

# European Union Stocks

## v4.495 (Apr-17-2021)

Not present Present Preferred

Stock	Time Series Types			
	B/Bmsy	U/Umsy	B/Bmgt	U/Umgmt
1. ANCHIXa [Anchovy Portuguese Waters -East]	TB SSB	ER F	TB SSB	ER F
2. ANCHOBAYB [Anchovy Bay of Biscay]	TB SSB	ER F	TB SSB	ER F
3. ANGLVIIIC-IXa [Black bellied angler ICES 8c-9a]	TB SSB	ER F	TB SSB	ER F
4. ANGLVII-VIIAbd [Black bellied angler ICES 7-8abd]	TB SSB	ER F	TB SSB	ER F
5. ASHARNEATL [Angel shark Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
6. BERYXSPNEATL [Beryx spp Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
7. BJMACKXa2 [Blue jack mackerel Azores]	TB SSB	ER F	TB SSB	ER F
8. BKSFNEATL [Black scabbardfish Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
9. BLINGI-II-IIIa-IVa-VIII-IX-XII [Blue ling ICES 1-2-3a-4a-8-9-12]	TB SSB	ER F	TB SSB	ER F
10. BLINGVb-VI-VII [Blue ling ICES 5b-6-7]	TB SSB	ER F	TB SSB	ER F
11. BLRAYIVa-VI [Blonde ray ICES 4a-6]	TB SSB	ER F	TB SSB	ER F
12. BLRAYIVc-VIId [Blonde ray ICES 4c-7d]	TB SSB	ER F	TB SSB	ER F
13. BLRAYIXa [Blonde ray Portuguese Waters -East]	TB SSB	ER F	TB SSB	ER F
14. BLRAYVIIafg [Blonde ray ICES 7afg]	TB SSB	ER F	TB SSB	ER F
15. BLRAYVIIe [Blonde ray Western English Channel]	TB SSB	ER F	TB SSB	ER F
16. BMDOGVIII-IXa [Blackmouth dogfish ICES 8-9a]	TB SSB	ER F	TB SSB	ER F
17. BMDOGVI-VII [Blackmouth dogfish ICES 6-7]	TB SSB	ER F	TB SSB	ER F
18. BOARVI-VIII [Boarfish ICES 6-8]	TB SSB	ER F	TB SSB	ER F
19. BRILL2232 [Brill Baltic Areas 22-32]	TB SSB	ER F	TB SSB	ER F
20. BRILLIIIa-IV-VIilde [Brill ICES 3a-4-7de]	TB SSB	ER F	TB SSB	ER F
21. BSKSHARNEATL [Basking shark Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
22. BWHITNEA [Blue whiting Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
23. CKRAYIIIa-IV [Cuckoo ray ICES 3a-4]	TB SSB	ER F	TB SSB	ER F
24. CKRAYIXa [Cuckoo ray Portuguese Waters -East]	TB SSB	ER F	TB SSB	ER F
25. CKRAYVIIIC [Cuckoo ray Bay of Biscay -South]	TB SSB	ER F	TB SSB	ER F
26. CKRAYVI-VII [Cuckoo ray ICES 6-7]	TB SSB	ER F	TB SSB	ER F
27. CODBA2224 [Atlantic cod Western Baltic]	TB SSB	ER F	TB SSB	ER F
28. CODBA2532 [Atlantic cod Eastern Baltic]	TB SSB	ER F	TB SSB	ER F
29. CODIIIaW-IV-VIId [Atlantic cod ICES 3a(west)-4-7d]	TB SSB	ER F	TB SSB	ER F
30. CODIS [Atlantic cod Irish Sea]	TB SSB	ER F	TB SSB	ER F
31. CODKAT [Atlantic cod Kattegat]	TB SSB	ER F	TB SSB	ER F
32. CODVIA [Atlantic cod West of Scotland]	TB SSB	ER F	TB SSB	ER F
33. CODVIB [Atlantic cod Rockall Bank]	TB SSB	ER F	TB SSB	ER F
34. CODVIIlek [Atlantic cod Celtic Sea]	TB SSB	ER F	TB SSB	ER F
35. CUSKNEATL [Tusk Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
36. CUSKVa-XIV [Tusk ICES 5a-14]	TB SSB	ER F	TB SSB	ER F
37. CUSKVIB [Tusk Rockall Bank]	TB SSB	ER F	TB SSB	ER F
38. CUSKXII [Tusk North of Azores]	TB SSB	ER F	TB SSB	ER F
39. DAB2232 [Dab Baltic Areas 22-32]	TB SSB	ER F	TB SSB	ER F

40. DABIIIa-IV [Dab ICES 3a-4]	TB SSB	ER F	TB SSB	ER F
41. EBASSIVbc-VII [European seabass ICES 4bc-7]	TB SSB	ER F	TB SSB	ER F
42. EBASSVIa-VIIb-j [European seabass ICES 6a-7b-j]	TB SSB	ER F	TB SSB	ER F
43. EBASSVIIlab [European seabass ICES 8ab]	TB SSB	ER F	TB SSB	ER F
44. EBASSVIIlc-IXa [European seabass ICES 8c-9a]	TB SSB	ER F	TB SSB	ER F
45. EFLOUN2223 [European flounder Subdivisions 22-23]	TB SSB	ER F	TB SSB	ER F
46. EFLOUN2425 [European flounder Subdivisions 24-25]	TB SSB	ER F	TB SSB	ER F
47. EFLOUN26-28 [European flounder Subdivisions 26-28]	TB SSB	ER F	TB SSB	ER F
48. EFLOUN27-2932 [European flounder Subdivisions 27 and 29-32]	TB SSB	ER F	TB SSB	ER F
49. EFLOUNIIIa-IV [European flounder ICES 3a-4]	TB SSB	ER F	TB SSB	ER F
50. EPOLLIV-IIIa [European pollack ICES 3a-4]	TB SSB	ER F	TB SSB	ER F
51. EPOLLVIII-IXa [European pollack ICES 8-9a]	TB SSB	ER F	TB SSB	ER F
52. FMEG8c9a [Fourspotted megrim ICES 8c-9a]	TB SSB	ER F	TB SSB	ER F
53. GFORKNEATL [Greater forkbeard Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
54. GGURNIIIa-IV-VIId [Grey gurnard ICES 3a-4-7d]	TB SSB	ER F	TB SSB	ER F
55. GHALV-VI-XII-XIV [Greenland halibut ICES 5-6-12-14]	TB SSB	ER F	TB SSB	ER F
56. GOLDREDV-VI-XII-XIV [Golden redfish ICES 5-6-12-14]	TB SSB	ER F	TB SSB	ER F
57. GSSMELTI-II-IIIa-IV [Greater silver smelt ICES 1-2-3a-4]	TB SSB	ER F	TB SSB	ER F
58. GSSMELTVIb-VII-VIII-IX-X-XII [Greater silver smelt ICES 6b-7-8-9-10-12]	TB SSB	ER F	TB SSB	ER F
59. HADIS [Haddock Irish Sea]	TB SSB	ER F	TB SSB	ER F
60. HADNS-IIIa-VIa [Haddock ICES 3a-4-6a]	TB SSB	ER F	TB SSB	ER F
61. HADROCK [Haddock Rockall Bank]	TB SSB	ER F	TB SSB	ER F
62. HADVIIb-k [Haddock ICES 7b-k]	TB SSB	ER F	TB SSB	ER F
63. HAKENRTN [Hake ICES 3a-4-6-7-8abd]	TB SSB	ER F	TB SSB	ER F
64. HAKESOTH [Hake ICES 8c-9a]	TB SSB	ER F	TB SSB	ER F
65. HERR2224IIIa [Herring ICES 22-24-3a]	TB SSB	ER F	TB SSB	ER F
66. HERR2529-32 [Herring Subdivisions 25-29 and 32]	TB SSB	ER F	TB SSB	ER F
67. HERR30-31 [Herring Subdivisions 30-31]	TB SSB	ER F	TB SSB	ER F
68. HERRNIRS [Herring Irish Sea]	TB SSB	ER F	TB SSB	ER F
69. HERRNS-IIIa-VIId [Herring ICES 3a-4-7d]	TB SSB	ER F	TB SSB	ER F
70. HERRRIGA [Herring Gulf of Riga East of Gotland]	TB SSB	ER F	TB SSB	ER F
71. HERRSIRS [Herring ICES 7a-g-h-j-k]	TB SSB	ER F	TB SSB	ER F
72. HERRVIa [Herring West of Scotland]	TB SSB	ER F	TB SSB	ER F
73. HERRVIaVIIbc [Herring ICES 5a-7bc]	TB SSB	ER F	TB SSB	ER F
74. HMACKIIIa-IVa-Vb-VIa-VII-VIII [Horse mackerel ICES 2a-4a-5b-6a-7-8]	TB SSB	ER F	TB SSB	ER F
75. HMACKIIIa-IVbc-VIId [Horse mackerel ICES 3a-4bc-7d]	TB SSB	ER F	TB SSB	ER F
76. HMACKIXa [Horse mackerel Portugese Waters -East]	TB SSB	ER F	TB SSB	ER F
77. KFSHARNEATL [Kitefin shark Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
78. LGSHARNEATL [Leafscale gulper shark Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
79. LINGNEATL [Ling Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
80. LSDOGIIIa-IV-VIId [Lesser spotted dogfish ICES 3a-4-7d]	TB SSB	ER F	TB SSB	ER F
81. LSDOGVIIab [Lesser spotted dogfish ICES 8abd]	TB SSB	ER F	TB SSB	ER F
82. LSDOGVIIlc-IXa [Lesser spotted dogfish ICES 8c-9a]	TB SSB	ER F	TB SSB	ER F
83. LSDOGVI-VIIabcefghij [Lesser spotted dogfish ICES 6-7abcefghij]	TB SSB	ER F	TB SSB	ER F
84. LSOLEIIIa-IV-VIId [Lemon sole ICES 3a-4-7d]	TB SSB	ER F	TB SSB	ER F
85. MACKNEICES [Mackerel ICES Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
86. MEG8c9a [Megrim ICES 8c-9a]	TB SSB	ER F	TB SSB	ER F

87. MEGSPPIVa-VIa [Megrim spp ICES 4a-6a]	TB SSB	ER F	TB SSB	ER F
88. MEGSPPVlb [Megrim spp Rockall Bank]	TB SSB	ER F	TB SSB	ER F
89. MEGVII-VIIIabd [Megrim ICES 7-8abd]	TB SSB	ER F	TB SSB	ER F
90. NEPHFU10 [Norway lobster Noup (FU 10)]	TB SSB	ER F	TB SSB	ER F
91. NEPHFU11 [Norway lobster North Minch (FU 11)]	TB SSB	ER F	TB SSB	ER F
92. NEPHFU12 [Norway lobster South Minch (FU 12)]	TB SSB	ER F	TB SSB	ER F
93. NEPHFU13 [Norway lobster Firth of Clyde and Sound of Jura (FU 13)]	TB SSB	ER F	TB SSB	ER F
94. NEPHFU14 [Norway lobster Irish Sea East (FU 14)]	TB SSB	ER F	TB SSB	ER F
95. NEPHFU15 [Norway lobster Irish Sea West (FU 15)]	TB SSB	ER F	TB SSB	ER F
96. NEPHFU16 [Norway lobster Porcupine Bank (FU 16)]	TB SSB	ER F	TB SSB	ER F
97. NEPHFU17 [Norway lobster Aran Grounds (FU 17)]	TB SSB	ER F	TB SSB	ER F
98. NEPHFU19 [Norway lobster South East and West of IRL (FU 19)]	TB SSB	ER F	TB SSB	ER F
99. NEPHFU2021 [Norway lobster Labadie, Jones and Cockburn (FU 20-21)]	TB SSB	ER F	TB SSB	ER F
100. NEPHFU22 [Norway lobster Smalls (FU 22)]	TB SSB	ER F	TB SSB	ER F
101. NEPHFU25 [Norway lobster North Galicia (FU 25)]	TB SSB	ER F	TB SSB	ER F
102. NEPHFU2627 [Norway lobster West Galicia and North Portugal (FU 26-27)]	TB SSB	ER F	TB SSB	ER F
103. NEPHFU2829 [Norway lobster South-West and South Portugal (FU 28-29)]	TB SSB	ER F	TB SSB	ER F
104. NEPHFU30 [Norway lobster Gulf of Cadiz (FU 30)]	TB SSB	ER F	TB SSB	ER F
105. NEPHFU31 [Norway lobster Cantabrian Sea (FU 31)]	TB SSB	ER F	TB SSB	ER F
106. NEPHFU32 [Norway lobster Norwegian Deeps (FU 32)]	TB SSB	ER F	TB SSB	ER F
107. NEPHFU33 [Norway lobster Off Horn Reef (FU 33)]	TB SSB	ER F	TB SSB	ER F
108. NEPHFU34 [Norway lobster Devils Hole (FU 34)]	TB SSB	ER F	TB SSB	ER F
109. NEPHFU3-4 [Norway lobster Skagerak Kattegat (FU 3-4)]	TB SSB	ER F	TB SSB	ER F
110. NEPHFU5 [Norway lobster Botney Cut - Silver Pit (FU 5)]	TB SSB	ER F	TB SSB	ER F
111. NEPHFU6 [Norway lobster Farn Deeps (FU 6)]	TB SSB	ER F	TB SSB	ER F
112. NEPHFU7 [Norway lobster Fladen Ground (FU 7)]	TB SSB	ER F	TB SSB	ER F
113. NEPHFU8 [Norway lobster Firth of Forth (FU 8)]	TB SSB	ER F	TB SSB	ER F
114. NEPHFU9 [Norway lobster Moray Firth (FU 9)]	TB SSB	ER F	TB SSB	ER F
115. NEPHIV [Norway lobster North Sea]	TB SSB	ER F	TB SSB	ER F
116. NEPHVIa [Norway lobster West of Scotland]	TB SSB	ER F	TB SSB	ER F
117. NEPHVII [Norway lobster ICES 7]	TB SSB	ER F	TB SSB	ER F
118. NEPHVIIIab [Norway lobster ICES 8ab]	TB SSB	ER F	TB SSB	ER F
119. NPOUTIIla-IV [Norway pout ICES 3a-4]	TB SSB	ER F	TB SSB	ER F
120. NPOUTVIa [Norway pout West of Scotland]	TB SSB	ER F	TB SSB	ER F
121. OROUGHYNEATL [Orange roughy Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
122. PANDALIIlaW-IVaE [Northern shrimp ICES 3a(west)-4a(east)]	TB SSB	ER F	TB SSB	ER F
123. PANDALIVa [Northern shrimp Northern North Sea]	TB SSB	ER F	TB SSB	ER F
124. PLAIC2123 [European plaice Subdivisions 21-23]	TB SSB	ER F	TB SSB	ER F
125. PLAIC2432 [European plaice Subdivisions 24-32]	TB SSB	ER F	TB SSB	ER F
126. PLAIC7d [European plaice Eastern English Channel]	TB SSB	ER F	TB SSB	ER F
127. PLAICCELT [European plaice Celtic Sea]	TB SSB	ER F	TB SSB	ER F
128. PLAICECHW [European plaice Western English Channel]	TB SSB	ER F	TB SSB	ER F
129. PLAICIS [European plaice Irish Sea]	TB SSB	ER F	TB SSB	ER F
130. PLAICNS [European plaice North Sea]	TB SSB	ER F	TB SSB	ER F
131. PLAICVIIbc [European plaice ICES 7bc]	TB SSB	ER F	TB SSB	ER F

132. PLAICVIIh-k [European plaice ICES 7h-k]	TB SSB	ER F	TB SSB	ER F
133. PLAICVIII-IXa [European plaice ICES 8-9a]	TB SSB	ER F	TB SSB	ER F
134. POLLNS-VI-IIla [Pollock ICES 3a-4-6]	TB SSB	ER F	TB SSB	ER F
135. PORSHARNEATL [Porbeagle shark Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
136. RBRMIX [Red seabream ICES 9]	TB SSB	ER F	TB SSB	ER F
137. RBRMVI-VII-VIII [Red seabream ICES 6-7-8]	TB SSB	ER F	TB SSB	ER F
138. RBRMX [Red seabream Azores Grounds]	TB SSB	ER F	TB SSB	ER F
139. REDDEEPXIVb [Beaked redfish Southeast Greenland]	TB SSB	ER F	TB SSB	ER F
140. RGURNNEATL [Red gurnard Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
141. RHGRENNEATL [Roughhead grenadier Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
142. RNGENI-II-IV-Va2-VIII-IX-XIVab2 [Roundnose grenadier ICES 1-2-4-5a2-8-9-14ab2]	TB SSB	ER F	TB SSB	ER F
143. RNGENMATLR [Roundnose grenadier Mid-Atlantic Ridge]	TB SSB	ER F	TB SSB	ER F
144. RNGENVb-VI-VII-XIIb [Roundnose grenadier ICES 5b-6-7-12b]	TB SSB	ER F	TB SSB	ER F
145. RNGRENIlla [Roundnose grenadier Kattegat and Skagerrak]	TB SSB	ER F	TB SSB	ER F
146. SARDPVIIIf-Xa [Sardine ICES 8c-9a]	TB SSB	ER F	TB SSB	ER F
147. SARDVII [Sardine ICES 7]	TB SSB	ER F	TB SSB	ER F
148. SARDVIIlabd [Sardine ICES 8abd]	TB SSB	ER F	TB SSB	ER F
149. SDRAYVI-VII [Sandy ray ICES 6-7]	TB SSB	ER F	TB SSB	ER F
150. SEELNSSA1 [Sand eel Sandeel Area 1]	TB SSB	ER F	TB SSB	ER F
151. SEELNSSA2 [Sand eel Sandeel Area 2]	TB SSB	ER F	TB SSB	ER F
152. SEELNSSA3 [Sand eel Sandeel Area 3]	TB SSB	ER F	TB SSB	ER F
153. SEELNSSA4 [Sand eel Sandeel Area 4]	TB SSB	ER F	TB SSB	ER F
154. SEELNSSA5 [Sand eel Sandeel Area 5]	TB SSB	ER F	TB SSB	ER F
155. SEELNSSA6 [Sand eel Sandeel Area 6]	TB SSB	ER F	TB SSB	ER F
156. SEELNSSA7 [Sand eel Sandeel Area 7]	TB SSB	ER F	TB SSB	ER F
157. SEELVla [Sand eel West of Scotland]	TB SSB	ER F	TB SSB	ER F
158. SERAYVIIde [Smalleyed ray ICES 7de]	TB SSB	ER F	TB SSB	ER F
159. SERAYVIIIf-g [Smalleyed ray Celtic Sea]	TB SSB	ER F	TB SSB	ER F
160. SGRAYVI-VII [Shagreen ray ICES 6-7]	TB SSB	ER F	TB SSB	ER F
161. SHSPPNNEATL [Smooth hound Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
162. SOLECS [Common sole Celtic Sea]	TB SSB	ER F	TB SSB	ER F
163. SOLEIIlla-2224 [Common sole ICES 22-24-3a]	TB SSB	ER F	TB SSB	ER F
164. SOLEIS [Common sole Irish Sea]	TB SSB	ER F	TB SSB	ER F
165. SOLENS [Common sole North Sea]	TB SSB	ER F	TB SSB	ER F
166. SOLEVIIbc [Common sole ICES 7bc]	TB SSB	ER F	TB SSB	ER F
167. SOLEVIIId [Common sole Eastern English Channel]	TB SSB	ER F	TB SSB	ER F
168. SOLEVIIle [Common sole Western English Channel]	TB SSB	ER F	TB SSB	ER F
169. SOLEVIIh-k [Common sole ICES 7h-k]	TB SSB	ER F	TB SSB	ER F
170. SOLEVIIIfab [Common sole ICES 8ab]	TB SSB	ER F	TB SSB	ER F
171. SOLEVIIIfc-IXa [Common sole ICES 8c-9a]	TB SSB	ER F	TB SSB	ER F
172. SPRAT22-32 [Sprat Baltic Areas 22-32]	TB SSB	ER F	TB SSB	ER F
173. SPRATIIlla-IV [Sprat ICES 3a-4]	TB SSB	ER F	TB SSB	ER F
174. SPRATVIIde [Sprat ICES 7de]	TB SSB	ER F	TB SSB	ER F
175. SPRATVI-VIIabcfgijkl [Sprat ICES 6-7-abcfgijkl]	TB SSB	ER F	TB SSB	ER F
176. SPRAYIIlla-IV-VIId [Spotted ray ICES 3a-4-7d]	TB SSB	ER F	TB SSB	ER F
177. SPRAYIXa [Spotted ray Portugese Waters -East]	TB SSB	ER F	TB SSB	ER F
178. SPRAYVIIaefgh [Spotted ray ICES 7aefgh]	TB SSB	ER F	TB SSB	ER F
179. SPRAYVIII [Spotted ray Bay of Biscay]	TB SSB	ER F	TB SSB	ER F

180. SPRAYVI-VIIbj [Spotted ray ICES 6-7bj]	TB SSB	ER F	TB SSB	ER F
181. SPURDNEATL [Spurdog Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
182. STRAYII-IIIa-IV [Starry ray ICES 2-3a-4]	TB SSB	ER F	TB SSB	ER F
183. STRMULLIIla-IV-VIId [Striped red mullet ICES 3a-4-7d]	TB SSB	ER F	TB SSB	ER F
184. STRMULLVI-VIIabcefghijk-VIII-IXa [Striped red mullet ICES 6-7abcefghijk-8-9a]	TB SSB	ER F	TB SSB	ER F
185. STROUT22-32 [Sea trout Baltic Areas 22-32]	TB SSB	ER F	TB SSB	ER F
186. TBSKAIlla-IV-VIId [Thornback skate ICES 3a-4-7d]	TB SSB	ER F	TB SSB	ER F
187. TBSKAIXa [Thornback skate Portugese Waters -East]	TB SSB	ER F	TB SSB	ER F
188. TBSKAVI [Thornback skate ICES 6]	TB SSB	ER F	TB SSB	ER F
189. TBSKAVIIafg [Thornback skate ICES 7afg]	TB SSB	ER F	TB SSB	ER F
190. TBSKAVIIe [Thornback skate Western English Channel]	TB SSB	ER F	TB SSB	ER F
191. TBSKAVIII [Thornback skate Bay of Biscay]	TB SSB	ER F	TB SSB	ER F
192. TPSHARNEATL [Tope shark Northeast Atlantic]	TB SSB	ER F	TB SSB	ER F
193. TUR2232 [Turbot Baltic Areas 22-32]	TB SSB	ER F	TB SSB	ER F
194. TURIlla [Turbot Kattegat and Skagerrak]	TB SSB	ER F	TB SSB	ER F
195. TURIV [Turbot North Sea]	TB SSB	ER F	TB SSB	ER F
196. URAYVIIde [Undulate ray ICES 7de]	TB SSB	ER F	TB SSB	ER F
197. URAYVIIlab [Undulate ray ICES 8ab]	TB SSB	ER F	TB SSB	ER F
198. WANGVIIlc-IXa [White anglerfish ICES 8c-9a]	TB SSB	ER F	TB SSB	ER F
199. WANGVII-VIIlabd [White anglerfish ICES 7-8abd]	TB SSB	ER F	TB SSB	ER F
200. WHITIIlla [Whiting Kattegat and Skagerrak]	TB SSB	ER F	TB SSB	ER F
201. WHITNS-VIId [Whiting ICES 4-7d]	TB SSB	ER F	TB SSB	ER F
202. WHITVIIa [Whiting West of Scotland]	TB SSB	ER F	TB SSB	ER F
203. WHITVIIb [Whiting Rockall Bank]	TB SSB	ER F	TB SSB	ER F
204. WHITVIIla [Whiting Irish Sea]	TB SSB	ER F	TB SSB	ER F
205. WHITVIIbce-k [Whiting Celtic Sea]	TB SSB	ER F	TB SSB	ER F
206. WHITVIII-IXa [Whiting ICES 8-9a]	TB SSB	ER F	TB SSB	ER F
207. WITFLOUNIIlla-IV-VIId [Witch flounder ICES 3a-4-7d]	TB SSB	ER F	TB SSB	ER F

## Anchovy Portuguese Waters -East [ANCHIXa]

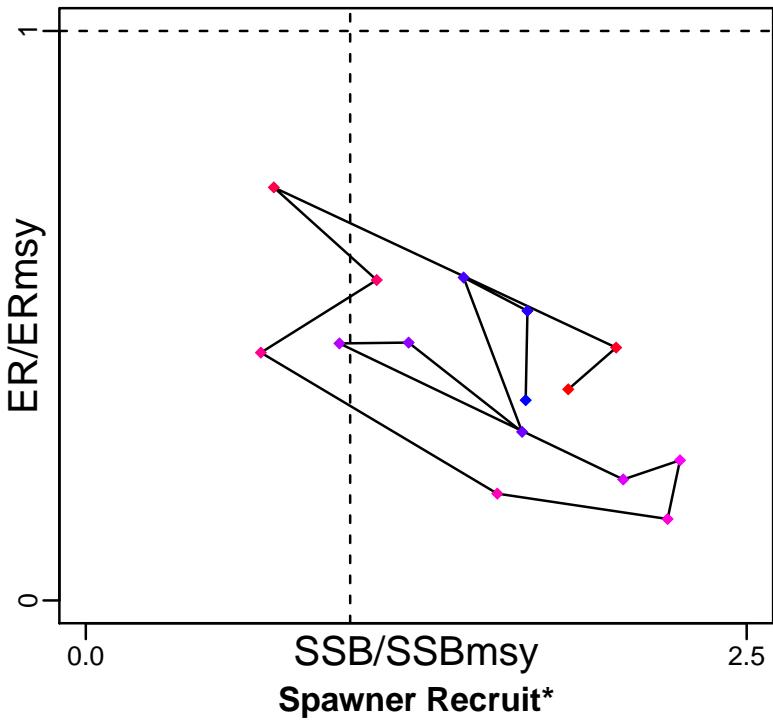
Metadata	
<b>Scientific Name</b>	Engraulis encrasicolus
<b>Current Assess ID</b>	WGHANSA-ANCHIXa-1989-2019-ICESIMP2021
<b>Area</b>	Portuguese Waters -East
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Southern Horse Mackerel, Anchovy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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2016	14,904
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2016	0.683
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-relative	2019	0.504
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2016	10,892
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-relative	2018	1440
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

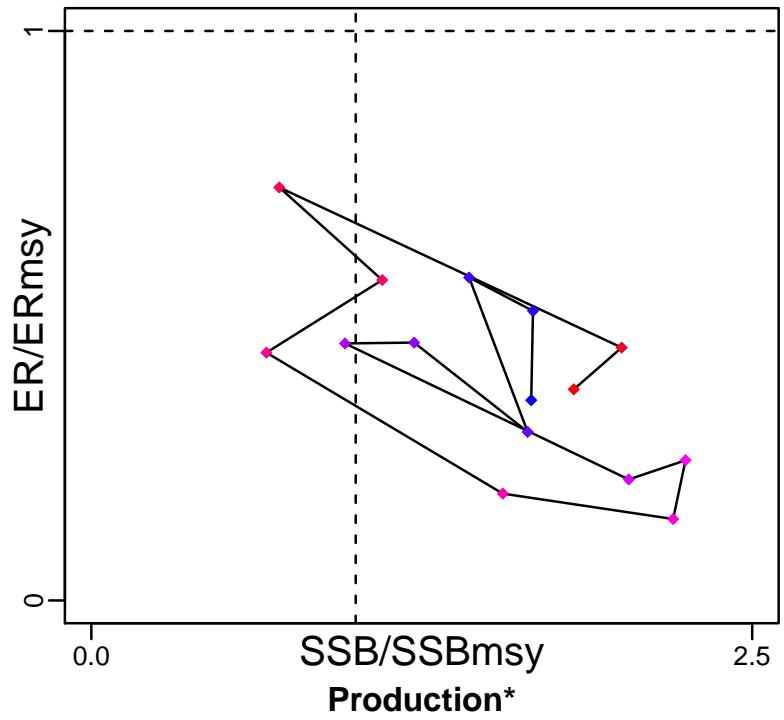
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	SSB-relative	2019	0.972	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	F-relative	2019	0.449	-	0 to 3	
<b>ER</b>	ER-ratio	2016	0.253	-	-	
<b>TC</b>	TC-MT	2019	15,799			
<b>TL</b>	TL-MT	2019	15,770			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2016	3.341			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-est-ratio	2016	0.371			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Anchovy Portuguese Waters –East [ANCHIXa]**

Kobe MSYpref (1989–2016–ICESIMP2018)



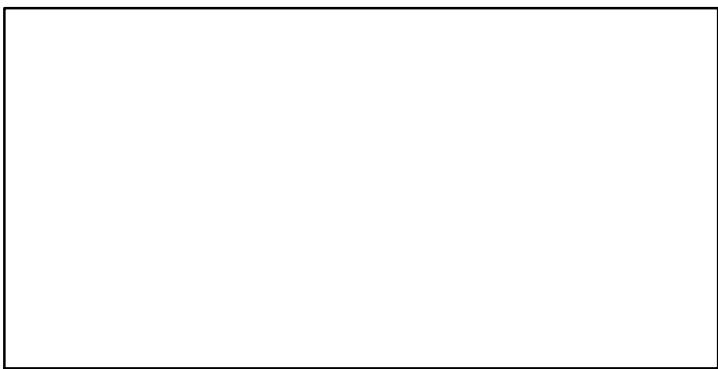
Kobe MGTpref (1989–2016–ICESIMP2018)



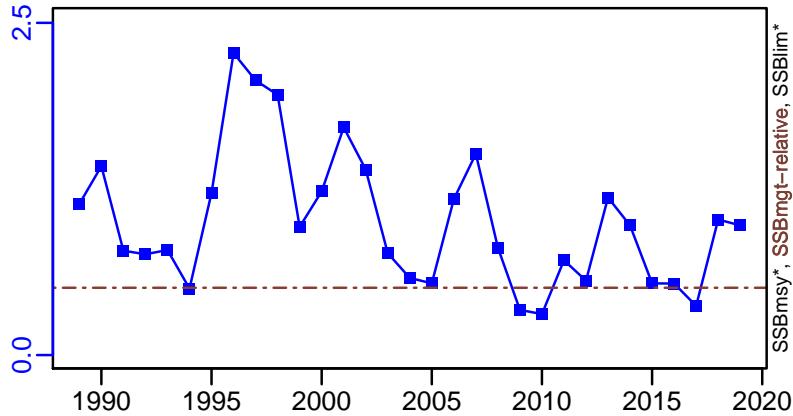
- ◆ Start Year ◆ End Year \* No Data

### Anchovy Portuguese Waters –East [ANCHIXa]

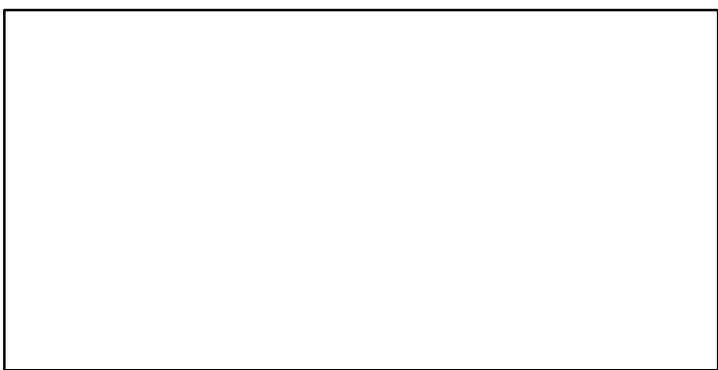
**TB\***



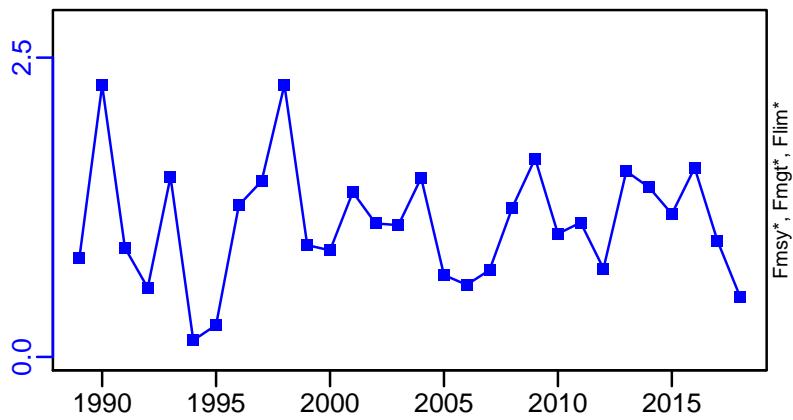
**SSB-relative (1989–2019–ICESIMP2021)**



**TN \***

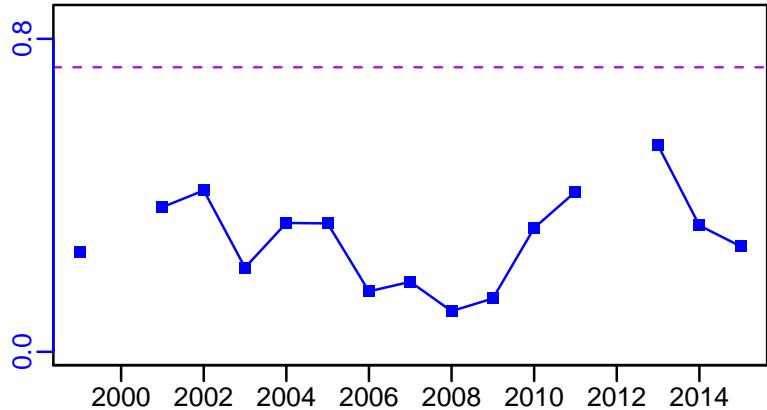


**F-relative (1989–2019–ICESIMP2021)**



**ER-ratio (1989–2016–ICESIMP2018)**

ER<sub>msy</sub>-est-ratio, ER<sub>mgt</sub>\* , ER<sub>lim</sub>\*



**Recruits\***

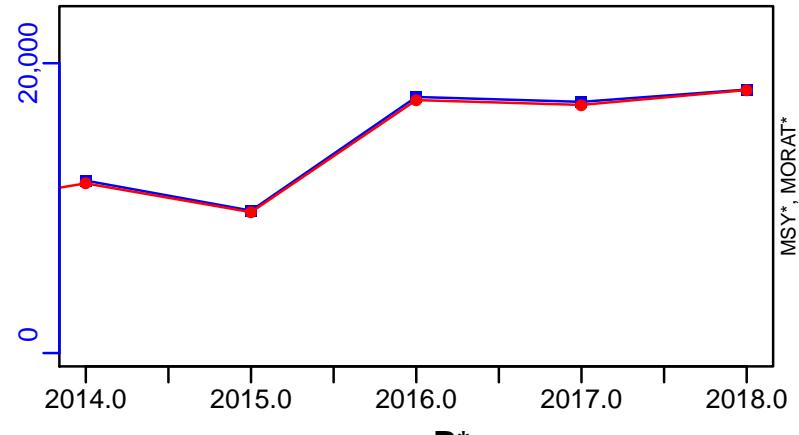


- Listed time series
- Target BRP
- MSY-based BRP
- Lim BRP
- Rec-Est
- \* No Data

### Anchovy Portuguese Waters –East [ANCHIXa]

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

TAC\*, Cpair\*, Cadv\*



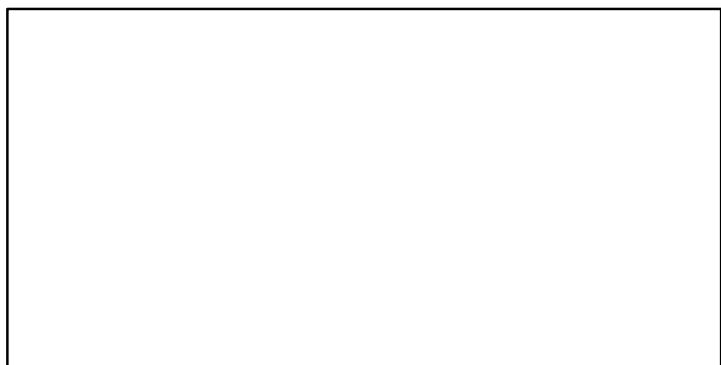
survB\*

MSY\*, MORAT\*

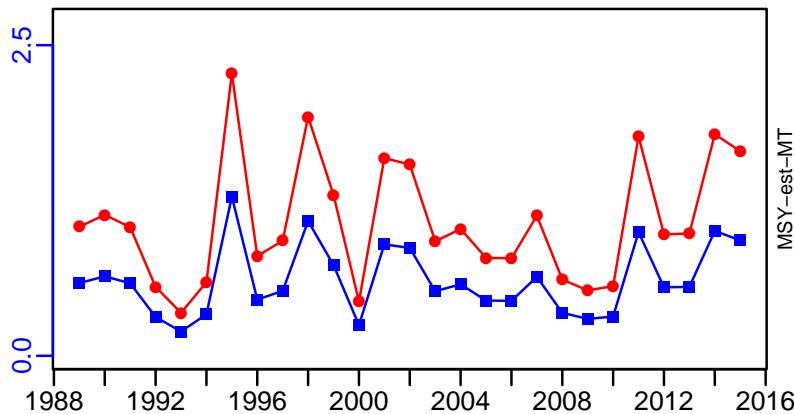
CPUE\*



EFFORT\*



TL–MT/MSY–est–MT, CdivMEANC–ratio, (1989–2016–ICESIMP2018)



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

## Anchovy Bay of Biscay [ANCHOBAYB]

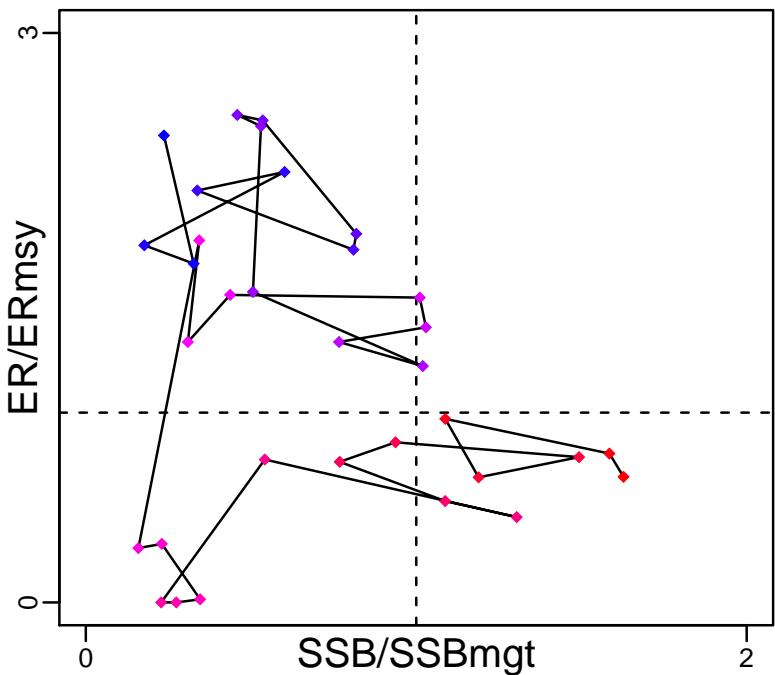
Metadata	
<b>Scientific Name</b>	Engraulis encrasicolus
<b>Current Assess ID</b>	WGHANSA-ANCHOBAYB-1986-2019-ICESIMP2021
<b>Area</b>	Bay of Biscay
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Southern Horse Mackerel, Anchovy and Sardine
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2019, 2007

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2014	49,781
<b>SSBmsy</b>	SSBmsy-est-MT	2015	50,742
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.278
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	89,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2015	35,421
<b>M</b>	M-1/yr	2007	1.2
<b>TBlim</b>	TBlim-MT	2014	21,000
<b>SSBlim</b>	SSBlim-MT	2017	21,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

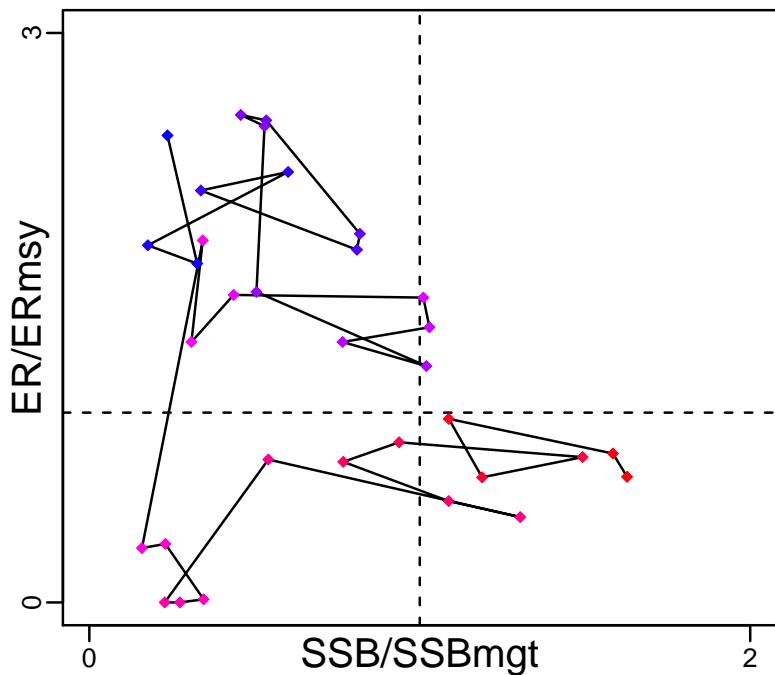
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2016	153,000	Both	-
<b>SSB</b>	SSB-MT	2019	144,834	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	33,706	-	1
<b>F</b>	F-1/yr	2014	0.222	-	1+
<b>ER</b>	ER-ratio	2019	0.184	-	2+
<b>TC</b>	TC-MT	2019	26,622		
<b>TL</b>	TL-MT	2019	25,743		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2014	1.33		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2015	2.897		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-est-ratio	2019	0.662		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.627		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

### Anchovy Bay of Biscay [ANCHOBAYB]

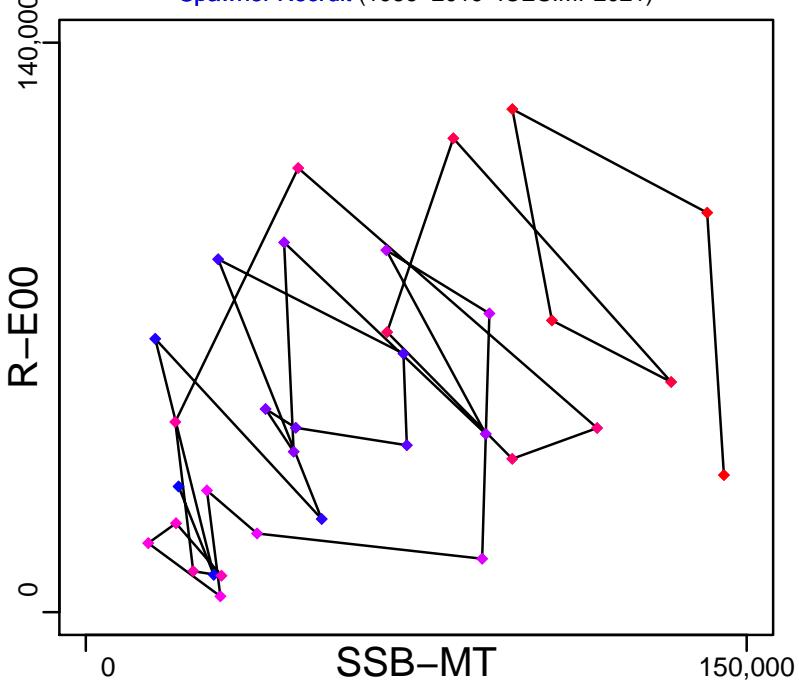
Kobe MSYpref (1986–2019–ICESIMP2021)



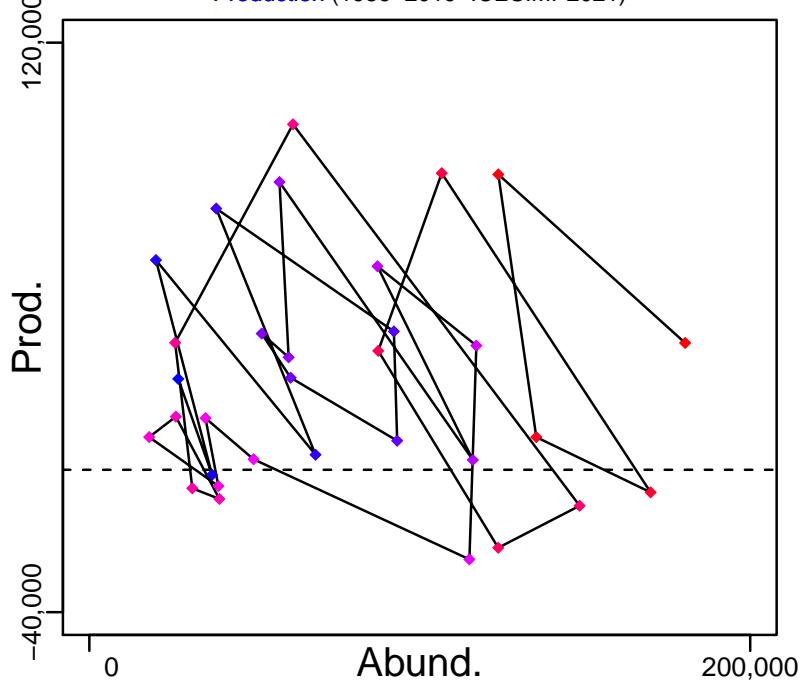
Kobe MGTpref (1986–2019–ICESIMP2021)



Spawner Recruit (1986–2019–ICESIMP2021)



Production (1986–2019–ICESIMP2021)

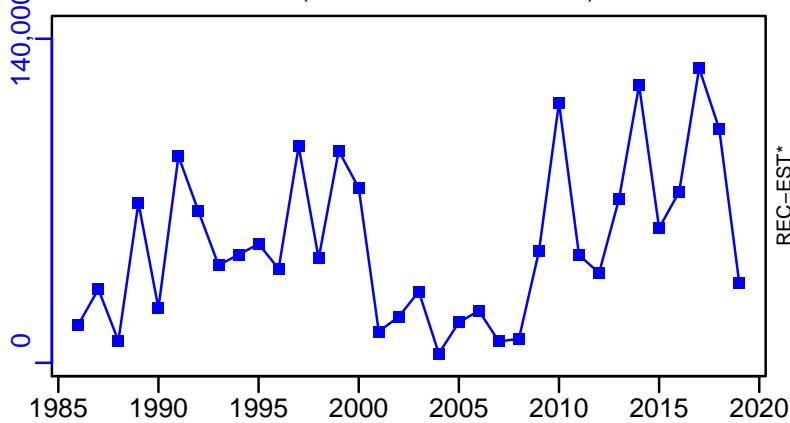
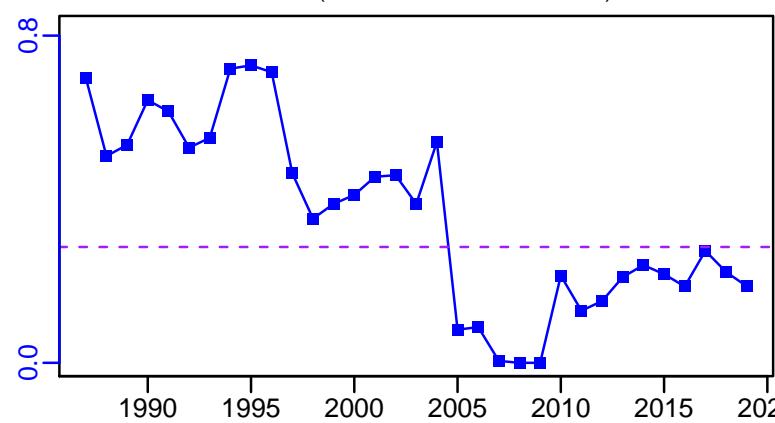
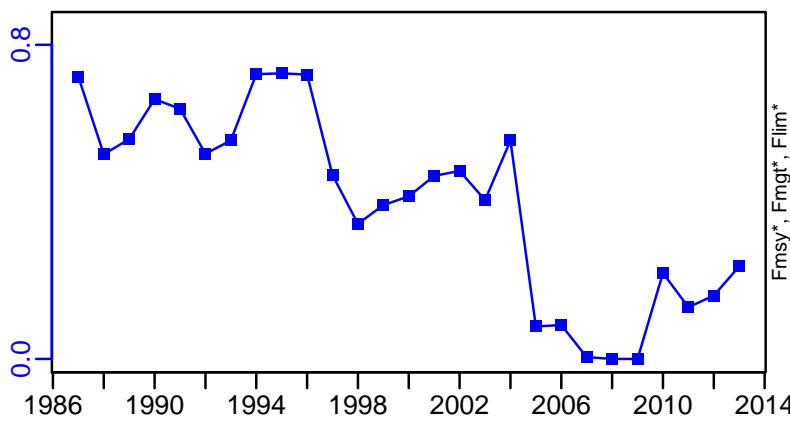
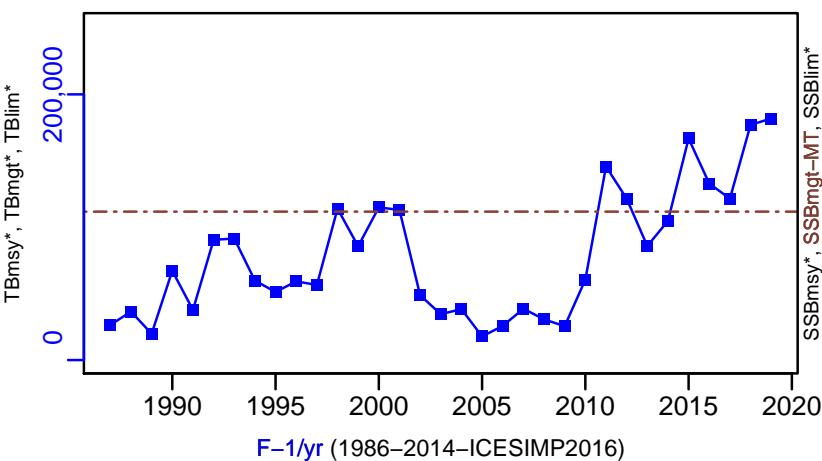
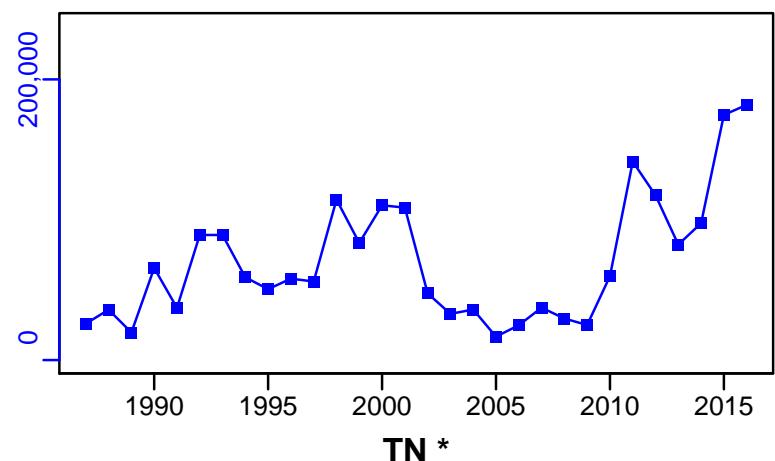


◆ Start Year   ◆ End Year   \* No Data

### Anchovy Bay of Biscay [ANCHOBAYB]

TB-MT (1986–2016–ICESIMP2018)

SSB-MT (1986–2019–ICESIMP2021)

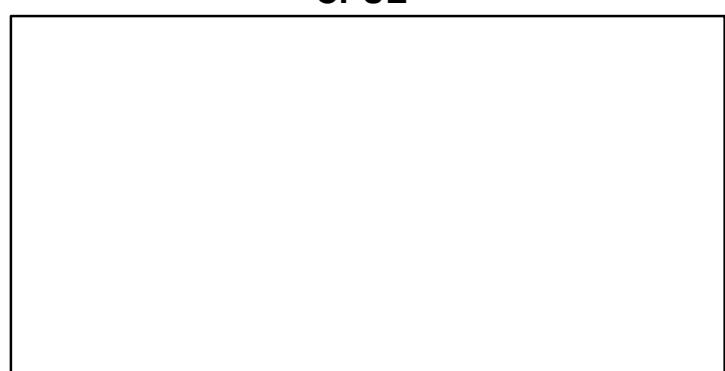
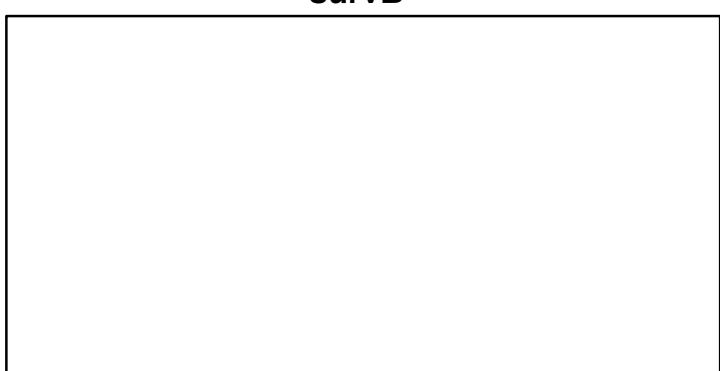
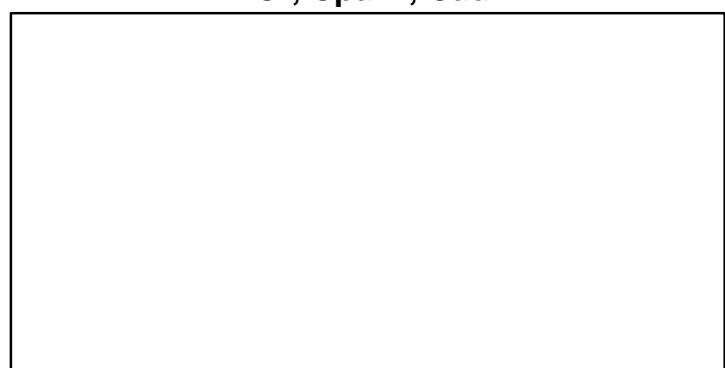
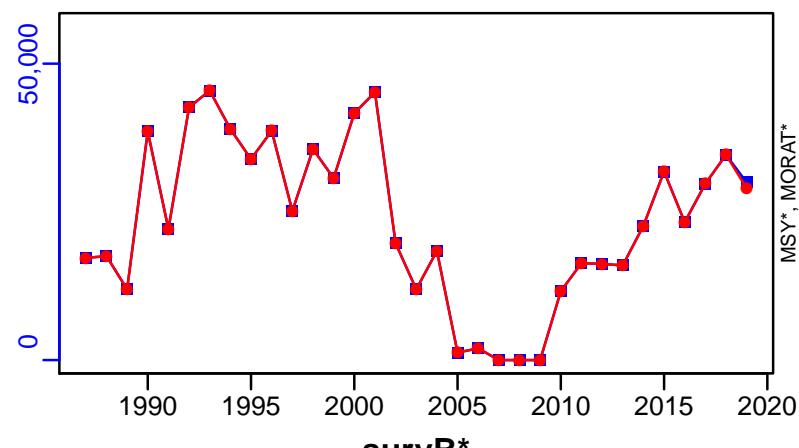


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	* No Data

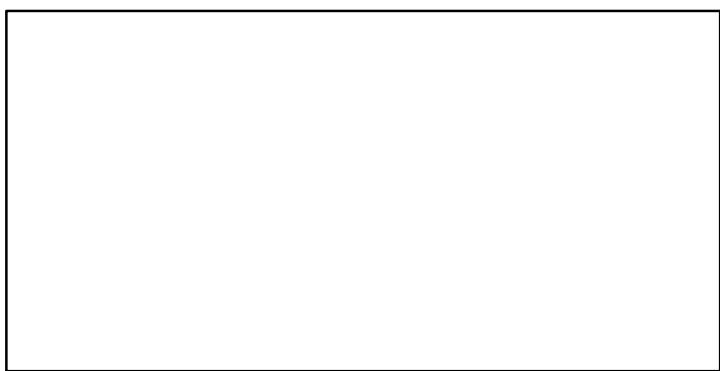
### Anchovy Bay of Biscay [ANCHOBAYB]

TC-MT, TL-MT, RecC\* (1986–2019–ICESIMP2021)

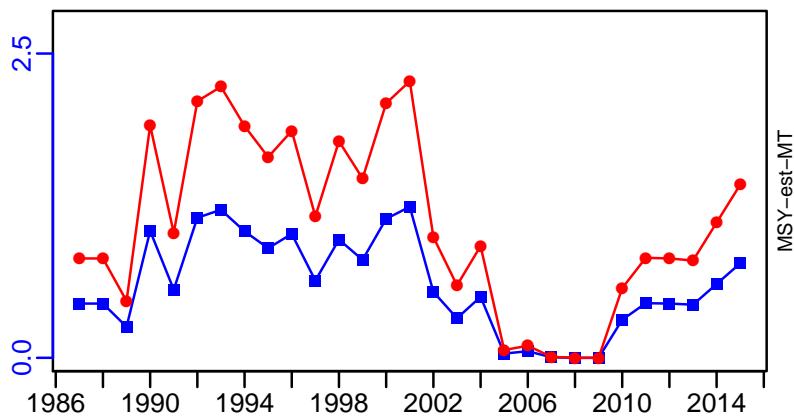
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1986–2015–ICESIMP2016)



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

## Black bellied angler ICES 8c-9a [ANGLVIIIC-IXa]

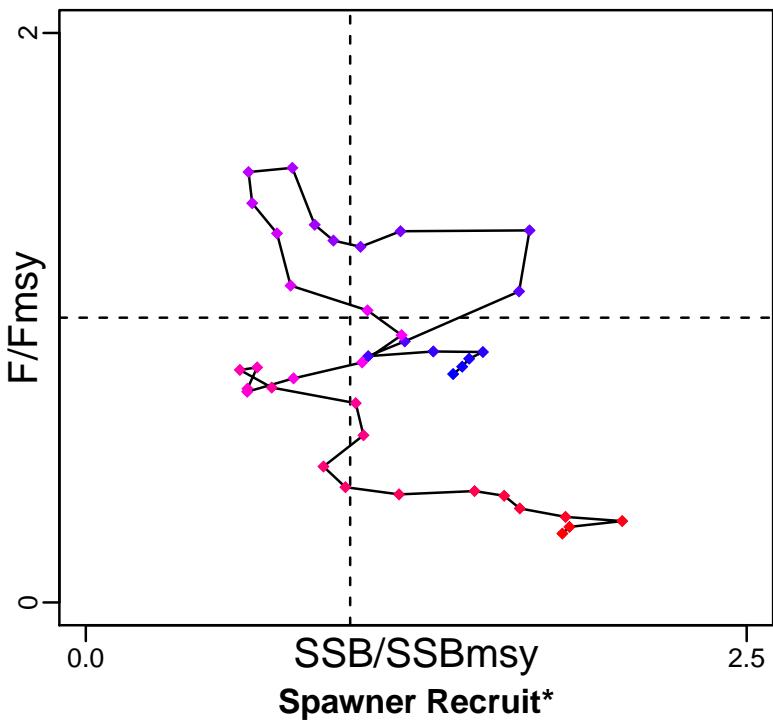
<b>Metadata</b>	
<b>Scientific Name</b>	Lophius budegassa
<b>Current Assess ID</b>	WGBIE-ANGLVIIIC-IXa-1978-2019-ICESIMP2021
<b>Area</b>	ICES 8c-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2019, 2014, 2015, 2016, 2017, 2018, 2011, 2012, 2013

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

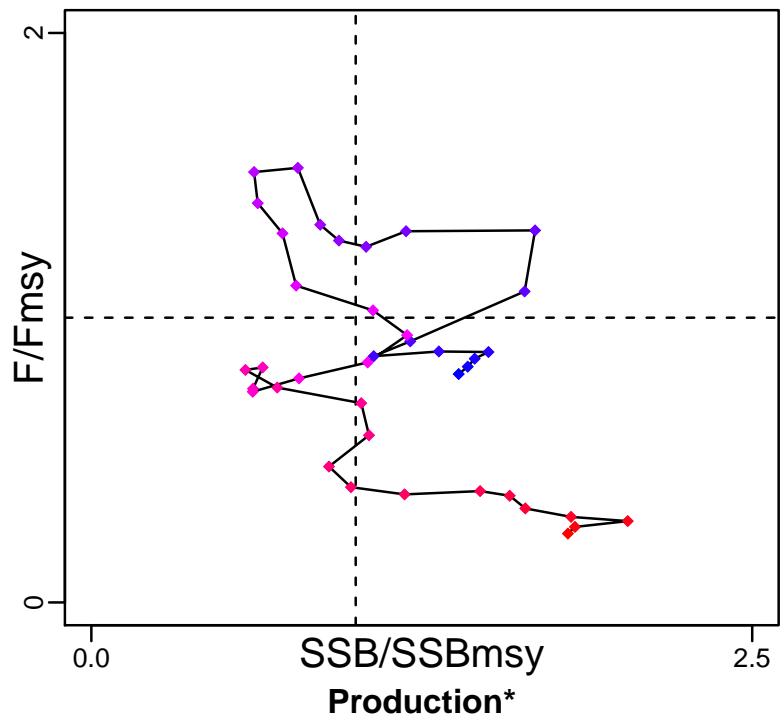
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	SSB-relative	2018	1.38	Both	-	
<b>TN</b>	-	-	-	-	-	-
<b>R</b>	-	-	-	-	-	-
<b>F</b>	F-relative	2018	0.342	-	-	
<b>ER</b>	-	-	-	-	-	-
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2019	764			
<b>TB/TBmsy</b>	TBdivTBmsy-dimensionless	2017	1.2			
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2019	1.702			
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2019	0.242			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Black bellied angler ICES 8c–9a [ANGLVIIIC–IXa]**

Kobe MSYpref (1978–2019–ICESIMP2021)



Kobe MGTpref (1978–2019–ICESIMP2021)



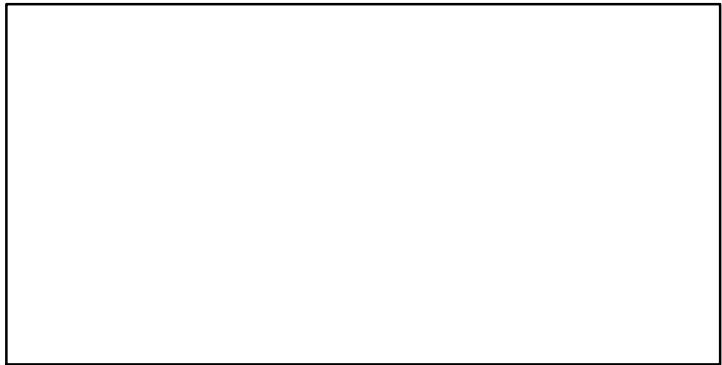
**Spawner Recruit\***

**Production\***

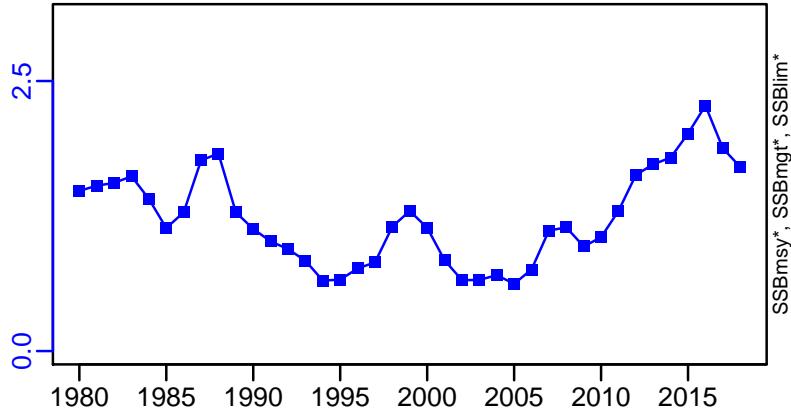
◆ Start Year   ◆ End Year   \* No Data

**Black bellied angler ICES 8c–9a [ANGLVIIIC–IXa]**

**TB\***



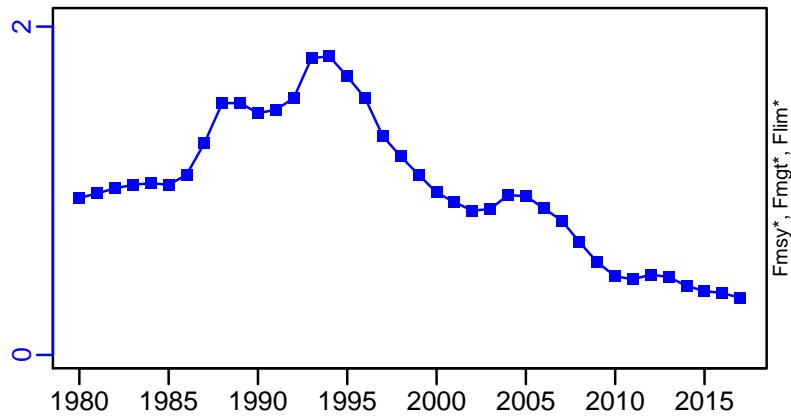
**SSB-relative (1980–2018–ICESIMP2018)**



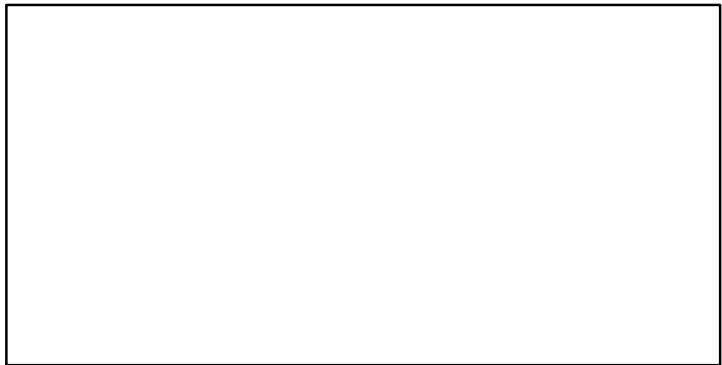
**TN \***



**F-relative (1980–2018–ICESIMP2018)**



**ER\***



**Recruits\***

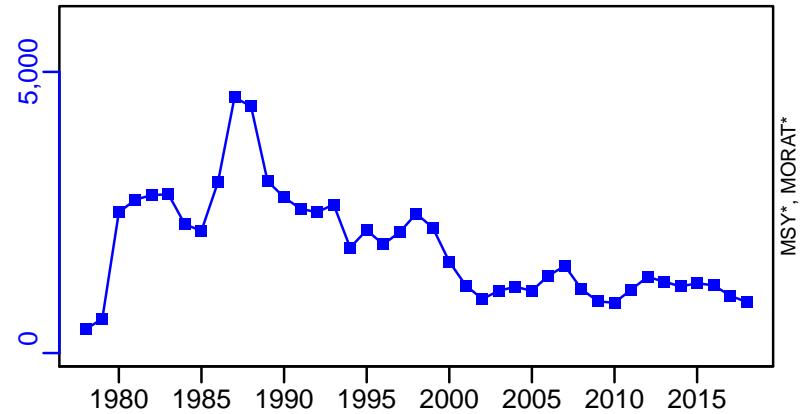


- Listed time series    - - - Target BRP    — Rec-Est
- - MSY-based BRP    - - Lim BRP    \* No Data

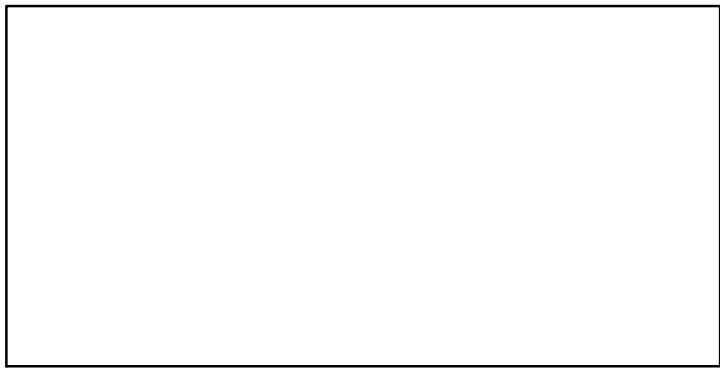
**Black bellied angler ICES 8c–9a [ANGLVIIIC–IXa]**

TL–MT, TC\*, RecC\* (1978–2019–ICESIMP2021)

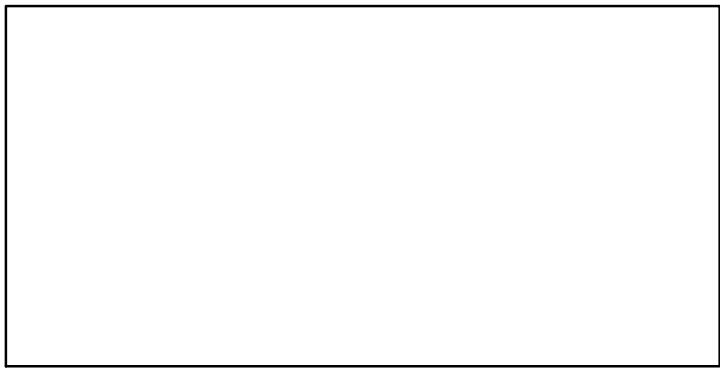
**TAC\*, Cpair\*, Cadv\***



**survB\***



**CPUE\***



**EFFORT\***



**CdivMSY\***



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

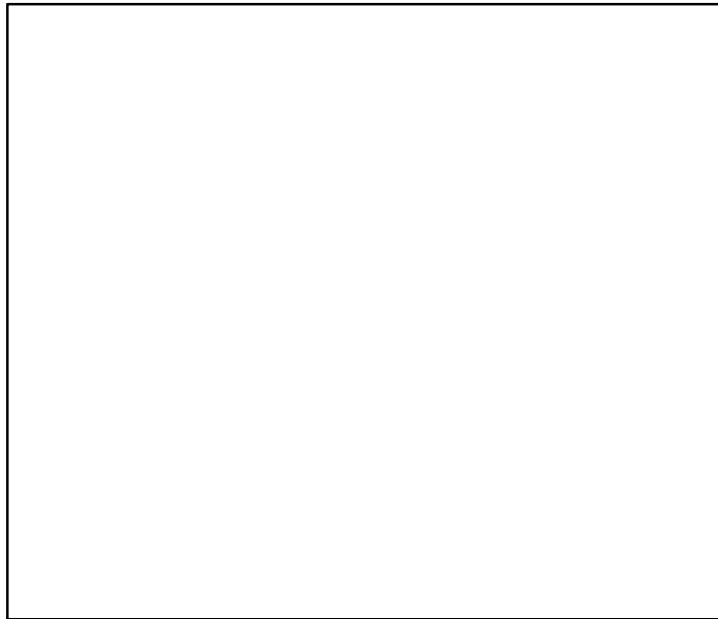
## Black bellied angler ICES 7-8abd [ANGLVII-VIIIabd]

<b>Metadata</b>	
<b>Scientific Name</b>	Lophius budegassa
<b>Current Assess ID</b>	WGBIE-ANGLVII-VIIIabd-1986-2018-ICESIMP2021
<b>Area</b>	ICES 7-8abd
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2016, 2017, 2018

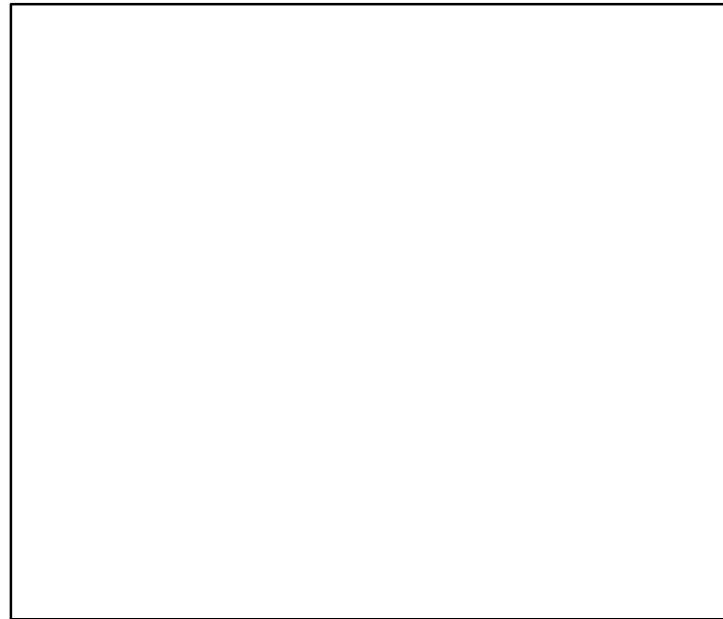
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-index	2018	2.197	-	-	
<b>F</b>	F-1/yr	2018	0.729	-	-	
<b>ER</b>	-	-	-	-	-	
<b>TC</b>	TC-MT	2017	13,500			
<b>TL</b>	TL-MT	2018	10,174			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2017	0.836			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

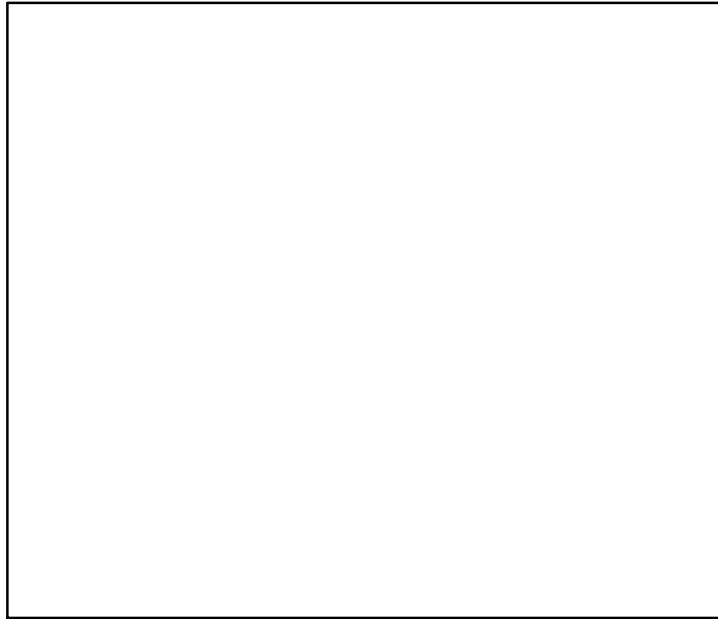
**Kobe MSY\***



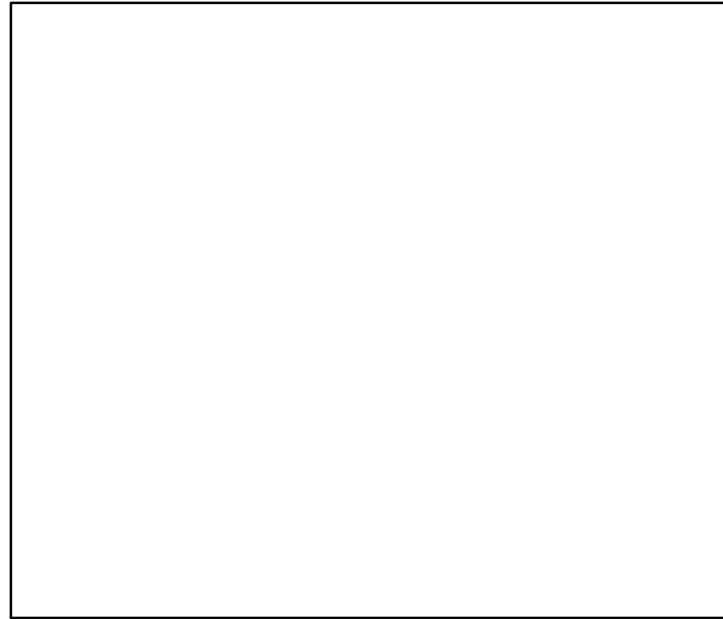
**Kobe MGT\***



**Spawner Recruit\***



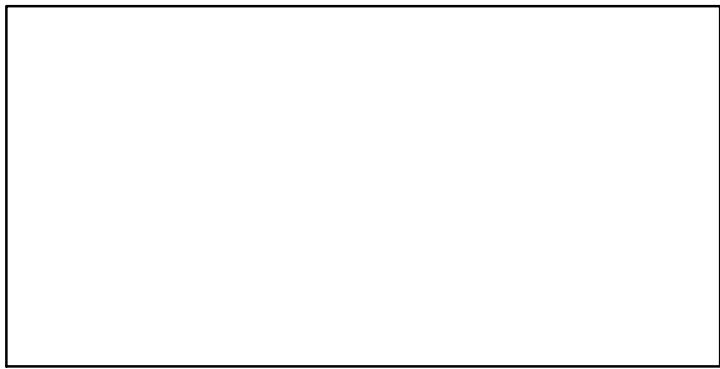
**Production\***



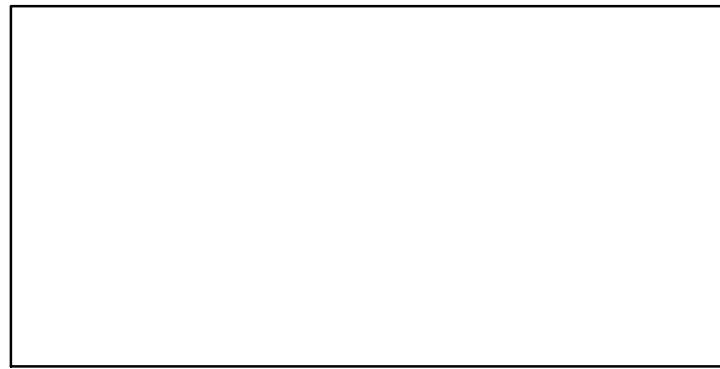
◆ Start Year ♦ End Year \* No Data

**Black bellied angler ICES 7–8abd [ANGLVII–VIIIab]**

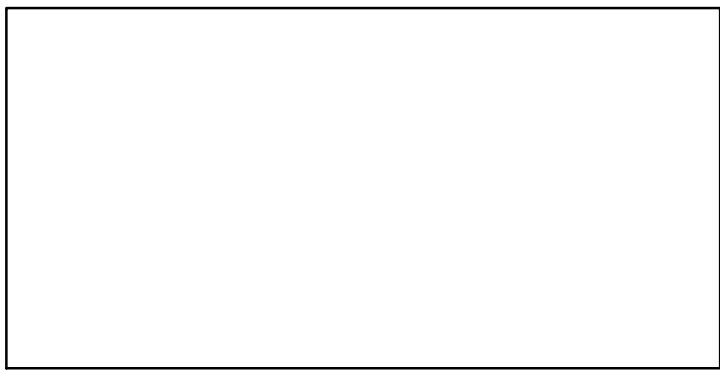
**TB\***



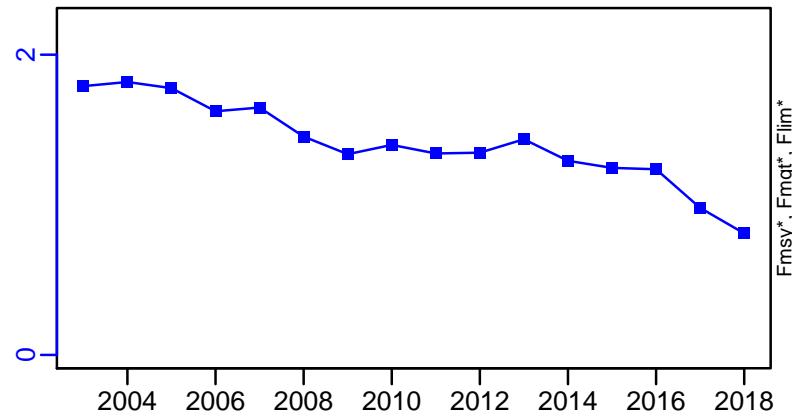
**SSB\***



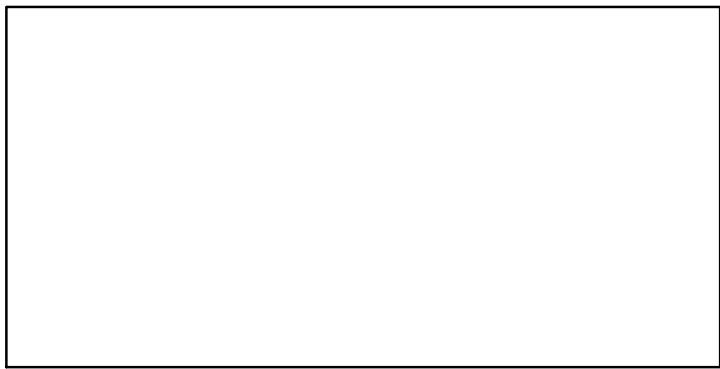
**TN \***



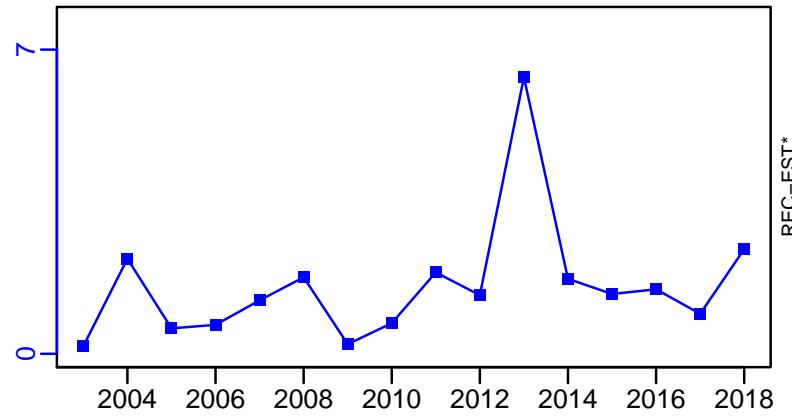
**F-1/yr (1986–2018–ICESIMP2021)**



**ER\***



**R-index (1986–2018–ICESIMP2021)**

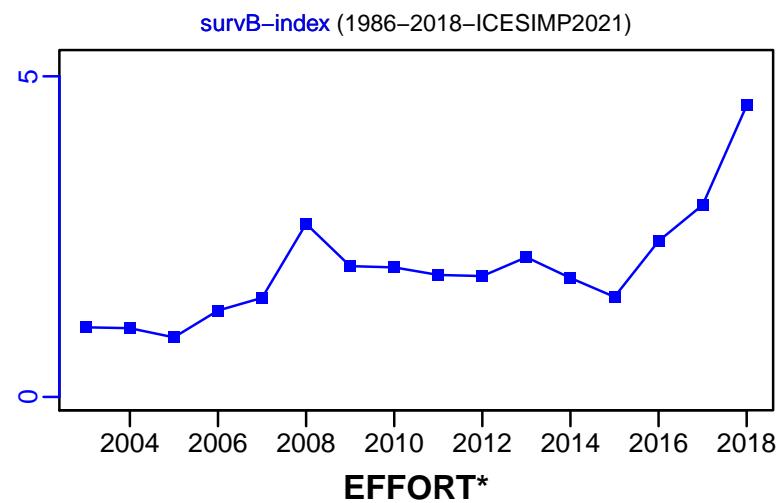
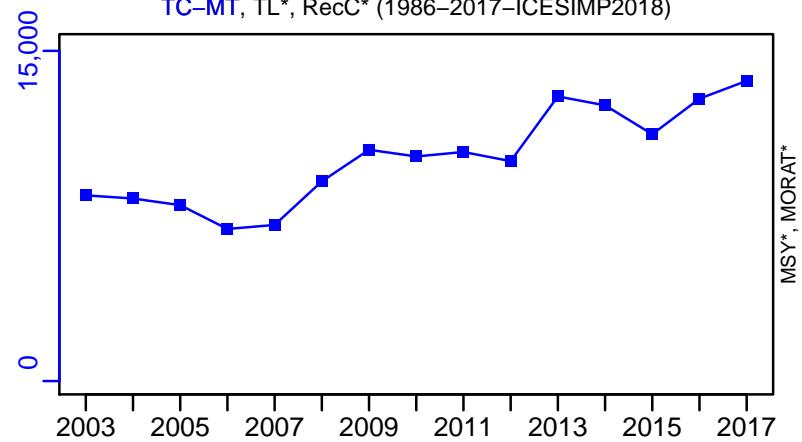


- Listed time series
- - - Target BRP
- - MSY-based BRP
- - Lim BRP
- Rec-Est
- \* No Data

**Black bellied angler ICES 7–8abd [ANGLVII–VIIIab]**

TC–MT, TL\*, RecC\* (1986–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



**EFFORT\***

**CPUE\***

**CdivMSY\***



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

## Angel shark Northeast Atlantic [ASHARNEATL]

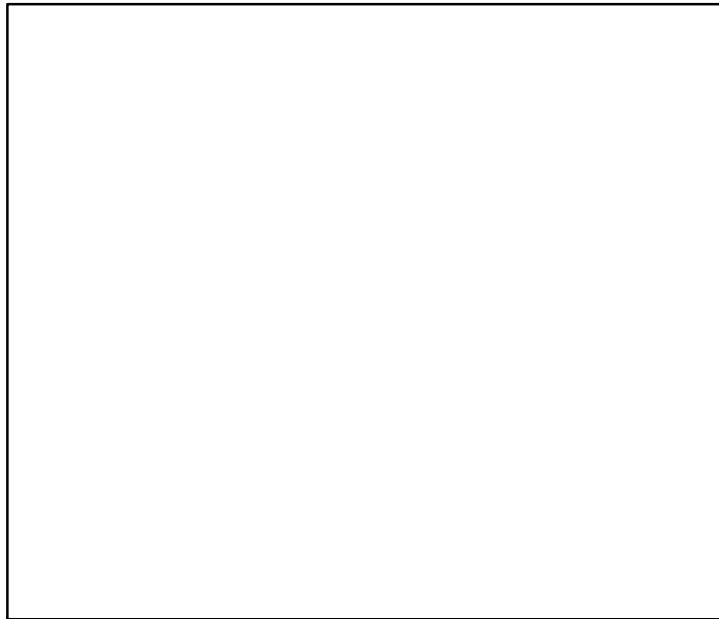
<b>Metadata</b>	
<b>Scientific Name</b>	Squatina squatina
<b>Current Assess ID</b>	WGEF-ASHARNEATL-1973-2018-ICESIMP2021
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2011, 2018

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

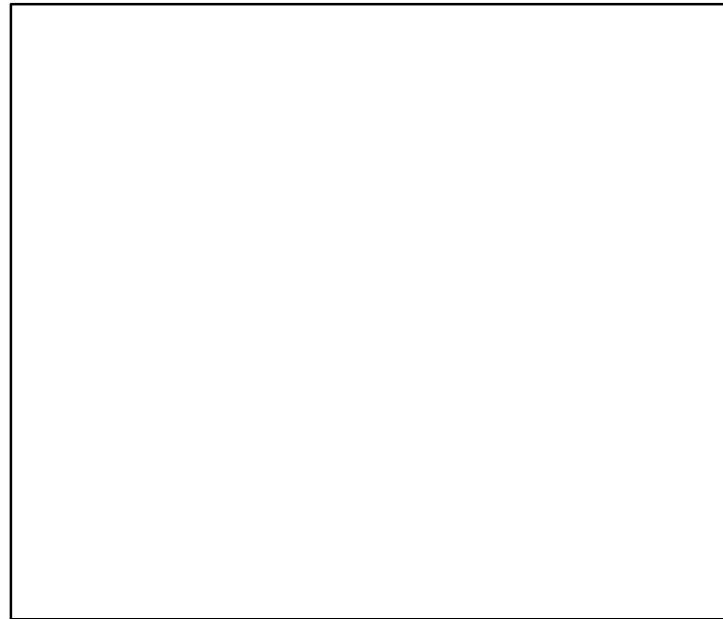
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	0		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Angel shark Northeast Atlantic [ASHARNEATL]

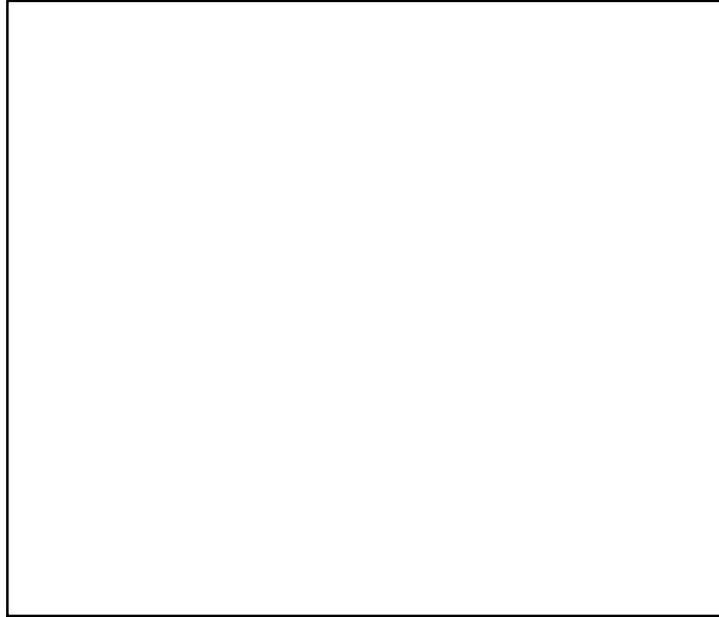
**Kobe MSY\***



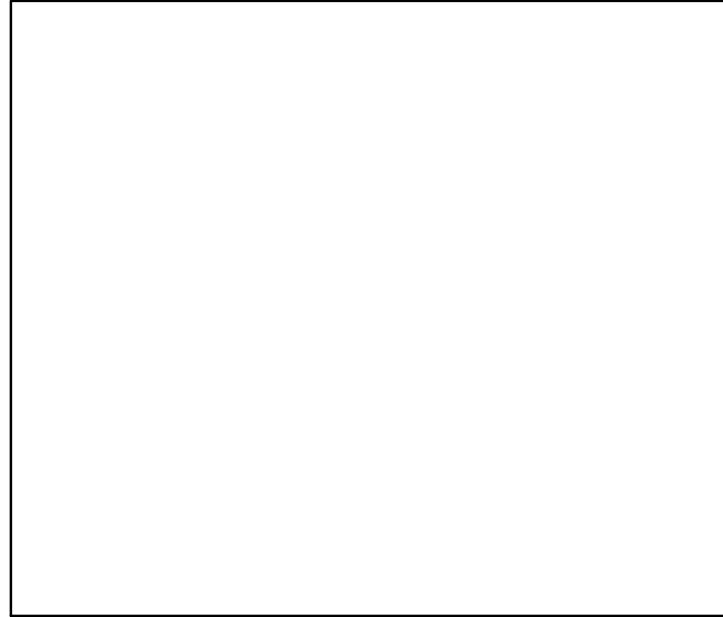
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ◆ End Year \* No Data

Angel shark Northeast Atlantic [ASHARNEATL]

**TB\***



**SSB\***



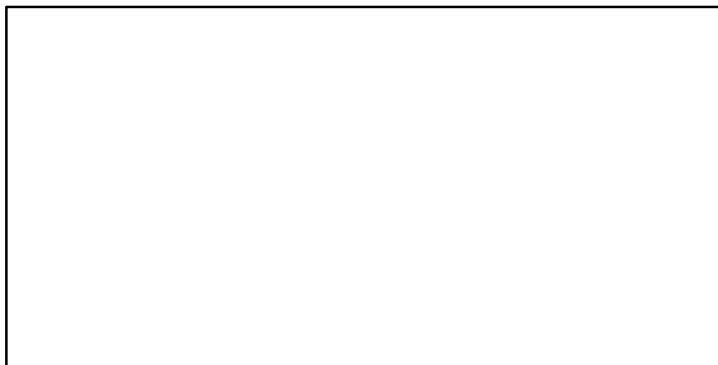
**TN \***



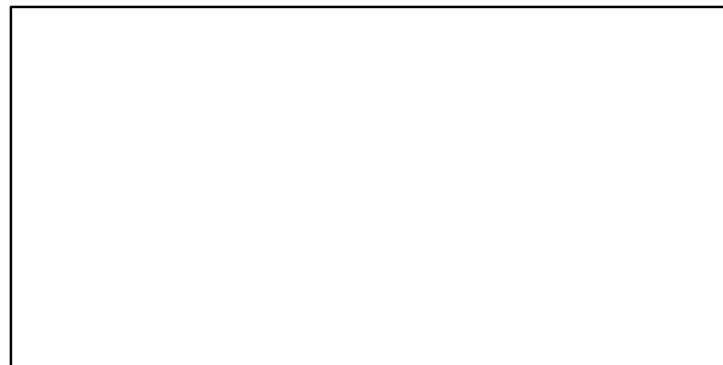
**F\***



**ER\***



**Recruits\***

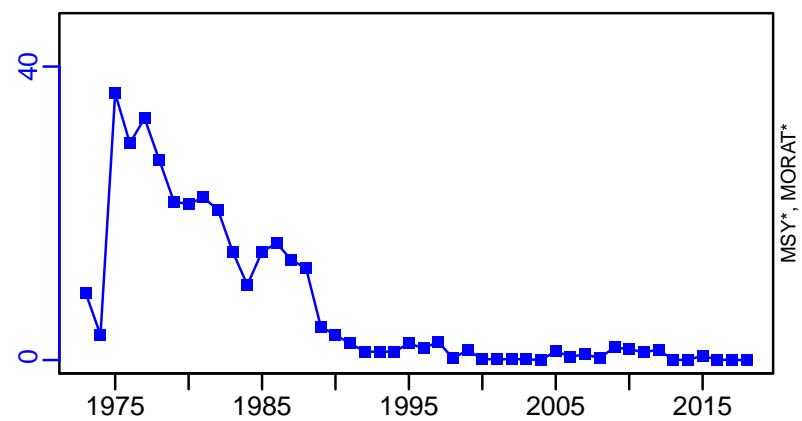


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

Angel shark Northeast Atlantic [ASHARNEATL]

TL-MT, TC\*, RecC\* (1973–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



survB\*

CPUE\*

EFFORT\*

CdivMSY\*

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

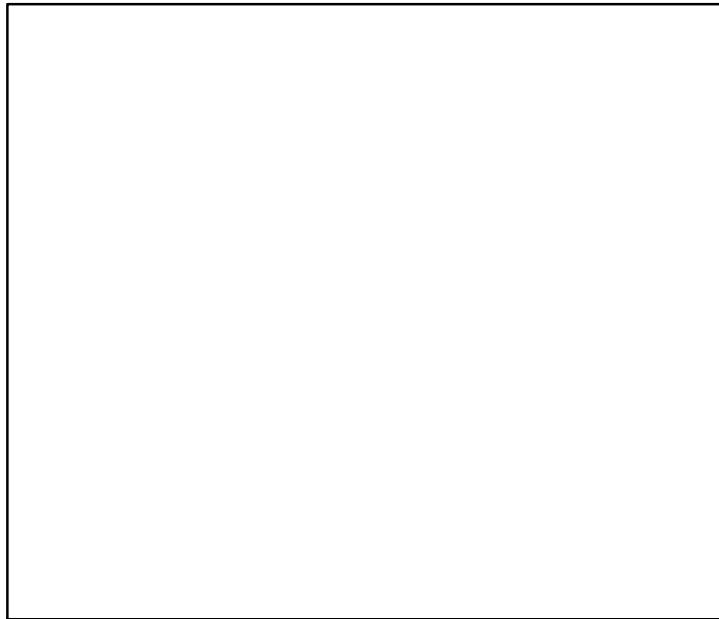
## Beryx spp Northeast Atlantic [BERYXSPPNEATL]

Metadata	
<b>Scientific Name</b>	Beryx spp
<b>Current Assess ID</b>	WGDEEP-BERYXSPPNEATL-1988-2017-ICESIMP2018
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2017

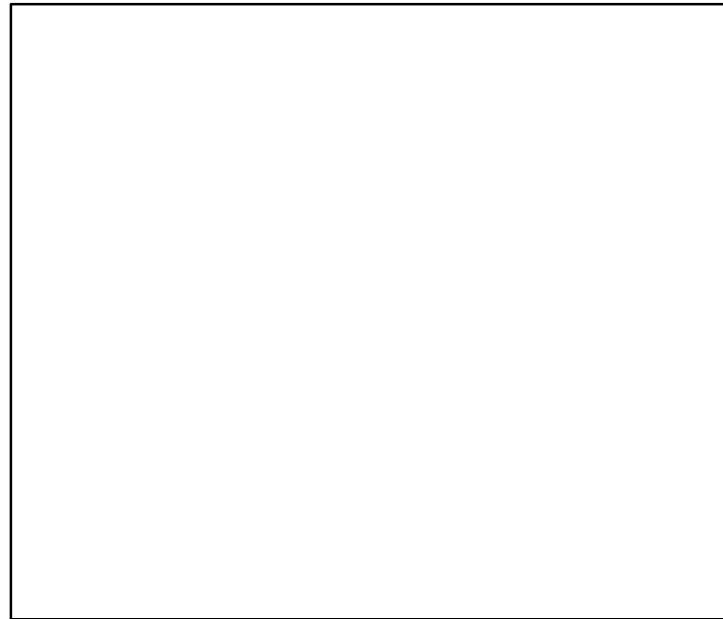
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2017	240		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

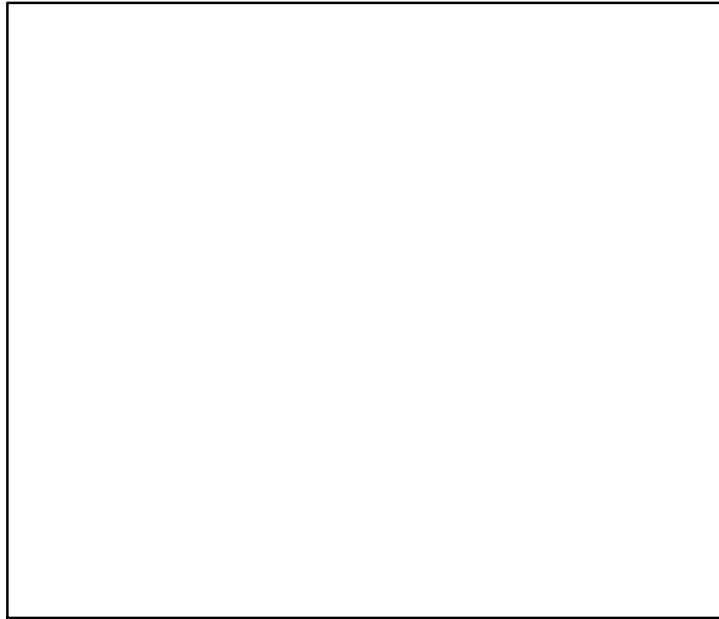
Kobe MSY\*



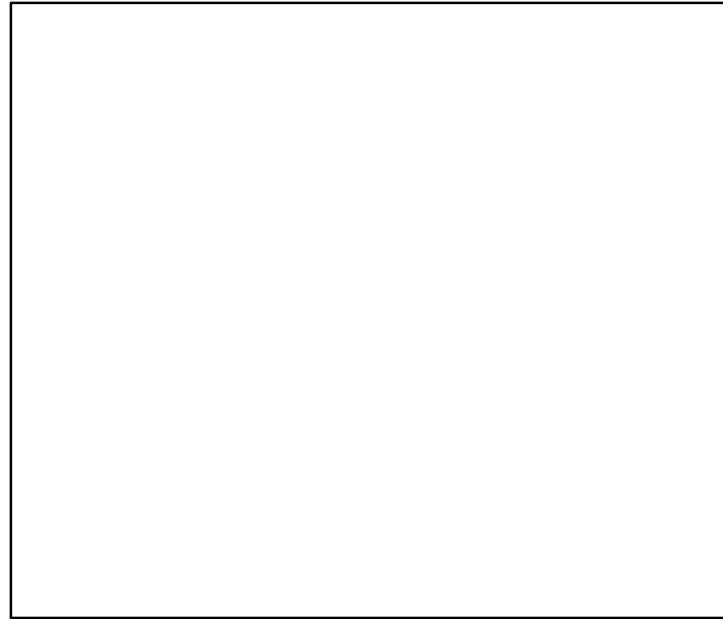
Kobe MGT\*



Spawner Recruit\*



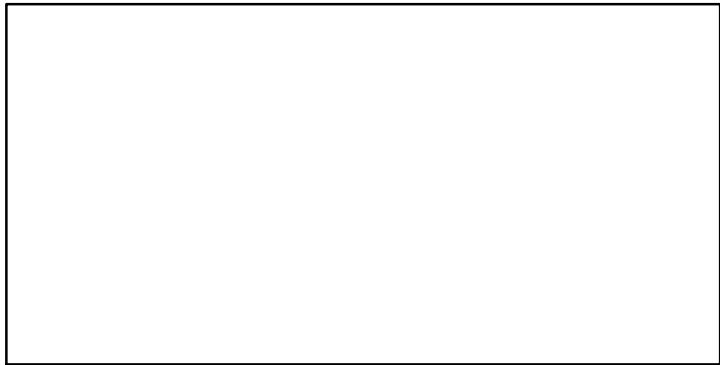
Production\*



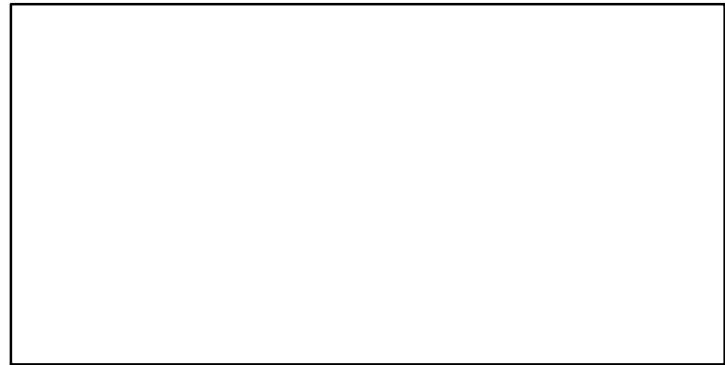
◆ Start Year ♦ End Year \* No Data

Beryx spp Northeast Atlantic [BERYXSPPNEATL]

**TB\***



**SSB\***



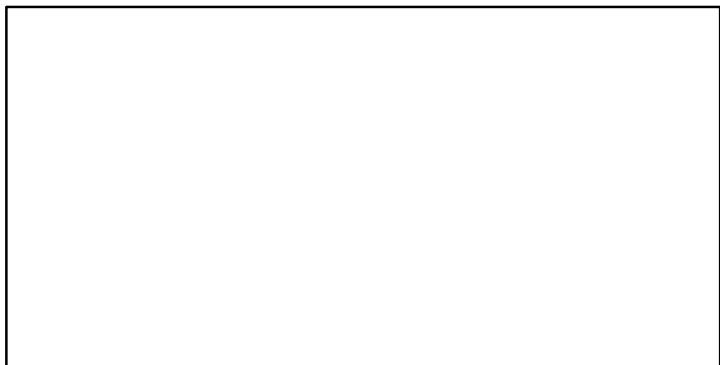
**TN \***



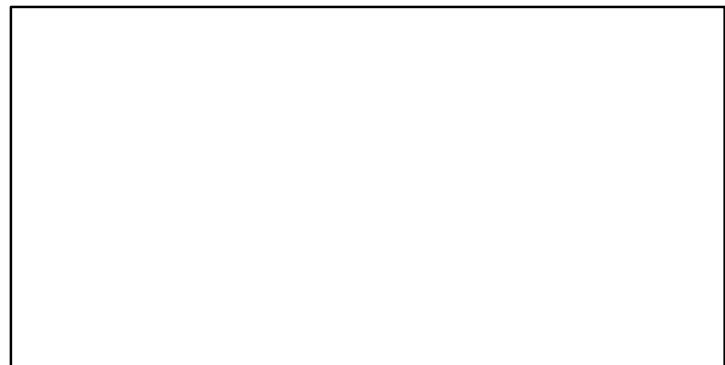
**F\***



**ER\***



**Recruits\***

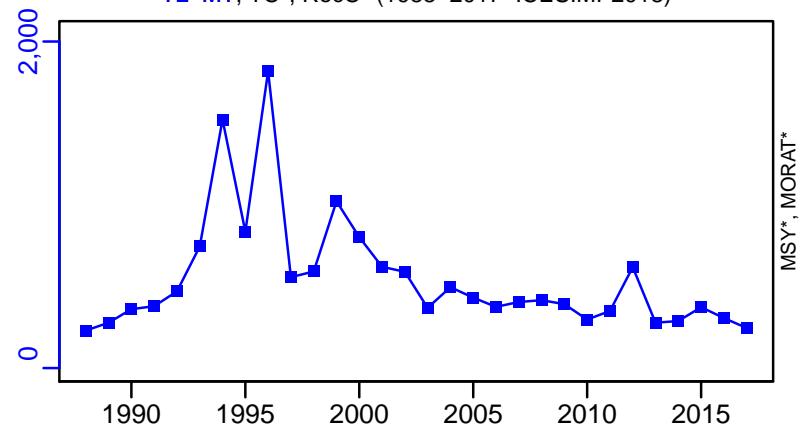


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Beryx spp Northeast Atlantic [BERYXSPPNEATL]

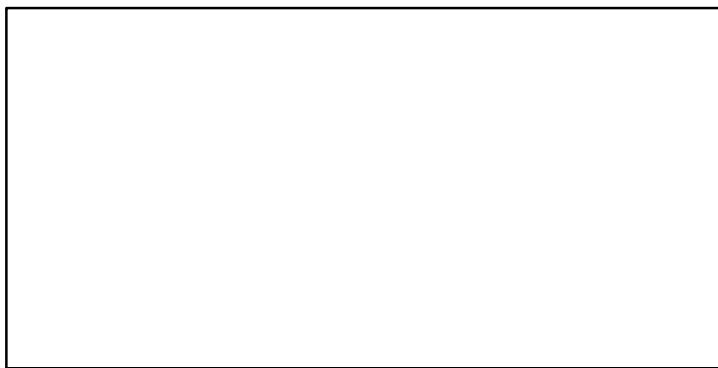
TL-MT, TC\*, RecC\* (1988–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*

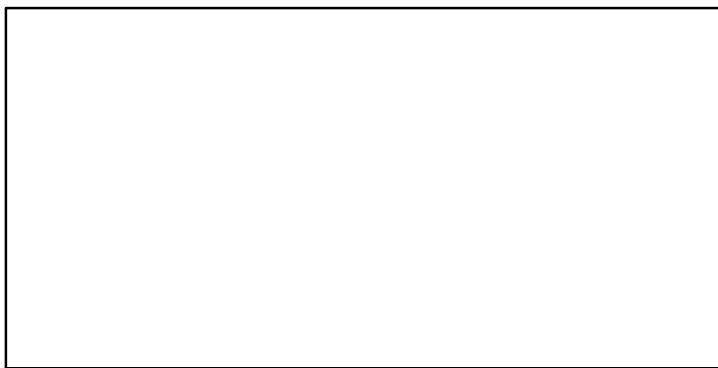


survB\*

MSY\*, MORAT\*



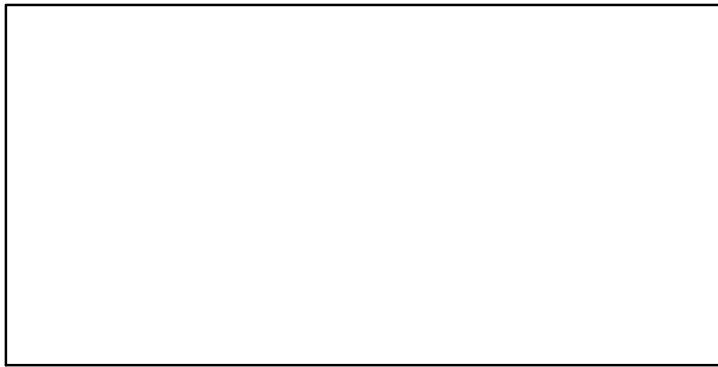
CPUE\*



EFFORT\*



CdivMSY\*



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

## Blue jack mackerel Azores [BJMACKXa2]

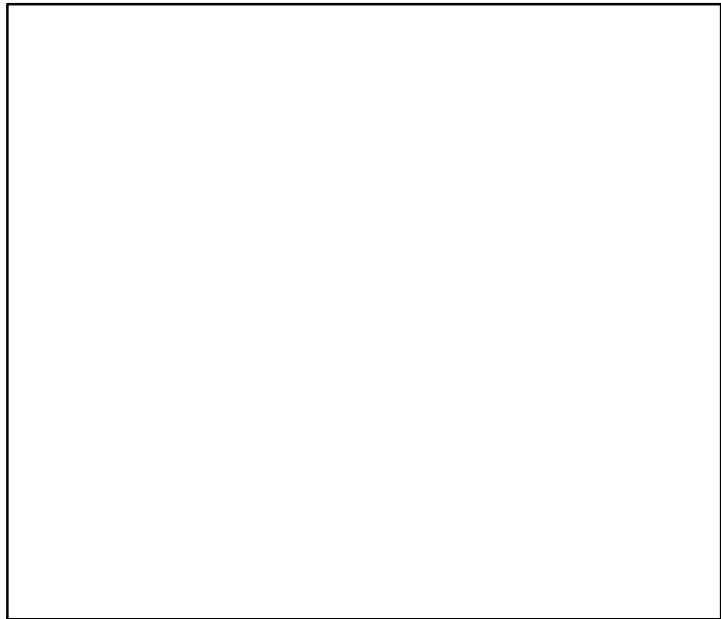
<b>Metadata</b>	
<b>Scientific Name</b>	Trachurus picturatus
<b>Current Assess ID</b>	WGHANSA-BJMACKXa2-1978-2017-ICESIMP2018
<b>Area</b>	Azores
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Southern Horse Mackerel, Anchovy and Sardine
<b>Asmts in RAM</b>	2016, 2017

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

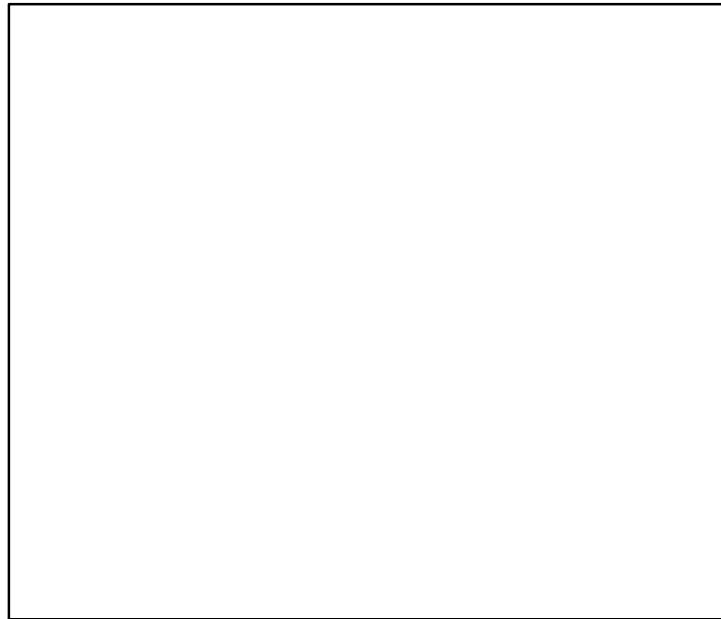
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2016	1140		
<b>TL</b>	TL-MT	2017	991		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Blue jack mackerel Azores [BJMACKXa2]**

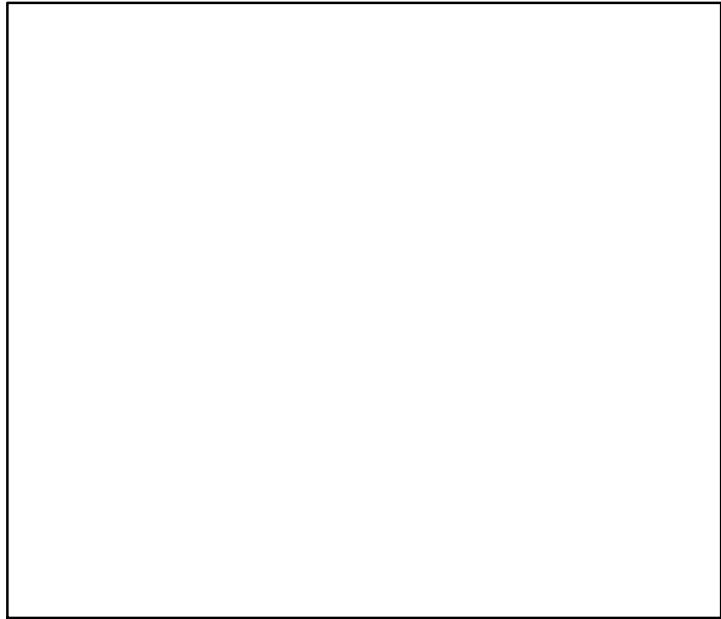
**Kobe MSY\***



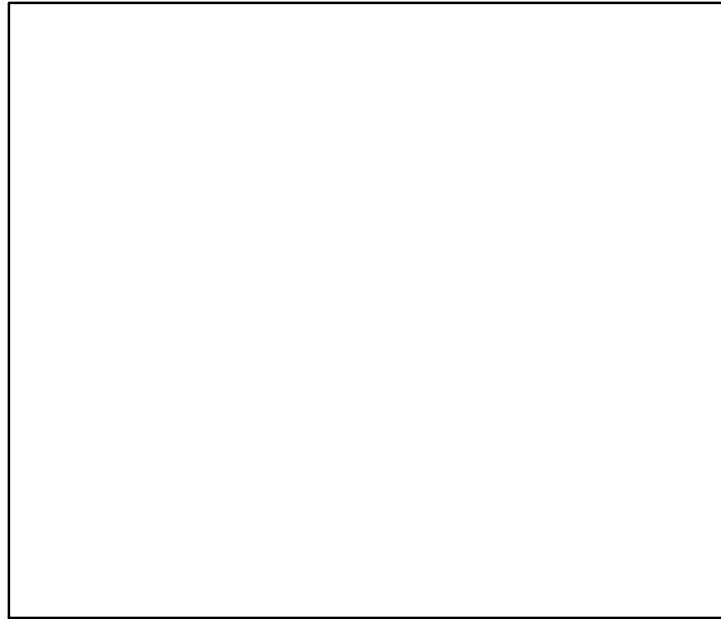
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

**Blue jack mackerel Azores [BJMACKXa2]**

**TB\***



**SSB\***



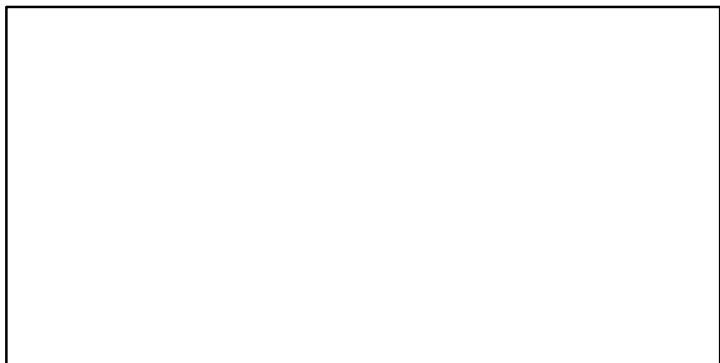
**TN \***



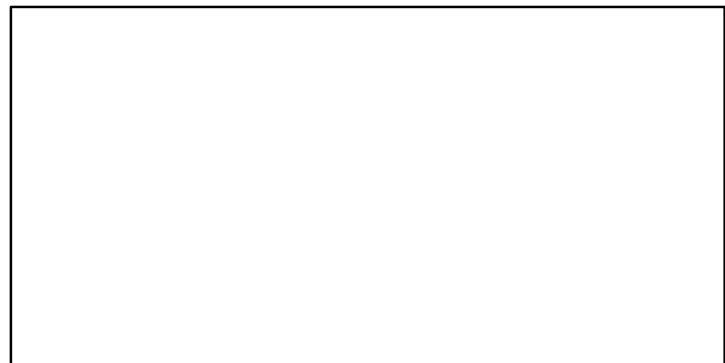
**F\***



**ER\***



**Recruits\***

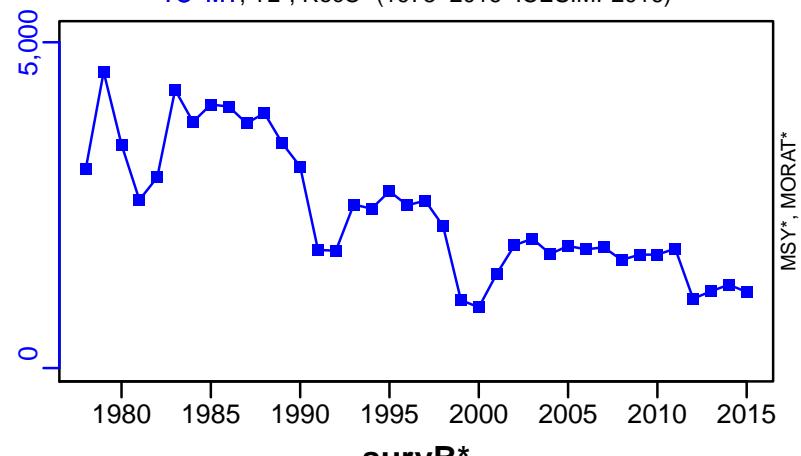


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

Blue jack mackerel Azores [BJMACKXa2]

TC-MT, TL\*, RecC\* (1978–2016—ICESIMP2016)

TAC\*, Cpair\*, Cadv\*



survB\*

CPUE\*

EFFORT\*

CdivMSY\*

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

## Black scabbardfish Northeast Atlantic [BKSFNEATL]

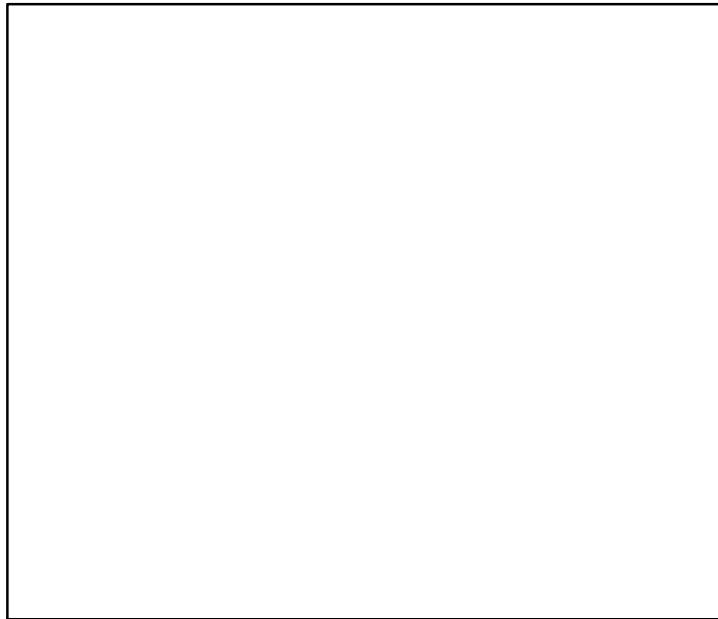
<b>Metadata</b>	
<b>Scientific Name</b>	Aphanopus carbo
<b>Current Assess ID</b>	WGDEEP-BKSFNEATL-1988-2017-ICESIMP2018
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2017, 2013

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

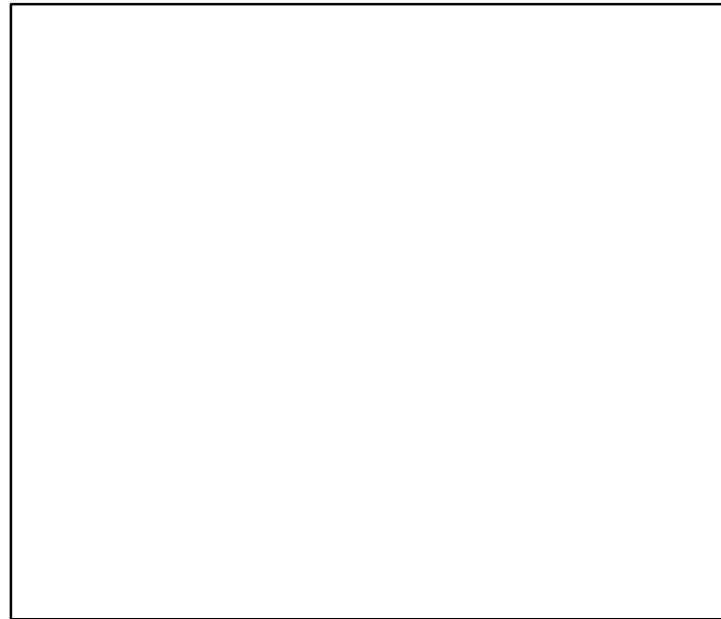
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	F-1/yr	2013	0.022	-	-	
<b>ER</b>	ER-ratio	2017	0.056	-	-	
<b>TC</b>	TC-MT	2017	5			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Black scabbardfish Northeast Atlantic [BKSFNEATL]**

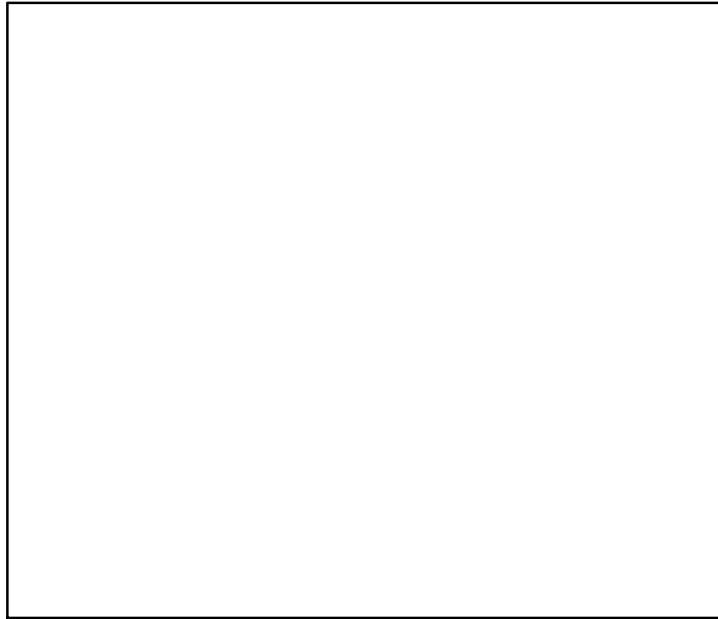
**Kobe MSY\***



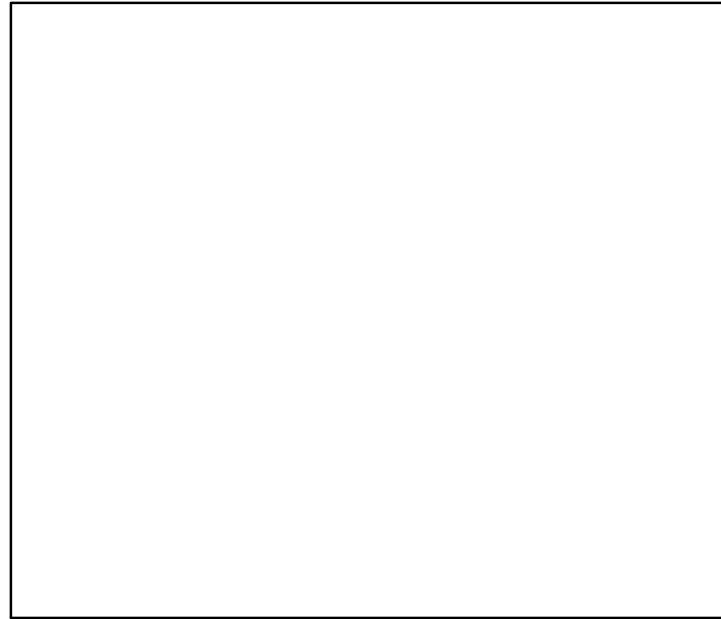
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

**Black scabbardfish Northeast Atlantic [BKSFNEATL]**

**TB\***



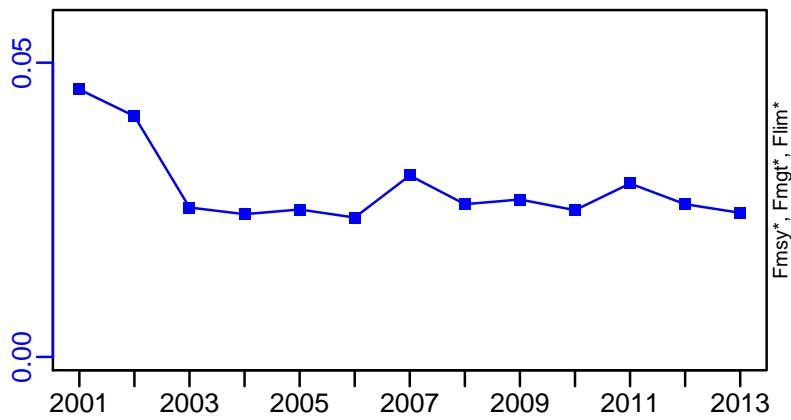
**SSB\***



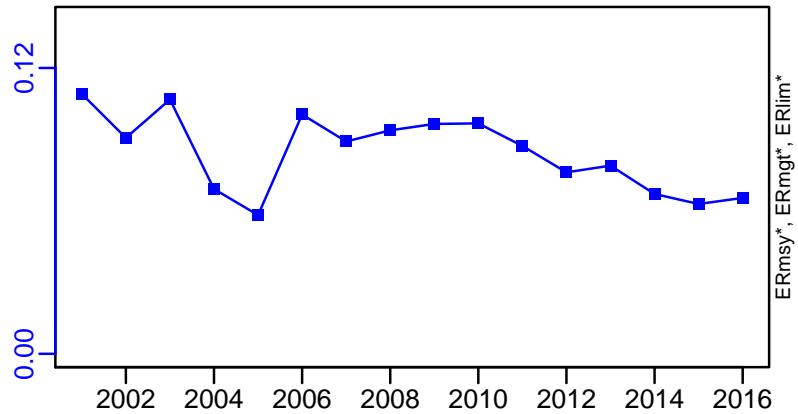
**TN \***



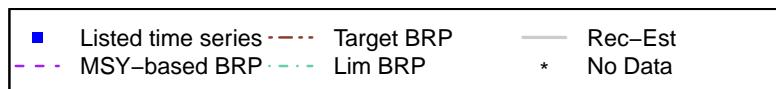
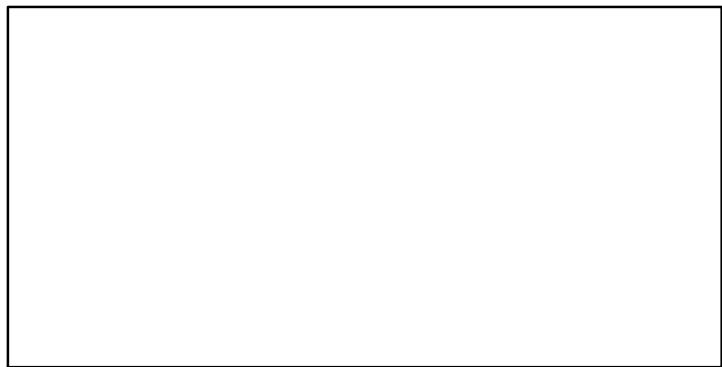
**F-1/yr (2001–2013–ICESIMP2018)**



**ER-ratio (1988–2017–ICESIMP2018)**



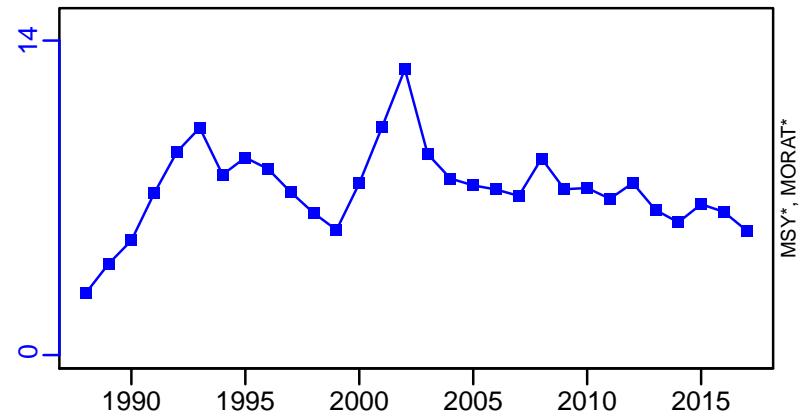
**Recruits\***



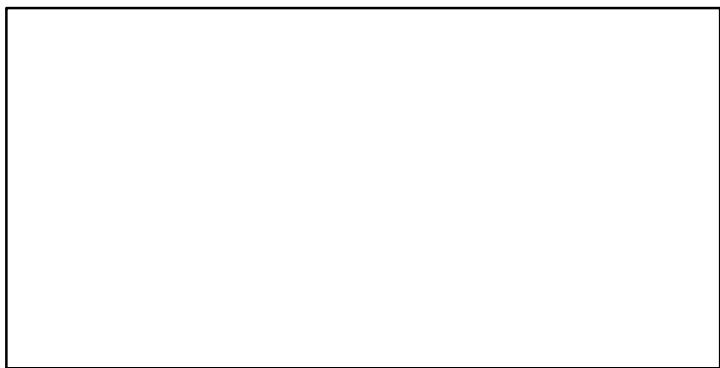
**Black scabbardfish Northeast Atlantic [BKSFNEATL]**

TC-MT, TL\*, RecC\* (1988–2017–ICESIMP2018)

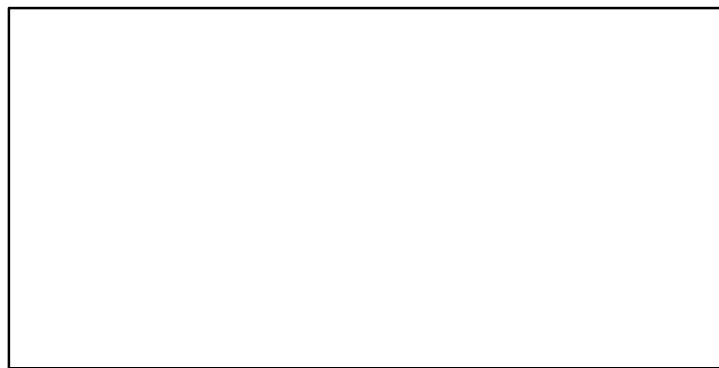
**TAC\*, Cpair\*, Cadv\***



**survB\***



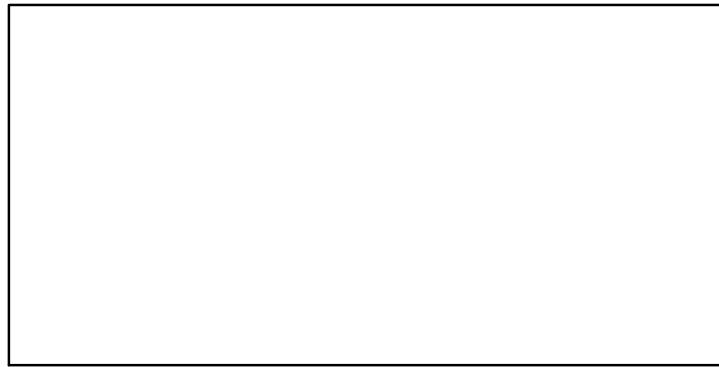
**CPUE\***



**EFFORT\***



**CdivMSY\***



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

## Blue ling ICES 1-2-3a-4a-8-9-12 [BLINGI-II-IIIa-IVa-VIII-IX-XII]

<b>Metadata</b>	
<b>Scientific Name</b>	Molva dypterygia
<b>Current Assess ID</b>	WGDEEP-BLINGI-II-IIIa-IVa-VIII-IX-XII-1988-2018-ICESIMP2021
<b>Area</b>	ICES 1-2-3a-4a-8-9-12
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2015, 2016, 2018

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2015	240		
<b>TL</b>	TL-MT	2018	348		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

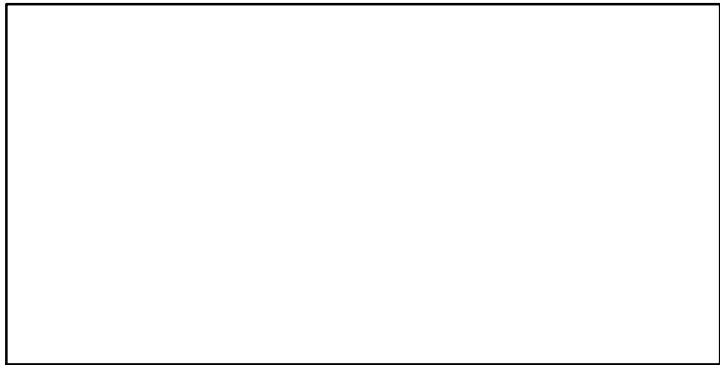
**Spawner Recruit\***

**Production\***

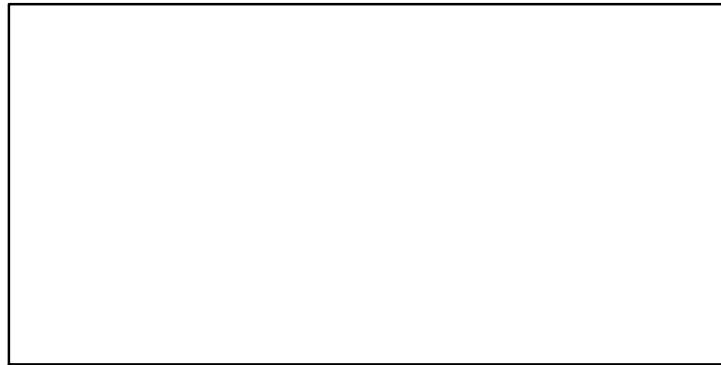
◆ Start Year ♦ End Year \* No Data

**Blue ling ICES 1–2–3a–4a–8–9–12 [BLINGI–II–IIIa–IVa–VIII–IX–XII]**

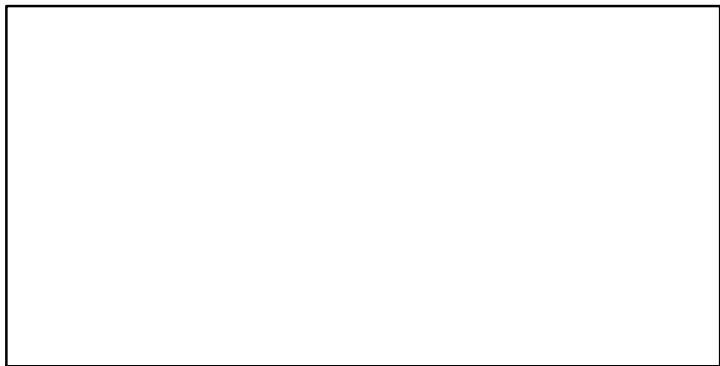
**TB\***



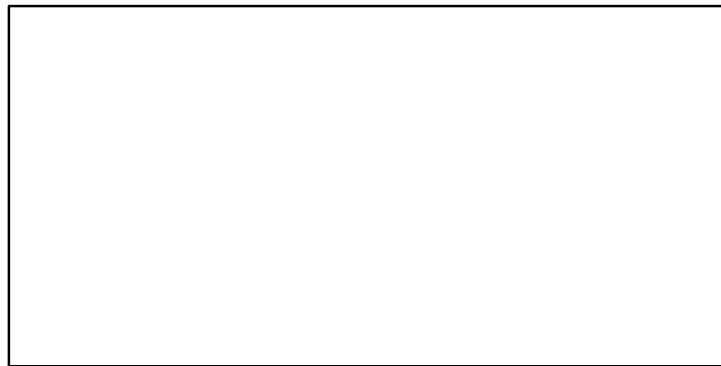
**SSB\***



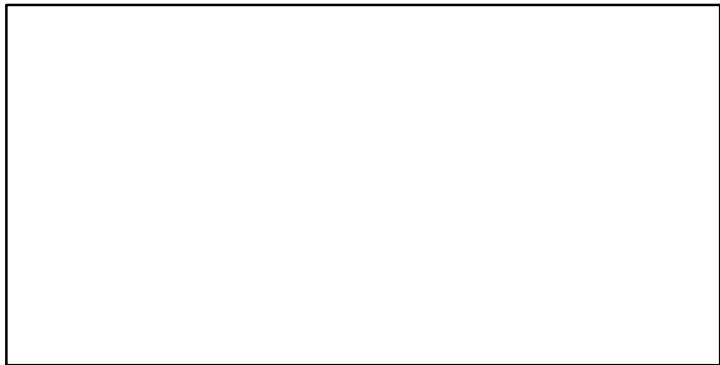
**TN \***



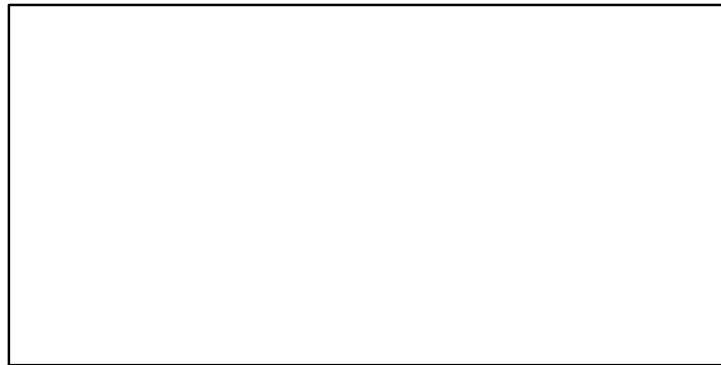
**F\***



**ER\***



**Recruits\***

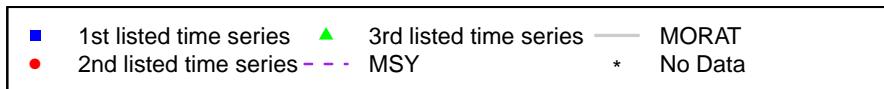
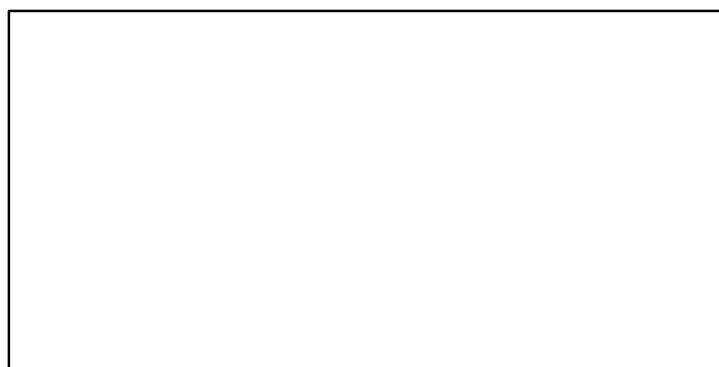
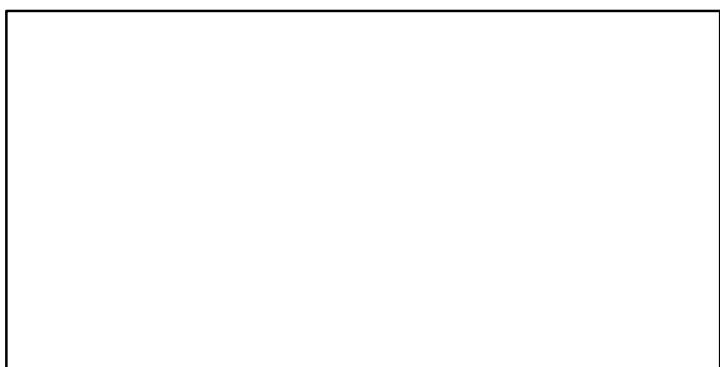
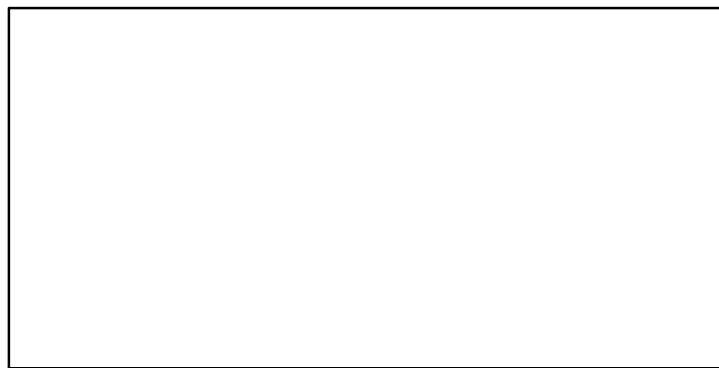
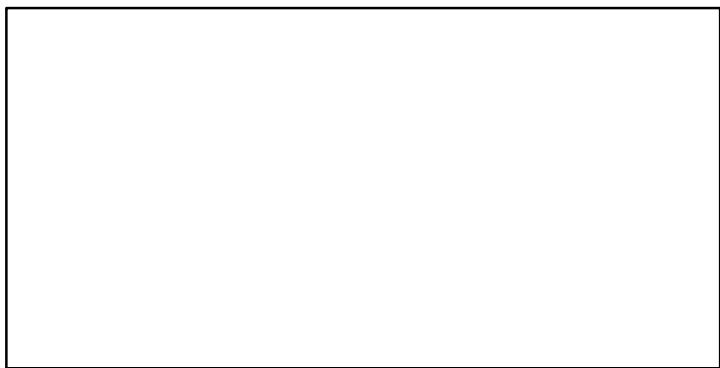
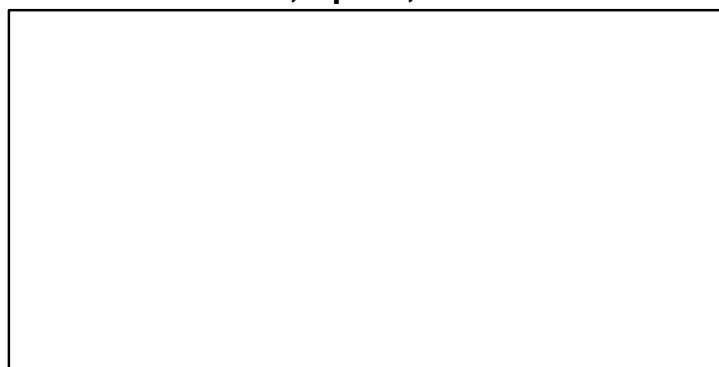
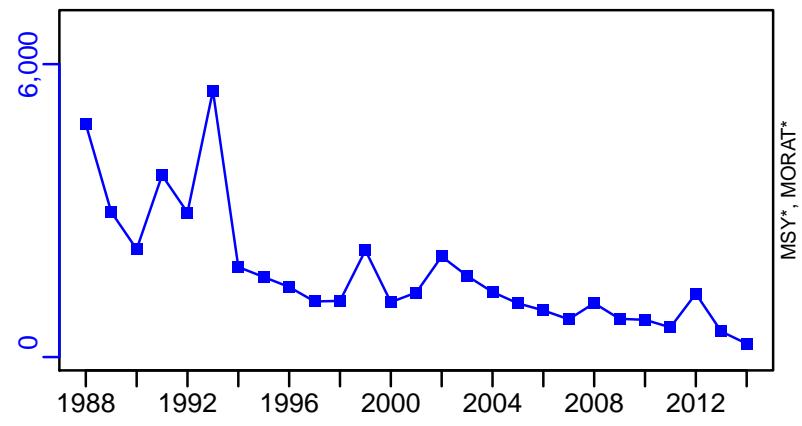


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Blue ling ICES 1–2–3a–4a–8–9–12 [BLINGI–II–IIIa–IVa–VIII–IX–XII]

TC–MT, TL\*, RecC\* (1988–2015–ICESIMP2016)

TAC\*, Cpair\*, Cadv\*



## Blue ling ICES 5b-6-7 [BLINGVb-VI-VII]

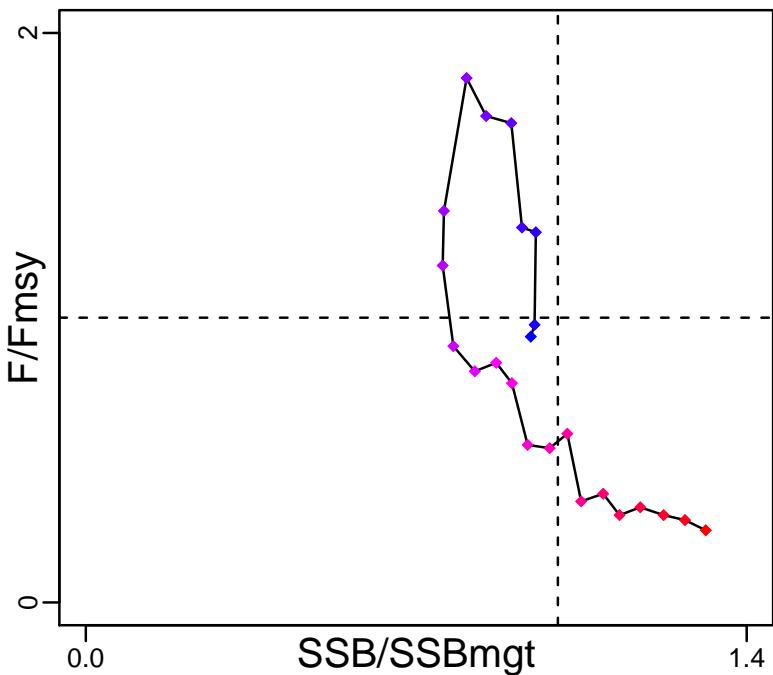
<b>Metadata</b>	
<b>Scientific Name</b>	Molva dypterygia
<b>Current Assess ID</b>	WGDEEP-BLINGVb-VI-VII-1966-2018-ICESIMP2018
<b>Area</b>	ICES 5b-6-7
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2016, 2018, 2014

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2014	34,196
<b>Fmsy</b>	Fmsy-1/yr	2018	0.12
<b>ERmsy</b>	ERmsy-est-ratio	2018	0.044
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	75,000
<b>Fmgt</b>	Fmgt-1/yr	2018	0.12
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2014	10,973
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	54,000
<b>Flim</b>	Flim-1/yr	2018	0.17
<b>ERlim</b>	-	-	-

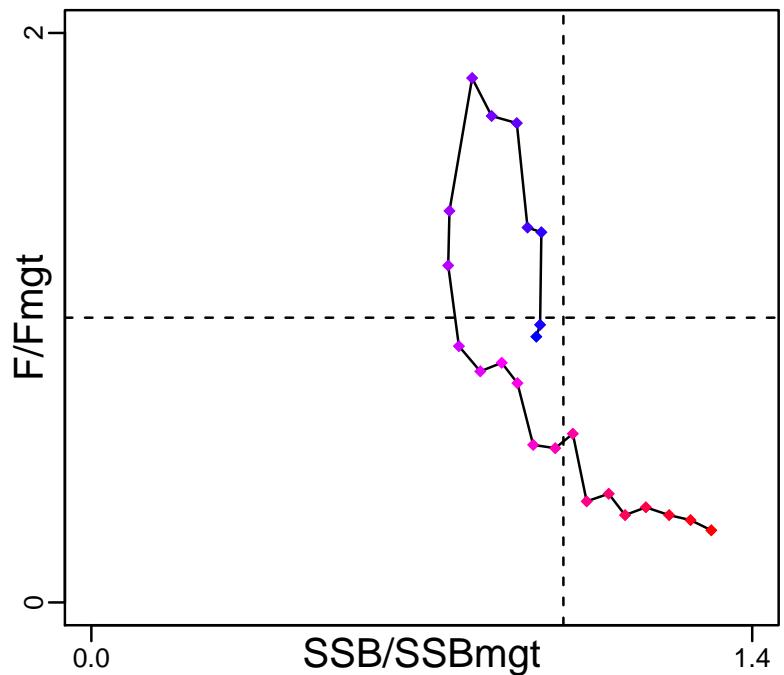
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	SSB-MT	2018	102,000	Both	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2018	3,480,000	-	9	
<b>F</b>	F-1/yr	2018	0.03	-	9 to 19	
<b>ER</b>	ER-calc-ratio	2018	0.008	-	-	
<b>TC</b>	TC-MT	2018	2670			
<b>TL</b>	TL-MT	2018	2670			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2014	1.994			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.253			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2018	0.192			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	1.36			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2018	0.253			
<b>ER/ERmgt</b>	-	-	-			

Blue ling ICES 5b–6–7 [BLINGVb–VI–VII]

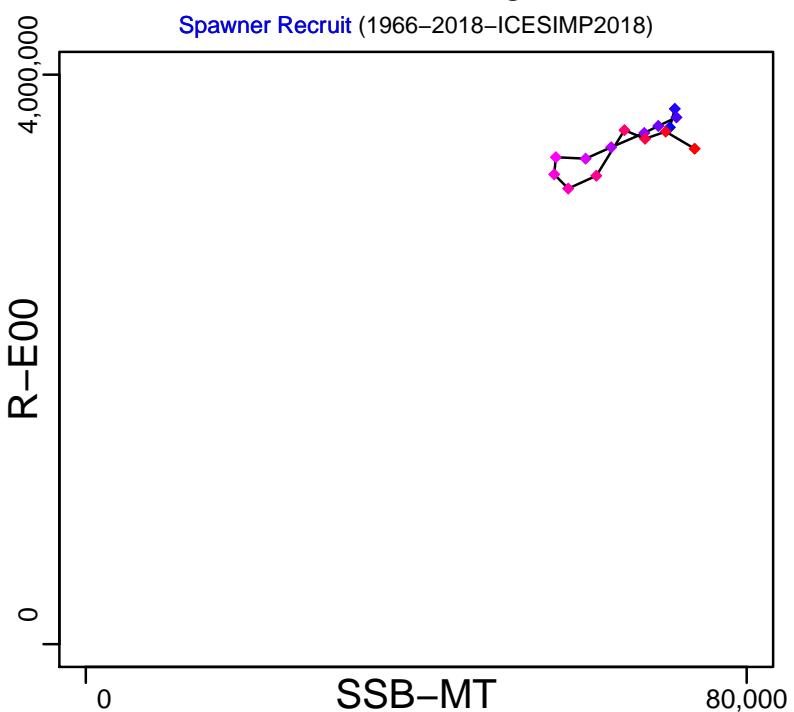
Kobe MSYpref (1966–2018–ICESIMP2018)



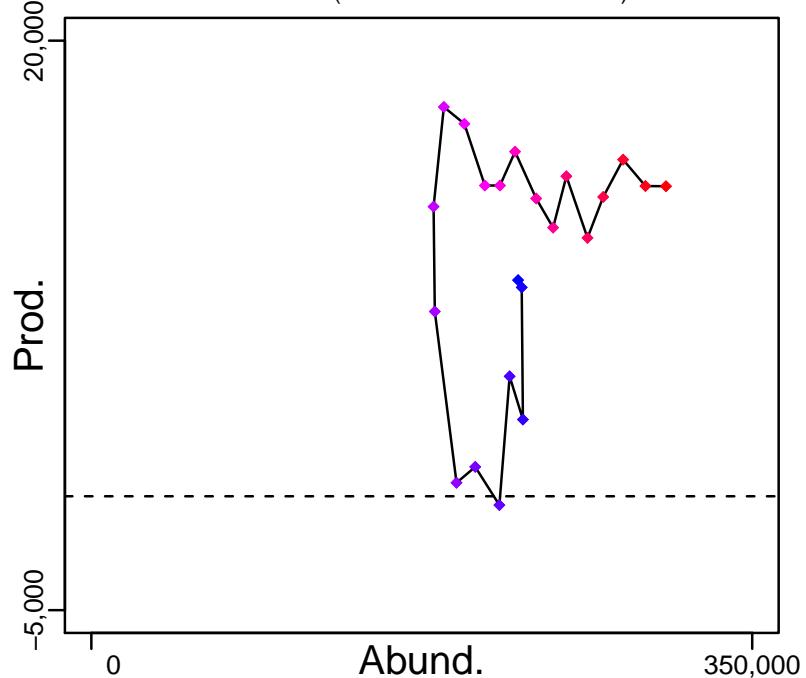
Kobe MGTpref (1966–2018–ICESIMP2018)



Spawner Recruit (1966–2018–ICESIMP2018)



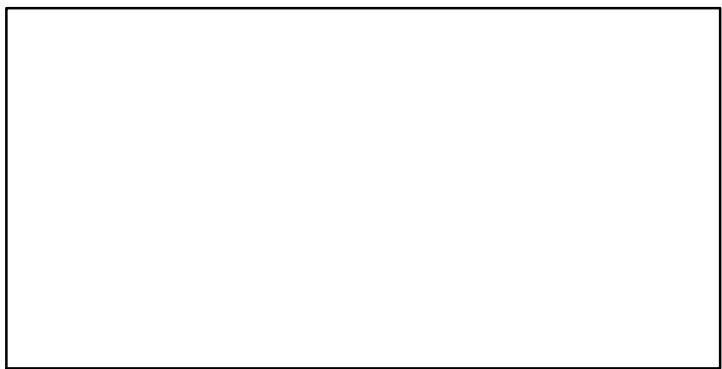
Production (1966–2018–ICESIMP2018)



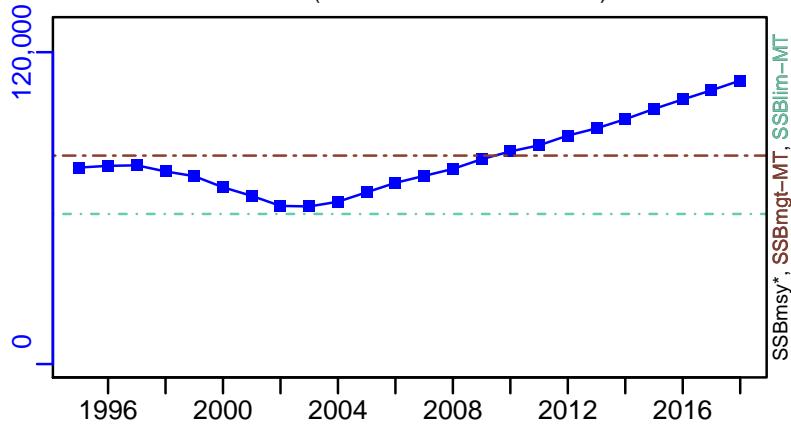
- ◆ Start Year
- ◆ End Year
- \* No Data

Blue ling ICES 5b–6–7 [BLINGVb–VI–VII]

**TB\***



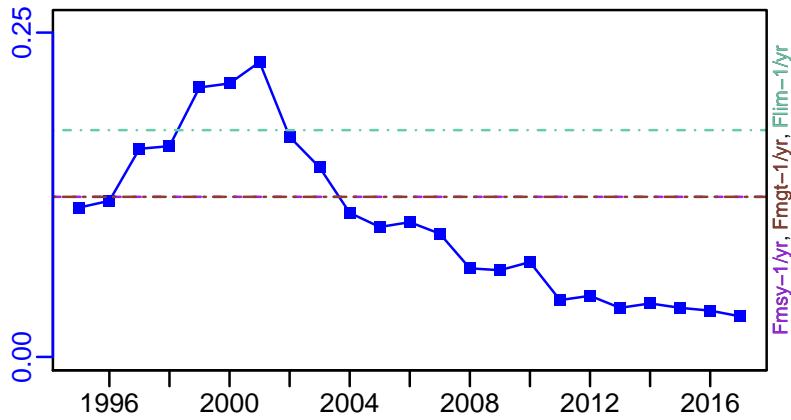
**SSB-MT (1966–2018–ICESIMP2018)**



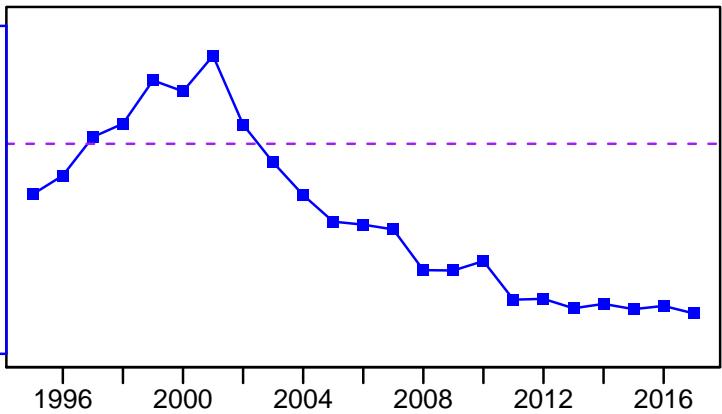
**TN \***



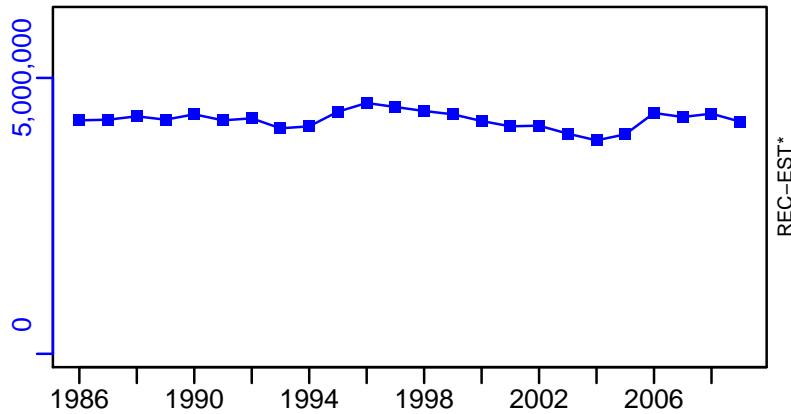
**F-1/yr (1966–2018–ICESIMP2018)**



**ER-calc-ratio (1966–2018–ICESIMP2018)**



**R-E00 (1966–2018–ICESIMP2018)**

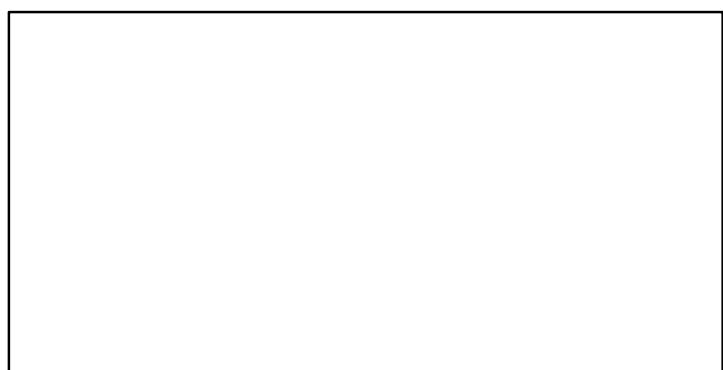
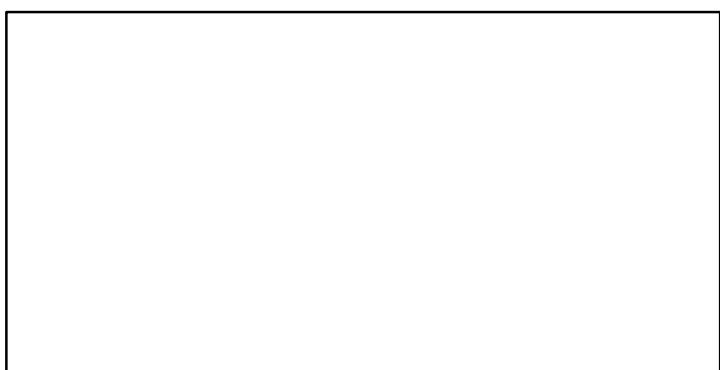
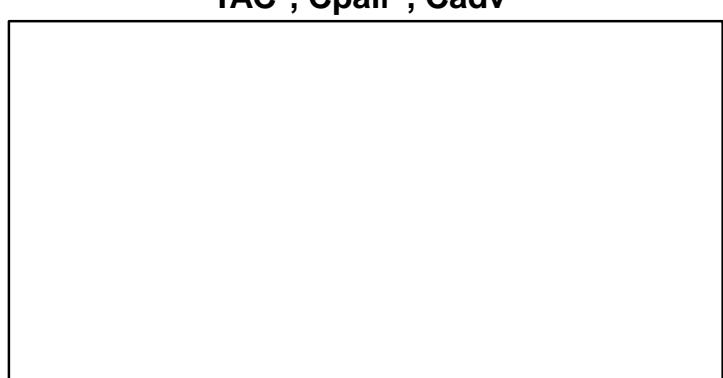
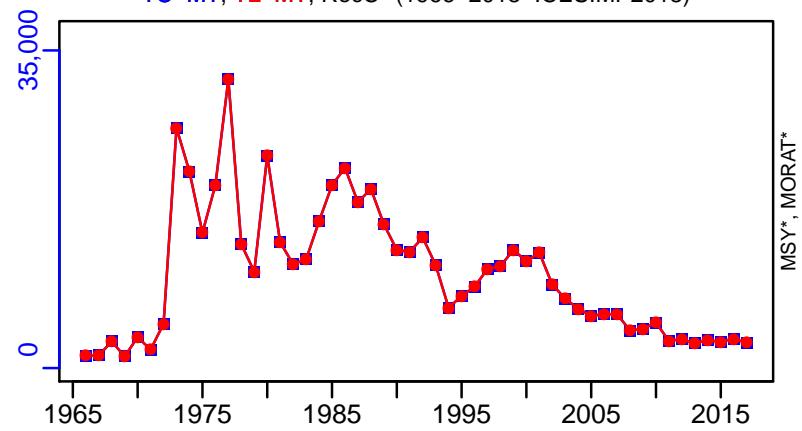


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

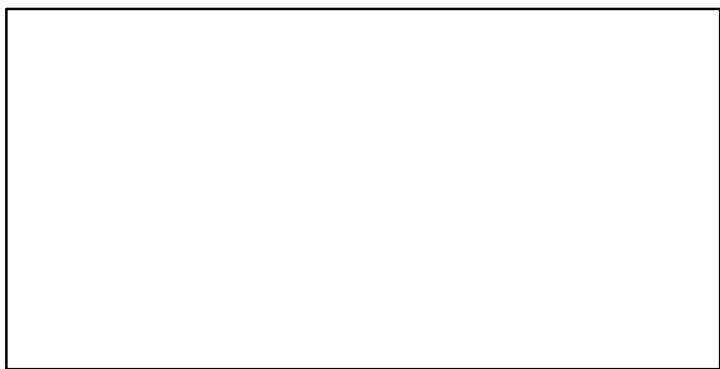
Blue ling ICES 5b–6–7 [BLINGVb–VI–VII]

TC–MT, TL–MT, RecC\* (1966–2018–ICESIMP2018)

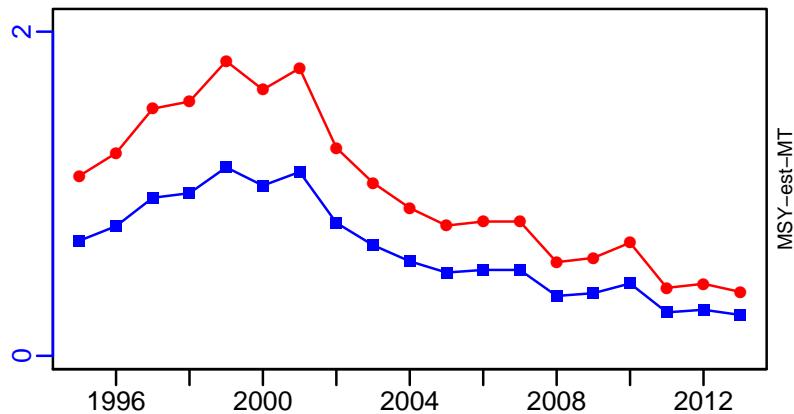
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TC–MT/MSY–est–MT, CdivMEANC–ratio, (1986–2014–ICESIMP2016)



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

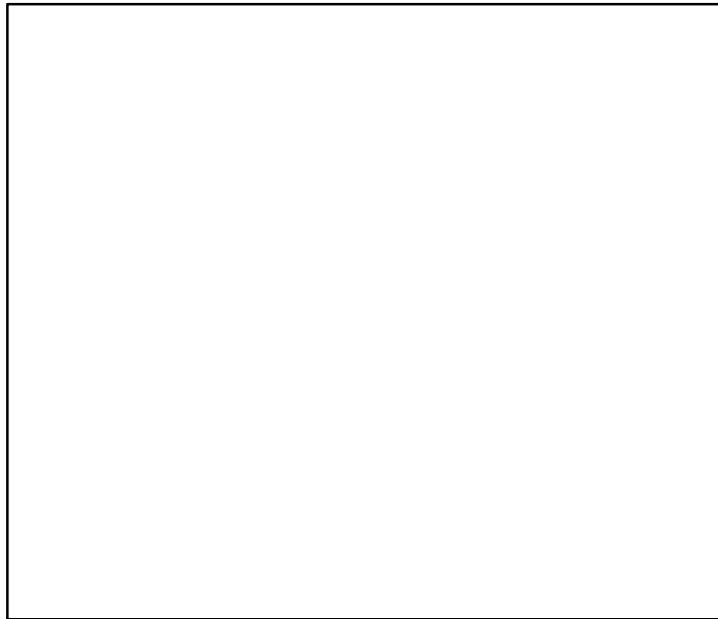
## Blonde ray ICES 4a-6 [BLRAYIVa-VI]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja brachyura
<b>Current Assess ID</b>	WGEF-BLRAYIVa-VI-2005-2018-ICESIMP2021
<b>Area</b>	ICES 4a-6
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2018, 2016

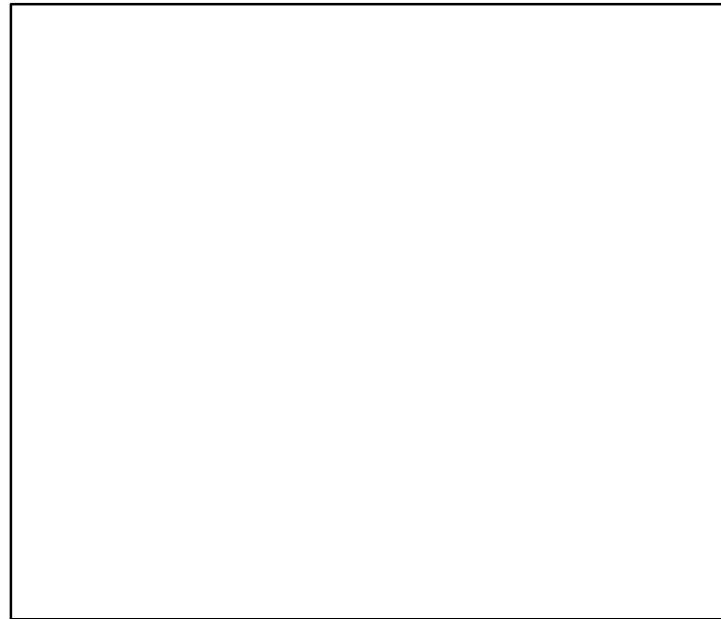
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	27		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

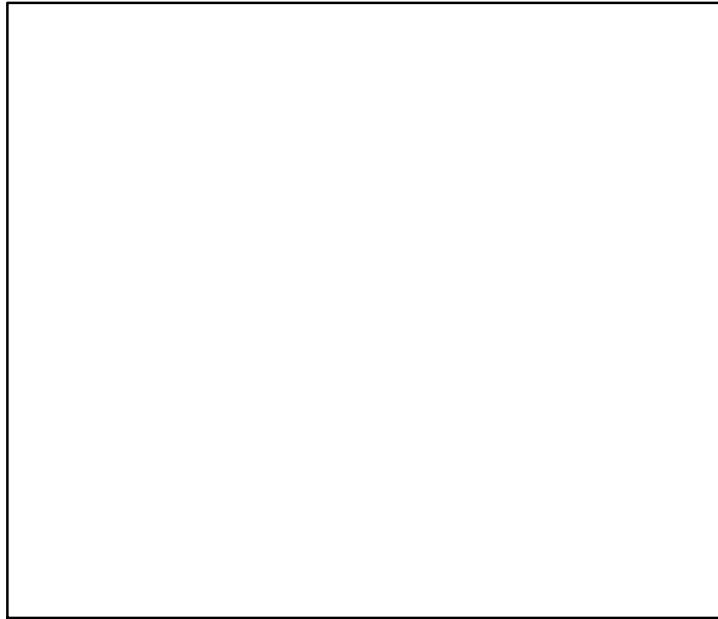
**Kobe MSY\***



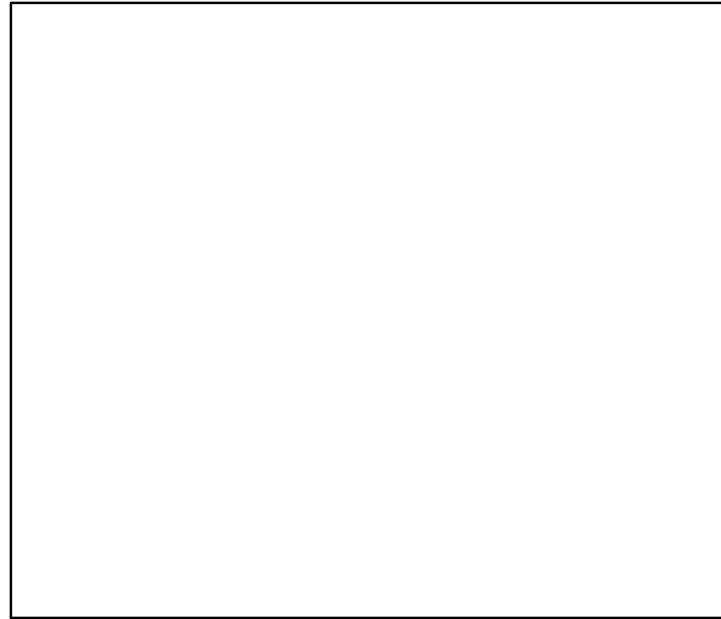
**Kobe MGT\***



**Spawner Recruit\***



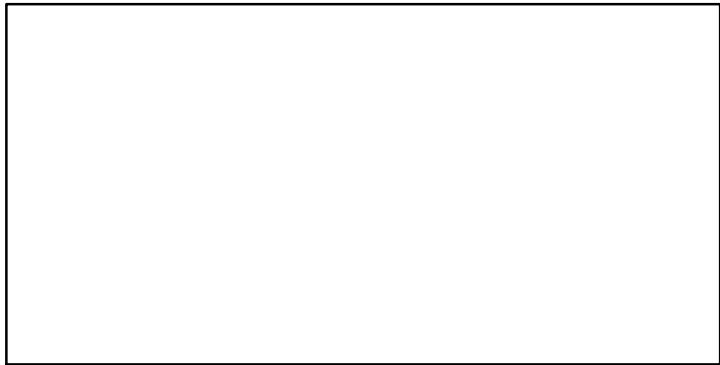
**Production\***



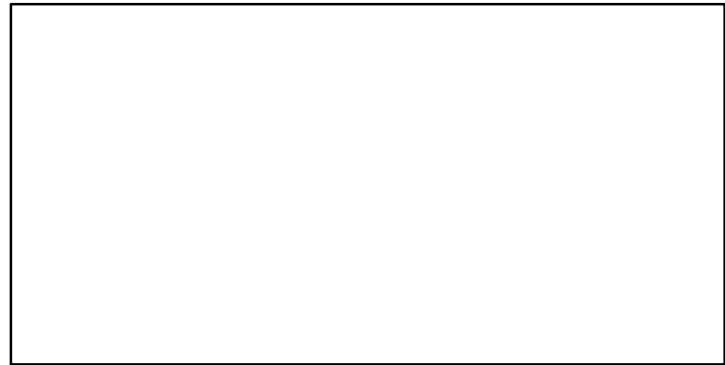
◆ Start Year ♦ End Year \* No Data

**Blonde ray ICES 4a–6 [BLRAYIVa–VI]**

**TB\***



**SSB\***



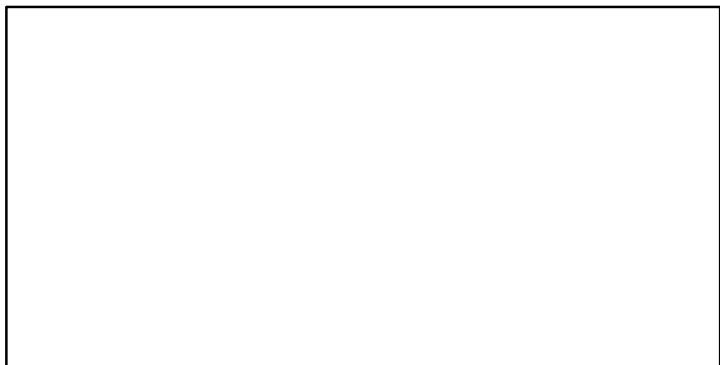
**TN \***



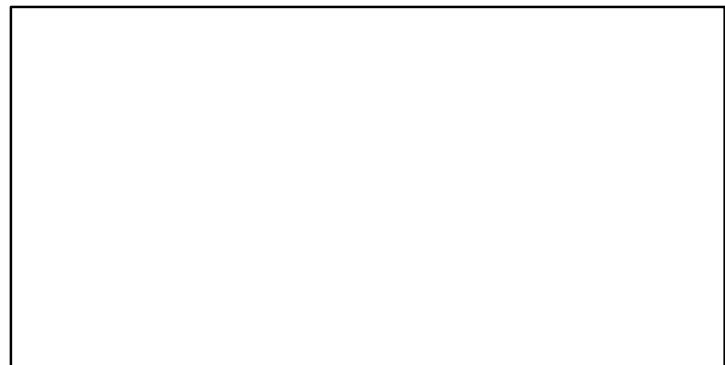
**F\***



**ER\***



**Recruits\***

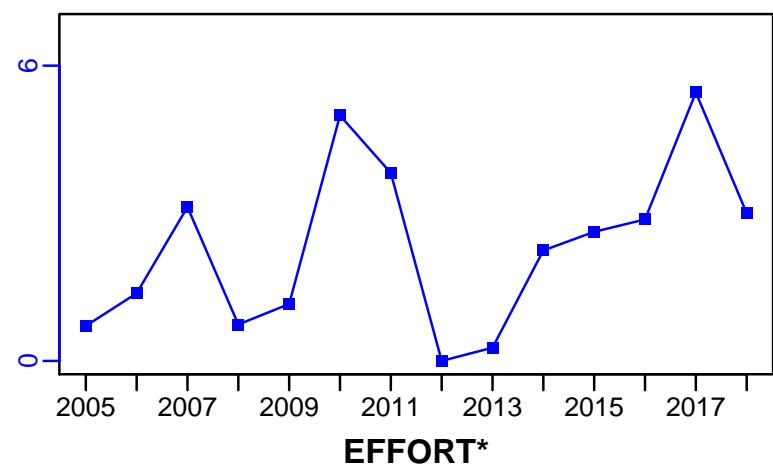
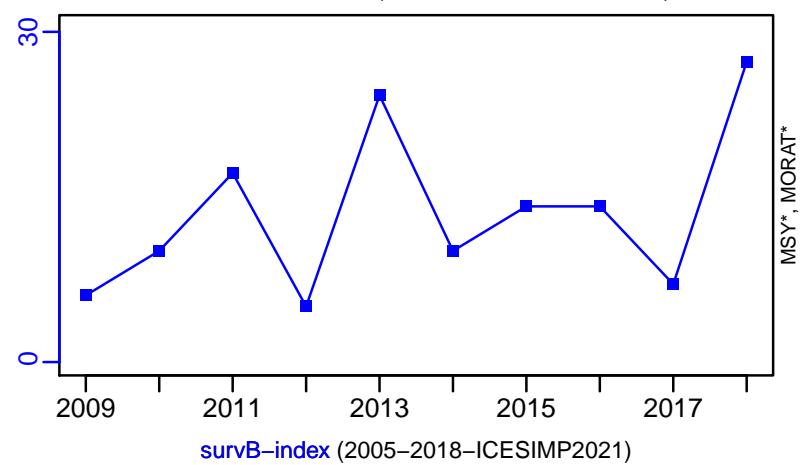


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

**Blonde ray ICES 4a–6 [BLRAYIVa–VI]**

TL-MT, TC\*, RecC\* (2005–2018–ICESIMP2021)

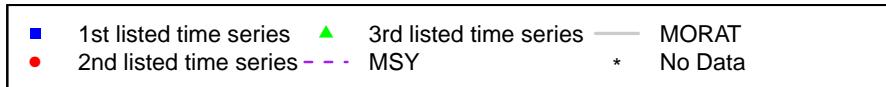
TAC\*, Cpair\*, Cadv\*



**EFFORT\***

**CPUE\***

**CdivMSY\***



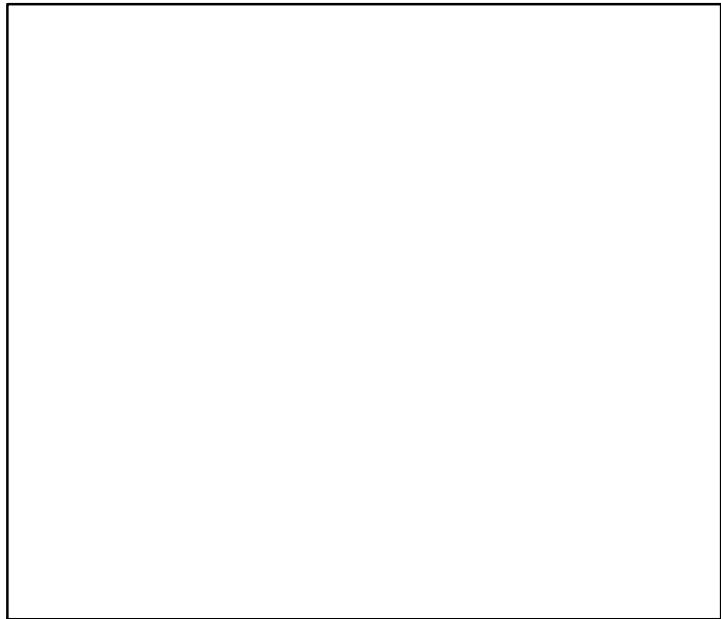
## Blonde ray ICES 4c-7d [BLRAYIVc-VIId]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja brachyura
<b>Current Assess ID</b>	WGEF-BLRAYIVc-VIId-1988-2018-ICESIMP2021
<b>Area</b>	ICES 4c-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2018, 2016

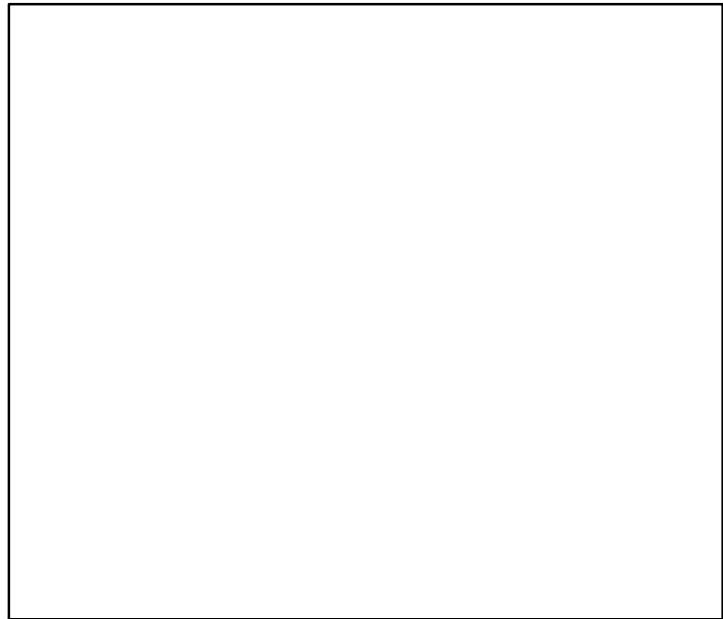
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	251		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

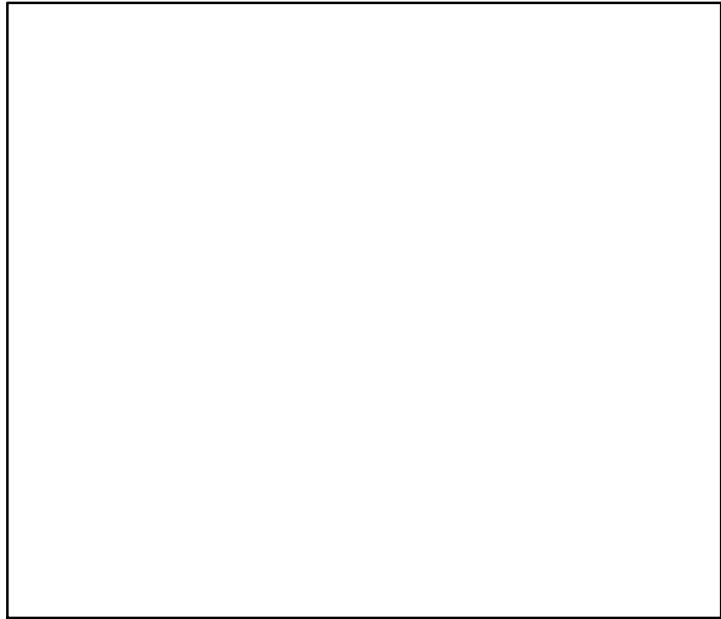
**Kobe MSY\***



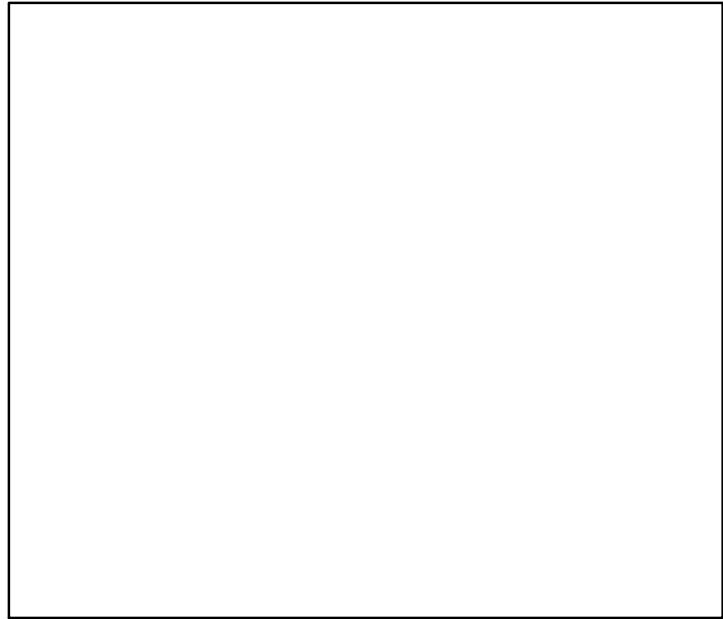
**Kobe MGT\***



**Spawner Recruit\***



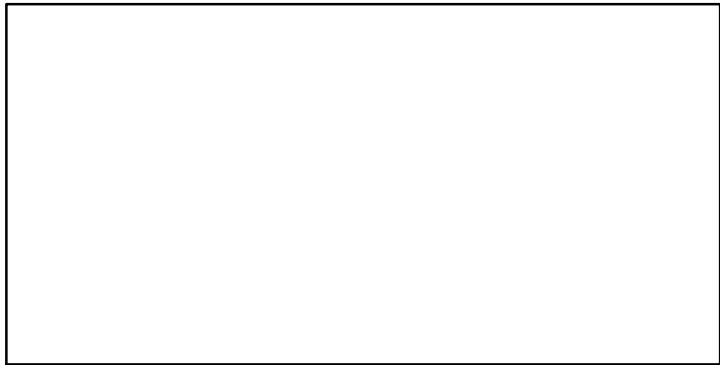
**Production\***



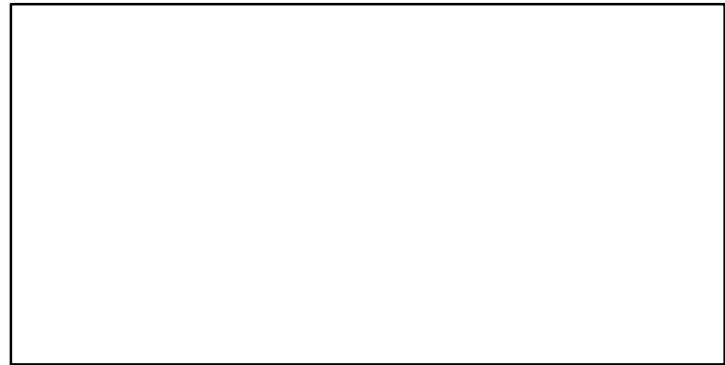
◆ Start Year ♦ End Year \* No Data

**Blonde ray ICES 4c–7d [BLRAYIVc–VIIId]**

**TB\***



**SSB\***



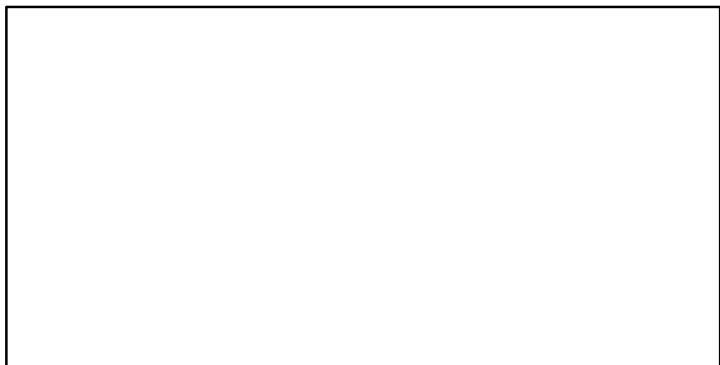
**TN \***



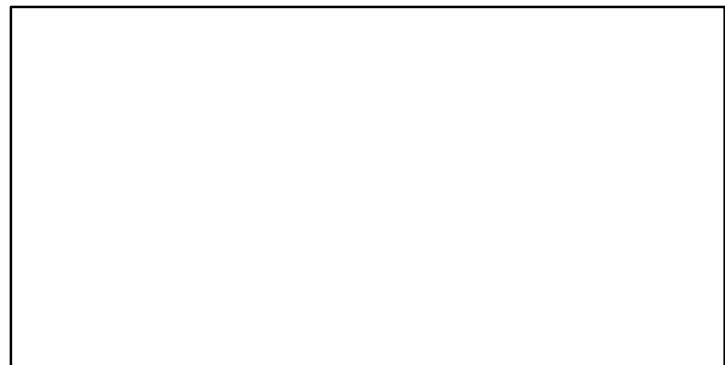
**F\***



**ER\***



**Recruits\***

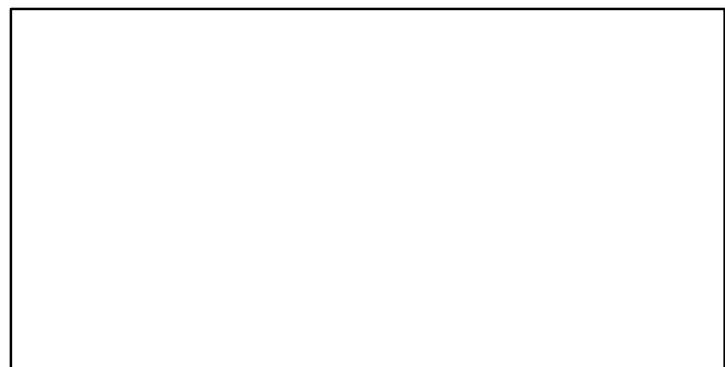
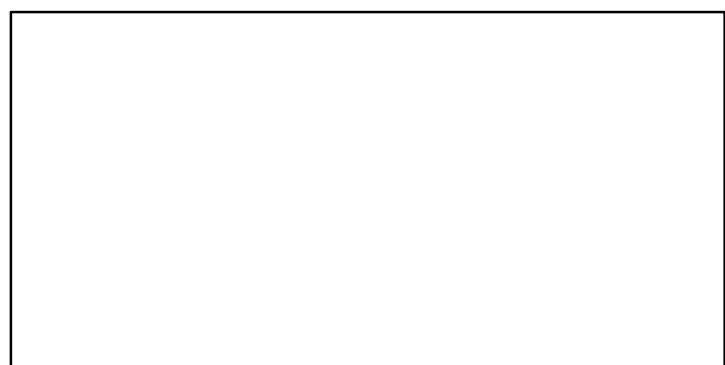
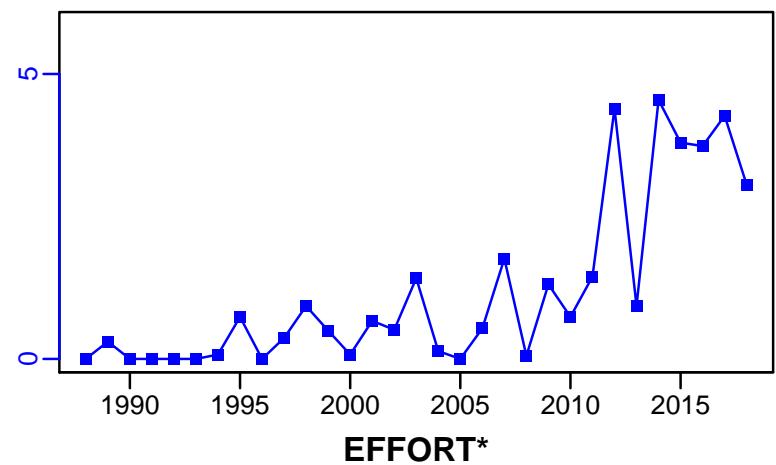
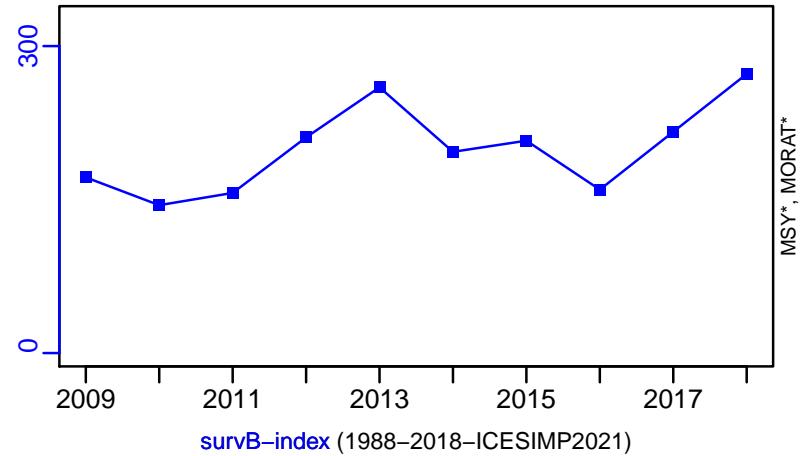


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Blonde ray ICES 4c–7d [BLRAYIVc–VIIId]

TL–MT, TC\*, RecC\* (1988–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

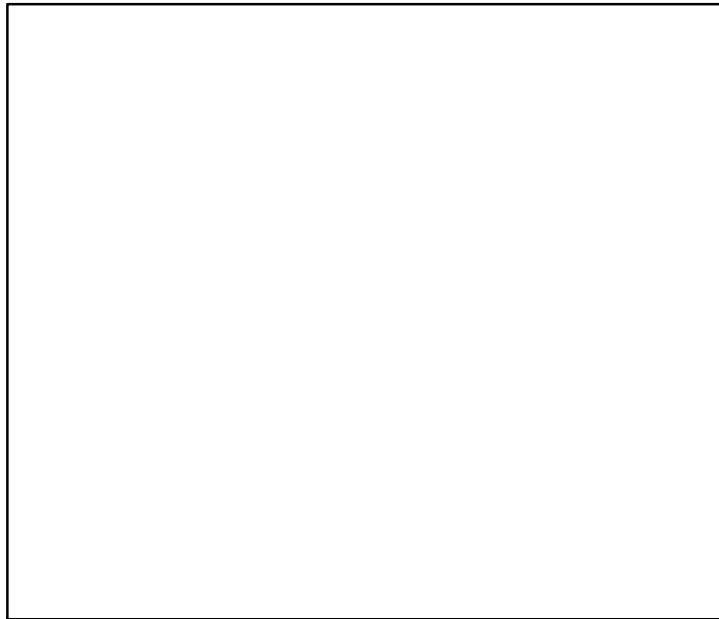
## Blonde ray Portugese Waters -East [BLRAYIXa]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja brachyura
<b>Current Assess ID</b>	WGEF-BLRAYIXa-2005-2015-ICESIMP2018
<b>Area</b>	Portugese Waters -East
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

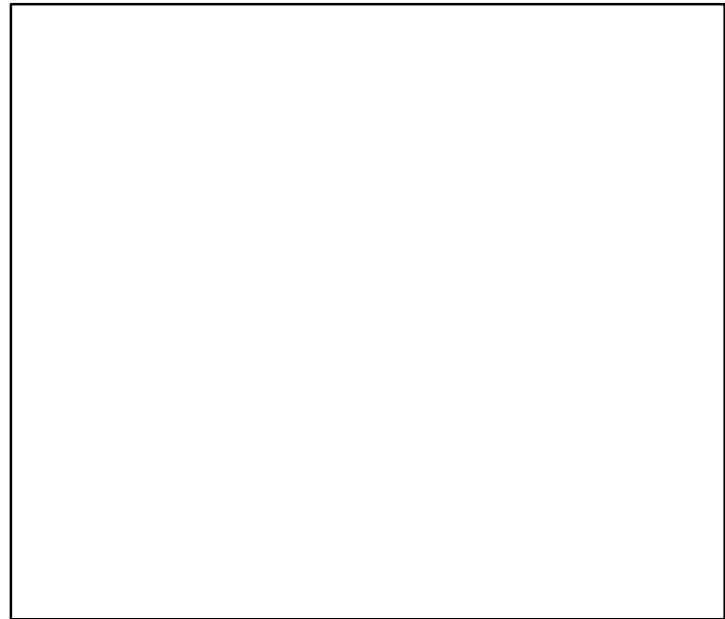
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	1.09	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	218		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

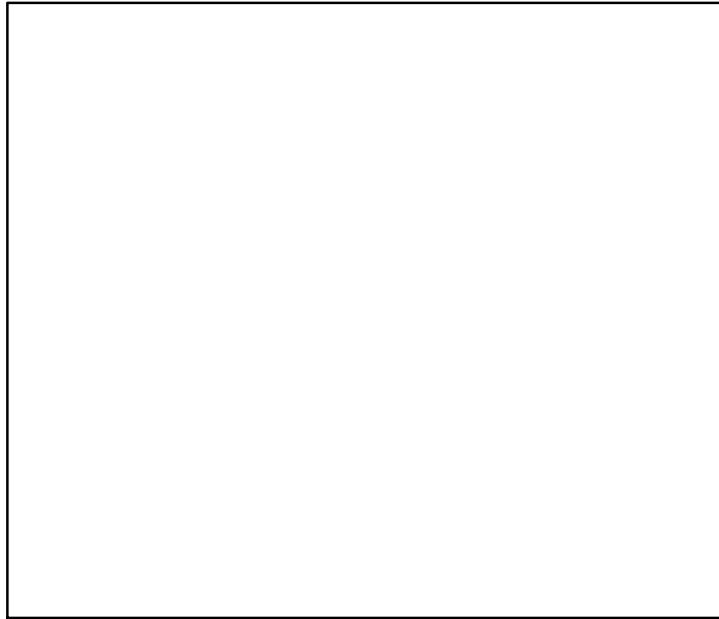
**Kobe MSY\***



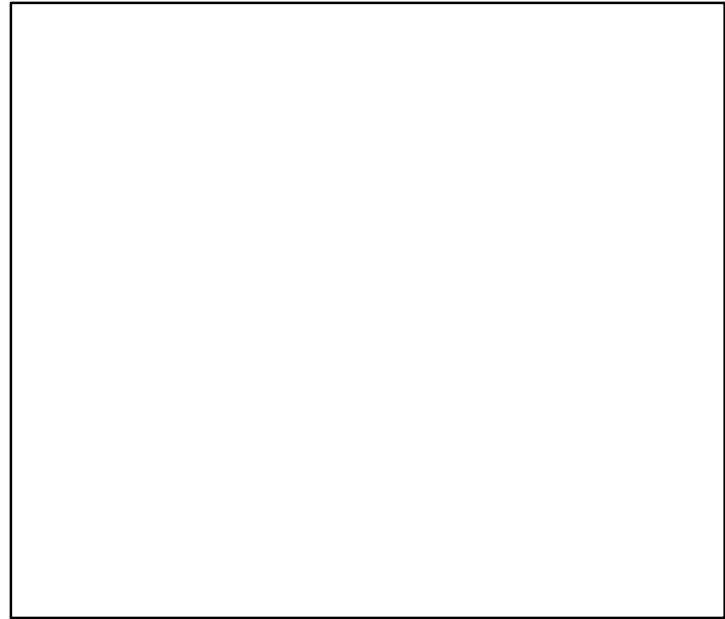
**Kobe MGT\***



**Spawner Recruit\***



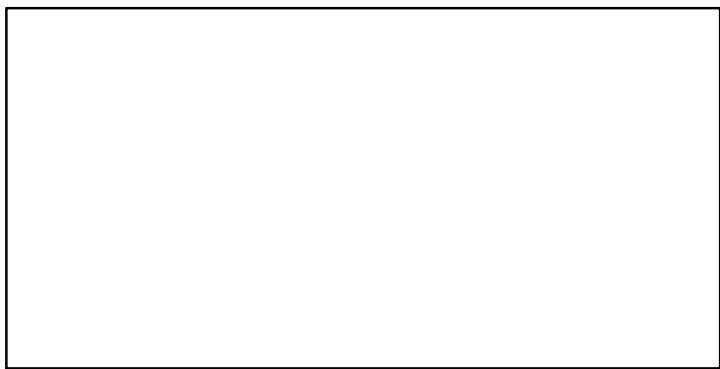
**Production\***



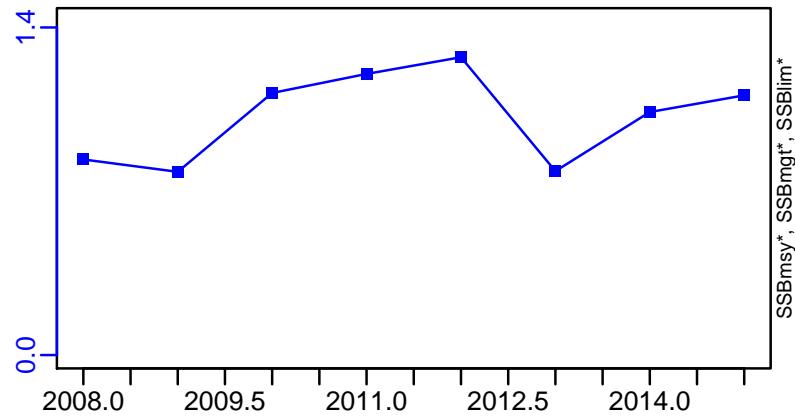
◆ Start Year ◆ End Year \* No Data

Blonde ray Portuguese Waters –East [BLRAYIXa]

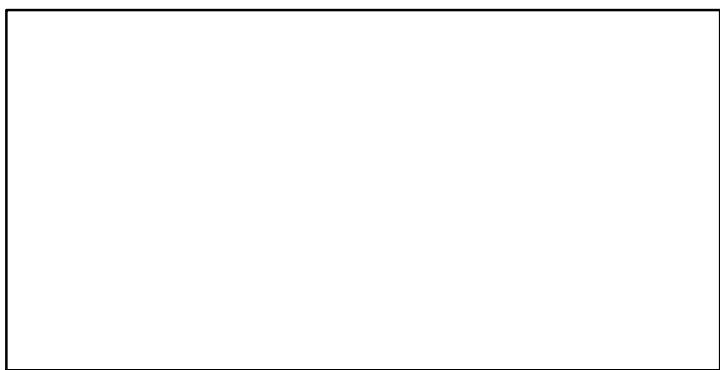
**TB\***



SSB–index (2005–2015–ICESIMP2018)



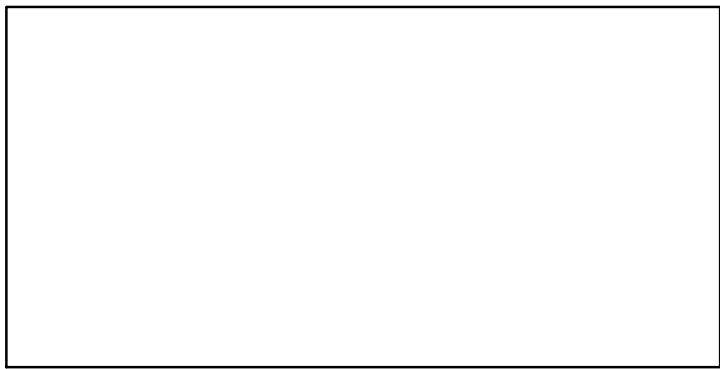
**TN \***



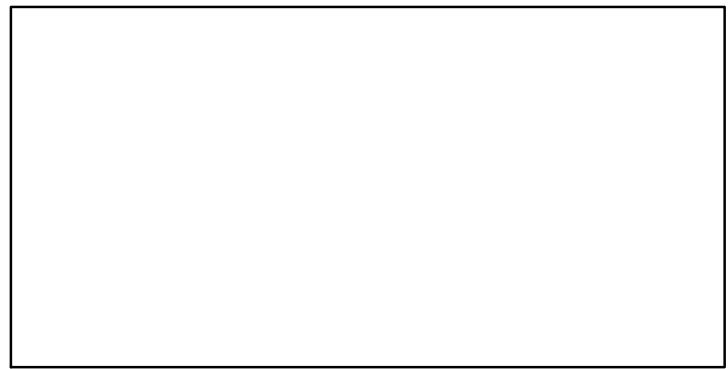
**F\***



**ER\***



**Recruits\***

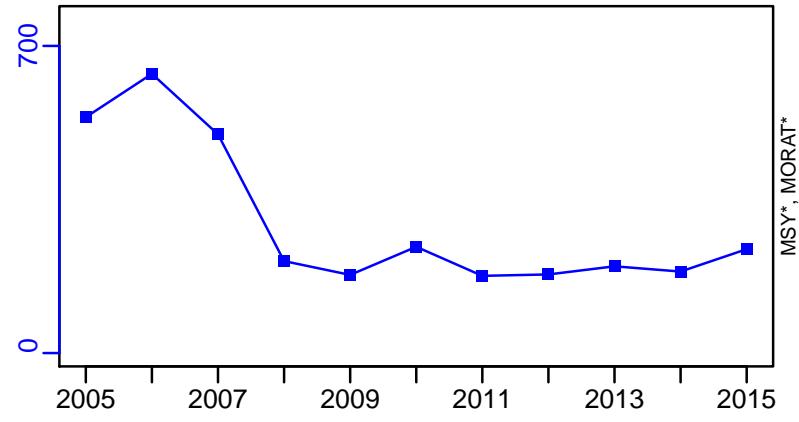


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

**Blonde ray Portuguese Waters –East [BLRAYIXa]**

TL-MT, TC\*, RecC\* (2005–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



**survB\***

MSY\*, MORAT\*

**CPUE\***

**EFFORT\***

**CdivMSY\***

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

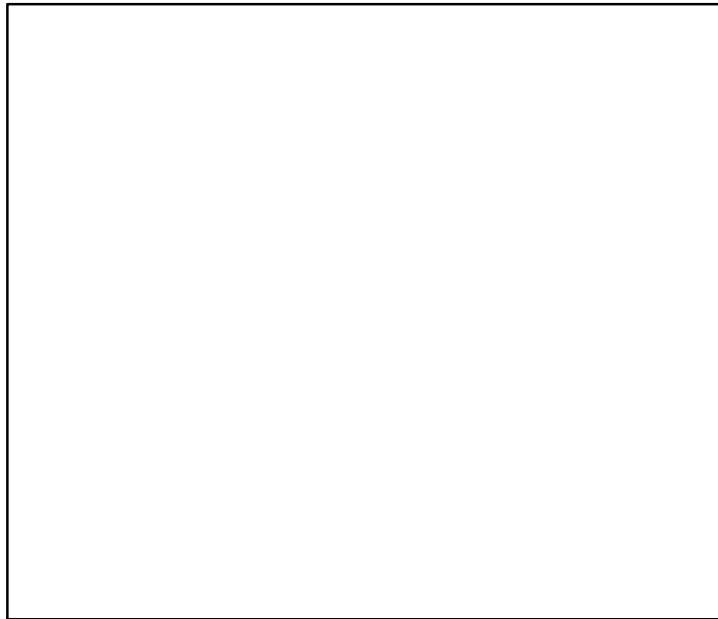
## Blonde ray ICES 7afg [BLRAYVIIafg]

Metadata	
<b>Scientific Name</b>	Raja brachyura
<b>Current Assess ID</b>	WGEF-BLRAYVIIafg-1993-2015-ICESIMP2018
<b>Area</b>	ICES 7afg
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

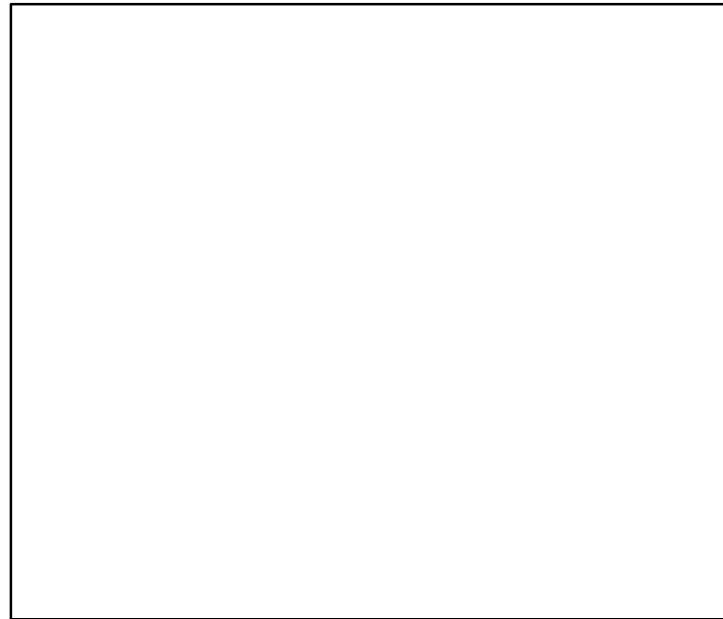
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	1170		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

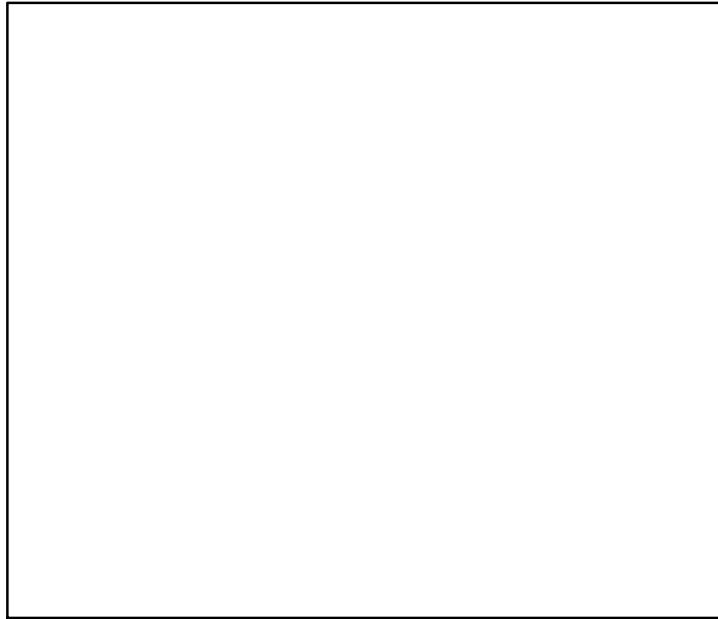
**Kobe MSY\***



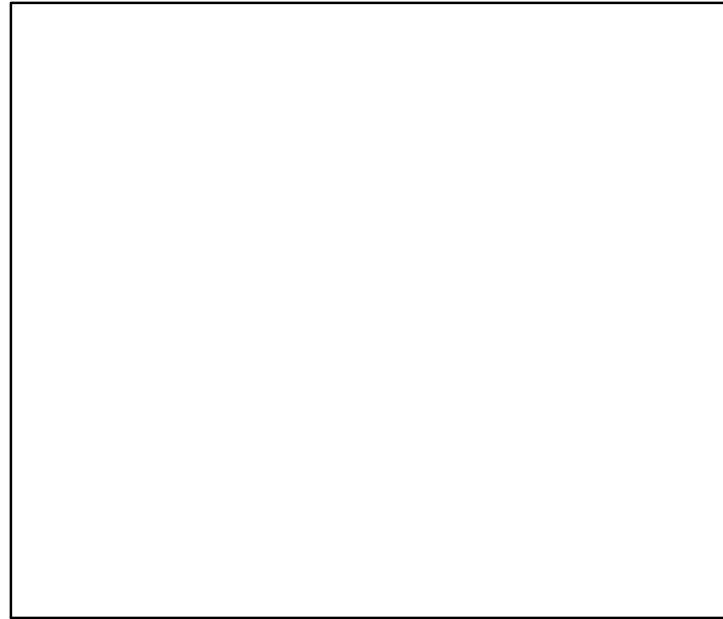
**Kobe MGT\***



**Spawner Recruit\***



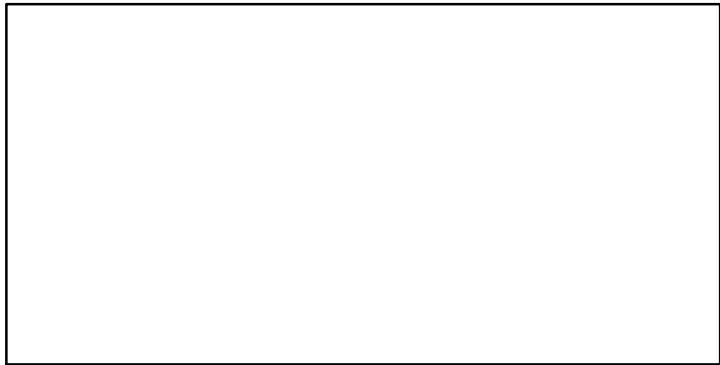
**Production\***



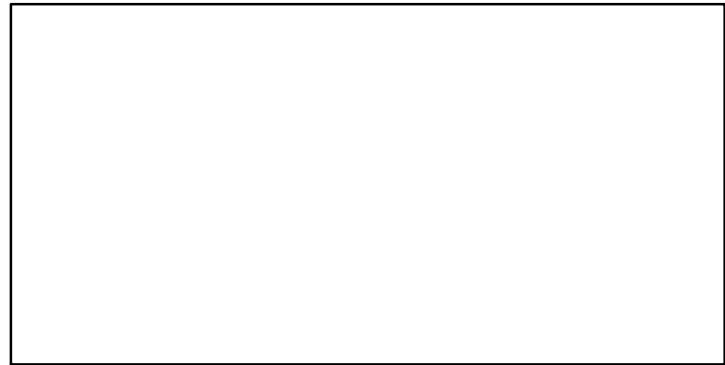
◆ Start Year ♦ End Year \* No Data

Blonde ray ICES 7afg [BLRAYVIIafg]

**TB\***



**SSB\***



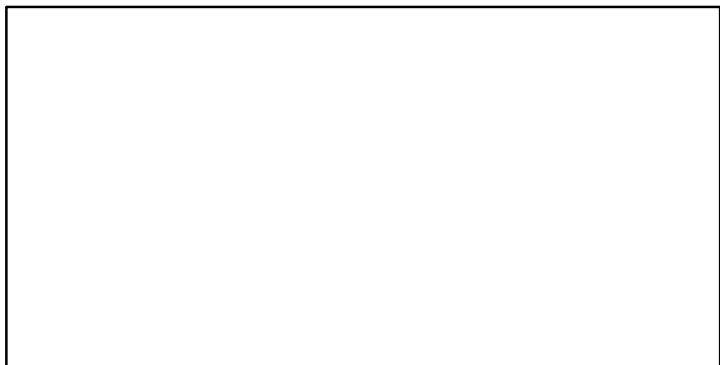
**TN \***



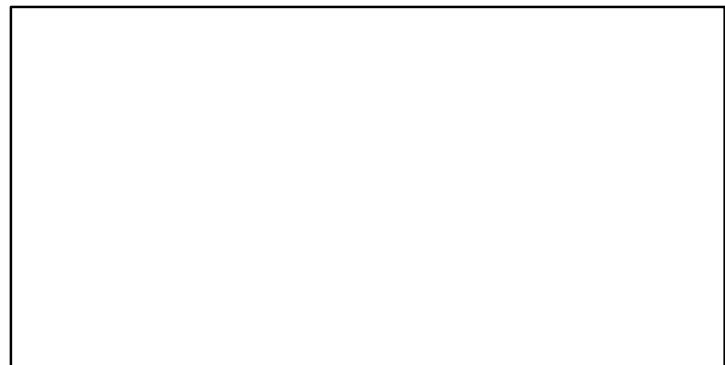
**F\***



**ER\***



**Recruits\***

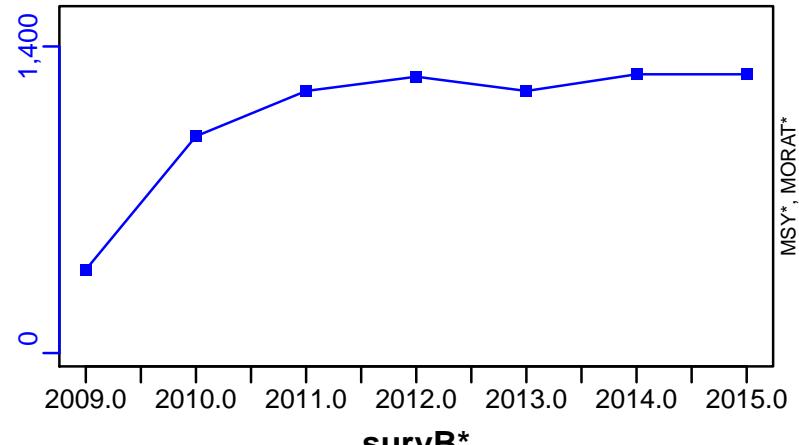


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

**Blonde ray ICES 7afg [BLRAYVIIafg]**

TL-MT, TC\*, RecC\* (1993–2015–ICESIMP2018)

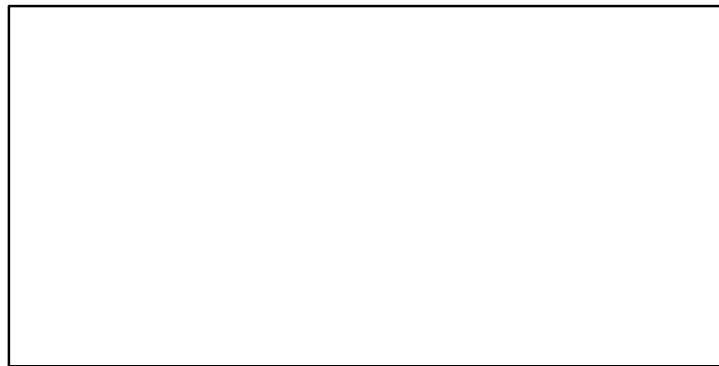
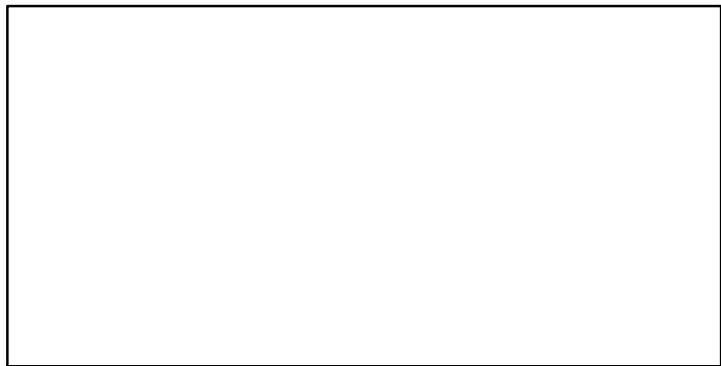
**TAC\*, Cpair\*, Cadv\***



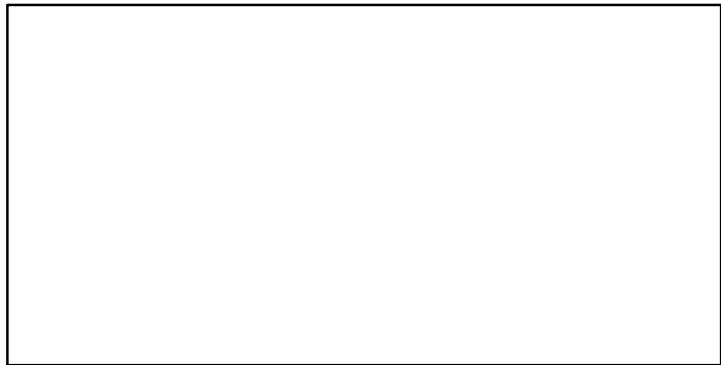
**survB\***

MSY\*, MORAT\*

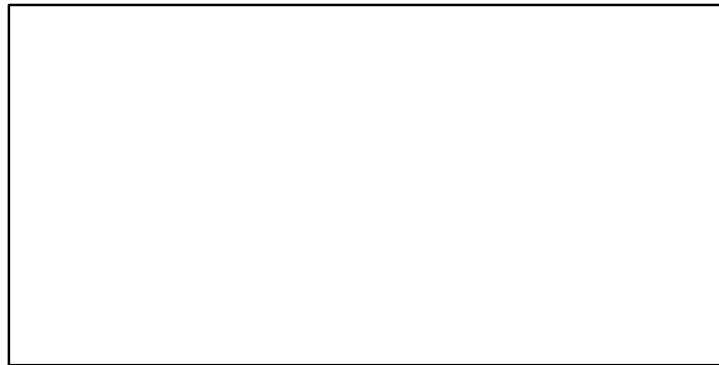
**CPUE\***



**EFFORT\***



**CdivMSY\***



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

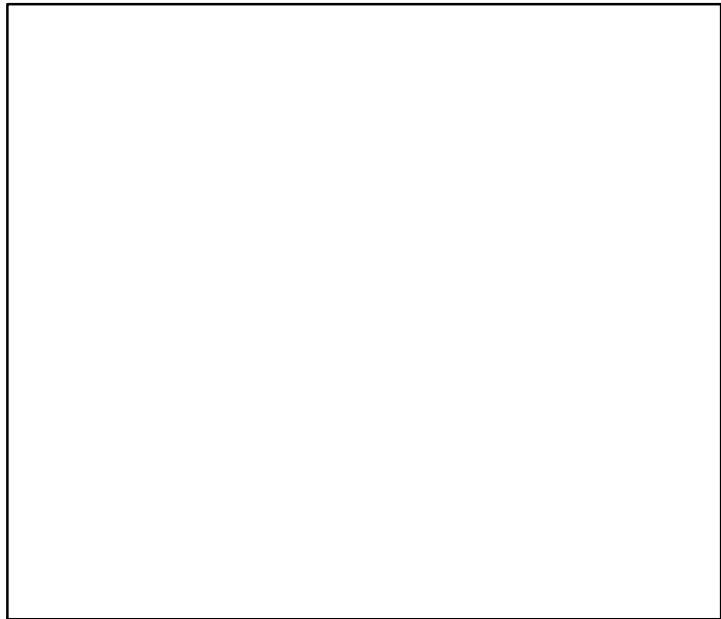
## Blonde ray Western English Channel [BLRAYVIIe]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja brachyura
<b>Current Assess ID</b>	WGEF-BLRAYVIIe-2009-2015-ICESIMP2018
<b>Area</b>	Western English Channel
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

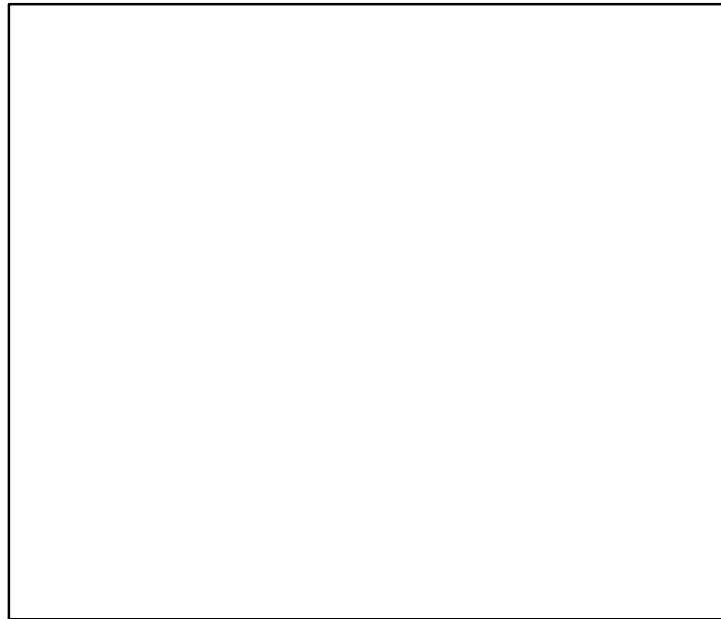
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	731		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

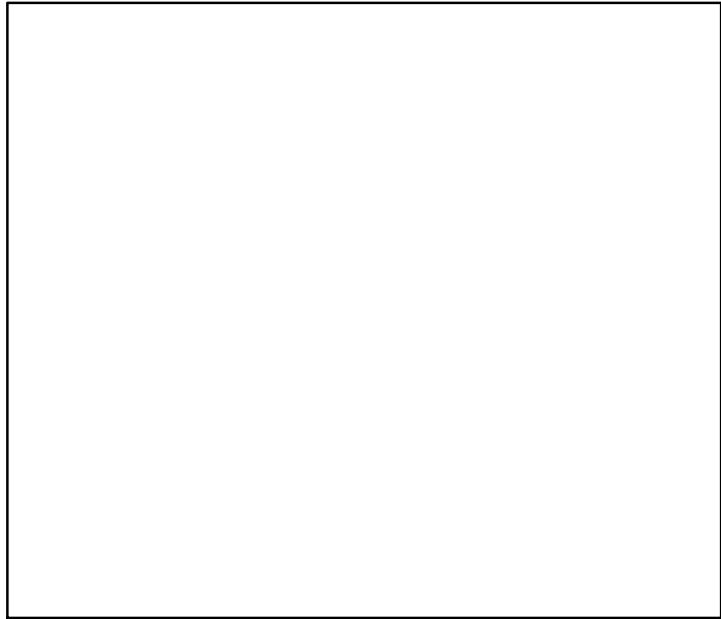
**Kobe MSY\***



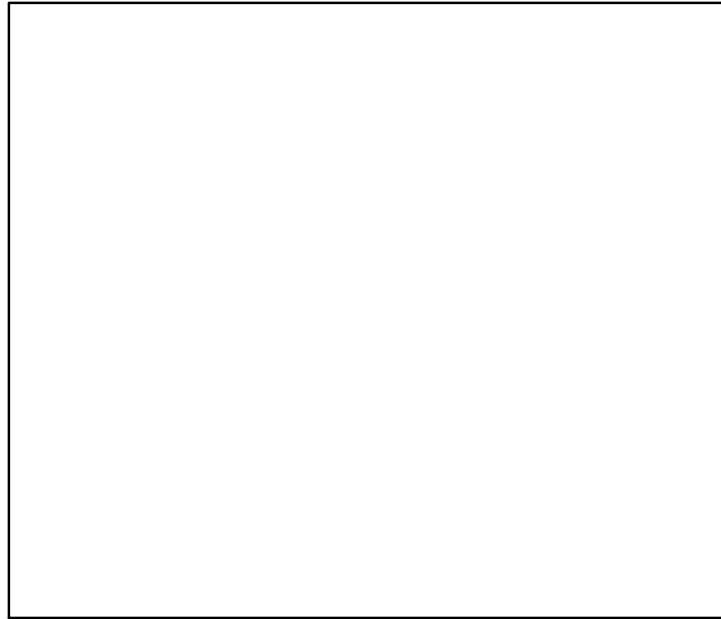
**Kobe MGT\***



**Spawner Recruit\***

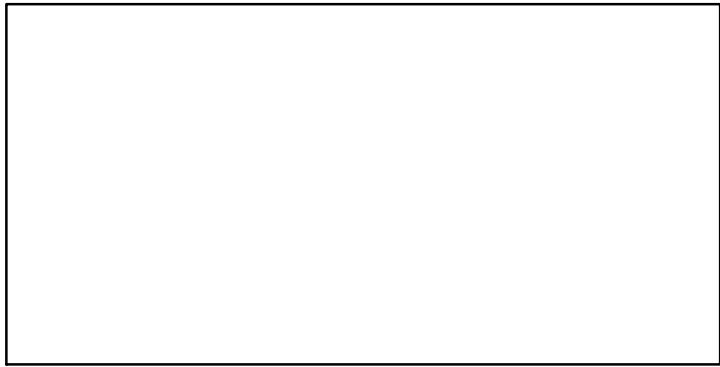


**Production\***

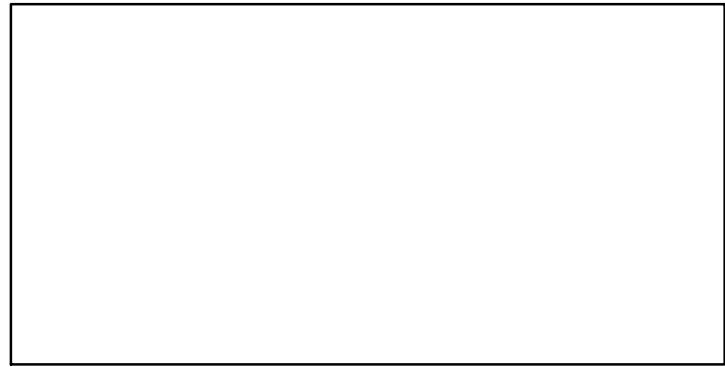


◆ Start Year ♦ End Year \* No Data

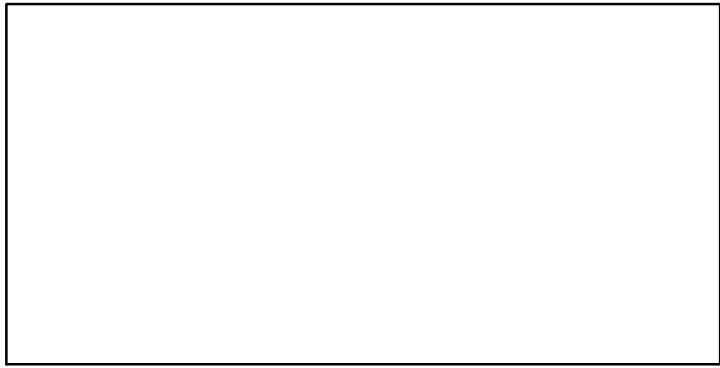
**TB\***



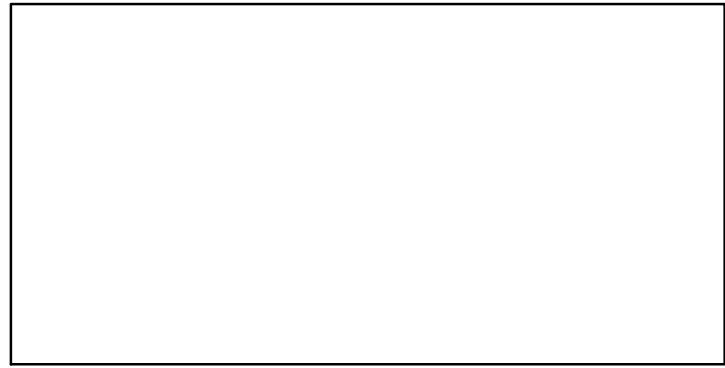
**SSB\***



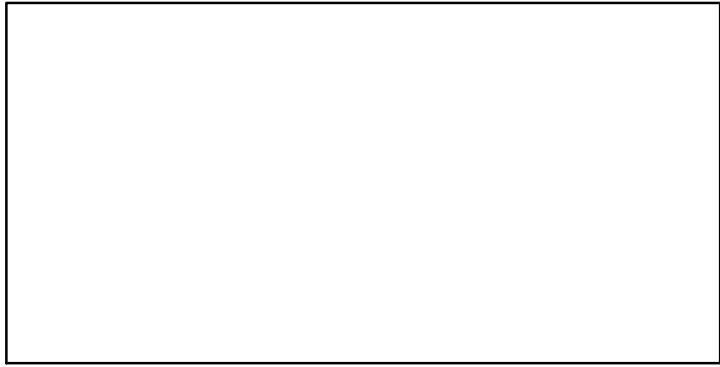
**TN \***



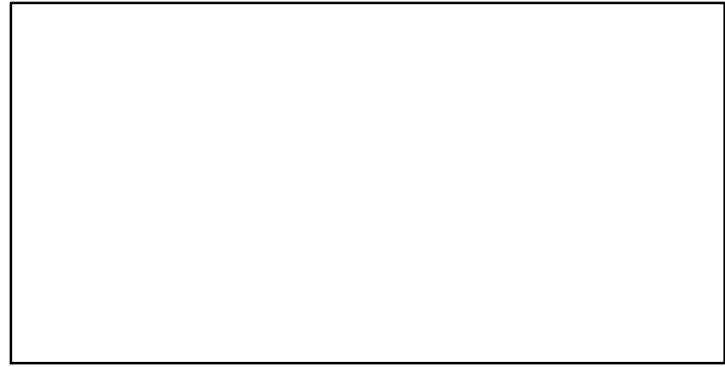
**F\***



**ER\***



**Recruits\***

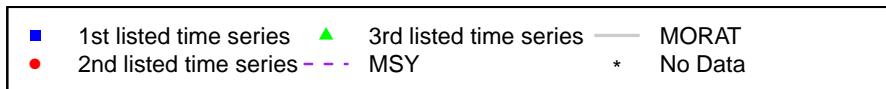
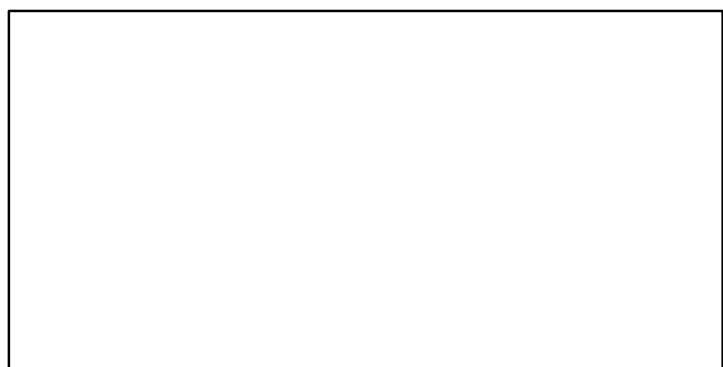
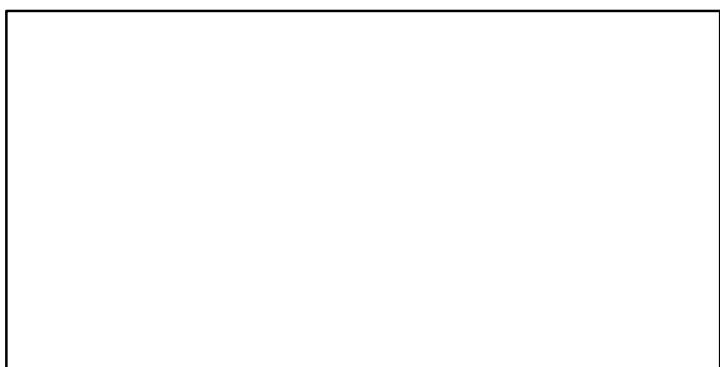
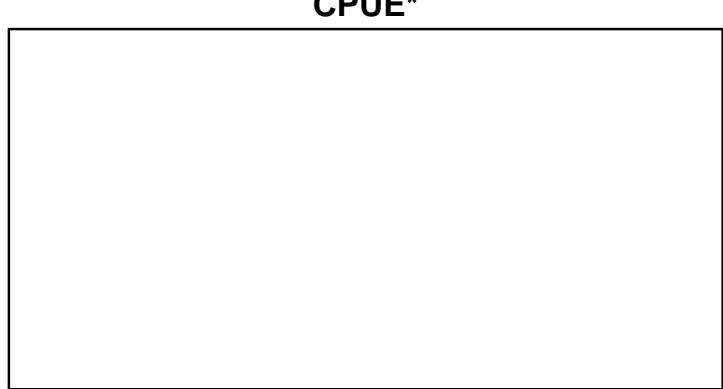
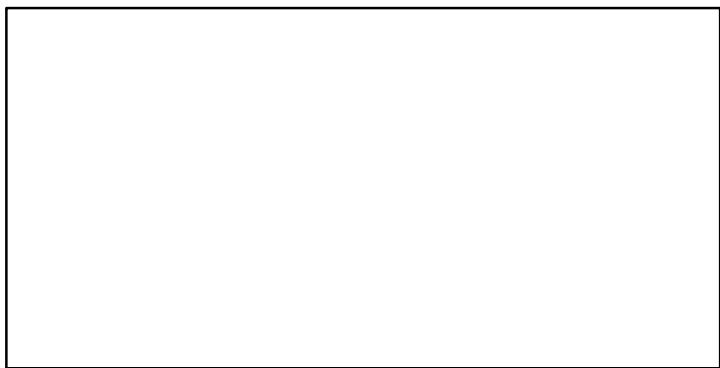
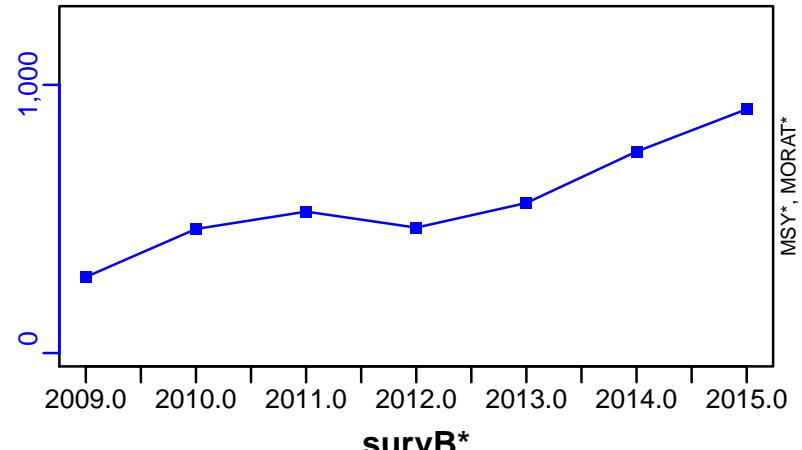


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

**Blonde ray Western English Channel [BLRAYVIIe]**

TL-MT, TC\*, RecC\* (2009–2015–ICESIMP2018)

**TAC\*, Cpair\*, Cadv\***



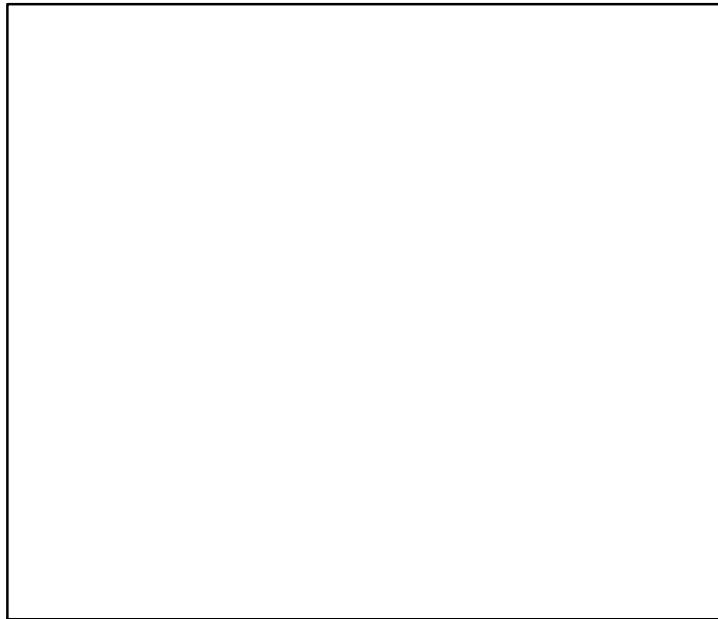
## Blackmouth dogfish ICES 8-9a [BMDOGVIII-IXa]

<b>Metadata</b>	
<b>Scientific Name</b>	Galeus melastomus
<b>Current Assess ID</b>	WGEF-BMDOGVIII-IXa-1997-2018-ICESIMP2021
<b>Area</b>	ICES 8-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2016, 2018

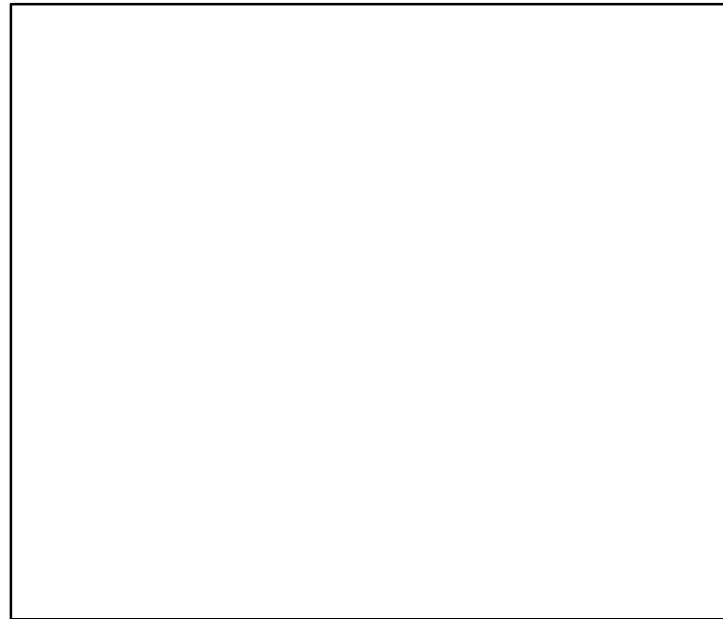
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	1.2	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	454		
<b>TL</b>	TL-MT	2018	181		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



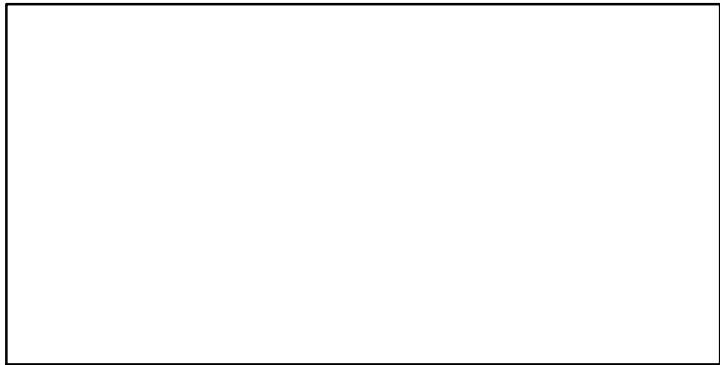
**Production\***



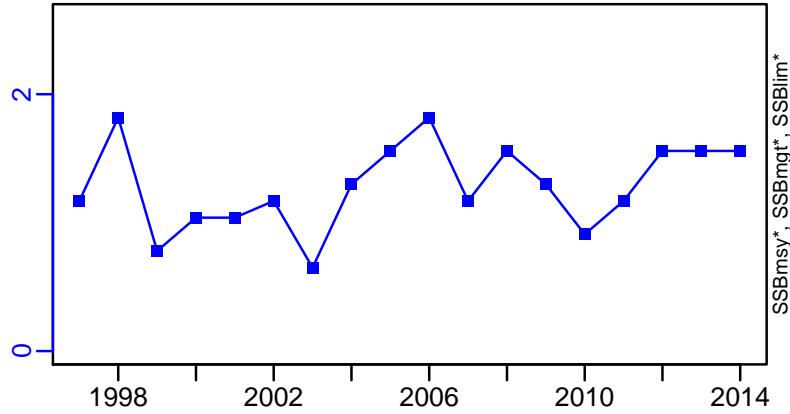
◆ Start Year ♦ End Year \* No Data

**Blackmouth dogfish ICES 8–9a [BMDOGVIII–IXa]**

**TB\***

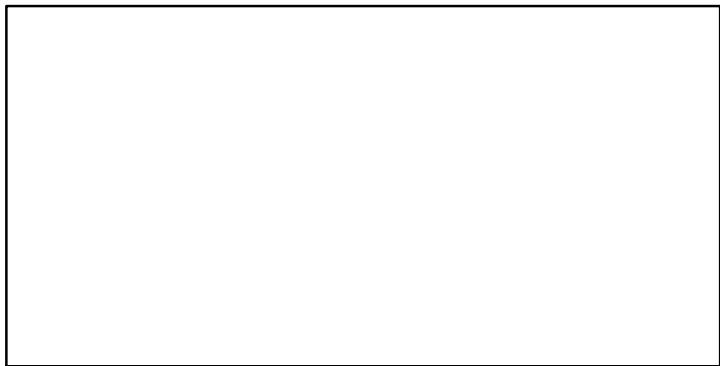


**SSB–index (1997–2014–ICESIMP2018)**

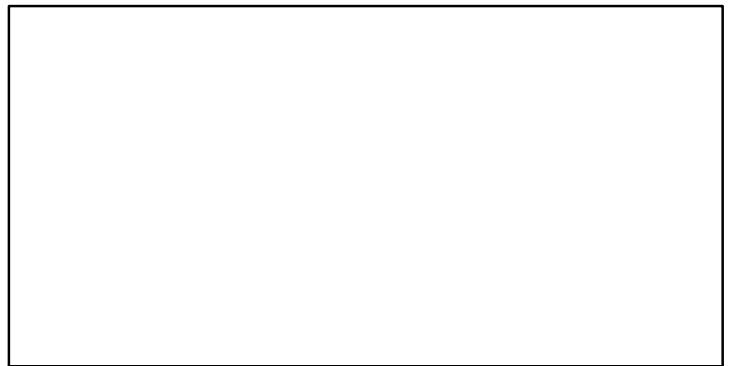


SSB<sub>m</sub>s\*, SSB<sub>mgt</sub>\*, SSB<sub>lim</sub>\*

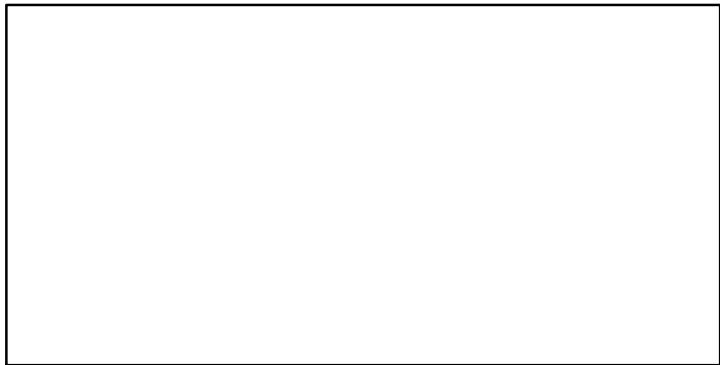
**TN \***



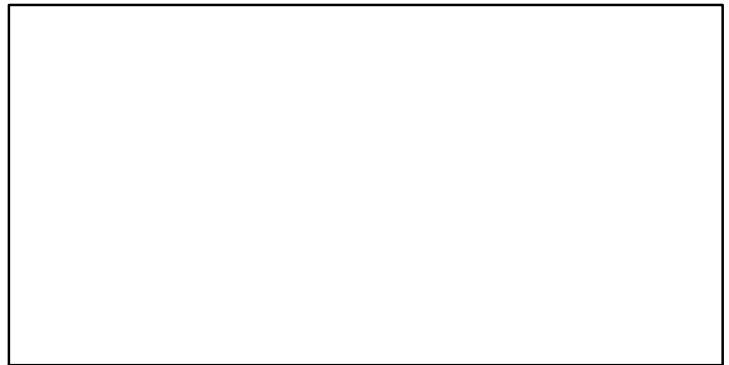
**F\***



**ER\***



**Recruits\***

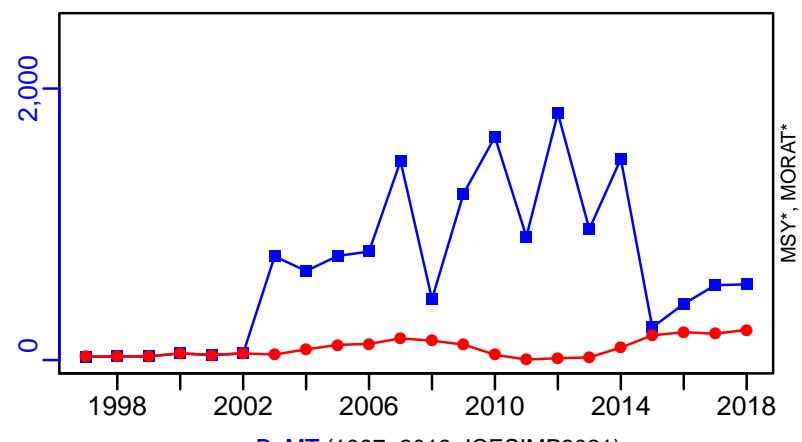


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

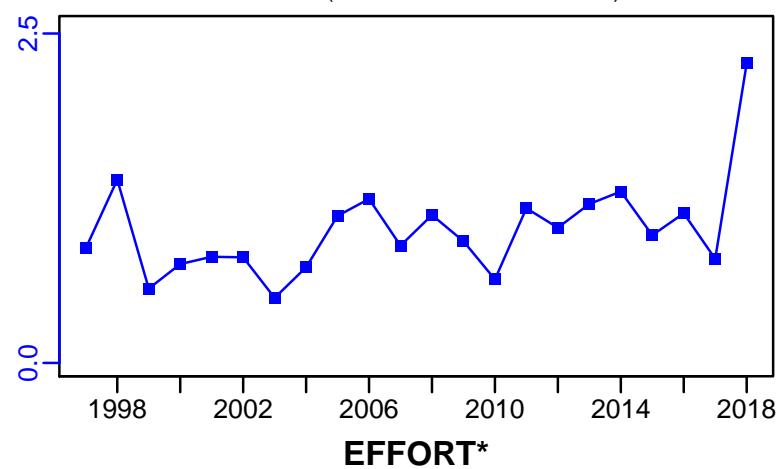
**Blackmouth dogfish ICES 8–9a [BMDOGVIII–IXa]**

TC–MT, TL–MT, RecC\* (1997–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



survB–MT (1997–2018–ICESIMP2021)



EFFORT\*

CPUE\*

CdivMSY\*

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

## Blackmouth dogfish ICES 6-7 [BMDOGVI-VII]

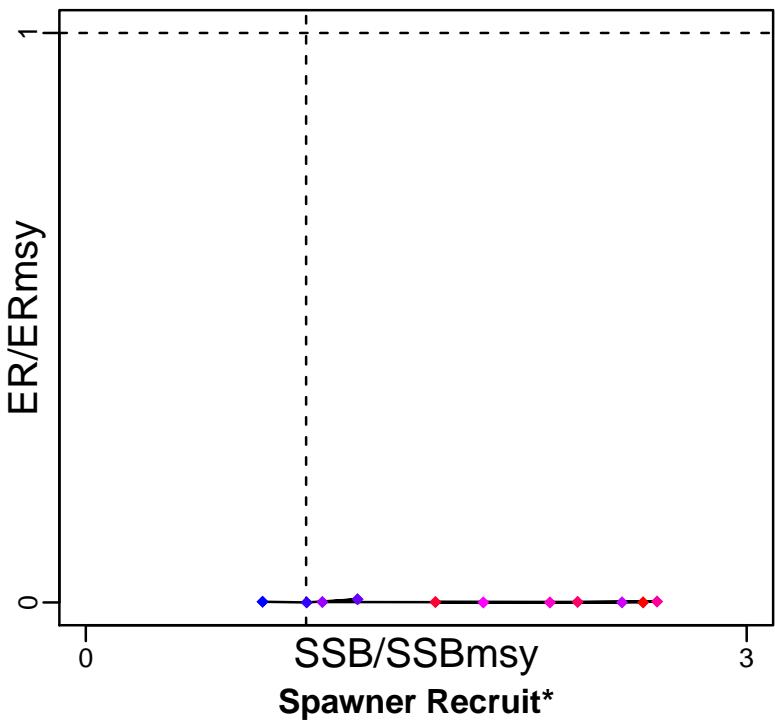
<b>Metadata</b>	
<b>Scientific Name</b>	Galeus melastomus
<b>Current Assess ID</b>	WGEF-BMDOGVI-VII-2001-2018-ICESIMP2021
<b>Area</b>	ICES 6-7
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2018, 2016

<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2018	24
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2018	0.559
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2018	64
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

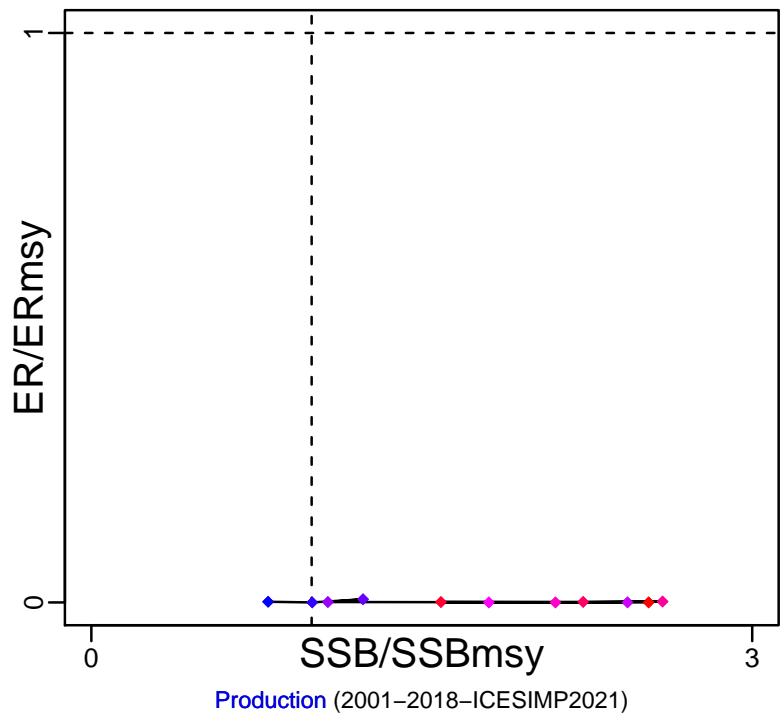
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	SSB-MT	2018	61	-	-	-
<b>TN</b>	-	-	-	-	-	-
<b>R</b>	-	-	-	-	-	-
<b>F</b>	-	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2018	0	-	-	-
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2018	0.015			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2018	2.53			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2018	0			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Blackmouth dogfish ICES 6–7 [BMDOGVI–VII]**

Kobe MSYpref (2001–2018–ICESIMP2021)

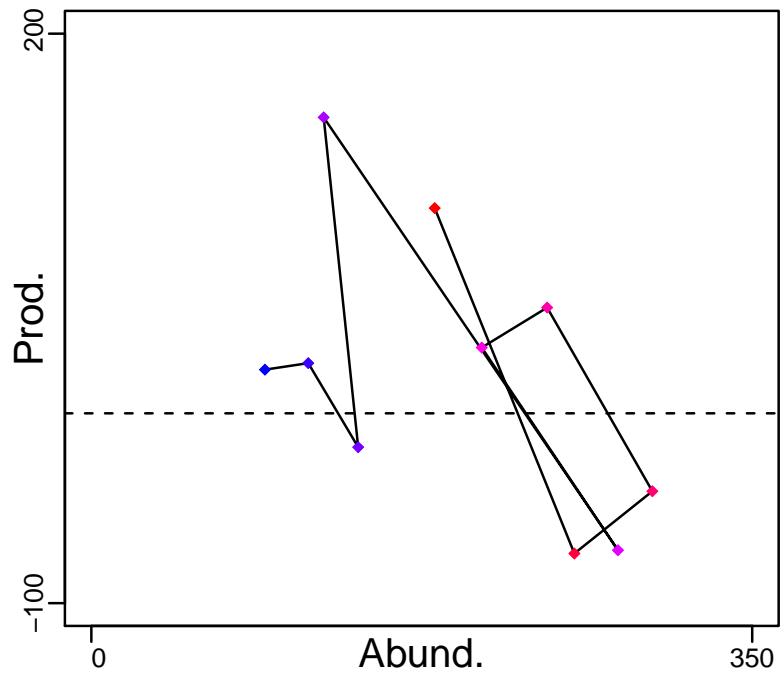


Kobe MGTpref (2001–2018–ICESIMP2021)



**Spawner Recruit\***

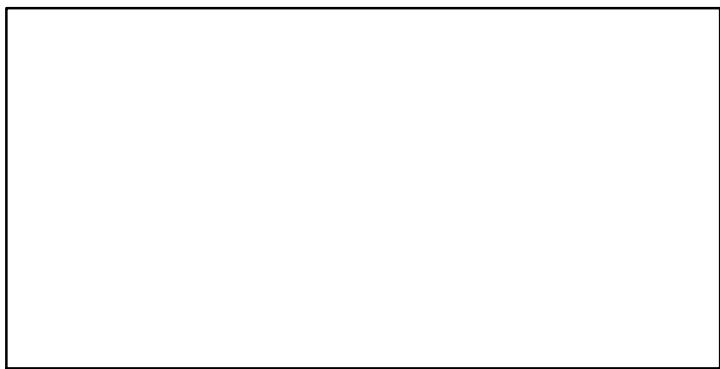
Production (2001–2018–ICESIMP2021)



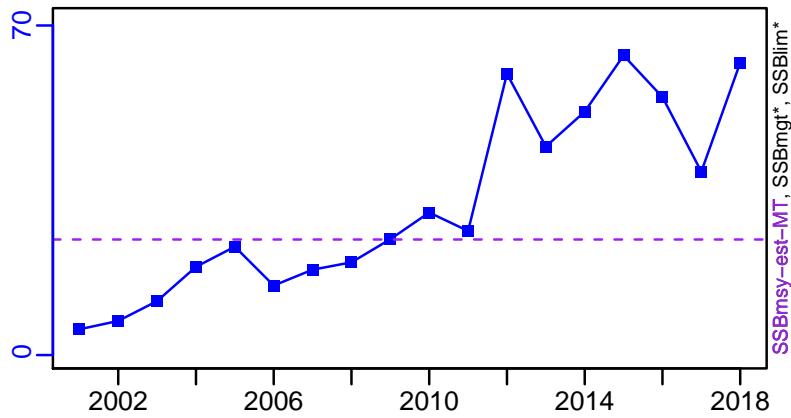
◆ Start Year   ◆ End Year   \* No Data

**Blackmouth dogfish ICES 6–7 [BMDOGVI–VII]**

**TB\***



**SSB-MT (2001–2018–ICESIMP2021)**



**TN \***

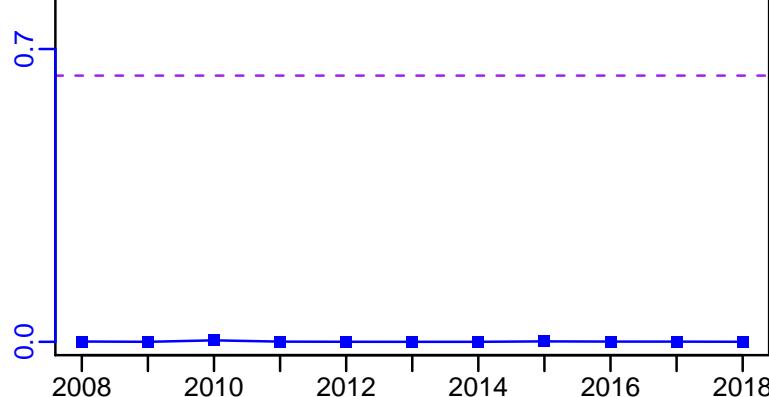


**F\***

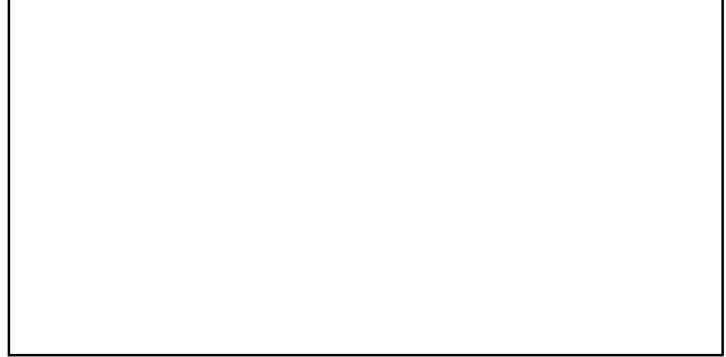


**ER-calc-ratio (2001–2018–ICESIMP2021)**

ER<sub>msy</sub>-est-ratio, ER<sub>mgt</sub>\* , ER<sub>lim</sub>\*



**Recruits\***

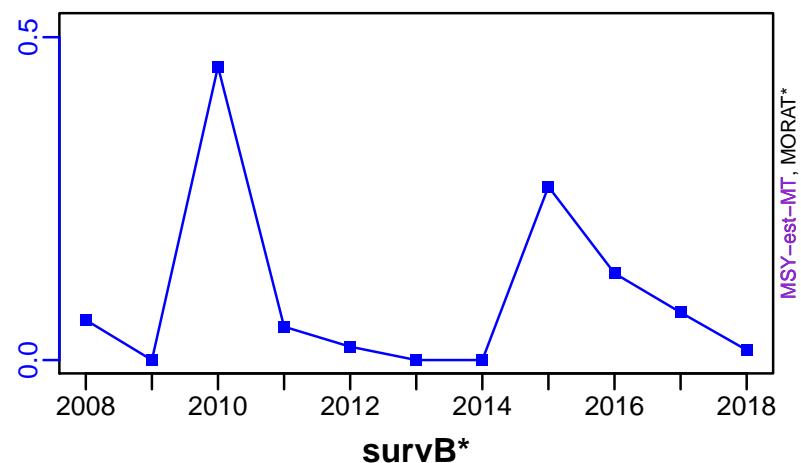


- Listed time series    - - - Target BRP    — Rec-Est
- - - MSY-based BRP    - - - Lim BRP    \* No Data

**Blackmouth dogfish ICES 6–7 [BMDOGVI–VII]**

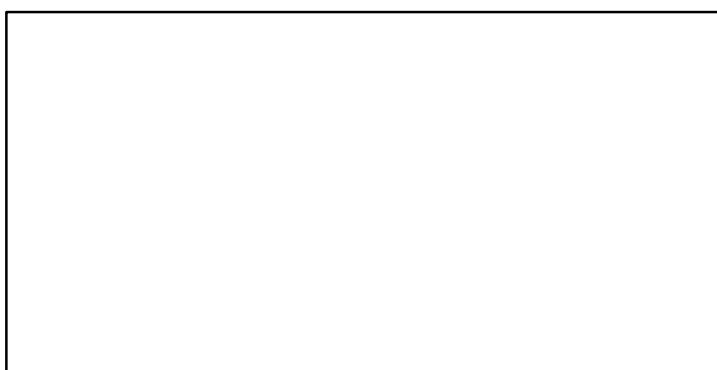
TL–MT, TC\*, RecC\* (2001–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*

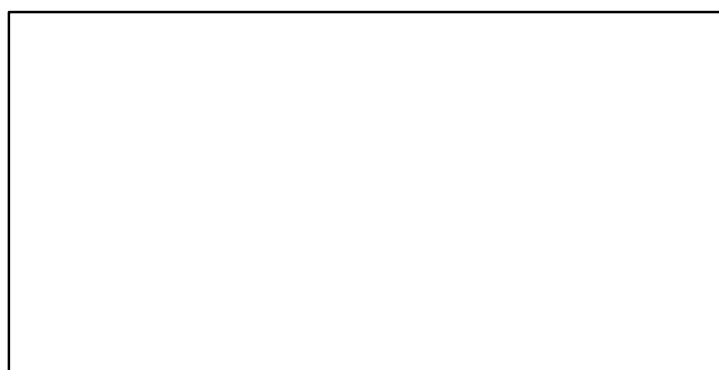


**survB\***

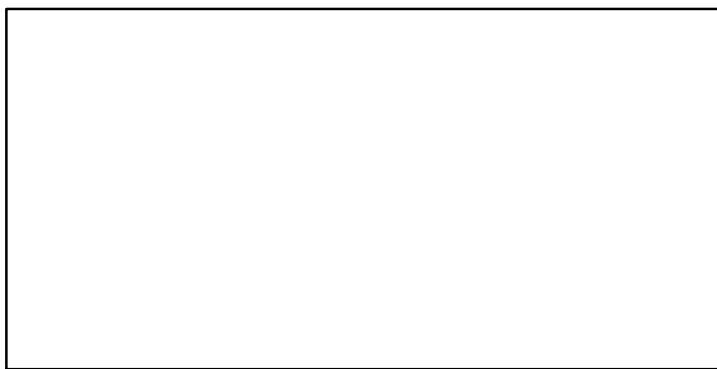
MSY-est-MT, MORAT\*



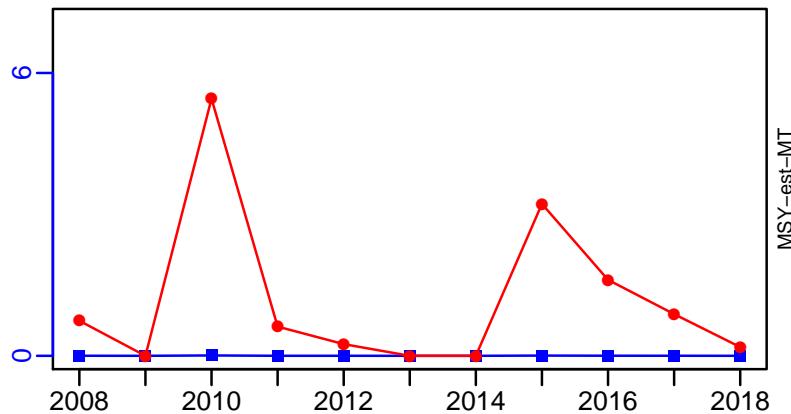
**CPUE\***



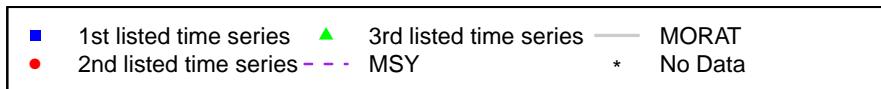
**EFFORT\***



TL–MT/MSY-est–MT, CdivMEANC–ratio, (2001–2018–ICESIMP2021)



MSY-est-MT



## Boarfish ICES 6-8 [BOARVI-VIII]

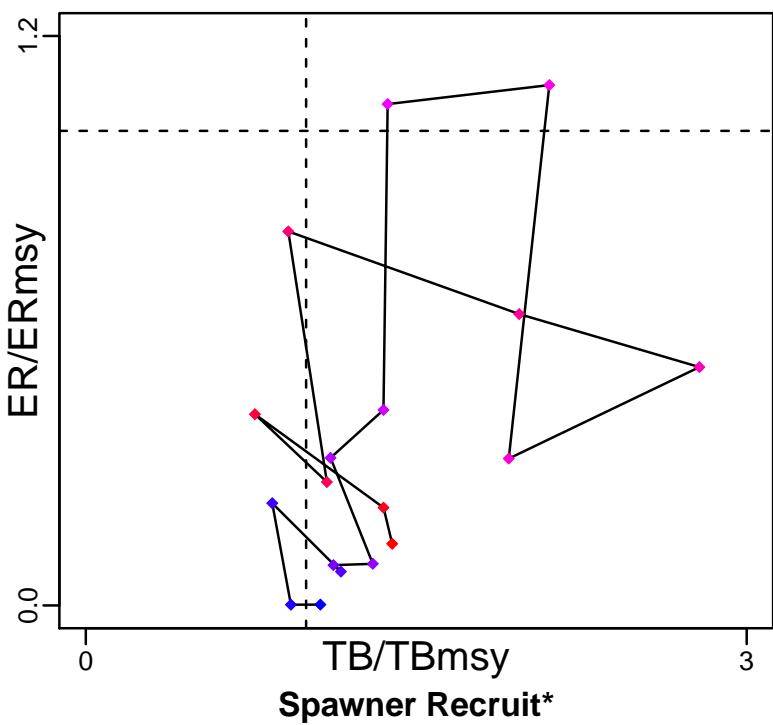
<b>Metadata</b>	
<b>Scientific Name</b>	Capros aper
<b>Current Assess ID</b>	WGWISE-BOARVI-VIII-1991-2019-ICESIMP2021
<b>Area</b>	ICES 6-8
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Widely Distributed Stocks
<b>Asmts in RAM</b>	2013, 2014, 2016, 2017, 2019, 2015

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2019	279,247
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.224
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2019	62,435
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

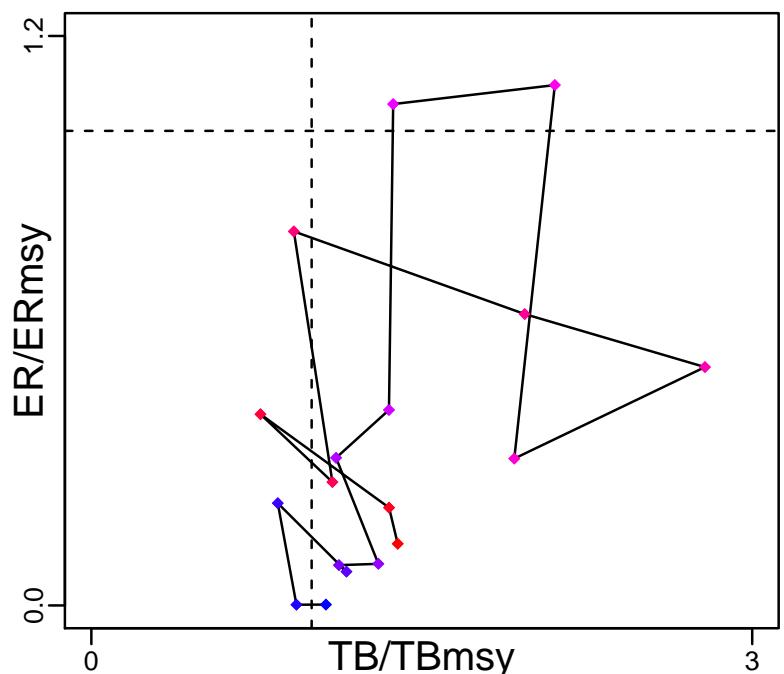
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	270,900	-	-	
<b>SSB</b>	SSB-MT	2019	270,900	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	F-relative	2016	0.581	-	-	
<b>ER</b>	ER-calc-ratio	2019	0.029	-	-	
<b>TC</b>	TC-MT	2019	11,286			
<b>TL</b>	TL-MT	2019	9927			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2019	0.97			
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2017	1.96			
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2017	0.609			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.13			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Boarfish ICES 6–8 [BOARVI–VIII]**

Kobe MSYpref (1991–2019–ICESIMP2021)

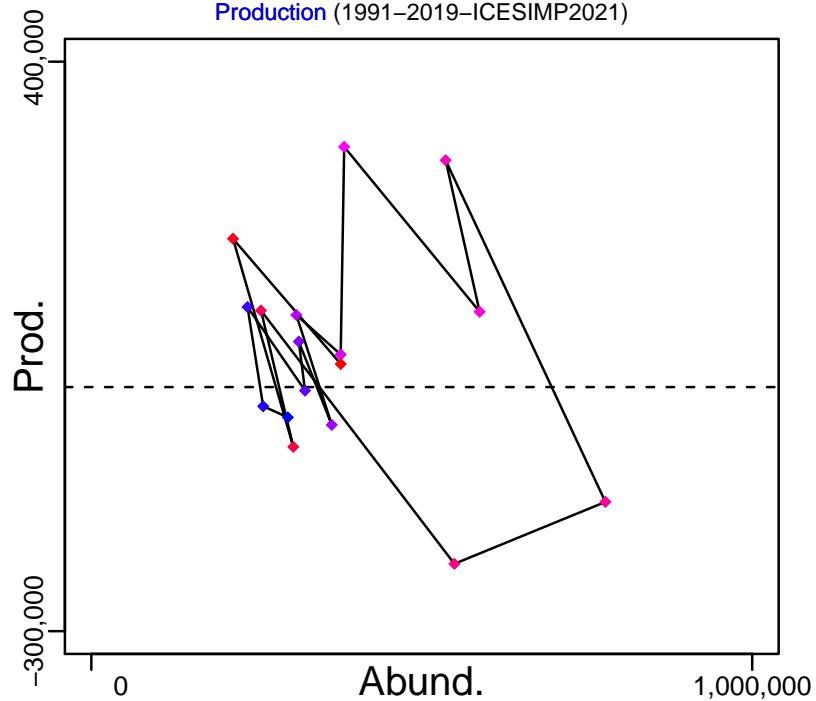


Kobe MGTpref (1991–2019–ICESIMP2021)



**Spawner Recruit\***

Production (1991–2019–ICESIMP2021)

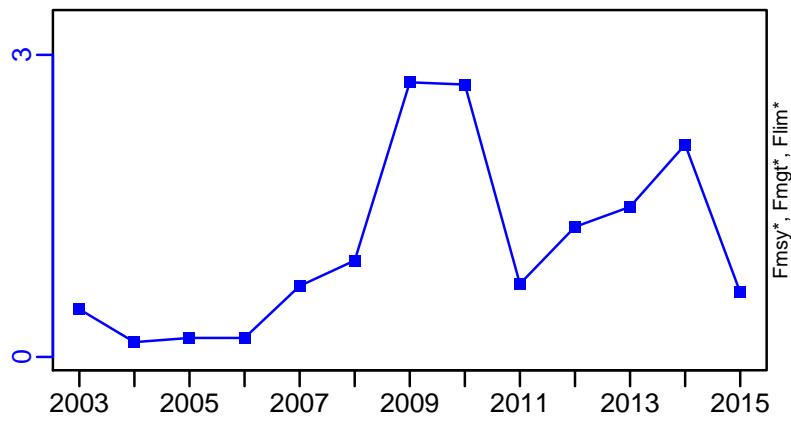
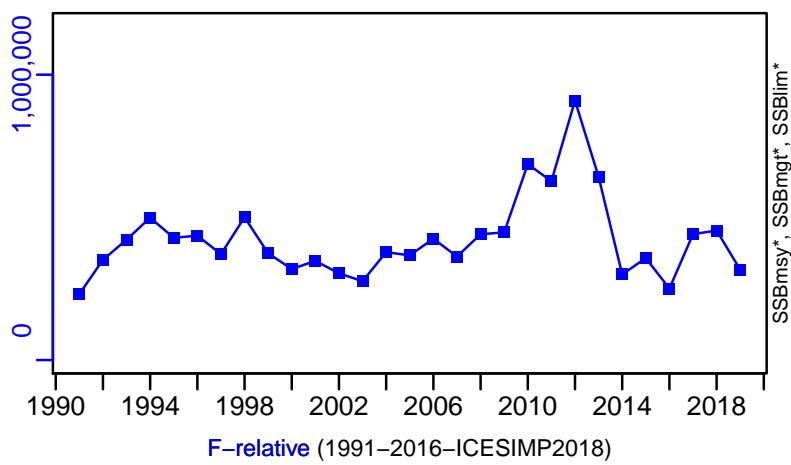
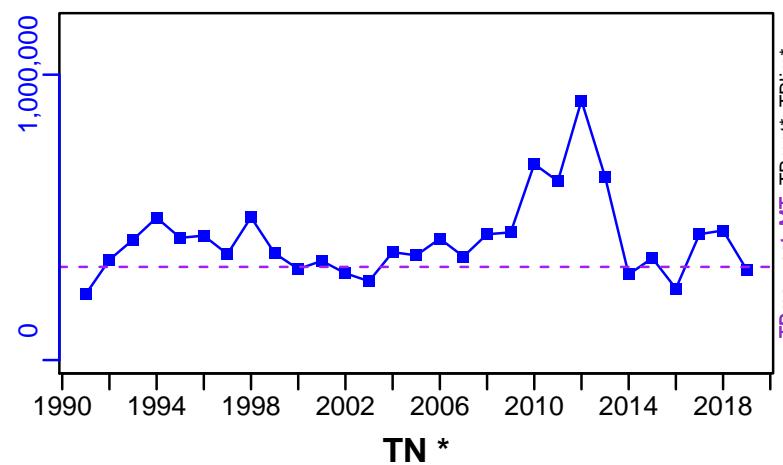


◆ Start Year   ◆ End Year   \* No Data

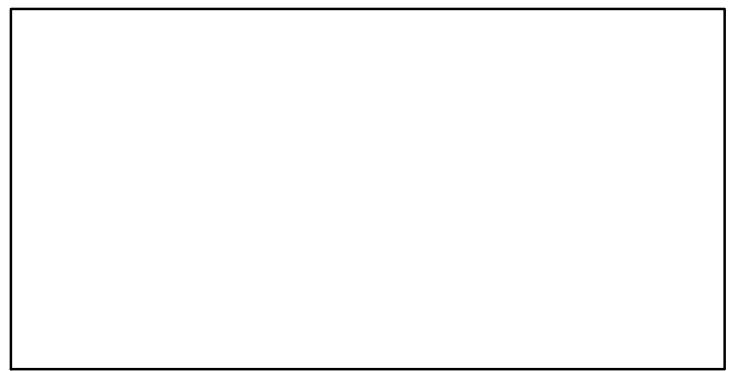
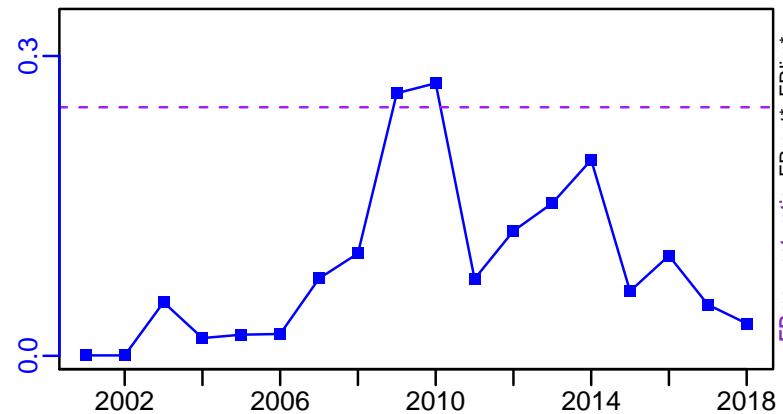
### Boarfish ICES 6–8 [BOARVI–VIII]

**TB-MT** (1991–2019–ICESIMP2021)

**SSB-MT** (1991–2019–ICESIMP2021)



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

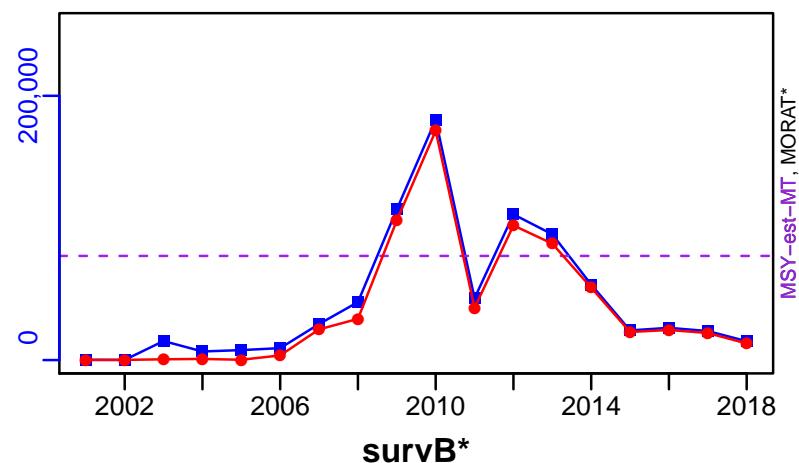


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	— Lim BRP	* No Data

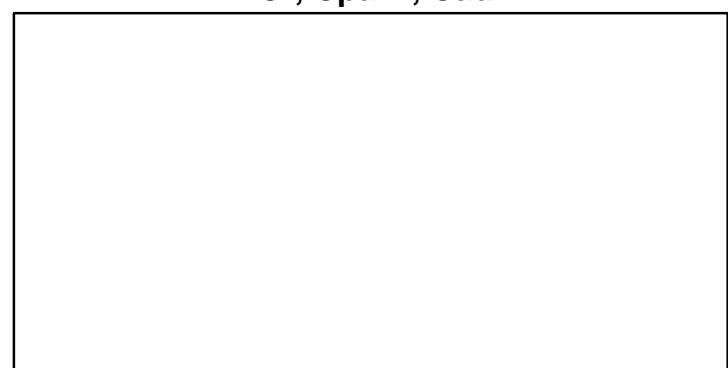
**Boarfish ICES 6–8 [BOARVI–VIII]**

TC–MT, TL–MT, RecC\* (1991–2019–ICESIMP2021)

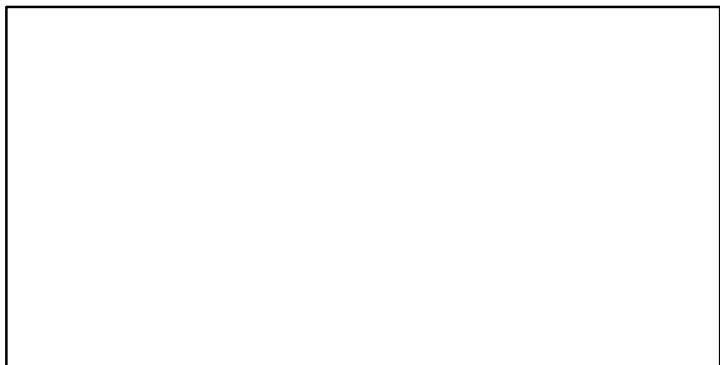
TAC\*, Cpair\*, Cadv\*



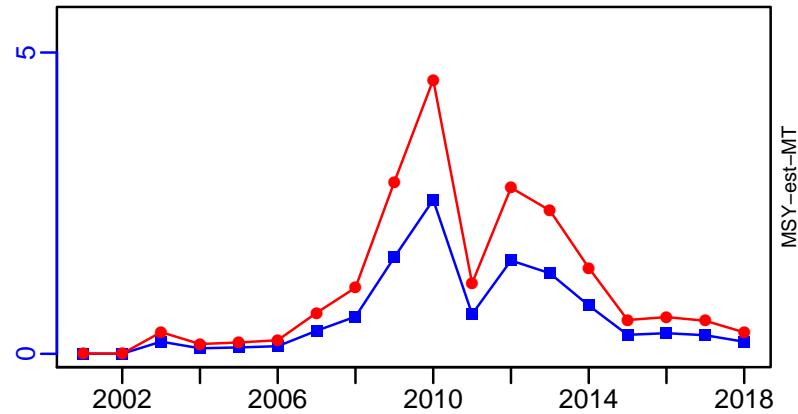
CPUE\*



EFFORT\*



TC–MT/MSY–est–MT, CdivMEANC–ratio, (1991–2019–ICESIMP2021)



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

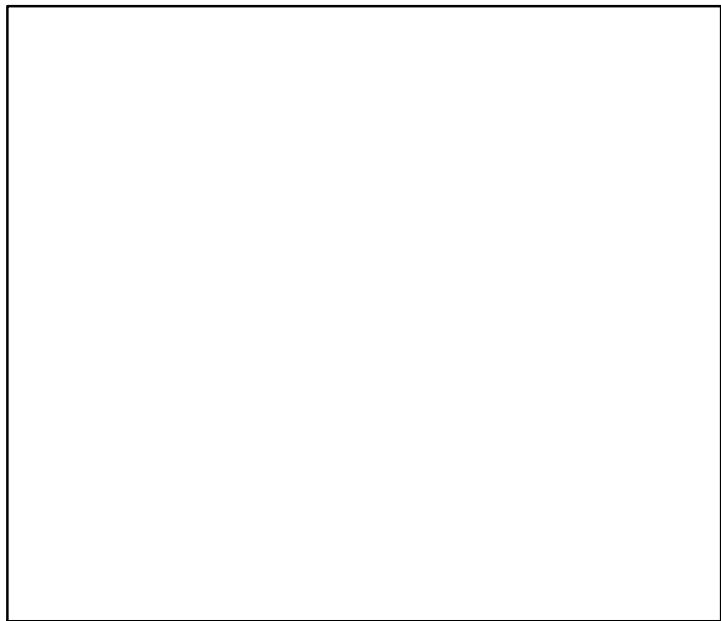
## Brill Baltic Areas 22-32 [BRILL2232]

<b>Metadata</b>	
<b>Scientific Name</b>	Scophthalmus rhombus
<b>Current Assess ID</b>	WGBFAS-BRILL2232-1970-2016-ICESIMP2018
<b>Area</b>	Baltic Areas 22-32
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2014, 2016, 2016

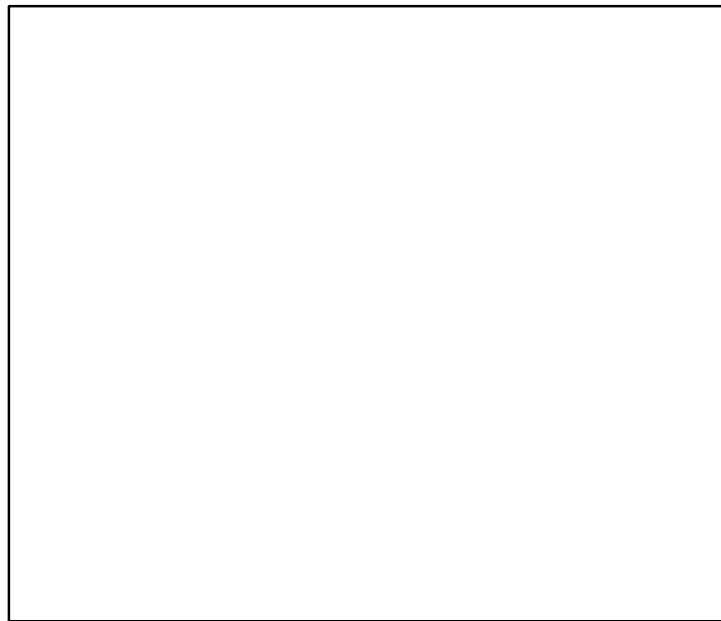
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	0.93	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2014	32		
<b>TL</b>	TL-MT	2016	40		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

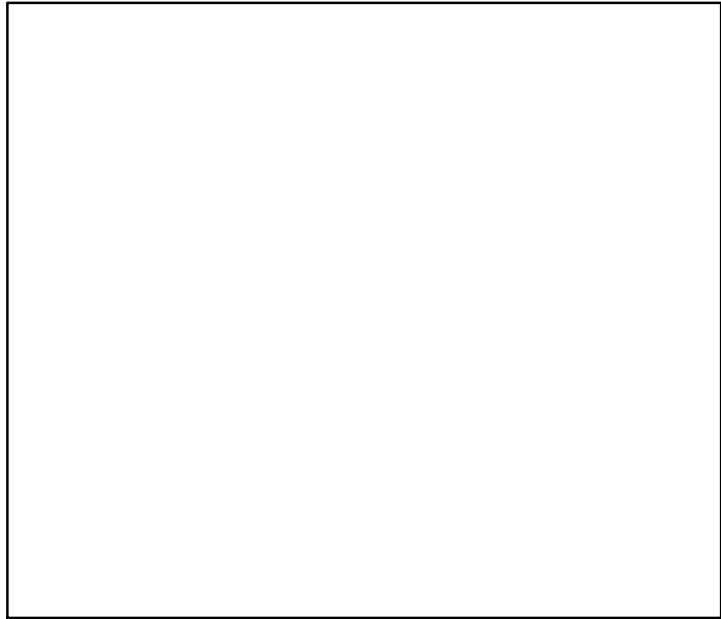
**Kobe MSY\***



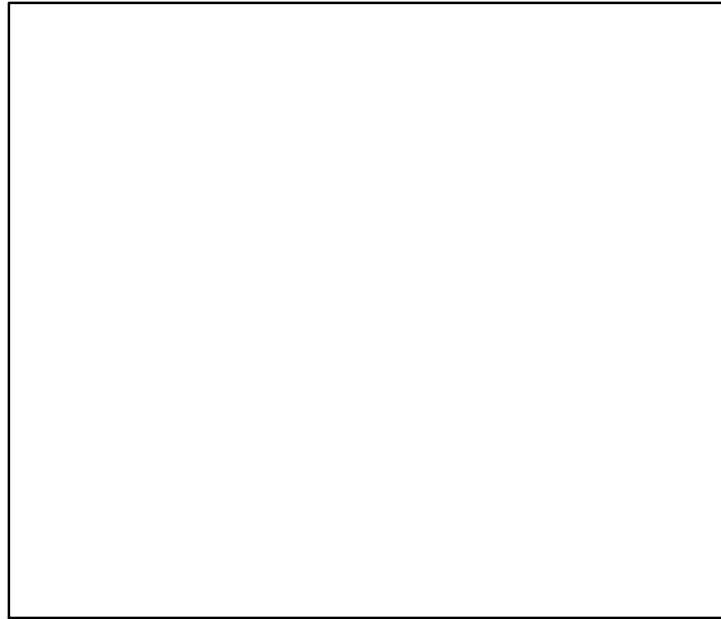
**Kobe MGT\***



**Spawner Recruit\***



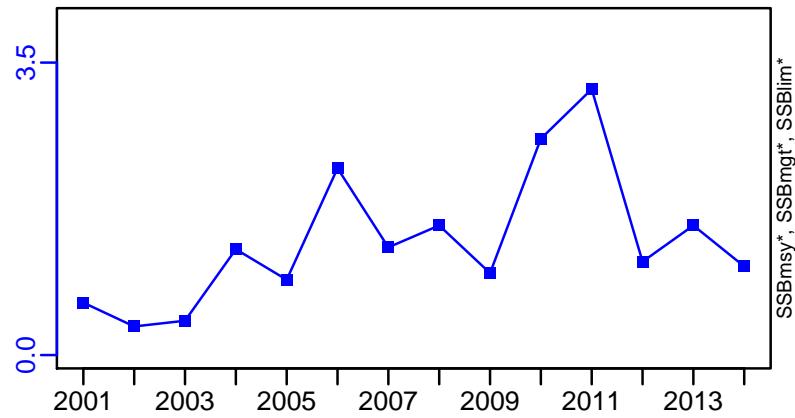
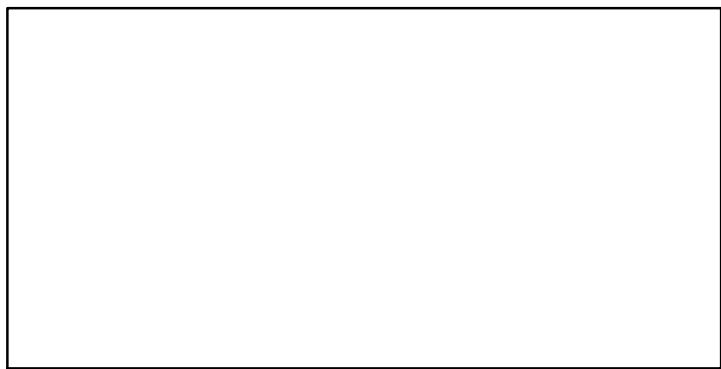
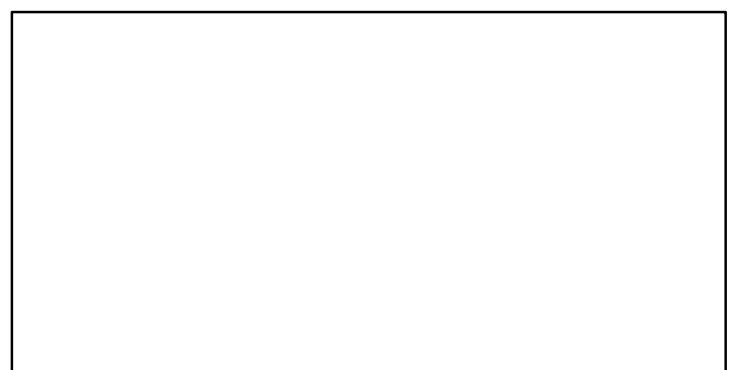
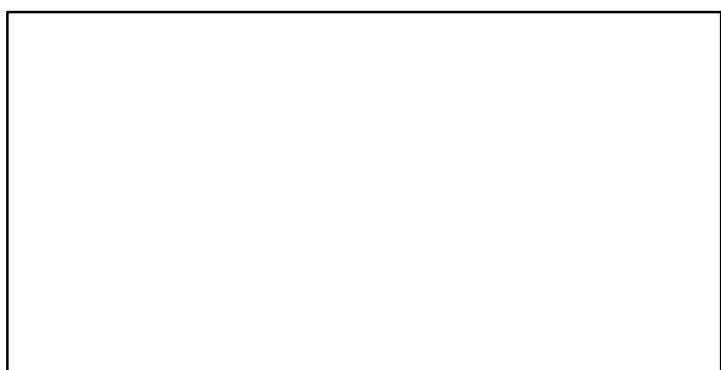
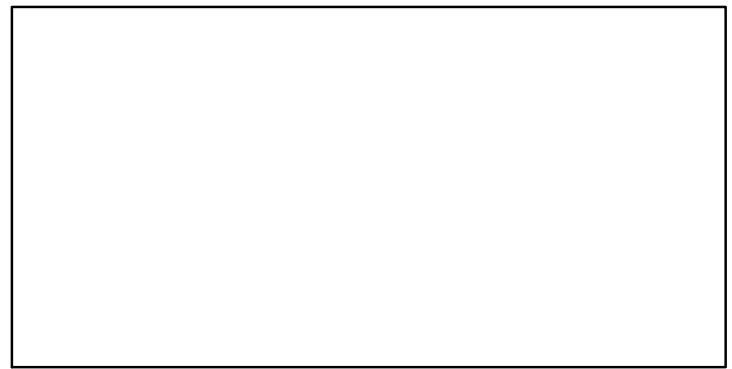
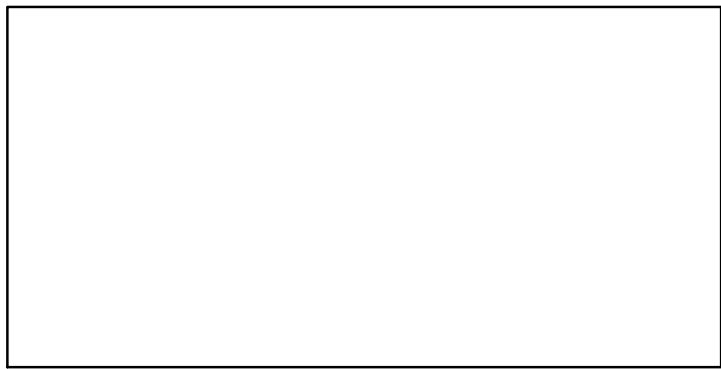
**Production\***



◆ Start Year ♦ End Year \* No Data

**TB\***

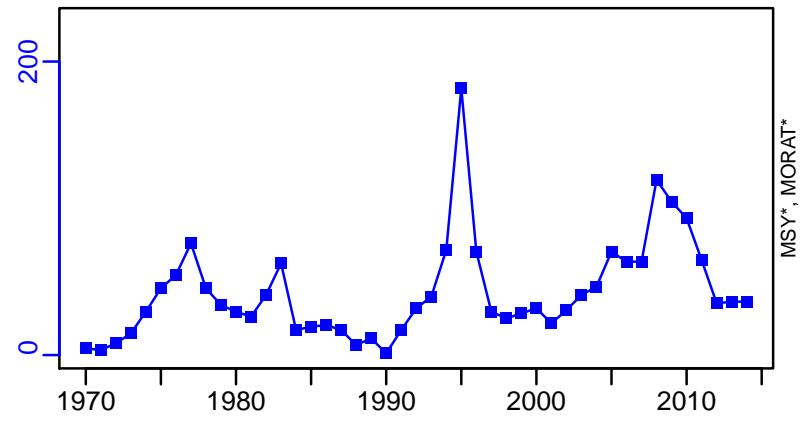
SSB-index (1970–2014–ICESIMP2018)

**TN \*****F\*****ER\*****Recruits\***

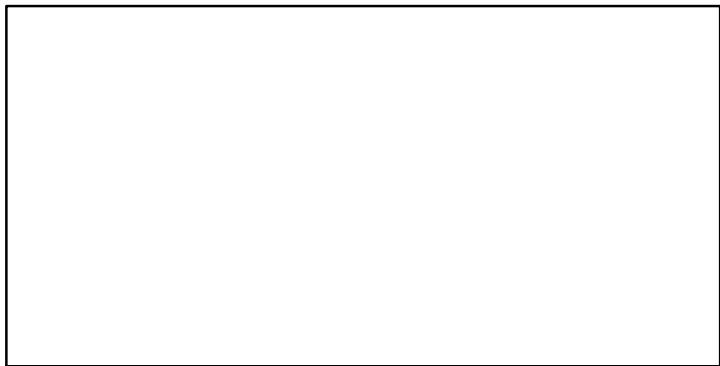
- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

TC-MT, TL\*, RecC\* (1970–2014–ICESIMP2018)

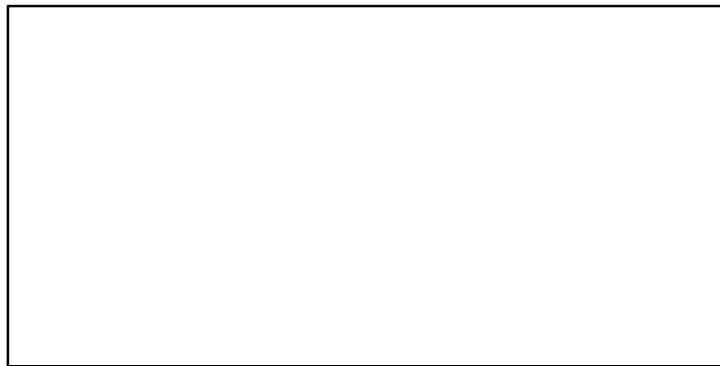
TAC\*, Cpair\*, Cadv\*



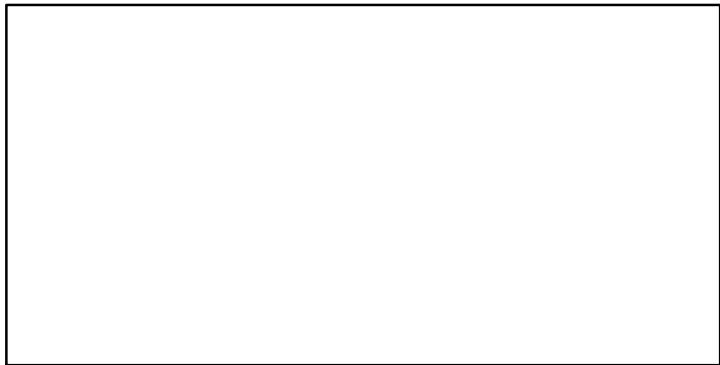
survB\*



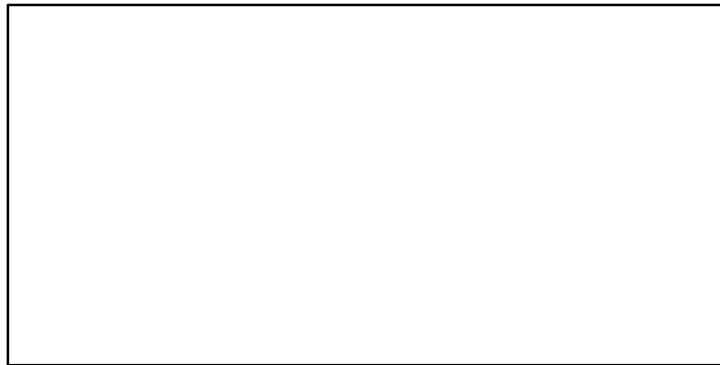
CPUE\*



EFFORT\*



CdivMSY\*



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

### Brill ICES 3a-4-7de [BRILLIIla-IV-VIilde]

<b>Metadata</b>	
<b>Scientific Name</b>	Scophthalmus rhombus
<b>Current Assess ID</b>	WGNSSK-BRILLIIla-IV-VIilde-1950-2018-ICESIMP2021
<b>Area</b>	ICES 3a-4-7de
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2014, 2016, 2018

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	46	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2016	2620		
<b>TL</b>	TL-MT	2018	1933		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

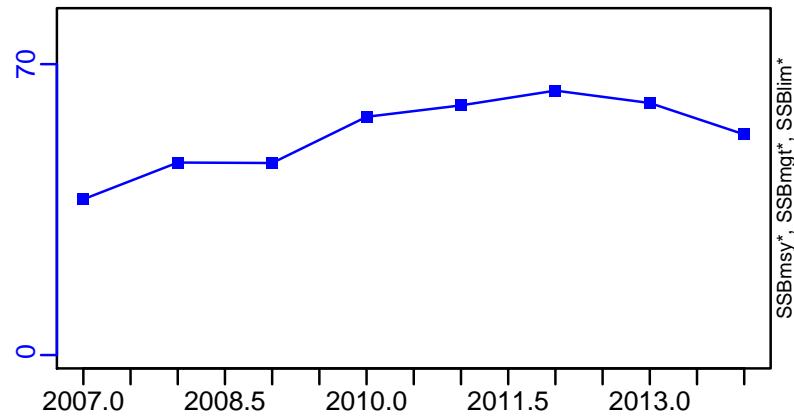
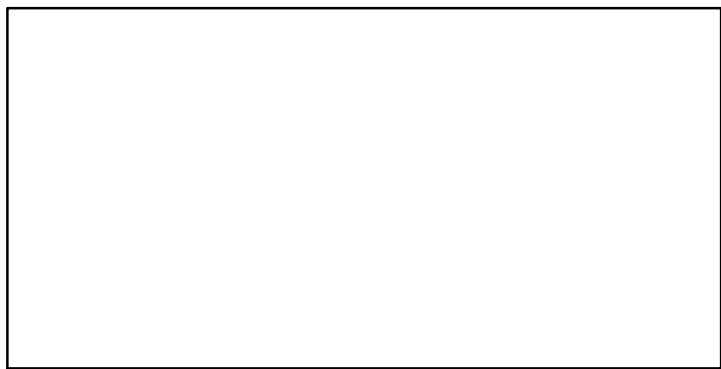
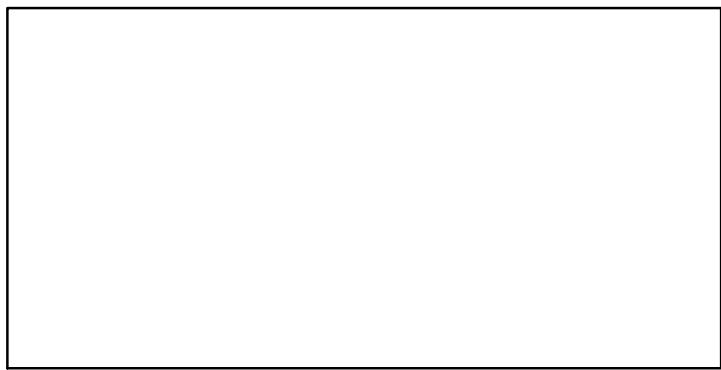
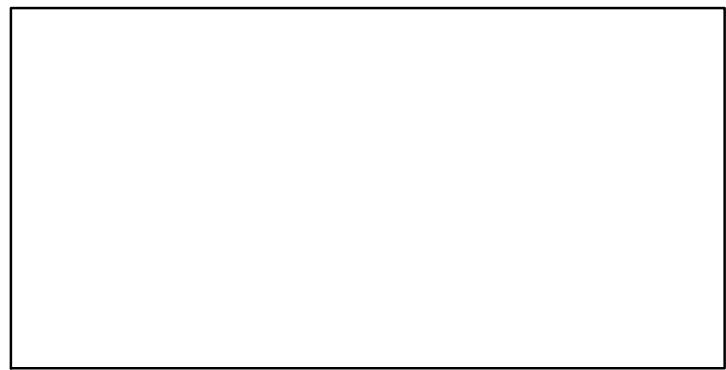
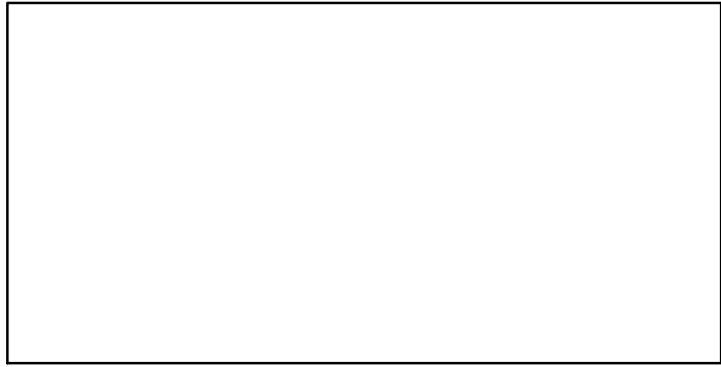
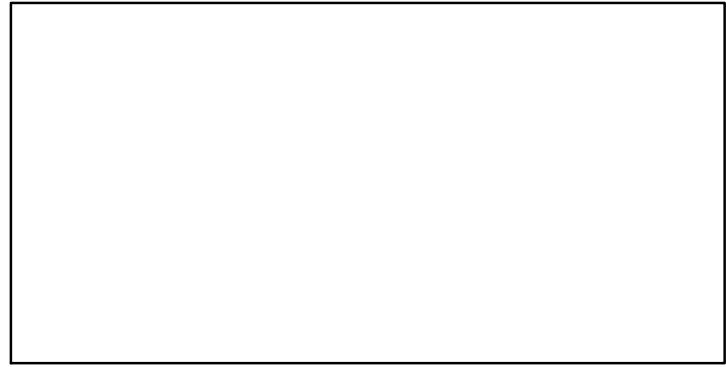
**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

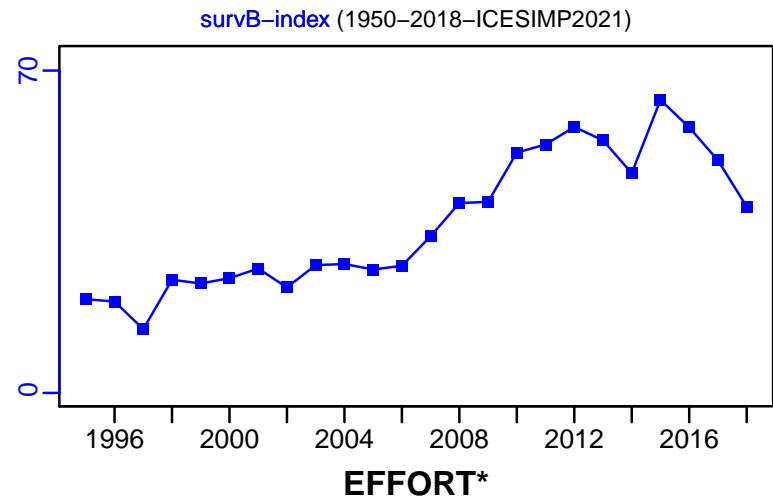
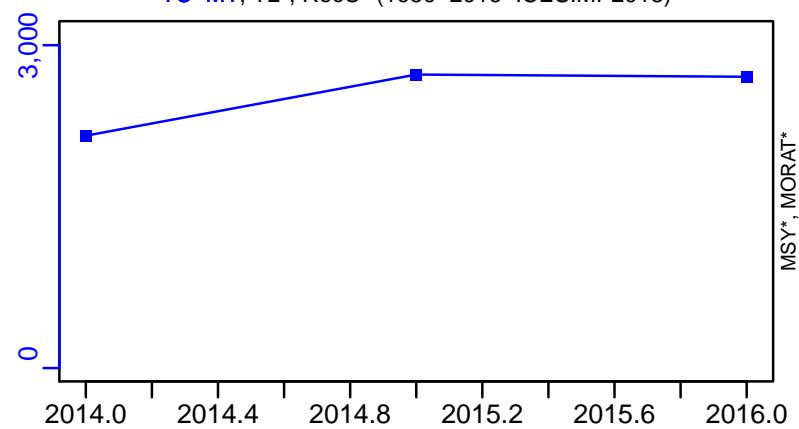
◆ Start Year ♦ End Year \* No Data

**TB\*****SSB-index (1950–2014–ICESIMP2018)****TN \*****F\*****ER\*****Recruits\***

- |   |  |   |
|---|--|---|
| <span style="color: blue;">■</span> Listed time series<br><span style="color: purple;">—</span> MSY-based BRP | <span style="color: brown;">—</span> Target BRP<br><span style="color: cyan;">—</span> Lim BRP | <span style="color: gray;">—</span> Rec-Est<br><span style="color: black;">*</span> No Data |
|---|--|---|

TC-MT, TL\*, RecC\* (1950–2016–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



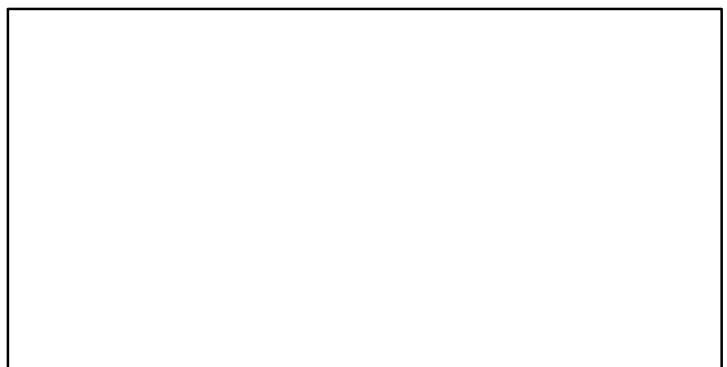
CPUE\*



EFFORT\*



CdivMSY\*



- |   |   |  |  |
|---|---|--|--|
| <span style="color: blue;">■</span> 1st listed time series<br><span style="color: red;">●</span> 2nd listed time series | <span style="color: green;">▲</span> 3rd listed time series<br><span style="color: purple;">○</span> 2nd listed time series | <span style="color: grey;">—</span> MORAT<br><span style="color: purple;">- - -</span> MSY | <span style="color: black;">*</span> No Data |
|---|---|--|--|

## Basking shark Northeast Atlantic [BSKSHARNEATL]

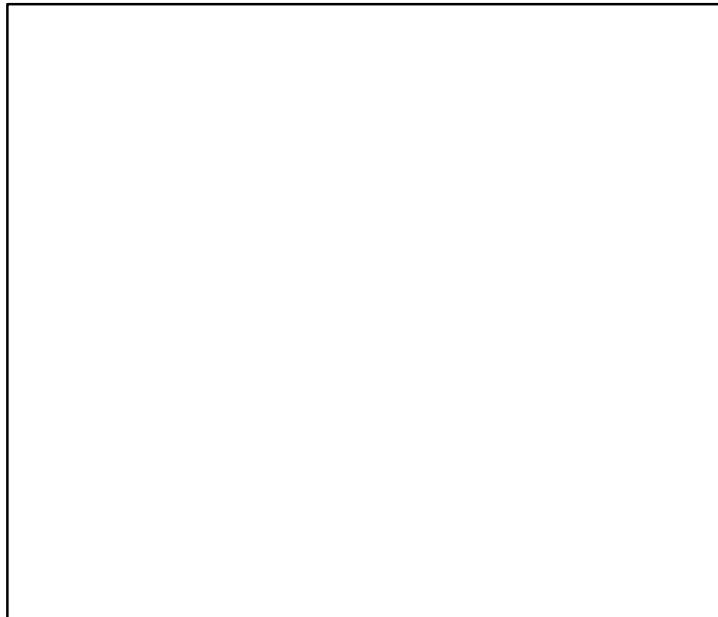
Metadata	
Scientific Name	Cetorhinus maximus
Current Assess ID	WGEF-BSKSHARNEATL-1977-2018-ICESIMP2021
Area	Northeast Atlantic
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on Elasmobranch Fishes
Asmts in RAM	2014, 2018

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

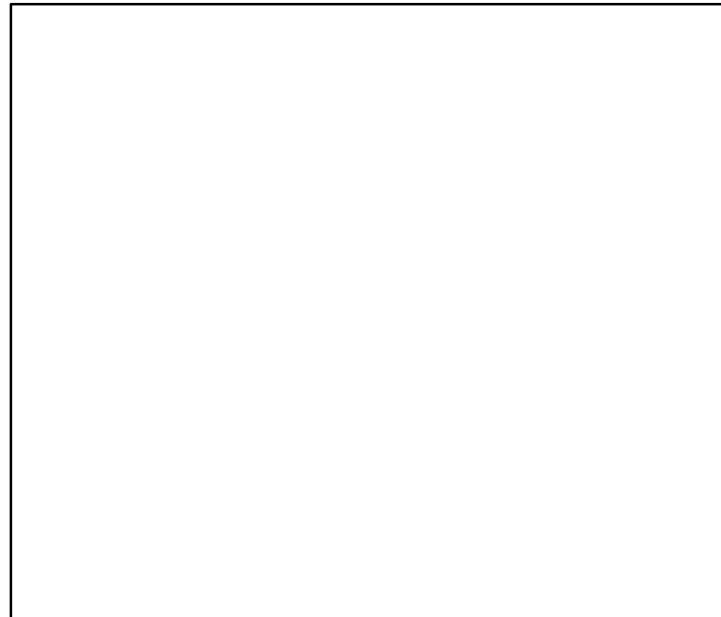
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	0		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Basking shark Northeast Atlantic [BSKSHARNEATL]

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



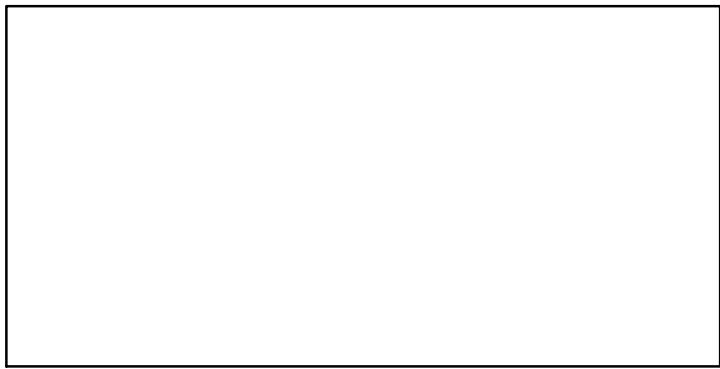
Production\*



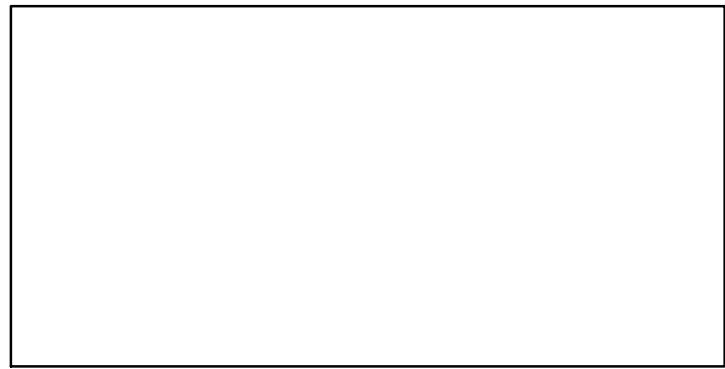
◆ Start Year ◆ End Year \* No Data

Basking shark Northeast Atlantic [BSKSHARNEATL]

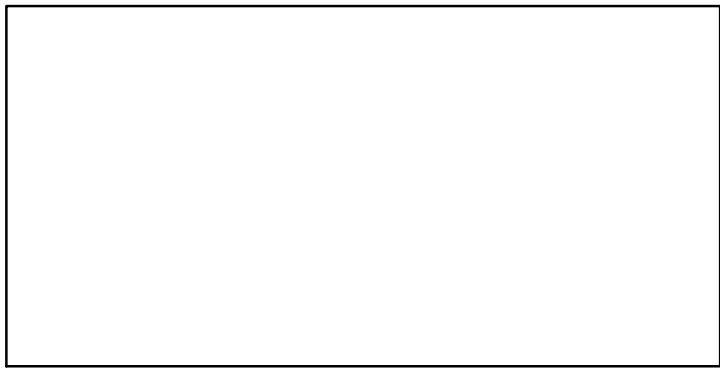
**TB\***



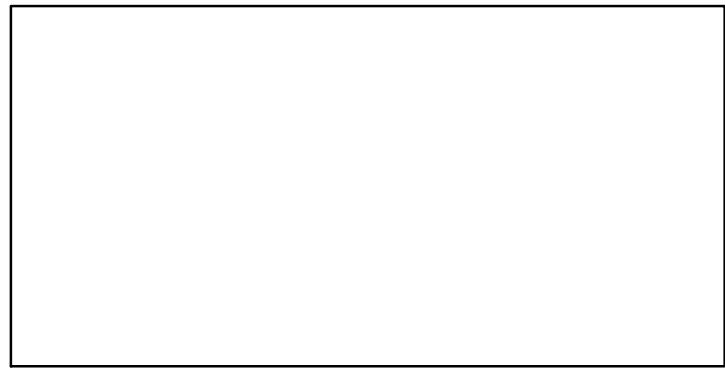
**SSB\***



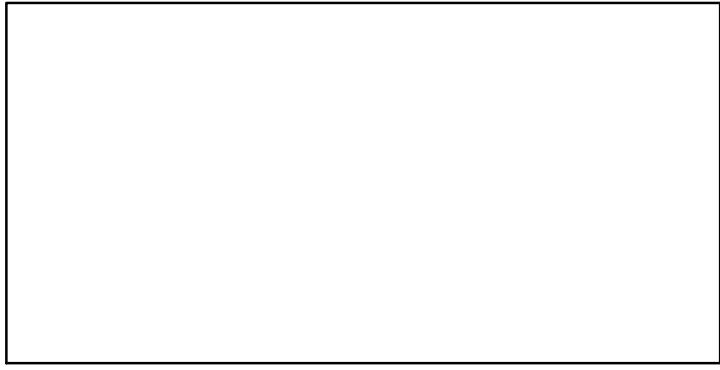
**TN \***



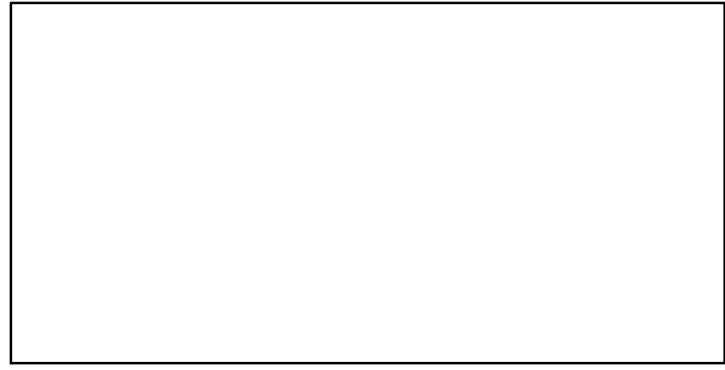
**F\***



**ER\***



**Recruits\***

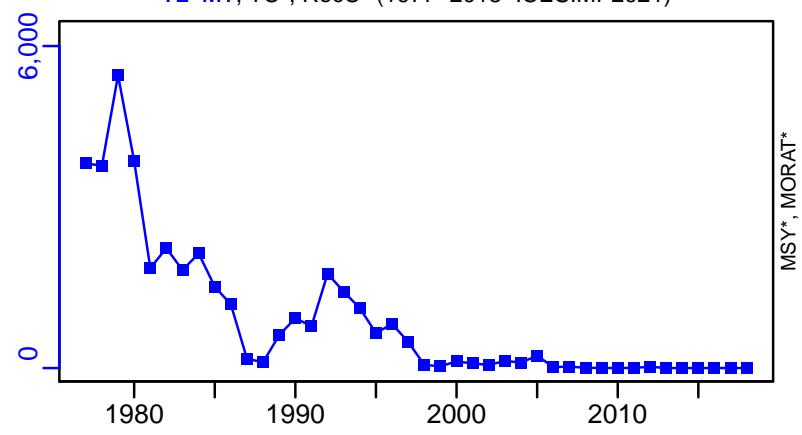


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

Basking shark Northeast Atlantic [BSKSHARNEATL]

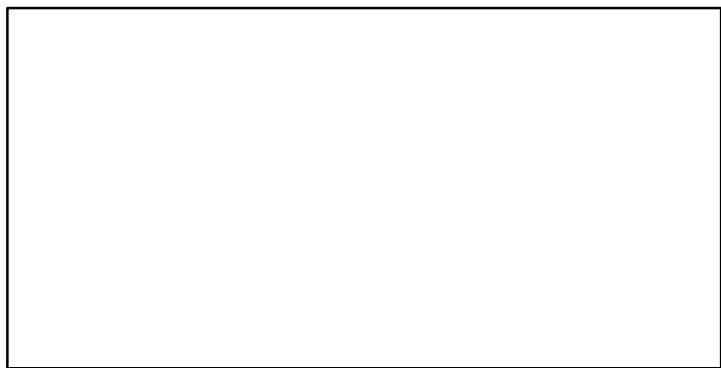
TL-MT, TC\*, RecC\* (1977–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*

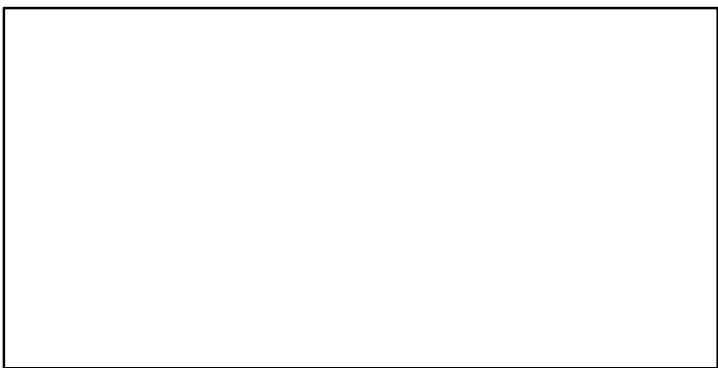


survB\*

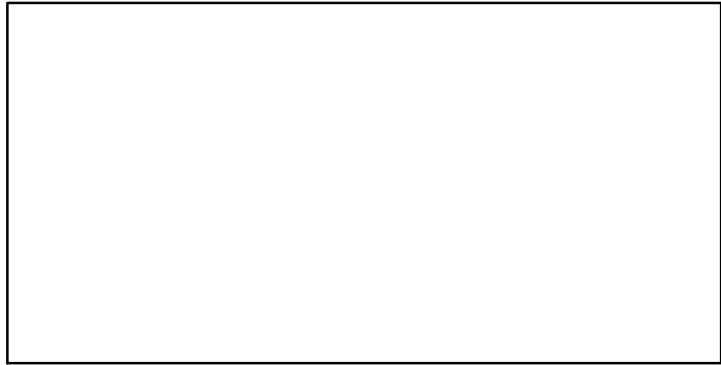
MSY\*, MORAT\*



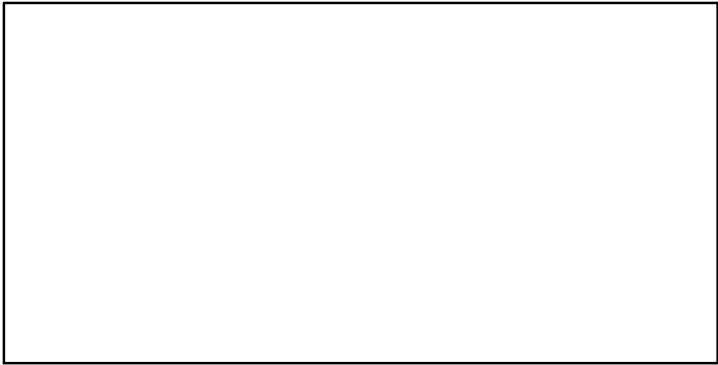
CPUE\*



EFFORT\*



CdivMSY\*



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

## Blue whiting Northeast Atlantic [BWHITNEA]

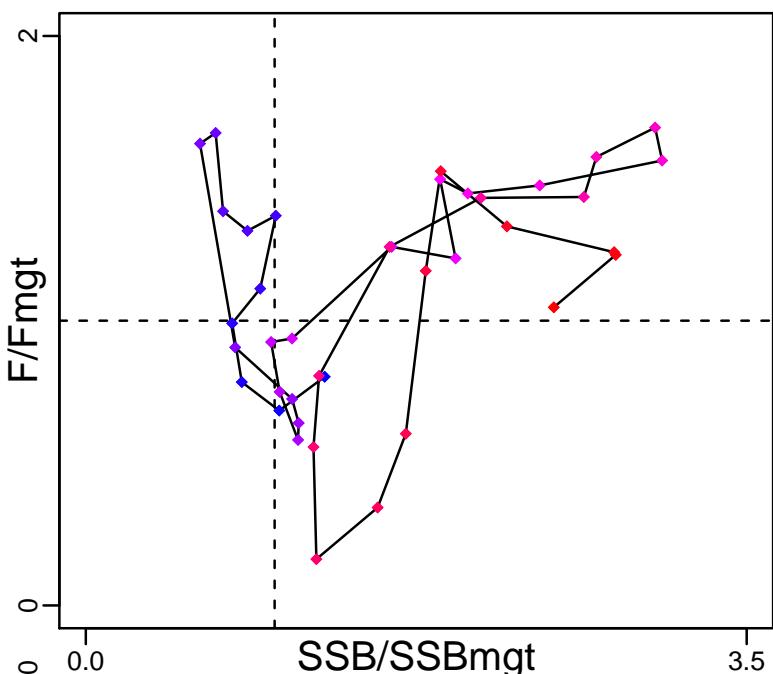
<b>Metadata</b>	
<b>Scientific Name</b>	Micromesistius poutassou
<b>Current Assess ID</b>	WGWISE-BWHITNEA-1980-2020-ICESIMP2021
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Widely Distributed Stocks
<b>Asmts in RAM</b>	2012, 2013, 2014, 2015, 2017, 2018, 2020

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2012	11,124,079
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.32
<b>ERmsy</b>	ERmsy-est-ratio	2020	0.341
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2020	2,250,000
<b>Fmgt</b>	Fmgt-1/yr	2020	0.32
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2012	1,616,060
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	1,500,000
<b>Flim</b>	Flim-1/yr	2018	0.88
<b>ERlim</b>	-	-	-

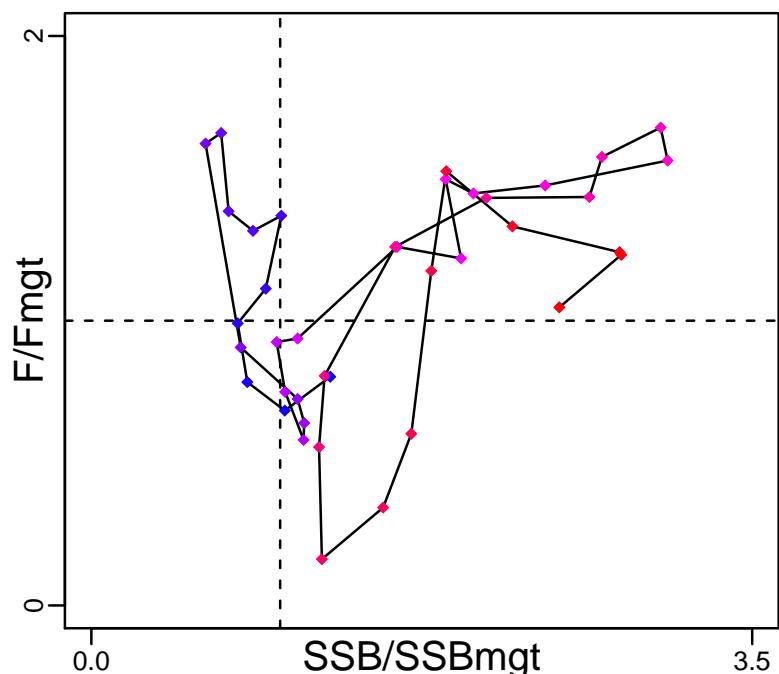
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2020	5,700,362	-	-	
<b>SSB</b>	SSB-MT	2020	4,325,386	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2020	5,466,776,000	-	1	
<b>F</b>	F-1/yr	2020	0.335	-	3 to 7	
<b>ER</b>	ER-calc-ratio	2020	0.21	-	-	
<b>TC</b>	TC-MT	2020	1,444,301			
<b>TL</b>	TL-MT	2020	1,444,301			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	0.567			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.256			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2020	0.615			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2020	1.922			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2020	1.047			
<b>ER/ERmgt</b>	-	-	-			

### Blue whiting Northeast Atlantic [BWHITNEA]

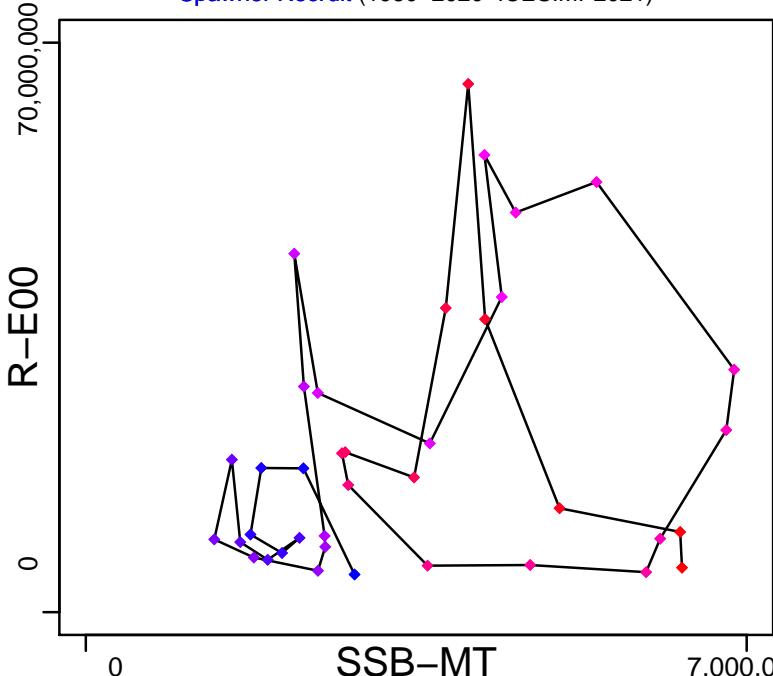
Kobe MSYpref (1980–2020–ICESIMP2021)



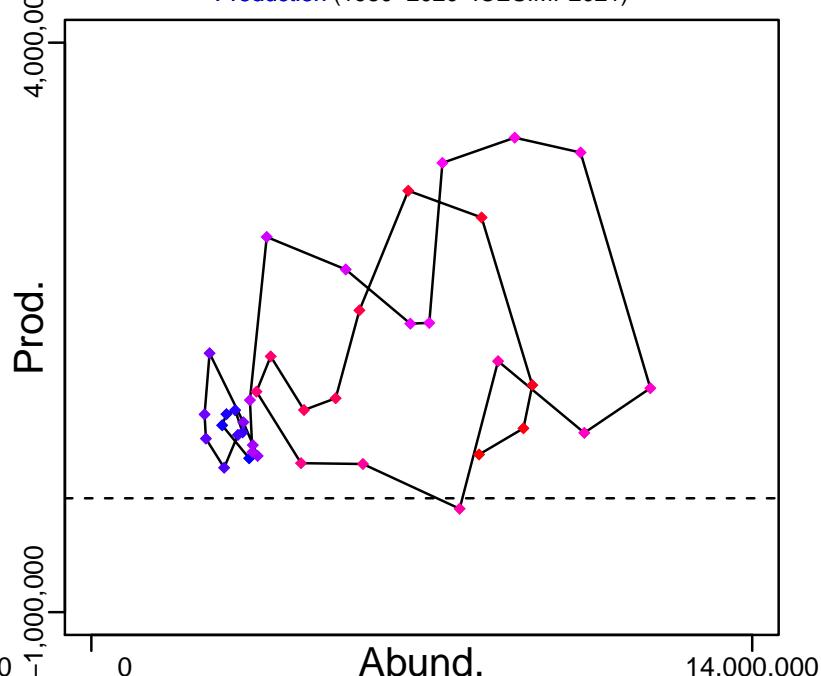
Kobe MGTpref (1980–2020–ICESIMP2021)



Spawner Recruit (1980–2020–ICESIMP2021)



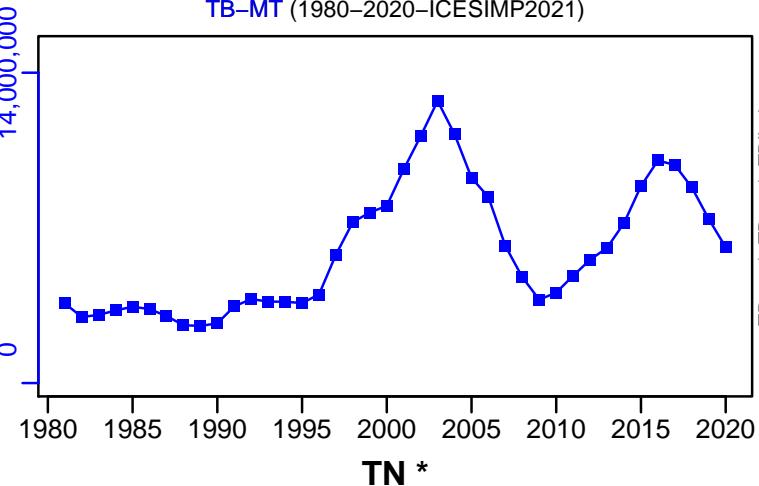
Production (1980–2020–ICESIMP2021)



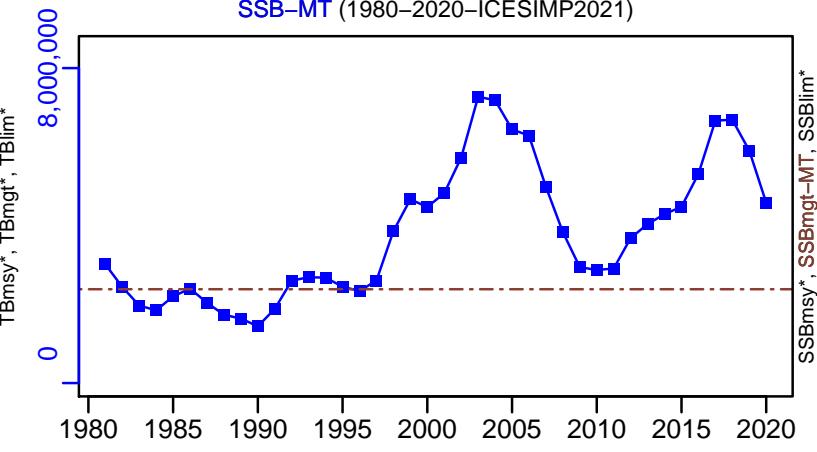
◆ Start Year ◆ End Year \* No Data

### Blue whiting Northeast Atlantic [BWHITNEA]

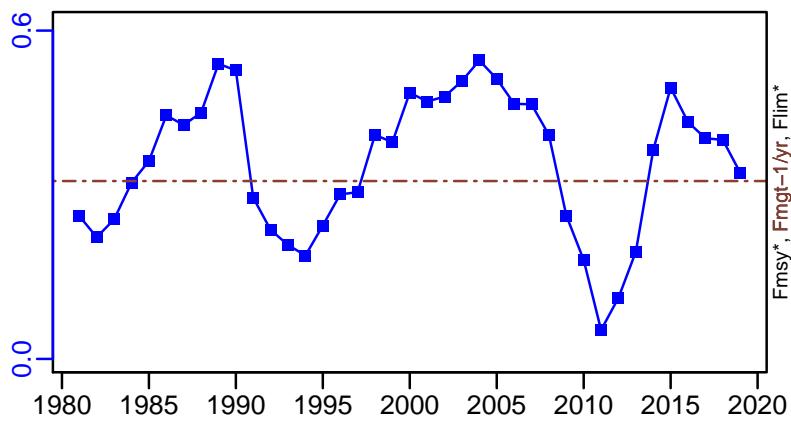
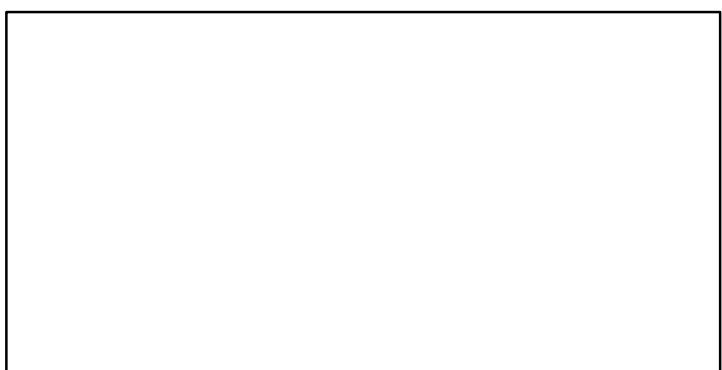
TB-MT (1980–2020–ICESIMP2021)



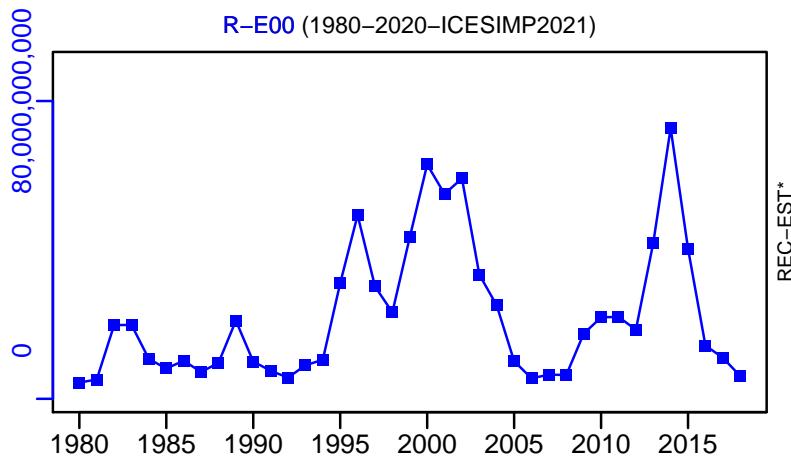
SSB-MT (1980–2020–ICESIMP2021)



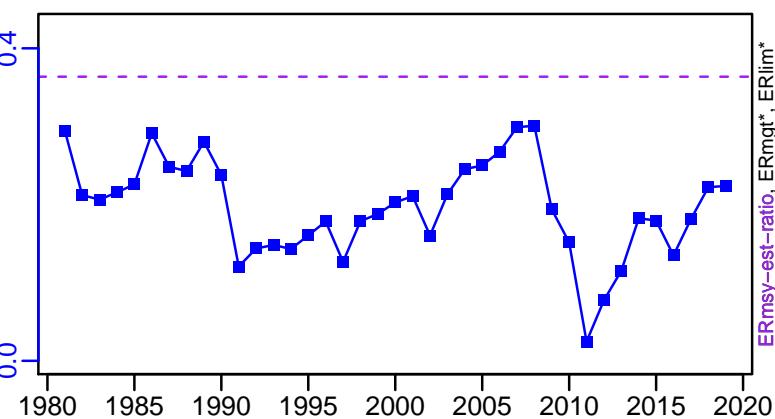
**TN \***



ER-calc-ratio (1980–2020–ICESIMP2021)



R-E00 (1980–2020–ICESIMP2021)

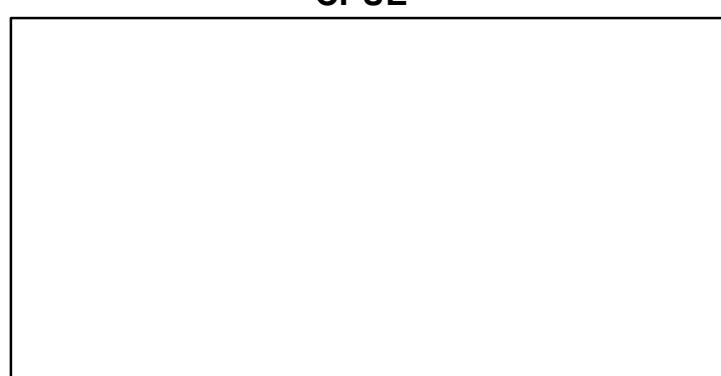
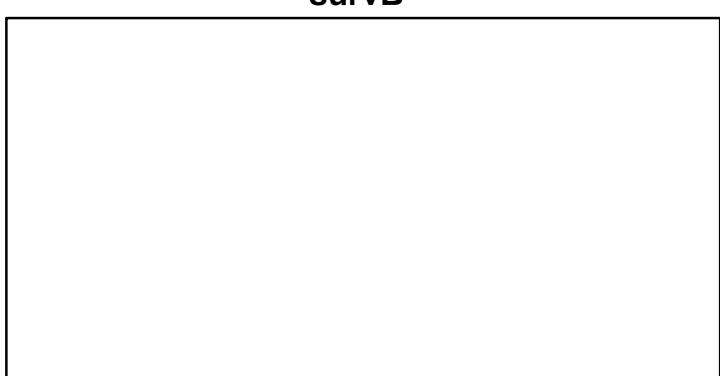
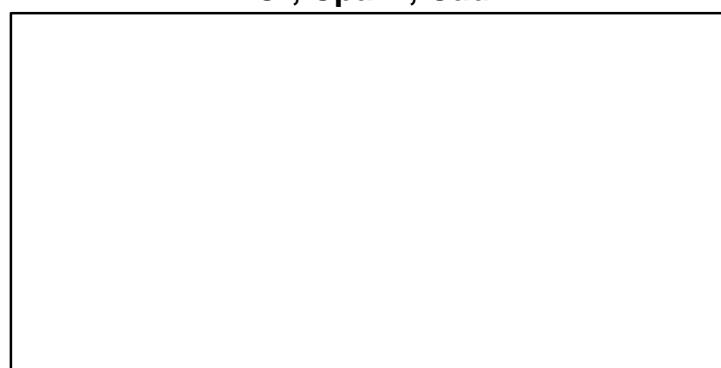
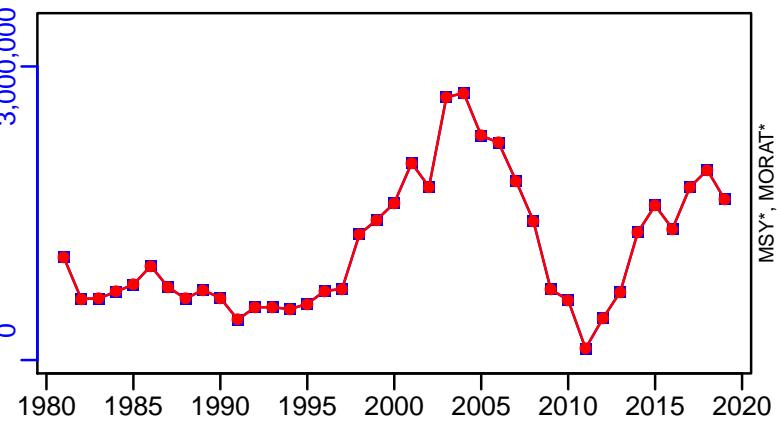


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

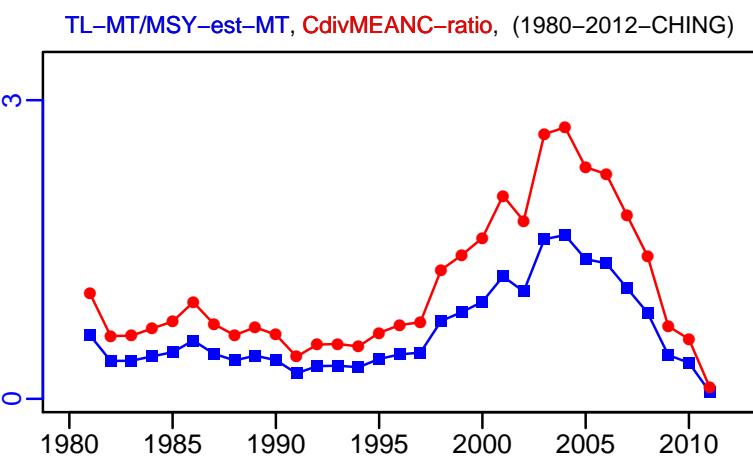
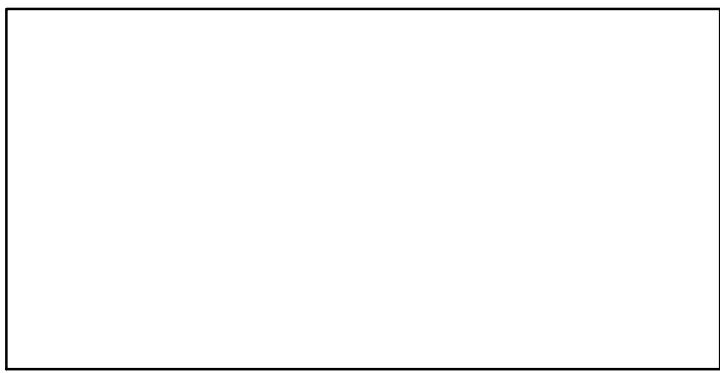
Blue whiting Northeast Atlantic [BWHITNEA]

TC-MT, TL-MT, RecC\* (1980–2020–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



EFFORT\*



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

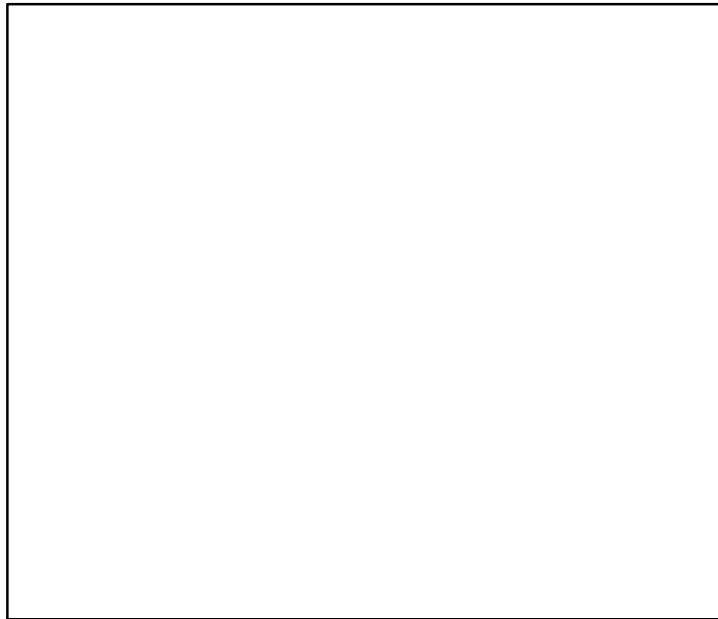
## Cuckoo ray ICES 3a-4 [CKRAYIIIa-IV]

<b>Metadata</b>	
<b>Scientific Name</b>	Leucoraja naevus
<b>Current Assess ID</b>	WGEF-CKRAYIIIa-IV-1991-2018-ICESIMP2021
<b>Area</b>	ICES 3a-4
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2018, 2016

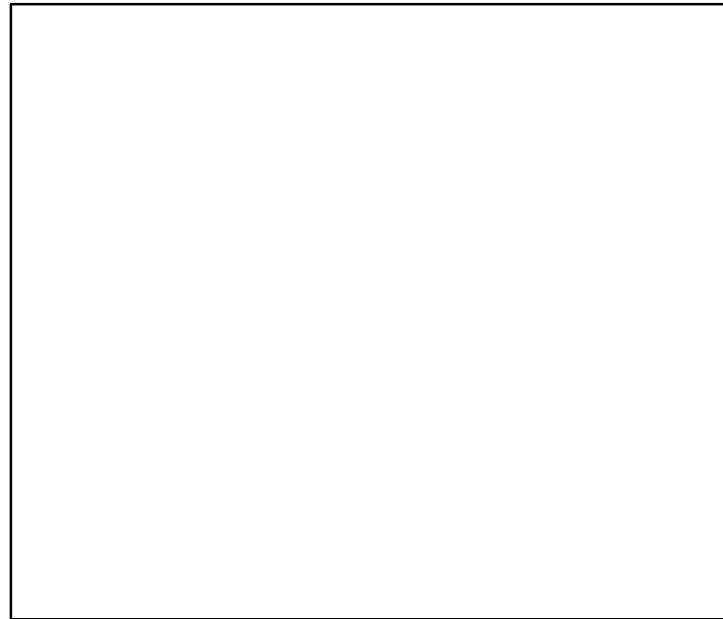
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	1.03	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	180		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

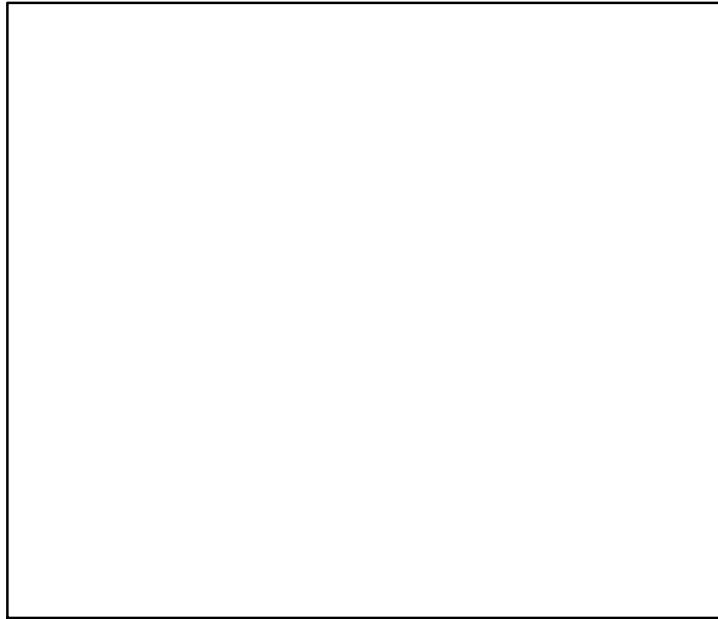
**Kobe MSY\***



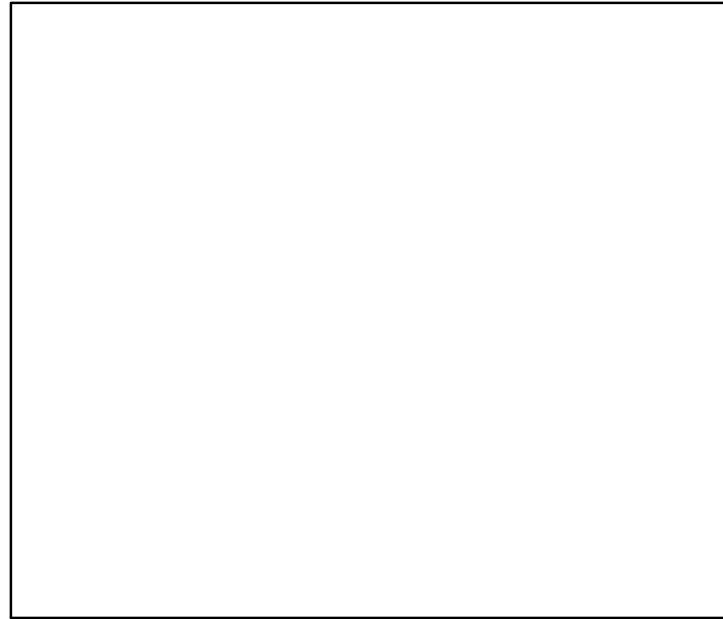
**Kobe MGT\***



**Spawner Recruit\***



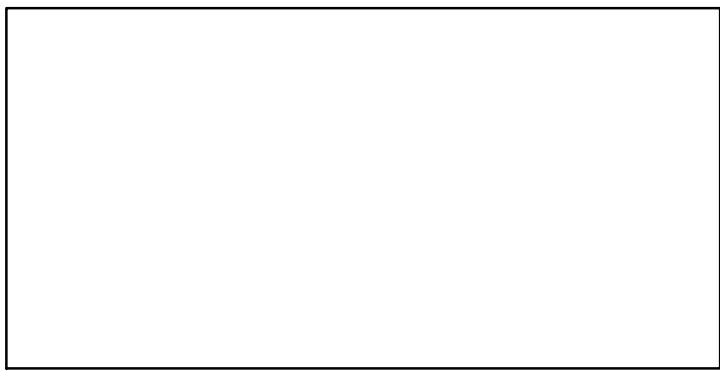
**Production\***



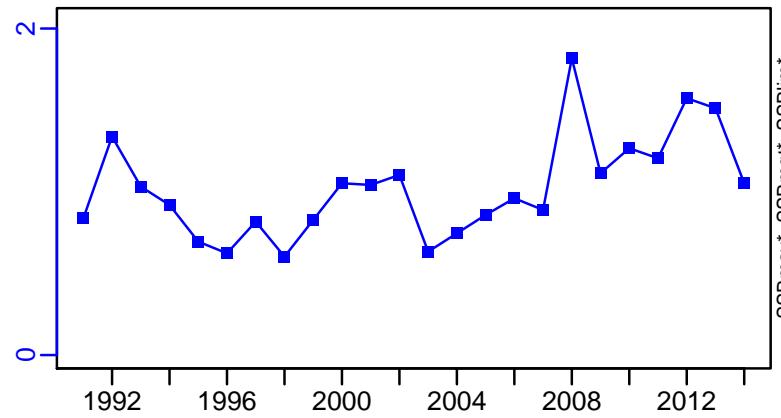
◆ Start Year ♦ End Year \* No Data

Cuckoo ray ICES 3a–4 [CKRAYIIIa–IV]

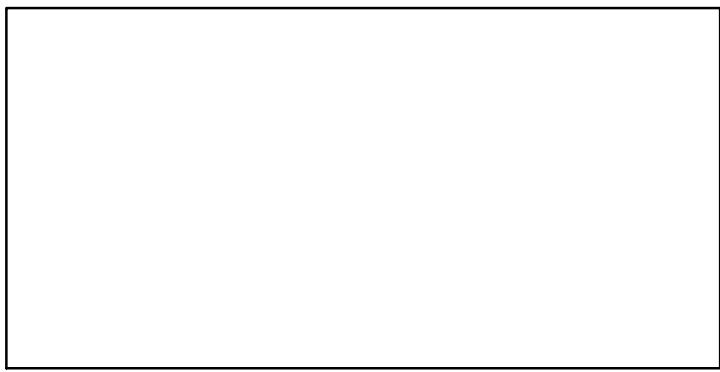
**TB\***



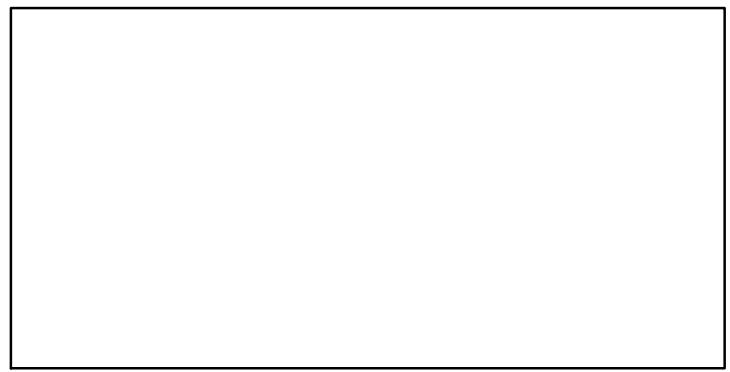
SSB-index (1991–2014–ICESIMP2018)



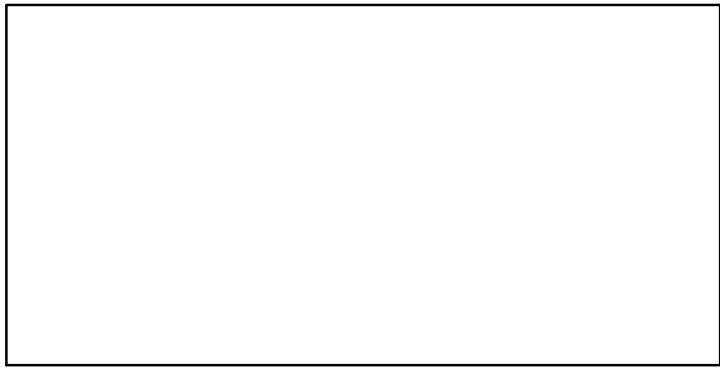
**TN \***



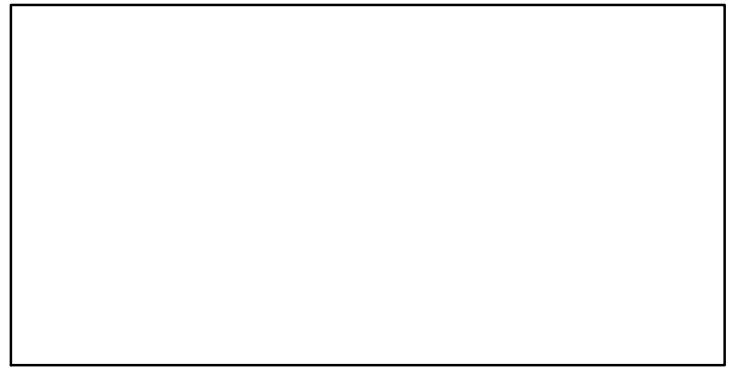
**F\***



**ER\***



**Recruits\***

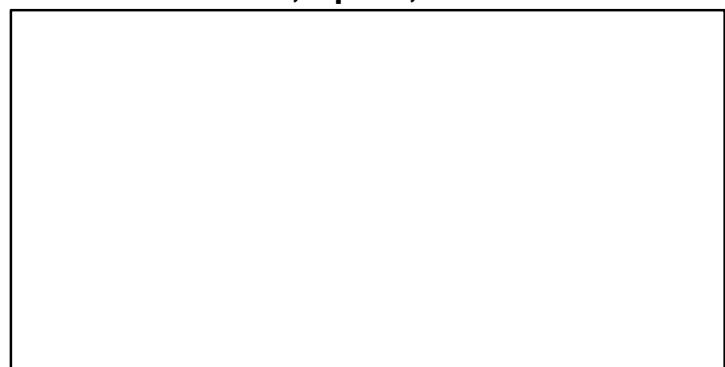
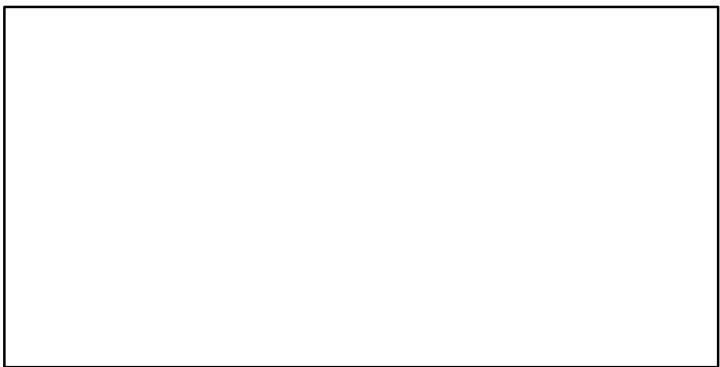
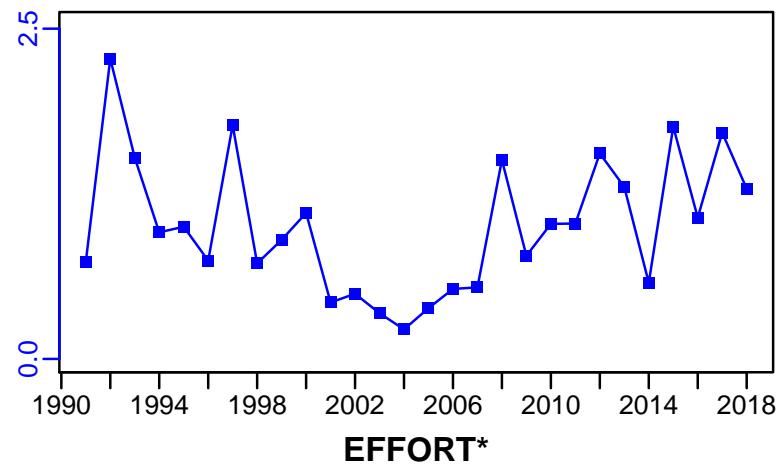
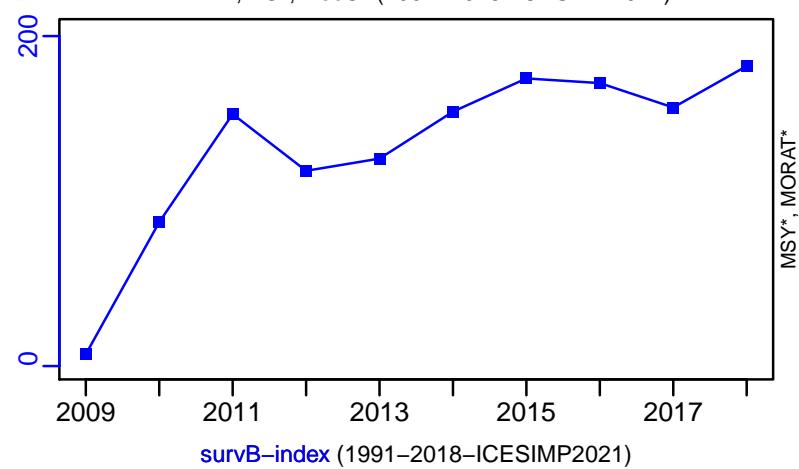


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

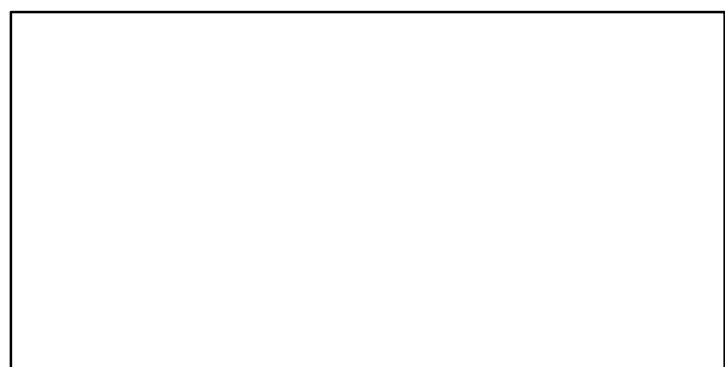
Cuckoo ray ICES 3a-4 [CKRAYIIIa-IV]

TL-MT, TC\*, RecC\* (1991–2018–ICESIMP2021)

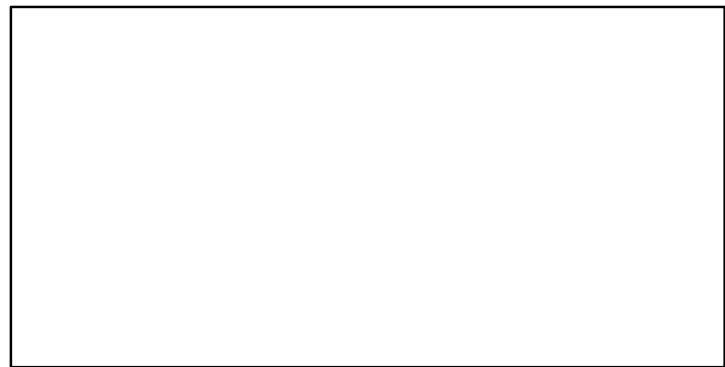
TAC\*, Cpair\*, Cadv\*



CPUE\*



CdivMSY\*



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

## Cuckoo ray Portugese Waters -East [CKRAYIXa]

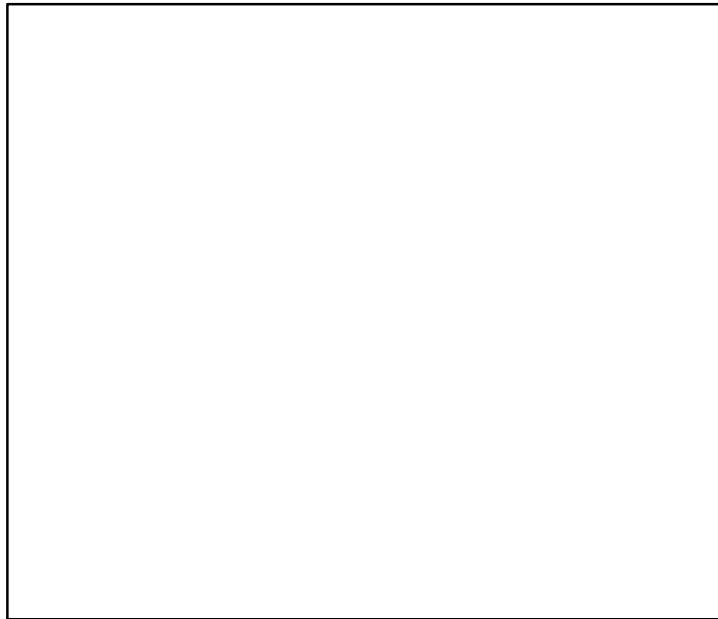
Metadata	
<b>Scientific Name</b>	Leucoraja naevus
<b>Current Assess ID</b>	WGEF-CKRAYIXa-1998-2015-ICESIMP2018
<b>Area</b>	Portugese Waters -East
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

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

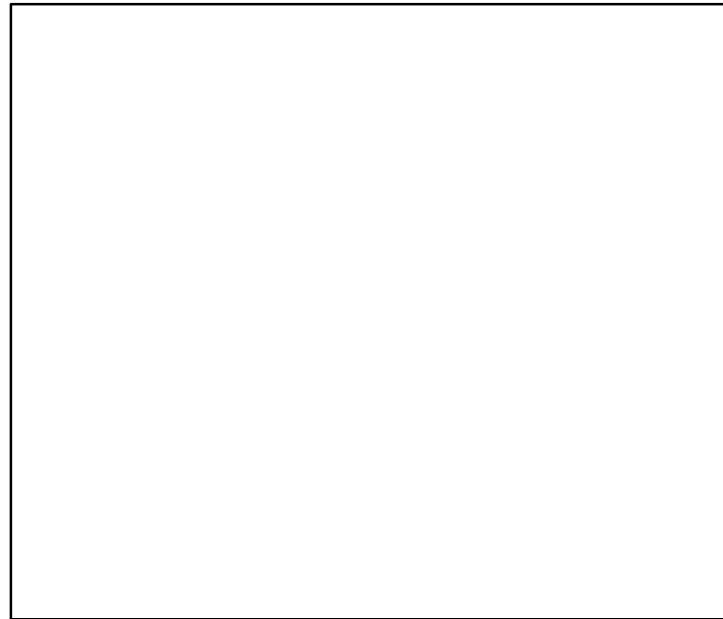
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	2.62	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	19		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Cuckoo ray Portugese Waters –East [CKRAYIXa]

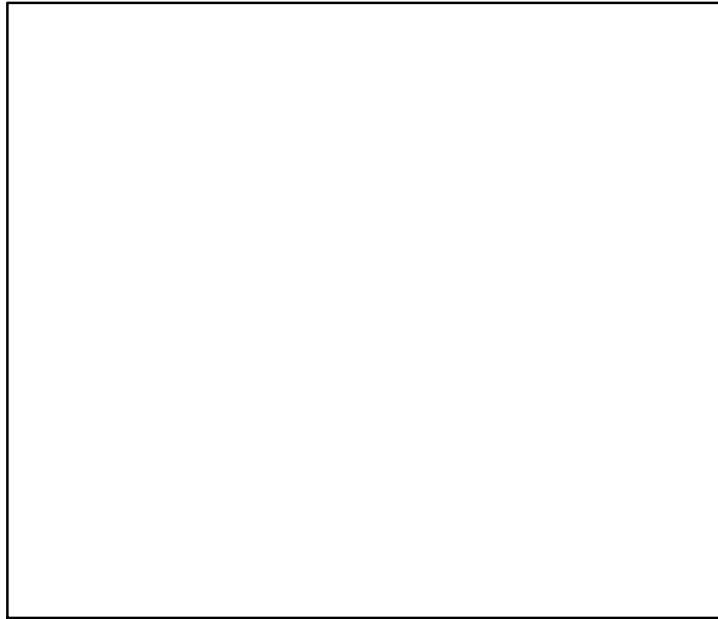
**Kobe MSY\***



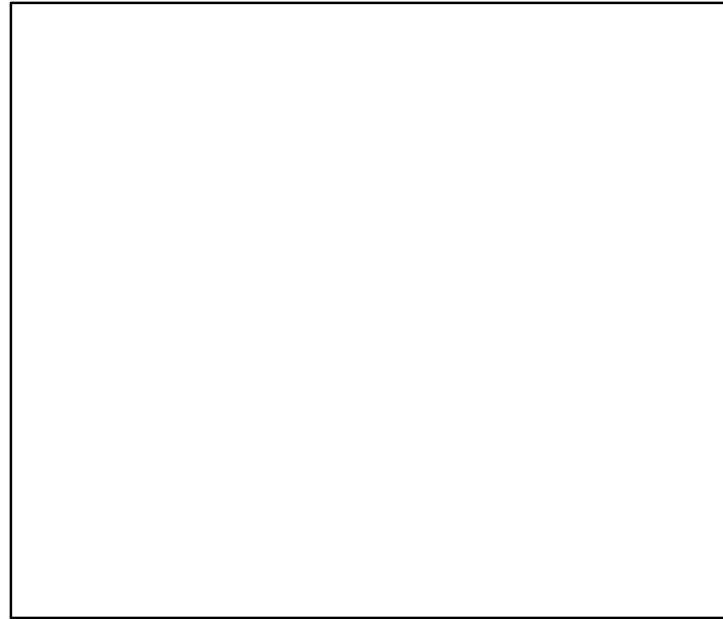
**Kobe MGT\***



**Spawner Recruit\***



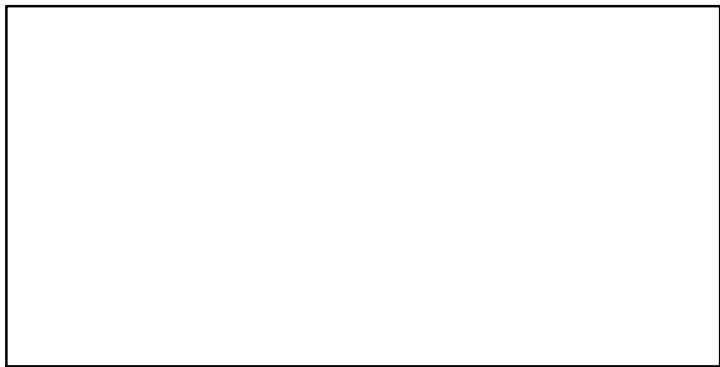
**Production\***



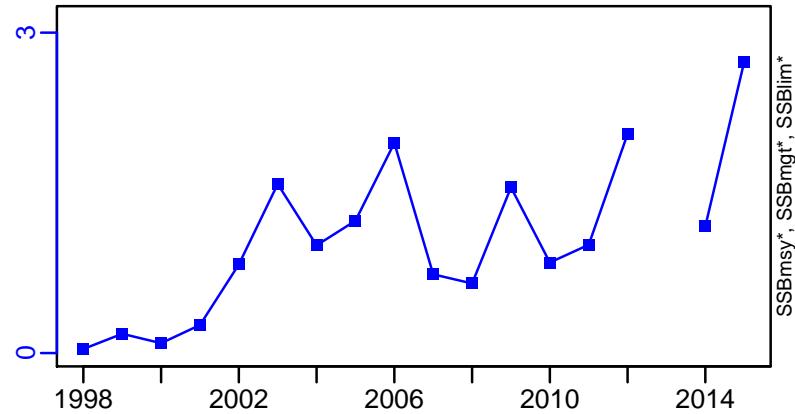
◆ Start Year ♦ End Year \* No Data

Cuckoo ray Portugese Waters –East [CKRAYIXa]

**TB\***



SSB–index (1998–2015–ICESIMP2018)



SSB<sub>m</sub>\*, SSB<sub>mgt</sub>\*, SSB<sub>lim</sub>\*

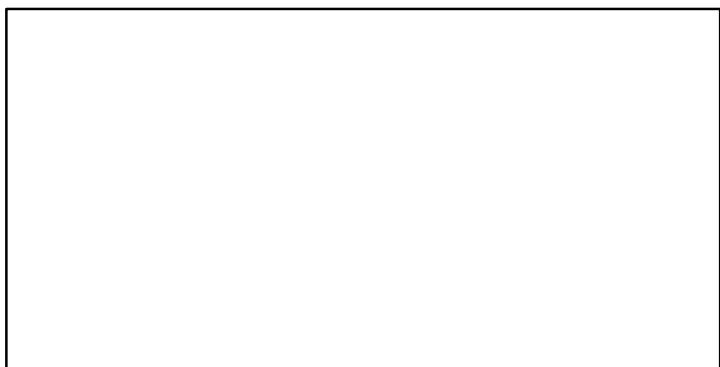
**TN \***



**F\***



**ER\***



**Recruits\***

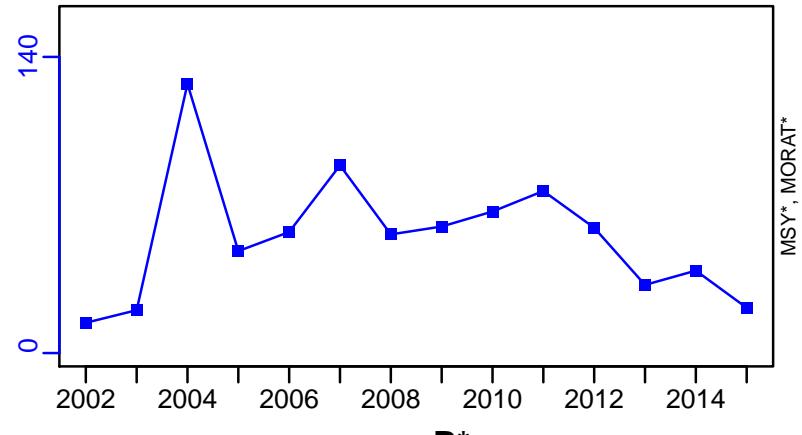


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

Cuckoo ray Portugese Waters –East [CKRAYIXa]

TL-MT, TC\*, RecC\* (1998–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



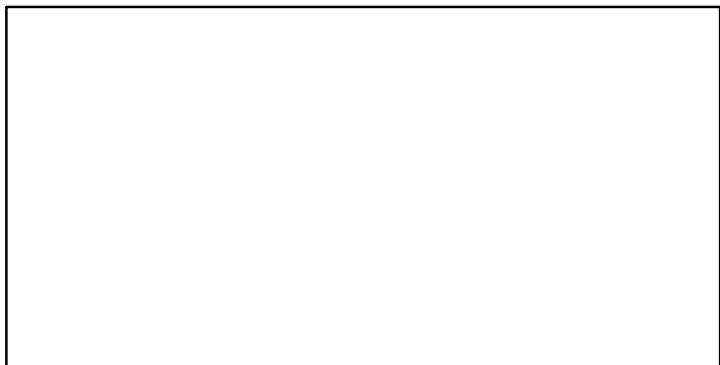
survB\*



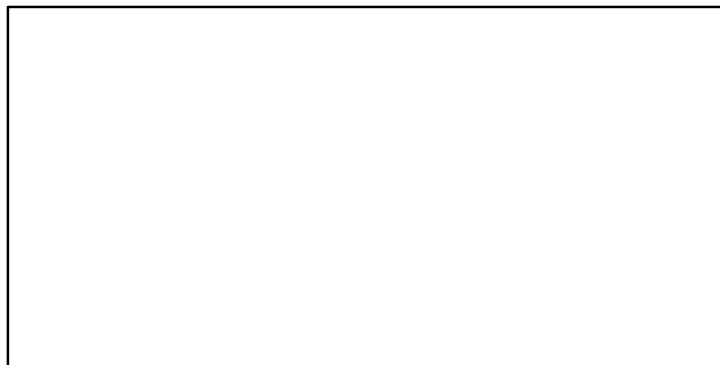
CPUE\*



EFFORT\*



CdivMSY\*



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

## Cuckoo ray Bay of Biscay -South [CKRAYVIIIC]

Metadata	
<b>Scientific Name</b>	Leucoraja naevus
<b>Current Assess ID</b>	WGEF-CKRAYVIIIC-1999-2015-ICESIMP2018
<b>Area</b>	Bay of Biscay -South
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	0.309	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	15		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

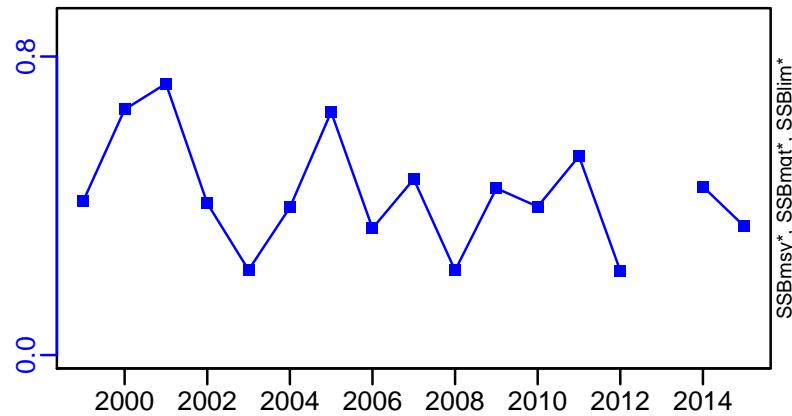
◆ Start Year ♦ End Year \* No Data

Cuckoo ray Bay of Biscay –South [CKRAYVIIIC]

**TB\***

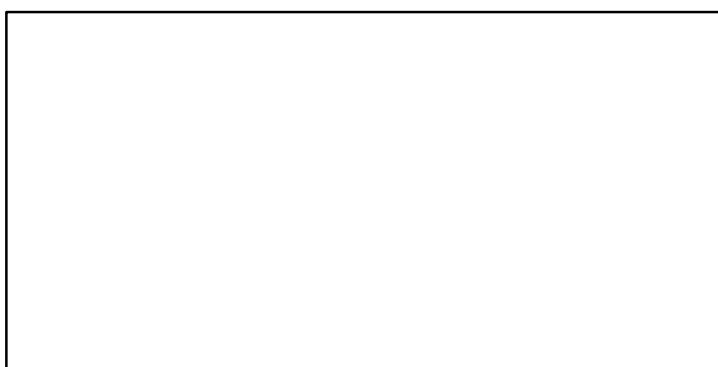


SSB–index (1999–2015–ICESIMP2018)

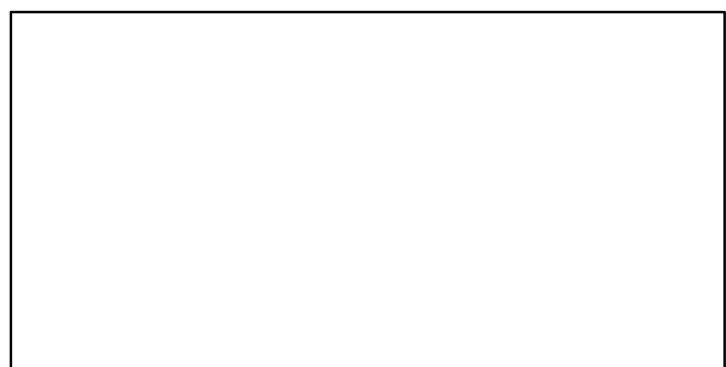


SSBm<sup>\*</sup>, SSBmgt<sup>\*</sup>, SSBLim<sup>\*</sup>

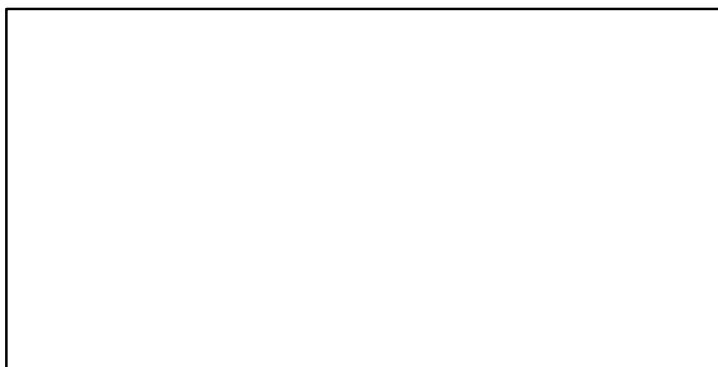
**TN \***



**F\***



**ER\***



**Recruits\***

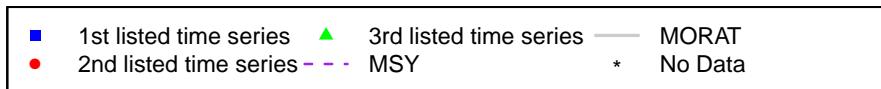
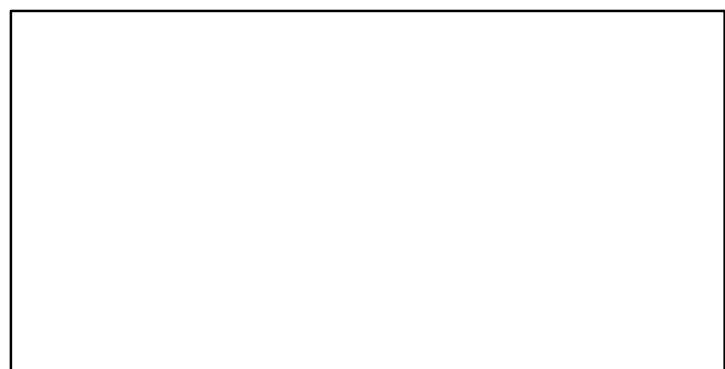
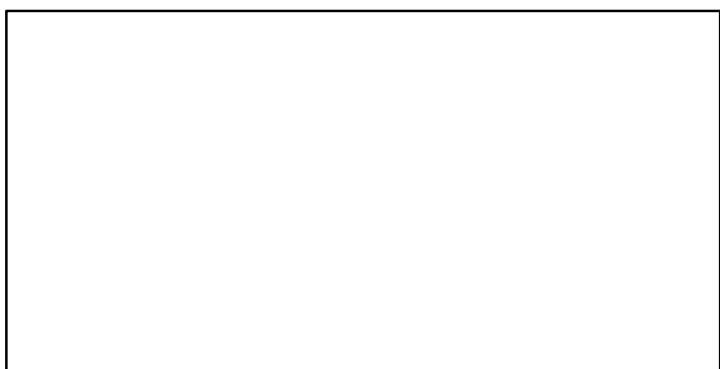
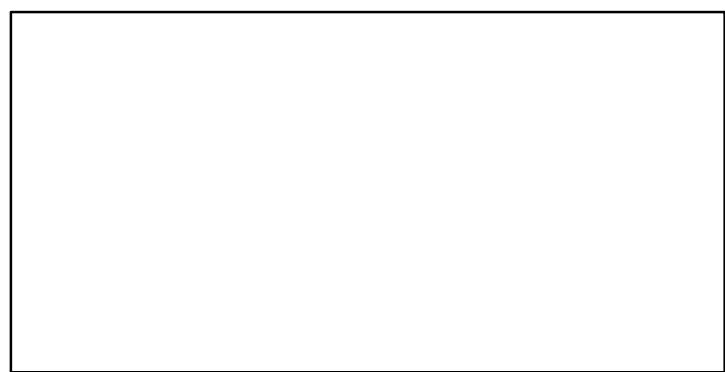
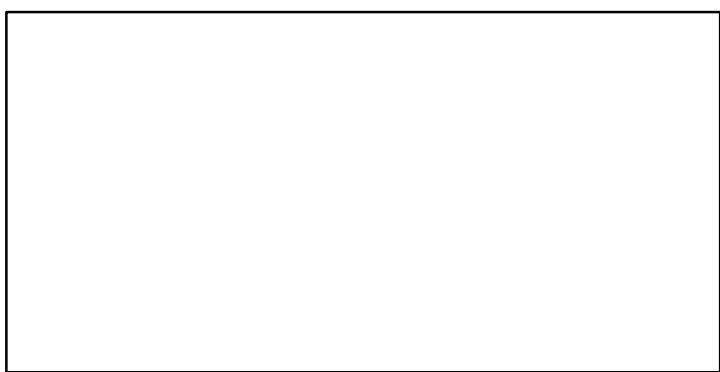
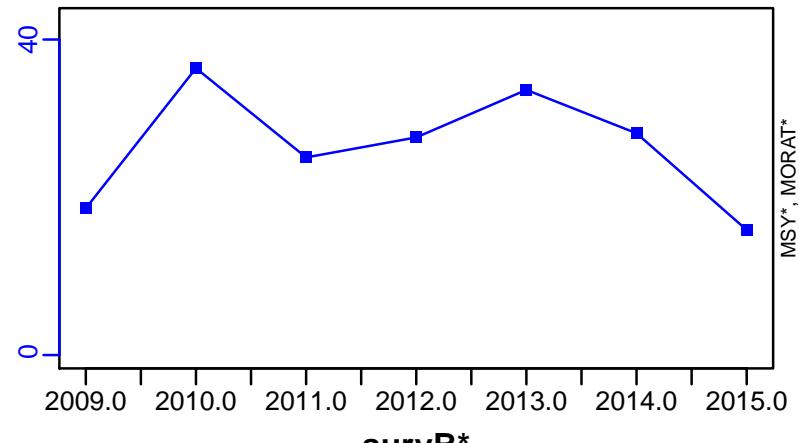


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

Cuckoo ray Bay of Biscay –South [CKRAYVIIIC]

TL–MT, TC\*, RecC\* (1999–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



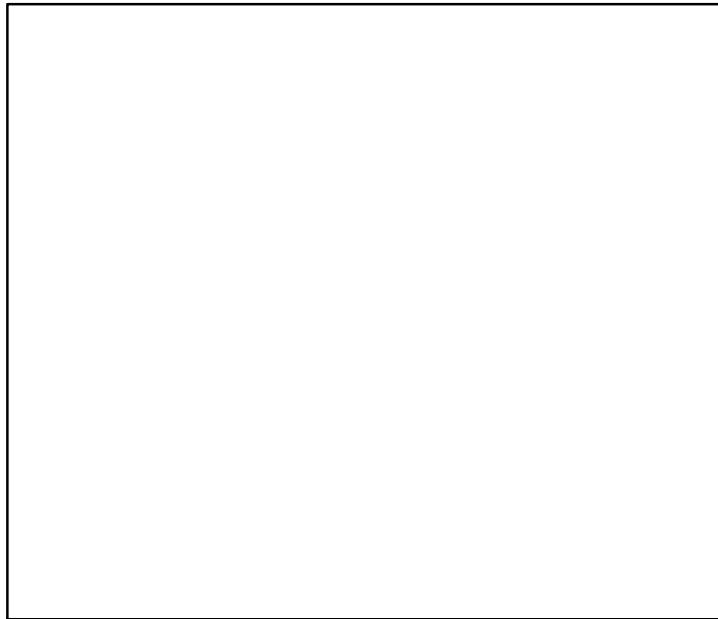
## Cuckoo ray ICES 6-7 [CKRAYVI-VII]

<b>Metadata</b>	
<b>Scientific Name</b>	Leucoraja naevus
<b>Current Assess ID</b>	WGEF-CKRAYVI-VII-2005-2015-ICESIMP2018
<b>Area</b>	ICES 6-7
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

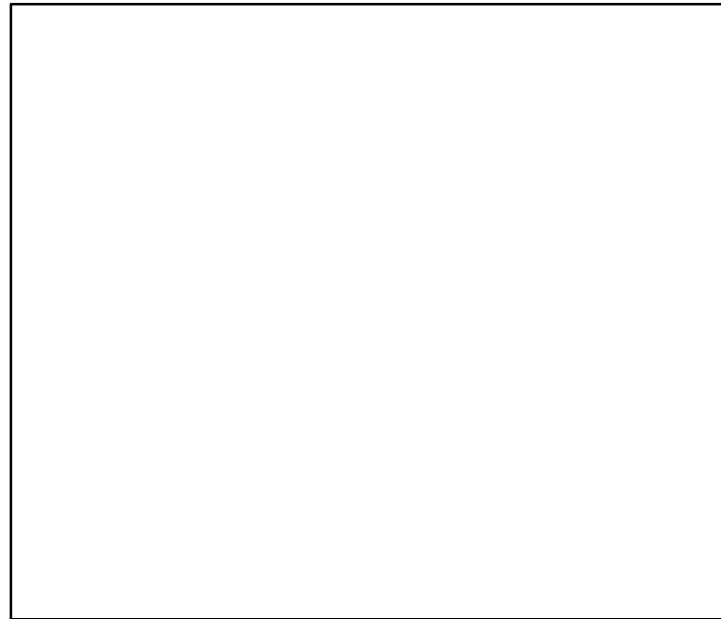
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	1.51	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	3360		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

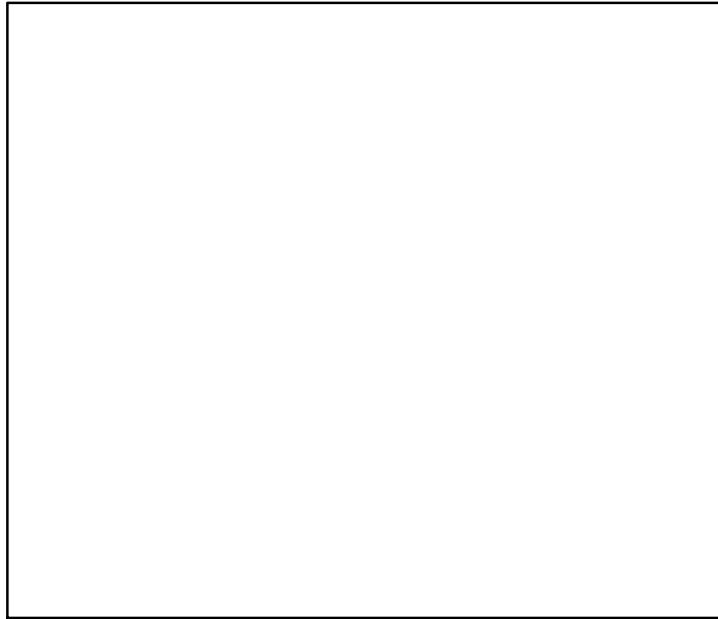
**Kobe MSY\***



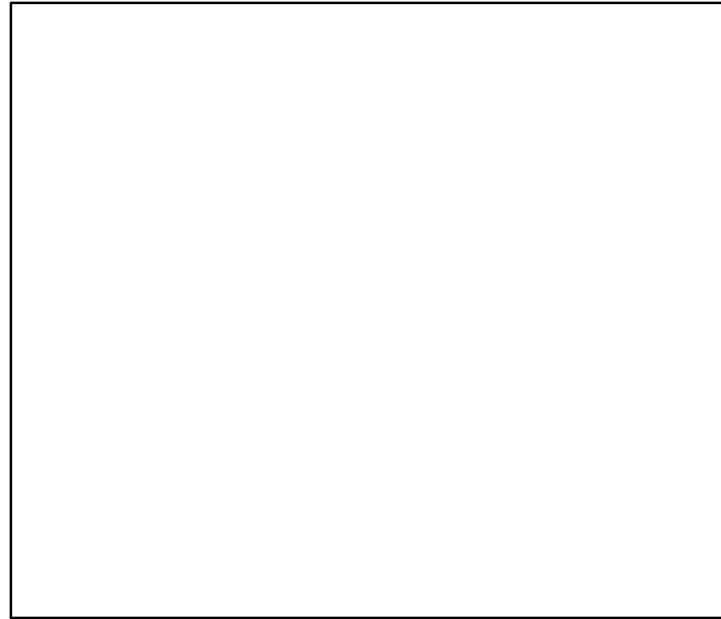
**Kobe MGT\***



**Spawner Recruit\***



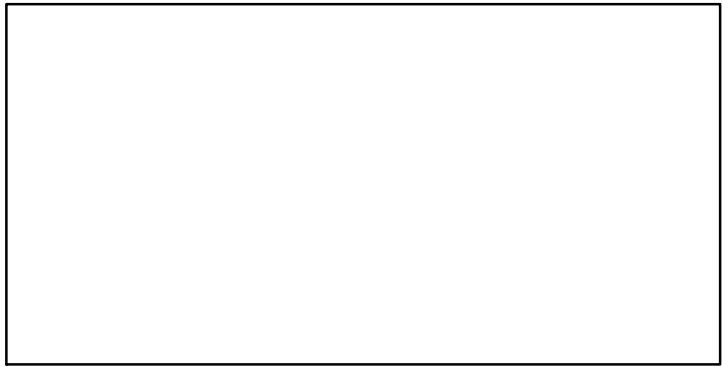
**Production\***



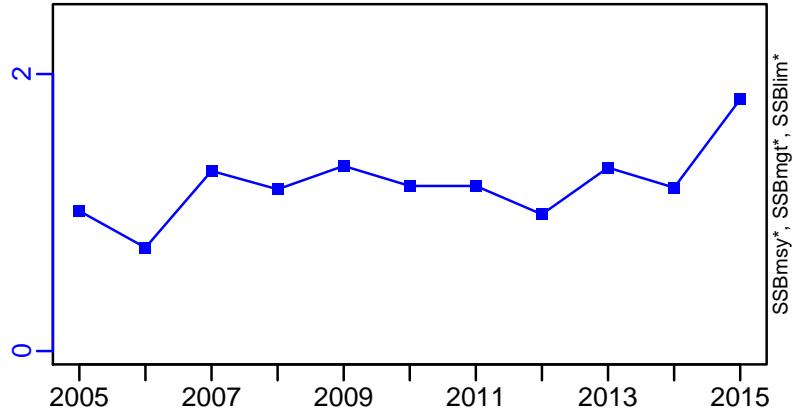
◆ Start Year ♦ End Year \* No Data

Cuckoo ray ICES 6–7 [CKRAYVI–VII]

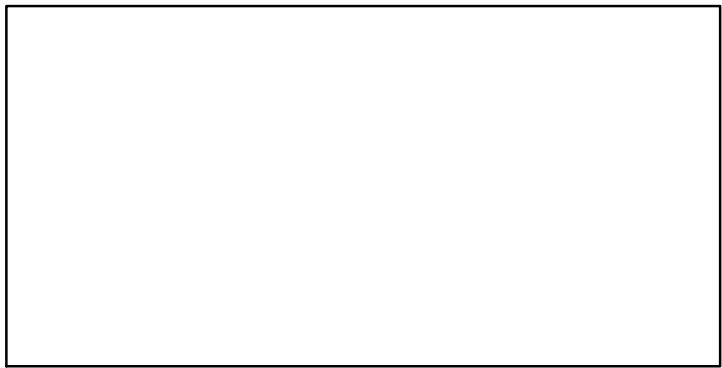
**TB\***



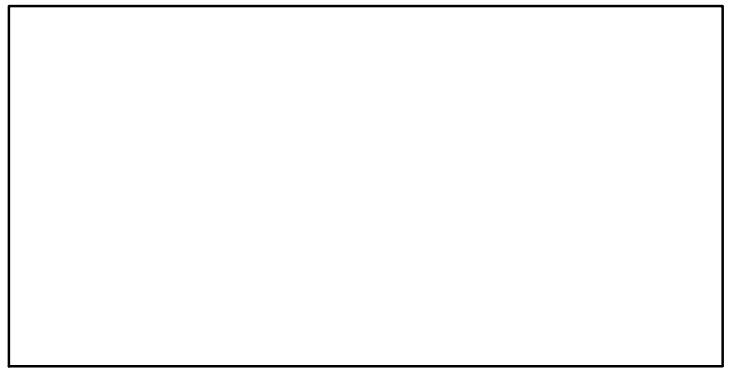
SSB–index (2005–2015–ICESIMP2018)



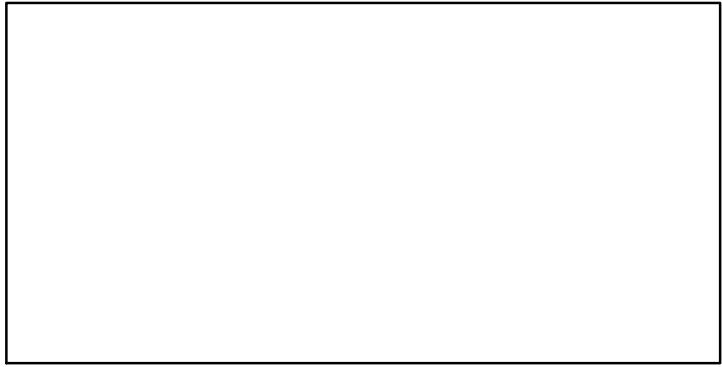
**TN \***



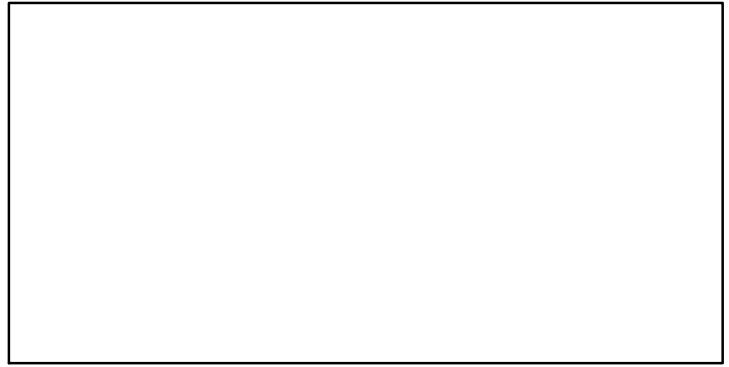
**F\***



**ER\***



**Recruits\***

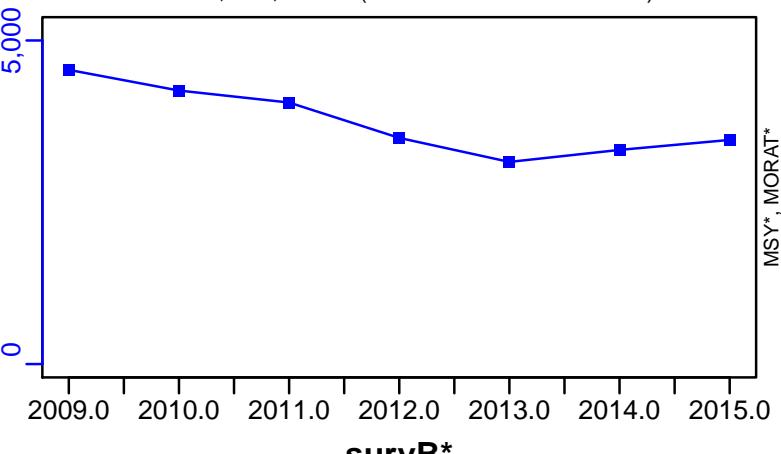


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

Cuckoo ray ICES 6–7 [CKRAYVI–VII]

TL–MT, TC\*, RecC\* (2005–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



MSY\*, MORAT\*

survB\*



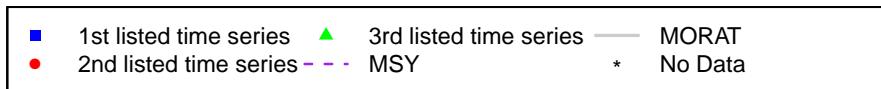
CPUE\*



EFFORT\*



CdivMSY\*



## Atlantic cod Western Baltic [CDBA2224]

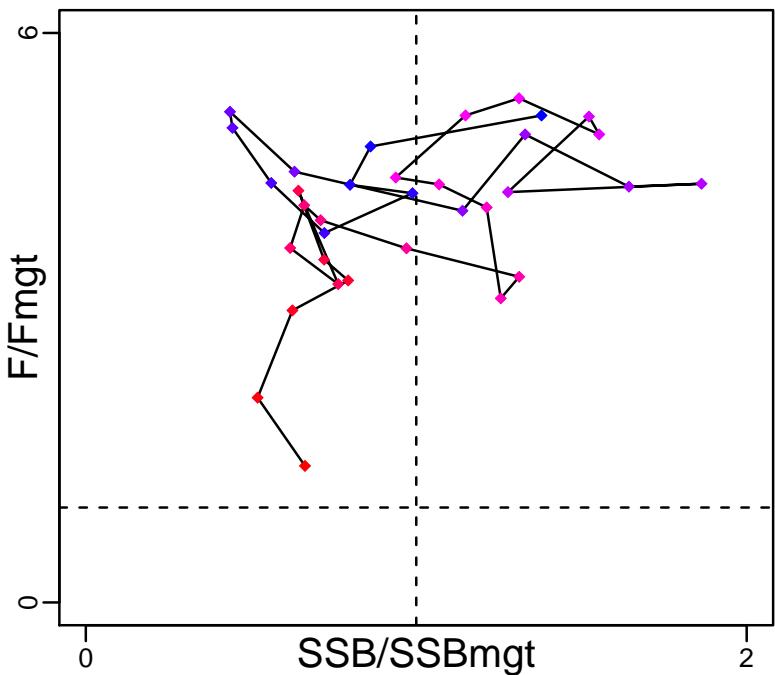
<b>Metadata</b>	
<b>Scientific Name</b>	Gadus morhua
<b>Current Assess ID</b>	WGBFAS-CDBA2224-1984-2019-ICESIMP2021
<b>Area</b>	Western Baltic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2012, 2013, 2014, 2019, 2015, 2016, 2016, 2017, 2018

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2012	35,333
<b>Fmsy</b>	Fmsy-1/yr	2018	0.26
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.464
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	21,876
<b>Fmgt</b>	Fmgt-1/yr	2019	0.26
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2012	23,000
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	27,400
<b>Flim</b>	Flim-1/yr	2018	1.01
<b>ERlim</b>	-	-	-

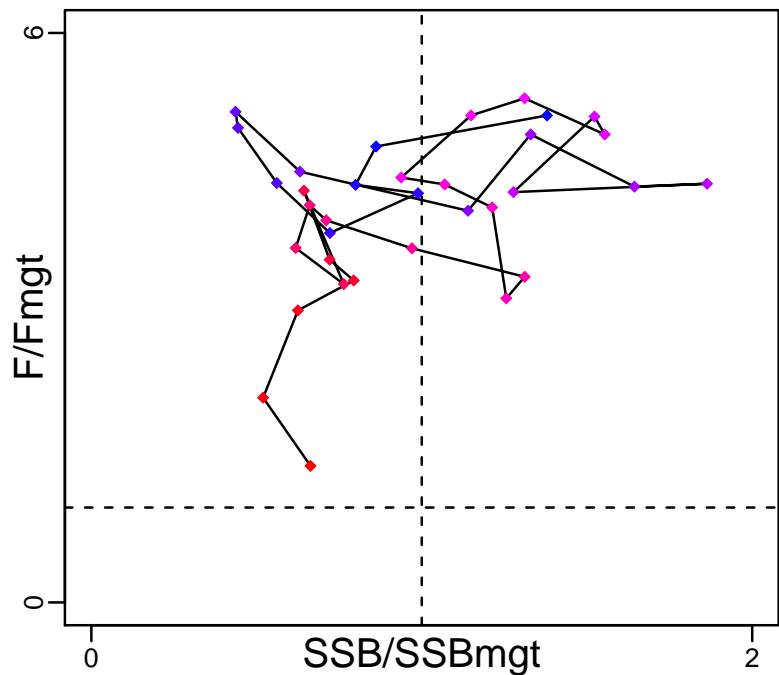
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	22,710	-	-	
<b>SSB</b>	SSB-MT	2019	21,297	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	2226	-	1	
<b>F</b>	F-1/yr	2019	0.374	-	3 to 5	
<b>ER</b>	ER-calc-ratio	2019	0.29	-	-	
<b>TC</b>	TC-MT	2019	5312			
<b>TL</b>	TL-MT	2019	3546			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2012	1.027			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	2.312			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.625			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.974			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.438			
<b>ER/ERmgt</b>	-	-	-			

Atlantic cod Western Baltic [CODBA2224]

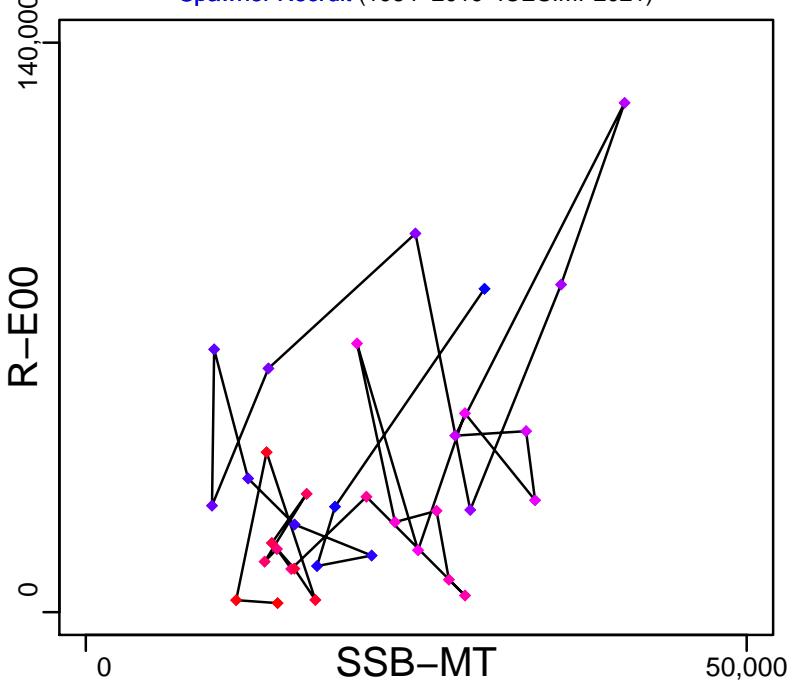
Kobe MSYpref (1984–2019–ICESIMP2021)



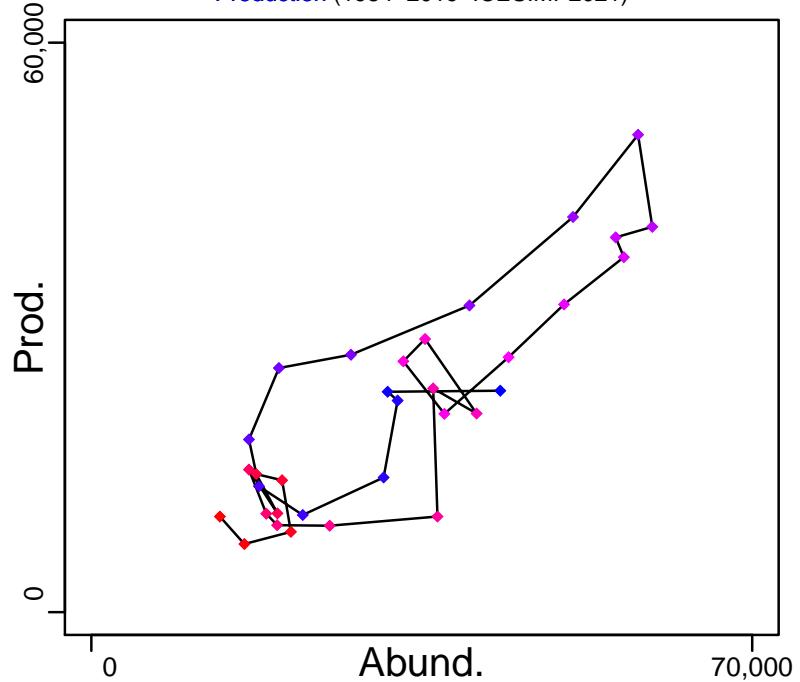
Kobe MGTpref (1984–2019–ICESIMP2021)



Spawner Recruit (1984–2019–ICESIMP2021)



Production (1984–2019–ICESIMP2021)

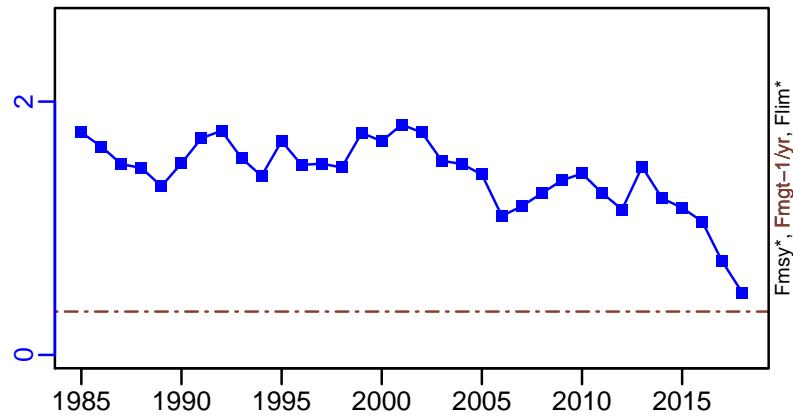
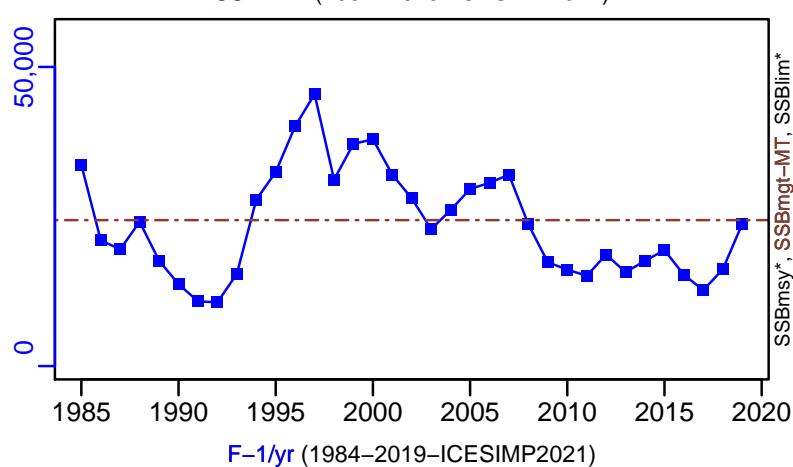
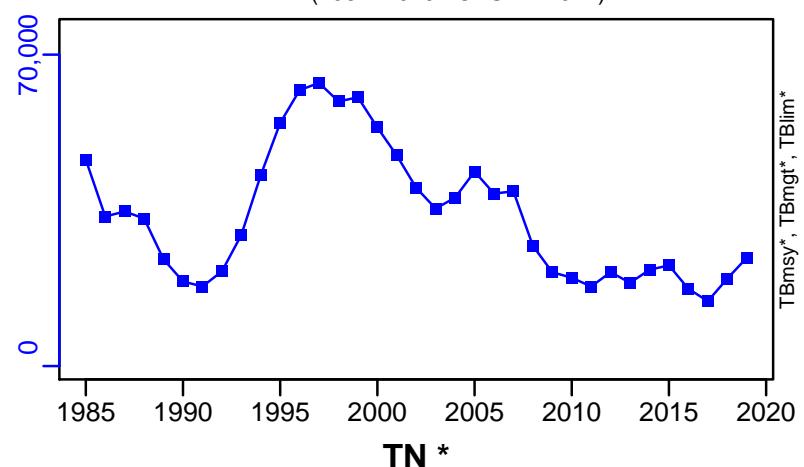


◆ Start Year   ◆ End Year   \* No Data

### Atlantic cod Western Baltic [CODBA2224]

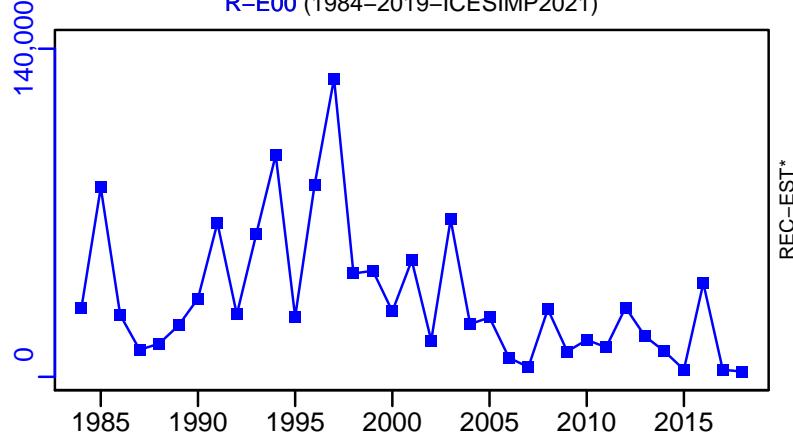
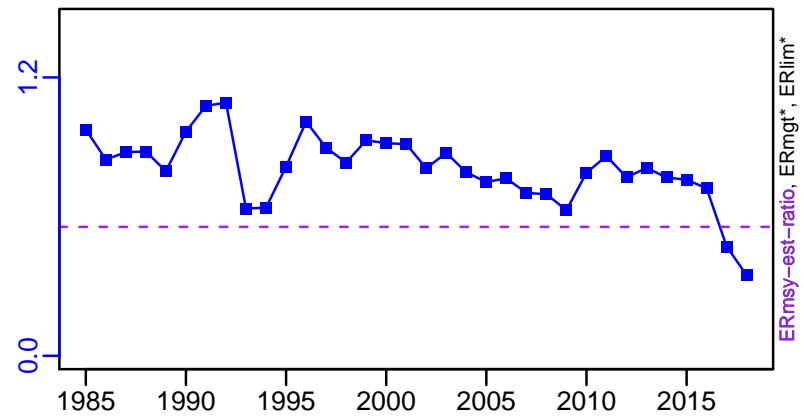
TB-MT (1984–2019–ICESIMP2021)

SSB-MT (1984–2019–ICESIMP2021)



ER-calc-ratio (1984–2019–ICESIMP2021)

R-E00 (1984–2019–ICESIMP2021)

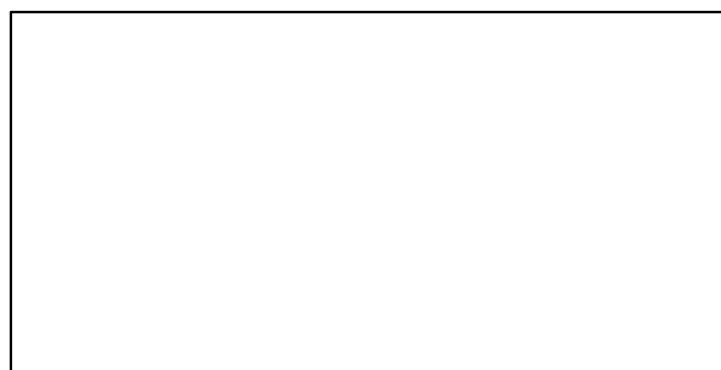
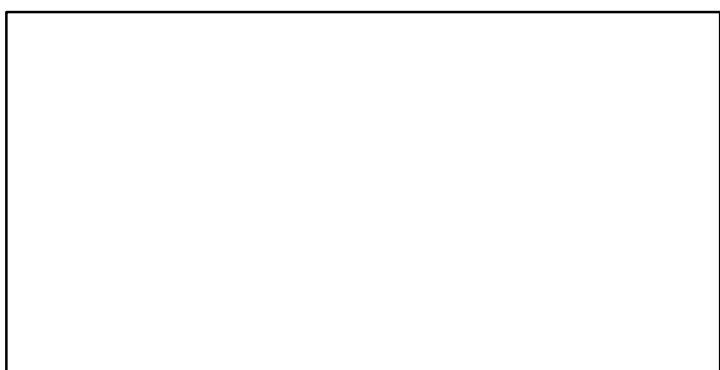
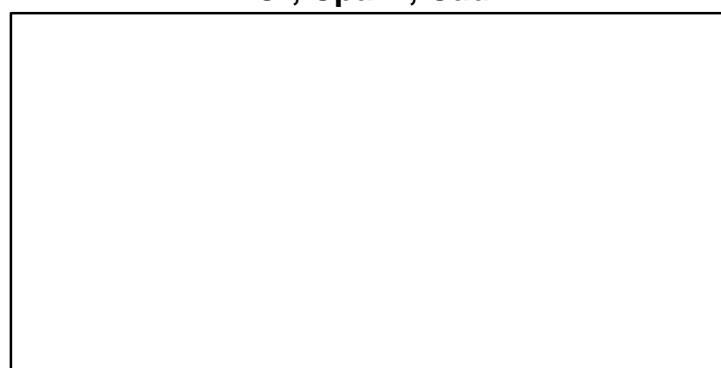
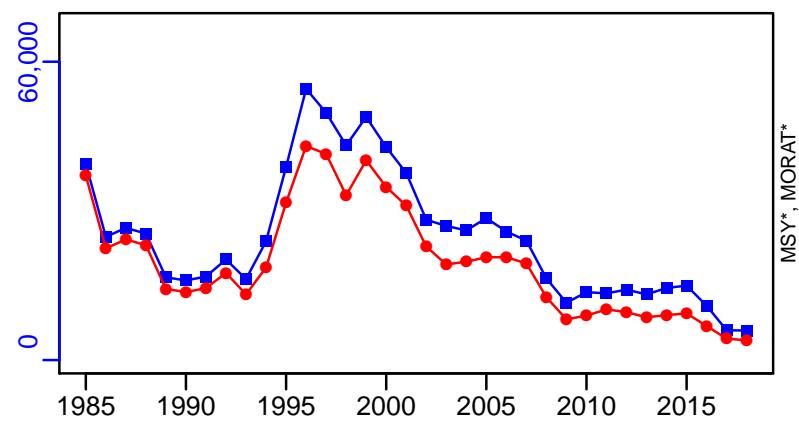


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

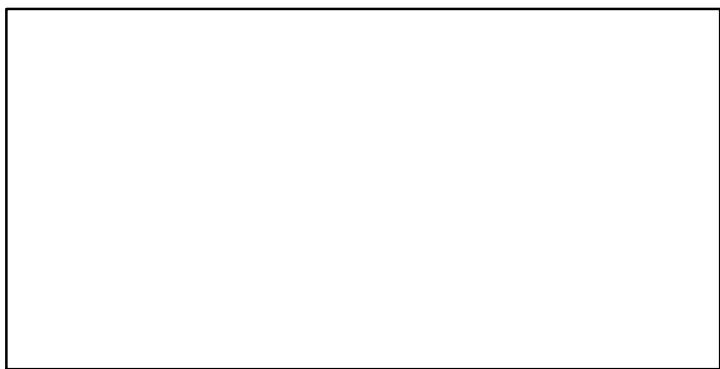
Atlantic cod Western Baltic [CODBA2224]

TC-MT, TL-MT, RecC\* (1984–2019–ICESIMP2021)

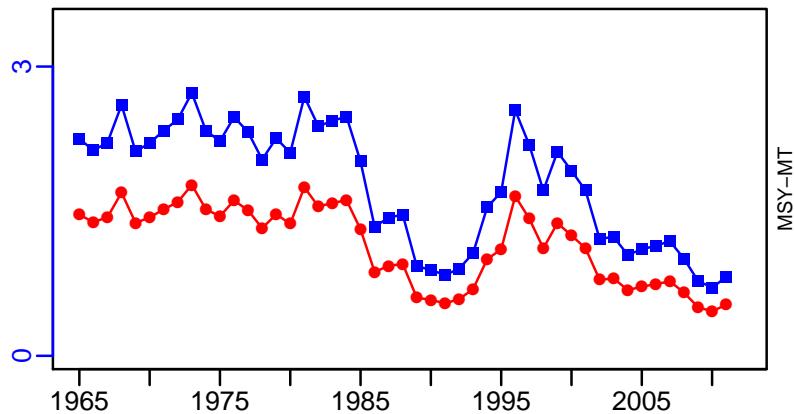
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL-MT/MSY-MT, CdiveMEANC-ratio, (1965–2012–CHING)



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

## Atlantic cod Eastern Baltic [CODBA2532]

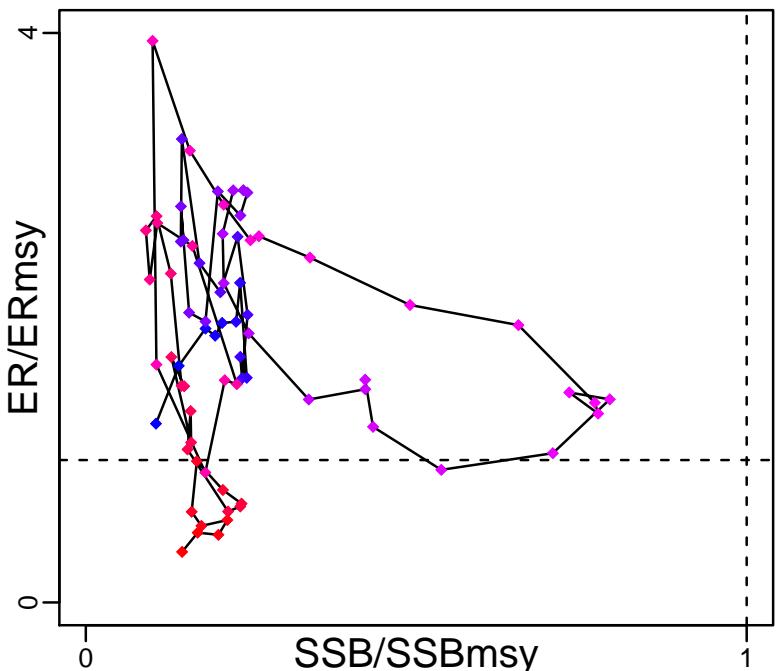
<b>Metadata</b>	
<b>Scientific Name</b>	Gadus morhua
<b>Current Assess ID</b>	WGBFAS-CODBA2532-1946-2019-ICESIMP2021
<b>Area</b>	Eastern Baltic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2019, 2013, 2016, 2016, 2017, 2012

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2012	1,517,840
<b>SSBmsy</b>	SSBmsy-est-MT	2019	574,795
<b>Fmsy</b>	Fmsy-1/yr	2012	0.3
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.265
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2013	88,200
<b>Fmgt</b>	Fmgt-1/yr	2013	0.3
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2019	307,390
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2013	63,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

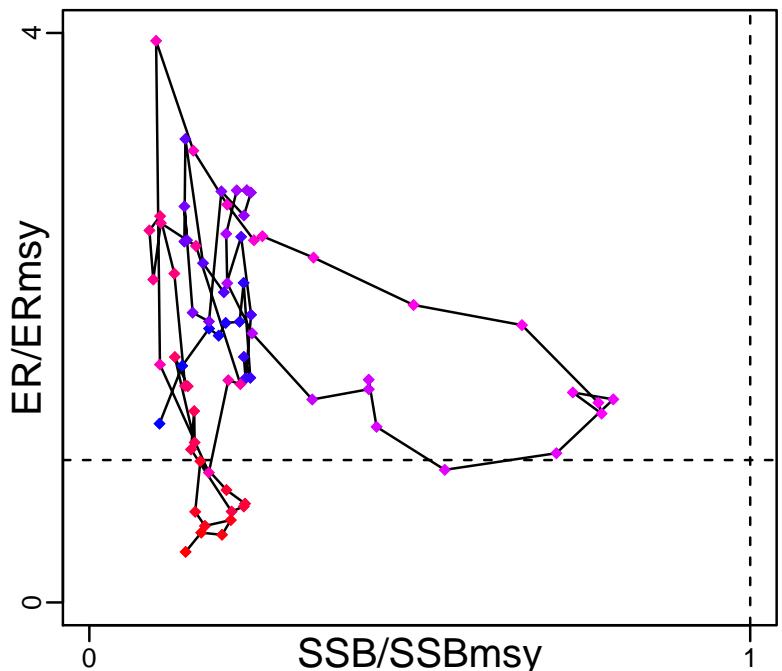
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2013	233,000	Both	-	
<b>SSB</b>	SSB-MT	2019	66,412	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	2,358,730	-	0	
<b>F</b>	F-1/yr	2019	0.21	-	4 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.094	-	-	
<b>TC</b>	TC-MT	2017	30,900			
<b>TL</b>	TL-MT	2019	15,907			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	0.192			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2019	0.116			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2012	0.857			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.355			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2013	2.041			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2013	1.243			
<b>ER/ERmgt</b>	-	-	-			

Atlantic cod Eastern Baltic [CODBA2532]

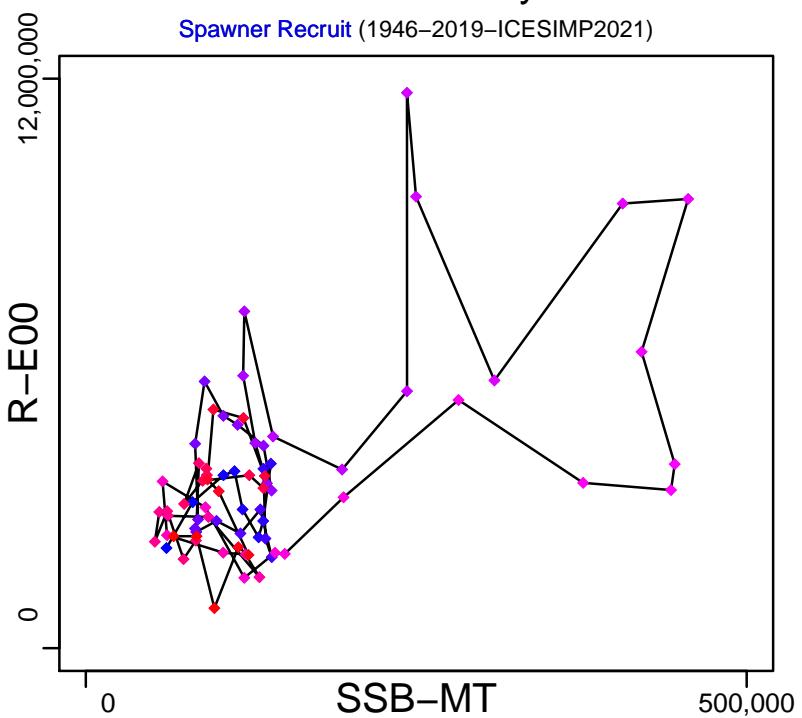
Kobe MSYpref (1946–2019–ICESIMP2021)



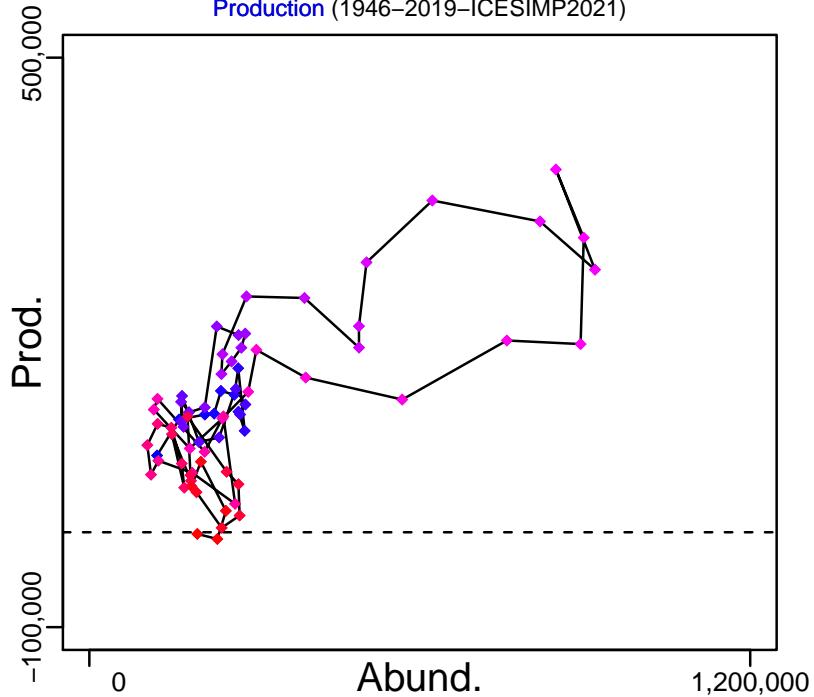
Kobe MGTpref (1946–2019–ICESIMP2021)



Spawner Recruit (1946–2019–ICESIMP2021)



Production (1946–2019–ICESIMP2021)

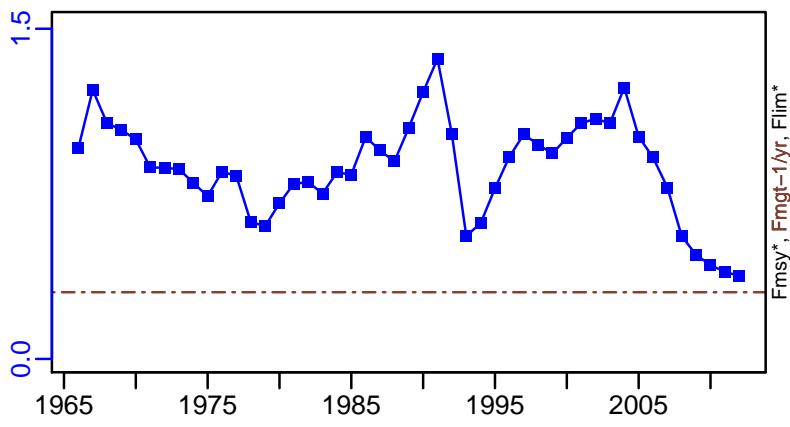
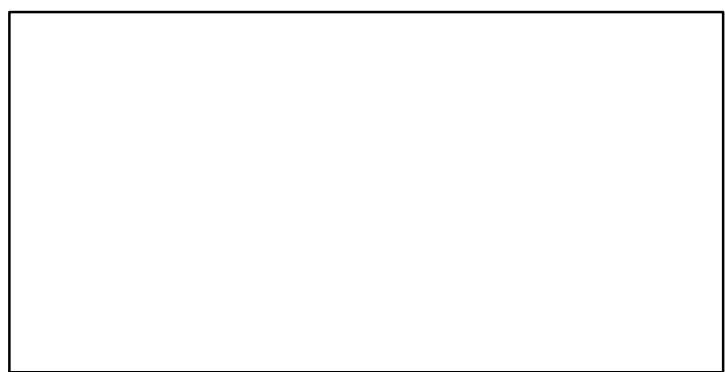
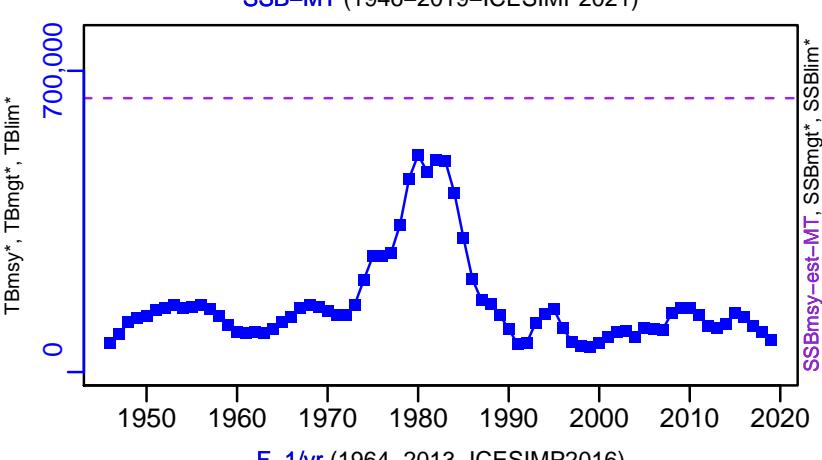
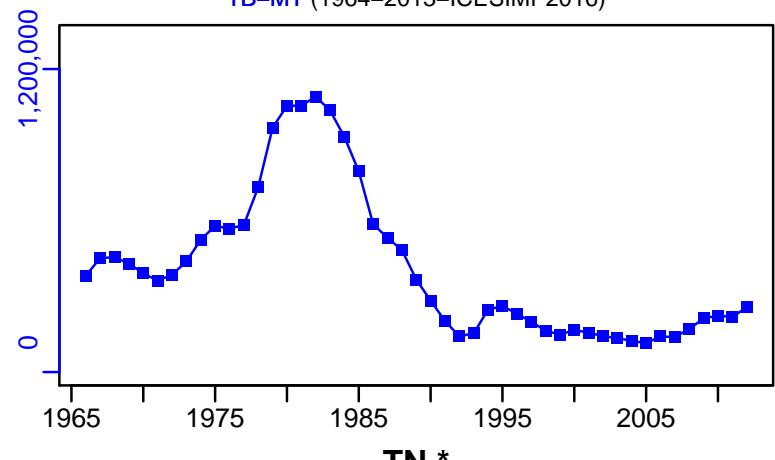


◆ Start Year   ◆ End Year   \* No Data

### Atlantic cod Eastern Baltic [CODBA2532]

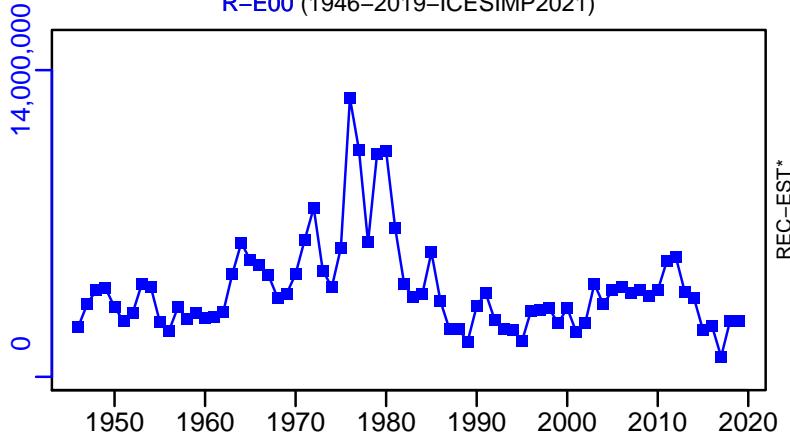
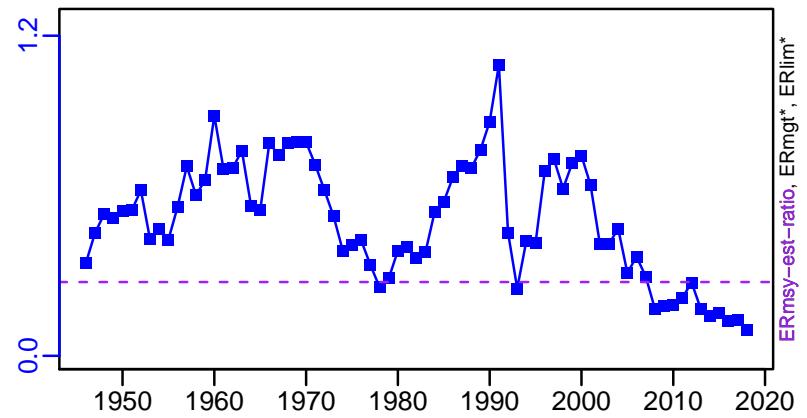
TB-MT (1964–2013–ICESIMP2016)

SSB-MT (1946–2019–ICESIMP2021)



ER-calc-ratio (1946–2019–ICESIMP2021)

R-E00 (1946–2019–ICESIMP2021)

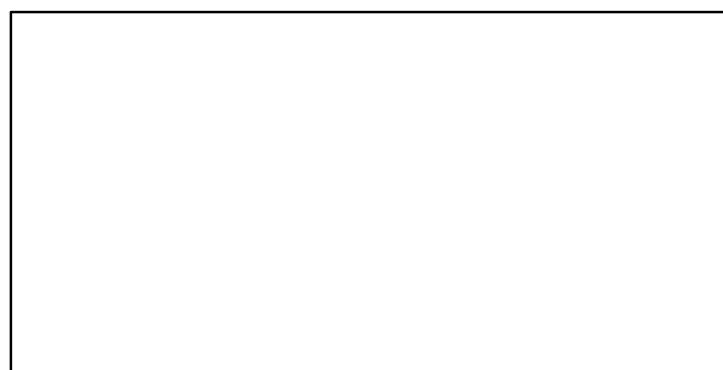
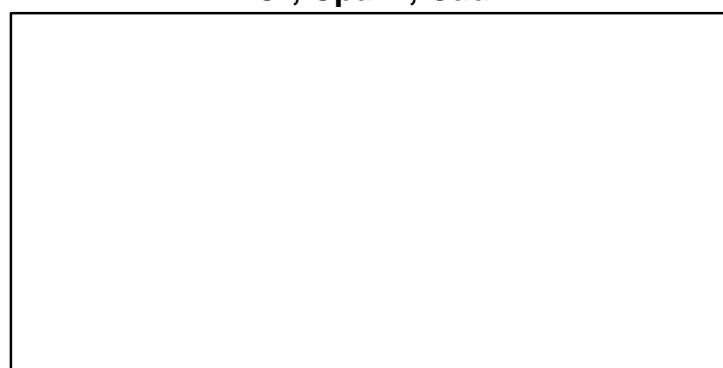
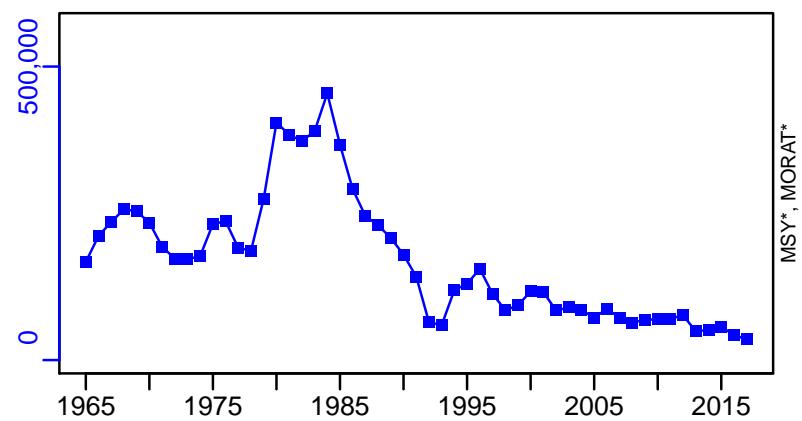


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	* No Data

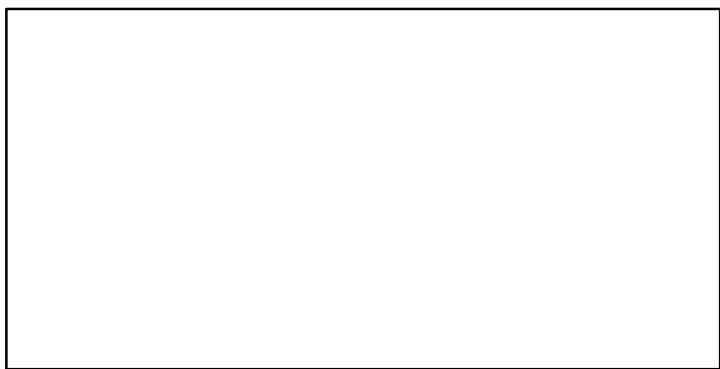
Atlantic cod Eastern Baltic [CODBA2532]

TC-MT, TL\*, RecC\* (1965–2017–ICESIMP2018)

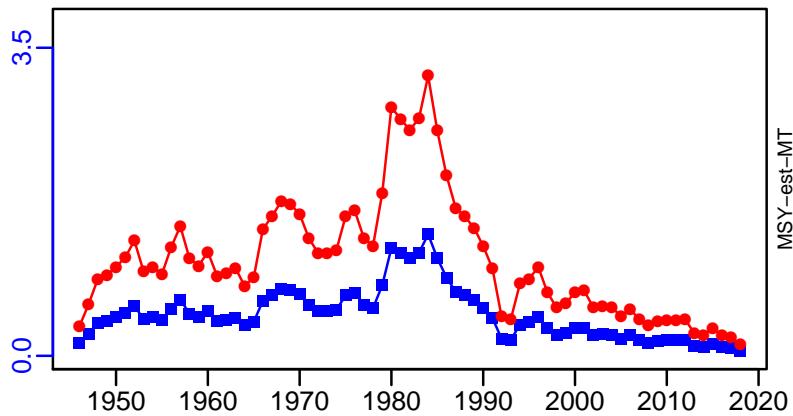
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1946–2019–ICESIMP2021)



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

## Atlantic cod ICES 3a(west)-4-7d [CODIIIaW-IV-VIId]

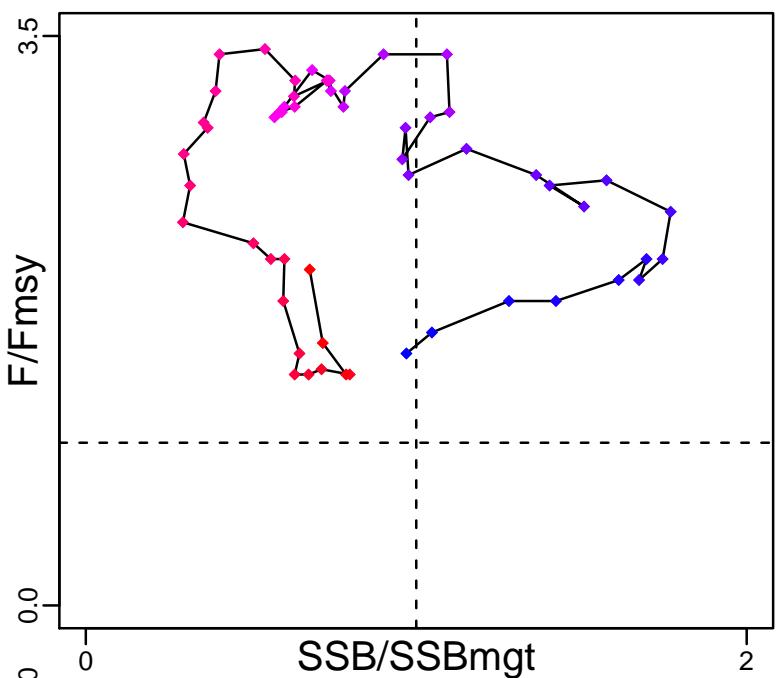
<b>Metadata</b>	
<b>Scientific Name</b>	Gadus morhua
<b>Current Assess ID</b>	WGNSSK-CODIIIaW-IV-VIId-1962-2019-ICESIMP2021
<b>Area</b>	ICES 3a(west)-4-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2011, 2013, 2014, 2015, 2016, 2016, 2017, 2018, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2011	971,321
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.31
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.396
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	150,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.31
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	267,310
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2011	70,000
<b>SSBlim</b>	SSBlim-MT	2018	107,000
<b>Flim</b>	Flim-1/yr	2018	0.54
<b>ERlim</b>	-	-	-

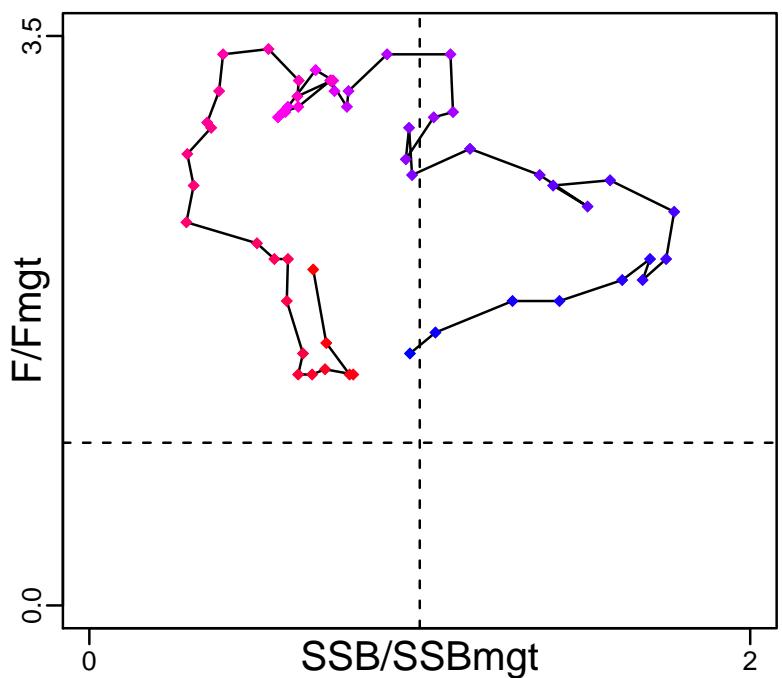
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	175,062	-	-	
<b>SSB</b>	SSB-MT	2019	80,475	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	181,905,000	-	1	
<b>F</b>	F-1/yr	2019	0.64	-	2 to 4	
<b>ER</b>	ER-calc-ratio	2019	0.289	-	-	
<b>TC</b>	TC-MT	2019	50,573			
<b>TL</b>	TL-MT	2019	41,433			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	0.194			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	2.065			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.73			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.536			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	2.065			
<b>ER/ERmgt</b>	-	-	-			

Atlantic cod ICES 3a(west)–4–7d [CODIIIaW–IV–VIId]

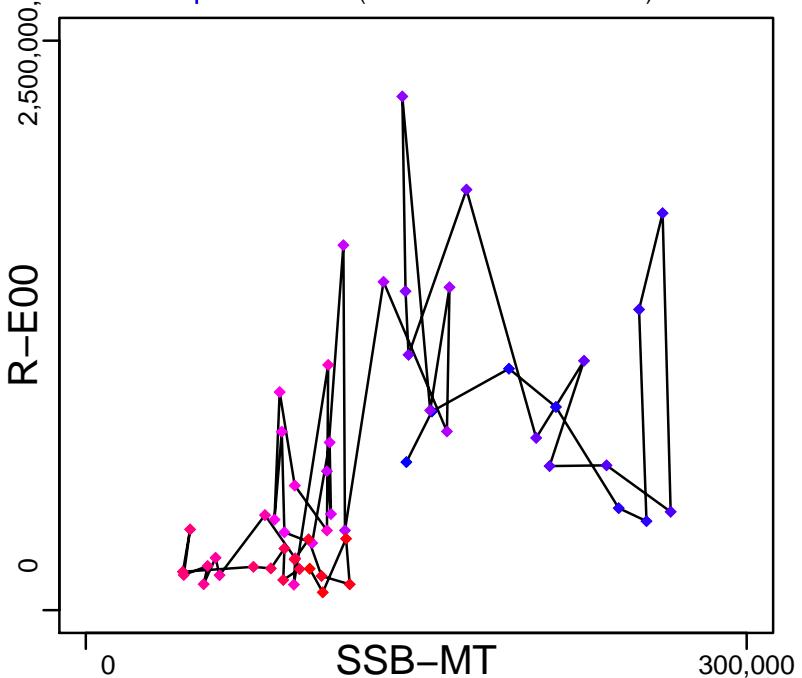
Kobe MSYpref (1962–2019–ICESIMP2021)



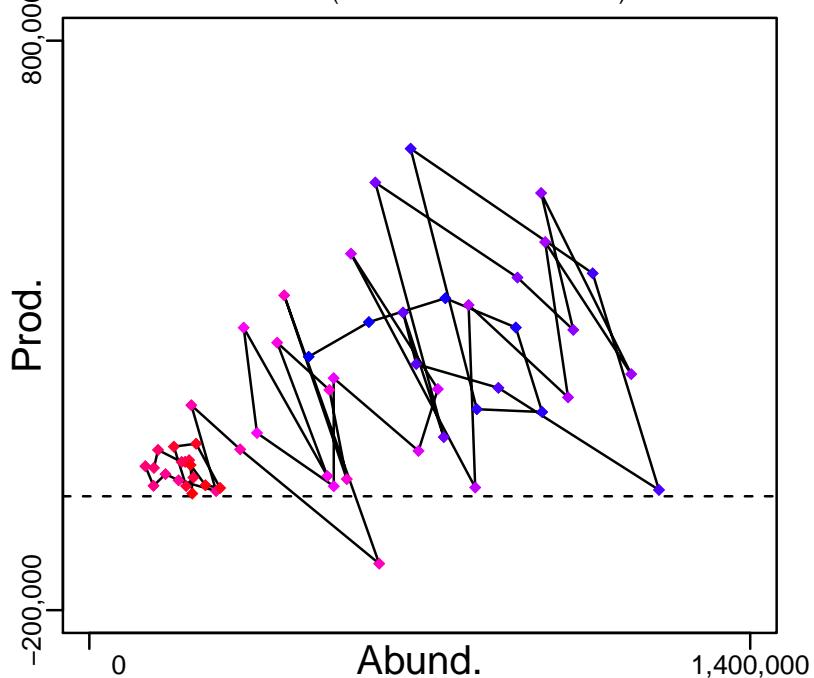
Kobe MGTpref (1962–2019–ICESIMP2021)



Spawner Recruit (1962–2019–ICESIMP2021)



Production (1962–2019–ICESIMP2021)

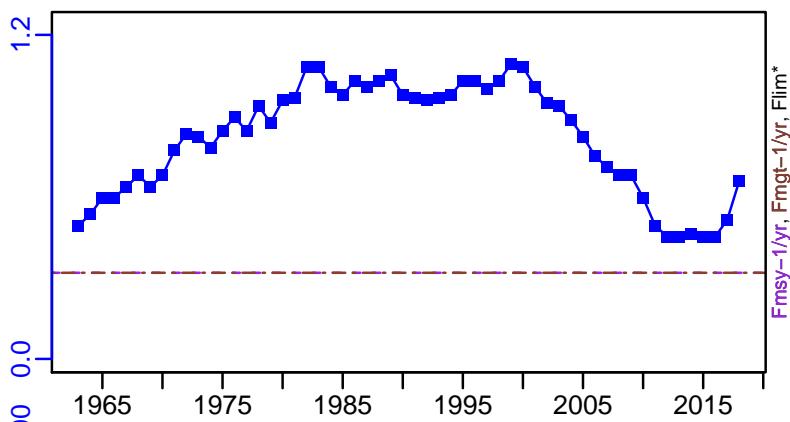
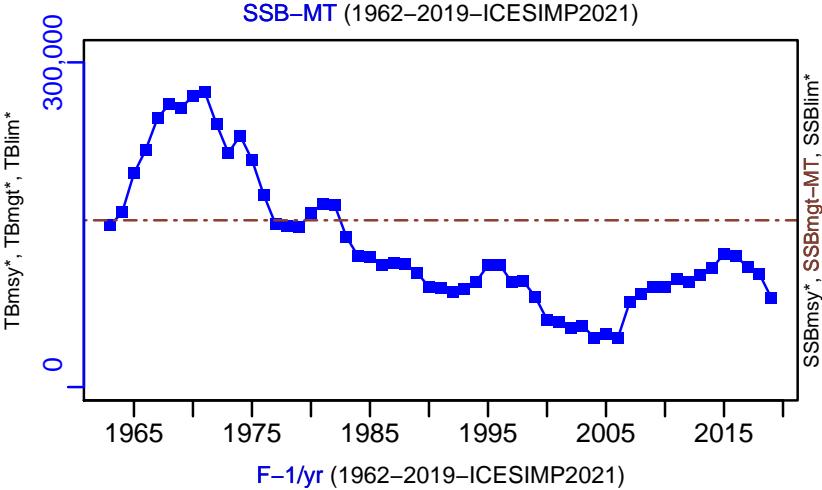
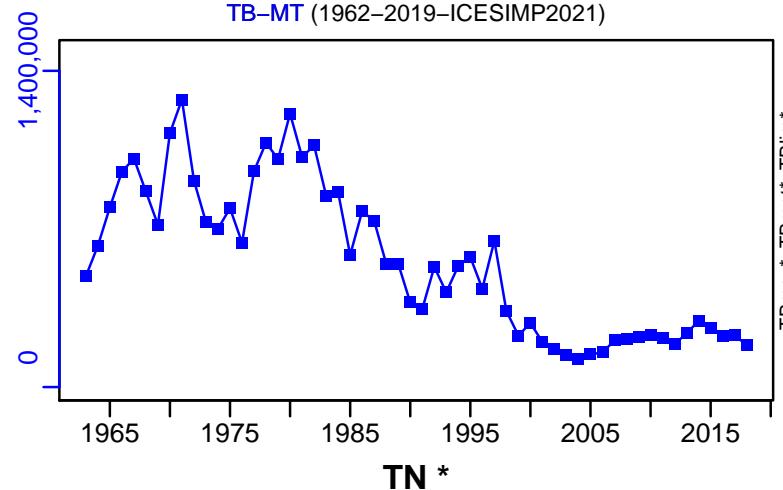


◆ Start Year   ◆ End Year   \* No Data

Atlantic cod ICES 3a(west)–4–7d [CODIIIaW–IV–VIId]

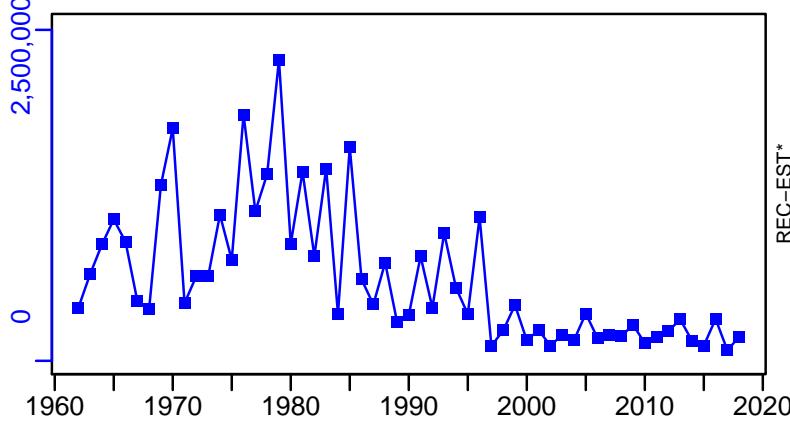
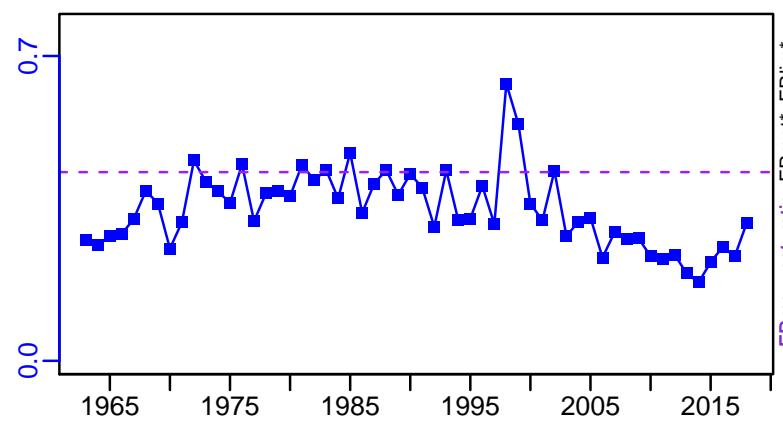
TB-MT (1962–2019–ICESIMP2021)

SSB-MT (1962–2019–ICESIMP2021)



ER-calc-ratio (1962–2019–ICESIMP2021)

R-E00 (1962–2019–ICESIMP2021)

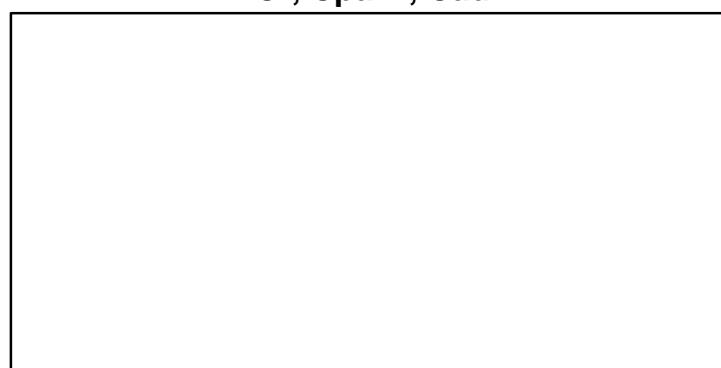
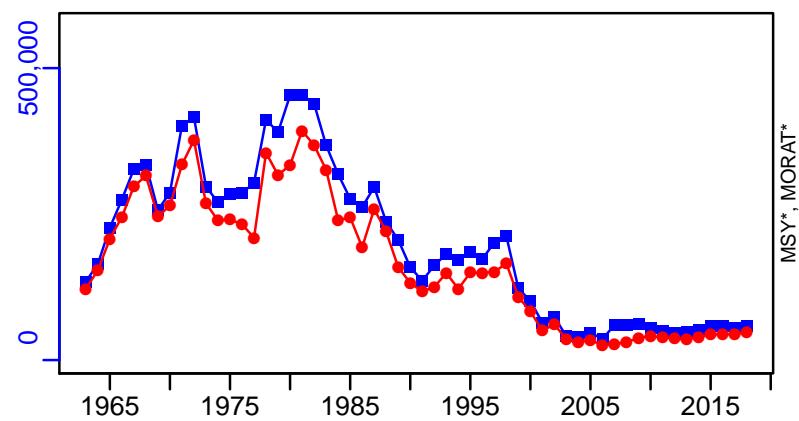


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	— Lim BRP	* No Data

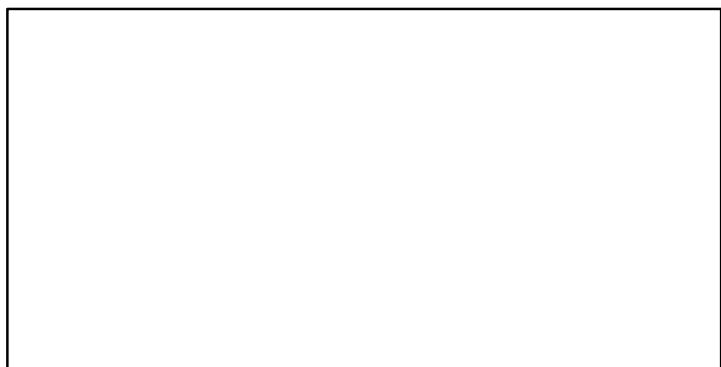
Atlantic cod ICES 3a(west)–4–7d [CODIIIaW–IV–VIId]

TC–MT, TL–MT, RecC\* (1962–2019–ICESIMP2021)

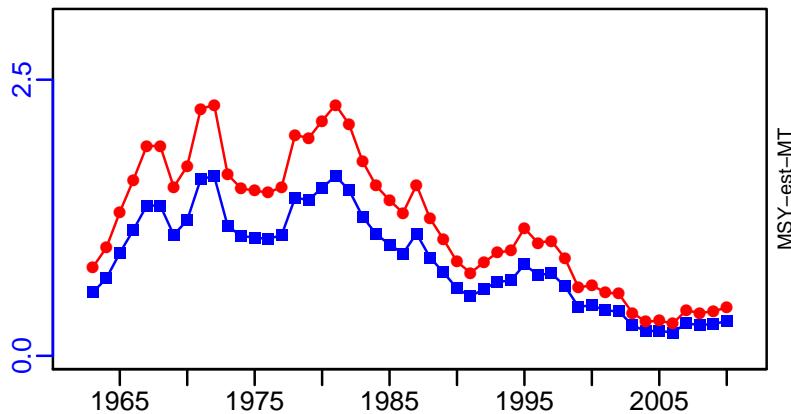
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC–MT/MSY–est–MT, CdivMEANC–ratio, (1962–2011–NEUBAUER)



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

## Atlantic cod Irish Sea [CODIS]

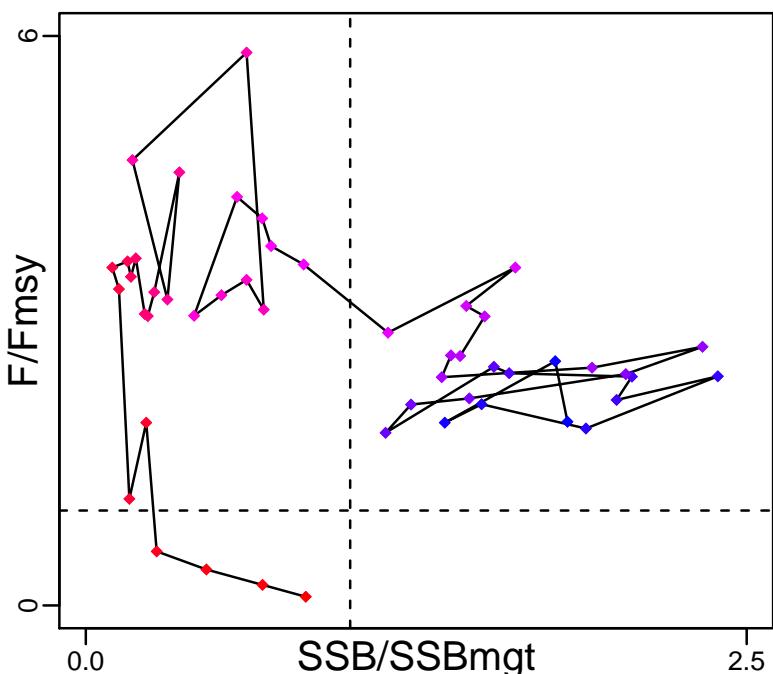
<b>Metadata</b>	
<b>Scientific Name</b>	Gadus morhua
<b>Current Assess ID</b>	WGCS-E-CODIS-1968-2018-ICESIMP2021
<b>Area</b>	Irish Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2010, 2013, 2014, 2015, 2016, 2017, 2018

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2010	11,929
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2017	0.309
<b>ERmsy</b>	ERmsy-est-ratio	2017	0.427
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2017	8616
<b>Fmgt</b>	Fmgt-1/yr	2017	0.309
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2010	4091
<b>M</b>	M-1/yr	2010	0.2
<b>TBlim</b>	TBlim-MT	2010	6000
<b>SSBlim</b>	SSBlim-MT	2017	6000
<b>Flim</b>	Flim-1/yr	2017	0.614
<b>ERlim</b>	-	-	-

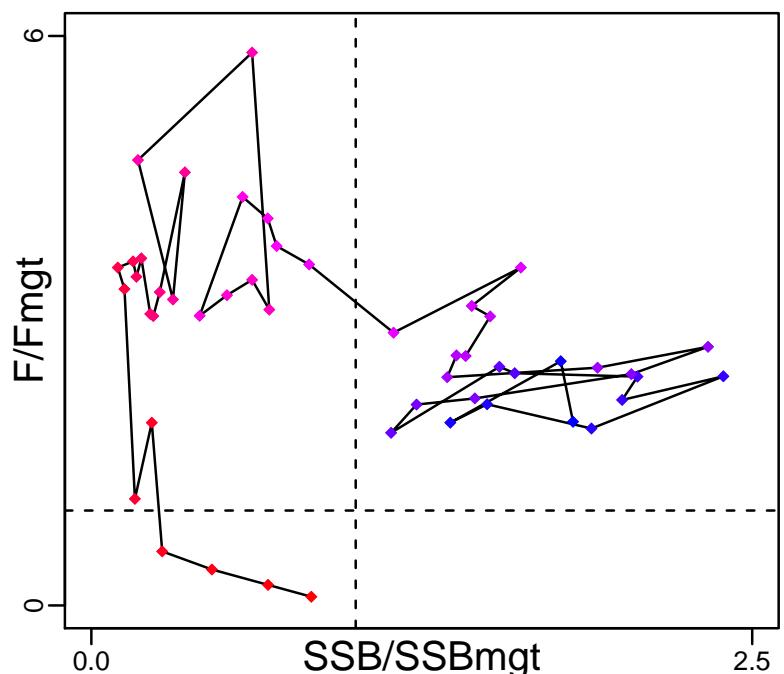
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2017	8650	Both	-	
<b>SSB</b>	SSB-relative	2018	0.352	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2017	5,510,000	-	0	
<b>F</b>	F-relative	2018	0.34	-	-	
<b>ER</b>	ER-calc-ratio	2017	0.016	-	-	
<b>TC</b>	TC-MT	2018	257			
<b>TL</b>	TL-MT	2018	226			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2010	0.425			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	0.092			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2017	0.038			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2017	1.195			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2017	0.092			
<b>ER/ERmgt</b>	-	-	-			

Atlantic cod Irish Sea [CODIS]

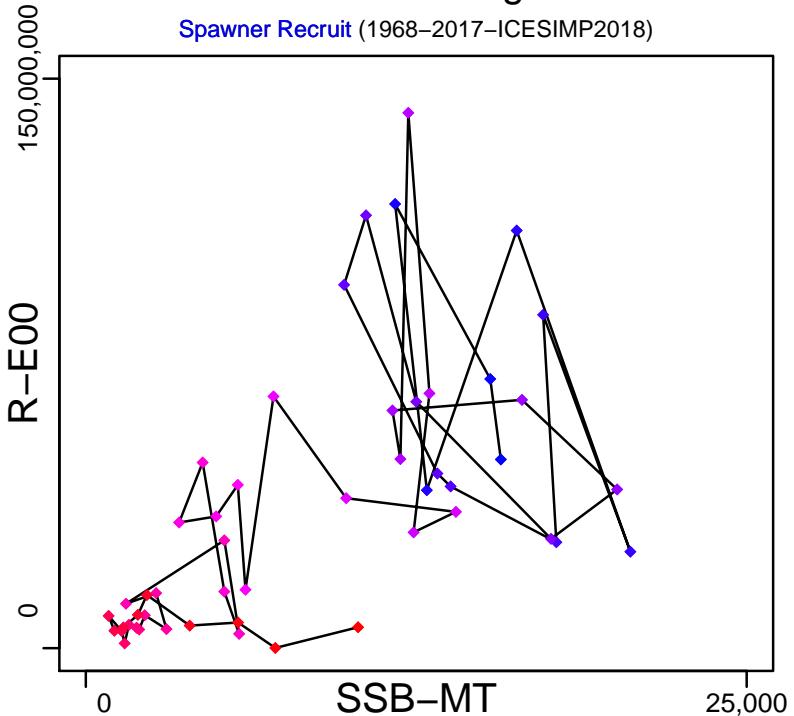
Kobe MSYpref (1968–2017–ICESIMP2018)



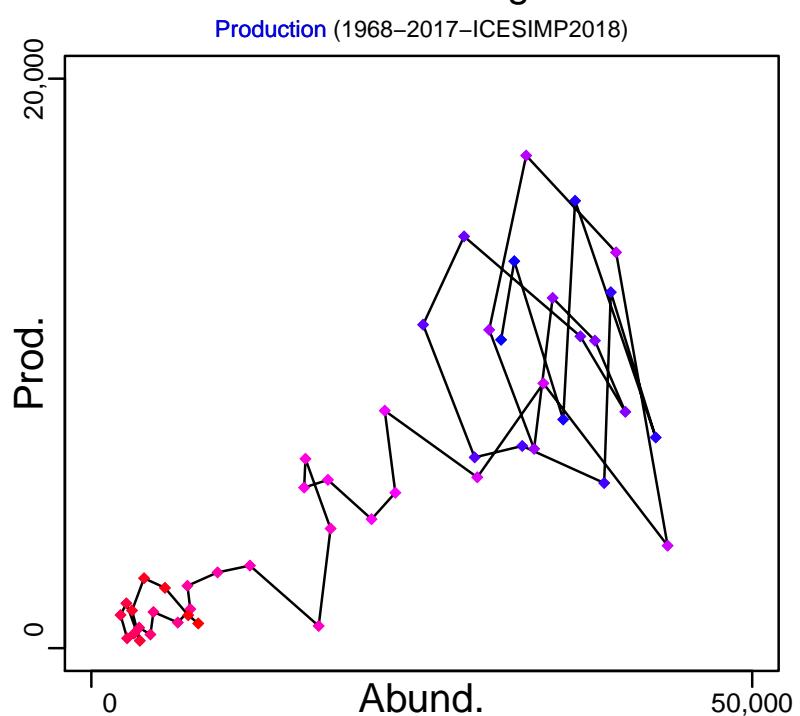
Kobe MGTpref (1968–2017–ICESIMP2018)



Spawner Recruit (1968–2017–ICESIMP2018)



Production (1968–2017–ICESIMP2018)

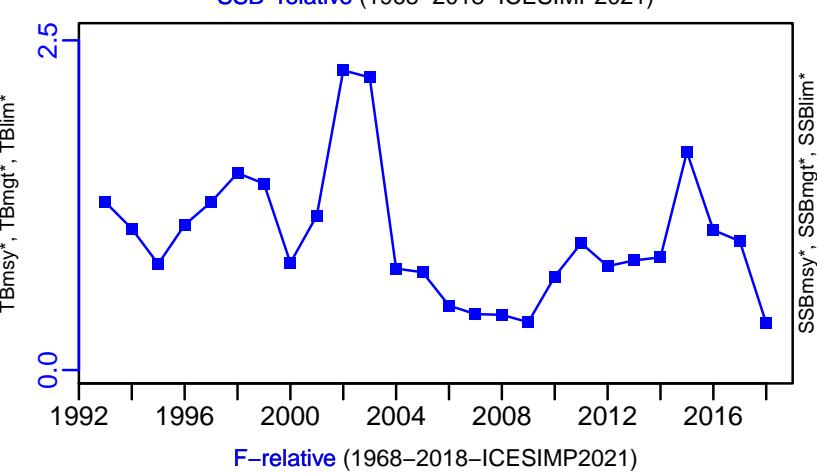
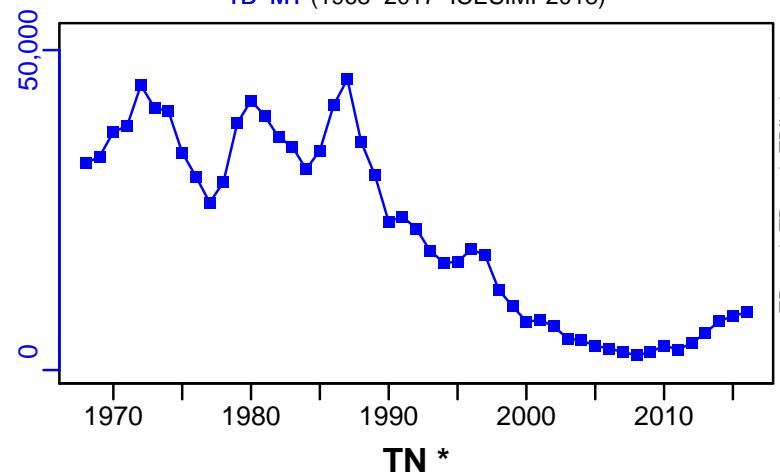


◆ Start Year   ◆ End Year   \* No Data

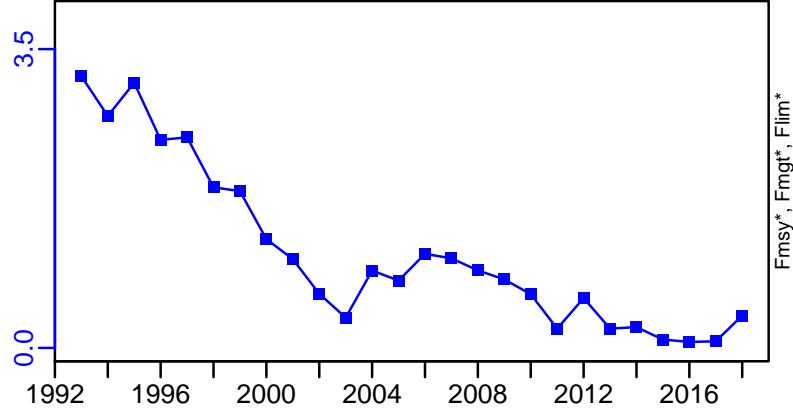
### Atlantic cod Irish Sea [CODIS]

TB-MT (1968–2017–ICESIMP2018)

SSB-relative (1968–2018–ICESIMP2021)



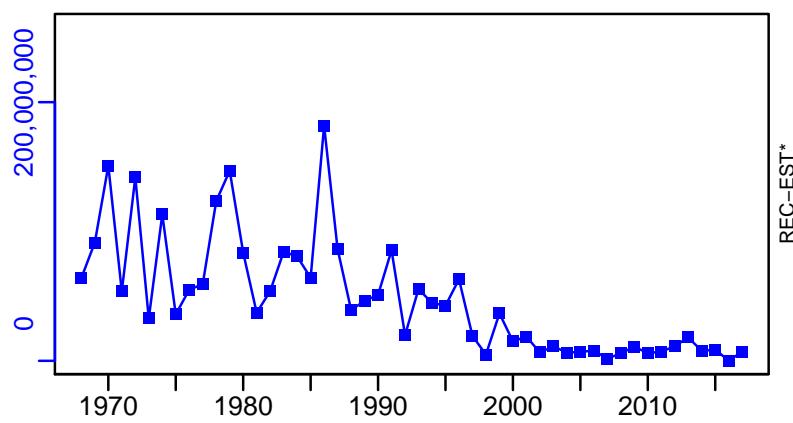
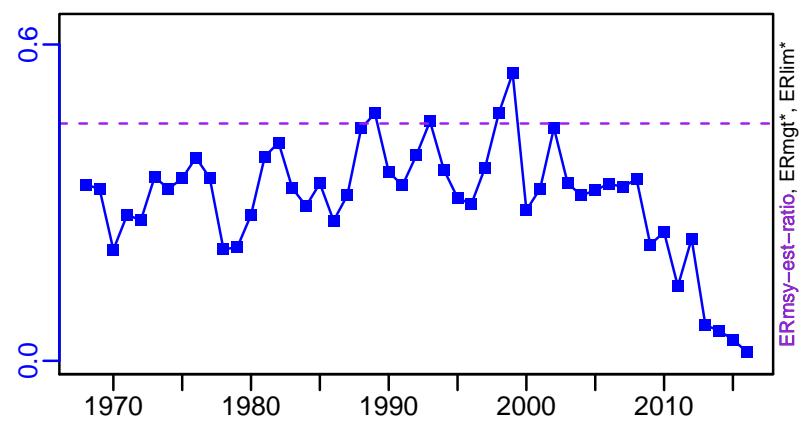
TN \*



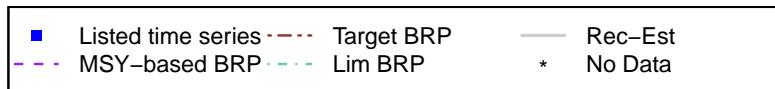
F<sub>m</sub>s<sup>y</sup>\* , F<sub>m</sub>g<sup>t</sup>\* , F<sub>l</sub>m<sup>\*</sup>

ER-calc-ratio (1968–2017–ICESIMP2018)

R-E00 (1968–2017–ICESIMP2018)



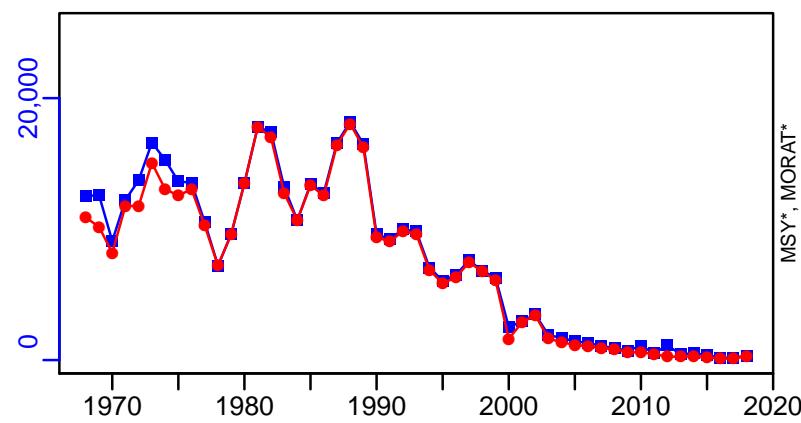
REC-EST\*



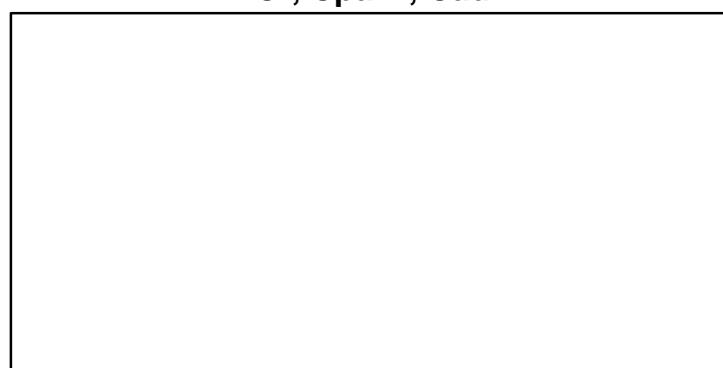
### Atlantic cod Irish Sea [CODIS]

TC-MT, TL-MT, RecC\* (1968–2018–ICESIMP2021)

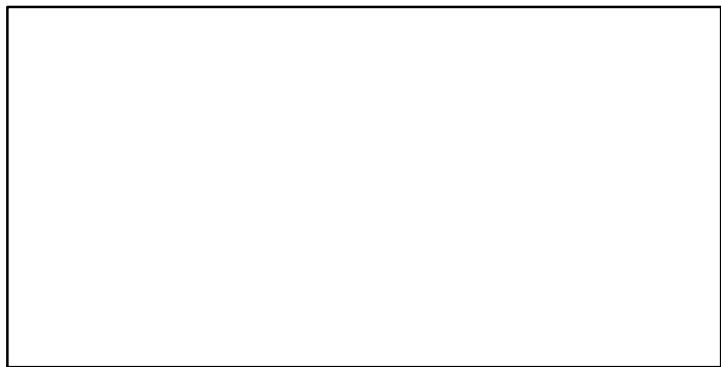
TAC\*, Cpair\*, Cadv\*



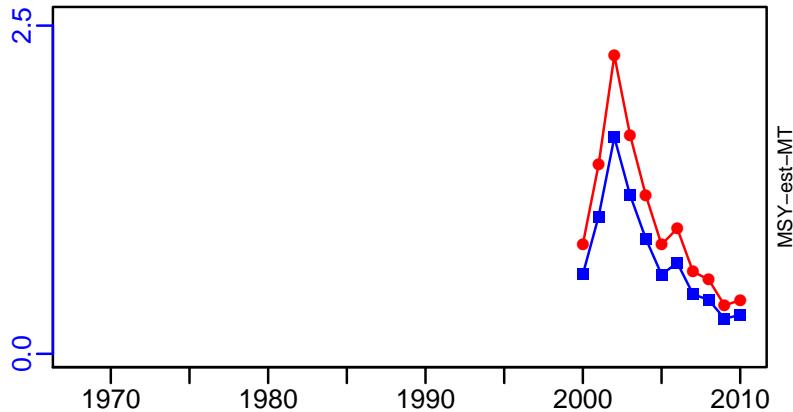
CPUE\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1968–2010–NEUBAUER)



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

## Atlantic cod Kattegat [CODKAT]

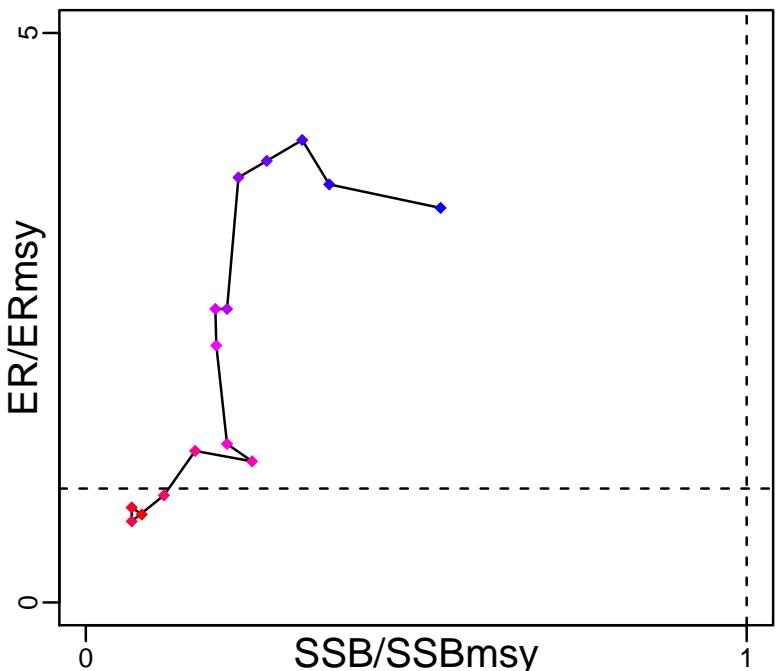
<b>Metadata</b>	
<b>Scientific Name</b>	Gadus morhua
<b>Current Assess ID</b>	WGBFAS-CODKAT-1996-2019-ICESIMP2021
<b>Area</b>	Kattegat
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2012, 2015, 2016, 2017, 2018, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2012	20,305
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2012	0.131
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2012	5600
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2012	6400
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

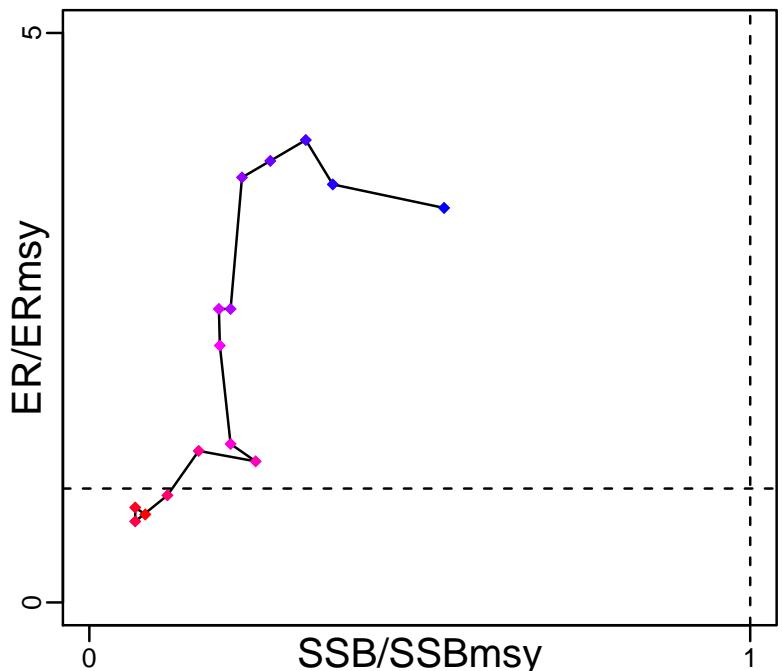
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-relative	2018	0.535	Both	-	
<b>SSB</b>	SSB-relative	2019	0.207	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-relative	2019	0.034	-	1	
<b>F</b>	F-relative	2019	1.079	-	-	
<b>ER</b>	ER-ratio	2012	0.101	-	-	
<b>TC</b>	TC-MT	2019	284			
<b>TL</b>	TL-MT	2019	212			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2012	0.112			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-est-ratio	2012	0.772			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

### Atlantic cod Kattegat [CODKAT]

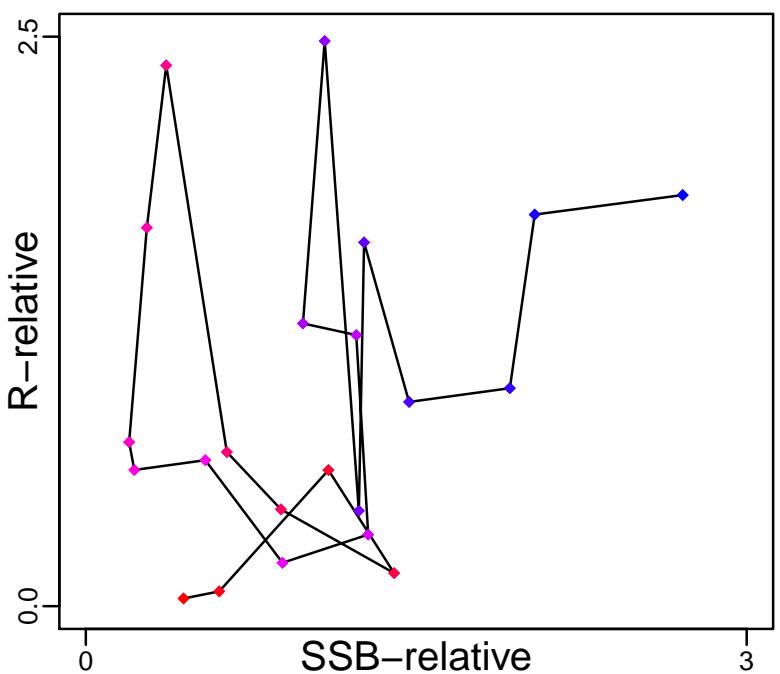
Kobe MSYpref (1971–2012–CHING)



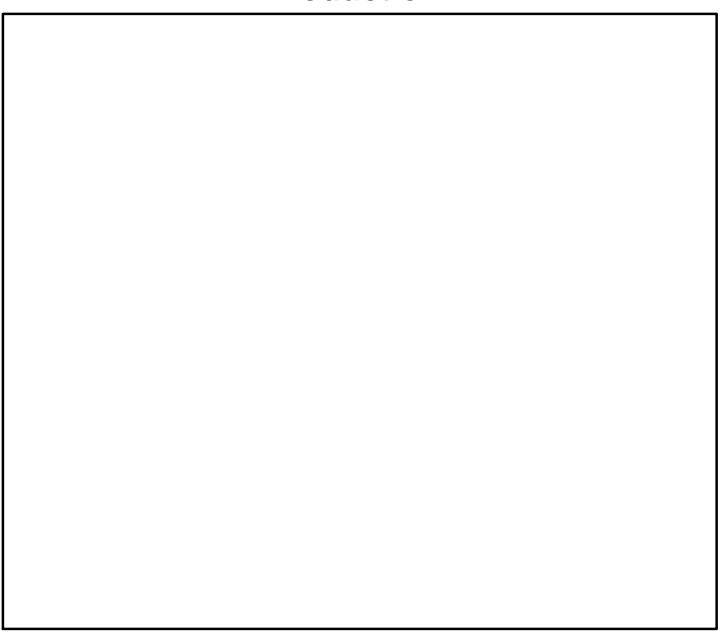
Kobe MGTPref (1971–2012–CHING)



Spawner Recruit (1996–2019–ICESIMP2021)



Production\*

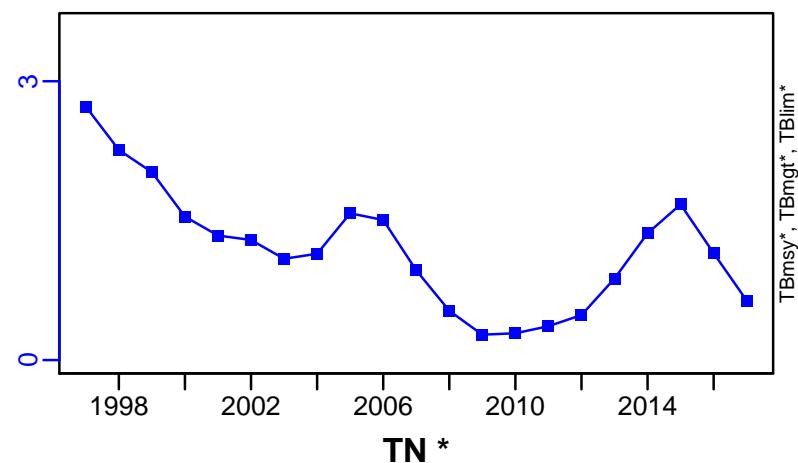


◆ Start Year   ◆ End Year   \* No Data

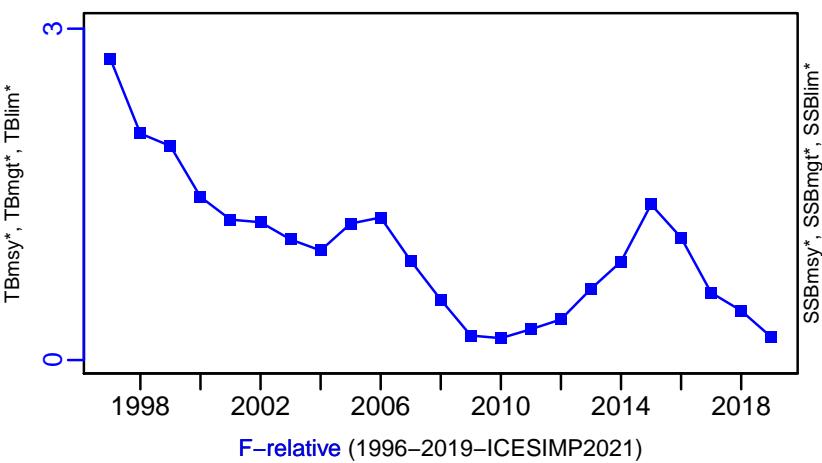
### Atlantic cod Kattegat [CODKAT]

TB-relative (1996–2018–ICESIMP2018)

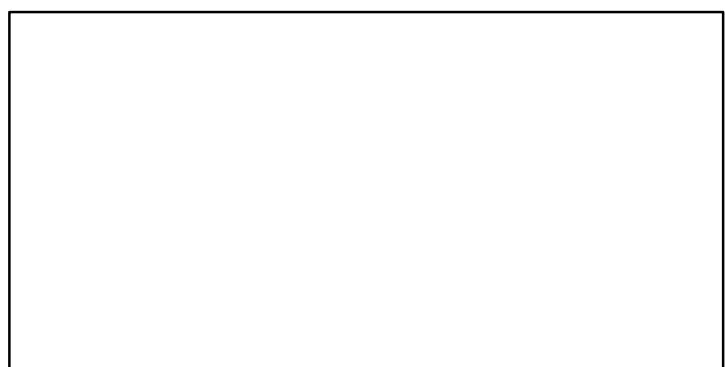
SSB-relative (1996–2019–ICESIMP2021)



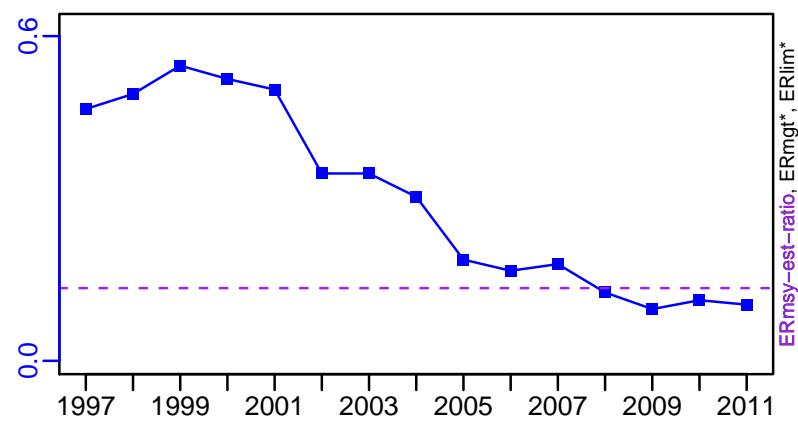
TN \*



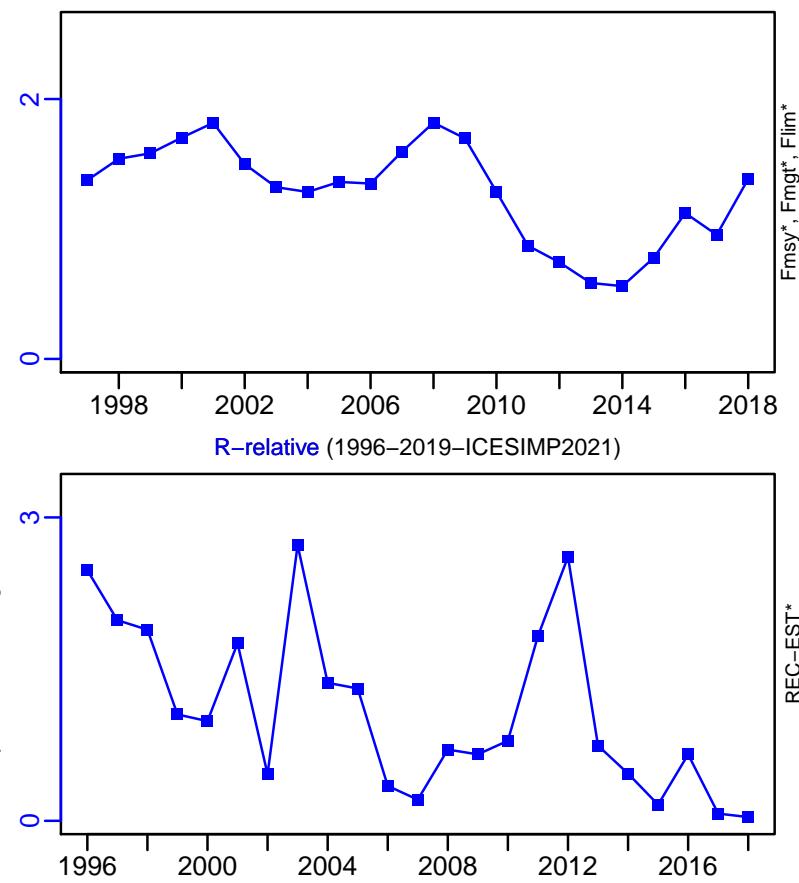
F-relative (1996–2019–ICESIMP2021)



ER-ratio (1971–2012–CHING)



R-relative (1996–2019–ICESIMP2021)

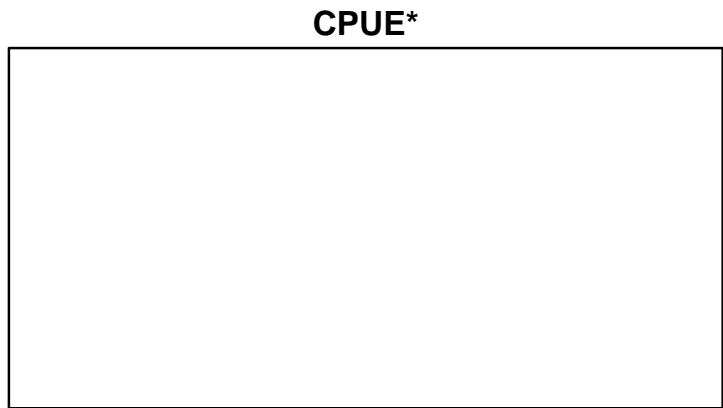
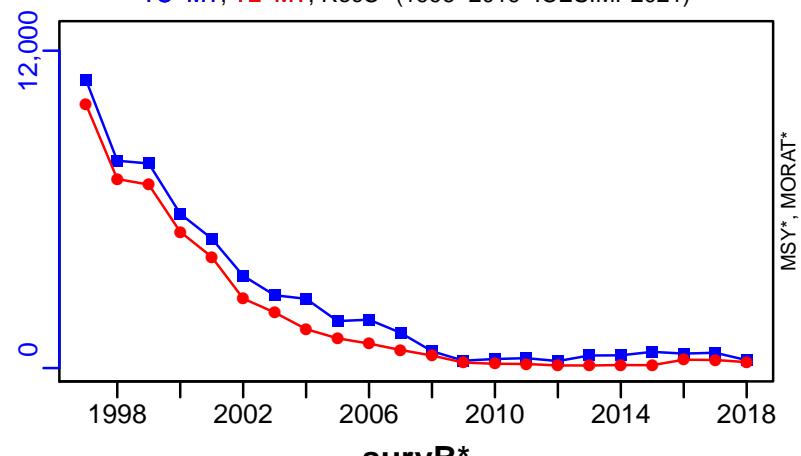


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	·· Lim BRP	* No Data

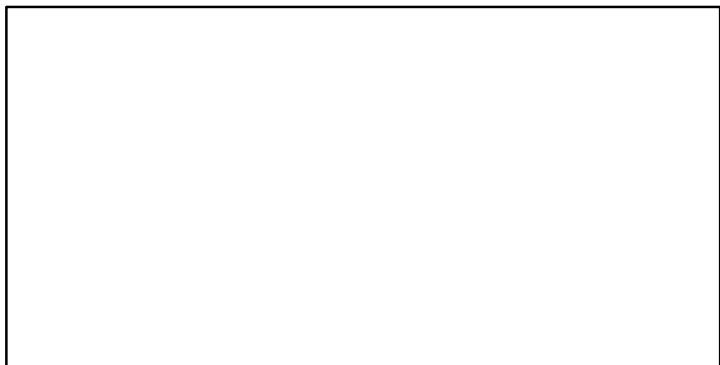
### Atlantic cod Kattegat [CODKAT]

TC-MT, TL-MT, RecC\* (1996–2019–ICESIMP2021)

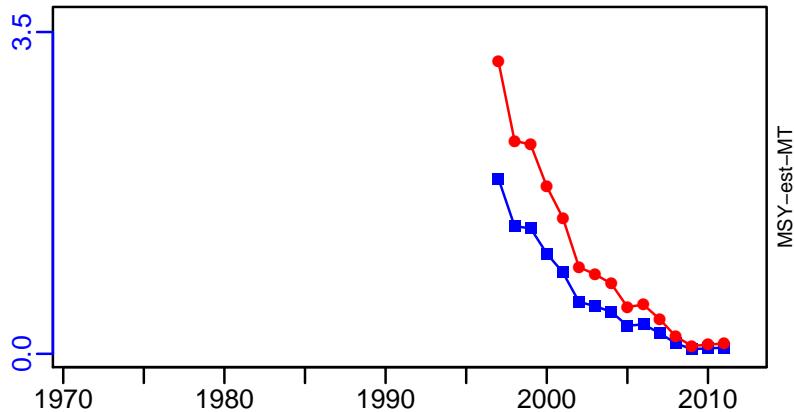
TAC\*, Cpair\*, Cadv\*



### EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1971–2012–CHING)



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

## Atlantic cod West of Scotland [CODVla]

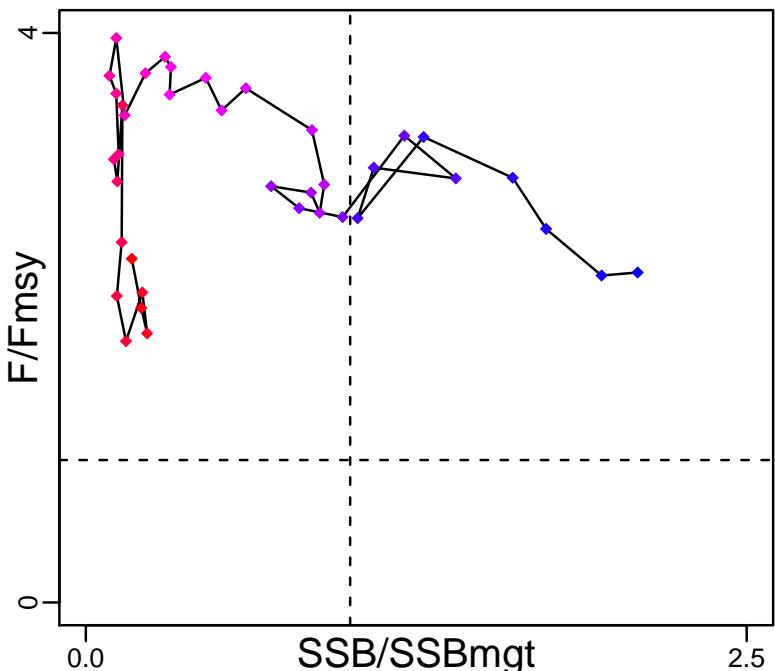
<b>Metadata</b>	
<b>Scientific Name</b>	Gadus morhua
<b>Current Assess ID</b>	WGCSE-CODVla-1980-2019-ICESIMP2021
<b>Area</b>	West of Scotland
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2013, 2014, 2015, 2017, 2019, 2012, 2016

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2012	22,000
<b>Fmsy</b>	Fmsy-1/yr	2019	0.29
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.209
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	20,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.29
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2012	11,113
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2017	14,000
<b>Flim</b>	Flim-1/yr	2017	0.82
<b>ERlim</b>	-	-	-

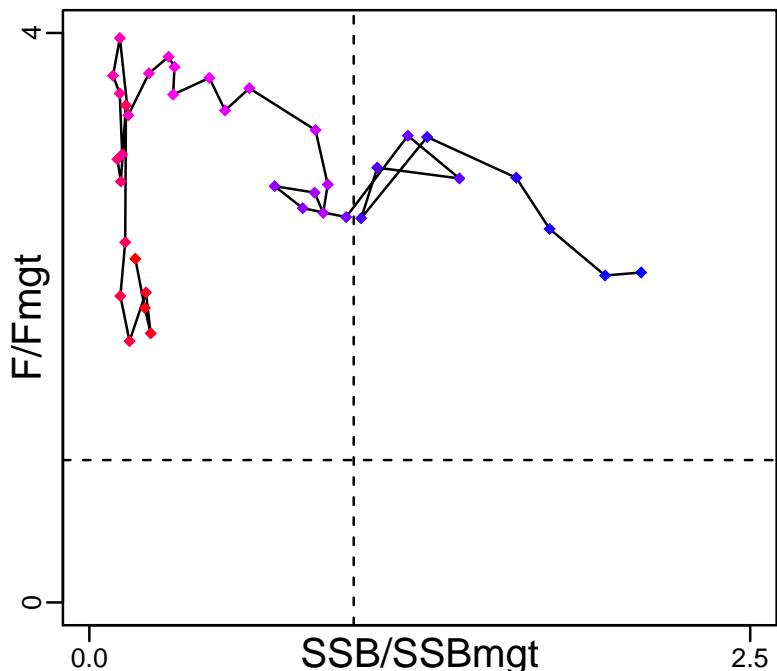
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2017	4250	Both	-	
<b>SSB</b>	SSB-MT	2019	2357	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	2,348,806	-	1	
<b>F</b>	F-1/yr	2019	0.7	-	2 to 5	
<b>ER</b>	ER-calc-ratio	2019	0.259	-	-	
<b>TC</b>	TC-MT	2019	1890			
<b>TL</b>	TL-MT	2019	1129			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2012	0.169			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	2.414			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	1.243			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.118			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	2.414			
<b>ER/ERmgt</b>	-	-	-			

Atlantic cod West of Scotland [CODW]

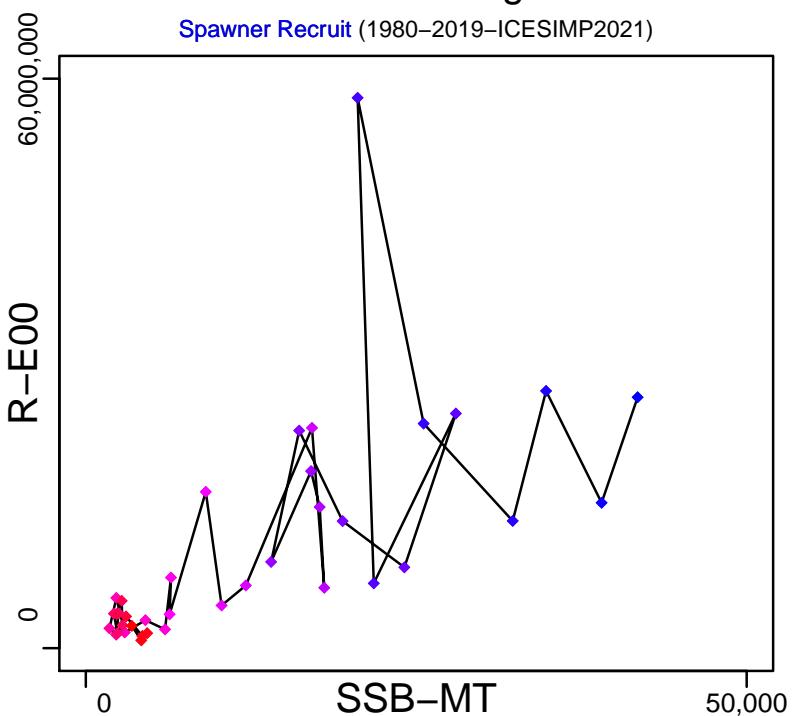
Kobe MSYpref (1980–2019–ICESIMP2021)



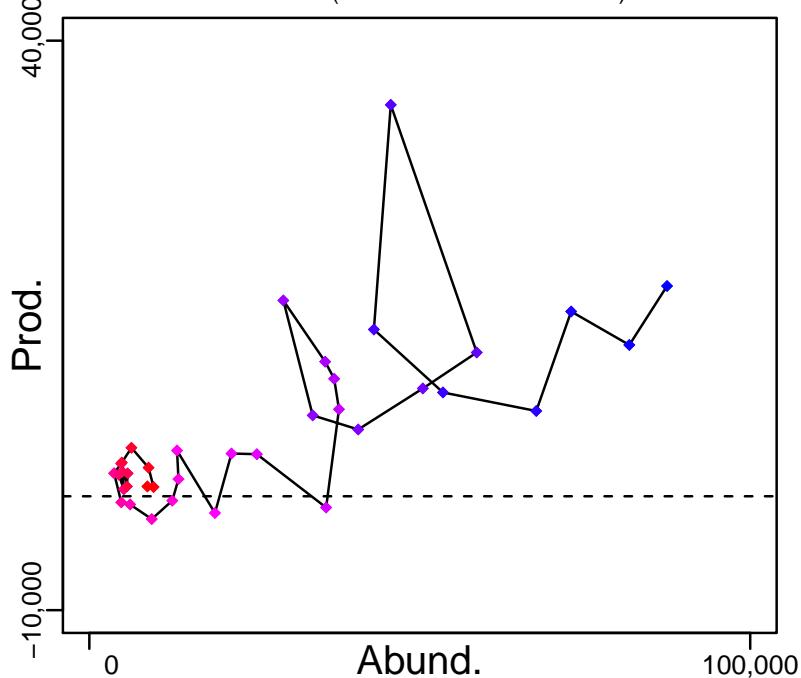
Kobe MGTpref (1980–2019–ICESIMP2021)



Spawner Recruit (1980–2019–ICESIMP2021)



Production (1980–2019–ICESIMP2021)

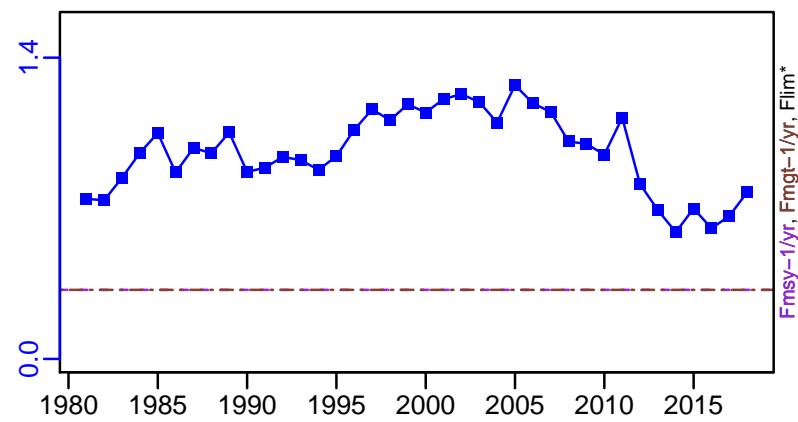
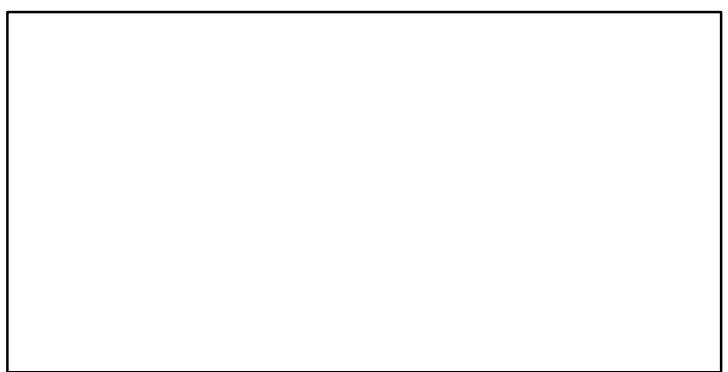
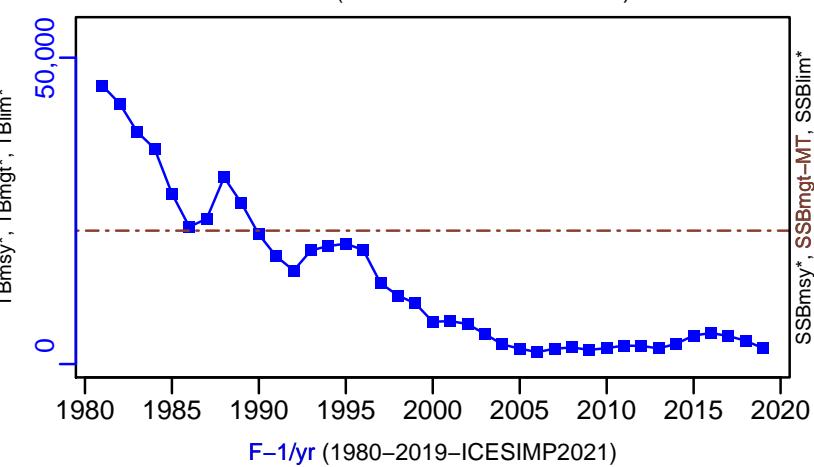
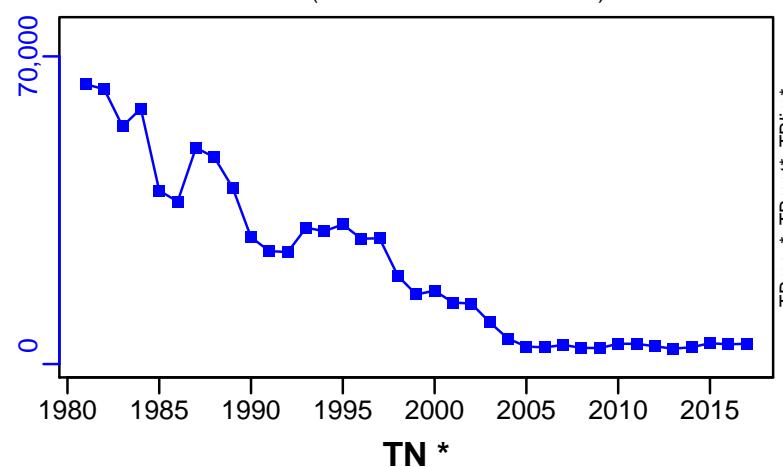


◆ Start Year ◆ End Year \* No Data

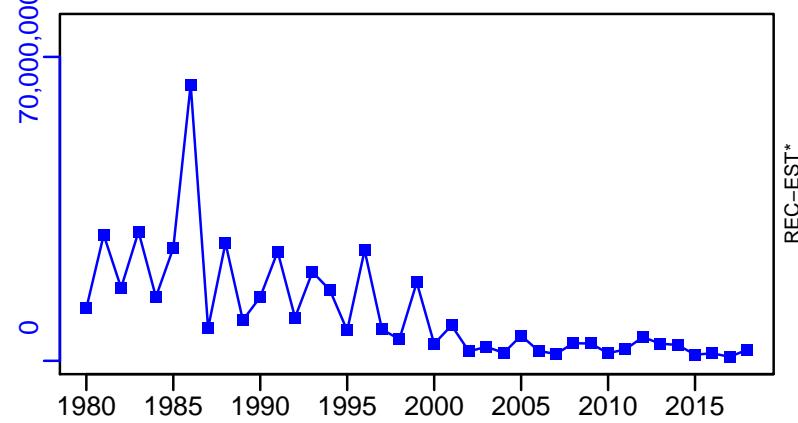
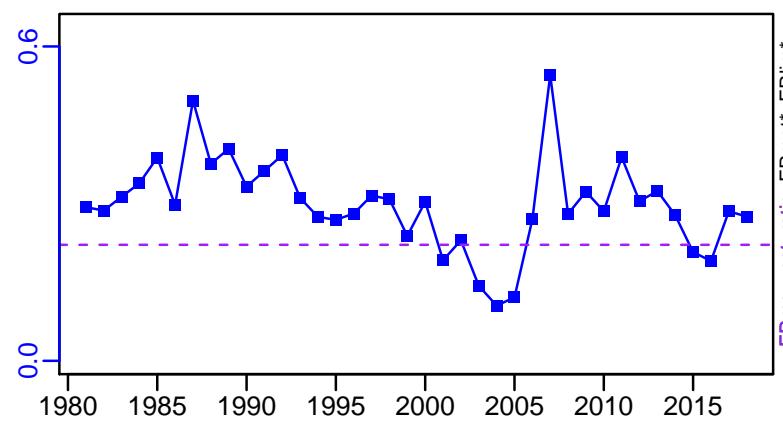
### Atlantic cod West of Scotland [CODW]

TB-MT (1980–2017–ICESIMP2018)

SSB-MT (1980–2019–ICESIMP2021)



ER-calc-ratio (1980–2019–ICESIMP2021)

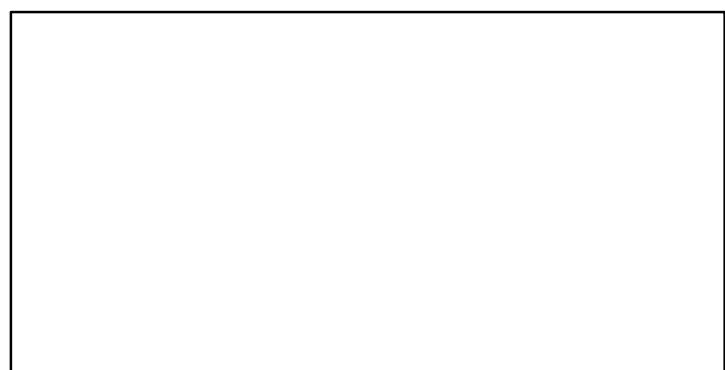
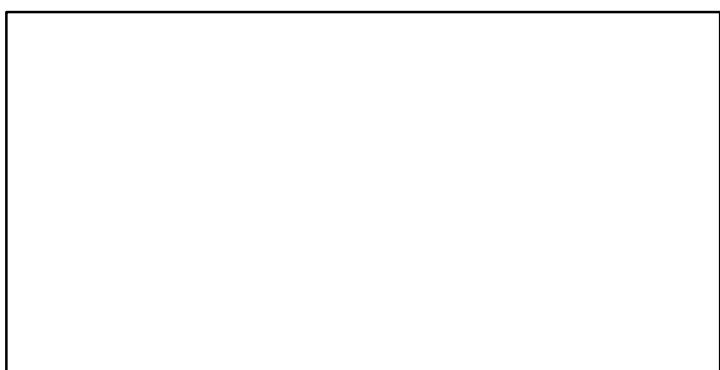
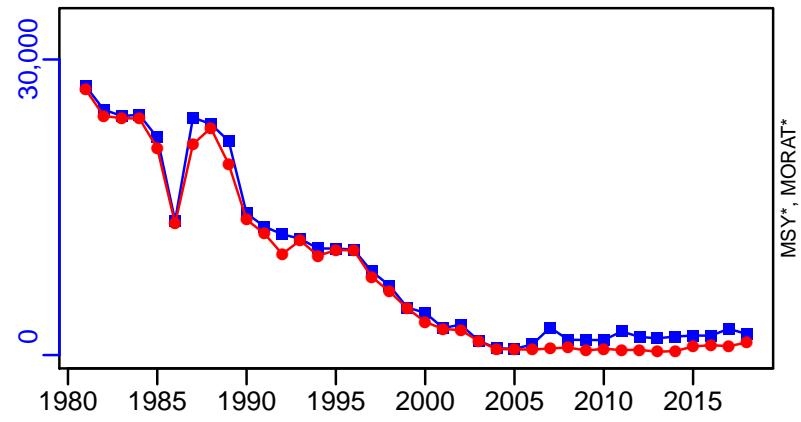


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

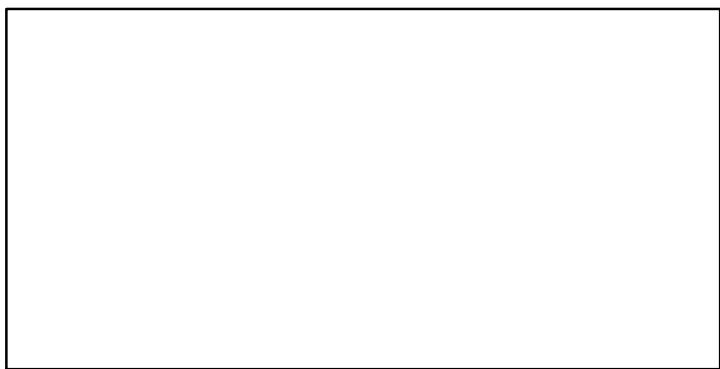
Atlantic cod West of Scotland [CODW]

TC-MT, TL-MT, RecC\* (1980–2019–ICESIMP2021)

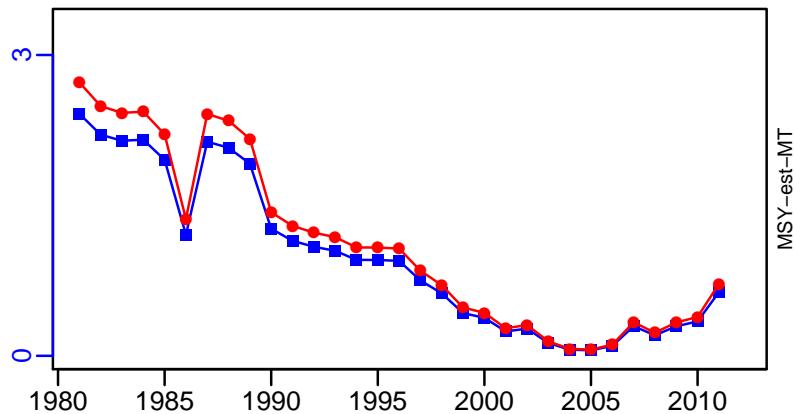
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TC-MT/MSY-est-MT, CdiveMEANC-ratio, (1981–2012–CHING)



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

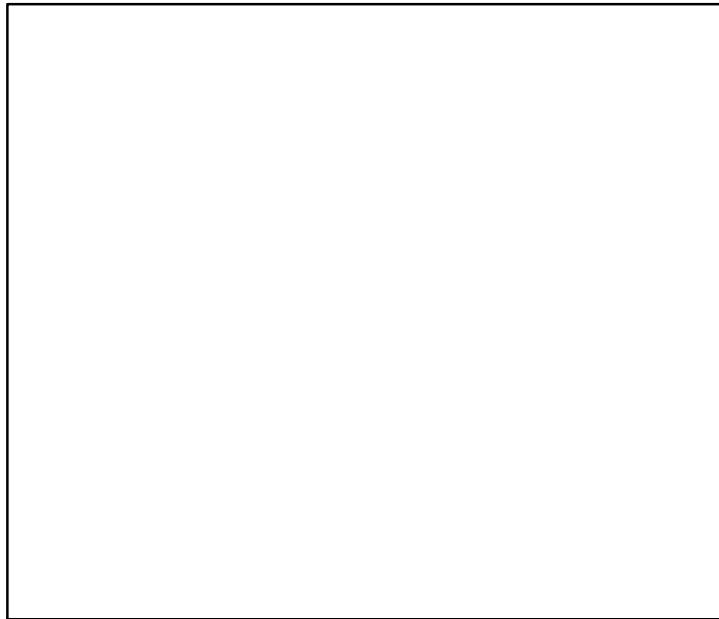
## Atlantic cod Rockall Bank [CODVlb]

<b>Metadata</b>	
<b>Scientific Name</b>	Gadus morhua
<b>Current Assess ID</b>	WGCSE-CODVlb-1984-2016-ICESIMP2018
<b>Area</b>	Rockall Bank
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2014, 2016

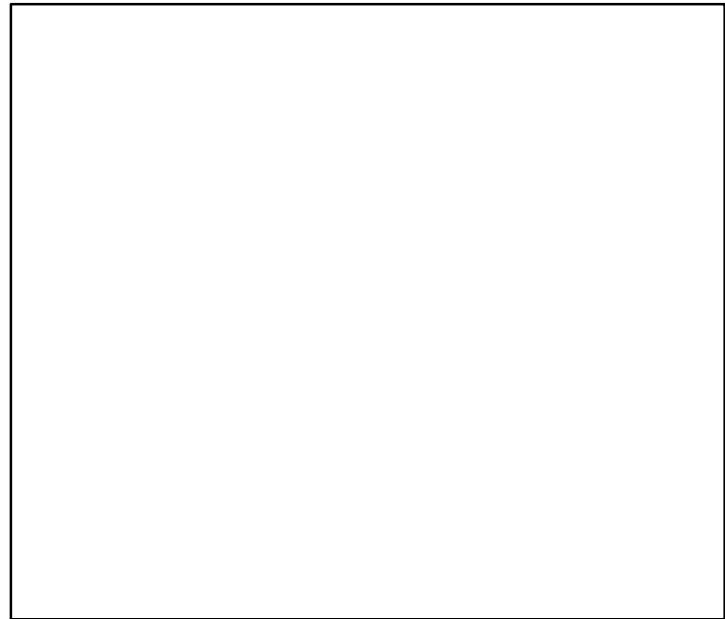
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	62		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

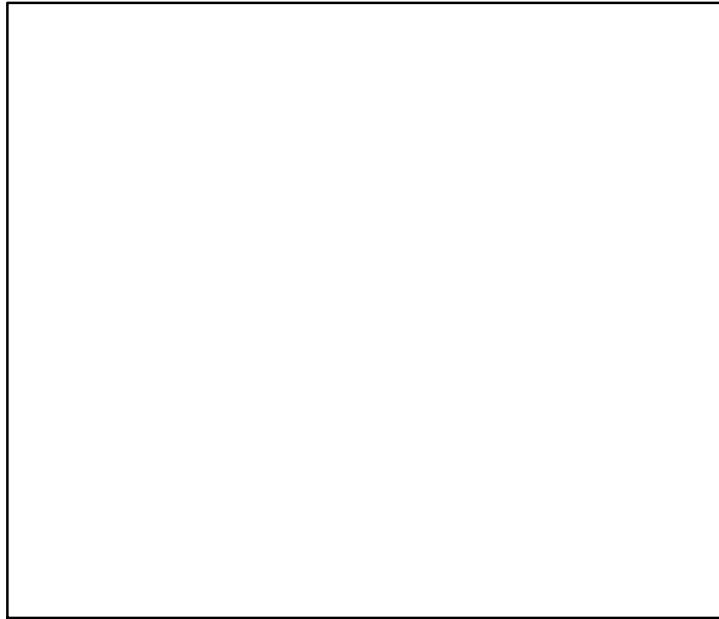
**Kobe MSY\***



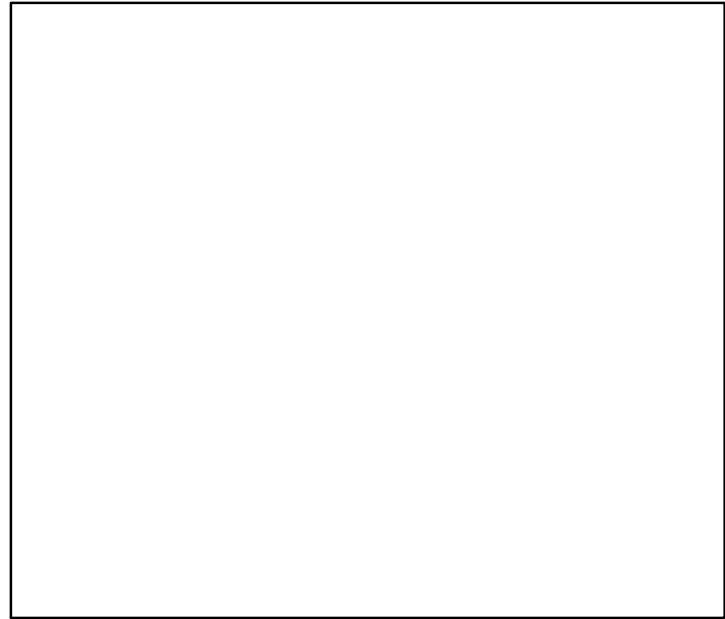
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

Atlantic cod Rockall Bank [CODVlb]

**TB\***



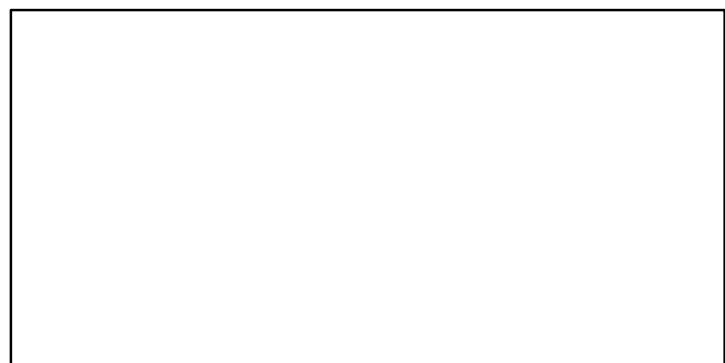
**SSB\***



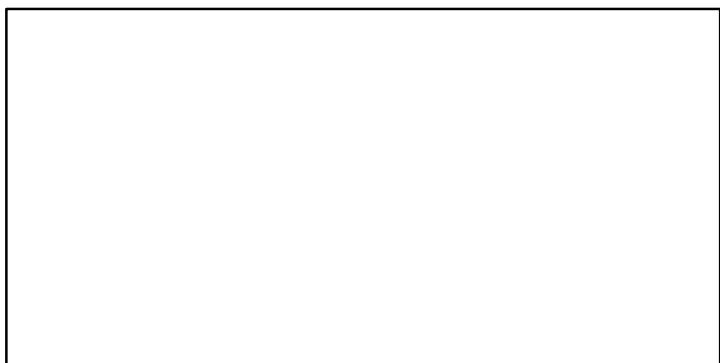
**TN \***



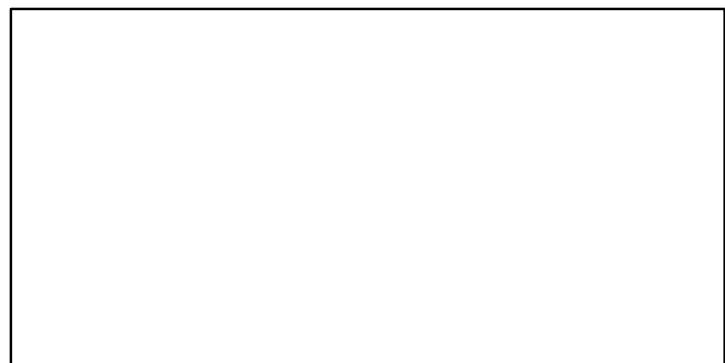
**F\***



**ER\***



**Recruits\***

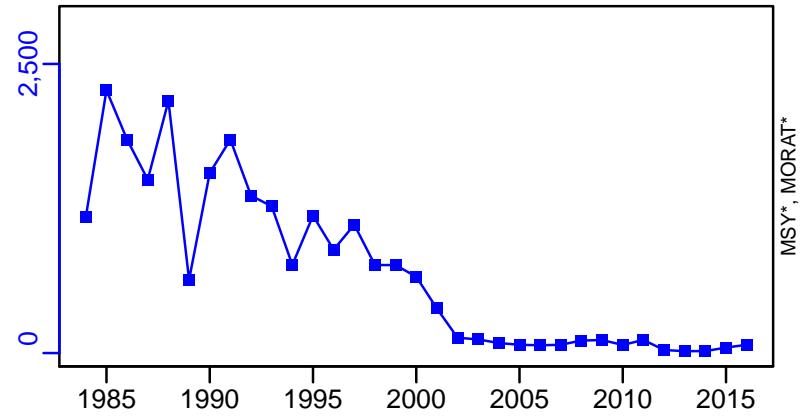


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

Atlantic cod Rockall Bank [CODVlb]

TL-MT, TC\*, RecC\* (1984–2016–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



survB\*

CPUE\*

EFFORT\*

CdivMSY\*

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

### Atlantic cod Celtic Sea [CODVilek]

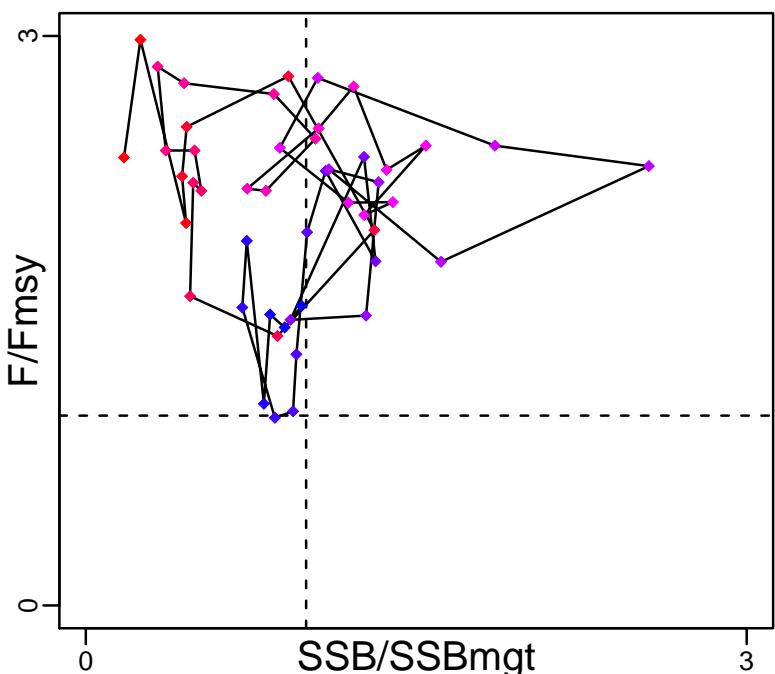
<b>Metadata</b>	
<b>Scientific Name</b>	Gadus morhua
<b>Current Assess ID</b>	WGCSE-CODVilek-1970-2019-ICESIMP2021
<b>Area</b>	Celtic Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2012, 2013, 2014, 2015, 2016, 2017, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2012	46,613
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.353
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.343
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	10,300
<b>Fmgt</b>	Fmgt-1/yr	2019	0.353
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2012	10,300
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2017	7300
<b>Flim</b>	Flim-1/yr	2017	0.807
<b>ERlim</b>	-	-	-

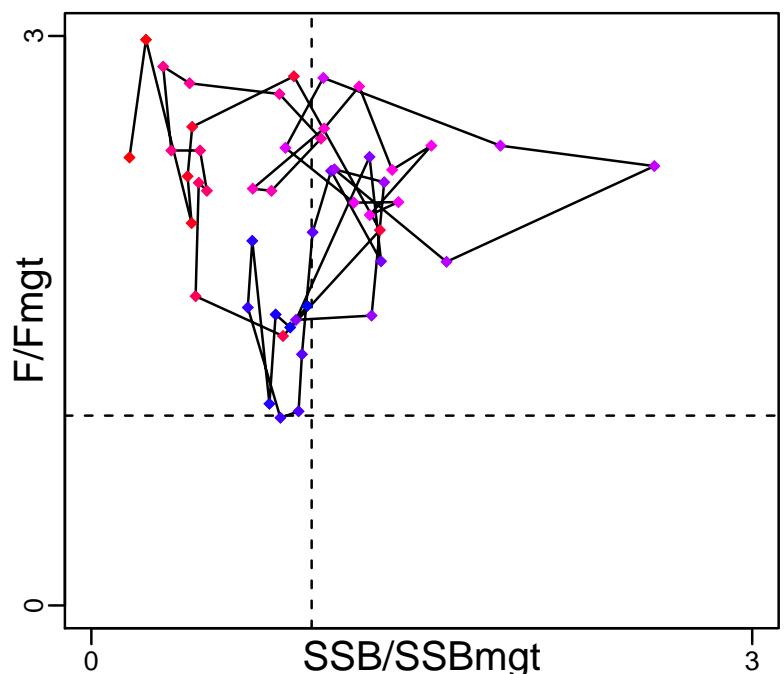
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	2678	-	-	
<b>SSB</b>	SSB-MT	2019	1290	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	2,166,000	-	1	
<b>F</b>	F-1/yr	2019	0.833	-	2 to 5	
<b>ER</b>	ER-calc-ratio	2019	0.584	-	-	
<b>TC</b>	TC-MT	2019	1565			
<b>TL</b>	TL-MT	2019	1385			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	0.502			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	2.36			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	1.703			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.125			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	2.36			
<b>ER/ERmgt</b>	-	-	-			

Atlantic cod Celtic Sea [CODVIlek]

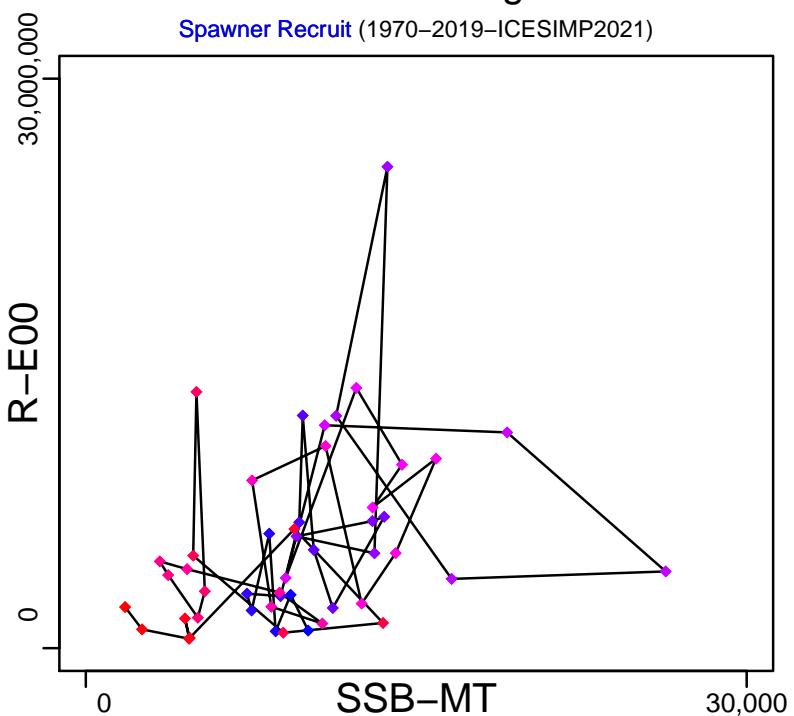
Kobe MSYpref (1970–2019–ICESIMP2021)



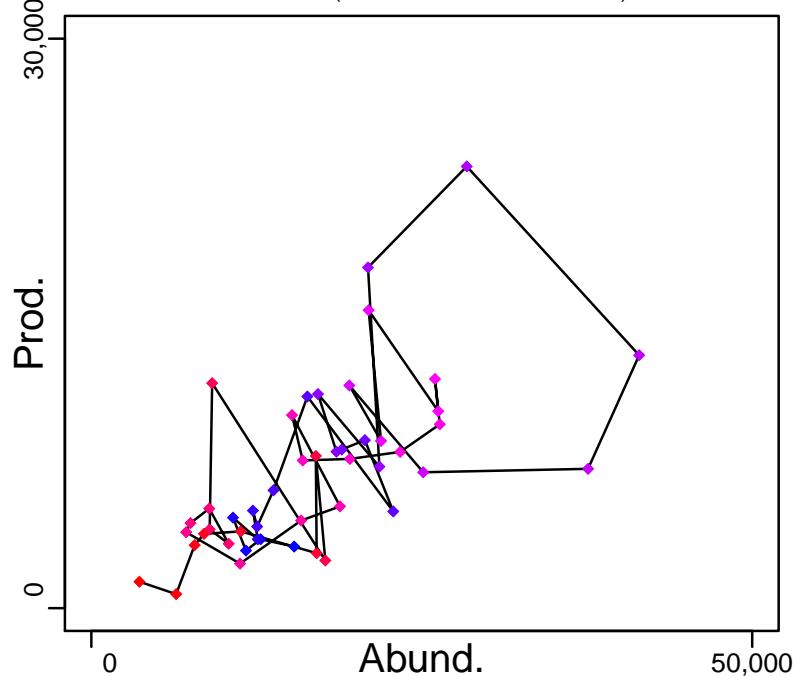
Kobe MGTpref (1970–2019–ICESIMP2021)



Spawner Recruit (1970–2019–ICESIMP2021)



Production (1970–2019–ICESIMP2021)

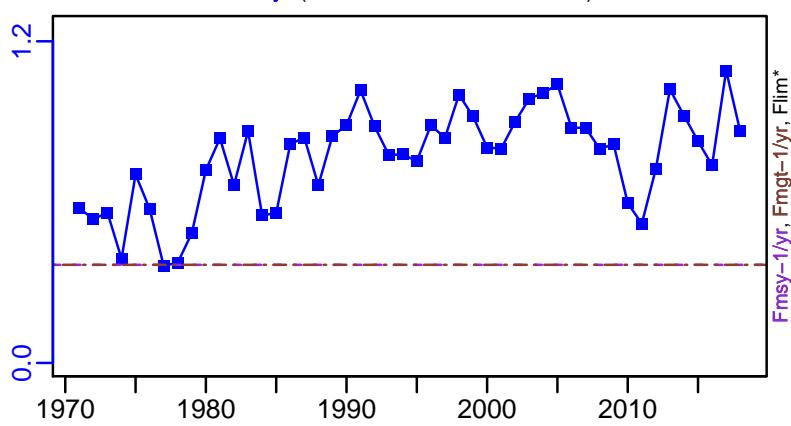
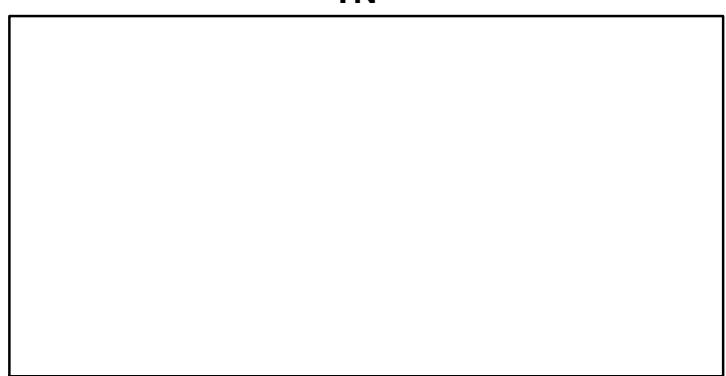
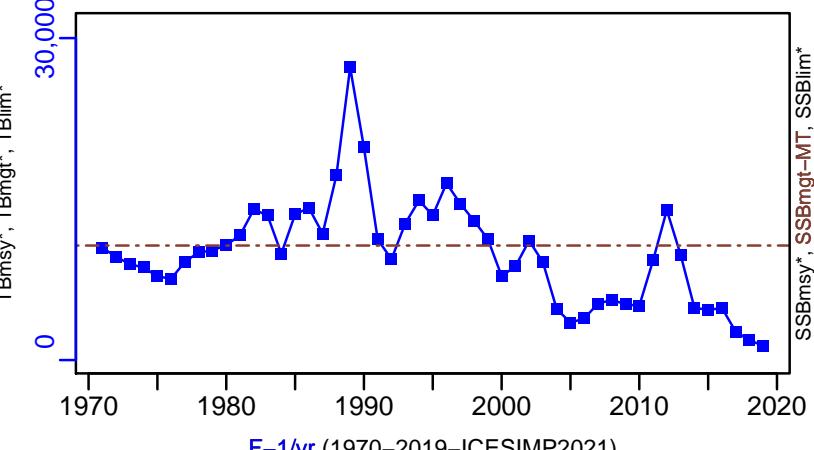
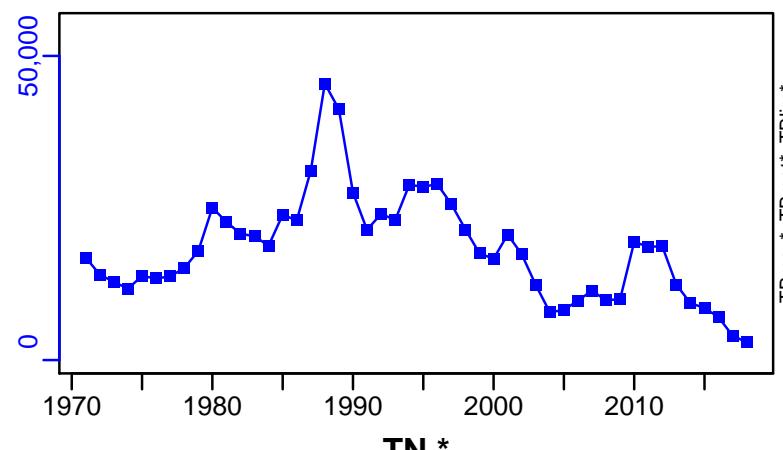


◆ Start Year   ◆ End Year   \* No Data

### Atlantic cod Celtic Sea [CODVIlek]

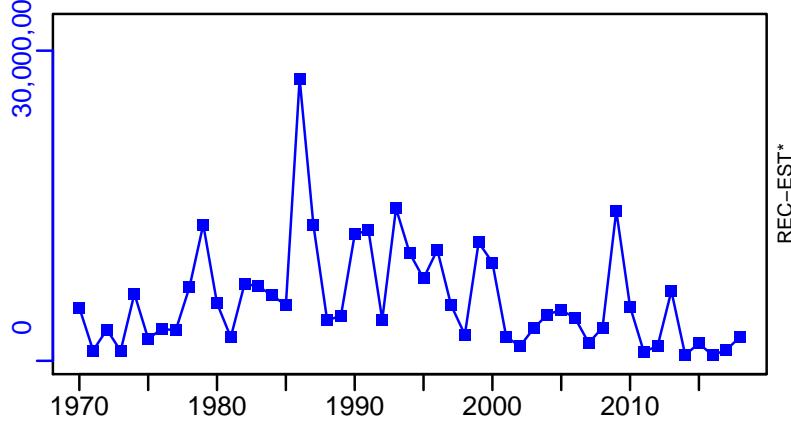
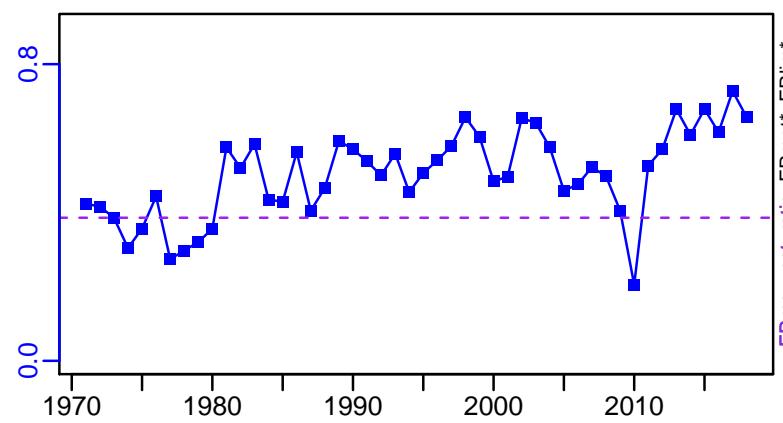
TB-MT (1970–2019–ICESIMP2021)

SSB-MT (1970–2019–ICESIMP2021)



ER-calc-ratio (1970–2019–ICESIMP2021)

R-E00 (1970–2019–ICESIMP2021)

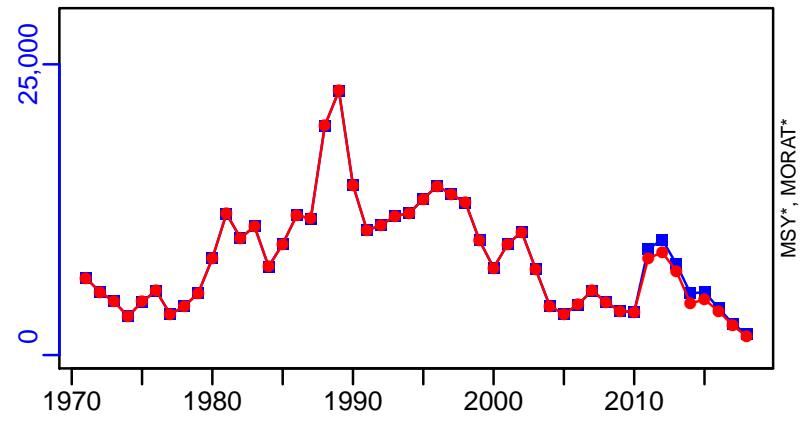


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	* No Data

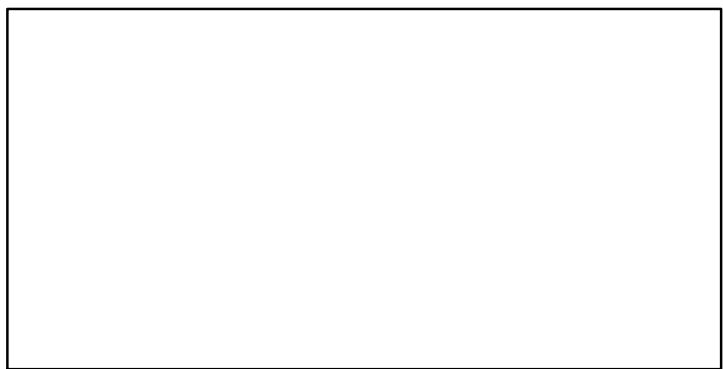
Atlantic cod Celtic Sea [CODVIlek]

TC-MT, TL-MT, RecC\* (1970–2019–ICESIMP2021)

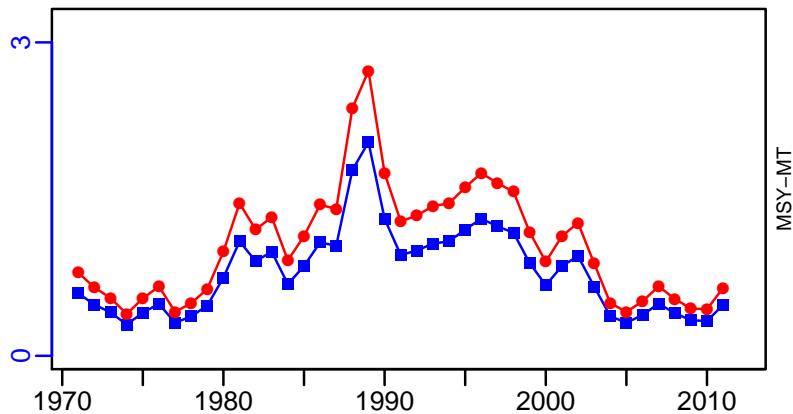
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL-MT/MSY-MT, CdiveMEANC-ratio, (1971–2012–CHING)



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

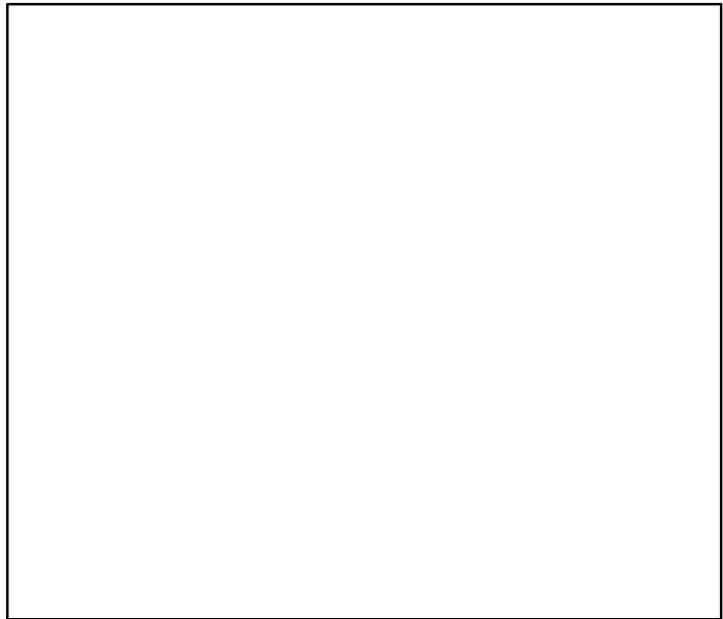
## Tusk Northeast Atlantic [CUSKNEATL]

<b>Metadata</b>	
<b>Scientific Name</b>	Brosme brosme
<b>Current Assess ID</b>	WGDEEP-CUSKNEATL-1988-2018-ICESIMP2021
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2014, 2016, 2018

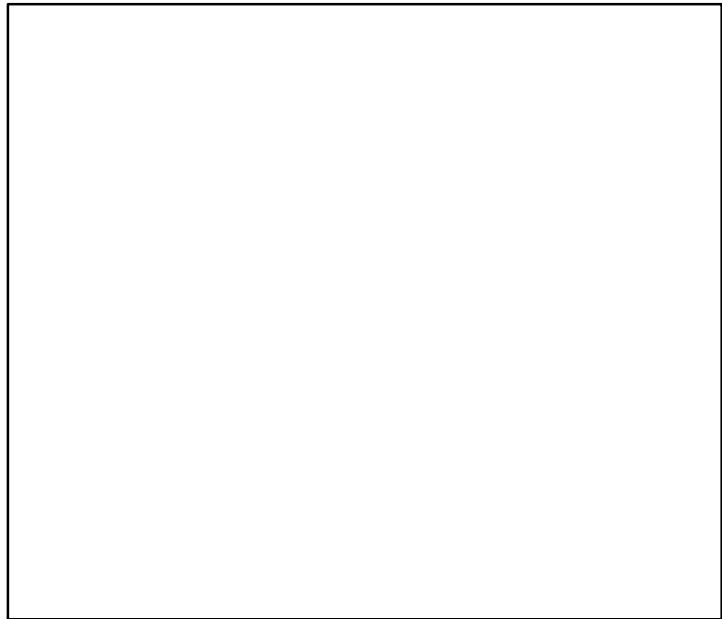
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	131	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2014	4590		
<b>TL</b>	TL-MT	2018	4411		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

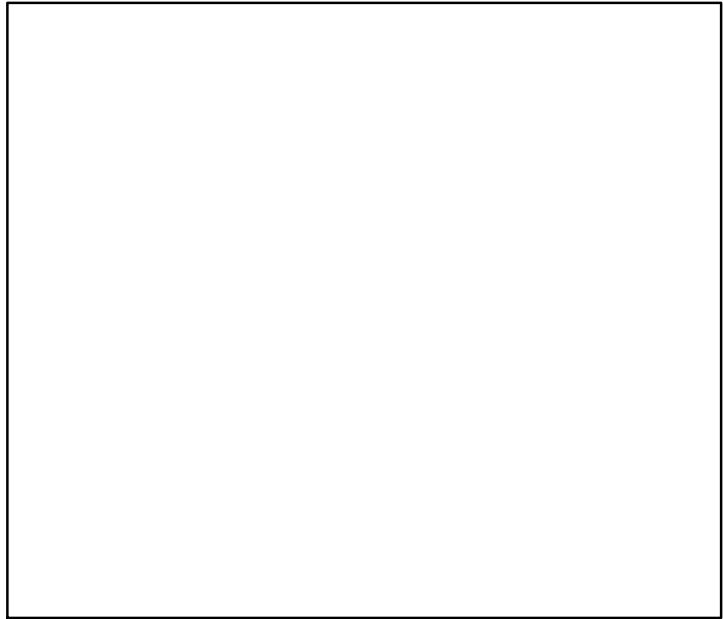
**Kobe MSY\***



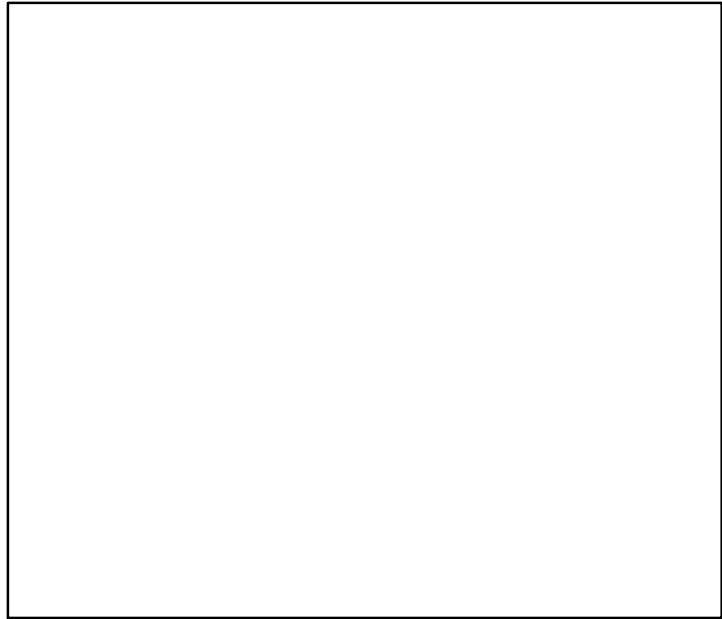
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



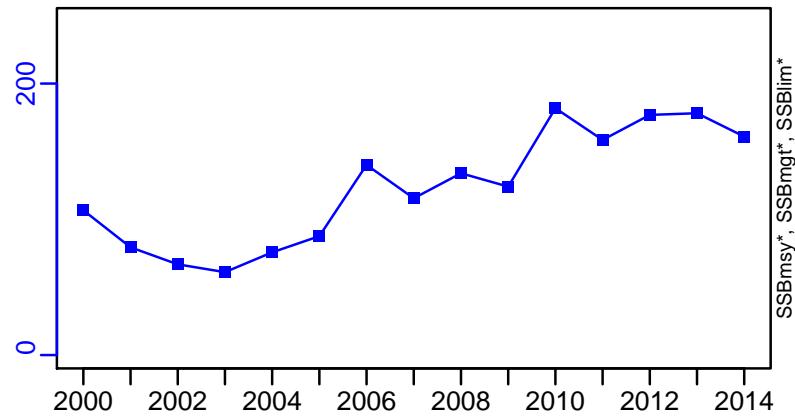
◆ Start Year ♦ End Year \* No Data

Tusk Northeast Atlantic [CUSKNEATL]

**TB\***



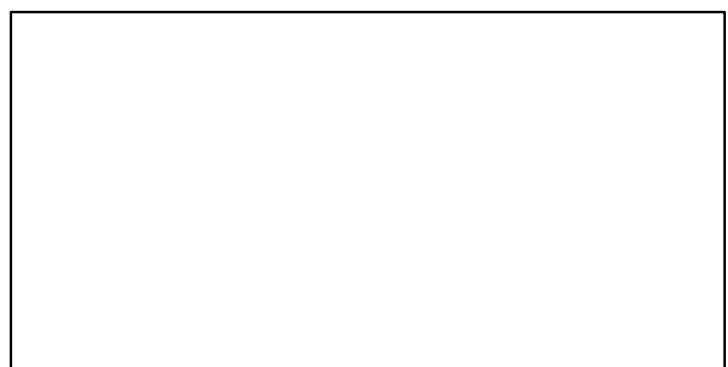
SSB-index (1988–2014–ICESIMP2018)



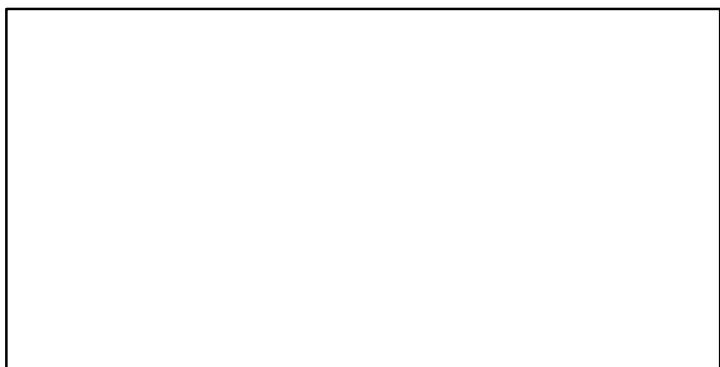
**TN \***



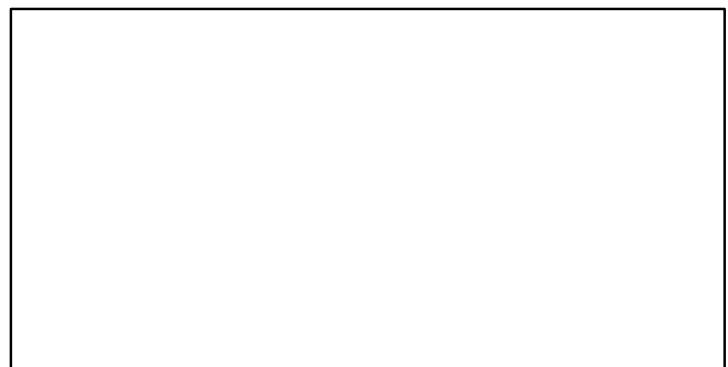
**F\***



**ER\***



**Recruits\***

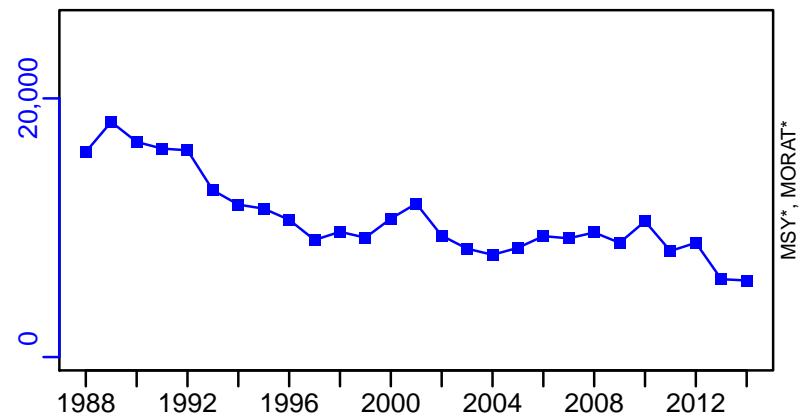


- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>■ Listed time series</li> <li>— Target BRP</li> <li>— MSY-based BRP</li> <li>— Lim BRP</li> </ul> | <ul style="list-style-type: none"> <li>— Rec-Est</li> <li>* No Data</li> </ul> |
|--|--|

Tusk Northeast Atlantic [CUSKNEATL]

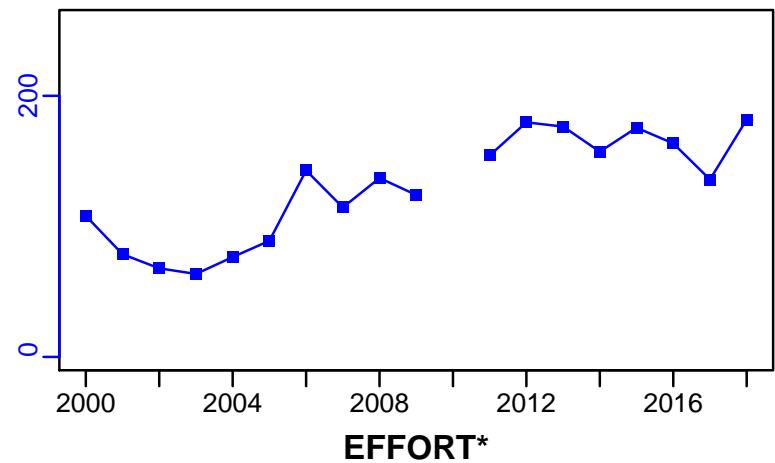
TC-MT, TL\*, RecC\* (1988–2014–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



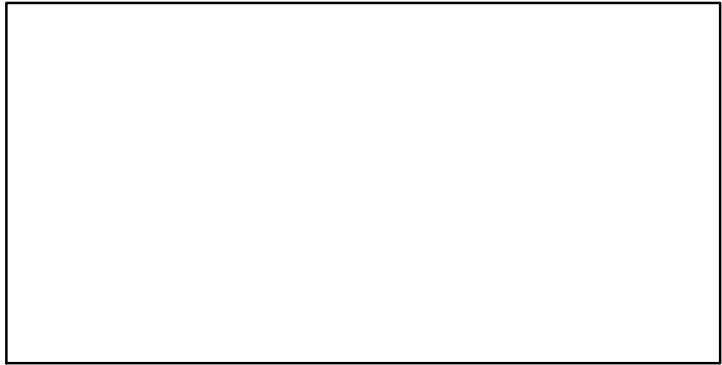
survB-MT (1988–2018–ICESIMP2021)

MSY\*, MORAT\*

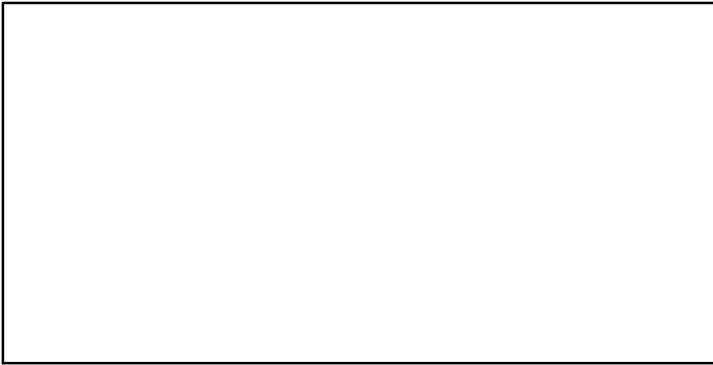


EFFORT\*

CPUE\*



CdivMSY\*



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

## Tusk ICES 5a-14 [CUSKVa-XIV]

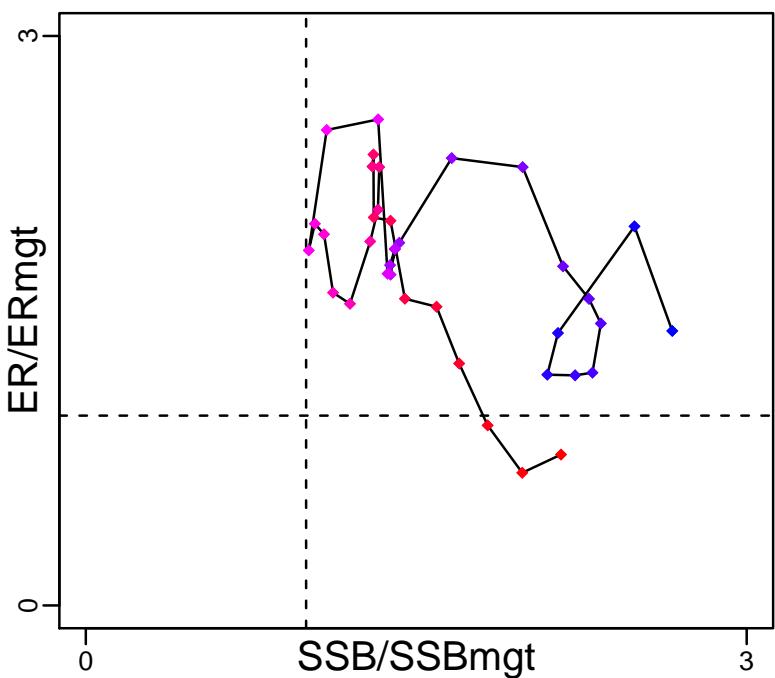
<b>Metadata</b>	
<b>Scientific Name</b>	Brosme brosme
<b>Current Assess ID</b>	WGDEEP-CUSKVa-XIV-1973-2019-ICESIMP2021
<b>Area</b>	ICES 5a-14
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2019, 2014, 2017, 2018, 2015, 2016

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2016	60,151
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2016	0.2
<b>ERmsy</b>	ERmsy-est-ratio	2016	0.14
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	6240
<b>Fmgt</b>	Fmgt-1/yr	2016	0.2
<b>ERmgt</b>	ERmgt-ratio	2019	0.13
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2016	8434
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	4460
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

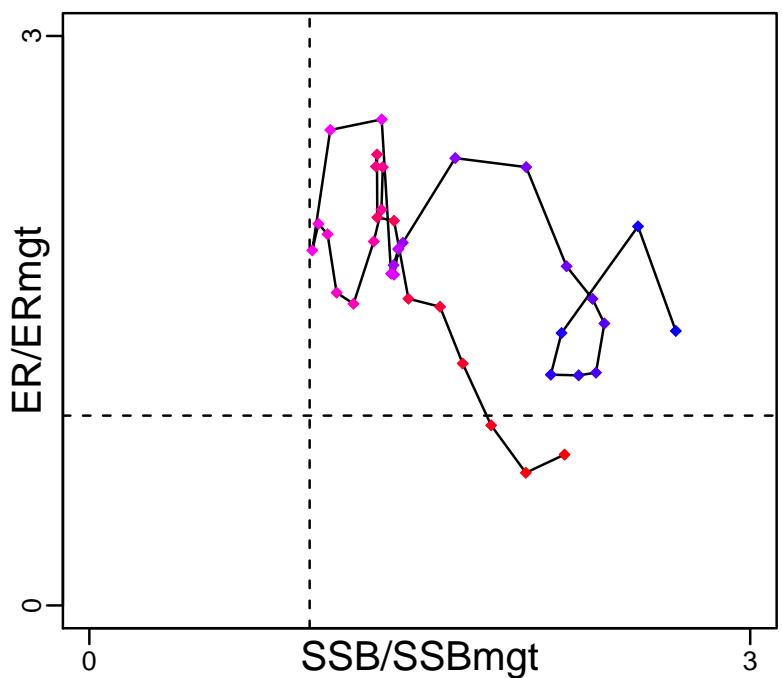
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	37,093	-	-	
<b>SSB</b>	SSB-MT	2019	14,143	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	18,433,788	-	3	
<b>F</b>	F-1/yr	2016	0.22	-	-	
<b>ER</b>	ER-ratio	2019	0.103	-	-	
<b>TC</b>	TC-MT	2017	3490			
<b>TL</b>	TL-MT	2019	3621			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2016	0.372			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2016	1.1			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2016	1.535			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	2.267			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	1.1			
<b>ER/ERmgt</b>	-	-	-			

Tusk ICES 5a-14 [CUSKVa-XIV]

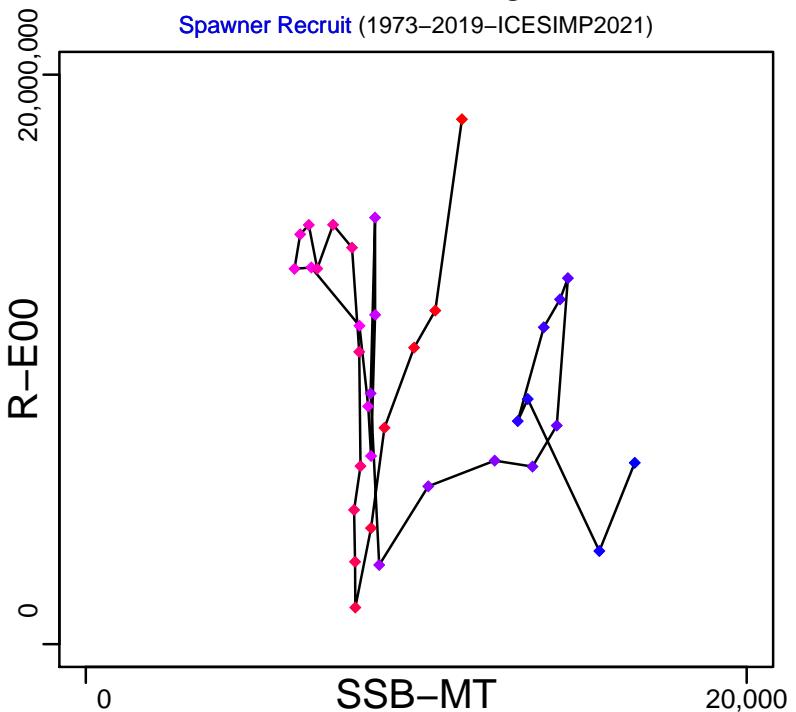
Kobe MSYpref (1973–2019–ICESIMP2021)



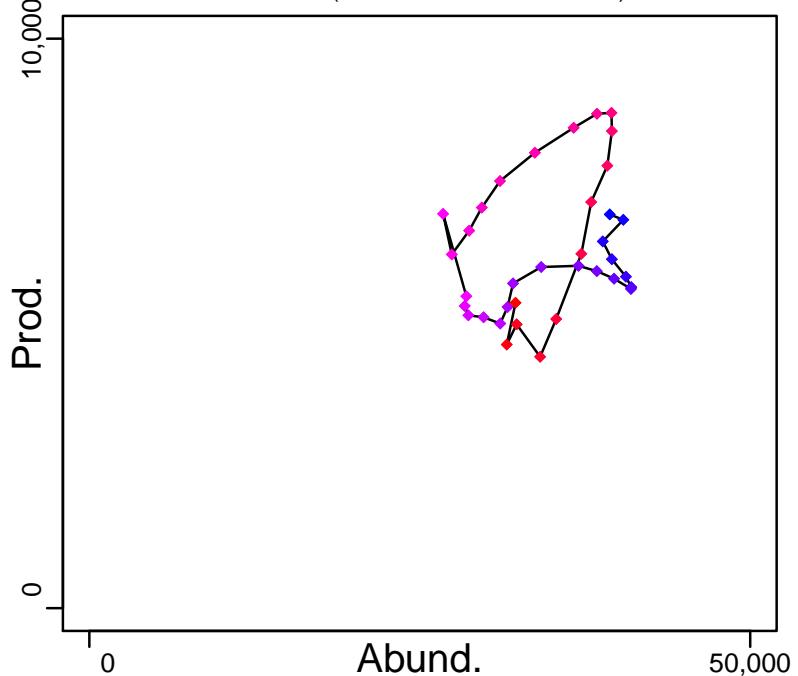
Kobe MGTpref (1973–2019–ICESIMP2021)



Spawner Recruit (1973–2019–ICESIMP2021)



Production (1973–2019–ICESIMP2021)

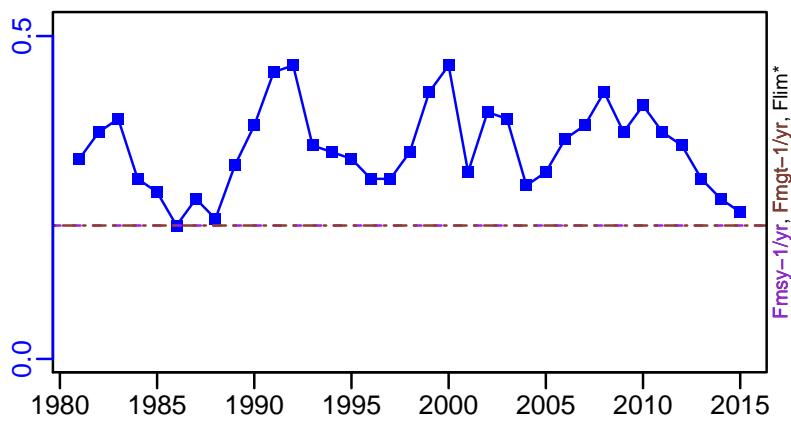
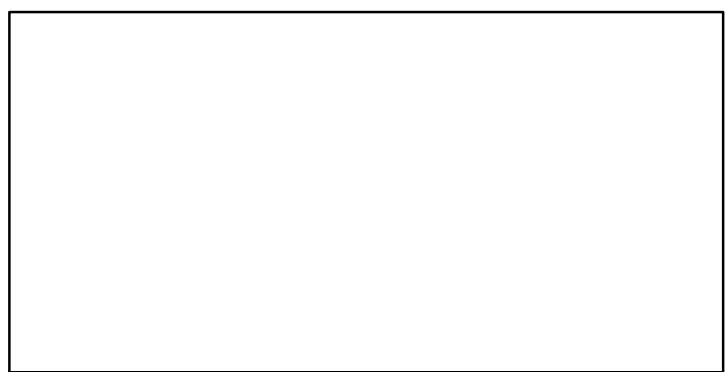
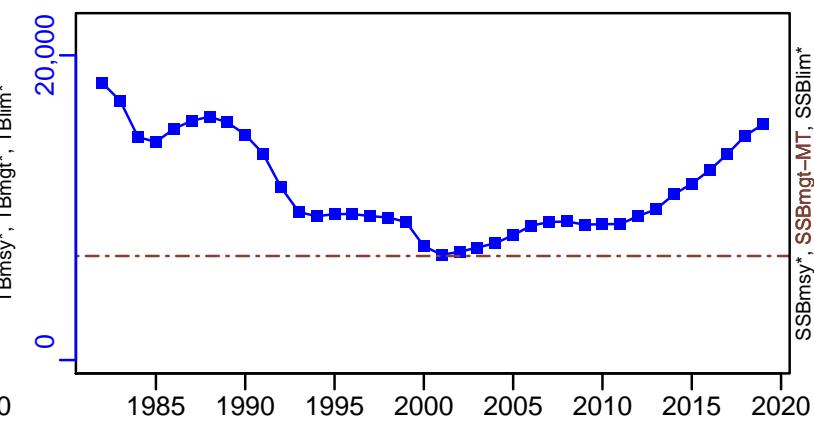
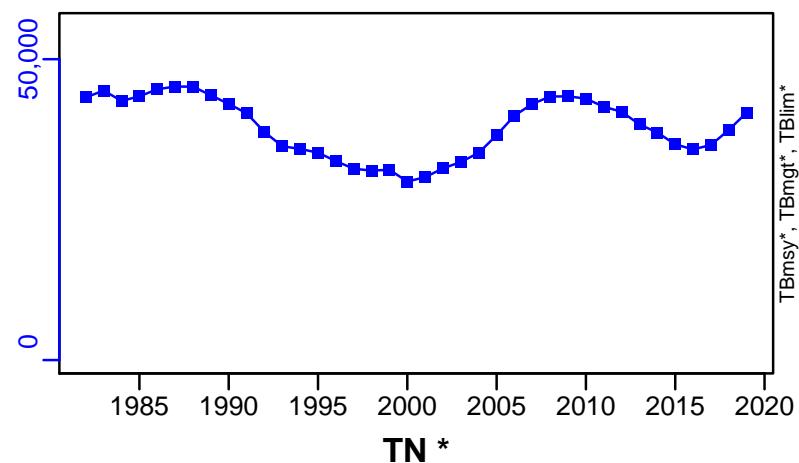


- ◆ Start Year
- ◆ End Year
- \* No Data

### Tusk ICES 5a–14 [CUSKVa–XIV]

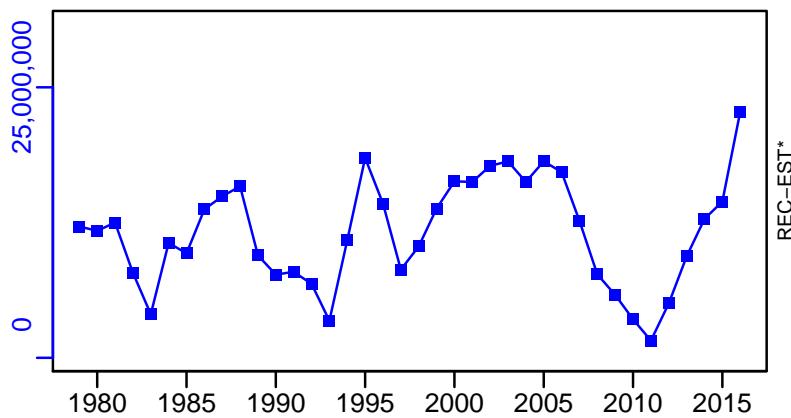
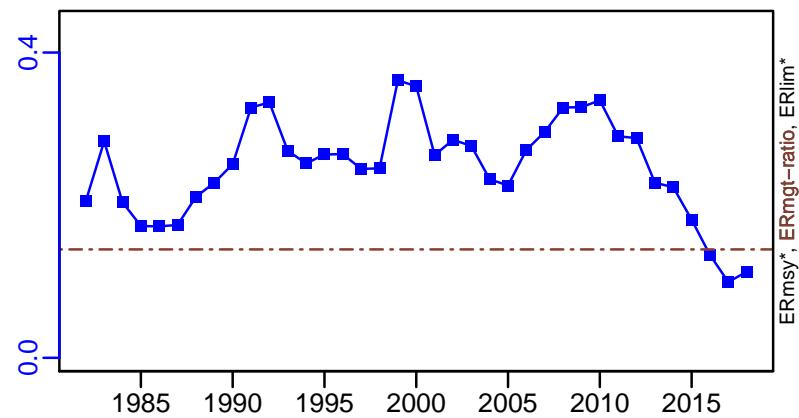
TB-MT (1973–2019–ICESIMP2021)

SSB-MT (1973–2019–ICESIMP2021)



ER-ratio (1973–2019–ICESIMP2021)

R-E00 (1973–2019–ICESIMP2021)

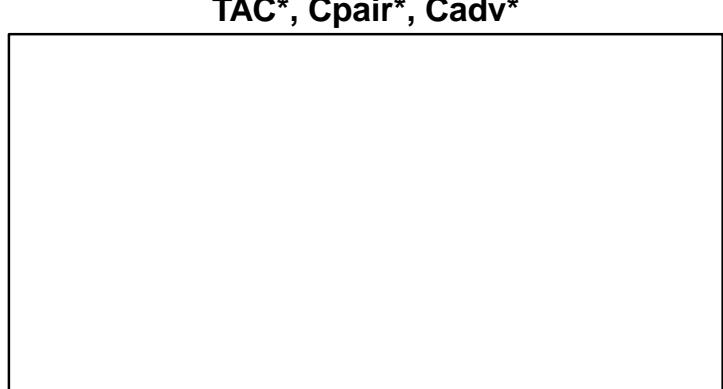
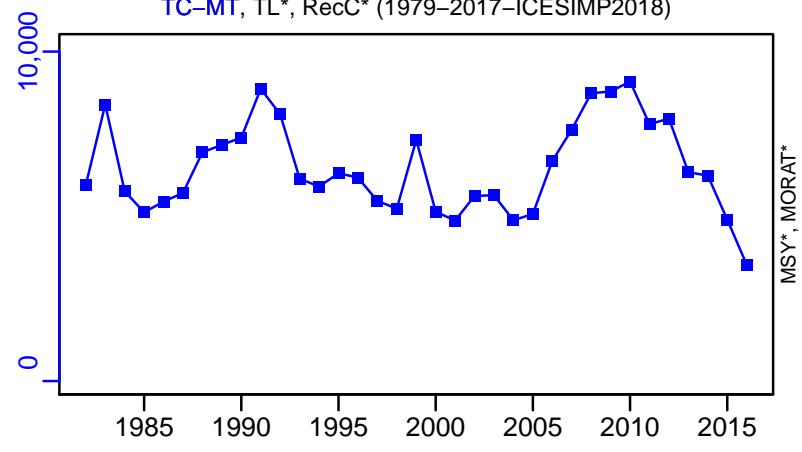


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	--- Lim BRP	* No Data

### Tusk ICES 5a–14 [CUSKVa–XIV]

TC–MT, TL\*, RecC\* (1979–2017–ICESIMP2018)

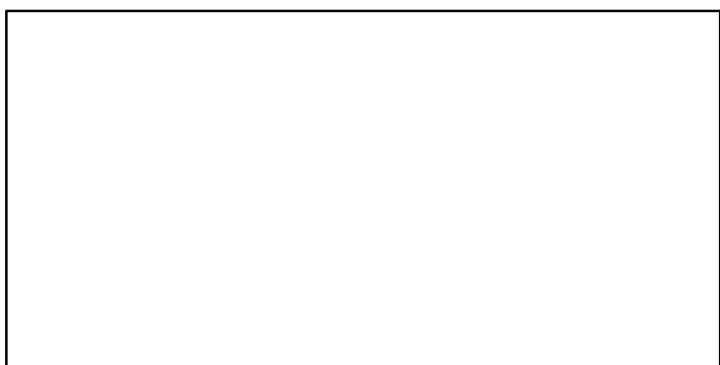
TAC\*, Cpair\*, Cadv\*



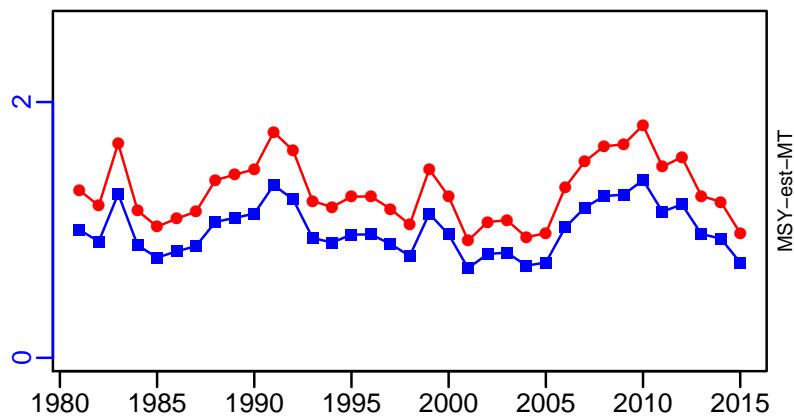
CPUE\*



EFFORT\*



TC–MT/MSY–est–MT, CdivMEANC–ratio, (1981–2016–ICESIMP2016)



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

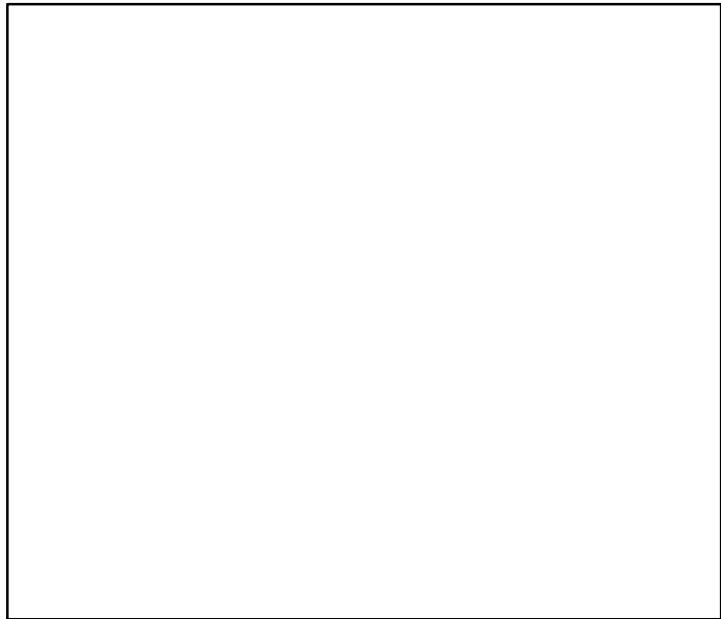
## Tusk Rockall Bank [CUSKVlb]

<b>Metadata</b>	
<b>Scientific Name</b>	Brosme brosme
<b>Current Assess ID</b>	WGDEEP-CUSKVlb-1988-2017-ICESIMP2018
<b>Area</b>	Rockall Bank
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2016, 2017

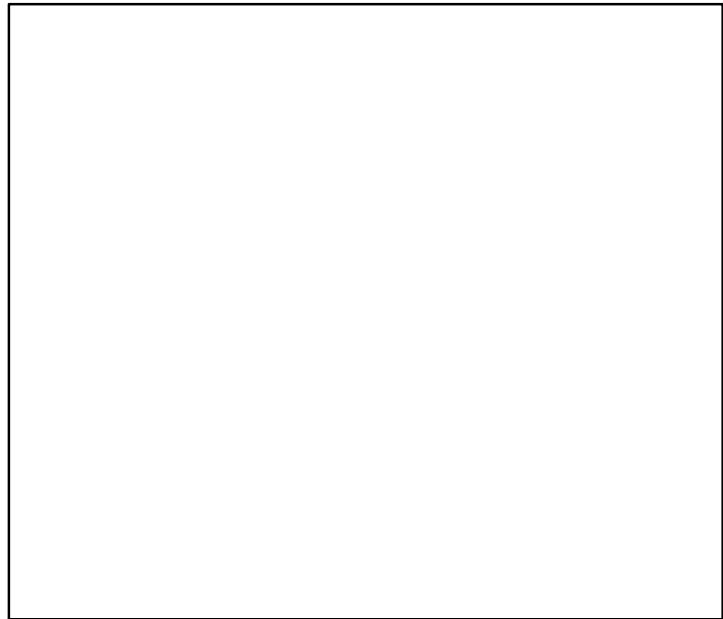
<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim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

<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2017	47		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

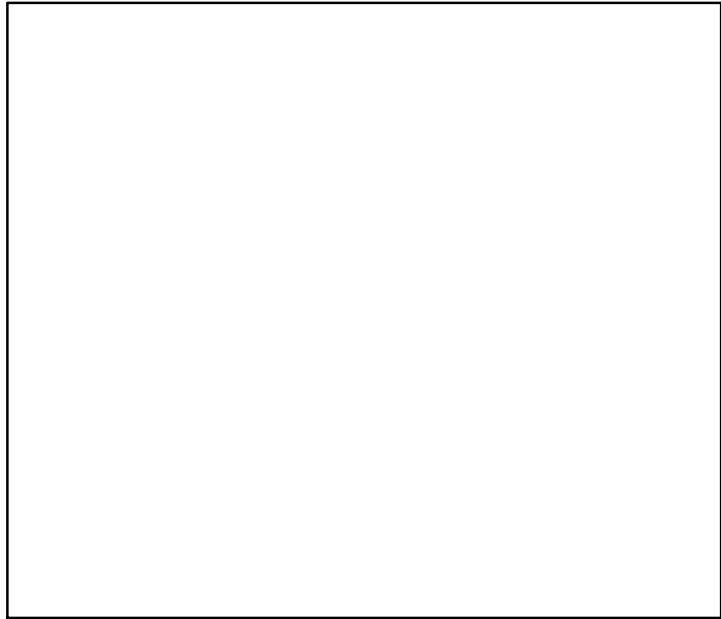
**Kobe MSY\***



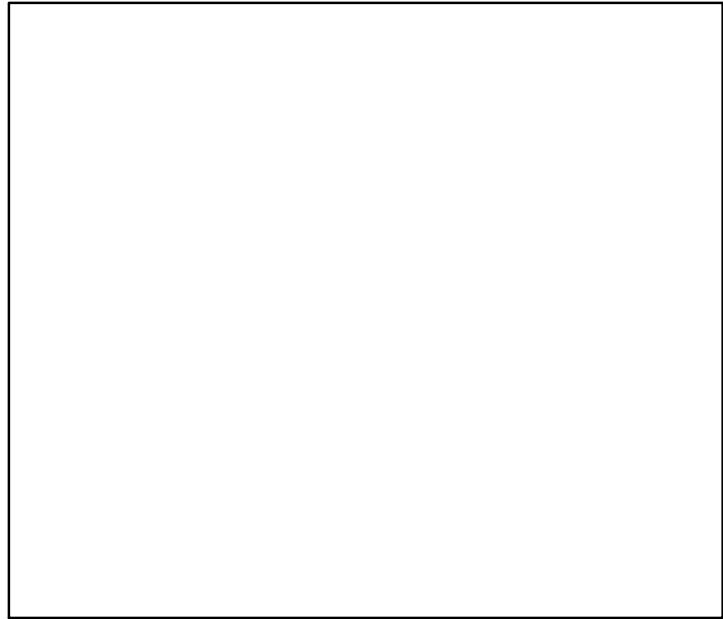
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

**TB\***



**SSB\***



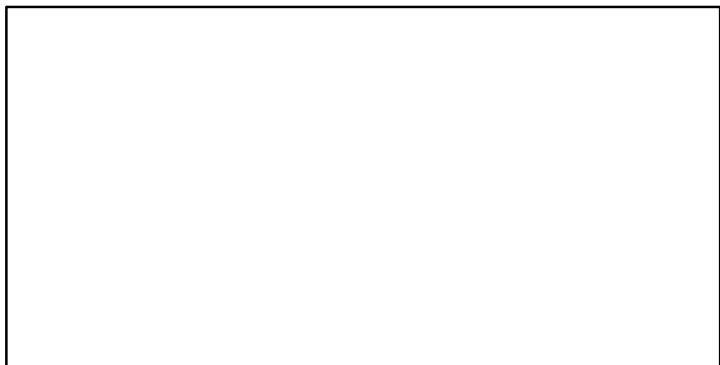
**TN \***



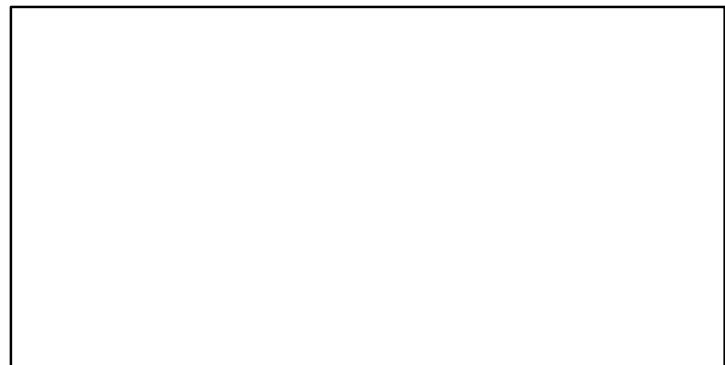
**F\***



**ER\***



**Recruits\***

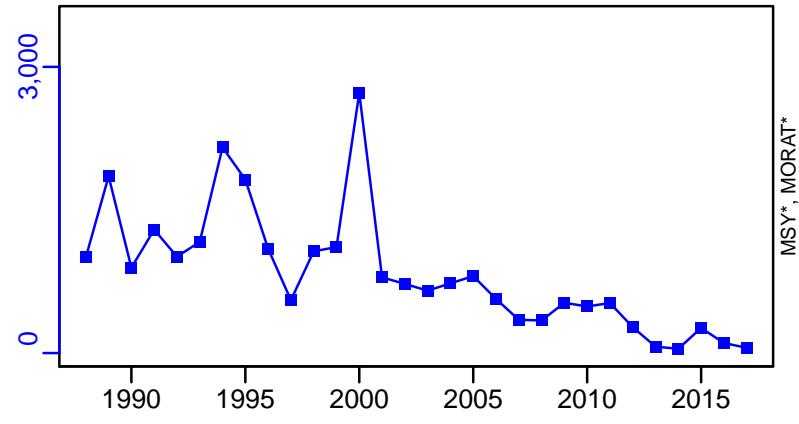


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

Tusk Rockall Bank [CUSKVIb]

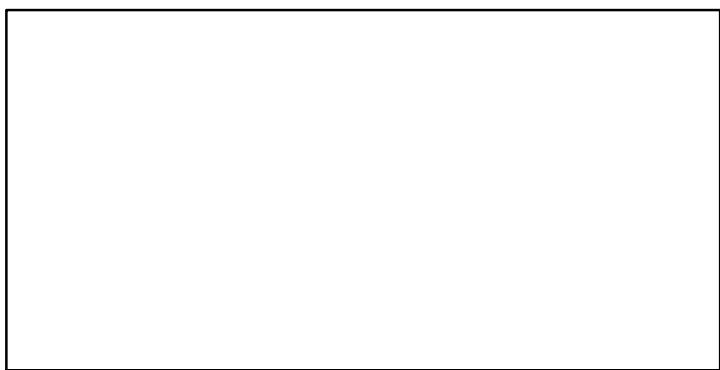
TL-MT, TC\*, RecC\* (1988–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*

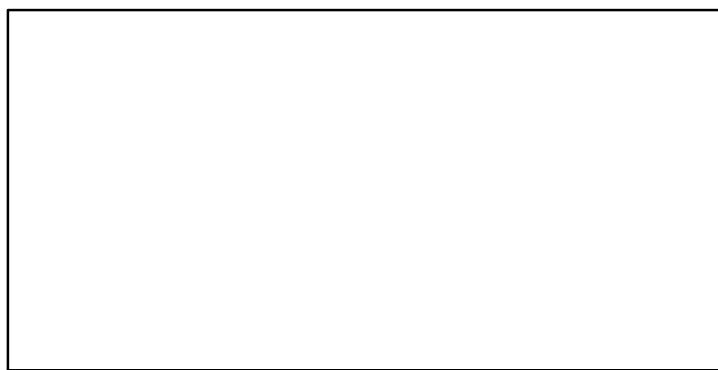


survB\*

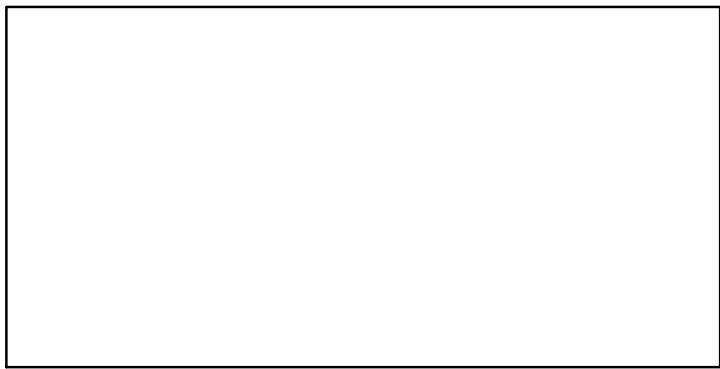
MSY\*, MORAT\*



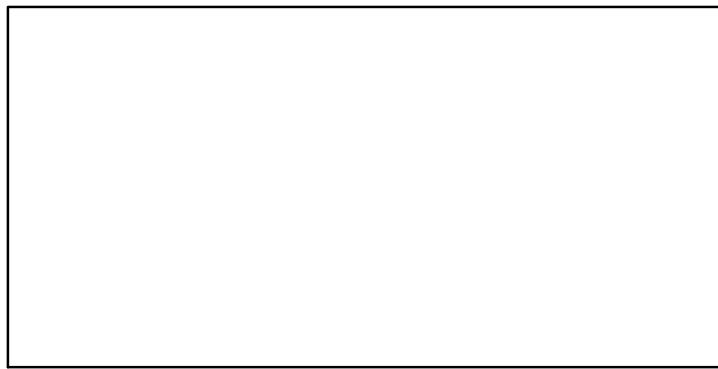
CPUE\*



EFFORT\*



CdivMSY\*



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

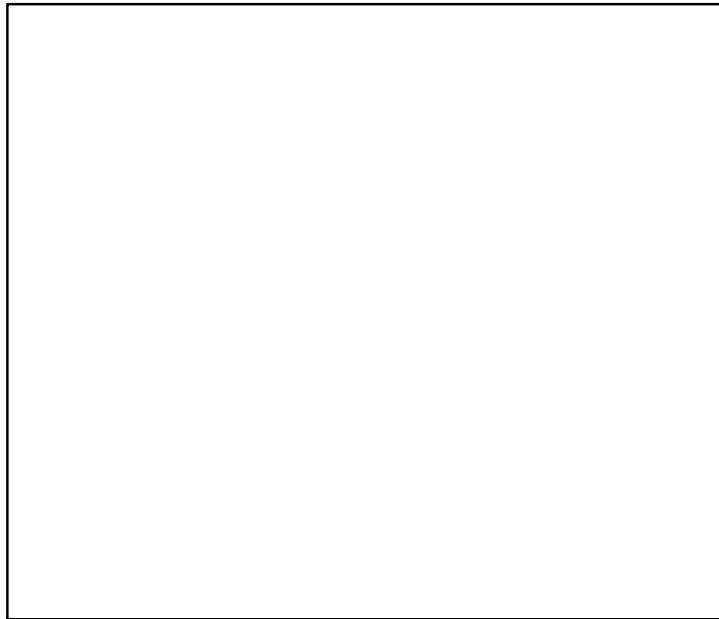
## Tusk North of Azores [CUSKXII]

<b>Metadata</b>	
<b>Scientific Name</b>	Brosme brosme
<b>Current Assess ID</b>	WGDEEP-CUSKXII-1988-2018-ICESIMP2021
<b>Area</b>	North of Azores
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2015, 2016, 2018

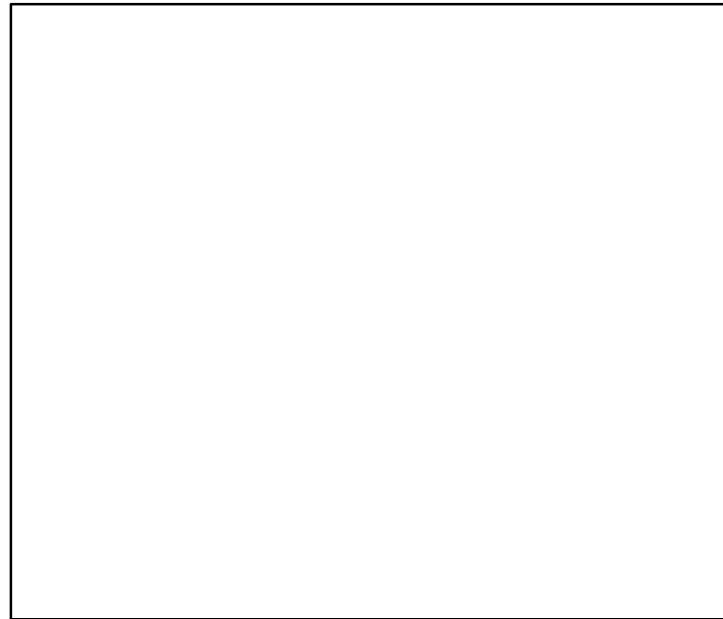
<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim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

<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	0		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

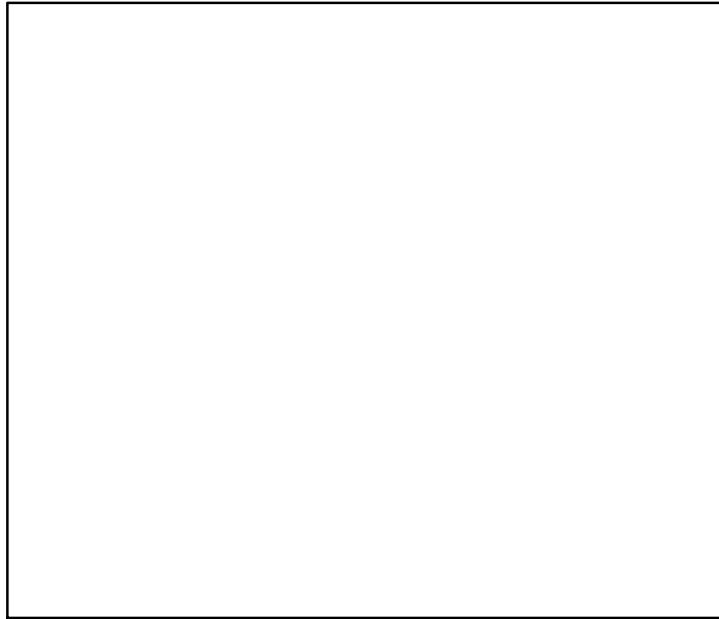
**Kobe MSY\***



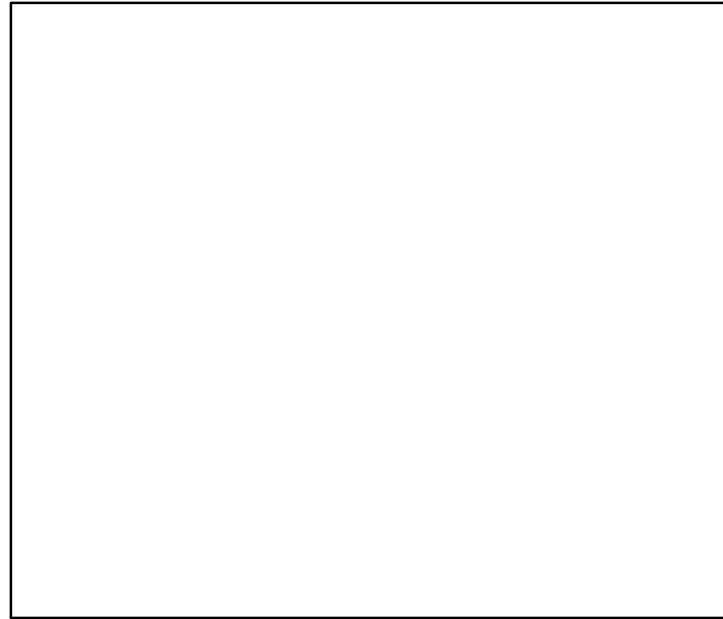
**Kobe MGT\***



**Spawner Recruit\***



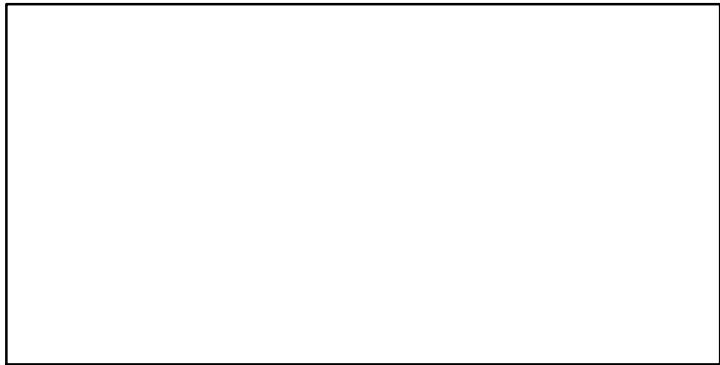
**Production\***



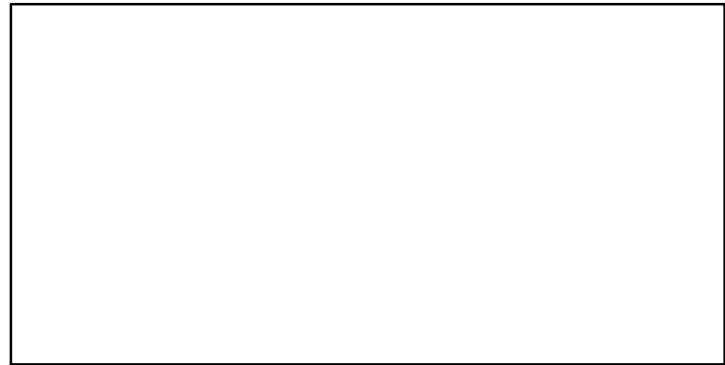
◆ Start Year ♦ End Year \* No Data

Tusk North of Azores [CUSKXII]

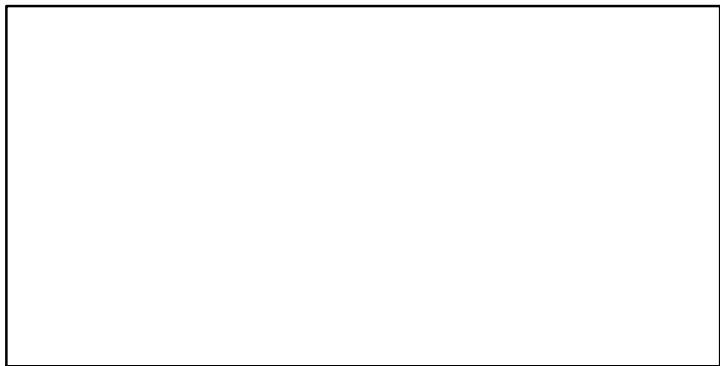
**TB\***



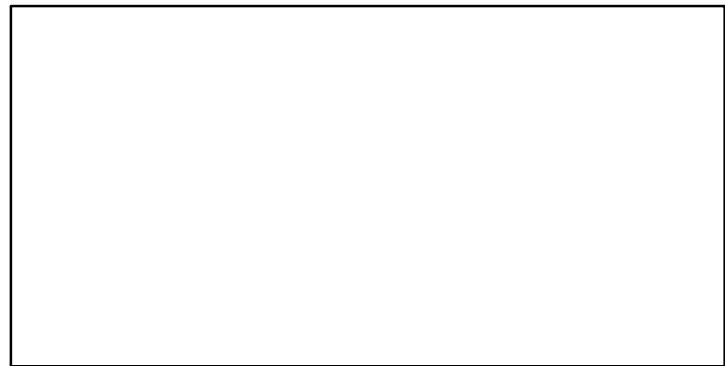
**SSB\***



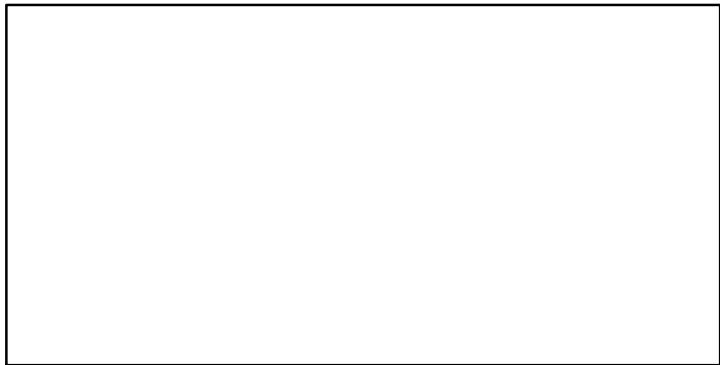
**TN \***



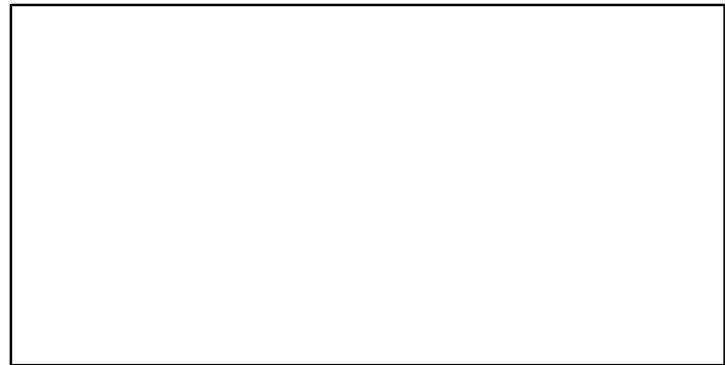
**F\***



**ER\***



**Recruits\***

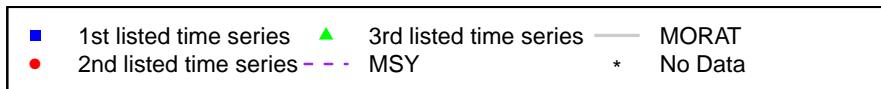
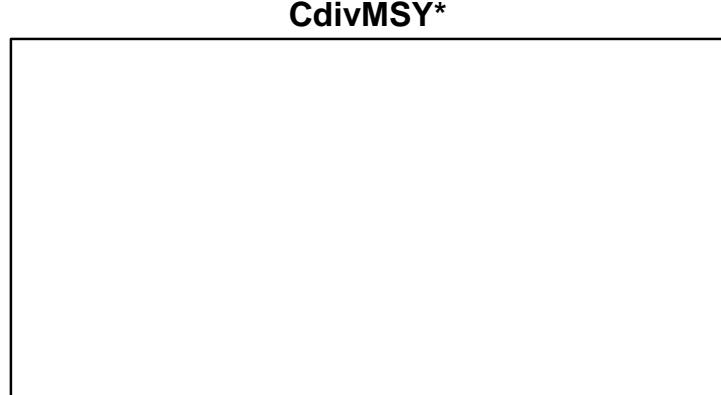
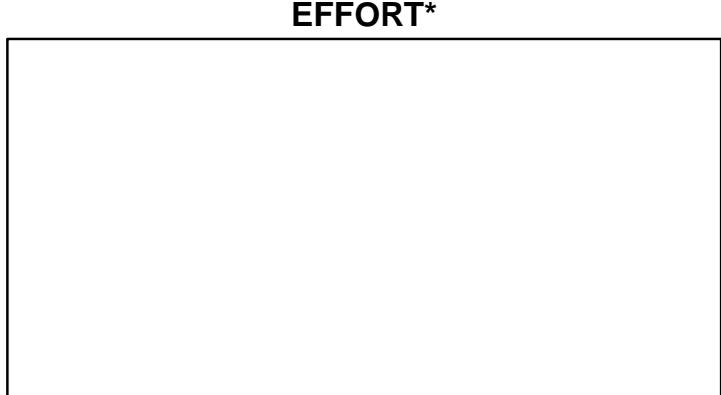
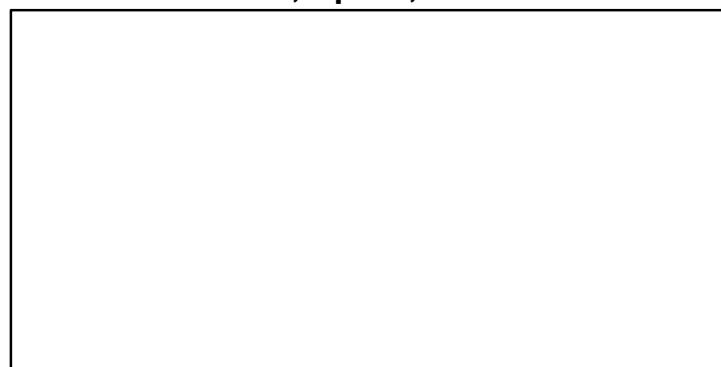
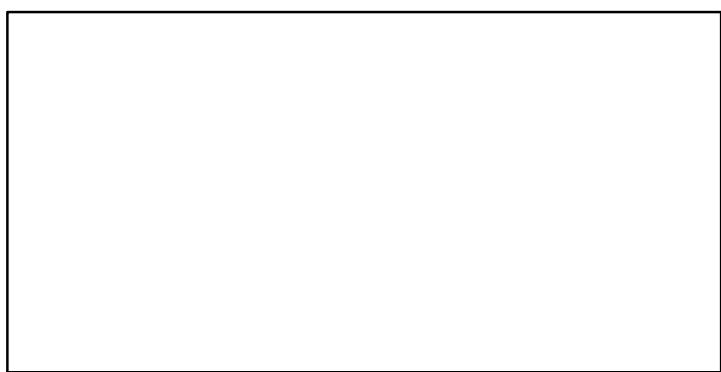
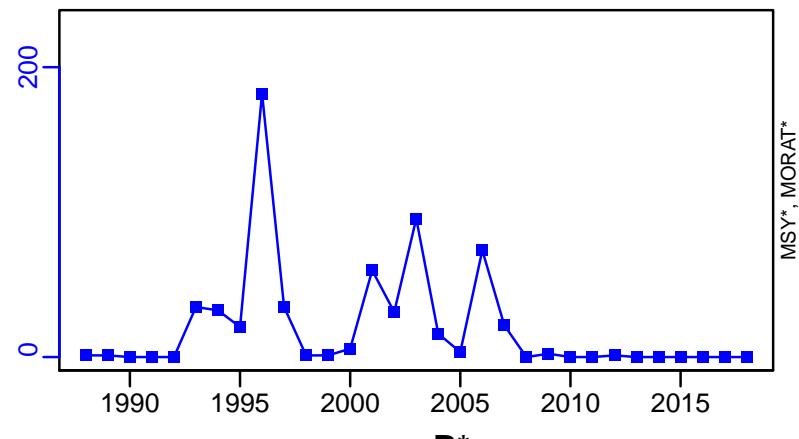


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

**Tusk North of Azores [CUSKXII]**

TL-MT, TC\*, RecC\* (1988–2018–ICESIMP2021)

**TAC\*, Cpair\*, Cadv\***



## Dab Baltic Areas 22-32 [DAB2232]

<b>Metadata</b>	
<b>Scientific Name</b>	Limanda limanda
<b>Current Assess ID</b>	WGBFAS-DAB2232-1970-2016-ICESIMP2018
<b>Area</b>	Baltic Areas 22-32
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2016, 2016

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2016	2360		
<b>TL</b>	TL-MT	2016	1270		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

**TB\***



**SSB\***



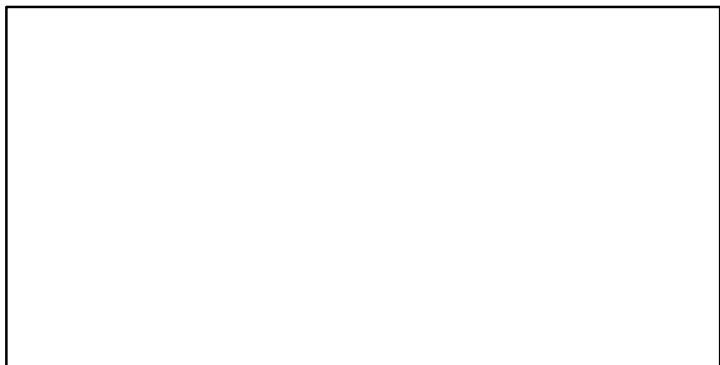
**TN \***



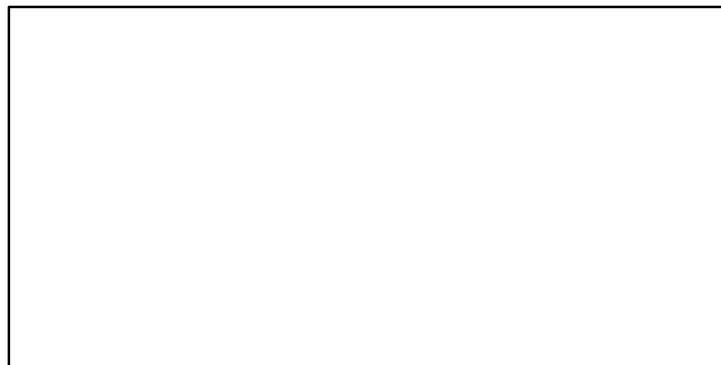
**F\***



**ER\***



**Recruits\***

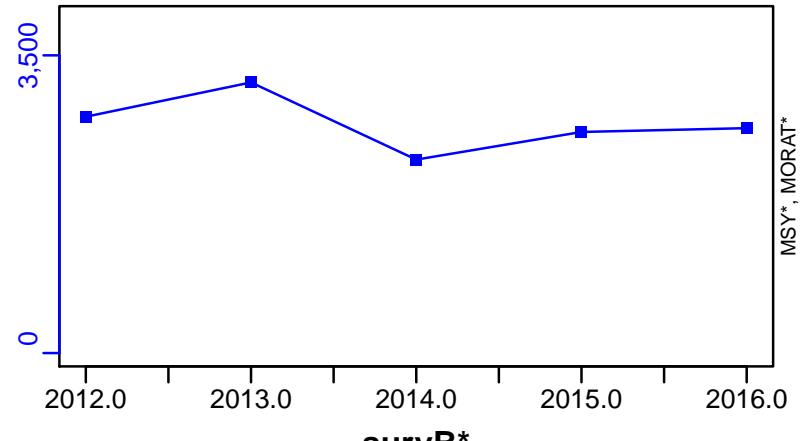


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

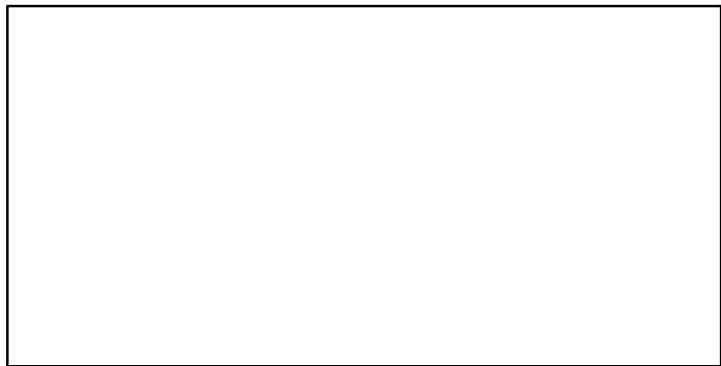
Dab Baltic Areas 22–32 [DAB2232]

TC-MT, TL\*, RecC\* (1970–2016–ICESIMP2018)

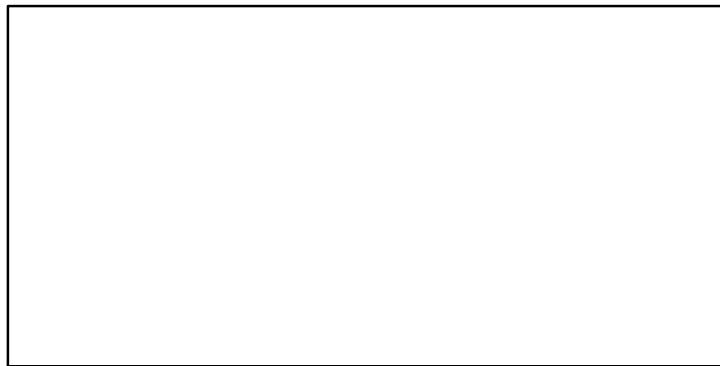
TAC\*, Cpair\*, Cadv\*



survB\*



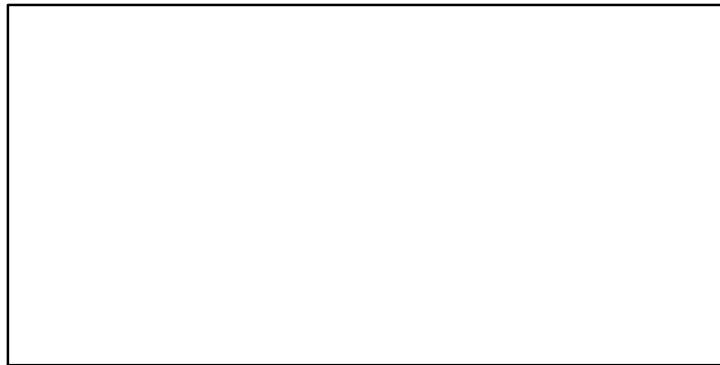
CPUE\*



EFFORT\*



CdivMSY\*



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

## Dab ICES 3a-4 [DABIIIa-IV]

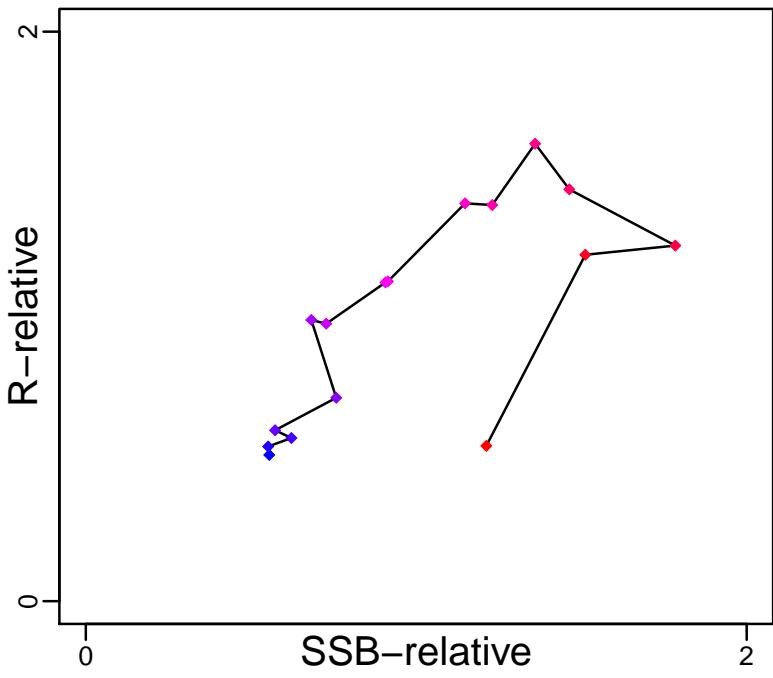
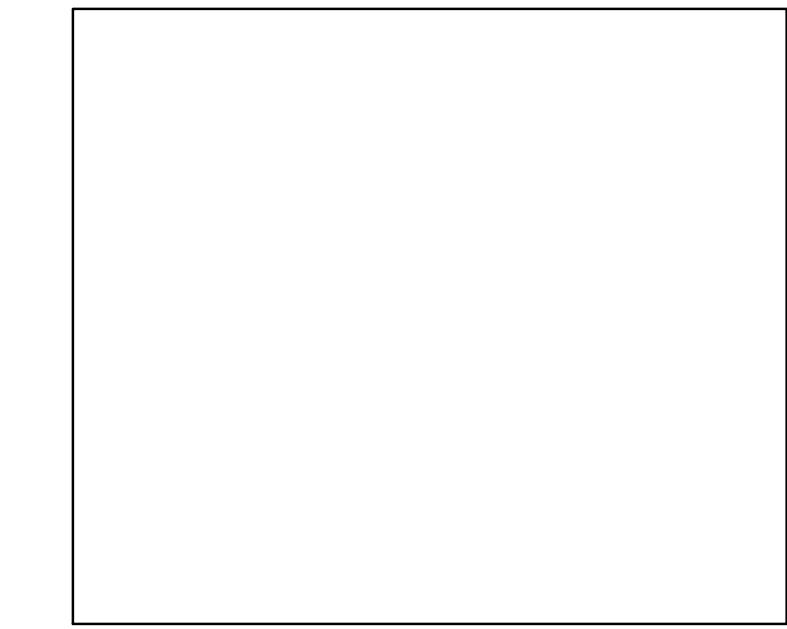
<b>Metadata</b>	
<b>Scientific Name</b>	Limanda limanda
<b>Current Assess ID</b>	WGNSSK-DABIIIa-IV-1965-2018-ICESIMP2021
<b>Area</b>	ICES 3a-4
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2015, 2016, 2018

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

<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-relative	2018	1.166	-	-	
<b>SSB</b>	SSB-relative	2018	1.212	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-relative	2018	0.545	-	-	
<b>F</b>	F-relative	2018	1.145	-	-	
<b>ER</b>	-	-	-	-	-	
<b>TC</b>	TC-MT	2018	44,792			
<b>TL</b>	TL-MT	2018	4233			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Kobe MSY\*****Kobe MGT\***

Spawner Recruit (1965–2018–ICESIMP2021)

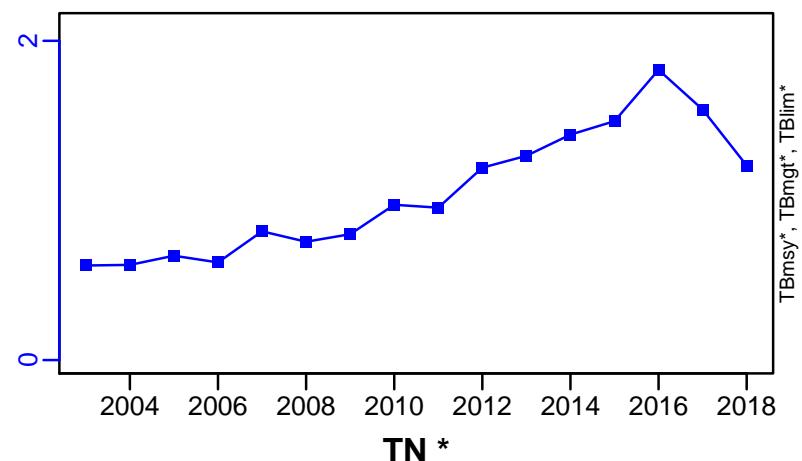
**Production\***

◆ Start Year   ◆ End Year   \* No Data

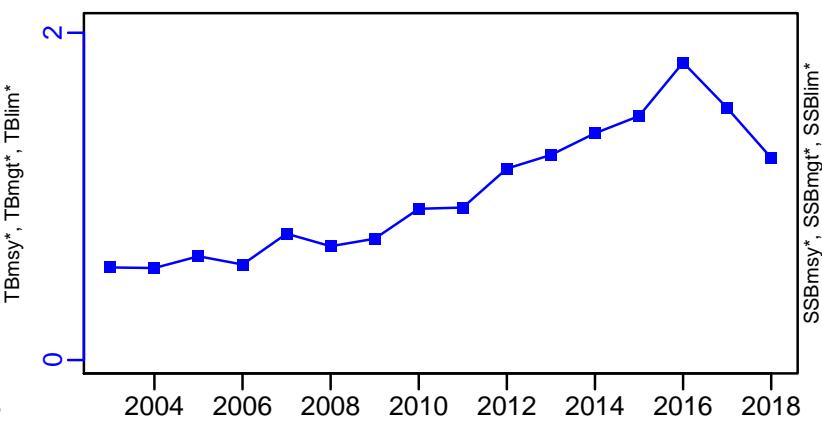
Dab ICES 3a–4 [DABIIIa–IV]

TB-relative (1965–2018–ICESIMP2021)

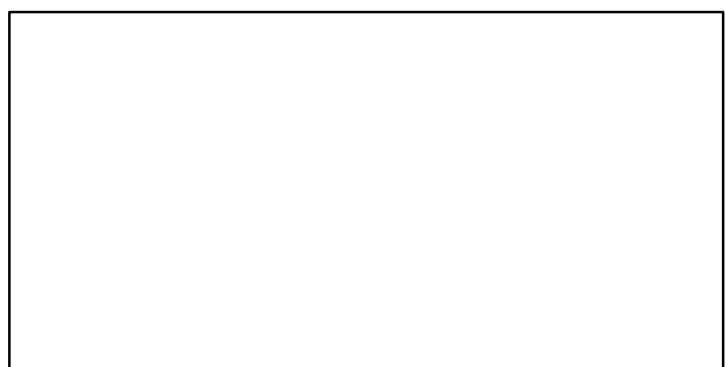
SSB-relative (1965–2018–ICESIMP2021)



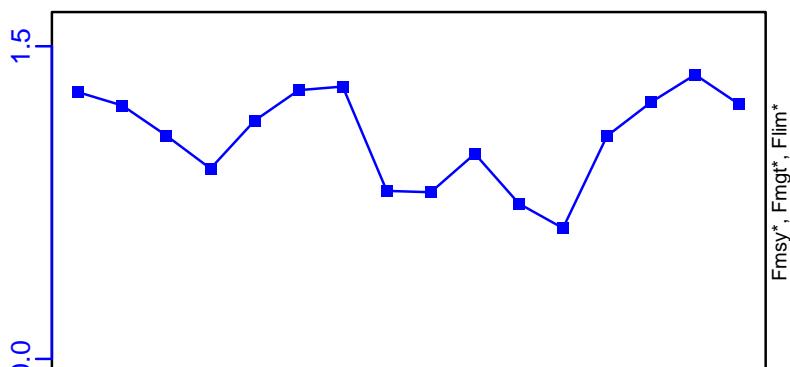
TN \*



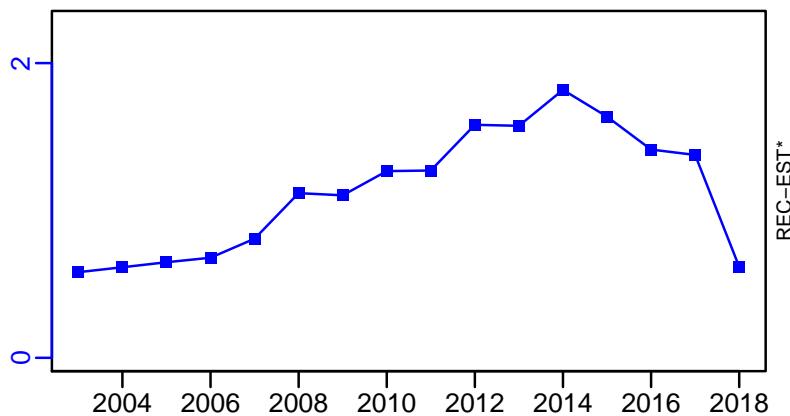
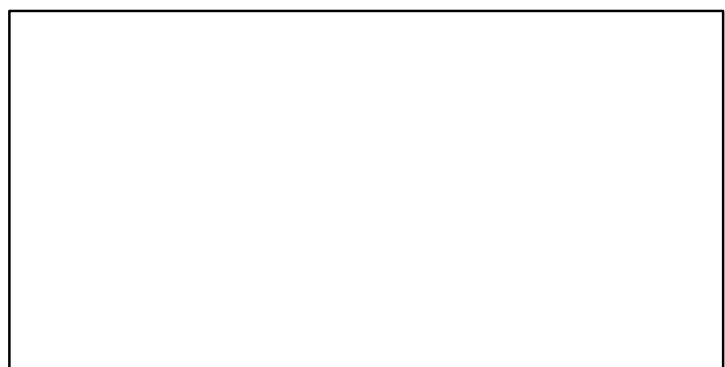
F-relative (1965–2018–ICESIMP2021)



ER\*



R-relative (1965–2018–ICESIMP2021)



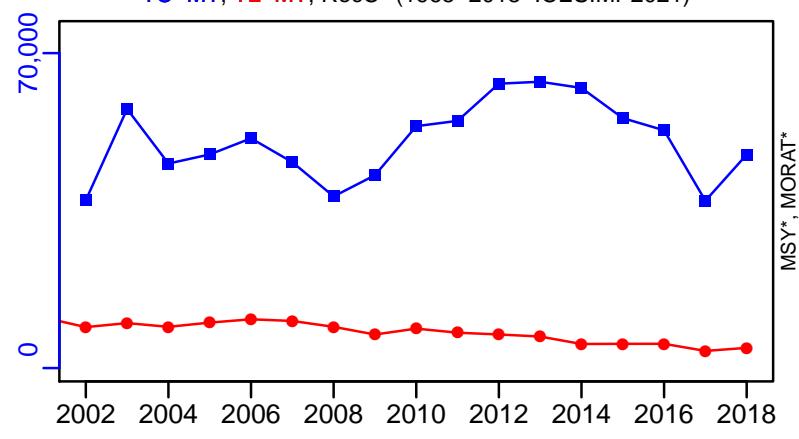
REC-EST\*

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

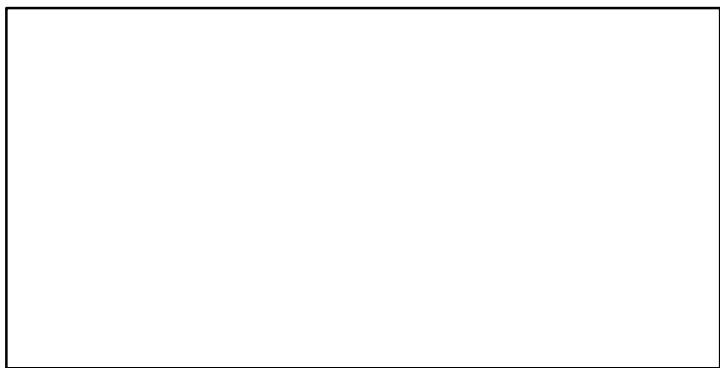
Dab ICES 3a–4 [DABIIIa–IV]

TC–MT, TL–MT, RecC\* (1965–2018–ICESIMP2021)

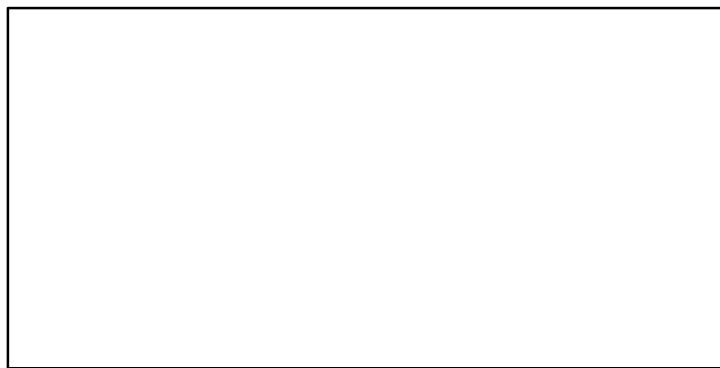
TAC\*, Cpair\*, Cadv\*



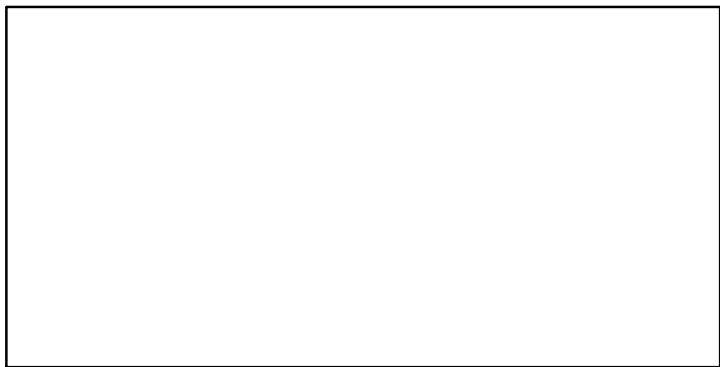
survB\*



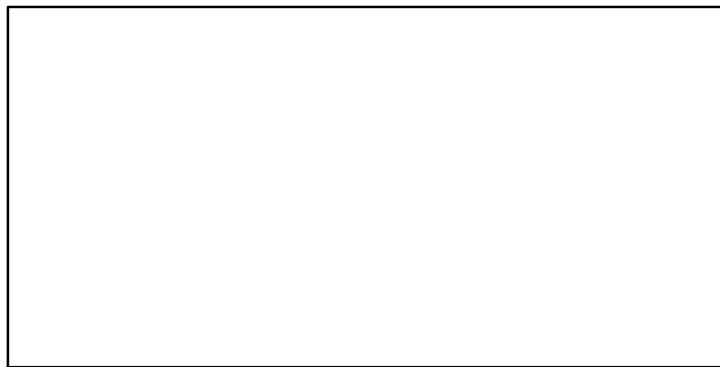
CPUE\*



EFFORT\*



CdivMSY\*



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

## European seabass ICES 4bc-7 [EBASSIVbc-VII]

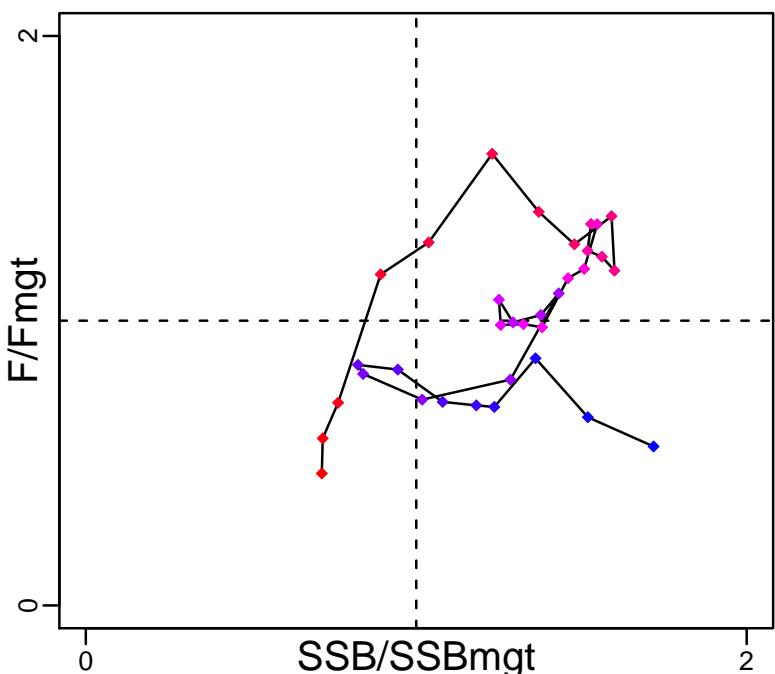
<b>Metadata</b>	
<b>Scientific Name</b>	Dicentrarchus labrax
<b>Current Assess ID</b>	WGCSE-EBASSIVbc-VII-1985-2019-ICESIMP2021
<b>Area</b>	ICES 4bc-7
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2014, 2015, 2016, 2017, 2018, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.203
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.086
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	14,439
<b>Fmgt</b>	Fmgt-1/yr	2019	0.171
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	9618
<b>Flim</b>	Flim-1/yr	2018	0.295
<b>ERlim</b>	-	-	-

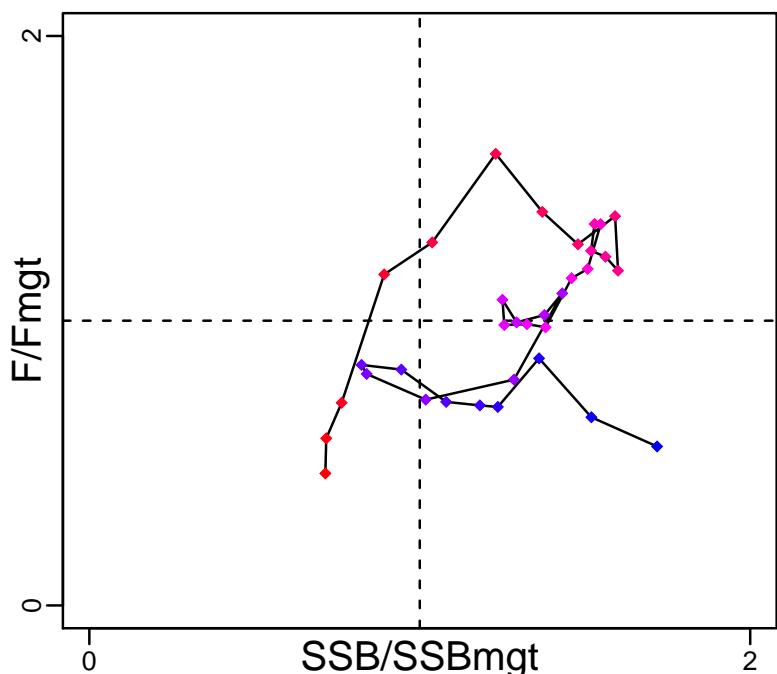
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2017	10,800	Both	-	
<b>SSB</b>	SSB-MT	2019	10,884	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	12,382,797	-	0	
<b>F</b>	F-1/yr	2019	0.079	-	4 to 15	
<b>ER</b>	ER-calc-ratio	2019	0.049	-	-	
<b>TC</b>	TC-MT	2018	1150			
<b>TL</b>	TL-MT	2019	801			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.591			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.564			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.754			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.464			
<b>ER/ERmgt</b>	-	-	-			

European seabass ICES 4bc–7 [EBASSIVbc–VII]

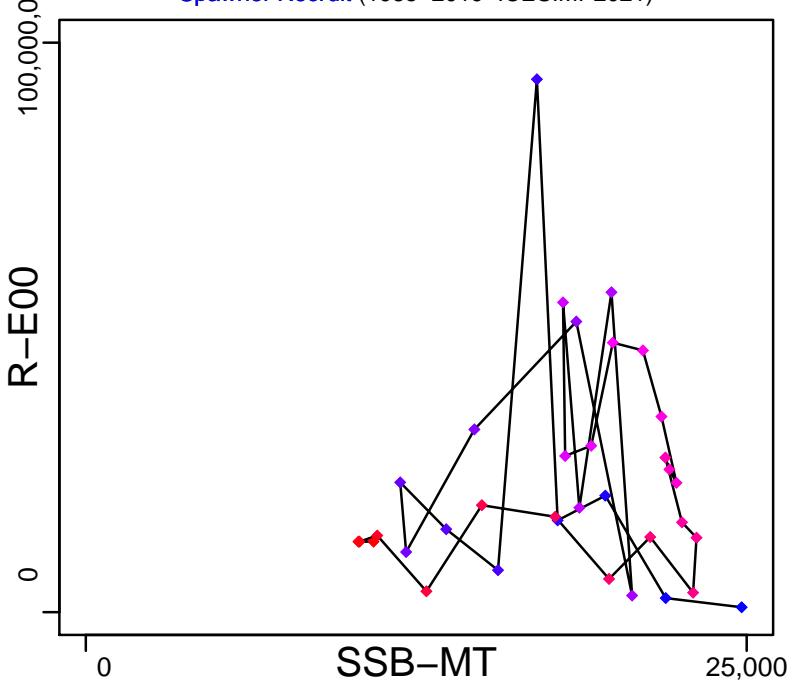
Kobe MSYpref (1985–2019–ICESIMP2021)



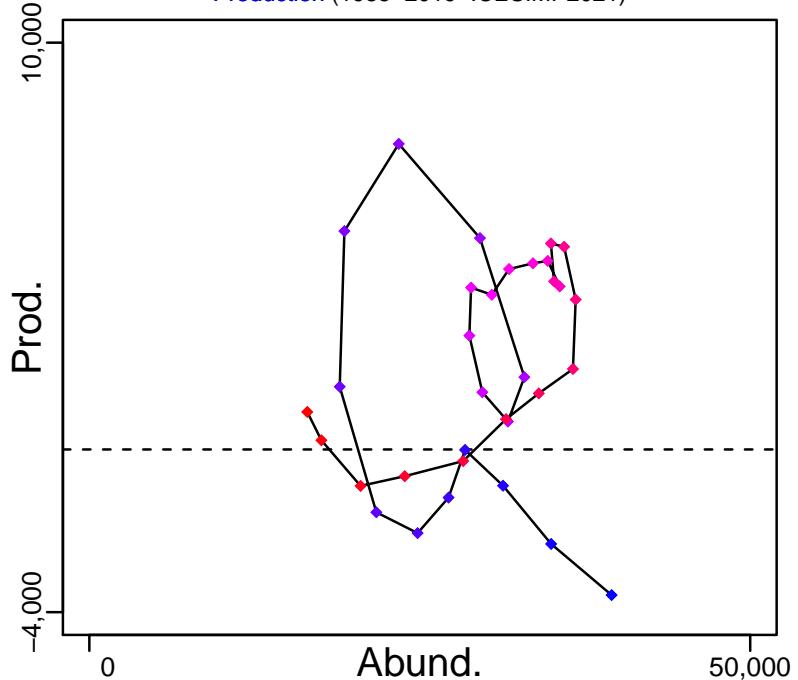
Kobe MGTpref (1985–2019–ICESIMP2021)



Spawner Recruit (1985–2019–ICESIMP2021)



Production (1985–2019–ICESIMP2021)

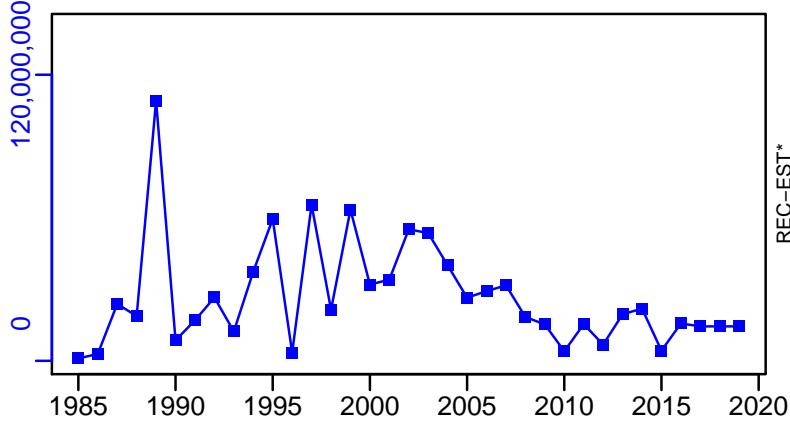
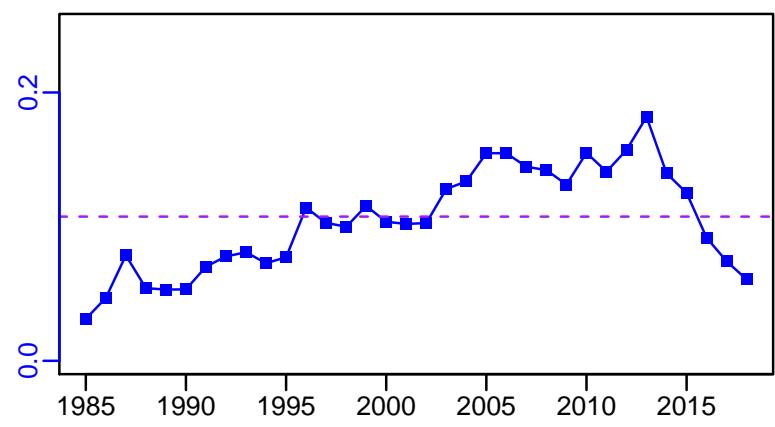
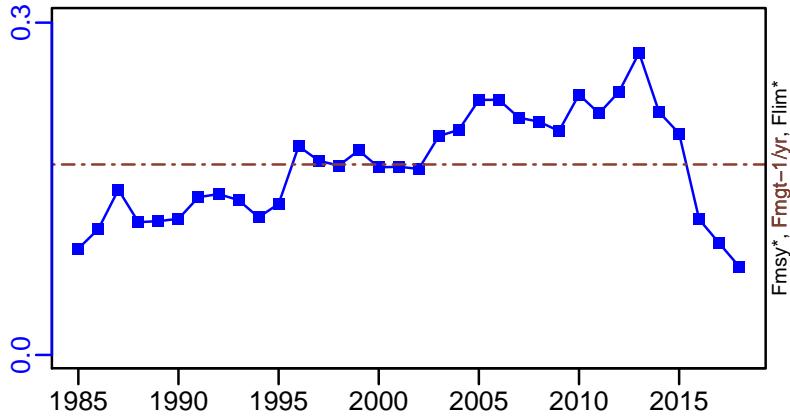
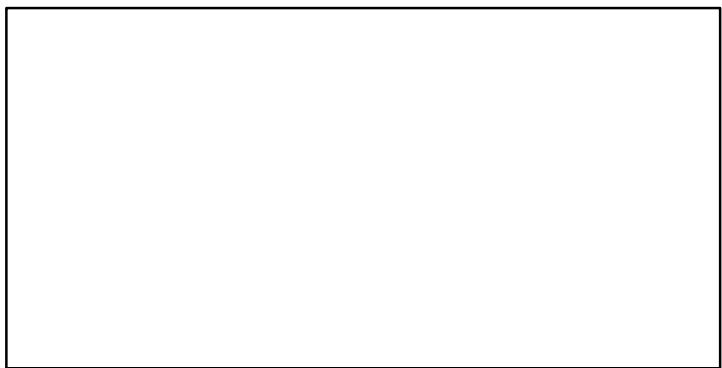
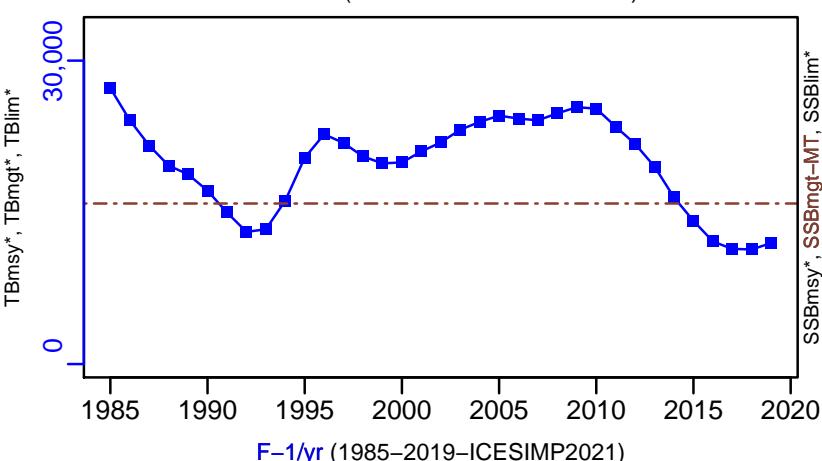
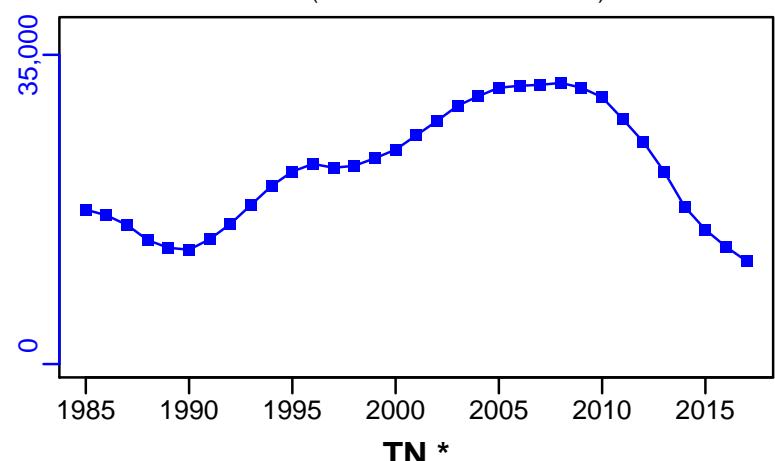


◆ Start Year ◆ End Year \* No Data

### European seabass ICES 4bc–7 [EBASSIVbc–VII]

TB-MT (1985–2017–ICESIMP2018)

SSB-MT (1985–2019–ICESIMP2021)

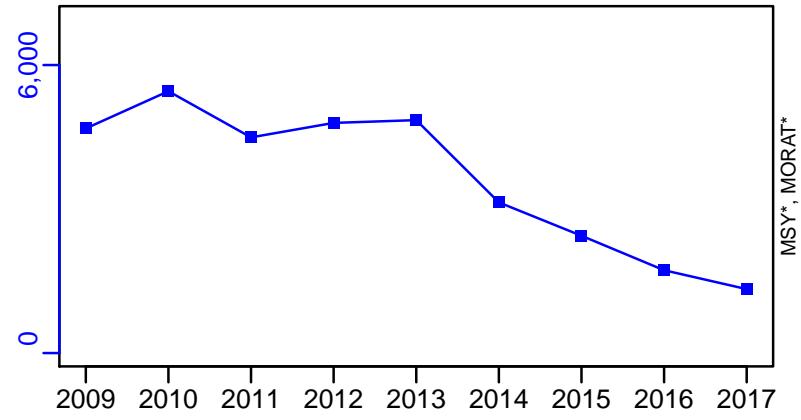


■ Listed time series	— Target BRP	— Rec-Est
- MSY-based BRP	- Lim BRP	* No Data

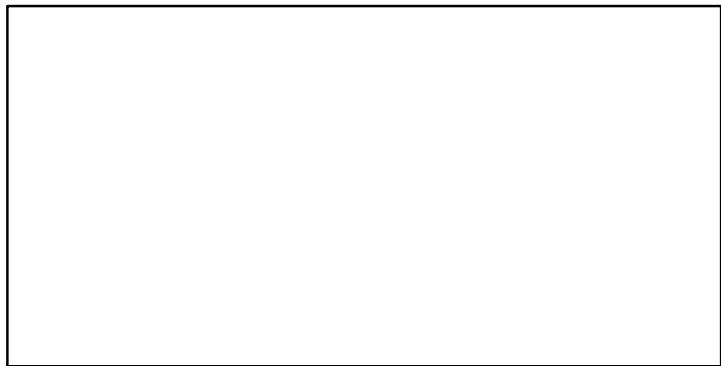
European seabass ICES 4bc–7 [EBASSIVbc–VII]

TC–MT, TL\*, RecC\* (1985–2018–ICESIMP2018)

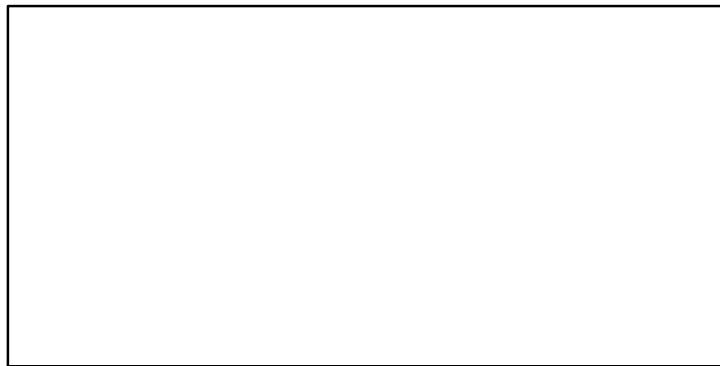
TAC\*, Cpair\*, Cadv\*



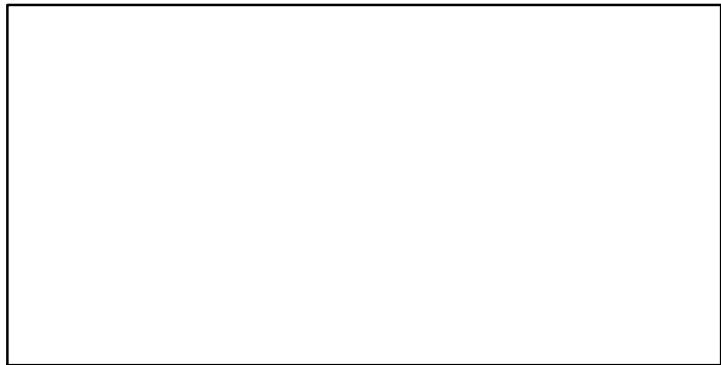
survB\*



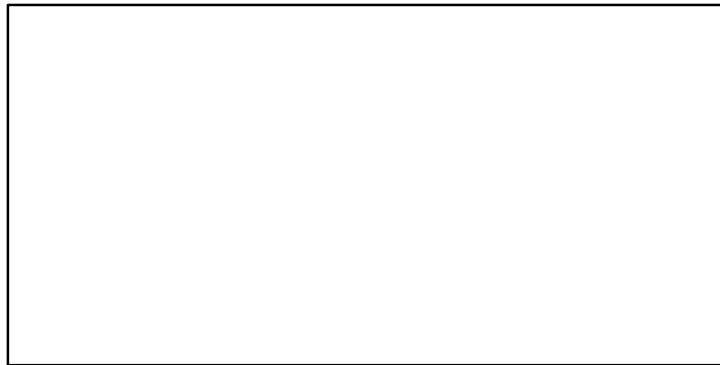
CPUE\*



EFFORT\*



CdivMSY\*



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

## European seabass ICES 6a-7b-j [EBASSVIa-VIIb-j]

<b>Metadata</b>	
<b>Scientific Name</b>	Dicentrarchus labrax
<b>Current Assess ID</b>	WGCSE-EBASSVIa-VIIb-j-2000-2016-ICESIMP2018
<b>Area</b>	ICES 6a-7b-j
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2015	2		
<b>TL</b>	TL-MT	2016	0.1		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***



**Recruits\***

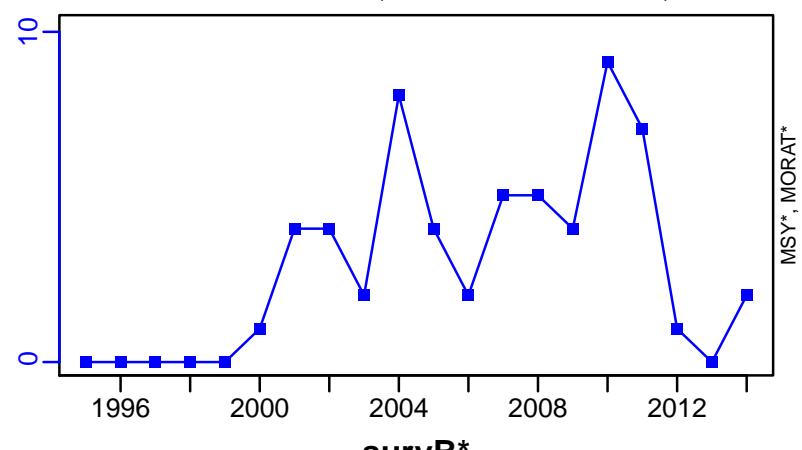


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

European seabass ICES 6a–7b–j [EBASSVla–VIIb–j]

TC–MT, TL\*, RecC\* (1995–2015–ICESIMP2016)

TAC\*, Cpair\*, Cadv\*



survB\*

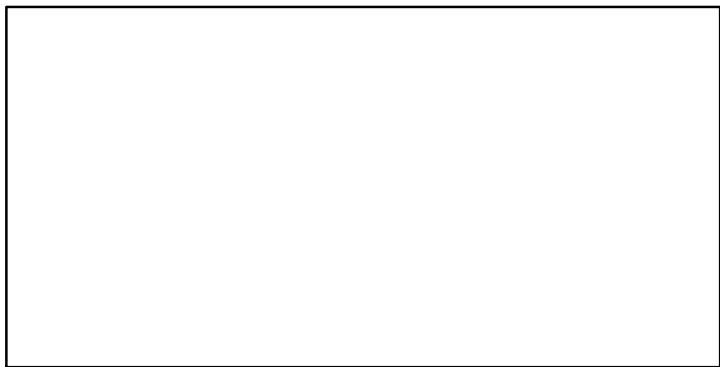
MSY\*, MORAT\*



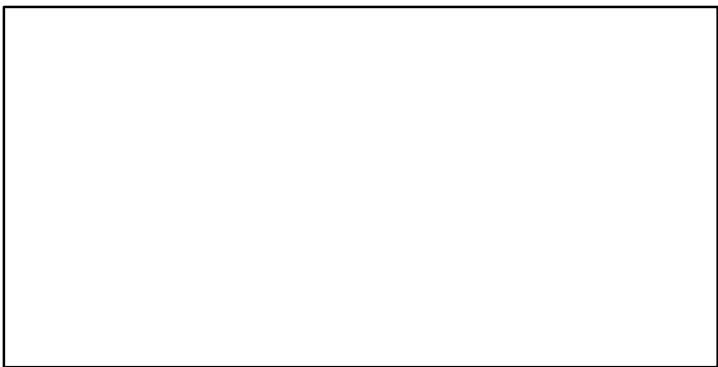
CPUE\*



EFFORT\*



CdivMSY\*



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

## European seabass ICES 8ab [EBASSVIIlab]

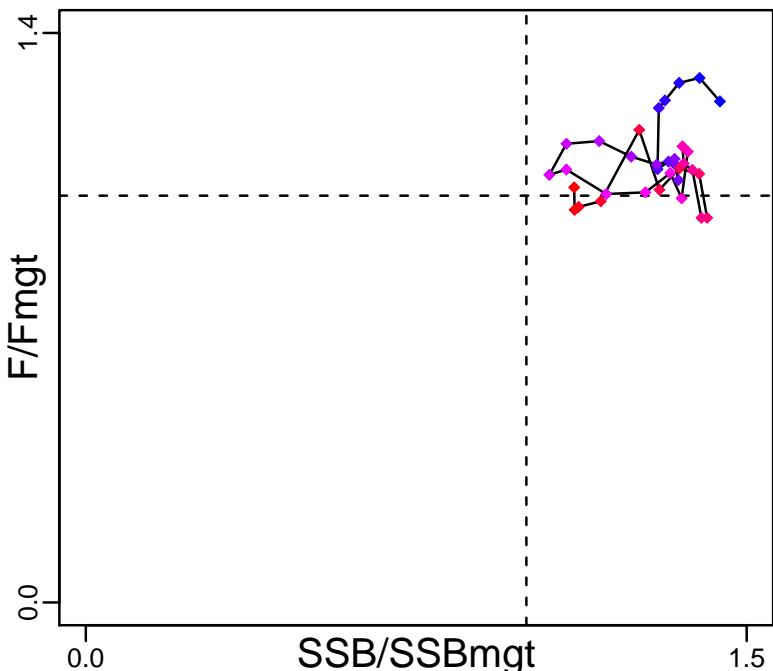
<b>Metadata</b>	
<b>Scientific Name</b>	Dicentrarchus labrax
<b>Current Assess ID</b>	WGBIE-EBASSVIIlab-1985-2019-ICESIMP2021
<b>Area</b>	ICES 8ab
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2019, 2014, 2016

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERrmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	16,688
<b>Fmgt</b>	Fmgt-1/yr	2019	0.123
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

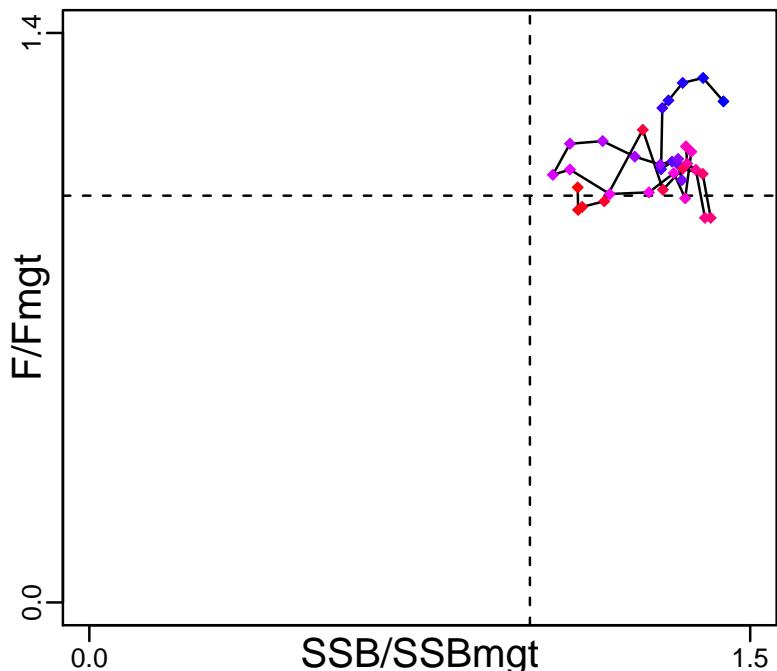
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	SSB-MT	2019	17,730	-	-	-
<b>TN</b>	-	-	-	-	-	-
<b>R</b>	R-E00	2019	18,827,000	-	0	
<b>F</b>	F-1/yr	2019	0.126	-	4 to 15	
<b>ER</b>	ER-calc-ratio	2019	0.109	-	-	
<b>TC</b>	TC-MT	2019	2422			
<b>TL</b>	TL-MT	2019	2316			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERrmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.062			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.02			
<b>ER/ERmgt</b>	-	-	-			

European seabass ICES 8ab [EBASSVIIlab]

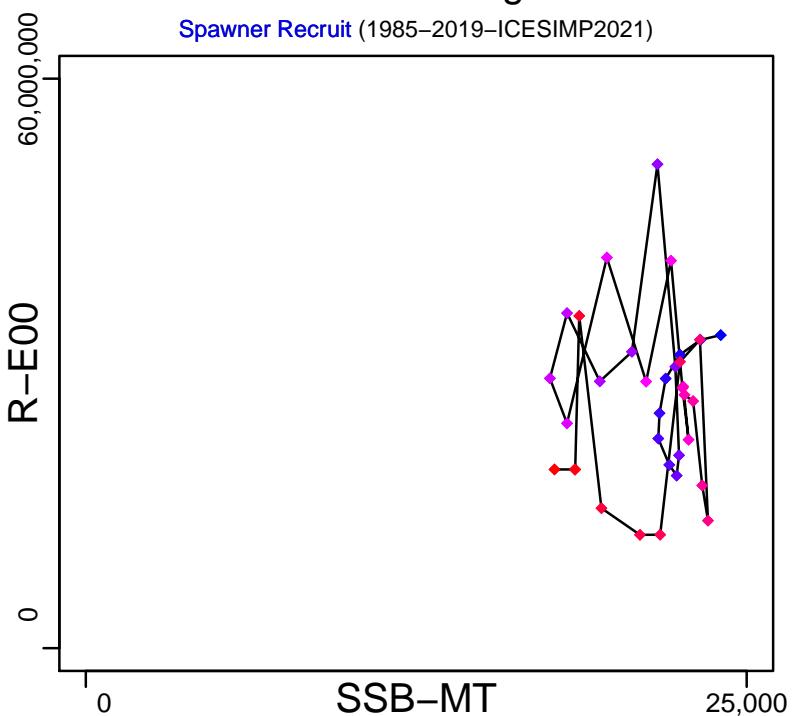
Kobe MSYpref (1985–2019–ICESIMP2021)



Kobe MGTpref (1985–2019–ICESIMP2021)



Spawner Recruit (1985–2019–ICESIMP2021)



Production\*



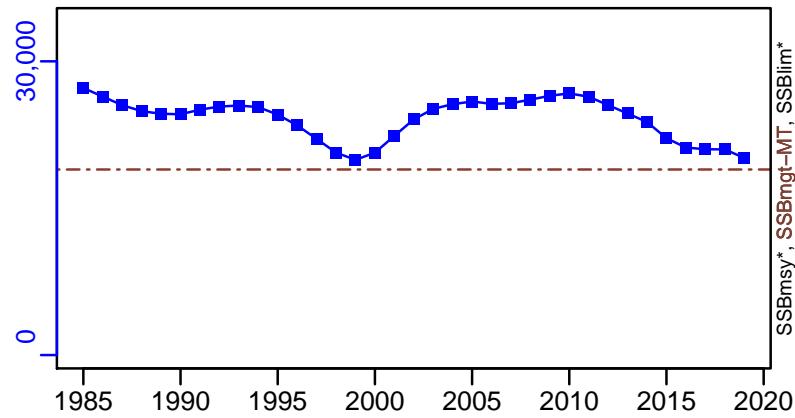
◆ Start Year ♦ End Year \* No Data

European seabass ICES 8ab [EBASSVIIlab]

**TB\***



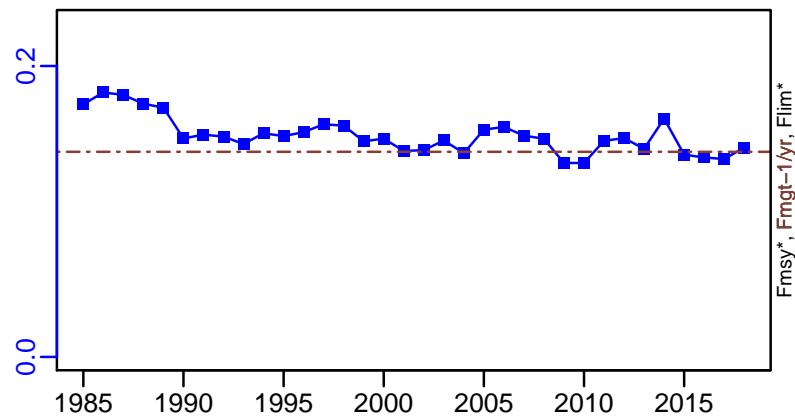
**SSB-MT (1985–2019–ICESIMP2021)**



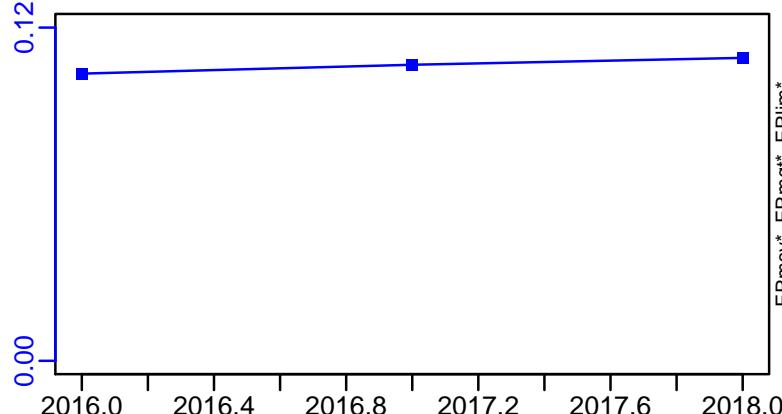
**TN \***



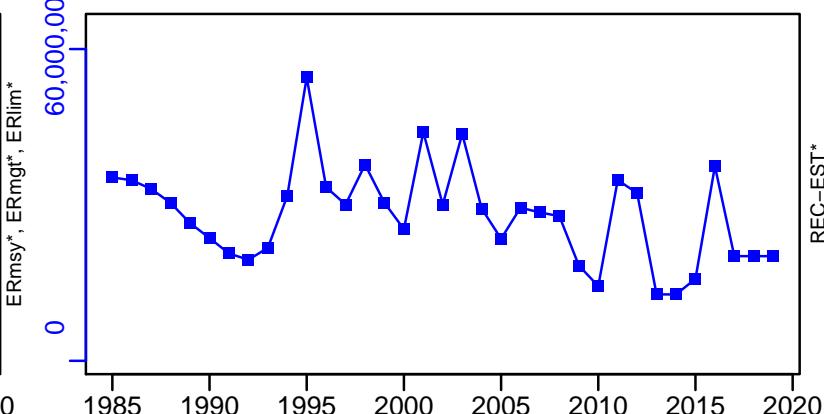
**F-1/yr (1985–2019–ICESIMP2021)**



**ER-calc-ratio (1985–2019–ICESIMP2021)**



**R-E00 (1985–2019–ICESIMP2021)**

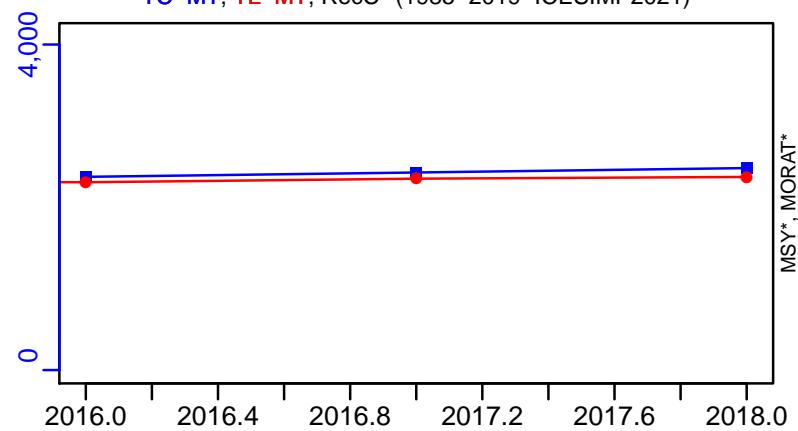


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	--- Lim BRP	* No Data

European seabass ICES 8ab [EBASSVIIlab]

TC-MT, TL-MT, RecC\* (1985–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



survB\*

MSY\*, MORAT\*

CPUE\*

EFFORT\*

CdivMSY\*

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

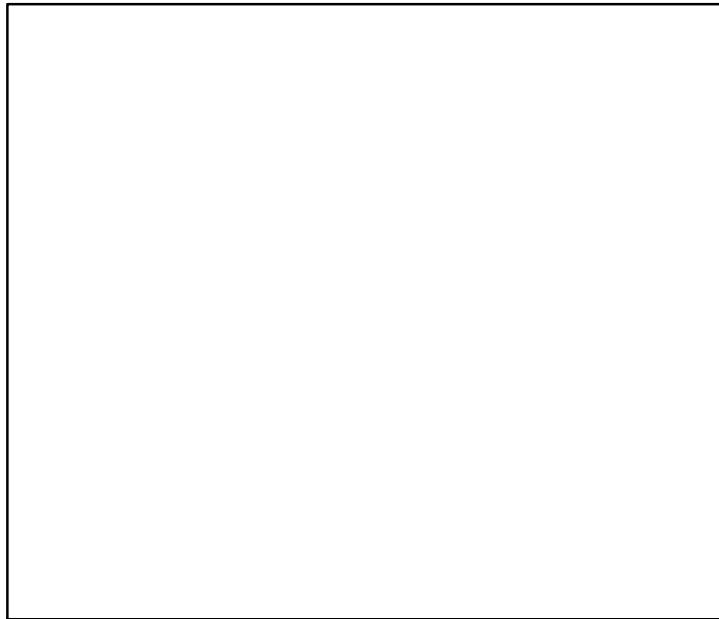
## European seabass ICES 8c-9a [EBASSVIIIC-IXa]

<b>Metadata</b>	
<b>Scientific Name</b>	Dicentrarchus labrax
<b>Current Assess ID</b>	WGBIE-EBASSVIIIC-IXa-1978-2018-ICESIMP2021
<b>Area</b>	ICES 8c-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2015, 2016, 2018

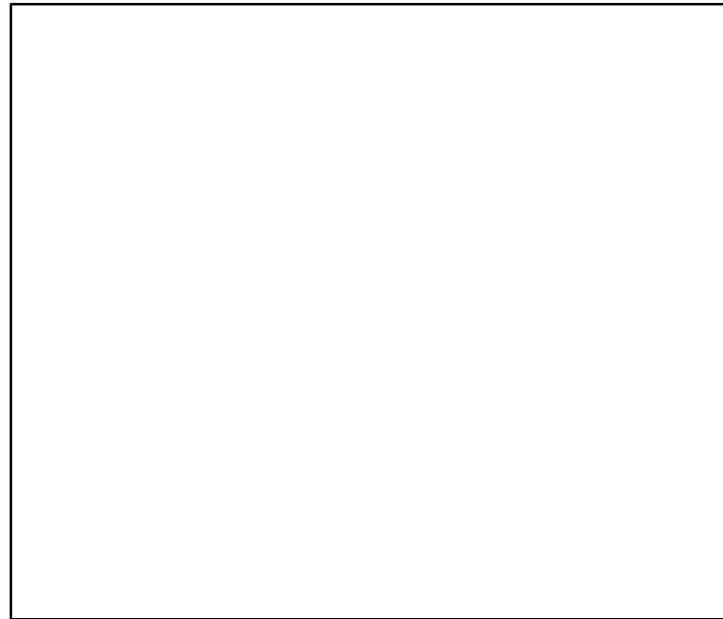
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2015	917		
<b>TL</b>	TL-MT	2018	832		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

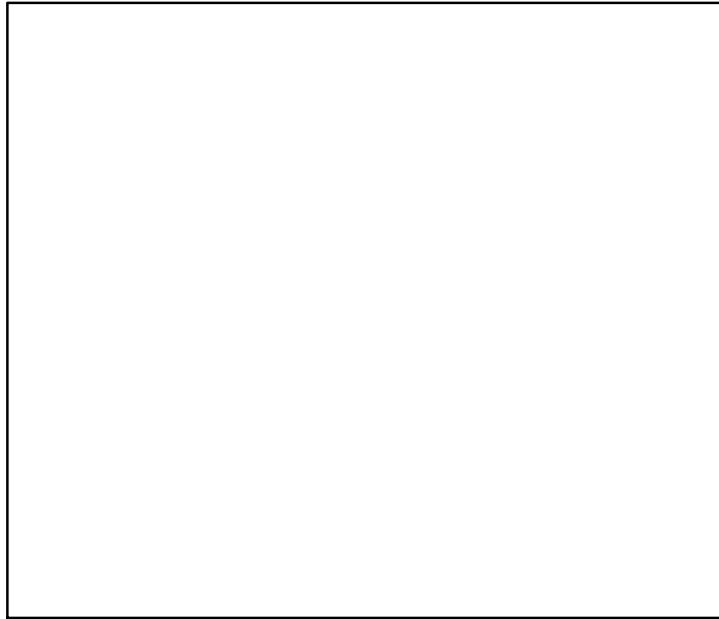
**Kobe MSY\***



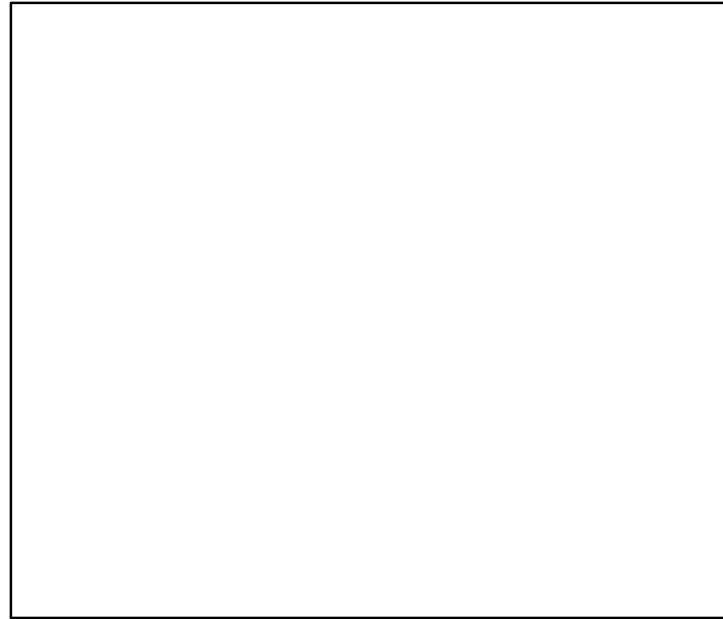
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

**TB\***



**SSB\***



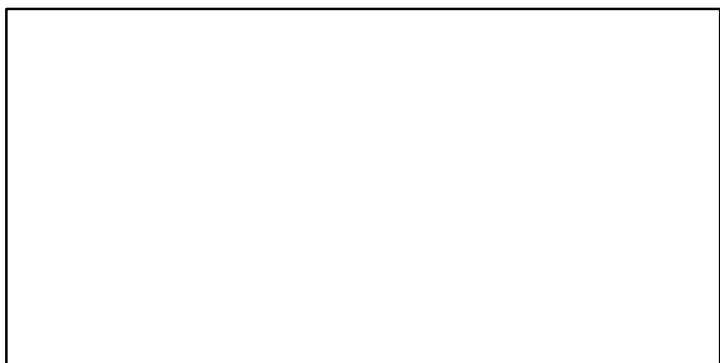
**TN \***



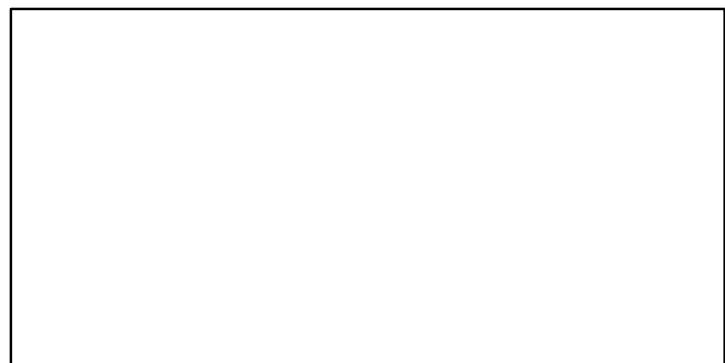
**F\***



**ER\***



**Recruits\***

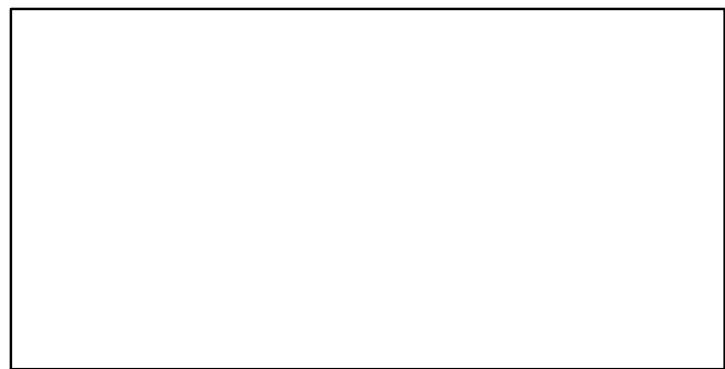
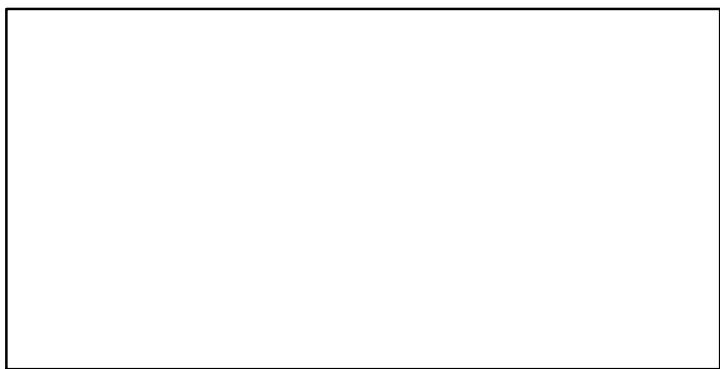
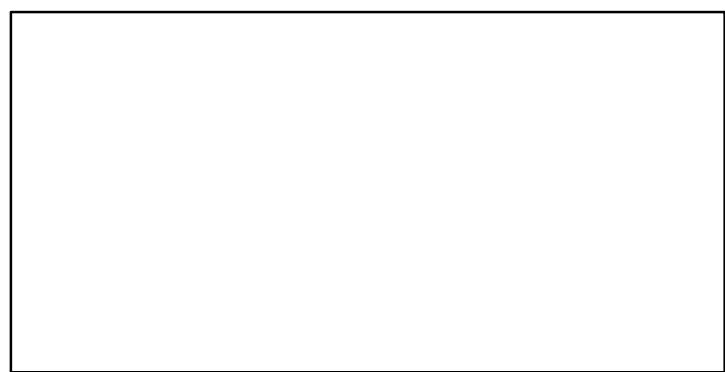
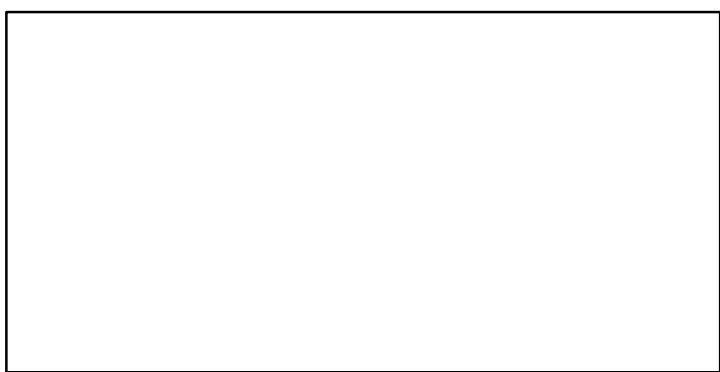
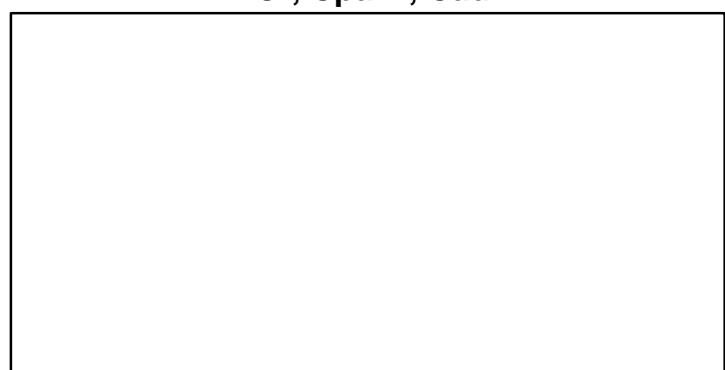
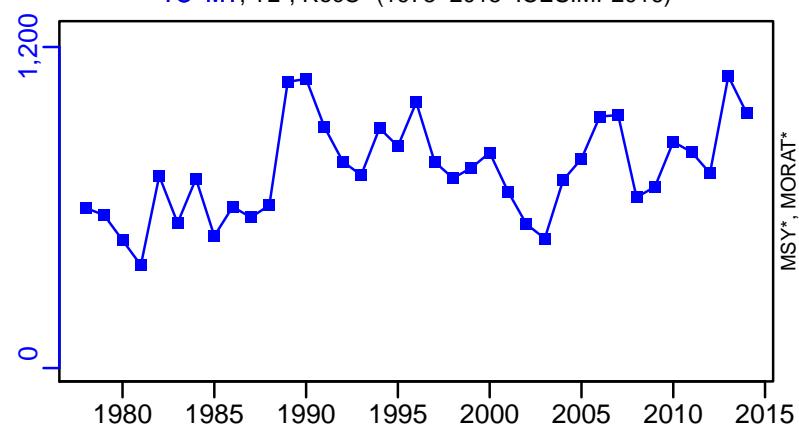


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

European seabass ICES 8c–9a [EBASSVIIIC–IXa]

TC–MT, TL\*, RecC\* (1978–2015–ICESIMP2016)

TAC\*, Cpair\*, Cadv\*



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

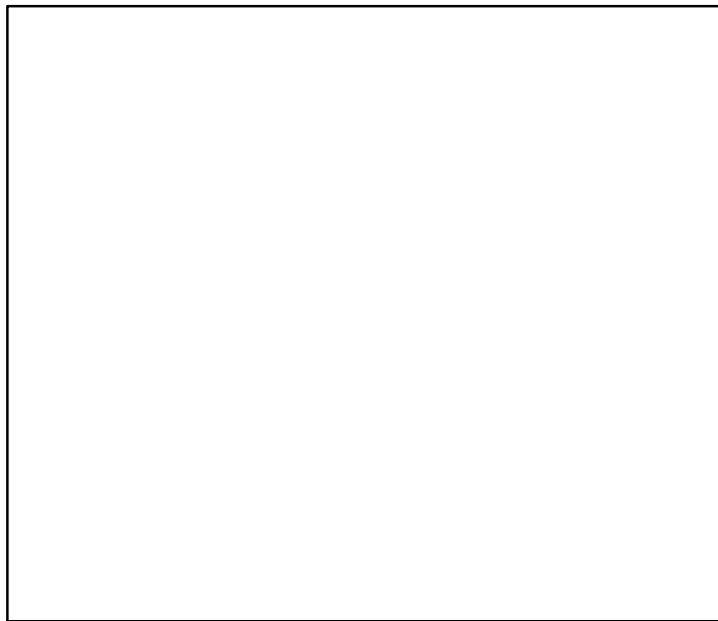
## European flounder Subdivisions 22-23 [EFLOUN2223]

Metadata	
<b>Scientific Name</b>	Platichthys flesus
<b>Current Assess ID</b>	WGBFAS-EFLOUN2223-1973-2018-ICESIMP2021
<b>Area</b>	Subdivisions 22-23
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2014, 2016, 2016, 2018

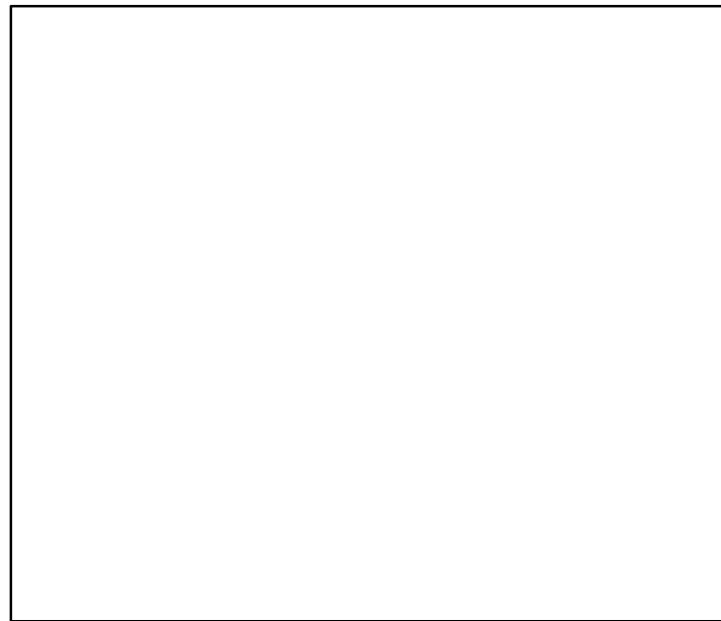
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	385	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	982		
<b>TL</b>	TL-MT	2018	809		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

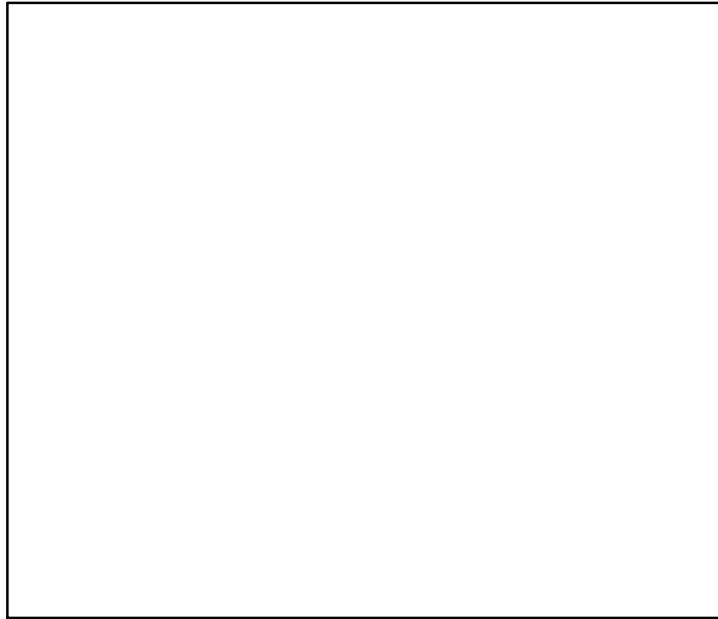
**Kobe MSY\***



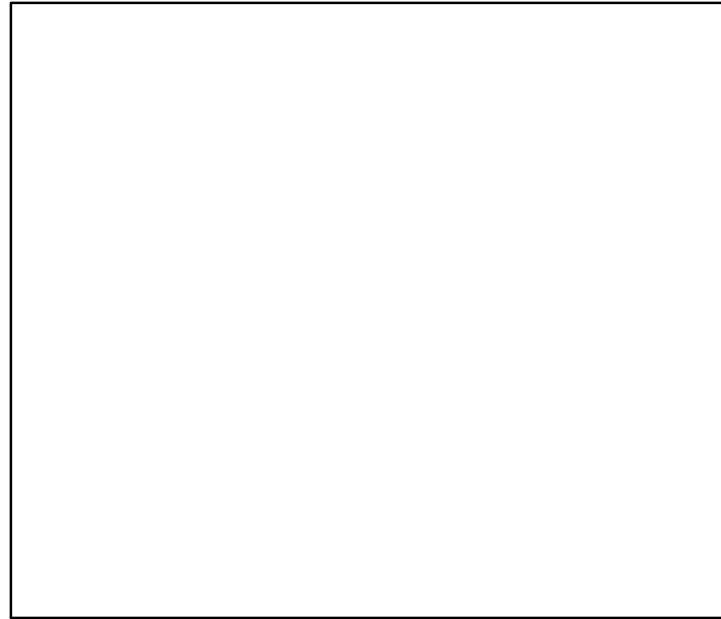
**Kobe MGT\***



**Spawner Recruit\***



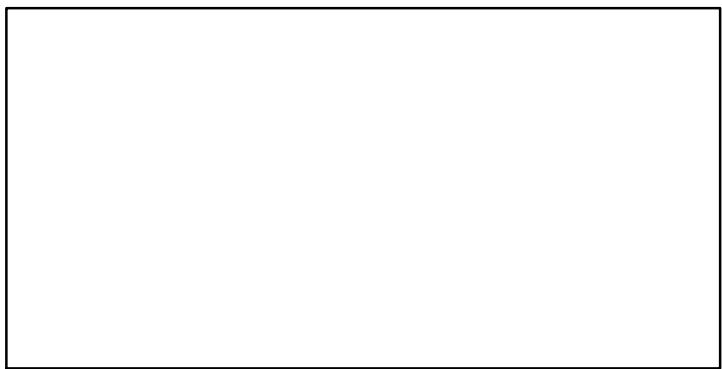
**Production\***



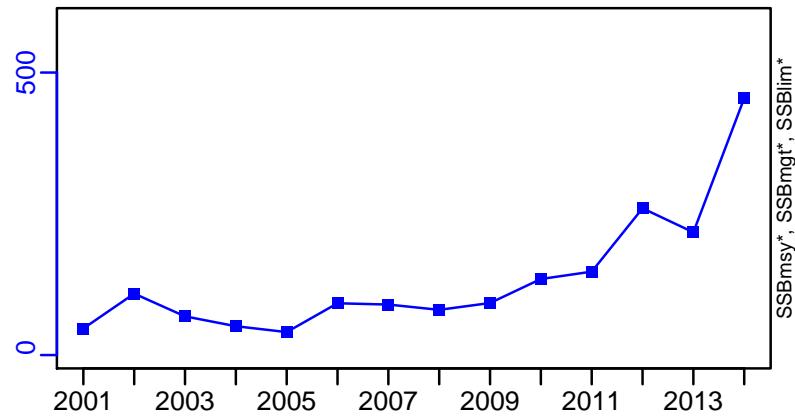
◆ Start Year ♦ End Year \* No Data

European flounder Subdivisions 22–23 [EFLOUN2223]

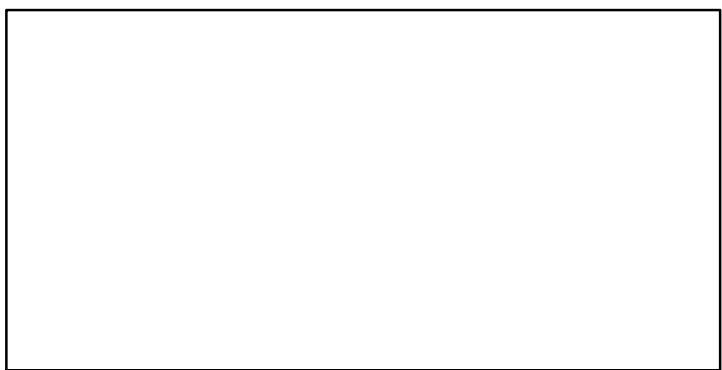
**TB\***



SSB-index (1973–2014–ICESIMP2018)



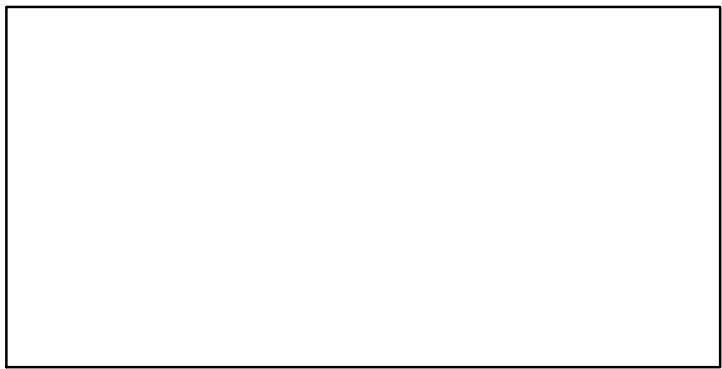
**TN \***



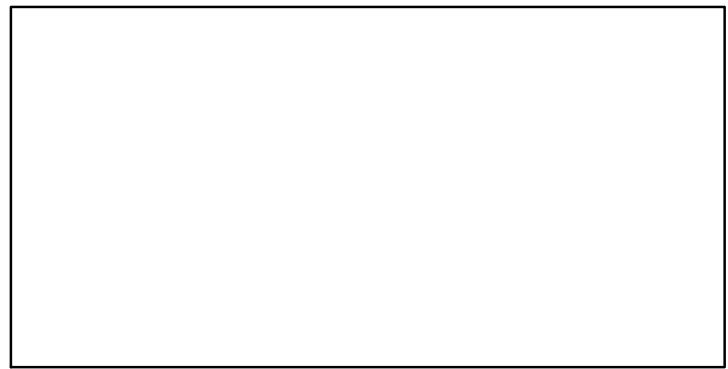
**F\***



**ER\***



**Recruits\***

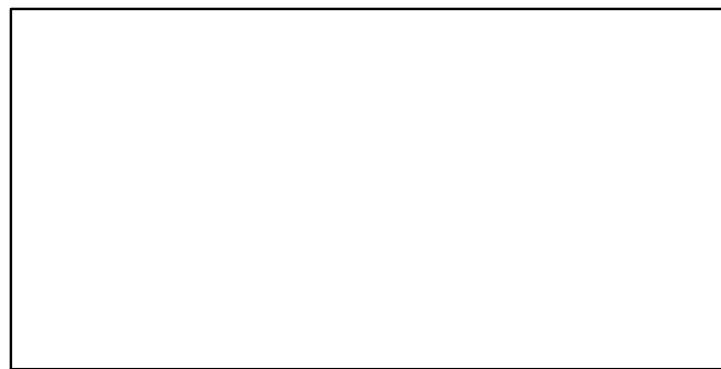
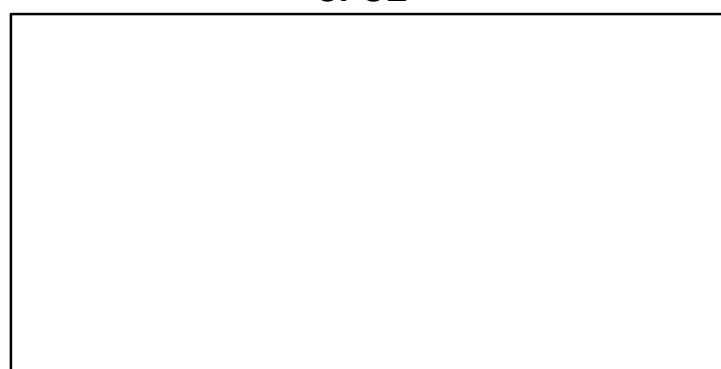
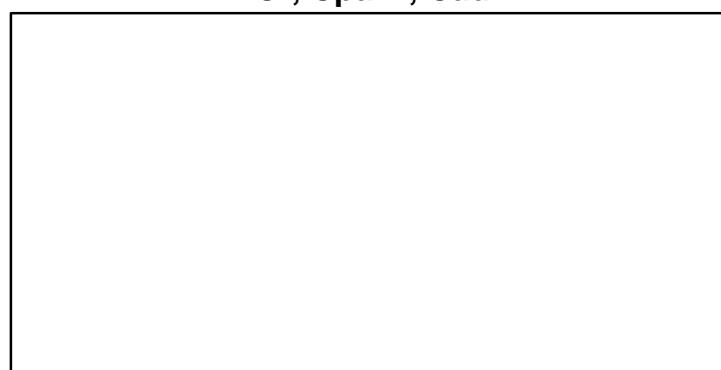
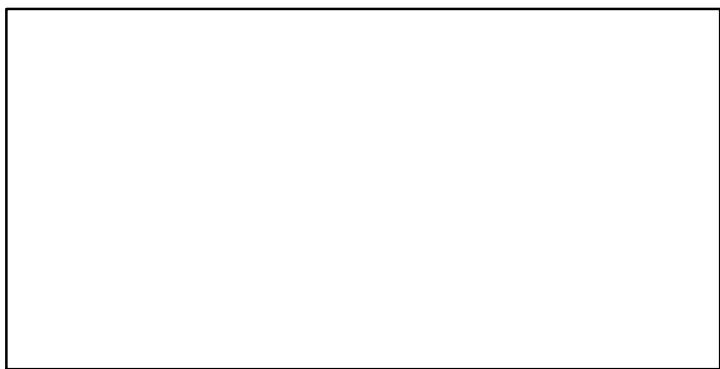
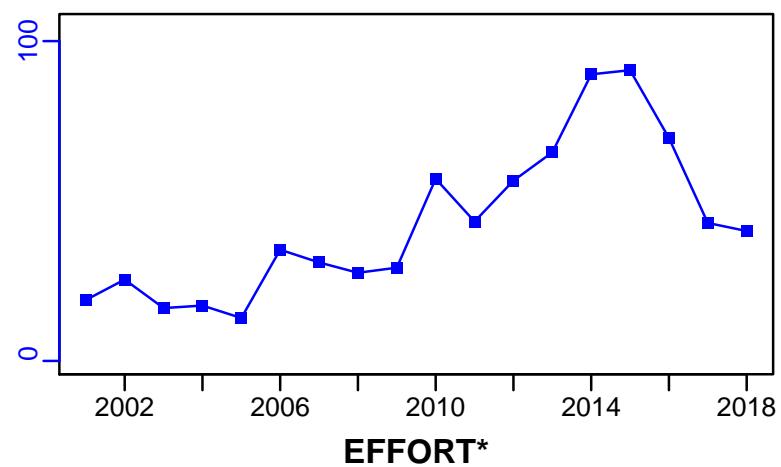
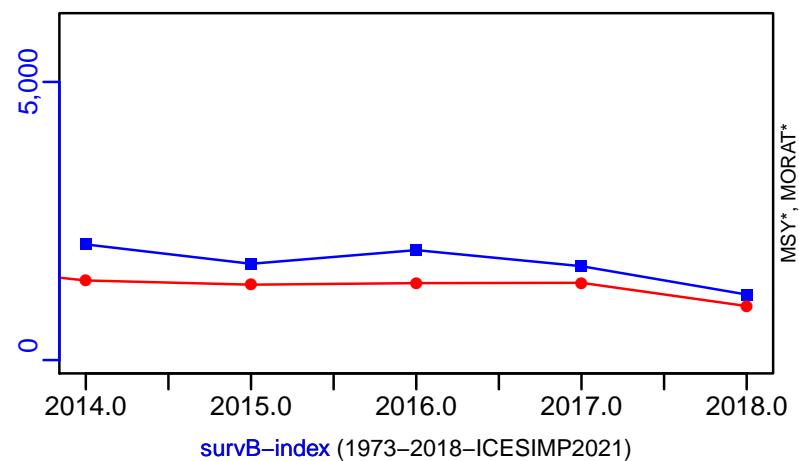


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

European flounder Subdivisions 22–23 [EFLOUN2223]

TC-MT, TL-MT, RecC\* (1973–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

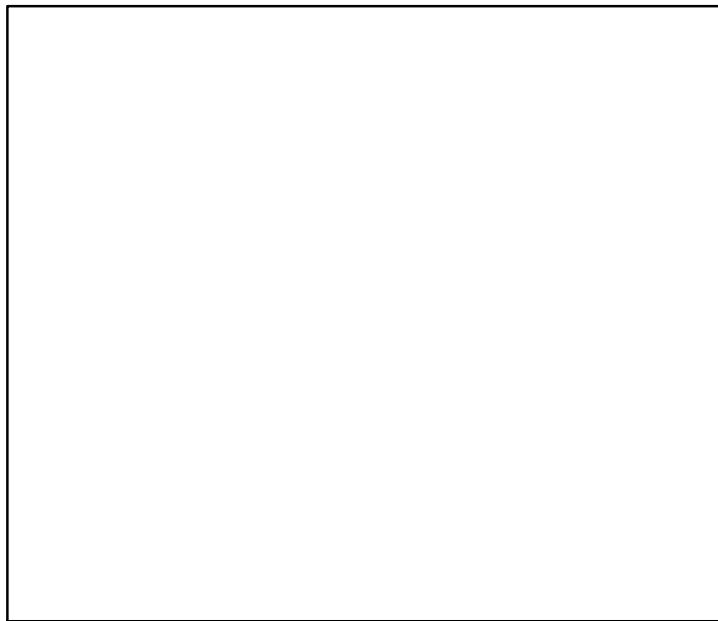
## European flounder Subdivisions 24-25 [EFLOUN2425]

Metadata	
<b>Scientific Name</b>	Platichthys flesus
<b>Current Assess ID</b>	WGBFAS-EFLOUN2425-1973-2016-ICESIMP2018
<b>Area</b>	Subdivisions 24-25
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2016, 2016

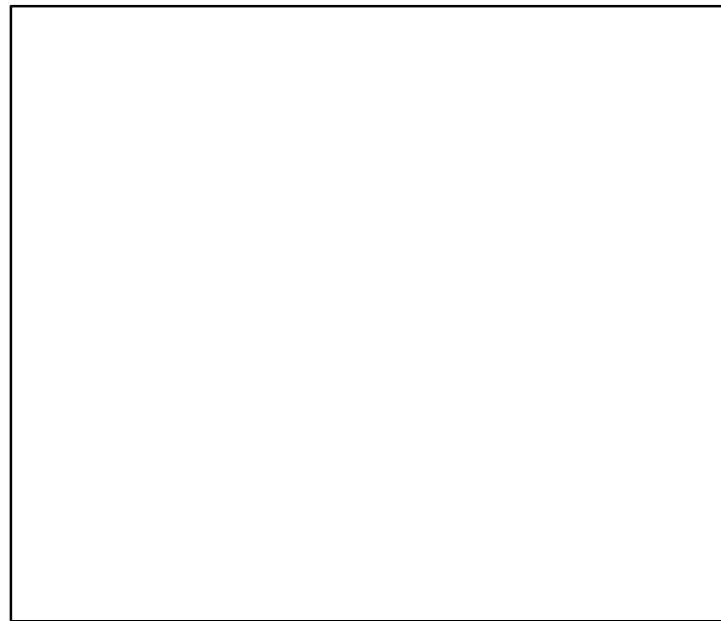
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERrmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2016	19,800		
<b>TL</b>	TL-MT	2016	11,100		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERrmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

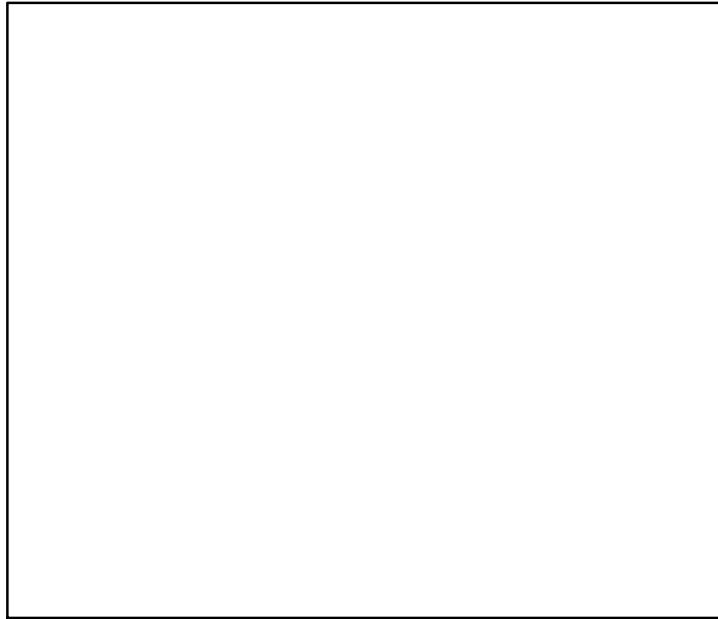
**Kobe MSY\***



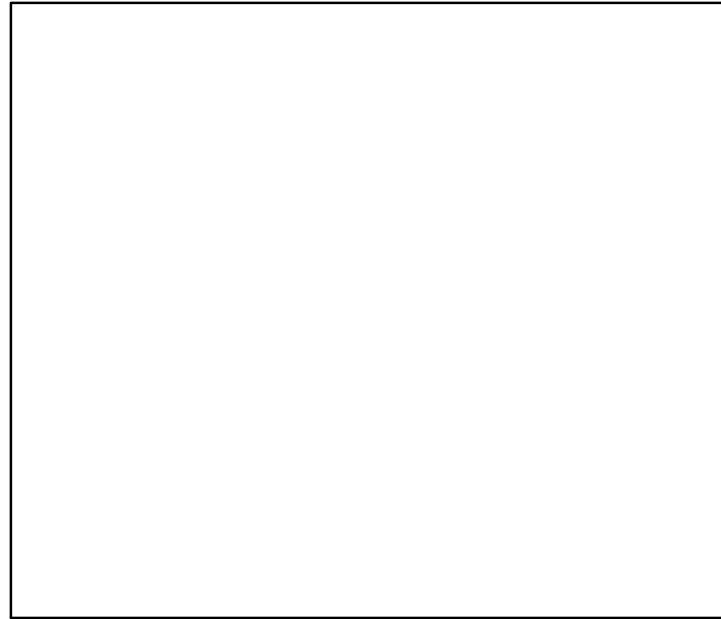
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

European flounder Subdivisions 24–25 [EFLOUN2425]

**TB\***



**SSB\***



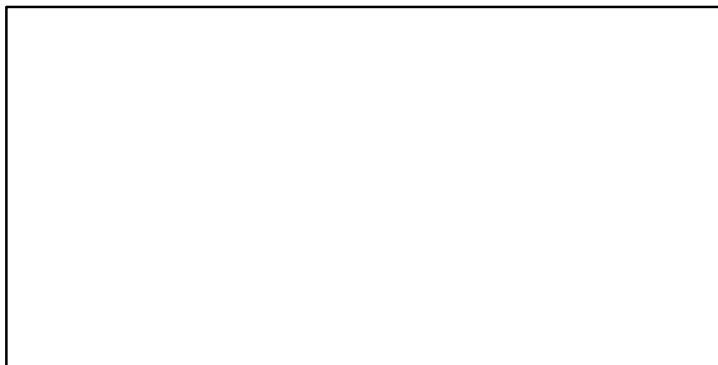
**TN \***



**F\***



**ER\***



**Recruits\***

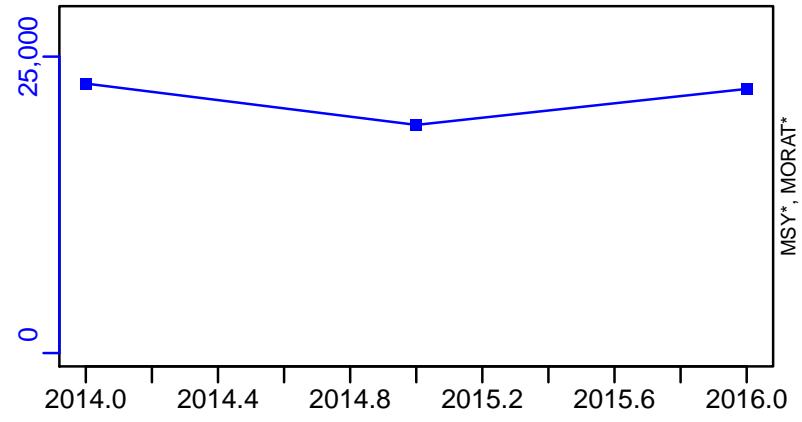


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

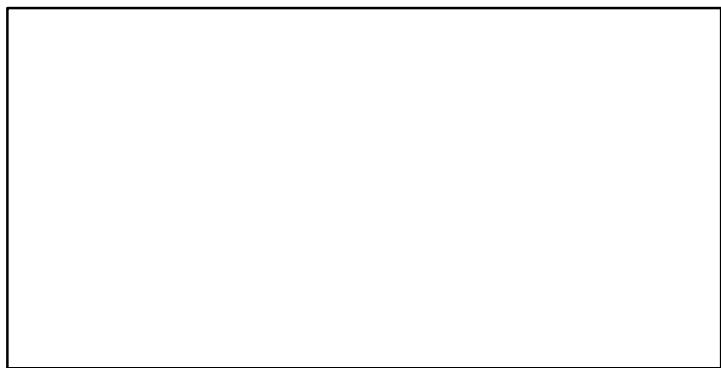
European flounder Subdivisions 24–25 [EFLOUN2425]

TC-MT, TL\*, RecC\* (1973–2016—ICESIMP2018)

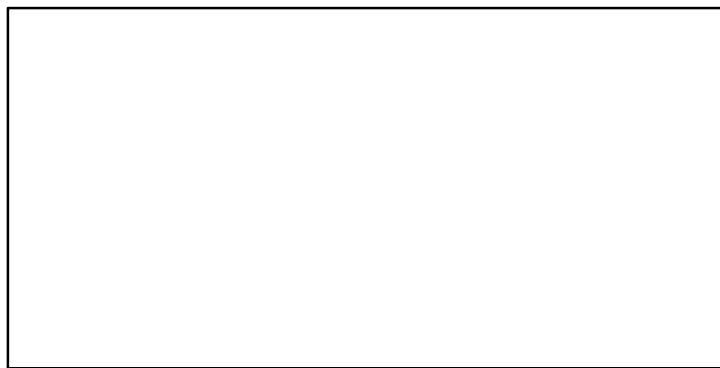
TAC\*, Cpair\*, Cadv\*



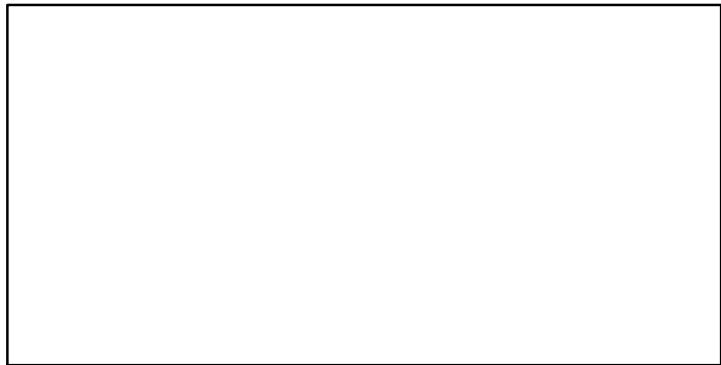
survB\*



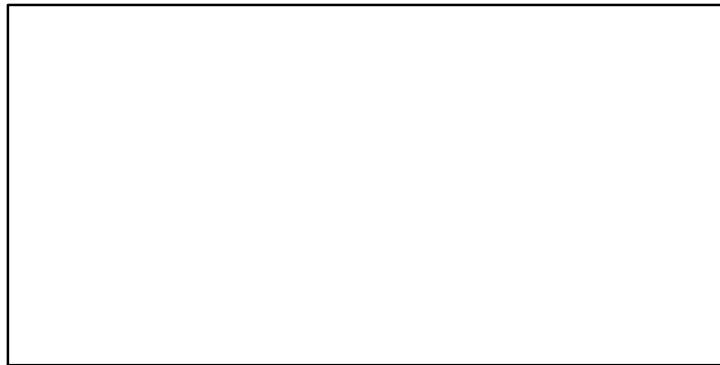
CPUE\*



EFFORT\*



CdivMSY\*



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

## European flounder Subdivisions 26-28 [EFLOUN26-28]

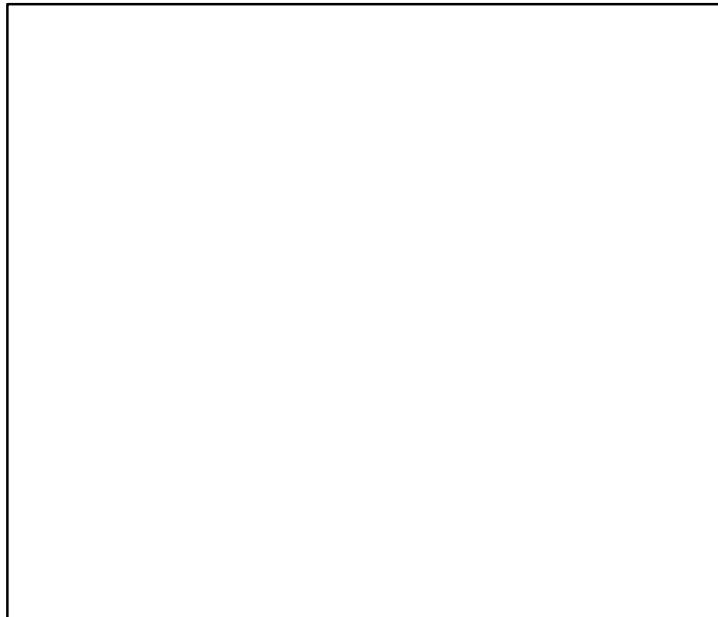
Metadata	
Scientific Name	Platichthys flesus
Current Assess ID	WGBFAS-EFLOUN26-28-1996-2016-ICESIMP2018
Area	Subdivisions 26-28
Management Authority	International Council for the Exploration of the Sea
Assessor	Baltic Fisheries Assessment Working Group
Asmts in RAM	2016, 2016

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

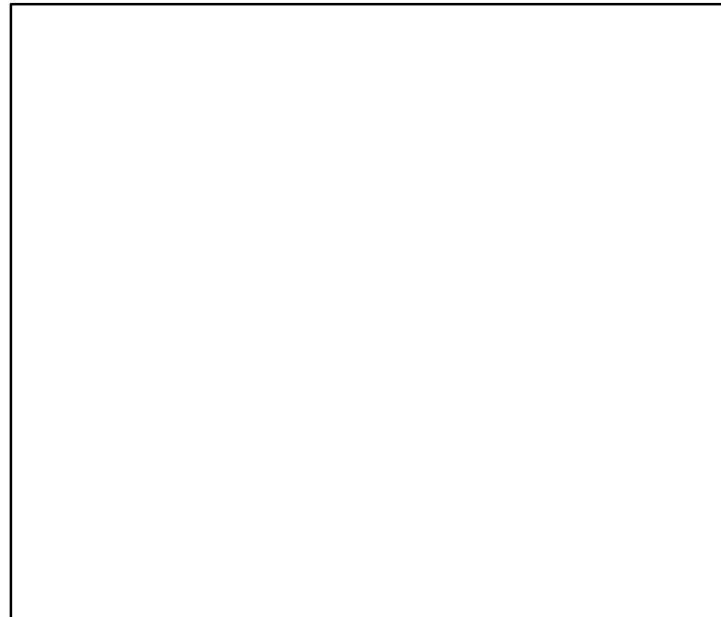
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2016	4440		
<b>TL</b>	TL-MT	2016	4440		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

European flounder Subdivisions 26–28 [EFLOUN26–28]

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

European flounder Subdivisions 26–28 [EFLOUN26–28]

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***



**Recruits\***

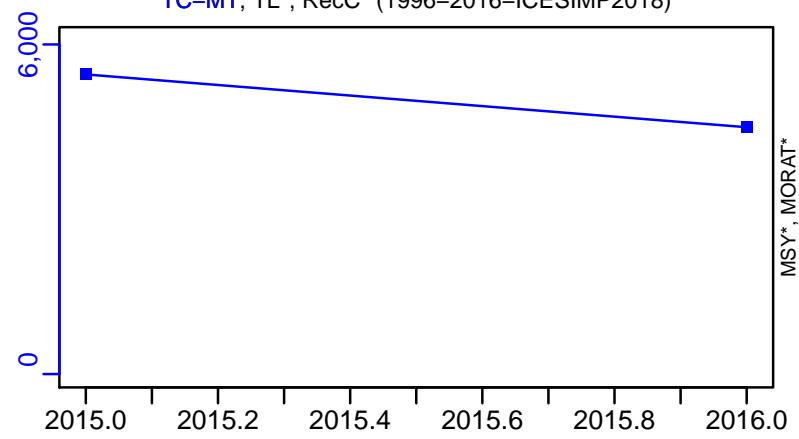


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

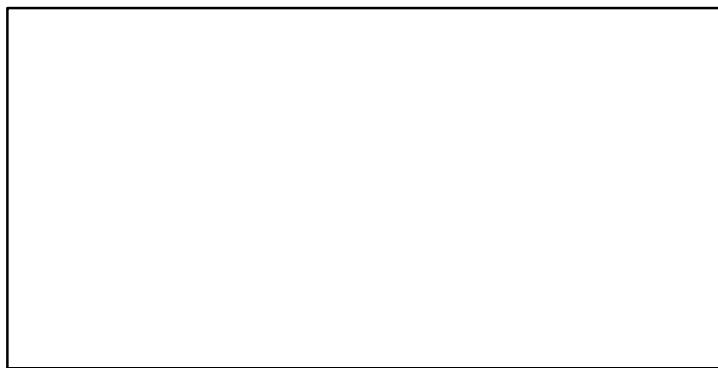
European flounder Subdivisions 26–28 [EFLOUN26–28]

TC-MT, TL\*, RecC\* (1996–2016–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



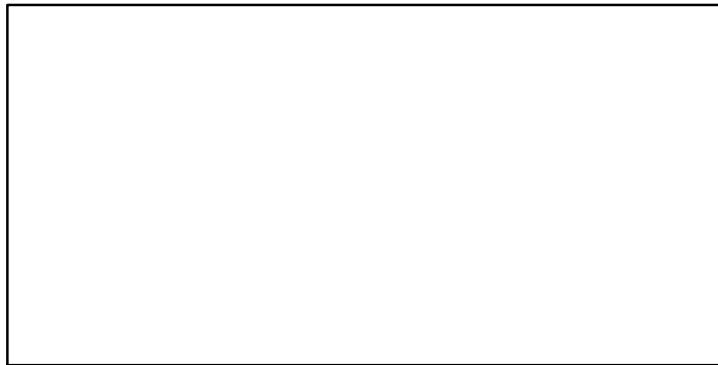
survB\*



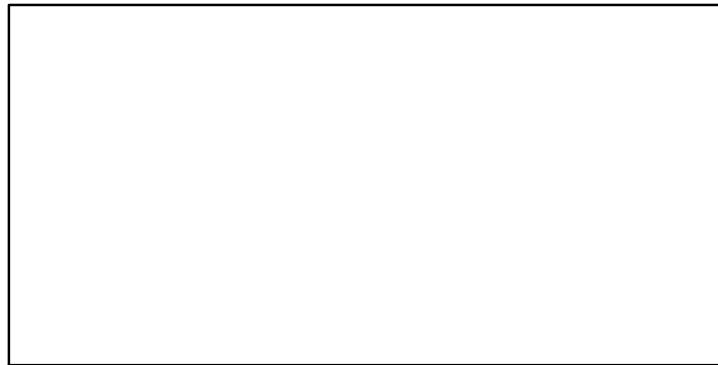
CPUE\*



EFFORT\*



CdivMSY\*



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

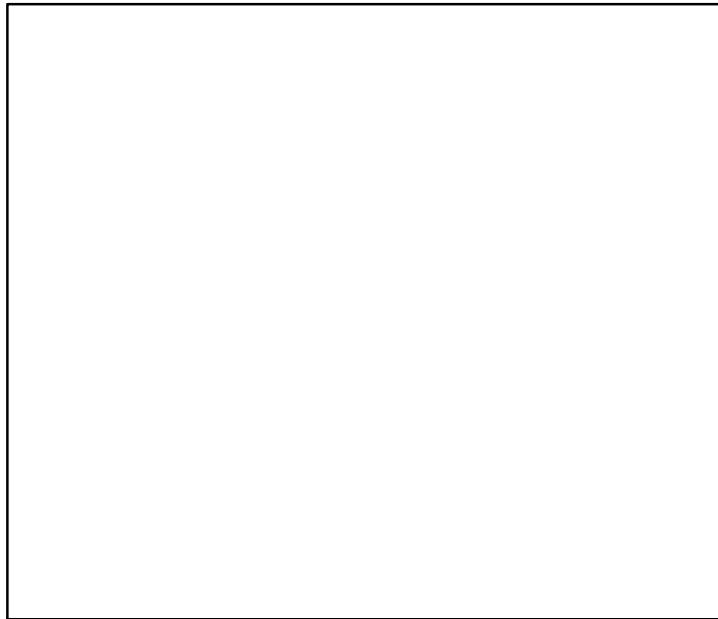
## European flounder Subdivisions 27 and 29-32 [EFLOUN27-2932]

Metadata	
Scientific Name	Platichthys flesus
Current Assess ID	WGBFAS-EFLOUN27-2932-1980-2016-ICESIMP2018
Area	Subdivisions 27 and 29-32
Management Authority	International Council for the Exploration of the Sea
Assessor	Baltic Fisheries Assessment Working Group
Asmts in RAM	2016, 2016

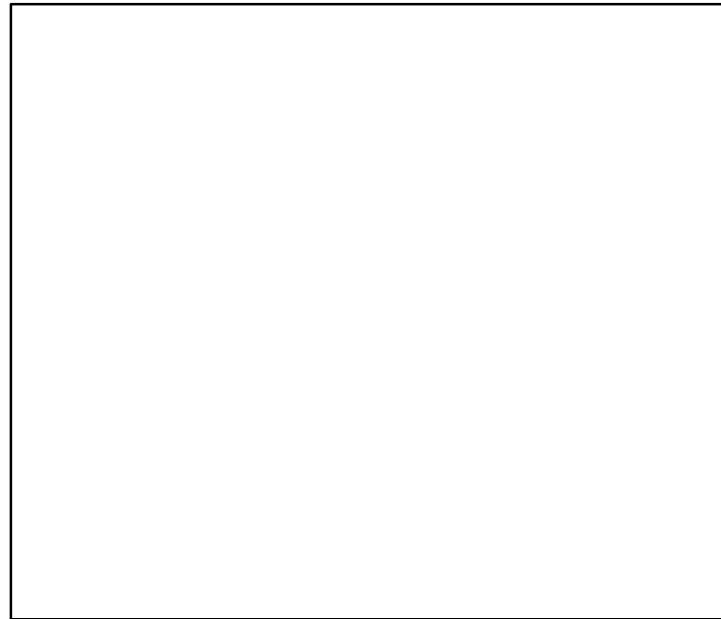
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	176		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

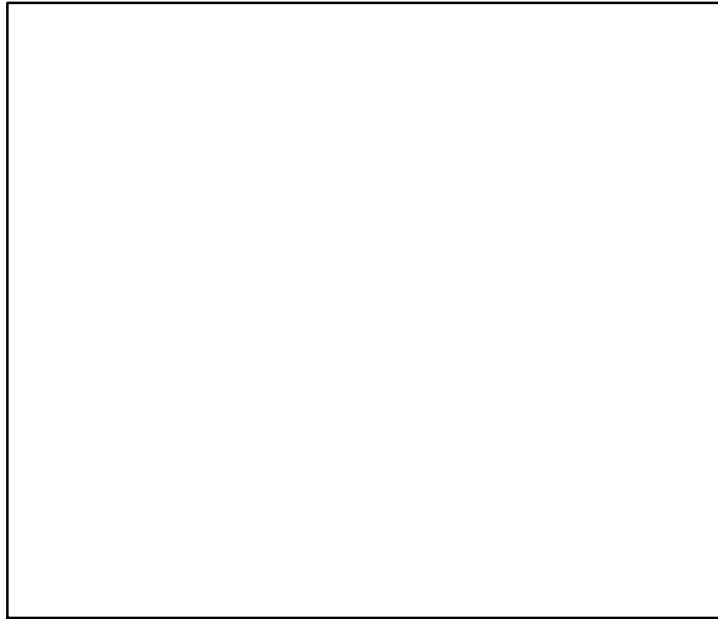
**Kobe MSY\***



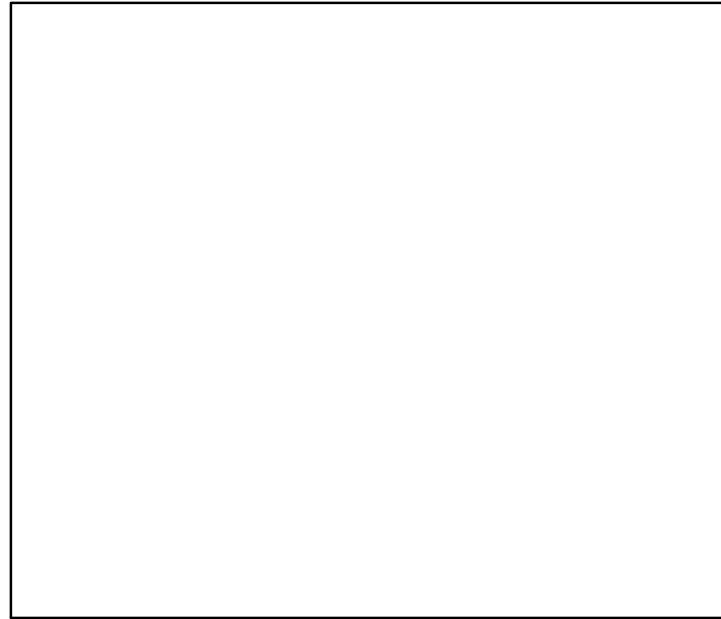
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

European flounder Subdivisions 27 and 29–32 [EFLOUN27–2932]

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***



**Recruits\***

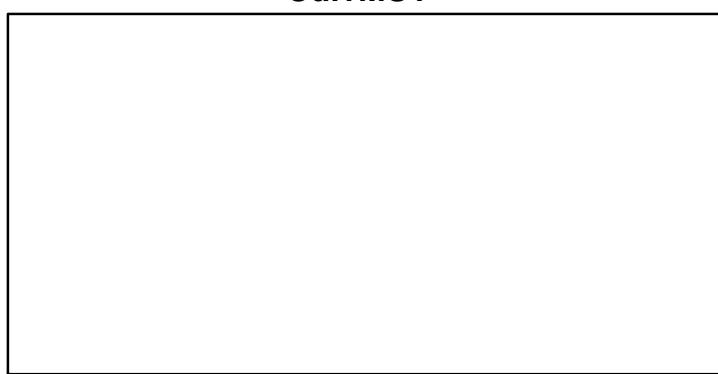
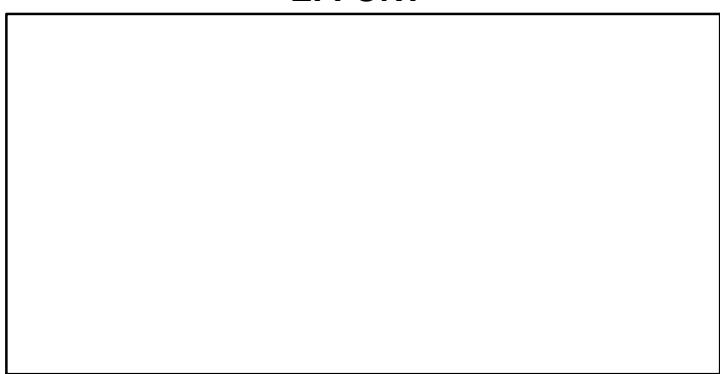
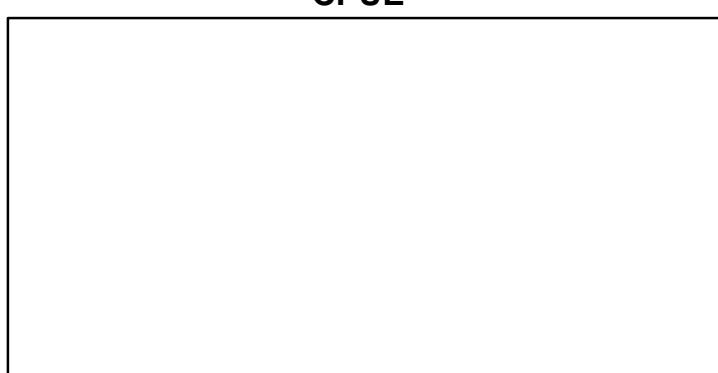
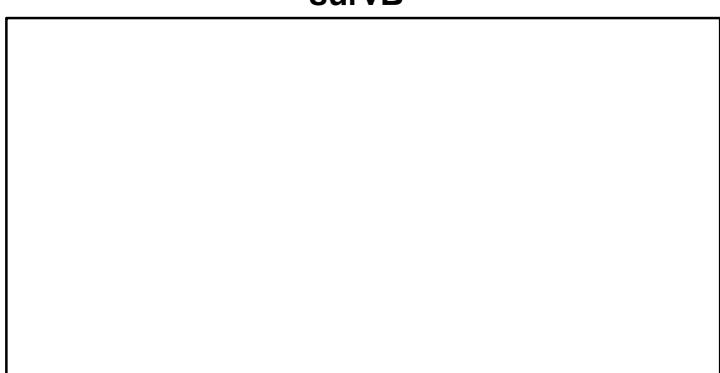
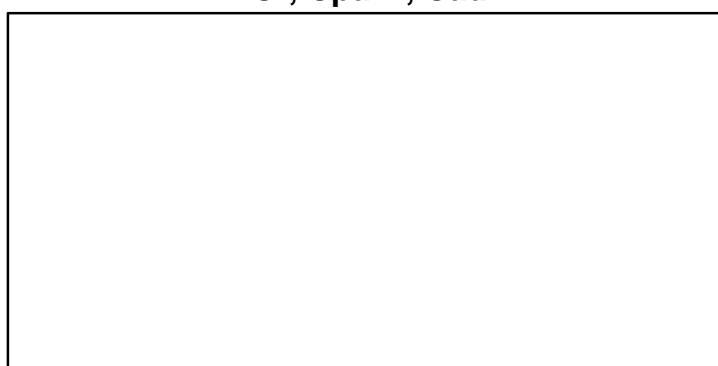
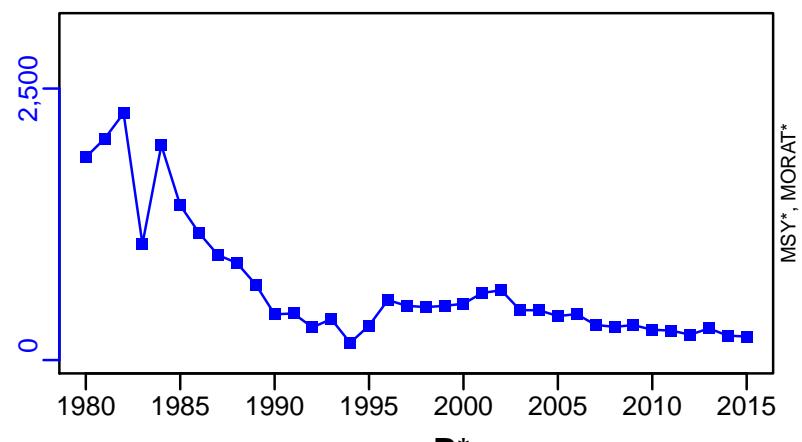


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - Lim BRP      | * No Data |

European flounder Subdivisions 27 and 29–32 [EFLOUN27–2932]

TL-MT, TC\*, RecC\* (1980–2016—ICESIMP2016)

TAC\*, Cpair\*, Cadv\*



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

## European flounder ICES 3a-4 [EFLOUNIIla-IV]

<b>Metadata</b>	
<b>Scientific Name</b>	Platichthys flesus
<b>Current Assess ID</b>	WGNSSK-EFLOUNIIla-IV-1950-2019-ICESIMP2021
<b>Area</b>	ICES 3a-4
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2015, 2019, 2016

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

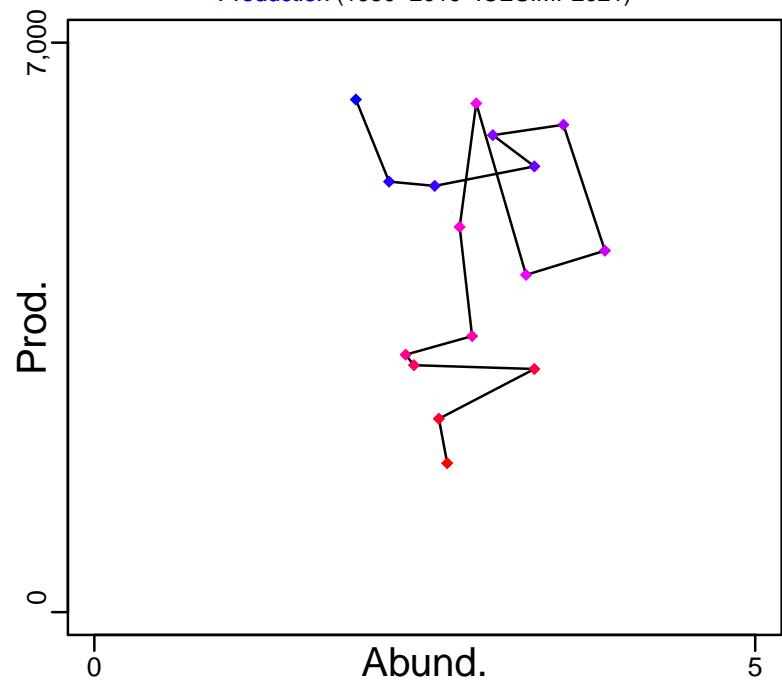
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	SSB-MT	2019	0.65	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-calc-ratio	2019	1191	-	-	
<b>TC</b>	TC-MT	2019	2245			
<b>TL</b>	TL-MT	2019	1587			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Kobe MSY\*

Kobe MGT\*

Spawner Recruit\*

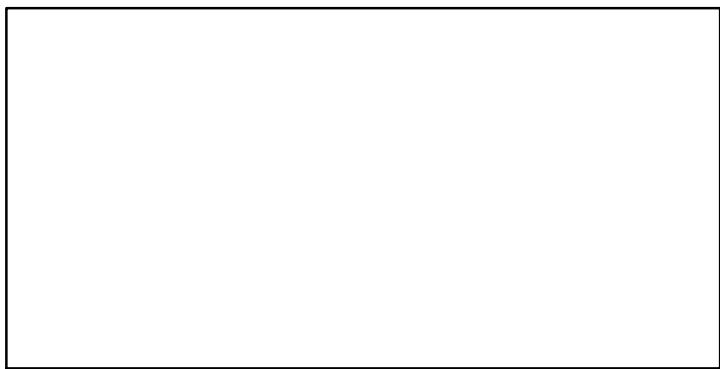
Production (1950–2019–ICESIMP2021)



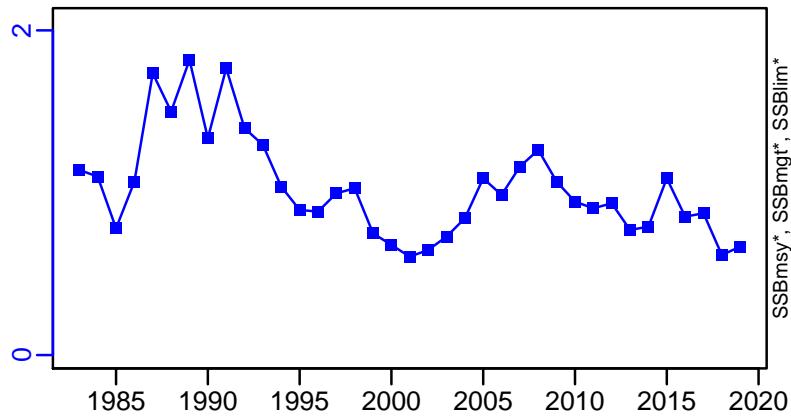
◆ Start Year   ◆ End Year   \* No Data

European flounder ICES 3a–4 [EFLOUNIIla–IV]

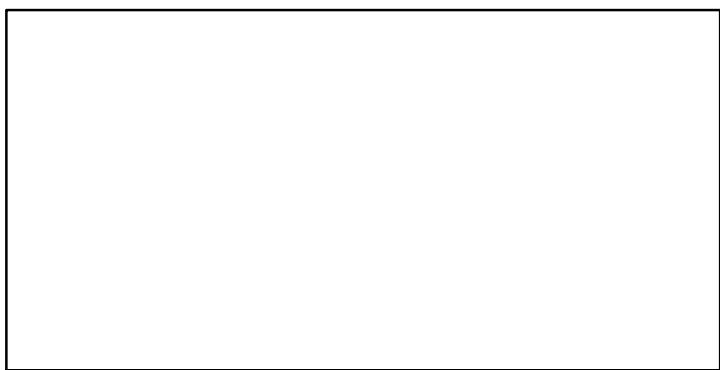
**TB\***



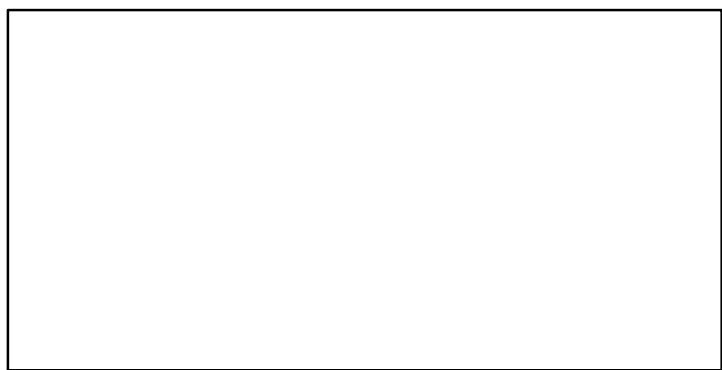
**SSB-MT (1950–2019–ICESIMP2021)**



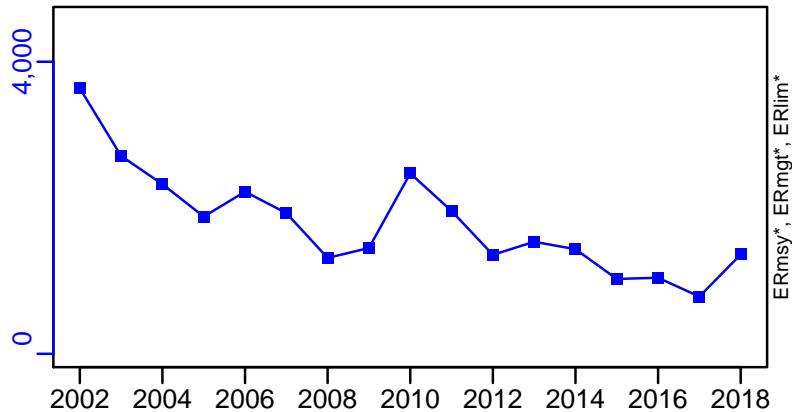
**TN \***



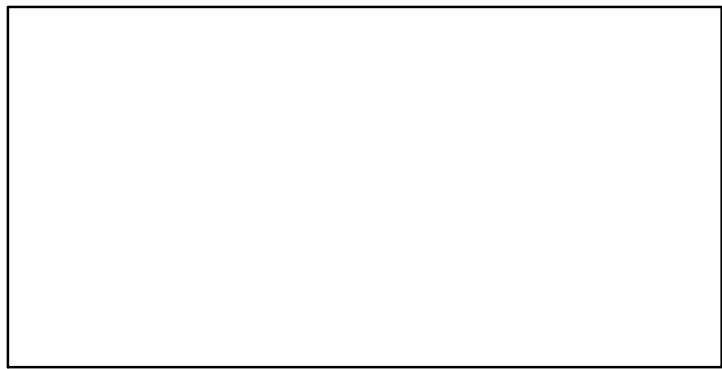
**F\***



**ER-calc-ratio (1950–2019–ICESIMP2021)**



**Recruits\***

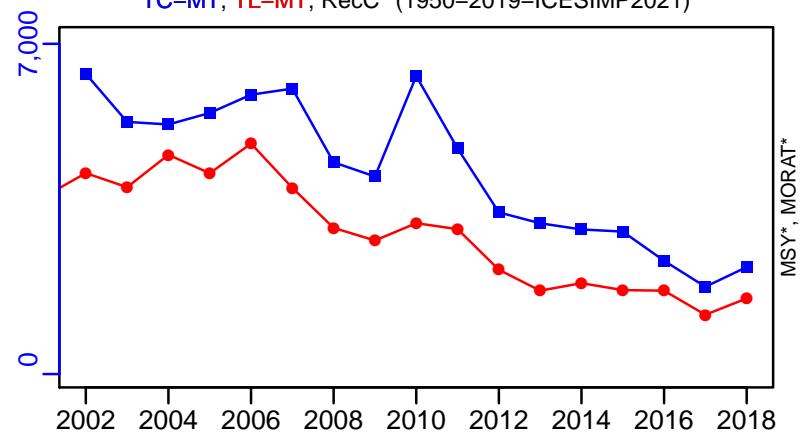


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | ··· Lim BRP  | * No Data |

European flounder ICES 3a–4 [EFLOUNIIla–IV]

TC-MT, TL-MT, RecC\* (1950–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



survB\*

CPUE\*

EFFORT\*

CdivMSY\*

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

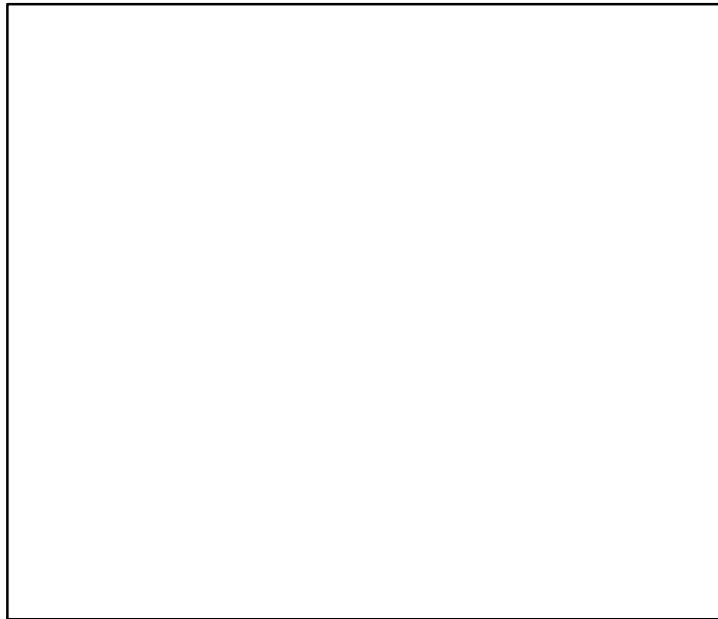
## European pollack ICES 3a-4 [EPOLLIV-IIIa]

<b>Metadata</b>	
<b>Scientific Name</b>	Pollachius pollachius
<b>Current Assess ID</b>	WGNSSK-EPOLLIV-IIIa-1977-2017-ICESIMP2018
<b>Area</b>	ICES 3a-4
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2016, 2017

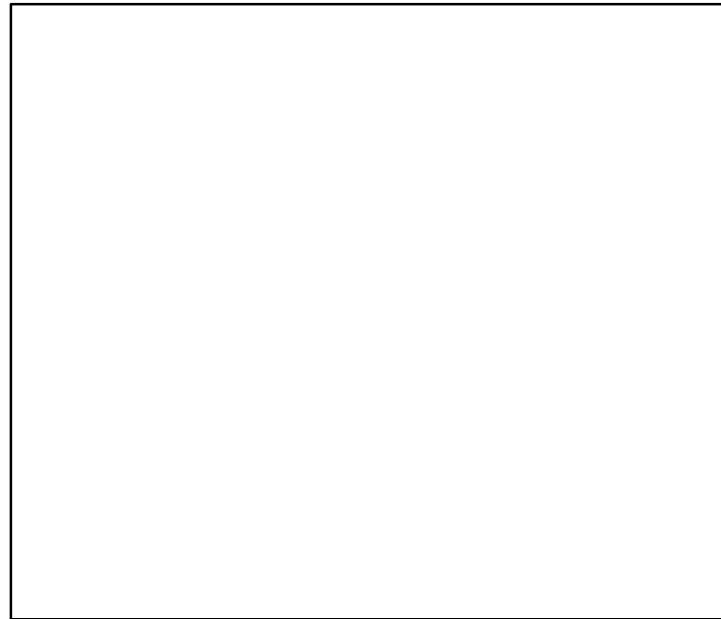
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2017	1910		
<b>TL</b>	TL-MT	2017	1900		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

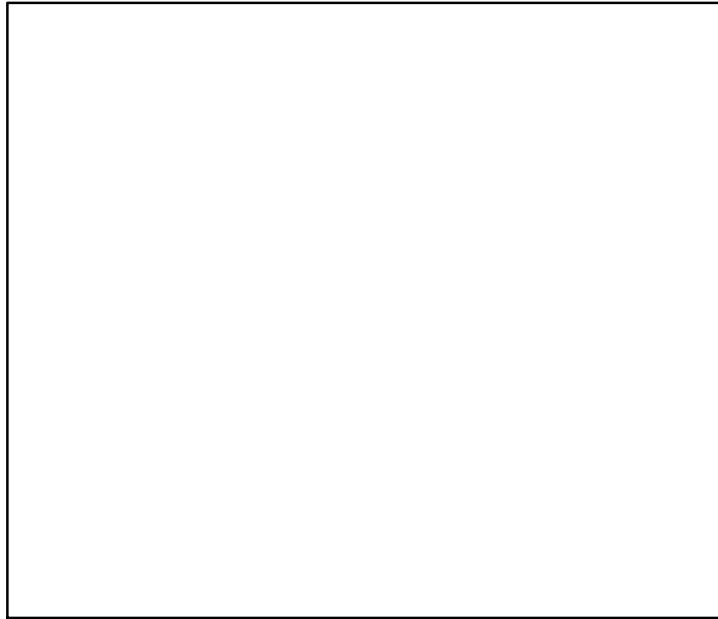
**Kobe MSY\***



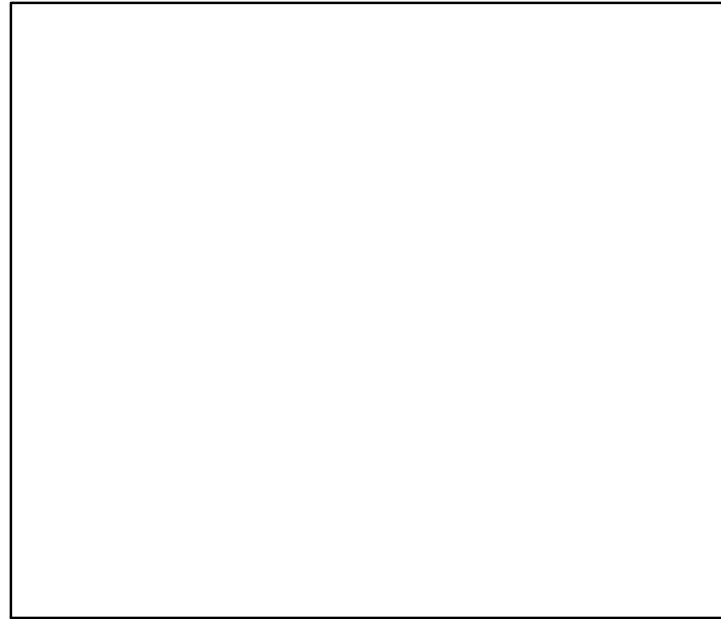
**Kobe MGT\***



**Spawner Recruit\***



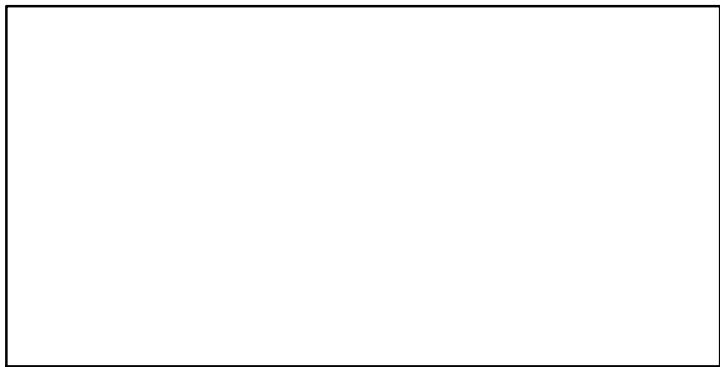
**Production\***



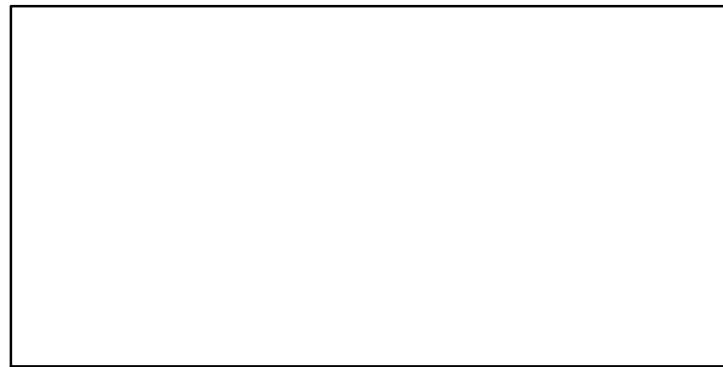
◆ Start Year ♦ End Year \* No Data

European pollack ICES 3a–4 [EPOLLIV–IIIa]

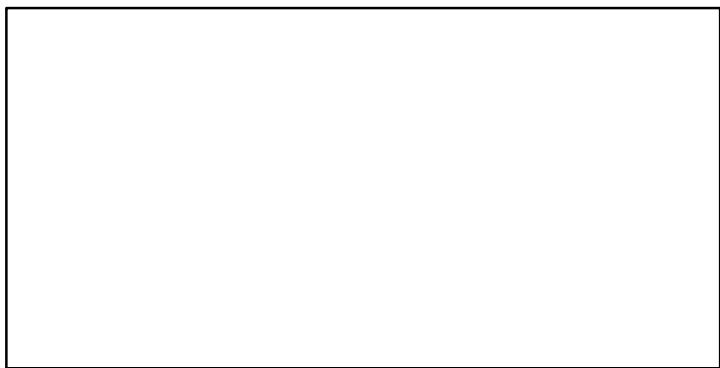
**TB\***



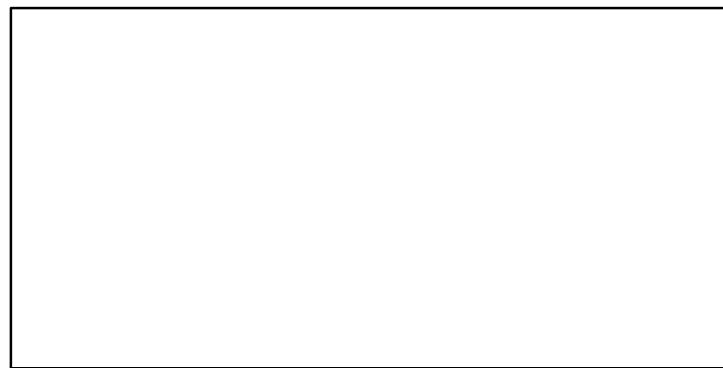
**SSB\***



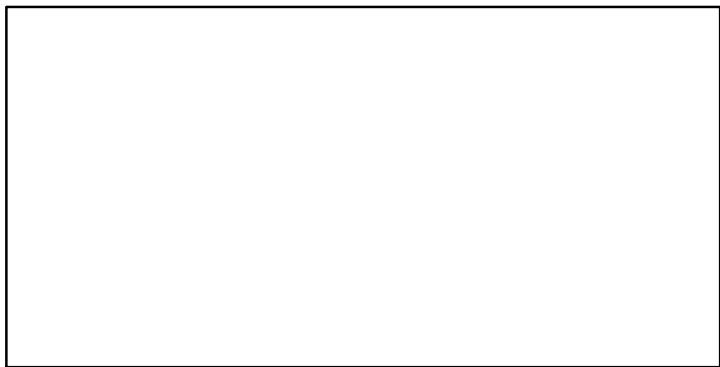
**TN \***



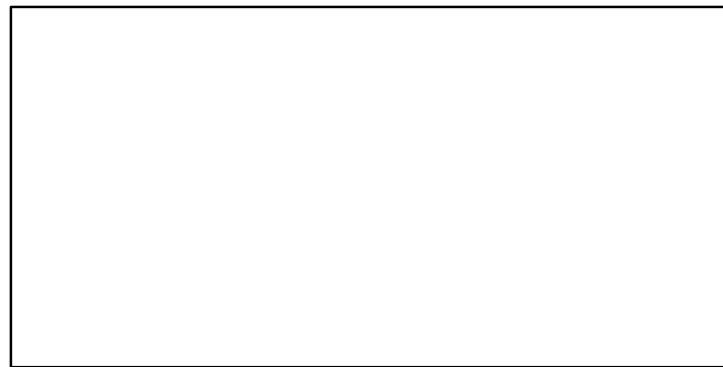
**F\***



**ER\***



**Recruits\***

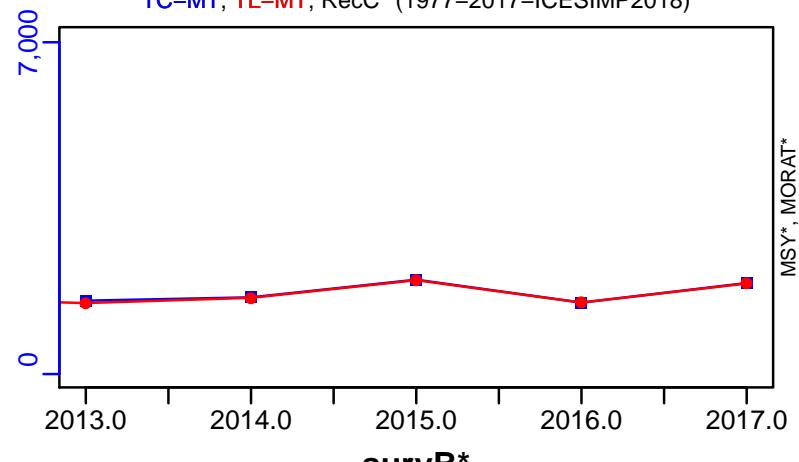


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

European pollack ICES 3a–4 [EPOLLIV–IIIa]

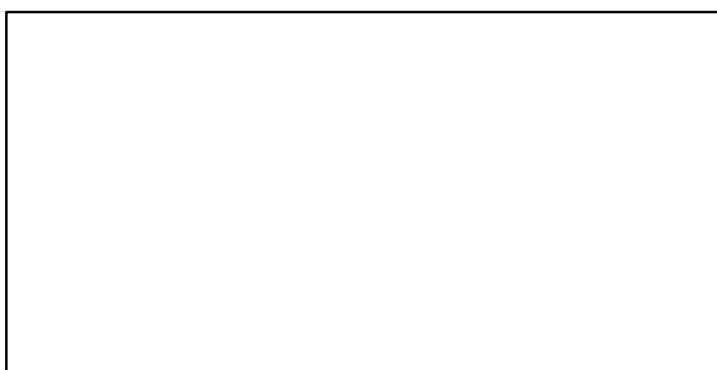
TC–MT, TL–MT, RecC\* (1977–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*

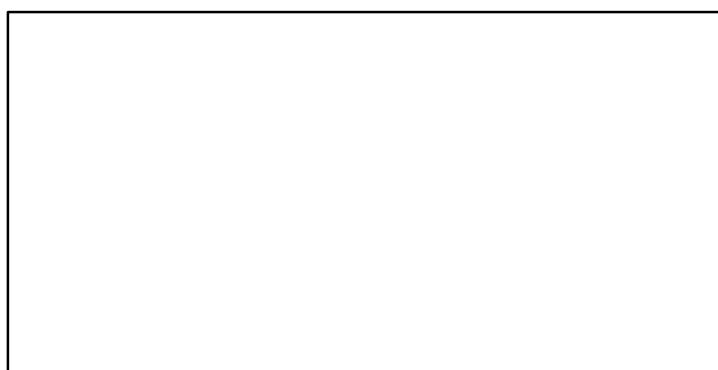


survB\*

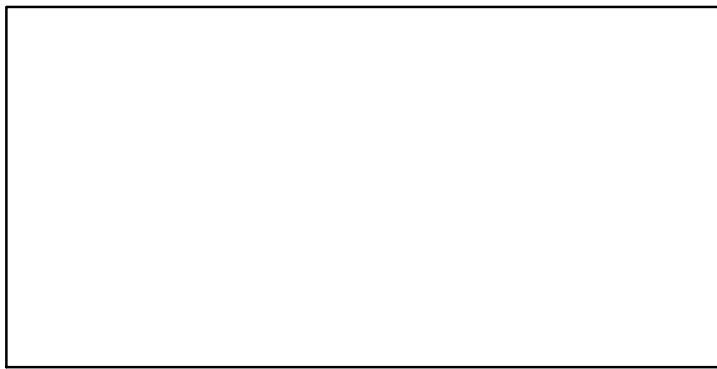
MSY\*, MORAT\*



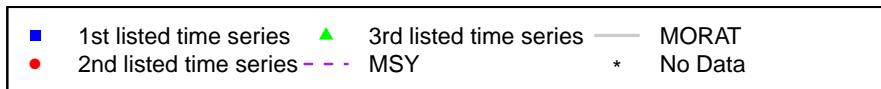
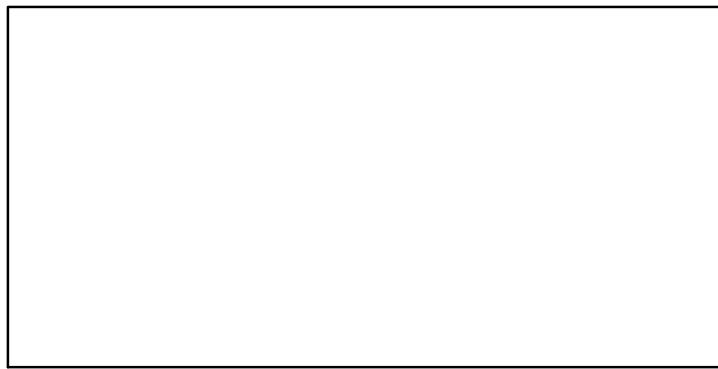
CPUE\*



EFFORT\*



CdivMSY\*



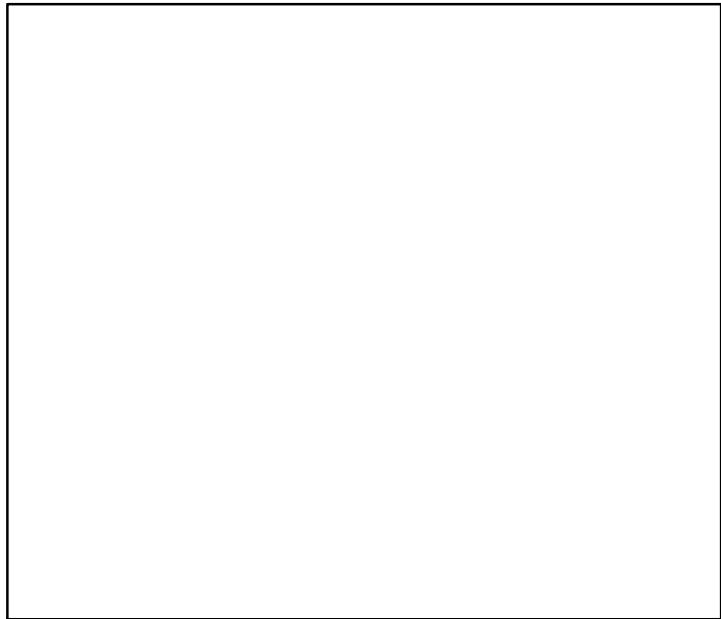
## European pollack ICES 8-9a [EPOLLVIII-IXa]

Metadata	
<b>Scientific Name</b>	Pollachius pollachius
<b>Current Assess ID</b>	WGBIE-EPOLLVIII-IXa-1986-2018-ICESIMP2021
<b>Area</b>	ICES 8-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2015, 2016, 2016, 2018

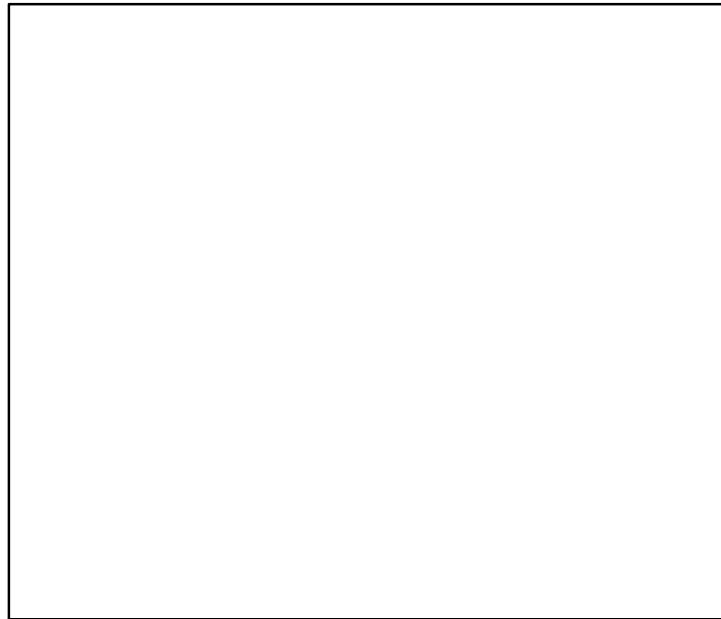
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	1512		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***



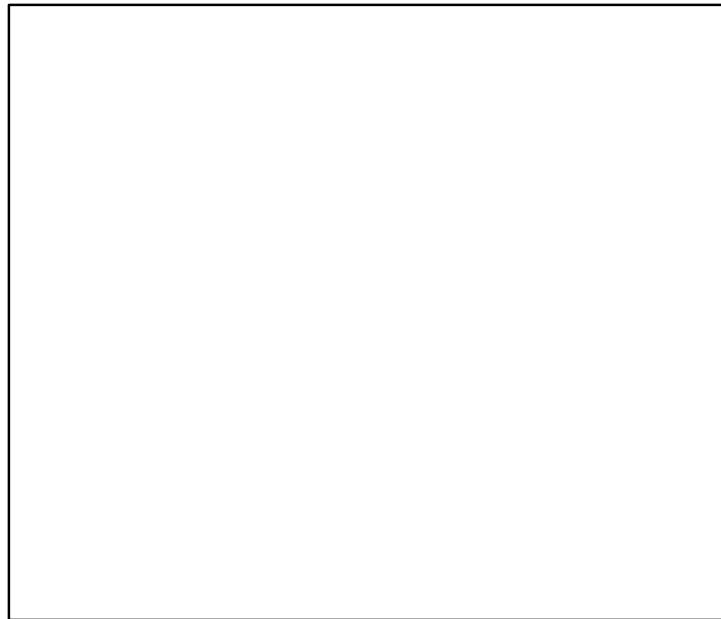
**Kobe MGT\***



**Spawner Recruit\***



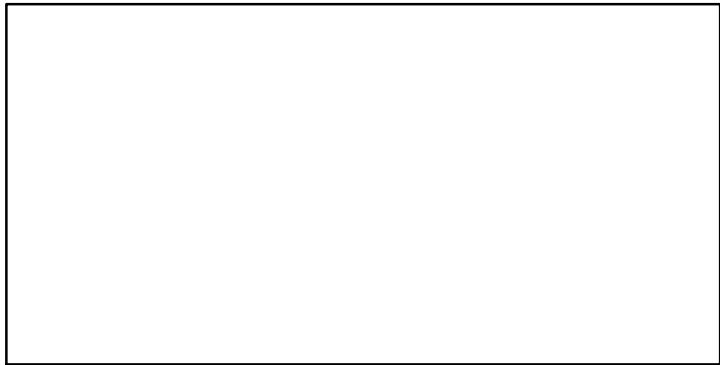
**Production\***



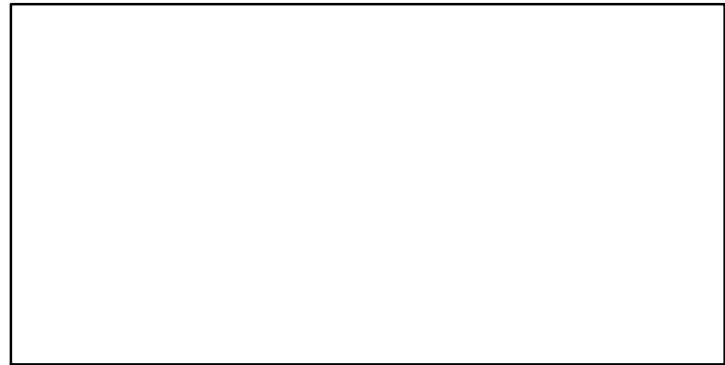
◆ Start Year ♦ End Year \* No Data

European pollack ICES 8–9a [EPOLLVIII–IXa]

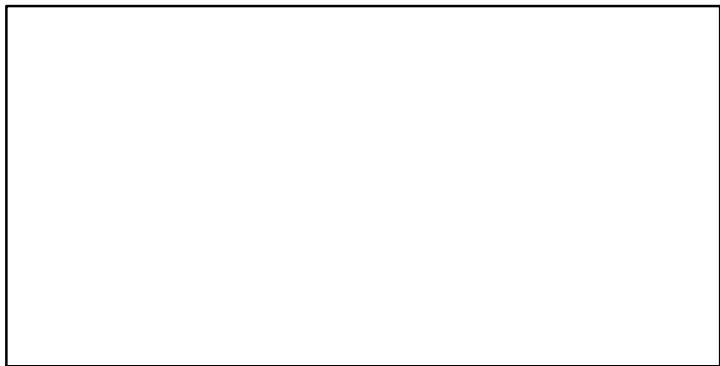
**TB\***



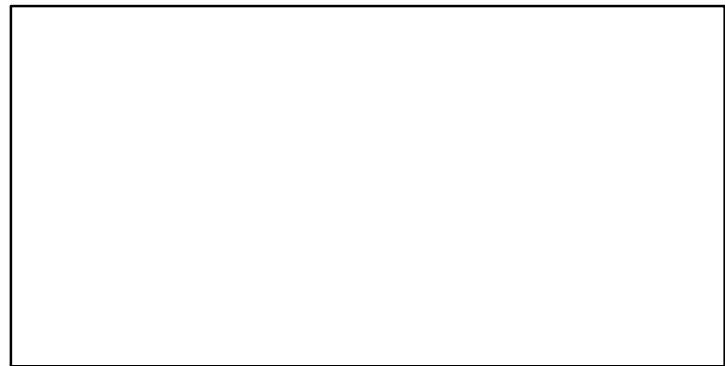
**SSB\***



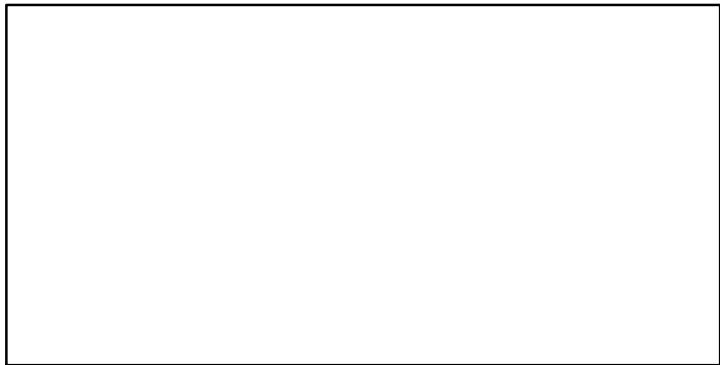
**TN \***



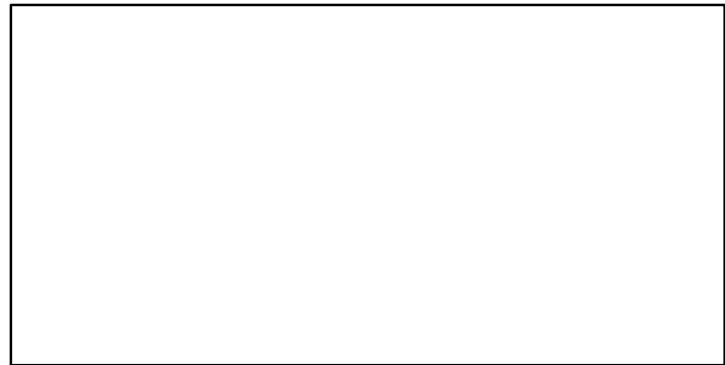
**F\***



**ER\***



**Recruits\***

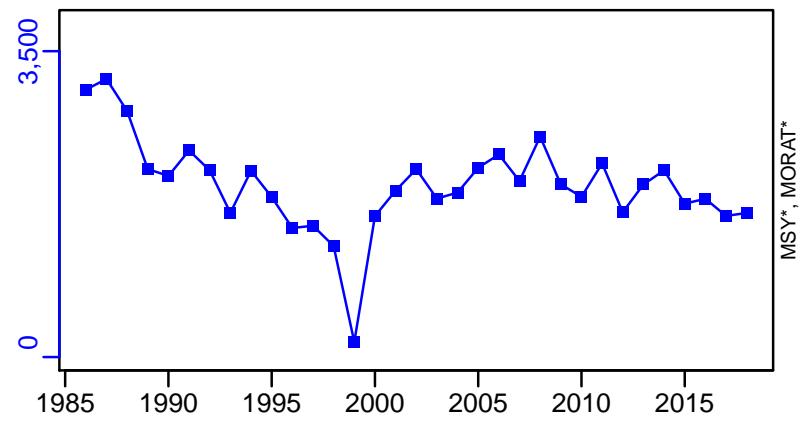


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

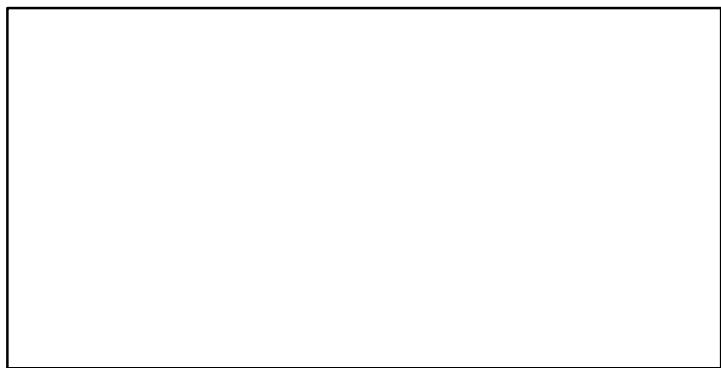
European pollack ICES 8–9a [EPOLLVIII–IXa]

TL–MT, TC\*, RecC\* (1986–2018–ICESIMP2021)

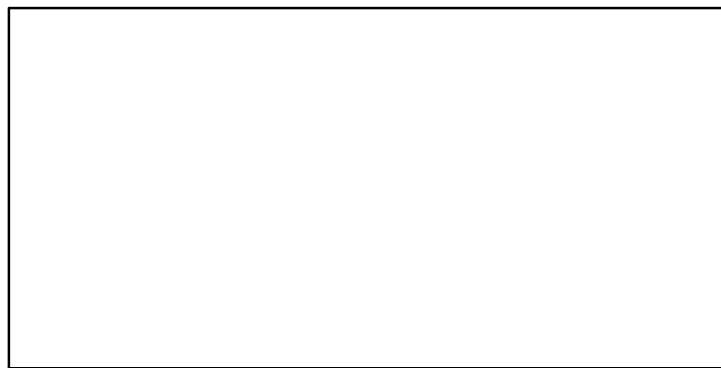
TAC\*, Cpair\*, Cadv\*



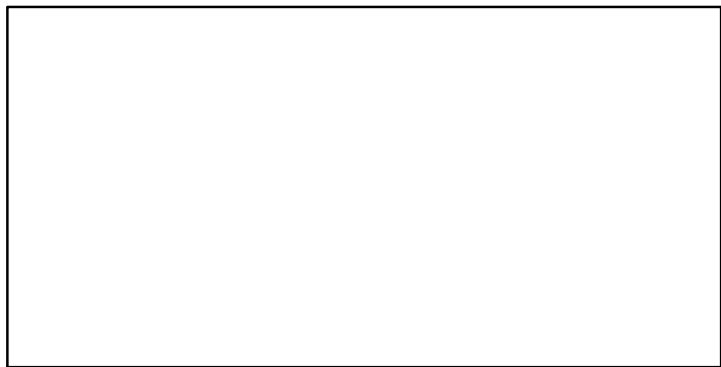
survB\*



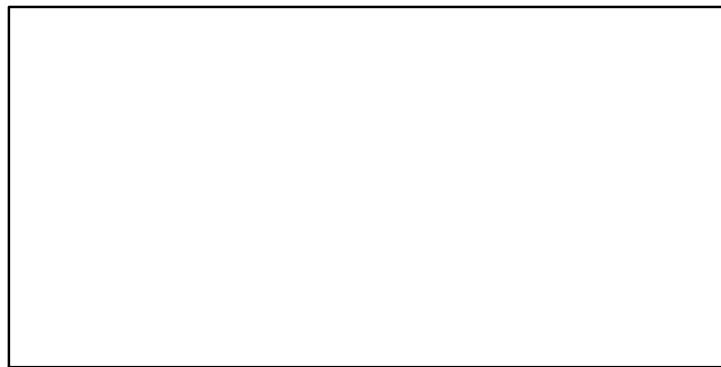
CPUE\*



EFFORT\*



CdivMSY\*



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

## Fourspotted megrim ICES 8c-9a [FMEG8c9a]

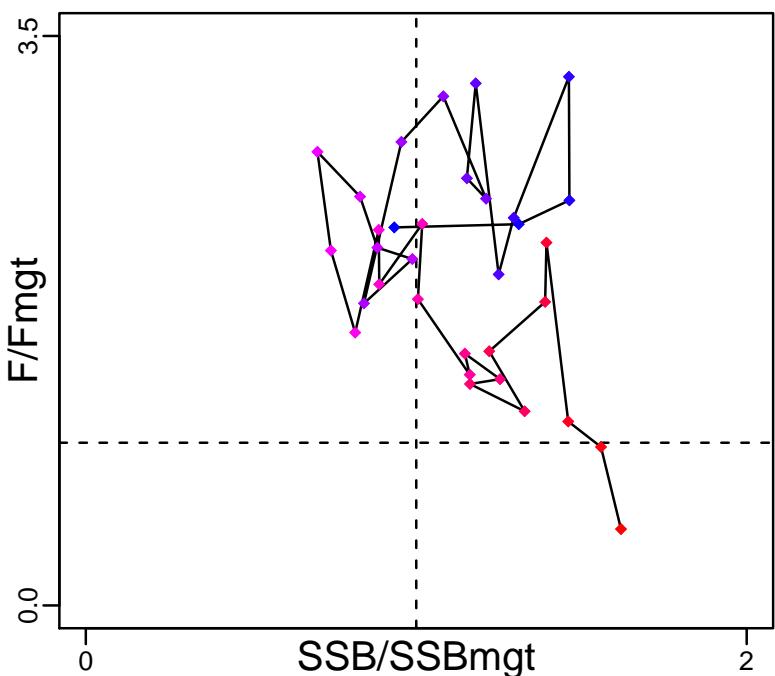
Metadata	
<b>Scientific Name</b>	Lepidorhombus boscii
<b>Current Assess ID</b>	WGBIE-FMEG8c9a-1986-2019-ICESIMP2021
<b>Area</b>	ICES 8c-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2014, 2015, 2016, 2017, 2018, 2019, 2010, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2013	14,952
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.193
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.328
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	4600
<b>Fmgt</b>	Fmgt-1/yr	2019	0.193
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2013	2138
<b>M</b>	M-1/yr	2010	0.2
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	3300
<b>Flim</b>	Flim-1/yr	2018	0.57
<b>ERlim</b>	-	-	-

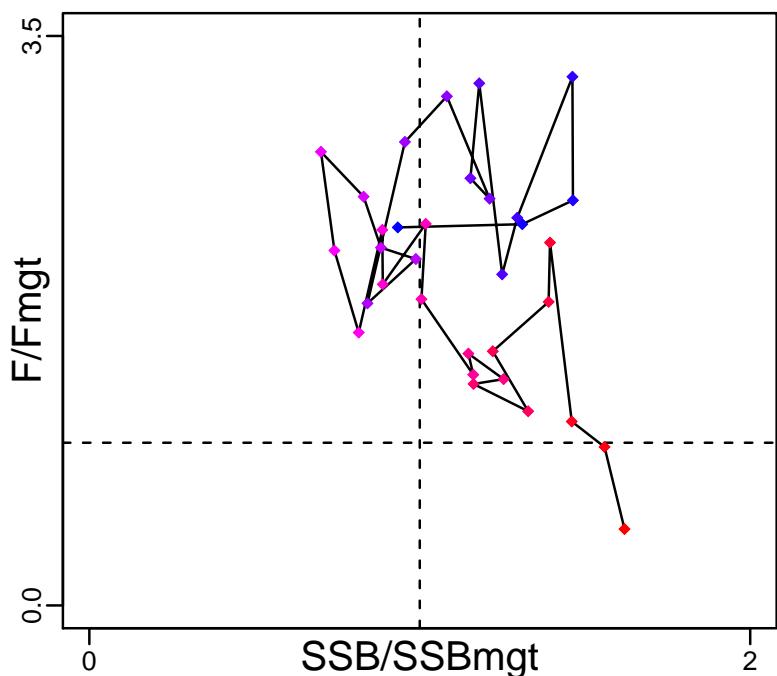
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	7878	-	-	
<b>SSB</b>	SSB-MT	2019	8854	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	45,233,000	-	0	
<b>F</b>	F-1/yr	2019	0.091	-	2 to 4	
<b>ER</b>	ER-calc-ratio	2019	0.115	-	-	
<b>TC</b>	TC-MT	2019	906			
<b>TL</b>	TL-MT	2019	814			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2013	0.557			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.917			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.35			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.925			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.469			
<b>ER/ERmgt</b>	-	-	-			

Fourspotted megrim ICES 8c–9a [FMEG8c9a]

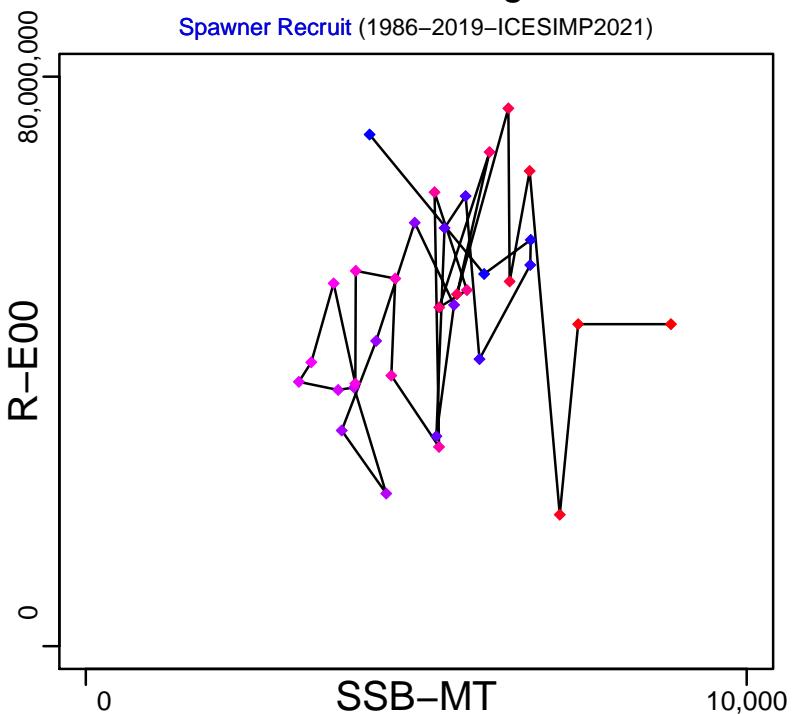
Kobe MSYpref (1986–2019–ICESIMP2021)



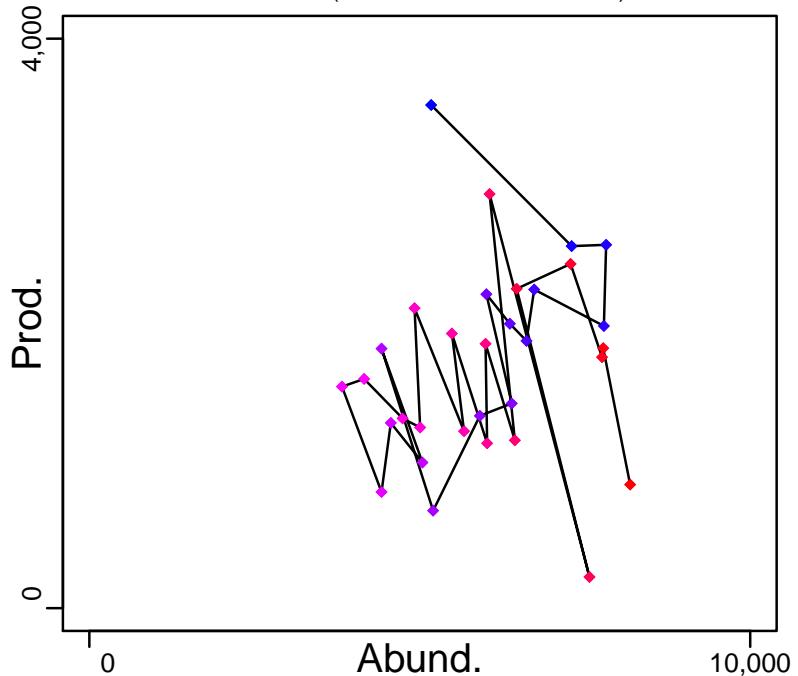
Kobe MGTpref (1986–2019–ICESIMP2021)



Spawner Recruit (1986–2019–ICESIMP2021)



Production (1986–2019–ICESIMP2021)

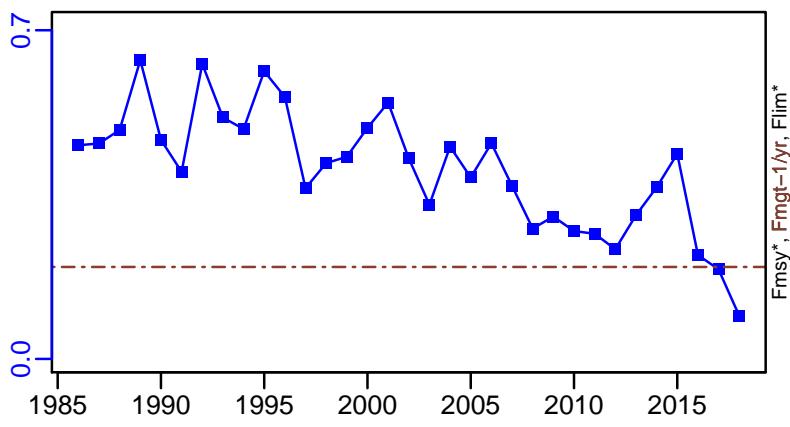
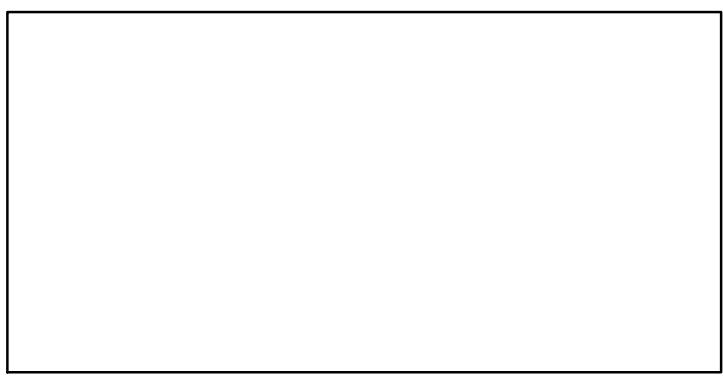
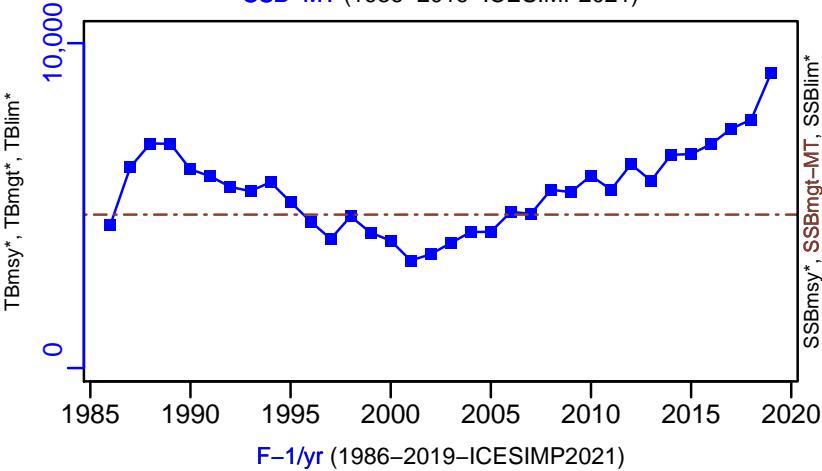
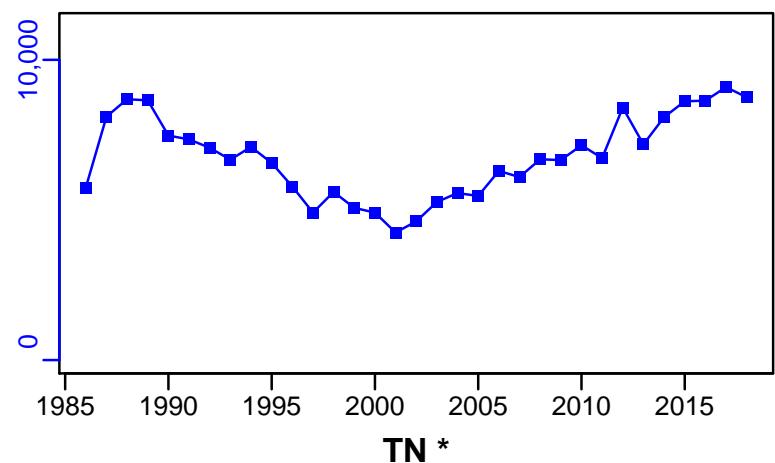


◆ Start Year   ◆ End Year   \* No Data

Fourspotted megrim ICES 8c–9a [FMEG8c9a]

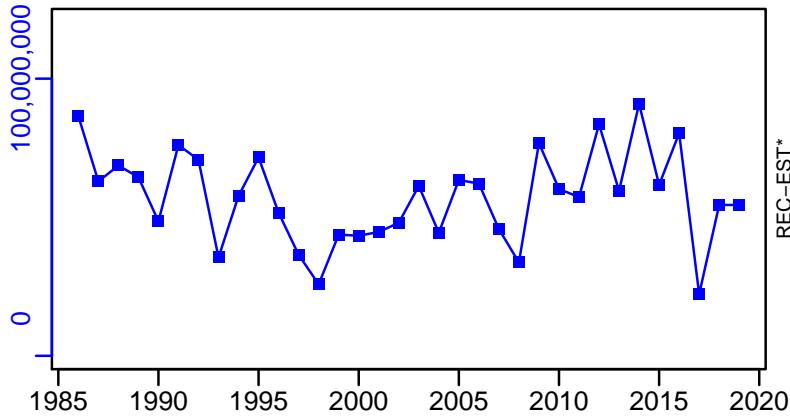
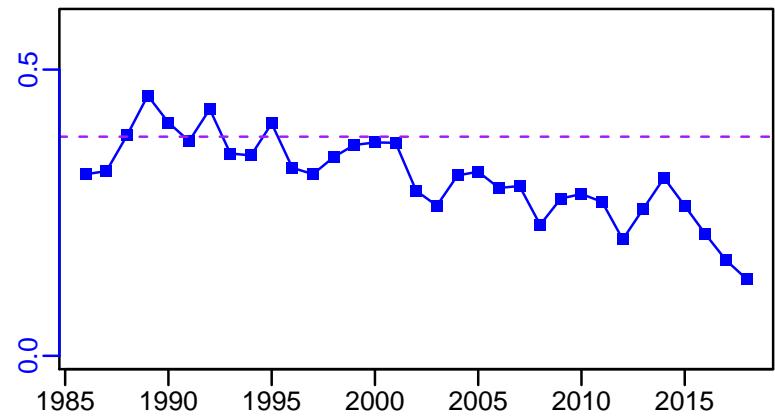
TB-MT (1986–2019–ICESIMP2021)

SSB-MT (1986–2019–ICESIMP2021)



ER-calc-ratio (1986–2019–ICESIMP2021)

R-E00 (1986–2019–ICESIMP2021)

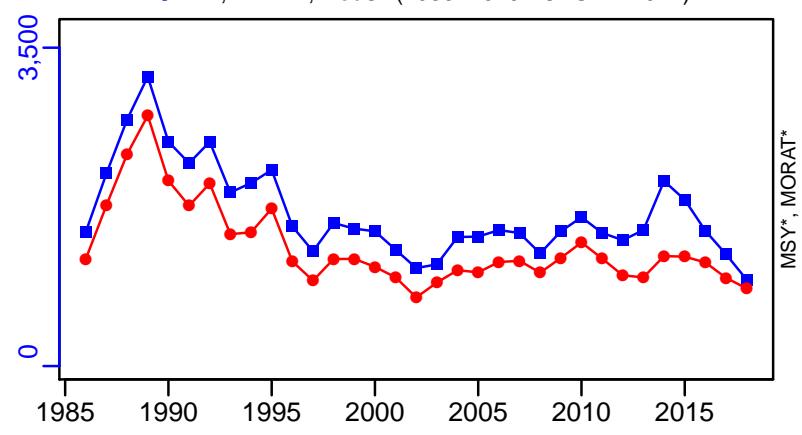


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

Fourspotted megrim ICES 8c–9a [FMEG8c9a]

TC–MT, TL–MT, RecC\* (1986–2019–ICESIMP2021)

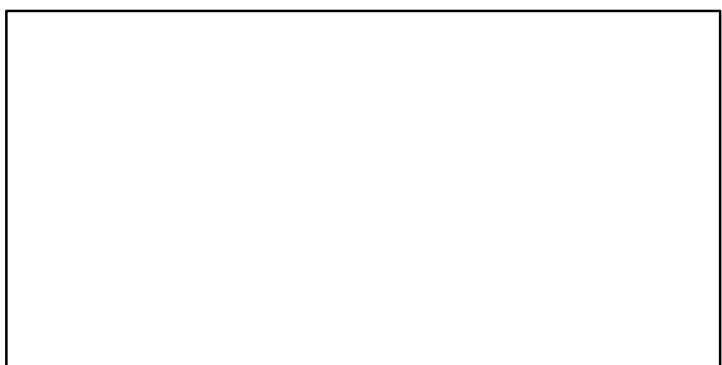
TAC\*, Cpair\*, Cadv\*



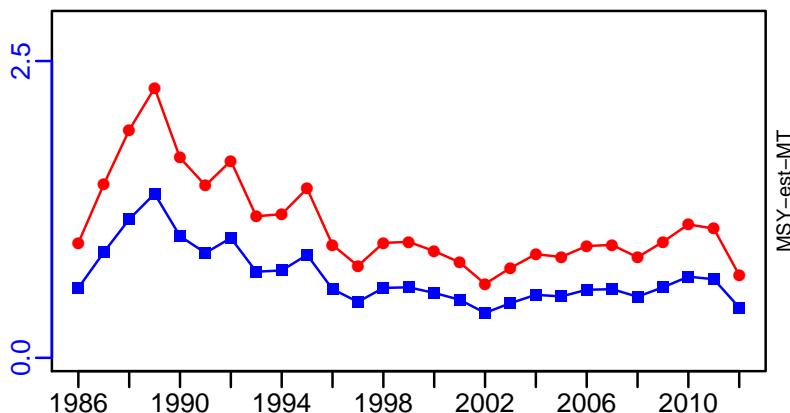
CPUE\*



EFFORT\*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1986–2013–ICESIMP2016)



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

## Greater forkbeard Northeast Atlantic [GFORKNEATL]

<b>Metadata</b>	
<b>Scientific Name</b>	Phycis blennoides
<b>Current Assess ID</b>	WGDEEP-GFORKNEATL-2005-2017-ICESIMP2018
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2016, 2017

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2017	2020		
<b>TL</b>	TL-MT	2017	1500		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

**Greater forkbeard Northeast Atlantic [GFORKNEATL]**

**TB\***



**SSB\***



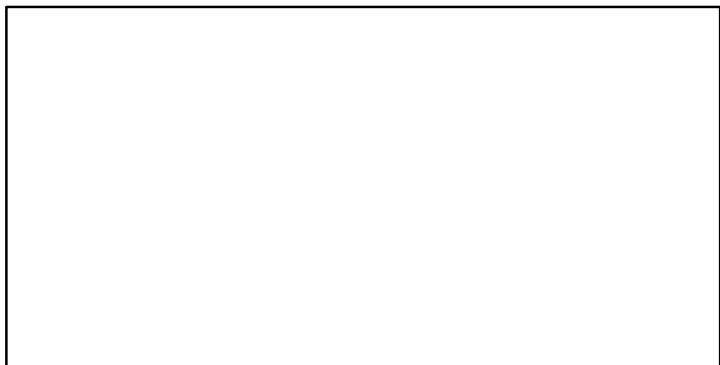
**TN \***



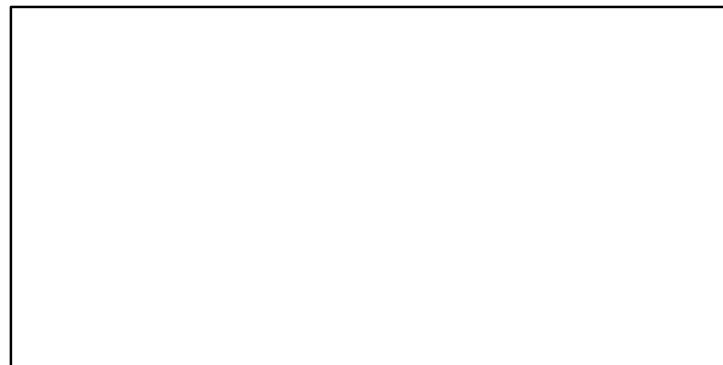
**F\***



**ER\***



**Recruits\***

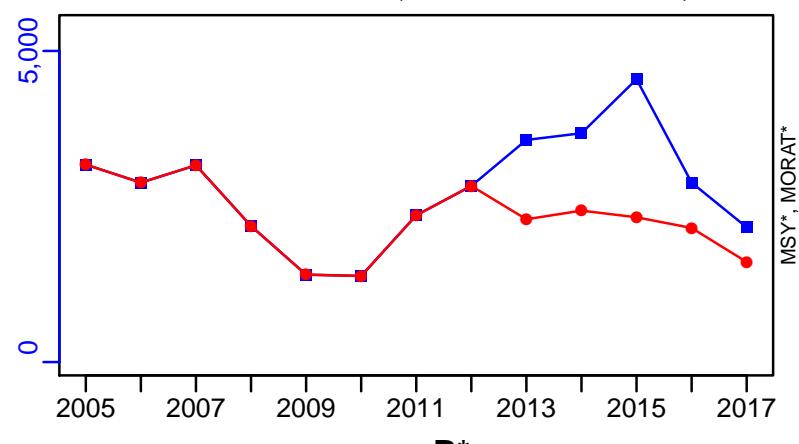


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

**Greater forkbeard Northeast Atlantic [GFORKNEATL]**

TC-MT, TL-MT, RecC\* (2005–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



survB\*

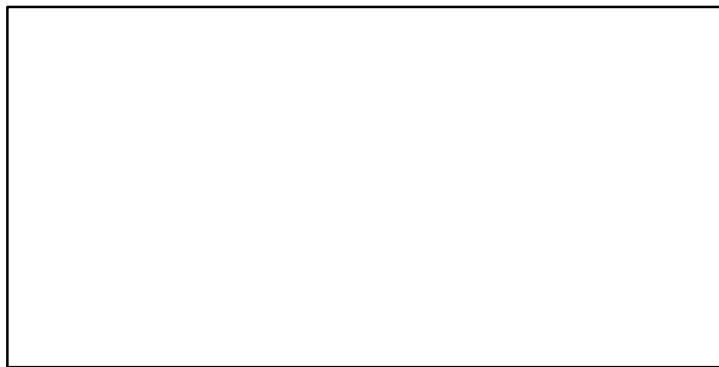
MSY\*, MORAT\*



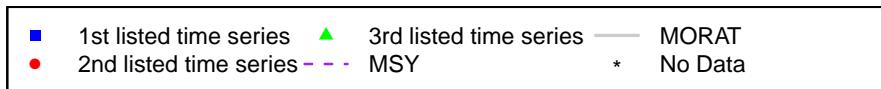
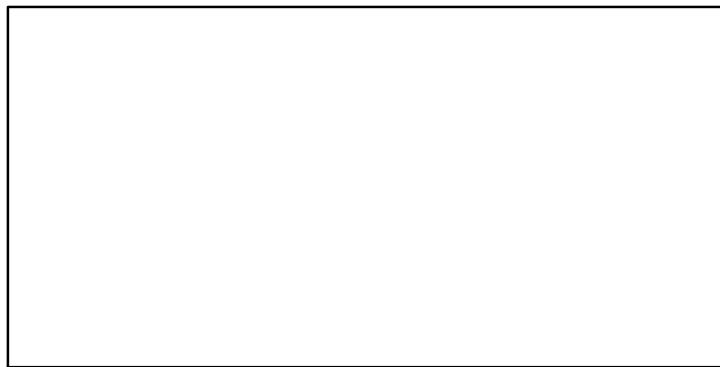
CPUE\*



EFFORT\*



CdivMSY\*



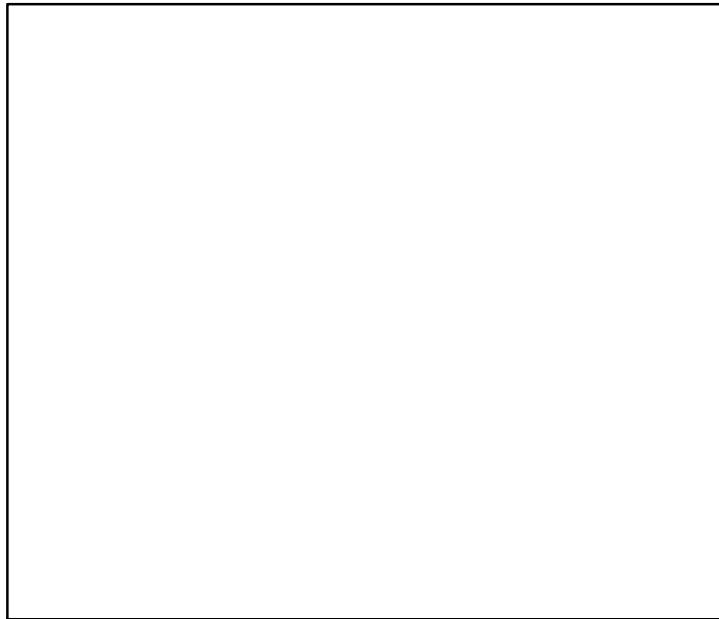
## Grey gurnard ICES 3a-4-7d [GGURNIIIA-IV-VIId]

<b>Metadata</b>	
<b>Scientific Name</b>	Eutrigla gurnardus
<b>Current Assess ID</b>	WGNSSK-GGURNIIIA-IV-VIId-1983-2017-ICESIMP2018
<b>Area</b>	ICES 3a-4-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2016, 2017

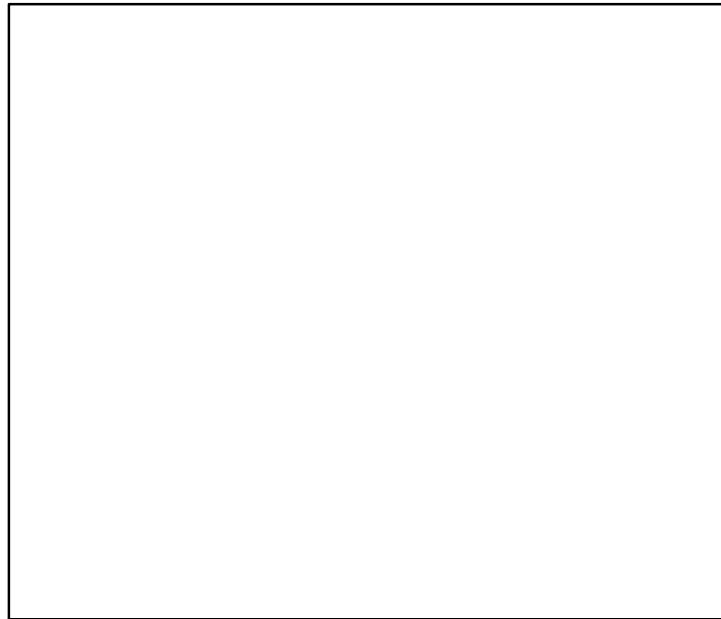
<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim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

<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2017	17,100		
<b>TL</b>	TL-MT	2017	3450		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

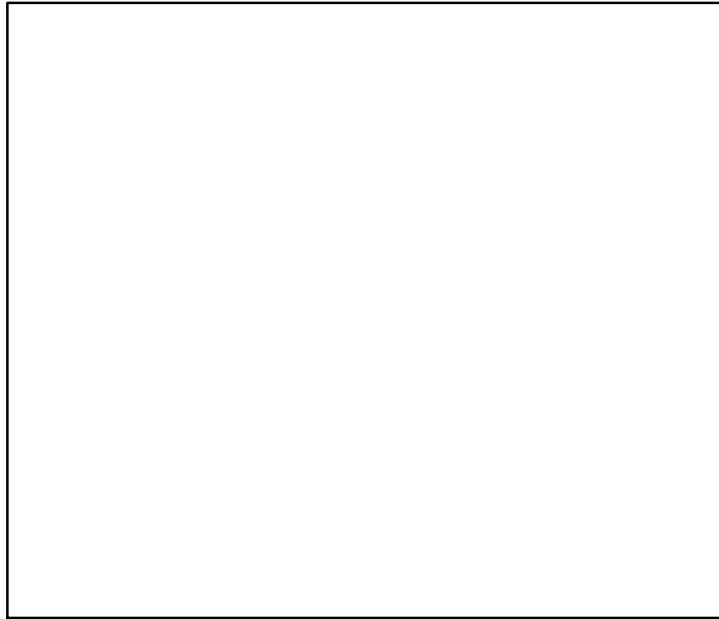
Kobe MSY\*



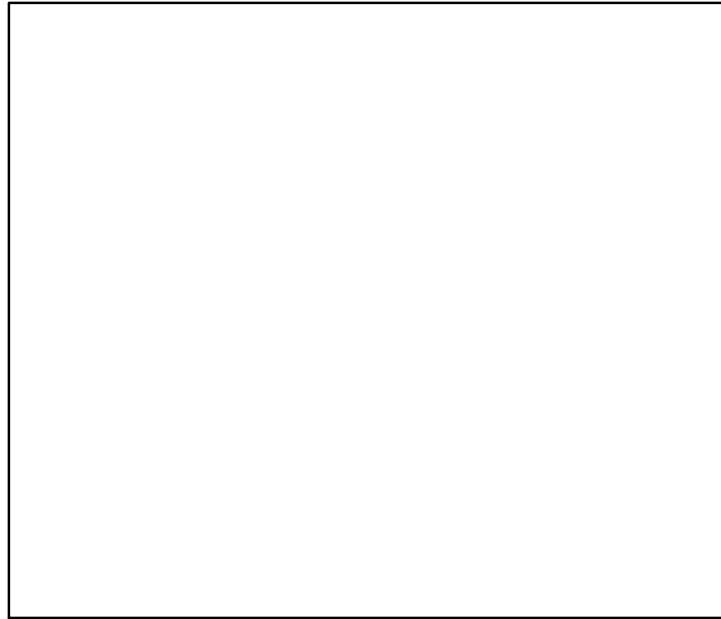
Kobe MGT\*



Spawner Recruit\*

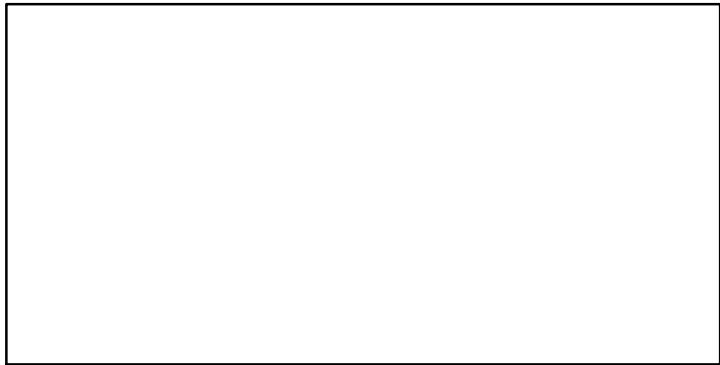


Production\*

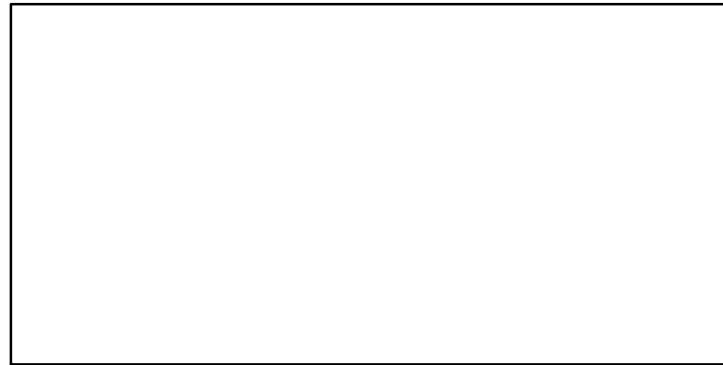


◆ Start Year ♦ End Year \* No Data

**TB\***



**SSB\***



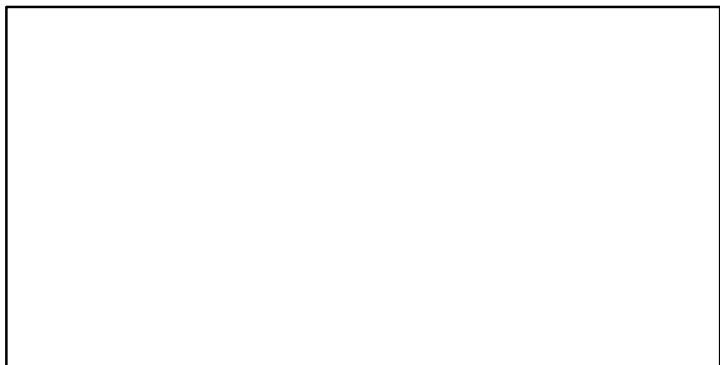
**TN \***



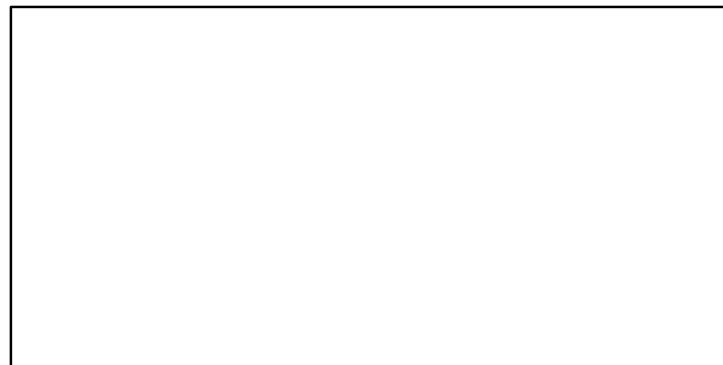
**F\***



**ER\***



**Recruits\***

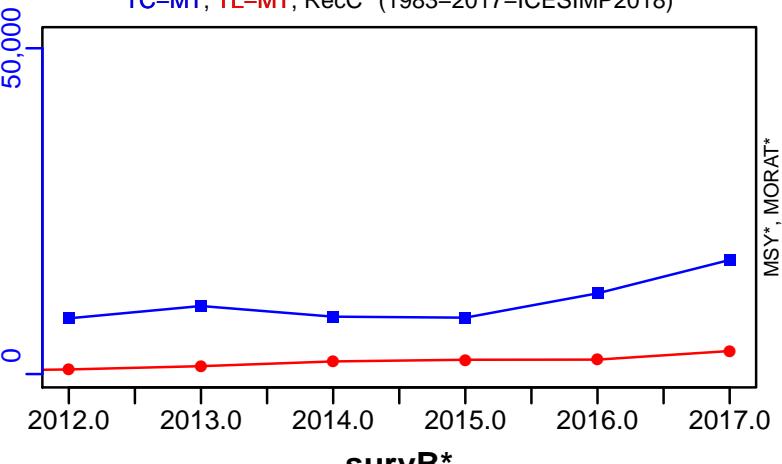


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

**Grey gurnard ICES 3a–4–7d [GGURNIIla–IV–VIIId]**

TC–MT, TL–MT, RecC\* (1983–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



**survB\***

**CPUE\***

**EFFORT\***

**CdivMSY\***

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

## Greenland halibut ICES 5-6-12-14 [GHALV-VI-XII-XIV]

<b>Metadata</b>	
<b>Scientific Name</b>	Reinhardtius hippoglossoides
<b>Current Assess ID</b>	NWWG-GHALV-VI-XII-XIV-1960-2019-ICESIMP2021
<b>Area</b>	ICES 5-6-12-14
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	North-Western Working Group
<b>Asmts in RAM</b>	2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019

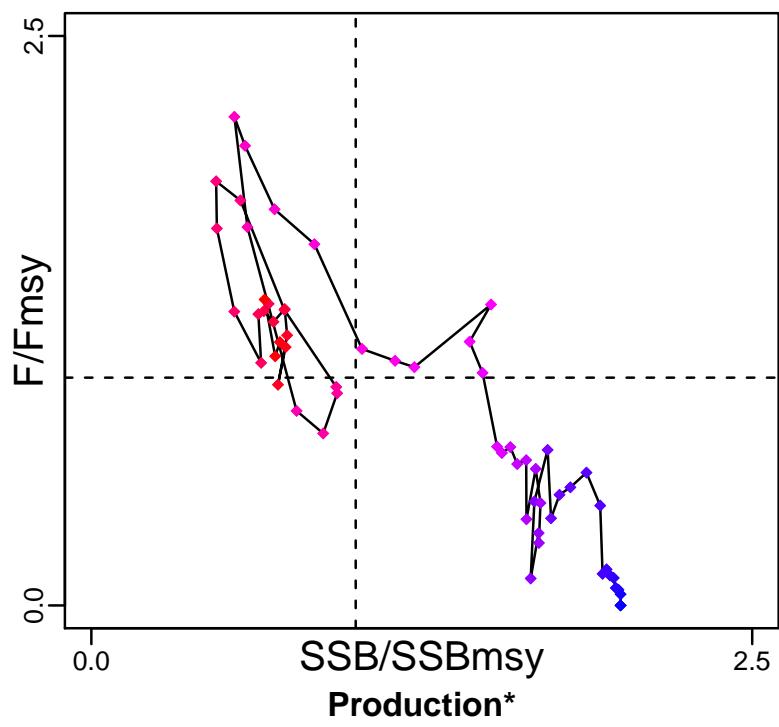
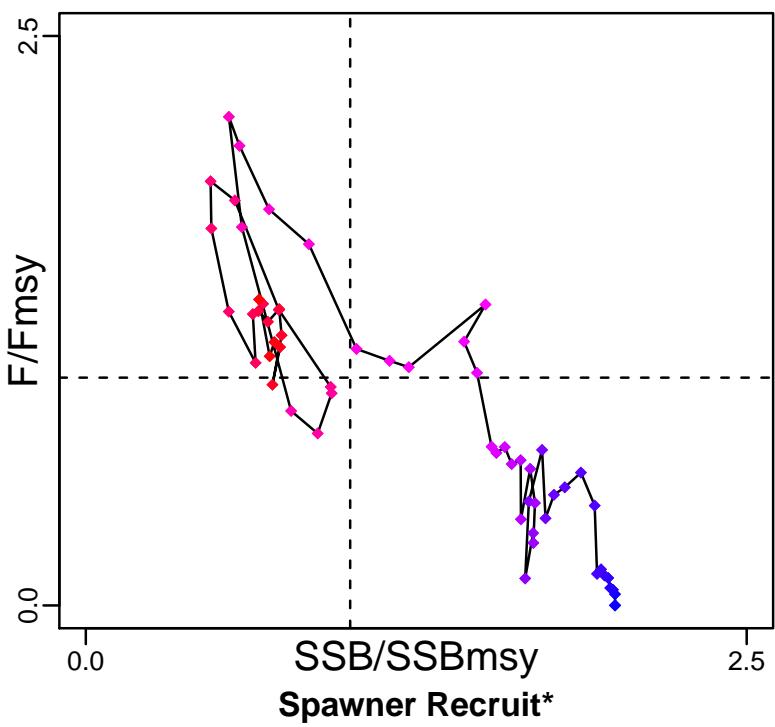
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	-	-	-	-	-	
<b>TC</b>	TC-MT	2018	23,500			
<b>TL</b>	TL-MT	2019	27,141			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2019	0.657			
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2019	1.343			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Greenland halibut ICES 5–6–12–14 [GHALV–VI–XII–XIV]

Kobe MSYpref (1960–2019–ICESIMP2021)

Kobe MGTpref (1960–2019–ICESIMP2021)



◆ Start Year	◆ End Year	*	No Data
--------------	------------	---	---------

**TB\***



**SSB\***



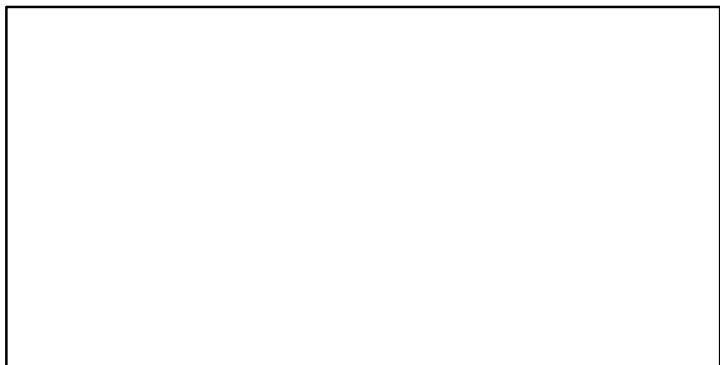
**TN \***



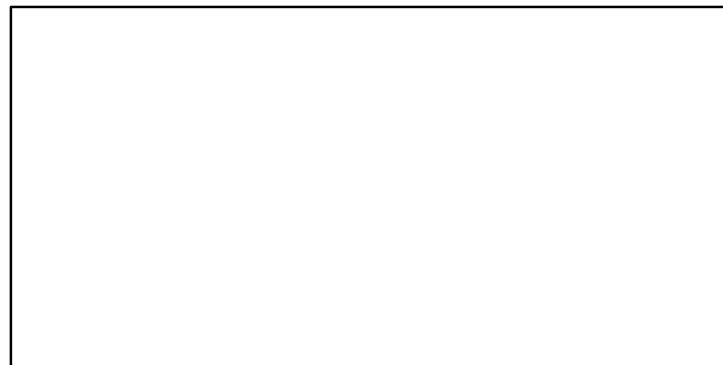
**F\***



**ER\***



**Recruits\***

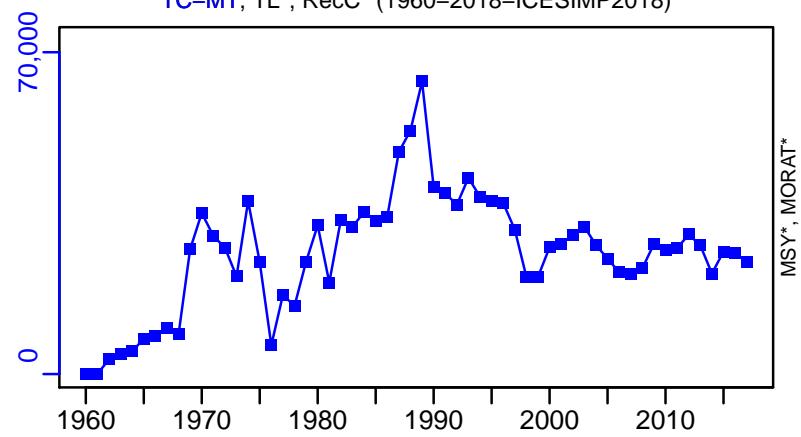


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

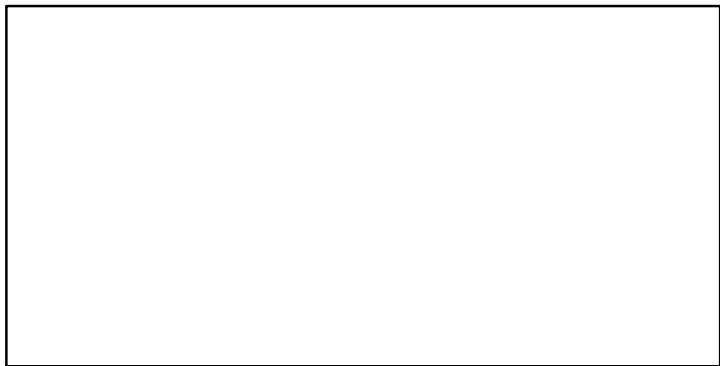
Greenland halibut ICES 5–6–12–14 [GHALV–VI–XII–XIV]

TC–MT, TL\*, RecC\* (1960–2018–ICESIMP2018)

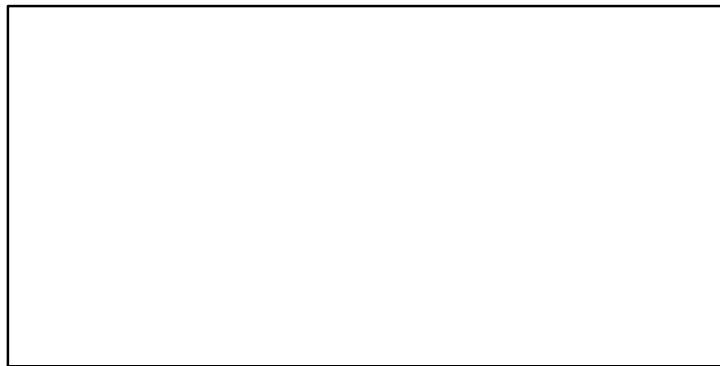
TAC\*, Cpair\*, Cadv\*



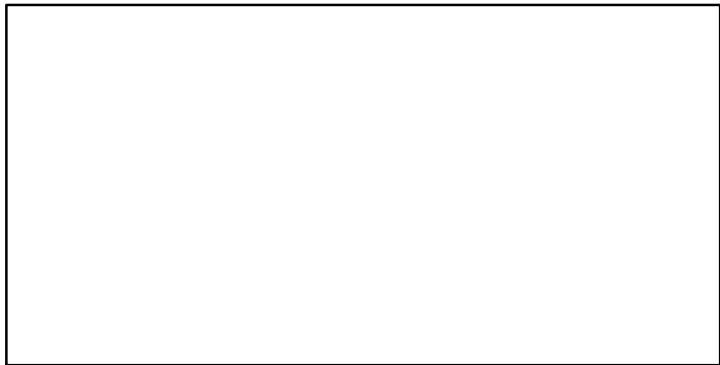
**survB\***



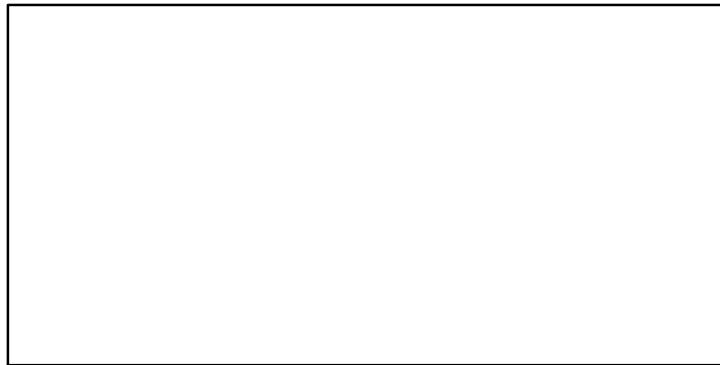
**CPUE\***



**EFFORT\***



**CdivMSY\***



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

## Golden redfish ICES 5-6-12-14 [GOLDREDV-VI-XII-XIV]

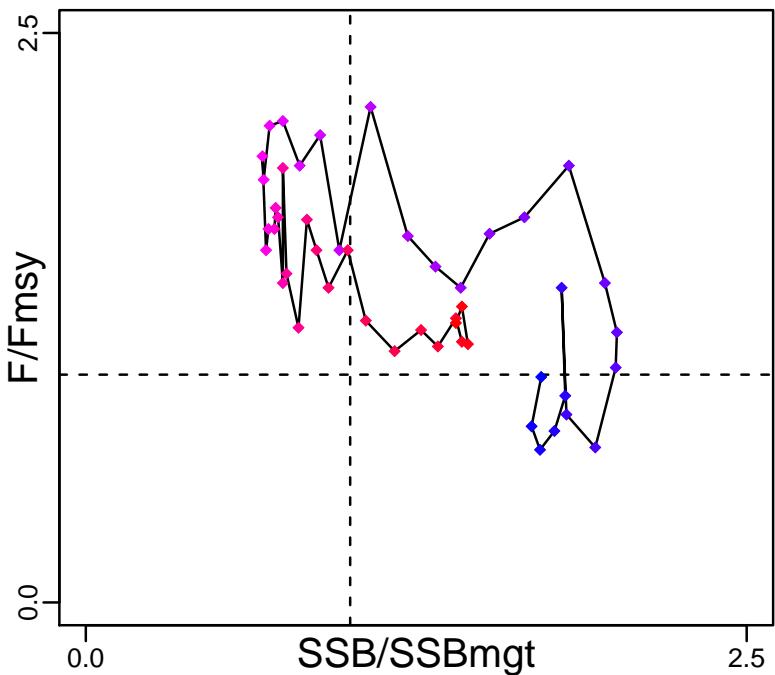
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastes norvegicus
<b>Current Assess ID</b>	NWWG-GOLDREDV-VI-XII-XIV-1966-2018-ICESIMP2018
<b>Area</b>	ICES 5-6-12-14
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	North-Western Working Group
<b>Asmts in RAM</b>	2014, 2017, 2018, 2015, 2016

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.097
<b>ERmsy</b>	ERmsy-est-ratio	2018	0.085
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	220,000
<b>Fmgt</b>	Fmgt-1/yr	2018	0.097
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	160,000
<b>Flim</b>	Flim-1/yr	2018	0.226
<b>ERlim</b>	-	-	-

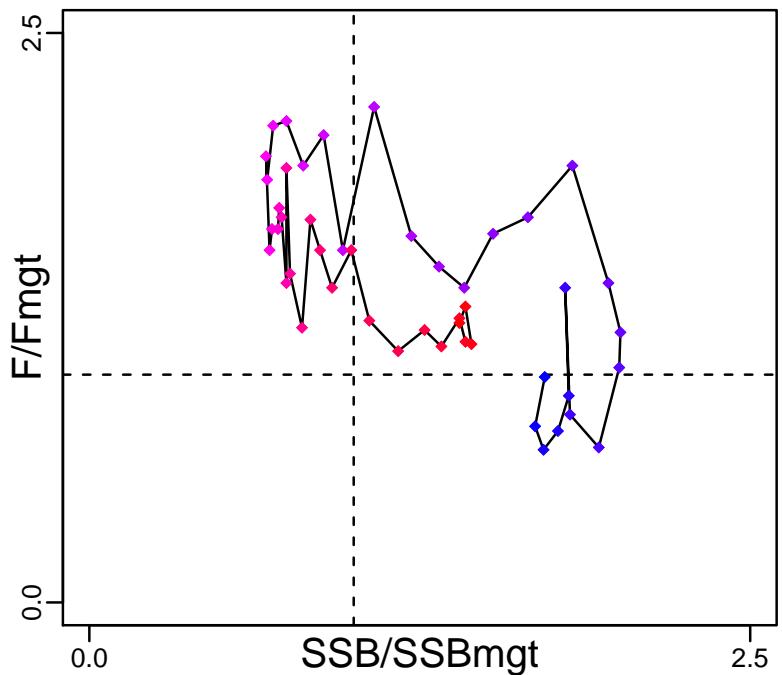
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2018	434,000	Both	-
<b>SSB</b>	SSB-MT	2018	296,000	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	$4.5 \times 10^7$	-	5
<b>F</b>	F-1/yr	2018	0.119	-	9 to 19
<b>ER</b>	ER-calc-ratio	2018	0.122	-	-
<b>TC</b>	TC-MT	2018	56,000		
<b>TL</b>	TL-MT	2018	56,000		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.227		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2018	1.437		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	1.345		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2018	1.227		
<b>ER/ERmgt</b>	-	-	-		

**Golden redfish ICES 5–6–12–14 [GOLDREDV–VI–XII–XIV]**

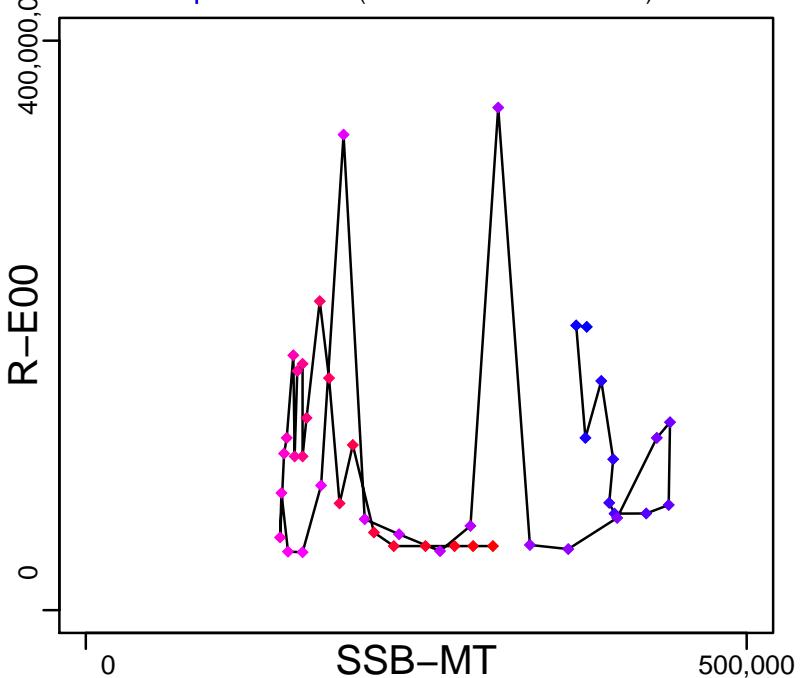
Kobe MSYpref (1966–2018–ICESIMP2018)



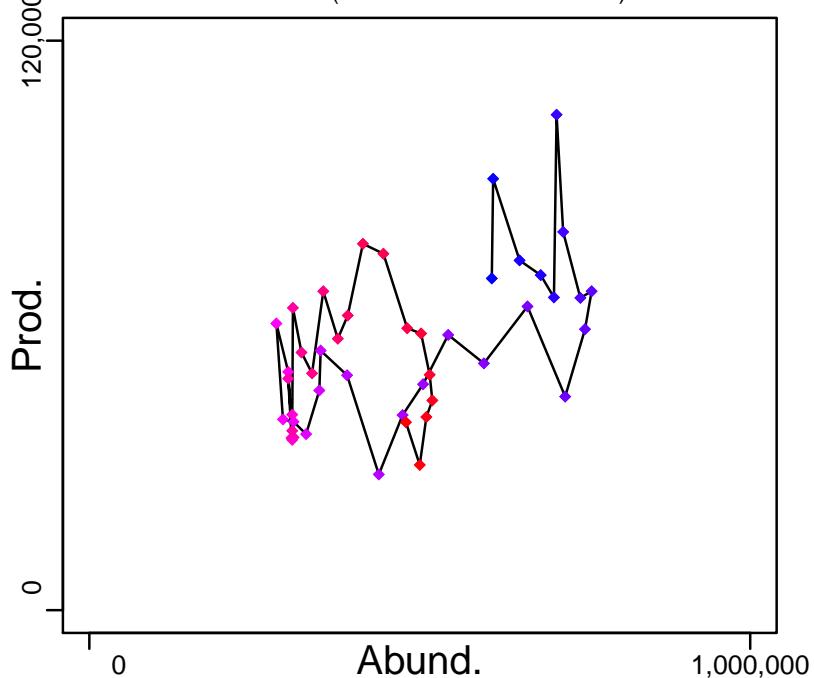
Kobe MGTpref (1966–2018–ICESIMP2018)



Spawner Recruit (1966–2018–ICESIMP2018)



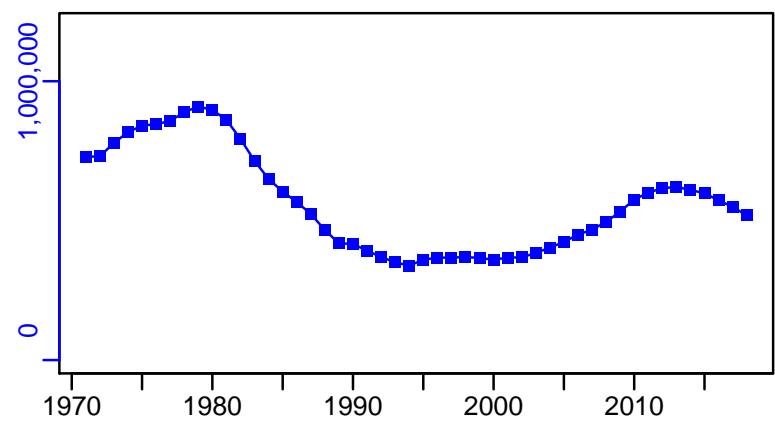
Production (1966–2018–ICESIMP2018)



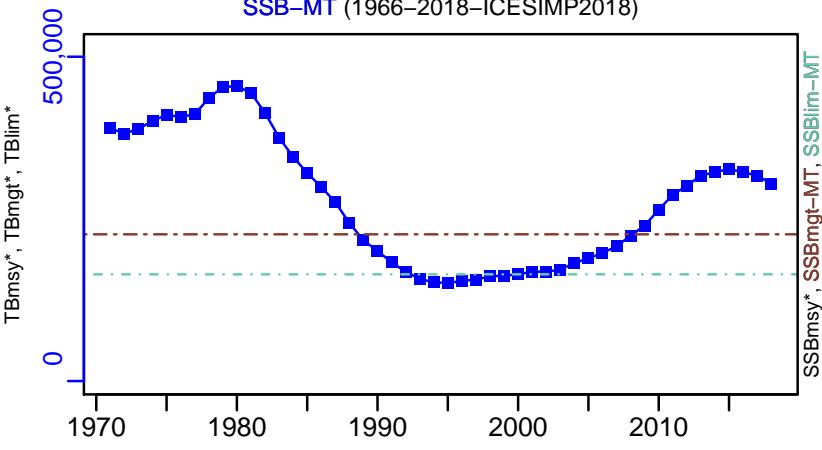
◆ Start Year	◆ End Year	*	No Data
--------------	------------	---	---------

Golden redfish ICES 5–6–12–14 [GOLDREDV–VI–XII–XIV]

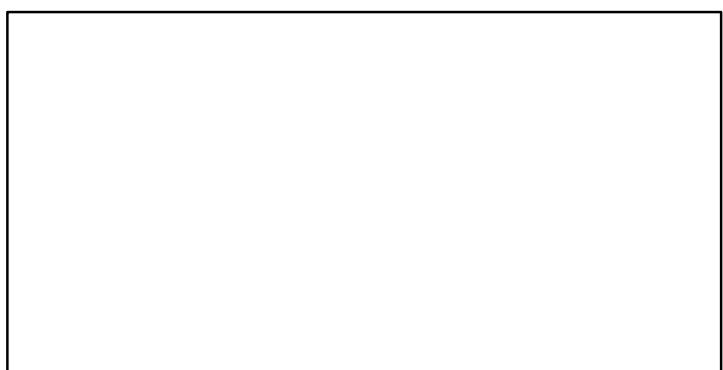
TB-MT (1966–2018–ICESIMP2018)



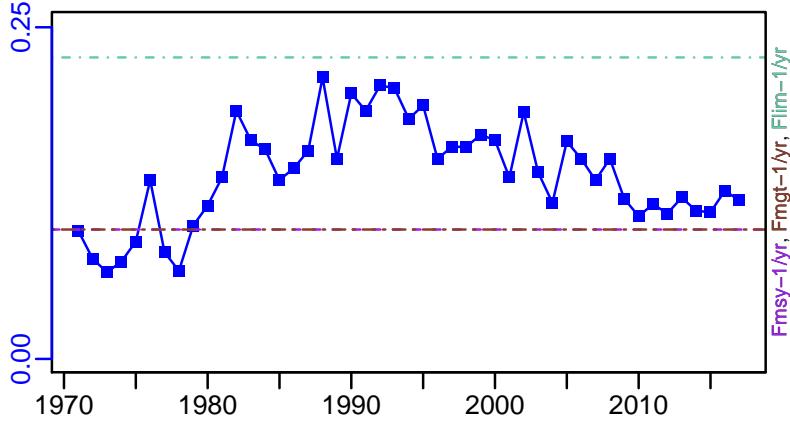
SSB-MT (1966–2018–ICESIMP2018)



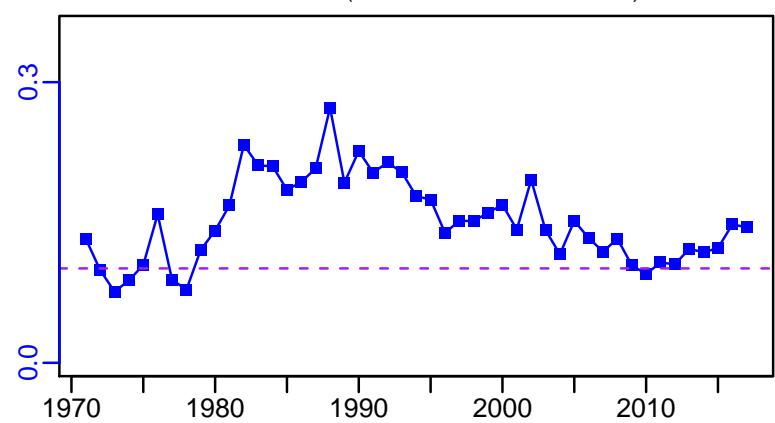
TN \*



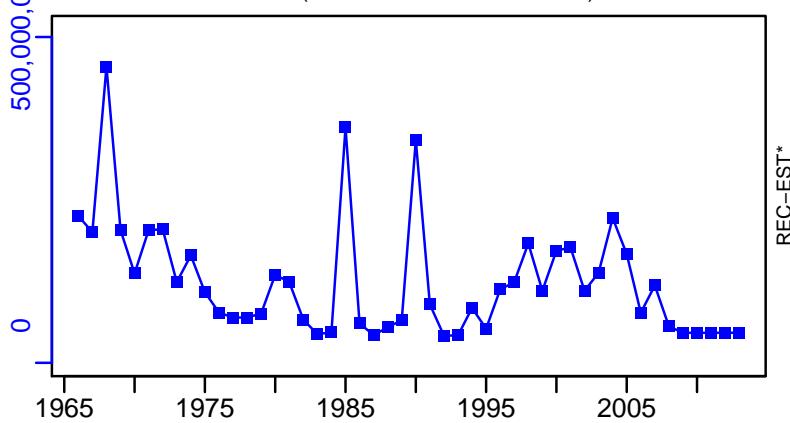
F-1/yr (1966–2018–ICESIMP2018)



ER-calc-ratio (1966–2018–ICESIMP2018)



R-E00 (1966–2018–ICESIMP2018)

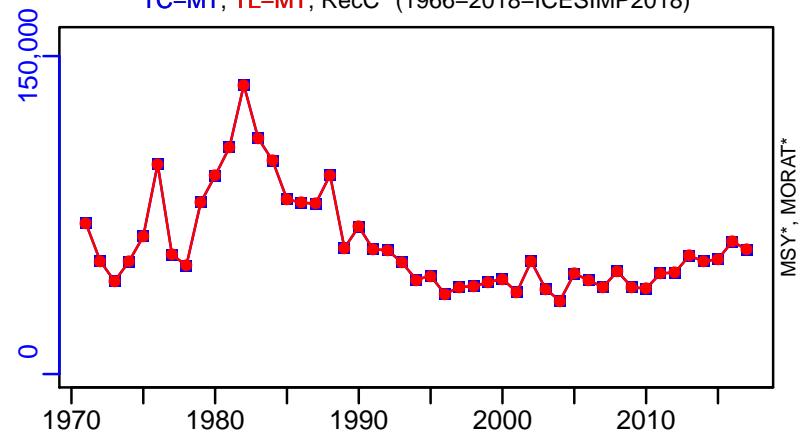


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	* No Data

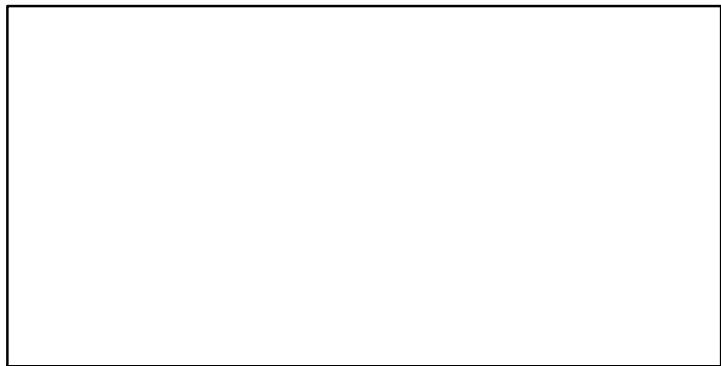
Golden redfish ICES 5–6–12–14 [GOLDREDV–VI–XII–XIV]

TC–MT, TL–MT, RecC\* (1966–2018–ICESIMP2018)

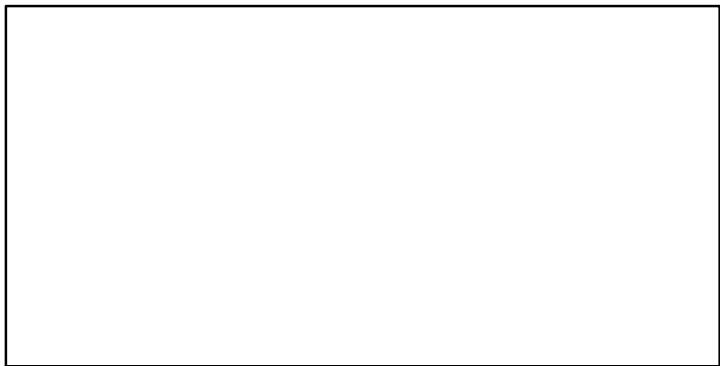
TAC\*, Cpair\*, Cadv\*



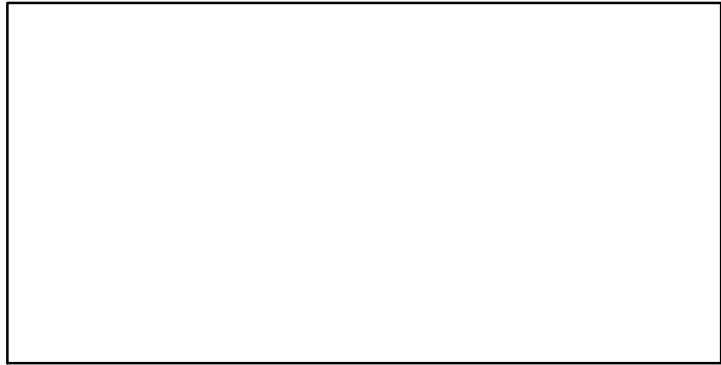
survB\*



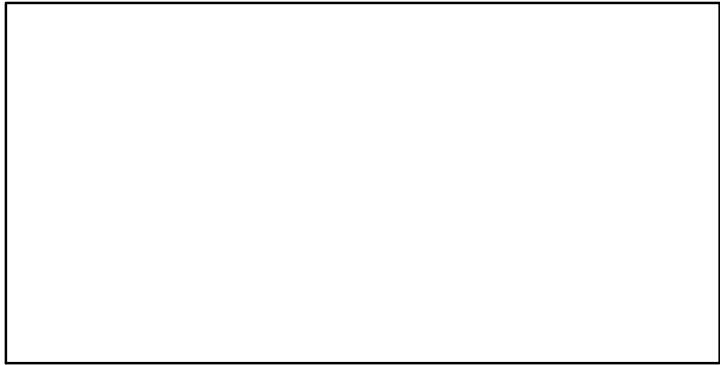
CPUE\*



EFFORT\*



CdivMSY\*



- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>■ 1st listed time series</li> <li>● 2nd listed time series</li> </ul> | <ul style="list-style-type: none"> <li>▲ 3rd listed time series</li> <li>- - - MSY</li> </ul> | <ul style="list-style-type: none"> <li>— MORAT</li> <li>* No Data</li> </ul> |
|--|---|--|

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

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

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

<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2014	15,100		
<b>TL</b>	TL-MT	2018	23,859		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

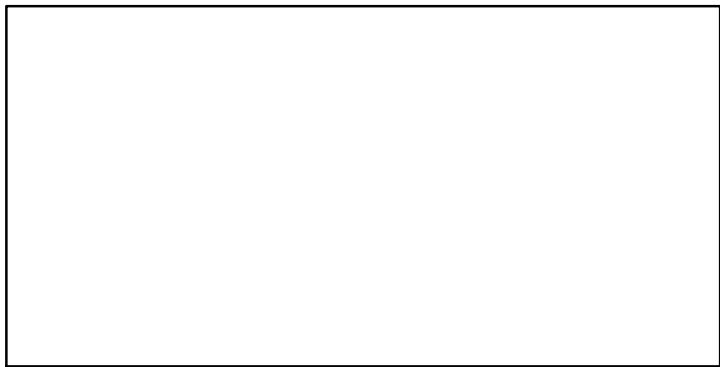
**Spawner Recruit\***

**Production\***

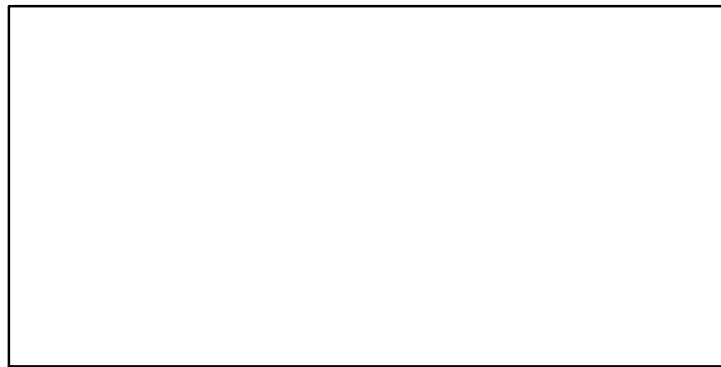
◆ Start Year ♦ End Year \* No Data

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

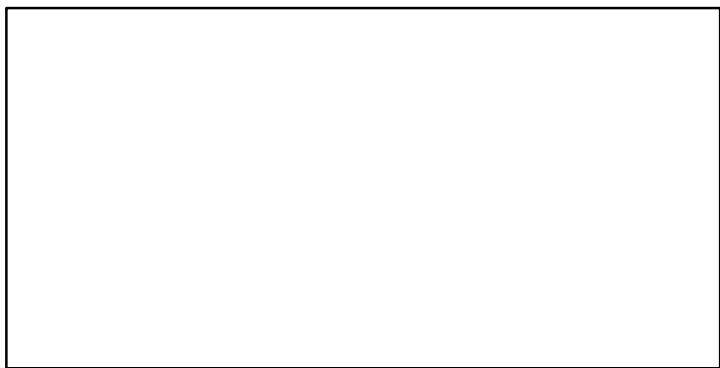
**TB\***



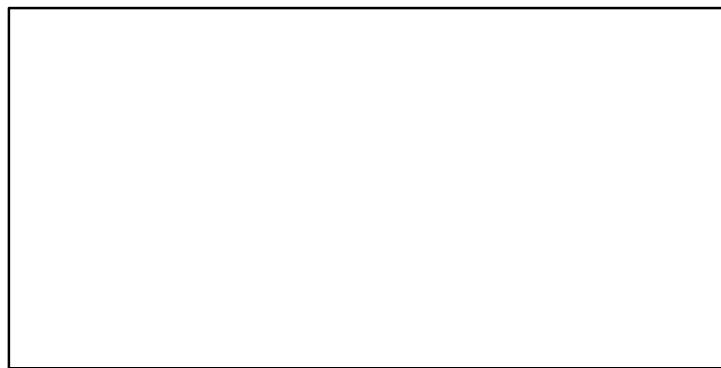
**SSB\***



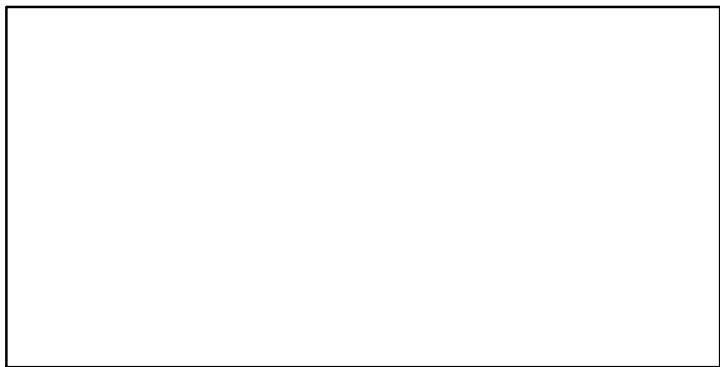
**TN \***



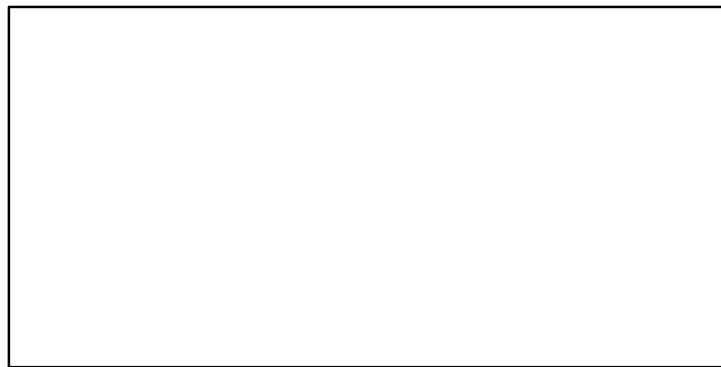
**F\***



**ER\***



**Recruits\***

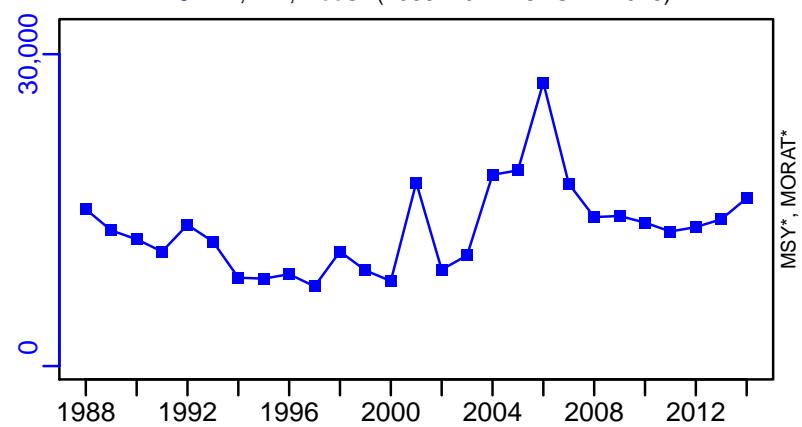


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

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

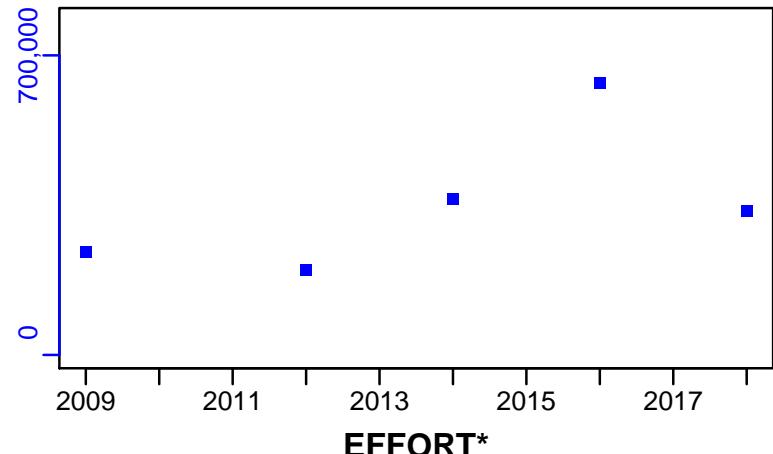
TC–MT, TL\*, RecC\* (1988–2014–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



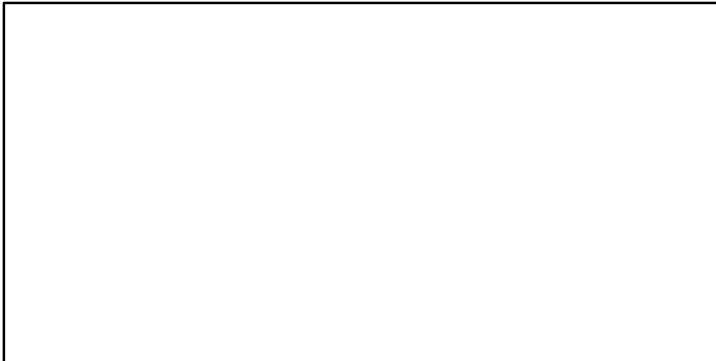
survB–MT (1988–2018–ICESIMP2021)

CPUE\*



EFFORT\*

CdivMSY\*



- |   |   |  |  |
|---|---|--|--|
| <span style="color: blue;">■</span> 1st listed time series<br><span style="color: red;">●</span> 2nd listed time series | <span style="color: green;">▲</span> 3rd listed time series<br><span style="color: purple;">●</span> 2nd listed time series | <span style="color: grey;">—</span> MORAT<br><span style="color: purple;">- - -</span> MSY | <span style="color: black;">*</span> No Data |
|---|---|--|--|

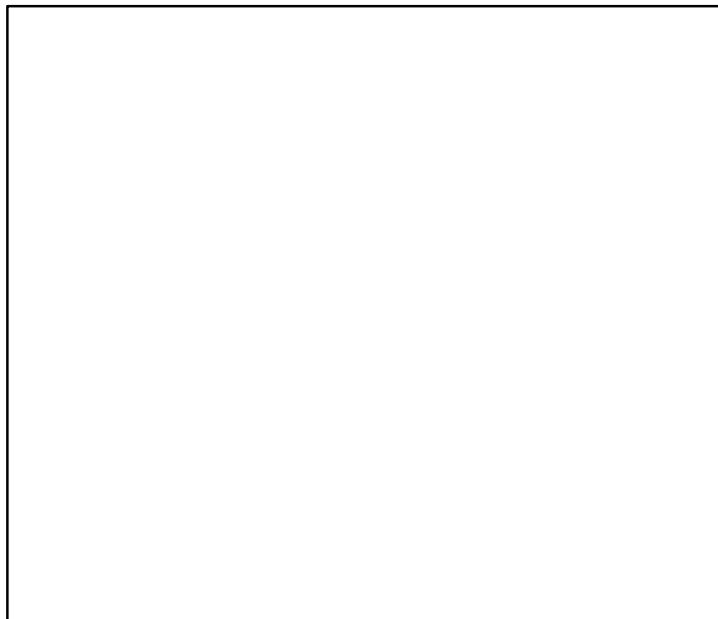
## Greater silver smelt ICES 6b-7-8-9-10-12 [GSSMELTVIb-VII-VIII-IX-X-XII]

<b>Metadata</b>	
<b>Scientific Name</b>	Argentina silus
<b>Current Assess ID</b>	WGDEEP-GSSMELTVIb-VII-VIII-IX-X-XII-1973-2018-ICESIMP2021
<b>Area</b>	ICES 6b-7-8-9-10-12
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2014, 2016, 2018

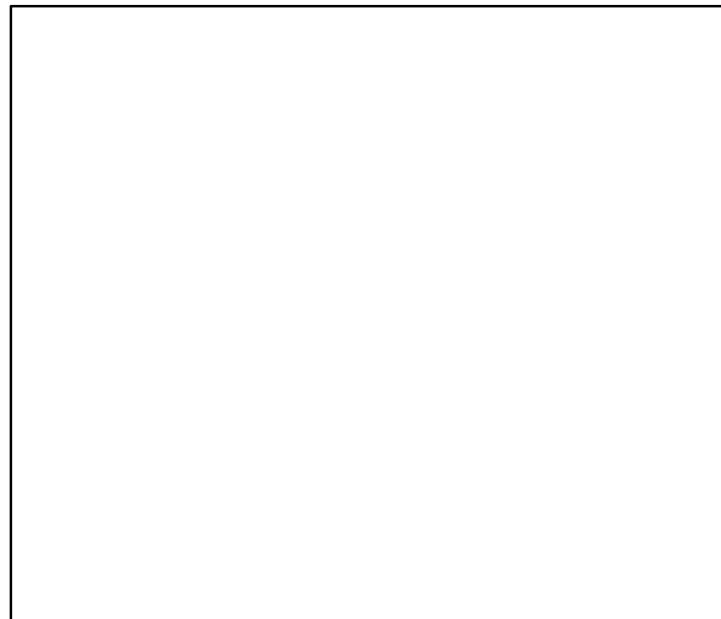
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	140		
<b>TL</b>	TL-MT	2018	36		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

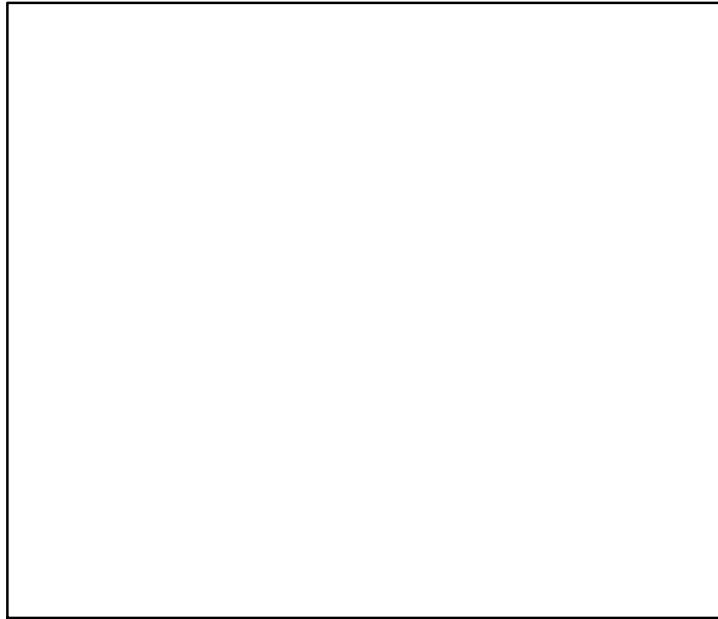
**Kobe MSY\***



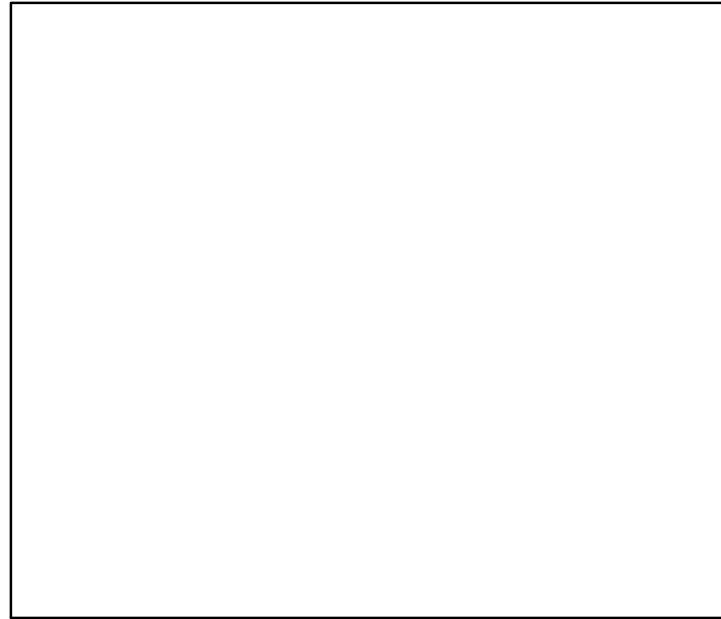
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

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

**TB\***



**SSB\***



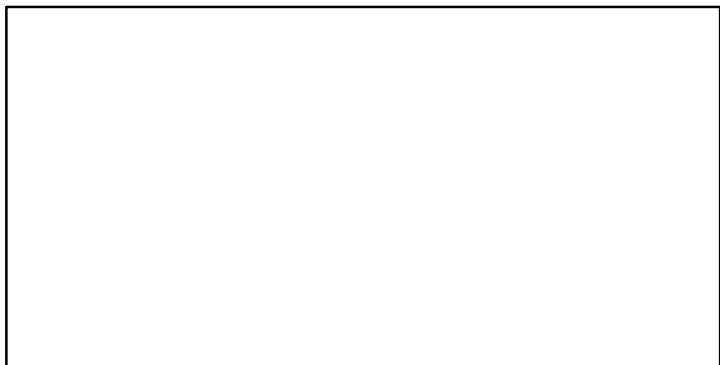
**TN \***



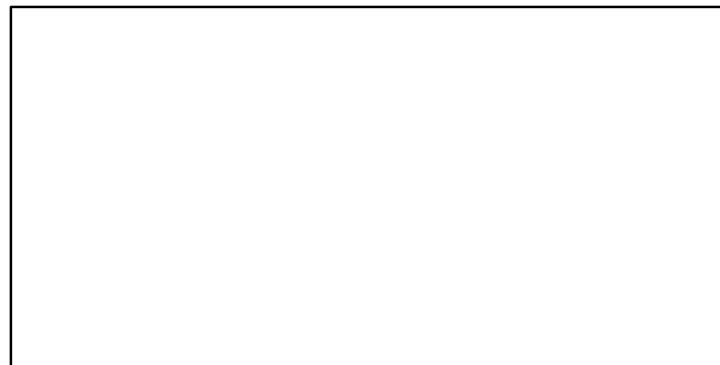
**F\***



**ER\***



**Recruits\***

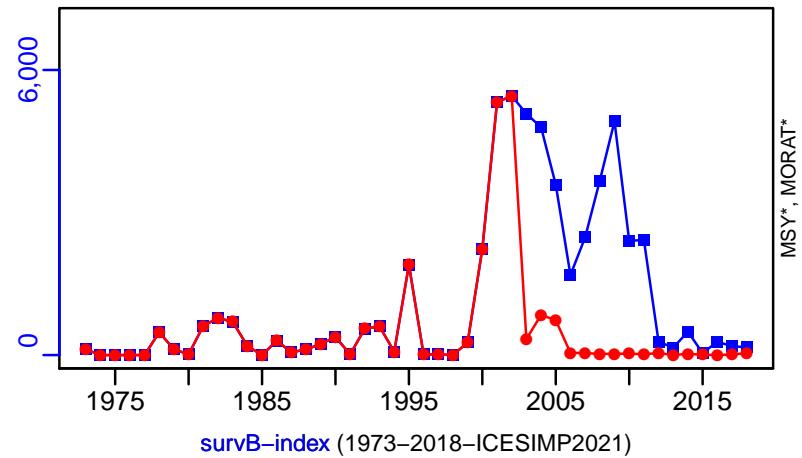


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

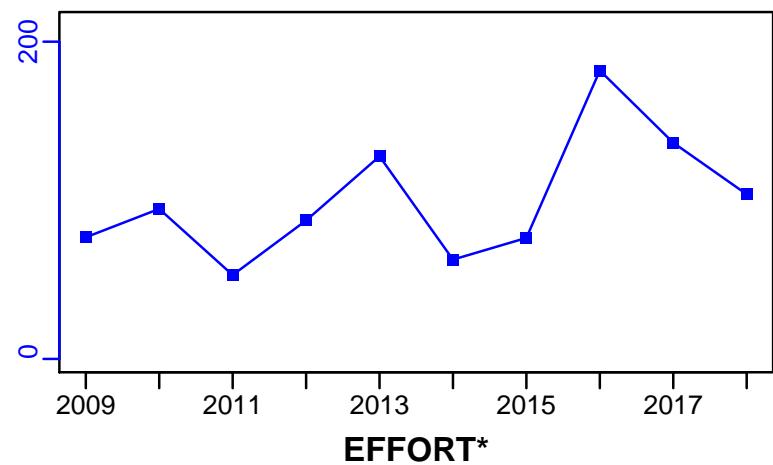
**Greater silver smelt ICES 6b–7–8–9–10–12 [GSSMELTVIb–VII–VIII–IX–X–XII]**

**TC–MT, TL–MT, RecC\*** (1973–2018–ICESIMP2021)

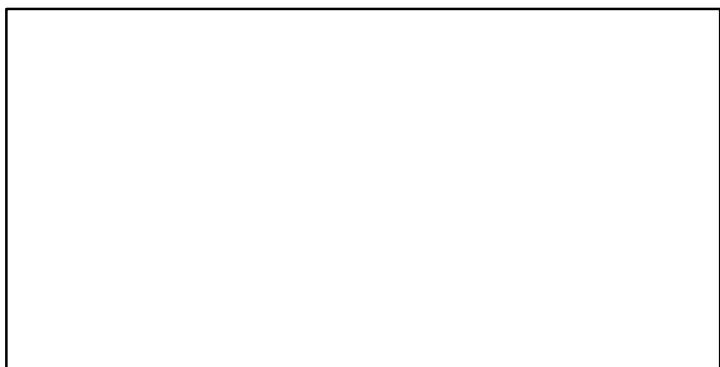
**TAC\*, Cpair\*, Cadv\***



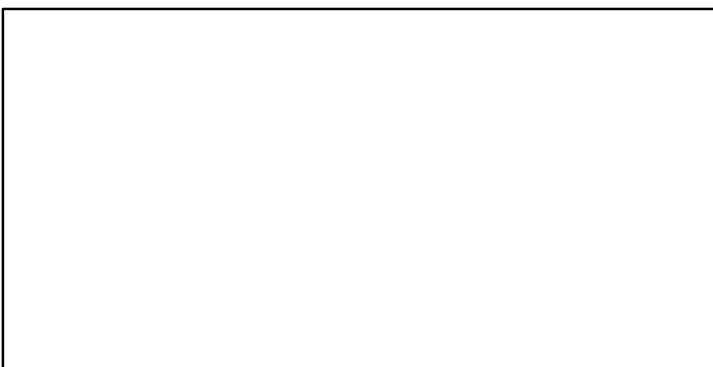
MSY\*, MORAT\*



**CPUE\***



**CdivMSY\***



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

## Haddock Irish Sea [HADIS]

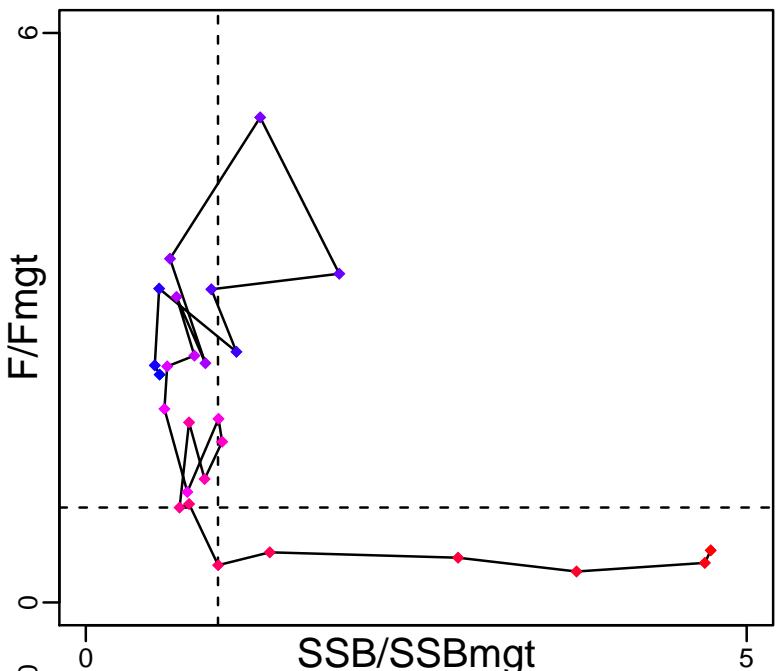
Metadata	
<b>Scientific Name</b>	Melanogrammus aeglefinus
<b>Current Assess ID</b>	WGCSE-HADIS-1993-2019-ICESIMP2021
<b>Area</b>	Irish Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2014, 2015, 2016, 2016, 2017, 2019, 2012

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2017	0.27
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.712
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	4281
<b>Fmgt</b>	Fmgt-1/yr	2019	0.28
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2017	2300
<b>Flim</b>	Flim-1/yr	2017	0.47
<b>ERlim</b>	-	-	-

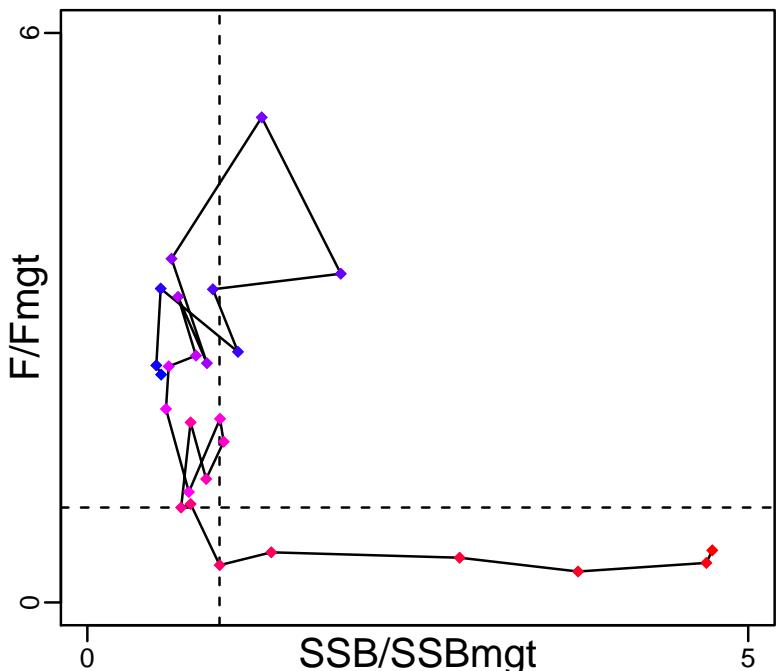
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	28,668	-	-	
<b>SSB</b>	SSB-MT	2019	18,945	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	357,134,000	-	0	
<b>F</b>	F-1/yr	2019	0.154	-	2 to 4	
<b>ER</b>	ER-calc-ratio	2019	0.089	-	-	
<b>TC</b>	TC-MT	2019	2561			
<b>TL</b>	TL-MT	2019	1993			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	0.393			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.125			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	4.425			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.549			
<b>ER/ERmgt</b>	-	-	-			

Haddock Irish Sea [HADIS]

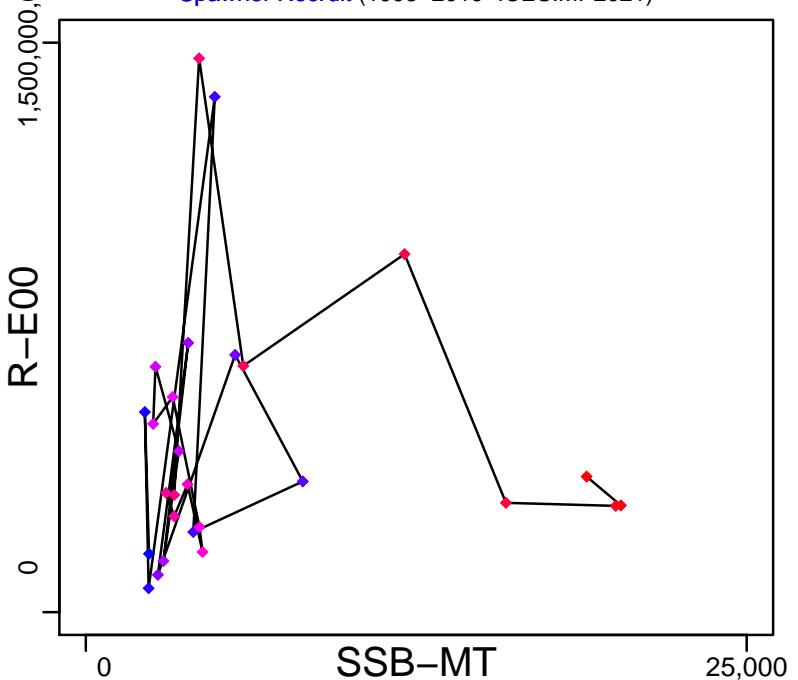
Kobe MSYpref (1993–2019–ICESIMP2021)



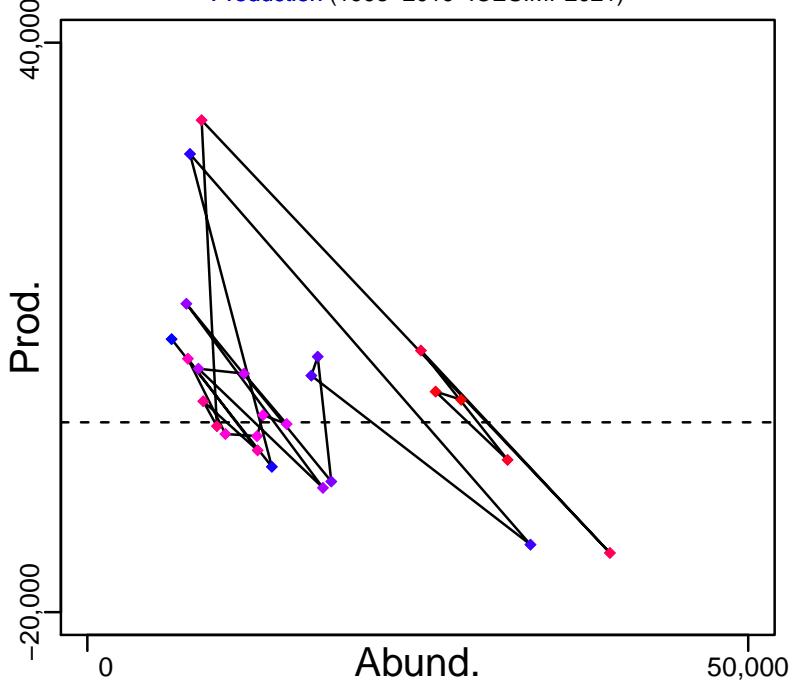
Kobe MGTpref (1993–2019–ICESIMP2021)



Spawner Recruit (1993–2019–ICESIMP2021)



Production (1993–2019–ICESIMP2021)

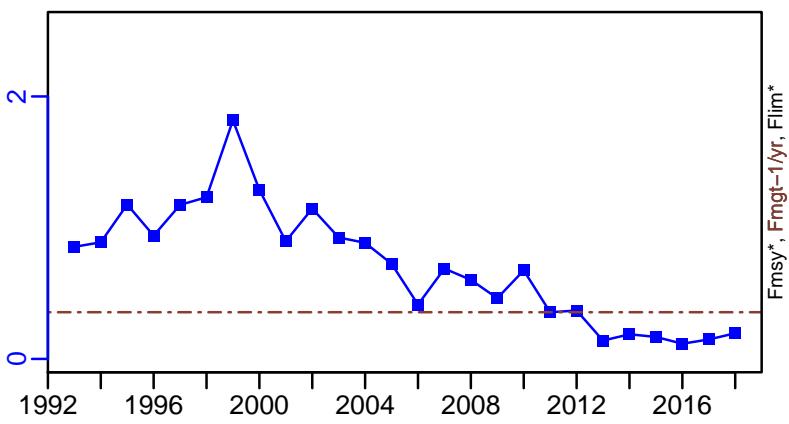
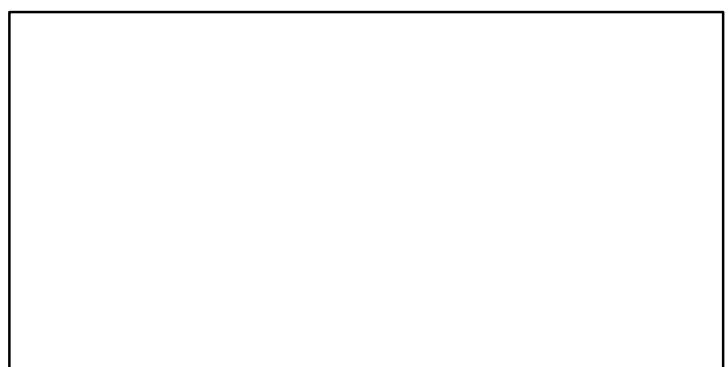
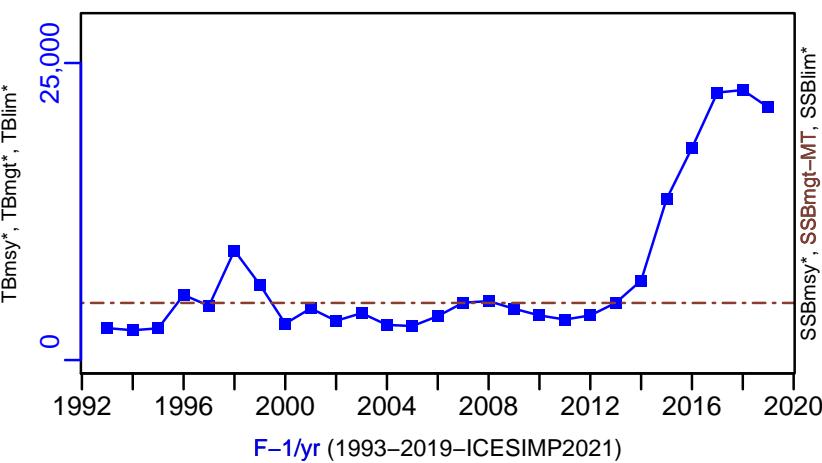
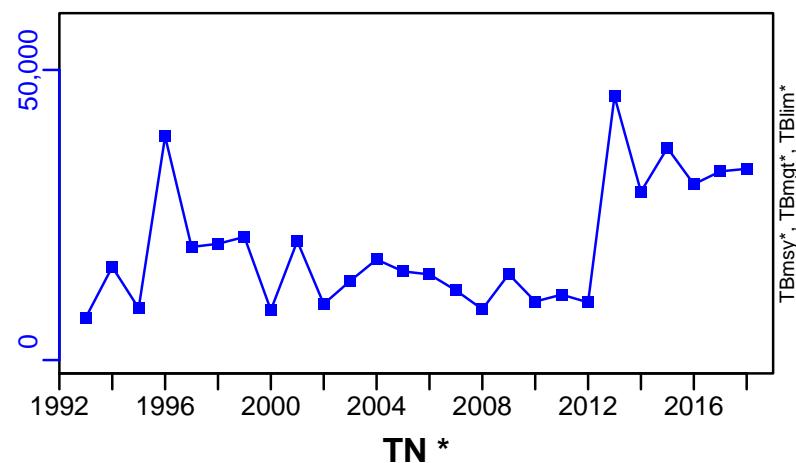


◆ Start Year ◆ End Year \* No Data

### Haddock Irish Sea [HADIS]

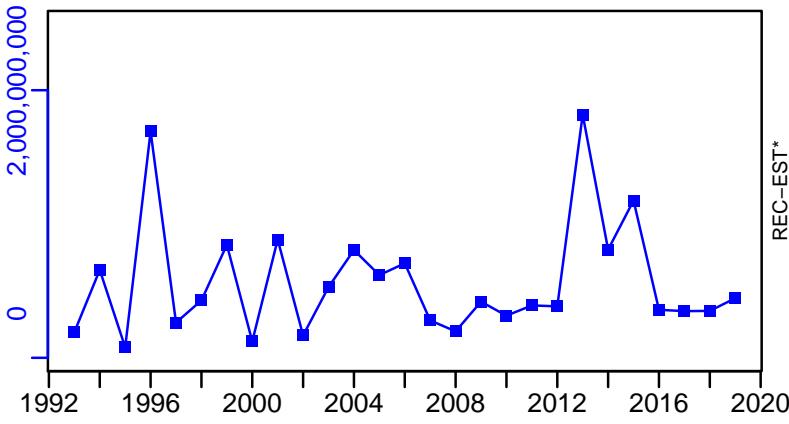
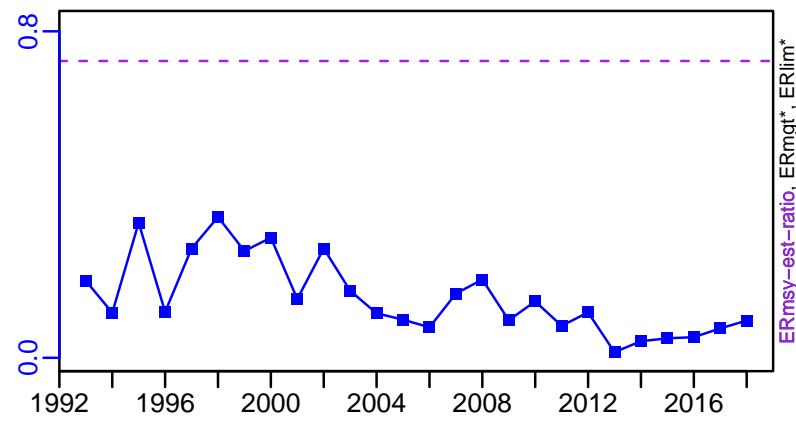
TB-MT (1993–2019–ICESIMP2021)

SSB-MT (1993–2019–ICESIMP2021)



ER-calc-ratio (1993–2019–ICESIMP2021)

R-E00 (1993–2019–ICESIMP2021)

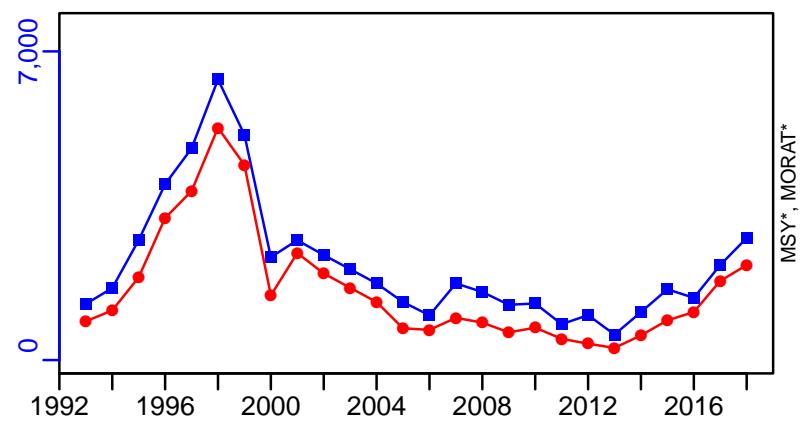


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	* No Data

Haddock Irish Sea [HADIS]

TC-MT, TL-MT, RecC\* (1993–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



survB\*

CPUE\*

EFFORT\*

CdivMSY\*

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

## Haddock ICES 3a-4-6a [HADNS-IIla-Vla]

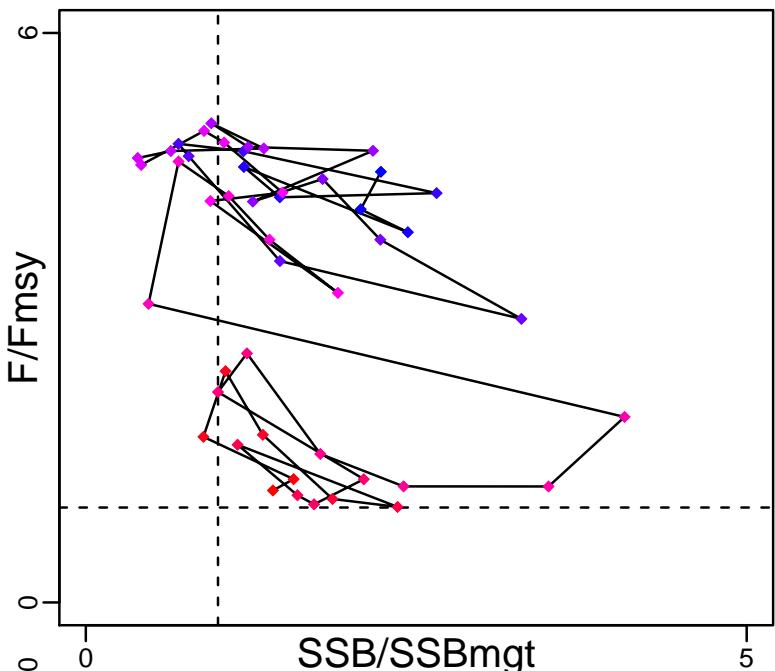
Metadata	
<b>Scientific Name</b>	Melanogrammus aeglefinus
<b>Current Assess ID</b>	WGNSSK-HADNS-IIla-Vla-1972-2019-ICESIMP2021
<b>Area</b>	ICES 3a-4-6a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2014, 2015, 2015, 2016, 2017, 2018, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.19
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.008
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	132,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.19
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	94,000
<b>Flim</b>	Flim-1/yr	2018	0.39
<b>ERlim</b>	-	-	-

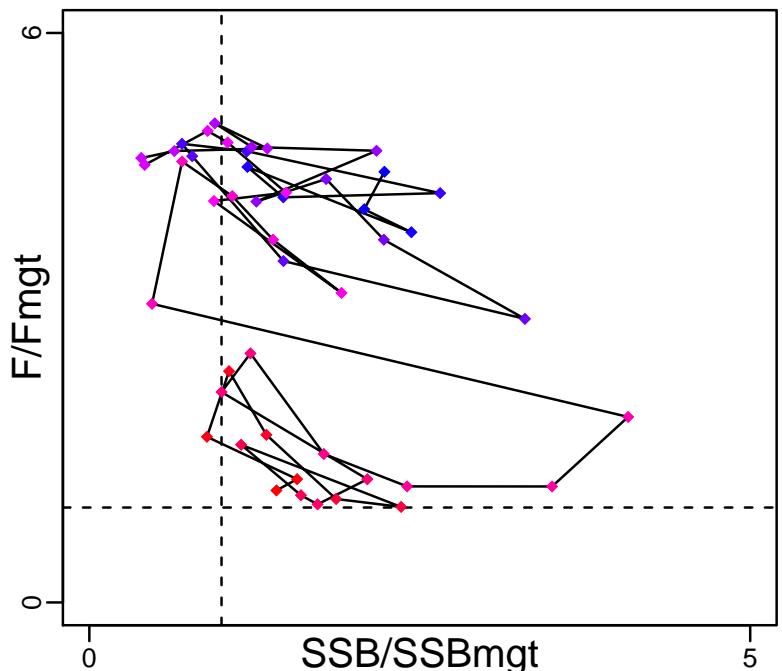
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	509,663	-	-	
<b>SSB</b>	SSB-MT	2019	236,941	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	$2.03 \times 10^{10}$	-	0	
<b>F</b>	F-1/yr	2019	0.224	-	2 to 4	
<b>ER</b>	ER-calc-ratio	2019	0.095	-	-	
<b>TC</b>	TC-MT	2019	39,524			
<b>TL</b>	TL-MT	2019	34,470			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	1.18			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	11.474			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.795			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.18			
<b>ER/ERmgt</b>	-	-	-			

Haddock ICES 3a–4–6a [HADNS–IIIa–VIa]

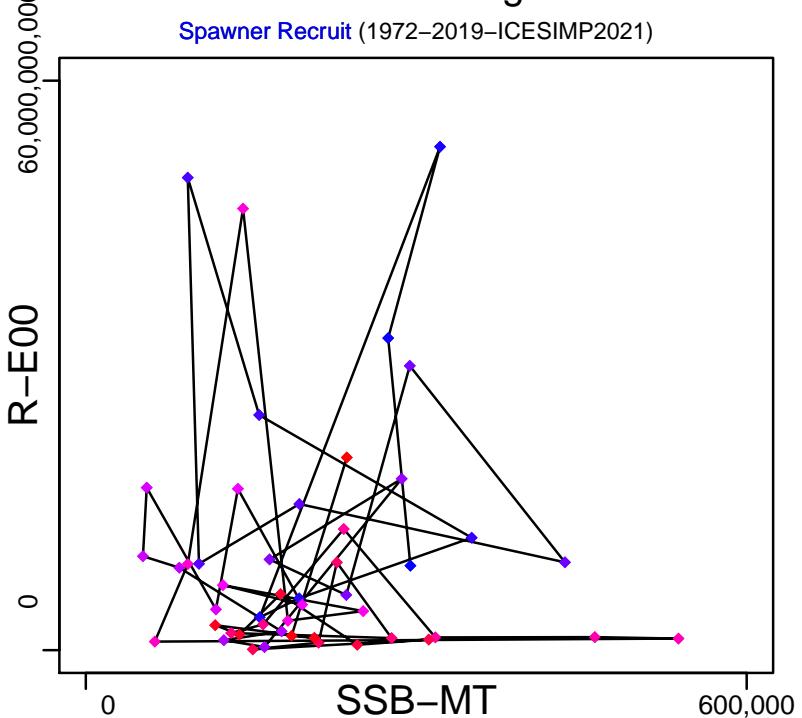
Kobe MSYpref (1972–2019–ICESIMP2021)



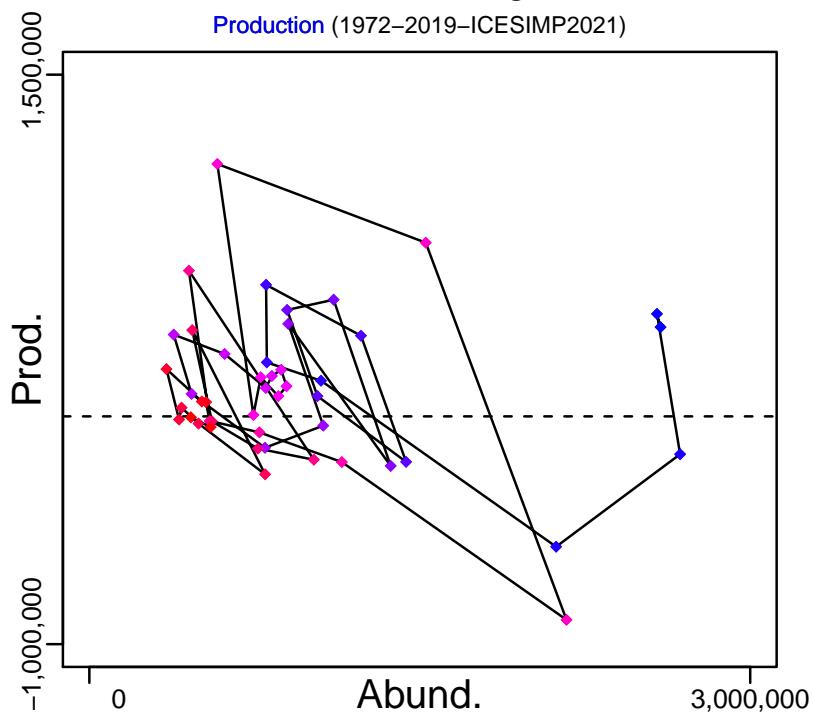
Kobe MGTpref (1972–2019–ICESIMP2021)



Spawner Recruit (1972–2019–ICESIMP2021)



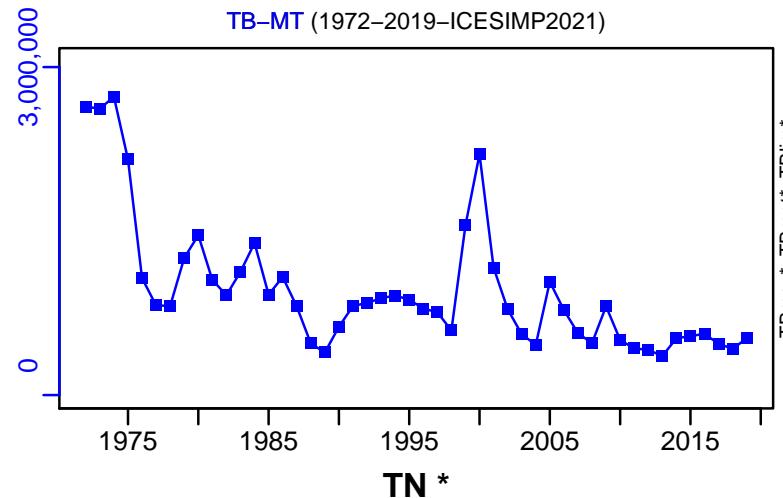
Production (1972–2019–ICESIMP2021)



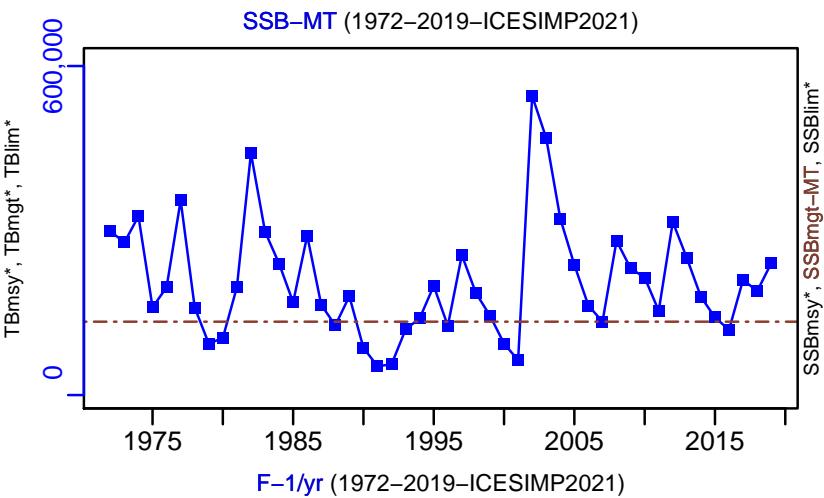
◆ Start Year	◆ End Year	* No Data
--------------	------------	-----------

Haddock ICES 3a–4–6a [HADNS–IIIa–VIa]

TB-MT (1972–2019–ICESIMP2021)



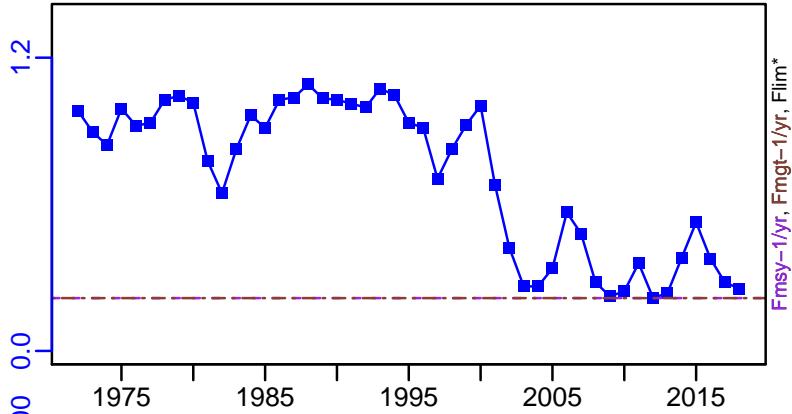
SSB-MT (1972–2019–ICESIMP2021)



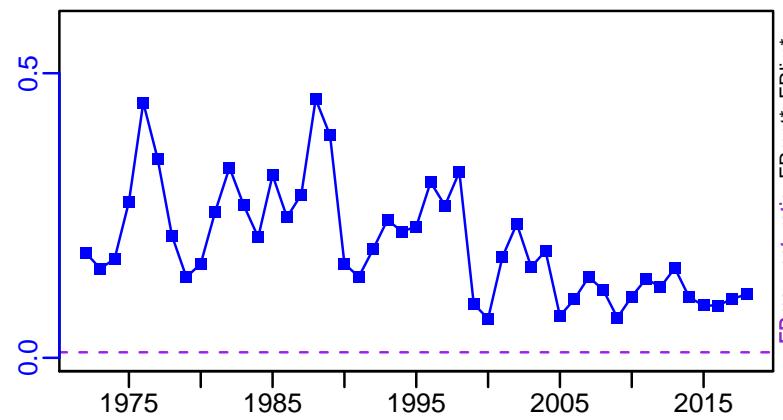
TN \*



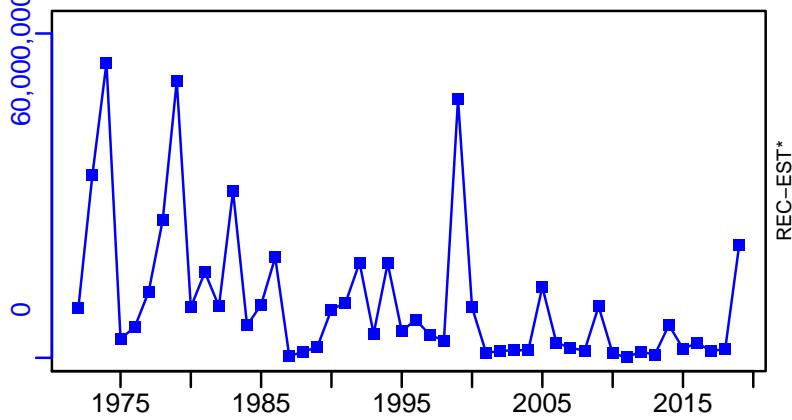
F-1/yr (1972–2019–ICESIMP2021)



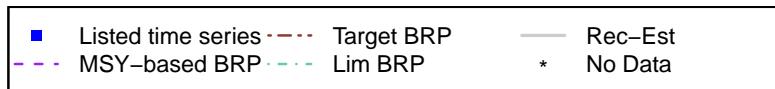
ER-calc-ratio (1972–2019–ICESIMP2021)



R-E00 (1972–2019–ICESIMP2021)



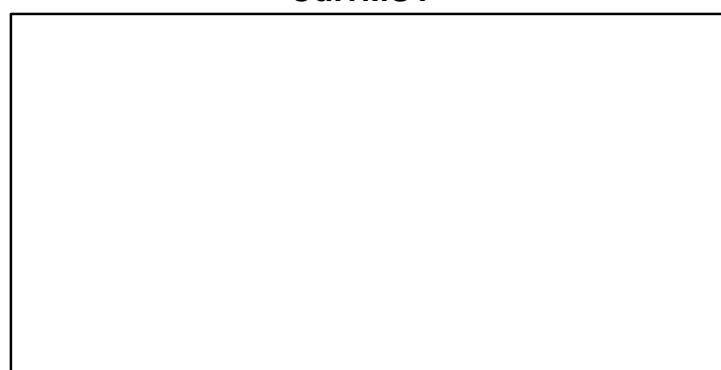
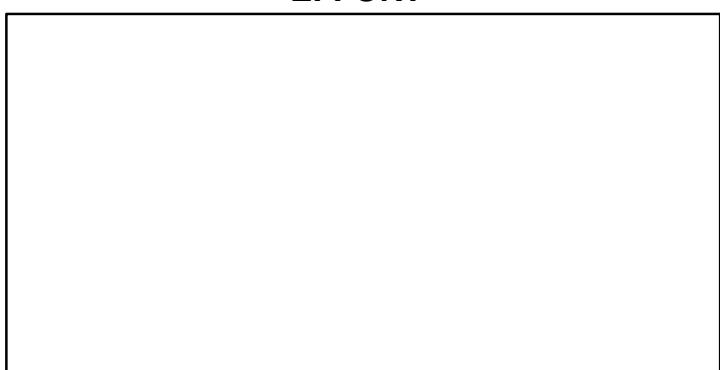
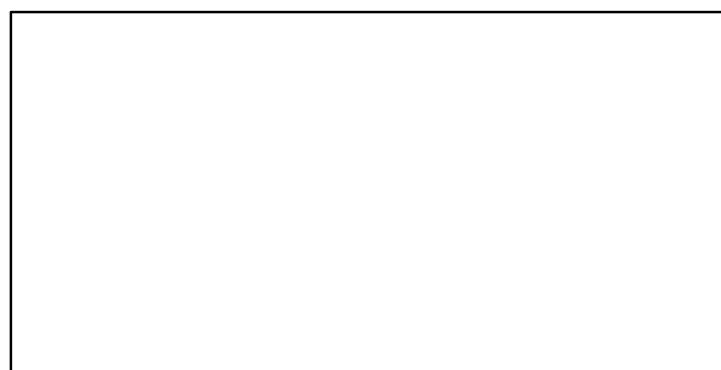
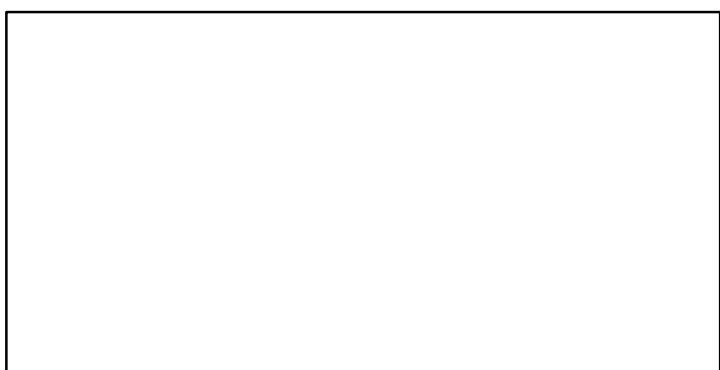
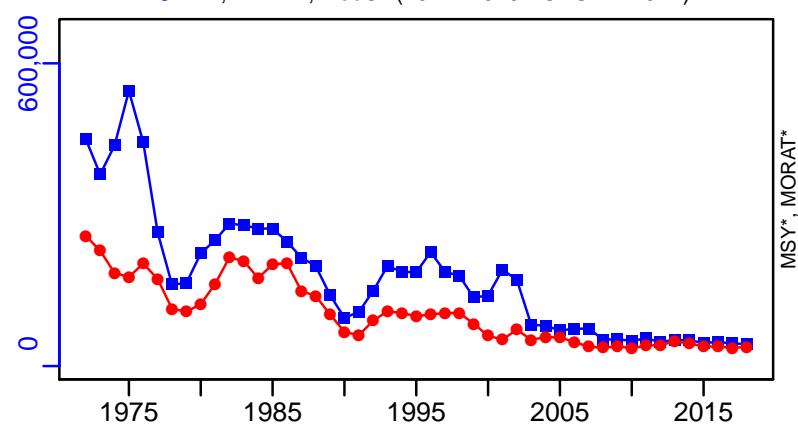
REC-EST\*



Haddock ICES 3a–4–6a [HADNS–IIIa–VIa]

TC–MT, TL–MT, RecC\* (1972–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

## Haddock Rockall Bank [HADROCK]

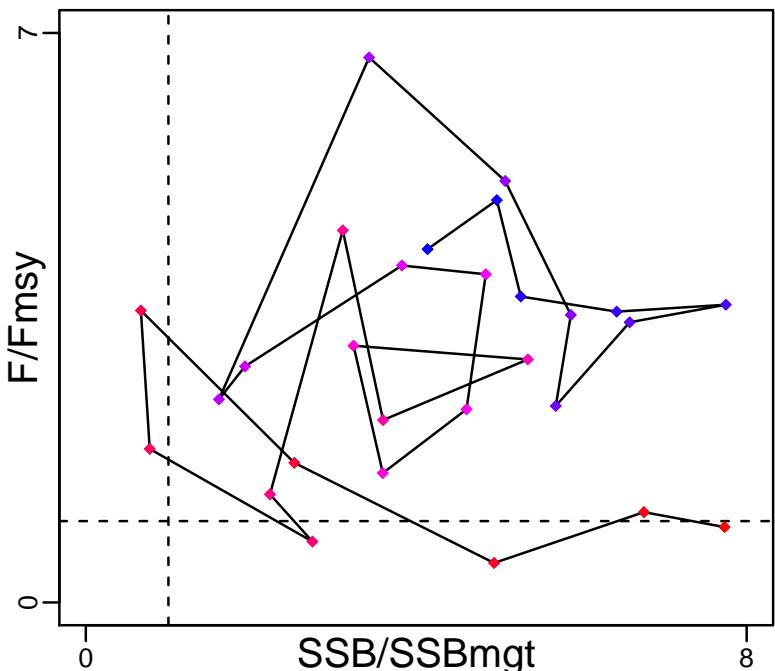
Metadata	
<b>Scientific Name</b>	Melanogrammus aeglefinus
<b>Current Assess ID</b>	WGCSE-HADROCK-1990-2019-ICESIMP2021
<b>Area</b>	Rockall Bank
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2019, 2012

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.168
<b>ERrmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	3712
<b>Fmgt</b>	Fmgt-1/yr	2019	0.168
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2012	9000
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2017	6800
<b>Flim</b>	Flim-1/yr	2017	0.69
<b>ERlim</b>	-	-	-

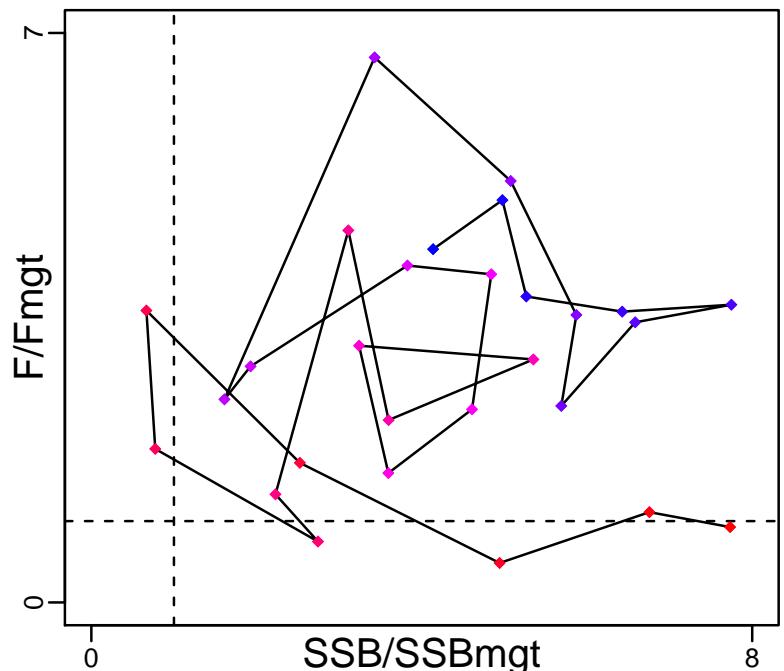
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	58,034	-	-	
<b>SSB</b>	SSB-MT	2019	48,513	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	24,444,000	-	1	
<b>F</b>	F-1/yr	2019	0.156	-	2 to 5	
<b>ER</b>	ER-calc-ratio	2019	0.072	-	-	
<b>TC</b>	TC-MT	2019	3850			
<b>TL</b>	TL-MT	2019	3850			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.926			
<b>ER/ERrmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	13.069			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.926			
<b>ER/ERmgt</b>	-	-	-			

### Haddock Rockall Bank [HADROCK]

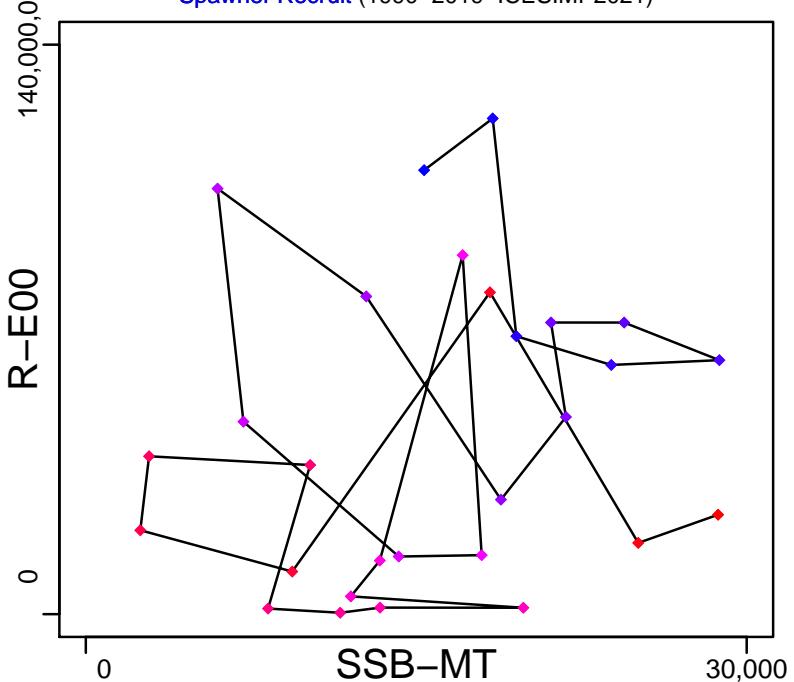
Kobe MSYpref (1990–2019–ICESIMP2021)



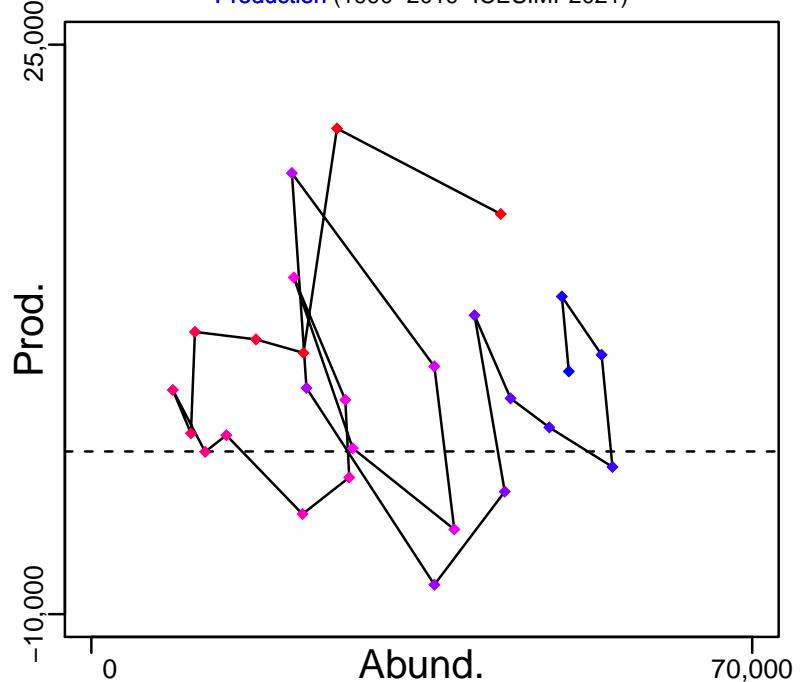
Kobe MGTpref (1990–2019–ICESIMP2021)



Spawner Recruit (1990–2019–ICESIMP2021)



Production (1990–2019–ICESIMP2021)

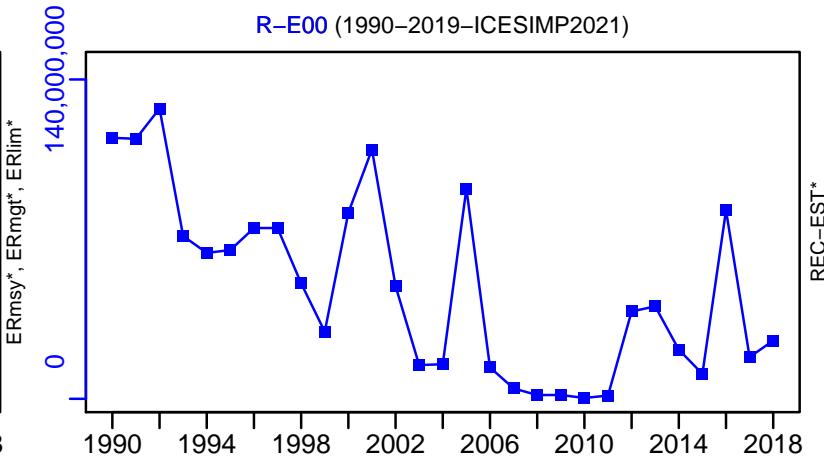
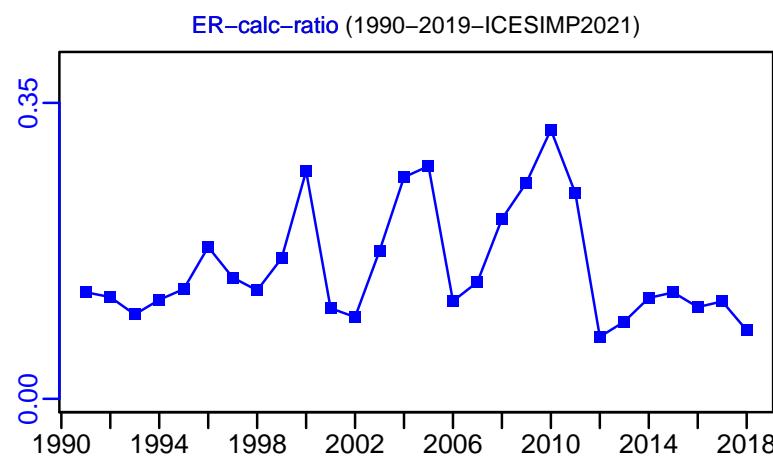
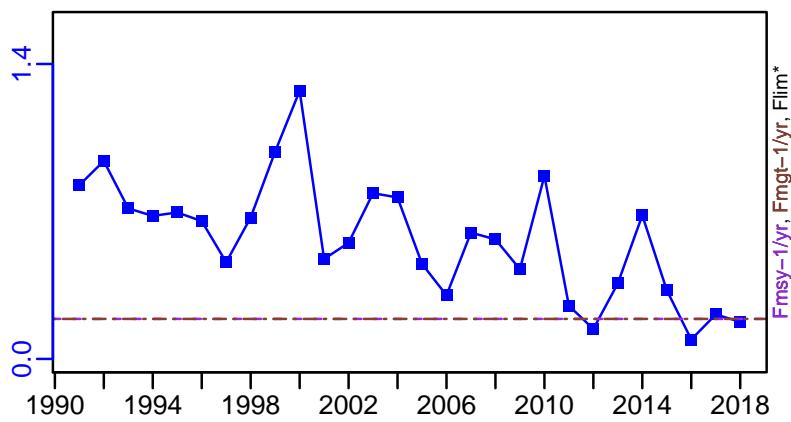
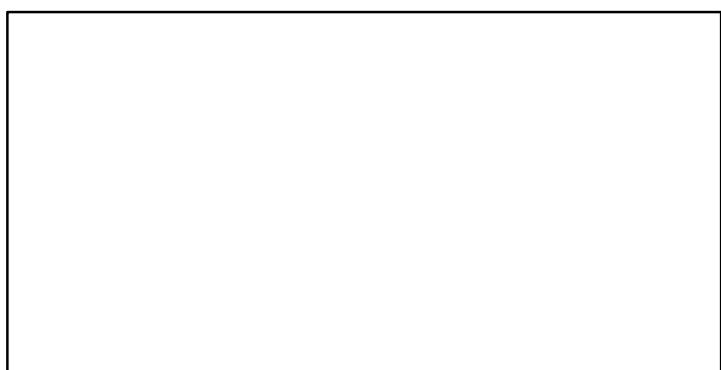
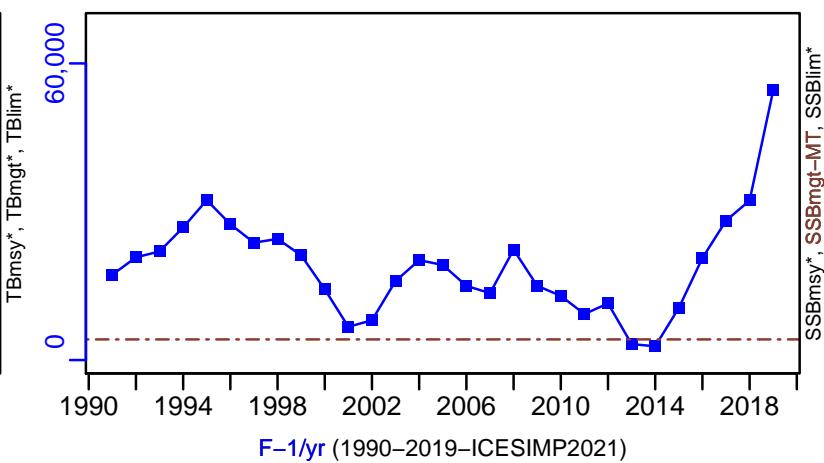
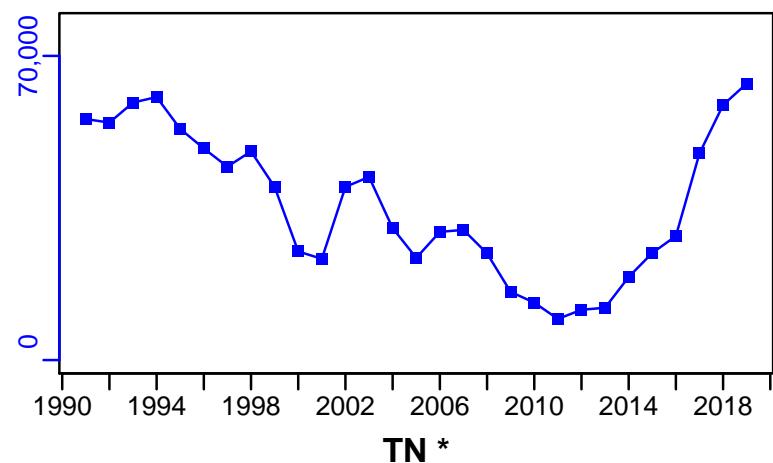


◆ Start Year ◆ End Year \* No Data

### Haddock Rockall Bank [HADROCK]

TB-MT (1990–2019–ICESIMP2021)

SSB-MT (1990–2019–ICESIMP2021)

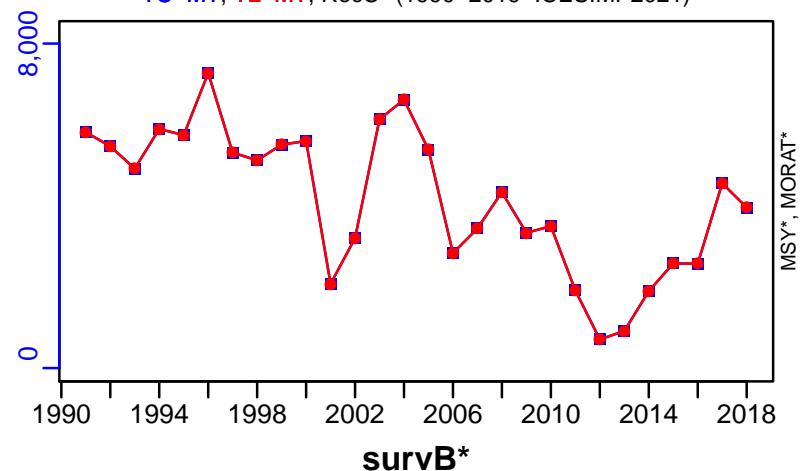


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	--- Lim BRP	* No Data

Haddock Rockall Bank [HADROCK]

TC-MT, TL-MT, RecC\* (1990–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



MSY\*, MORAT\*

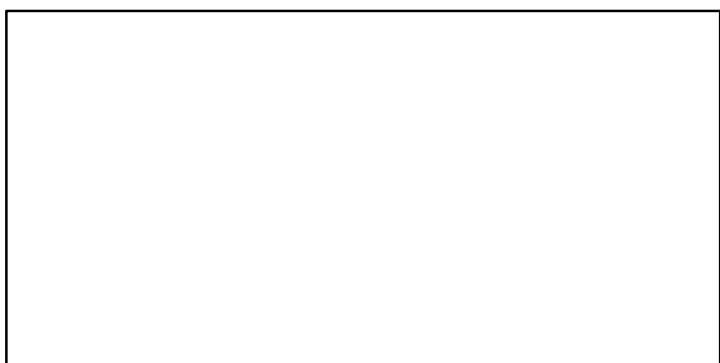
survB\*



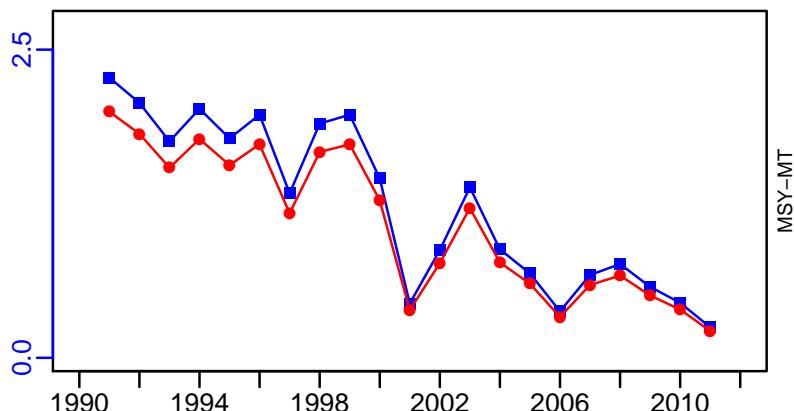
CPUE\*



EFFORT\*



TL-MT/MSY-MT, CdiveMEANC-ratio, (1990–2012–CHING)



MSY-MT



## Haddock ICES 7b-k [HADVIIb-k]

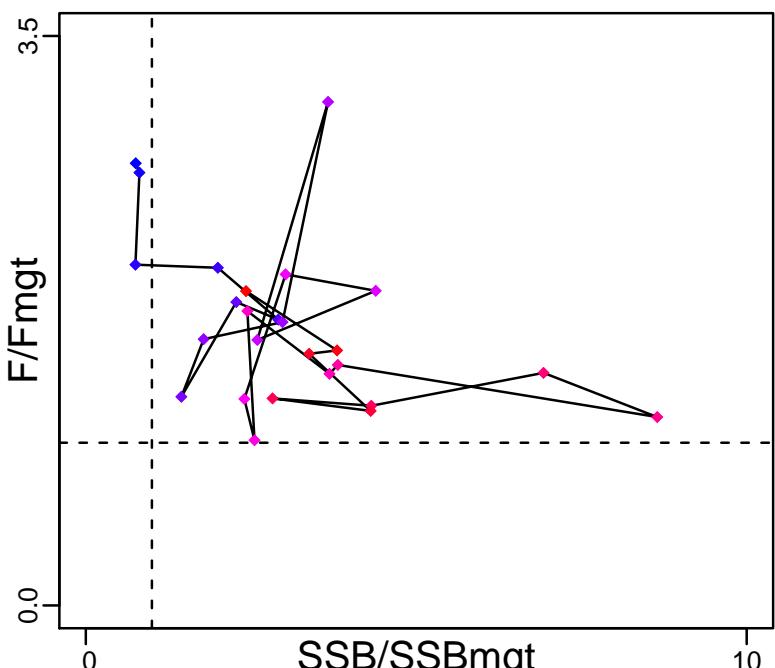
Metadata	
<b>Scientific Name</b>	Melanogrammus aeglefinus
<b>Current Assess ID</b>	WGCSE-HADVIIb-k-1993-2019-ICESIMP2021
<b>Area</b>	ICES 7b-k
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2019, 2012

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2012	65,742
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2017	0.4
<b>ERmsy</b>	ERmsy-est-ratio	2012	0.306
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	10,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.4
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2012	20,137
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2017	6700
<b>Flim</b>	Flim-1/yr	2017	1.41
<b>ERlim</b>	-	-	-

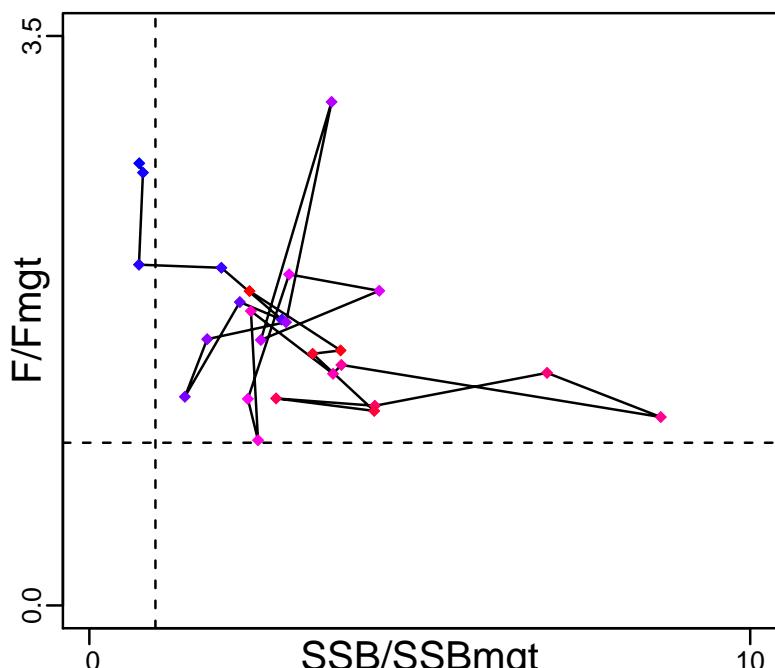
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	74,659	-	-	
<b>SSB</b>	SSB-MT	2019	14,205	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	252,713,000	-	0	
<b>F</b>	F-1/yr	2019	0.773	-	3 to 5	
<b>ER</b>	ER-calc-ratio	2019	0.168	-	-	
<b>TC</b>	TC-MT	2019	12,546			
<b>TL</b>	TL-MT	2019	7109			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	1.339			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	1.685			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-est-ratio	2012	0.996			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.421			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.932			
<b>ER/ERmgt</b>	-	-	-			

Haddock ICES 7b–k [HADVIIb–k]

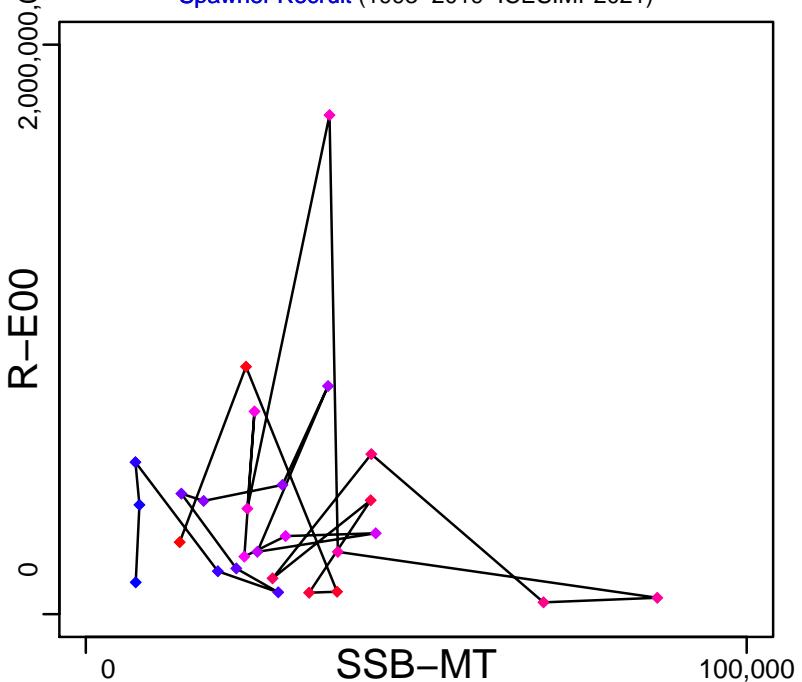
Kobe MSYpref (1993–2019–ICESIMP2021)



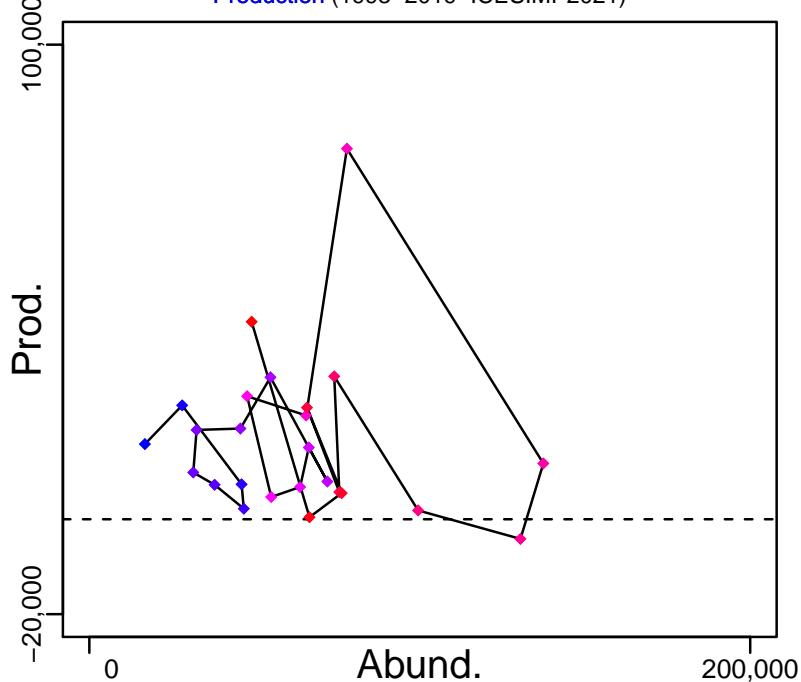
Kobe MGTpref (1993–2019–ICESIMP2021)



Spawner Recruit (1993–2019–ICESIMP2021)



Production (1993–2019–ICESIMP2021)

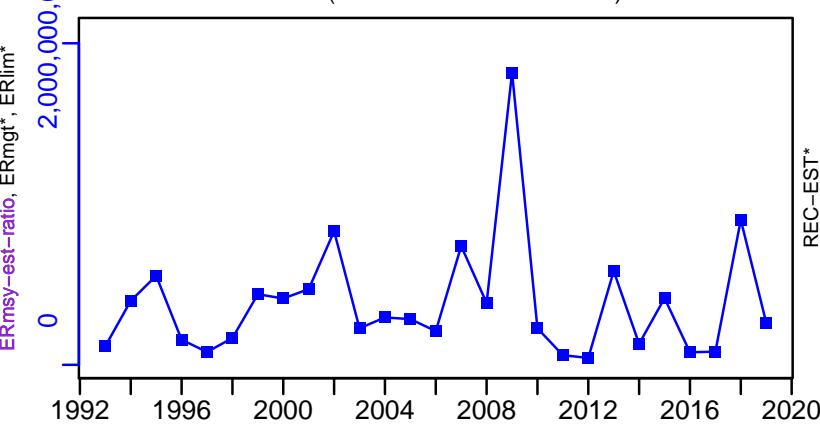
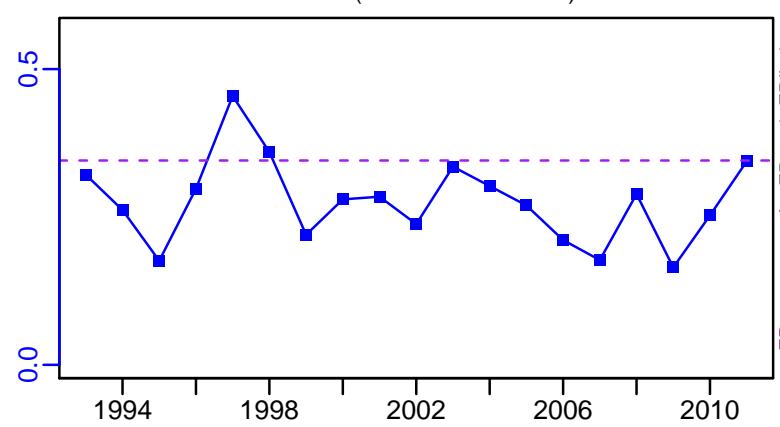
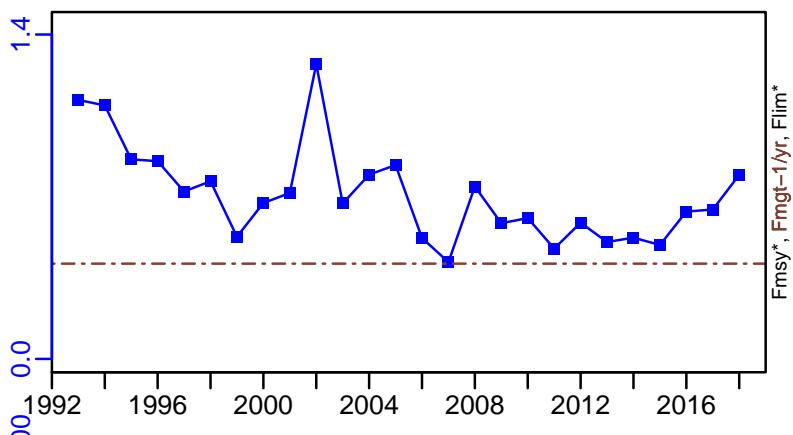
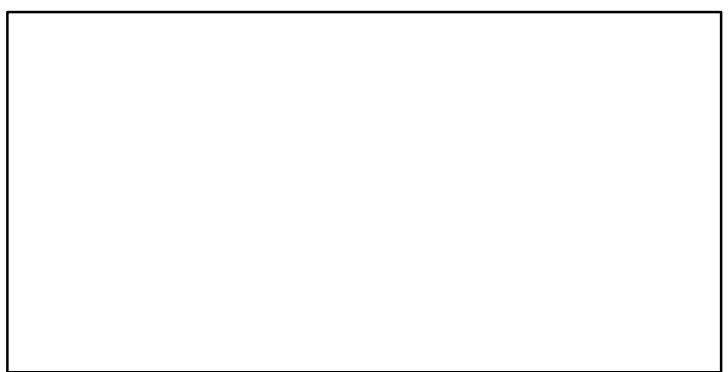
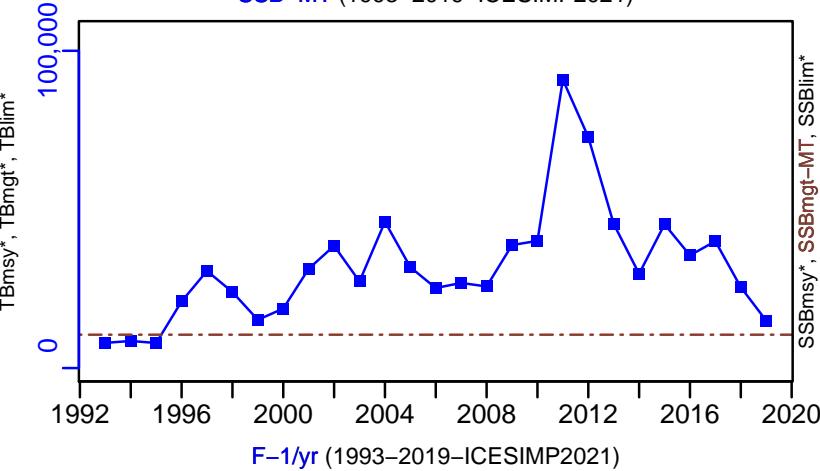
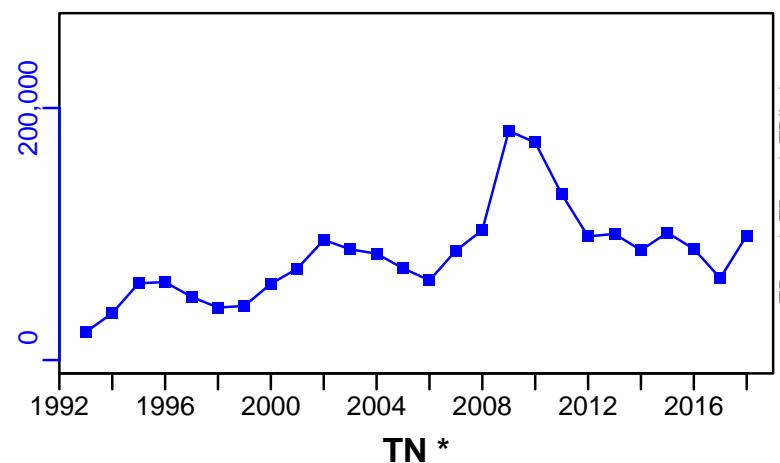


◆ Start Year	◆ End Year	*	No Data
--------------	------------	---	---------

### Haddock ICES 7b–k [HADVIIb–k]

TB-MT (1993–2019–ICESIMP2021)

SSB-MT (1993–2019–ICESIMP2021)

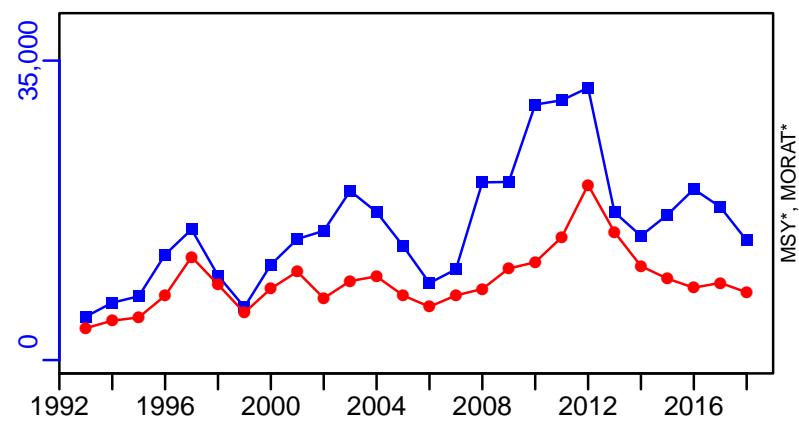


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

Haddock ICES 7b–k [HADVIIb–k]

TC–MT, TL–MT, RecC\* (1993–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



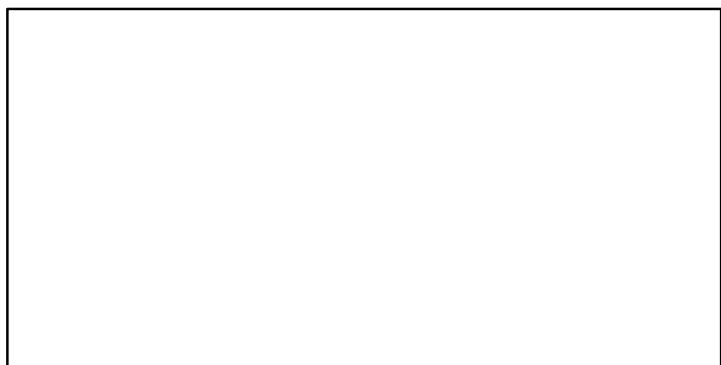
survB\*



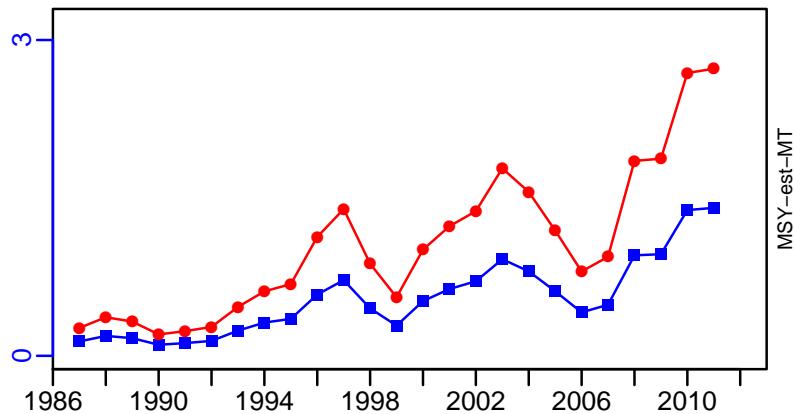
CPUE\*



EFFORT\*



TC–MT/MSY–est–MT, CdivMEANC–ratio, (1987–2012–CHING)



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

## Hake ICES 3a-4-6-7-8abd [HAKENRTN]

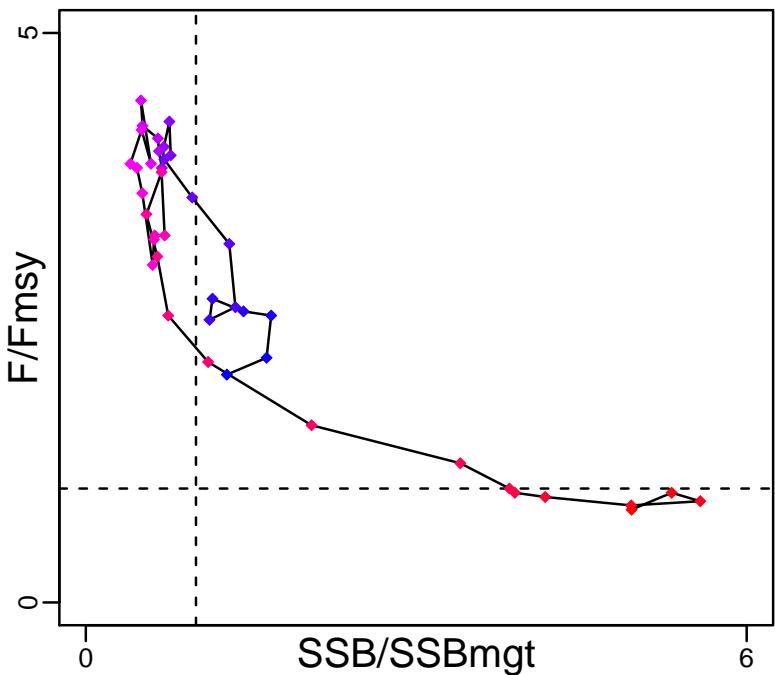
Metadata	
<b>Scientific Name</b>	Merluccius merluccius
<b>Current Assess ID</b>	WGBIE-HAKENRTN-1978-2019-ICESIMP2021
<b>Area</b>	ICES 3a-4-6-7-8abd
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2013	271,388
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.27
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.491
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	56,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.27
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2013	106,752
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	32,000
<b>Flim</b>	Flim-1/yr	2018	0.87
<b>ERlim</b>	-	-	-

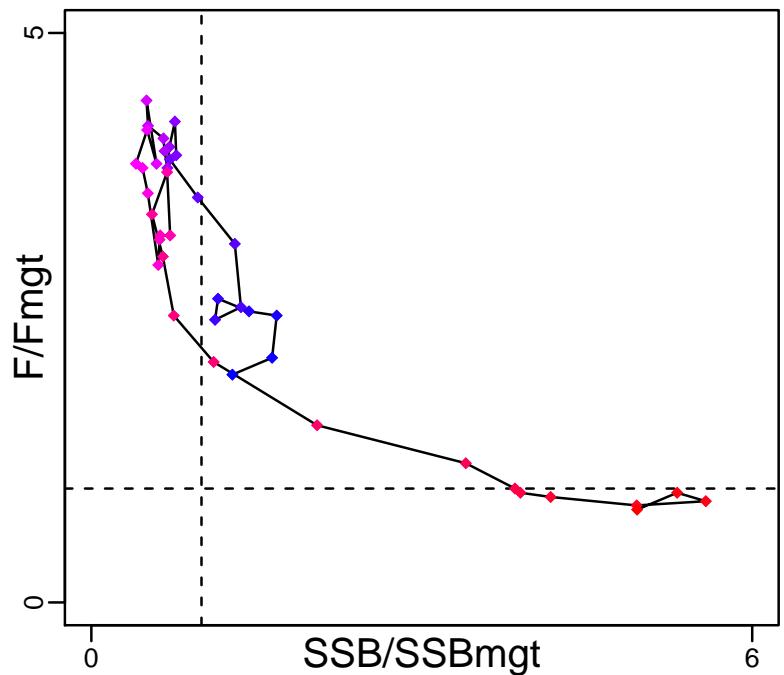
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	339,643	-	-	
<b>SSB</b>	SSB-MT	2019	285,371	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	310,754,000	-	0	
<b>F</b>	F-1/yr	2019	0.22	-	-	
<b>ER</b>	ER-calc-ratio	2019	0.283	-	-	
<b>TC</b>	TC-MT	2019	96,188			
<b>TL</b>	TL-MT	2019	89,695			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2013	1.135			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.815			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.577			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	5.096			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.815			
<b>ER/ERmgt</b>	-	-	-			

Hake ICES 3a–4–6–7–8abd [HAKENRTN]

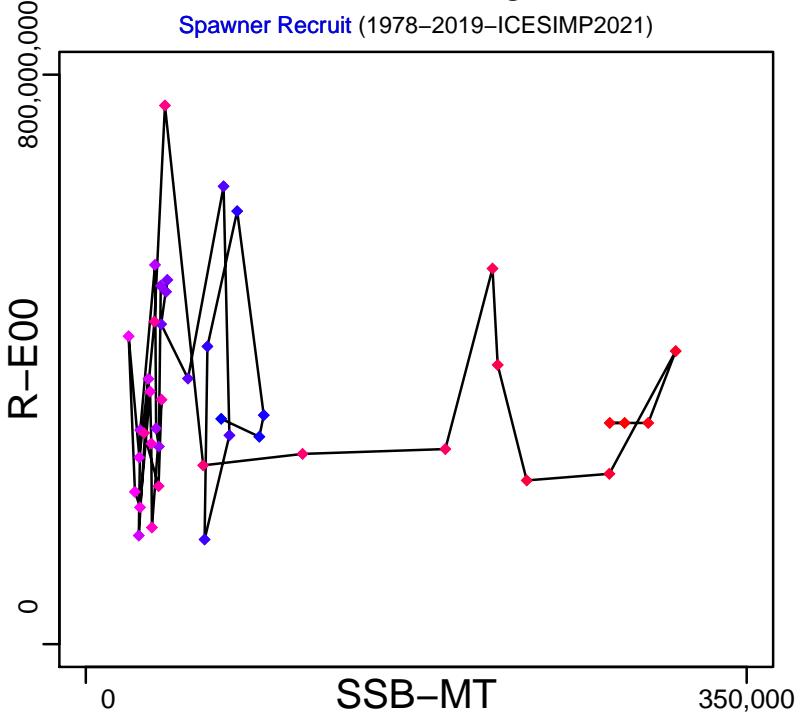
Kobe MSYpref (1978–2019–ICESIMP2021)



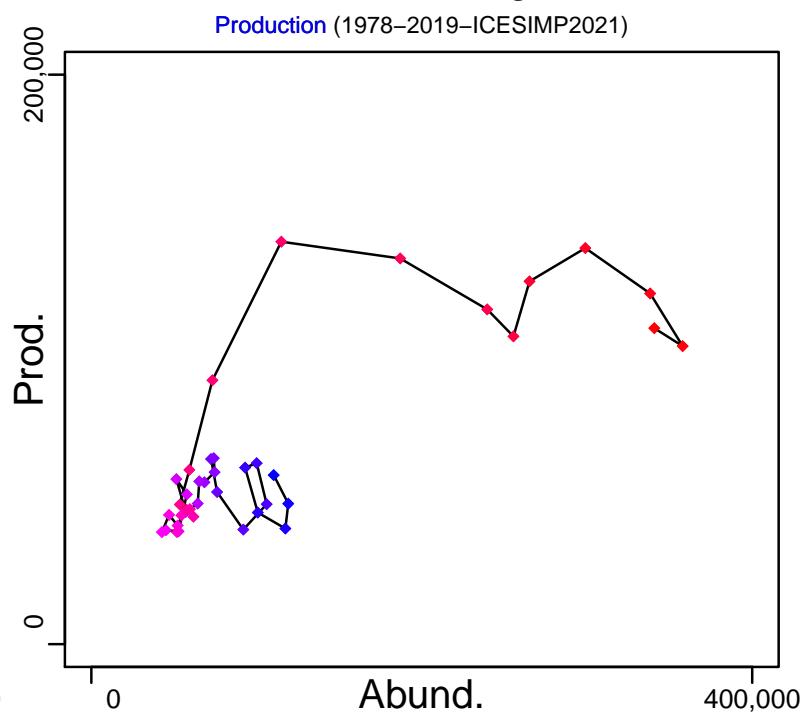
Kobe MGTpref (1978–2019–ICESIMP2021)



Spawner Recruit (1978–2019–ICESIMP2021)



Production (1978–2019–ICESIMP2021)

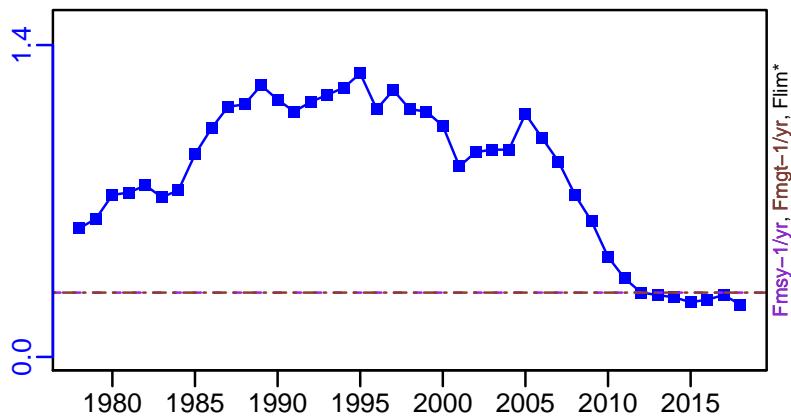
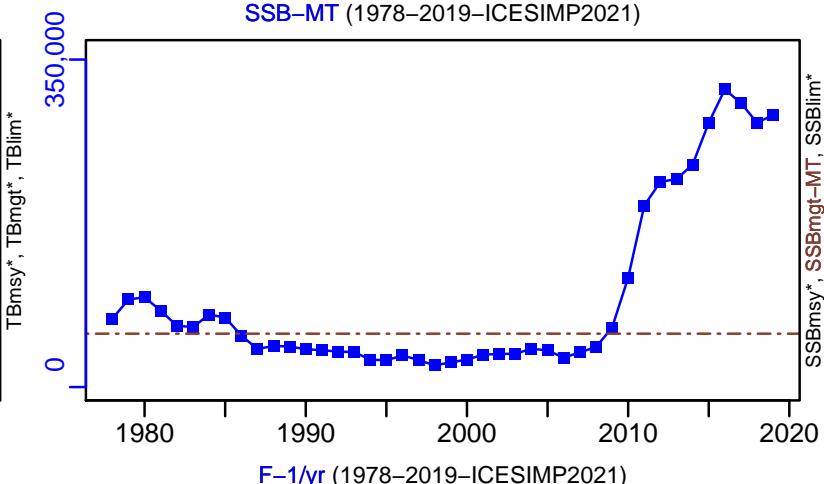
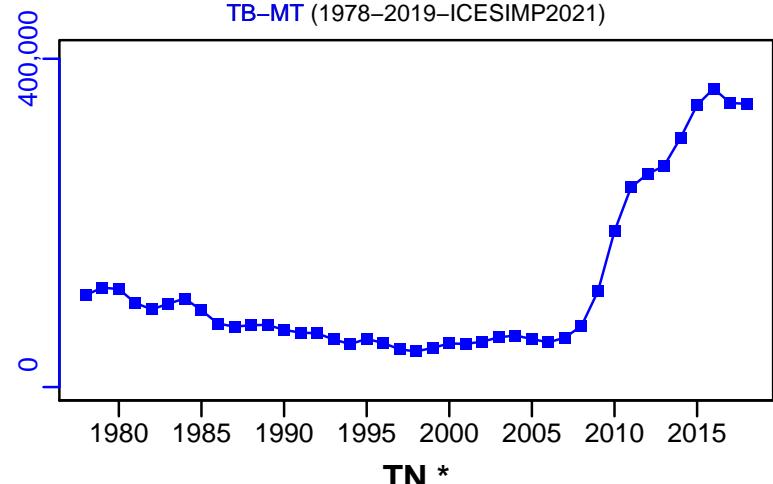


◆ Start Year	◆ End Year	*	No Data
--------------	------------	---	---------

Hake ICES 3a–4–6–7–8abd [HAKENRTN]

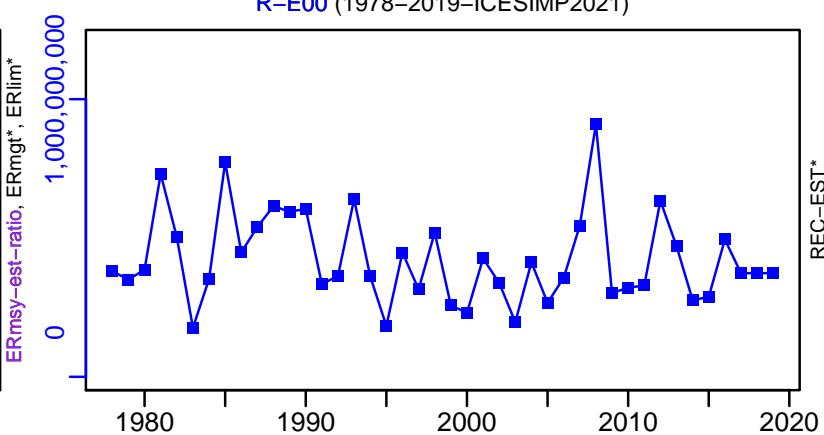
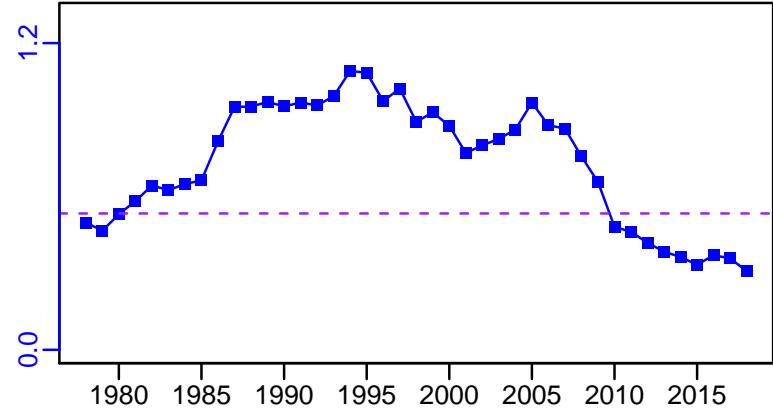
TB-MT (1978–2019–ICESIMP2021)

SSB-MT (1978–2019–ICESIMP2021)



ER-calc-ratio (1978–2019–ICESIMP2021)

R-E00 (1978–2019–ICESIMP2021)

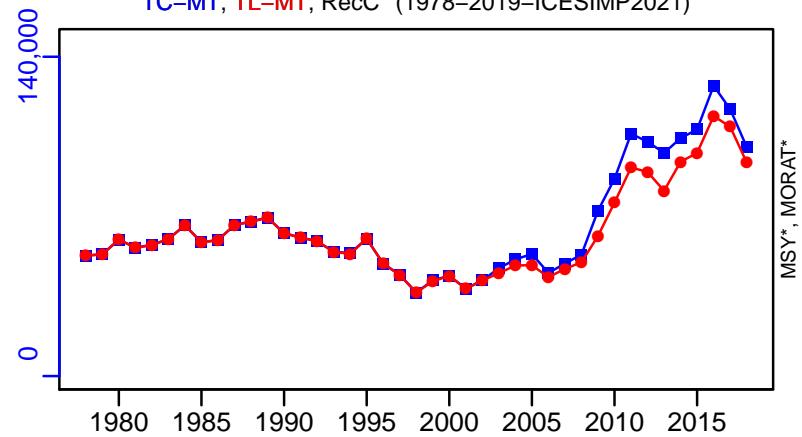


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

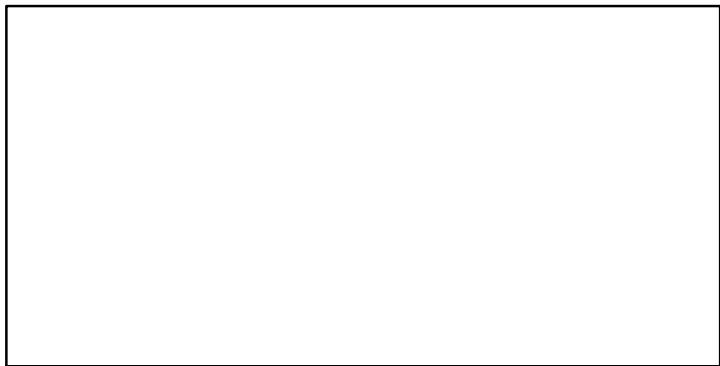
Hake ICES 3a–4–6–7–8abd [HAKENRTN]

TC-MT, TL-MT, RecC\* (1978–2019–ICESIMP2021)

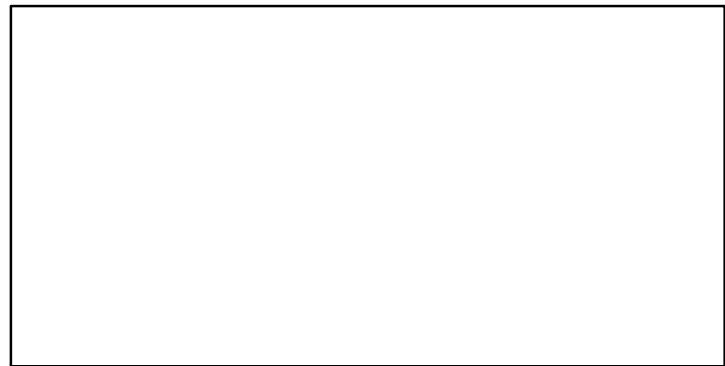
TAC\*, Cpair\*, Cadv\*



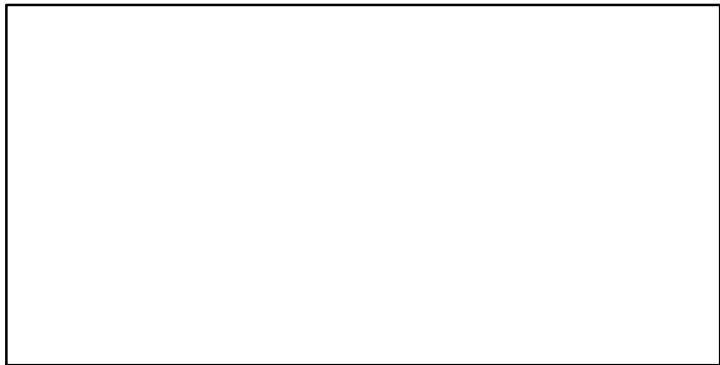
survB\*



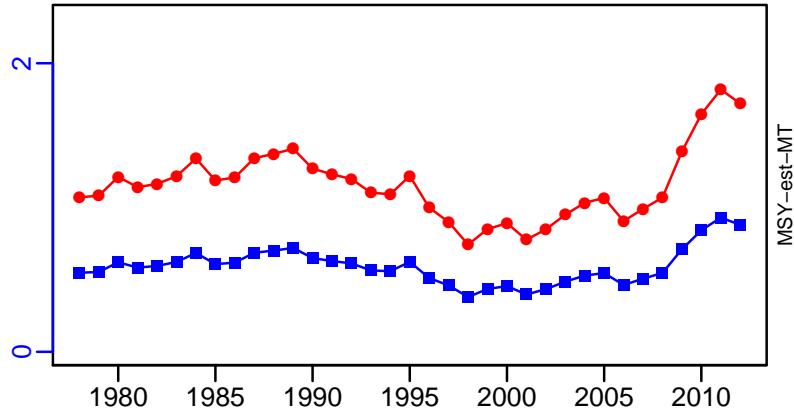
CPUE\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1978–2013–ICESIMP2016)



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

## Hake ICES 8c-9a [HAKESOTH]

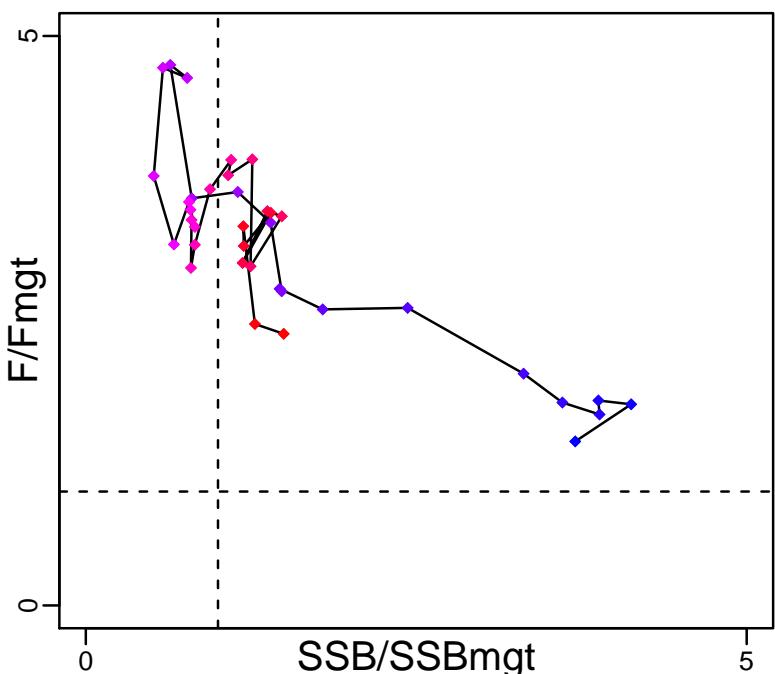
Metadata	
<b>Scientific Name</b>	Merluccius merluccius
<b>Current Assess ID</b>	WGBIE-HAKESOTH-1982-2019-ICESIMP2021
<b>Area</b>	ICES 8c-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2014, 2015, 2016, 2017, 2018, 2019, 2011, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2015	39,990
<b>SSBmsy</b>	SSBmsy-est-MT	2014	30,348
<b>Fmsy</b>	Fmsy-1/yr	2018	0.25
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.453
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	11,100
<b>Fmgt</b>	Fmgt-1/yr	2019	0.25
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2015	17,849
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	8000
<b>Flim</b>	Flim-1/yr	2018	1.05
<b>ERlim</b>	-	-	-

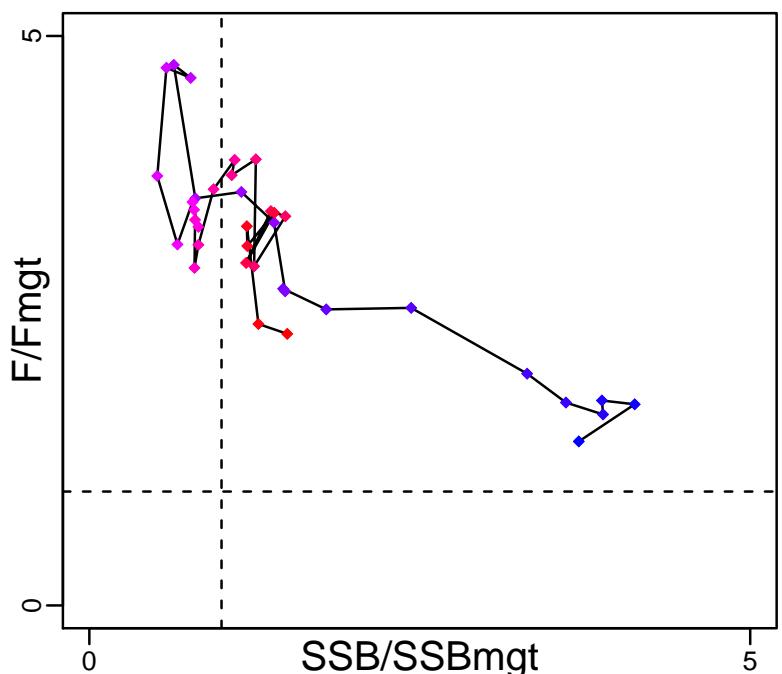
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	20,988	-	-	
<b>SSB</b>	SSB-MT	2019	17,430	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	78,619.505	-	0	
<b>F</b>	F-1/yr	2019	0.596	-	1 to 3	
<b>ER</b>	ER-calc-ratio	2019	0.575	-	-	
<b>TC</b>	TC-MT	2019	12,065			
<b>TL</b>	TL-MT	2019	10,123			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2015	0.588			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2014	0.814			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.76			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	1.269			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.57			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	2.384			
<b>ER/ERmgt</b>	-	-	-			

Hake ICES 8c–9a [HAKESOTH]

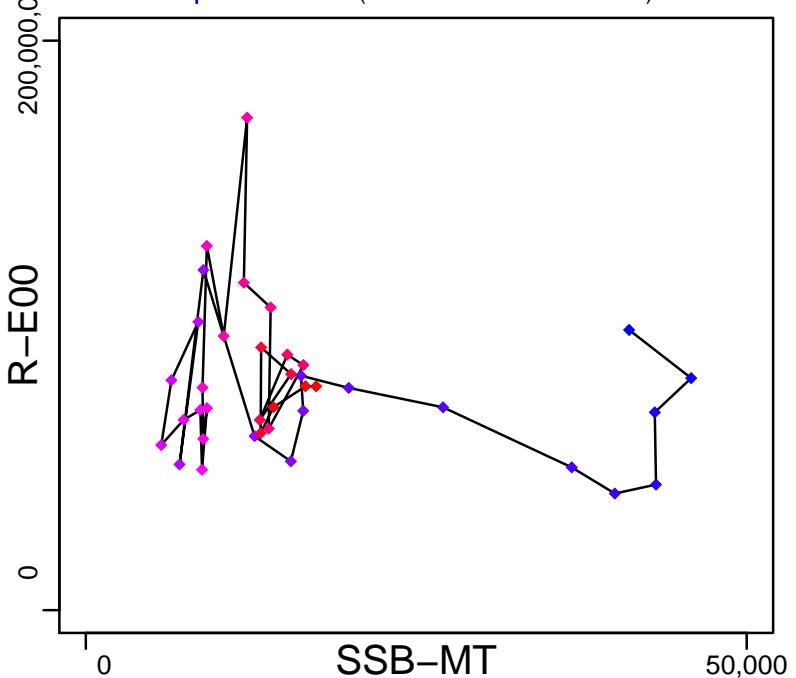
Kobe MSYpref (1982–2019–ICESIMP2021)



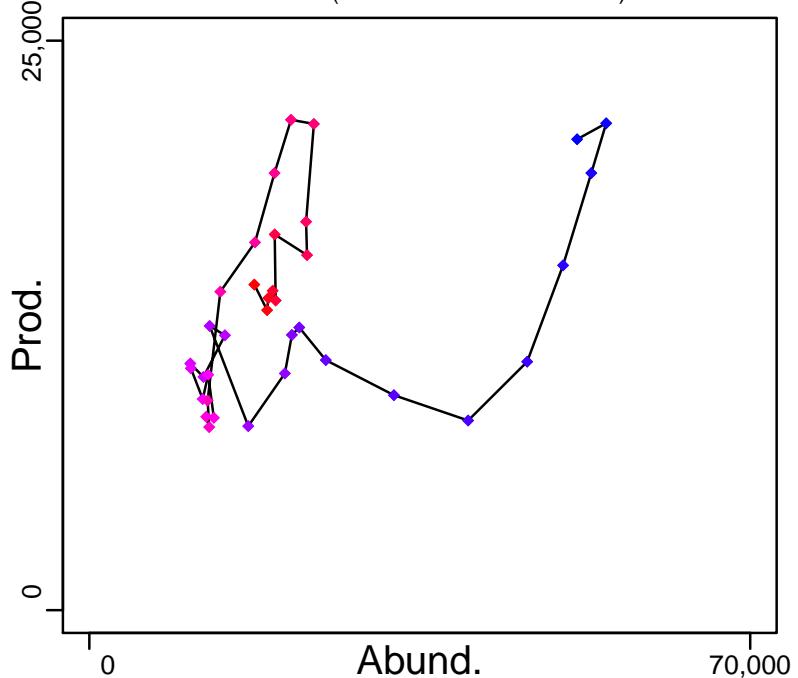
Kobe MGTpref (1982–2019–ICESIMP2021)



Spawner Recruit (1982–2019–ICESIMP2021)



Production (1982–2019–ICESIMP2021)

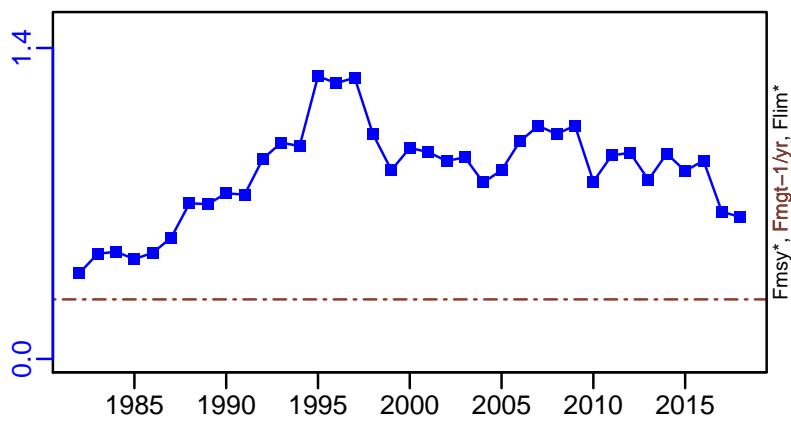
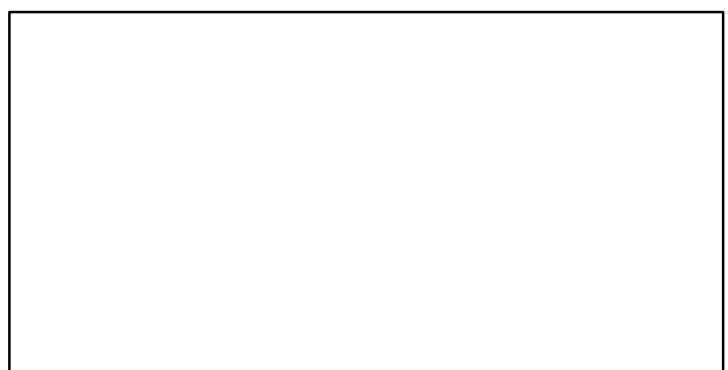
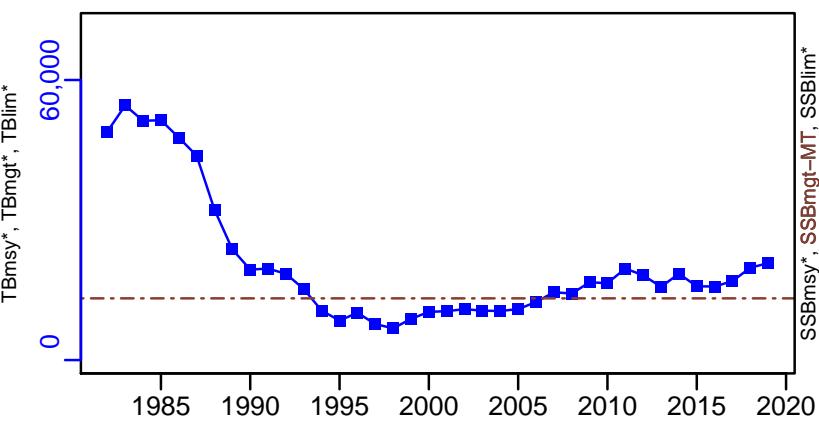
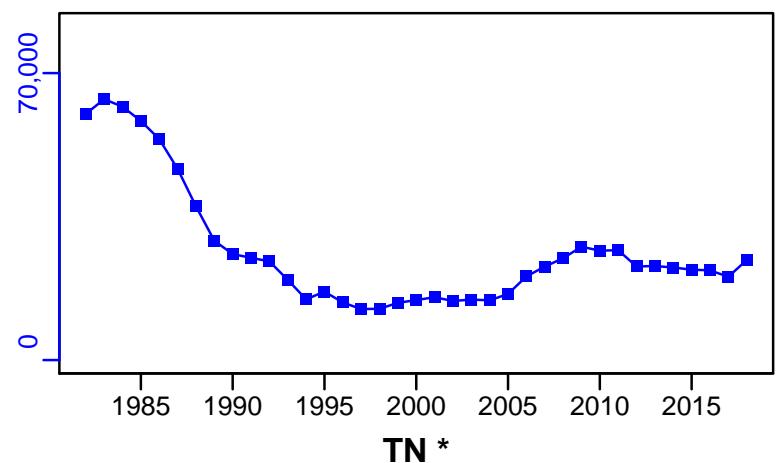


◆ Start Year   ◆ End Year   \* No Data

Hake ICES 8c–9a [HAKESOTH]

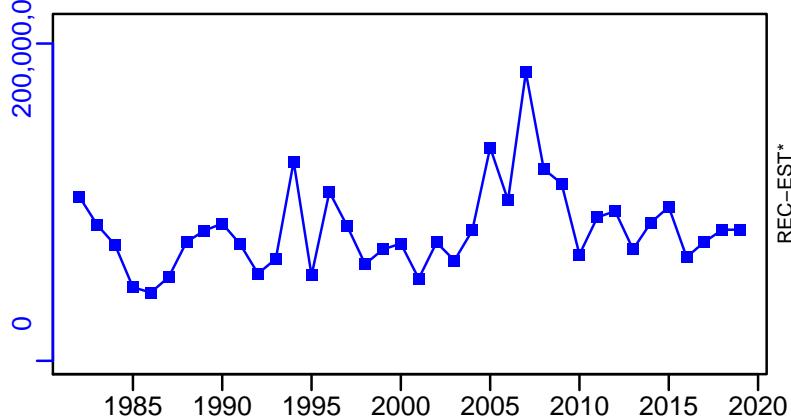
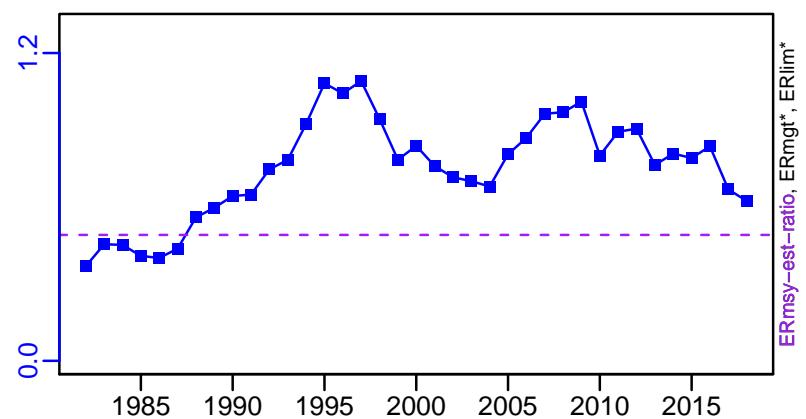
TB-MT (1982–2019–ICESIMP2021)

SSB-MT (1982–2019–ICESIMP2021)



ER-calc-ratio (1982–2019–ICESIMP2021)

R-E00 (1982–2019–ICESIMP2021)

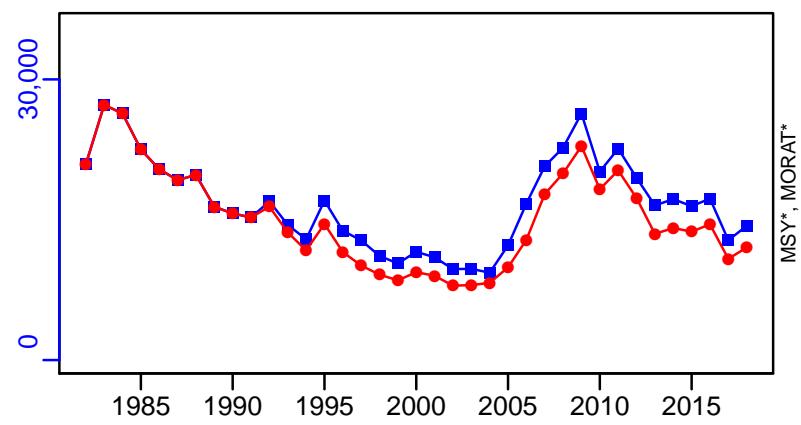


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

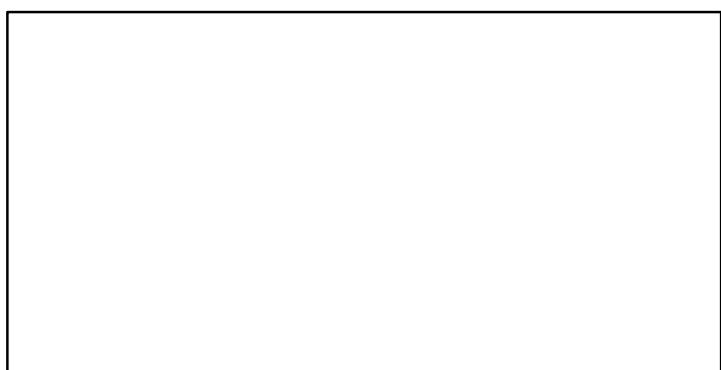
Hake ICES 8c–9a [HAKESOTH]

TC-MT, TL-MT, RecC\* (1982–2019–ICESIMP2021)

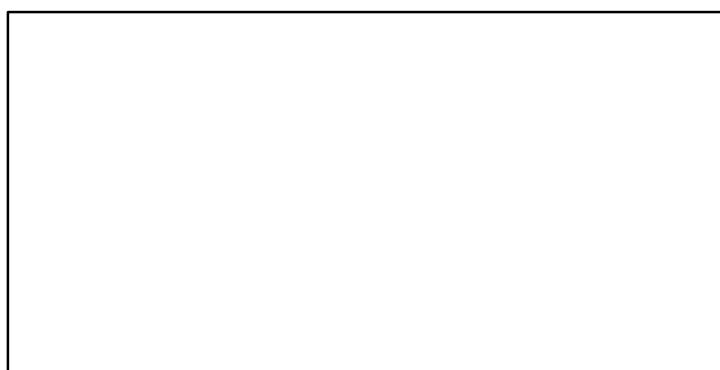
TAC\*, Cpair\*, Cadv\*



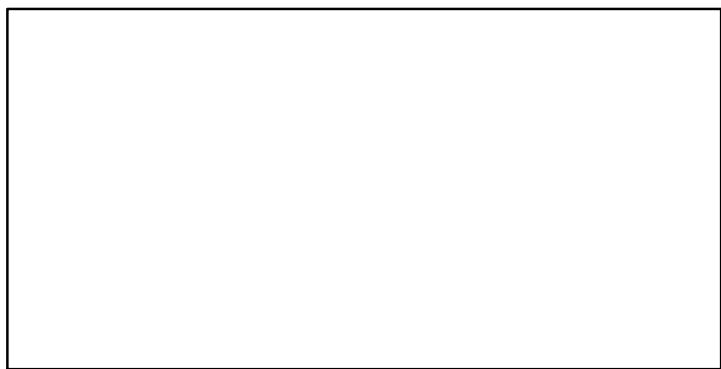
survB\*



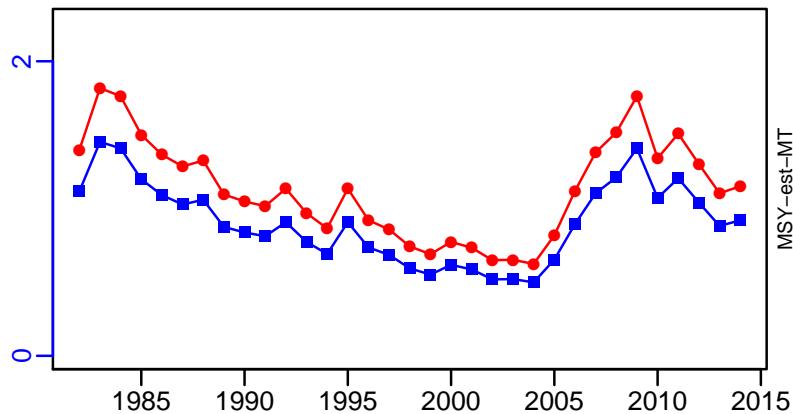
CPUE\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1982–2015–ICESIMP2016)



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

## Herring ICES 22-24-3a [HERR2224IIIa]

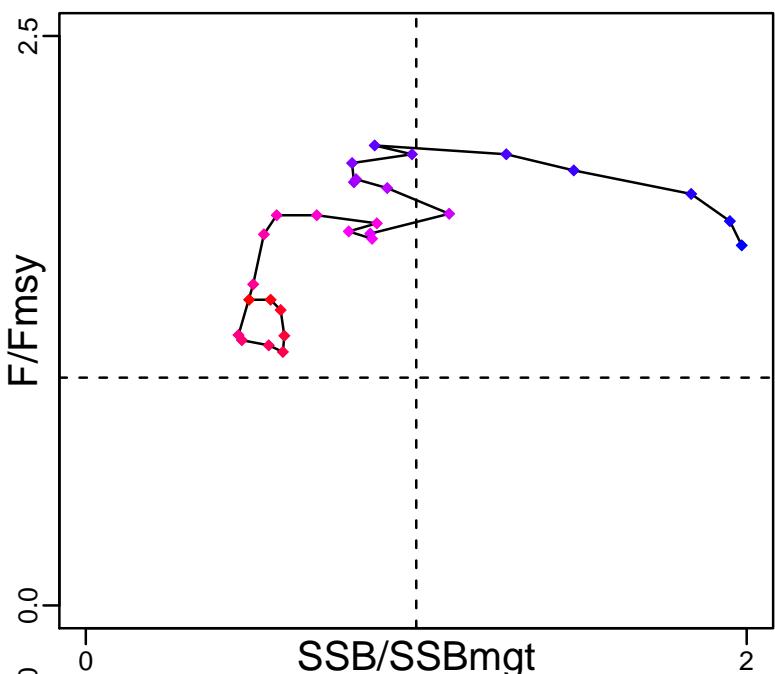
<b>Metadata</b>	
<b>Scientific Name</b>	Clupea harengus
<b>Current Assess ID</b>	HAWG-HERR2224IIIa-1991-2019-ICESIMP2021
<b>Area</b>	ICES 22-24-3a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-MT	2011	110,000
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.31
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.309
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	150,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.31
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	120,000
<b>Flim</b>	Flim-1/yr	2018	0.45
<b>ERlim</b>	-	-	-

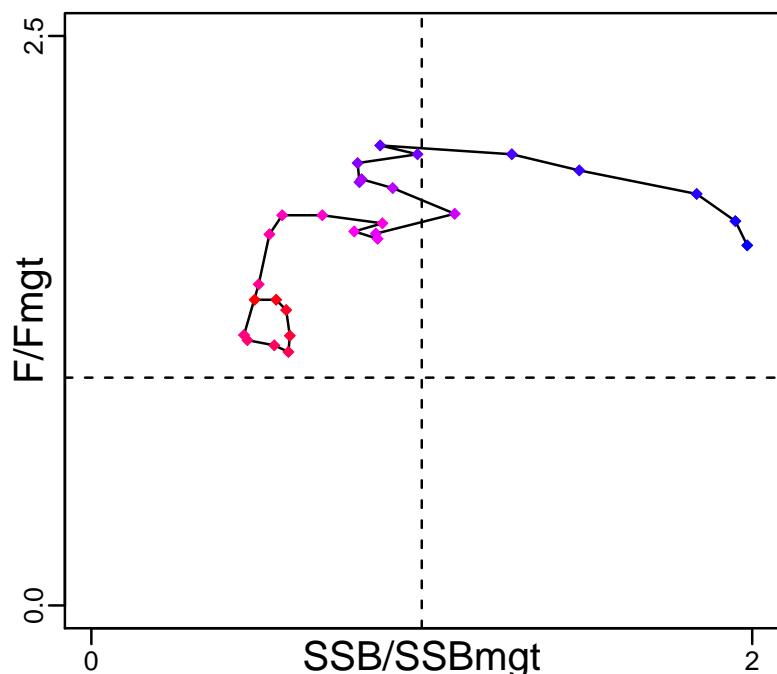
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	114,957	-	-	
<b>SSB</b>	SSB-MT	2019	69,743	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	1,223,484,000	-	0	
<b>F</b>	F-1/yr	2019	0.416	-	3 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.357	-	-	
<b>TC</b>	TC-MT	2019	41,058			
<b>TL</b>	TL-MT	2019	41,058			
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2011	1.491			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	1.342			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	1.157			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.465			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.342			
<b>ER/ERmgt</b>	-	-	-			

Herring ICES 22–24–3a [HERR2224IIla]

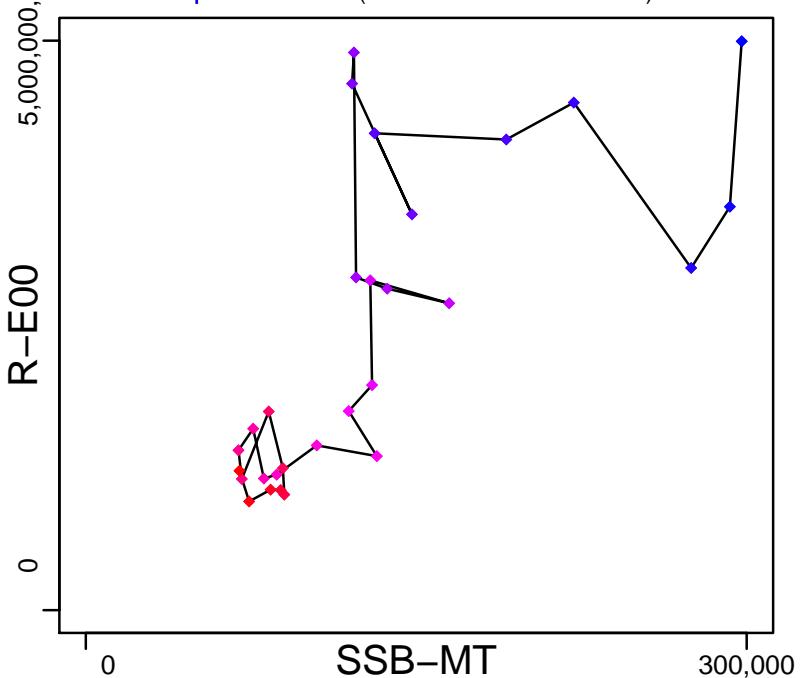
Kobe MSYpref (1991–2019–ICESIMP2021)



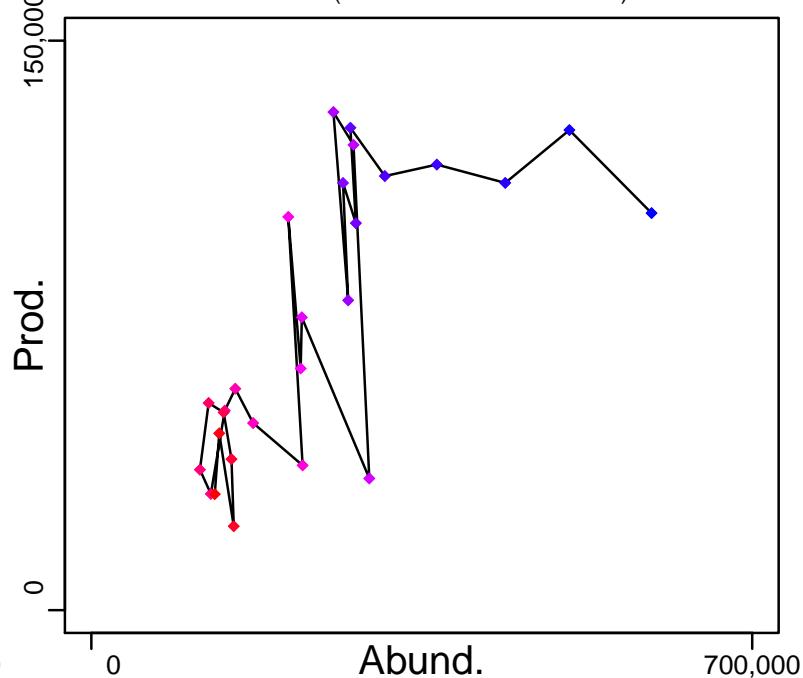
Kobe MGTpref (1991–2019–ICESIMP2021)



Spawner Recruit (1991–2019–ICESIMP2021)



Production (1991–2019–ICESIMP2021)

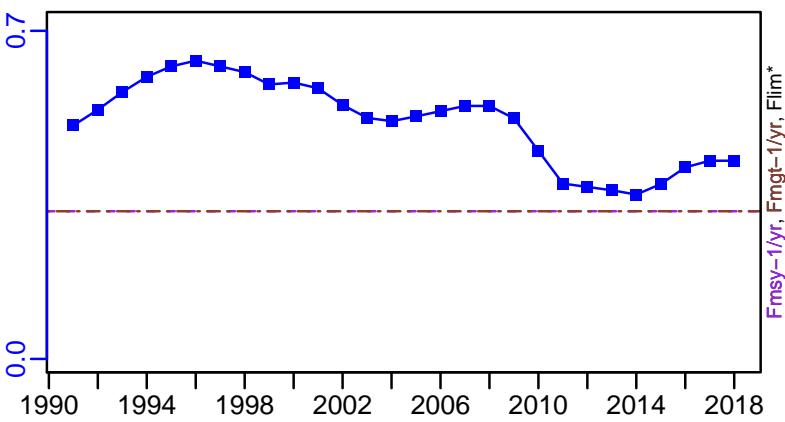
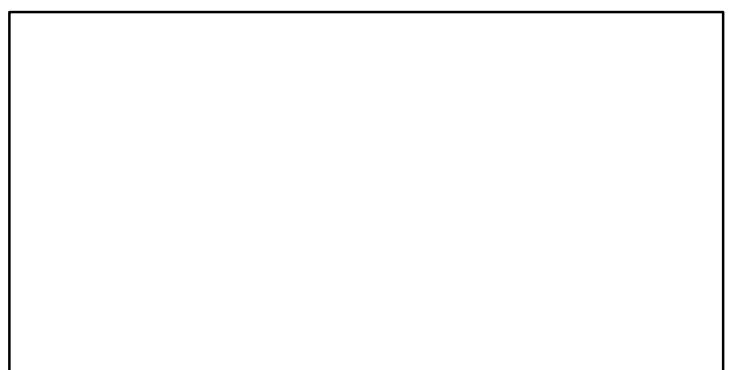
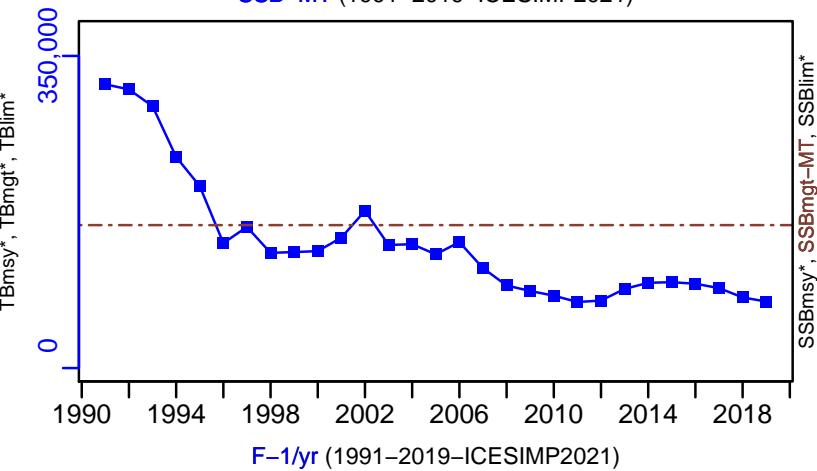
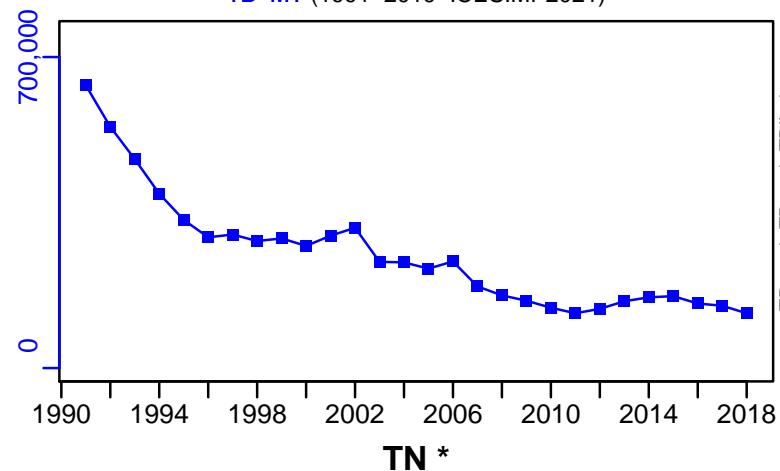


◆ Start Year   ◆ End Year   \* No Data

Herring ICES 22–24–3a [HERR2224IIla]

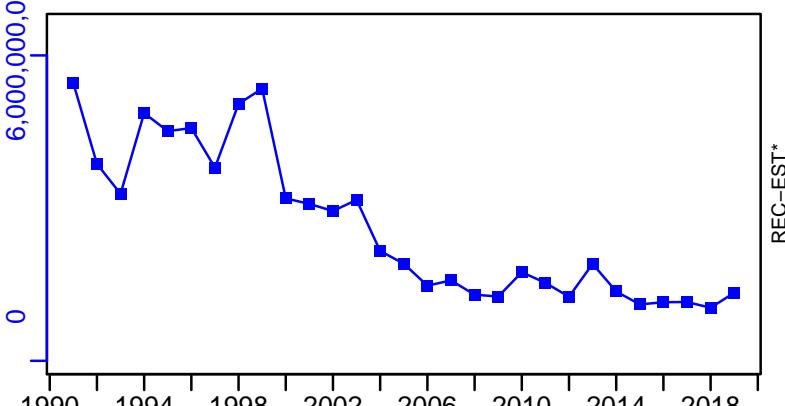
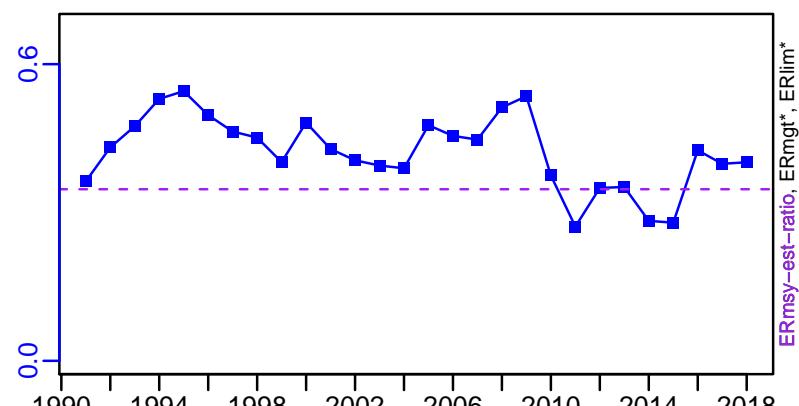
TB-MT (1991–2019–ICESIMP2021)

SSB-MT (1991–2019–ICESIMP2021)



ER-calc-ratio (1991–2019–ICESIMP2021)

R-E00 (1991–2019–ICESIMP2021)

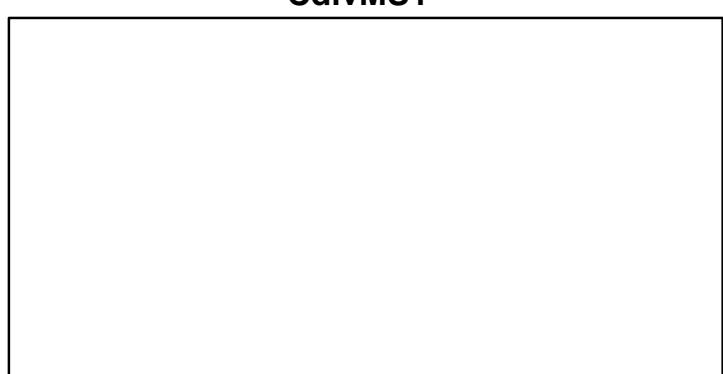
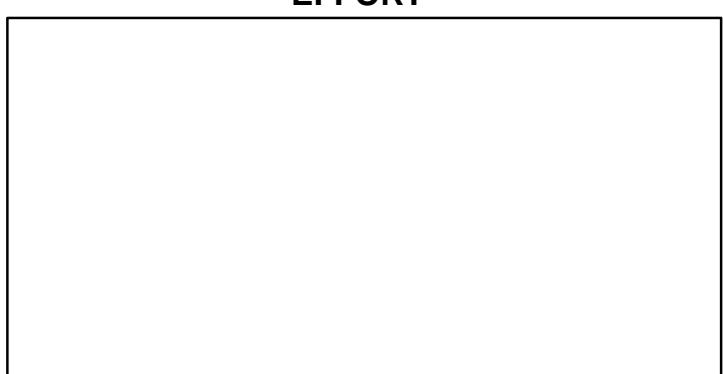
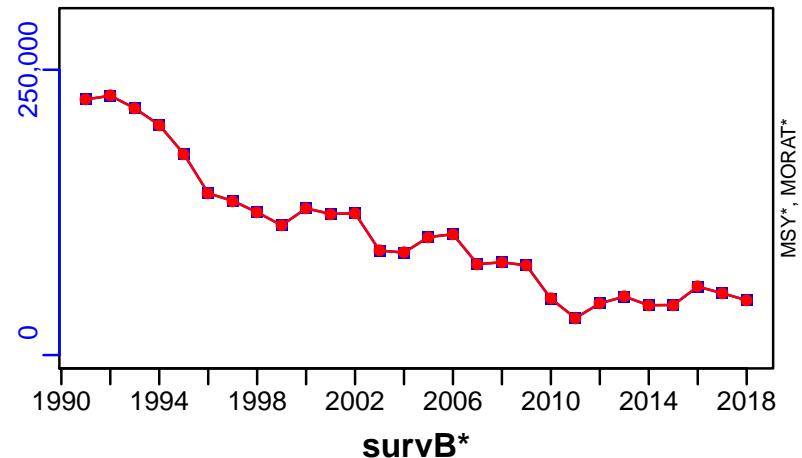


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

Herring ICES 22–24–3a [HERR2224IIla]

TC-MT, TL-MT, RecC\* (1991–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

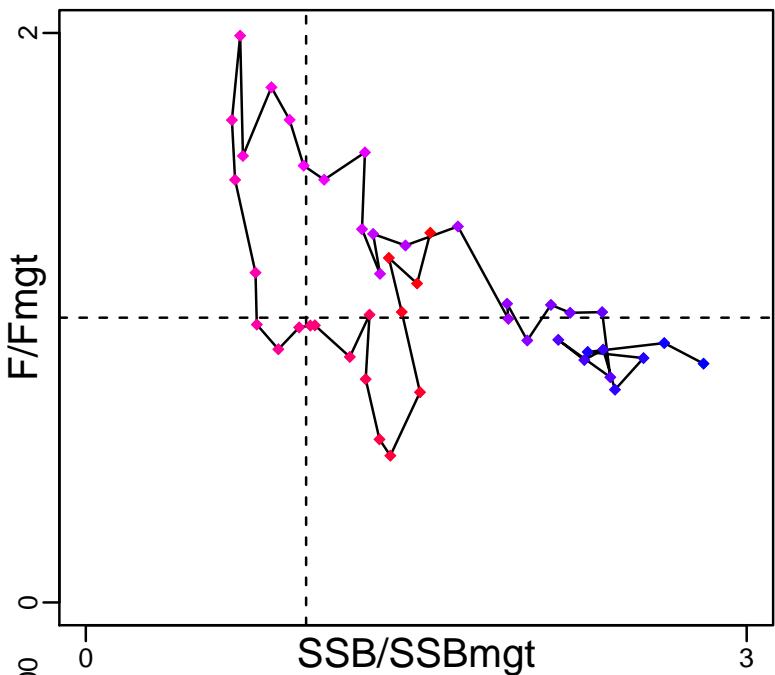
Metadata	
<b>Scientific Name</b>	Clupea harengus
<b>Current Assess ID</b>	WGBFAS-HERR2529-32-1973-2019-ICESIMP2021
<b>Area</b>	Subdivisions 25-29 and 32
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.22
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.15
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	$6 \times 10^5$
<b>Fmgt</b>	Fmgt-1/yr	2019	0.22
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	430,000
<b>Flim</b>	Flim-1/yr	2018	0.52
<b>ERlim</b>	-	-	-

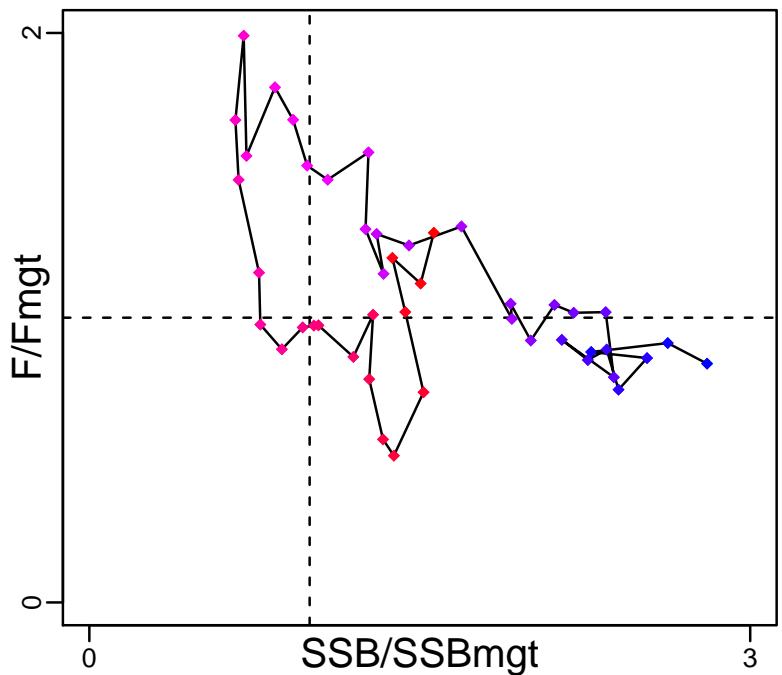
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	1,379,633	-	-	
<b>SSB</b>	SSB-MT	2019	844,663	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	$1.14 \times 10^{10}$	-	1	
<b>F</b>	F-1/yr	2019	0.286	-	3 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.177	-	-	
<b>TC</b>	TC-MT	2019	244,365			
<b>TL</b>	TL-MT	2019	244,365			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.255			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	1.178			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.408			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.298			
<b>ER/ERmgt</b>	-	-	-			

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

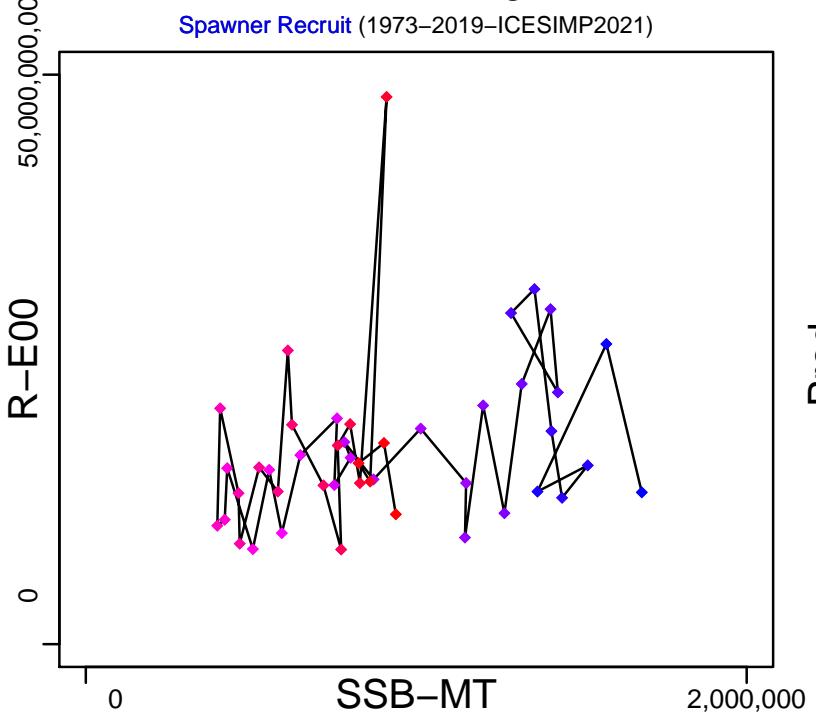
Kobe MSYpref (1973–2019–ICESIMP2021)



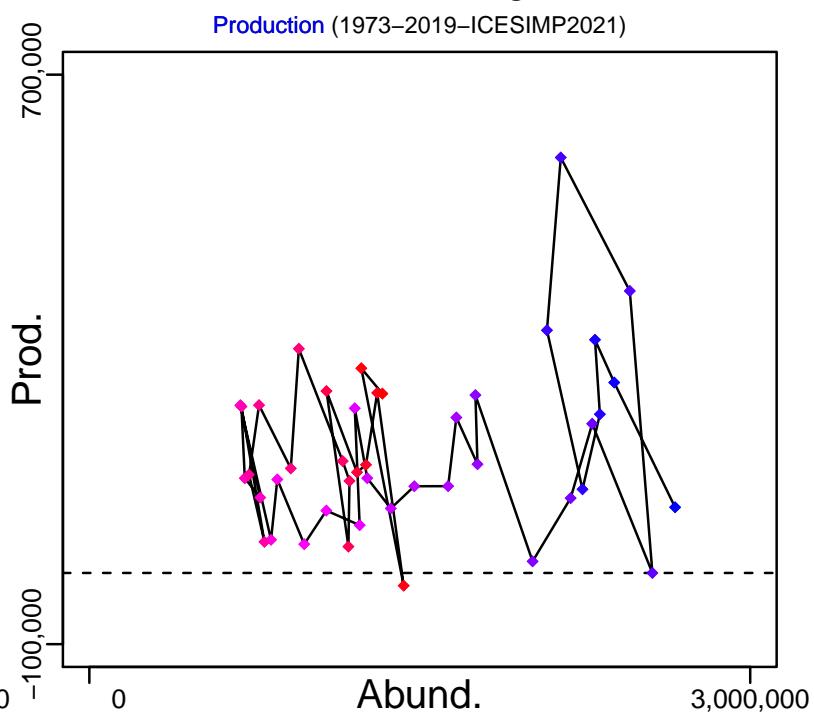
Kobe MGTpref (1973–2019–ICESIMP2021)



Spawner Recruit (1973–2019–ICESIMP2021)



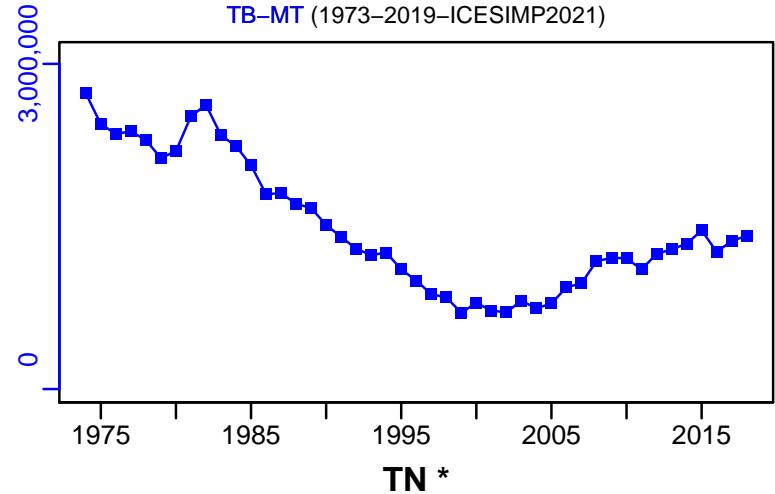
Production (1973–2019–ICESIMP2021)



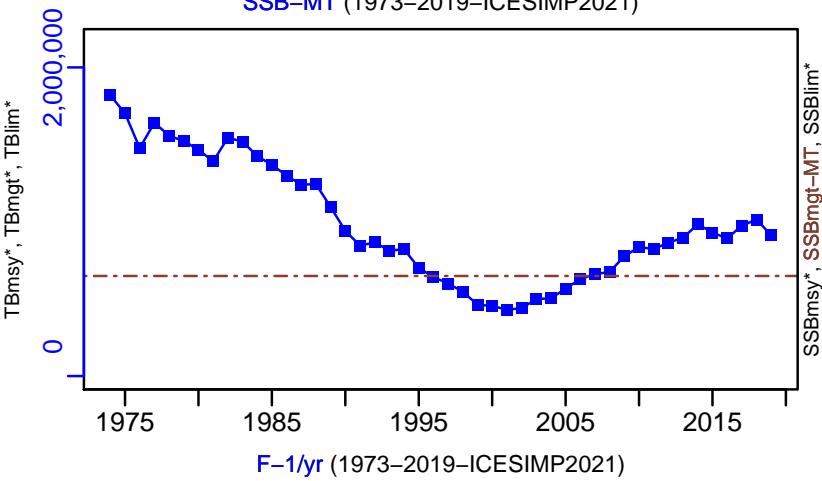
◆ Start Year ♦ End Year \* No Data

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

TB-MT (1973–2019–ICESIMP2021)



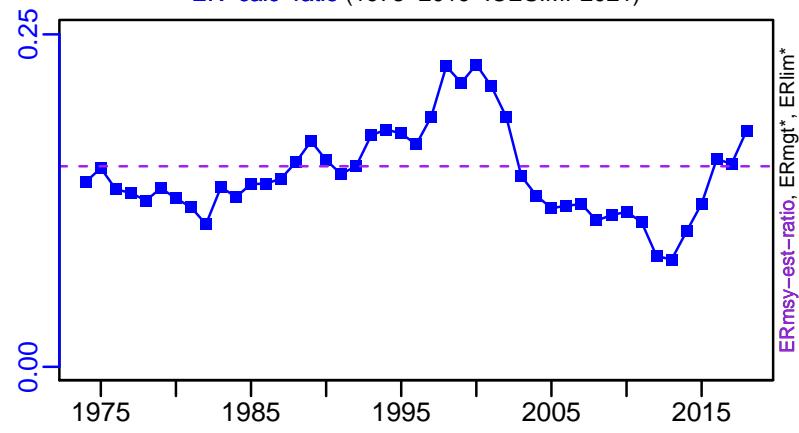
SSB-MT (1973–2019–ICESIMP2021)



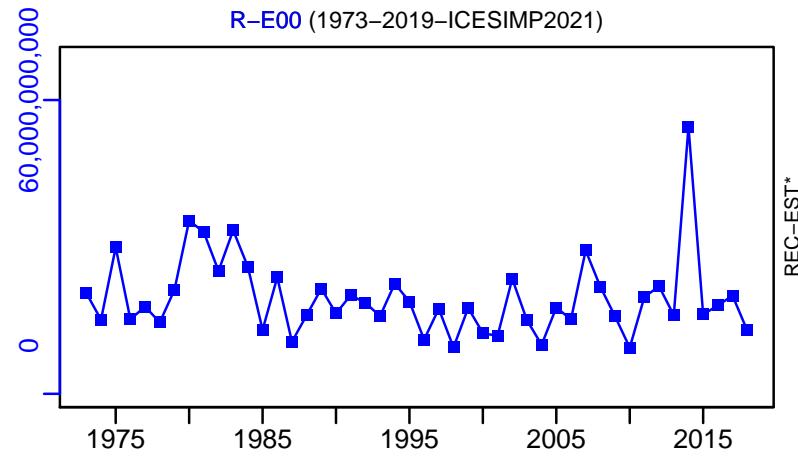
TN \*

F-1/yr

ER-calc-ratio (1973–2019–ICESIMP2021)



R-E00 (1973–2019–ICESIMP2021)

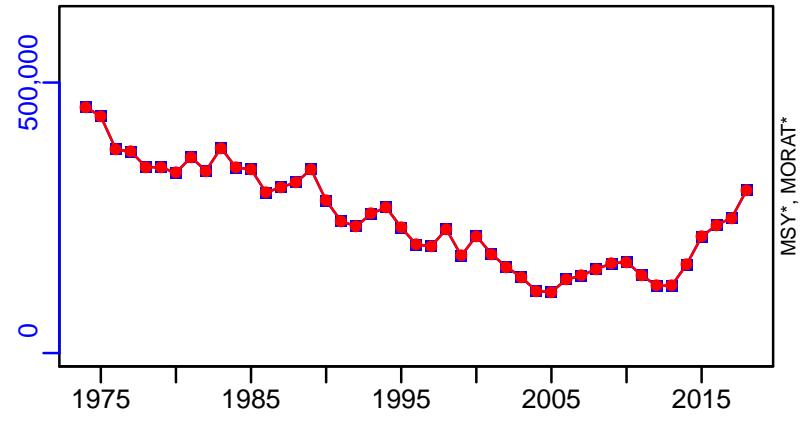


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	* No Data

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

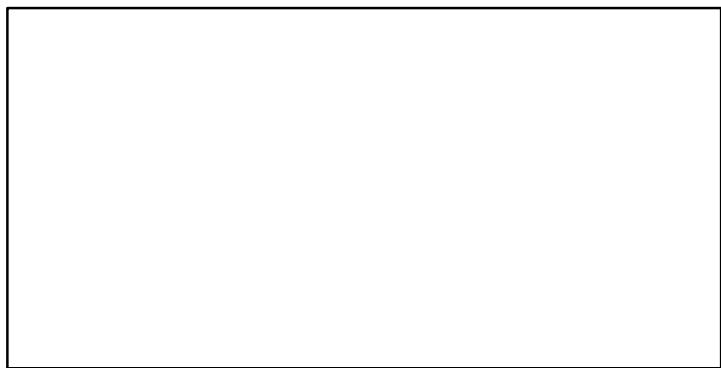
TC-MT, TL-MT, RecC\* (1973–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*

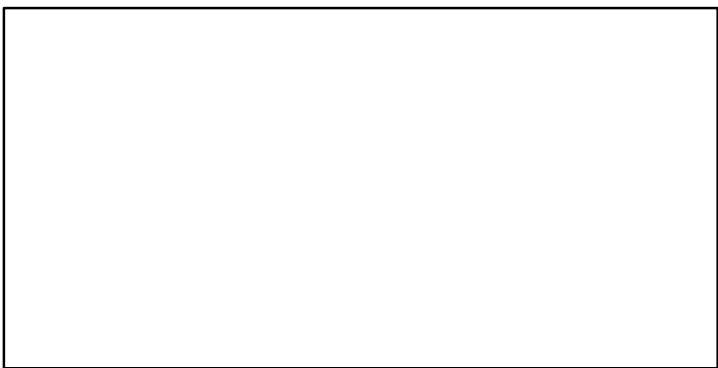


survB\*

MSY\*, MORAT\*



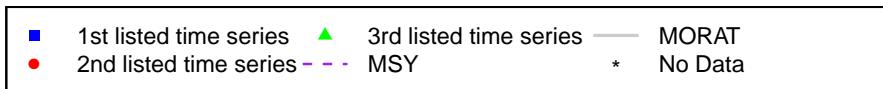
CPUE\*



EFFORT\*



CdivMSY\*



## Herring Subdivisions 30-31 [HERR30-31]

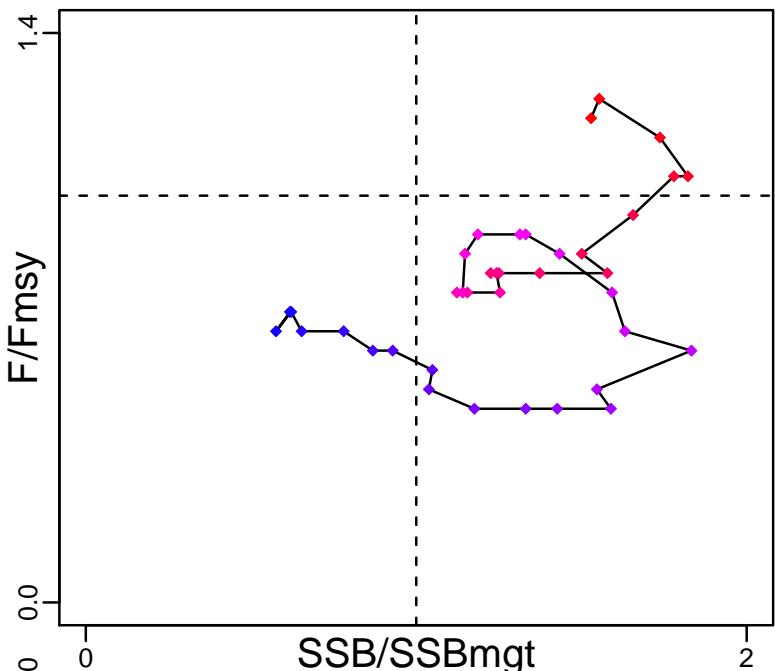
Metadata	
<b>Scientific Name</b>	Clupea harengus
<b>Current Assess ID</b>	WGBFAS-HERR30-31-1979-2018-ICESIMP2021
<b>Area</b>	Subdivisions 30-31
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2017, 2018, 2018

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.21
<b>ERmsy</b>	ERmsy-est-ratio	2018	0.159
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	283,180
<b>Fmgt</b>	Fmgt-1/yr	2018	0.21
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	202,272
<b>Flim</b>	Flim-1/yr	2018	0.29
<b>ERlim</b>	-	-	-

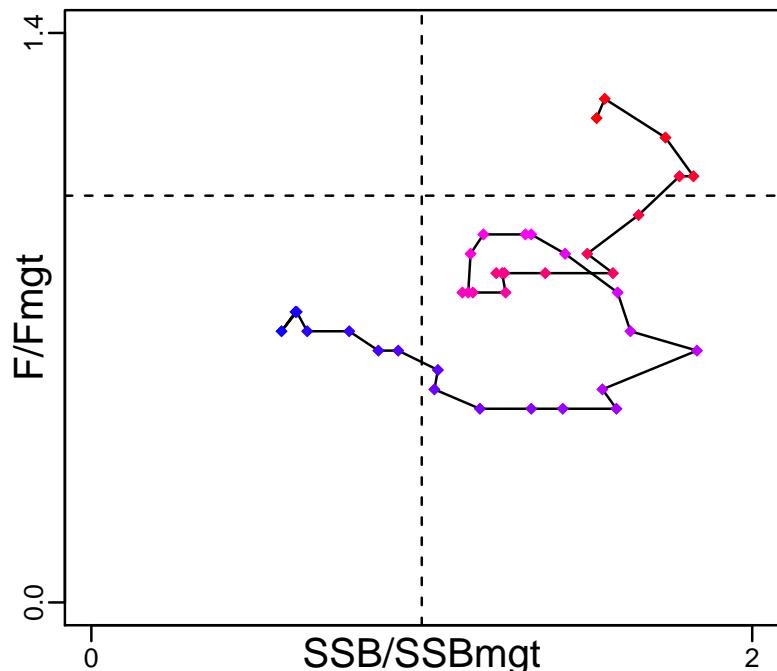
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-relative	2018	0.892	-	-	
<b>SSB</b>	SSB-MT	2018	422,000	Both	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2018	$4.61 \times 10^9$	-	1	
<b>F</b>	F-1/yr	2018	0.25	-	3 to 7	
<b>ER</b>	ER-calc-ratio	2018	0.127	-	-	
<b>TC</b>	TC-MT	2018	97,366			
<b>TL</b>	TL-MT	2018	104,000			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.19			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2018	0.797			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	1.49			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2018	1.19			
<b>ER/ERmgt</b>	-	-	-			

Herring Subdivisions 30–31 [HERR30–31]

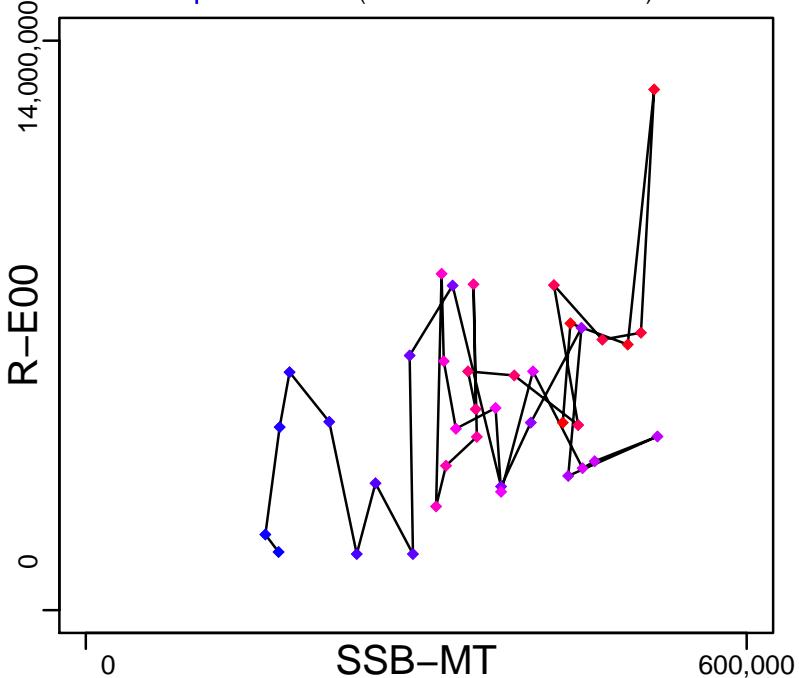
Kobe MSYpref (1979–2018–ICESIMP2018)



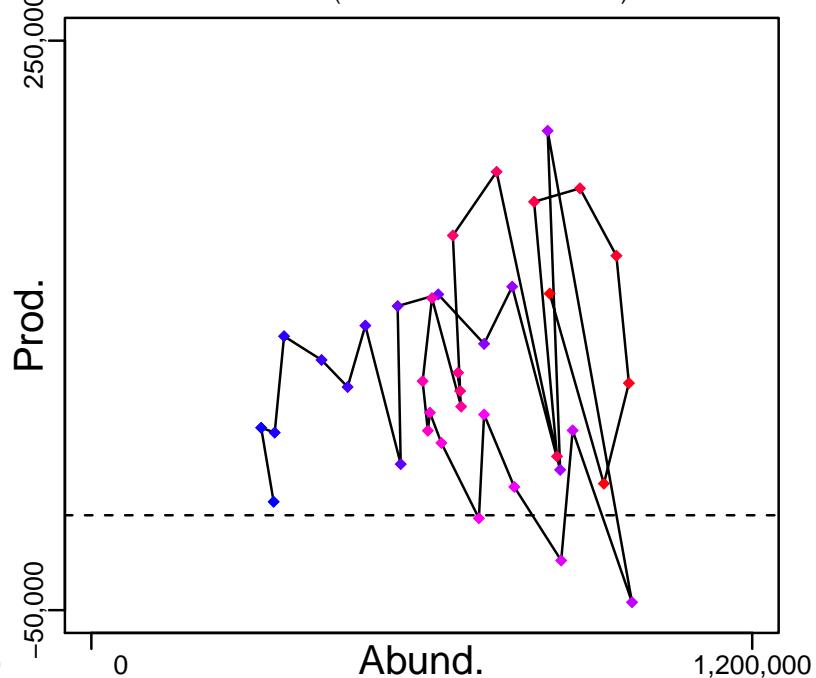
Kobe MGTpref (1979–2018–ICESIMP2018)



Spawner Recruit (1979–2018–ICESIMP2018)



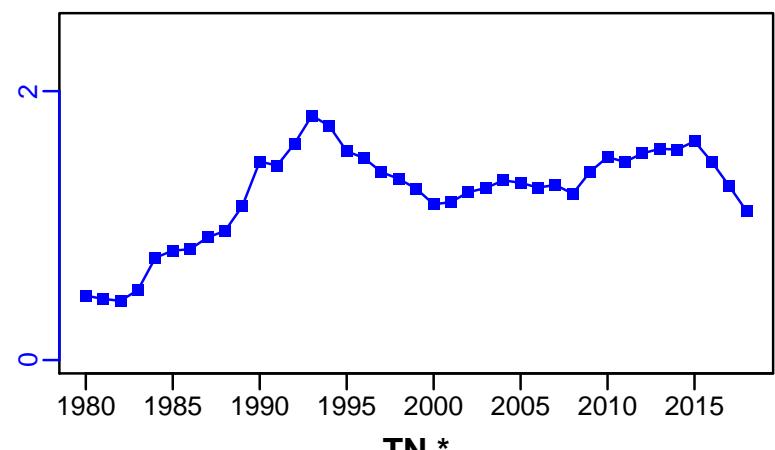
Production (1979–2018–ICESIMP2018)



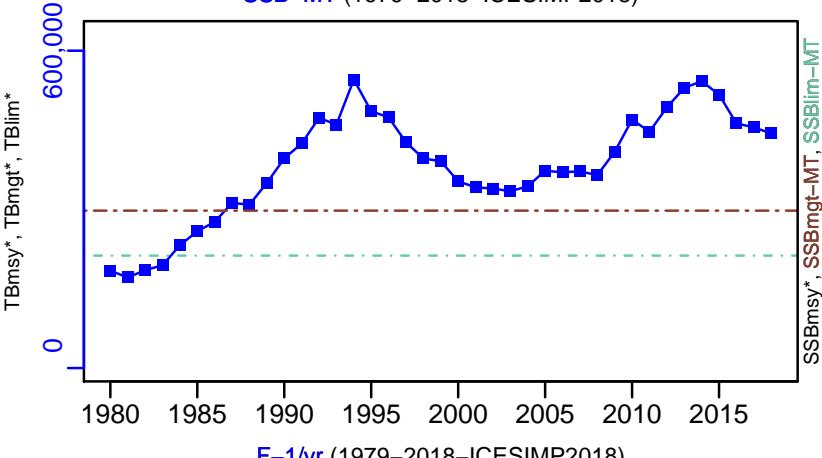
◆ Start Year   ◆ End Year   \* No Data

### Herring Subdivisions 30–31 [HERR30–31]

TB-relative (1979–2018–ICESIMP2021)



SSB-MT (1979–2018–ICESIMP2018)



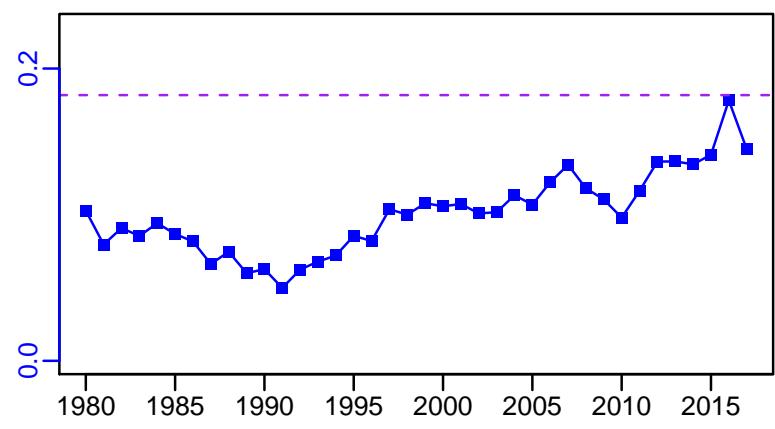
TN \*

F-1/yr

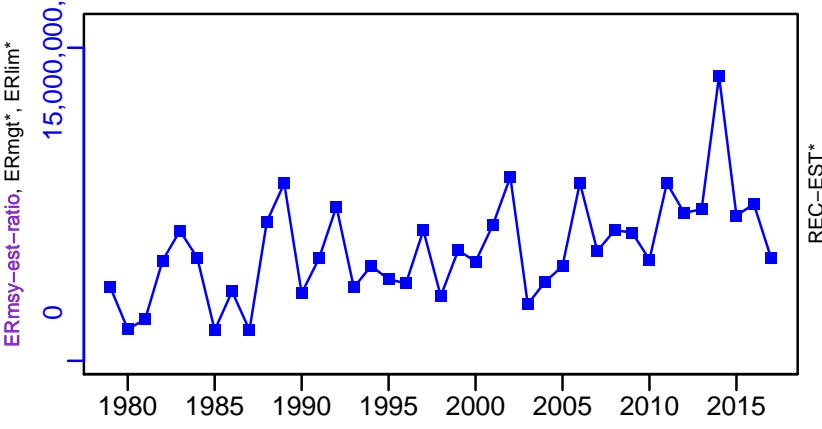
SSBmsy\*, SSBmg\*–MT, SSBlim–MT

Fmsy–1/yr, Fmgt–1/yr, Flim–1/yr

ER-calc-ratio (1979–2018–ICESIMP2018)



R-E00 (1979–2018–ICESIMP2018)



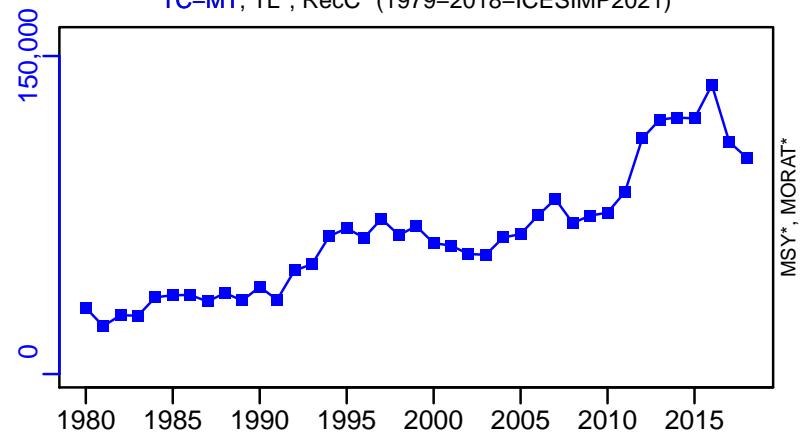
REC-EST\*



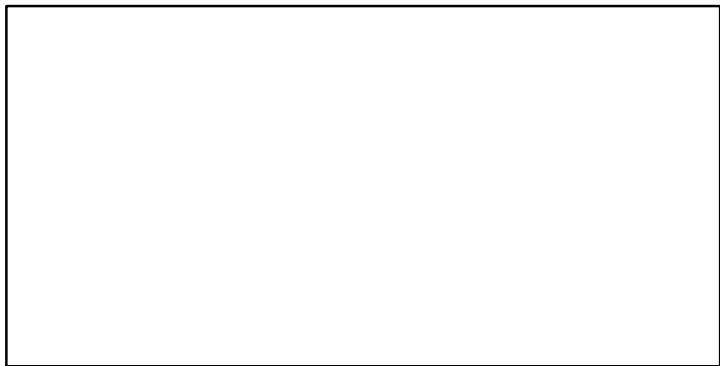
Herring Subdivisions 30–31 [HERR30–31]

TC–MT, TL\*, RecC\* (1979–2018–ICESIMP2021)

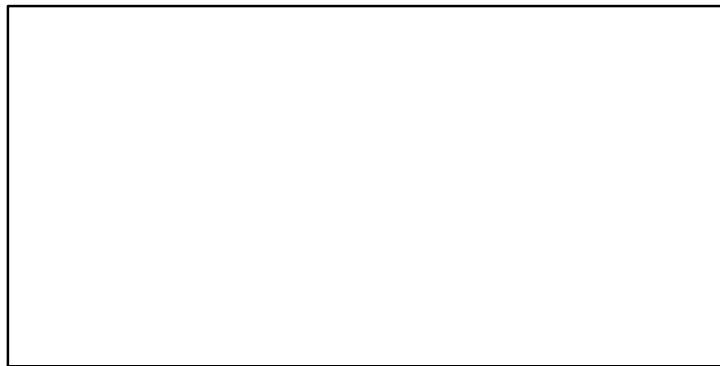
TAC\*, Cpair\*, Cadv\*



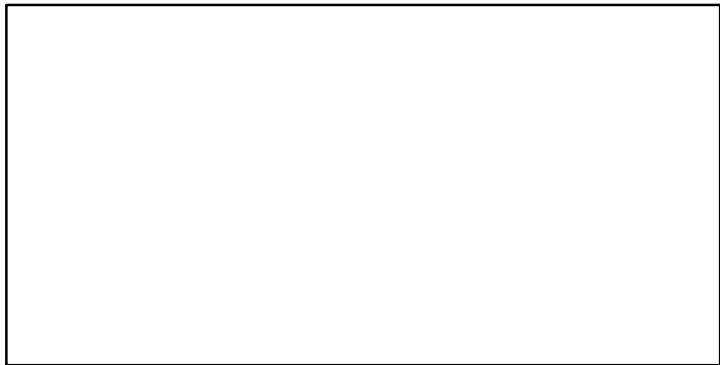
survB\*



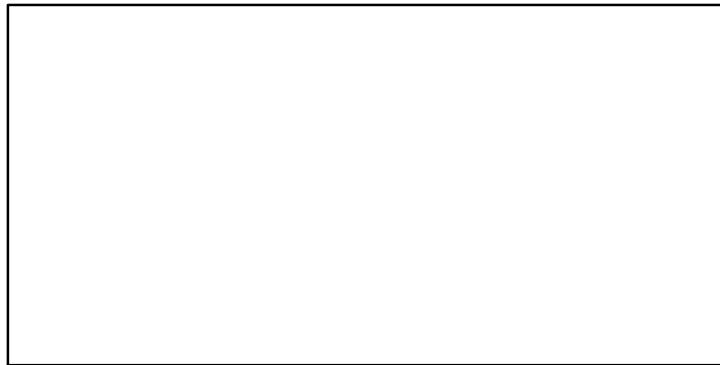
CPUE\*



EFFORT\*



CdivMSY\*



- |   |   |  |  |
|---|---|--|--|
| <span style="color: blue;">■</span> 1st listed time series<br><span style="color: red;">●</span> 2nd listed time series | <span style="color: green;">▲</span> 3rd listed time series<br><span style="color: purple;">●</span> 2nd listed time series | <span style="color: grey;">—</span> MORAT<br><span style="color: purple;">- - -</span> MSY | <span style="color: black;">*</span> No Data |
|---|---|--|--|

## Herring Irish Sea [HERRNIRS]

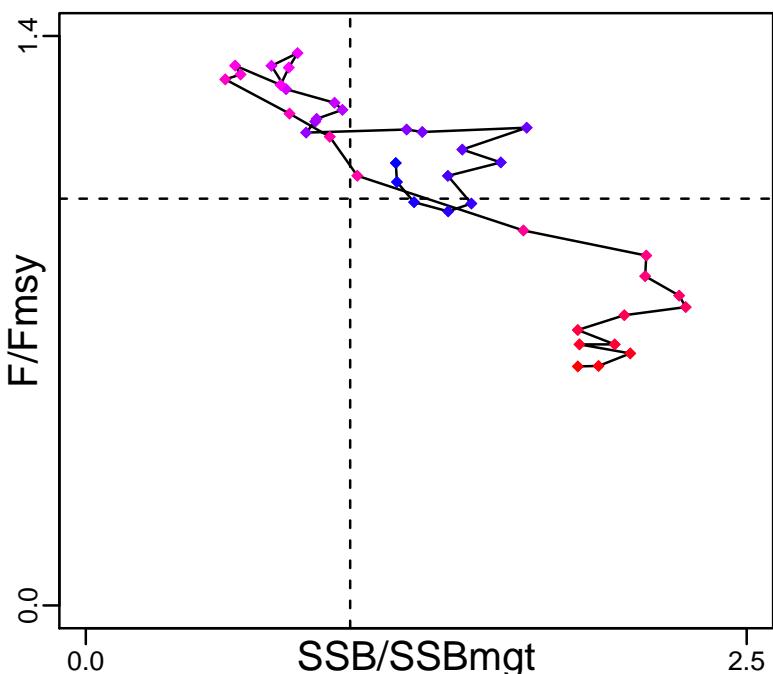
<b>Metadata</b>	
<b>Scientific Name</b>	Clupea harengus
<b>Current Assess ID</b>	HAWG-HERRNIRS-1979-2019-ICESIMP2021
<b>Area</b>	Irish Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2010, 2013, 2014, 2015, 2016, 2017, 2018, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2010	141,328
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.266
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.151
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	11,831
<b>Fmgt</b>	Fmgt-1/yr	2019	0.266
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2010	19,292
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2010	6000
<b>SSBlim</b>	SSBlim-MT	2018	8500
<b>Flim</b>	Flim-1/yr	2018	0.397
<b>ERlim</b>	-	-	-

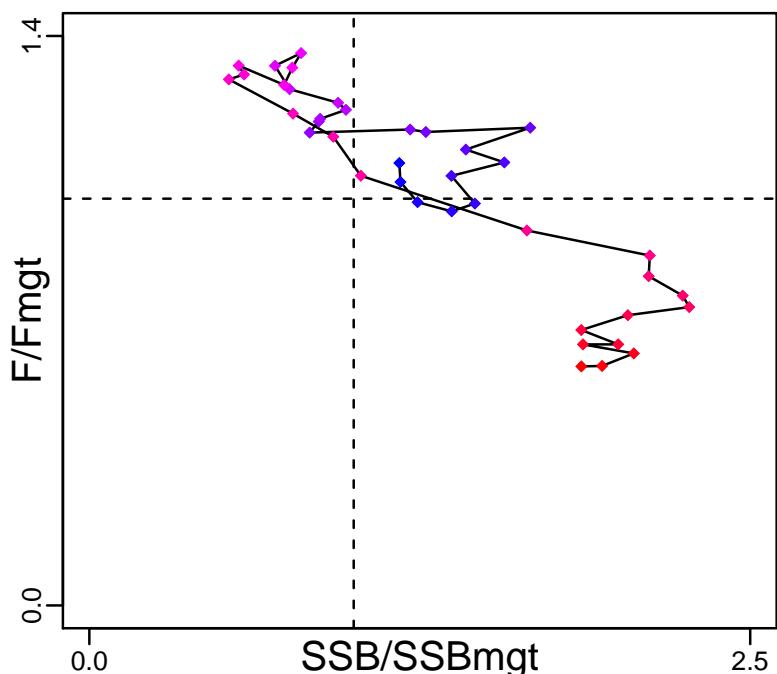
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	54,885	-	-	
<b>SSB</b>	SSB-MT	2019	23,247	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	300,740,000	-	1	
<b>F</b>	F-1/yr	2019	0.156	-	4 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.124	-	-	
<b>TC</b>	TC-MT	2019	6804			
<b>TL</b>	TL-MT	2019	6804			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2010	0.222			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.588			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.821			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.965			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.588			
<b>ER/ERmgt</b>	-	-	-			

Herring Irish Sea [HERRNIRS]

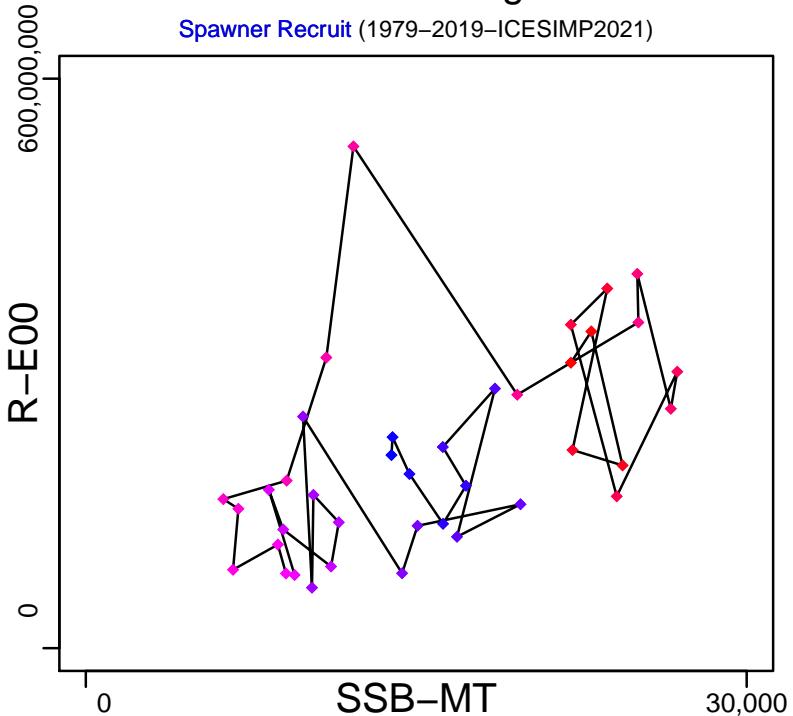
Kobe MSYpref (1979–2019–ICESIMP2021)



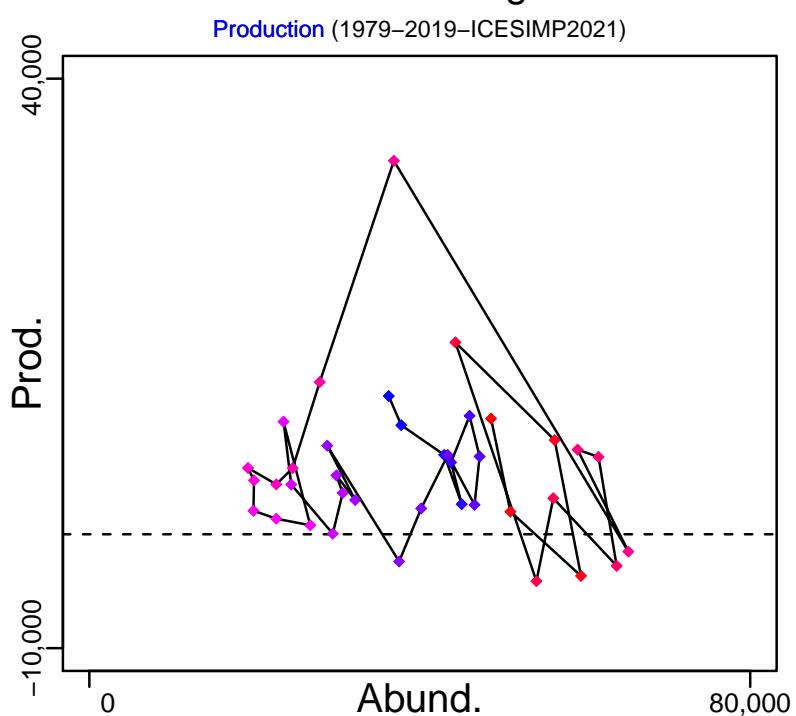
Kobe MGTpref (1979–2019–ICESIMP2021)



Spawner Recruit (1979–2019–ICESIMP2021)



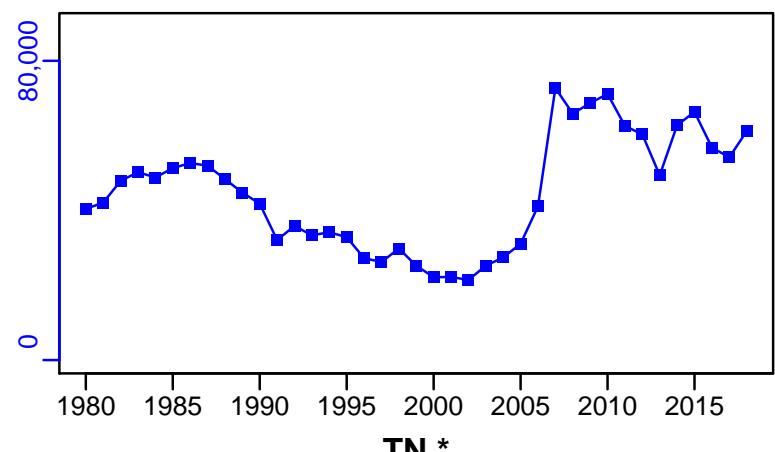
Production (1979–2019–ICESIMP2021)



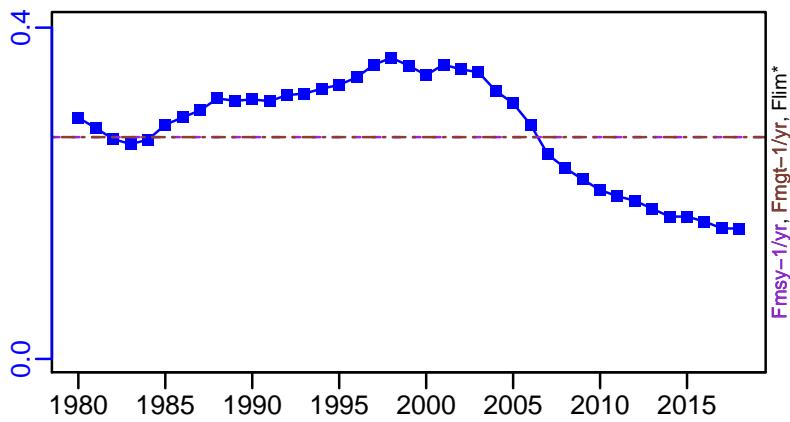
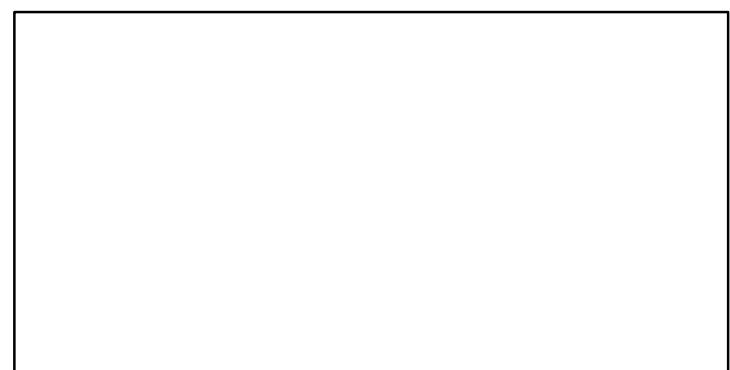
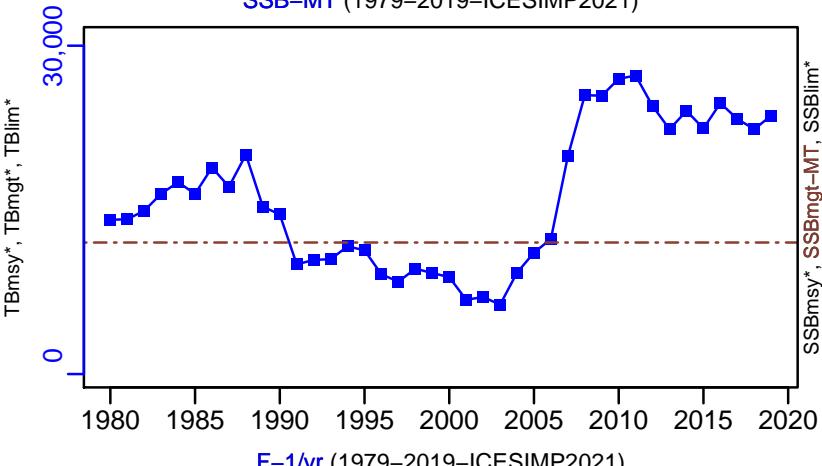
◆ Start Year ♦ End Year \* No Data

### Herring Irish Sea [HERRNIRS]

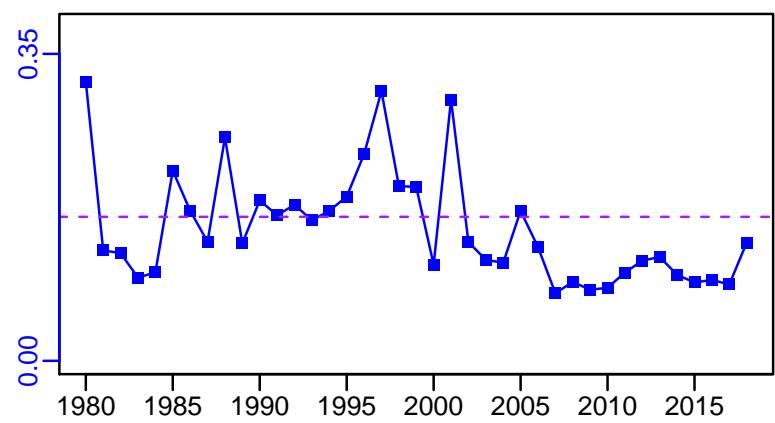
TB-MT (1979–2019–ICESIMP2021)



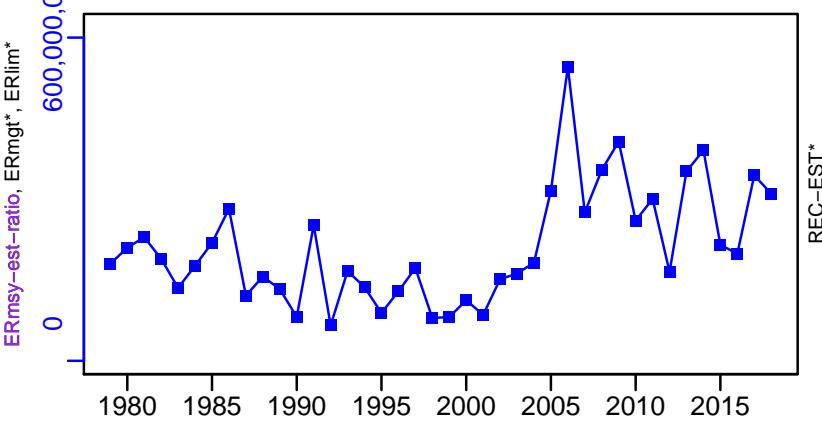
SSB-MT (1979–2019–ICESIMP2021)



ER-calc-ratio (1979–2019–ICESIMP2021)



R-E00 (1979–2019–ICESIMP2021)

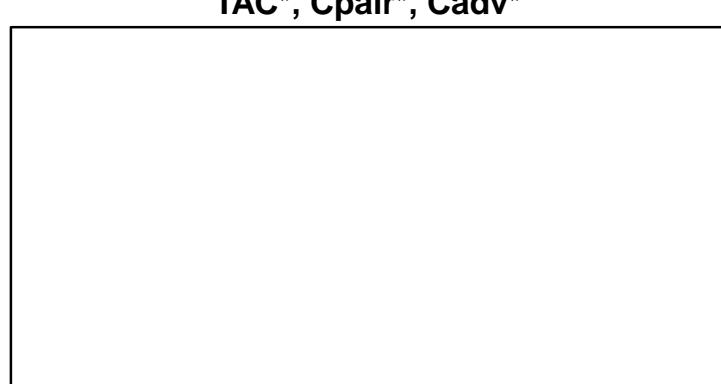
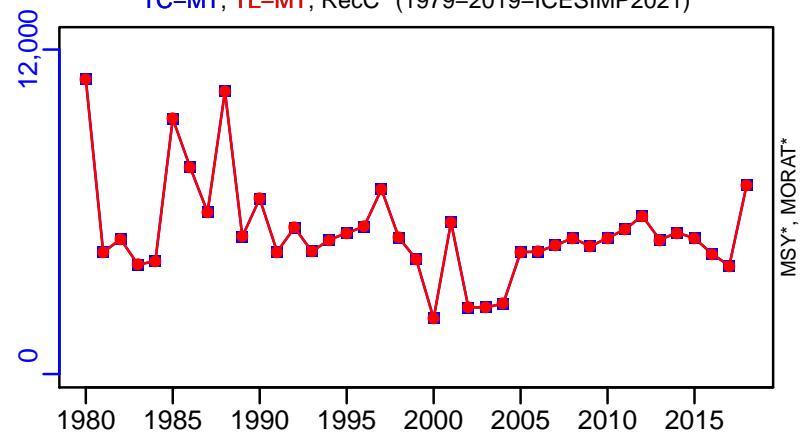


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	* No Data

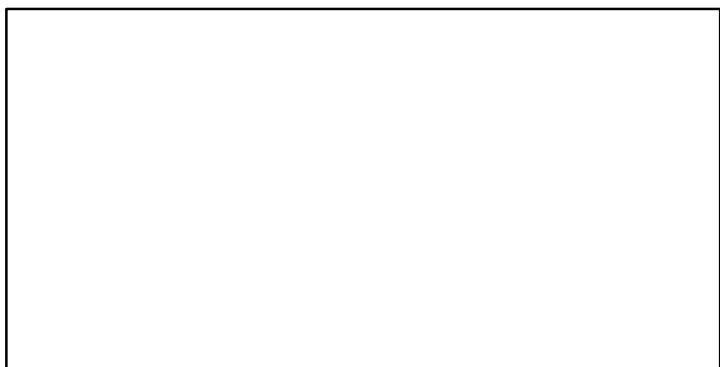
Herring Irish Sea [HERRNIRS]

TC-MT, TL-MT, RecC\* (1979–2019–ICESIMP2021)

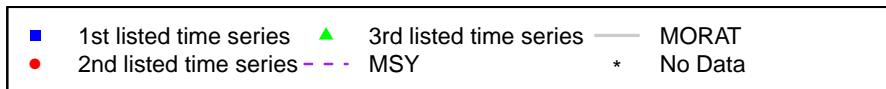
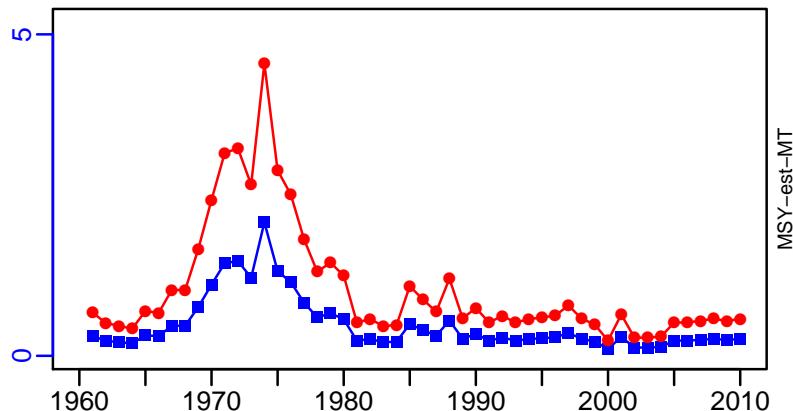
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TL-MT/MSY-est-MT, CdiveMEANC-ratio, (1960–2010–NEUBAUER)



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

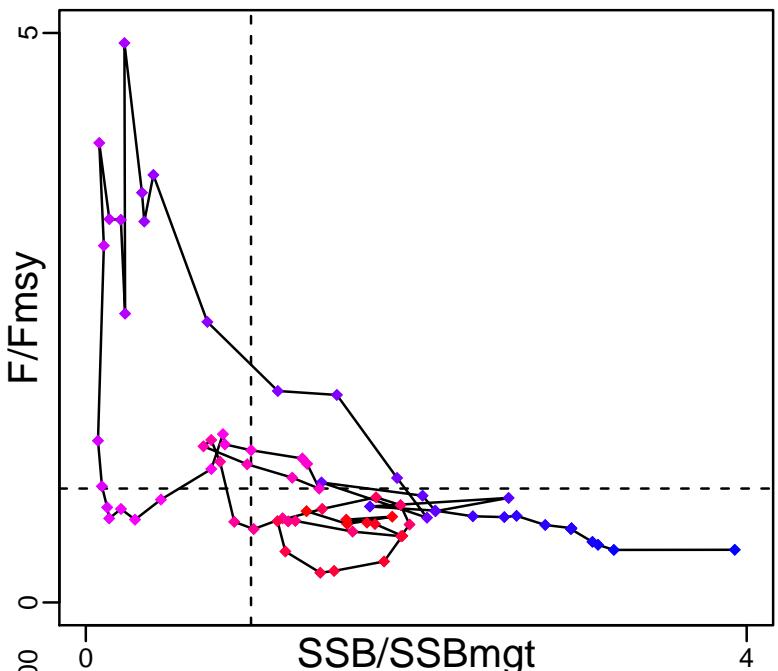
<b>Metadata</b>	
<b>Scientific Name</b>	Clupea harengus
<b>Current Assess ID</b>	HAWG-HERRNS-IIIA-VIId-1947-2019-ICESIMP2021
<b>Area</b>	ICES 3a-4-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2011

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2011	3,489,386
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.26
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.048
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	1,400,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.26
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	583,071
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2011	$8 \times 10^5$
<b>SSBlim</b>	SSBlim-MT	2018	$8 \times 10^5$
<b>Flim</b>	Flim-1/yr	2018	0.34
<b>ERlim</b>	-	-	-

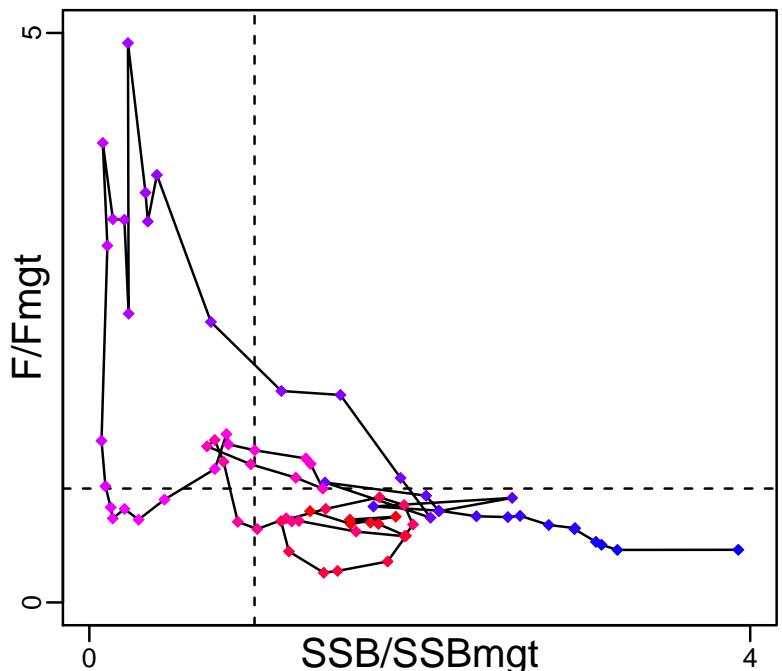
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2019	3,243,613	-	-
<b>SSB</b>	SSB-MT	2019	1,529,000	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	26,191,234,000	-	0
<b>F</b>	F-1/yr	2019	0.208	-	2 to 6
<b>ER</b>	ER-calc-ratio	2019	0.158	-	-
<b>TC</b>	TC-MT	2019	603,536		
<b>TL</b>	TL-MT	2017	564,000		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	0.92		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.801		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	3.308		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.092		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.801		
<b>ER/ERmgt</b>	-	-	-		

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

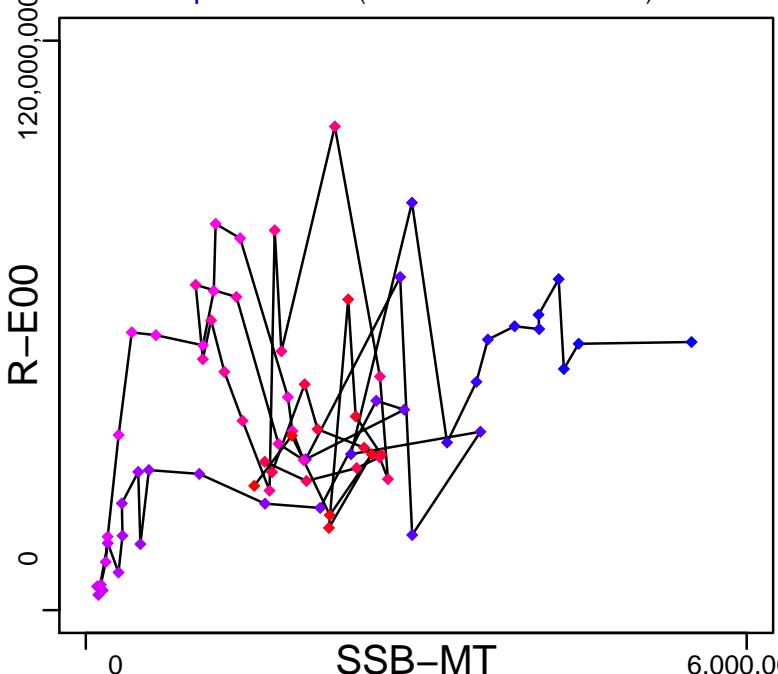
Kobe MSYpref (1947–2019–ICESIMP2021)



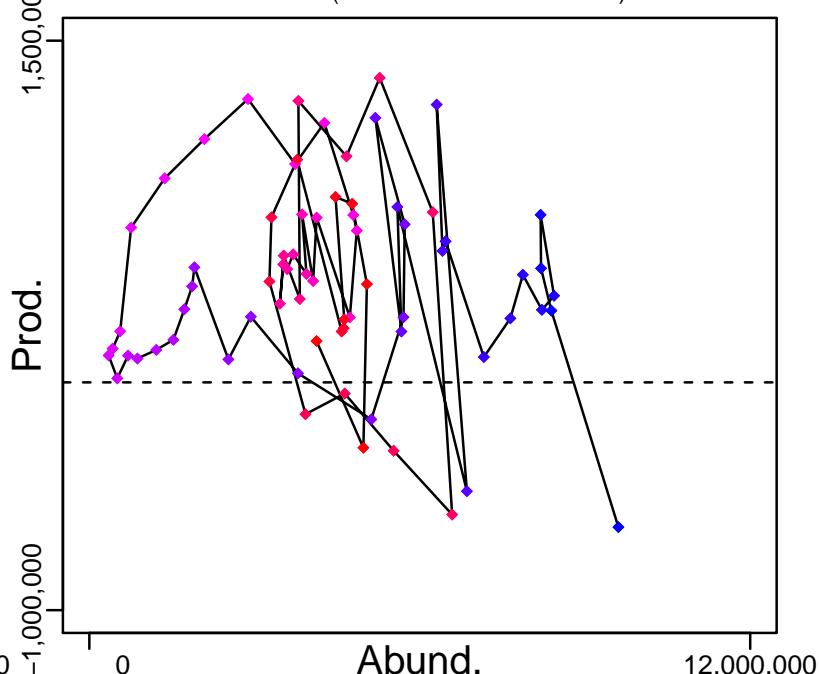
Kobe MGTpref (1947–2019–ICESIMP2021)



Spawner Recruit (1947–2019–ICESIMP2021)



Production (1947–2019–ICESIMP2021)

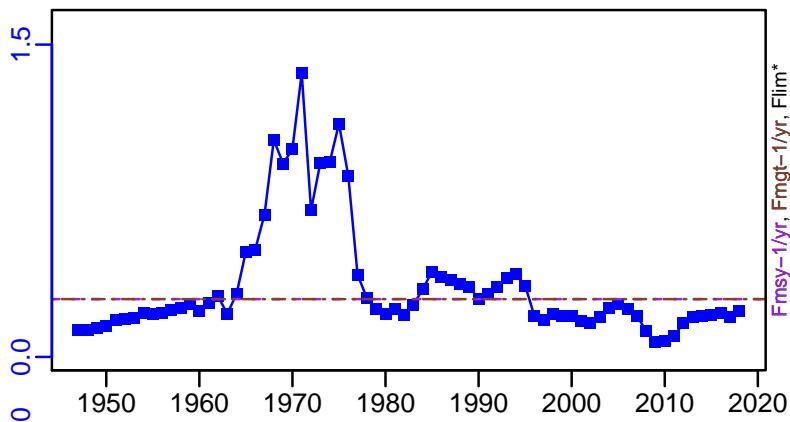
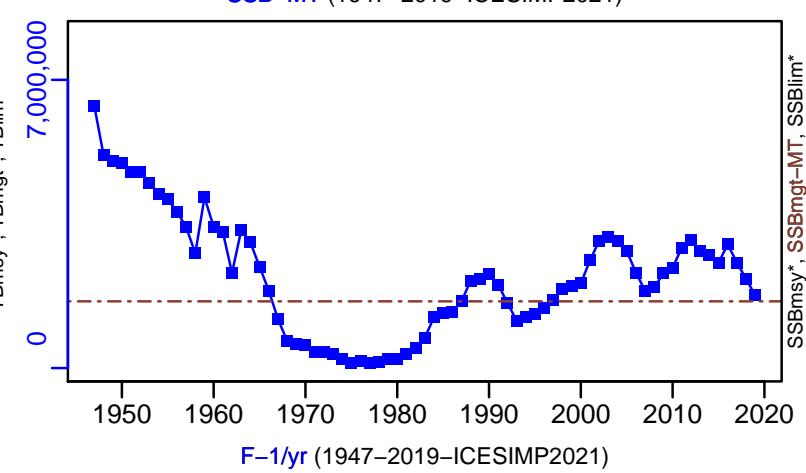
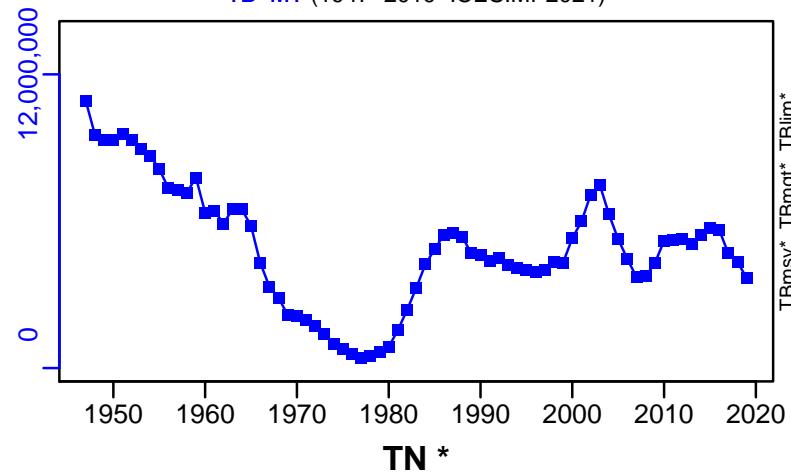


◆ Start Year   ◆ End Year   \* No Data

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

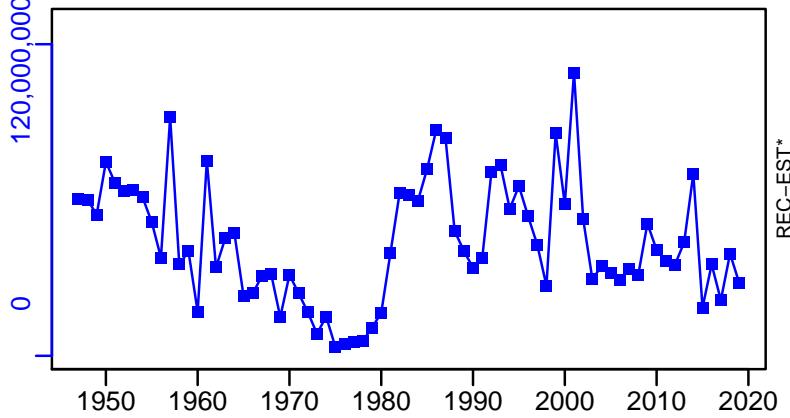
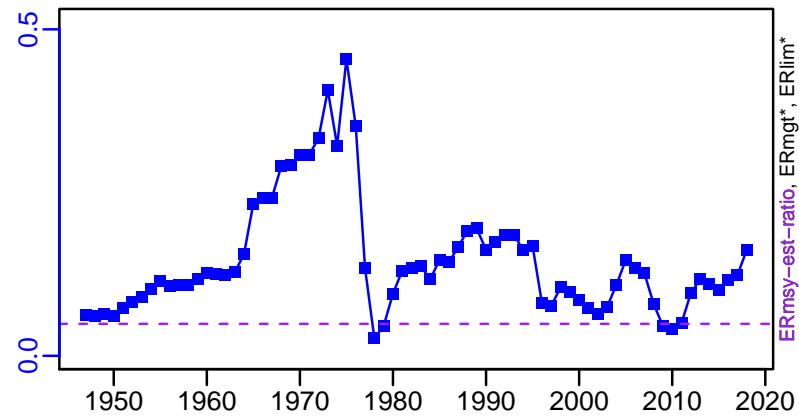
TB-MT (1947–2019–ICESIMP2021)

SSB-MT (1947–2019–ICESIMP2021)



ER-calc-ratio (1947–2019–ICESIMP2021)

R-E00 (1947–2019–ICESIMP2021)

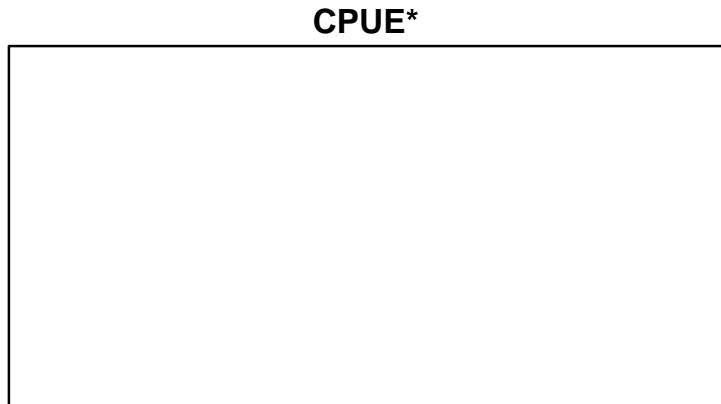
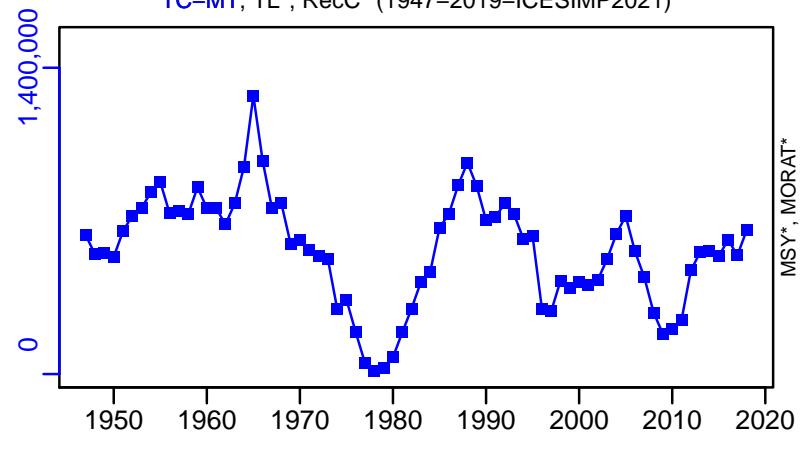


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

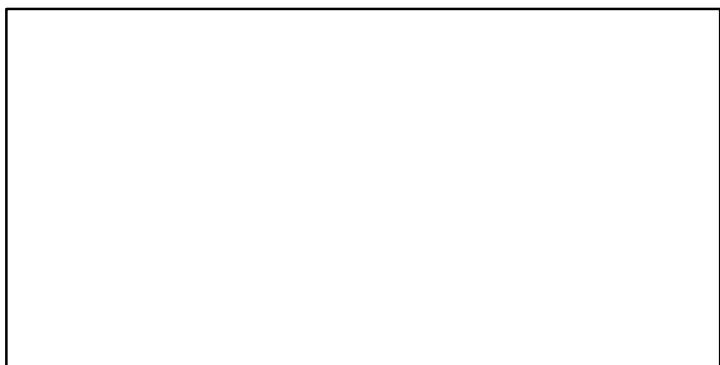
Herring ICES 3a–4–7d [HERRNS–IIIa–VIId]

TC–MT, TL\*, RecC\* (1947–2019–ICESIMP2021)

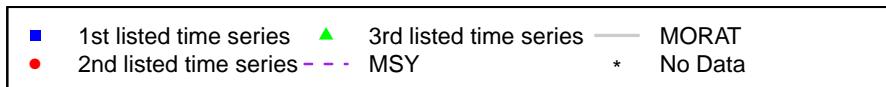
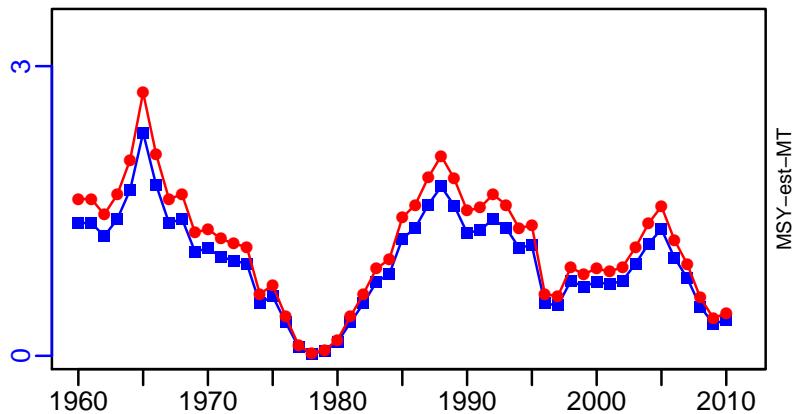
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TL–MT/MSY–est–MT, CdiveMEANC–ratio, (1960–2011–NEUBAUER)



## Herring Gulf of Riga East of Gotland [HERRRIGA]

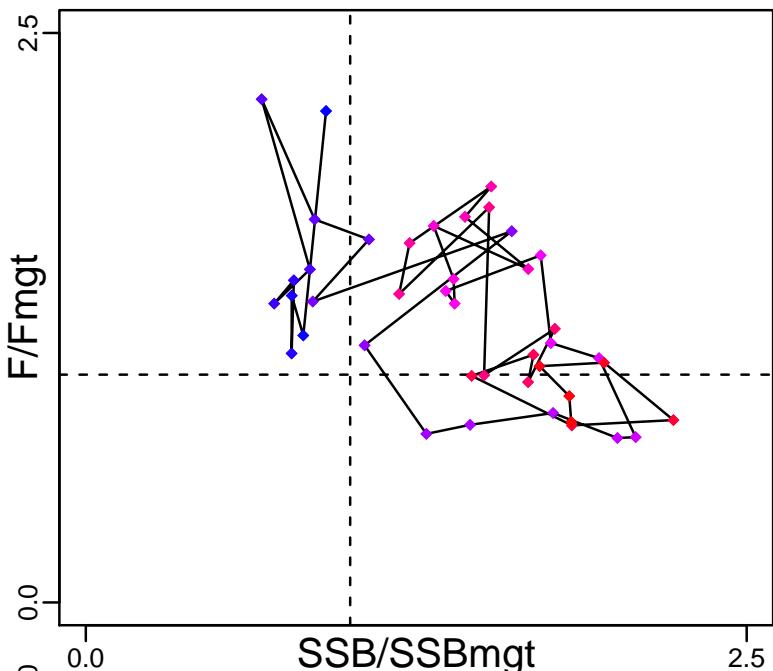
Metadata	
<b>Scientific Name</b>	Clupea harengus
<b>Current Assess ID</b>	WGBFAS-HERRRIGA-1976-2019-ICESIMP2021
<b>Area</b>	Gulf of Riga East of Gotland
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2011, 2013, 2014, 2015, 2016, 2017, 2018, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2011	60,000
<b>Fmsy</b>	Fmsy-1/yr	2018	0.32
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.279
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	60,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.32
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	28,776
<b>M</b>	M-1/yr	2011	0.2
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	40,800
<b>Flim</b>	Flim-1/yr	2018	0.88
<b>ERlim</b>	-	-	-

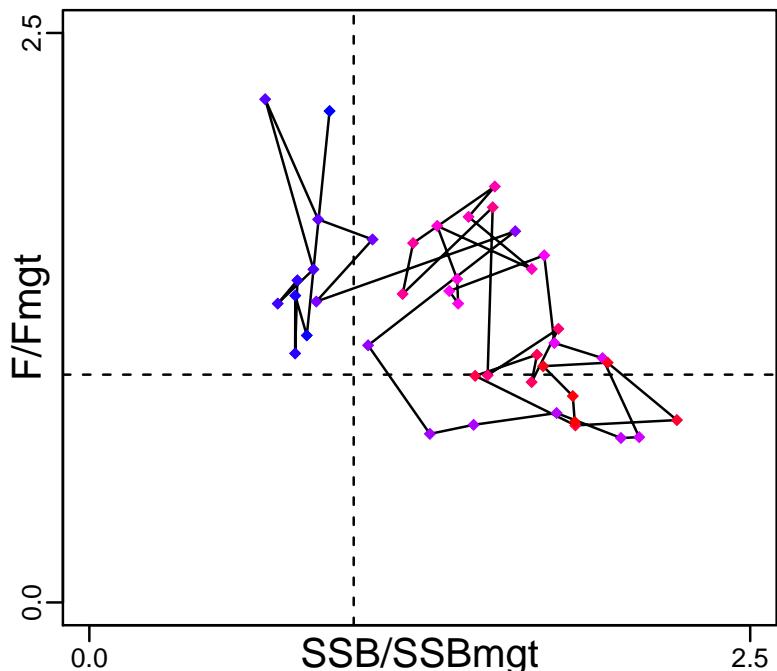
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	177,796	-	-	
<b>SSB</b>	SSB-MT	2019	109,238	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	3,099,173,000	-	1	
<b>F</b>	F-1/yr	2019	0.254	-	3 to 7	
<b>ER</b>	ER-calc-ratio	2019	0.145	-	-	
<b>TC</b>	TC-MT	2017	30,900			
<b>TL</b>	TL-MT	2019	25,747			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2011	1.262			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.003			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.519			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.821			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.792			
<b>ER/ERmgt</b>	-	-	-			

Herring Gulf of Riga East of Gotland [HERRRIGA]

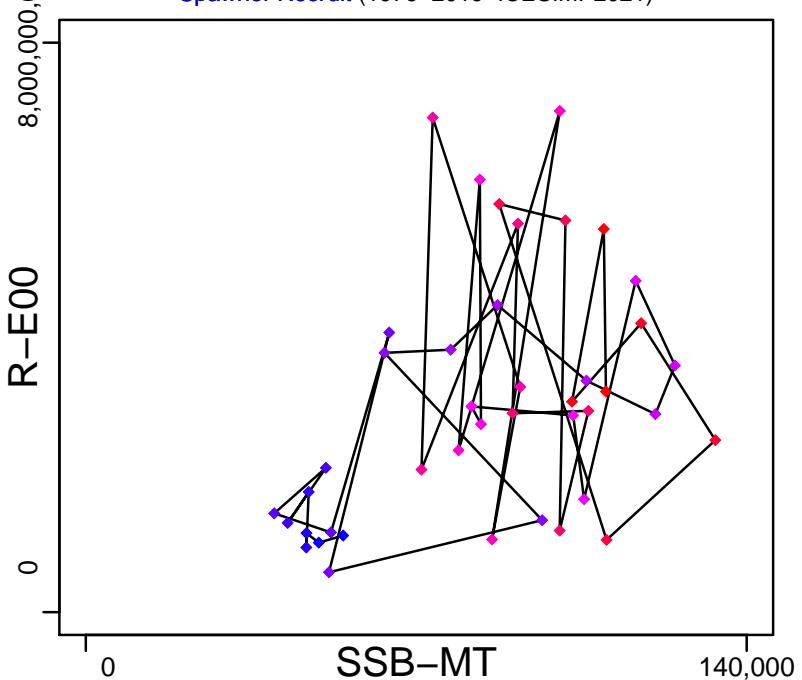
Kobe MSYpref (1976–2019–ICESIMP2021)



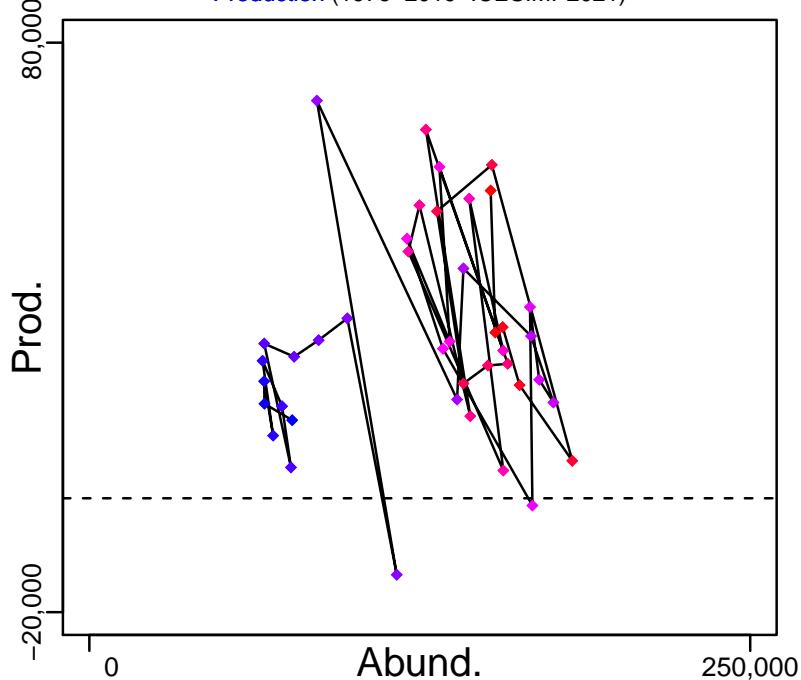
Kobe MGTpref (1976–2019–ICESIMP2021)



Spawner Recruit (1976–2019–ICESIMP2021)



Production (1976–2019–ICESIMP2021)

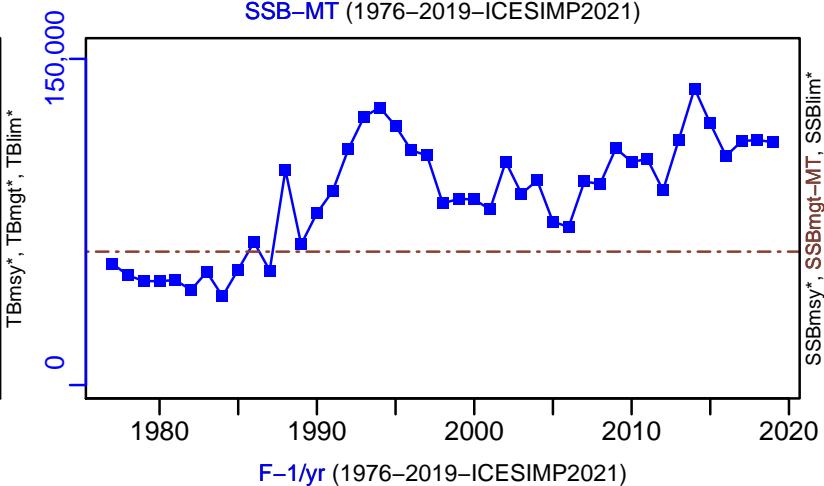
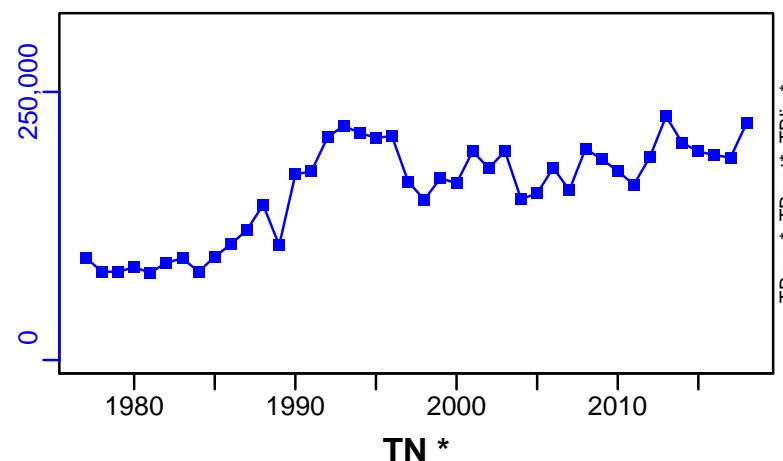


◆ Start Year   ◆ End Year   \* No Data

Herring Gulf of Riga East of Gotland [HERRRIGA]

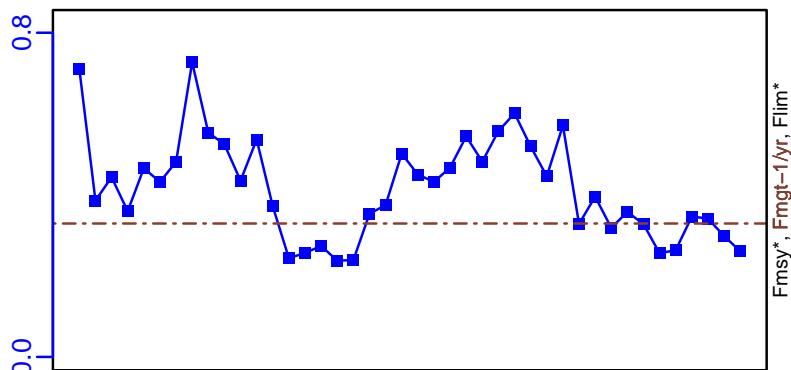
TB-MT (1976–2019–ICESIMP2021)

SSB-MT (1976–2019–ICESIMP2021)



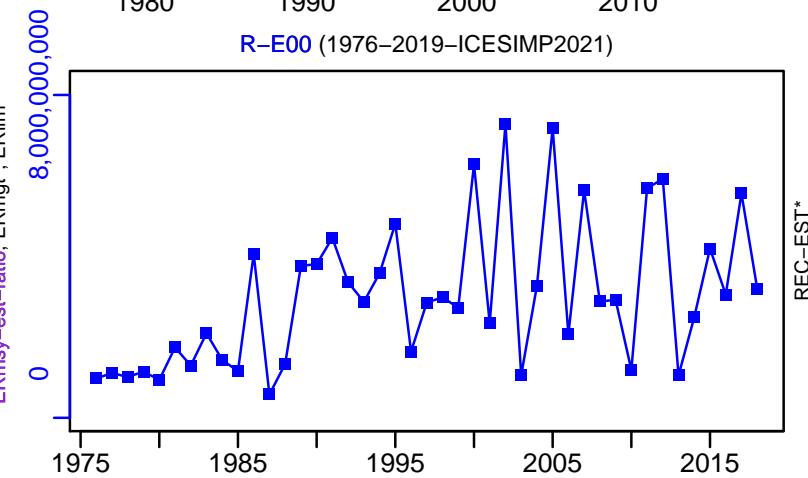
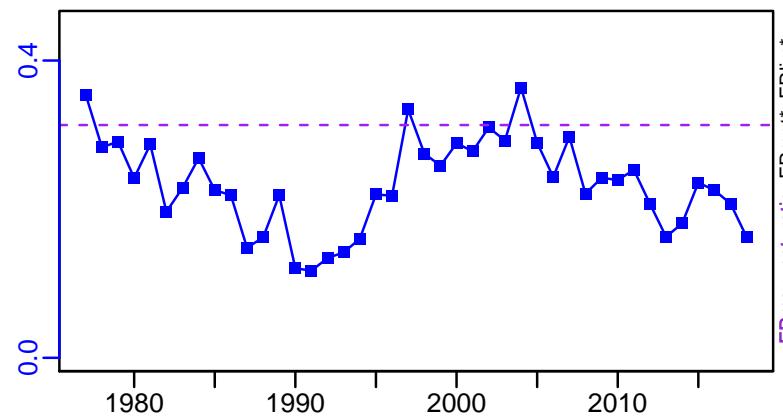
TN \*

F-1/yr (1976–2019–ICESIMP2021)



ER-calc-ratio (1976–2019–ICESIMP2021)

R-E00 (1976–2019–ICESIMP2021)

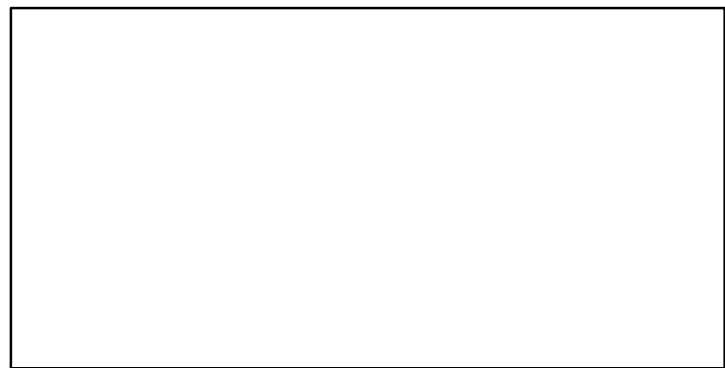
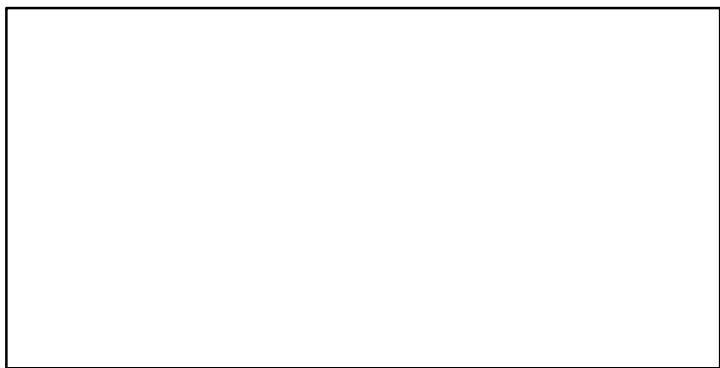
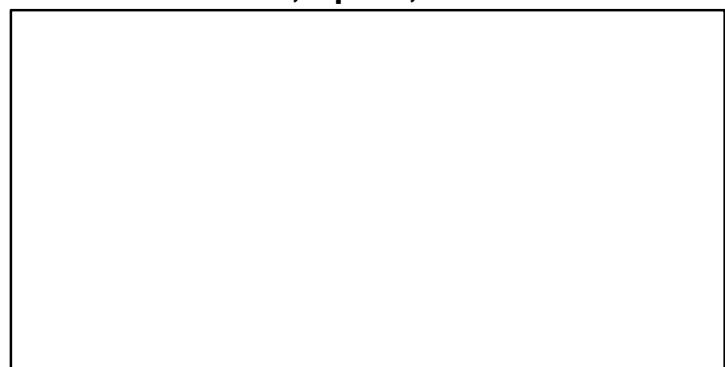
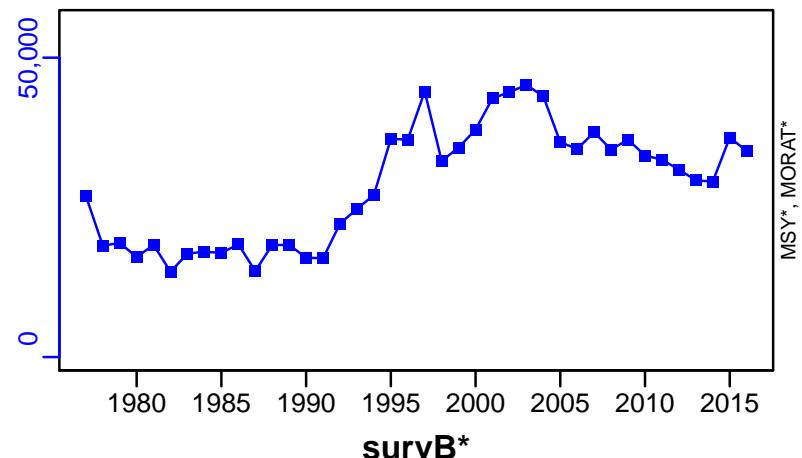


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

Herring Gulf of Riga East of Gotland [HERRRIGA]

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

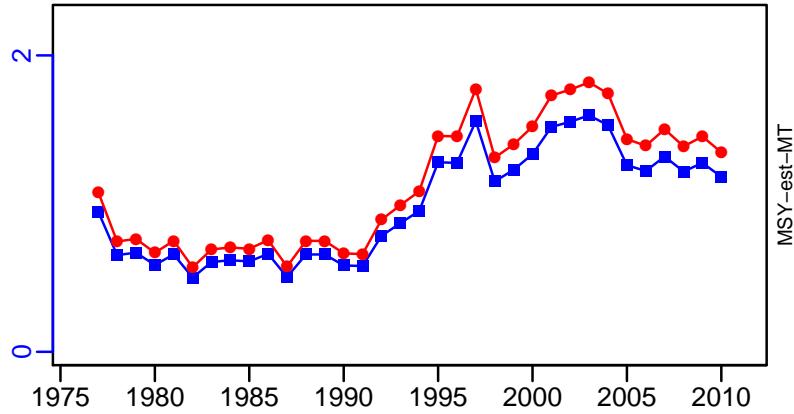
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1976–2011–NEUBAUER)



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

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

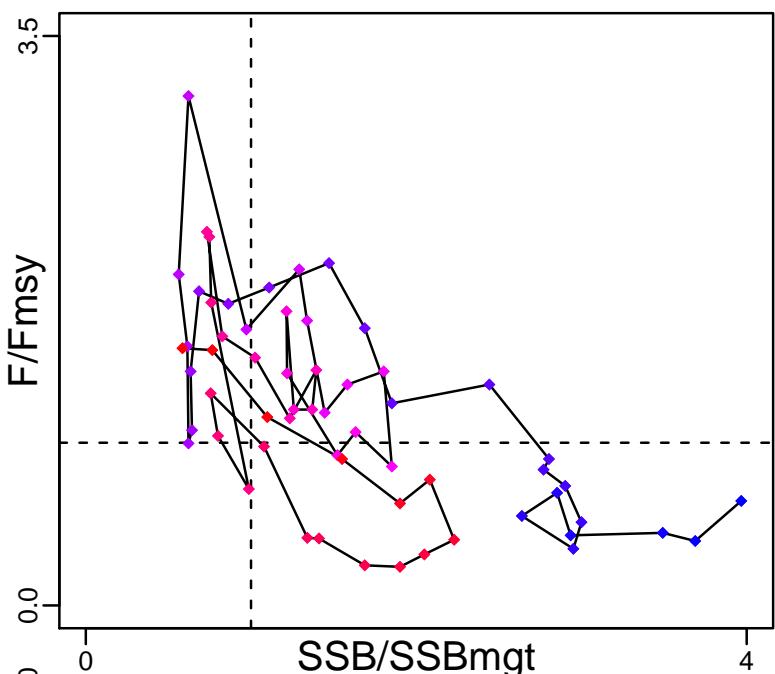
<b>Metadata</b>	
<b>Scientific Name</b>	Clupea harengus
<b>Current Assess ID</b>	HAWG-HERRSIRS-1957-2018-ICESIMP2018
<b>Area</b>	ICES 7a-g-h-j-k
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2010, 2012, 2013, 2014, 2015, 2016, 2017, 2018

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2012	92,458
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.26
<b>ERmsy</b>	ERmsy-est-ratio	2018	0.151
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	61,000
<b>Fmgt</b>	Fmgt-1/yr	2018	0.23
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2012	23,196
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2010	26,000
<b>SSBlim</b>	SSBlim-MT	2018	54,000
<b>Flim</b>	Flim-1/yr	2018	0.45
<b>ERlim</b>	-	-	-

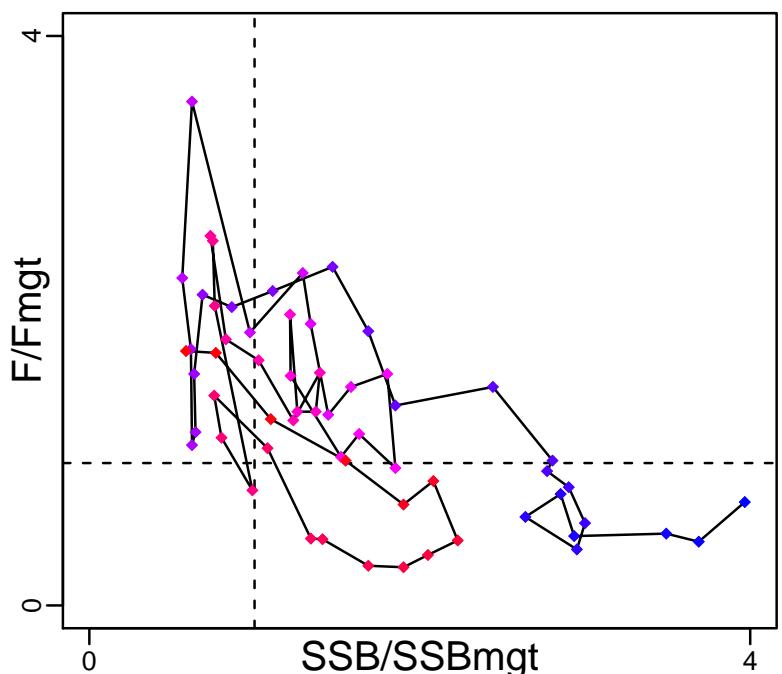
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2018	61,300	Both	-
<b>SSB</b>	SSB-MT	2018	34,200	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	$4.38 \times 10^8$	-	1
<b>F</b>	F-1/yr	2018	0.411	-	2 to 5
<b>ER</b>	ER-calc-ratio	2018	0.176	-	-
<b>TC</b>	TC-MT	2018	10,800		
<b>TL</b>	TL-MT	2018	10,800		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	1.763		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.581		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2018	1.17		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	0.561		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2018	1.787		
<b>ER/ERmgt</b>	-	-	-		

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

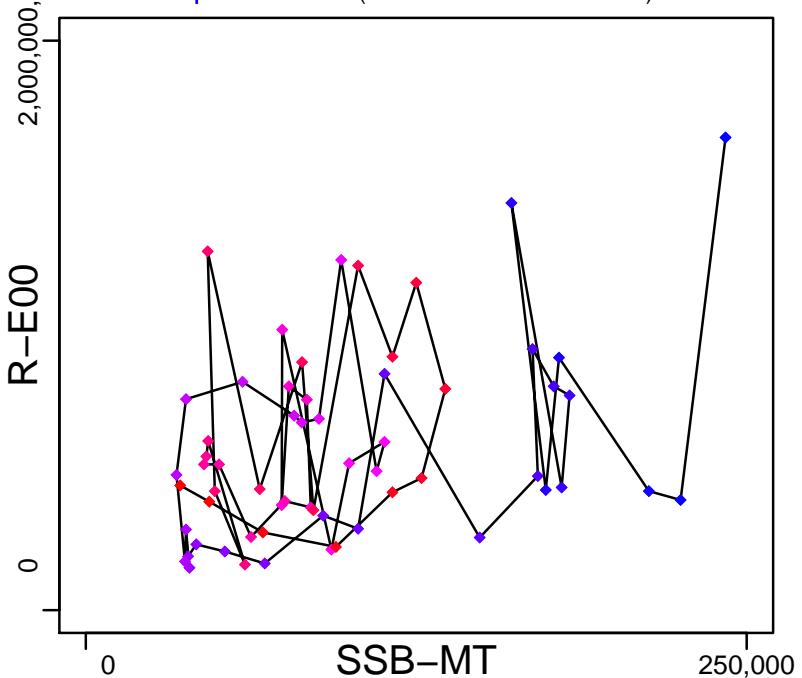
Kobe MSYpref (1957–2018–ICESIMP2018)



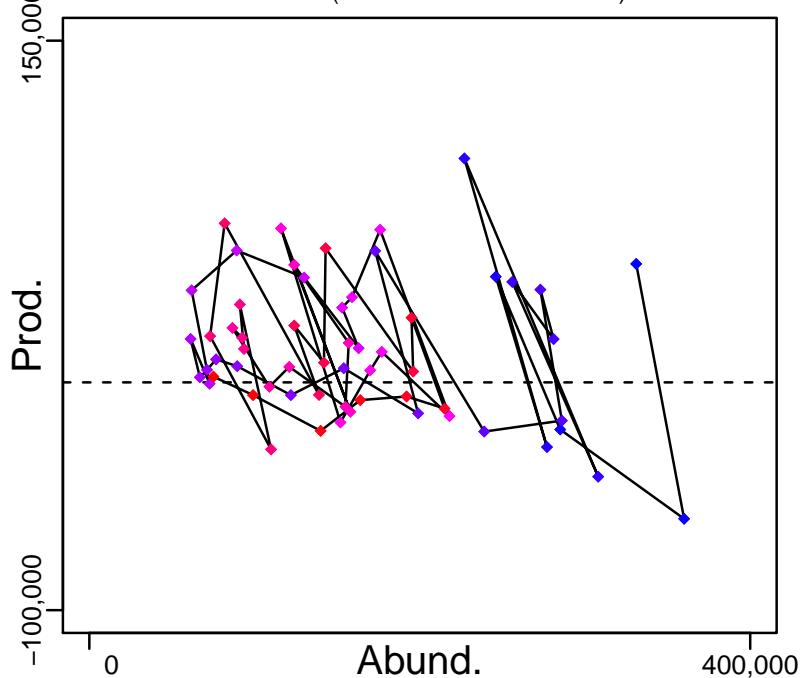
Kobe MGTpref (1957–2018–ICESIMP2018)



Spawner Recruit (1957–2018–ICESIMP2018)



Production (1957–2018–ICESIMP2018)

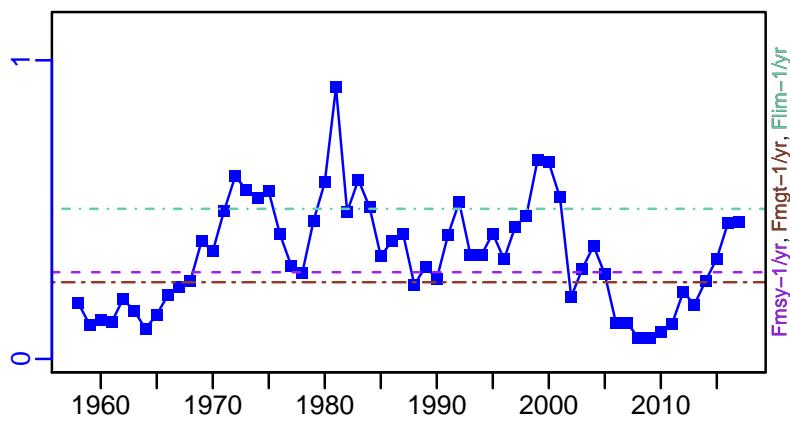
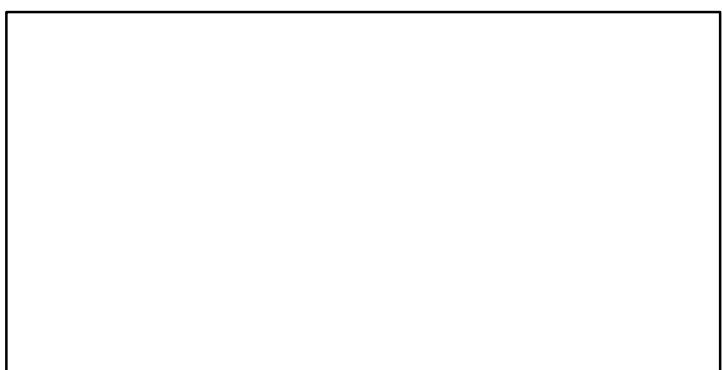
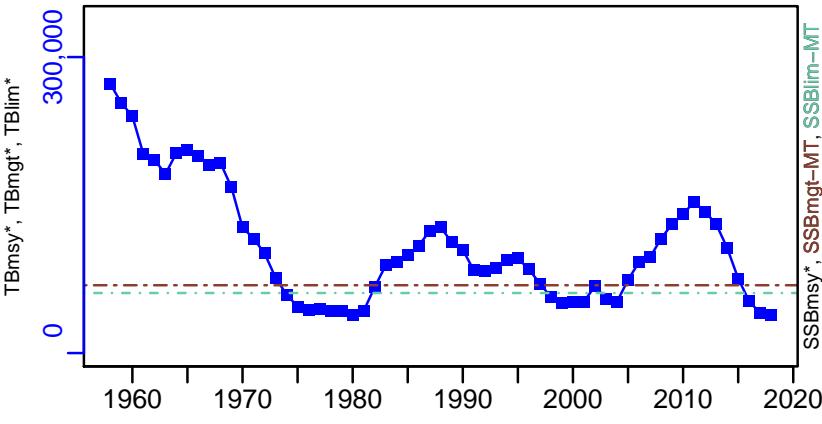
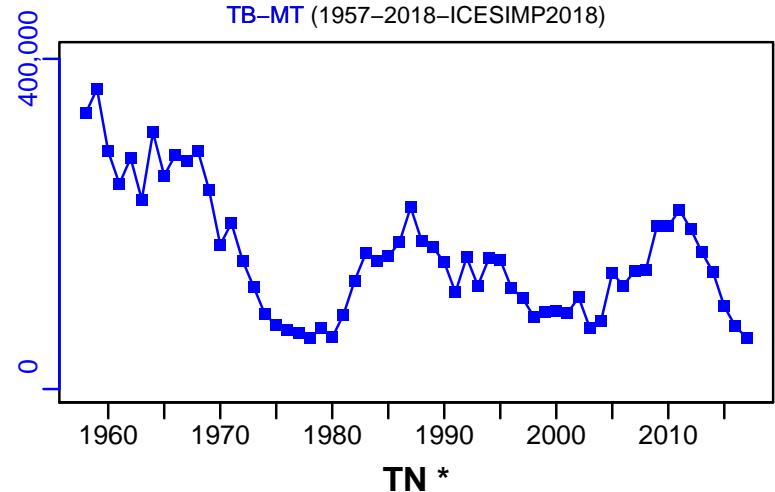


◆ Start Year   ◆ End Year   \* No Data

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

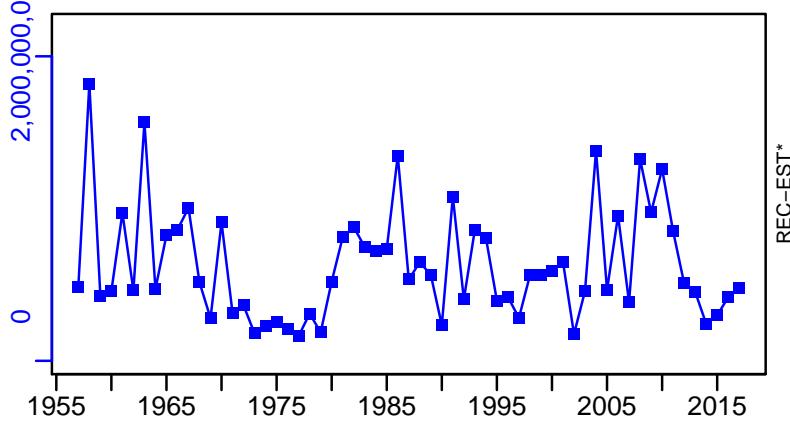
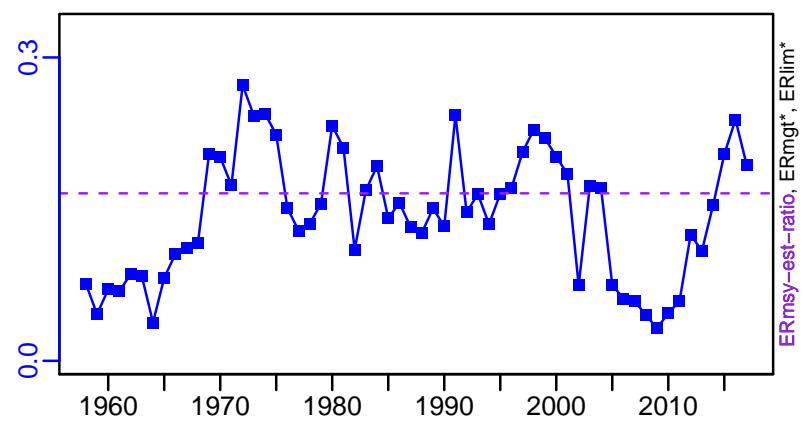
TB-MT (1957–2018–ICESIMP2018)

SSB-MT (1957–2018–ICESIMP2018)



ER-calc-ratio (1957–2018–ICESIMP2018)

R-E00 (1957–2018–ICESIMP2018)

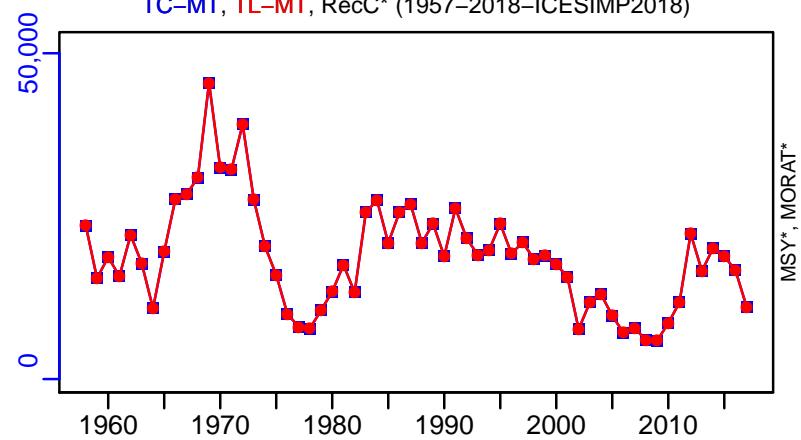


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

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

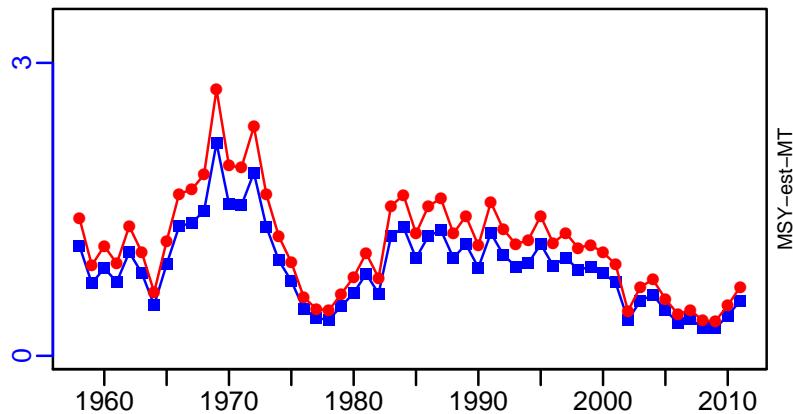
TC-MT, TL-MT, RecC\* (1957–2018–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

TL-MT/MSY-est-MT, CdivMEANC-ratio, (1957–2012–ICESIMP2016)



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

## Herring West of Scotland [HERRVla]

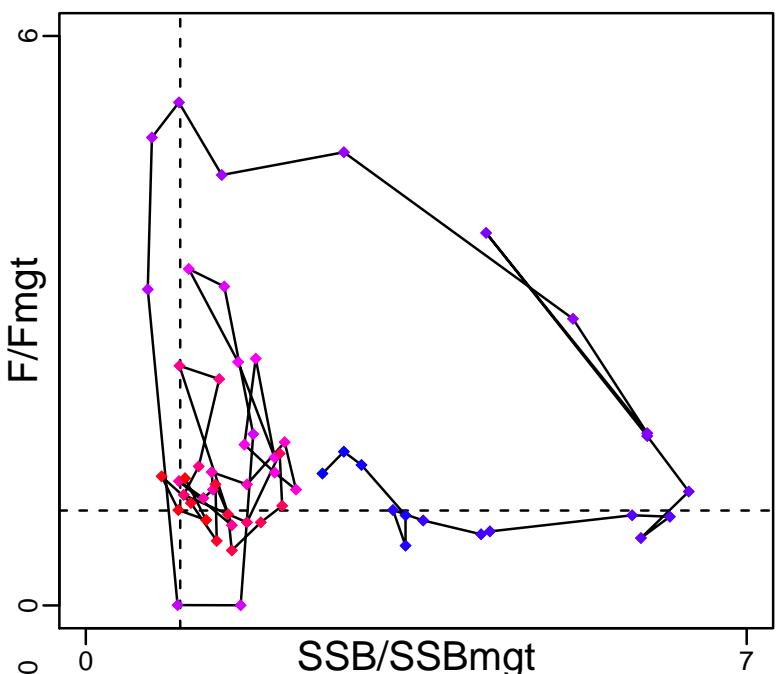
<b>Metadata</b>	
<b>Scientific Name</b>	Clupea harengus
<b>Current Assess ID</b>	HAWG-HERRVla-1956-2014-ICESIMP2016
<b>Area</b>	West of Scotland
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2010, 2013, 2014

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2013	594,800
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2010	0.25
<b>ERmsy</b>	ERmsy-est-ratio	2013	0.155
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2014	75,000
<b>Fmgt</b>	Fmgt-1/yr	2014	0.2
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2013	91,953
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2010	50,000
<b>SSBlim</b>	SSBlim-MT	2014	50,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

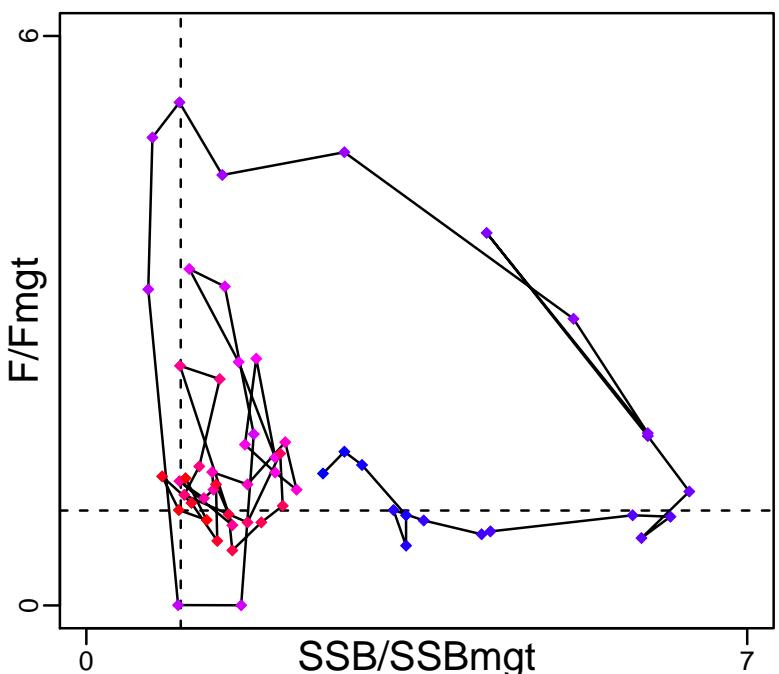
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2014	114,000	Both	-	
<b>SSB</b>	SSB-MT	2014	78,800	Both	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2014	$6 \times 10^8$	-	1	
<b>F</b>	F-1/yr	2014	0.268	-	3 to 6 ringer	
<b>ER</b>	ER-calc-ratio	2014	0.202	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2014	23,000			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2013	0.331			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2010	1.064			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2013	0.607			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2014	1.051			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2014	1.34			
<b>ER/ERmgt</b>	-	-	-			

Herring West of Scotland [HERRVla]

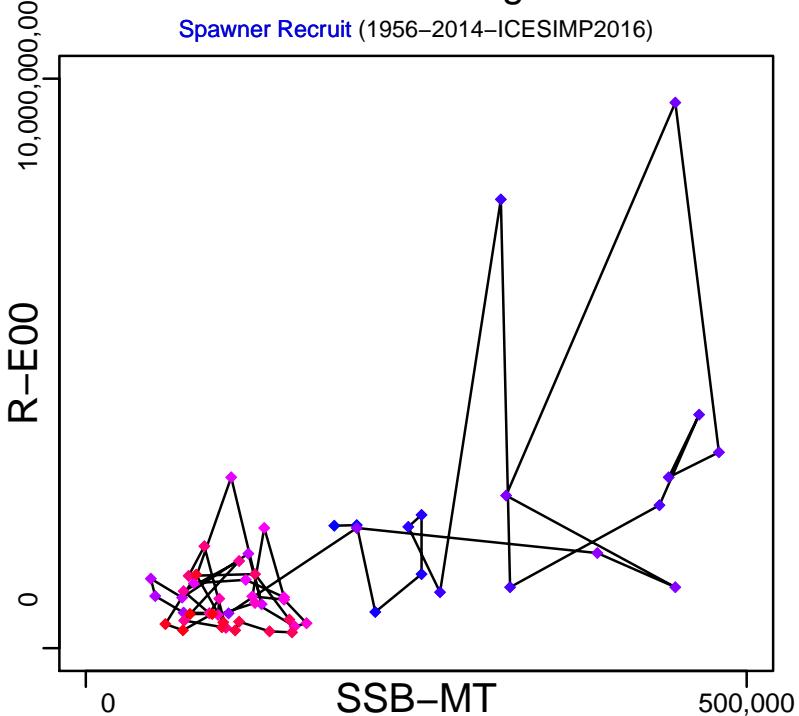
Kobe MSYpref (1956–2014–ICESIMP2016)



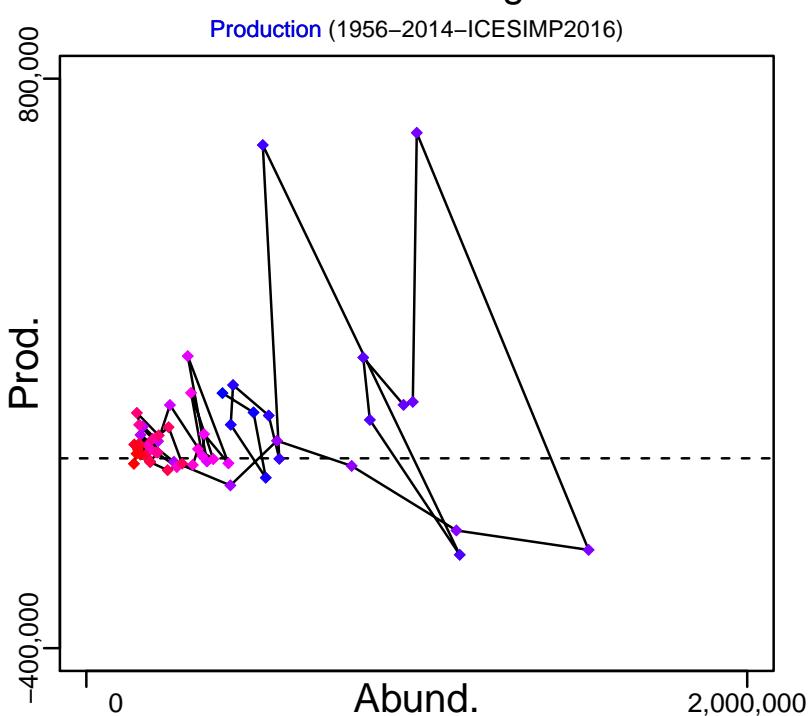
Kobe MGTpref (1956–2014–ICESIMP2016)



Spawner Recruit (1956–2014–ICESIMP2016)



Production (1956–2014–ICESIMP2016)

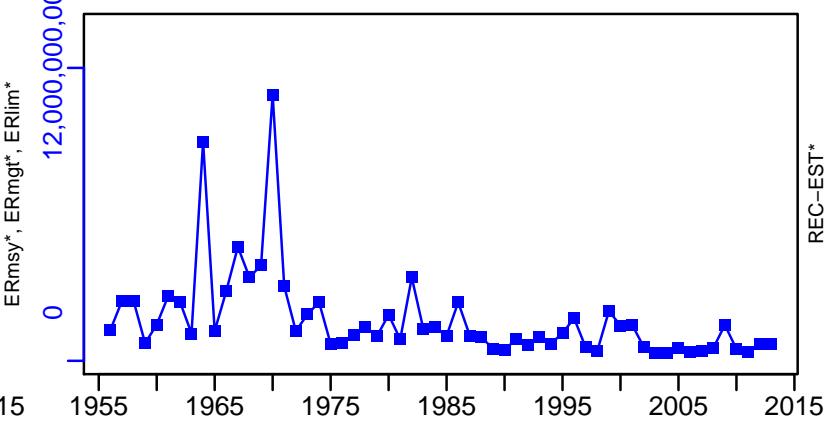
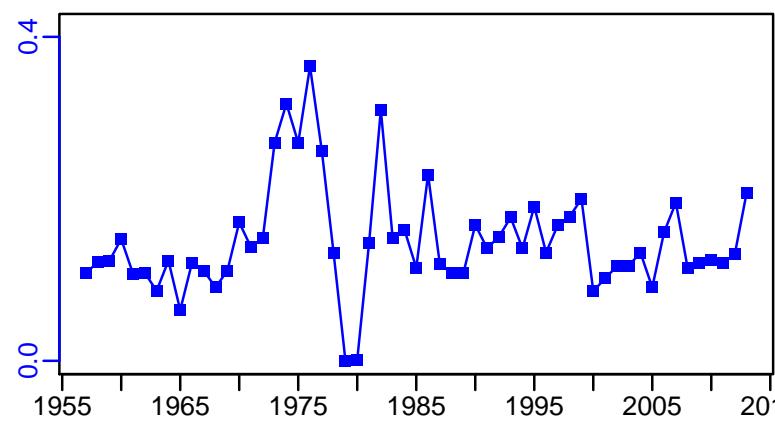
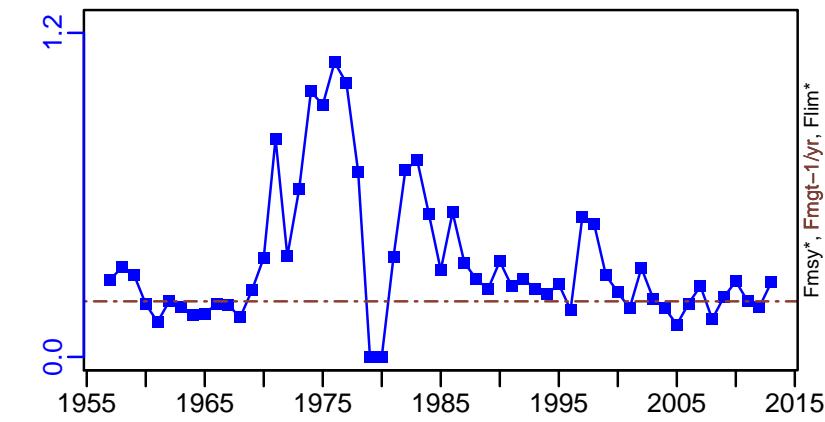
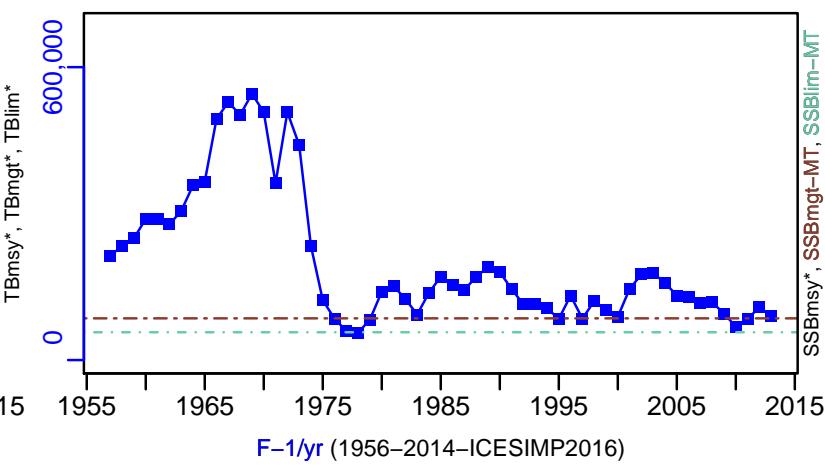
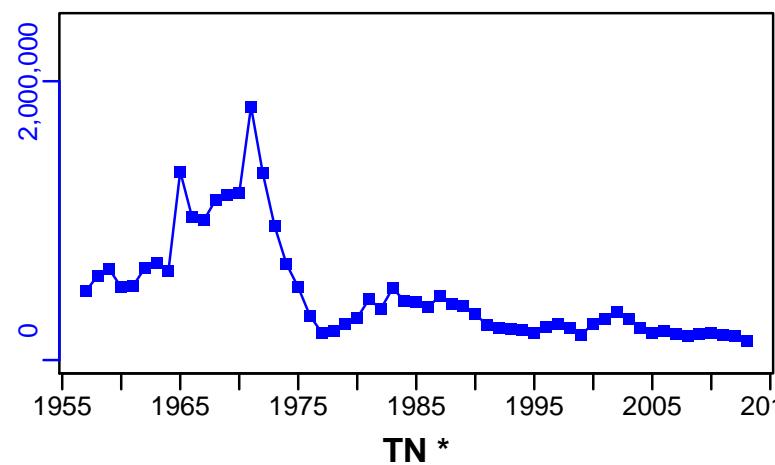


◆ Start Year   ◆ End Year   \* No Data

### Herring West of Scotland [HERRVla]

TB-MT (1956–2014–ICESIMP2016)

SSB-MT (1956–2014–ICESIMP2016)

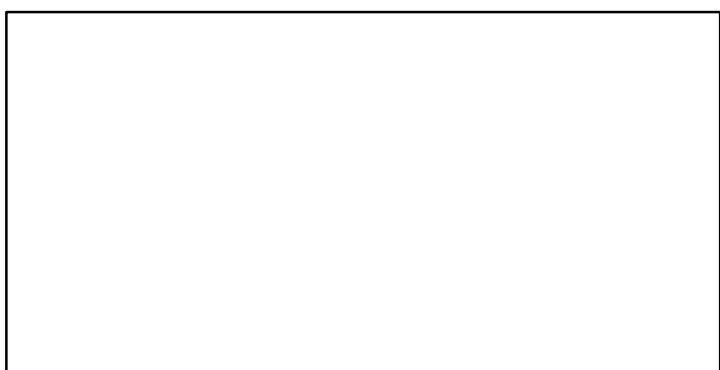
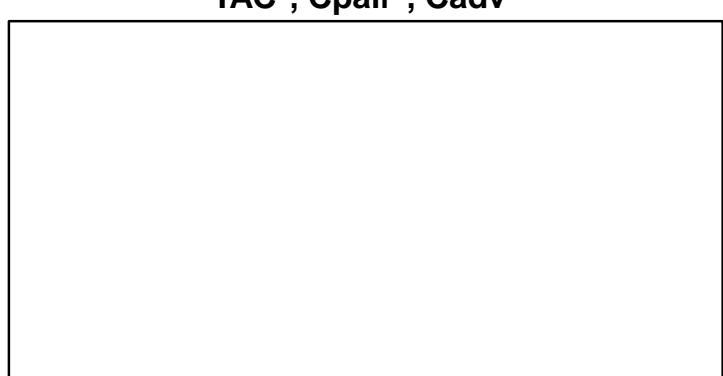
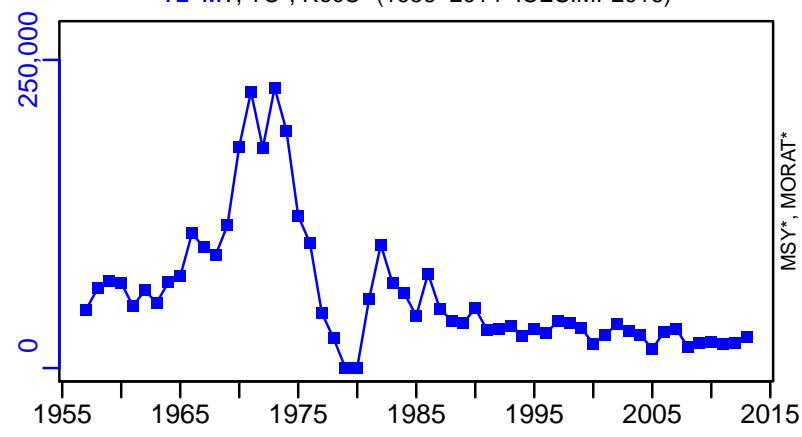


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	--- Lim BRP	* No Data

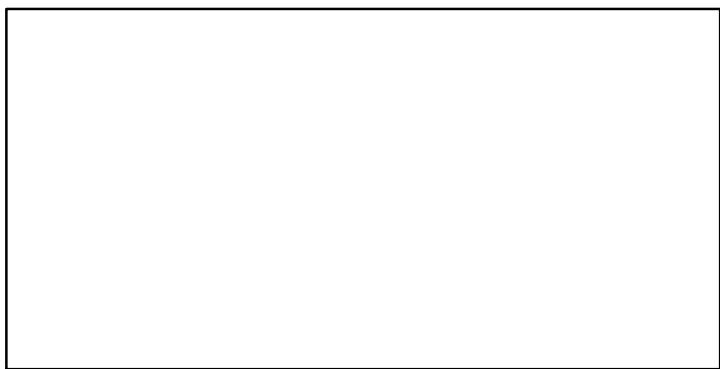
Herring West of Scotland [HERRV1a]

TL-MT, TC\*, RecC\* (1956–2014–ICESIMP2016)

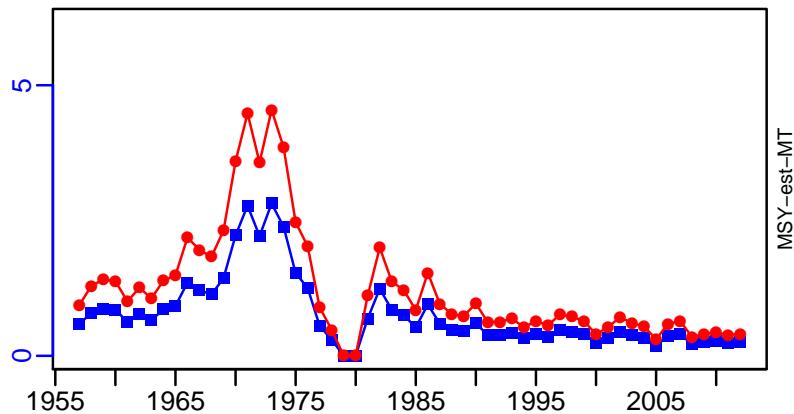
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1956–2013–ICESIMP2016)



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

## Herring ICES 5a-7bc [HERRVlaVIIbc]

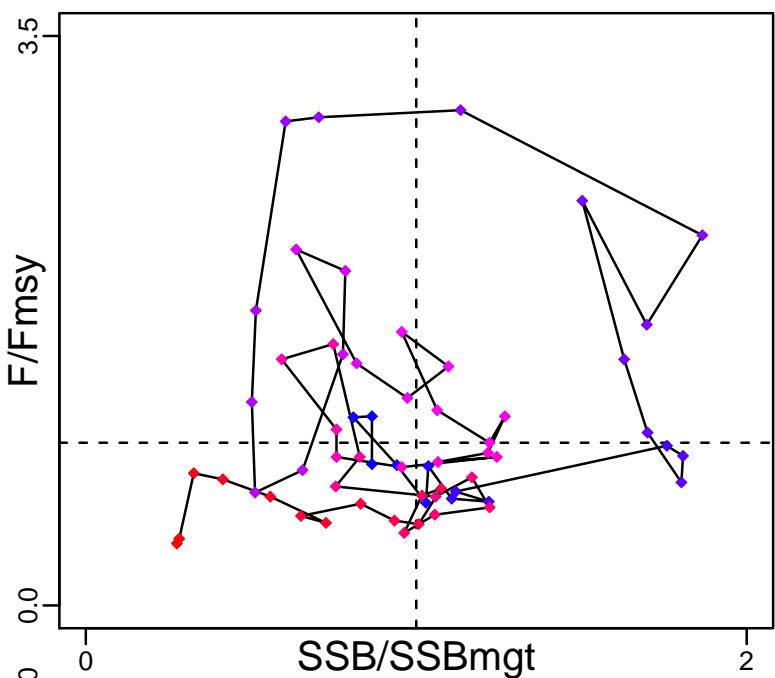
<b>Metadata</b>	
<b>Scientific Name</b>	Clupea harengus
<b>Current Assess ID</b>	HAWG-HERRVlaVIIbc-1956-2018-ICESIMP2021
<b>Area</b>	ICES 5a-7bc
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2010, 2013, 2014, 2015, 2016, 2017, 2018, 2018

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2013	202,004
<b>SSBmsy</b>	SSBmsy-est-MT	2010	91,414
<b>Fmsy</b>	Fmsy-1/yr	2018	0.16
<b>ERmsy</b>	ERmsy-est-ratio	2018	0.082
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	410,000
<b>Fmgt</b>	Fmgt-1/yr	2018	0.16
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2013	63,752
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2010	81,000
<b>SSBlim</b>	SSBlim-MT	2018	250,000
<b>Flim</b>	Flim-1/yr	2018	0.3
<b>ERlim</b>	-	-	-

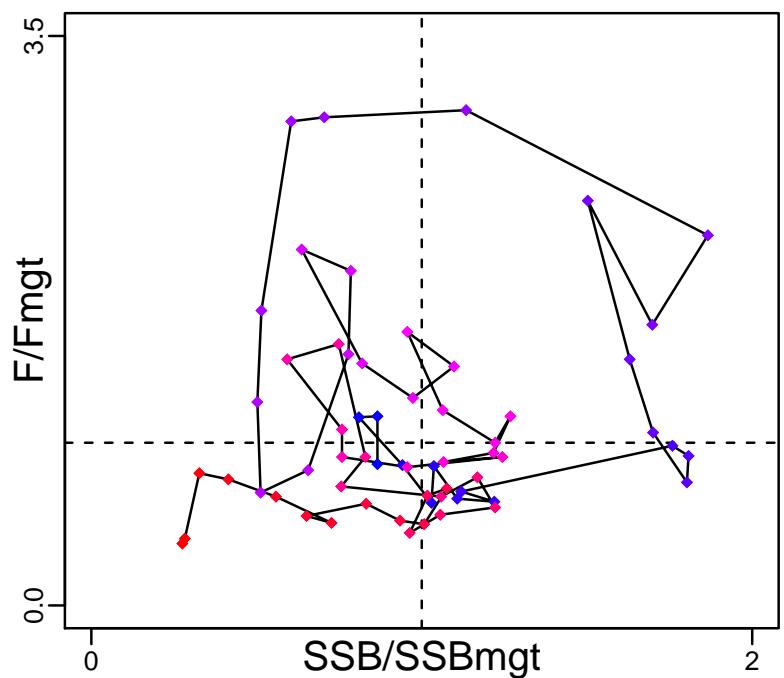
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2018	162,000	Both	-
<b>SSB</b>	SSB-MT	2018	91,500	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	$4.4 \times 10^8$	-	1
<b>F</b>	F-1/yr	2018	0.061	-	3 to 6
<b>ER</b>	ER-calc-ratio	2018	0.04	-	-
<b>TC</b>	TC-MT	2018	6420		
<b>TL</b>	TL-MT	2018	6420		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2013	8.96		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2010	0.257		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.381		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2018	0.484		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	0.223		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2018	0.381		
<b>ER/ERmgt</b>	-	-	-		

Herring ICES 5a–7bc [HERRVlaVIIbc]

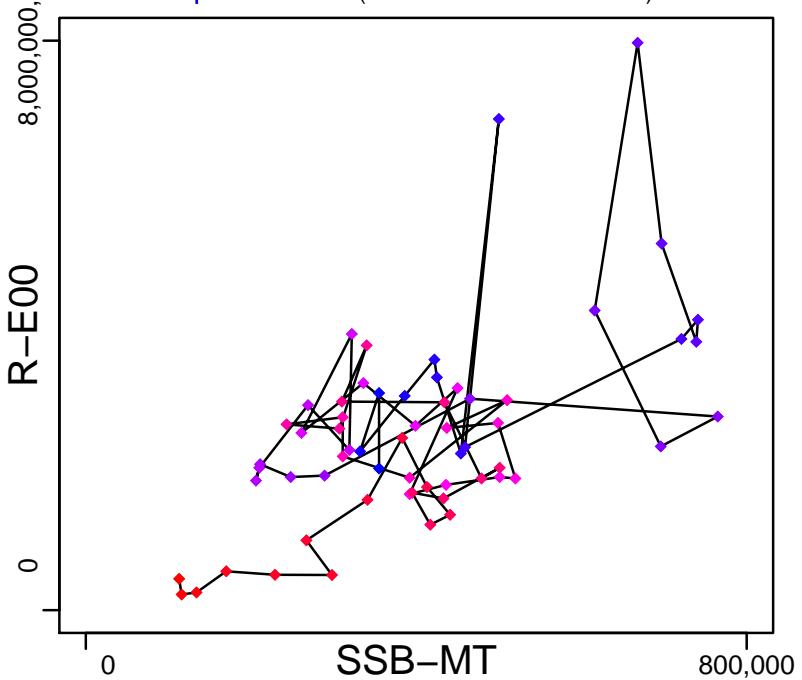
Kobe MSYpref (1956–2018–ICESIMP2018)



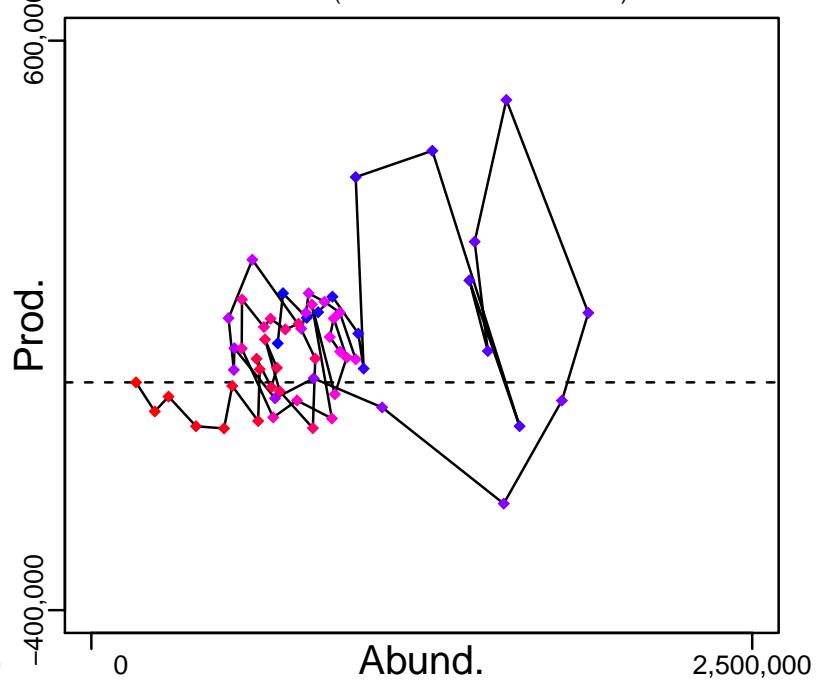
Kobe MGTpref (1956–2018–ICESIMP2018)



Spawner Recruit (1956–2018–ICESIMP2018)



Production (1956–2018–ICESIMP2018)

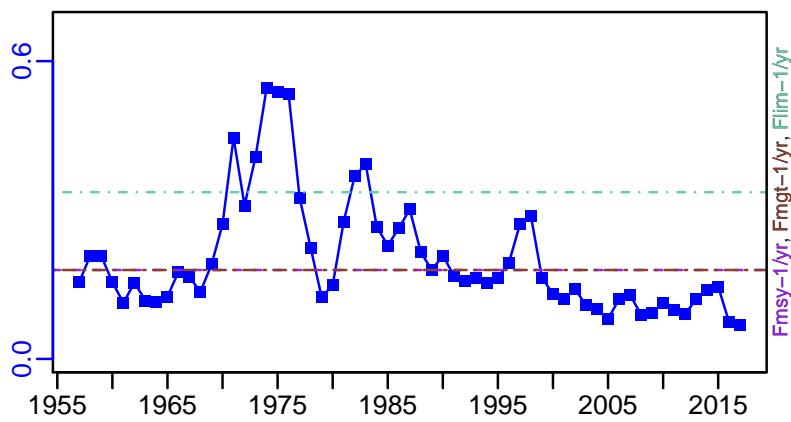
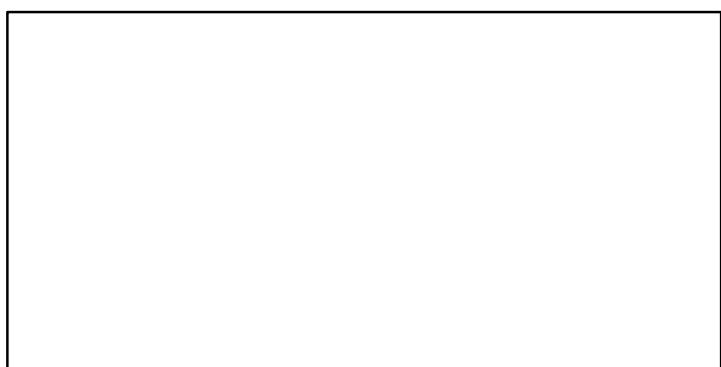
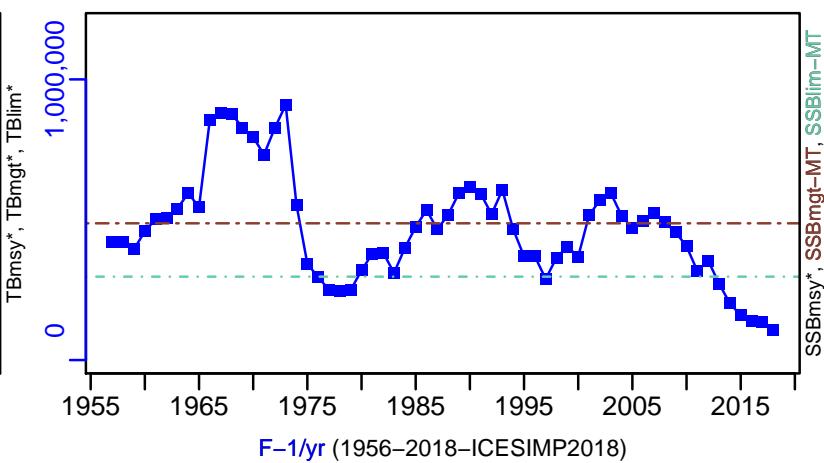
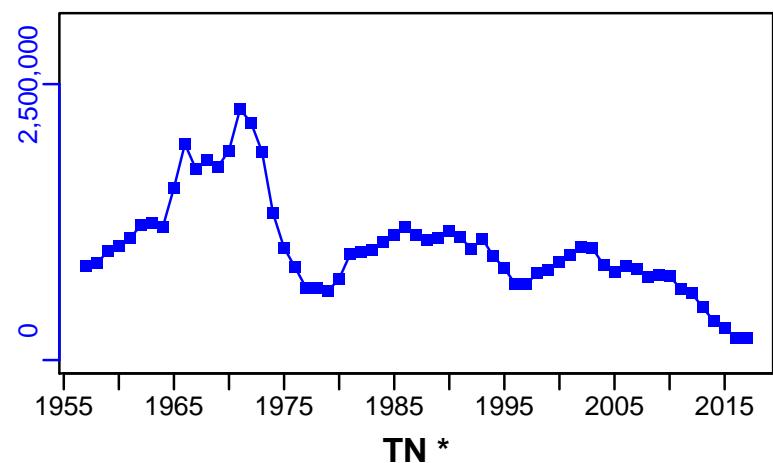


◆ Start Year ♦ End Year \* No Data

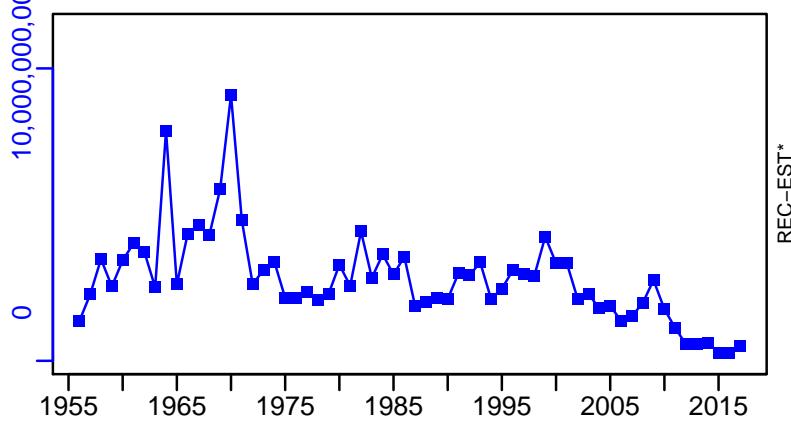
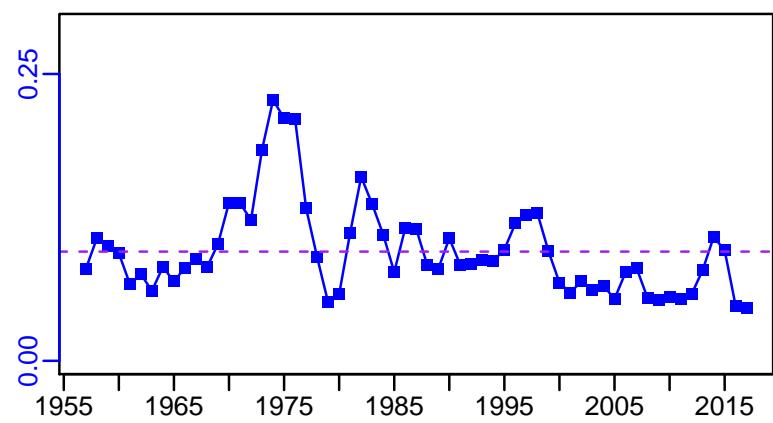
Herring ICES 5a–7bc [HERRVlaVIIbc]

TB-MT (1956–2018–ICESIMP2018)

SSB-MT (1956–2018–ICESIMP2018)



ER-calc-ratio (1956–2018–ICESIMP2018)

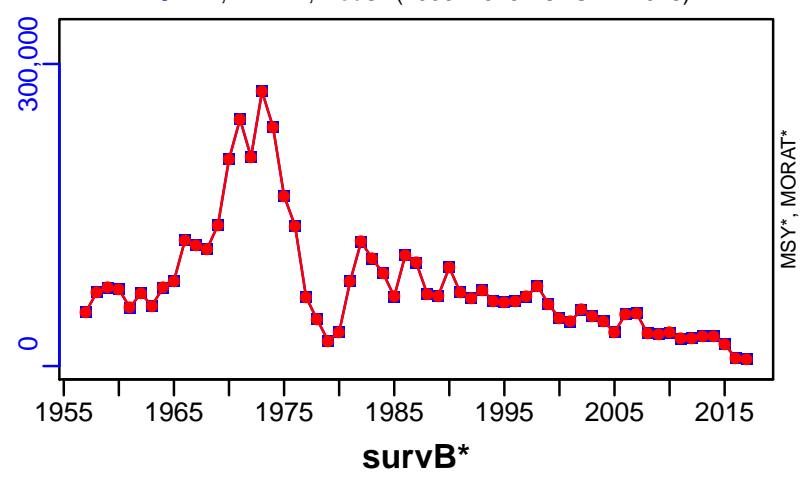


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

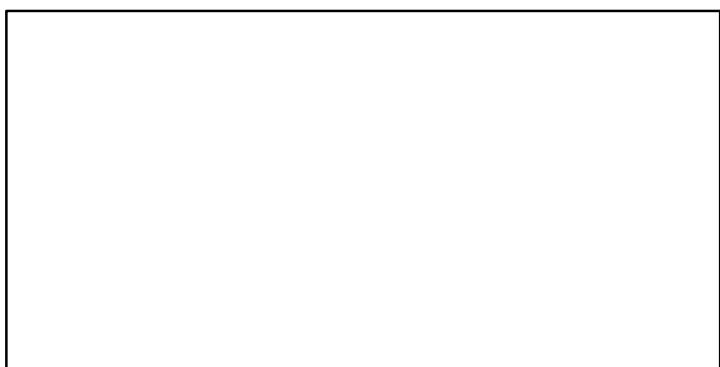
Herring ICES 5a–7bc [HERRVlaVIIbc]

TC–MT, TL–MT, RecC\* (1956–2018–ICESIMP2018)

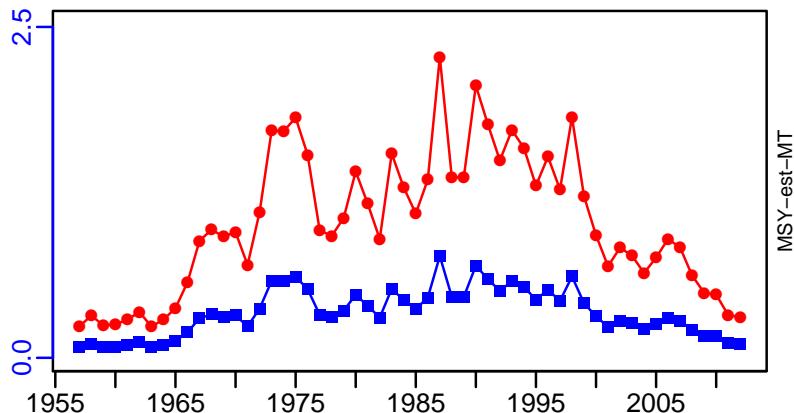
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL–MT/MSY–est–MT, CdivMEANC–ratio, (1956–2013–ICESIMP2016)



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

## Horse mackerel ICES 2a-4a-5b-6a-7-8 [HMACKIIa-IVa-Vb-VIa-VII-VIII]

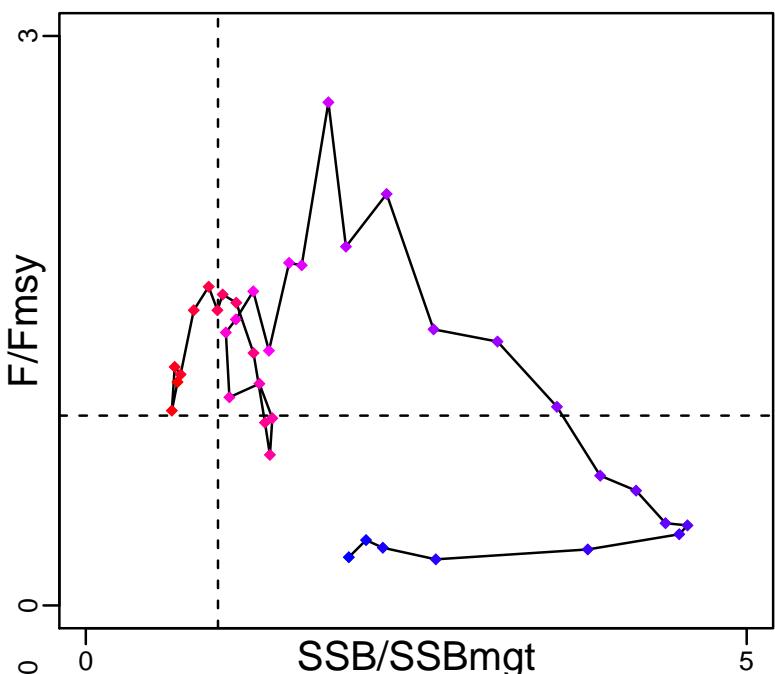
Metadata	
<b>Scientific Name</b>	Trachurus trachurus
<b>Current Assess ID</b>	WGWISE-HMACKIIa-IVa-Vb-VIa-VII-VIII-1982-2019-ICESIMP2021
<b>Area</b>	ICES 2a-4a-5b-6a-7-8
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Widely Distributed Stocks
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2013	2,482,584
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.074
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.043
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	1,170,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.074
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2013	277,614
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2017	661.917
<b>Flim</b>	Flim-1/yr	2017	0.151
<b>ERlim</b>	-	-	-

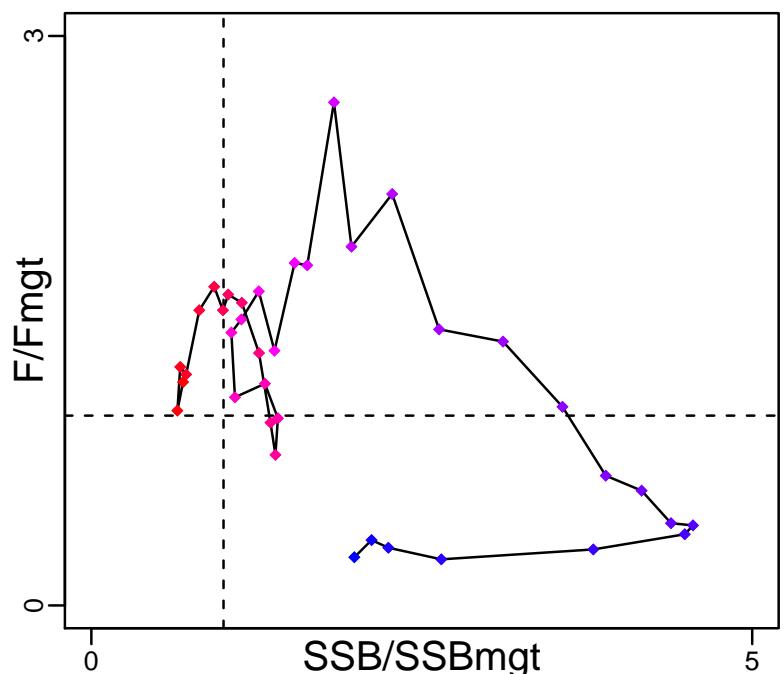
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	1,070,000	Both	-
<b>SSB</b>	SSB-MT	2019	872,831	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	2,572,649,000	-	0
<b>F</b>	F-1/yr	2019	0.087	-	1 to 10
<b>ER</b>	ER-calc-ratio	2019	0.136	-	-
<b>TC</b>	TC-MT	2019	101,682		
<b>TL</b>	TL-MT	2019	99,072		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2013	0.512		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	1.177		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	3.175		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.746		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.177		
<b>ER/ERmgt</b>	-	-	-		

Horse mackerel ICES 2a–4a–5b–6a–7–8 [HMACKIIa–IVa–Vb–VIa–VII–VIII]

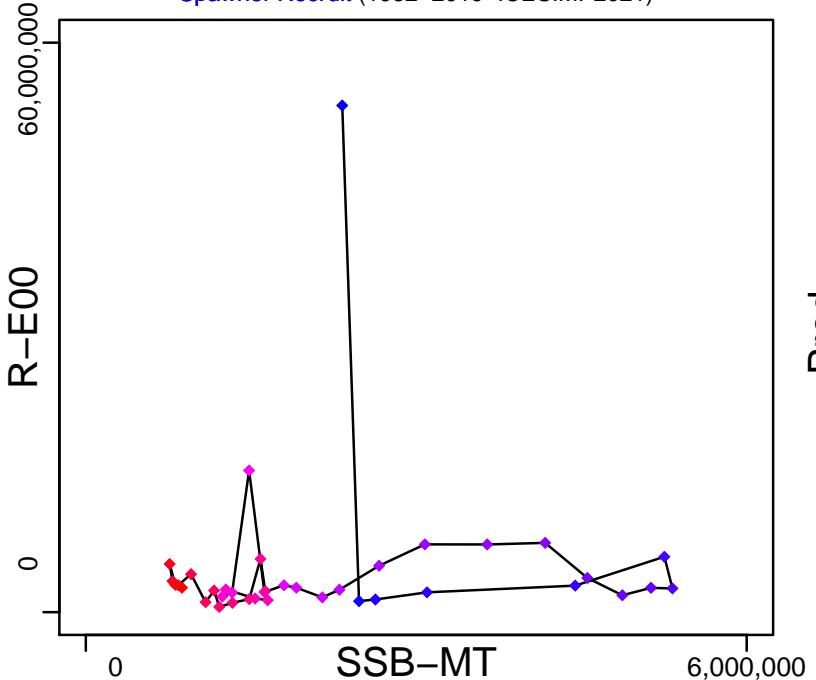
Kobe MSYpref (1982–2019–ICESIMP2021)



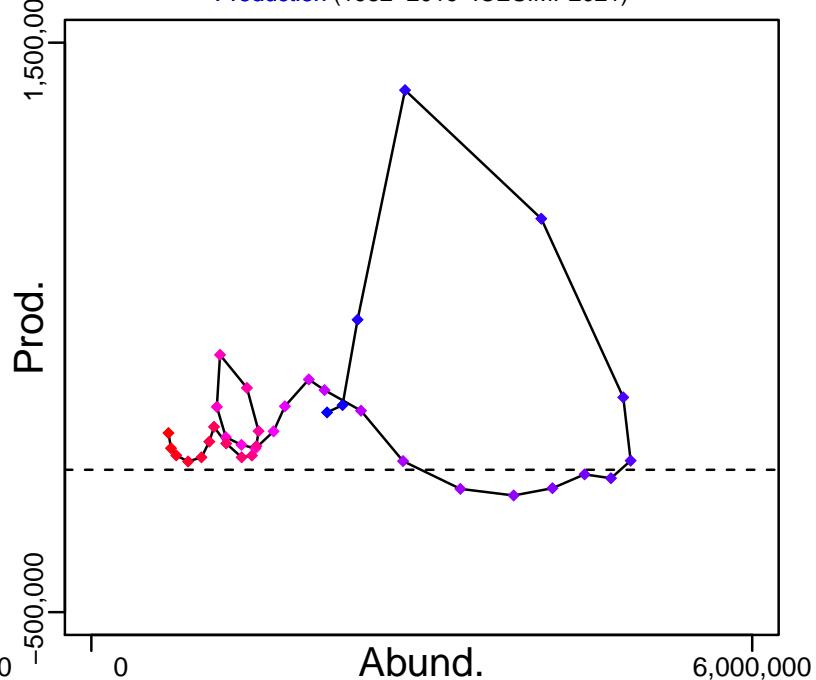
Kobe MGTpref (1982–2019–ICESIMP2021)



Spawner Recruit (1982–2019–ICESIMP2021)



Production (1982–2019–ICESIMP2021)

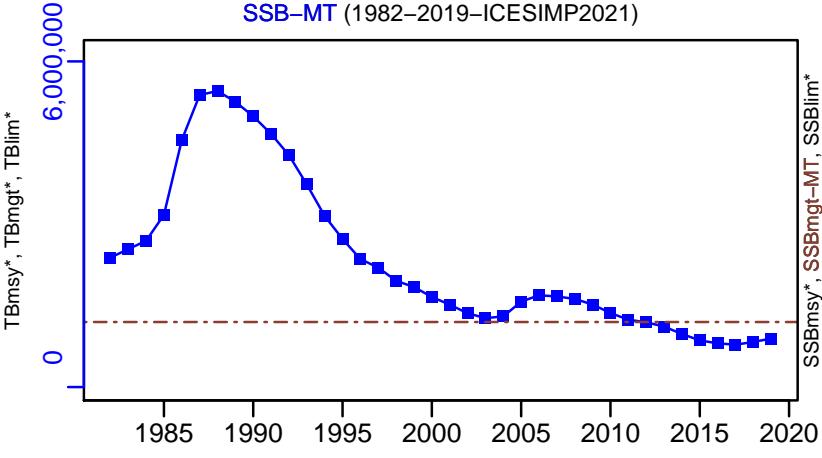
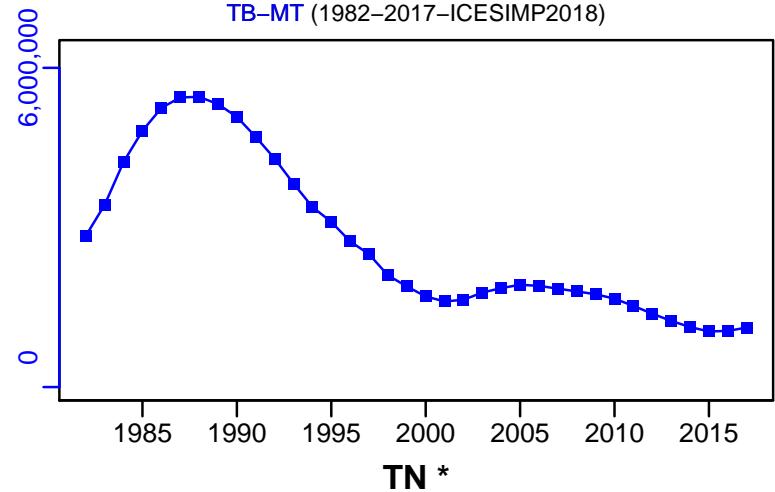


◆ Start Year   ◆ End Year   \* No Data

Horse mackerel ICES 2a–4a–5b–6a–7–8 [HMACKIIa–IVa–Vb–VIa–VII–VIII]

TB-MT (1982–2017–ICESIMP2018)

SSB-MT (1982–2019–ICESIMP2021)

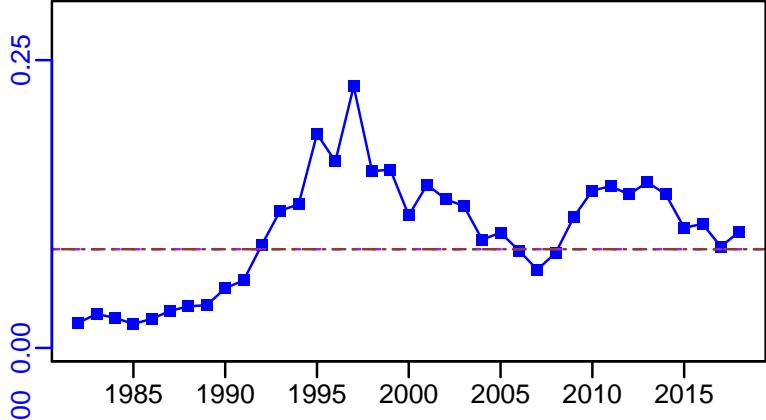
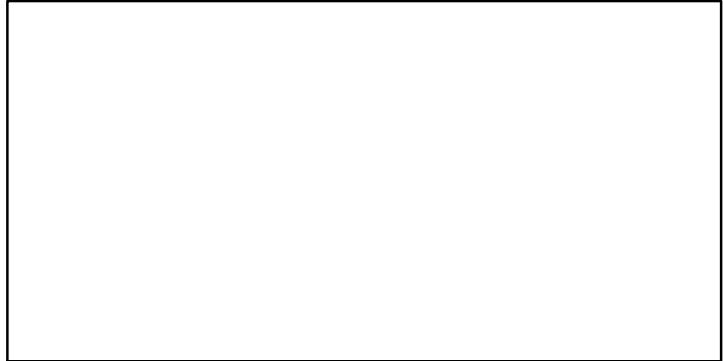


TN \*

F-1/yr (1982–2019–ICESIMP2021)

SSBmsy\*, TBmg\*, TBlim\*

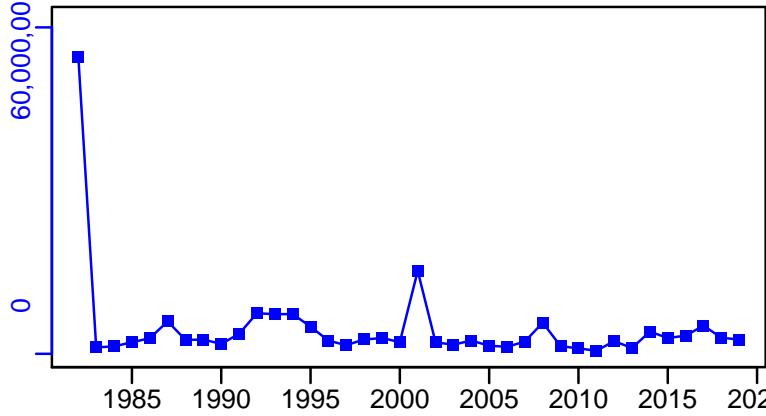
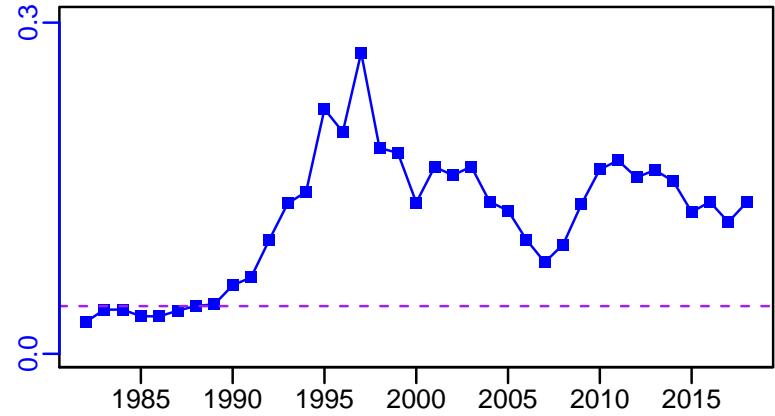
Fmsy-1/yr, Fmgmt-1/yr, Flim\*



ER-calc-ratio (1982–2019–ICESIMP2021)

R-E00 (1982–2019–ICESIMP2021)

REC-EST\*

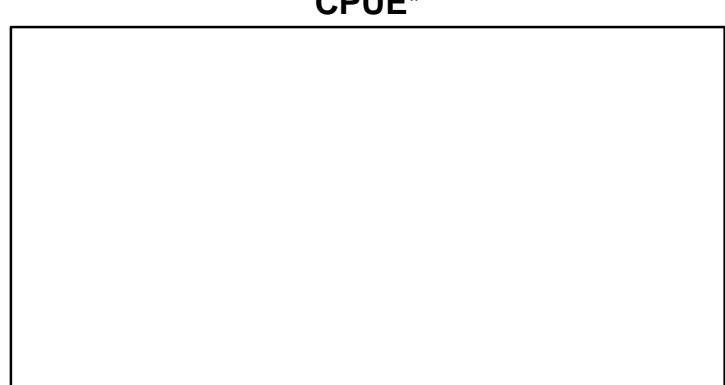
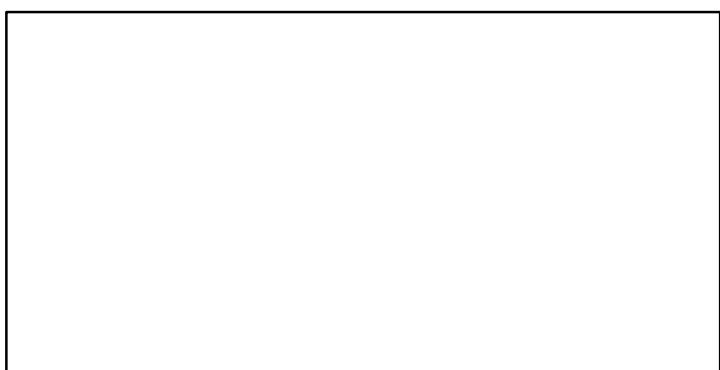
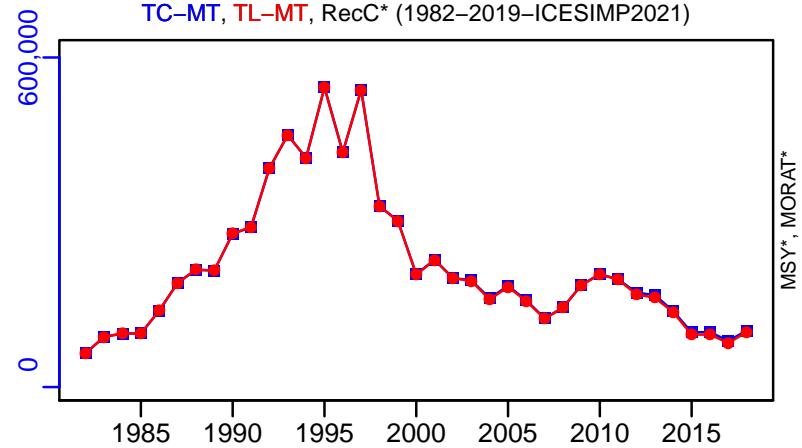


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

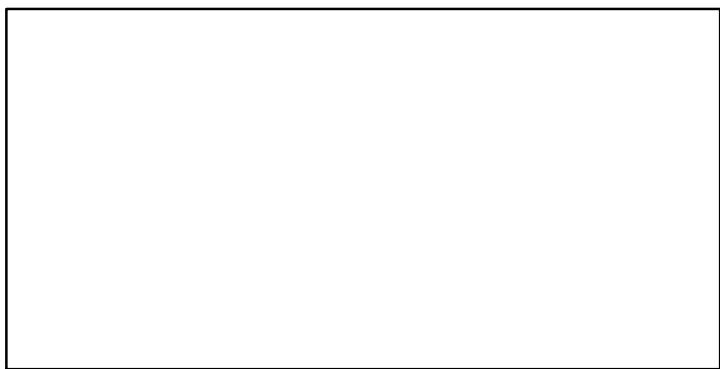
Horse mackerel ICES 2a–4a–5b–6a–7–8 [HMACIIa–IVa–Vb–VIa–VII–VIII]

TC-MT, TL-MT, RecC\* (1982–2019–ICESIMP2021)

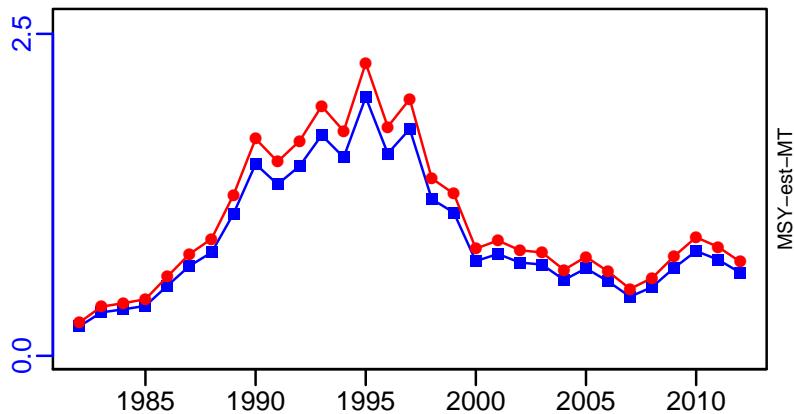
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1982–2013–ICESIMP2016)



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

## Horse mackerel ICES 3a-4bc-7d [HMACKIIIa-IVbc-VIId]

Metadata	
<b>Scientific Name</b>	Trachurus trachurus
<b>Current Assess ID</b>	WGWISE-HMACKIIIa-IVbc-VIId-1982-2018-ICESIMP2021
<b>Area</b>	ICES 3a-4bc-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Widely Distributed Stocks
<b>Asmts in RAM</b>	2015, 2015, 2016, 2018

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	14,773		
<b>TL</b>	TL-MT	2018	14,508		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

Horse mackerel ICES 3a–4bc–7d [HMACKIIIa–IVbc–VIIId]

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***



**Recruits\***

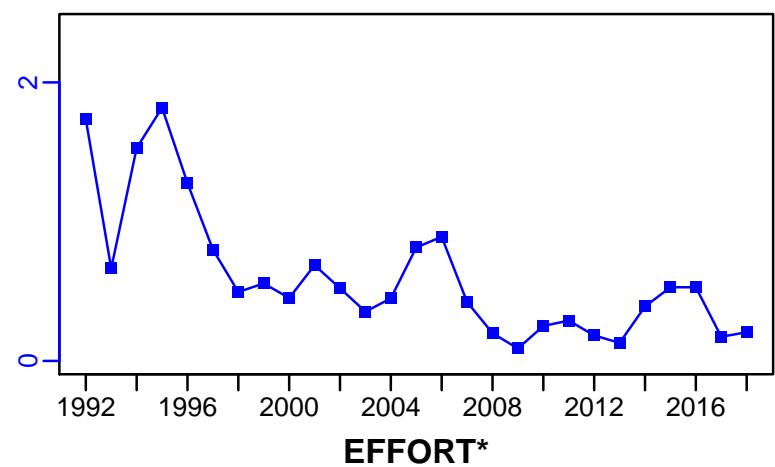
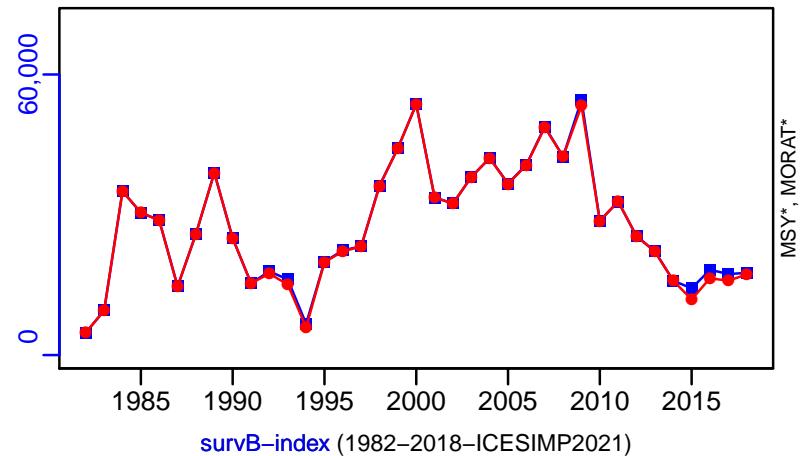


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Horse mackerel ICES 3a–4bc–7d [HMACKIIIa–IVbc–VIIId]

TC–MT, TL–MT, RecC\* (1982–2018–ICESIMP2021)

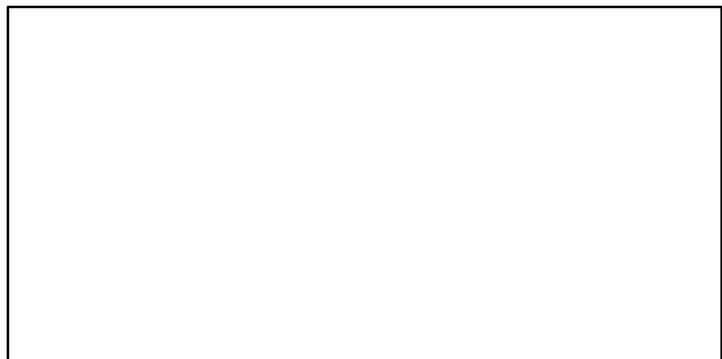
TAC\*, Cpair\*, Cadv\*



CPUE\*



CdivMSY\*



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

## Horse mackerel Portuguese Waters -East [HMACKIXa]

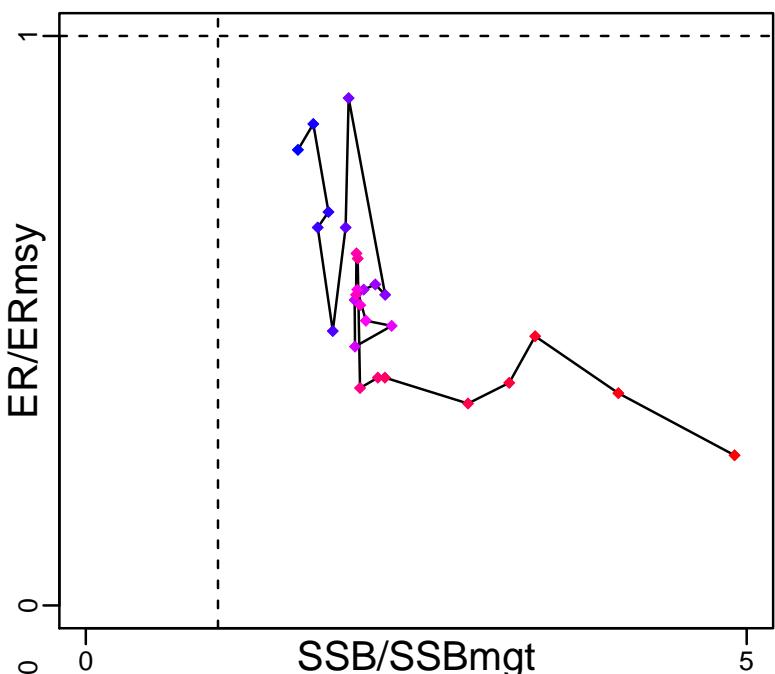
<b>Metadata</b>	
<b>Scientific Name</b>	Trachurus trachurus
<b>Current Assess ID</b>	WGHANSA-HMACKIXa-1992-2019-ICESIMP2021
<b>Area</b>	Portuguese Waters -East
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Southern Horse Mackerel, Anchovy and Sardine
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2015	230,680
<b>Fmsy</b>	Fmsy-1/yr	2017	0.11
<b>ERmsy</b>	ERmsy-ratio	2019	0.11
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	181,000
<b>Fmgt</b>	Fmgt-1/yr	2017	0.11
<b>ERmgt</b>	ERmgt-ratio	2019	0.11
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2015	49,041
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	103,000
<b>Flim</b>	Flim-1/yr	2017	0.19
<b>ERlim</b>	-	-	-

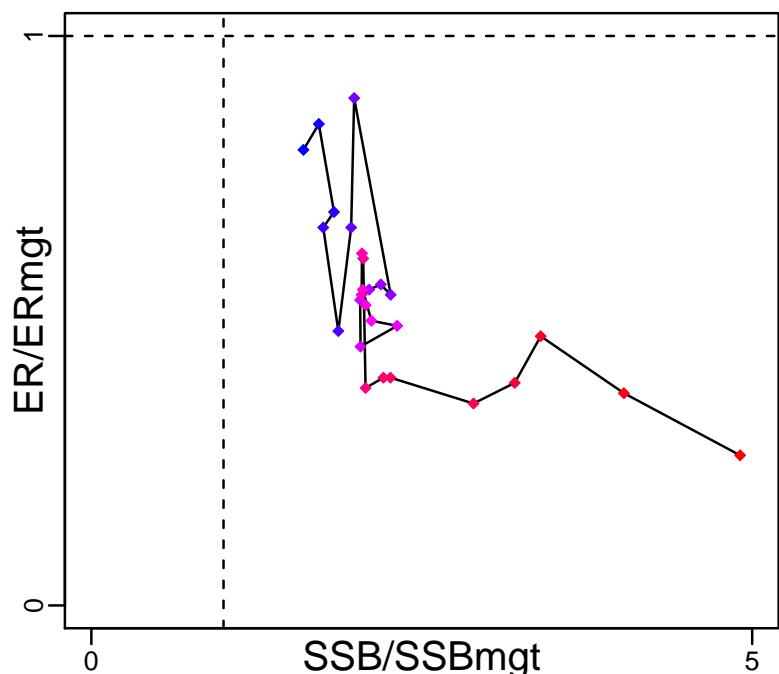
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	SSB-MT	2019	1,001,740	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	4,692,300,000	-	0	
<b>F</b>	F-1/yr	2017	0.077	-	2 to 10	
<b>ER</b>	ER-ratio	2019	0.029	-	2 to 10	
<b>TC</b>	TC-MT	2019	31,661			
<b>TL</b>	TL-MT	2019	31,661			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2015	2.298			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	0.704			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2019	0.264			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	5.534			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2017	0.704			
<b>ER/ERmgt</b>	-	-	-			

Horse mackerel Portuguese Waters –East [HMACKIXa]

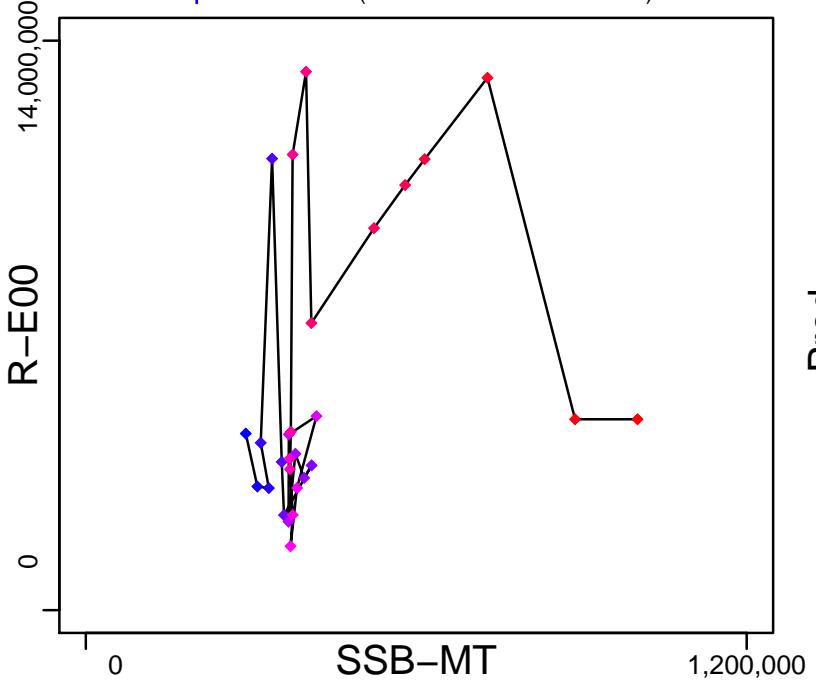
Kobe MSYpref (1992–2019–ICESIMP2021)



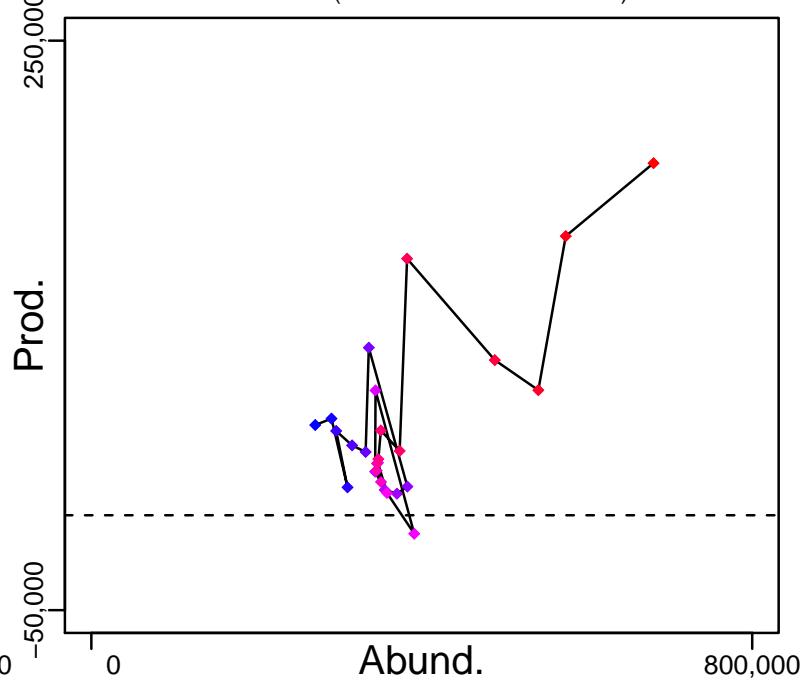
Kobe MGTpref (1992–2019–ICESIMP2021)



Spawner Recruit (1992–2019–ICESIMP2021)



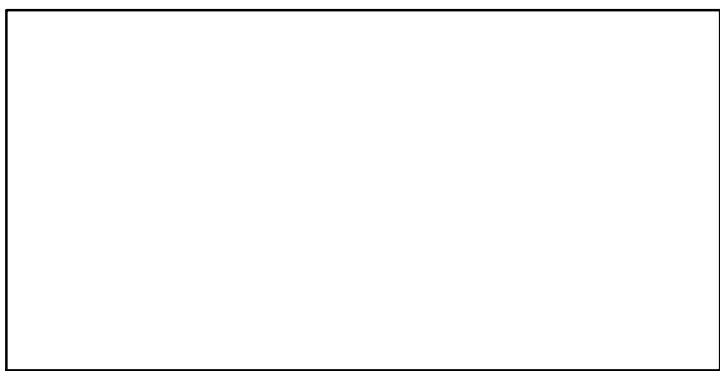
Production (1992–2019–ICESIMP2021)



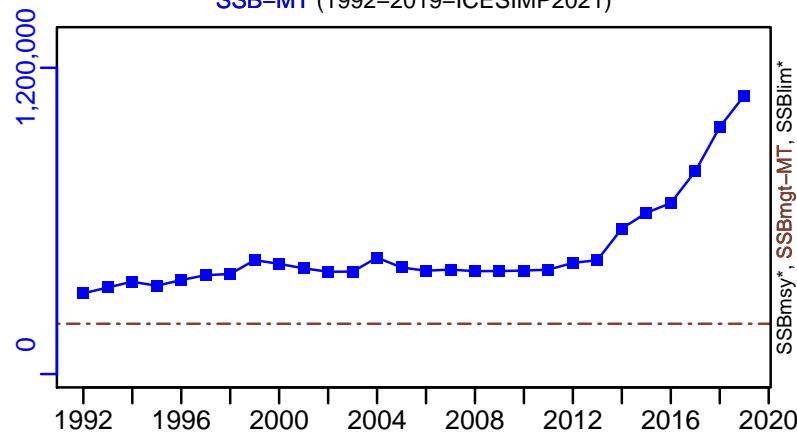
◆ Start Year ◆ End Year \* No Data

Horse mackerel Portuguese Waters –East [HMACKIXa]

**TB\***



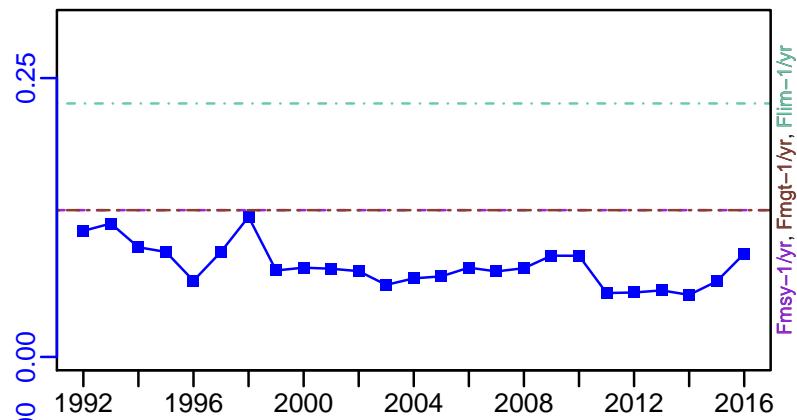
**SSB-MT (1992–2019–ICESIMP2021)**



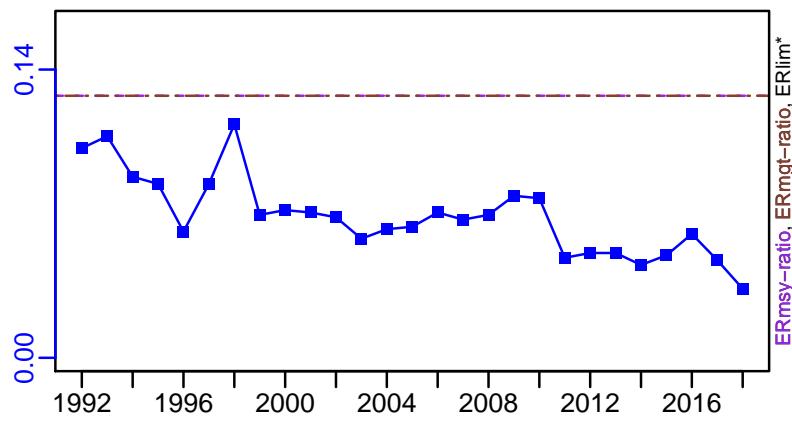
**TN \***



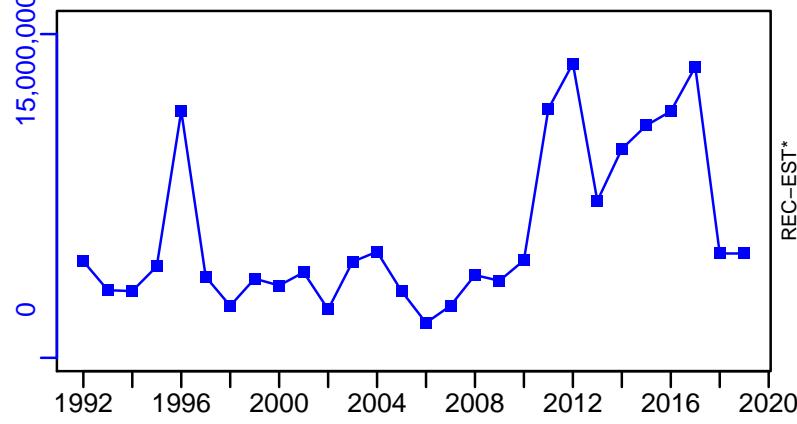
**F-1/yr (1992–2017–ICESIMP2018)**



**ER-ratio (1992–2019–ICESIMP2021)**



**R-E00 (1992–2019–ICESIMP2021)**

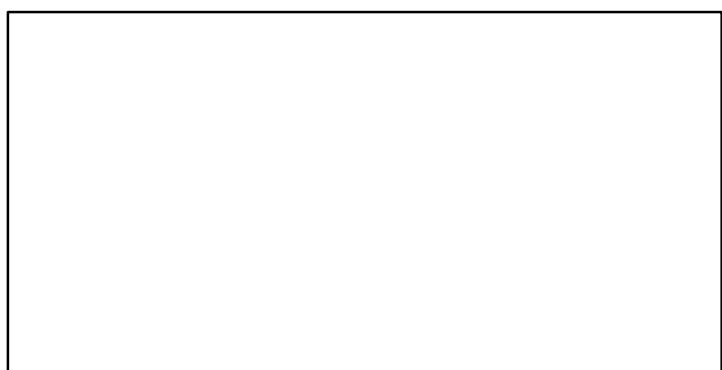
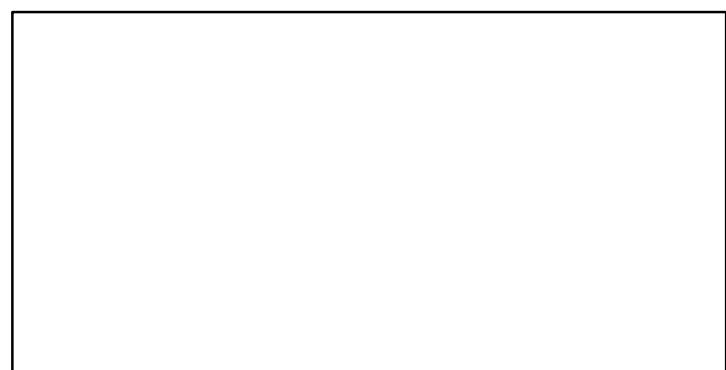
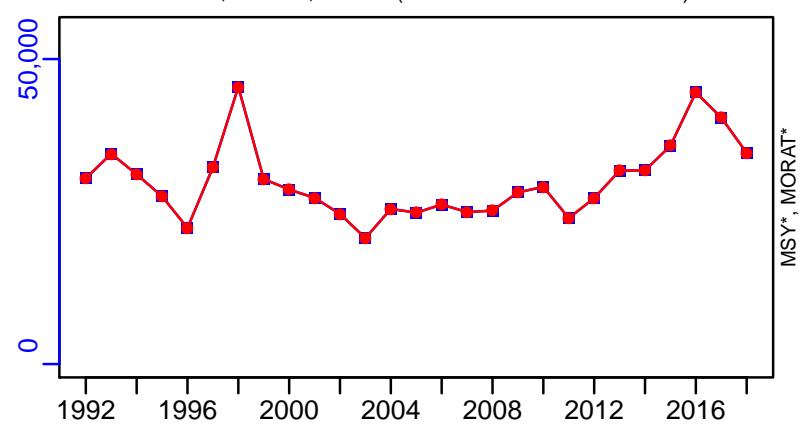


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

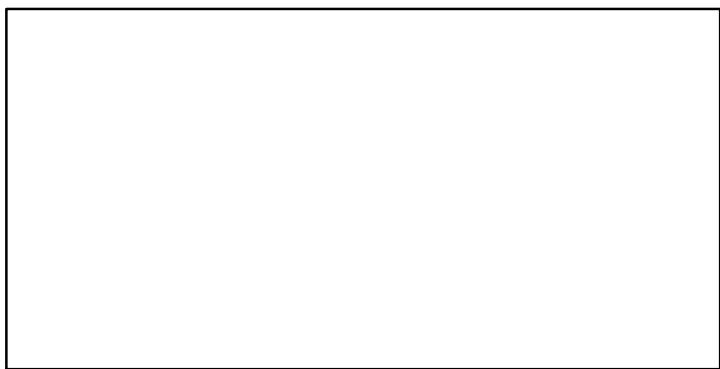
Horse mackerel Portuguese Waters –East [HMACKIXa]

TC–MT, TL–MT, RecC\* (1992–2019–ICESIMP2021)

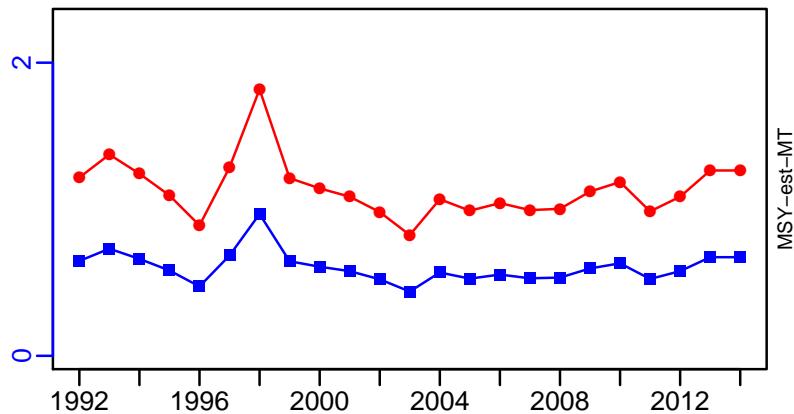
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC–MT/MSY–est–MT, CdivMEANC–ratio, (1992–2015–ICESIMP2016)



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

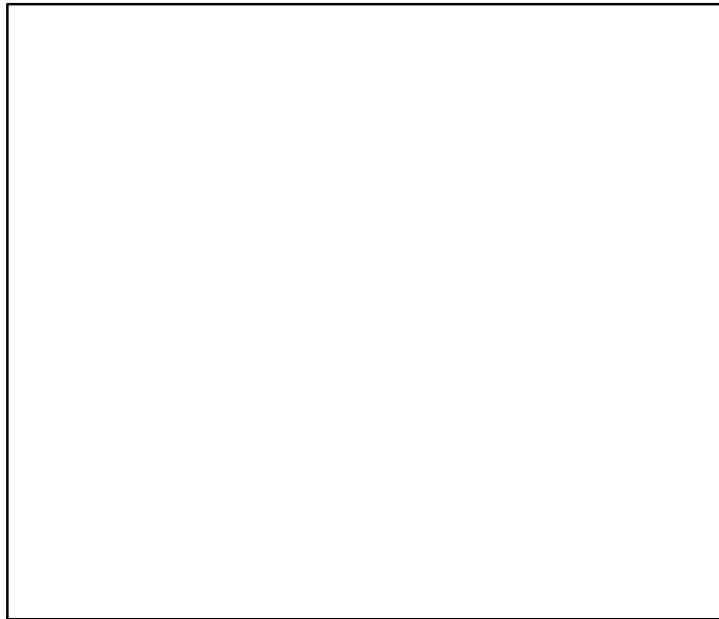
## Kitefin shark Northeast Atlantic [KFSHARNEATL]

Metadata	
<b>Scientific Name</b>	Dalatias licha
<b>Current Assess ID</b>	WGEF-KFSHARNEATL-1972-2018-ICESIMP2021
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2018, 2014

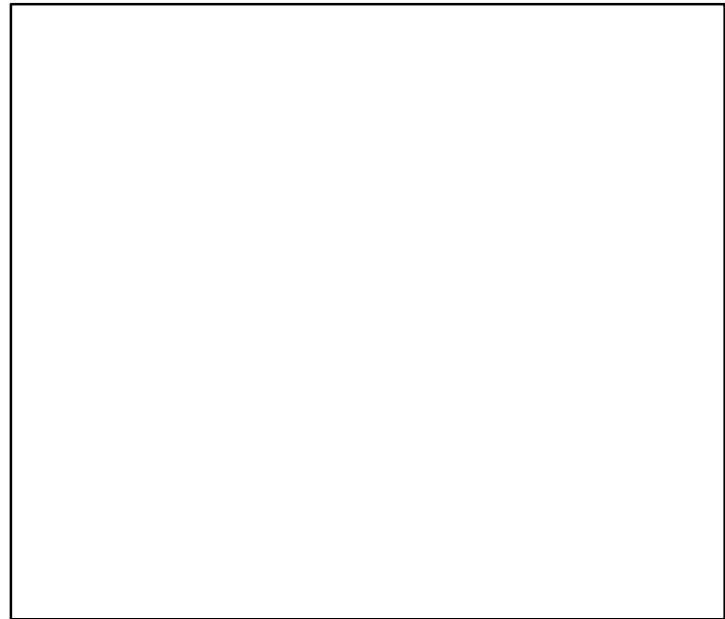
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	0		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

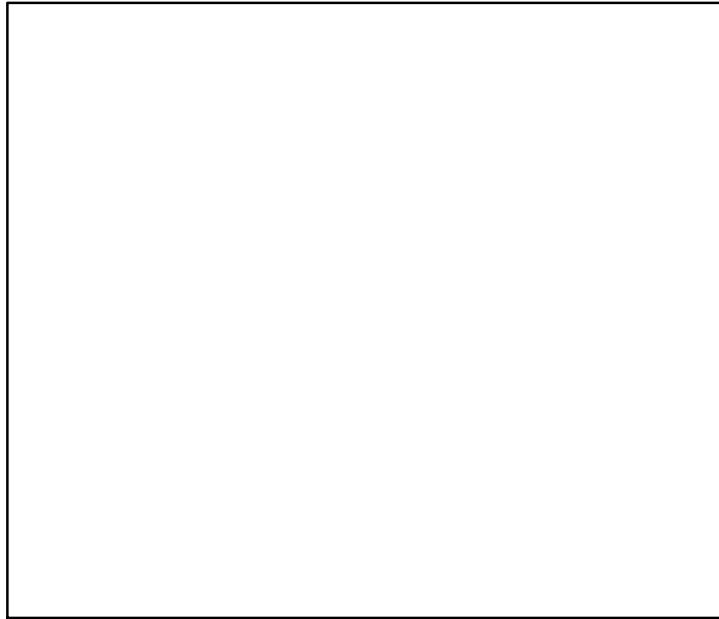
**Kobe MSY\***



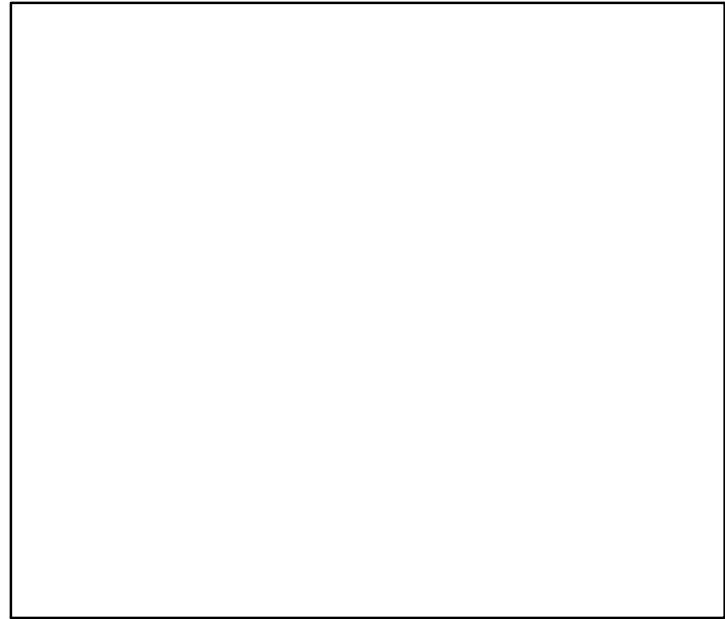
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

Kitefin shark Northeast Atlantic [KFSHARNEATL]

**TB\***



**SSB\***



**TN \***



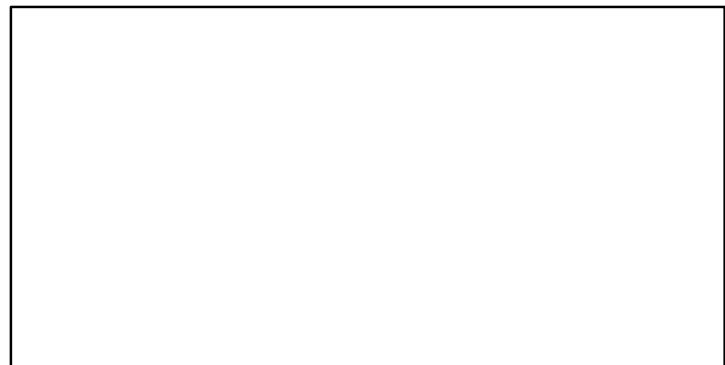
**F\***



**ER\***



**Recruits\***

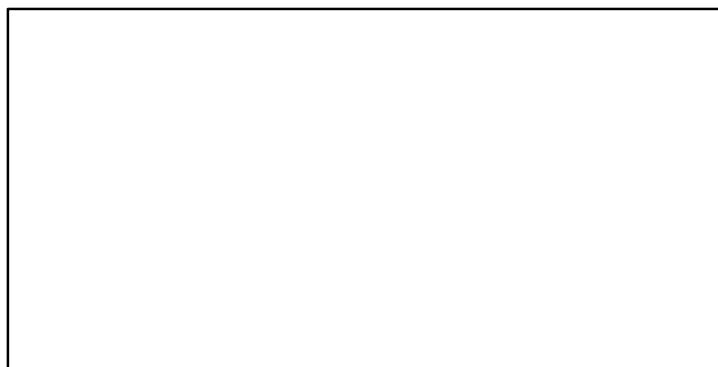
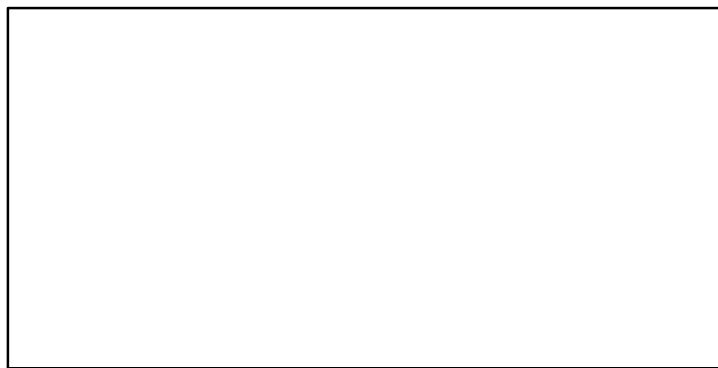
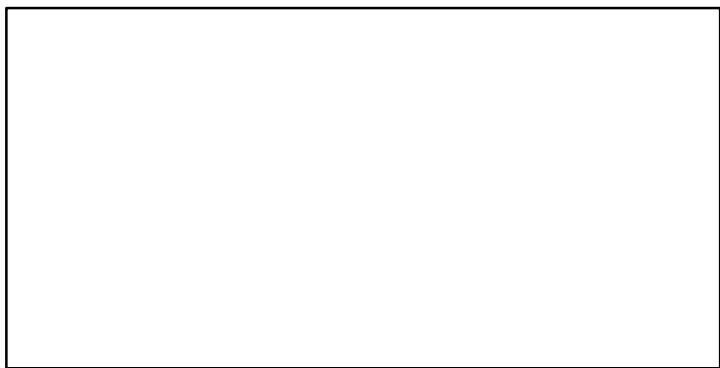
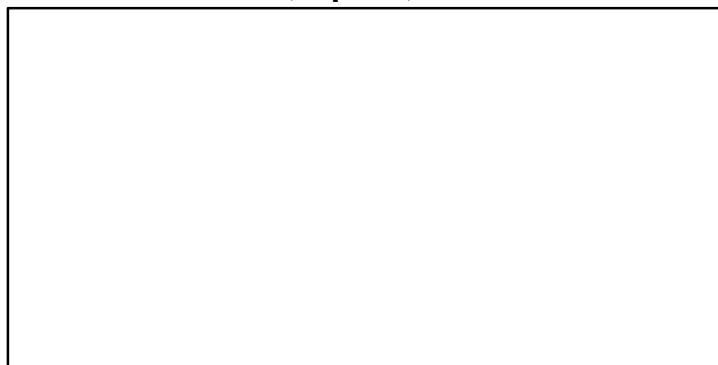
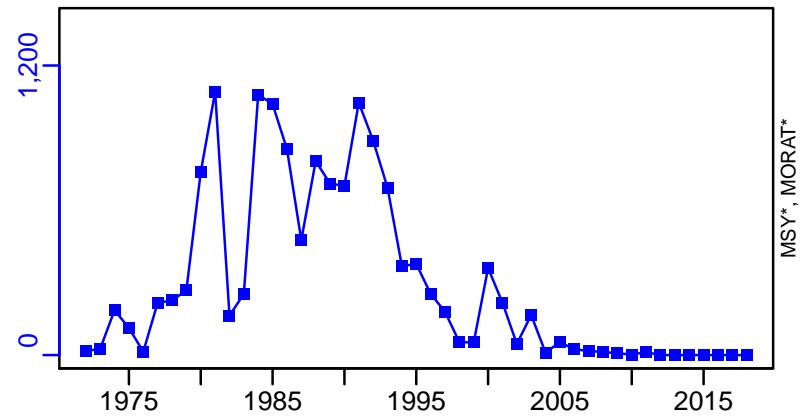


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Kitefin shark Northeast Atlantic [KFSHARNEATL]

TL-MT, TC\*, RecC\* (1972–2018—ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

## Leafscale gulper shark Northeast Atlantic [LGSHARNEATL]

<b>Metadata</b>	
<b>Scientific Name</b>	Centrophorus squamosus
<b>Current Assess ID</b>	WGEF-LGSHARNEATL-1988-2018-ICESIMP2021
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2018

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	2		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

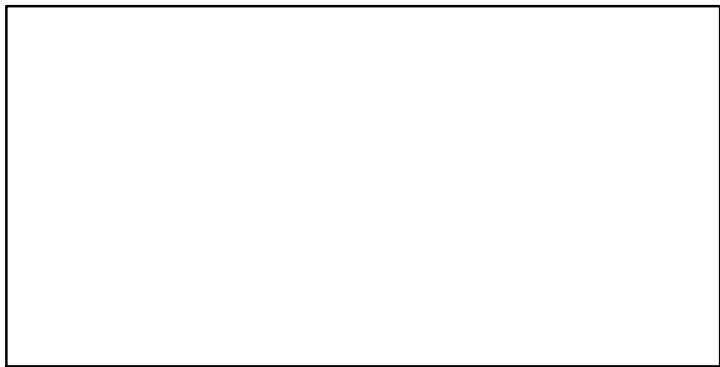
**Spawner Recruit\***

**Production\***

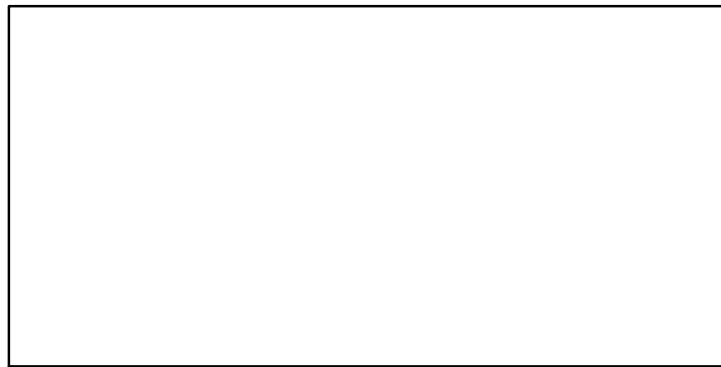
◆ Start Year ♦ End Year \* No Data

**Leafscale gulper shark Northeast Atlantic [LGSHEARNEATL]**

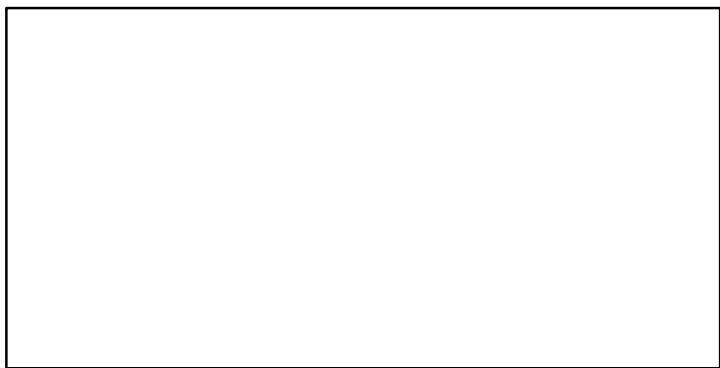
**TB\***



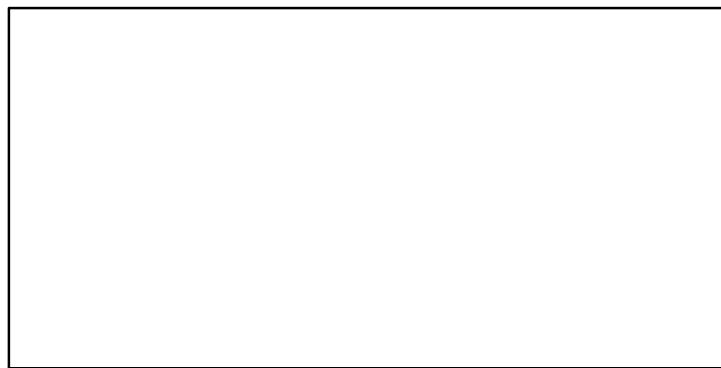
**SSB\***



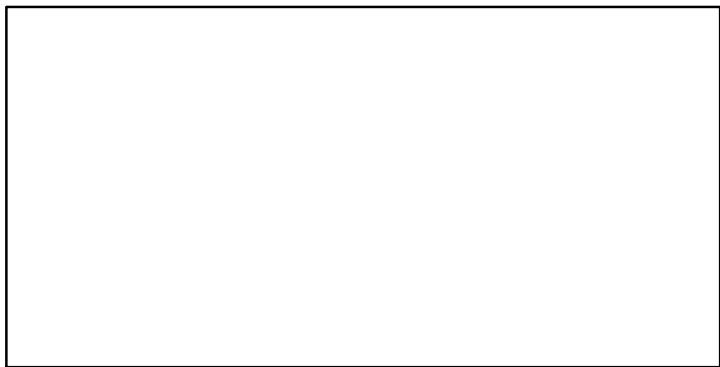
**TN \***



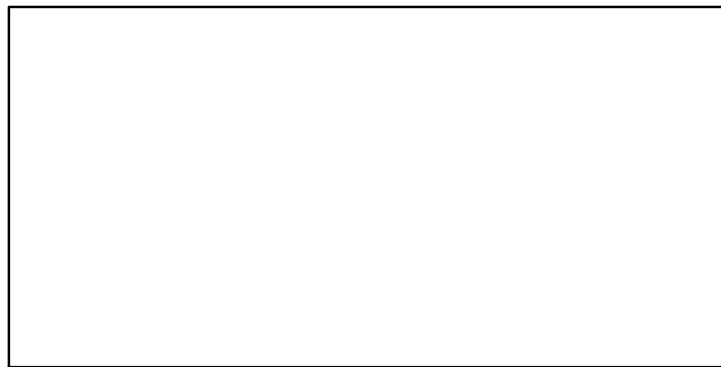
**F\***



**ER\***



**Recruits\***

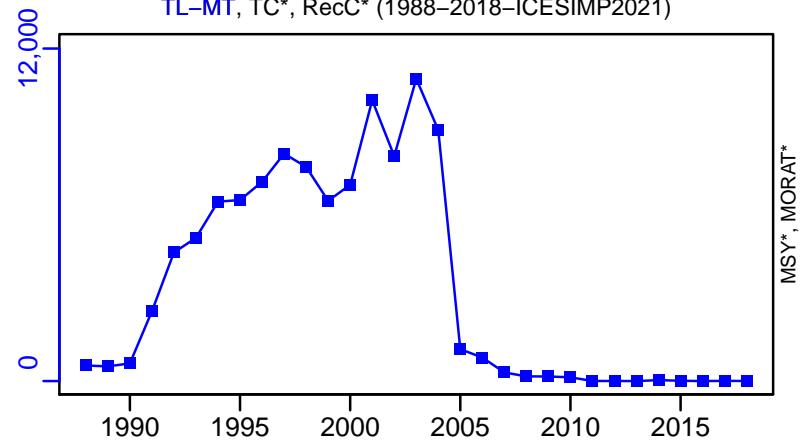


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Leafscale gulper shark Northeast Atlantic [LGSHARNEATL]

TL-MT, TC\*, RecC\* (1988–2018–ICESIMP2021)

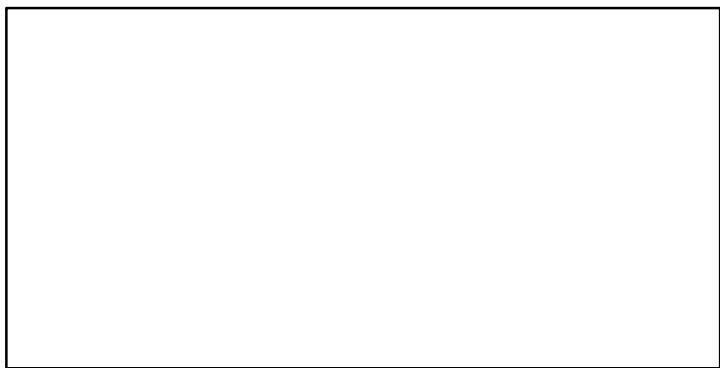
TAC\*, Cpair\*, Cadv\*



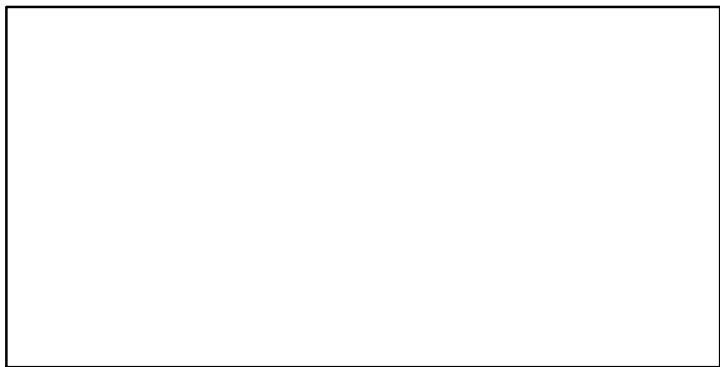
survB\*



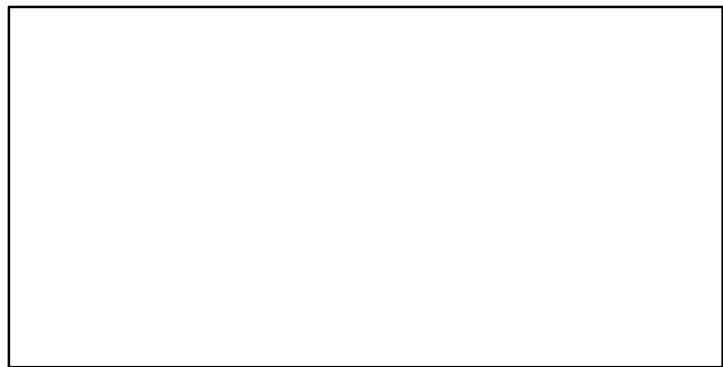
CPUE\*



EFFORT\*



CdivMSY\*



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

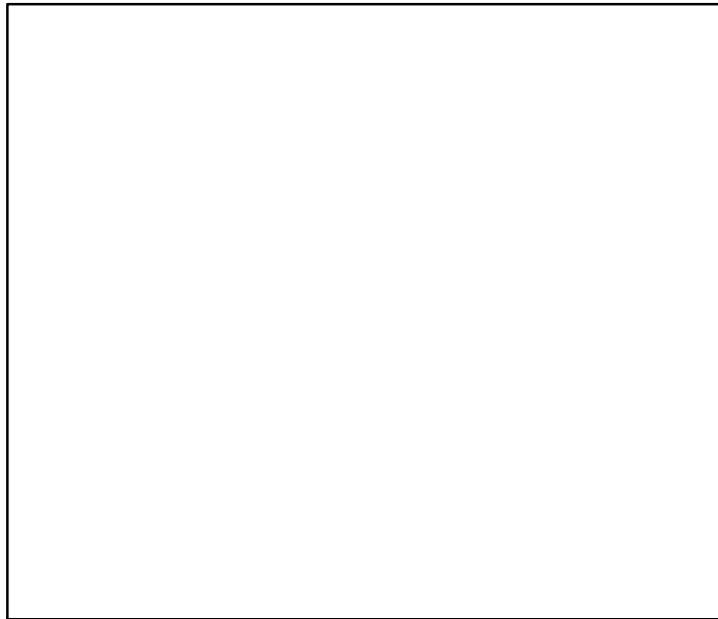
## Ling Northeast Atlantic [LINGNEATL]

<b>Metadata</b>	
<b>Scientific Name</b>	Molva molva
<b>Current Assess ID</b>	WGDEEP-LINGNEATL-1988-2018-ICESIMP2021
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2014, 2016, 2018

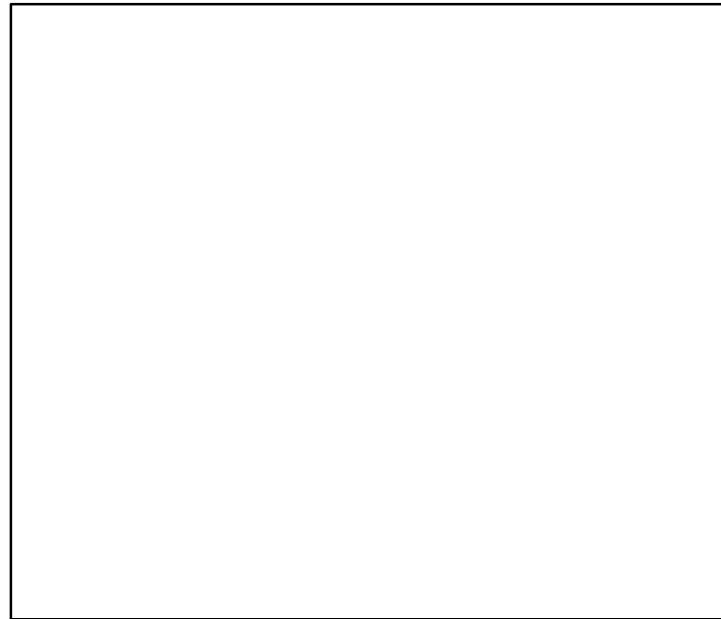
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	144	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	20,688		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

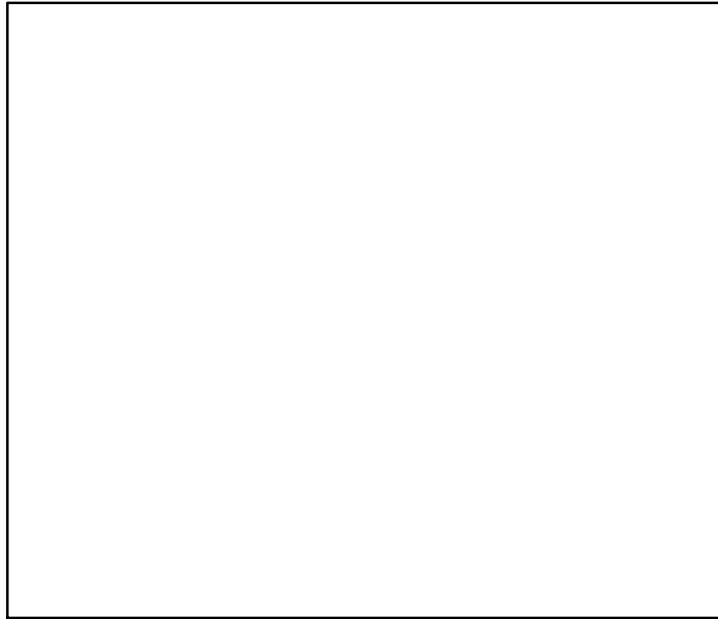
**Kobe MSY\***



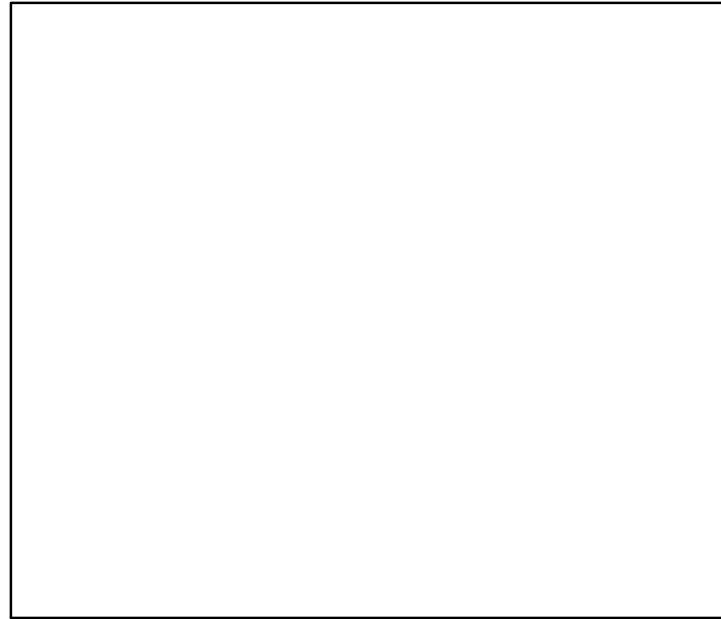
**Kobe MGT\***



**Spawner Recruit\***



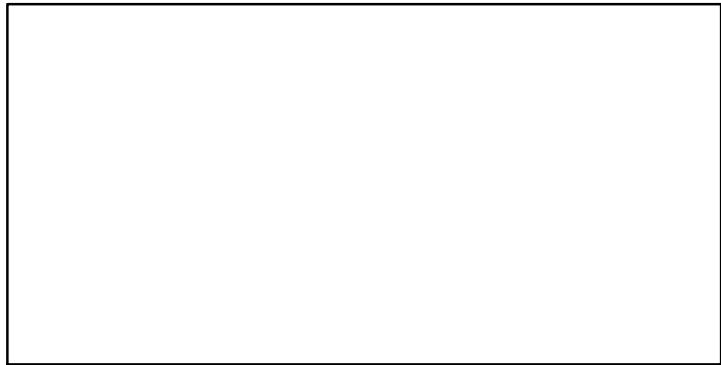
**Production\***



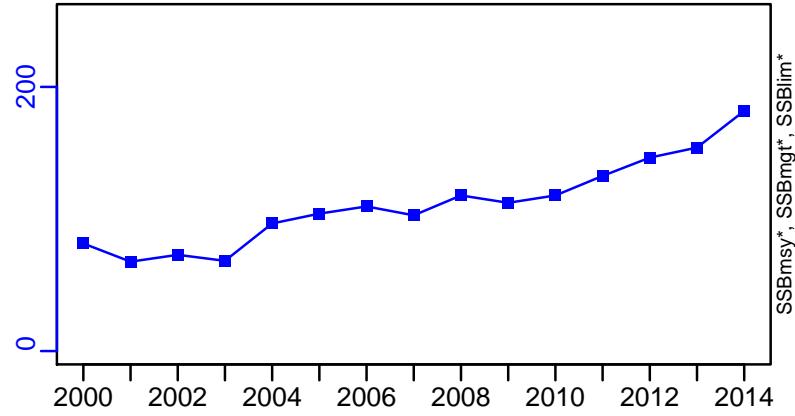
◆ Start Year ♦ End Year \* No Data

Ling Northeast Atlantic [LINGNEATL]

**TB\***



SSB-index (1988–2014–ICESIMP2018)



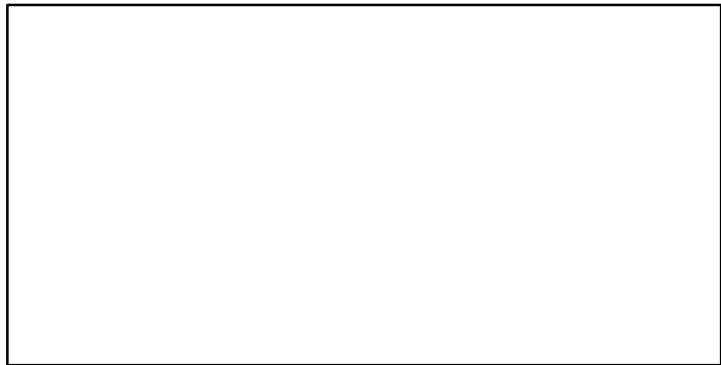
**TN \***



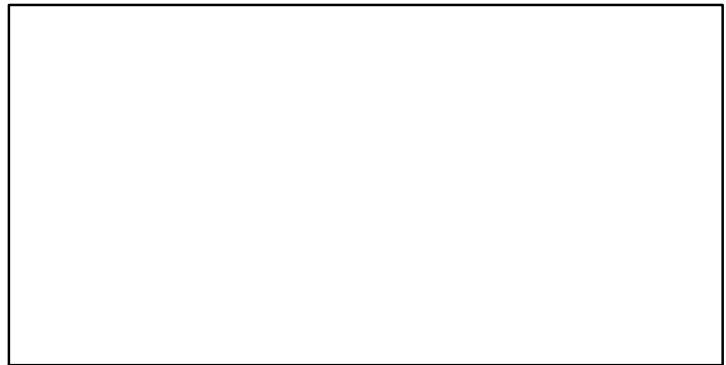
**F\***



**ER\***



**Recruits\***

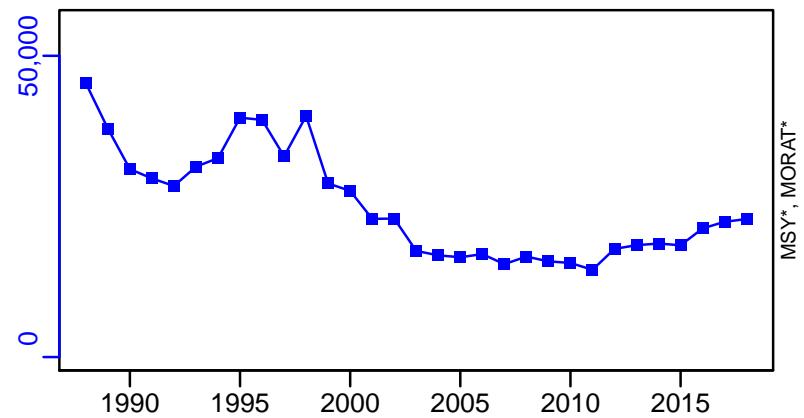


- |   |  |   |
|---|--|---|
| <span style="color: blue;">■</span> Listed time series<br><span style="color: purple;">—</span> MSY-based BRP | <span style="color: brown;">—</span> Target BRP<br><span style="color: cyan;">—</span> Lim BRP | <span style="color: gray;">—</span> Rec-Est<br><span style="color: black;">*</span> No Data |
|---|--|---|

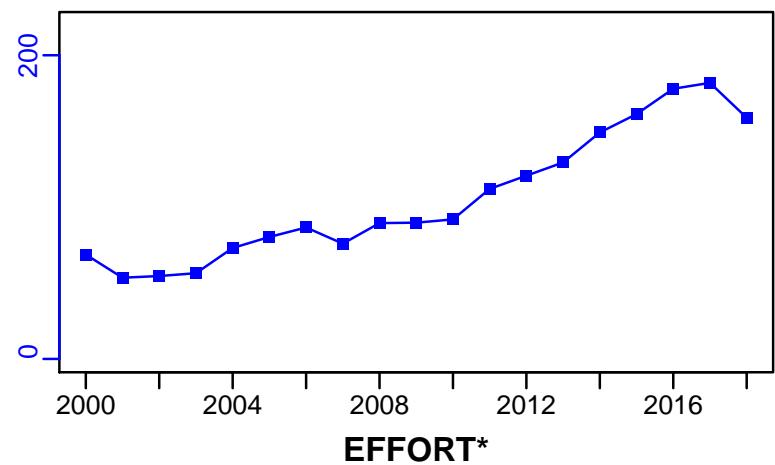
Ling Northeast Atlantic [LINGNEATL]

TL-MT, TC\*, RecC\* (1988–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



survB-MT (1988–2018–ICESIMP2021)



EFFORT\*

CPUE\*

CdivMSY\*

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

## Lesser spotted dogfish ICES 3a-4-7d [LSDOGIIIa-IV-VIId]

<b>Metadata</b>	
<b>Scientific Name</b>	Scyliorhinus canicula
<b>Current Assess ID</b>	WGEF-LSDOGIIIa-IV-VIId-1993-2018-ICESIMP2021
<b>Area</b>	ICES 3a-4-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2018, 2016

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	1.93	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	2340		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

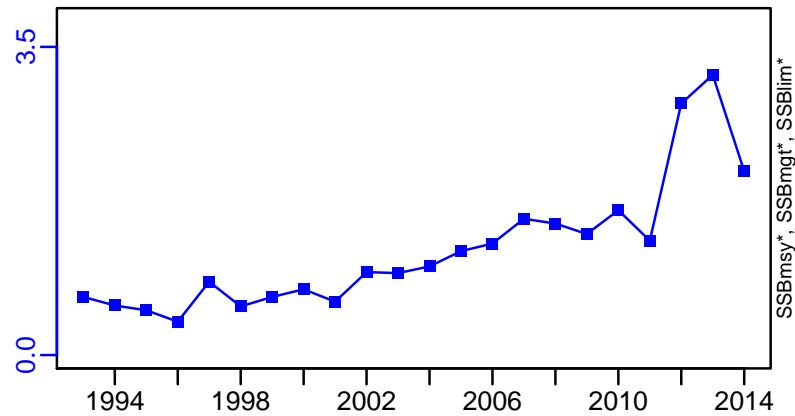
◆ Start Year ♦ End Year \* No Data

Lesser spotted dogfish ICES 3a–4–7d [LSDOGIIa–IV–VIId]

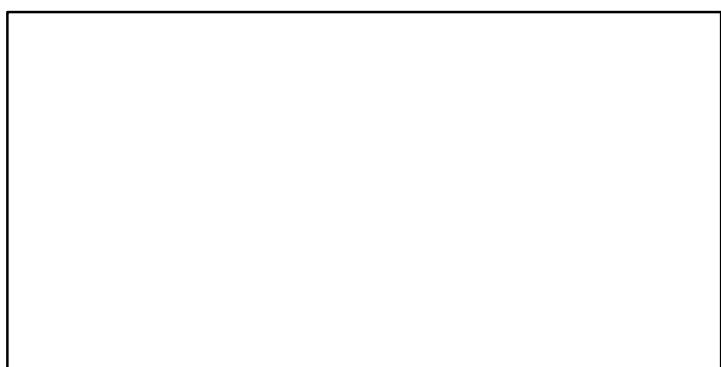
**TB\***



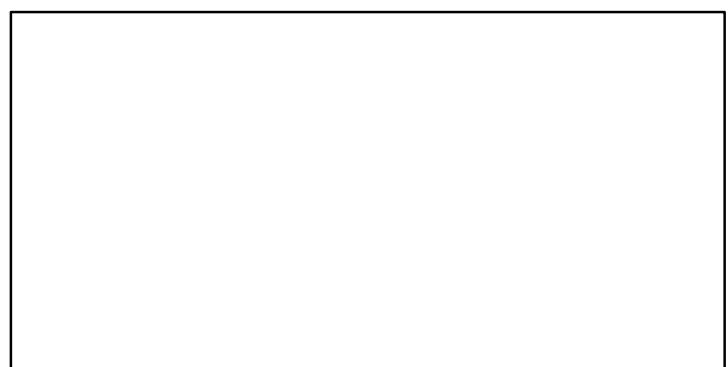
SSB-index (1993–2014–ICESIMP2018)



**TN \***



**F\***



**ER\***



**Recruits\***

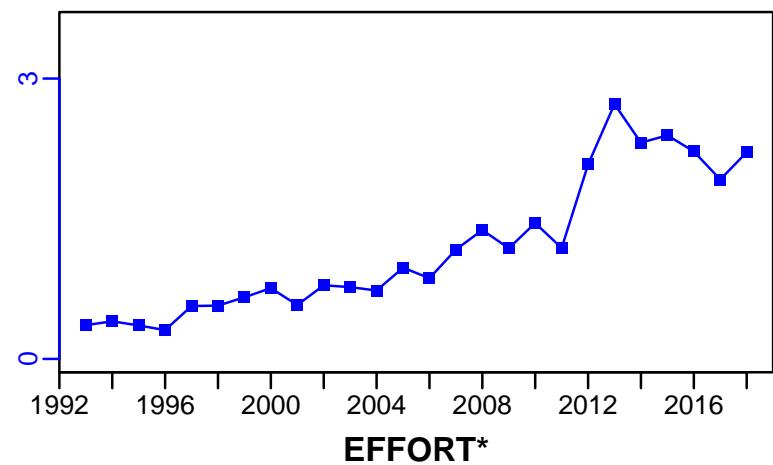
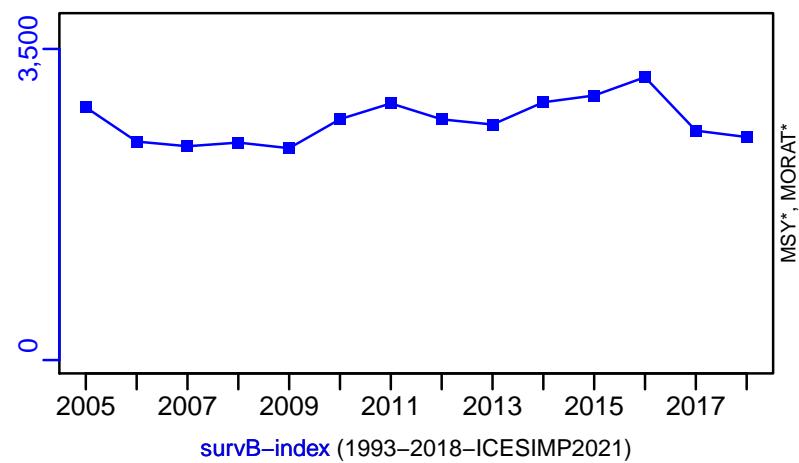


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

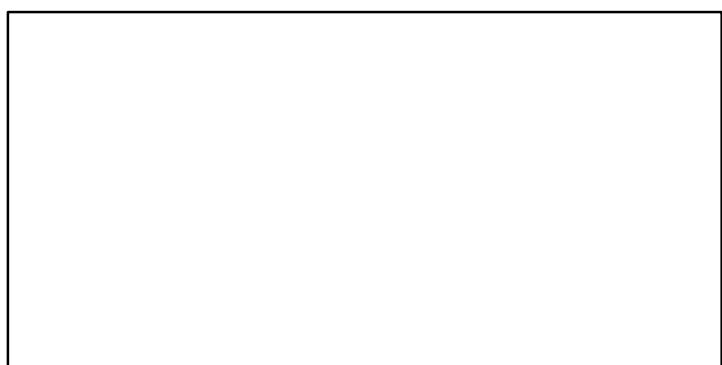
**Lesser spotted dogfish ICES 3a–4–7d [LSDOGIIa–IV–VIId]**

TL–MT, TC\*, RecC\* (1993–2018–ICESIMP2021)

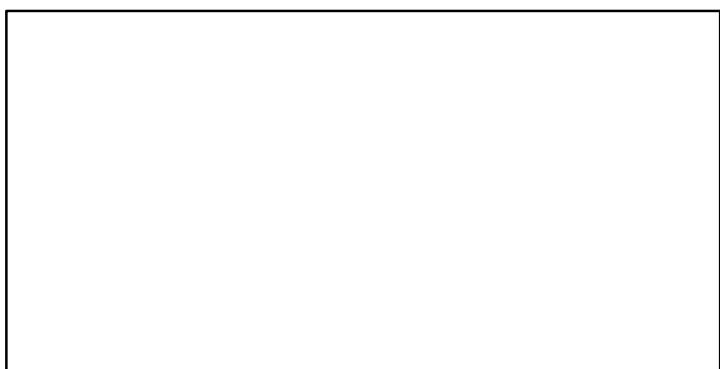
TAC\*, Cpair\*, Cadv\*



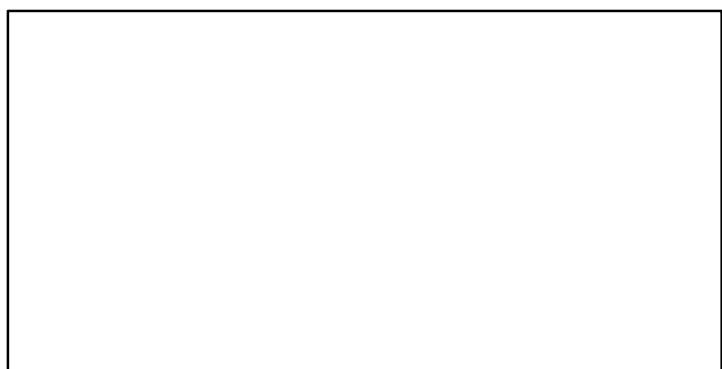
CPUE\*



EFFORT\*



CdivMSY\*



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

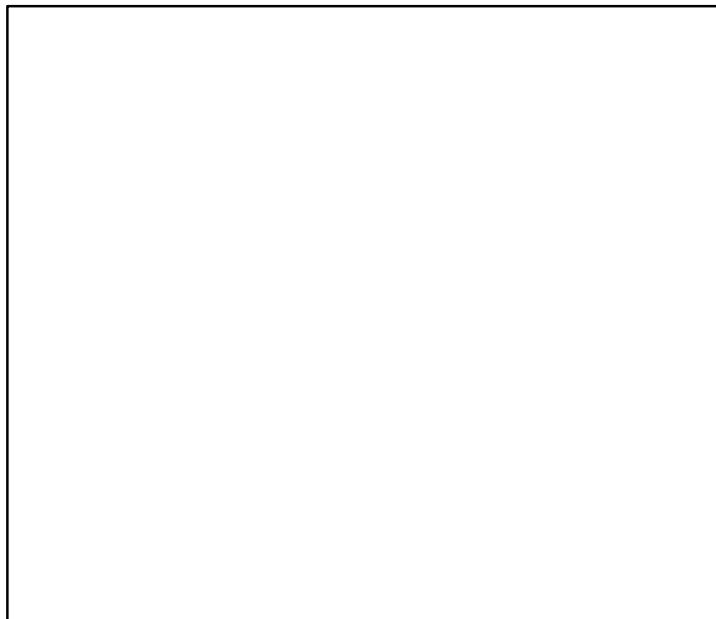
## Lesser spotted dogfish ICES 8abd [LSDOGVIIab]

<b>Metadata</b>	
<b>Scientific Name</b>	Scyliorhinus canicula
<b>Current Assess ID</b>	WGEF-LSDOGVIIab-1997-2018-ICESIMP2021
<b>Area</b>	ICES 8abd
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2016, 2018

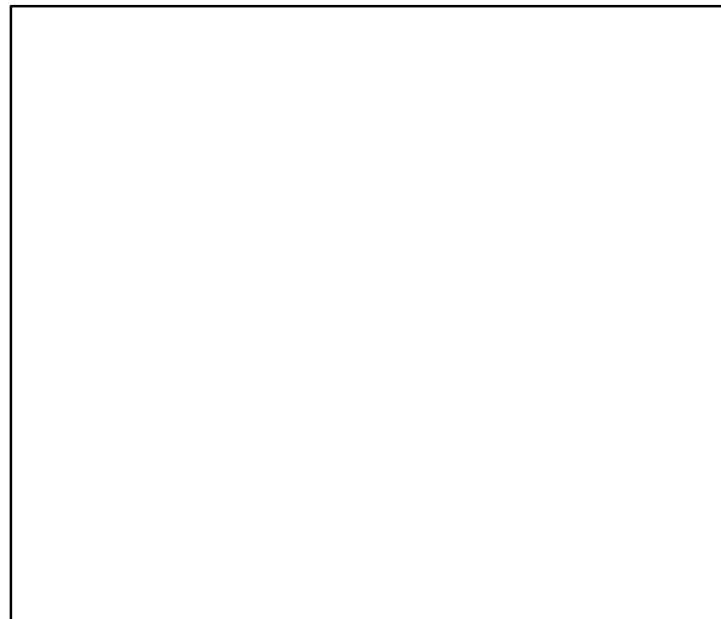
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	1.02	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	8148		
<b>TL</b>	TL-MT	2018	1092		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



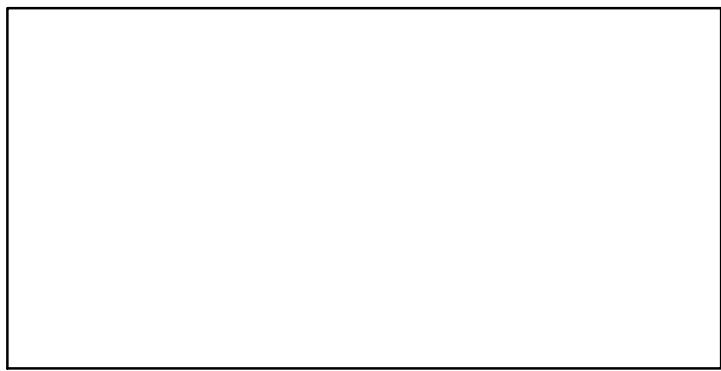
**Production\***



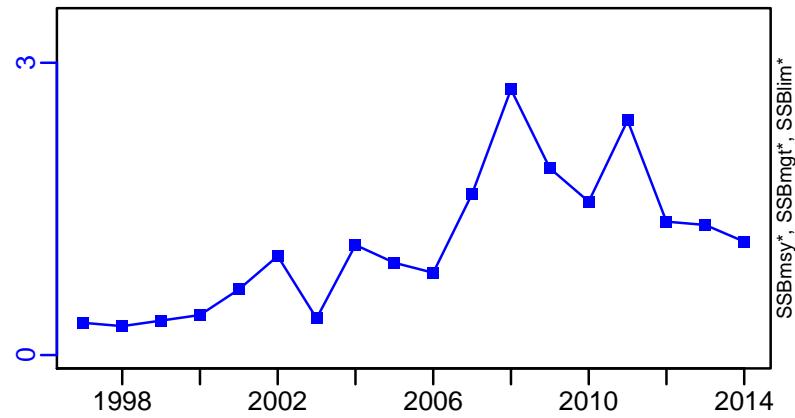
◆ Start Year ♦ End Year \* No Data

Lesser spotted dogfish ICES 8abd [LSDOGVIIlabd]

**TB\***



SSB-index (1997–2014–ICESIMP2018)



SSB<sub>mgt\*</sub>, SSB<sub>lim\*</sub>

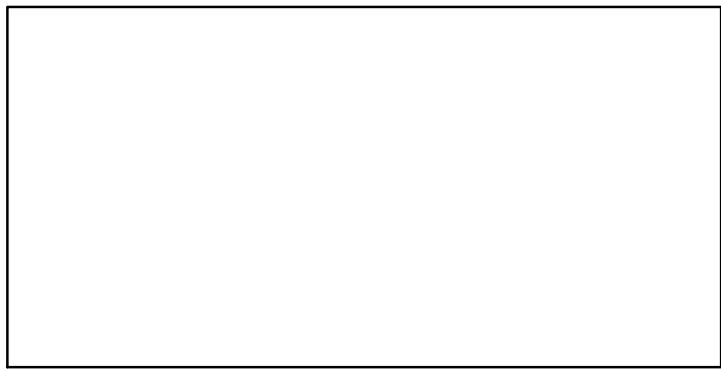
**TN \***



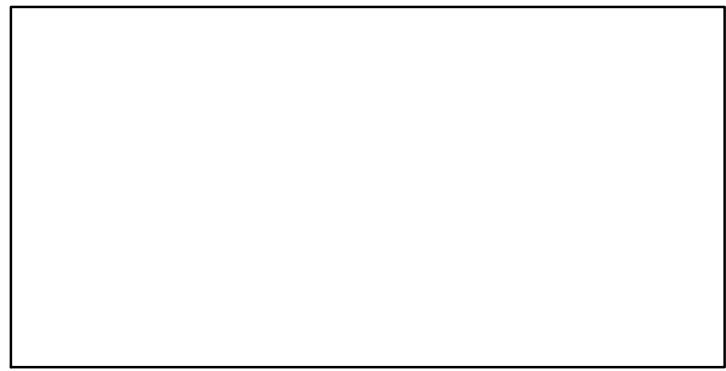
**F\***



**ER\***



**Recruits\***

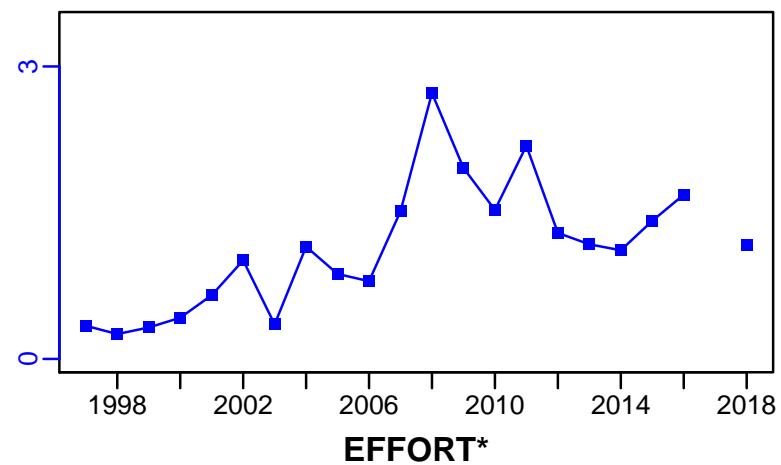
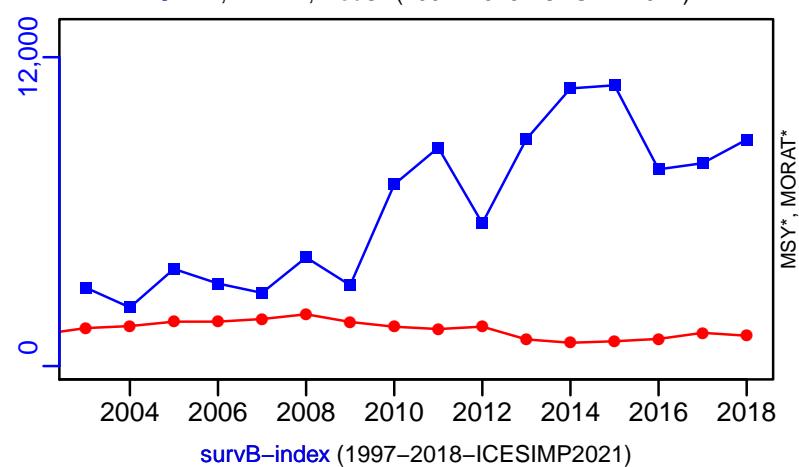


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

Lesser spotted dogfish ICES 8abd [LSDOGVIIlabd]

TC-MT, TL-MT, RecC\* (1997–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



EFFORT\*



CPUE\*



CdivMSY\*



- |   |  |  |
|---|--|--|
| <span style="color: blue;">■</span> 1st listed time series<br><span style="color: red;">●</span> 2nd listed time series | <span style="color: green;">▲</span> 3rd listed time series<br><span style="color: purple;">—</span> MSY | <span style="color: grey;">—</span> MORAT<br><span style="color: purple;">- - -</span> MSY |
|   |  | <span style="color: black;">*</span> No Data   |

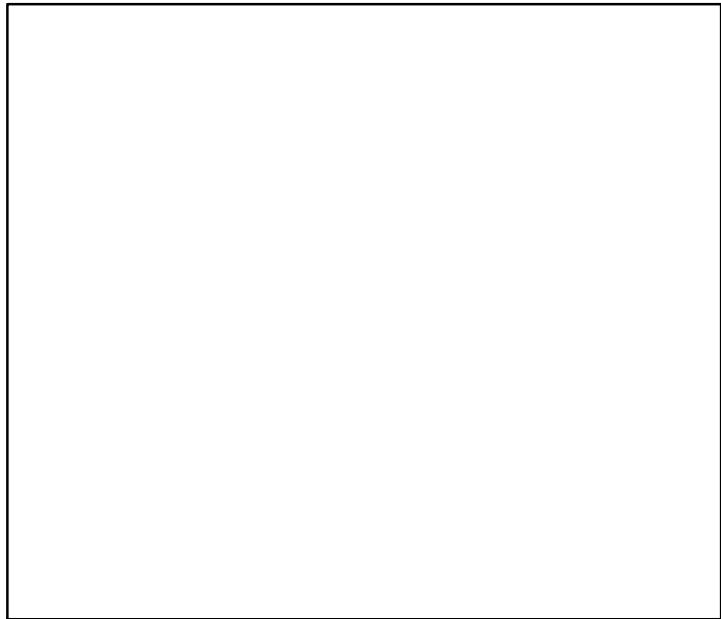
## Lesser spotted dogfish ICES 8c-9a [LSDOGVIIIC-IXa]

<b>Metadata</b>	
<b>Scientific Name</b>	Scyliorhinus canicula
<b>Current Assess ID</b>	WGEF-LSDOGVIIIC-IXa-1993-2018-ICESIMP2021
<b>Area</b>	ICES 8c-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2018, 2016, 2014

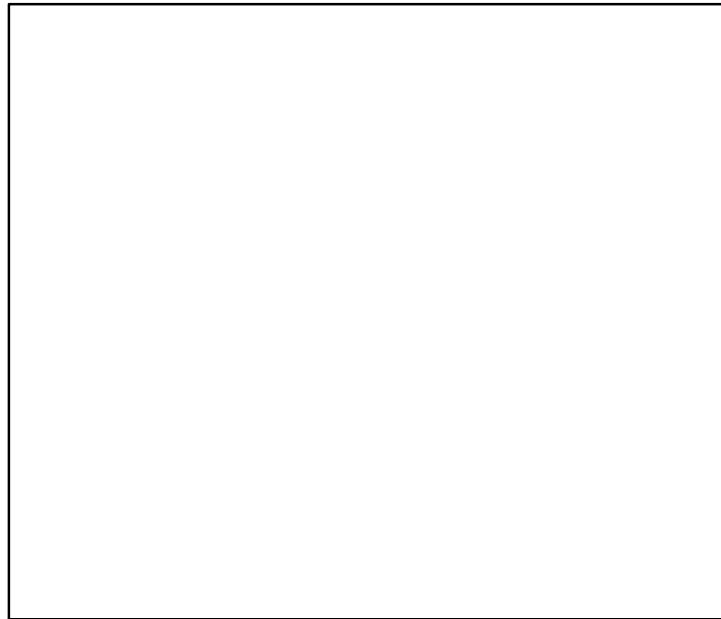
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	1.42	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	1035		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

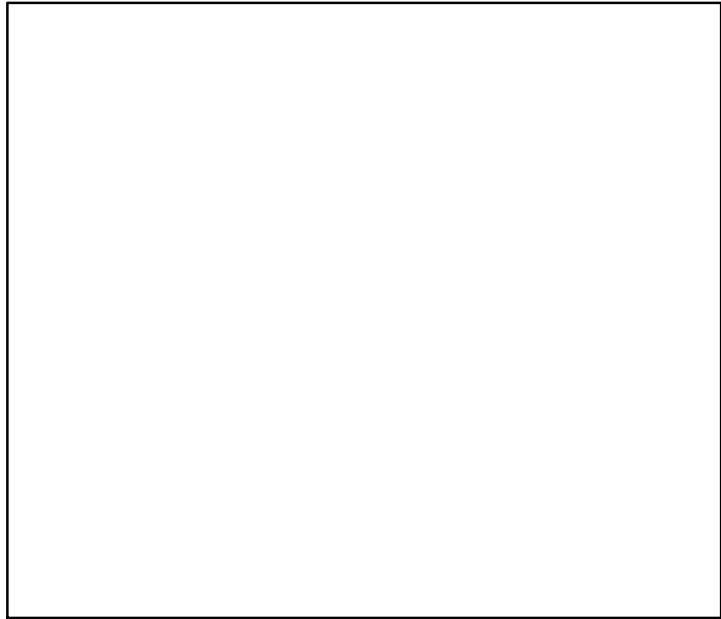
**Kobe MSY\***



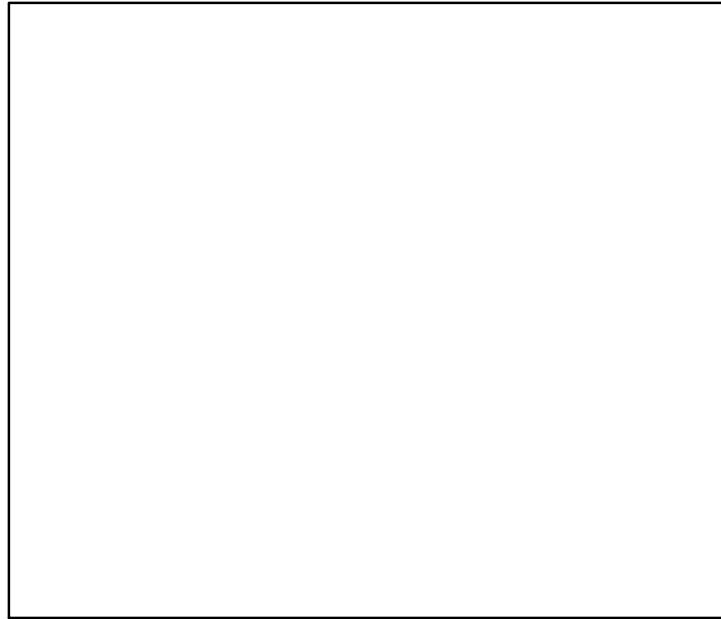
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



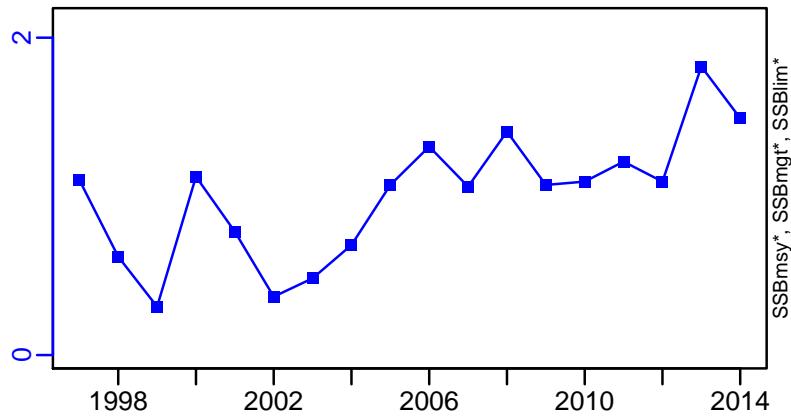
◆ Start Year ♦ End Year \* No Data

**Lesser spotted dogfish ICES 8c-9a [LSDOGVIIIC-IXa]**

**TB\***



**SSB-index (1997–2014–ICESIMP2018)**



**TN \***



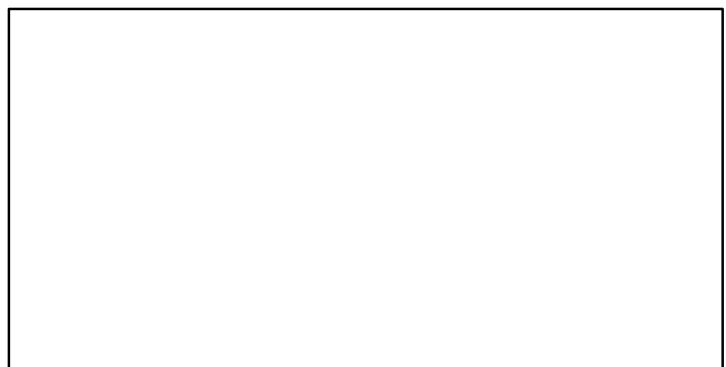
**F\***



**ER\***



**Recruits\***

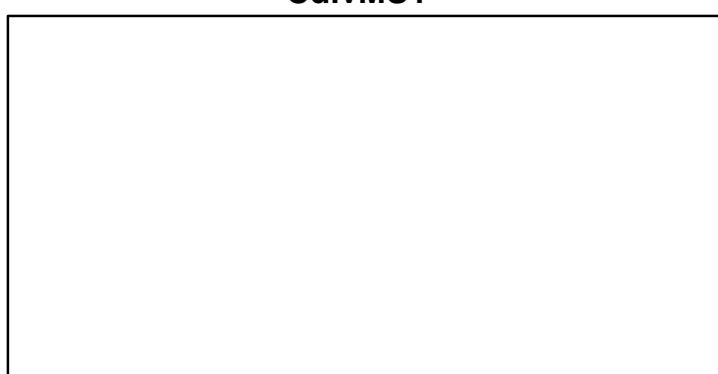
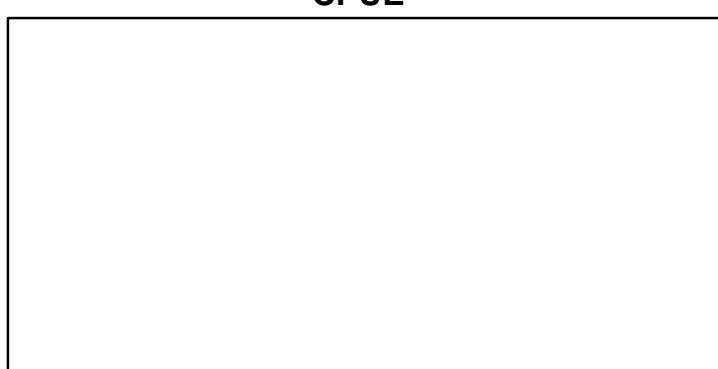
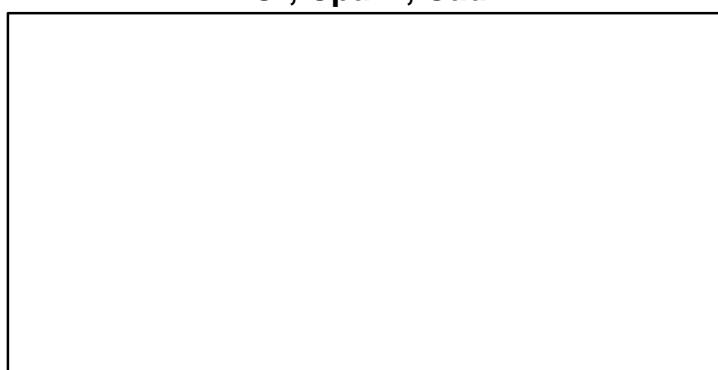
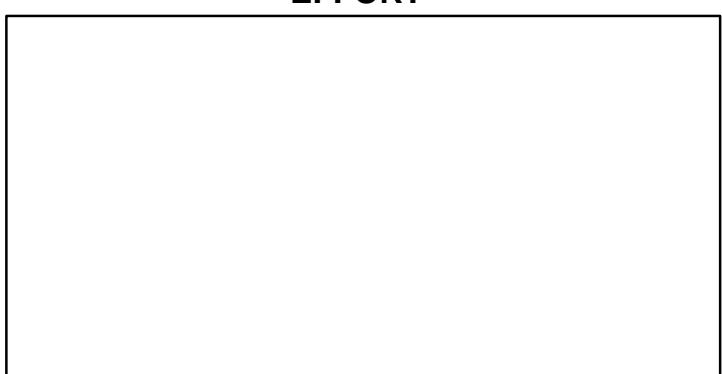
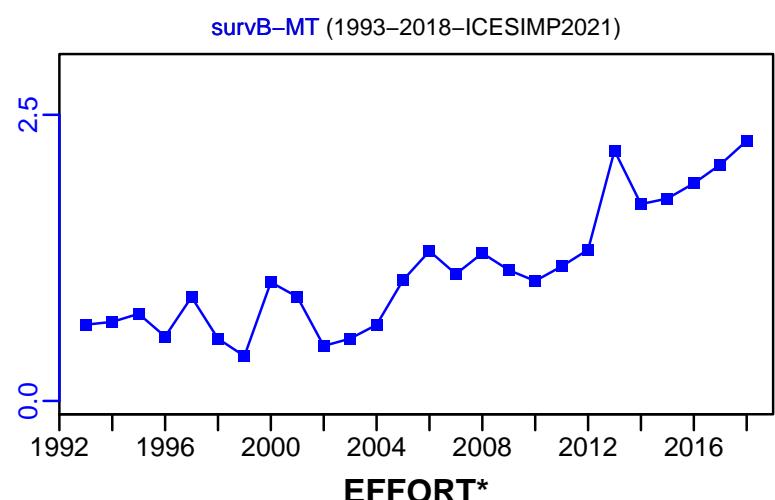
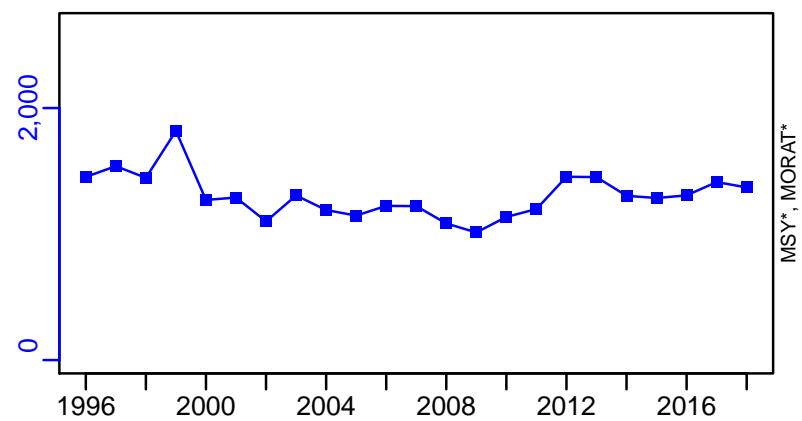


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

**Lesser spotted dogfish ICES 8c-9a [LSDOGVIIIC-IXa]**

TL-MT, TC\*, RecC\* (1993–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

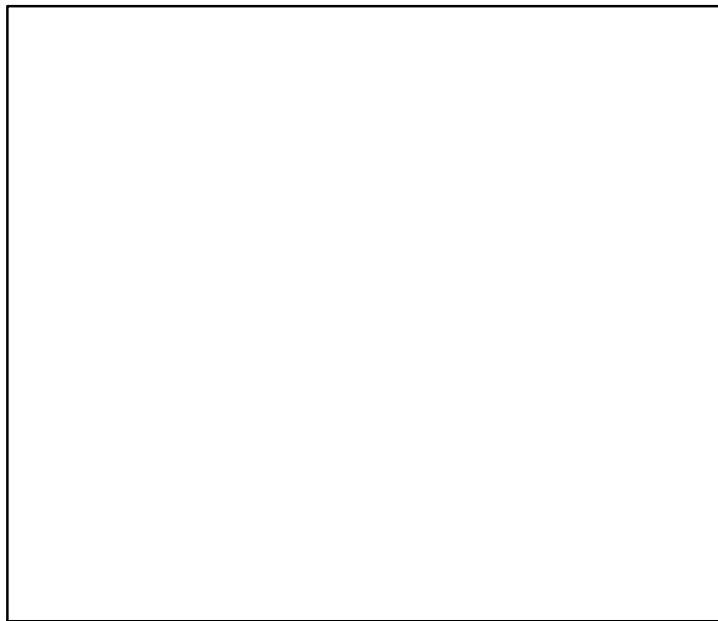
## Lesser spotted dogfish ICES 6-7abcefghij [LSDOGVI-VIIabcefghij]

<b>Metadata</b>	
<b>Scientific Name</b>	Scyliorhinus canicula
<b>Current Assess ID</b>	WGEF-LSDOGVI-VIIabcefghij-2005-2018-ICESIMP2021
<b>Area</b>	ICES 6-7abcefghij
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2016, 2018

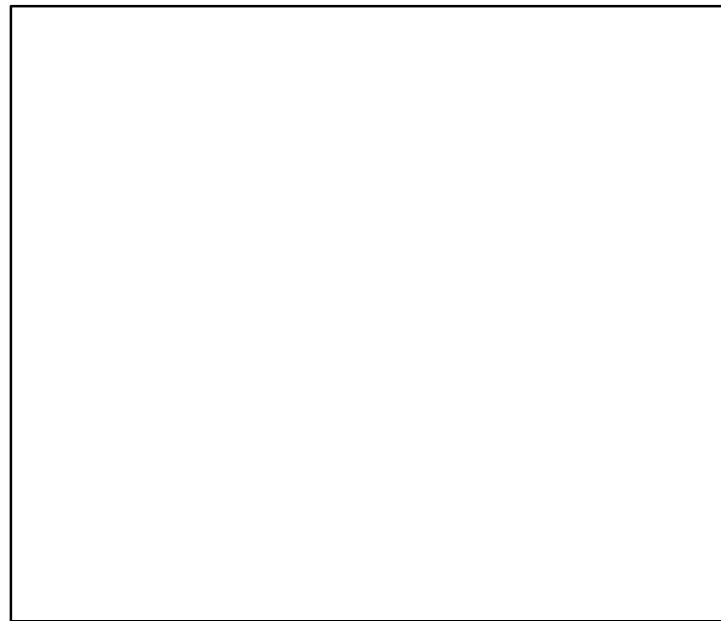
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	1.14	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	3763		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

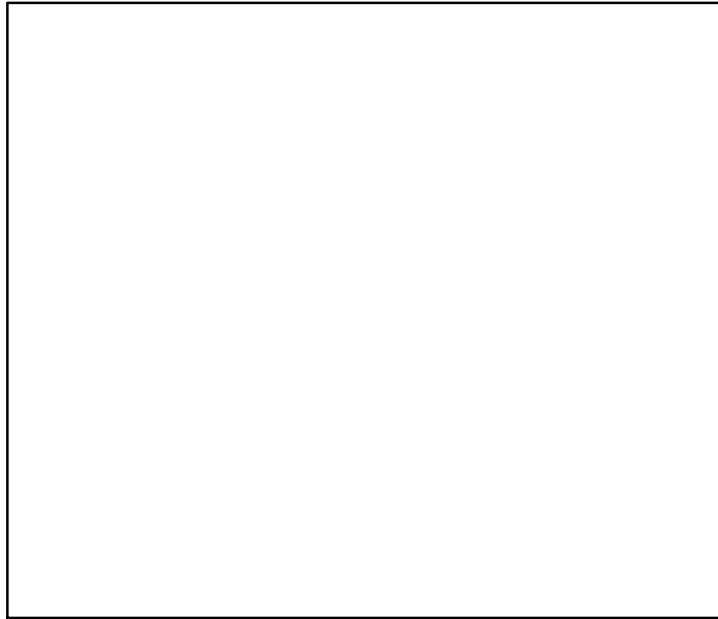
**Kobe MSY\***



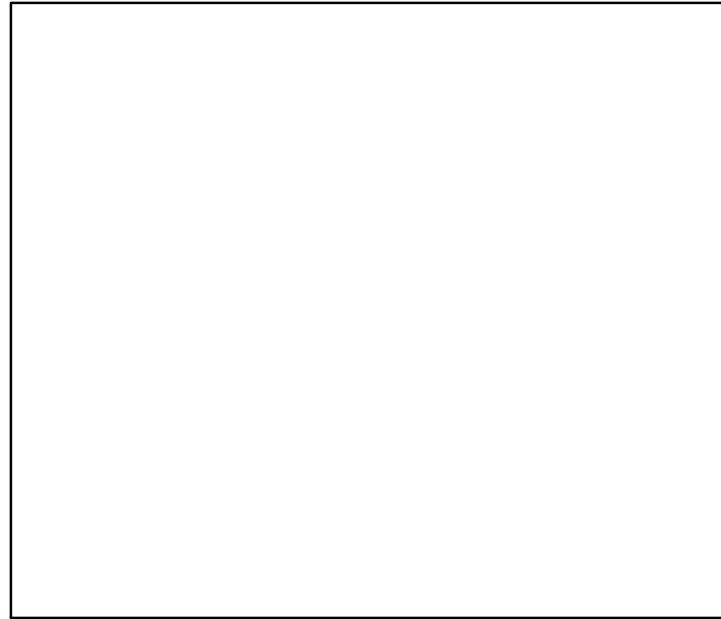
**Kobe MGT\***



**Spawner Recruit\***



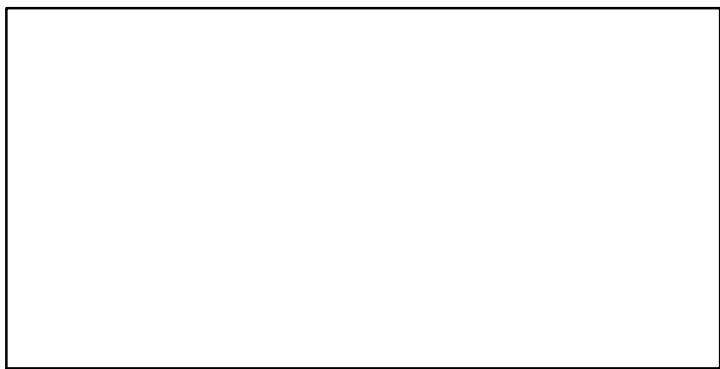
**Production\***



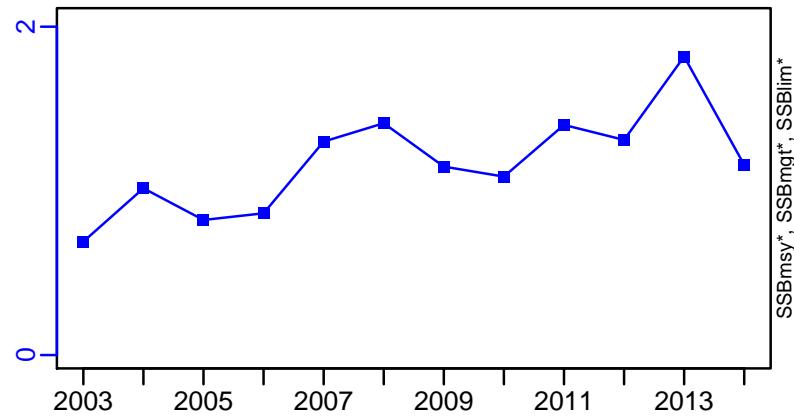
◆ Start Year ♦ End Year \* No Data

Lesser spotted dogfish ICES 6–7abcefghij [LSDOGVI–VIIabcefghij]

**TB\***



SSB-index (2003–2014–ICESIMP2018)



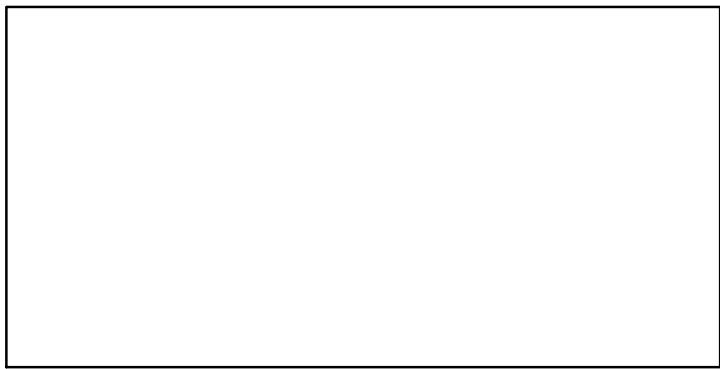
**TN \***



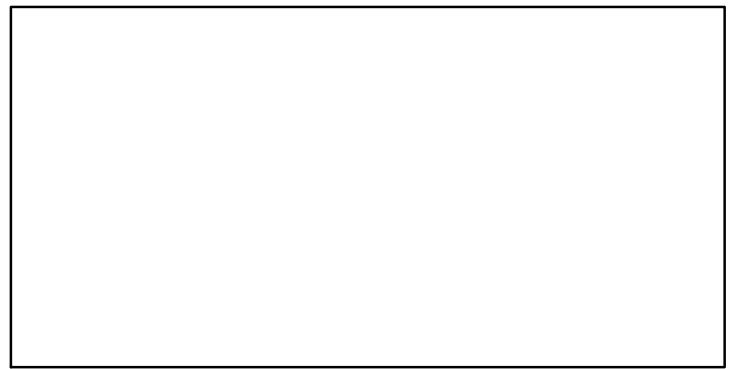
**F\***



**ER\***



**Recruits\***

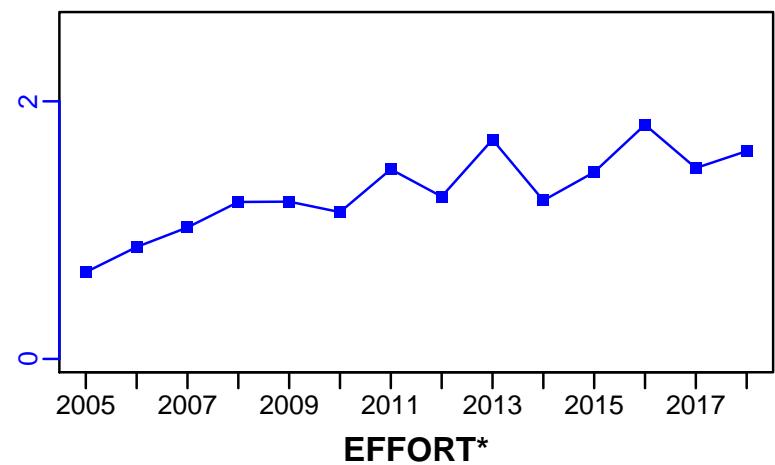
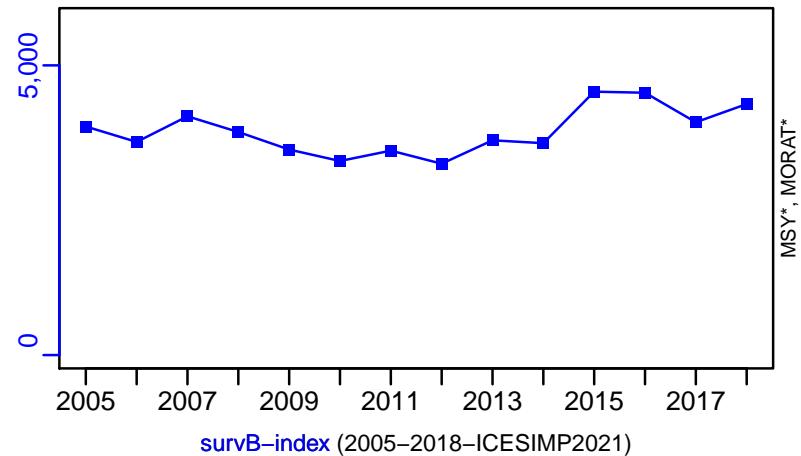


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

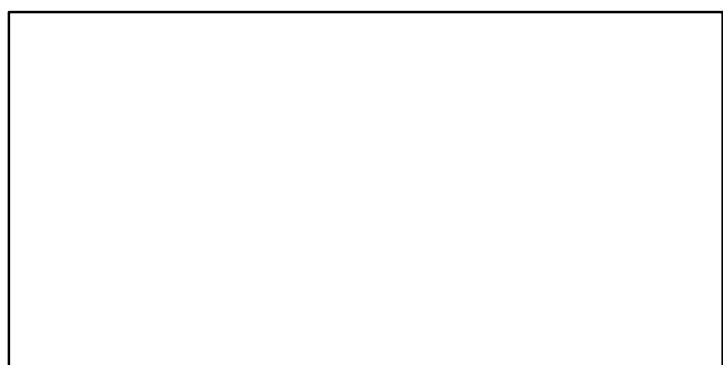
Lesser spotted dogfish ICES 6–7abcefghij [LSDOGVI–VIIabcefghij]

TL–MT, TC\*, RecC\* (2005–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



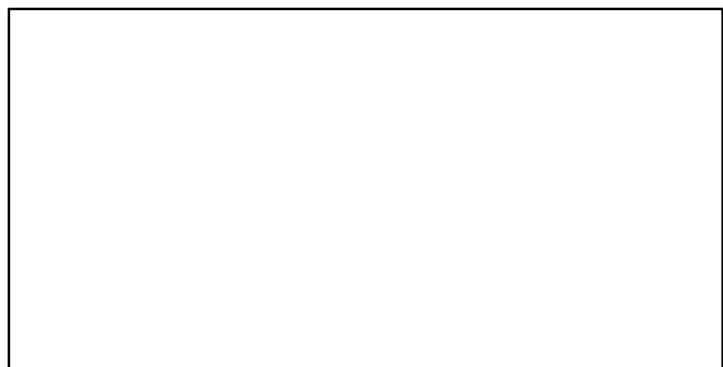
CPUE\*



EFFORT\*



CdivMSY\*



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

## Lemon sole ICES 3a-4-7d [LSOLEIIIA-IV-VIId]

<b>Metadata</b>	
<b>Scientific Name</b>	Microstomus kitt
<b>Current Assess ID</b>	WGNSSK-LSOLEIIIA-IV-VIId-1968-2018-ICESIMP2021
<b>Area</b>	ICES 3a-4-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2016, 2018, 2015

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

<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	1.73	Both	-	-
<b>TN</b>	-	-	-	-	-	-
<b>R</b>	R-relative	2018	0.913	-	1	
<b>F</b>	-	-	-	-	-	-
<b>ER</b>	-	-	-	-	-	-
<b>TC</b>	TC-MT	2018	3377			
<b>TL</b>	TL-MT	2018	3014			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ERdivERmsy-dimensionless	2018	0.193			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Kobe MSY\***

**Kobe MGT\***

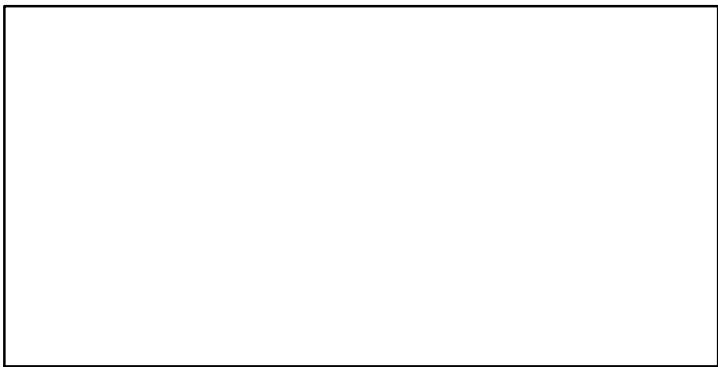
**Spawner Recruit\***

**Production\***

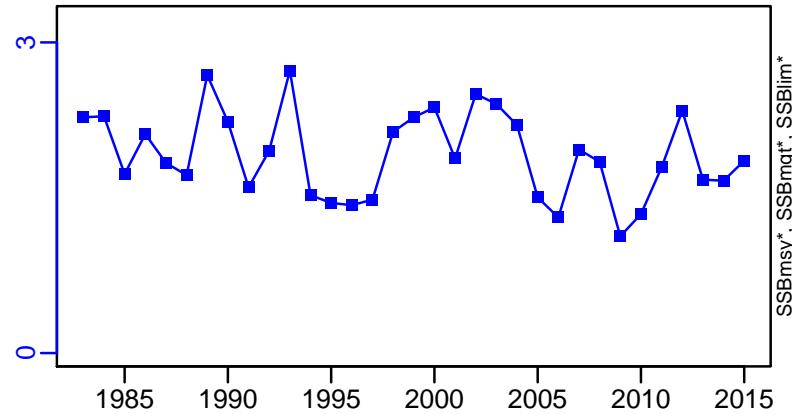
◆ Start Year   ◆ End Year   \* No Data

Lemon sole ICES 3a–4–7d [LSOLEIIIa–IV–VIIId]

**TB\***



SSB-index (1983–2015–ICESIMP2018)



SSB<sub>m</sub>y\*, SSB<sub>mgt</sub>\*, SSB<sub>lim</sub>\*

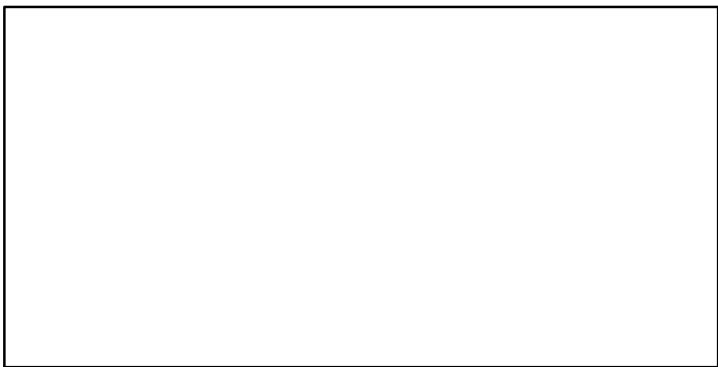
**TN \***



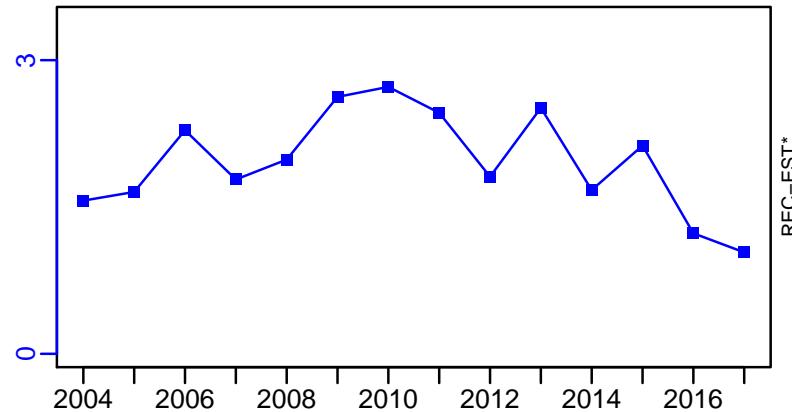
**F\***



**ER\***



R-relative (1968–2018–ICESIMP2021)



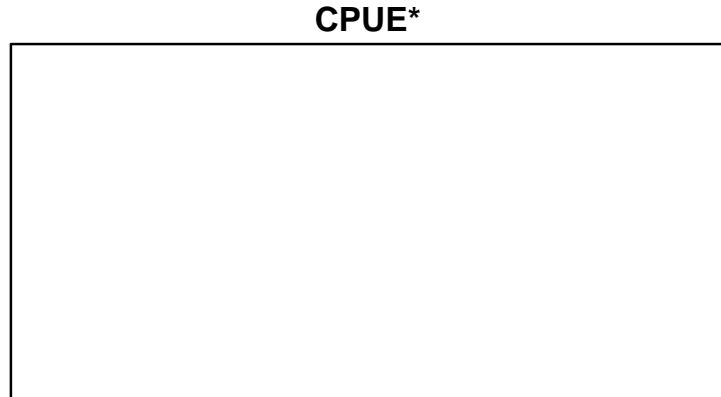
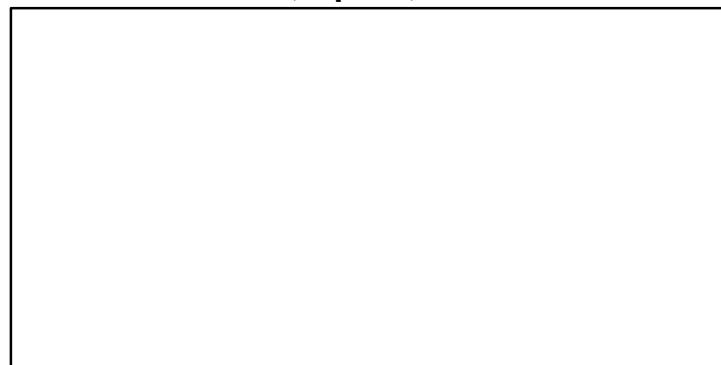
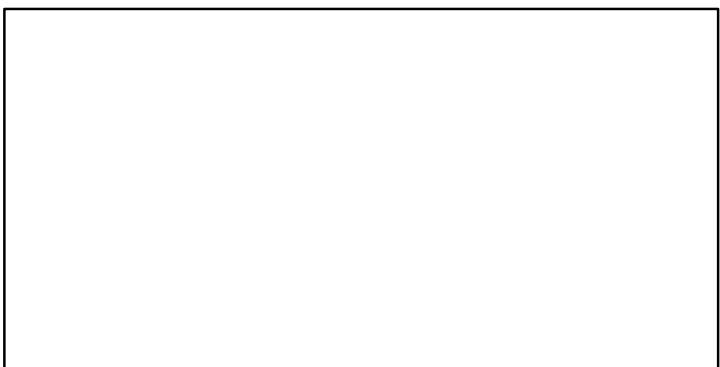
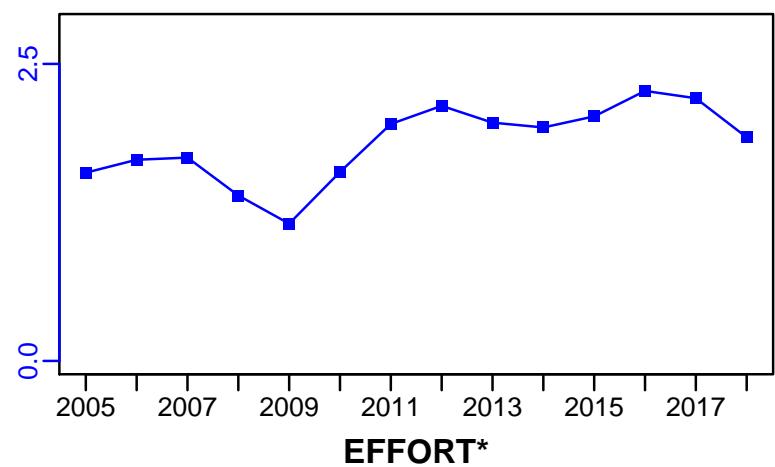
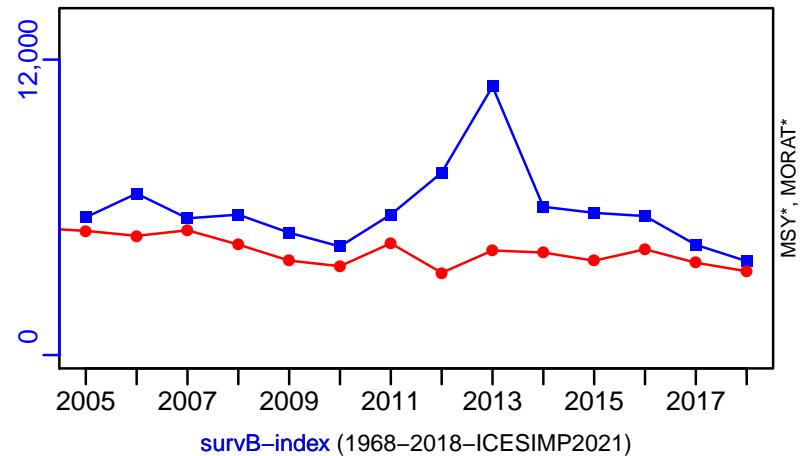
REC-EST\*

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

Lemon sole ICES 3a–4–7d [LSOLEIIIa–IV–VIIId]

TC-MT, TL-MT, RecC\* (1968–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

## Mackerel ICES Northeast Atlantic [MACKNEICES]

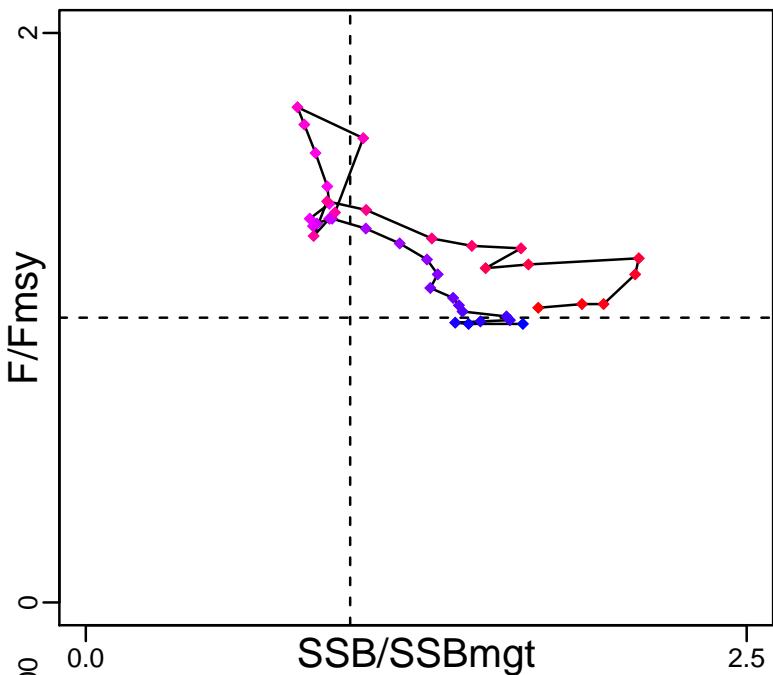
<b>Metadata</b>	
<b>Scientific Name</b>	Scomber scombrus
<b>Current Assess ID</b>	WGWISE-MACKNEICES-1980-2019-ICESIMP2021
<b>Area</b>	ICES Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Widely Distributed Stocks
<b>Asmts in RAM</b>	2007, 2013, 2014, 2015, 2016, 2017, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2014	4,037,320
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.23
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.199
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	2,500,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.23
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2014	726,365
<b>M</b>	M-1/yr	2007	0.15
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2017	1,940,000
<b>Flim</b>	Flim-1/yr	2017	0.48
<b>ERlim</b>	-	-	-

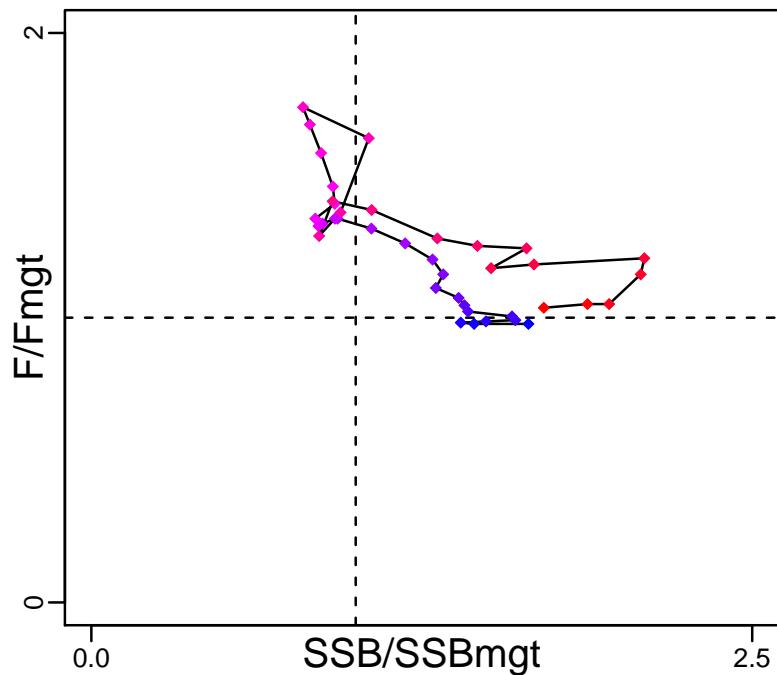
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	5,684,879	-	-	
<b>SSB</b>	SSB-MT	2019	4,312,156	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	4,486,290,000	-	0	
<b>F</b>	F-1/yr	2019	0.238	-	4 to 8	
<b>ER</b>	ER-calc-ratio	2019	0.181	-	-	
<b>TC</b>	TC-MT	2019	1,026,437			
<b>TL</b>	TL-MT	2016	1,200,000			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2014	1.39			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	1.035			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.909			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.725			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.035			
<b>ER/ERmgt</b>	-	-	-			

Mackerel ICES Northeast Atlantic [MACKNEICES]

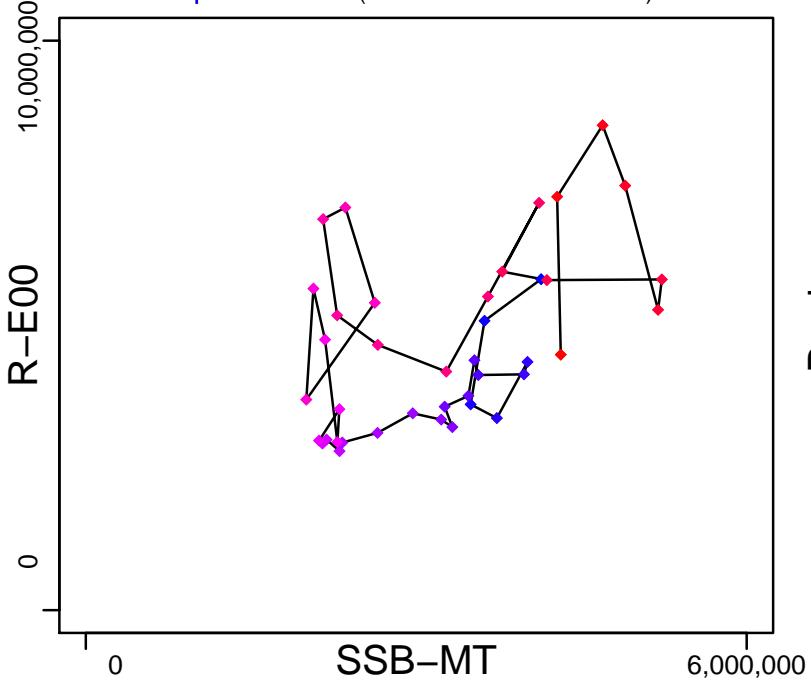
Kobe MSYpref (1980–2019–ICESIMP2021)



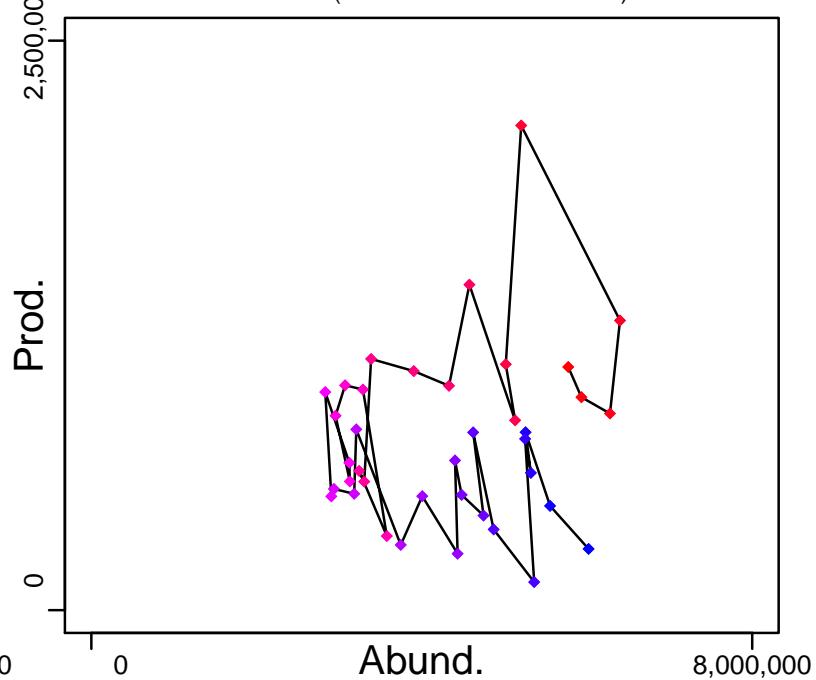
Kobe MGTpref (1980–2019–ICESIMP2021)



Spawner Recruit (1980–2019–ICESIMP2021)



Production (1980–2019–ICESIMP2021)

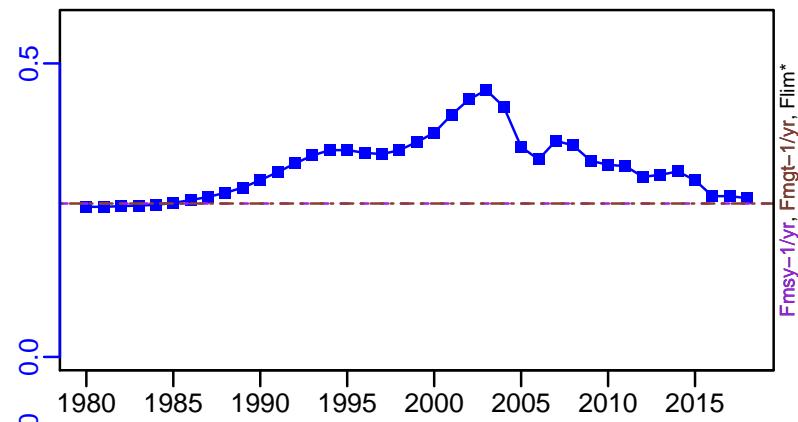
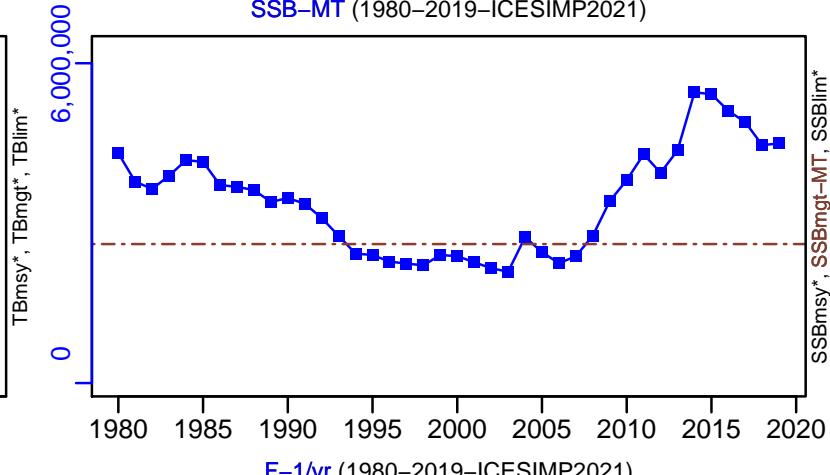
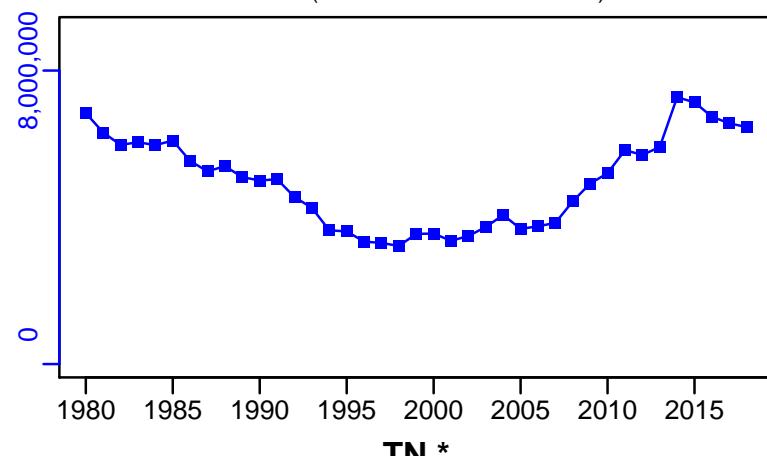


◆ Start Year   ◆ End Year   \* No Data

### Mackerel ICES Northeast Atlantic [MACKNEICES]

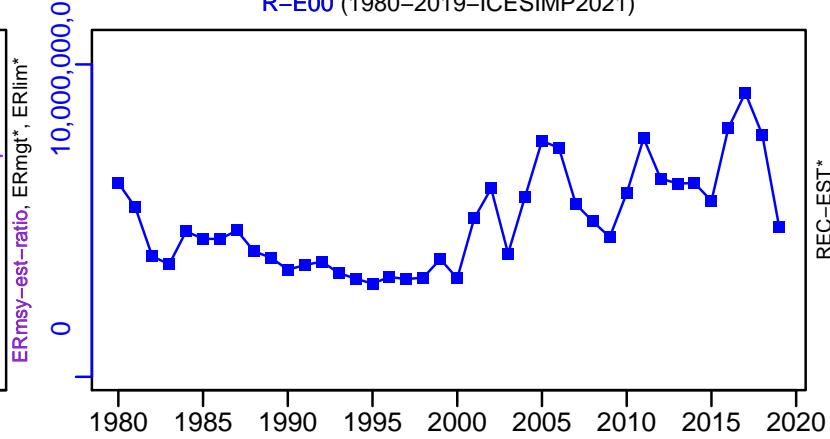
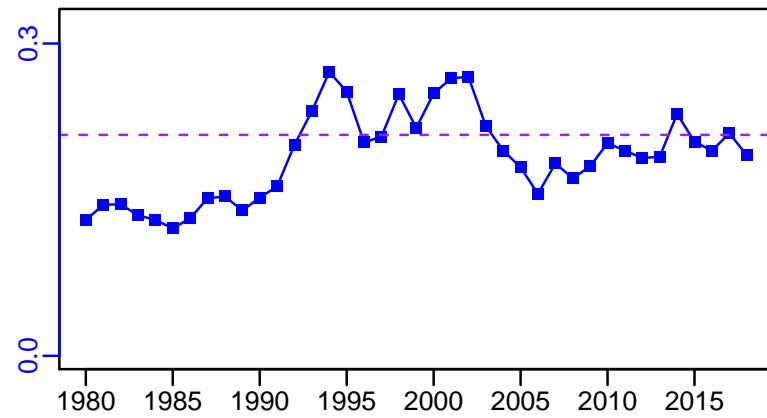
TB-MT (1980–2019–ICESIMP2021)

SSB-MT (1980–2019–ICESIMP2021)



ER-calc-ratio (1980–2019–ICESIMP2021)

R-E00 (1980–2019–ICESIMP2021)

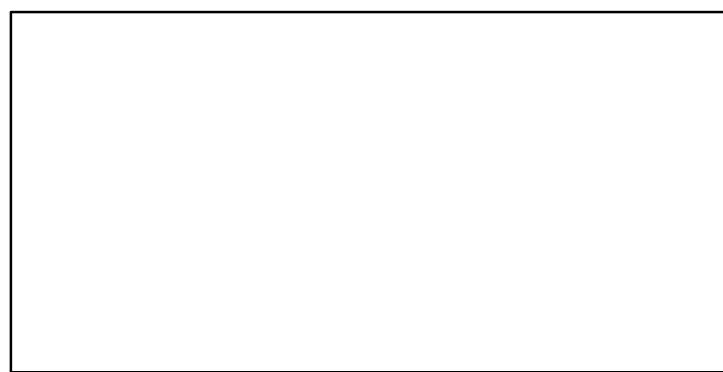
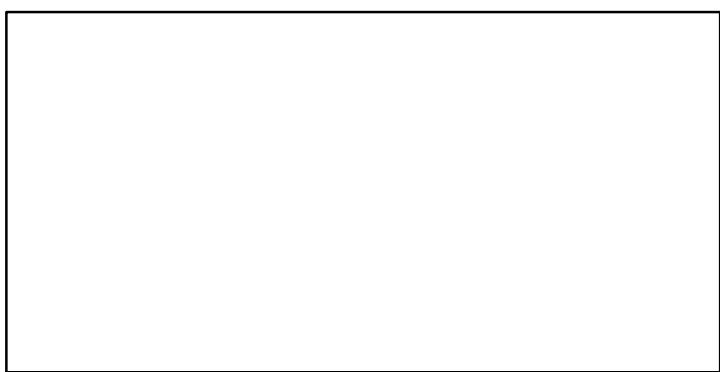
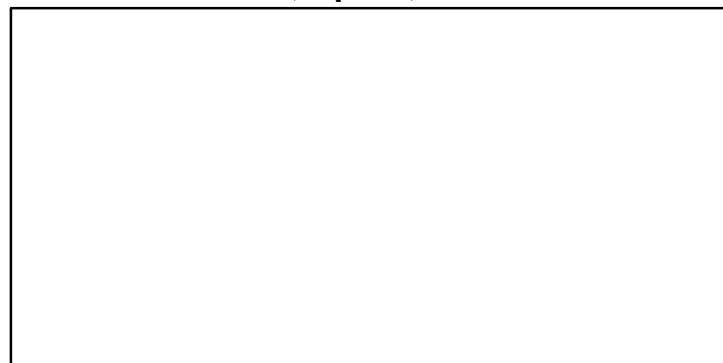
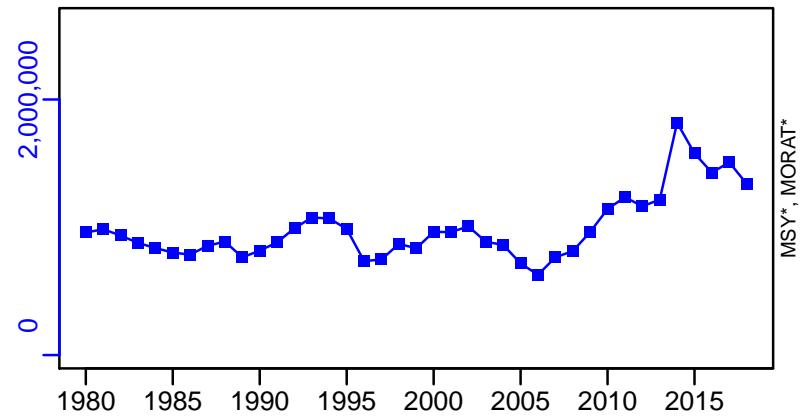


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

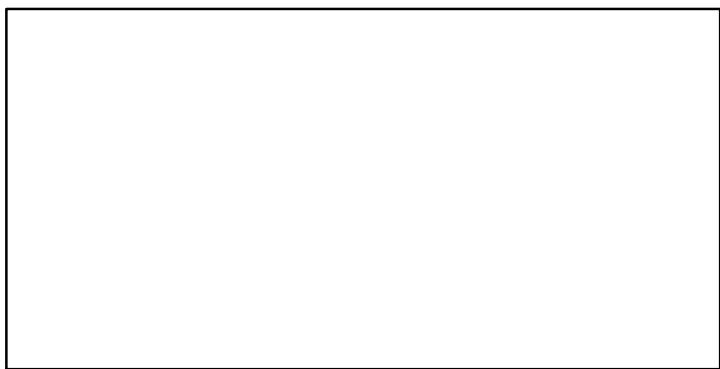
Mackerel ICES Northeast Atlantic [MACKNEICES]

TC-MT, TL\*, RecC\* (1980–2019–ICESIMP2021)

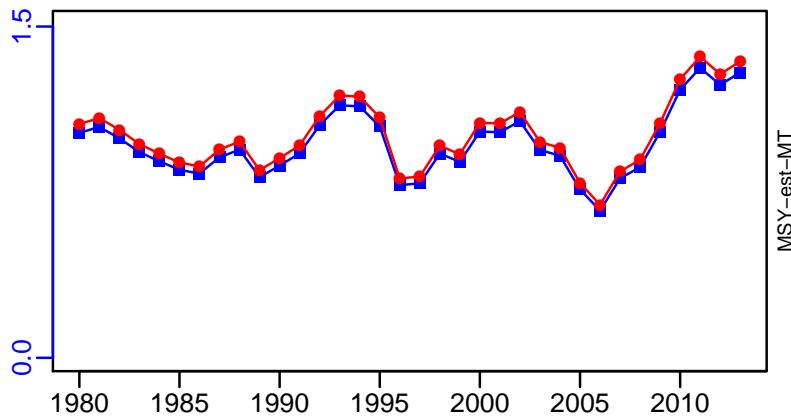
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1980–2014–ICESIMP2016)



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

## Megrim ICES 8c-9a [MEG8c9a]

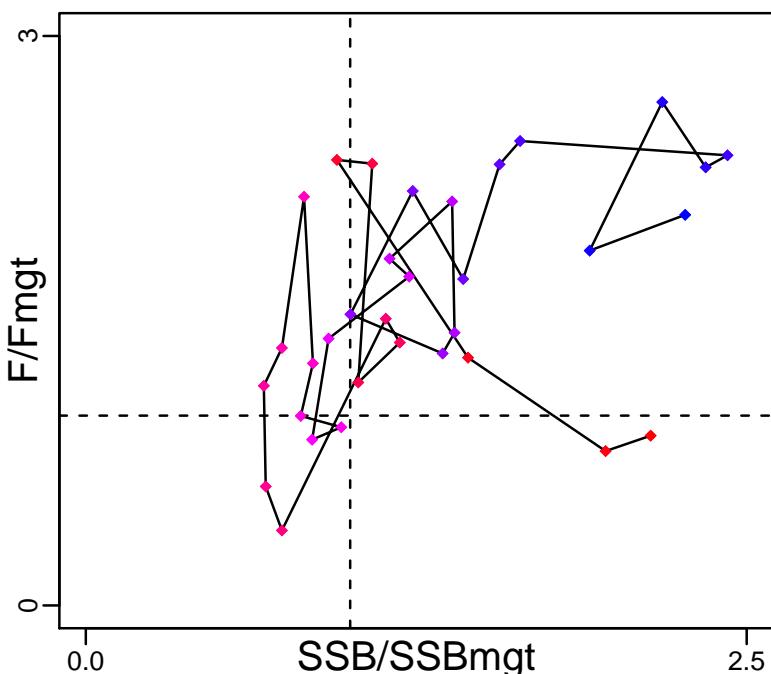
Metadata	
<b>Scientific Name</b>	Lepidorhombus whiffiagonis
<b>Current Assess ID</b>	WGBIE-MEG8c9a-1985-2019-ICESIMP2021
<b>Area</b>	ICES 8c-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2014, 2015, 2016, 2017, 2018, 2019, 2010, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.191
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.318
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	980
<b>Fmgt</b>	Fmgt-1/yr	2019	0.191
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2010	0.2
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	700
<b>Flim</b>	Flim-1/yr	2018	0.45
<b>ERlim</b>	-	-	-

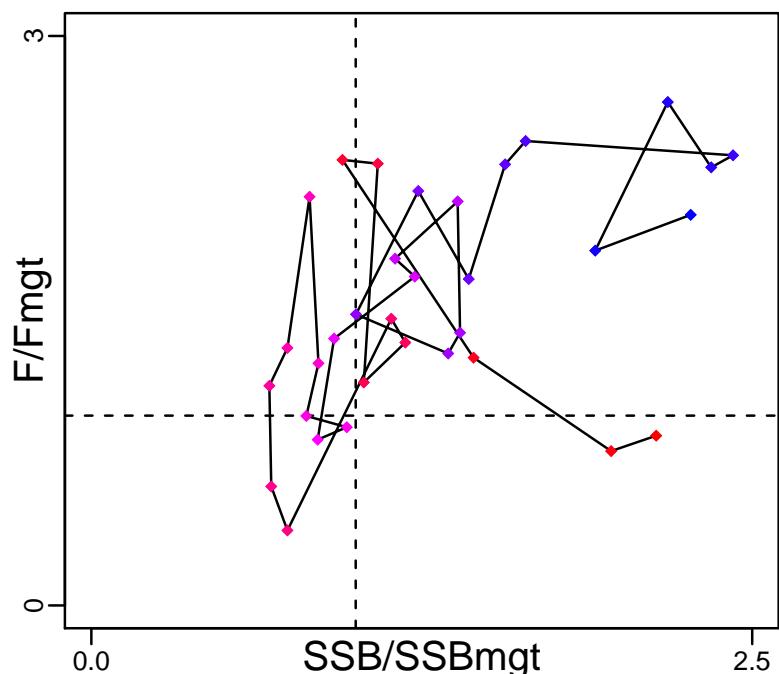
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	2290	-	-	
<b>SSB</b>	SSB-MT	2019	2652	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	3,542,000	-	1	
<b>F</b>	F-1/yr	2019	0.171	-	2 to 4	
<b>ER</b>	ER-calc-ratio	2019	0.154	-	-	
<b>TC</b>	TC-MT	2019	352			
<b>TL</b>	TL-MT	2019	315			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.848			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.484			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	2.706			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.894			
<b>ER/ERmgt</b>	-	-	-			

**Megrim ICES 8c–9a [MEG8c9a]**

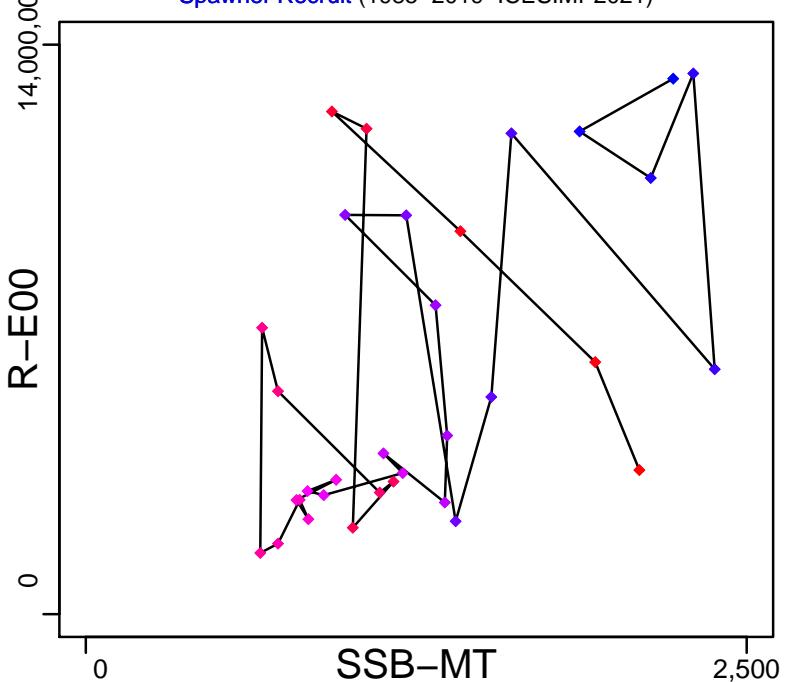
Kobe MSYpref (1985–2019–ICESIMP2021)



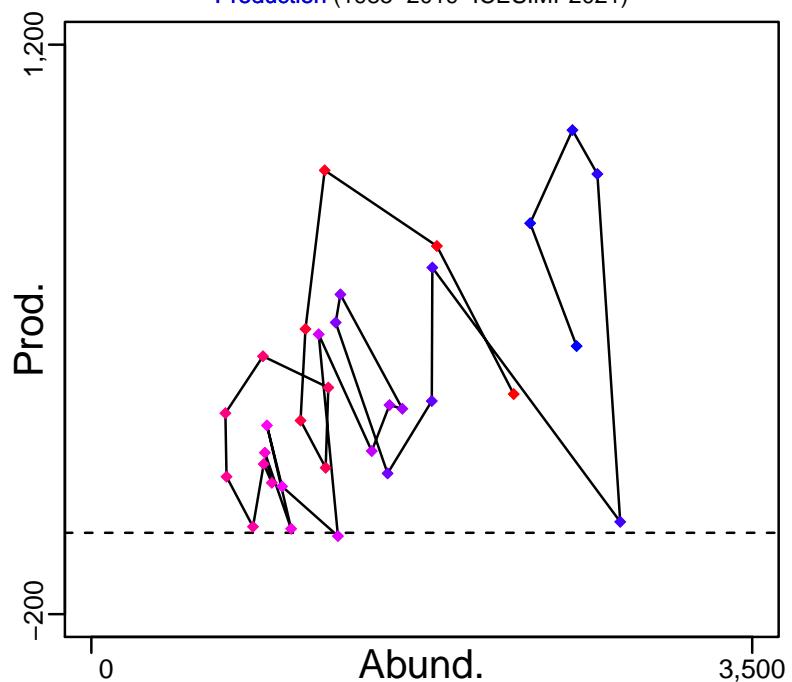
Kobe MGTpref (1985–2019–ICESIMP2021)



Spawner Recruit (1985–2019–ICESIMP2021)



Production (1985–2019–ICESIMP2021)

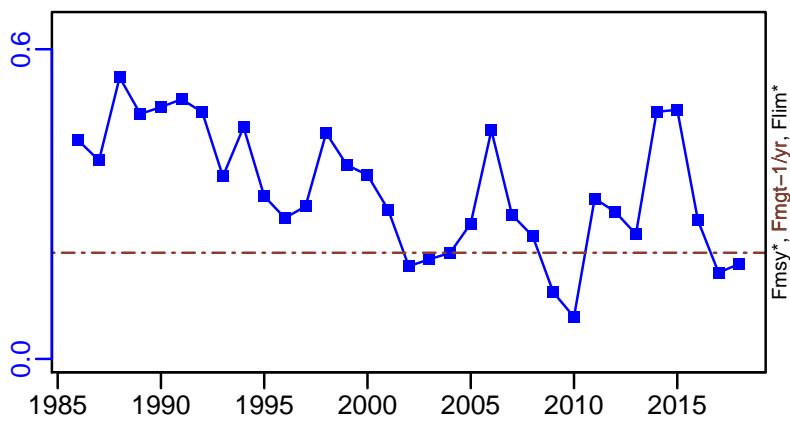
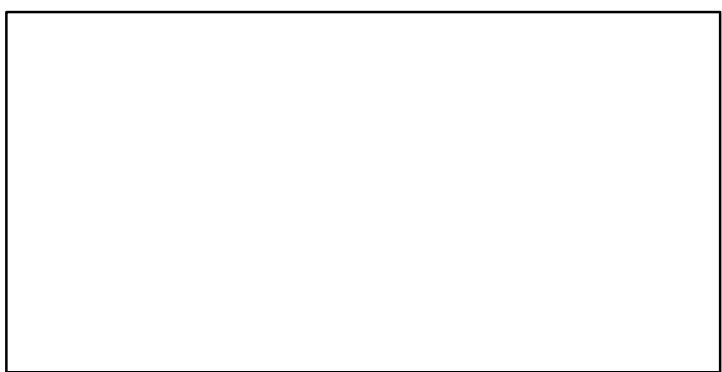
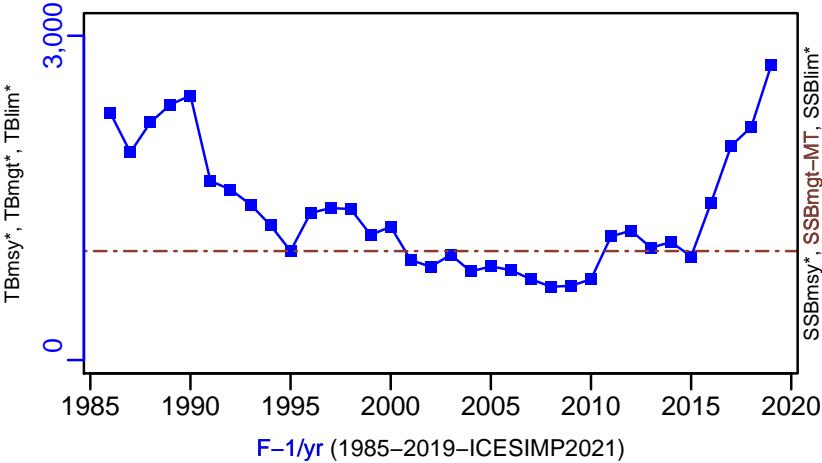
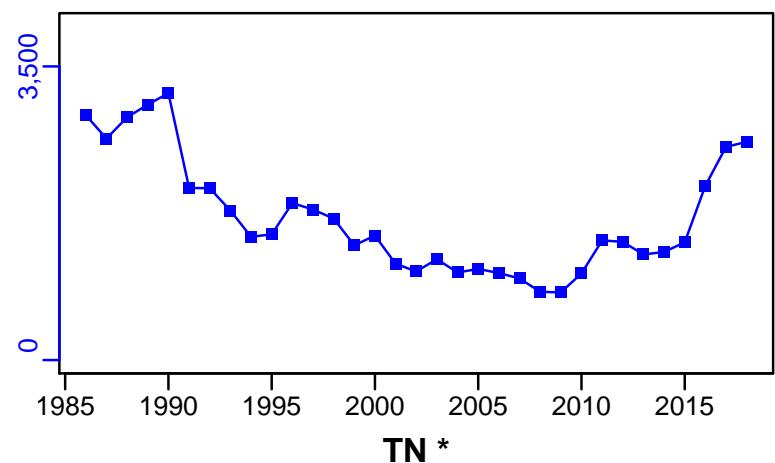


◆ Start Year ◆ End Year \* No Data

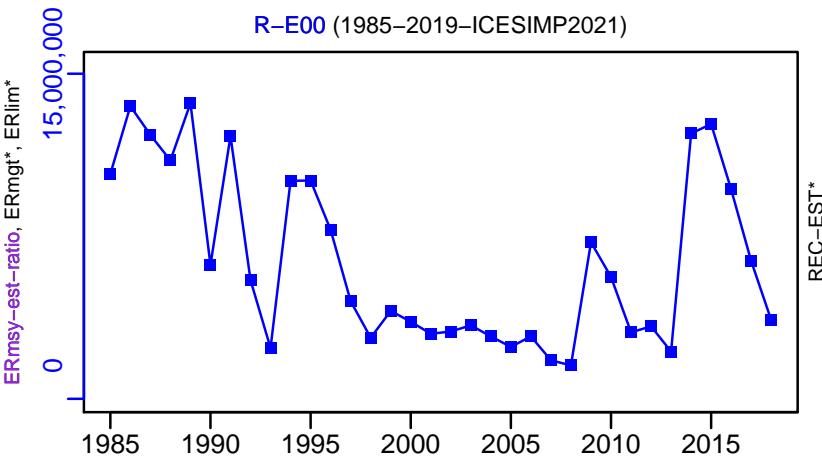
Megrim ICES 8c–9a [MEG8c9a]

TB-MT (1985–2019–ICESIMP2021)

SSB-MT (1985–2019–ICESIMP2021)



ER-calc-ratio (1985–2019–ICESIMP2021)

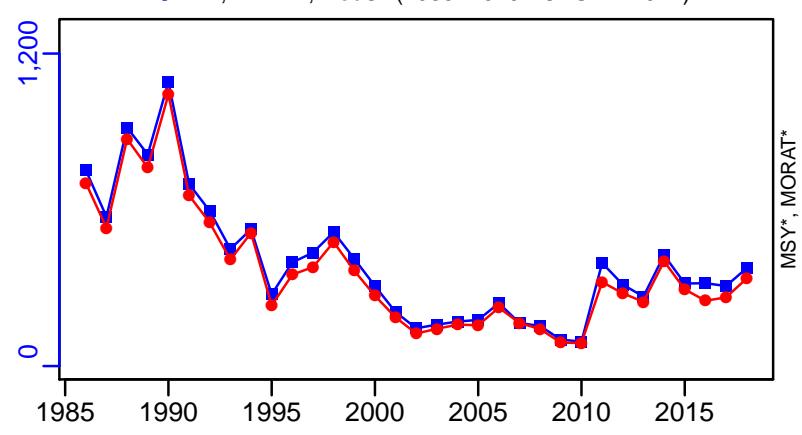


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

Megrim ICES 8c–9a [MEG8c9a]

TC-MT, TL-MT, RecC\* (1985–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



MSY\*, MORAT\*

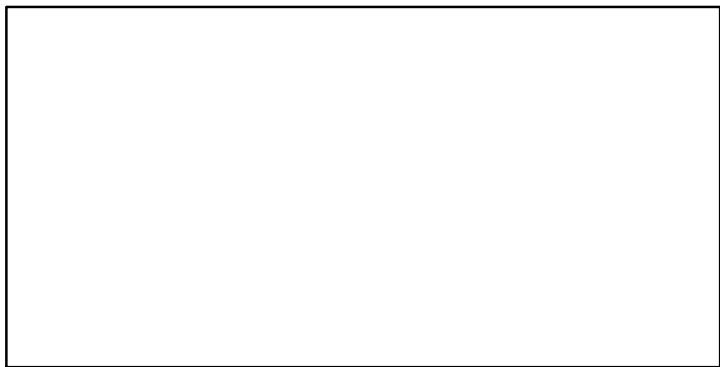
survB\*



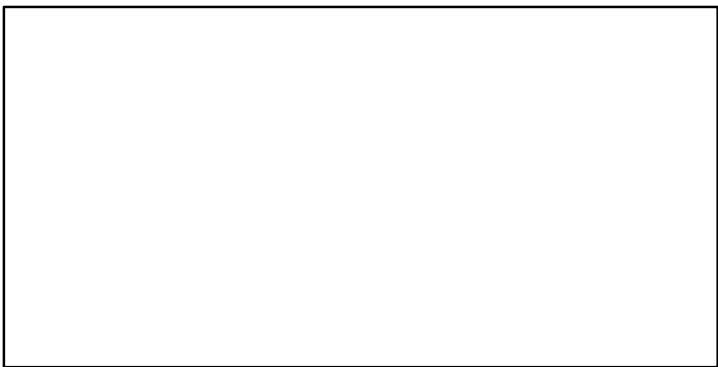
CPUE\*



EFFORT\*



CdivMSY\*



## Megrim spp ICES 4a-6a [MEGSPPIVa-VIa]

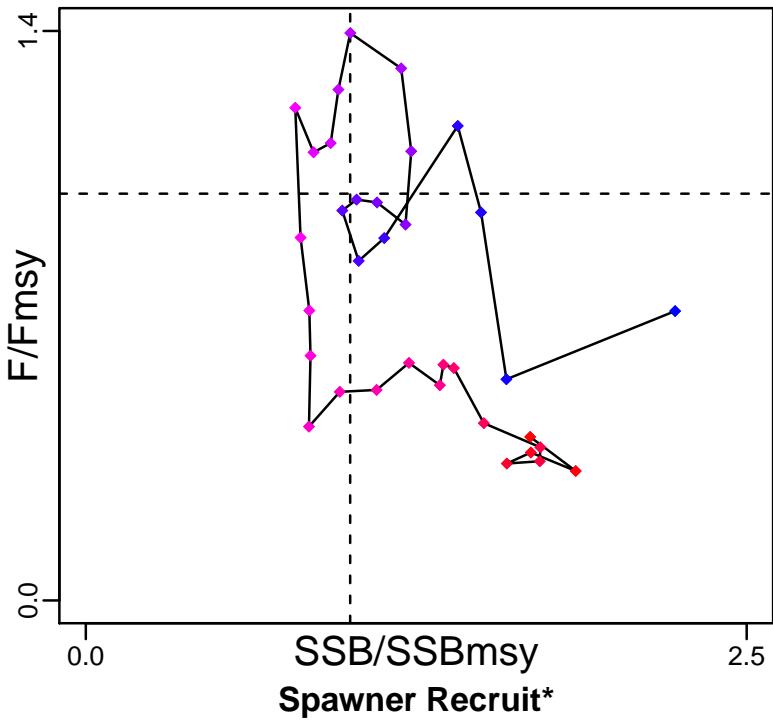
Metadata	
<b>Scientific Name</b>	Lepidorhombus spp
<b>Current Assess ID</b>	WGCSE-MEGSPPIVa-VIa-1985-2018-ICESIMP2021
<b>Area</b>	ICES 4a-6a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2012, 2013, 2015, 2016, 2017, 2018

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

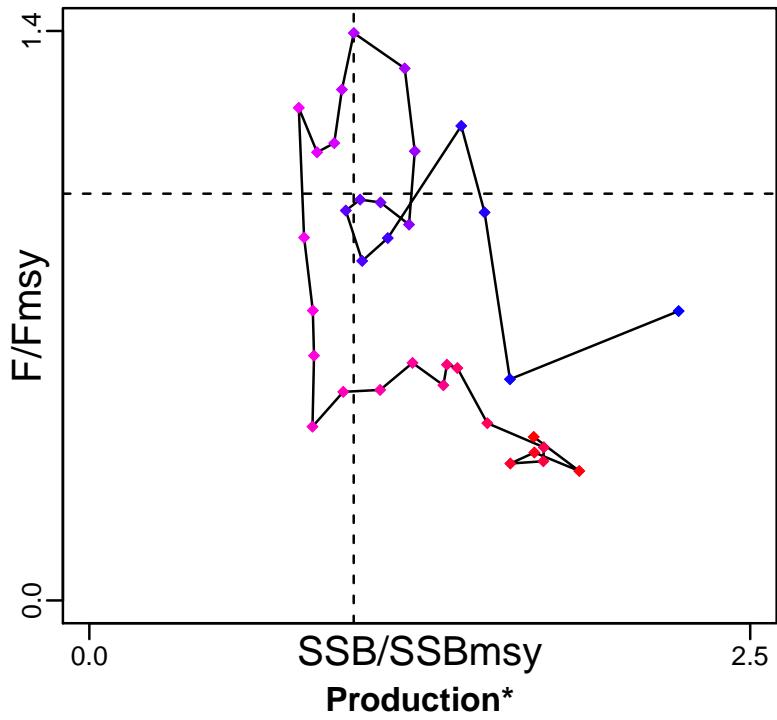
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	-	-	-	-	-	
<b>TC</b>	TC-MT	2018	3258			
<b>TL</b>	TL-MT	2018	3003			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2018	1.681			
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2018	0.402			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Megrim spp ICES 4a–6a [MEGSPPIVa–VIa]

Kobe MSYpref (1985–2018–ICESIMP2021)



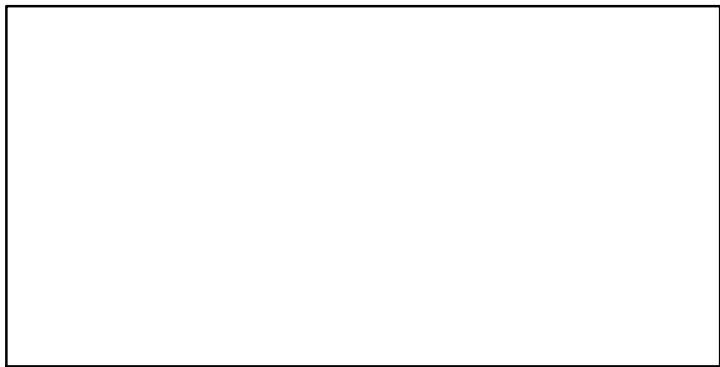
Kobe MGTpref (1985–2018–ICESIMP2021)



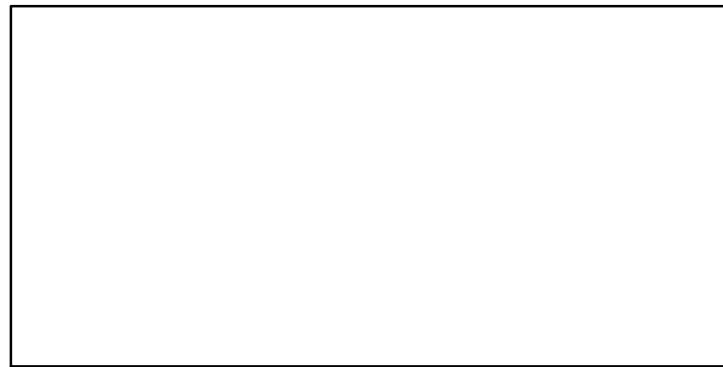
◆ Start Year	◆ End Year	* No Data
--------------	------------	-----------

Megrim spp ICES 4a–6a [MEGSPPIVa–VIa]

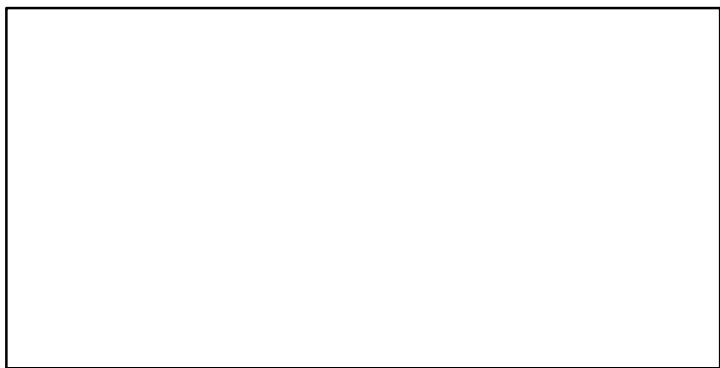
**TB\***



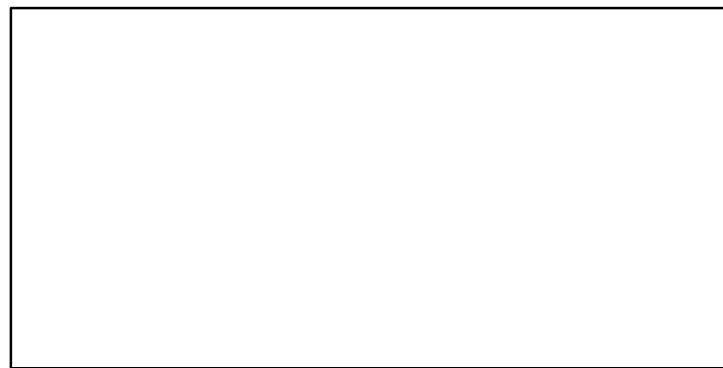
**SSB\***



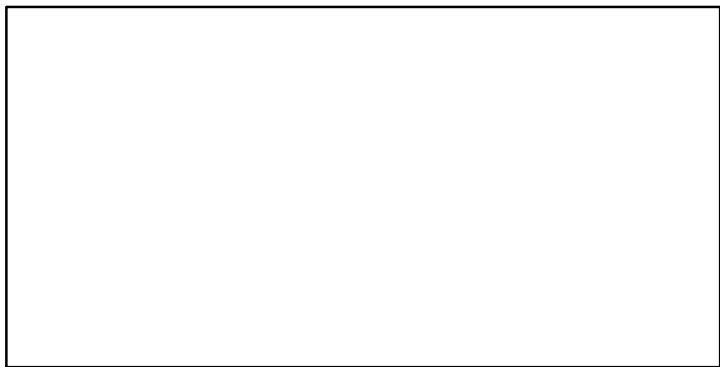
**TN \***



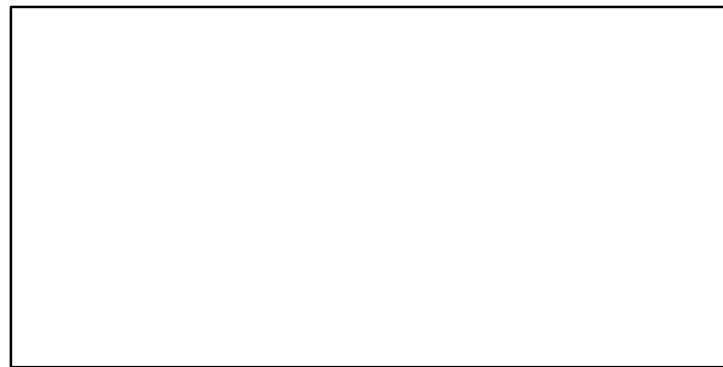
**F\***



**ER\***



**Recruits\***

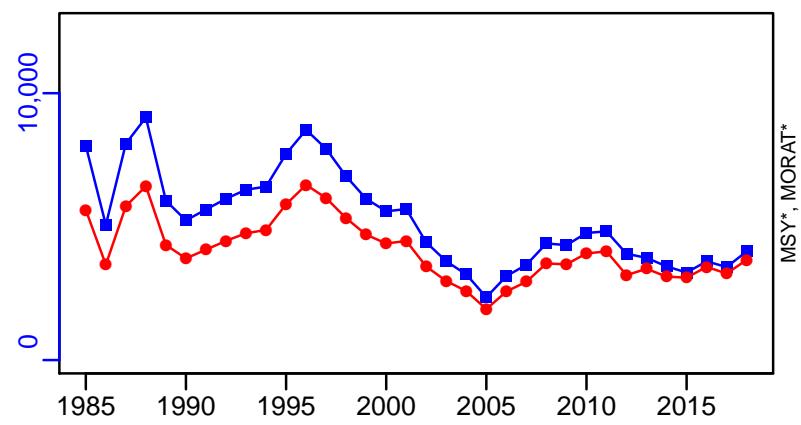


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

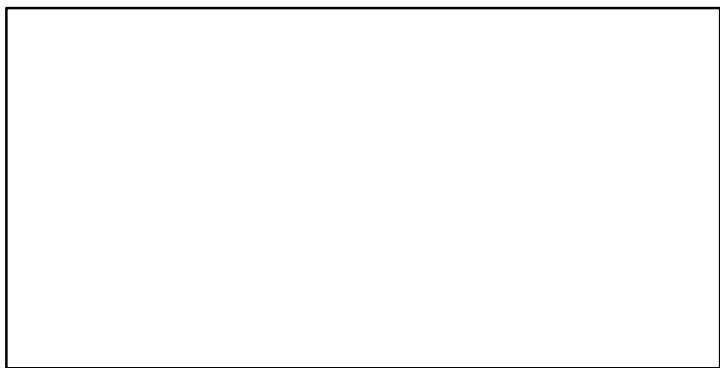
Megrim spp ICES 4a–6a [MEGSPPIVa–VIa]

TC–MT, TL–MT, RecC\* (1985–2018–ICESIMP2021)

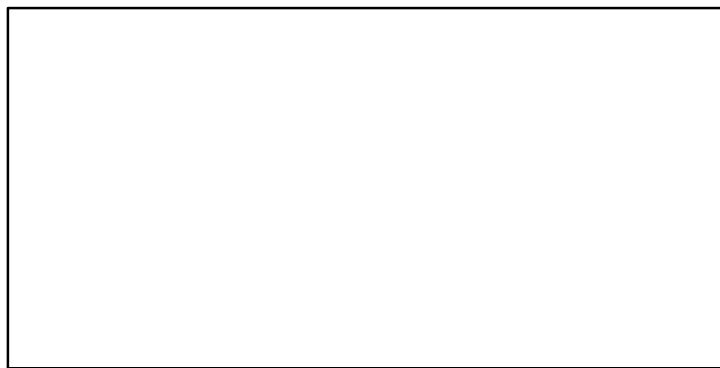
TAC\*, Cpair\*, Cadv\*



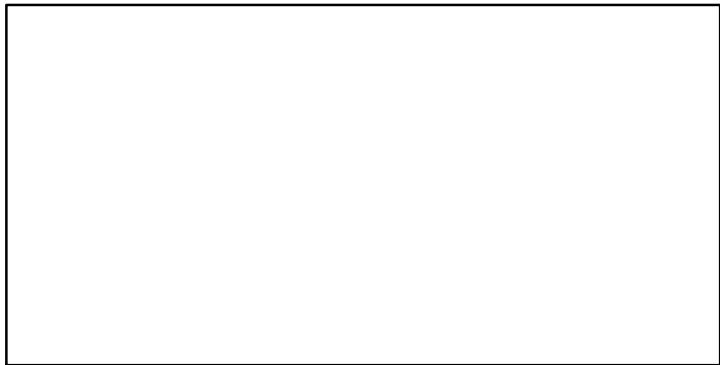
survB\*



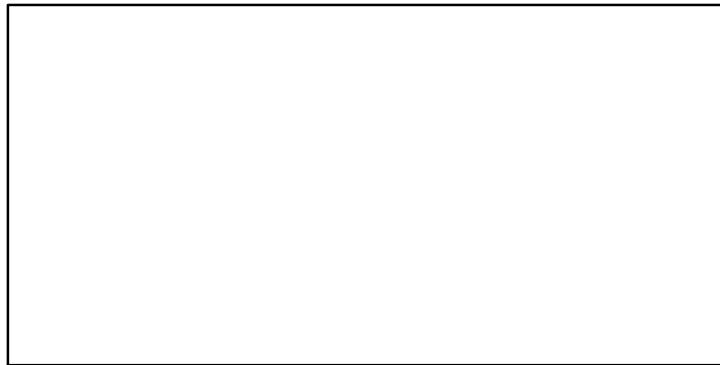
CPUE\*



EFFORT\*



CdivMSY\*



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

## Megrim spp Rockall Bank [MEGSPPVlb]

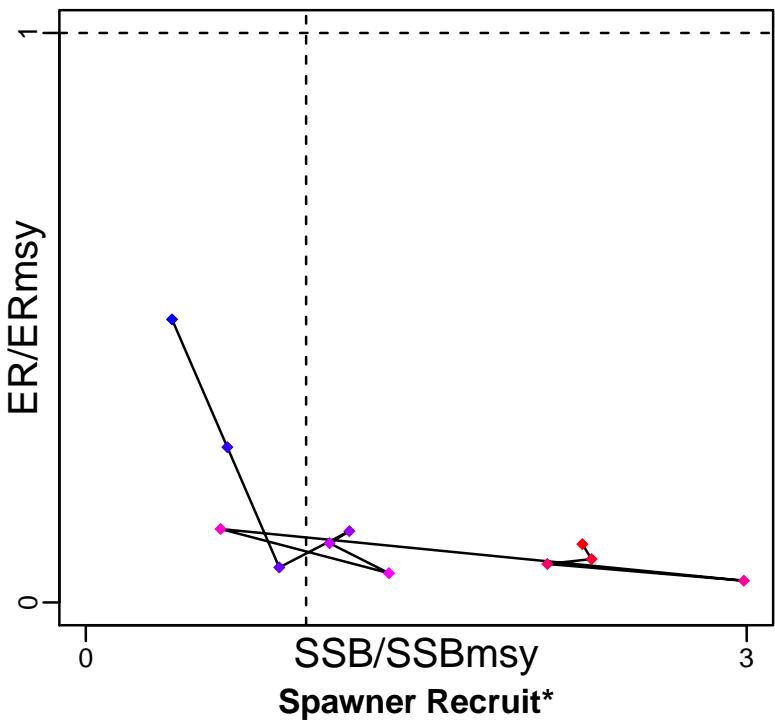
Metadata	
<b>Scientific Name</b>	Lepidorhombus spp
<b>Current Assess ID</b>	WGCSE-MEGSPPVlb-1991-2019-ICESIMP2021
<b>Area</b>	Rockall Bank
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2016, 2017, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2016	1446
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2016	0.432
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2016	1964
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

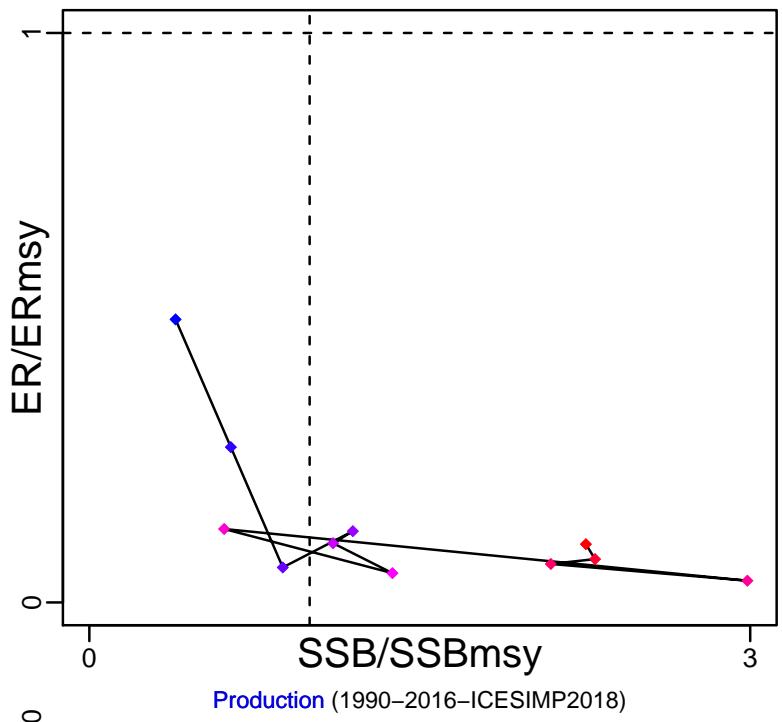
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	SSB-MT	2016	4510	Both	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-calc-ratio	2016	0.044	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2019	763			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2016	3.118			
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2019	0.932			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2016	0.102			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Megrim spp Rockall Bank [MEGSPPVlb]**

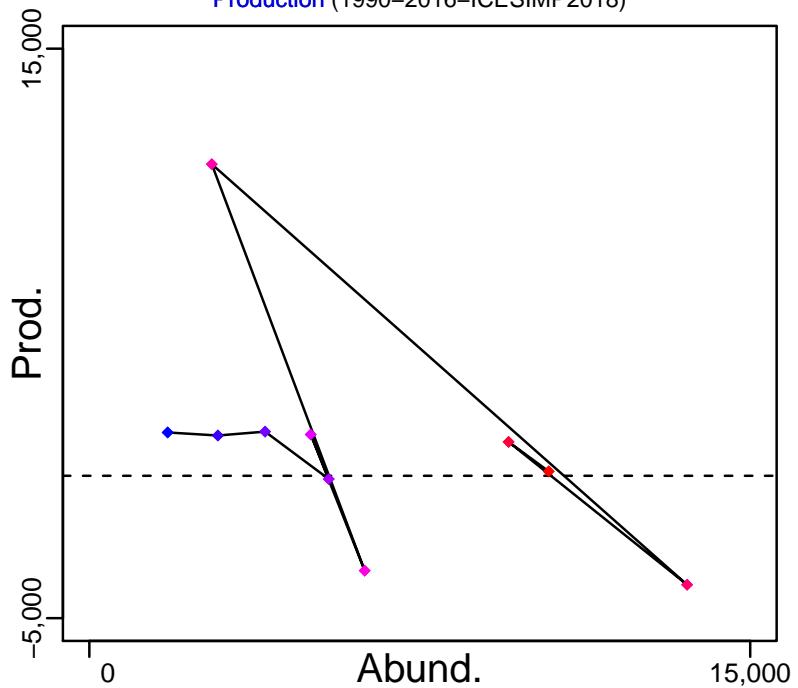
Kobe MSYpref (1990–2016–ICESIMP2018)



Kobe MGTpref (1990–2016–ICESIMP2018)



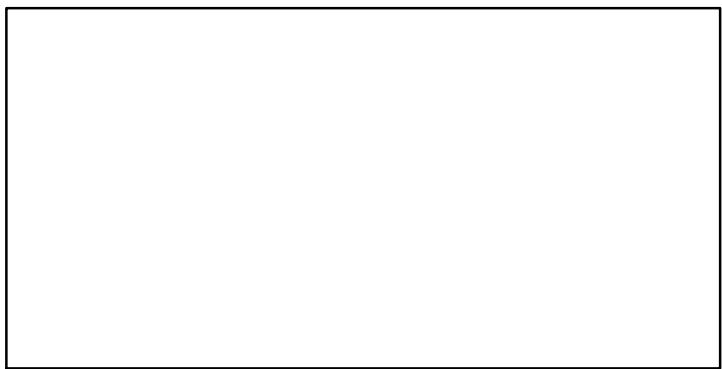
Production (1990–2016–ICESIMP2018)



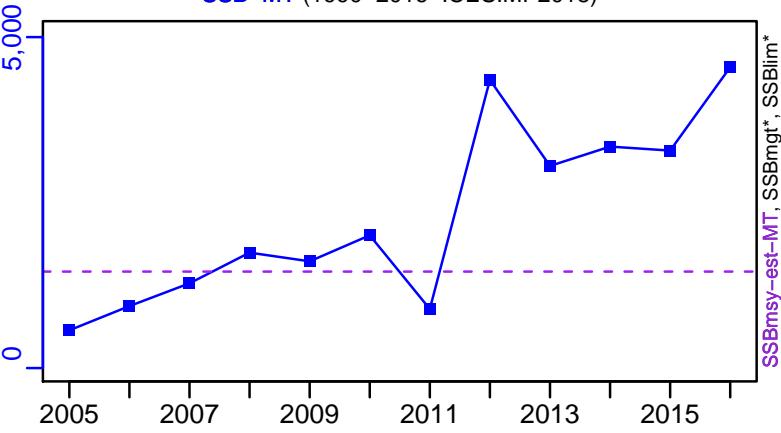
◆ Start Year   ◆ End Year   \* No Data

Megrim spp Rockall Bank [MEGSPPVIb]

**TB\***



**SSB-MT (1990–2016–ICESIMP2018)**



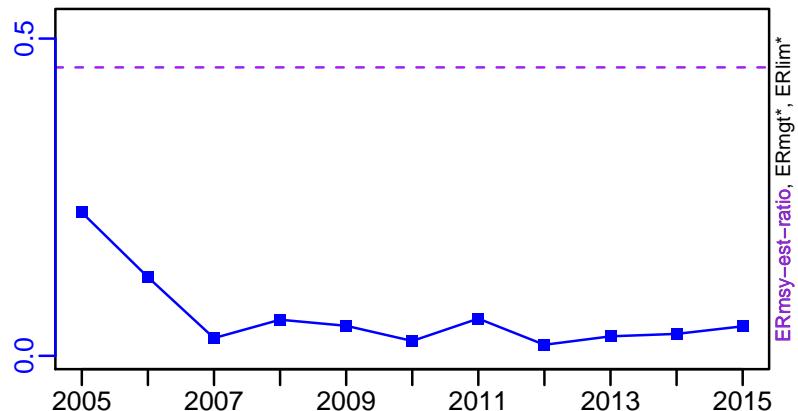
**TN \***



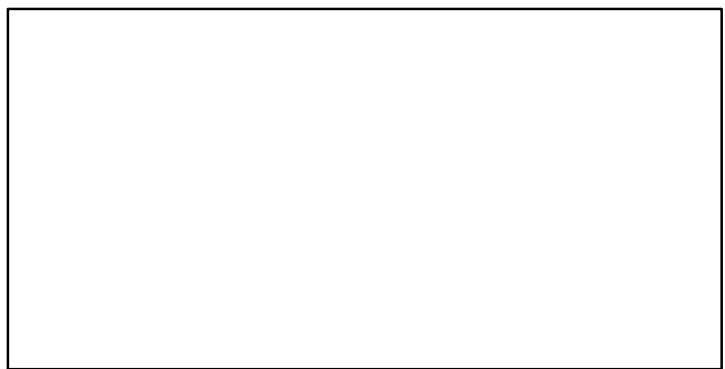
**F\***



**ER-calc-ratio (1990–2016–ICESIMP2018)**



**Recruits\***

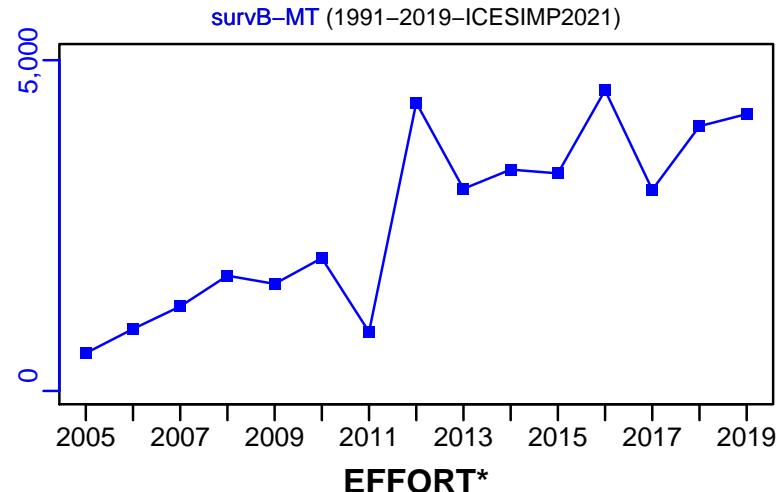
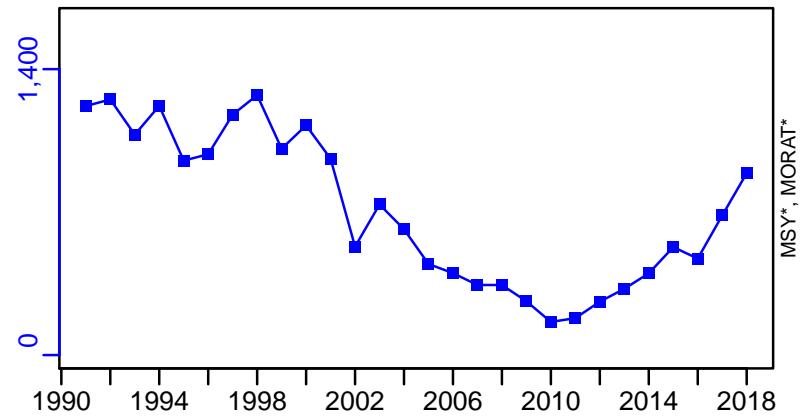


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | --- Lim BRP  | * No Data |

Megrim spp Rockall Bank [MEGSPPVIb]

TL-MT, TC\*, RecC\* (1991–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



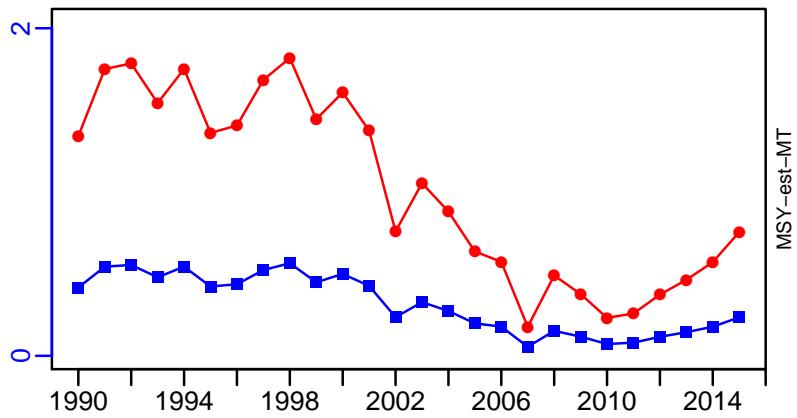
CPUE\*



EFFORT\*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1990–2016–ICESIMP2018)



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

## Megrim ICES 7-8abd [MEGVII-VIIIabd]

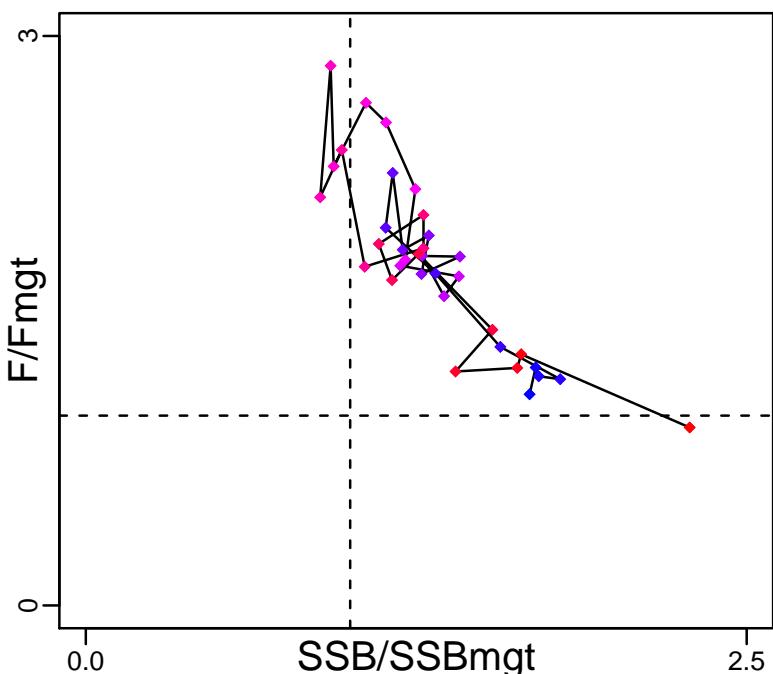
Metadata	
<b>Scientific Name</b>	Lepidorhombus whiffiagonis
<b>Current Assess ID</b>	WGBIE-MEGVII-VIIIabd-1983-2019-ICESIMP2021
<b>Area</b>	ICES 7-8abd
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2014, 2015, 2016, 2017, 2018, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.191
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.427
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	41,800
<b>Fmgt</b>	Fmgt-1/yr	2019	0.191
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	37,100
<b>Flim</b>	Flim-1/yr	2018	0.53
<b>ERlim</b>	-	-	-

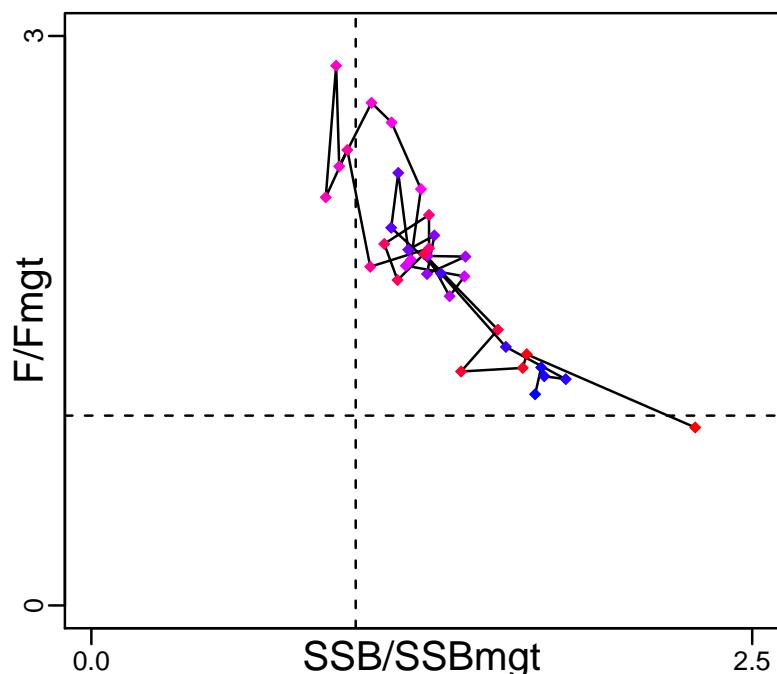
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	150,653	-	-	
<b>SSB</b>	SSB-MT	2019	100,393	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	223,736,000	-	1	
<b>F</b>	F-1/yr	2019	0.179	-	3 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.094	-	-	
<b>TC</b>	TC-MT	2019	14,133			
<b>TL</b>	TL-MT	2019	12,279			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.152			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.22			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	2.402			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.937			
<b>ER/ERmgt</b>	-	-	-			

**Megrim ICES 7–8abd [MEGVII–VIIIab]**

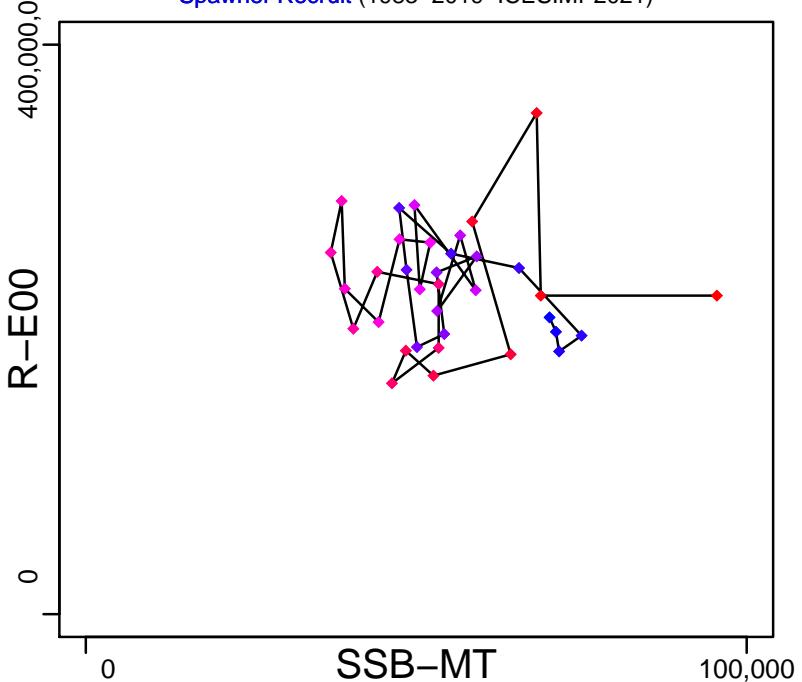
Kobe MSYpref (1983–2019–ICESIMP2021)



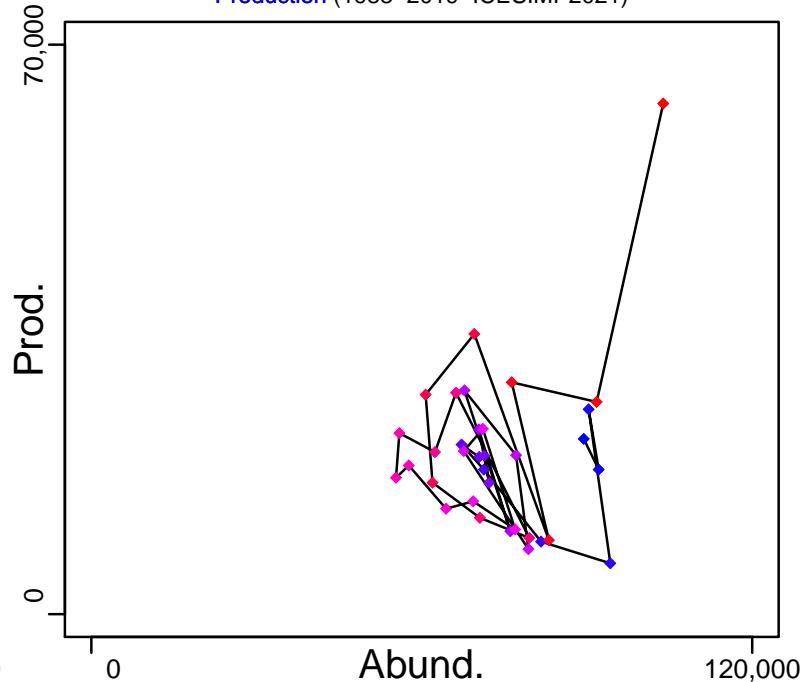
Kobe MGTpref (1983–2019–ICESIMP2021)



Spawner Recruit (1983–2019–ICESIMP2021)



Production (1983–2019–ICESIMP2021)

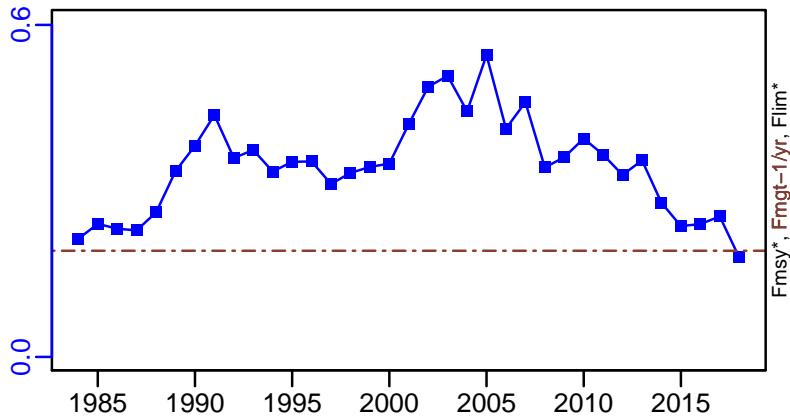
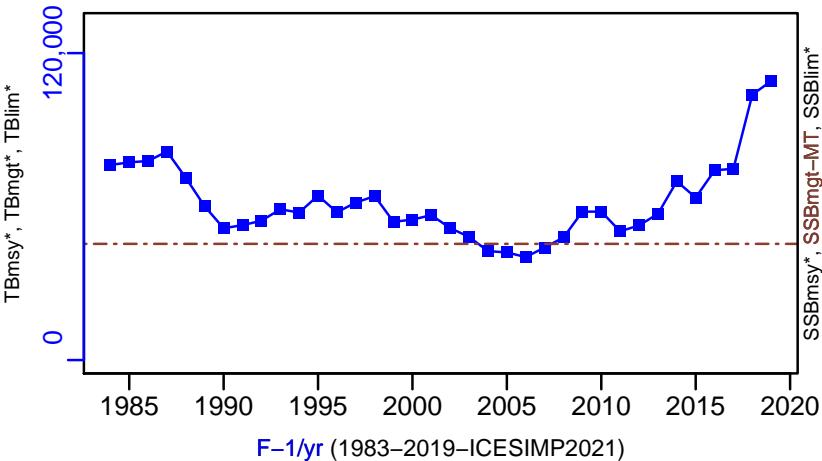
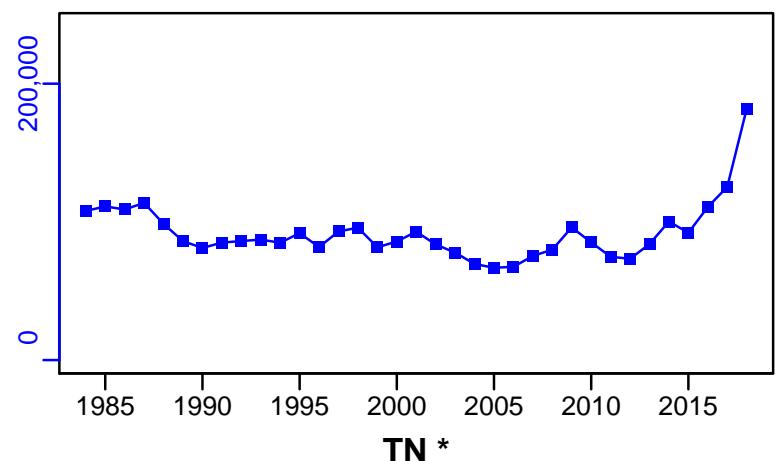


◆ Start Year	◆ End Year	*	No Data
--------------	------------	---	---------

### Megrim ICES 7–8abd [MEGVII–VIIIab]

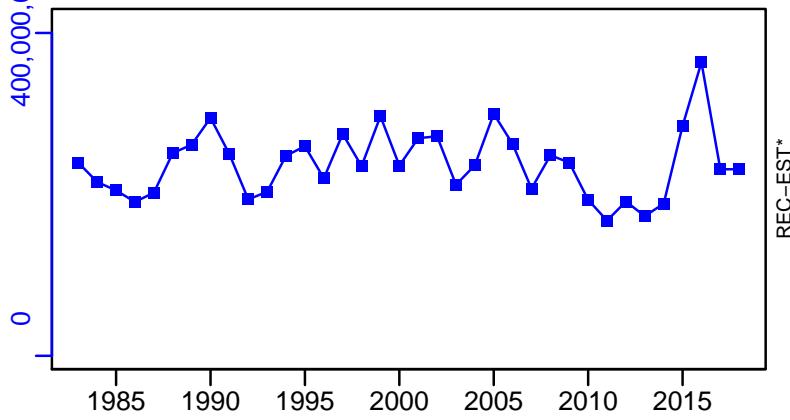
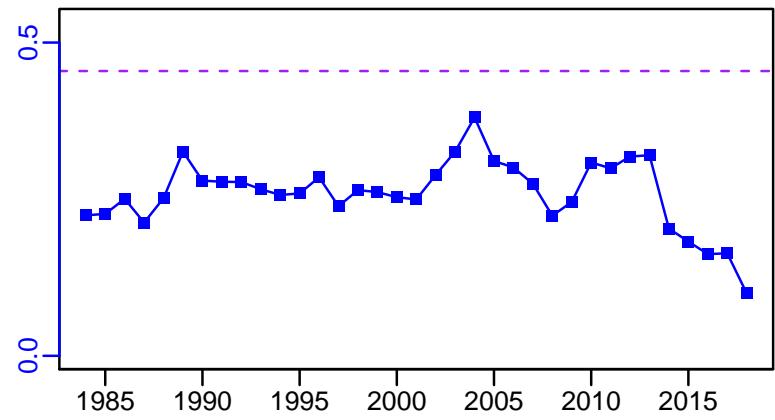
TB-MT (1983–2019–ICESIMP2021)

SSB-MT (1983–2019–ICESIMP2021)



ER-calc-ratio (1983–2019–ICESIMP2021)

R-E00 (1983–2019–ICESIMP2021)

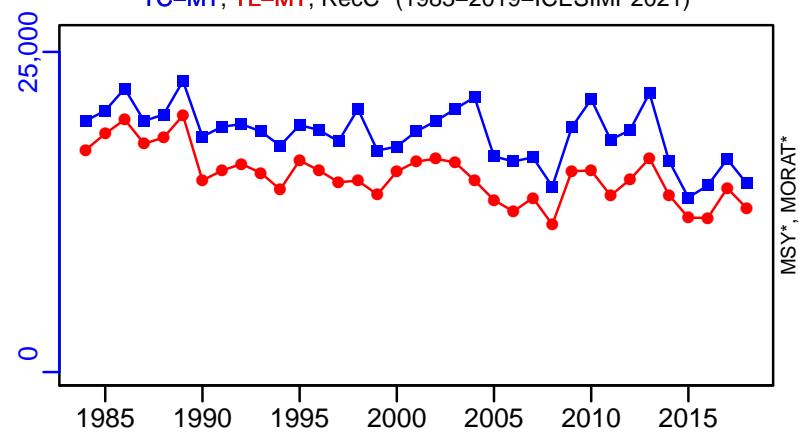


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	— Lim BRP	* No Data

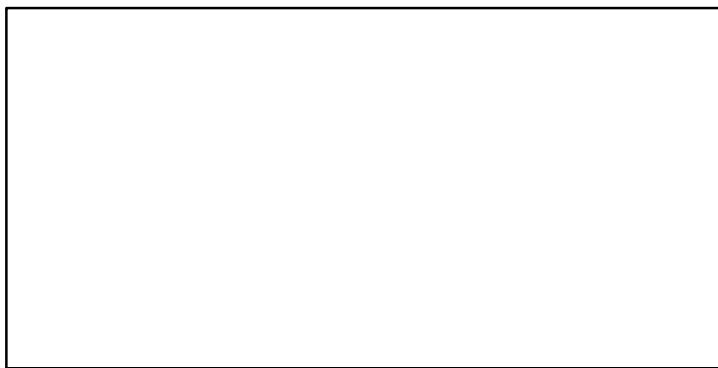
Megrim ICES 7–8abd [MEGVII–VIIIab*d*]

TC–MT, TL–MT, RecC\* (1983–2019–ICESIMP2021)

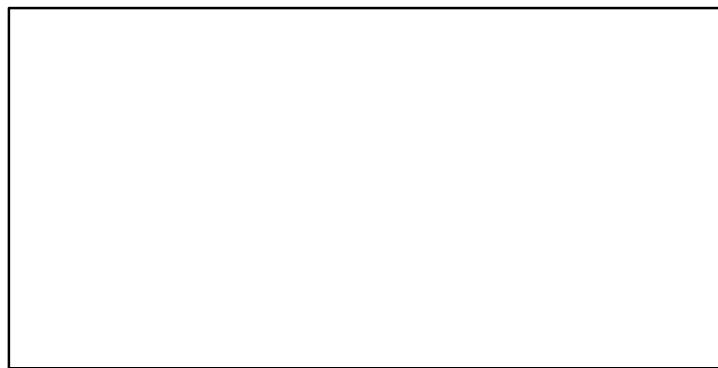
TAC\*, Cp*air*\*, Cd*adv*\*



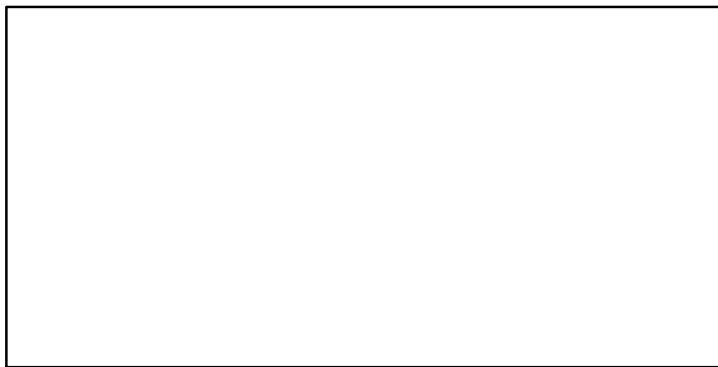
survB\*



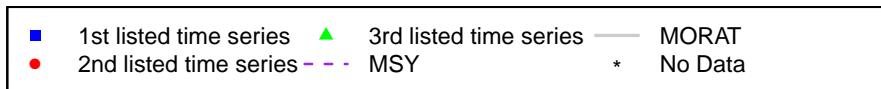
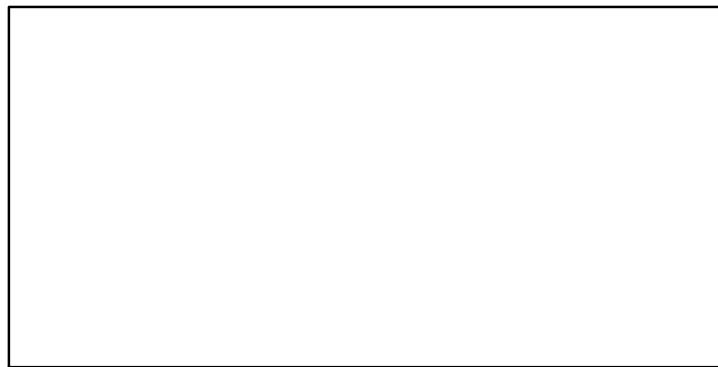
CPUE\*



EFFORT\*



C*div*MSY\*



## Norway lobster Noup (FU 10) [NEPHFU10]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHFU10-1994-2017-ICESIMP2018
<b>Area</b>	Noup (FU 10)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2016, 2017

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2017	9		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

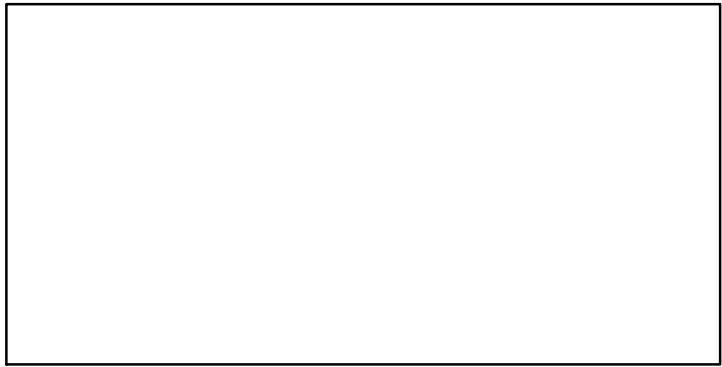
**Spawner Recruit\***

**Production\***

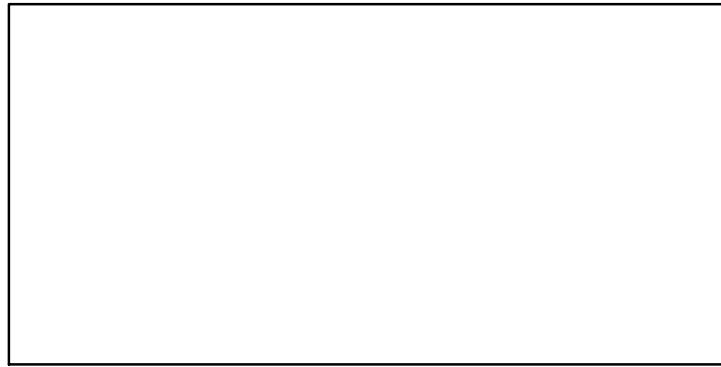
◆ Start Year ♦ End Year \* No Data

Norway lobster Noup (FU 10) [NEPHFU10]

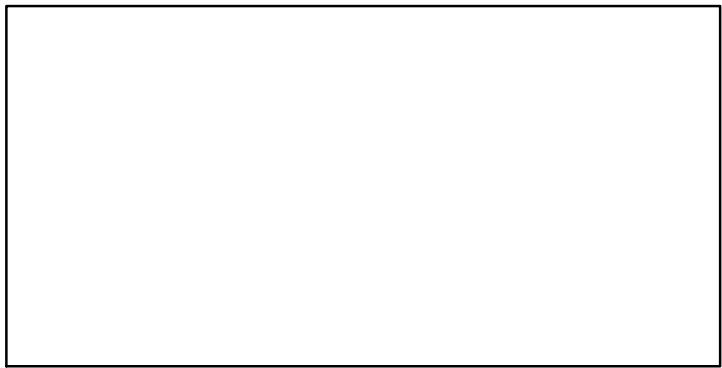
**TB\***



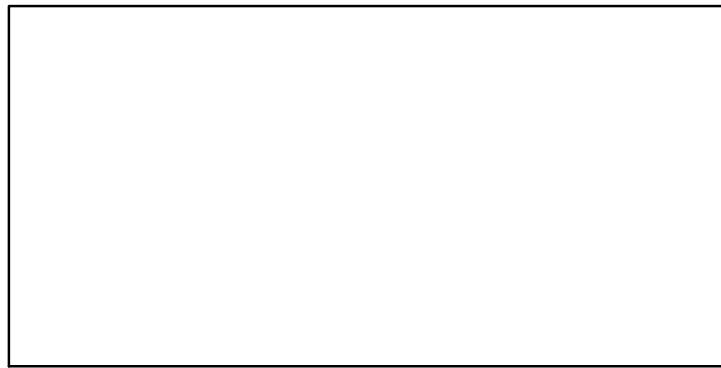
**SSB\***



**TN \***



**F\***



**ER\***



**Recruits\***

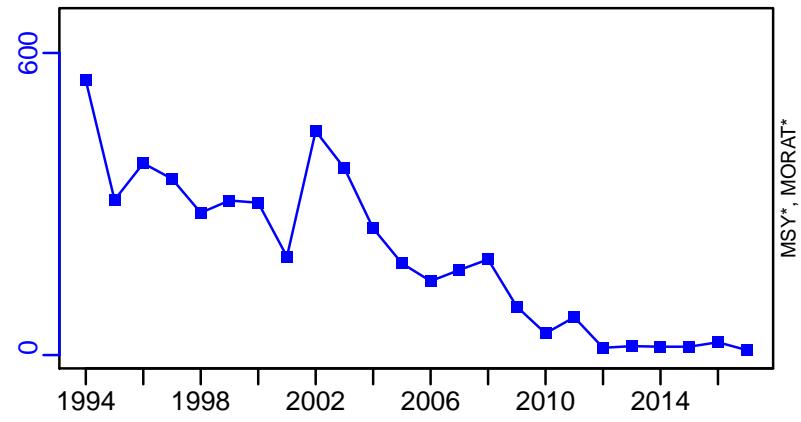


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

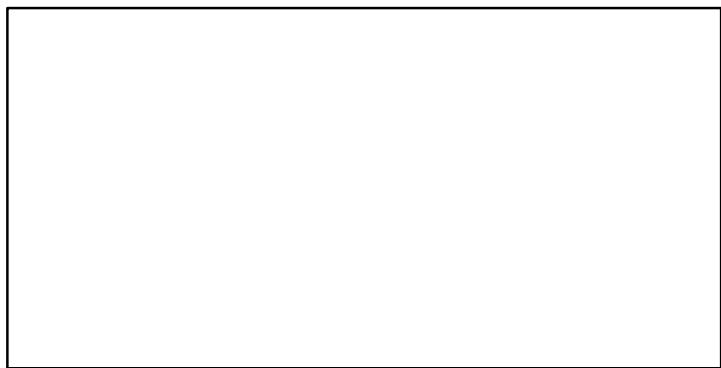
Norway lobster Noup (FU 10) [NEPHFU10]

TL-MT, TC\*, RecC\* (1994–2017–ICESIMP2018)

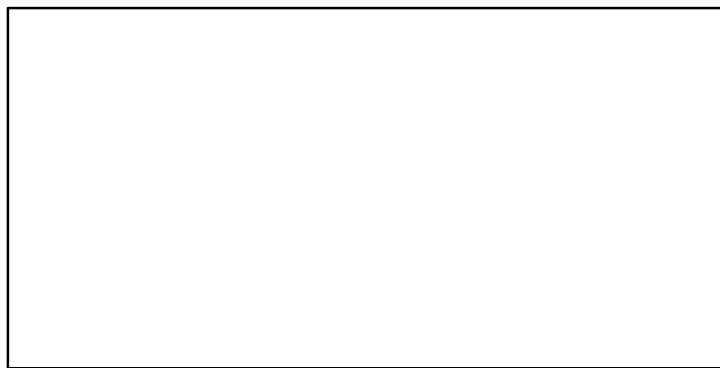
TAC\*, Cpair\*, Cadv\*



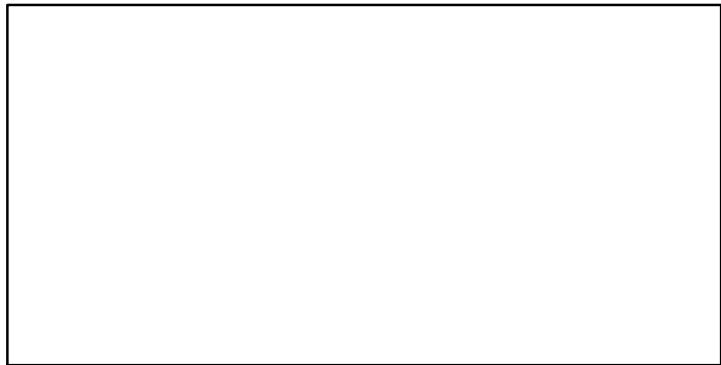
survB\*



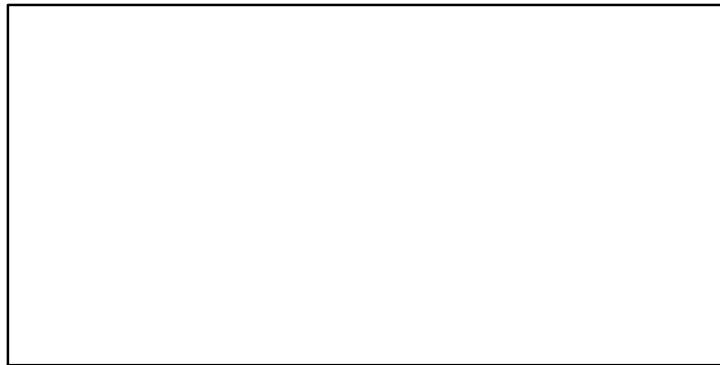
CPUE\*



EFFORT\*



CdivMSY\*



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

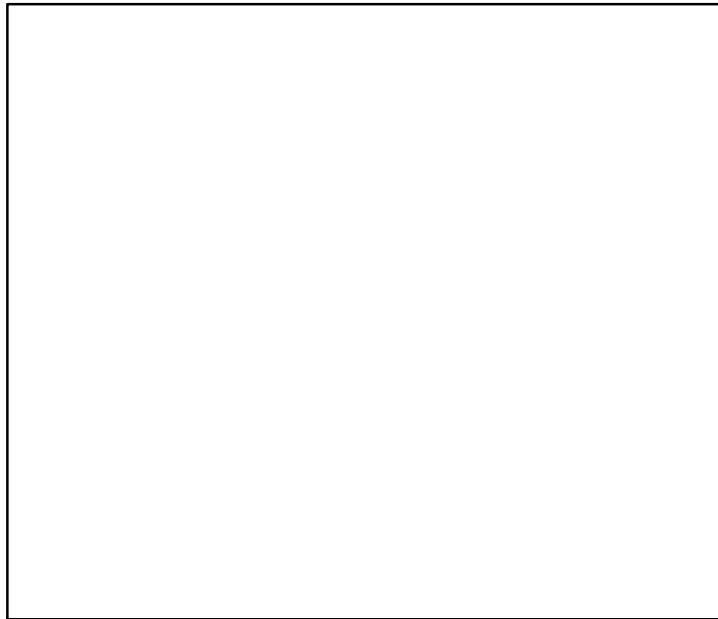
## Norway lobster North Minch (FU 11) [NEPHFU11]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHFU11-1981-2019-ICESIMP2021
<b>Area</b>	North Minch (FU 11)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016, 2019

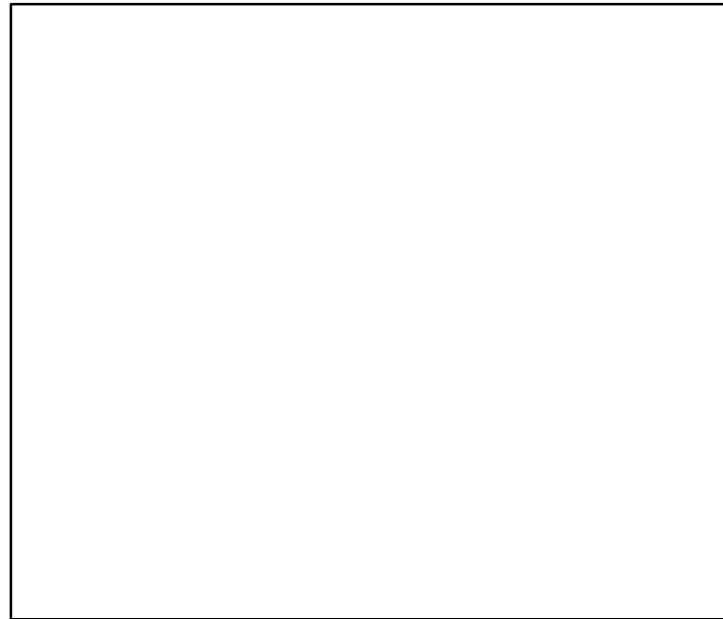
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.108
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2019	0.108
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2019	0.064	-	-	
<b>TC</b>	TC-MT	2019	2020			
<b>TL</b>	TL-MT	2019	1961			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	0.991			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

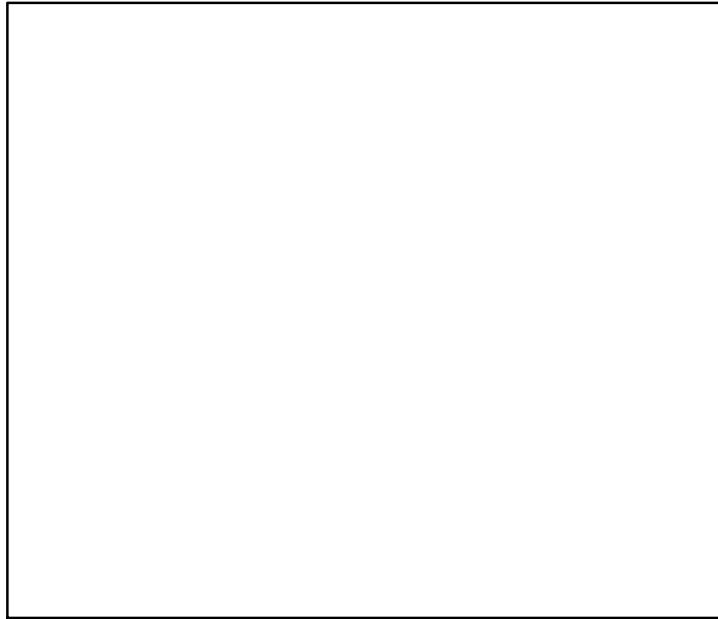
**Kobe MSY\***



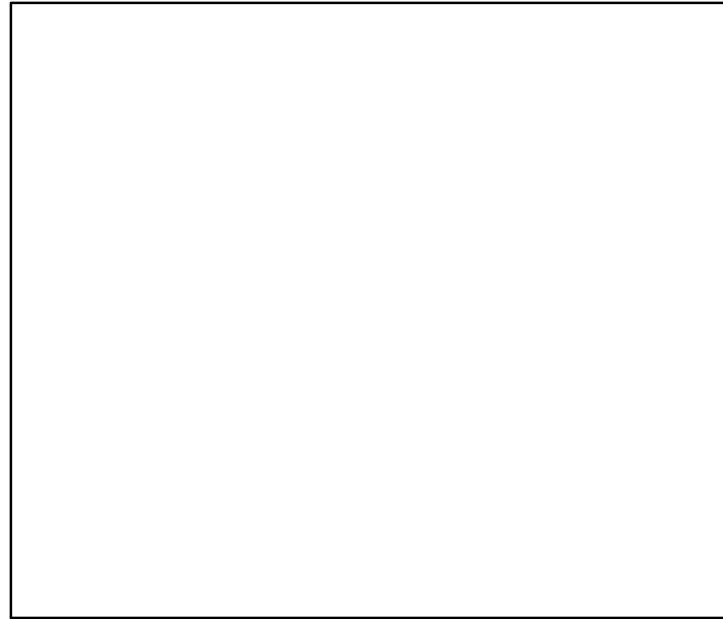
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



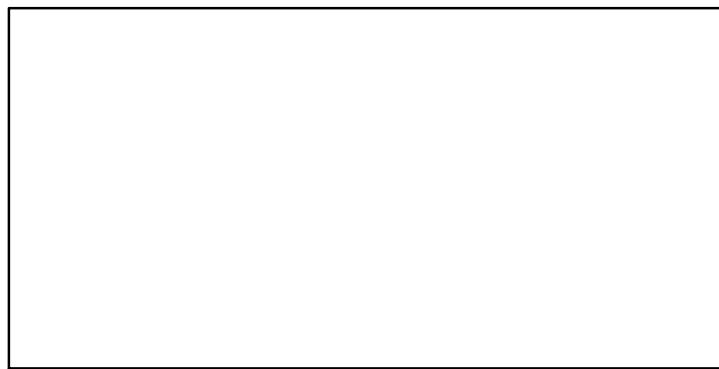
◆ Start Year ♦ End Year \* No Data

Norway lobster North Minch (FU 11) [NEPHFU11]

**TB\***



**SSB\***



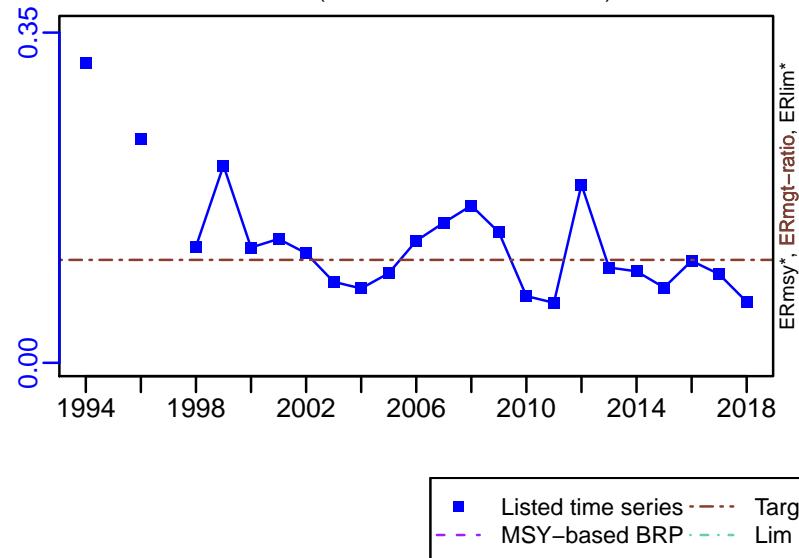
**TN \***



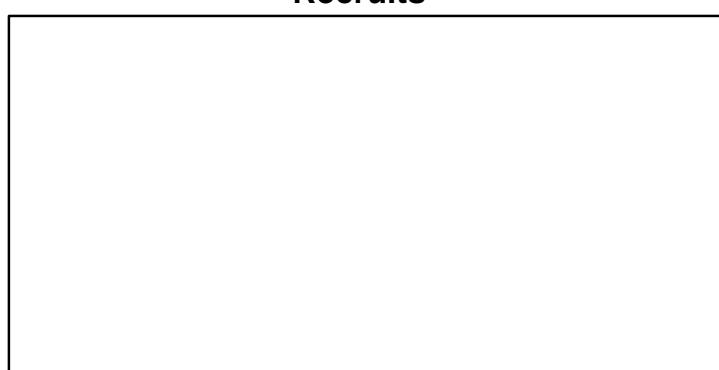
**F\***



**ER-ratio (1981–2019–ICESIMP2021)**



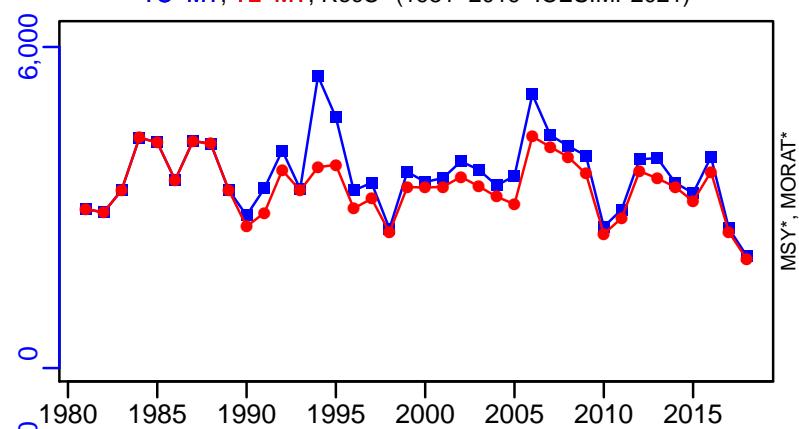
**Recruits\***



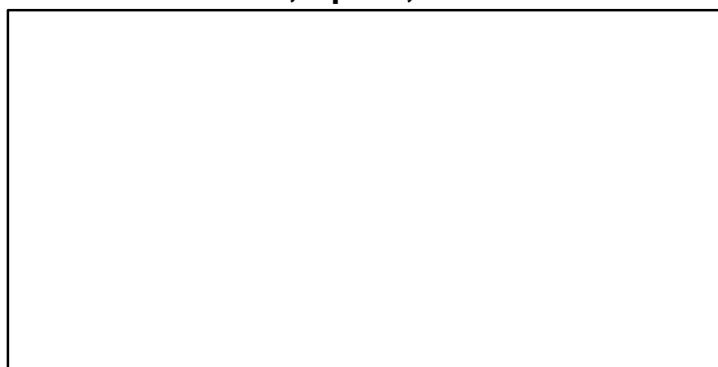
■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	--- Lim BRP	* No Data

Norway lobster North Minch (FU 11) [NEPHFU11]

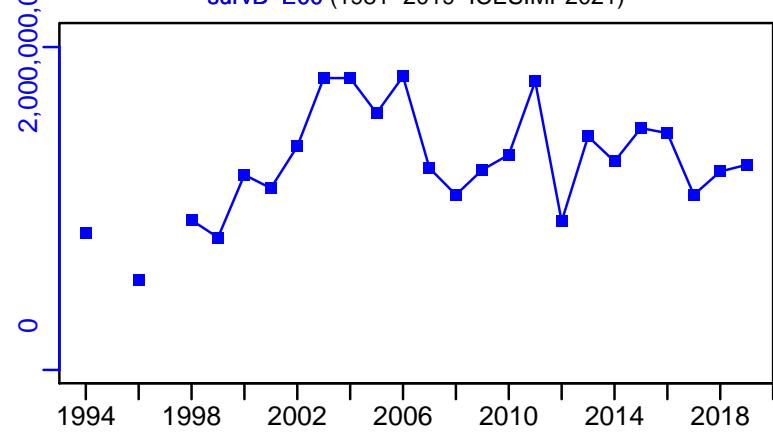
TC-MT, TL-MT, RecC\* (1981–2019–ICESIMP2021)



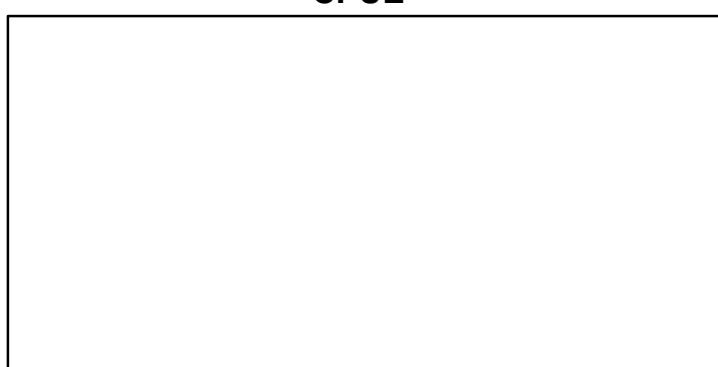
TAC\*, Cpair\*, Cadv\*



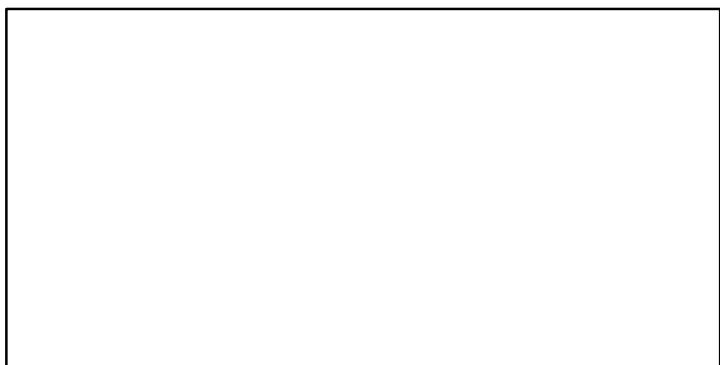
survB-E00 (1981–2019–ICESIMP2021)



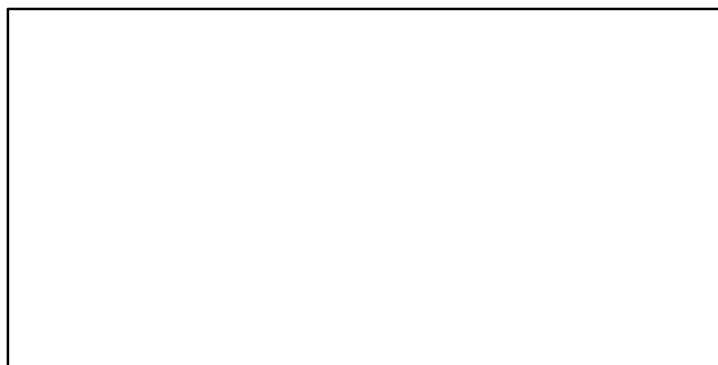
CPUE\*



EFFORT\*



CdivMSY\*



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

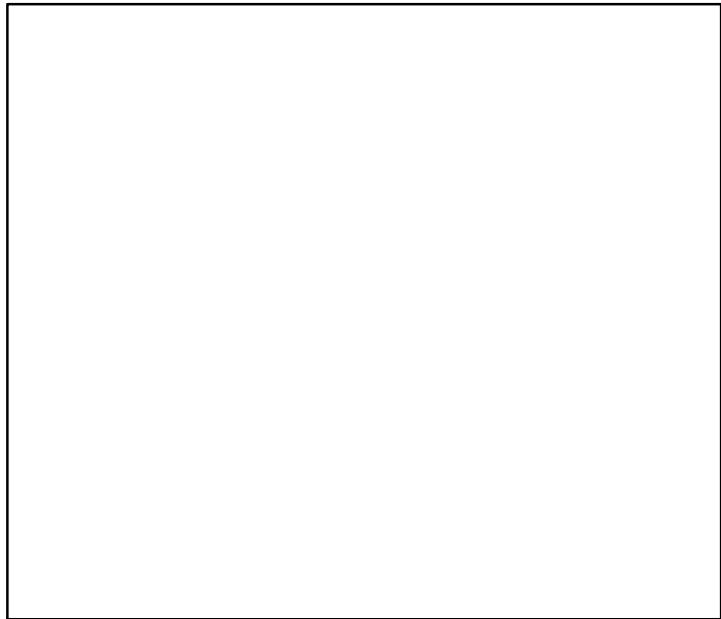
## Norway lobster South Minch (FU 12) [NEPHFU12]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHFU12-1979-2019-ICESIMP2021
<b>Area</b>	South Minch (FU 12)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2019, 2015, 2016

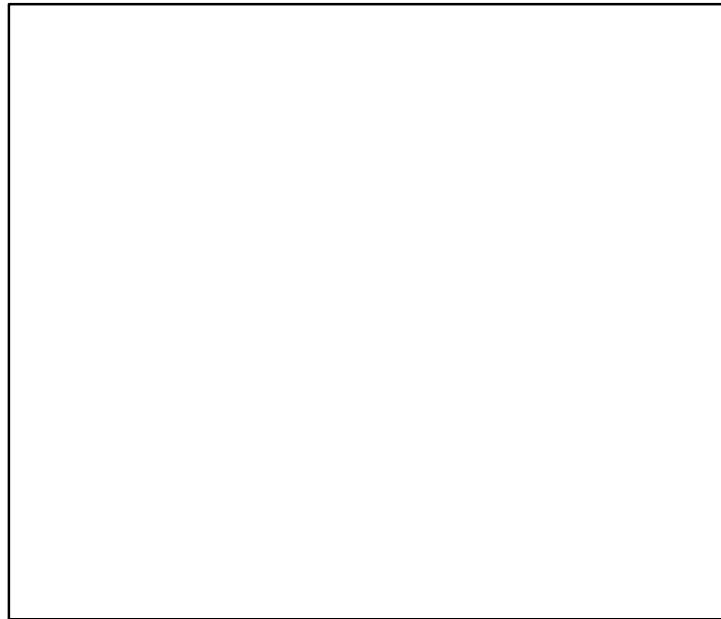
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.117
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2019	0.117
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2019	0.048	-	-	
<b>TC</b>	TC-MT	2019	2590			
<b>TL</b>	TL-MT	2019	2536			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	0.812			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

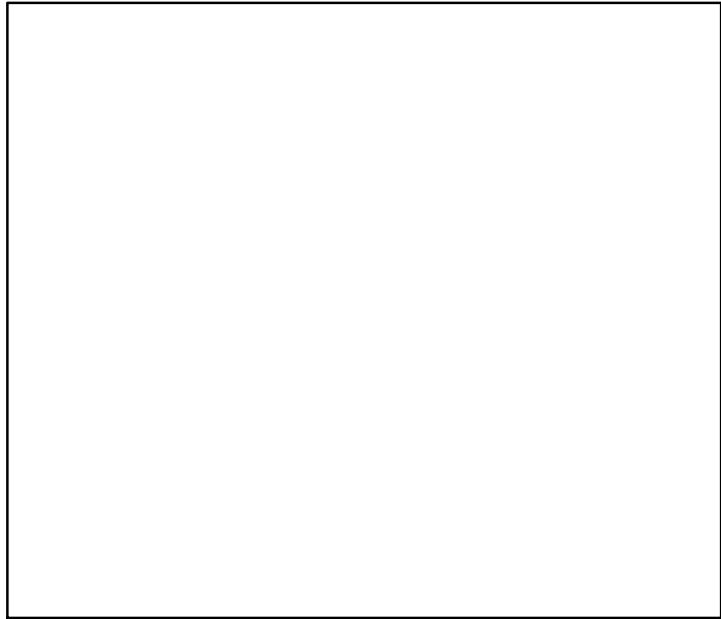
**Kobe MSY\***



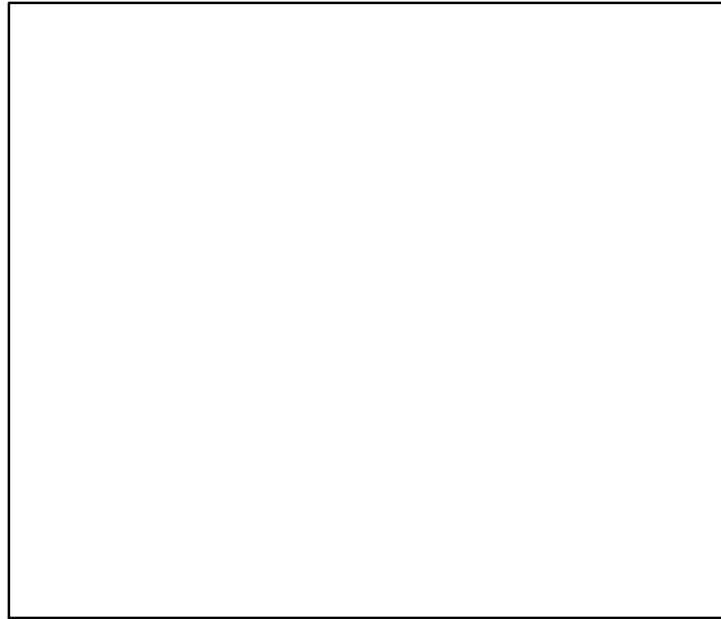
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

Norway lobster South Minch (FU 12) [NEPHFU12]

**TB\***



**SSB\***



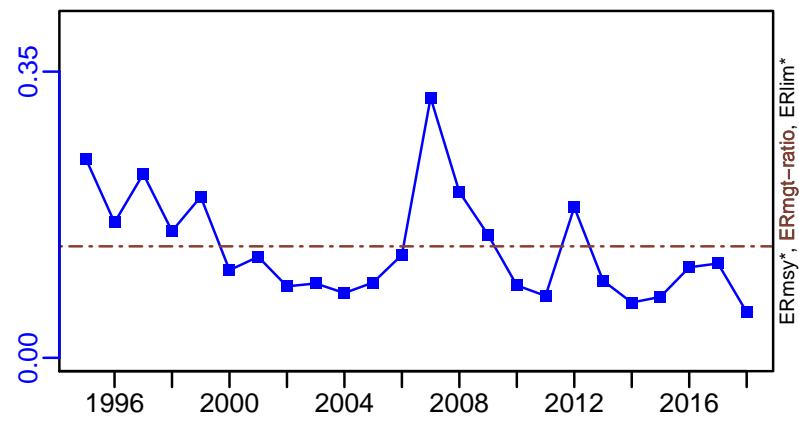
**TN \***



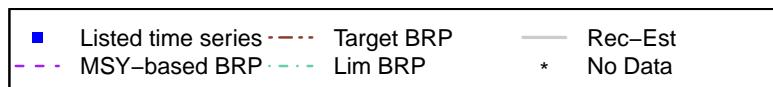
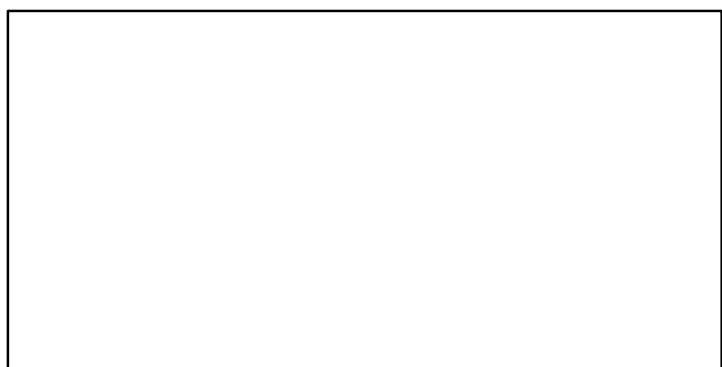
**F\***



**ER-ratio (1979–2019–ICESIMP2021)**



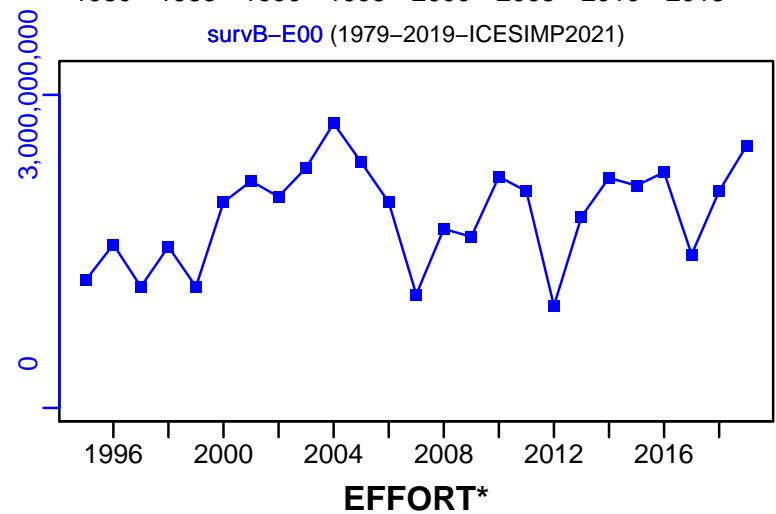
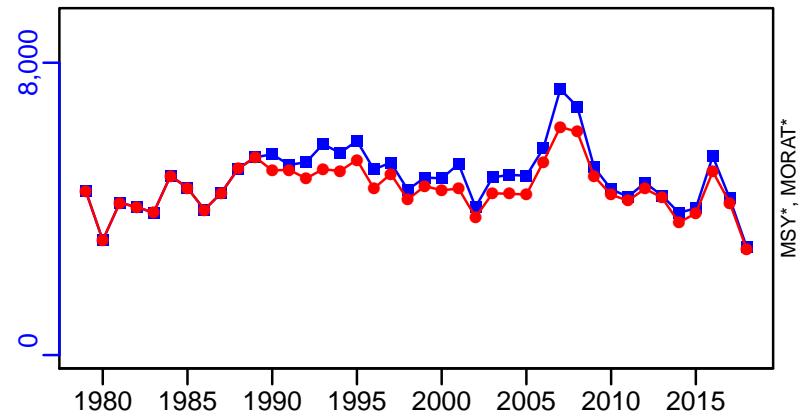
**Recruits\***



Norway lobster South Minch (FU 12) [NEPHFU12]

TC-MT, TL-MT, RecC\* (1979–2019–ICESIMP2021)

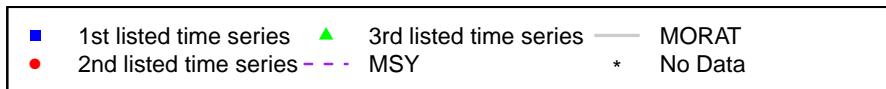
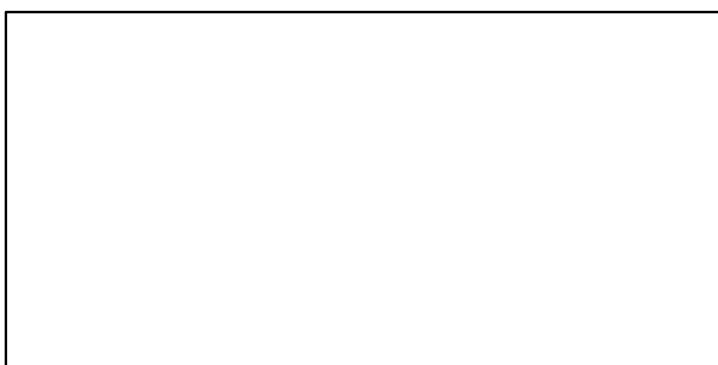
TAC\*, Cpair\*, Cadv\*



EFFORT\*

CPUE\*

CdivMSY\*



## Norway lobster Firth of Clyde and Sound of Jura (FU 13) [NEPHFU13]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHFU13-1981-2019-ICESIMP2021
<b>Area</b>	Firth of Clyde and Sound of Jura (FU 13)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.151
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2019	0.12
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2019	0.111	-	-
<b>TC</b>	TC-MT	2019	4209		
<b>TL</b>	TL-MT	2019	4141		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	1.166		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

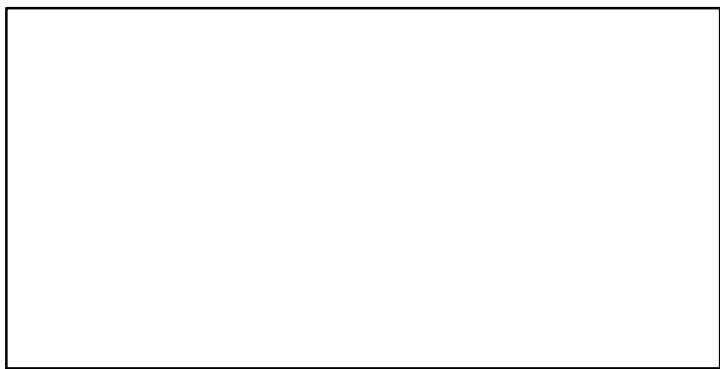
**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

Norway lobster Firth of Clyde and Sound of Jura (FU 13) [NEPHFU13]

**TB\***



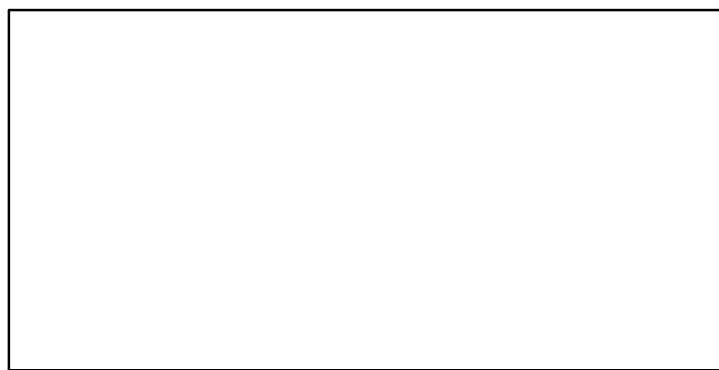
**SSB\***



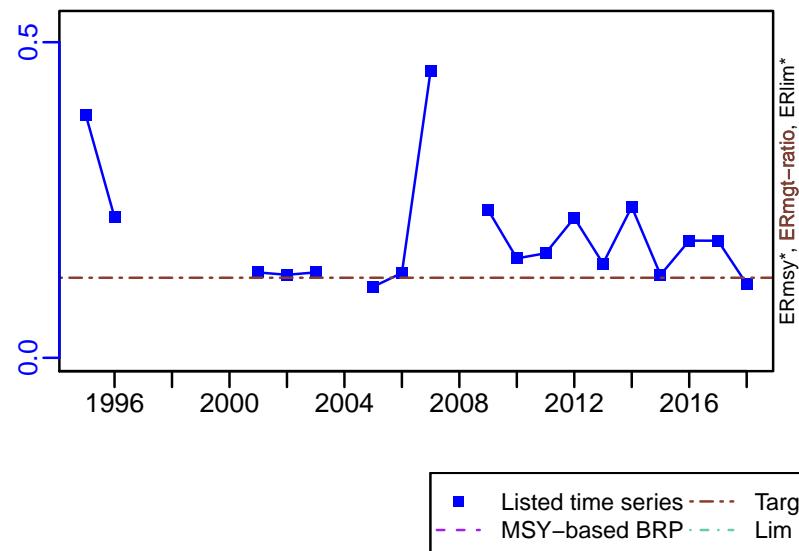
**TN \***



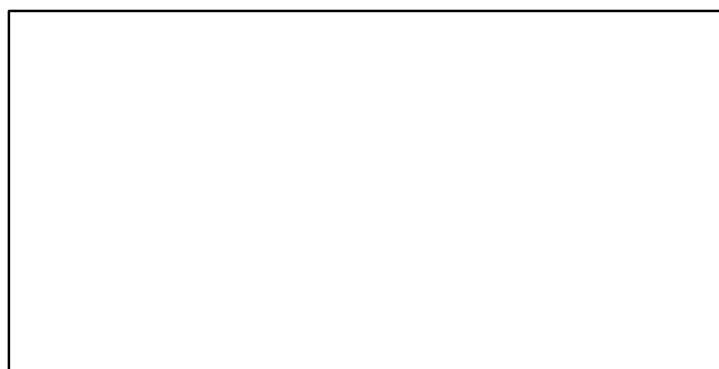
**F\***



**ER-ratio (1981–2019–ICESIMP2021)**



**Recruits\***

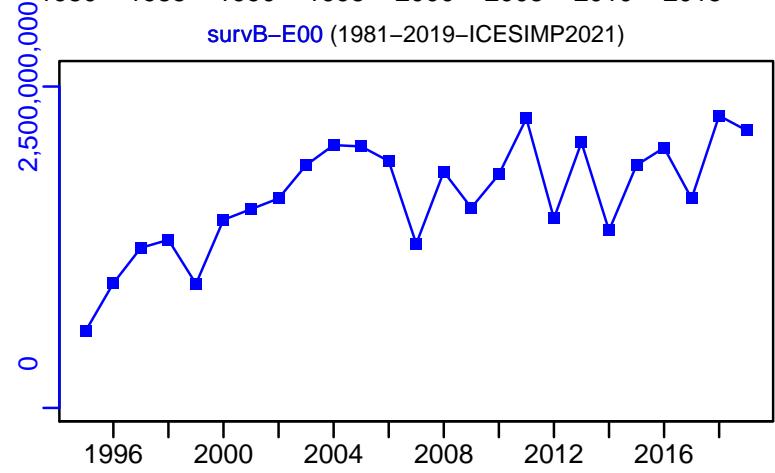
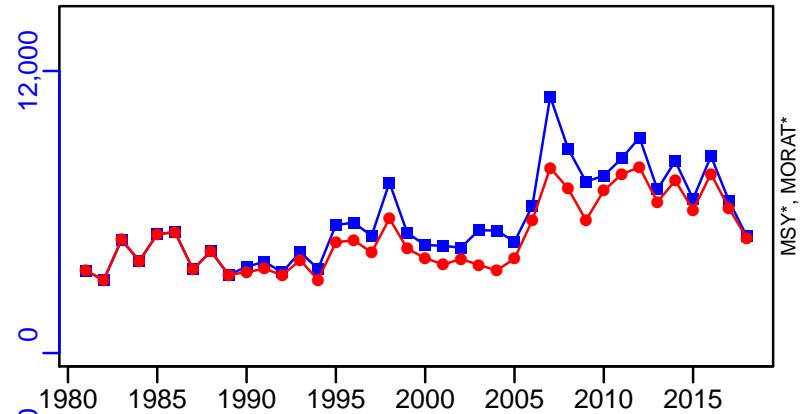


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	--- Lim BRP	* No Data

Norway lobster Firth of Clyde and Sound of Jura (FU 13) [NEPHFU13]

TC-MT, TL-MT, RecC\* (1981–2019–ICESIMP2021)

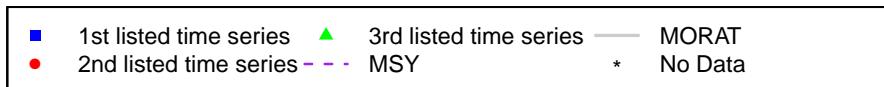
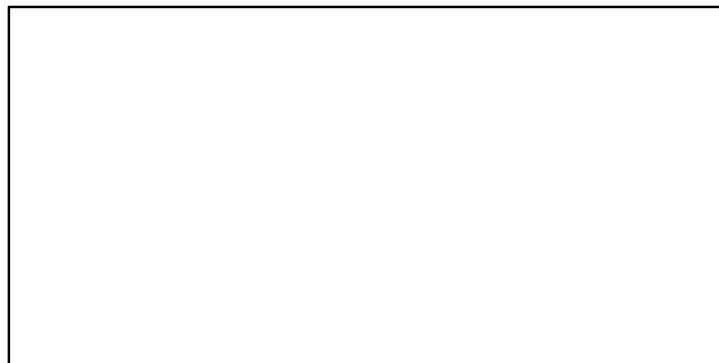
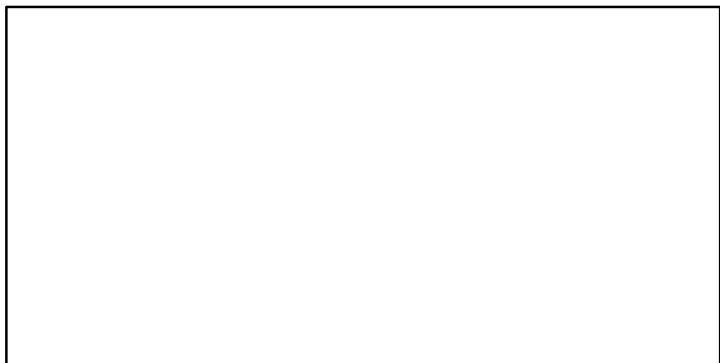
TAC\*, Cpair\*, Cadv\*



EFFORT\*

CPUE\*

CdivMSY\*



## Norway lobster Irish Sea East (FU 14) [NEPHFU14]

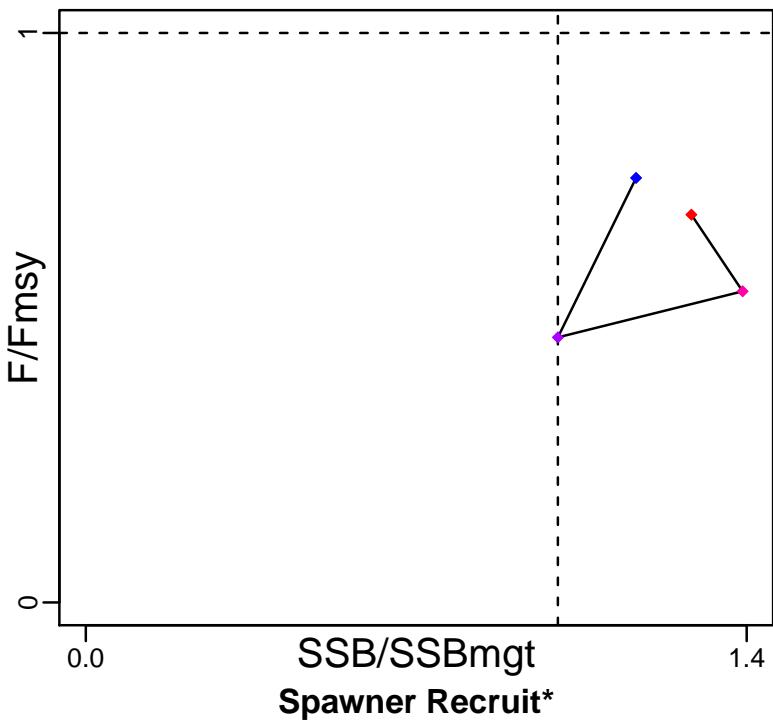
Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHFU14-2000-2019-ICESIMP2021
<b>Area</b>	Irish Sea East (FU 14)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2015	11
<b>ERmsy</b>	ERmsy-ratio	2016	0.11
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2015	350
<b>Fmgt</b>	Fmgt-1/yr	2015	11
<b>ERmgt</b>	ERmgt-ratio	2019	0.11
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

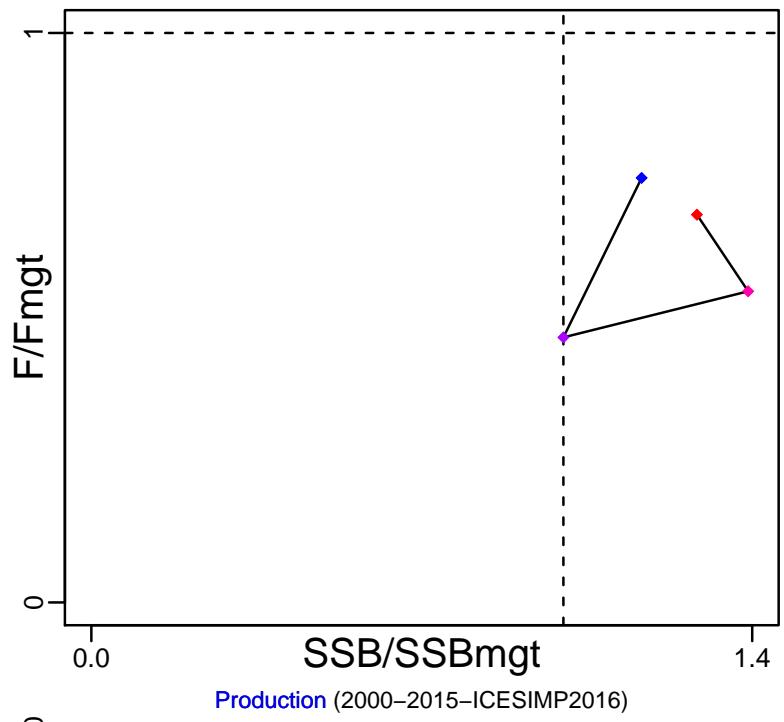
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-MT	2015	591	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	F-1/yr	2015	7.49	-	-
<b>ER</b>	ER-ratio	2019	0.026	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2019	263		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.681		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	0.346		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2015	1.689		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2015	0.681		
<b>ER/ERmgt</b>	-	-	-		

Norway lobster Irish Sea East (FU 14) [NEPHFU14]

Kobe MSYpref (2000–2015–ICESIMP2016)

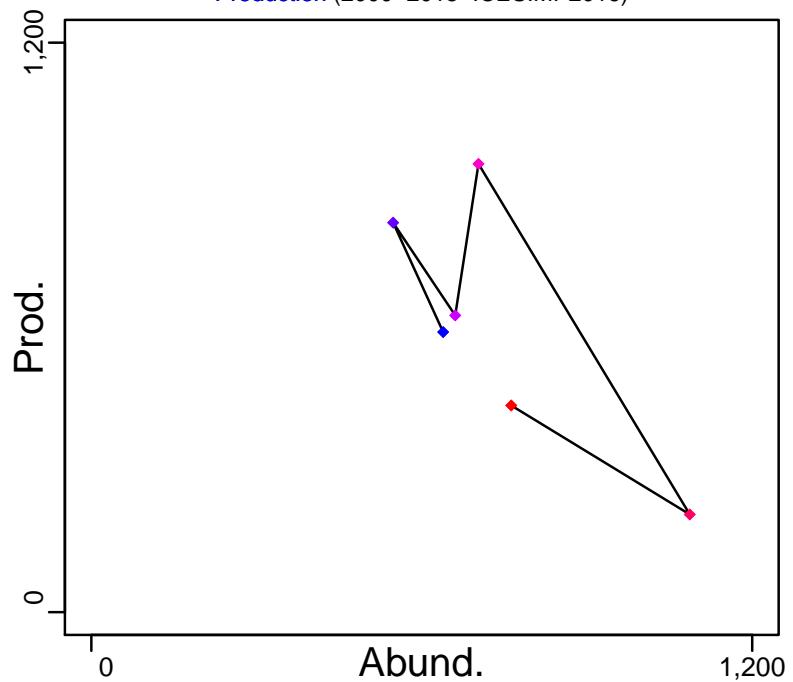
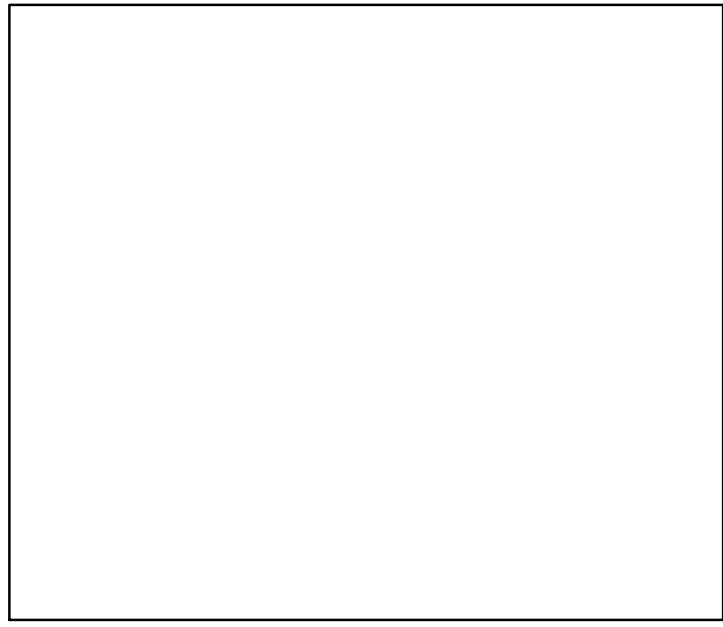


Kobe MGTpref (2000–2015–ICESIMP2016)



Spawner Recruit\*

Production (2000–2015–ICESIMP2016)



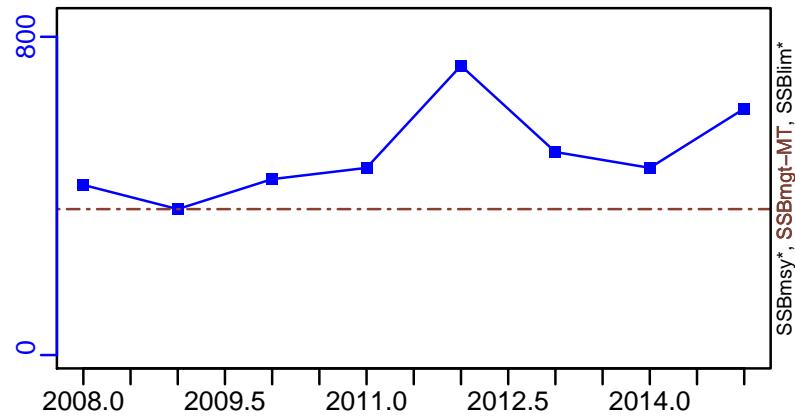
- ◆ Start Year
- ◆ End Year
- \* No Data

Norway lobster Irish Sea East (FU 14) [NEPHFU14]

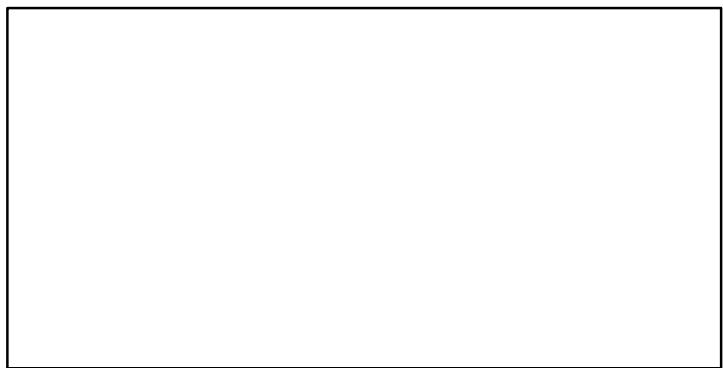
**TB\***



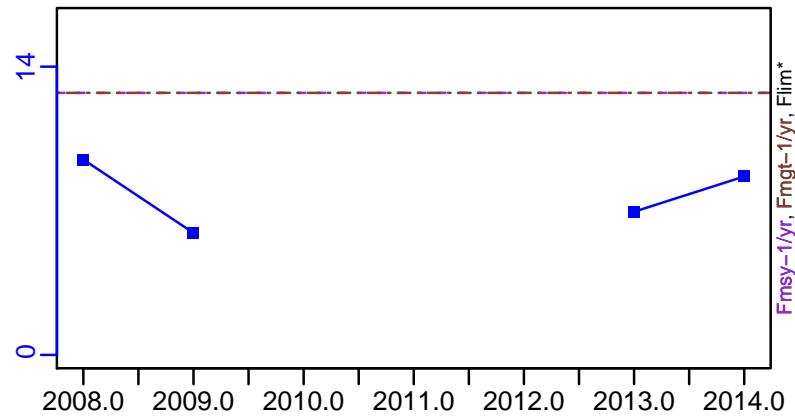
**SSB-MT** (2000–2015–ICESIMP2016)



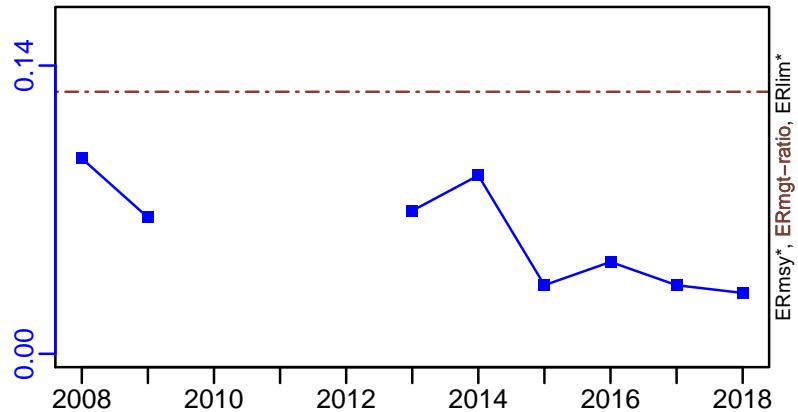
**TN \***



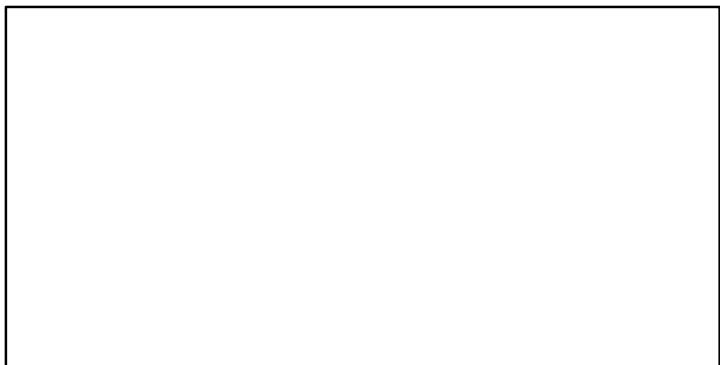
**F-1/yr** (2000–2015–ICESIMP2016)



**ER-ratio** (2000–2019–ICESIMP2021)



**Recruits\***

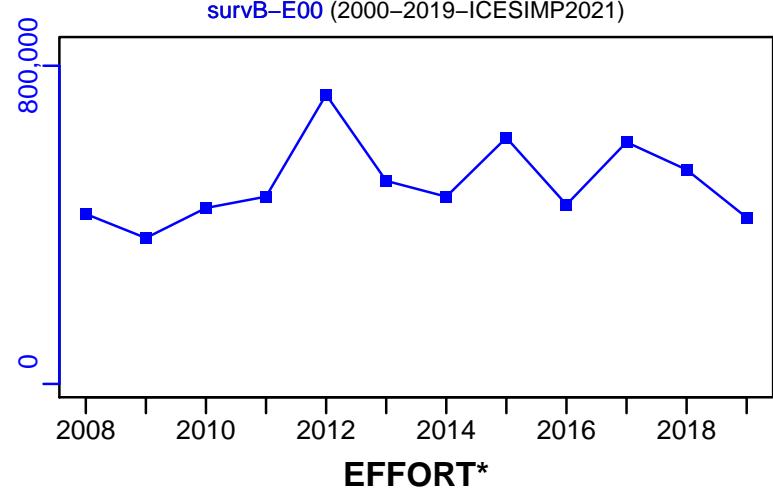
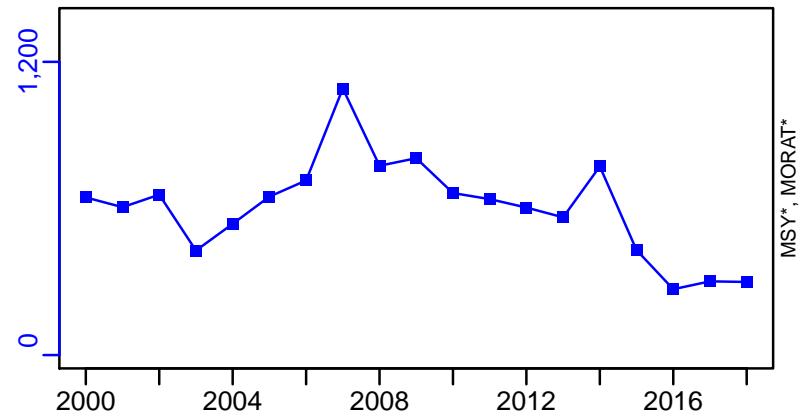


- Listed time series    - - - Target BRP    — Rec-Est
- - - MSY-based BRP    - - - Lim BRP    \* No Data

Norway lobster Irish Sea East (FU 14) [NEPHFU14]

TL-MT, TC\*, RecC\* (2000–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CPUE\*

CdivMSY\*



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

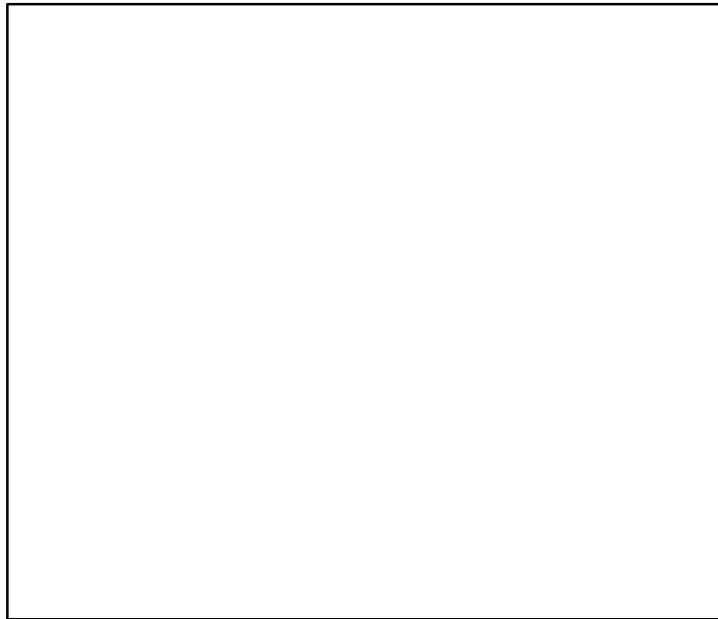
## Norway lobster Irish Sea West (FU 15) [NEPHFU15]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHFU15-1960-2019-ICESIMP2021
<b>Area</b>	Irish Sea West (FU 15)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016, 2019

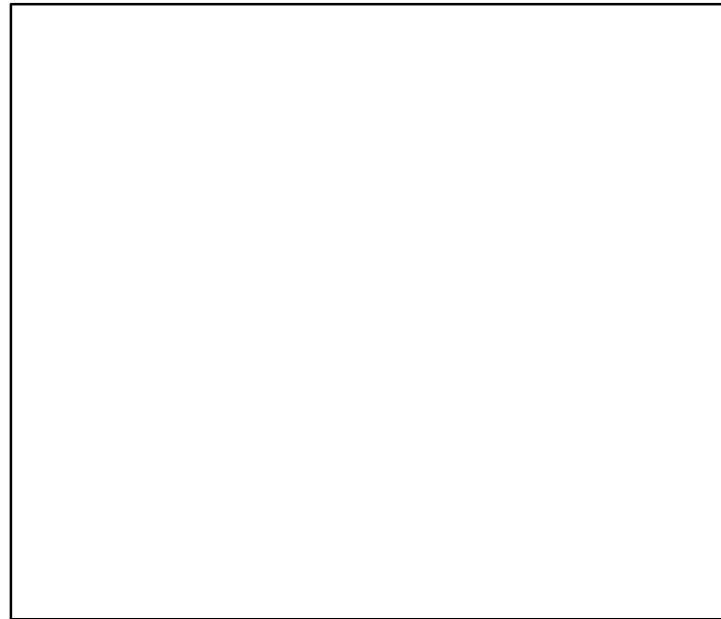
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	18.2
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2019	0.182
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2019	0.1	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2019	5756		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	0.846		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

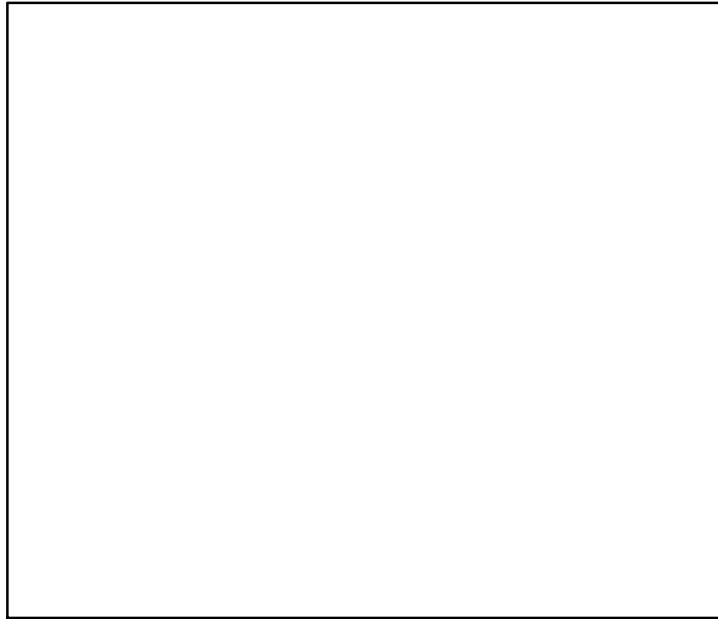
**Kobe MSY\***



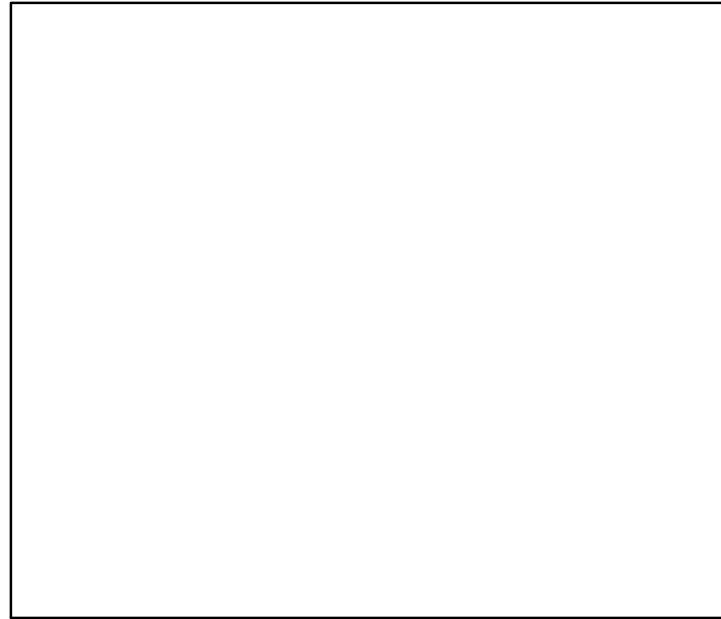
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

Norway lobster Irish Sea West (FU 15) [NEPHFU15]

**TB\***



**SSB\***



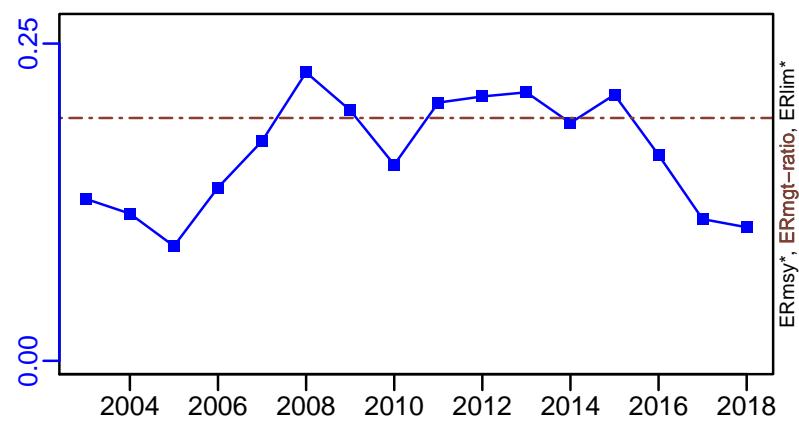
**TN \***



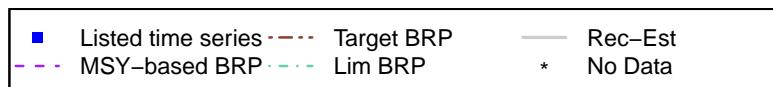
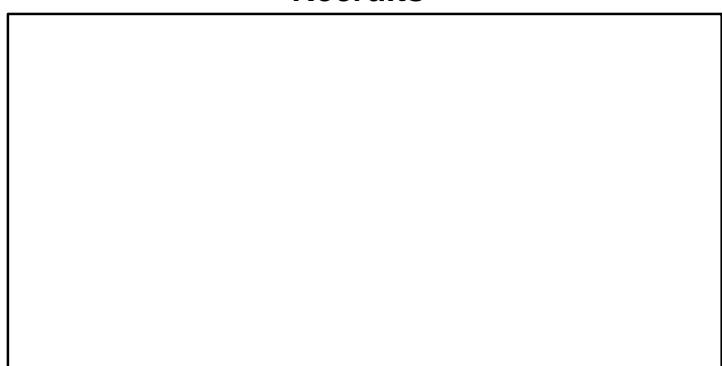
**F\***



**ER-ratio (1960–2019–ICESIMP2021)**



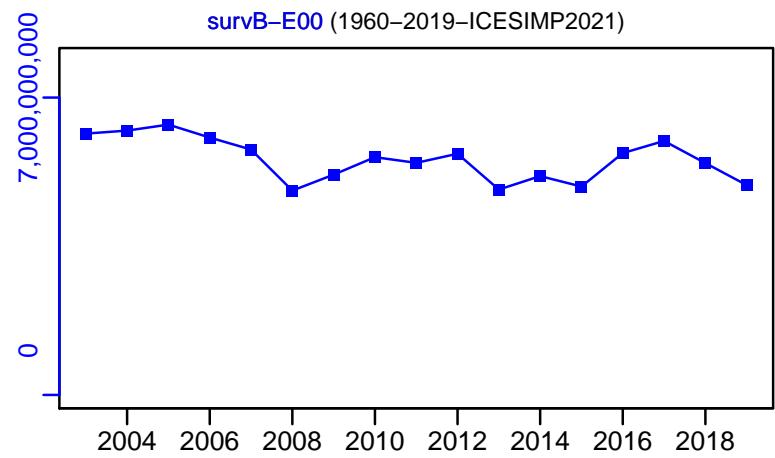
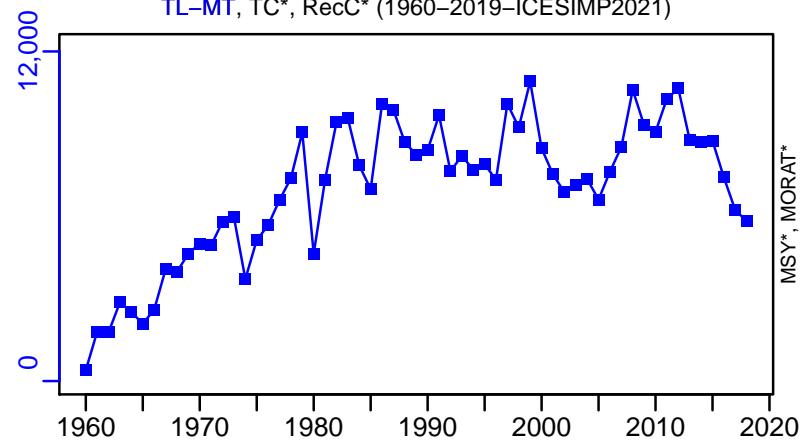
**Recruits\***



Norway lobster Irish Sea West (FU 15) [NEPHFU15]

TL-MT, TC\*, RecC\* (1960–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CPUE\*

CdivMSY\*

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

## Norway lobster Porcupine Bank (FU 16) [NEPHFU16]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHFU16-1979-2019-ICESIMP2021
<b>Area</b>	Porcupine Bank (FU 16)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2016, 2019, 2015, 2016

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2016	6.2
<b>ERmsy</b>	ERmsy-ratio	2016	0.062
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	Fmgt-1/yr	2016	6.2
<b>ERmgt</b>	ERmgt-ratio	2019	0.062
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	SSB-MT	2016	958	Both	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	F-1/yr	2016	3.3	-	-	
<b>ER</b>	ER-ratio	2019	0.059	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2019	2751			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2016	0.532			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	0.902			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	0.532			
<b>ER/ERmgt</b>	-	-	-			

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

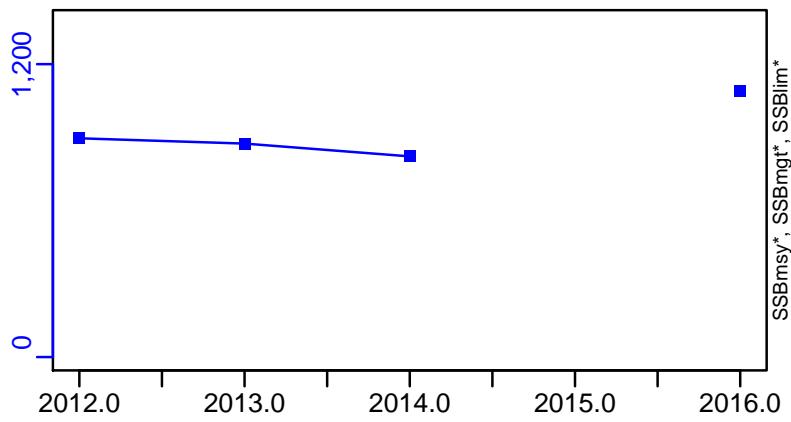
◆ Start Year ♦ End Year \* No Data

Norway lobster Porcupine Bank (FU 16) [NEPHFU16]

**TB\***



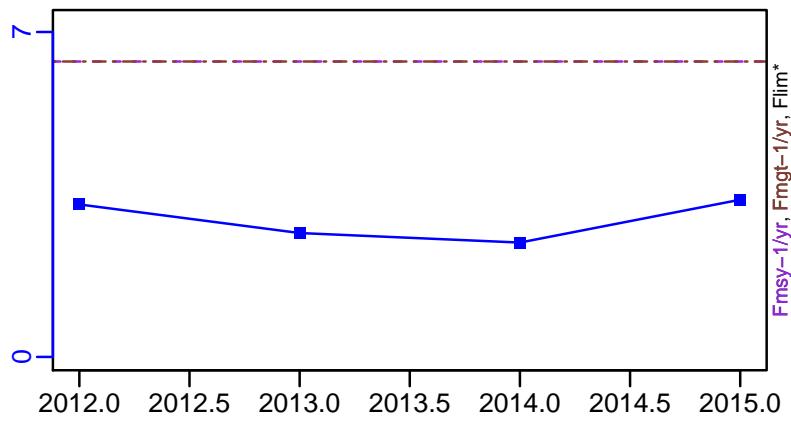
SSB-MT (1986–2016–ICESIMP2018)



**TN \***

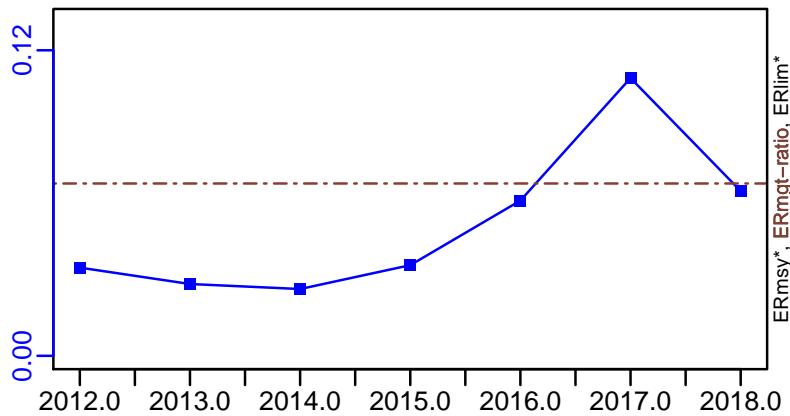


F-1/yr (1986–2016–ICESIMP2018)

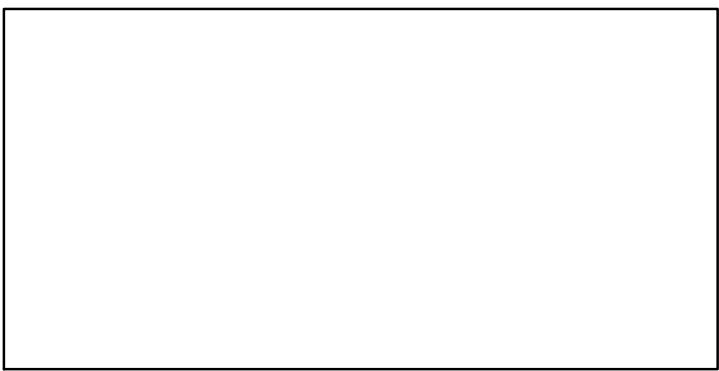


ER-ratio (1979–2019–ICESIMP2021)

ER<sub>m</sub>sy\*, ER<sub>mgt</sub>-ratio, ER<sub>lim</sub>\*



**Recruits\***

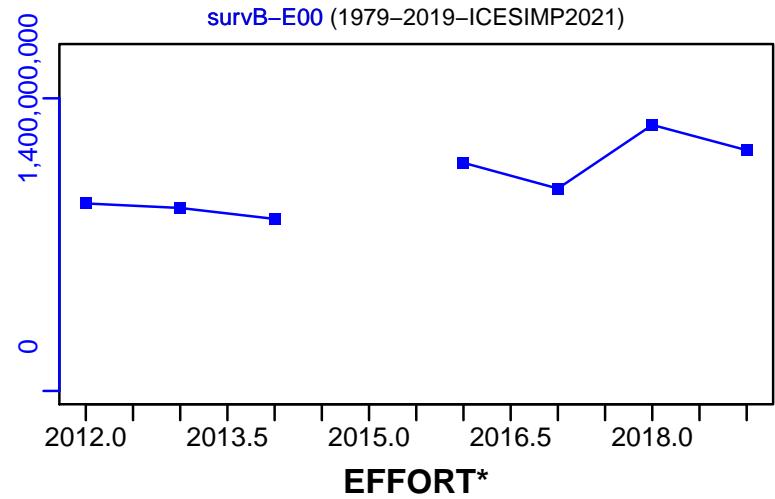
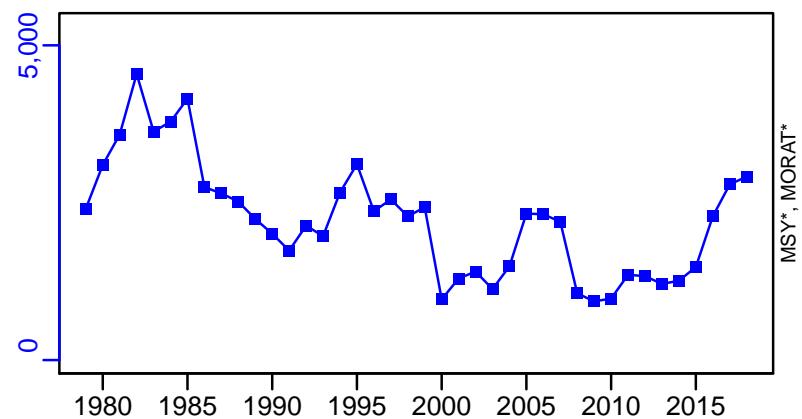


- Listed time series    - - - Target BRP    — Rec-Est
- - MSY-based BRP    - - Lim BRP    \* No Data

Norway lobster Porcupine Bank (FU 16) [NEPHFU16]

TL-MT, TC\*, RecC\* (1979–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CPUE\*

CdivMSY\*

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

## Norway lobster Aran Grounds (FU 17) [NEPHFU17]

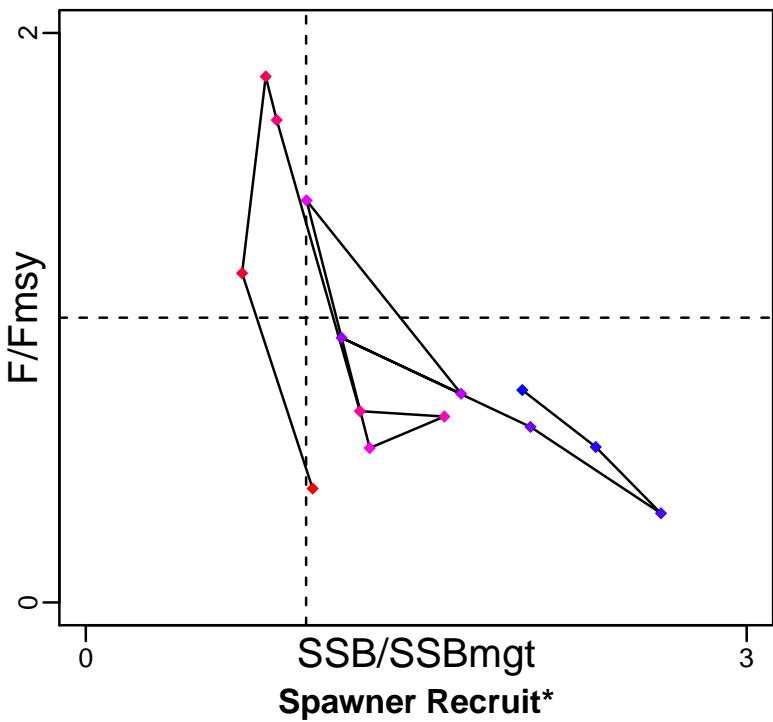
Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHFU17-1974-2019-ICESIMP2021
<b>Area</b>	Aran Grounds (FU 17)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016, 2019, 2016

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2016	8.5
<b>ERmsy</b>	ERmsy-ratio	2016	0.085
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2016	540
<b>Fmgt</b>	Fmgt-1/yr	2016	8.5
<b>ERmgt</b>	ERmgt-ratio	2019	0.085
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

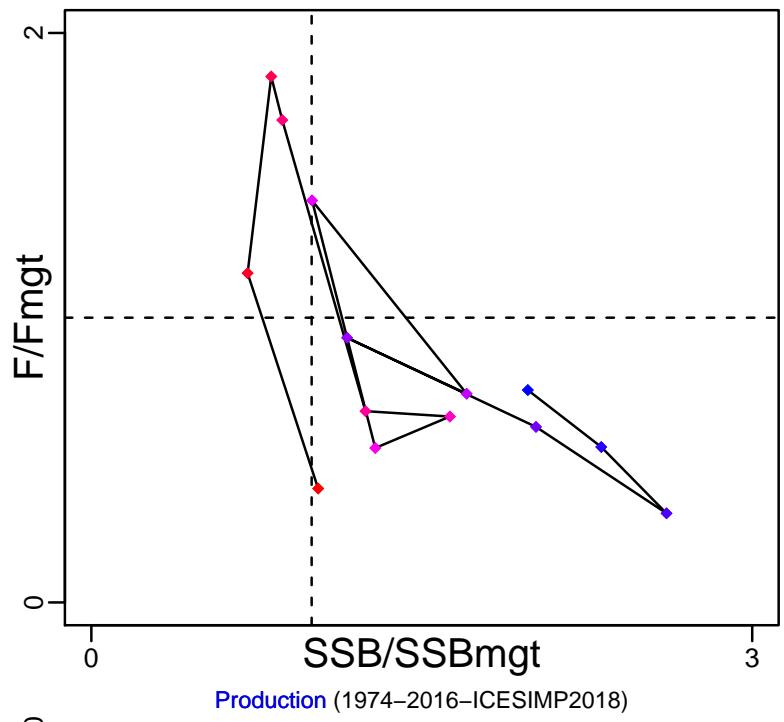
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	SSB-MT	2016	379	Both	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	F-1/yr	2016	3.4	-	-	
<b>ER</b>	ER-ratio	2019	0.054	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2019	536			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2016	0.4			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	1.086			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2016	0.702			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	0.4			
<b>ER/ERmgt</b>	-	-	-			

Norway lobster Aran Grounds (FU 17) [NEPHFU17]

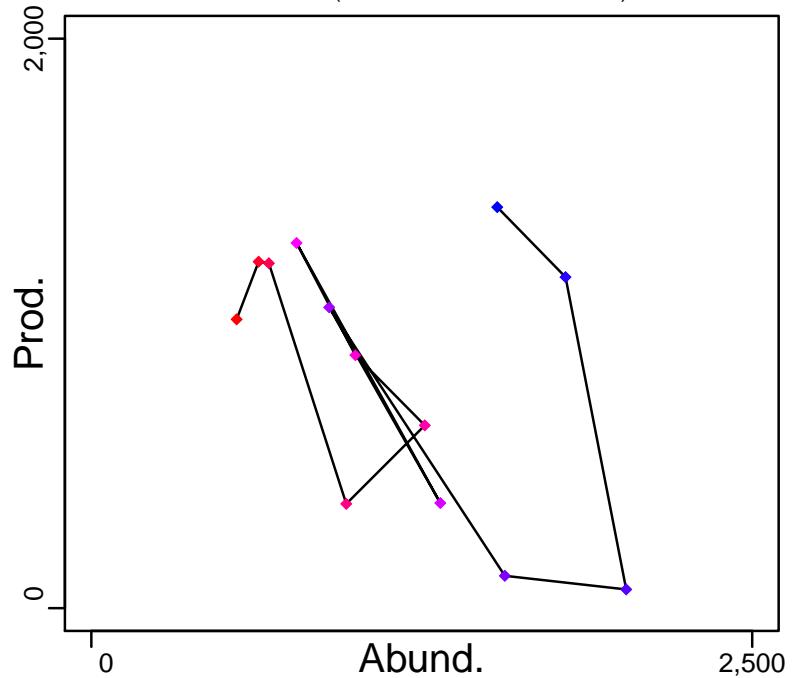
Kobe MSYpref (1974–2016–ICESIMP2018)



Kobe MGTpref (1974–2016–ICESIMP2018)



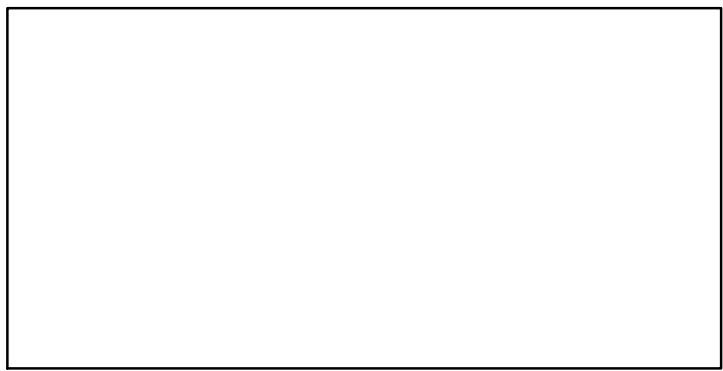
Production (1974–2016–ICESIMP2018)



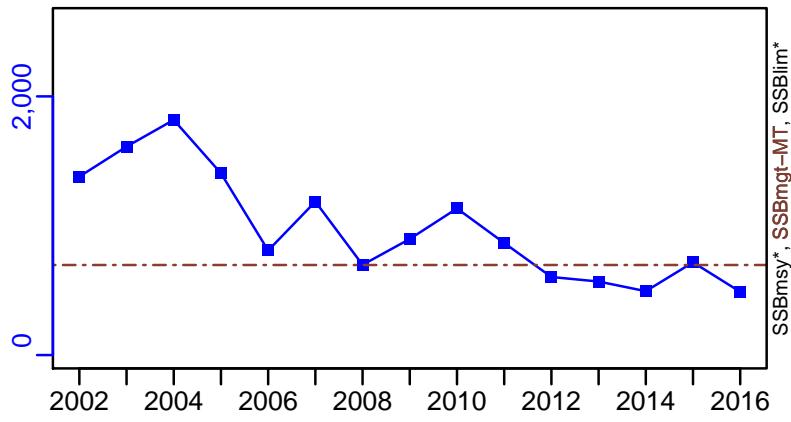
◆ Start Year ◆ End Year \* No Data

Norway lobster Aran Grounds (FU 17) [NEPHFU17]

**TB\***



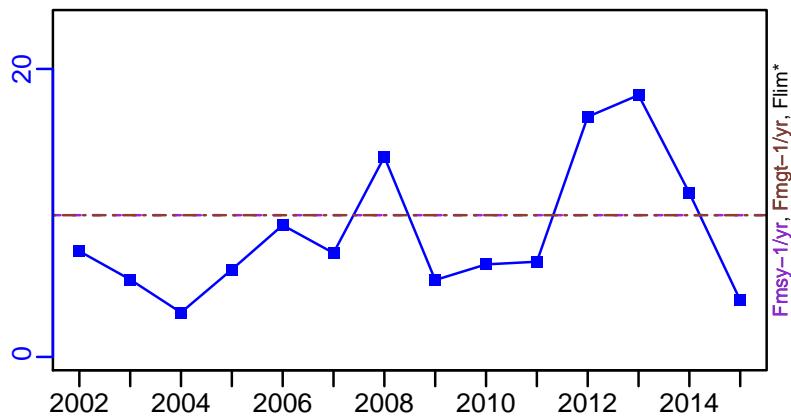
**SSB-MT** (1974–2016–ICESIMP2018)



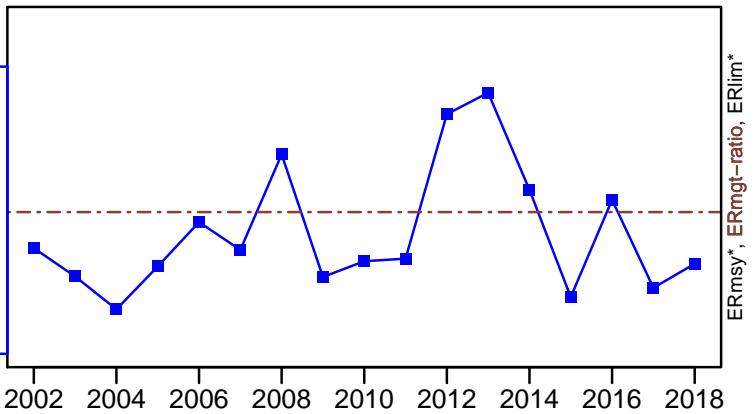
**TN \***



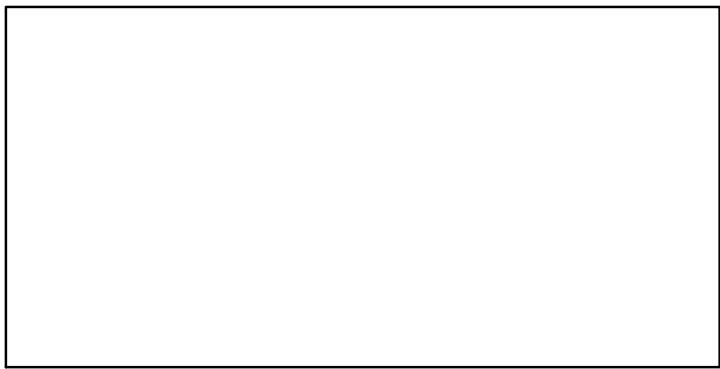
**F-1/yr** (1974–2016–ICESIMP2018)



**ER-ratio** (1974–2019–ICESIMP2021)



**Recruits\***

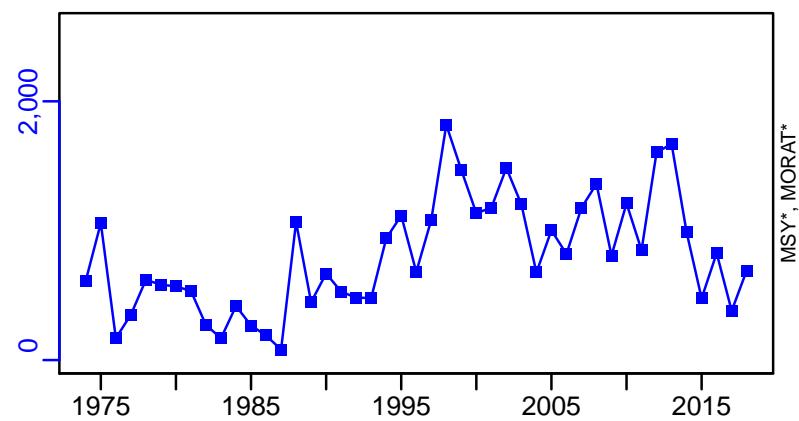


- Listed time series    - - - Target BRP    — Rec-Est
- - - MSY-based BRP    - - - Lim BRP    \* No Data

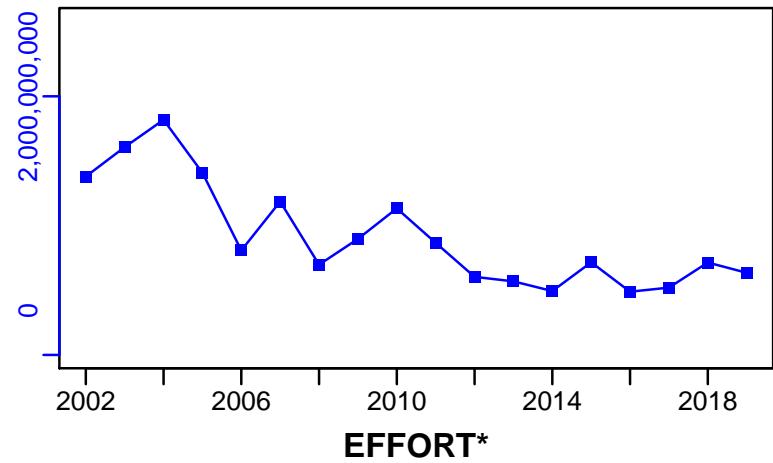
### Norway lobster Aran Grounds (FU 17) [NEPHFU17]

TL-MT, TC\*, RecC\* (1974–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



survB-E00 (1974–2019–ICESIMP2021)



CPUE\*



CdivMSY\*



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

## Norway lobster South East and West of IRL (FU 19) [NEPHFU19]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHFU19-1989-2019-ICESIMP2021
<b>Area</b>	South East and West of IRL (FU 19)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2019, 2015, 2016

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.093
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2019	0.093
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2019	0.062	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2019	219		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	0.808		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ◆ End Year \* No Data

Norway lobster South East and West of IRL (FU 19) [NEPHFU19]

**TB\***



**SSB\***



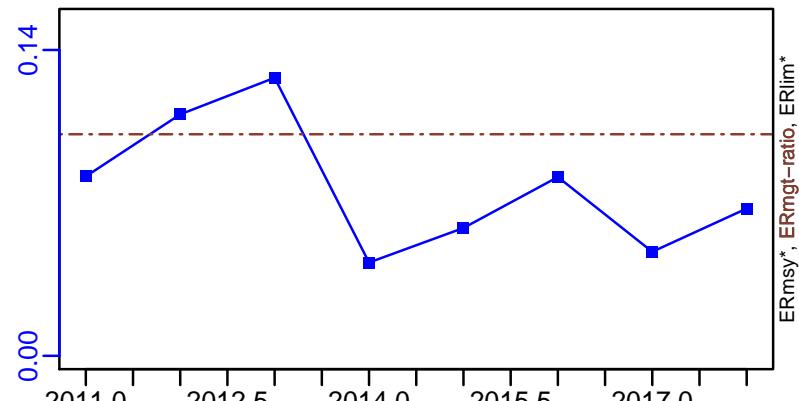
**TN \***



**F\***



**ER-ratio (1989–2019–ICESIMP2021)**



**Recruits\***

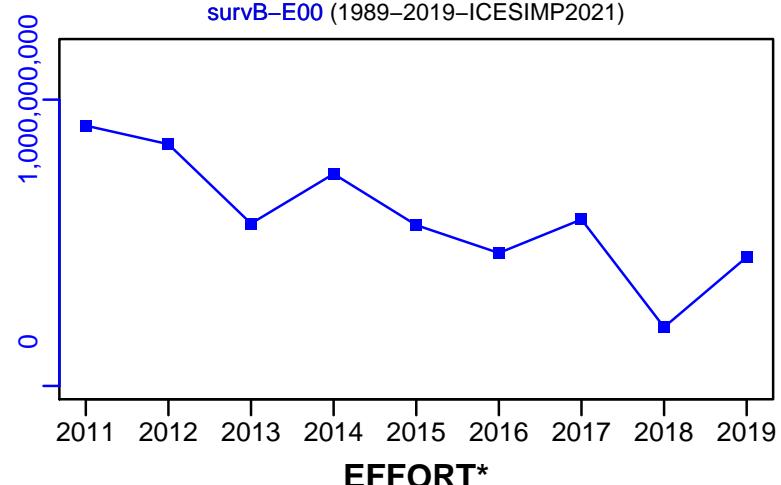
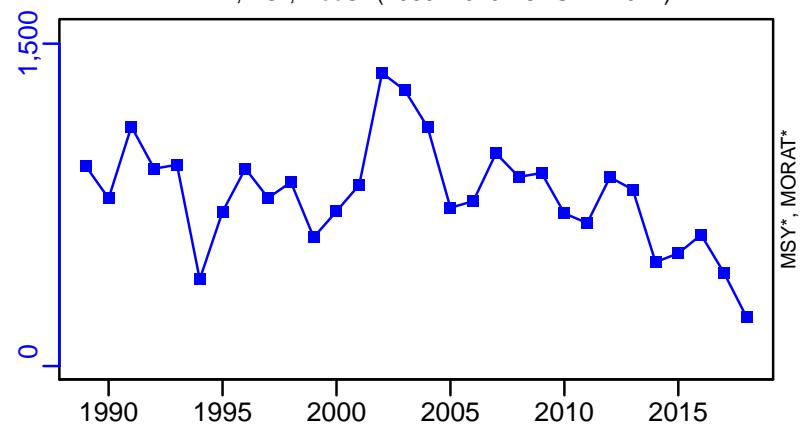


■ Listed time series	--- Target BRP	— Rec-Est
- - - MSY-based BRP	... Lim BRP	* No Data

Norway lobster South East and West of IRL (FU 19) [NEPHFU19]

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

TAC\*, Cpair\*, Cadv\*



EFFORT\*



CPUE\*



CdivMSY\*



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

## Norway lobster Labadie, Jones and Cockburn (FU 20-21) [NEPHFU2021]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHFU2021-1995-2019-ICESIMP2021
<b>Area</b>	Labadie, Jones and Cockburn (FU 20-21)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.06
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2019	0.06
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2019	0.03	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2019	1803		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	0.783		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

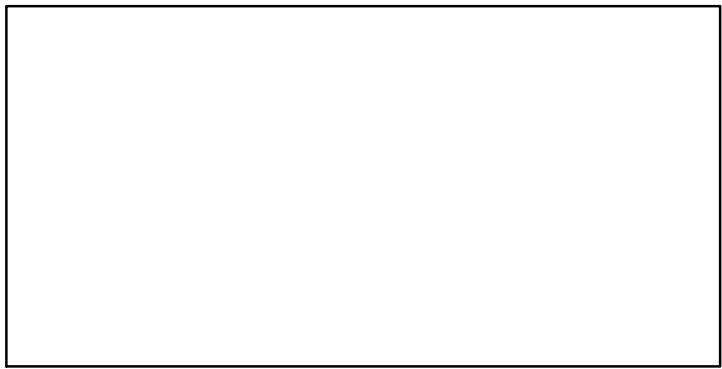
**Kobe MGT\***

**Spawner Recruit\***

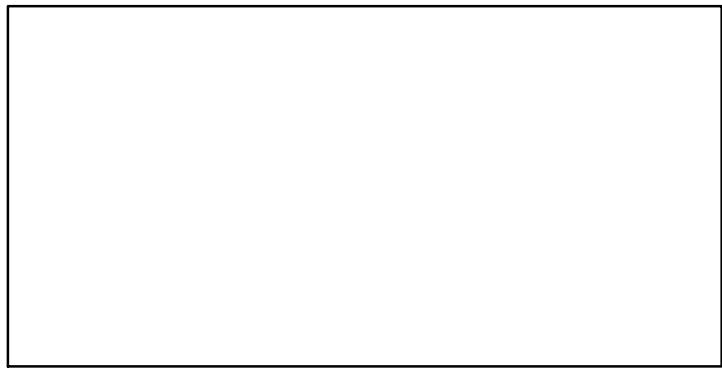
**Production\***

◆ Start Year ◆ End Year \* No Data

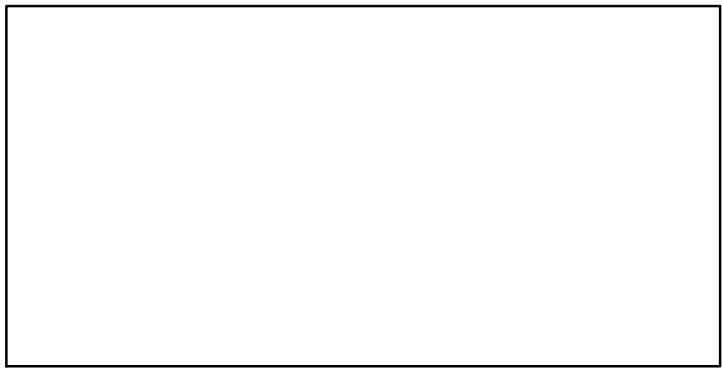
**TB\***



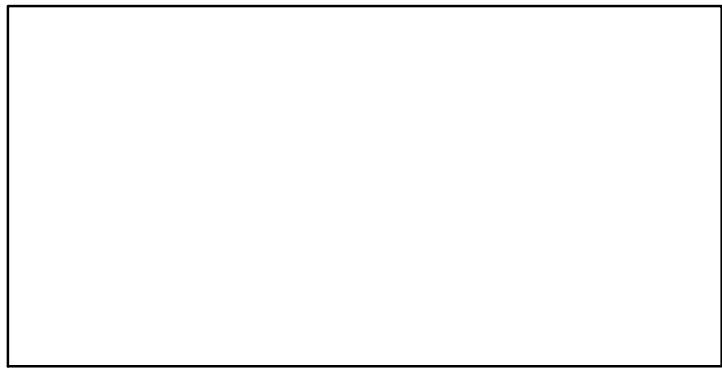
**SSB\***



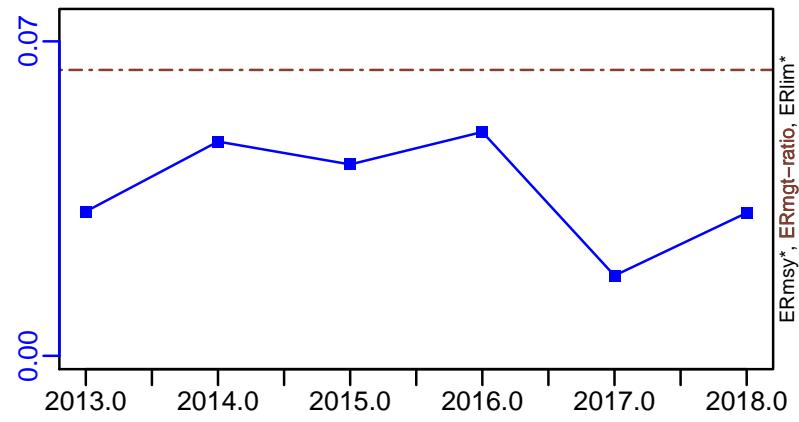
**TN \***



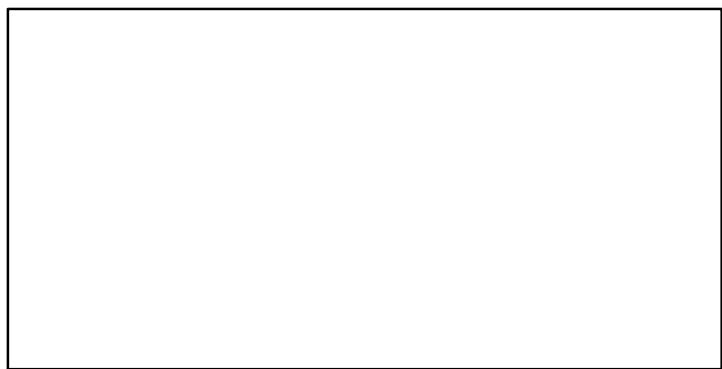
**F\***



**ER-ratio (1995–2019–ICESIMP2021)**



**Recruits\***

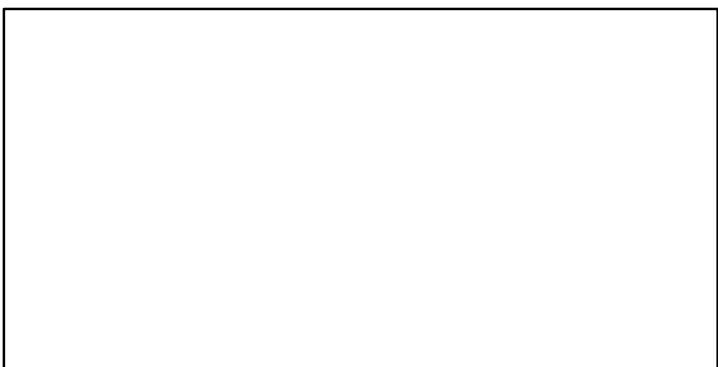
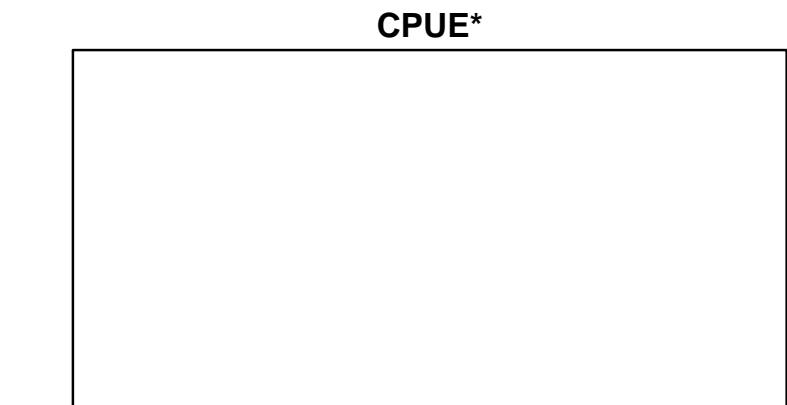
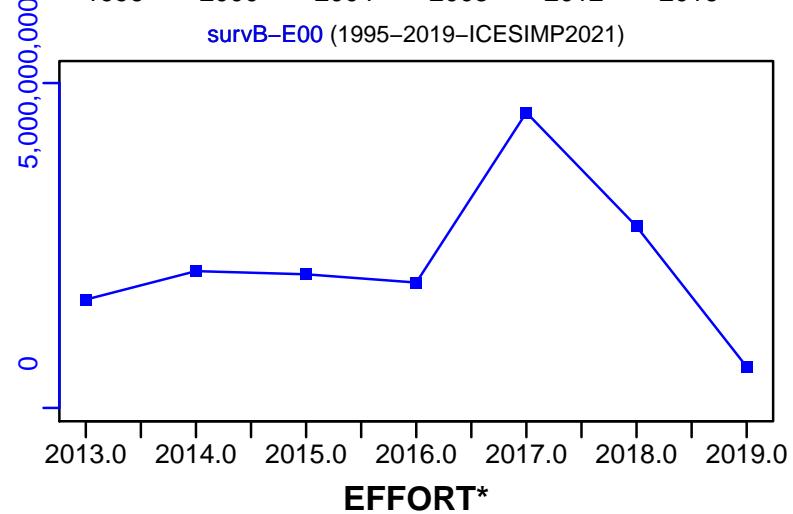
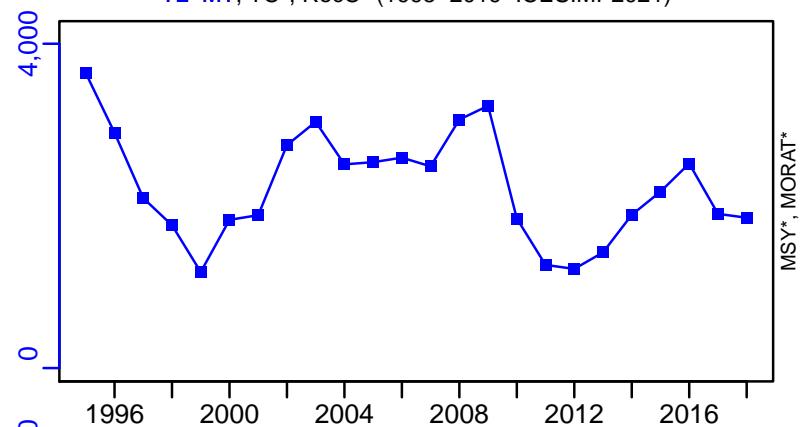


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	— Lim BRP	* No Data

Norway lobster Labadie, Jones and Cockburn (FU 20–21) [NEPHFU2021]

TL-MT, TC\*, RecC\* (1995–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

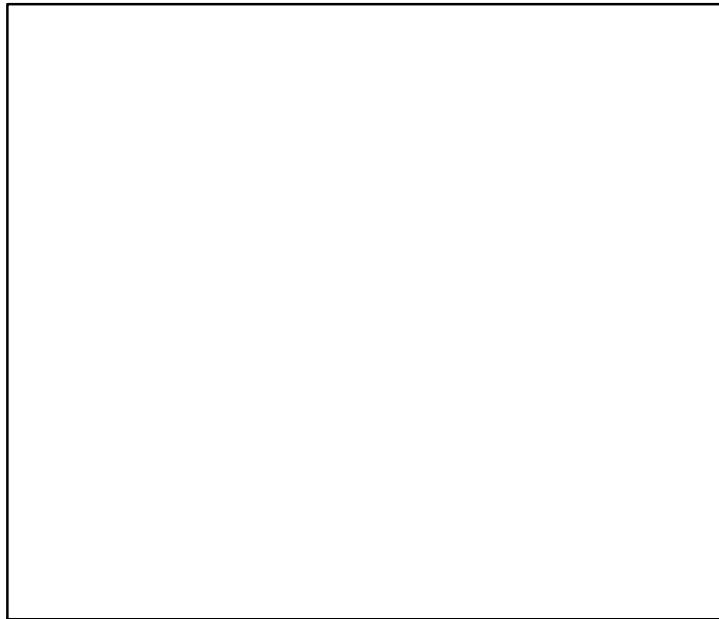
## Norway lobster Smalls (FU 22) [NEPHFU22]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHFU22-1999-2019-ICESIMP2021
<b>Area</b>	Smalls (FU 22)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016, 2019

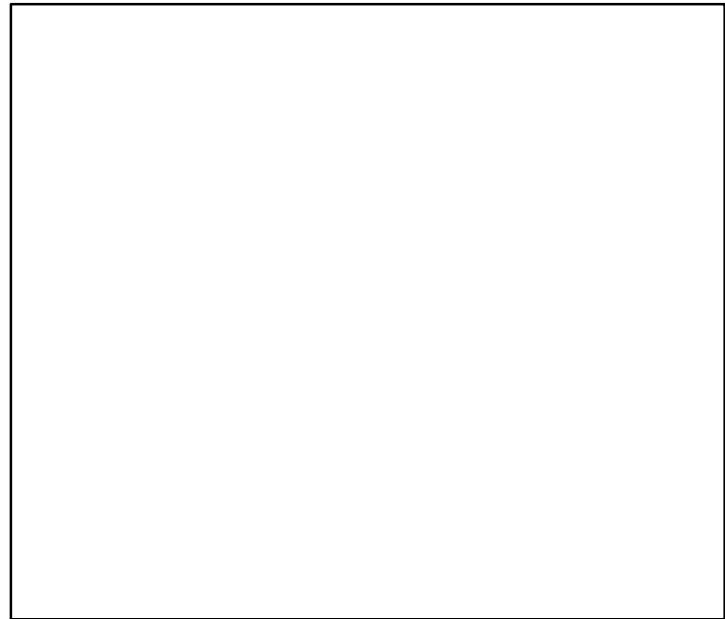
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.128
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2019	0.128
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2019	0.138	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2019	1974		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	1.781		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

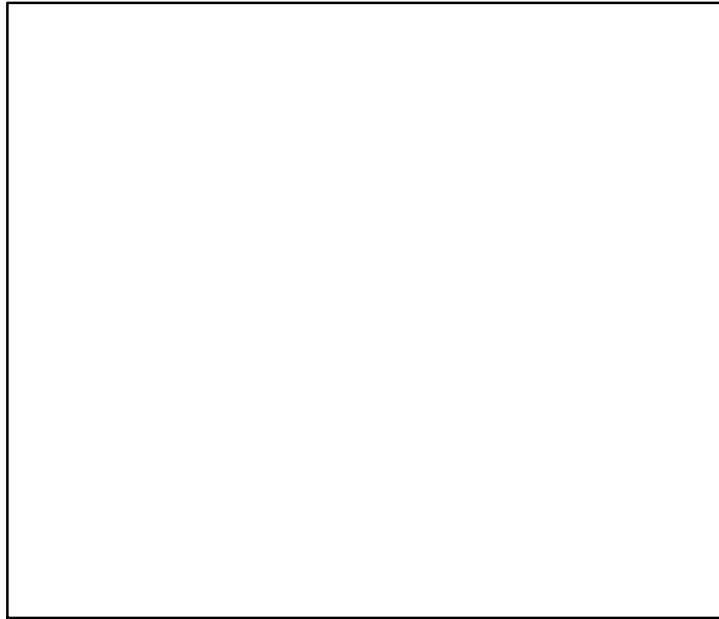
**Kobe MSY\***



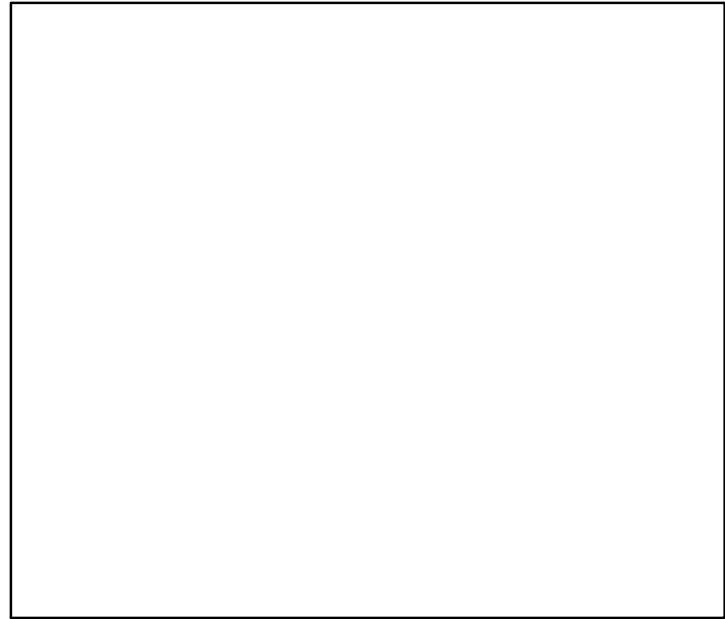
**Kobe MGT\***



**Spawner Recruit\***



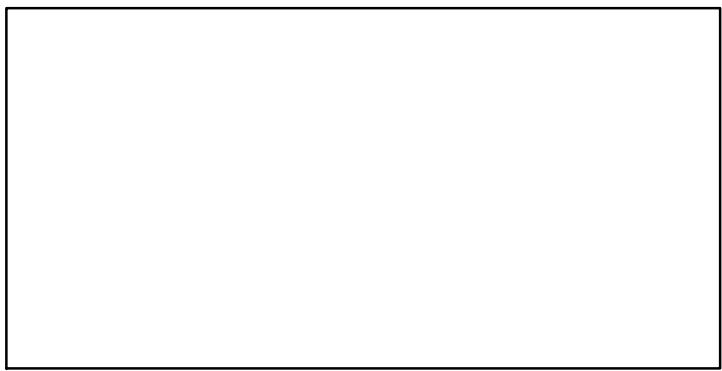
**Production\***



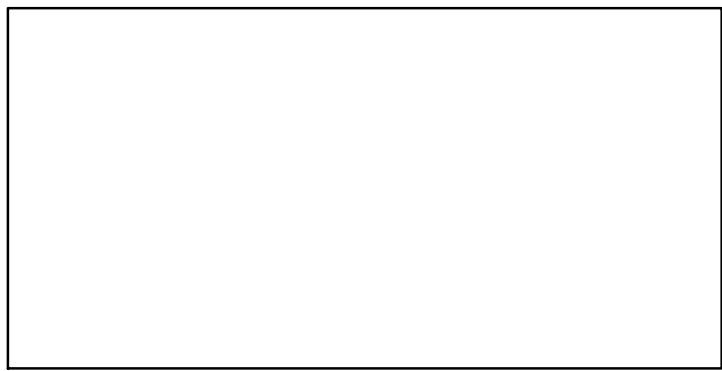
◆ Start Year ♦ End Year \* No Data

Norway lobster Small (FU 22) [NEPHFU22]

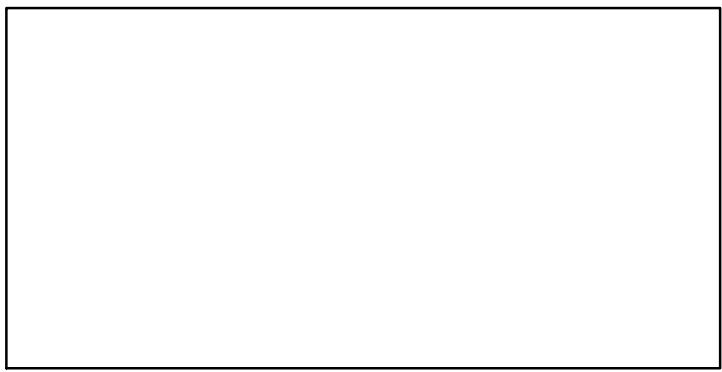
**TB\***



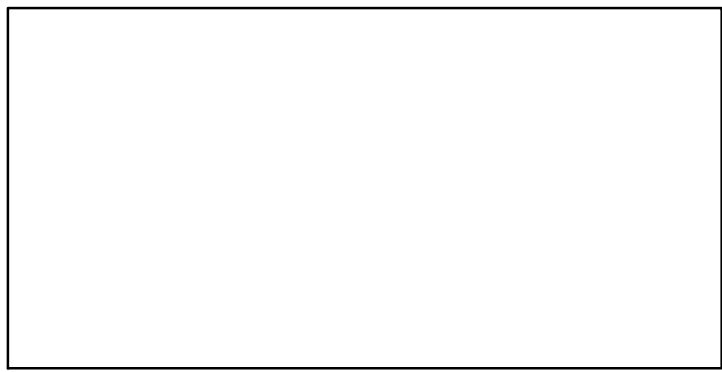
**SSB\***



**TN \***

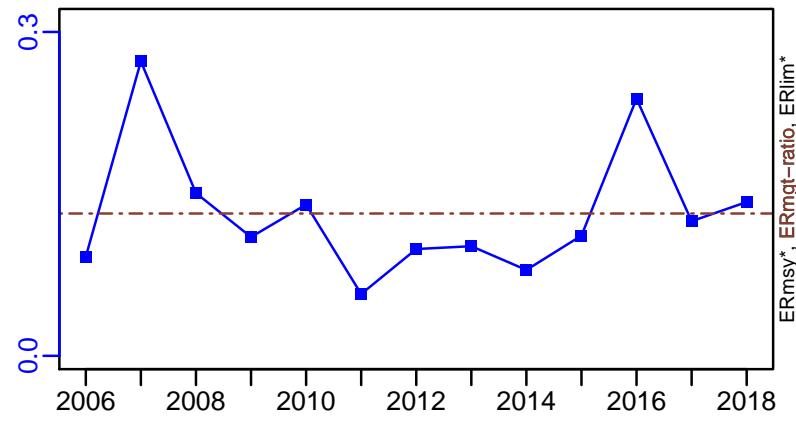


**F\***

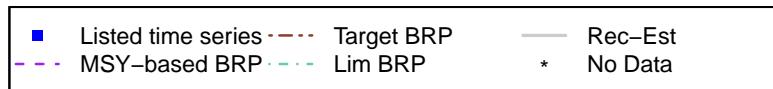
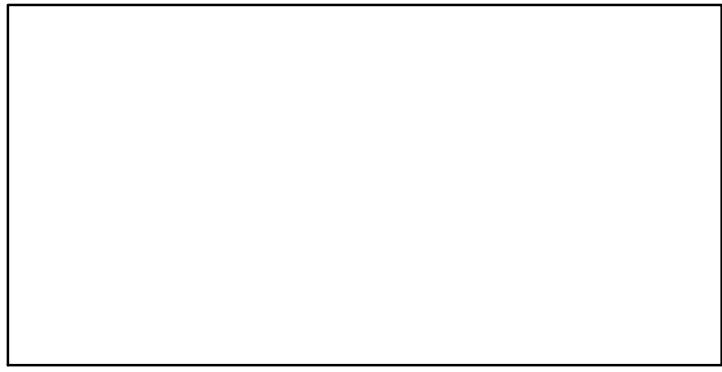


**ER-ratio (1999–2019–ICESIMP2021)**

ER<sub>MSY</sub>\*, ER<sub>mgt</sub>-ratio, ER<sub>lim</sub>\*

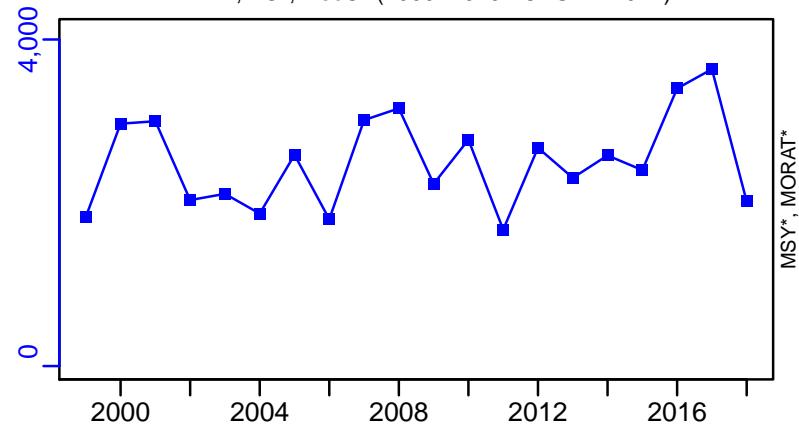


**Recruits\***

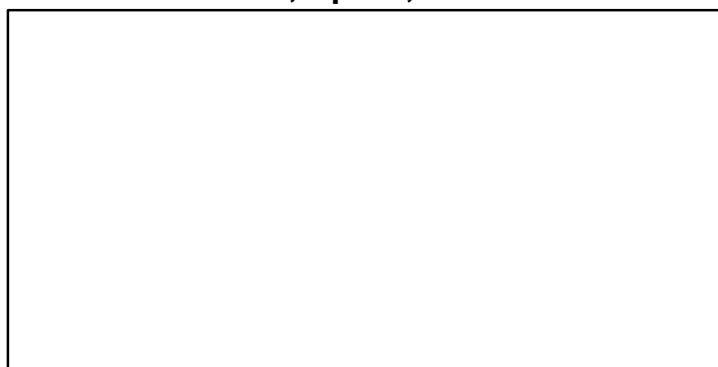


### Norway lobster Smalls (FU 22) [NEPHFU22]

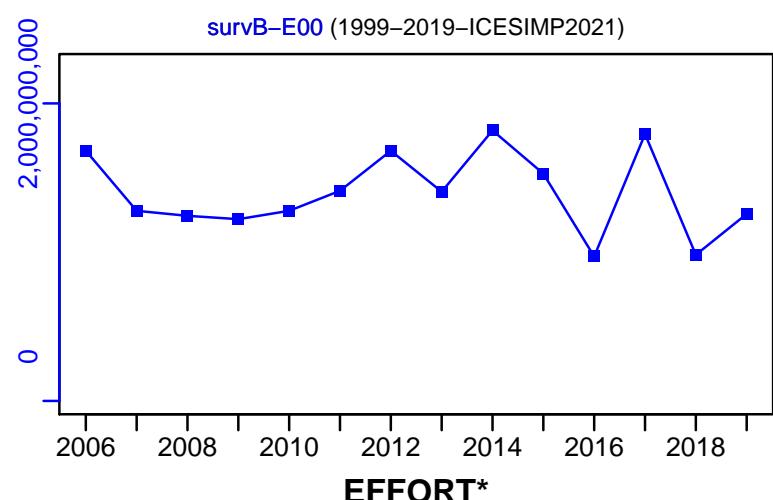
TL-MT, TC\*, RecC\* (1999–2019–ICESIMP2021)



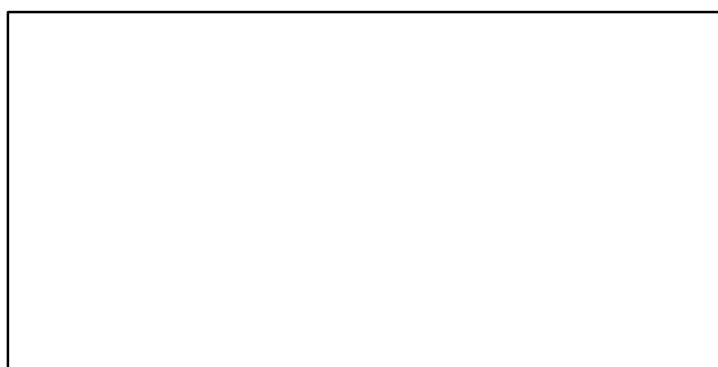
### TAC\*, Cpair\*, Cadv\*



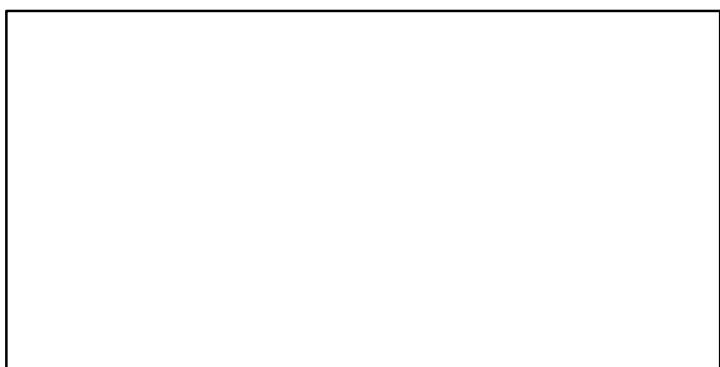
survB-E00 (1999–2019–ICESIMP2021)



### CPUE\*



### EFFORT\*



### CdivMSY\*



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

## Norway lobster North Galicia (FU 25) [NEPHFU25]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGBIE-NEPHFU25-1975-2018-ICESIMP2021
<b>Area</b>	North Galicia (FU 25)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2016, 2018

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	2		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

Norway lobster North Galicia (FU 25) [NEPHFU25]

**TB\***



**SSB\***



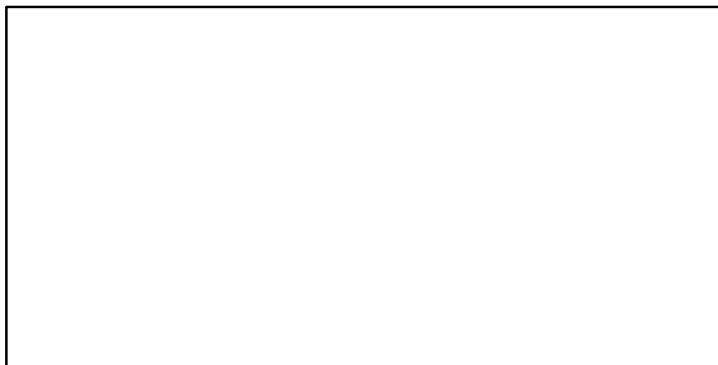
**TN \***



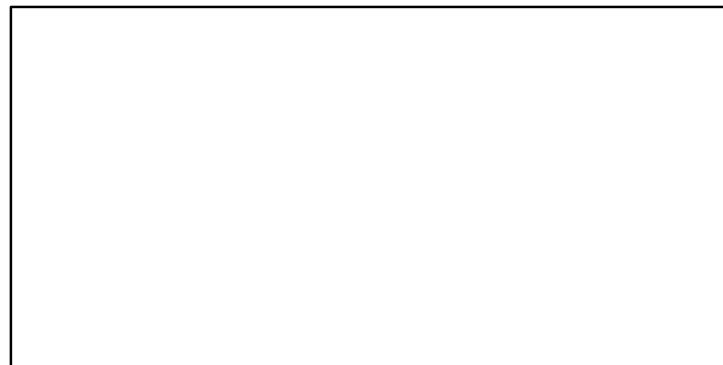
**F\***



**ER\***



**Recruits\***

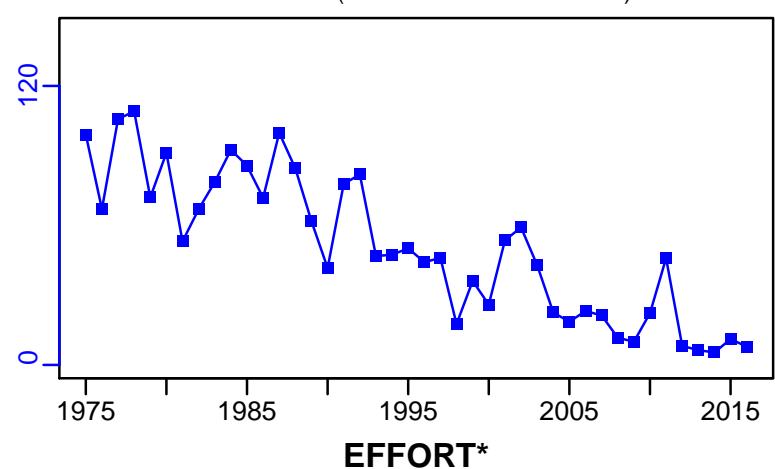
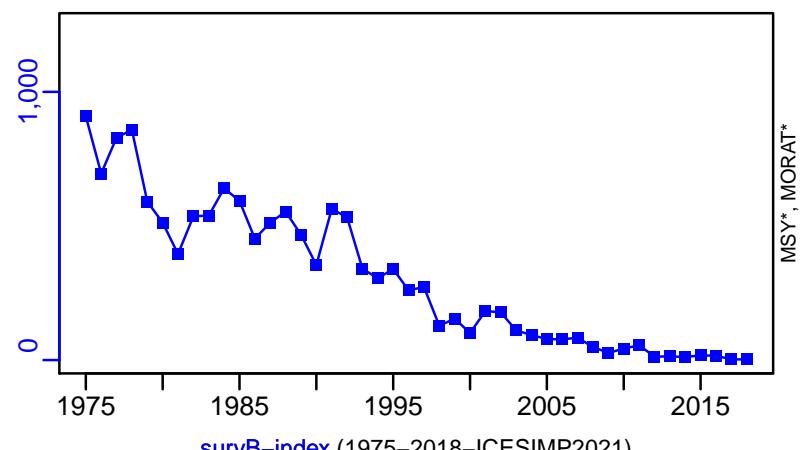


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Norway lobster North Galicia (FU 25) [NEPHFU25]

TL-MT, TC\*, RecC\* (1975–2018–ICESIMP2021)

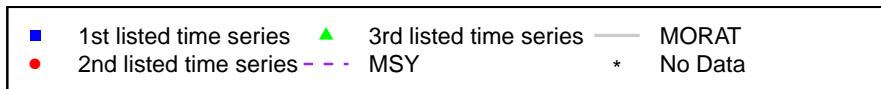
TAC\*, Cpair\*, Cadv\*



CPUE\*

EFFORT\*

CdivMSY\*



## Norway lobster West Galicia and North Portugal (FU 26-27) [NEPHFU2627]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGBIE-NEPHFU2627-1975-2018-ICESIMP2021
<b>Area</b>	West Galicia and North Portugal (FU 26-27)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2016, 2018

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	F-1/yr	2018	0.051	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	2.01		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

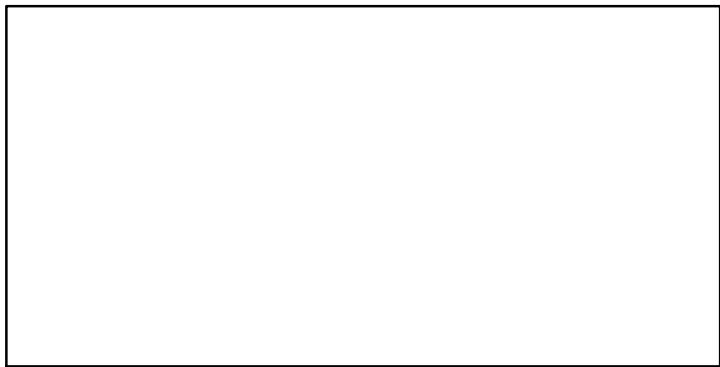
**Kobe MGT\***

**Spawner Recruit\***

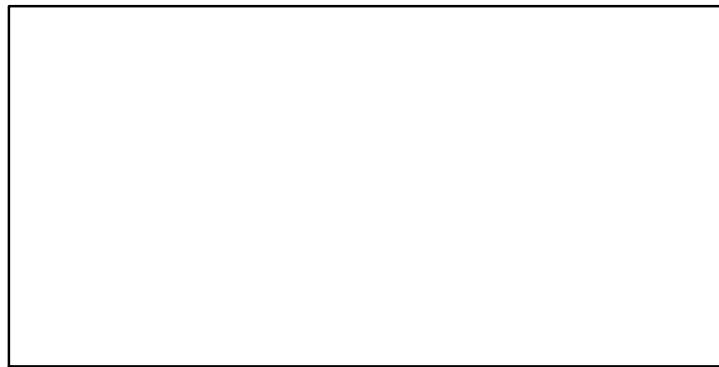
**Production\***

◆ Start Year ◆ End Year \* No Data

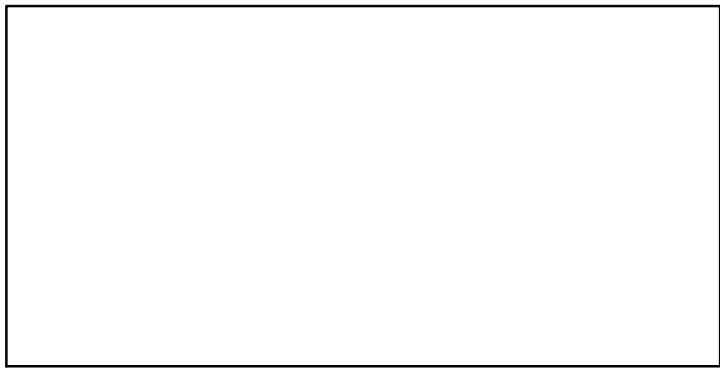
**TB\***



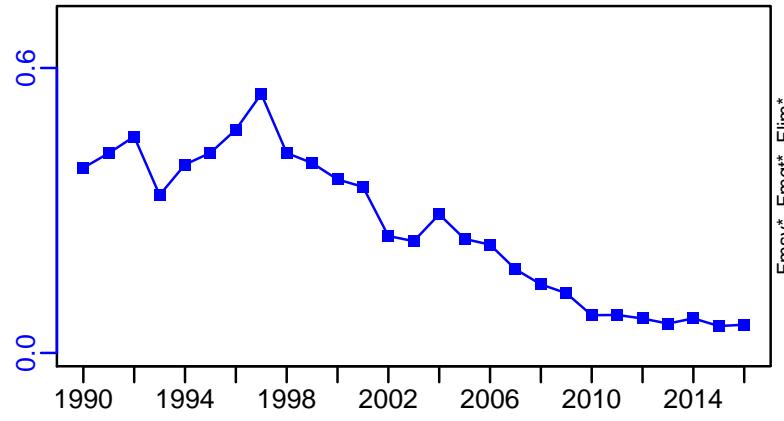
**SSB\***



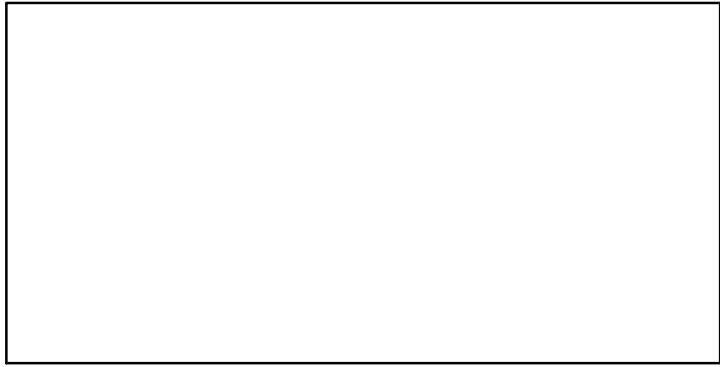
**TN \***



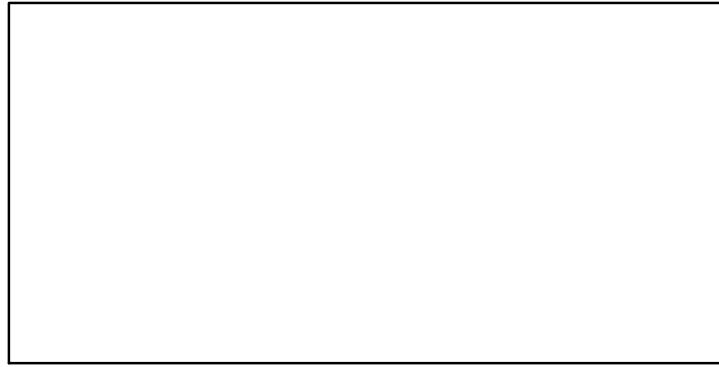
**F-1/yr (1975–2018–ICESIMP2021)**



**ER\***



**Recruits\***

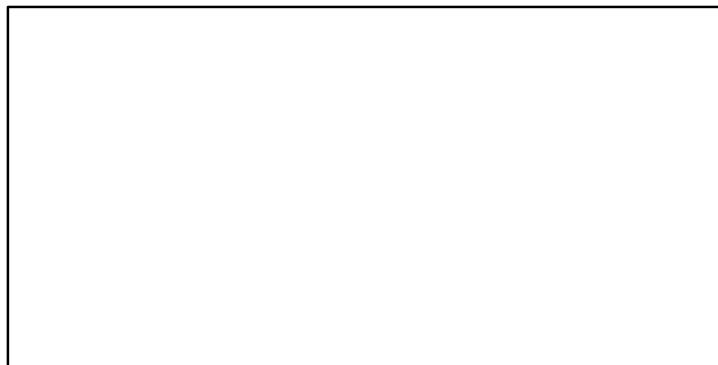
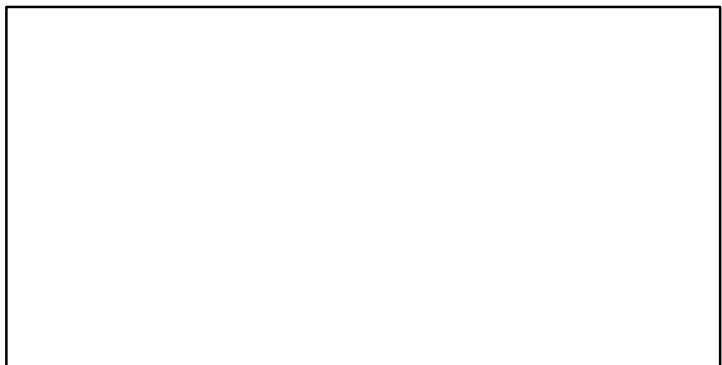
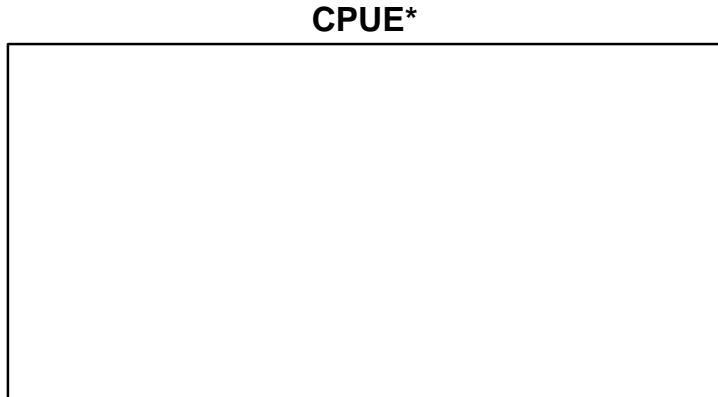
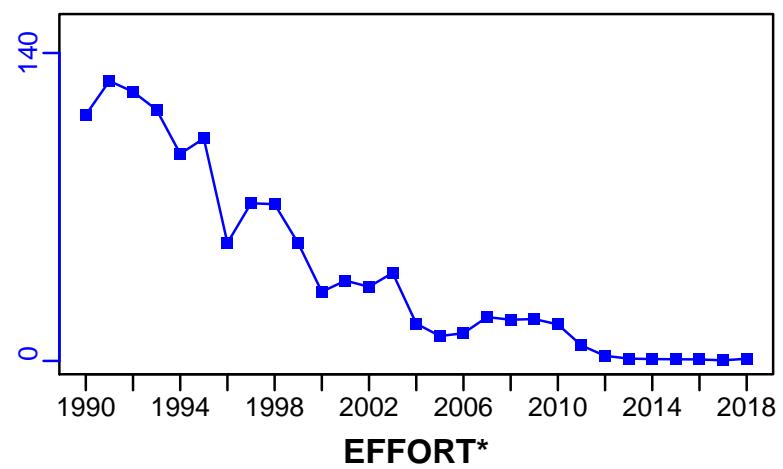
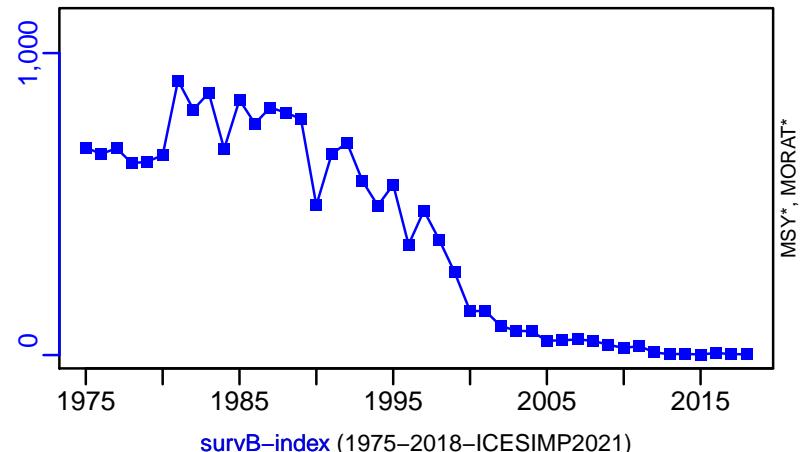


- Listed time series
- - - Target BRP
- - MSY-based BRP
- - Lim BRP
- Rec-Est
- \* No Data

Norway lobster West Galicia and North Portugal (FU 26–27) [NEPHFU2627]

TL-MT, TC\*, RecC\* (1975–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

## Norway lobster South-West and South Portugal (FU 28-29) [NEPHFU2829]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGBIE-NEPHFU2829-1984-2018-ICESIMP2021
<b>Area</b>	South-West and South Portugal (FU 28-29)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2016, 2016, 2018

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

Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-	-
<b>TN</b>	-	-	-	-	-	-
<b>R</b>	-	-	-	-	-	-
<b>F</b>	F-1/yr	2018	0.461	-	-	
<b>ER</b>	-	-	-	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2018	299			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2016	0.449			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

**TB\***



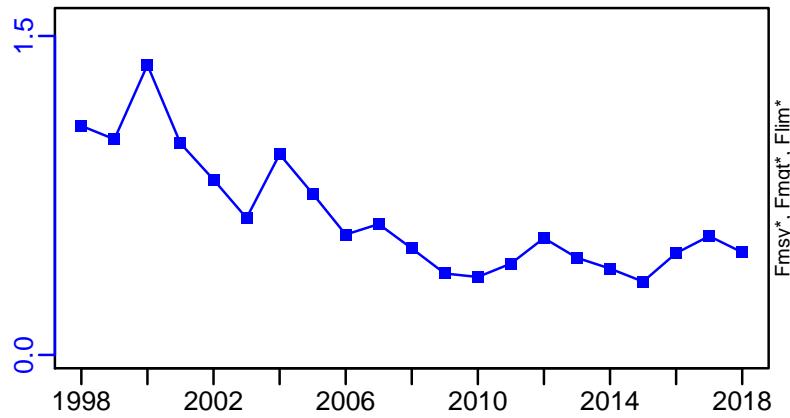
**SSB\***



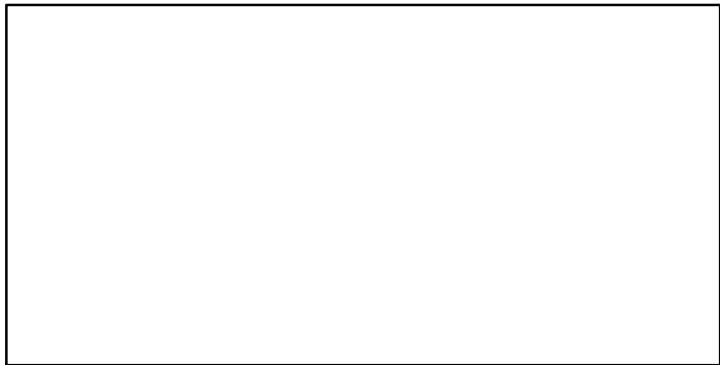
**TN \***



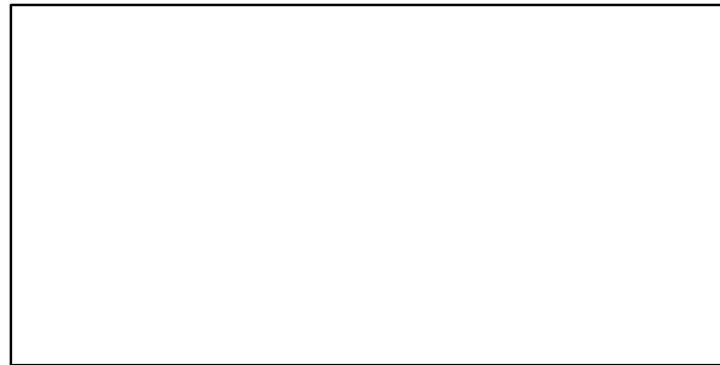
**F-1/yr (1984–2018–ICESIMP2021)**



**ER\***



**Recruits\***

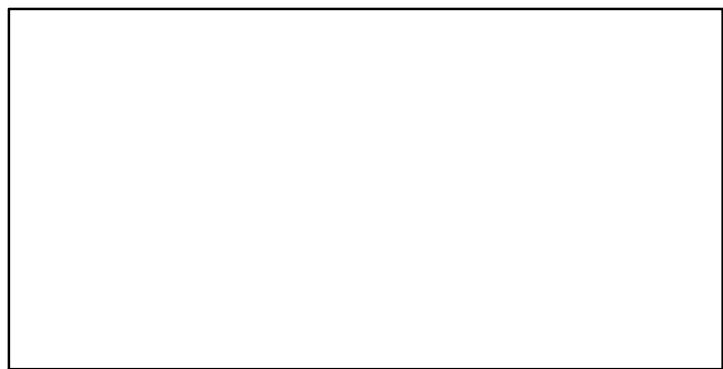
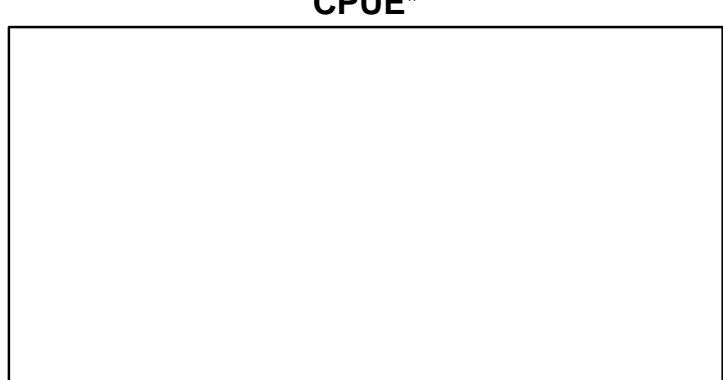
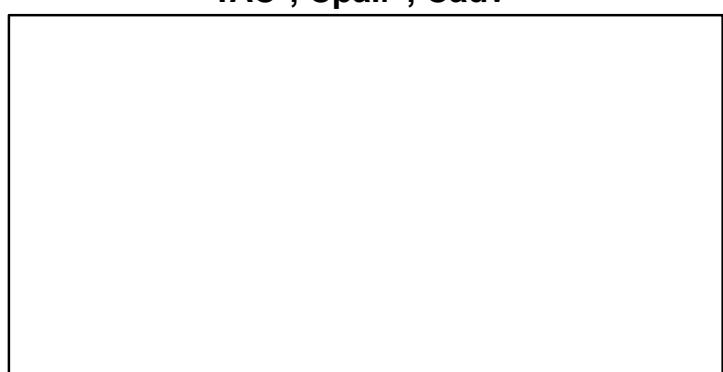
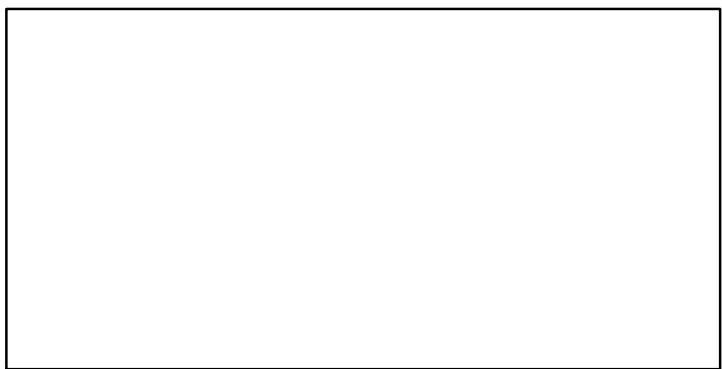
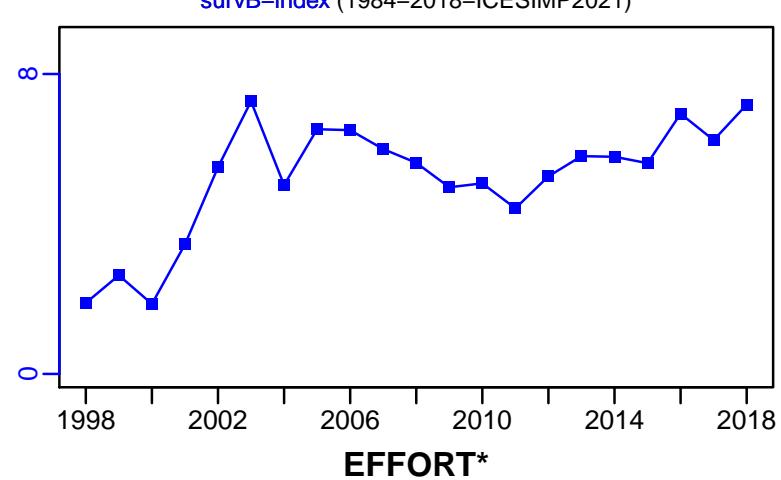
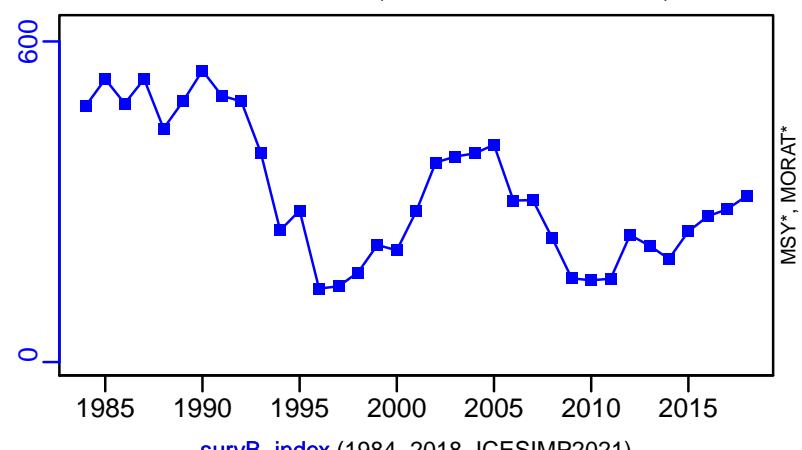


- Listed time series    - - - Target BRP    — Rec-Est
- - MSY-based BRP    - - Lim BRP    \* No Data

Norway lobster South-West and South Portugal (FU 28–29) [NEPHFU2829]

TL-MT, TC\*, RecC\* (1984–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

## Norway lobster Gulf of Cadiz (FU 30) [NEPHFU30]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGBIE-NEPHFU30-1994-2019-ICESIMP2021
<b>Area</b>	Gulf of Cadiz (FU 30)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2016, 2017, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERrmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-E00	2017	370	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2019	0.01	-	-
<b>TC</b>	TC-MT	2019	76		
<b>TL</b>	TL-MT	2017	124		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERrmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

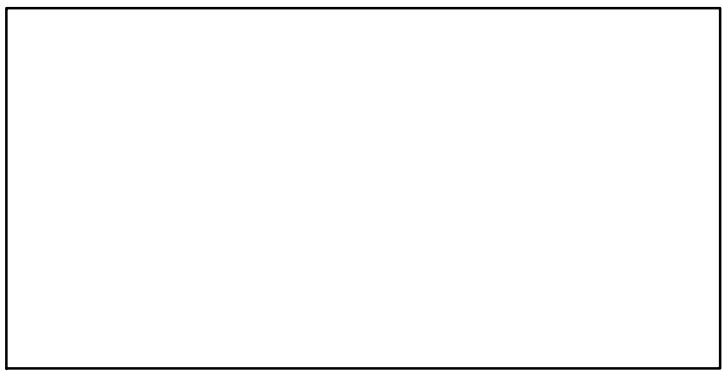
**Spawner Recruit\***

**Production\***

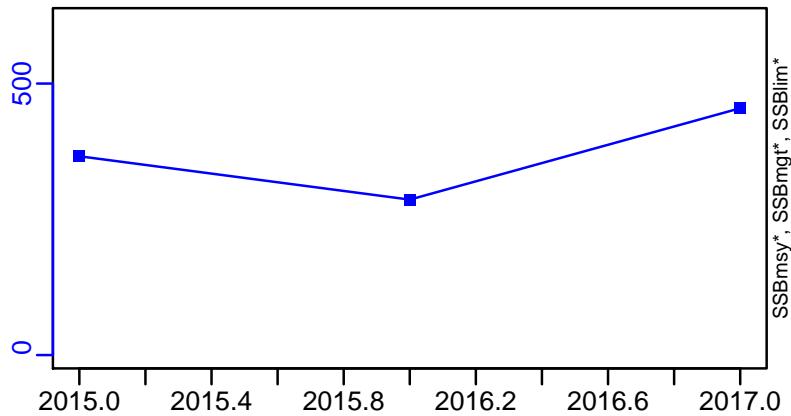
◆ Start Year ♦ End Year \* No Data

Norway lobster Gulf of Cadiz (FU 30) [NEPHFU30]

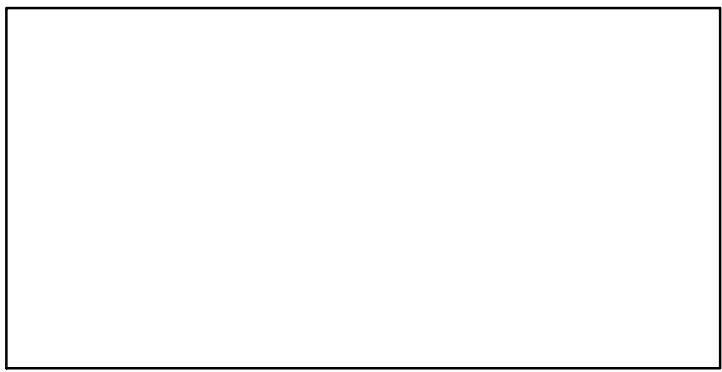
**TB\***



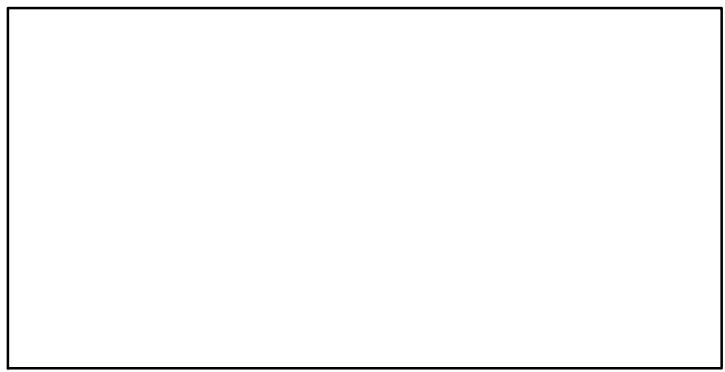
SSB-E00 (1994–2017–ICESIMP2018)



**TN \***

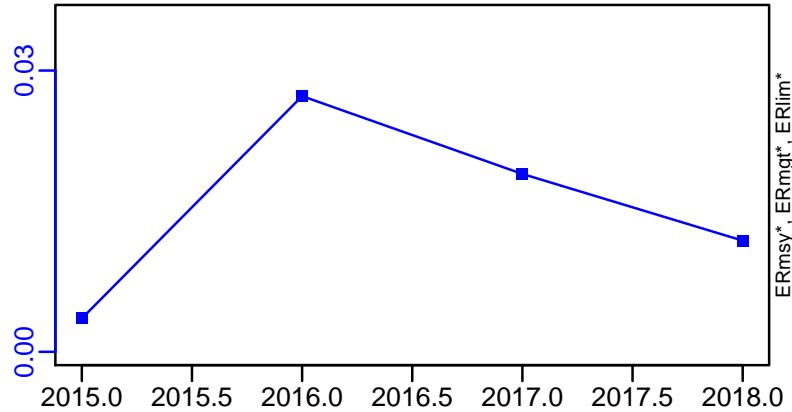


**F\***

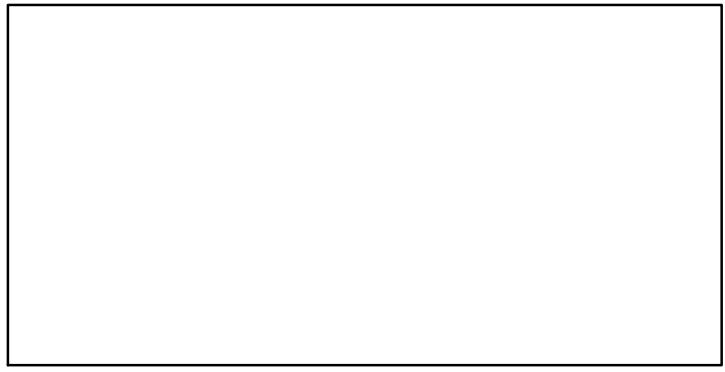


ER-ratio (1994–2019–ICESIMP2021)

ER<sub>m</sub>sy\*, ER<sub>mgt</sub>\*, ER<sub>lim</sub>\*



**Recruits\***

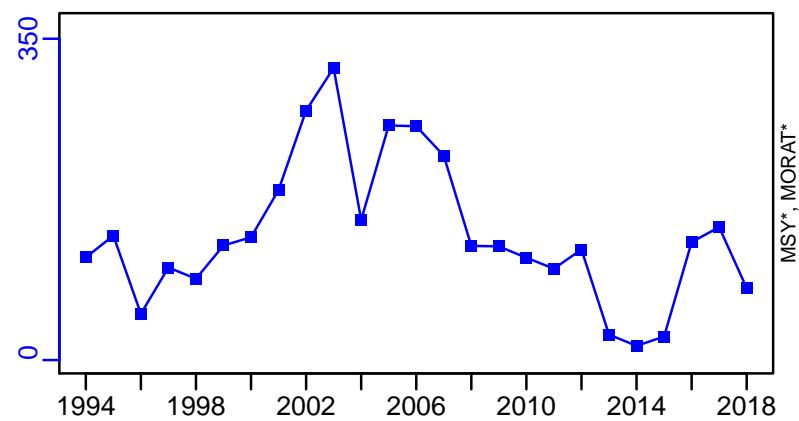


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | ··· Lim BRP  | * No Data |

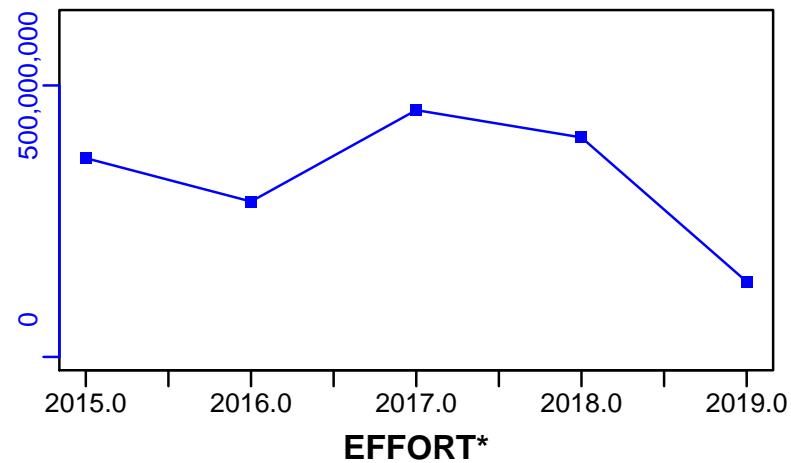
Norway lobster Gulf of Cadiz (FU 30) [NEPHFU30]

TC-MT, TL\*, RecC\* (1994–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



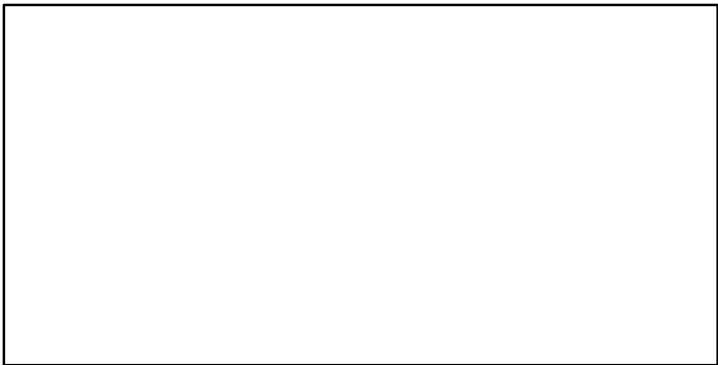
survB-E00 (1994–2019–ICESIMP2021)



CPUE\*



CdivMSY\*



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

## Norway lobster Cantabrian Sea (FU 31) [NEPHFU31]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGBIE-NEPHFU31-1983-2018-ICESIMP2021
<b>Area</b>	Cantabrian Sea (FU 31)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2016, 2018

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	3		
<b>TL</b>	TL-MT	2016	4.26		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

Norway lobster Cantabrian Sea (FU 31) [NEPHFU31]

**TB\***



**SSB\***



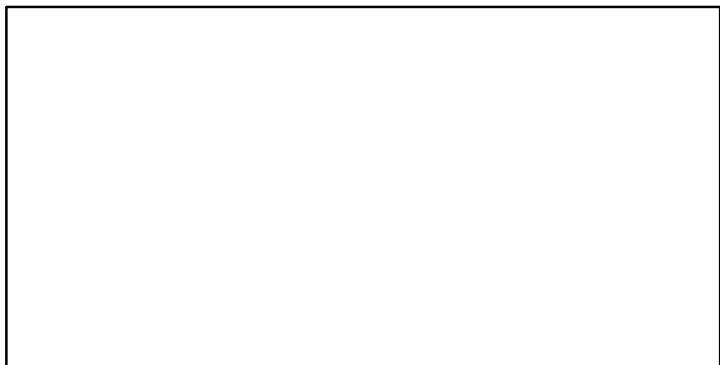
**TN \***



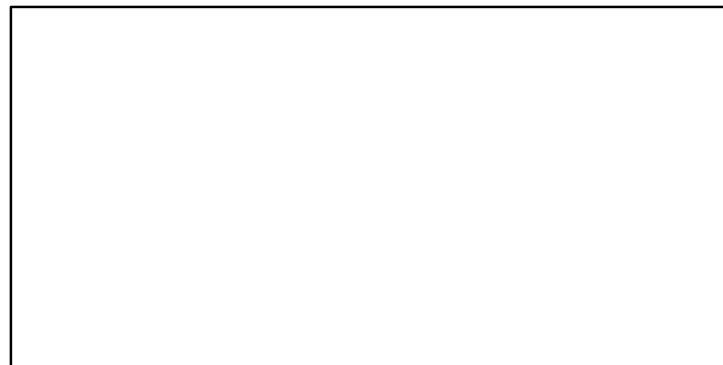
**F\***



**ER\***



**Recruits\***

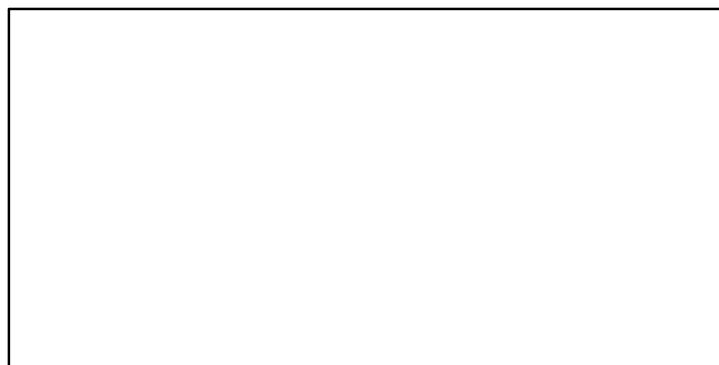
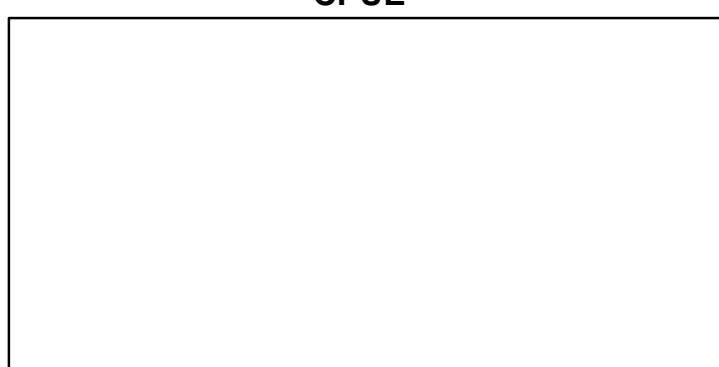
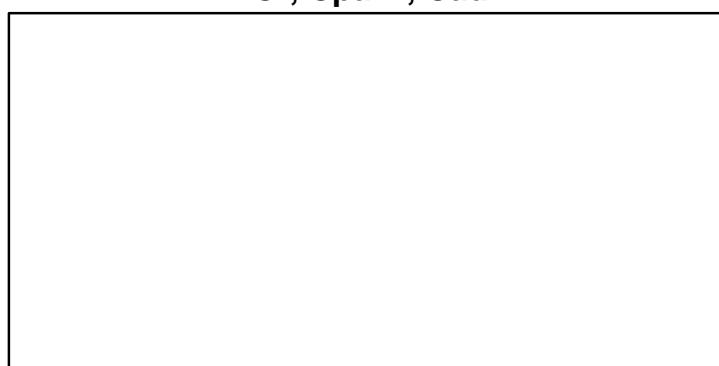
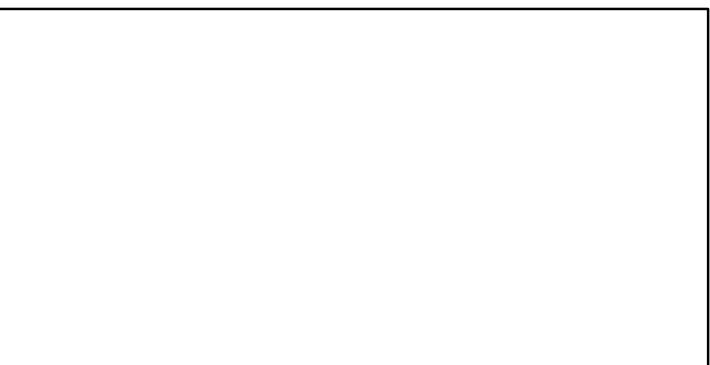
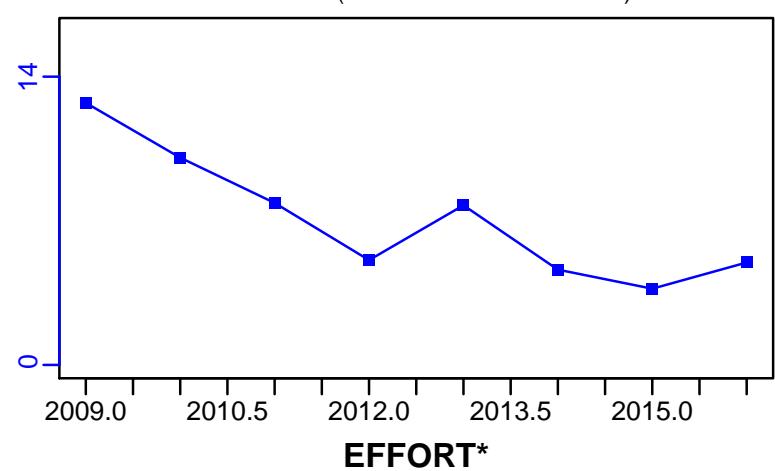
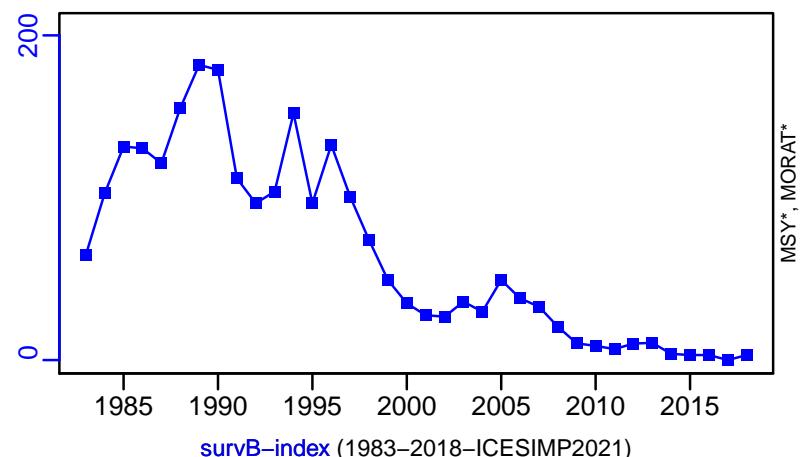


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Norway lobster Cantabrian Sea (FU 31) [NEPHFU31]

TC-MT, TL\*, RecC\* (1983–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

## Norway lobster Norwegian Deeps (FU 32) [NEPHFU32]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHFU32-1987-2017-ICESIMP2018
<b>Area</b>	Norwegian Deeps (FU 32)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2016, 2017

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2016	198		
<b>TL</b>	TL-MT	2017	53		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

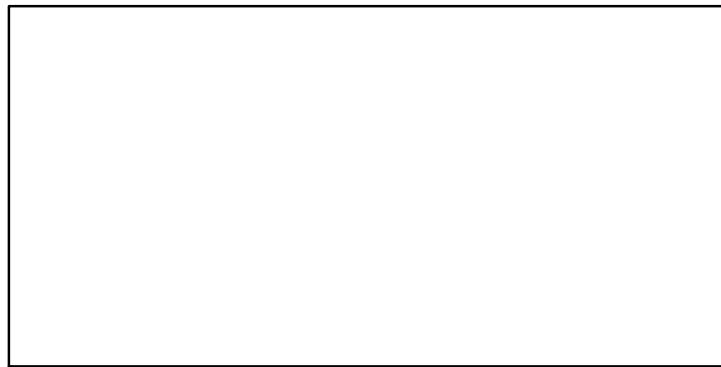
◆ Start Year   ◆ End Year   \* No Data

Norway lobster Norwegian Deep (FU 32) [NEPHFU32]

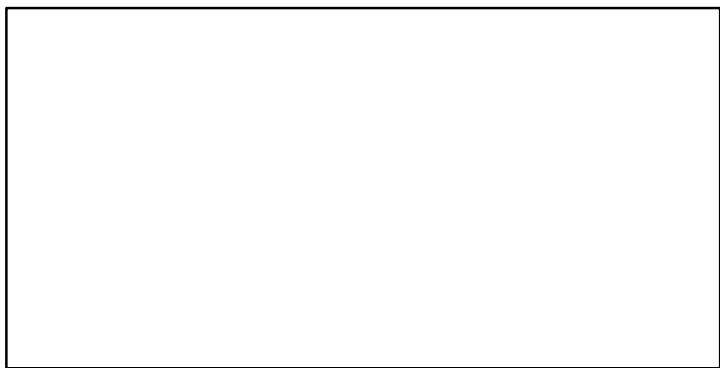
**TB\***



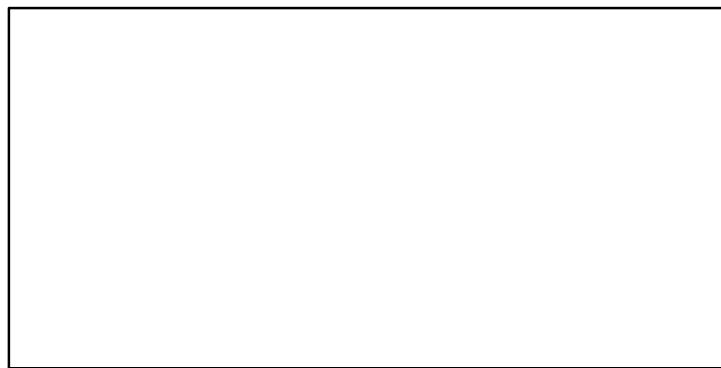
**SSB\***



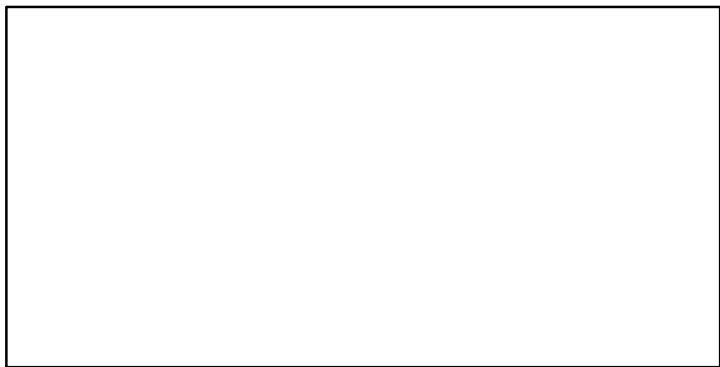
**TN \***



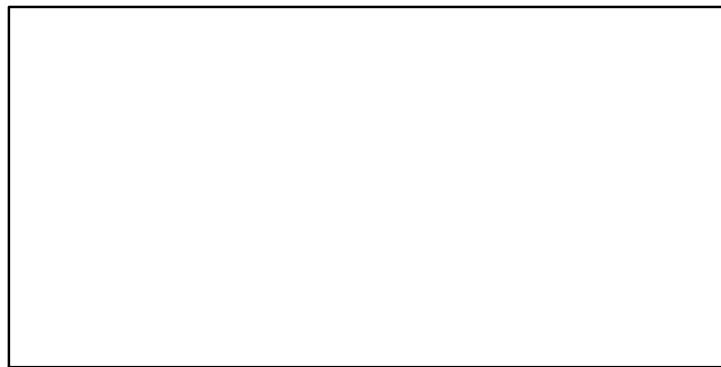
**F\***



**ER\***



**Recruits\***

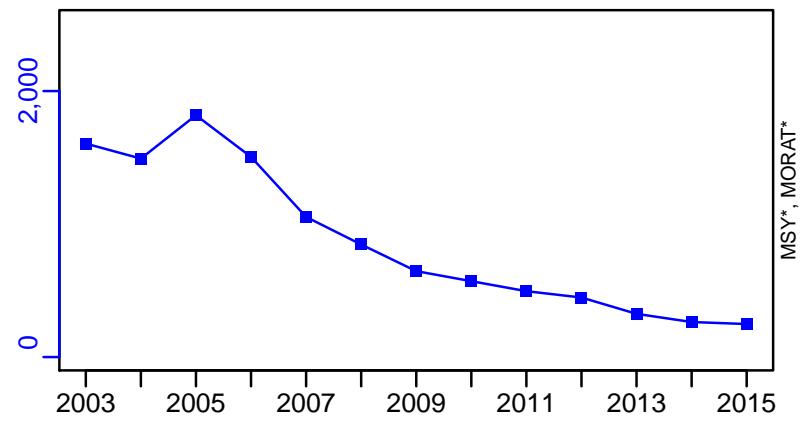


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

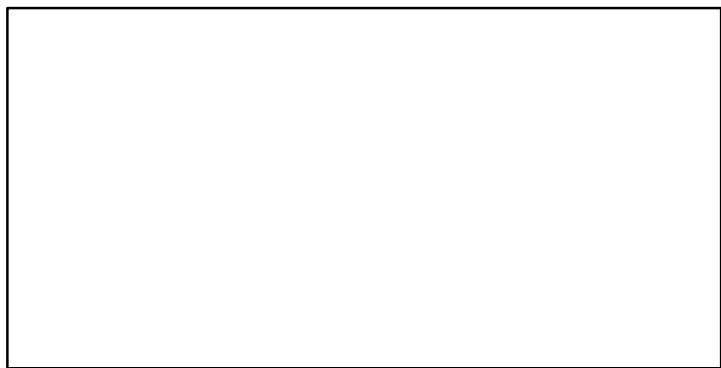
Norway lobster Norwegian Deeps (FU 32) [NEPHFU32]

TC-MT, TL\*, RecC\* (1987–2016–ICESIMP2016)

TAC\*, Cpair\*, Cadv\*

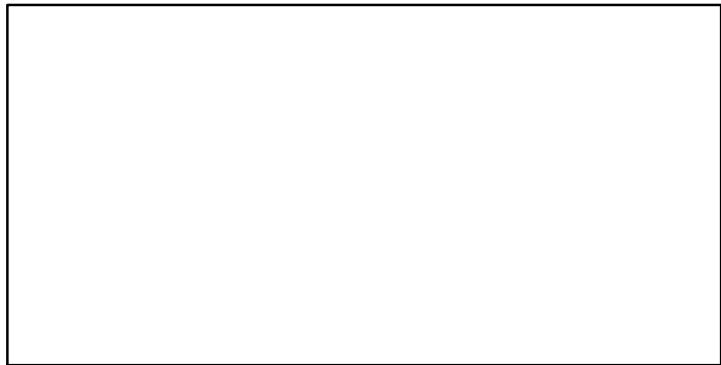


survB\*



CPUE\*

EFFORT\*



CdivMSY\*



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

## Norway lobster Off Horn Reef (FU 33) [NEPHFU33]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHFU33-1993-2018-ICESIMP2021
<b>Area</b>	Off Horn Reef (FU 33)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2016, 2017, 2018

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	776		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

Norway lobster Off Horn Reef (FU 33) [NEPHFU33]

**TB\***



**SSB\***



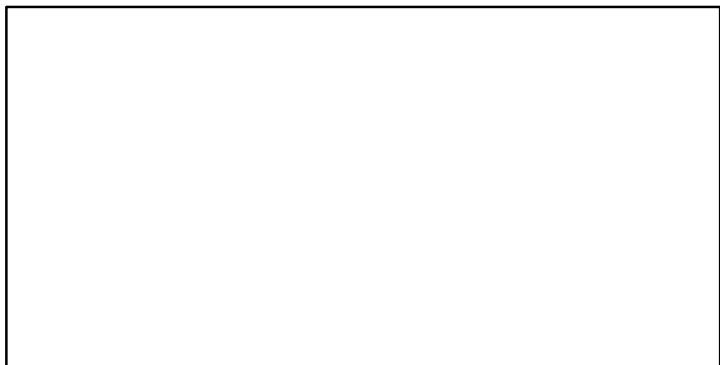
**TN \***



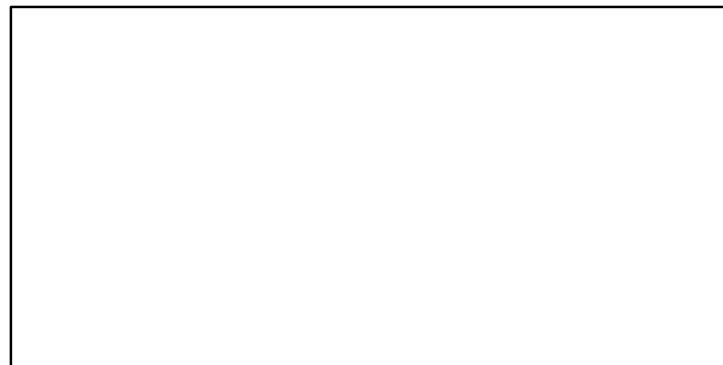
**F\***



**ER\***



**Recruits\***

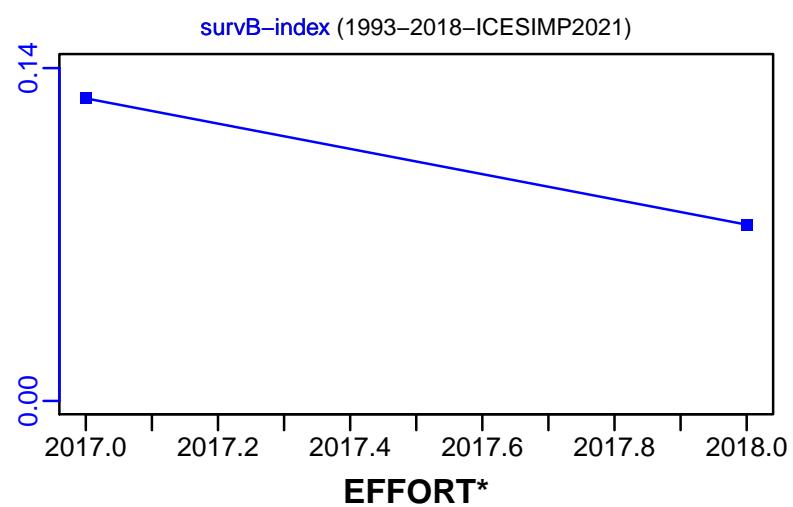
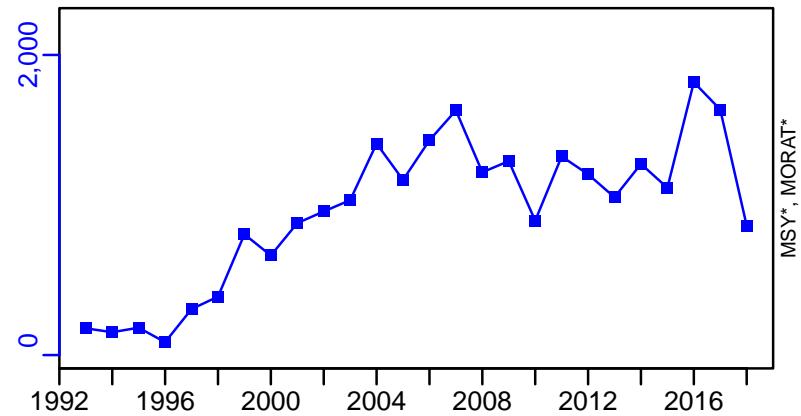


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

Norway lobster Off Horn Reef (FU 33) [NEPHFU33]

TL-MT, TC\*, RecC\* (1993–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CPUE\*

CdivMSY\*

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

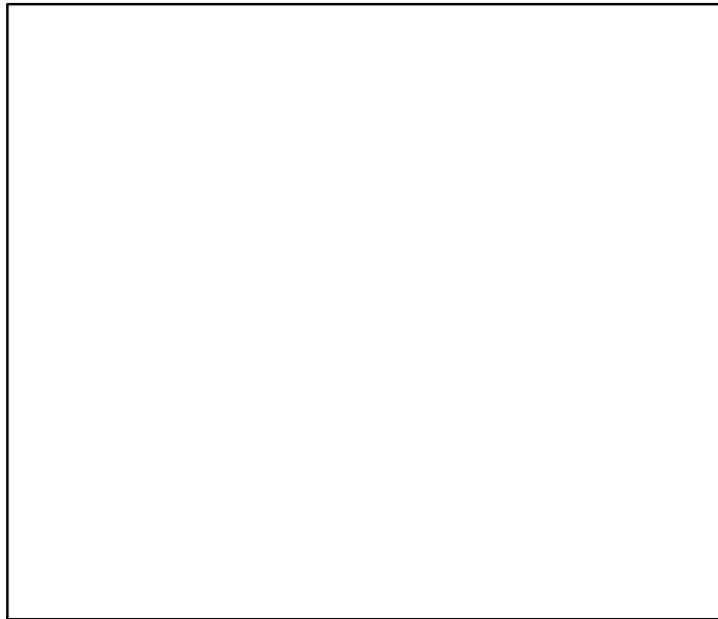
## Norway lobster Devils Hole (FU 34) [NEPHFU34]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHFU34-2003-2017-ICESIMP2018
<b>Area</b>	Devils Hole (FU 34)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2016, 2017

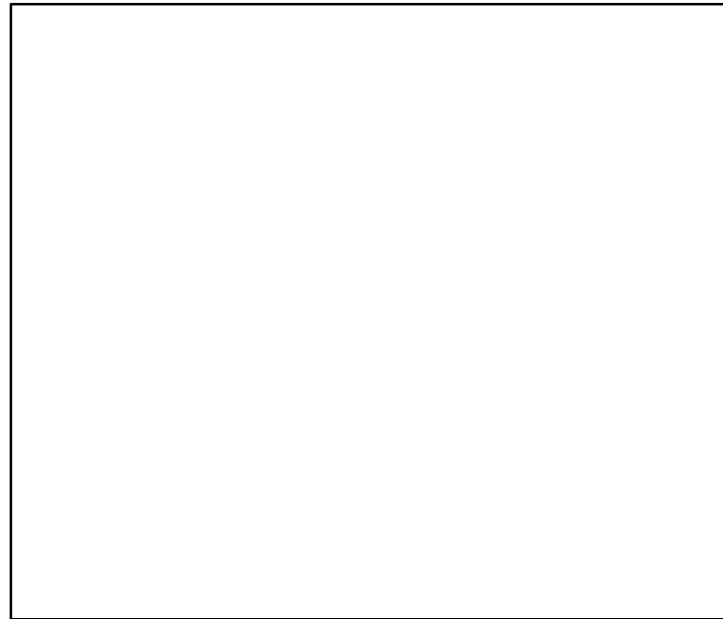
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2017	550		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

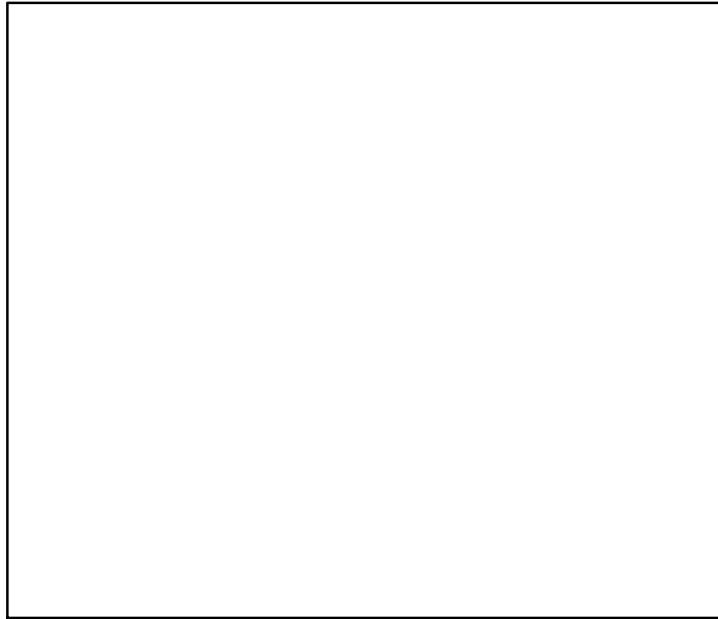
**Kobe MSY\***



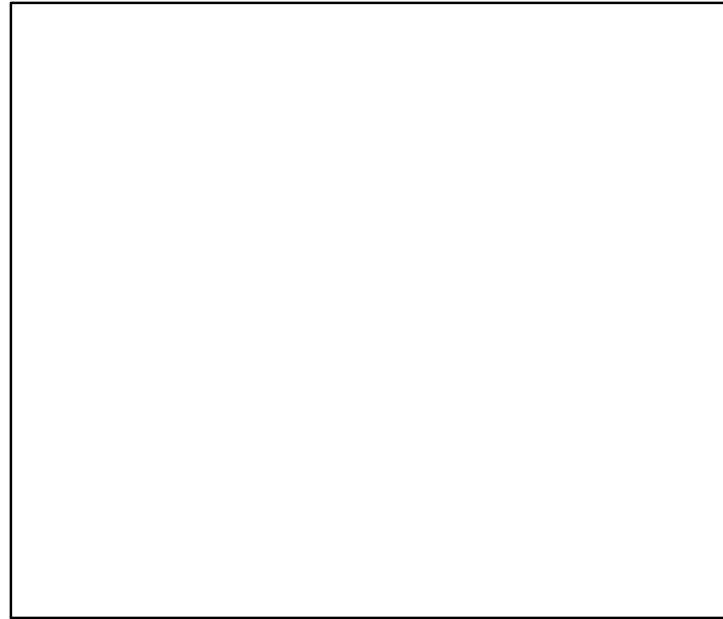
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

**Norway lobster Devils Hole (FU 34) [NEPHFU34]**

**TB\***



**SSB\***



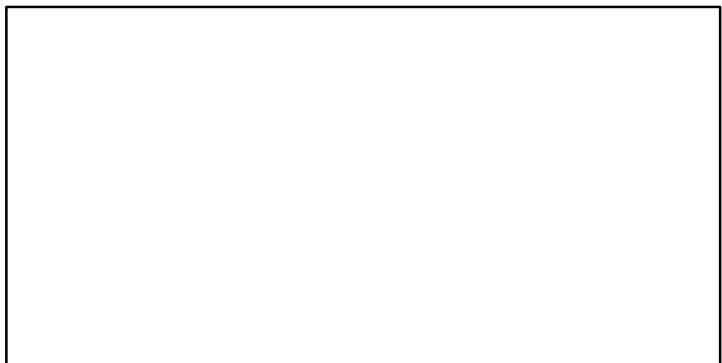
**TN \***



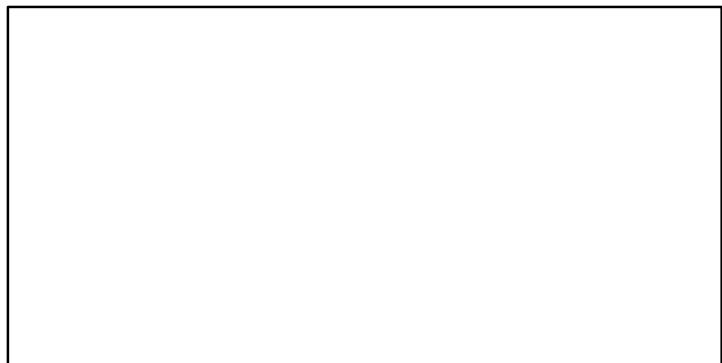
**F\***



**ER\***



**Recruits\***

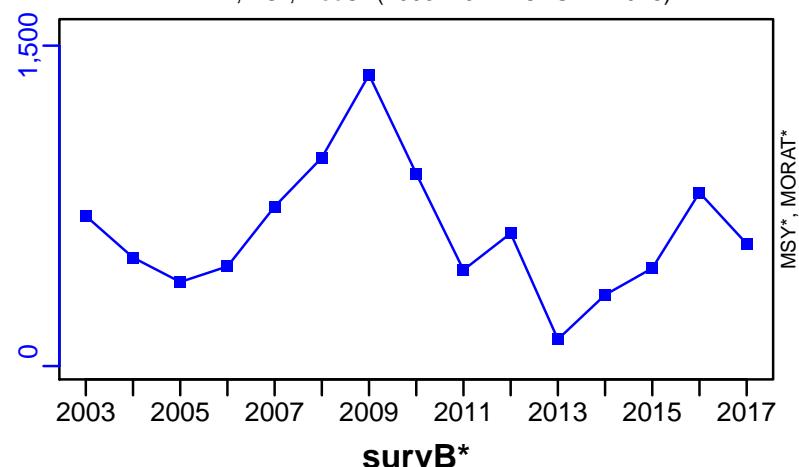


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Norway lobster Devils Hole (FU 34) [NEPHFU34]

TL-MT, TC\*, RecC\* (2003–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



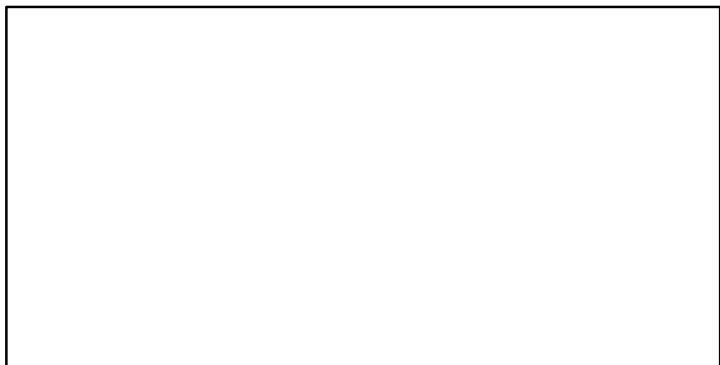
survB\*



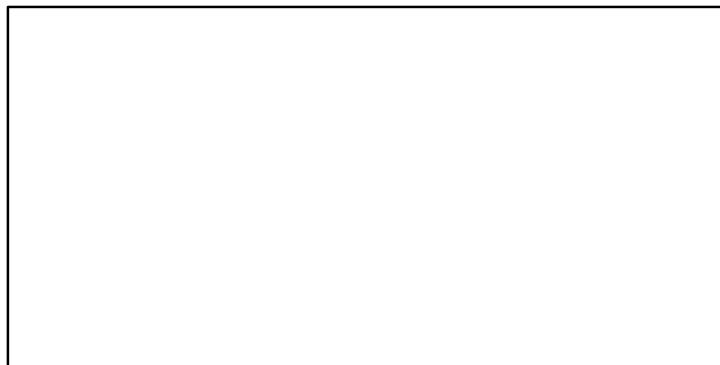
CPUE\*



EFFORT\*



CdivMSY\*



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

## Norway lobster Skagerak Kattegat (FU 3-4) [NEPHFU3-4]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHFU3-4-1960-2018-ICESIMP2021
<b>Area</b>	Skagerak Kattegat (FU 3-4)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2016, 2016, 2017, 2018, 2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.079
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2018	0.079
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-	-
<b>TN</b>	-	-	-	-	-	-
<b>R</b>	-	-	-	-	-	-
<b>F</b>	-	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.036	-	-	-
<b>TC</b>	TC-MT	2018	8435			
<b>TL</b>	TL-MT	2018	7100			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	0.389			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Norway lobster Skagerak Kattegat (FU 3–4) [NEPHFU3–4]

**Kobe MSY\***

**Kobe MGT\***

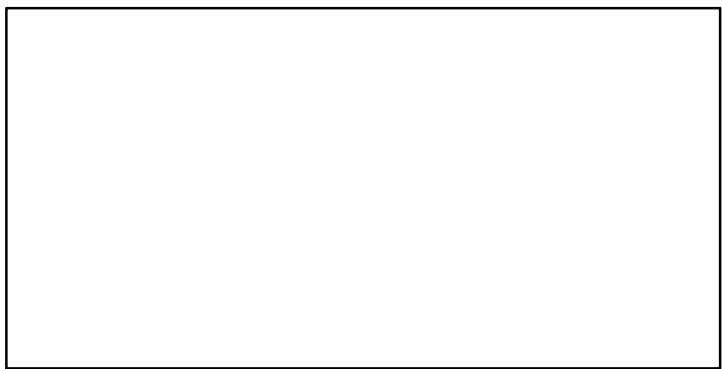
**Spawner Recruit\***

**Production\***

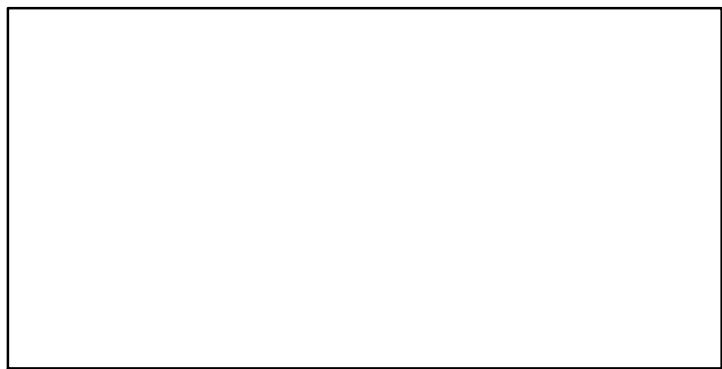
◆ Start Year ♦ End Year \* No Data

Norway lobster Skagerak Kattegat (FU 3–4) [NEPHFU3–4]

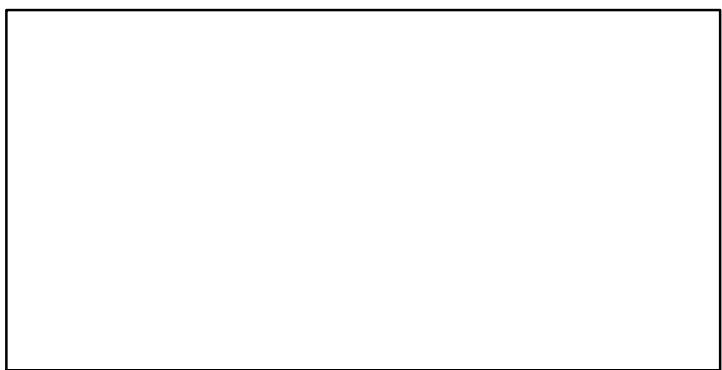
**TB\***



**SSB\***



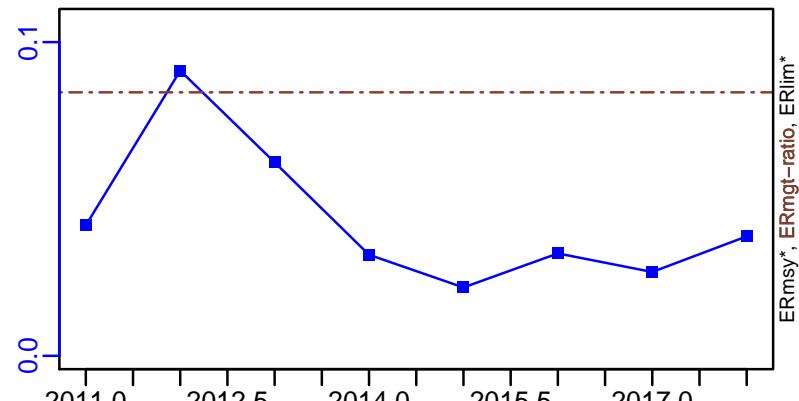
**TN \***



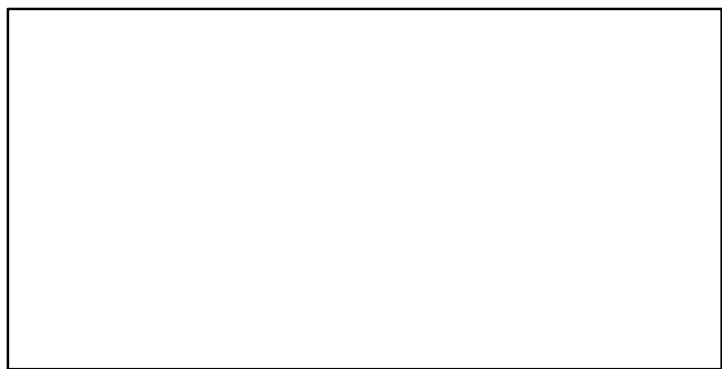
**F\***



**ER-ratio (1960–2018–ICESIMP2021)**



**Recruits\***

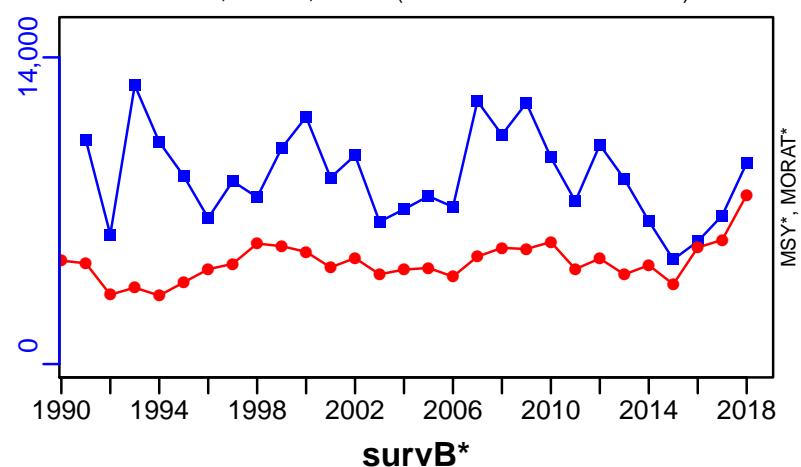


■ Listed time series	--- Target BRP	— Rec-Est
- - MSY-based BRP	·· Lim BRP	* No Data

Norway lobster Skagerak Kattegat (FU 3–4) [NEPHFU3–4]

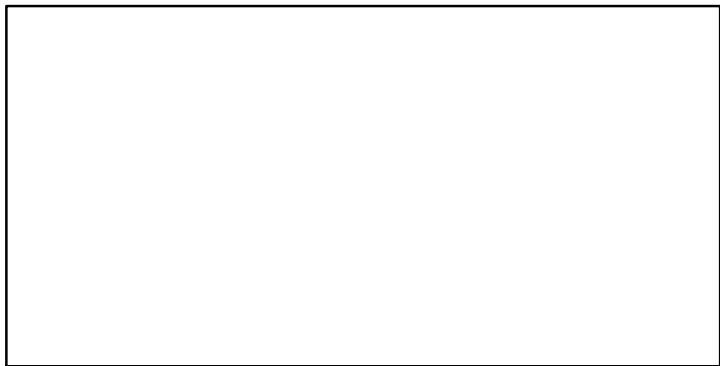
TC-MT, TL-MT, RecC\* (1960–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*

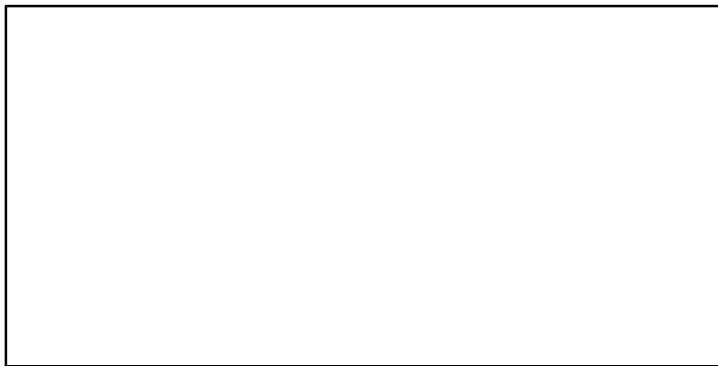


survB\*

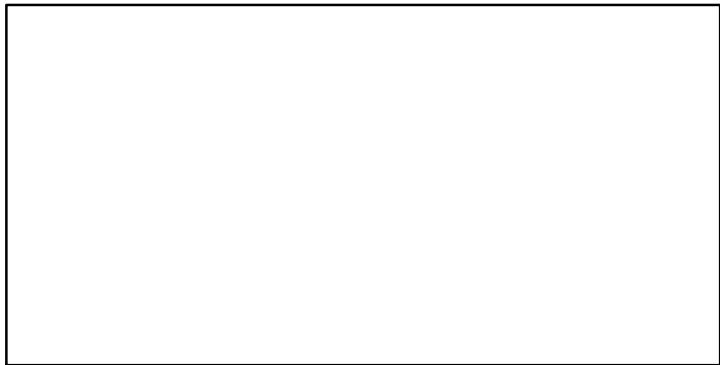
MSY\*, MORAT\*



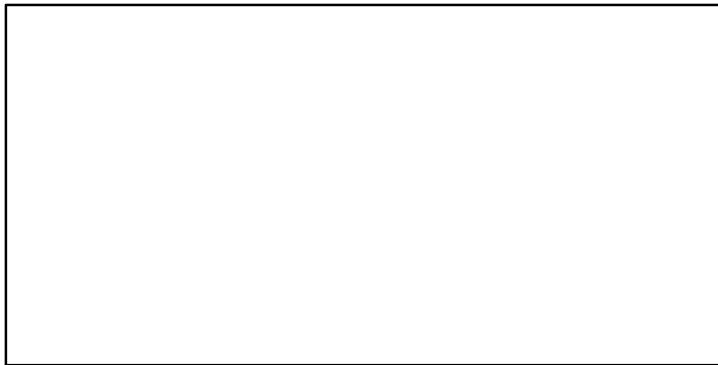
CPUE\*



EFFORT\*



CdivMSY\*



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

## Norway lobster Botney Cut - Silver Pit (FU 5) [NEPHFU5]

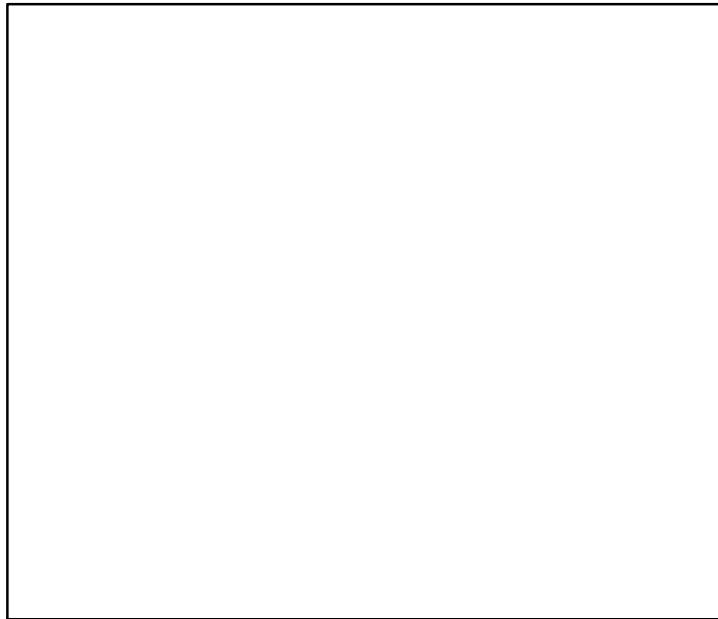
Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHFU5-1991-2017-ICESIMP2018
<b>Area</b>	Botney Cut - Silver Pit (FU 5)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2016, 2017

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

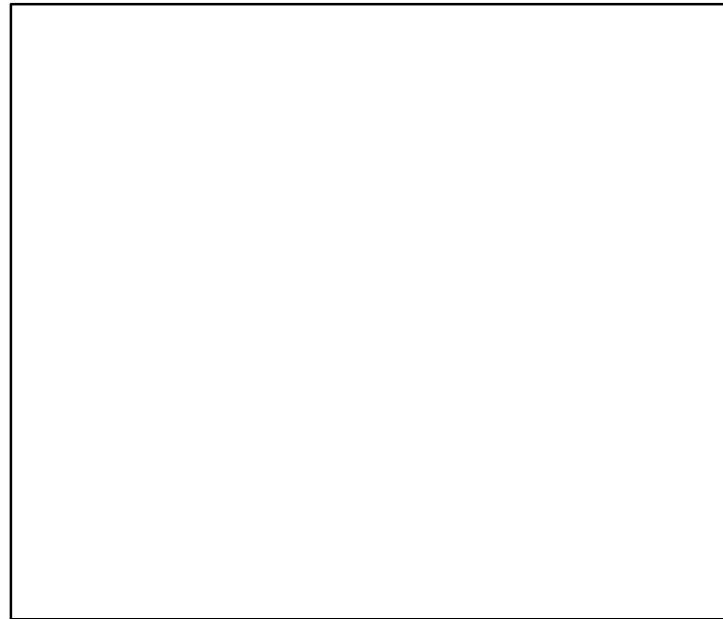
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2017	2110		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Norway lobster Botney Cut – Silver Pit (FU 5) [NEPHFU5]

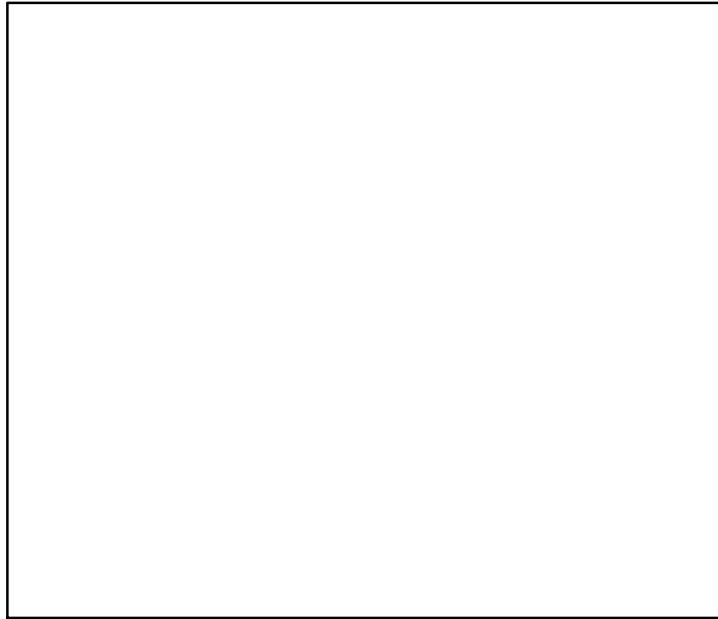
**Kobe MSY\***



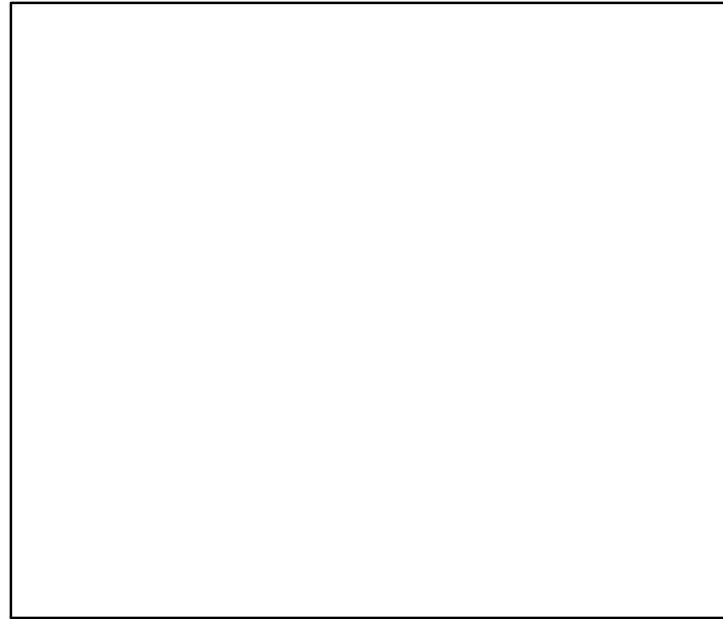
**Kobe MGT\***



**Spawner Recruit\***



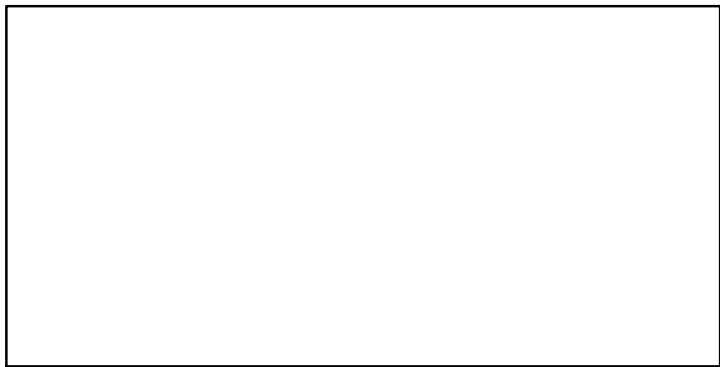
**Production\***



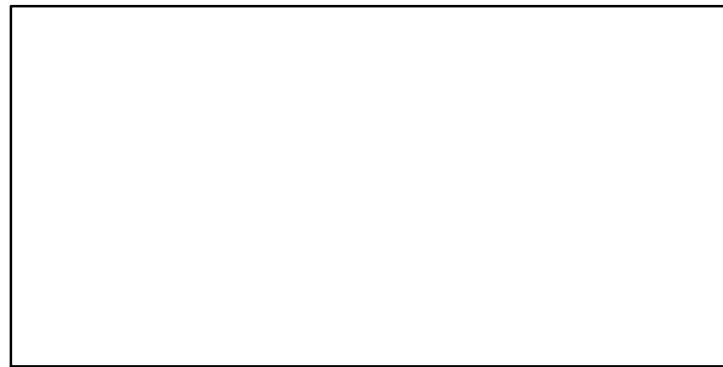
◆ Start Year ♦ End Year \* No Data

Norway lobster Botney Cut – Silver Pit (FU 5) [NEPHFU5]

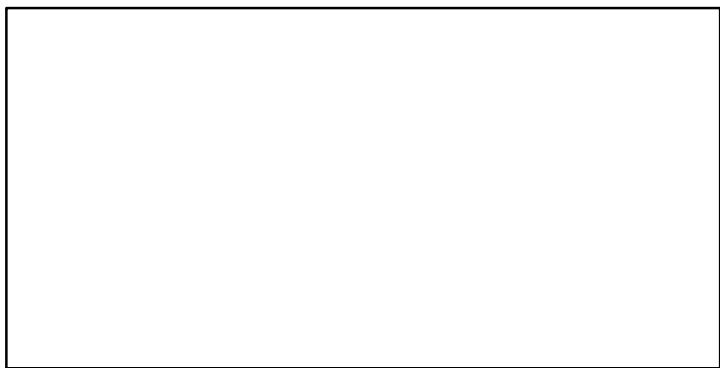
**TB\***



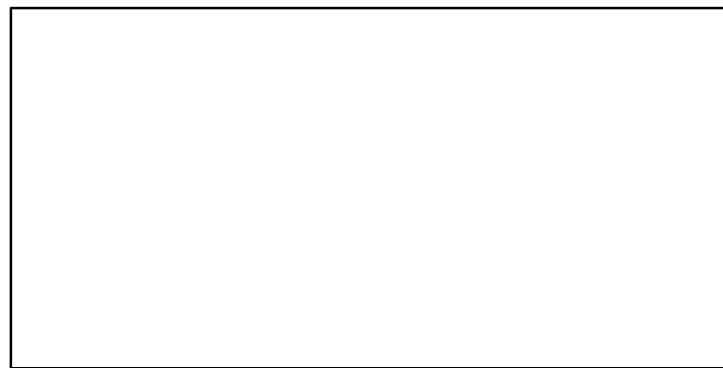
**SSB\***



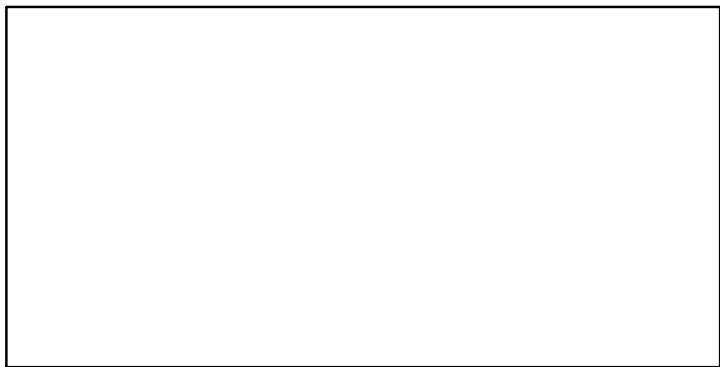
**TN \***



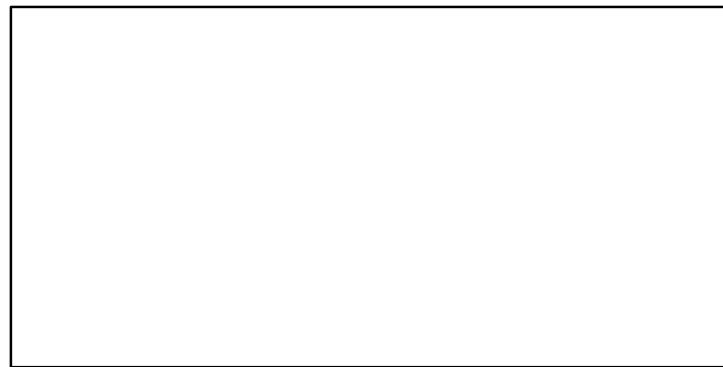
**F\***



**ER\***



**Recruits\***

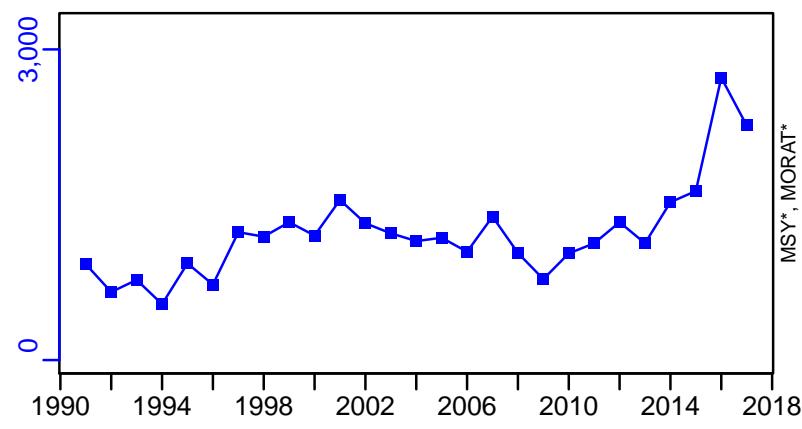


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

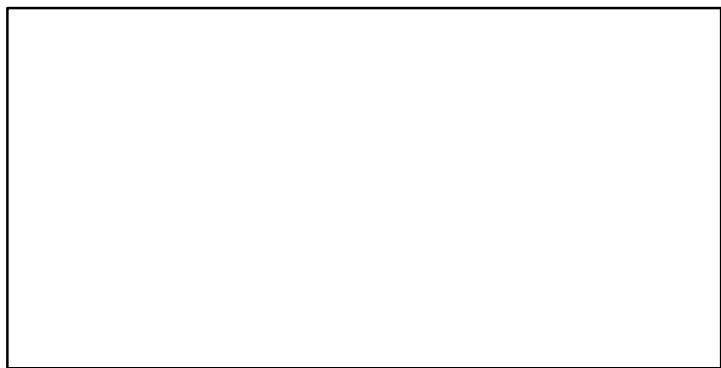
Norway lobster Botney Cut – Silver Pit (FU 5) [NEPHFU5]

TL-MT, TC\*, RecC\* (1991–2017–ICESIMP2018)

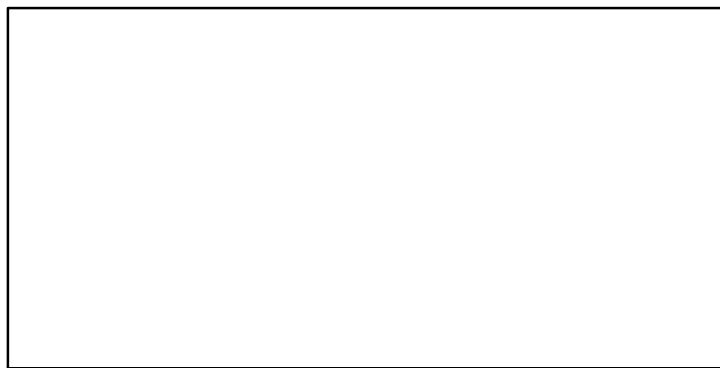
TAC\*, Cpair\*, Cadv\*



survB\*



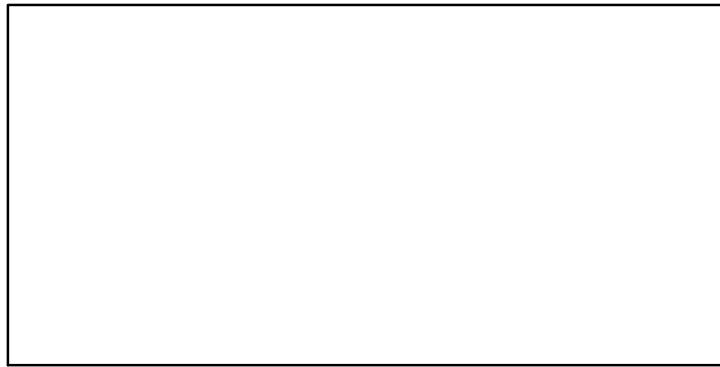
CPUE\*



EFFORT\*



CdivMSY\*



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

## Norway lobster Farm Deeps (FU 6) [NEPHFU6]

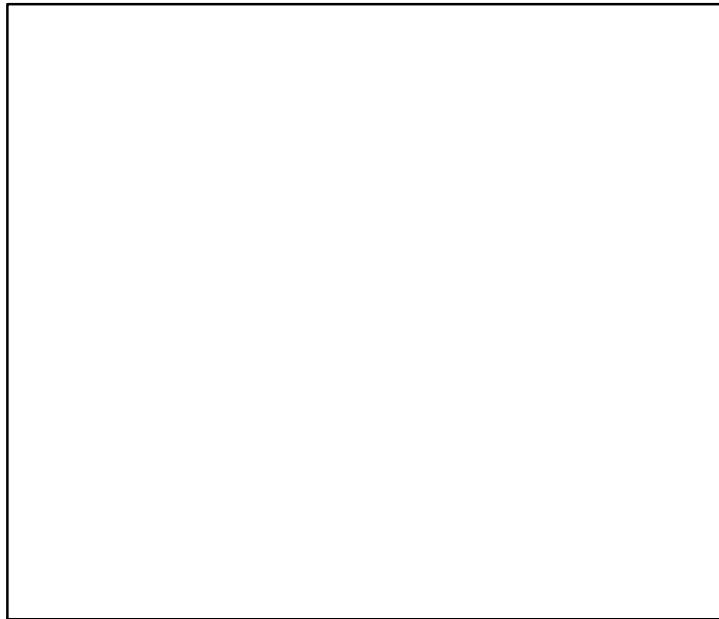
Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHFU6-1981-2016-ICESIMP2018
<b>Area</b>	Farn Deeps (FU 6)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2015, 2016, 2016

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.081
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2016	0.081
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

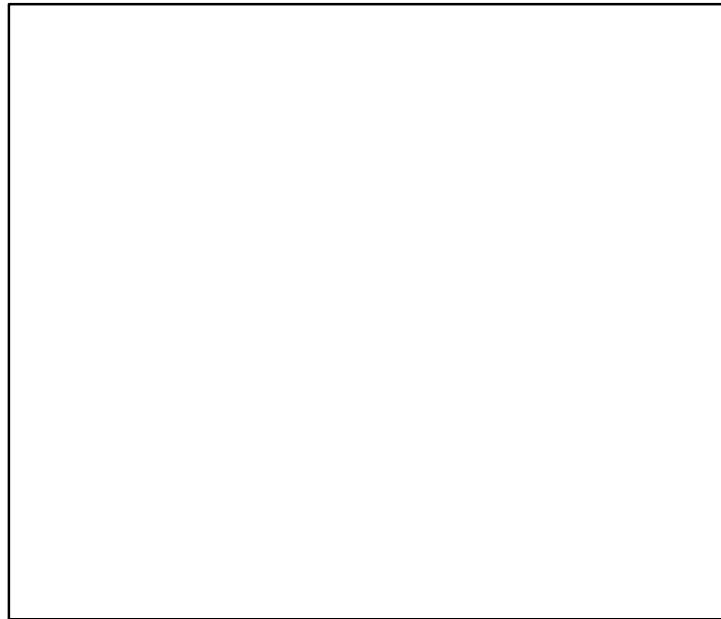
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-	-
<b>TN</b>	-	-	-	-	-	-
<b>R</b>	-	-	-	-	-	-
<b>F</b>	-	-	-	-	-	-
<b>ER</b>	ER-ratio	2016	0.116	-	-	-
<b>TC</b>	TC-MT	2016	2130			
<b>TL</b>	TL-MT	2016	1370			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	1.432			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Norway lobster Farm Deeps (FU 6) [NEPHFU6]

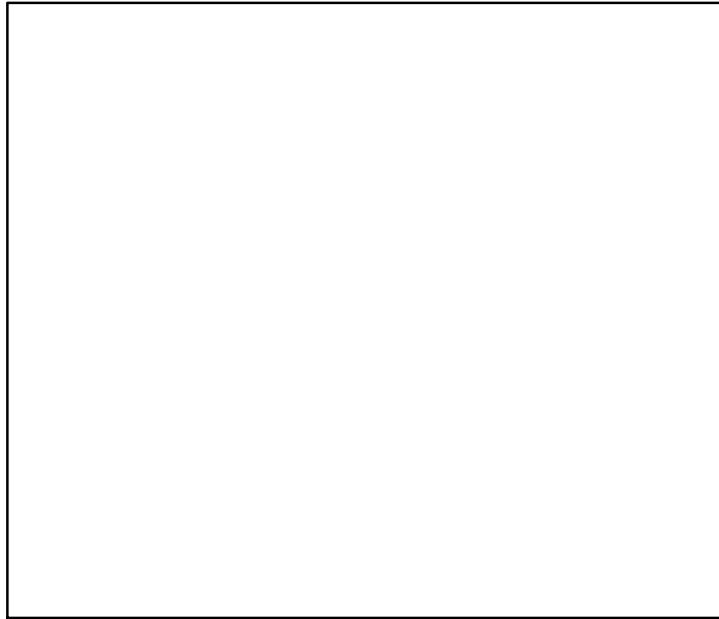
**Kobe MSY\***



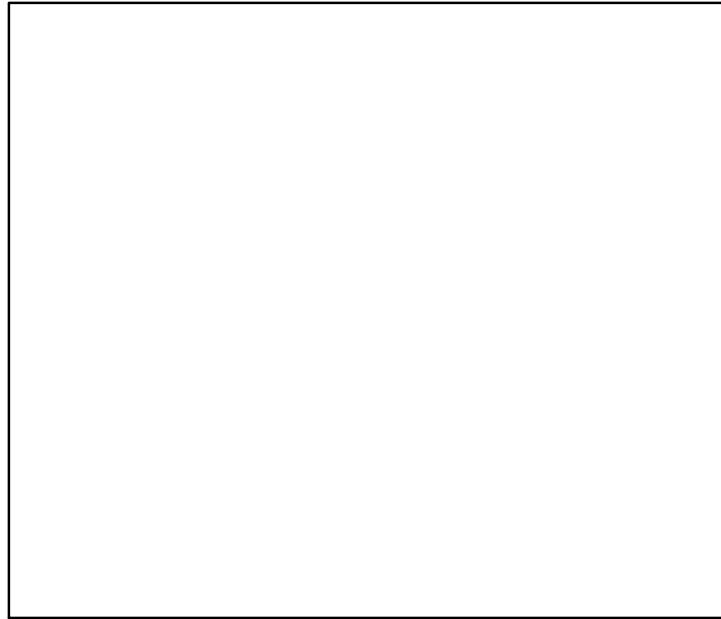
**Kobe MGT\***



**Spawner Recruit\***



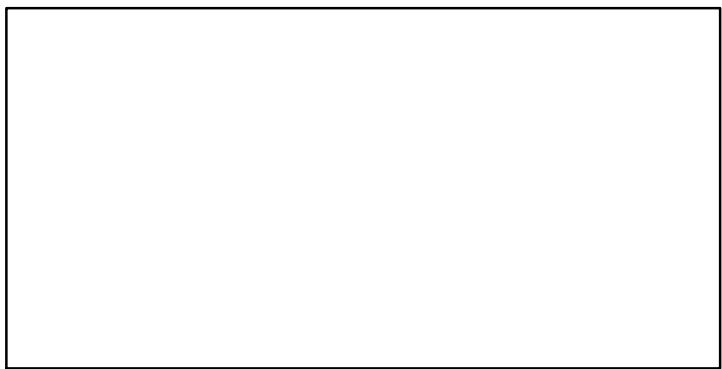
**Production\***



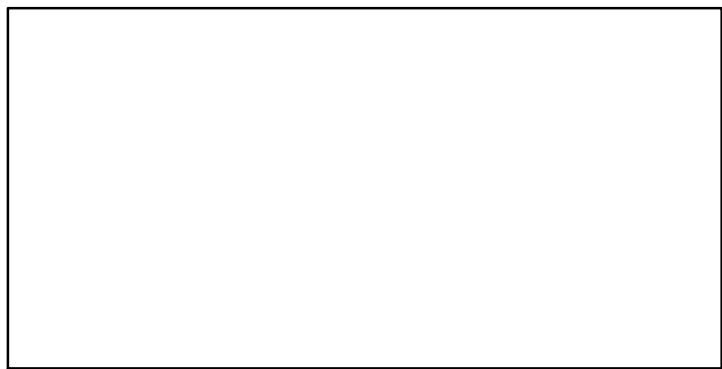
◆ Start Year ♦ End Year \* No Data

Norway lobster Farm Deeps (FU 6) [NEPHFU6]

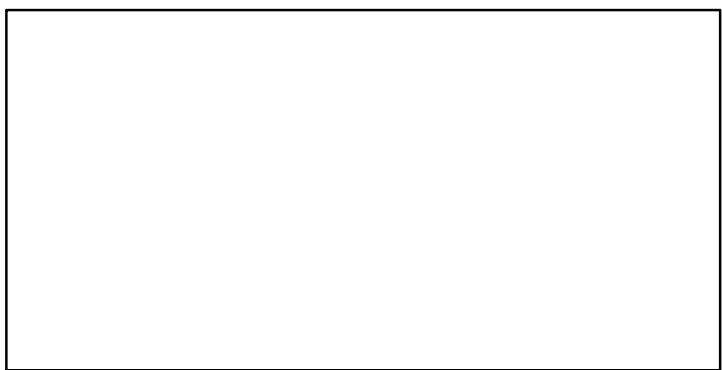
**TB\***



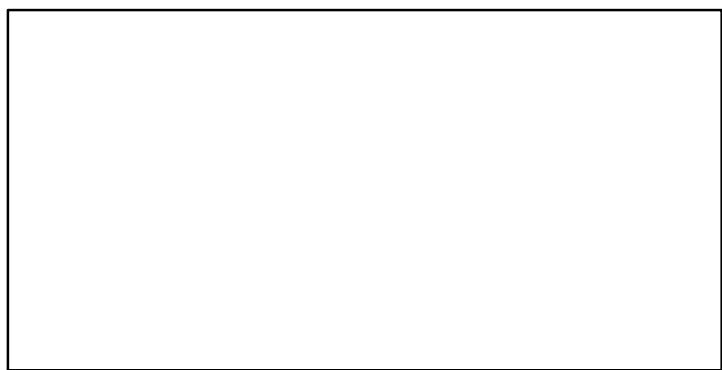
**SSB\***



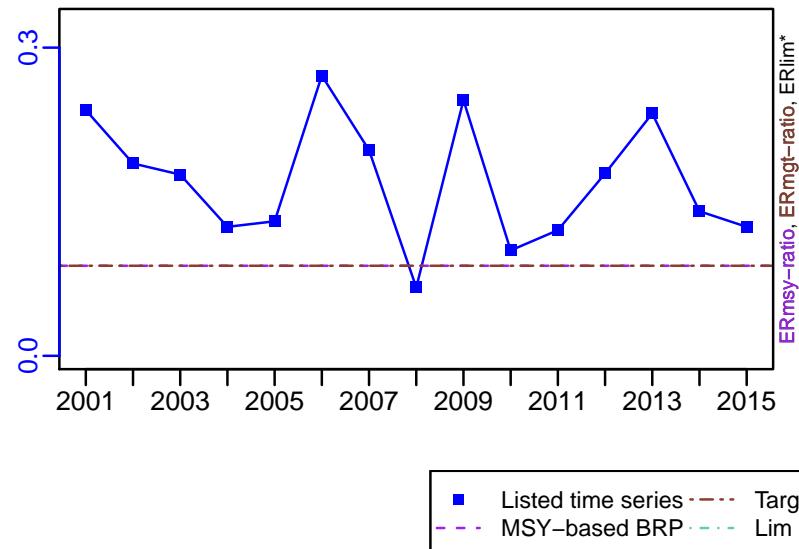
**TN \***



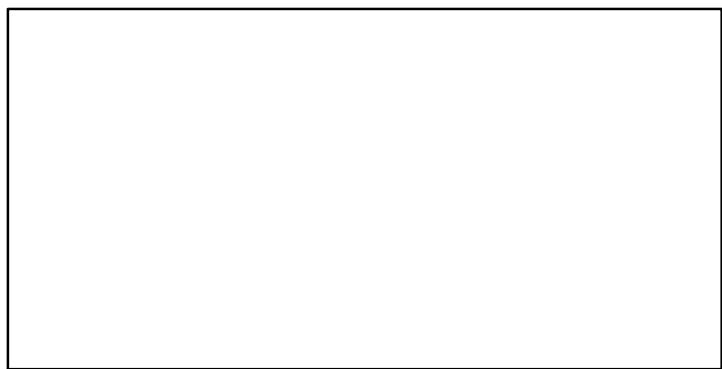
**F\***



**ER-ratio (1981–2016–ICESIMP2016)**



**Recruits\***

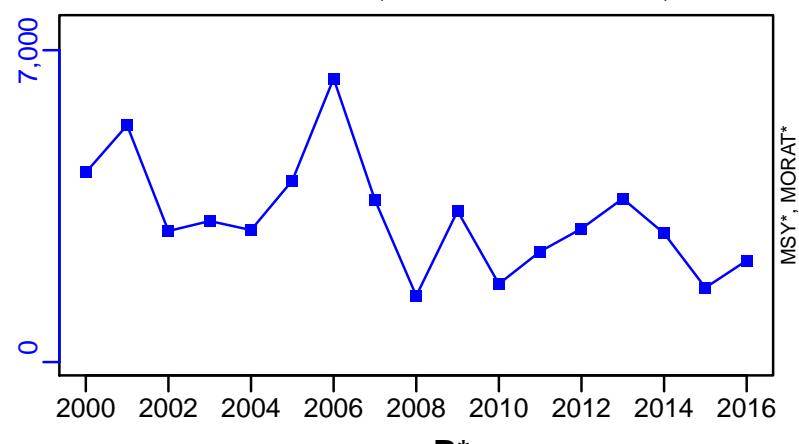


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	·· Lim BRP	* No Data

Norway lobster Farm Deeps (FU 6) [NEPHFU6]

TC-MT, TL\*, RecC\* (1981–2016–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



survB\*

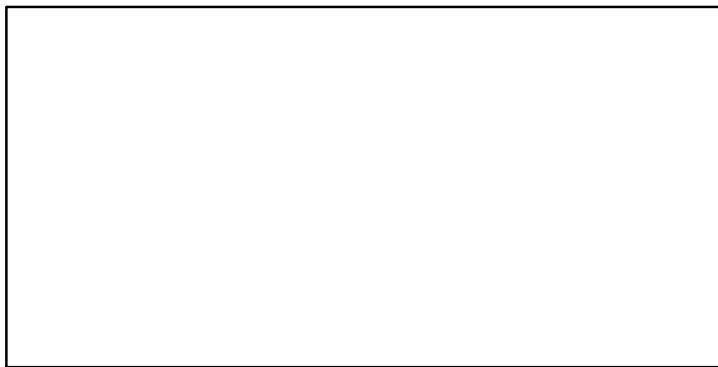
MSY\*, MORAT\*



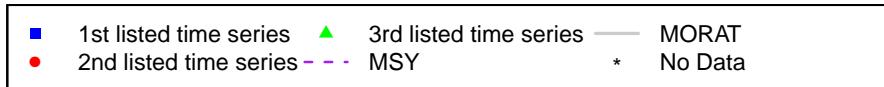
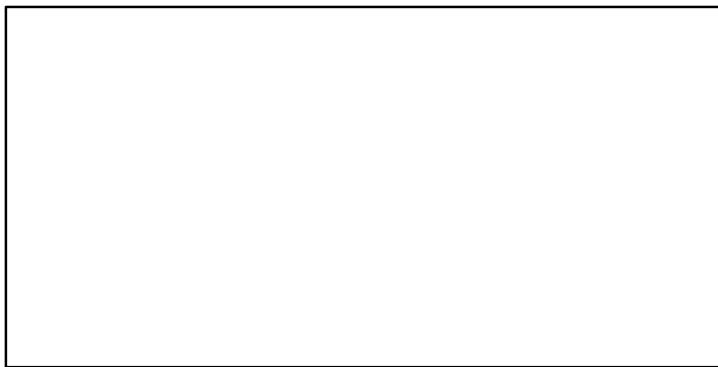
CPUE\*



EFFORT\*



CdivMSY\*



## Norway lobster Fladen Ground (FU 7) [NEPHFU7]

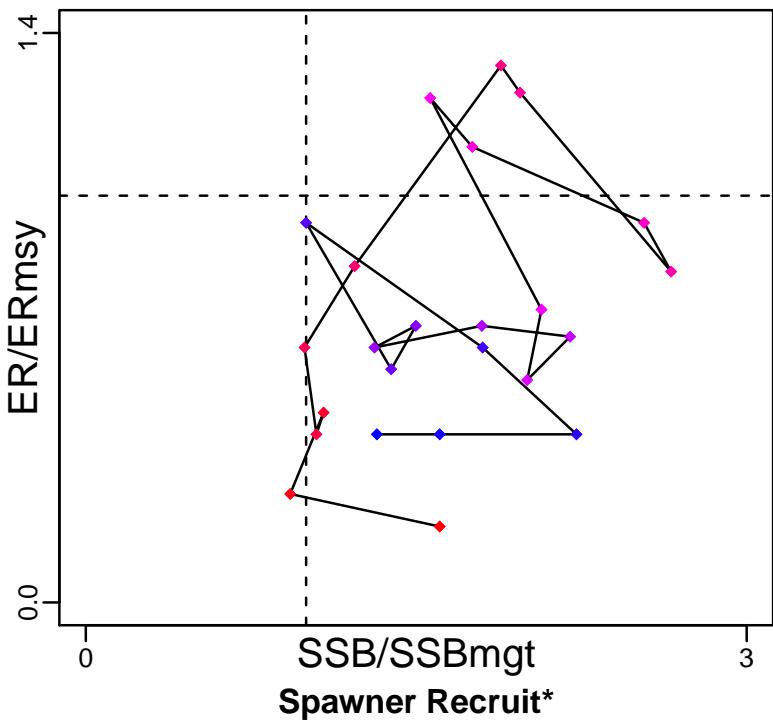
Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHFU7-1992-2019-ICESIMP2021
<b>Area</b>	Fladen Ground (FU 7)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2015, 2016, 2016, 2017, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2016	7.5
<b>ERmsy</b>	ERmsy-ratio	2017	0.075
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-E00	2017	$2.77 \times 10^9$
<b>Fmgt</b>	Fmgt-1/yr	2016	7.5
<b>ERmgt</b>	ERmgt-ratio	2019	0.075
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

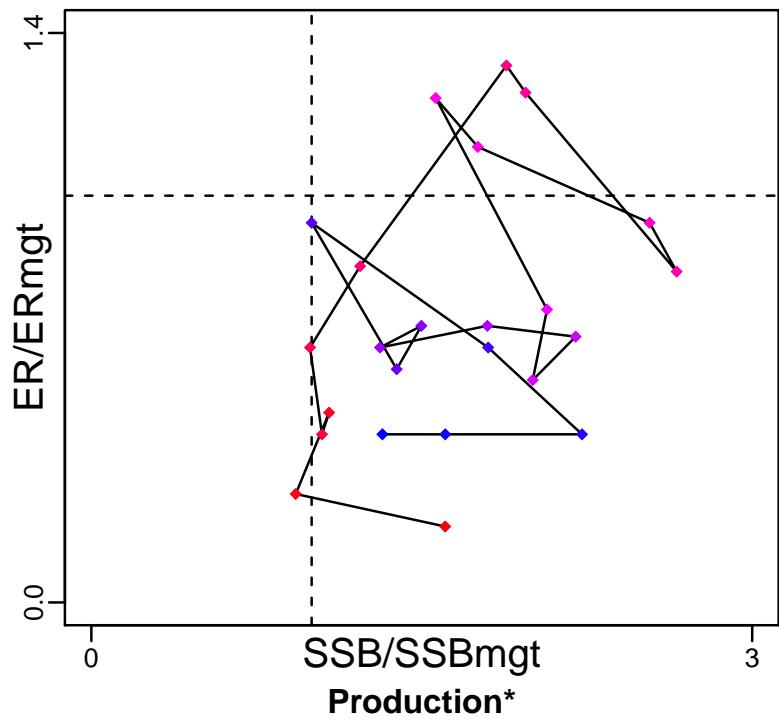
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	SSB-E00	2017	$7.04 \times 10^9$	Both	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	F-1/yr	2016	2	-	-	
<b>ER</b>	ER-ratio	2019	0.028	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2019	4418			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2016	0.267			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2017	0.187			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-E00/SSBmgt-E00	2017	2.542			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	0.267			
<b>ER/ERmgt</b>	-	-	-			

Norway lobster Fladen Ground (FU 7) [NEPHFU7]

Kobe MSYpref (1992–2017–ICESIMP2018)



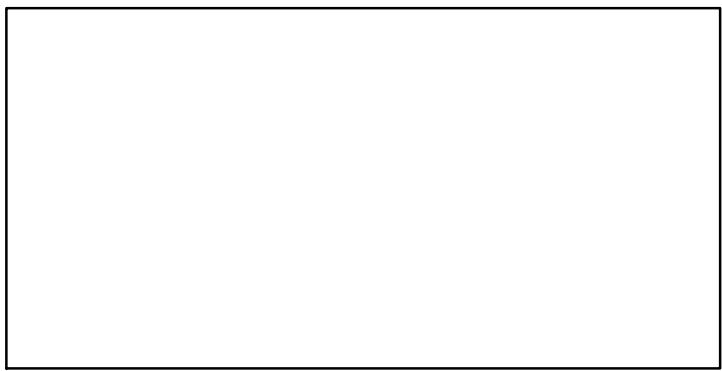
Kobe MGTpref (1992–2017–ICESIMP2018)



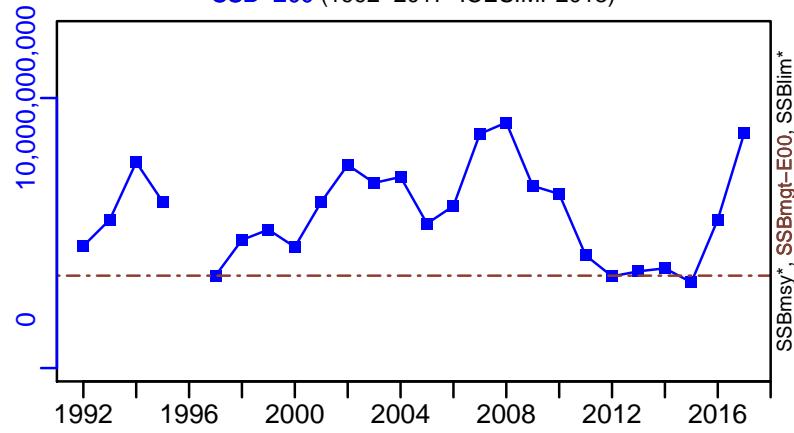
◆ Start Year   ◆ End Year   \* No Data

Norway lobster Fladen Ground (FU 7) [NEPHFU7]

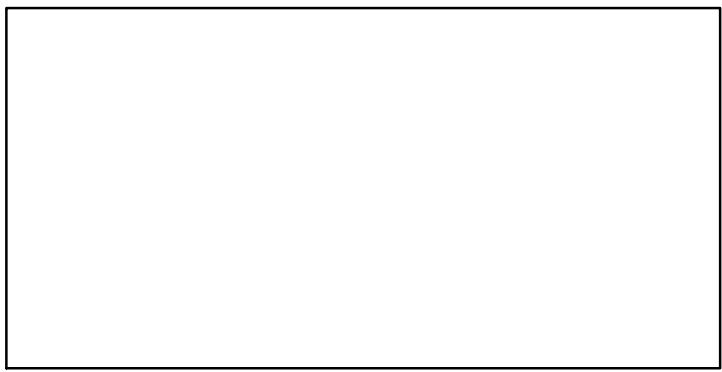
**TB\***



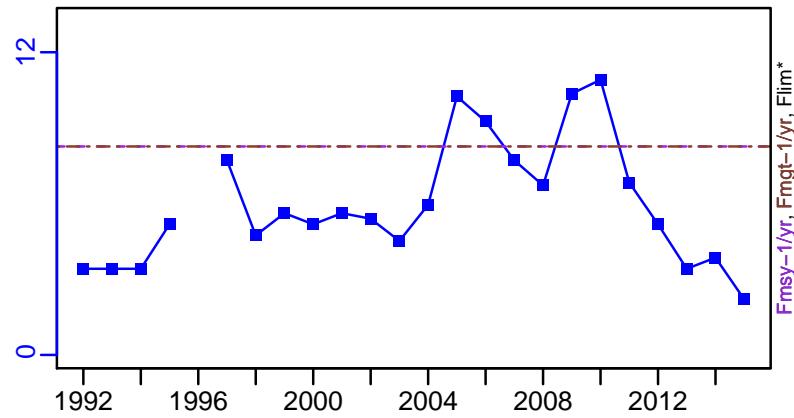
SSB-E00 (1992–2017–ICESIMP2018)



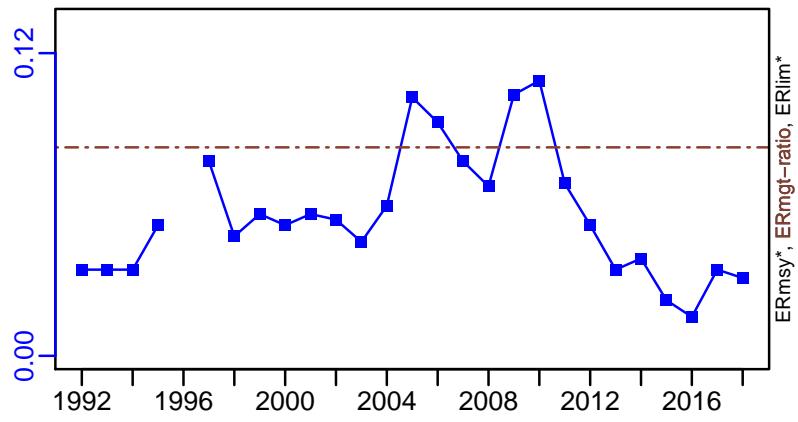
**TN \***



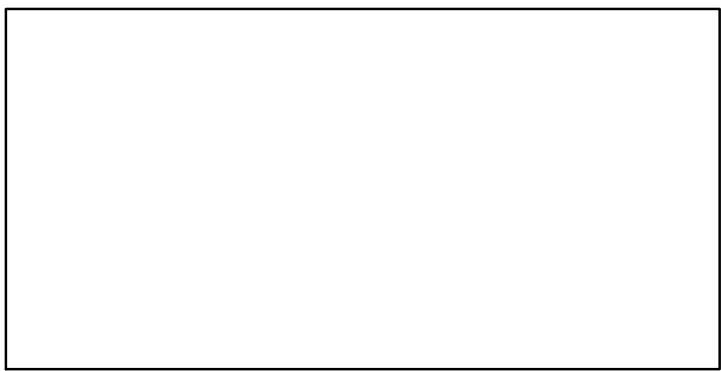
F-1/yr (1992–2016–ICESIMP2018)



ER-ratio (1992–2019–ICESIMP2021)



**Recruits\***

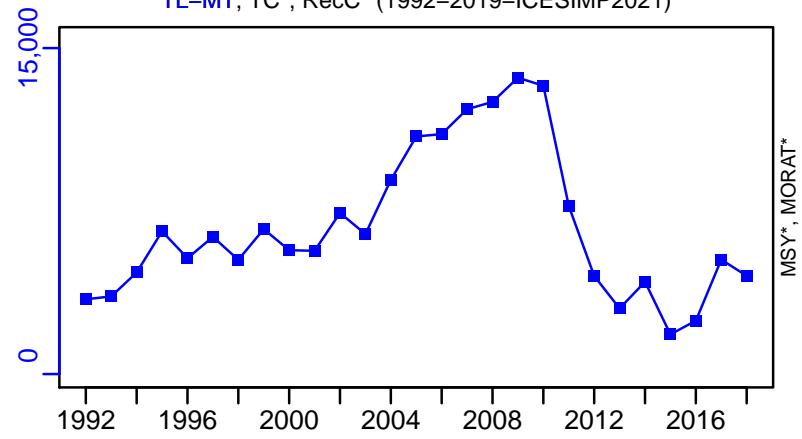


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | --- Lim BRP  | * No Data |

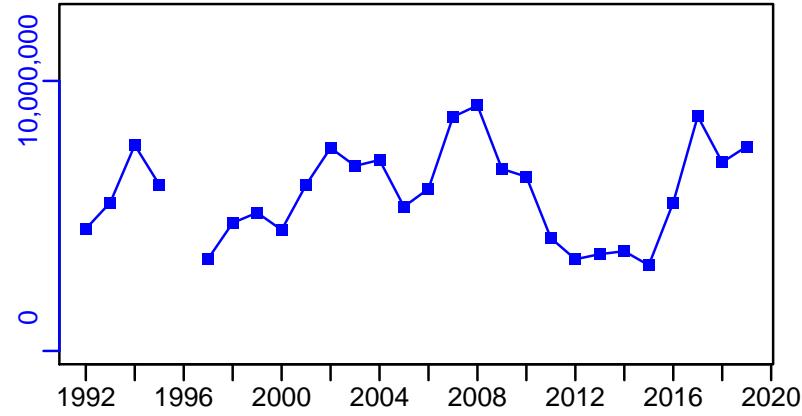
### Norway lobster Fladen Ground (FU 7) [NEPHFU7]

TL-MT, TC\*, RecC\* (1992–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



survB-E00 (1992–2019–ICESIMP2021)



CPUE\*



EFFORT\*



CdivMSY\*



- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>■ 1st listed time series</li> <li>● 2nd listed time series</li> </ul> | <ul style="list-style-type: none"> <li>▲ 3rd listed time series</li> <li>- - - MSY</li> </ul> | <ul style="list-style-type: none"> <li>— MORAT</li> <li>* No Data</li> </ul> |
|--|---|--|

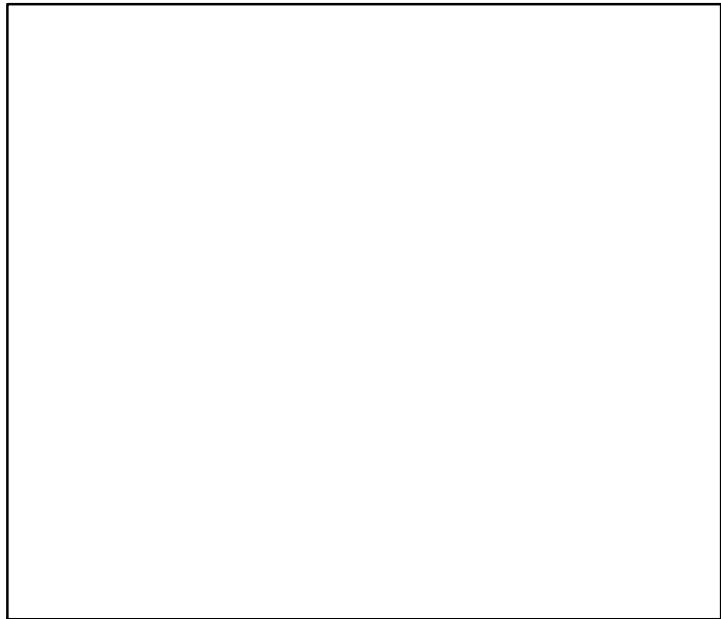
## Norway lobster Firth of Forth (FU 8) [NEPHFU8]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHFU8-1993-2019-ICESIMP2021
<b>Area</b>	Firth of Forth (FU 8)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2015, 2016, 2016, 2019

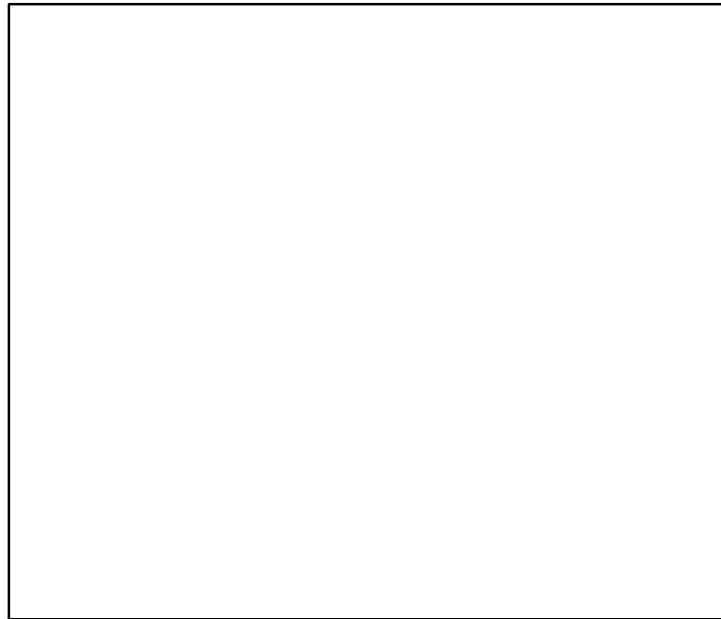
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.163
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2019	0.163
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-	-
<b>TN</b>	-	-	-	-	-	-
<b>R</b>	-	-	-	-	-	-
<b>F</b>	-	-	-	-	-	-
<b>ER</b>	ER-ratio	2019	0.129	-	-	-
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2019	2690			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	1.031			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

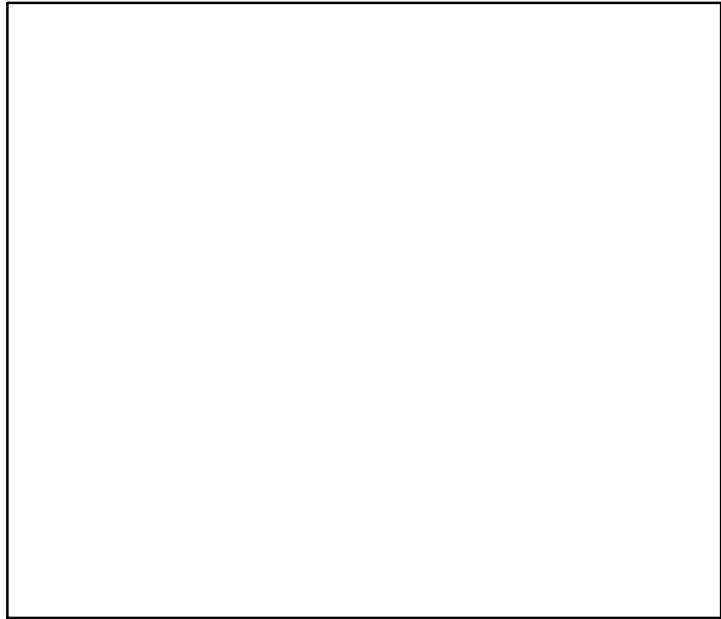
**Kobe MSY\***



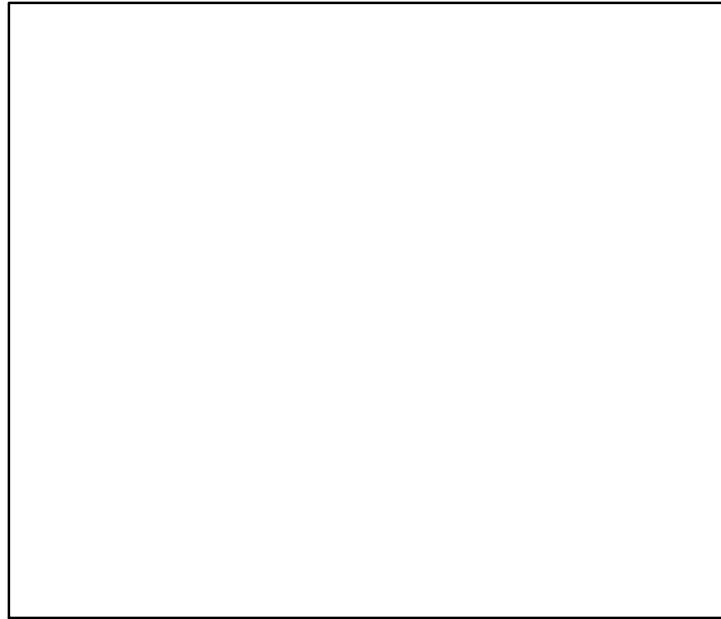
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



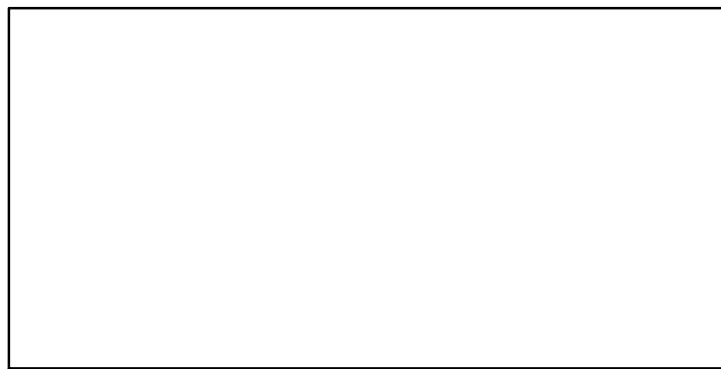
◆ Start Year ♦ End Year \* No Data

Norway lobster Firth of Forth (FU 8) [NEPHFU8]

**TB\***



**SSB\***



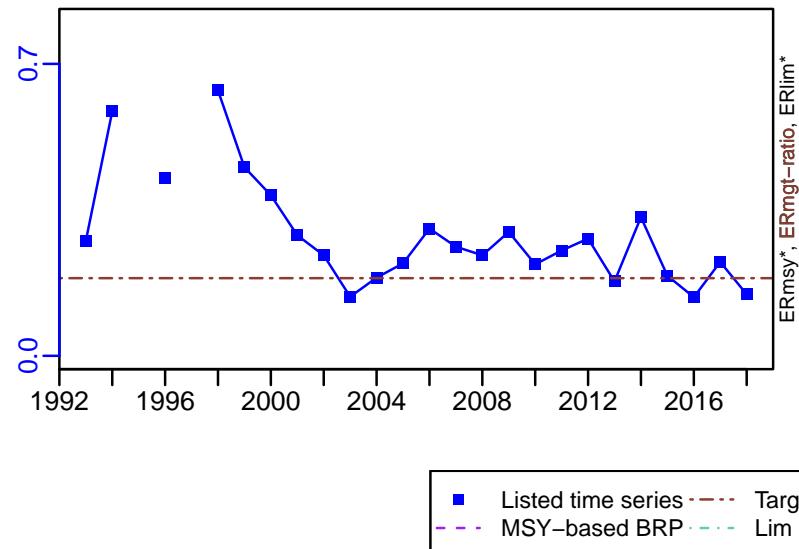
**TN \***



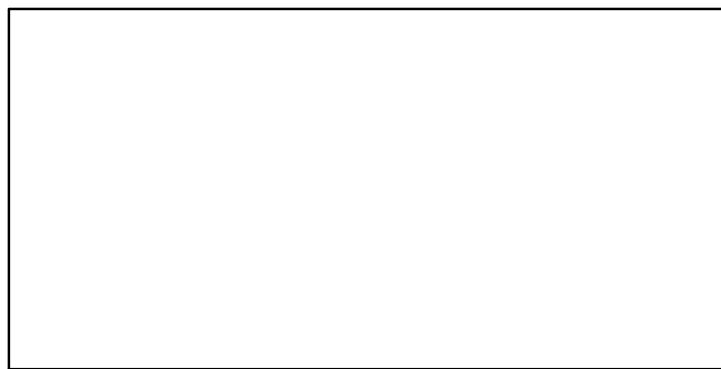
**F\***



**ER-ratio (1993–2019–ICESIMP2021)**



**Recruits\***

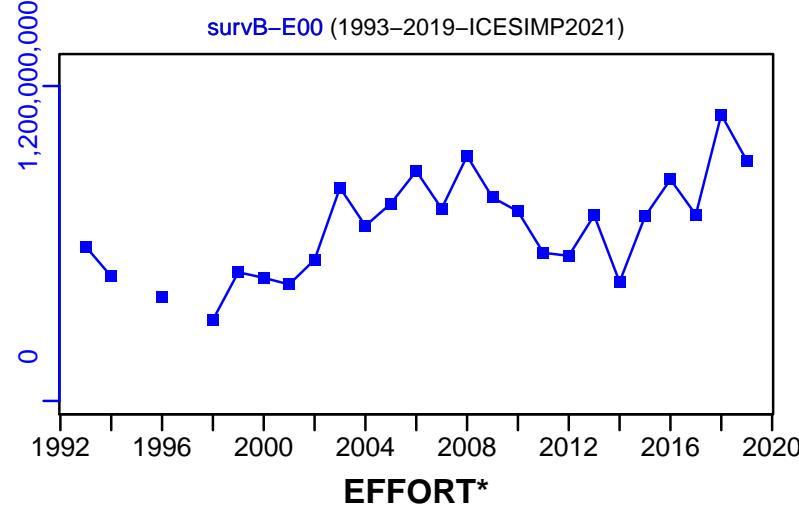
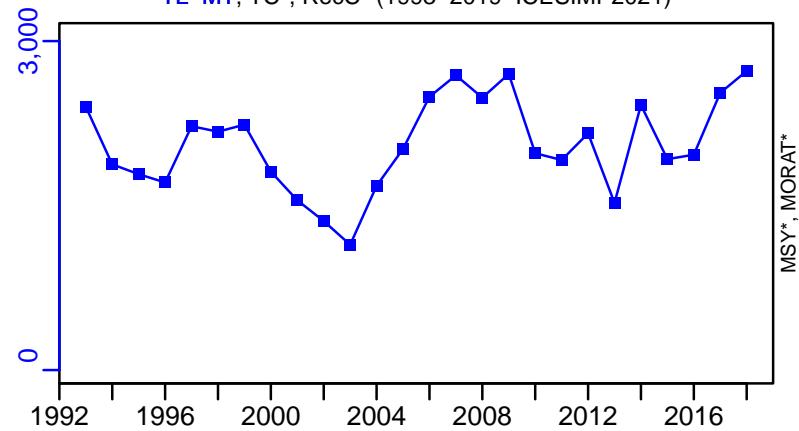


■ Listed time series	--- Target BRP	— Rec-Est
- - MSY-based BRP	·· Lim BRP	* No Data

Norway lobster Firth of Forth (FU 8) [NEPHFU8]

TL-MT, TC\*, RecC\* (1993–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CPUE\*

CdivMSY\*

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

## Norway lobster Moray Firth (FU 9) [NEPHFU9]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHFU9-1993-2018-ICESIMP2021
<b>Area</b>	Moray Firth (FU 9)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2015, 2016, 2016, 2017, 2018

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2017	0.118
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2018	0.118
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.117	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	1399		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2017	0.89		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

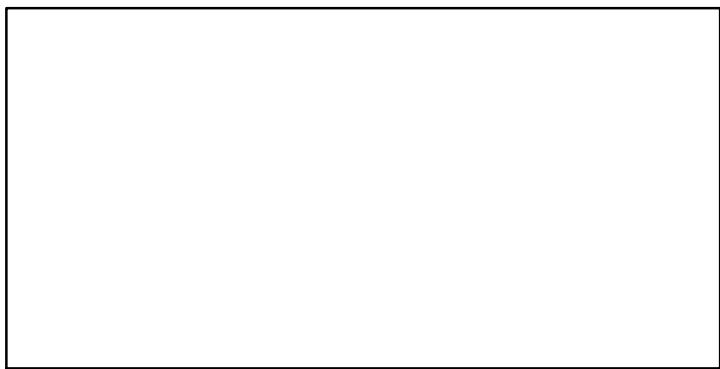
**Spawner Recruit\***

**Production\***

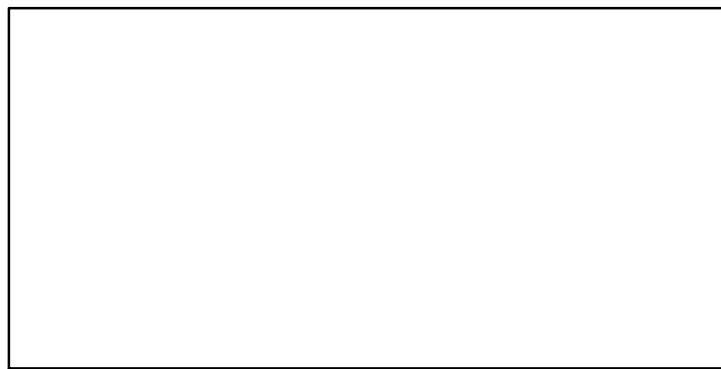
◆ Start Year ◆ End Year \* No Data

Norway lobster Moray Firth (FU 9) [NEPHFU9]

**TB\***



**SSB\***



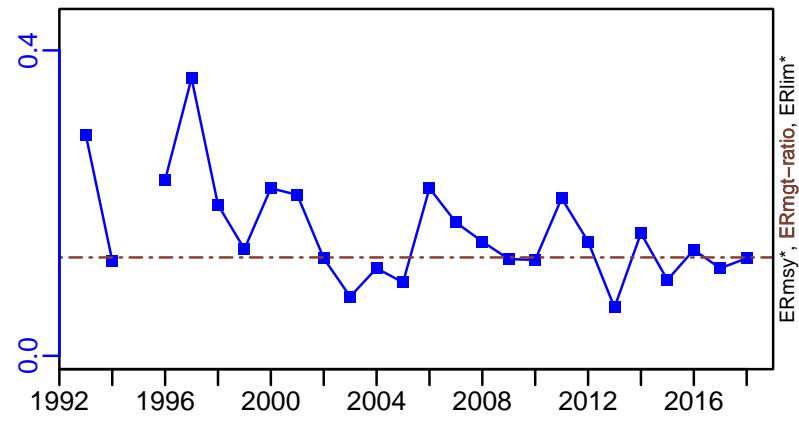
**TN \***



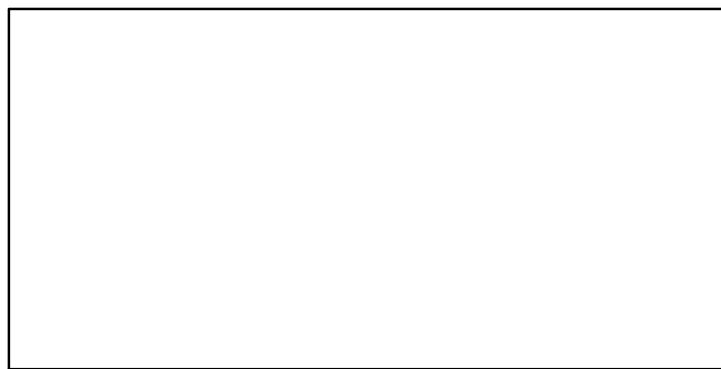
**F\***



**ER-ratio (1993–2018–ICESIMP2021)**



**Recruits\***

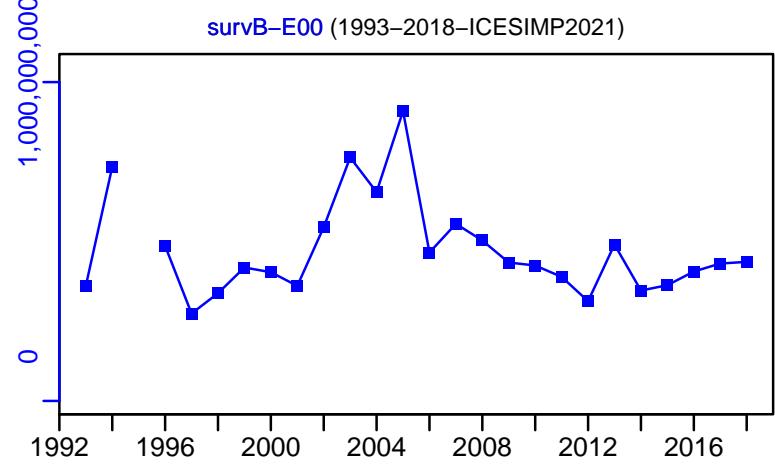
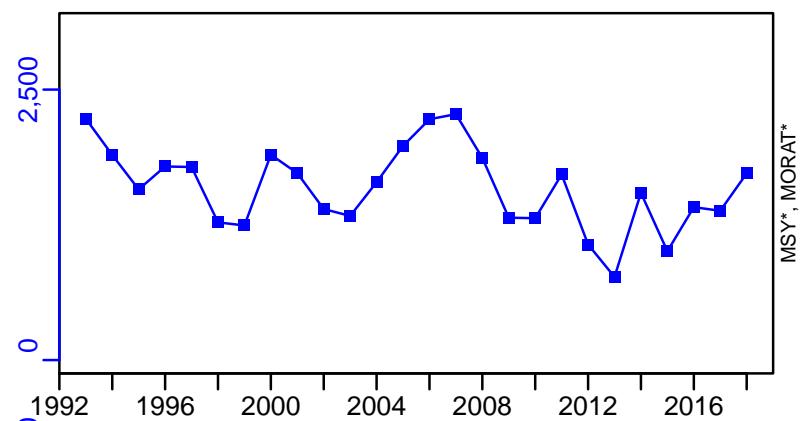


■ Listed time series	--- Target BRP	— Rec-Est
- - MSY-based BRP	·· Lim BRP	* No Data

Norway lobster Moray Firth (FU 9) [NEPHFU9]

TL-MT, TC\*, RecC\* (1993–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CPUE\*

CdivMSY\*

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

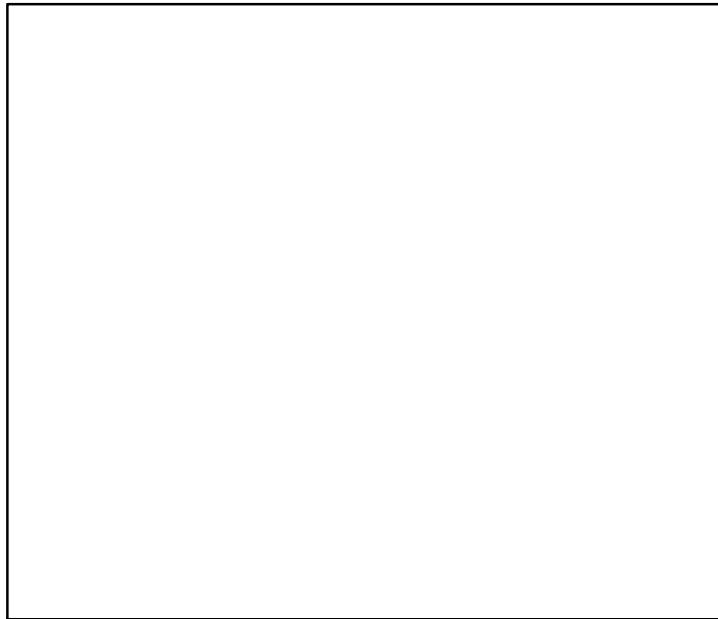
## Norway lobster North Sea [NEPHIV]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGNSSK-NEPHIV-2010-2016-ICESIMP2018
<b>Area</b>	North Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2014, 2016

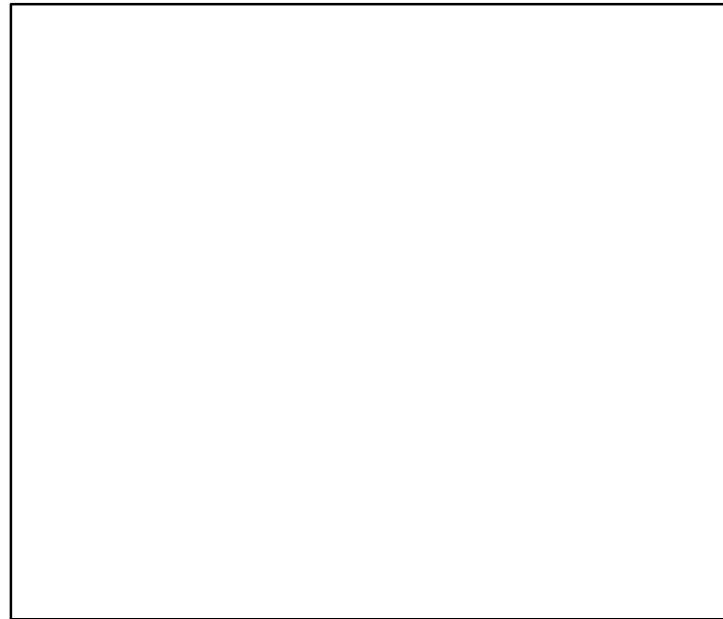
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	966		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

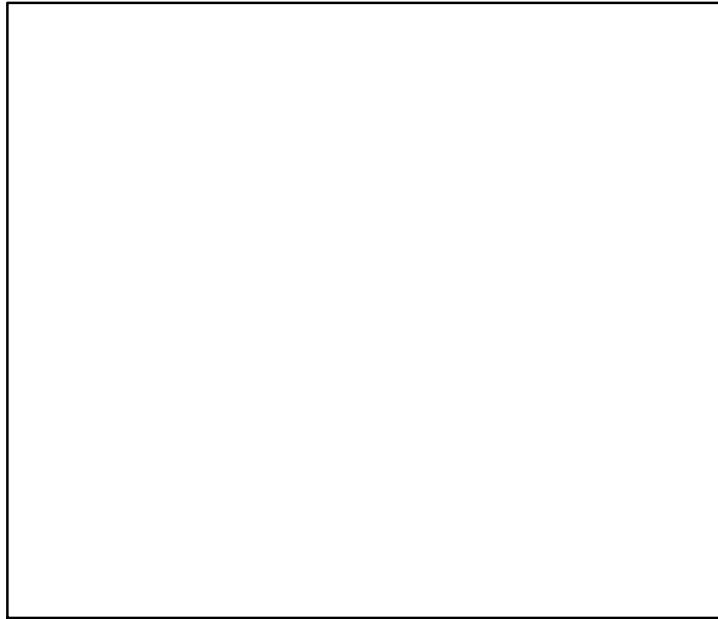
**Kobe MSY\***



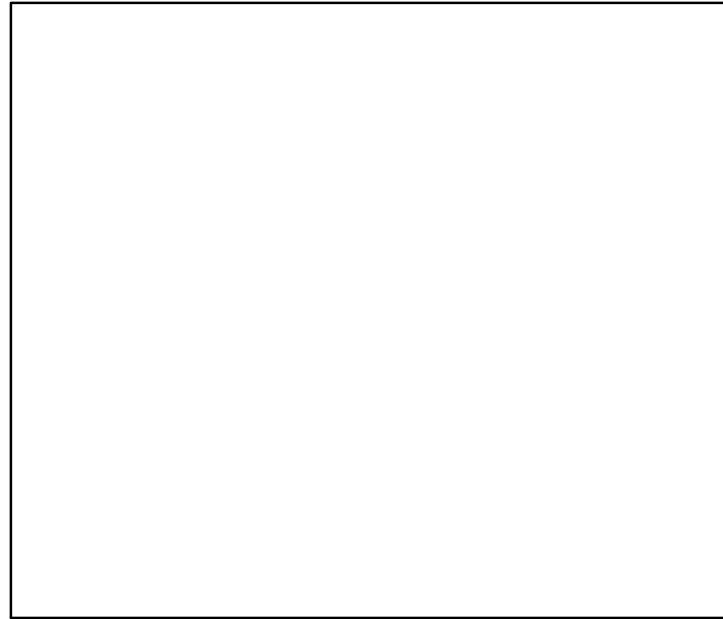
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

Norway lobster North Sea [NEPHIV]

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***



**Recruits\***

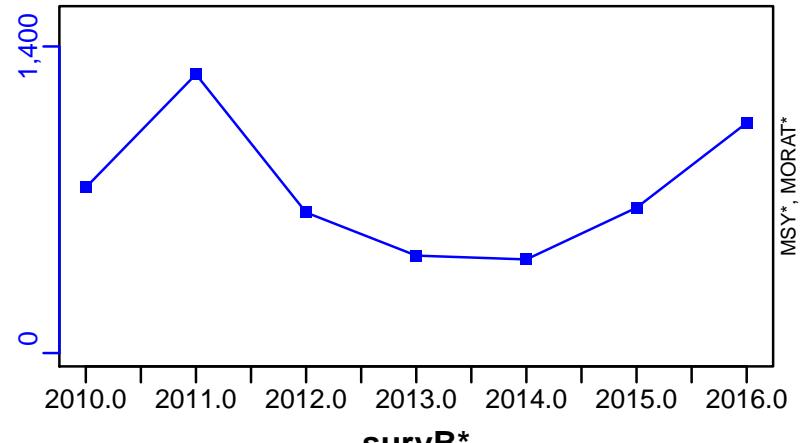


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

Norway lobster North Sea [NEPHIV]

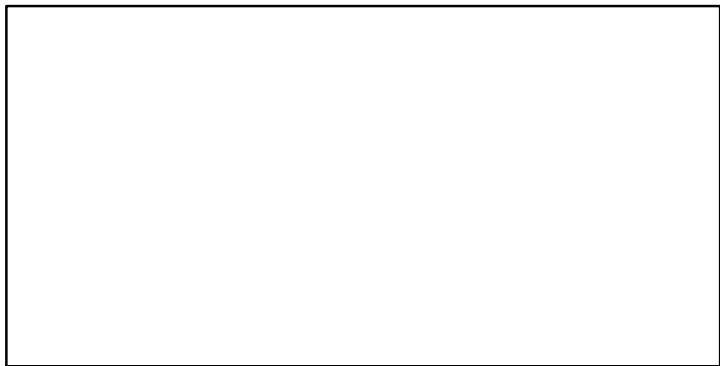
TL-MT, TC\*, RecC\* (2010–2016–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*

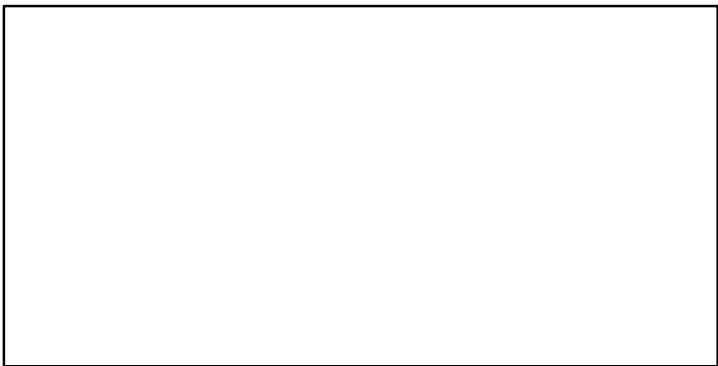


survB\*

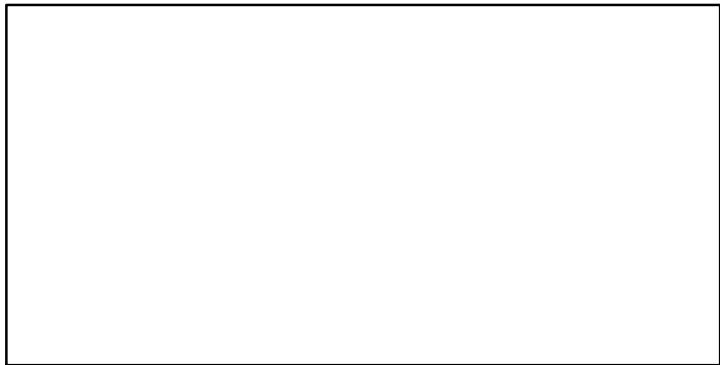
MSY\*, MORAT\*



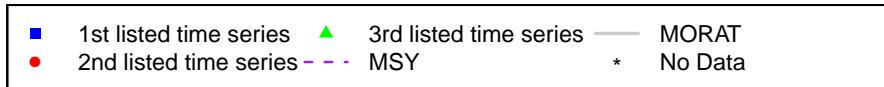
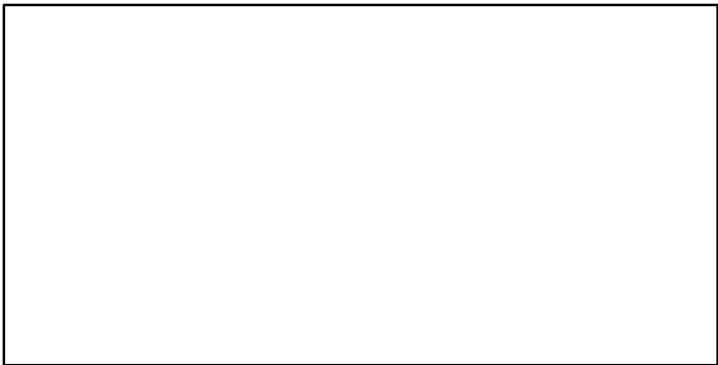
CPUE\*



EFFORT\*



CdivMSY\*



## Norway lobster West of Scotland [NEPHV1a]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHV1a-1981-2016-ICESIMP2018
<b>Area</b>	West of Scotland
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2014, 2016

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	236		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

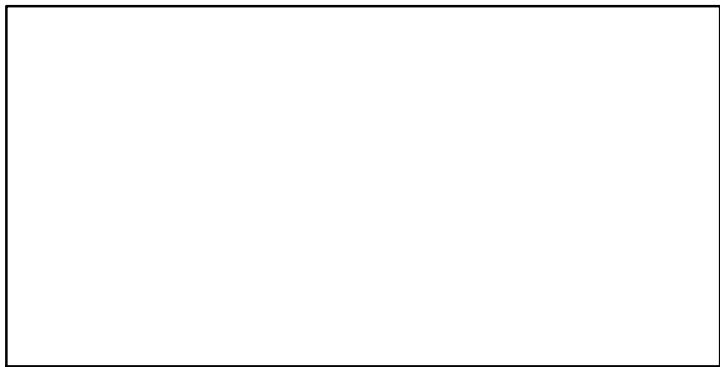
**Spawner Recruit\***

**Production\***

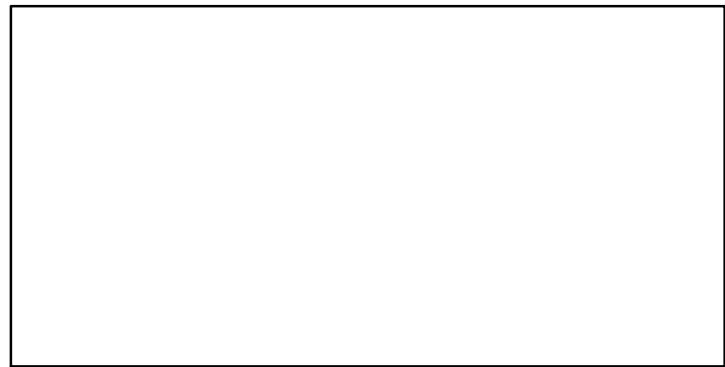
◆ Start Year ♦ End Year \* No Data

Norway lobster West of Scotland [NEPHVla]

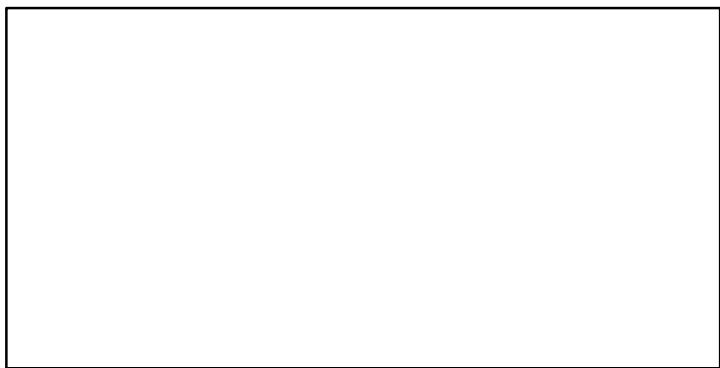
**TB\***



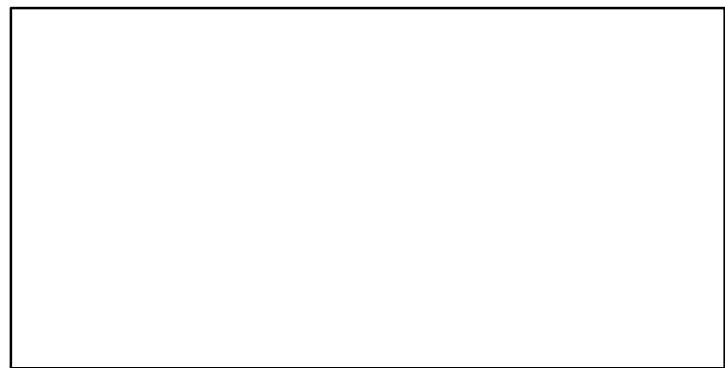
**SSB\***



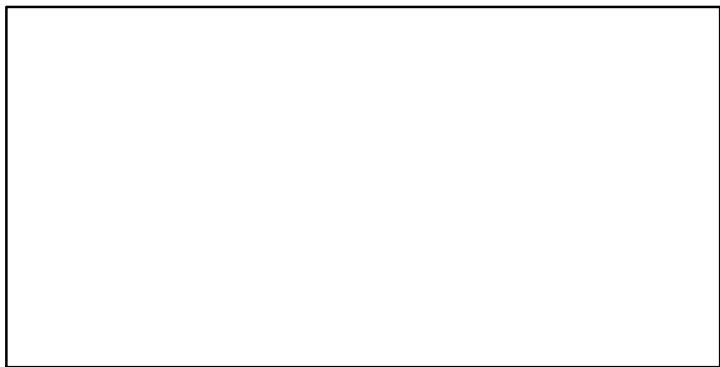
**TN \***



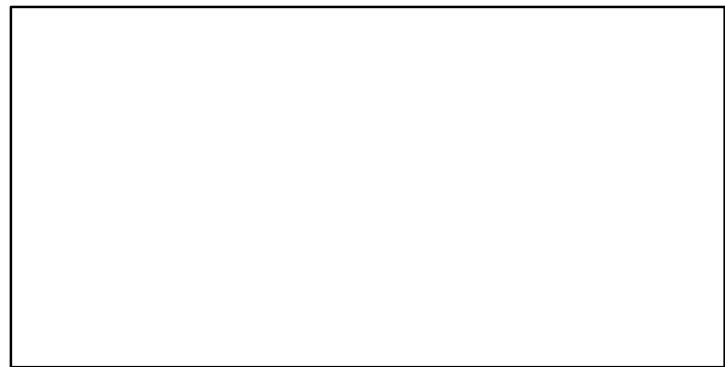
**F\***



**ER\***



**Recruits\***

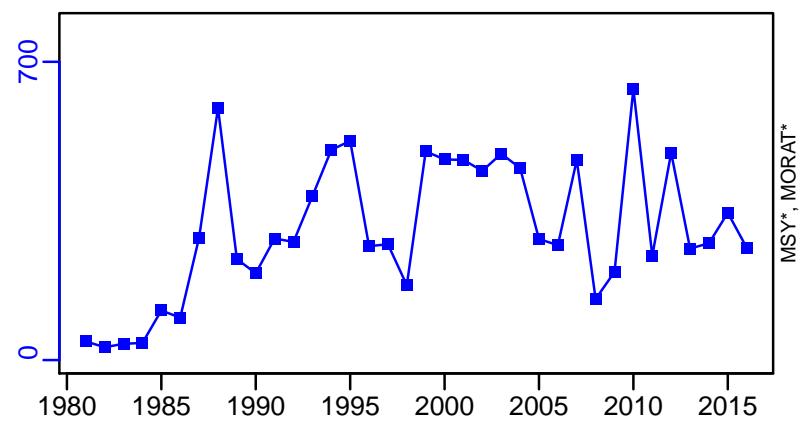


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

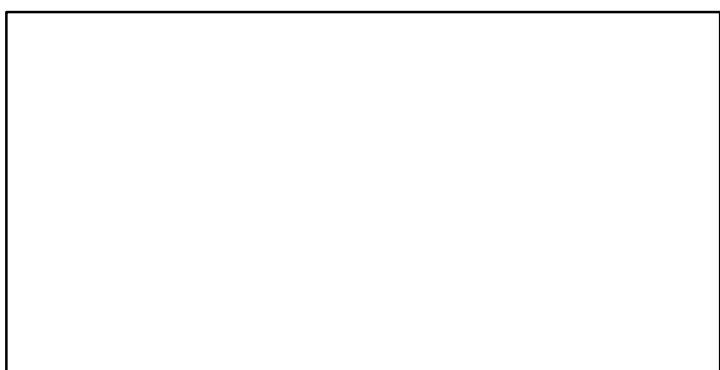
Norway lobster West of Scotland [NEPHVla]

TL-MT, TC\*, RecC\* (1981–2016–ICESIMP2018)

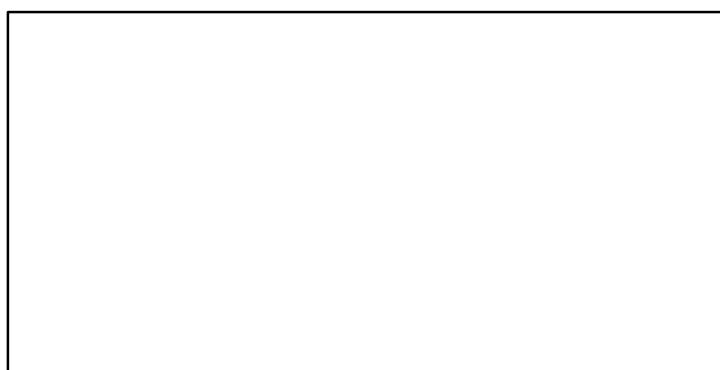
TAC\*, Cpair\*, Cadv\*



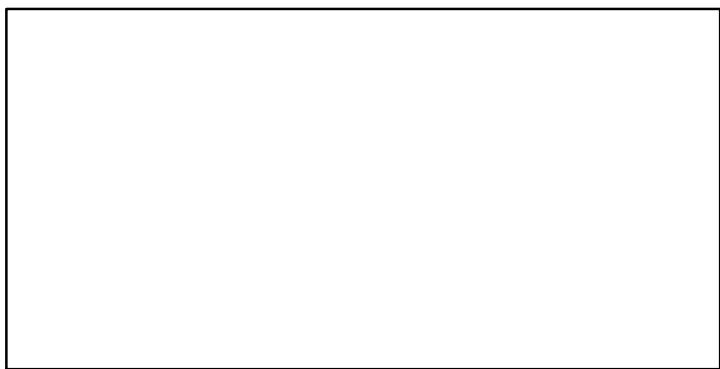
survB\*



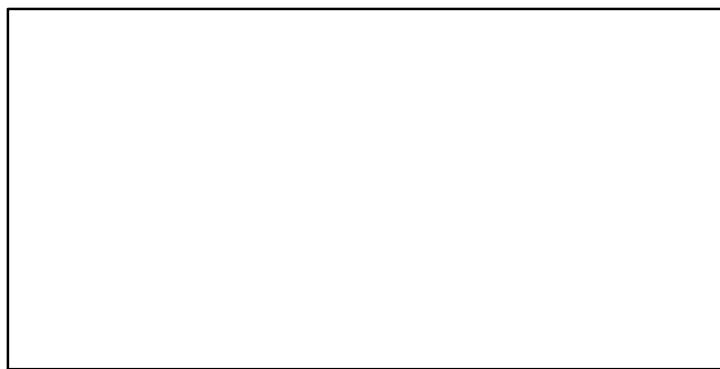
CPUE\*



EFFORT\*



CdivMSY\*



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

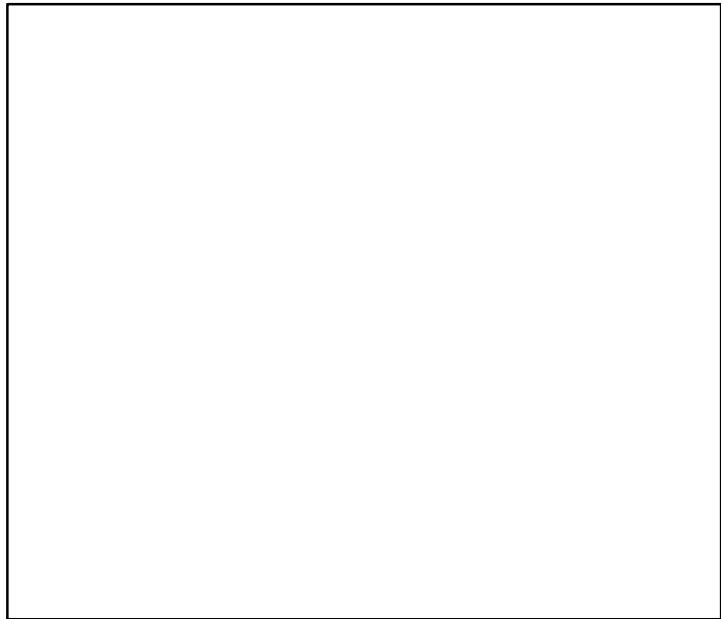
## Norway lobster ICES 7 [NEPHVII]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGCSE-NEPHVII-1978-2016-ICESIMP2018
<b>Area</b>	ICES 7
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2016, 2014

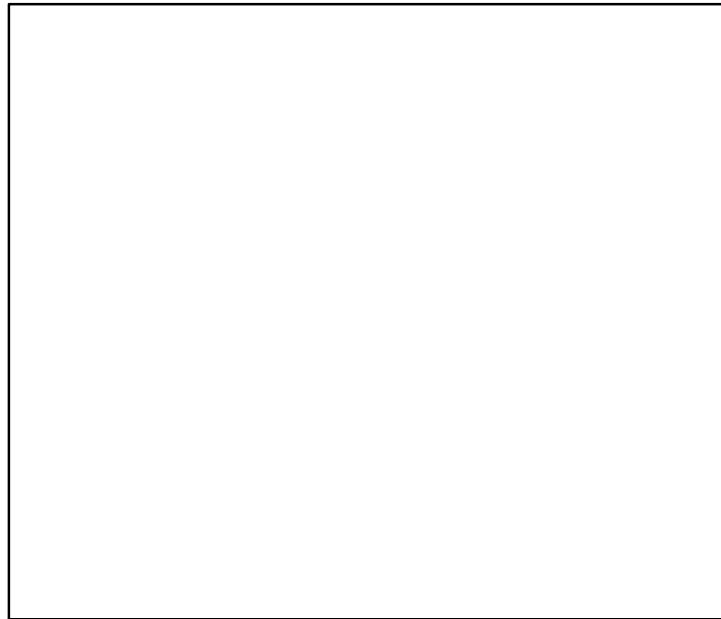
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	119		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

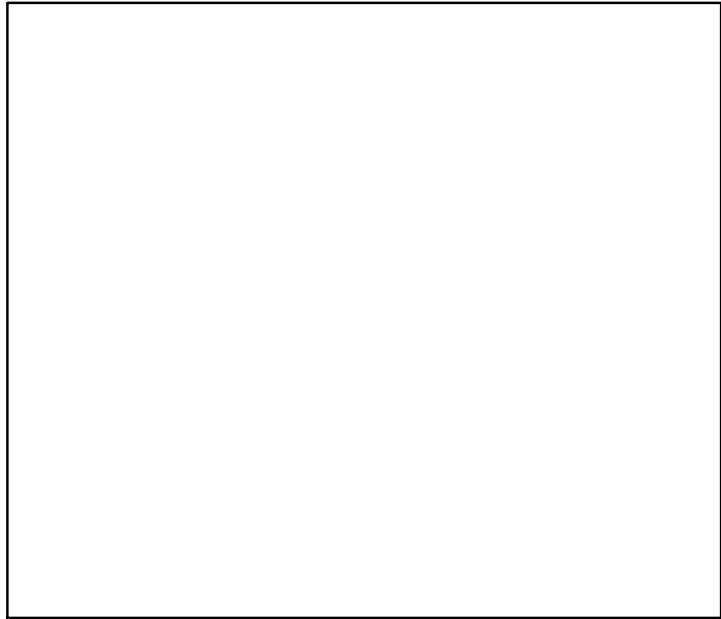
**Kobe MSY\***



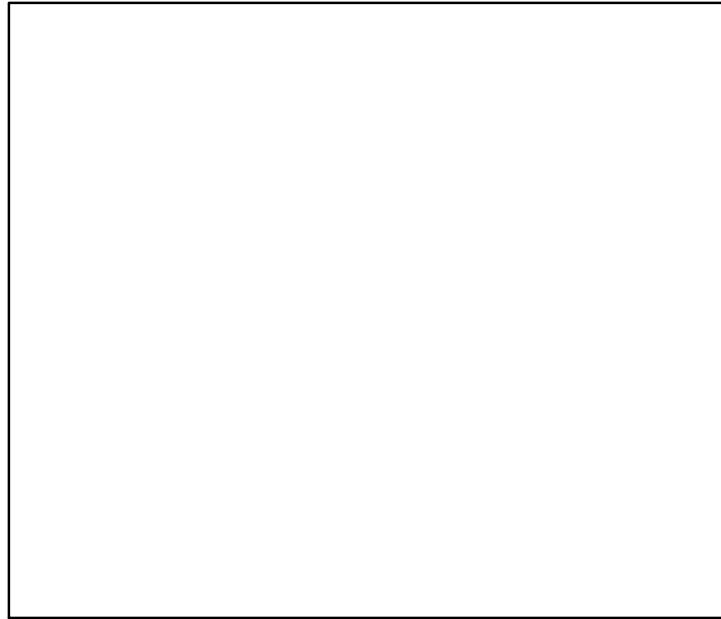
**Kobe MGT\***



**Spawner Recruit\***

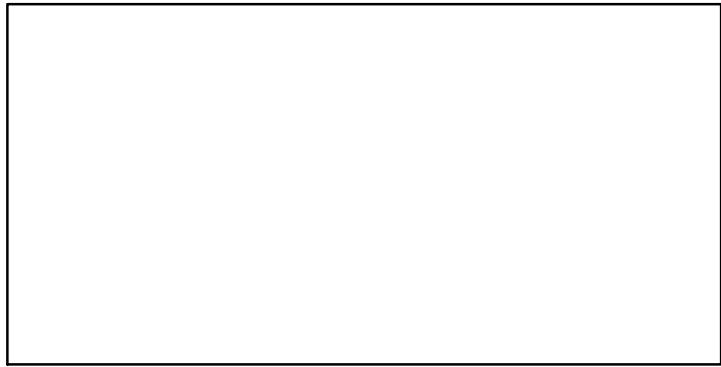


**Production\***

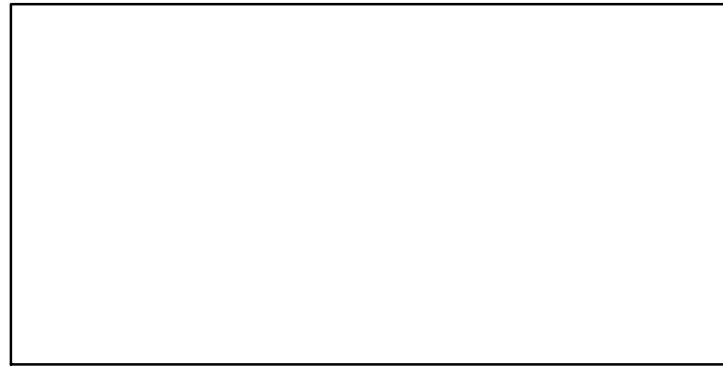


◆ Start Year ♦ End Year \* No Data

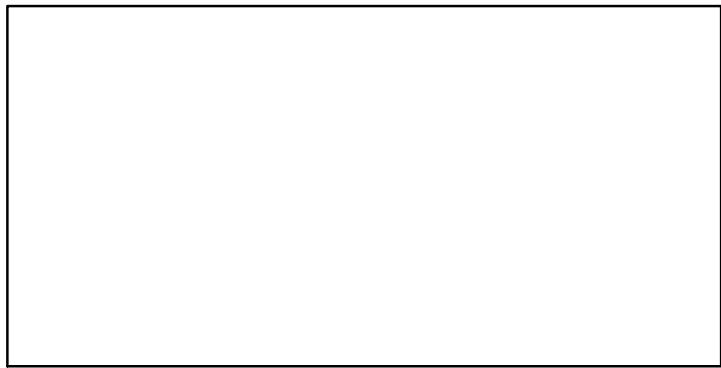
**TB\***



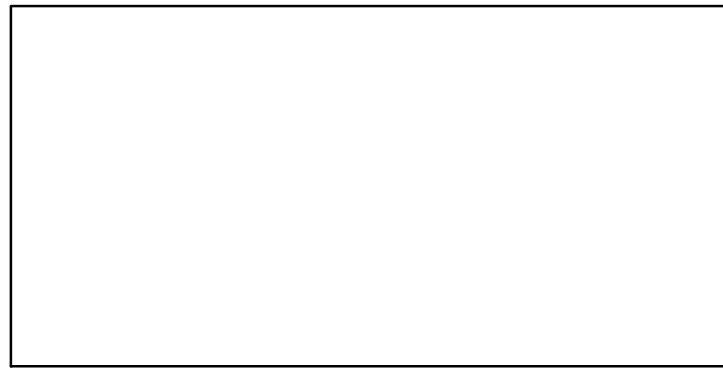
**SSB\***



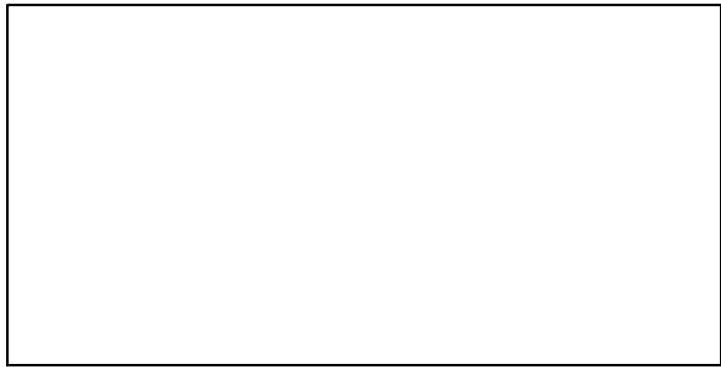
**TN \***



**F\***



**ER\***



**Recruits\***

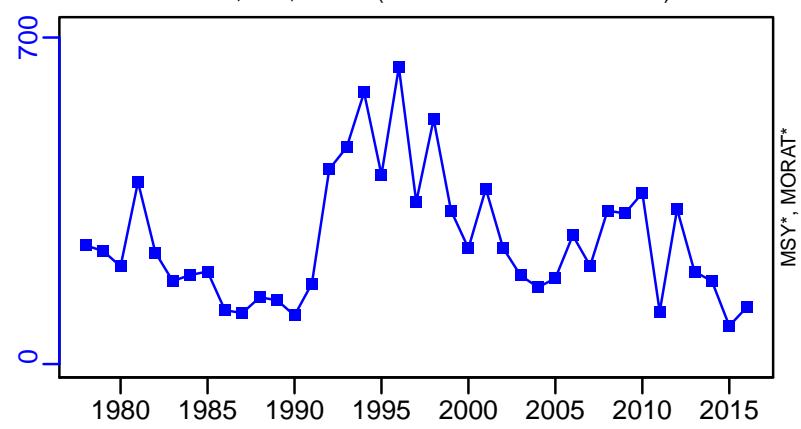


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

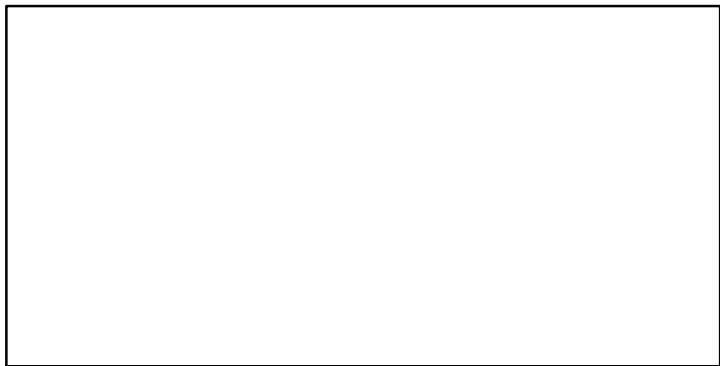
Norway lobster ICES 7 [NEPHVII]

TL-MT, TC\*, RecC\* (1978–2016–ICESIMP2018)

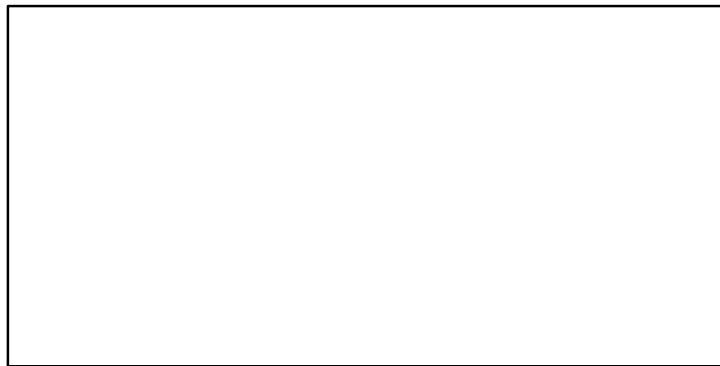
TAC\*, Cpair\*, Cadv\*



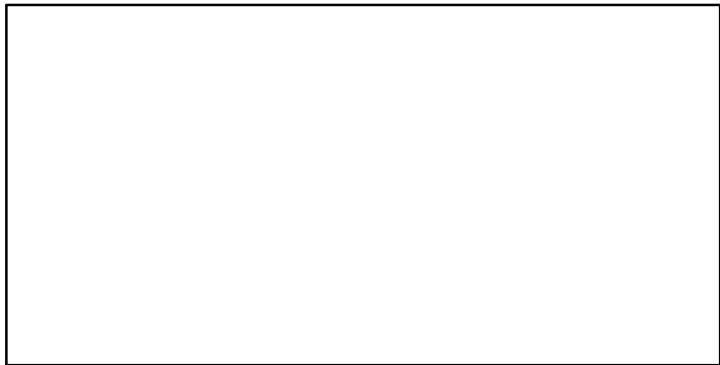
survB\*



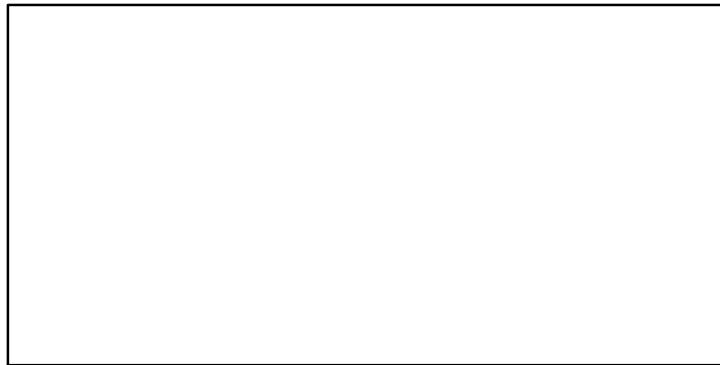
CPUE\*



EFFORT\*



CdivMSY\*



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

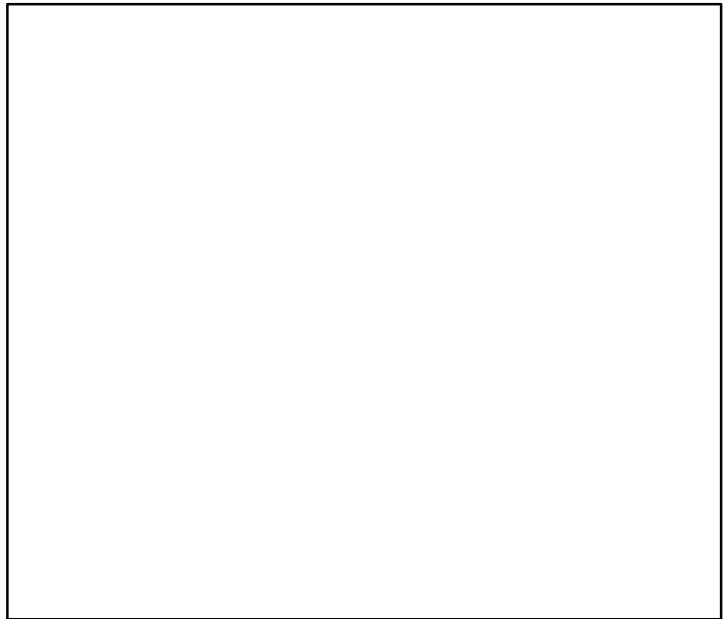
## Norway lobster ICES 8ab [NEPHVIIlab]

Metadata	
<b>Scientific Name</b>	Nephrops norvegicus
<b>Current Assess ID</b>	WGBIE-NEPHVIIlab-1987-2019-ICESIMP2021
<b>Area</b>	ICES 8ab
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2016, 2017, 2019

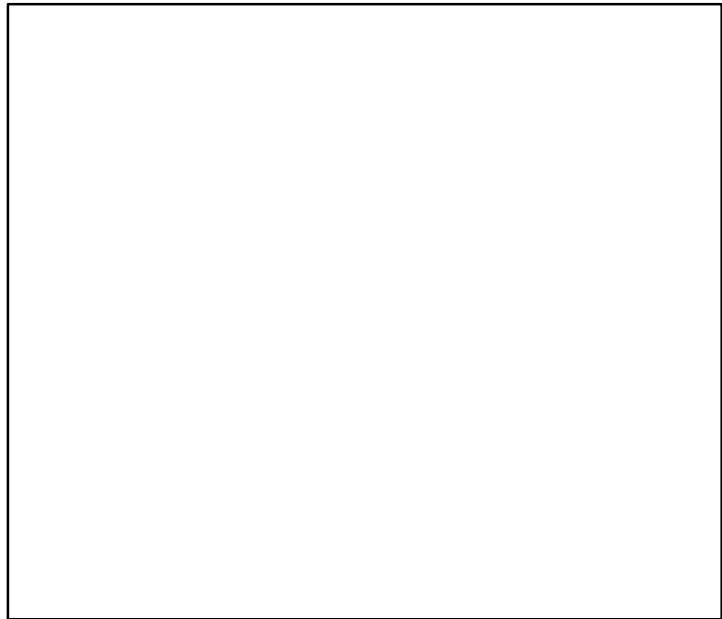
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2016	7.7
<b>ERmsy</b>	ERmsy-ratio	2019	0.077
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	Fmgt-1/yr	2016	7.7
<b>ERmgt</b>	ERmgt-ratio	2019	0.077
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-E00	2017	3370	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	F-1/yr	2016	6	-	-
<b>ER</b>	ER-ratio	2019	0.05	-	-
<b>TC</b>	TC-MT	2017	6620		
<b>TL</b>	TL-MT	2019	2125		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2016	0.779		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2019	0.652		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	0.779		
<b>ER/ERmgt</b>	-	-	-		

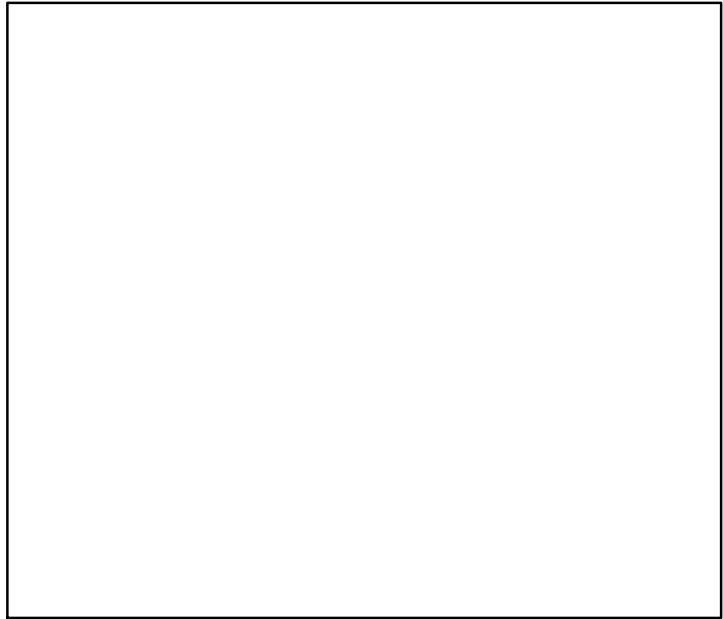
**Kobe MSY\***



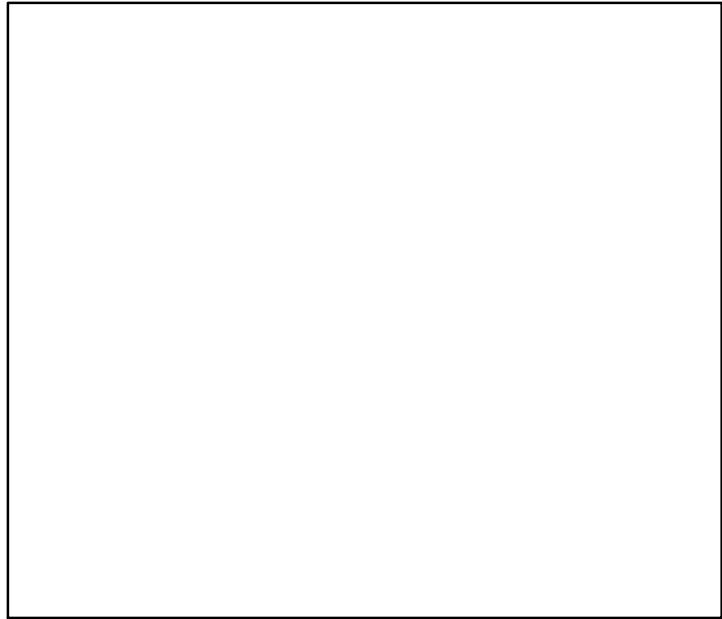
**Kobe MGT\***



**Spawner Recruit\***



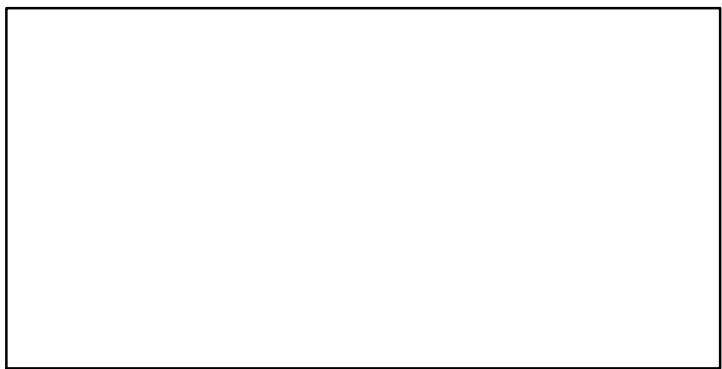
**Production\***



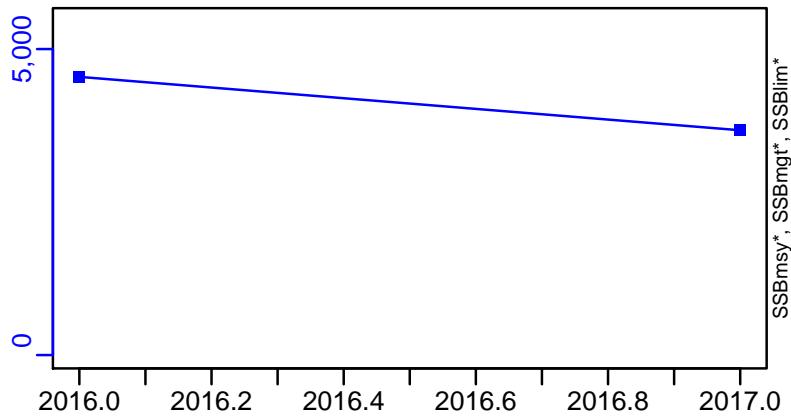
◆ Start Year ♦ End Year \* No Data

Norway lobster ICES 8ab [NEPHVIIlab]

**TB\***



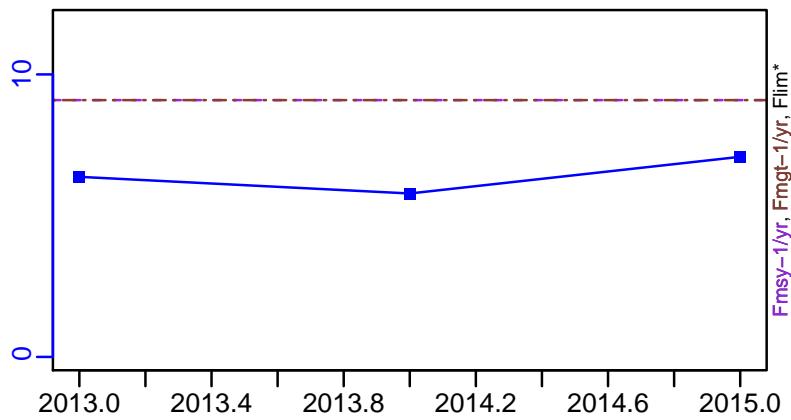
SSB-E00 (1987–2017–ICESIMP2018)



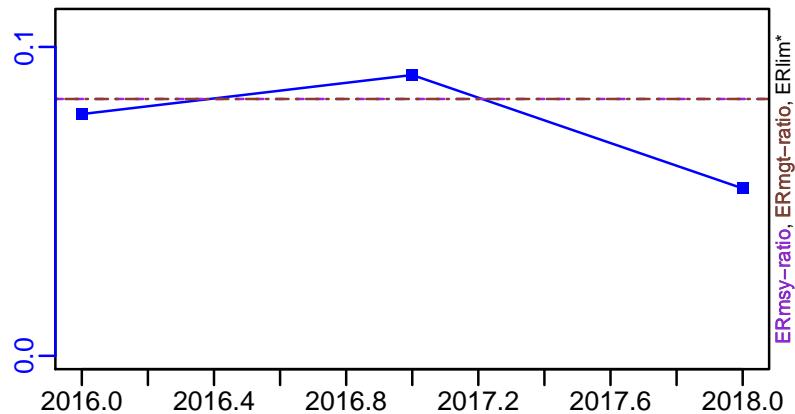
**TN \***



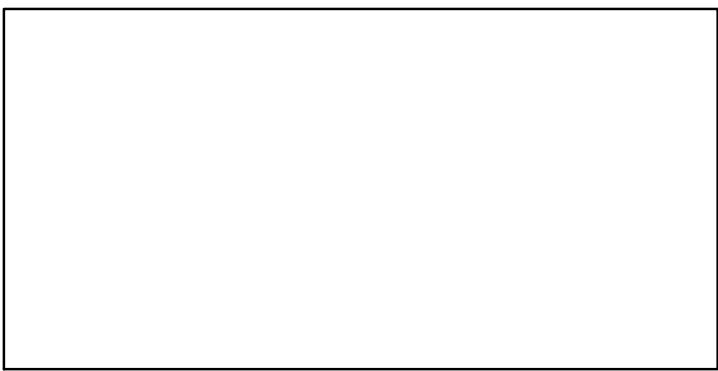
F-1/yr (1987–2016–ICESIMP2018)



ER-ratio (1987–2019–ICESIMP2021)



Recruits\*

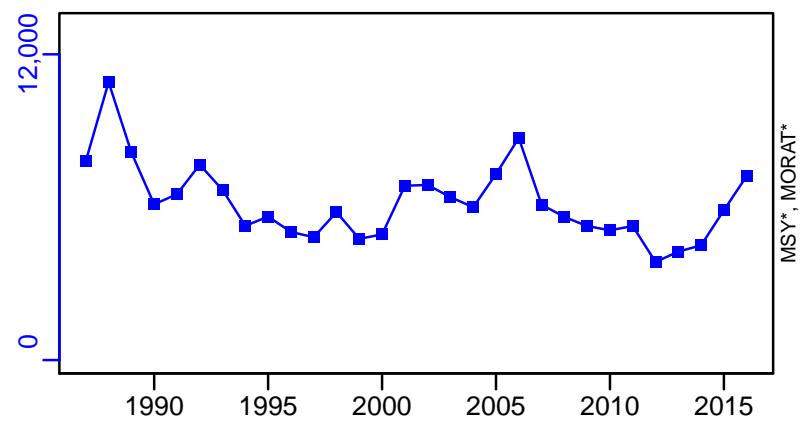


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | --- Lim BRP  | * No Data |

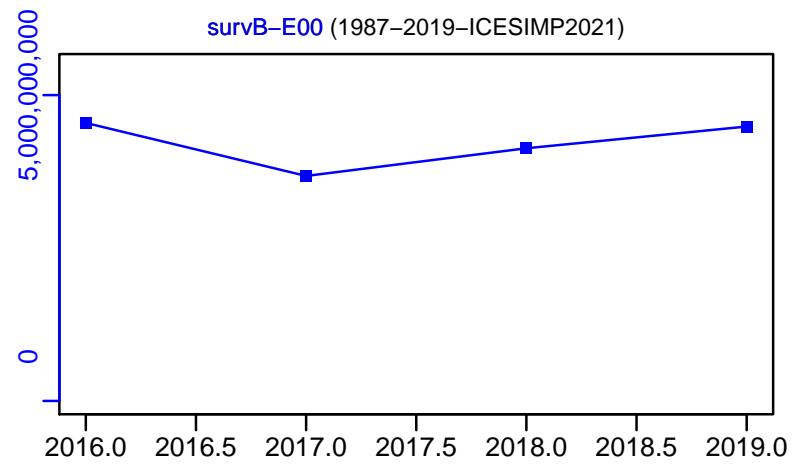
Norway lobster ICES 8ab [NEPHVIIlab]

TC-MT, TL\*, RecC\* (1987–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



survB-E00 (1987–2019–ICESIMP2021)



EFFORT\*



CPUE\*



CdivMSY\*



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

## Norway pout ICES 3a-4 [NPOUTIIla-IV]

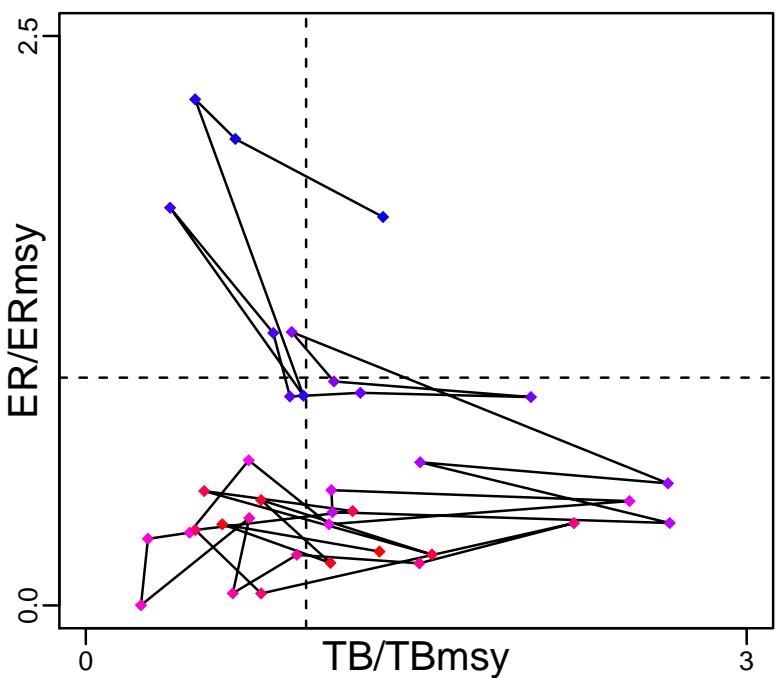
Metadata	
<b>Scientific Name</b>	Trisopterus esmarkii
<b>Current Assess ID</b>	WGNSSK-NPOUTIIla-IV-1984-2019-ICESIMP2021
<b>Area</b>	ICES 3a-4
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2011, 2013, 2014, 2017, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2019	243,913
<b>SSBmsy</b>	SSBmsy-est-MT	2011	227,068
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.671
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2017	65,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2019	163,658
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2011	$1 \times 10^5$
<b>SSBlim</b>	SSBlim-MT	2017	39,450
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

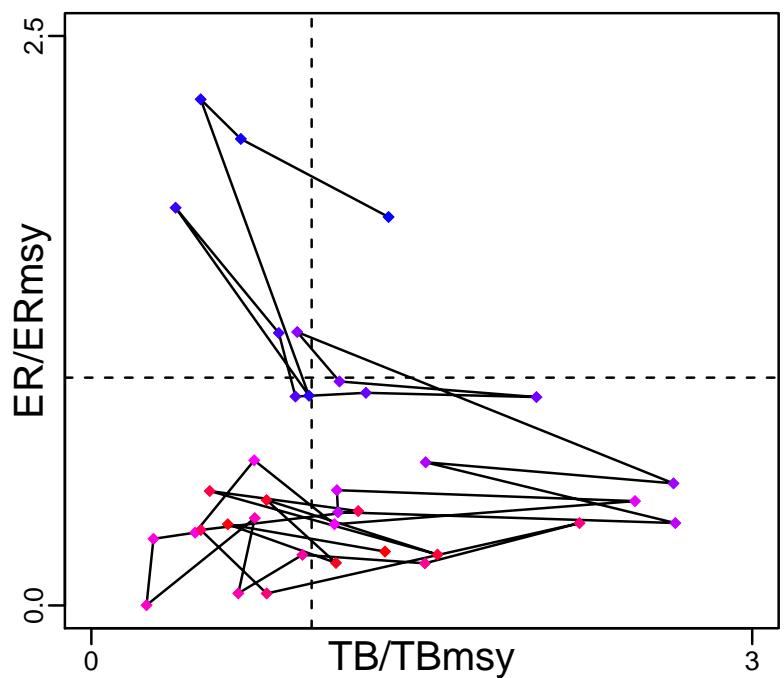
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	325,157	-	-	
<b>SSB</b>	SSB-MT	2019	94,420	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	80,528,000	-	0	
<b>F</b>	F-1/yr	2019	0.311	-	1 to 2	
<b>ER</b>	ER-calc-ratio	2019	0.159	-	-	
<b>TC</b>	TC-MT	2017	30,100			
<b>TL</b>	TL-MT	2019	51,613			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2019	1.333			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2011	1.405			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.237			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2017	2.338			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Norway pout ICES 3a–4 [NPOUTIIIa–IV]

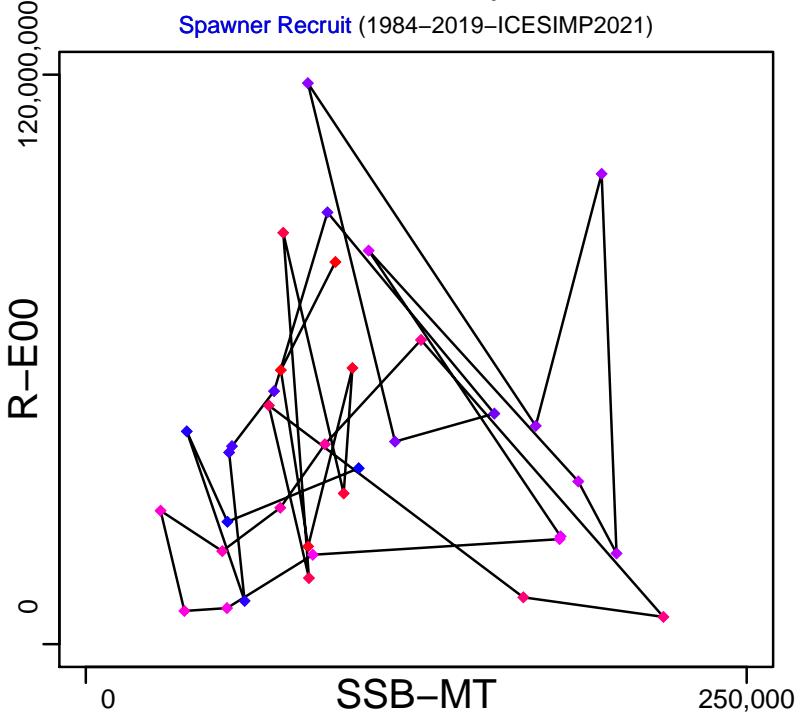
Kobe MSYpref (1984–2019–ICESIMP2021)



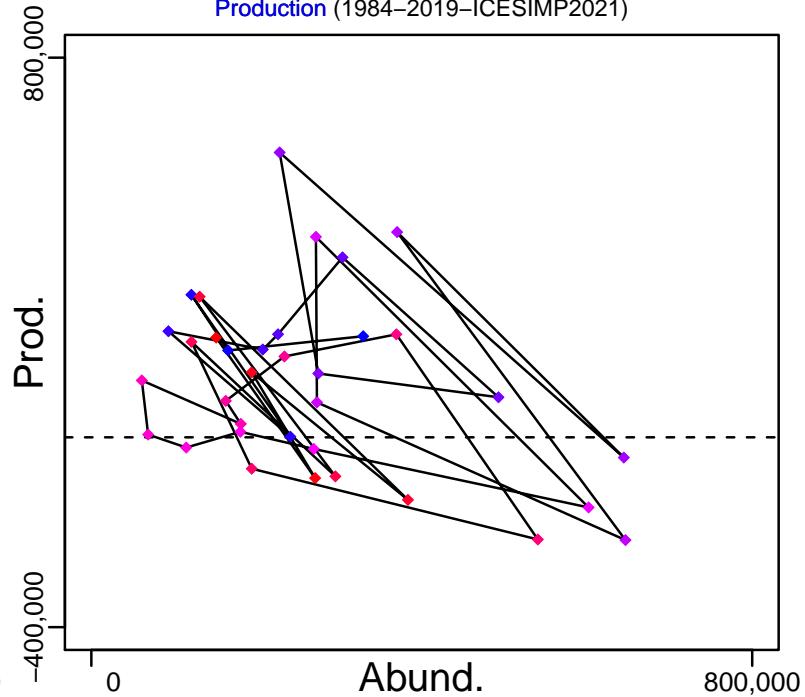
Kobe MGTpref (1984–2019–ICESIMP2021)



Spawner Recruit (1984–2019–ICESIMP2021)



Production (1984–2019–ICESIMP2021)

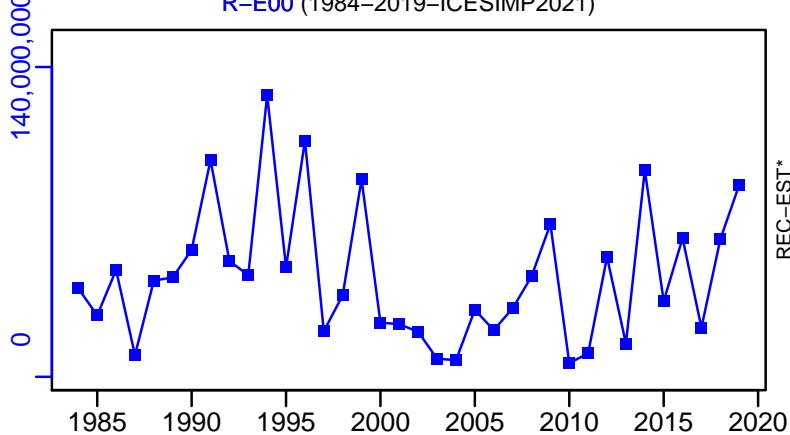
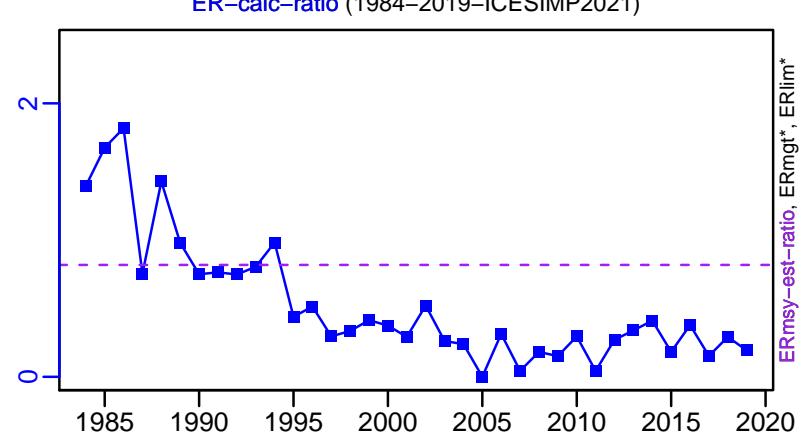
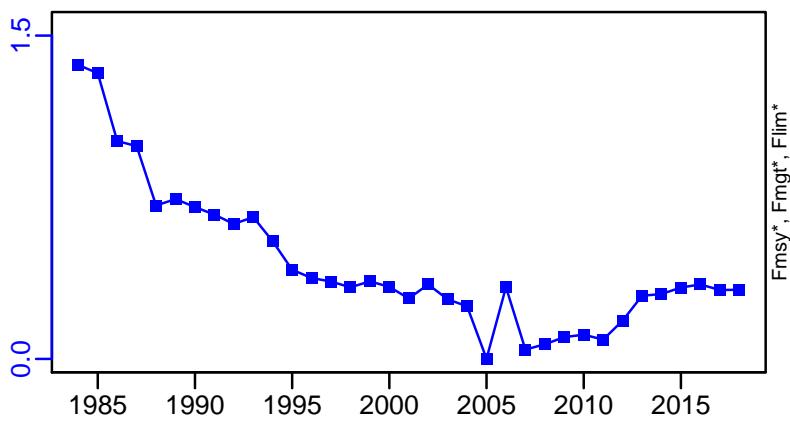
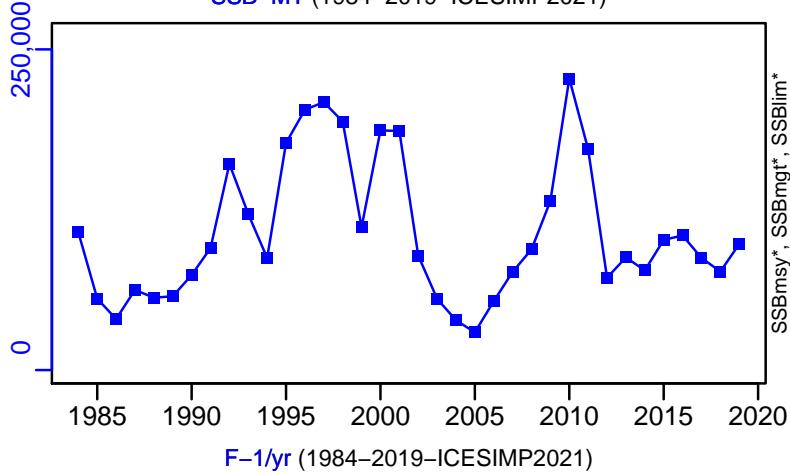
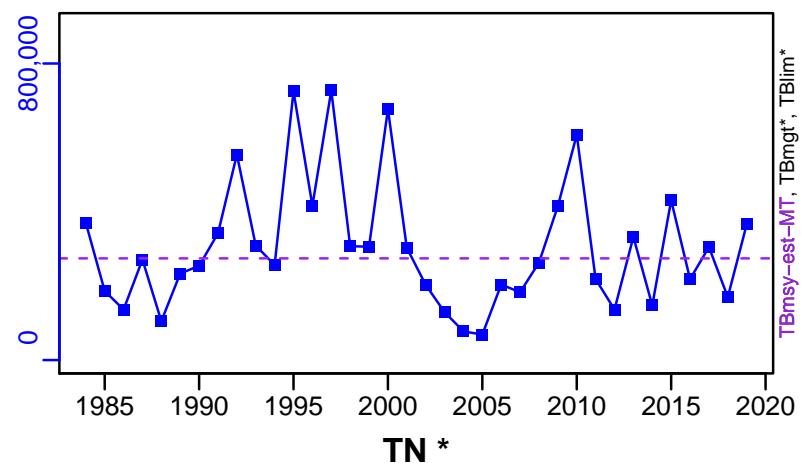


◆ Start Year   ◆ End Year   \* No Data

### Norway pout ICES 3a–4 [NPOUTIIIa–IV]

TB-MT (1984–2019–ICESIMP2021)

SSB-MT (1984–2019–ICESIMP2021)

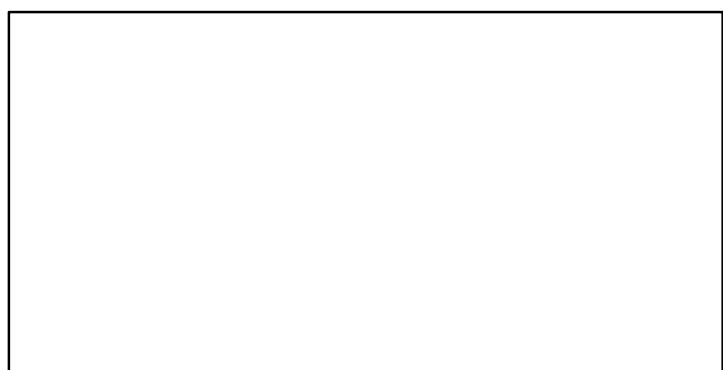
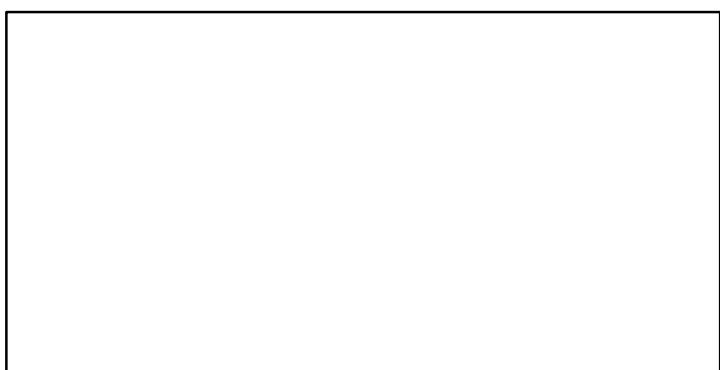
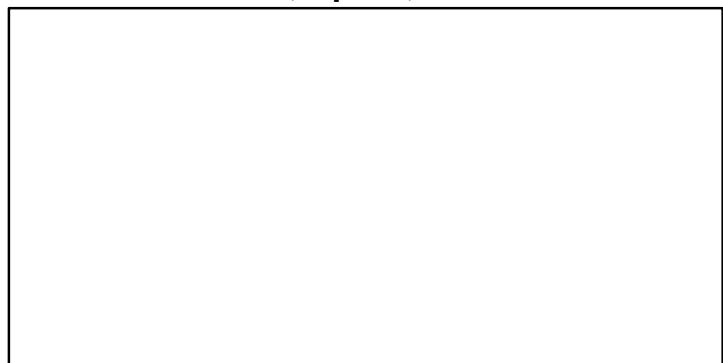
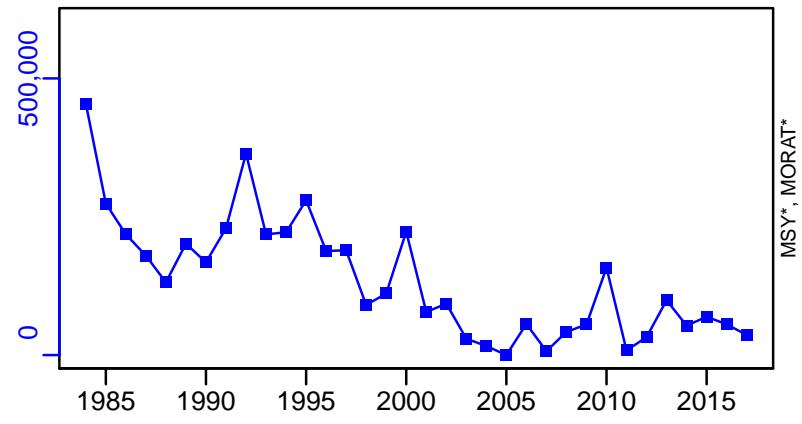


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

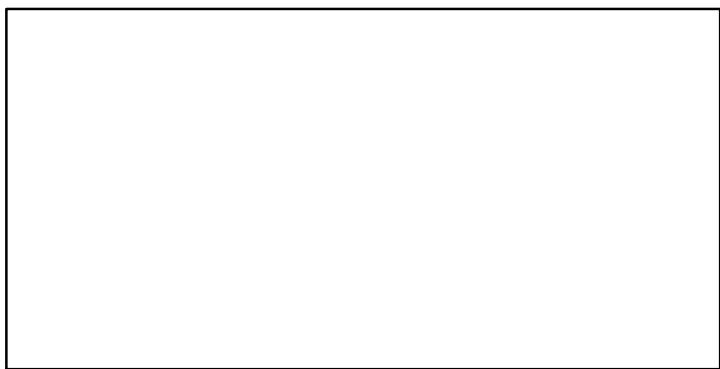
Norway pout ICES 3a–4 [NPOUTIIIa–IV]

TC-MT, TL\*, RecC\* (1984–2017–ICESIMP2018)

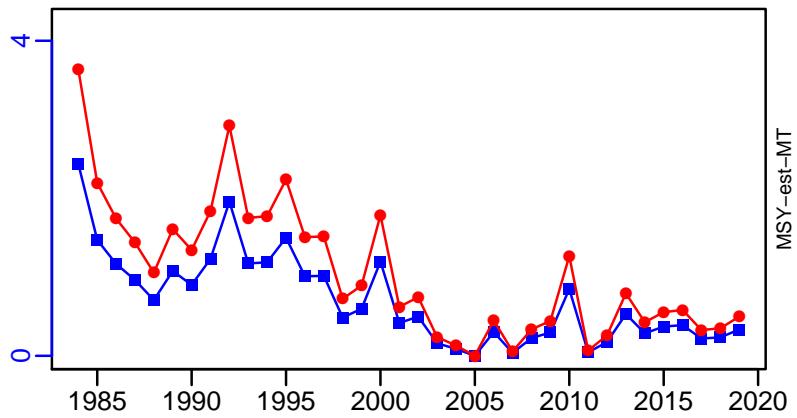
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1984–2019–ICESIMP2021)



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

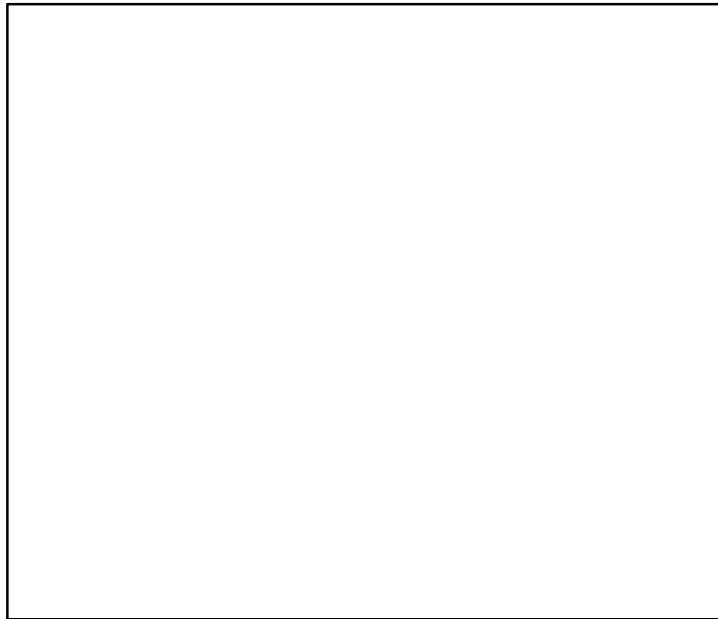
## Norway pout West of Scotland [NPOUTVla]

Metadata	
<b>Scientific Name</b>	Trisopterus esmarkii
<b>Current Assess ID</b>	WGNSSK-NPOUTVla-1970-2017-ICESIMP2021
<b>Area</b>	West of Scotland
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2015, 2017

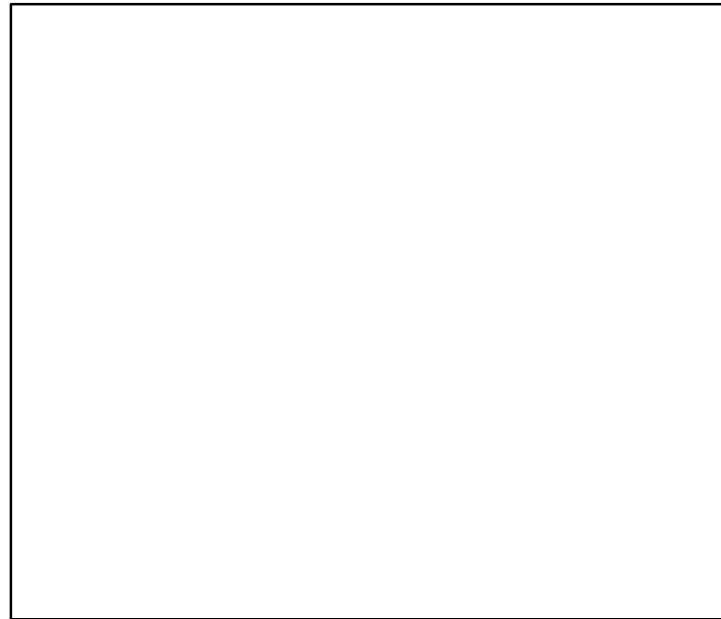
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2017	13		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

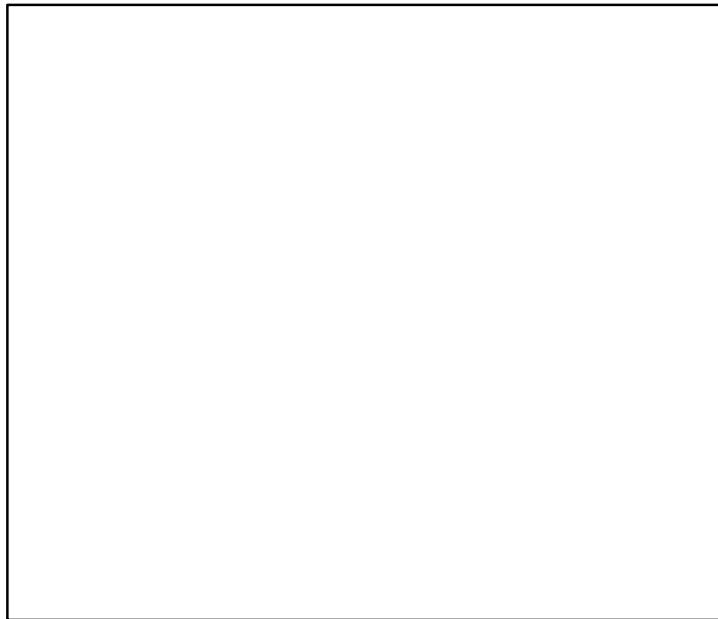
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



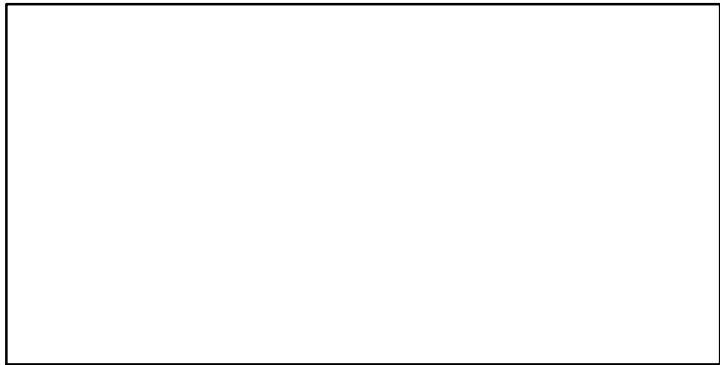
**Production\***



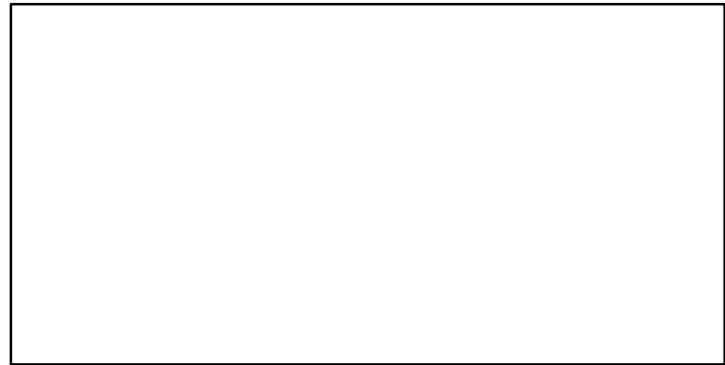
◆ Start Year ♦ End Year \* No Data

Norway pout West of Scotland [NPOUTVla]

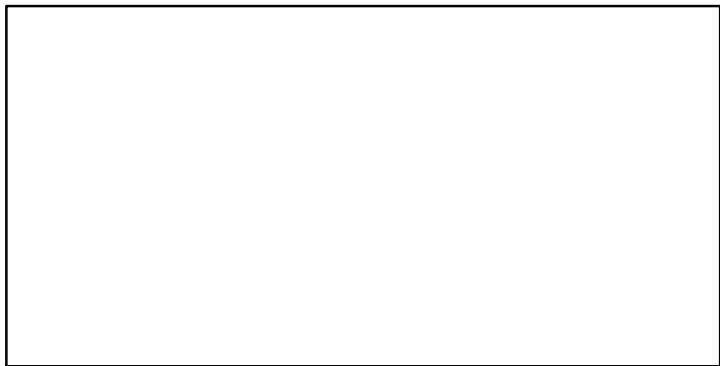
**TB\***



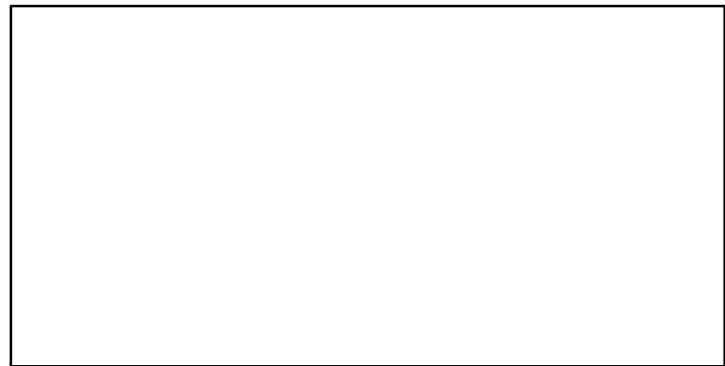
**SSB\***



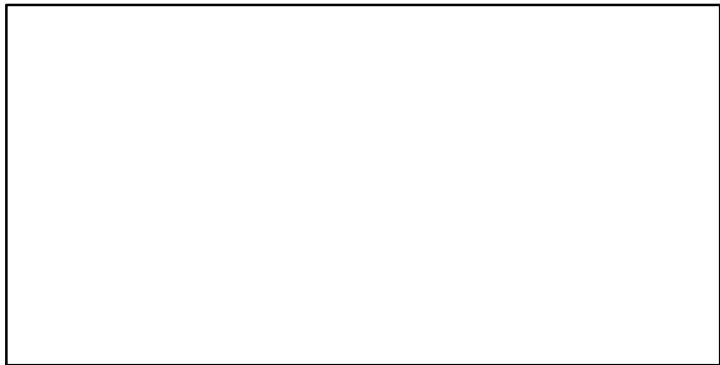
**TN \***



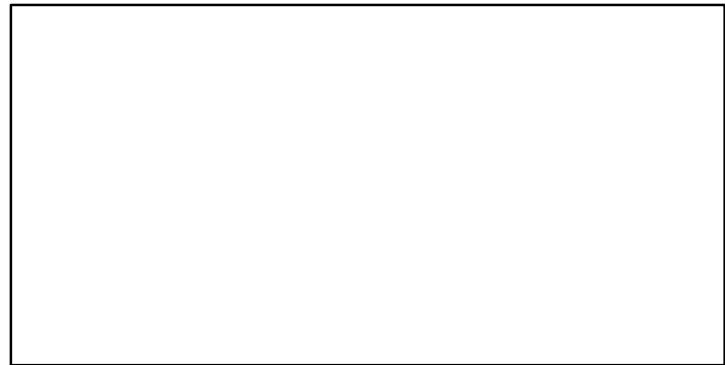
**F\***



**ER\***



**Recruits\***

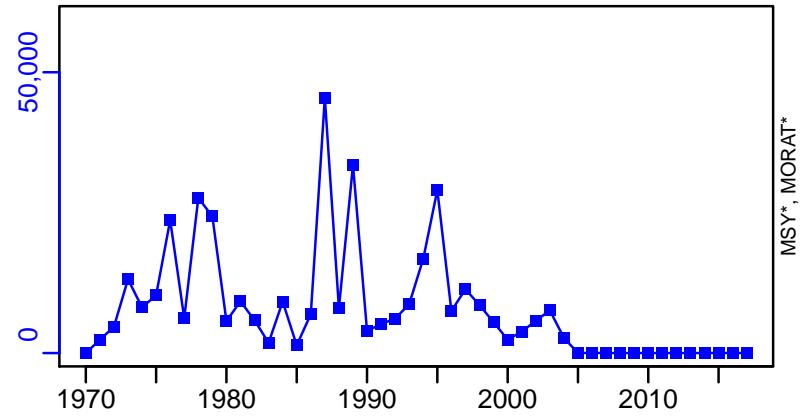


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

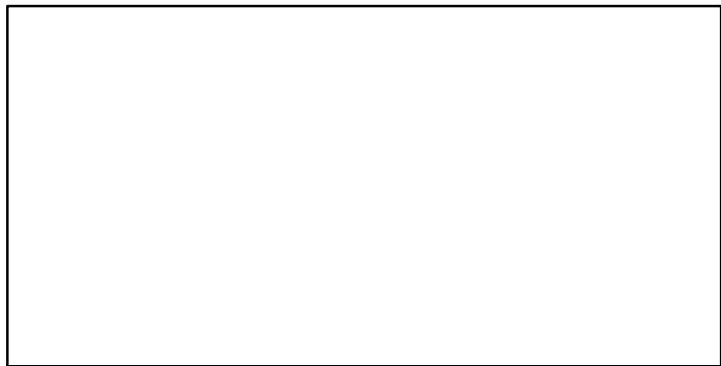
Norway pout West of Scotland [NPOUTVla]

TL-MT, TC\*, RecC\* (1970–2017–ICESIMP2021)

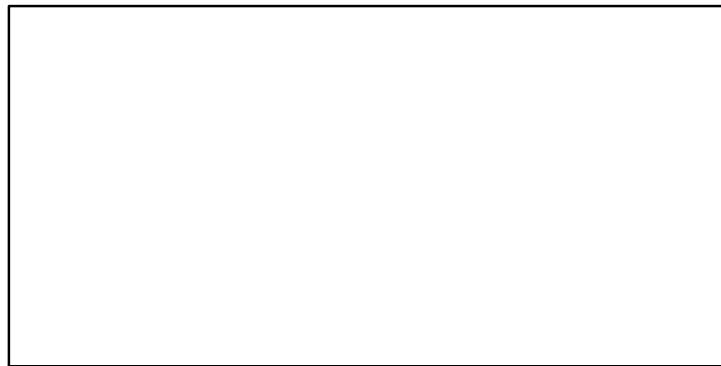
TAC\*, Cpair\*, Cadv\*



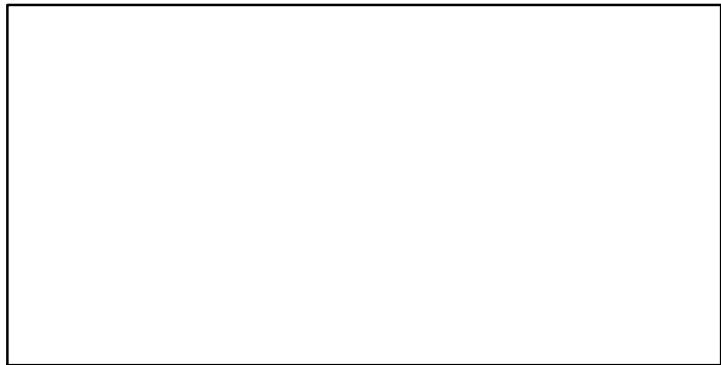
**survB\***



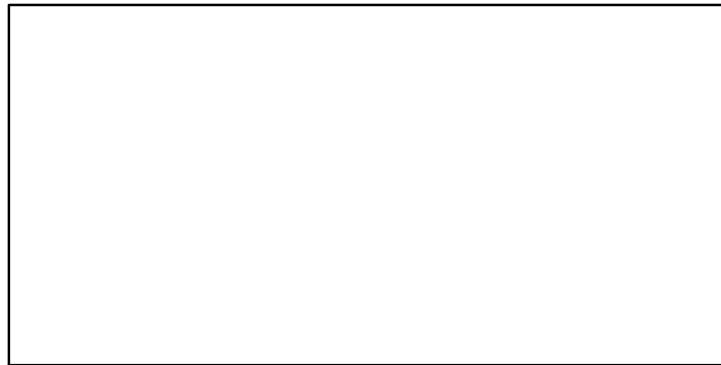
**CPUE\***



**EFFORT\***



**CdivMSY\***



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

## Orange roughy Northeast Atlantic [OROUGHYNEATL]

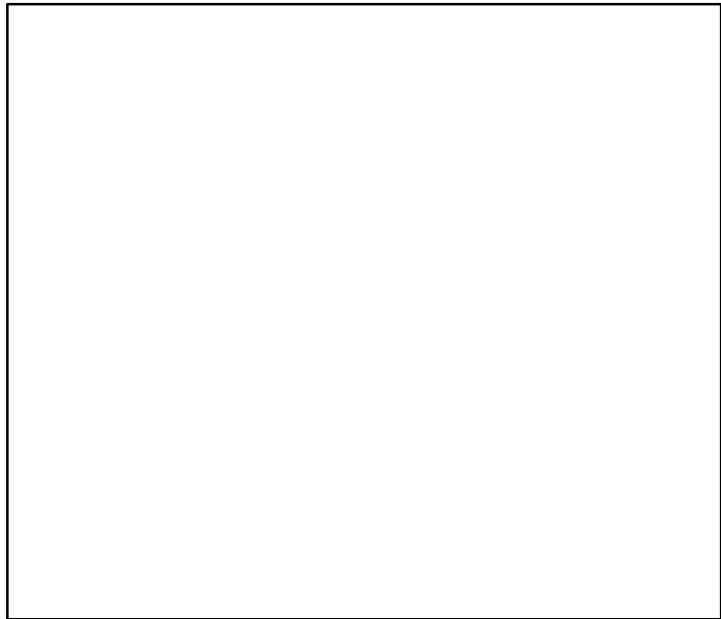
<b>Metadata</b>	
<b>Scientific Name</b>	Hoplostethus atlanticus
<b>Current Assess ID</b>	WGDEEP-OROUGHYNEATL-1988-2016-ICESIMP2016
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2016

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

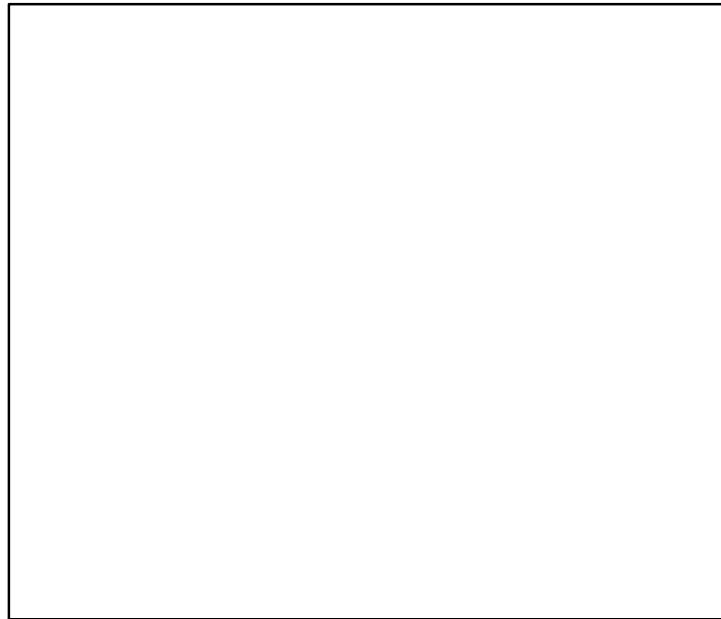
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	48		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Orange roughy Northeast Atlantic [OROUGHYNEATL]

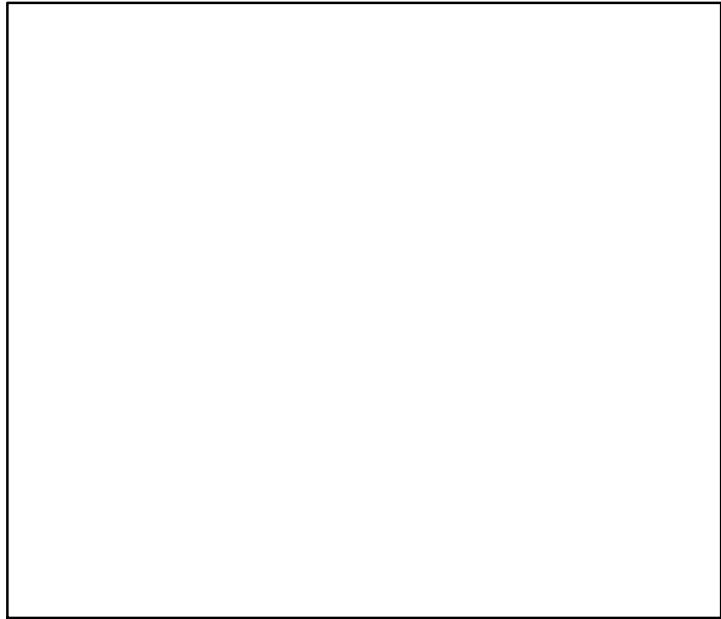
Kobe MSY\*



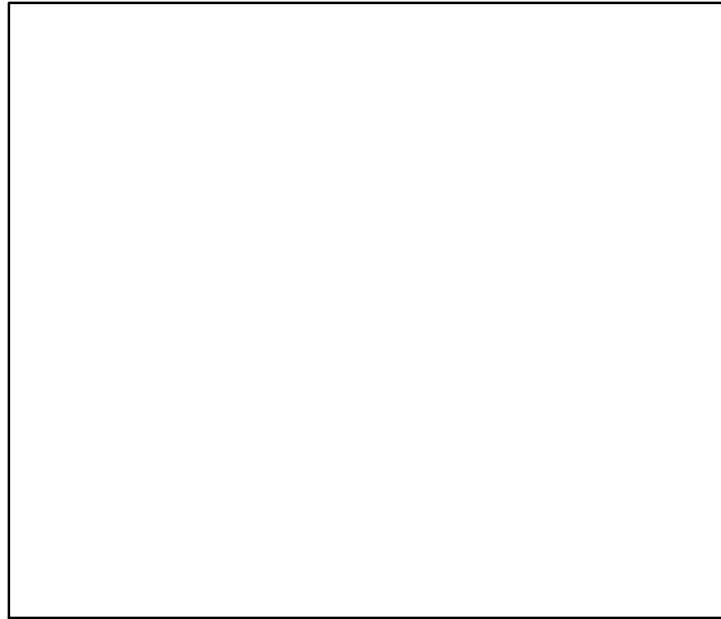
Kobe MGT\*



Spawner Recruit\*



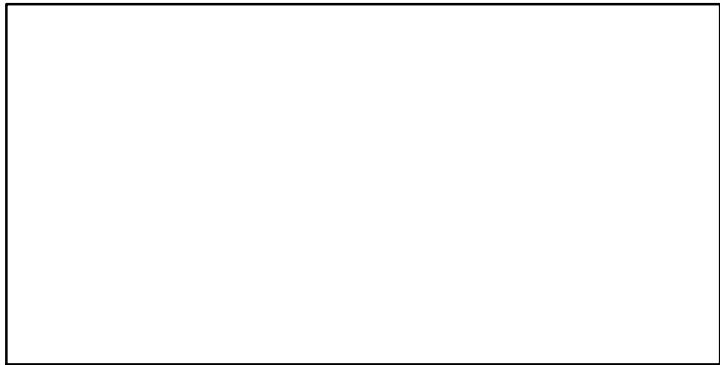
Production\*



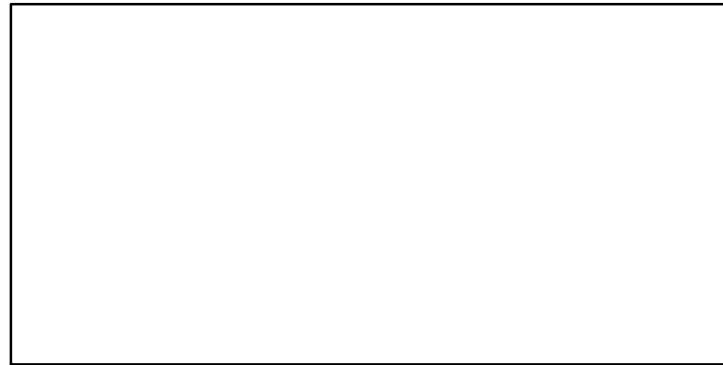
♦ Start Year ♦ End Year \* No Data

**Orange roughy Northeast Atlantic [OROUGHYNEATL]**

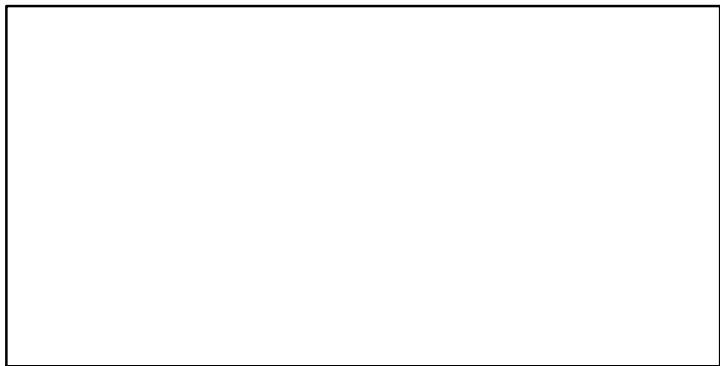
**TB\***



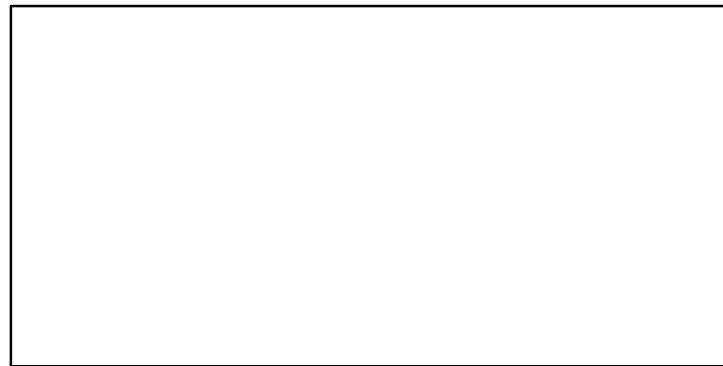
**SSB\***



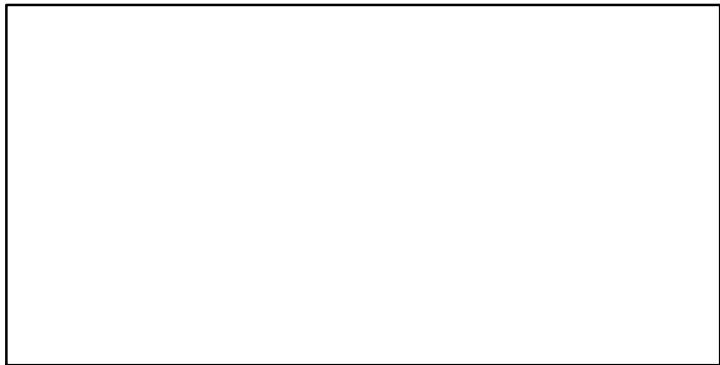
**TN \***



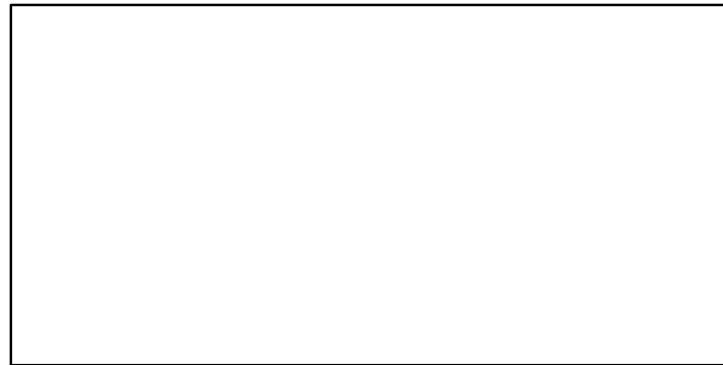
**F\***



**ER\***



**Recruits\***

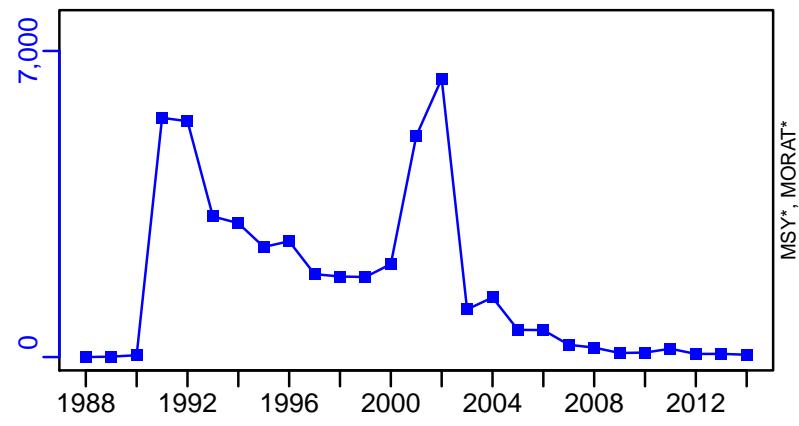


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

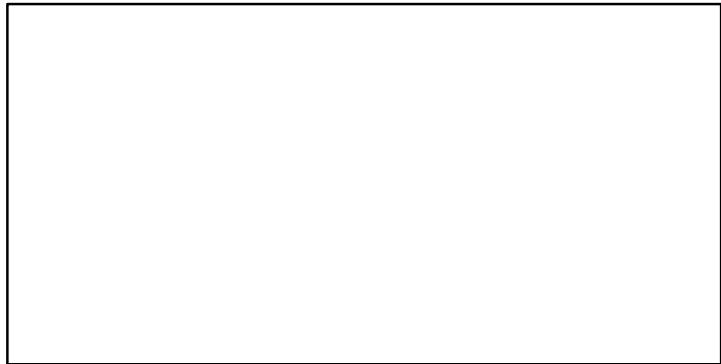
Orange roughy Northeast Atlantic [OROUGHYNEATL]

TL-MT, TC\*, RecC\* (1988–2016—ICESIMP2016)

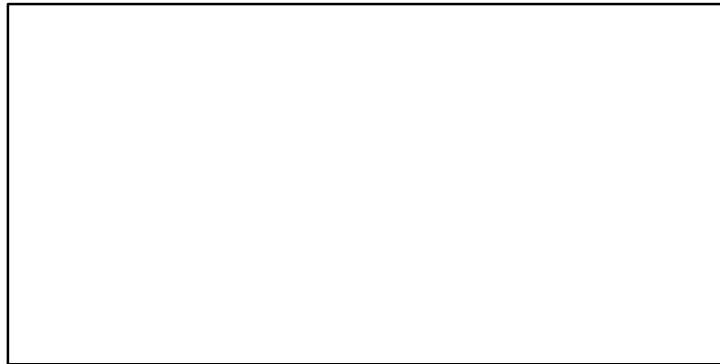
TAC\*, Cpair\*, Cadv\*



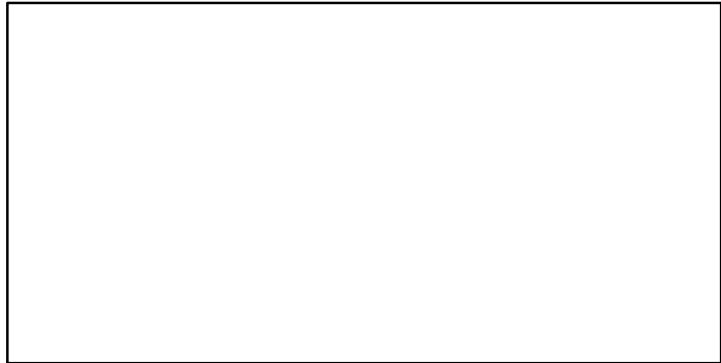
survB\*



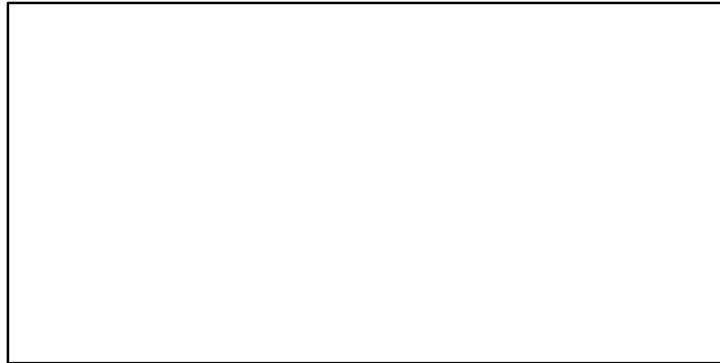
CPUE\*



EFFORT\*



CdivMSY\*



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

## Northern shrimp ICES 3a(west)-4a(east) [PANDALIIIaW-IVaE]

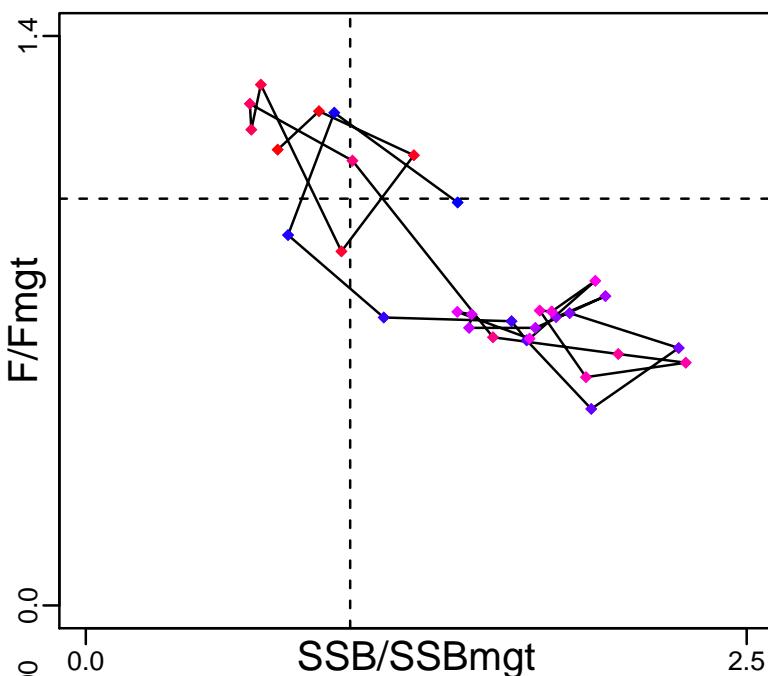
<b>Metadata</b>	
<b>Scientific Name</b>	Pandalus borealis
<b>Current Assess ID</b>	NIPAG-PANDALIIIaW-IVaE-1988-2019-ICESIMP2021
<b>Area</b>	ICES 3a(west)-4a(east)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Joint NAFO and ICES Pandalus Assessment Working Group
<b>Asmts in RAM</b>	2013, 2014, 2015, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2015	0.62
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.601
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	9900
<b>Fmgt</b>	Fmgt-1/yr	2019	0.59
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	6300
<b>Flim</b>	Flim-1/yr	2015	1
<b>ERlim</b>	-	-	-

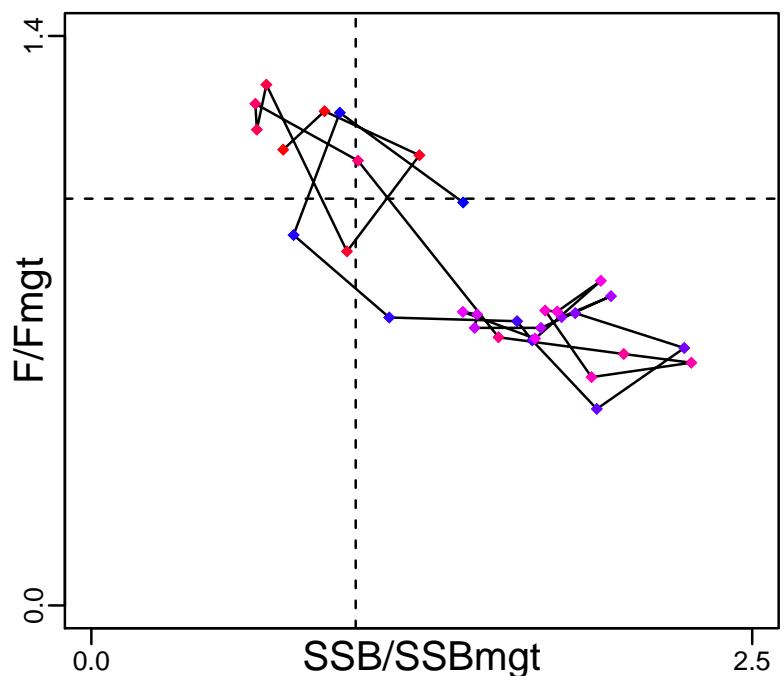
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2015	29,400	Both	-
<b>SSB</b>	SSB-MT	2019	6377	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	7,339,340,000	-	0
<b>F</b>	F-1/yr	2019	0.661	-	1 to 3
<b>ER</b>	ER-calc-ratio	2019	0.518	-	-
<b>TC</b>	TC-MT	2019	8971		
<b>TL</b>	TL-MT	2019	8730		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2014	1.1		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	1.016		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.861		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.644		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.12		
<b>ER/ERmgt</b>	-	-	-		

Northern shrimp ICES 3a(west)–4a(east) [PANDALIlaW–IVaE]

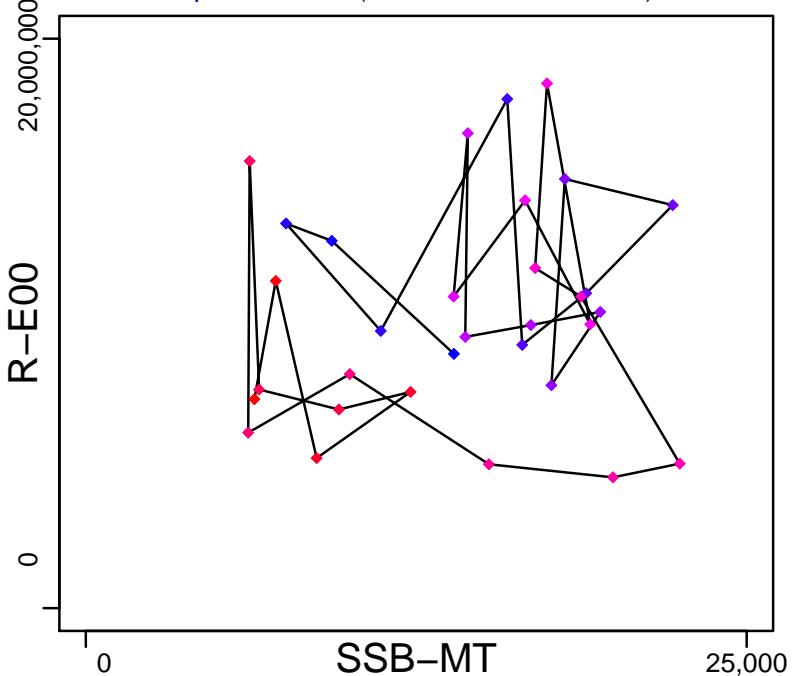
Kobe MSYpref (1988–2019–ICESIMP2021)



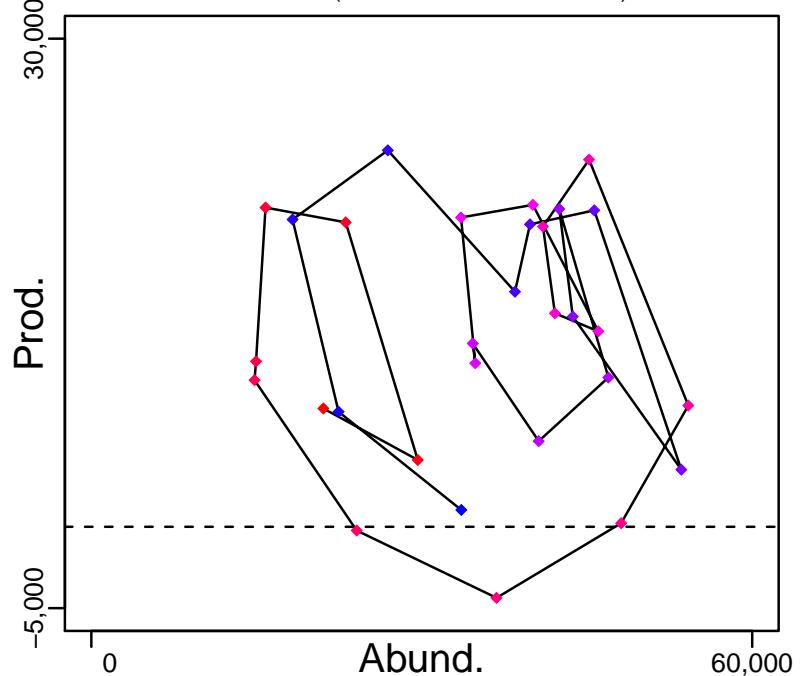
Kobe MGTpref (1988–2019–ICESIMP2021)



Spawner Recruit (1988–2019–ICESIMP2021)



Production (1988–2019–ICESIMP2021)

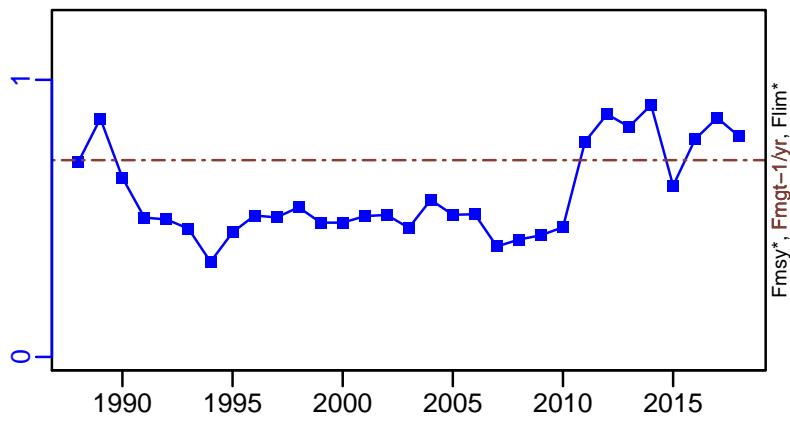
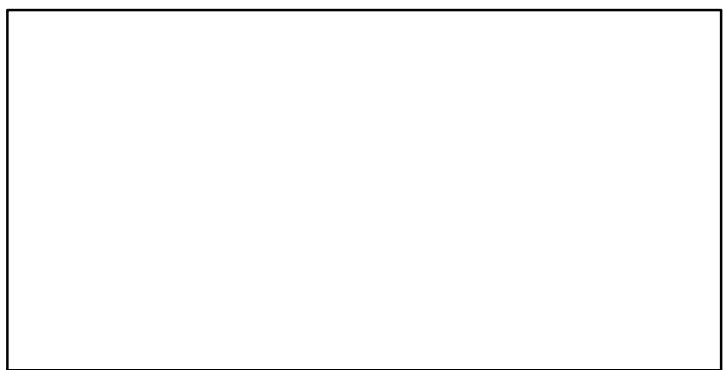
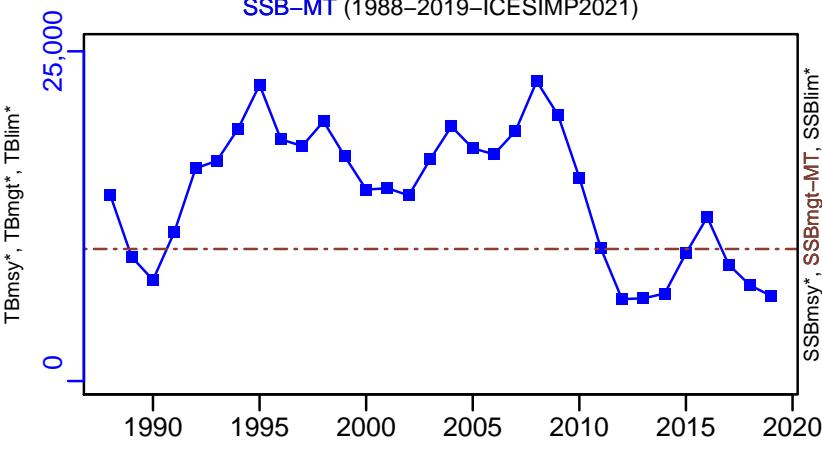
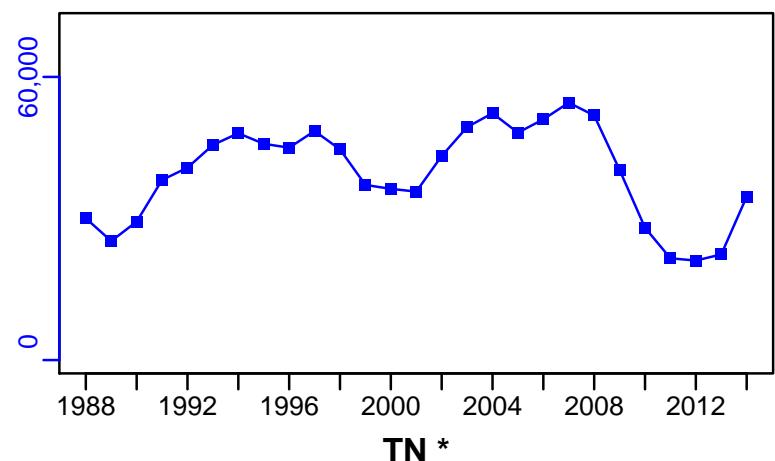


◆ Start Year	◆ End Year	*	No Data
--------------	------------	---	---------

Northern shrimp ICES 3a(west)–4a(east) [PANDALIIIaW–IVaE]

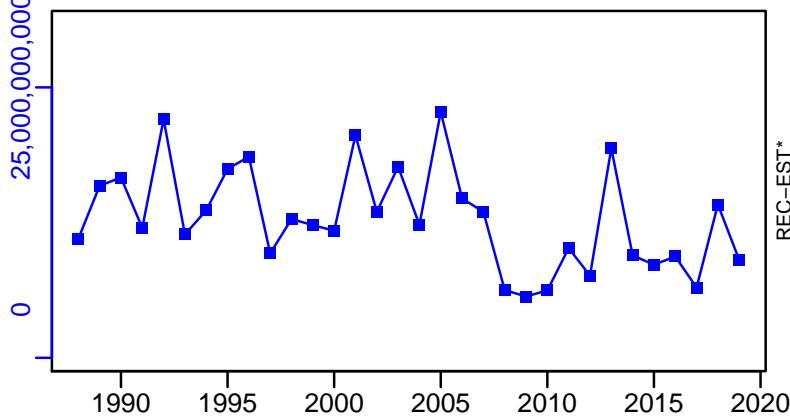
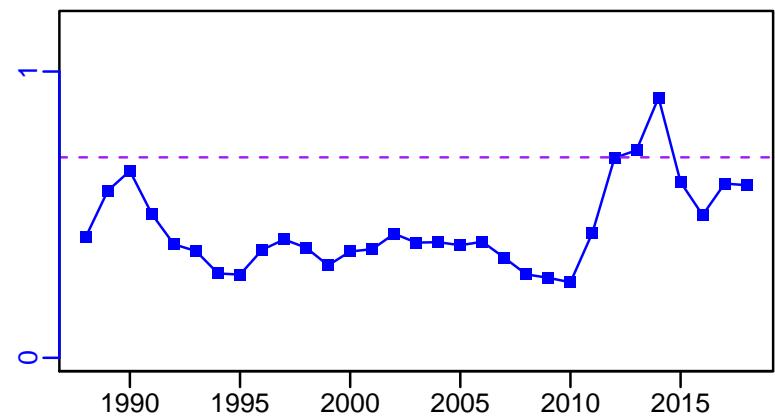
TB-MT (1988–2015–ICESIMP2016)

SSB-MT (1988–2019–ICESIMP2021)



ER-calc-ratio (1988–2019–ICESIMP2021)

R-E00 (1988–2019–ICESIMP2021)

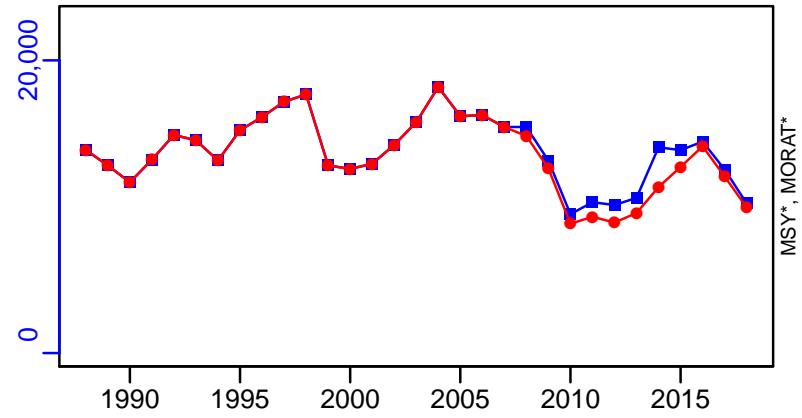


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

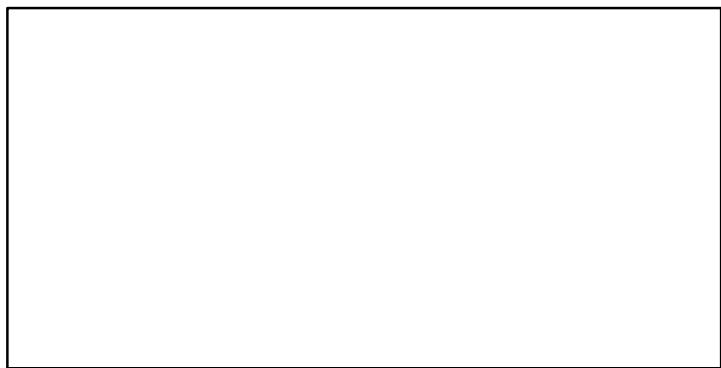
Northern shrimp ICES 3a(west)–4a(east) [PANDALIIIaW–IVaE]

TC–MT, TL–MT, RecC\* (1988–2019–ICESIMP2021)

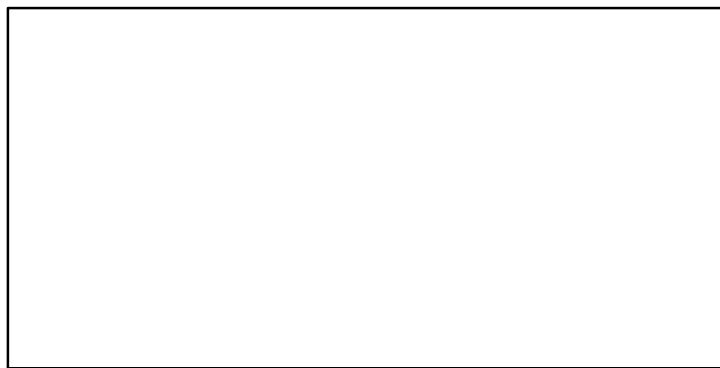
TAC\*, Cpair\*, Cadv\*



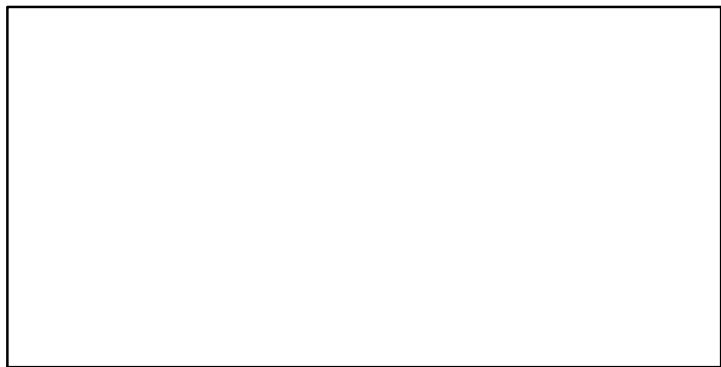
survB\*



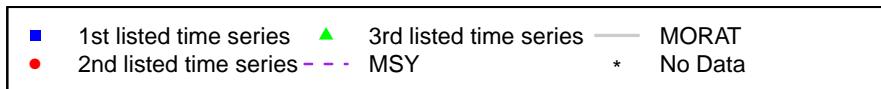
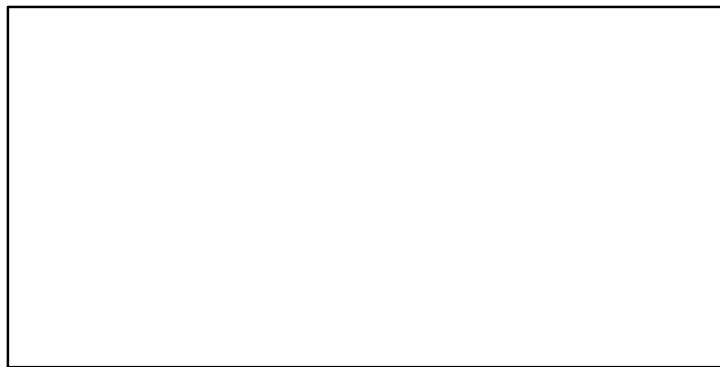
CPUE\*



EFFORT\*



CdivMSY\*



## Northern shrimp Northern North Sea [PANDALIVa]

<b>Metadata</b>	
<b>Scientific Name</b>	Pandalus borealis
<b>Current Assess ID</b>	NIPAG-PANDALIVa-1970-2019-ICESIMP2021
<b>Area</b>	Northern North Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Joint NAFO and ICES Pandalus Assessment Working Group
<b>Asmts in RAM</b>	2015, 2019

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2019	1.4		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

**Northern shrimp Northern North Sea [PANDALIVa]**

**TB\***



**SSB\***



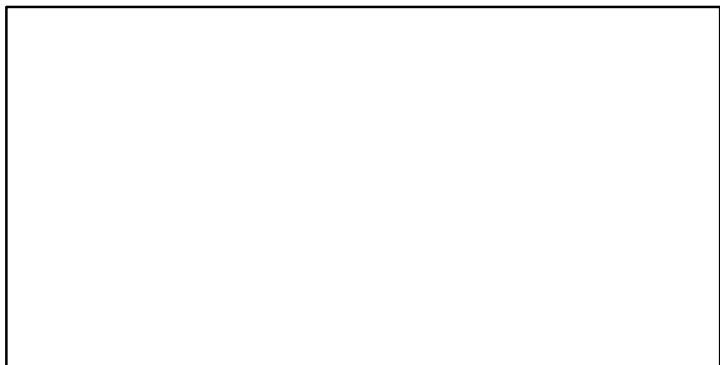
**TN \***



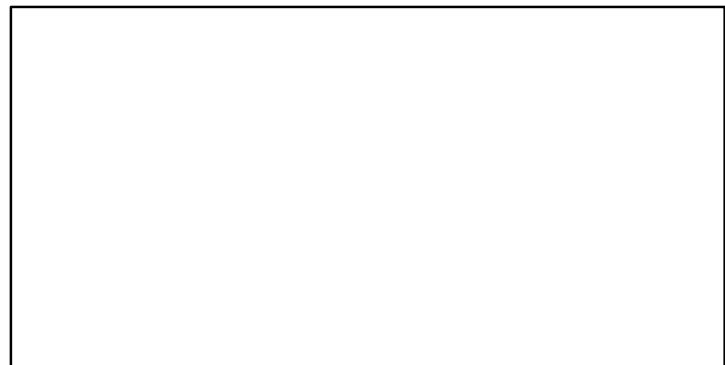
**F\***



**ER\***



**Recruits\***

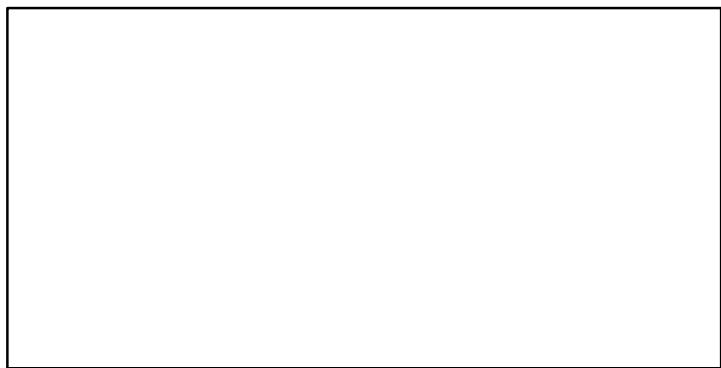
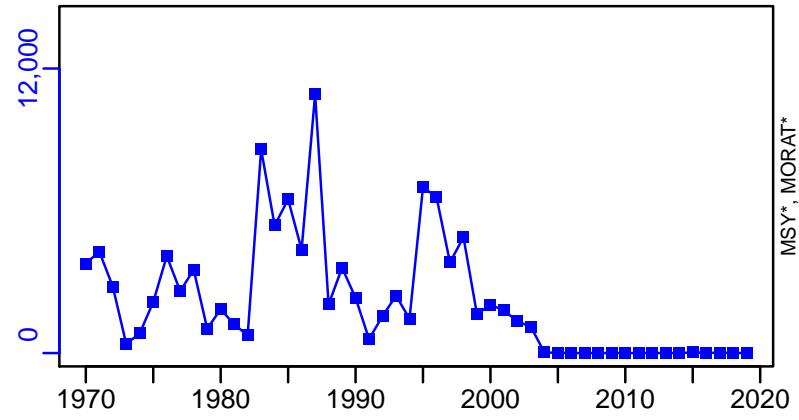


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

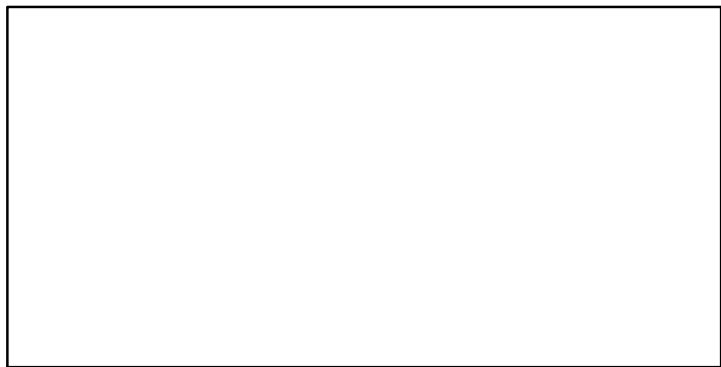
Northern shrimp Northern North Sea [PANDALIVa]

TL-MT, TC\*, RecC\* (1970–2019—ICESIMP2021)

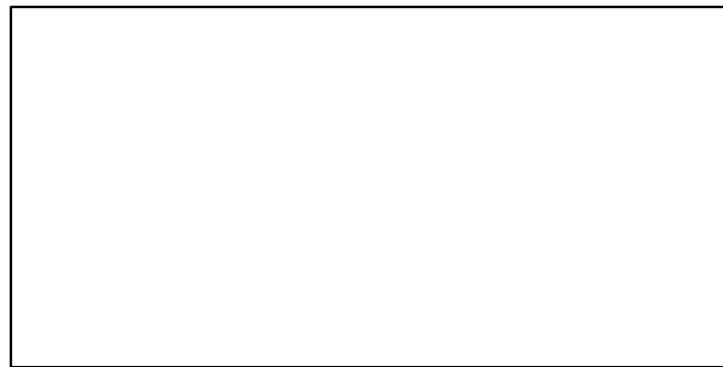
TAC\*, Cpair\*, Cadv\*



EFFORT\*



CdivMSY\*



## European plaice Subdivisions 21-23 [PLAIC2123]

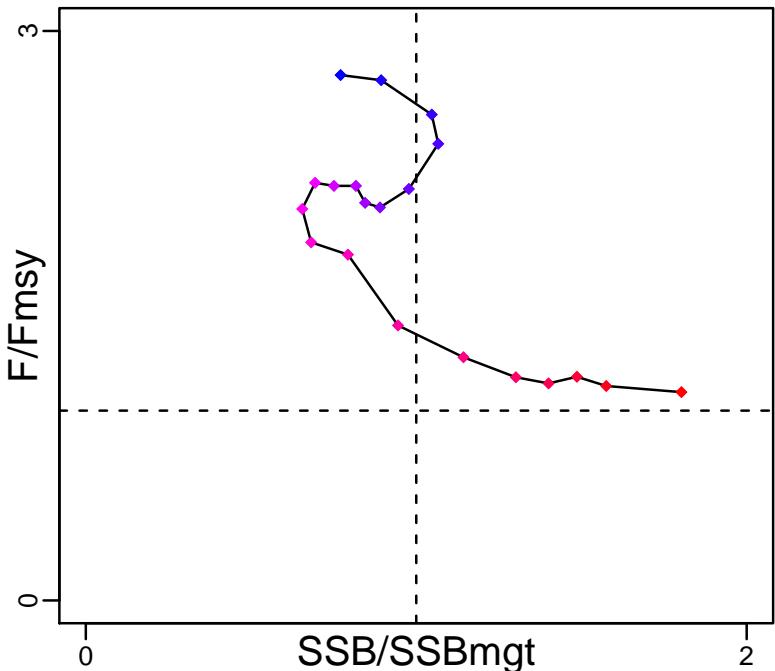
<b>Metadata</b>	
<b>Scientific Name</b>	Pleuronectes platessa
<b>Current Assess ID</b>	WGBFAS-PLAIC2123-1998-2019-ICESIMP2021
<b>Area</b>	Subdivisions 21-23
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2014, 2015, 2016, 2017, 2018, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.37
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.407
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	5550
<b>Fmgt</b>	Fmgt-1/yr	2019	0.37
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	4077
<b>Flim</b>	Flim-1/yr	2018	1.01
<b>ERlim</b>	-	-	-

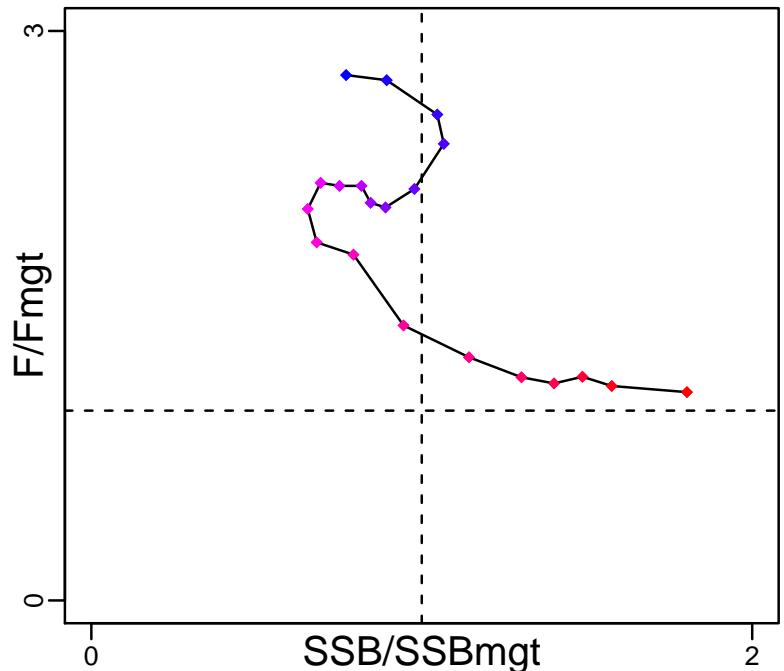
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	14,245	-	-	
<b>SSB</b>	SSB-MT	2019	11,907	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	29,103	-	1	
<b>F</b>	F-1/yr	2019	0.406	-	3 to 5	
<b>ER</b>	ER-calc-ratio	2019	0.243	-	-	
<b>TC</b>	TC-MT	2018	4240			
<b>TL</b>	TL-MT	2019	3459			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	1.097			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.597			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	2.145			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.097			
<b>ER/ERmgt</b>	-	-	-			

European plaice Subdivisions 21–23 [PLAIC2123]

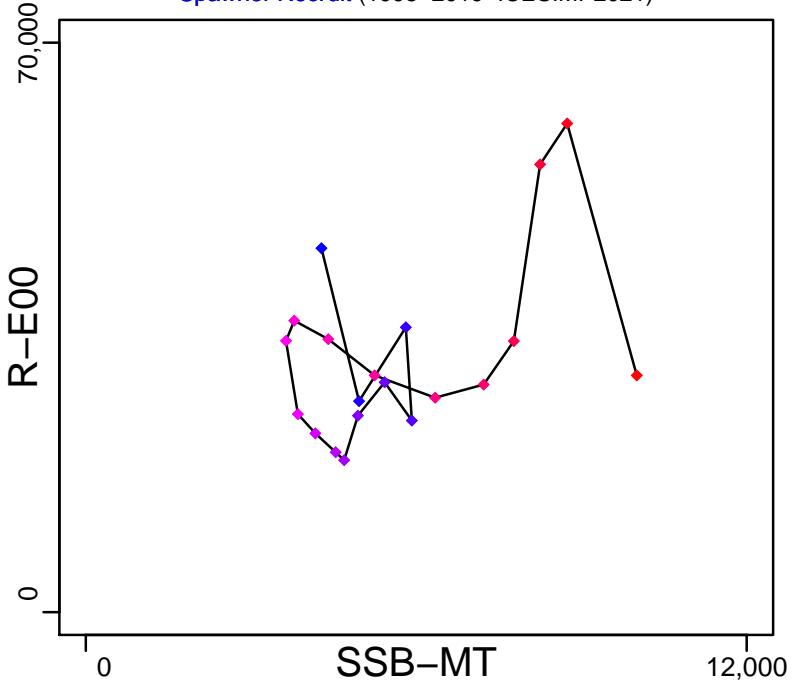
Kobe MSYpref (1998–2019–ICESIMP2021)



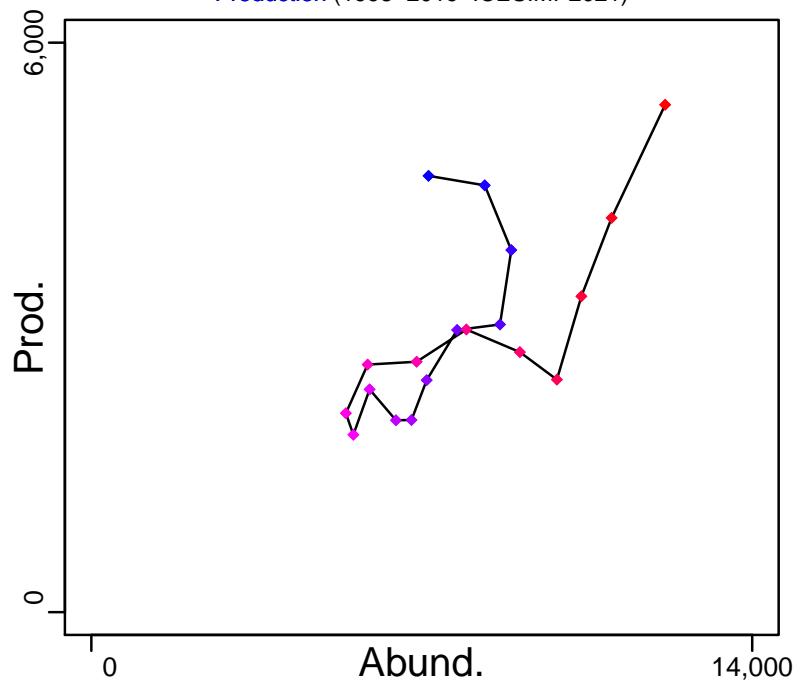
Kobe MGTpref (1998–2019–ICESIMP2021)



Spawner Recruit (1998–2019–ICESIMP2021)



Production (1998–2019–ICESIMP2021)

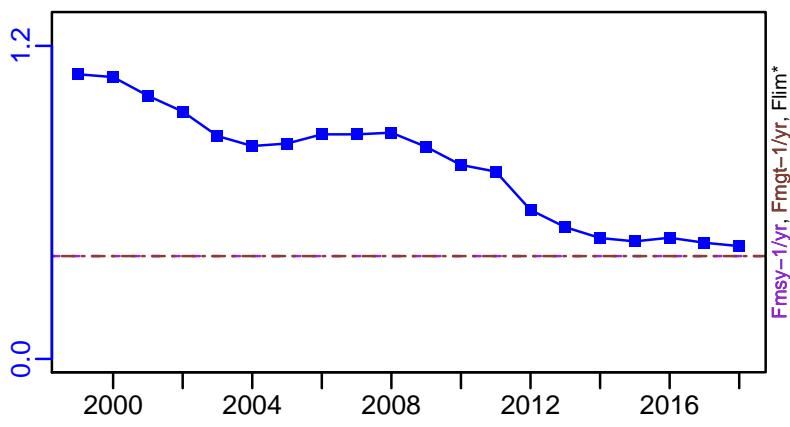
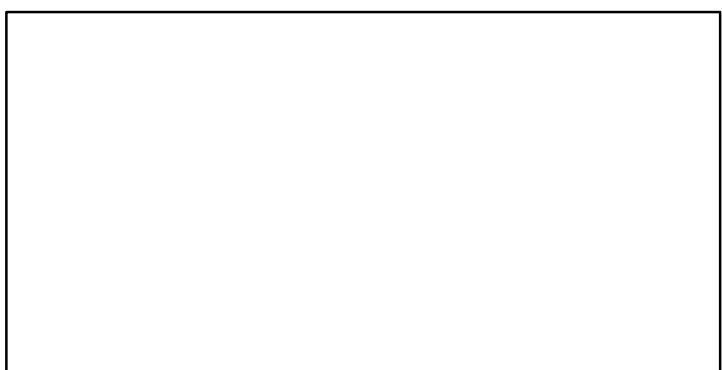
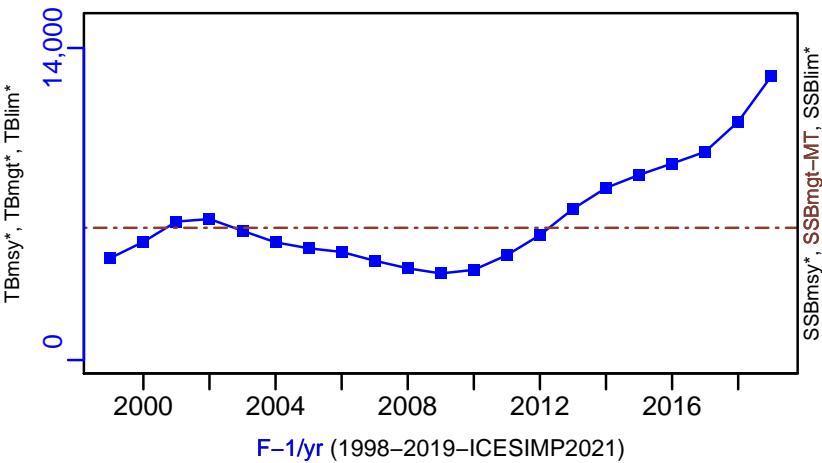
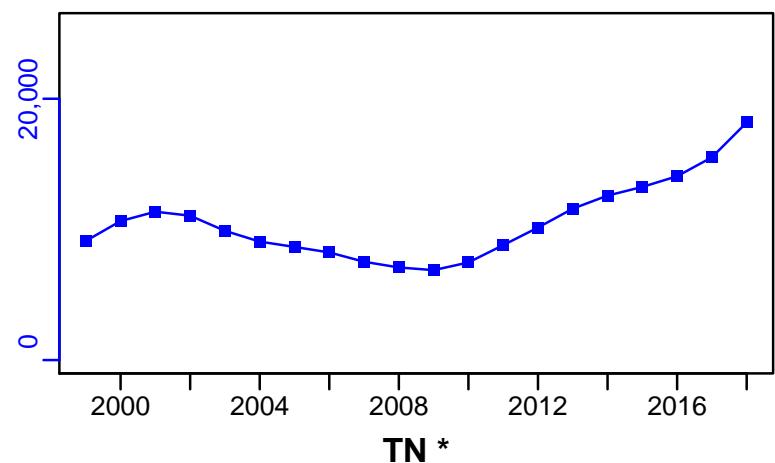


◆ Start Year   ◆ End Year   \* No Data

### European plaice Subdivisions 21–23 [PLAIC2123]

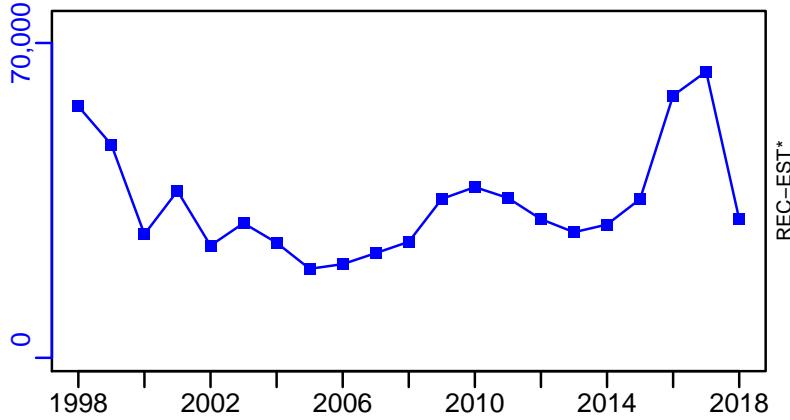
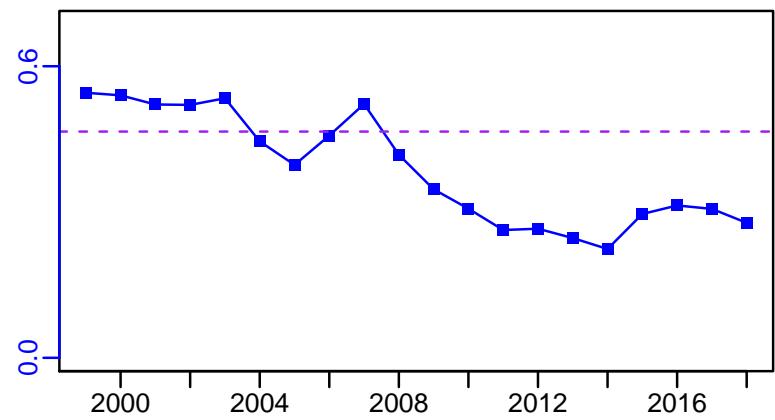
TB-MT (1998–2019–ICESIMP2021)

SSB-MT (1998–2019–ICESIMP2021)



ER-calc-ratio (1998–2019–ICESIMP2021)

R-E00 (1998–2019–ICESIMP2021)

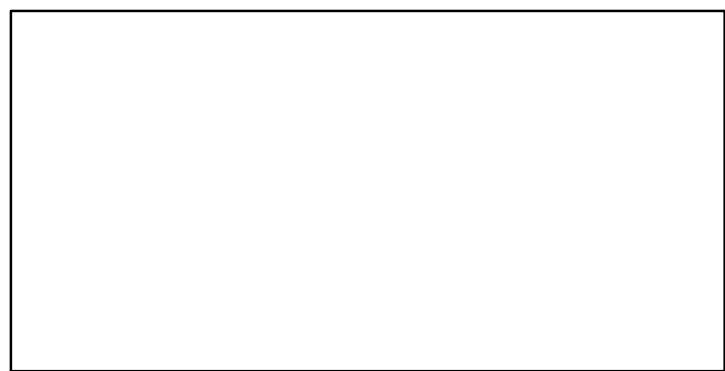
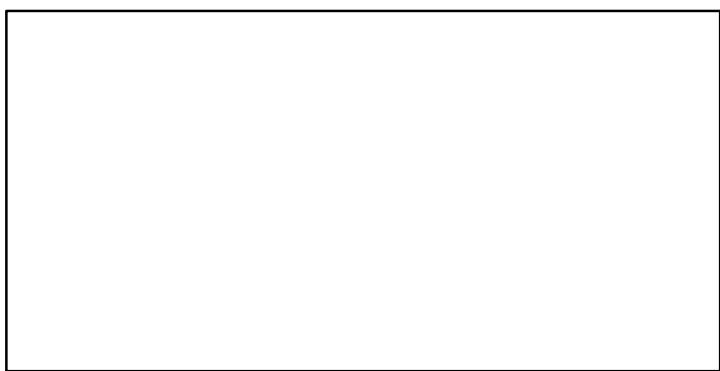
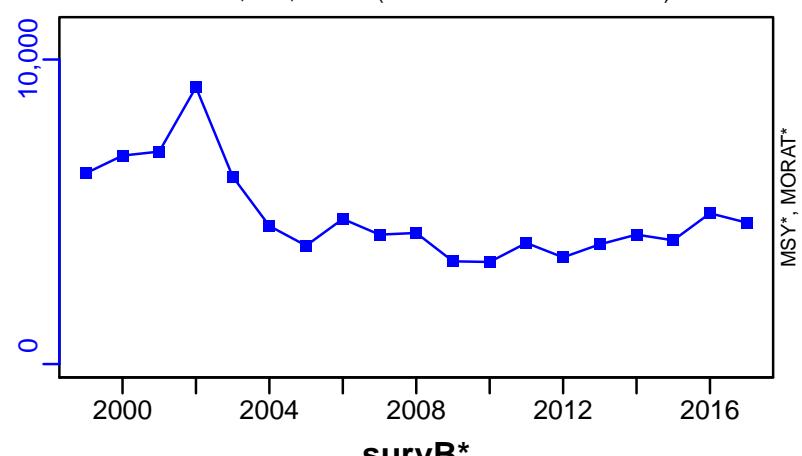


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	--- Lim BRP	* No Data

European plaice Subdivisions 21–23 [PLAIC2123]

TC-MT, TL\*, RecC\* (1998–2018–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



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

## European plaice Subdivisions 24-32 [PLAIC2432]

<b>Metadata</b>	
<b>Scientific Name</b>	Pleuronectes platessa
<b>Current Assess ID</b>	WGBFAS-PLAIC2432-2001-2019-ICESIMP2021
<b>Area</b>	Subdivisions 24-32
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2015, 2016, 2017, 2018, 2019

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

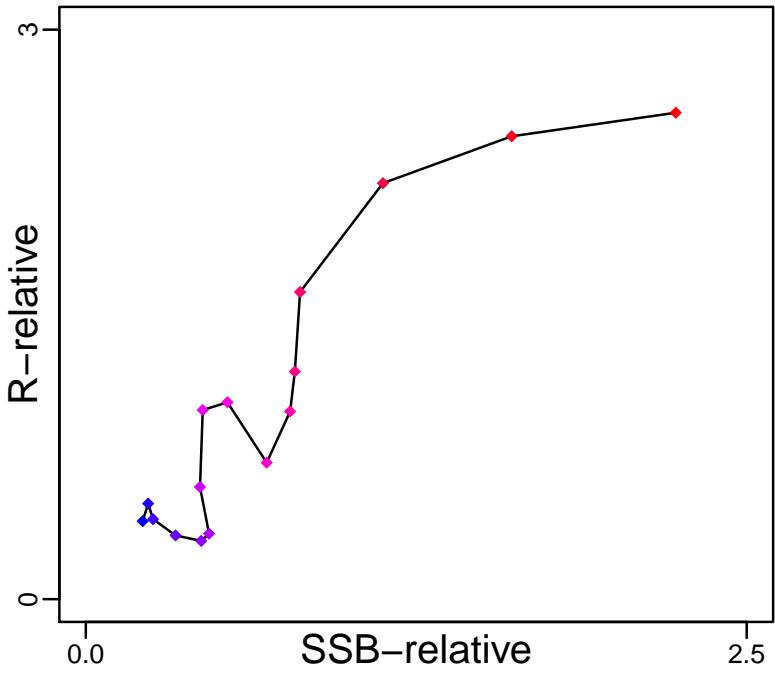
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-relative	2019	3.224	-	-	
<b>SSB</b>	SSB-relative	2019	3.579	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-relative	2019	2.562	-	1	
<b>F</b>	F-relative	2019	0.541	-	2 to 5	
<b>ER</b>	-	-	-	-	-	
<b>TC</b>	TC-MT	2019	2355			
<b>TL</b>	TL-MT	2019	1644			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Kobe MSY\*

Kobe MGT\*

Spawner Recruit (2001–2019–ICESIMP2021)

Production\*

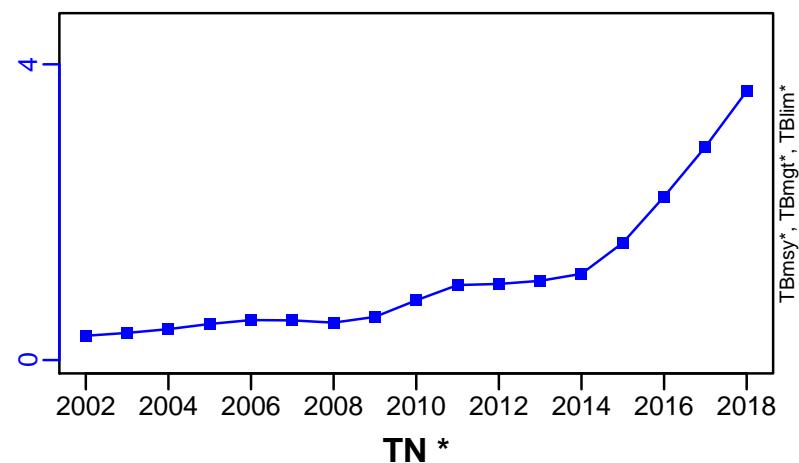


◆ Start Year    ♦ End Year    \* No Data

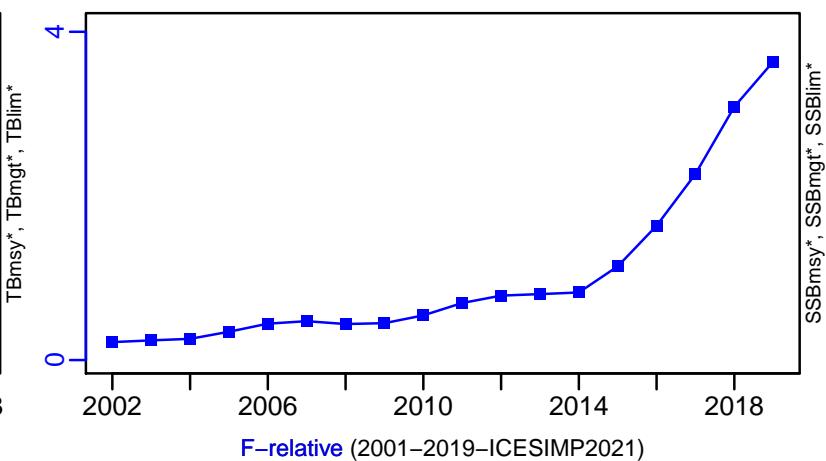
European plaice Subdivisions 24–32 [PLAIC2432]

TB-relative (2001–2019–ICESIMP2021)

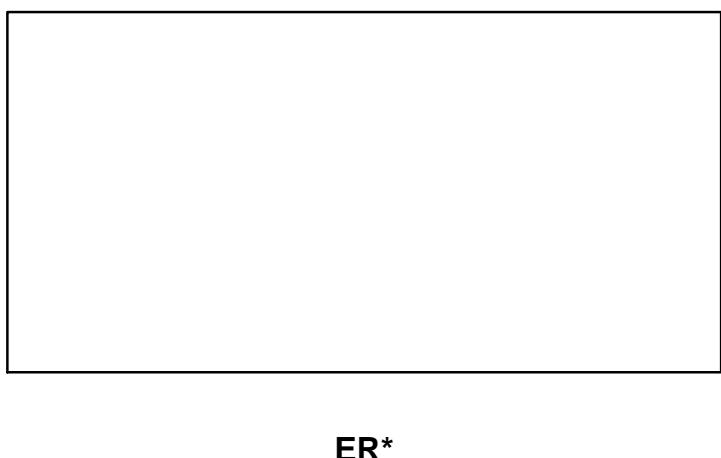
SSB-relative (2001–2019–ICESIMP2021)



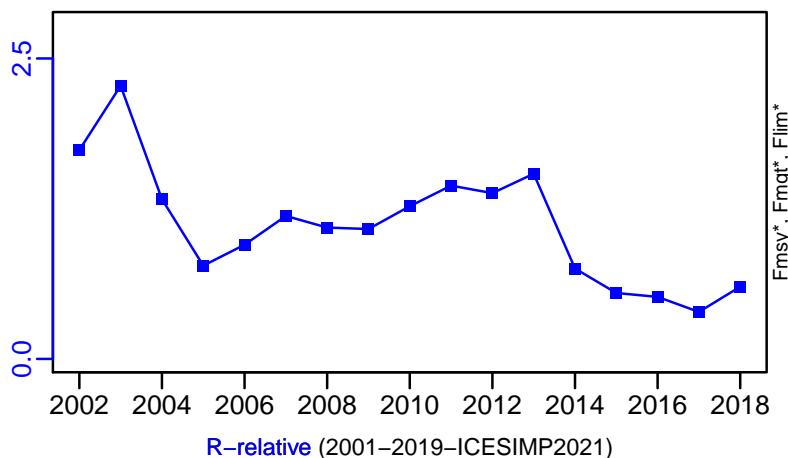
TN \*



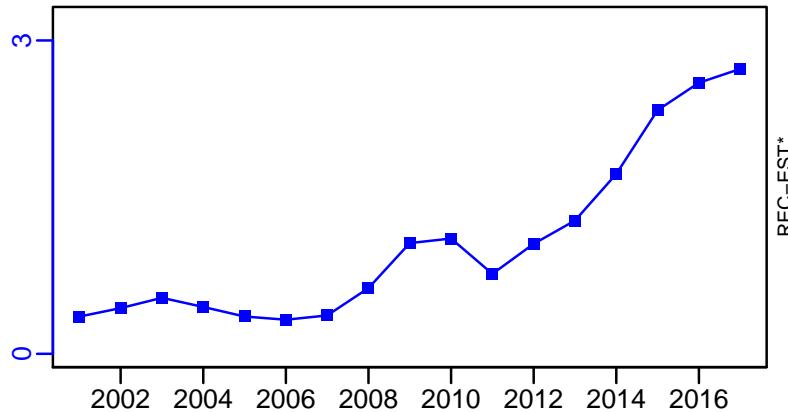
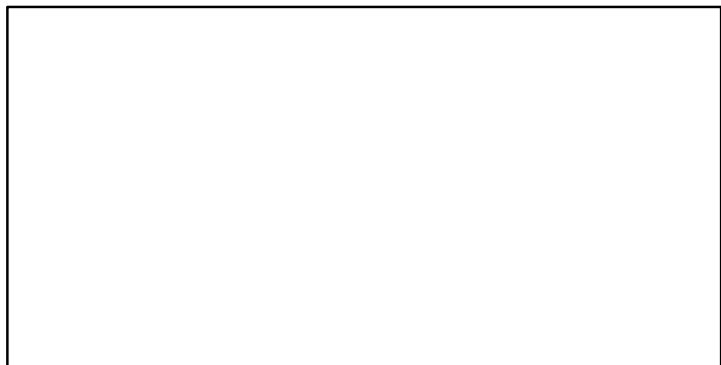
SSB<sub>m</sub>s<sup>y\*</sup>, SSB<sub>mgt</sub><sup>\*</sup>, SSB<sub>lim</sub><sup>\*</sup>



ER\*



F<sub>m</sub>s<sup>y\*</sup>, F<sub>mgt</sub><sup>\*</sup>, F<sub>lim</sub><sup>\*</sup>



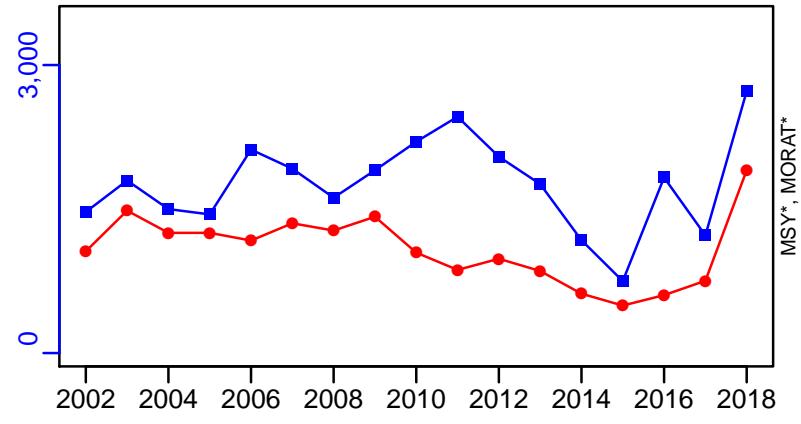
R<sub>m</sub>s<sup>y\*</sup>, R<sub>mgt</sub><sup>\*</sup>, R<sub>lim</sub><sup>\*</sup>

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

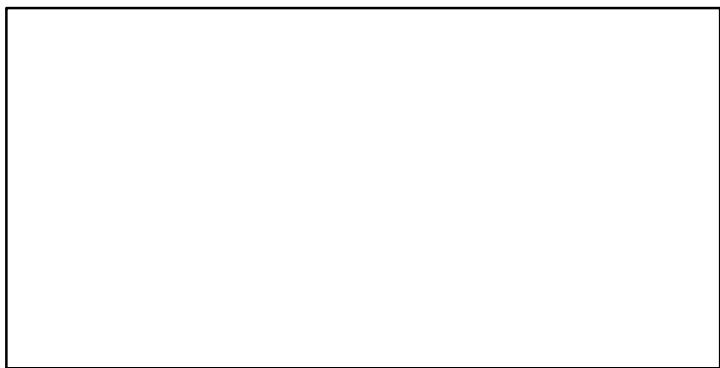
European plaice Subdivisions 24–32 [PLAIC2432]

TC-MT, TL-MT, RecC\* (2001–2019–ICESIMP2021)

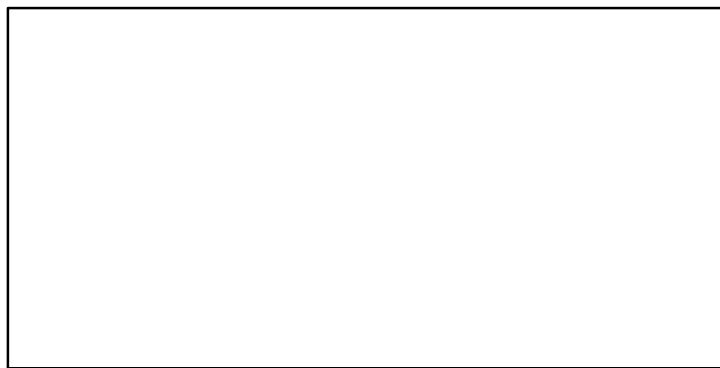
TAC\*, Cpair\*, Cadv\*



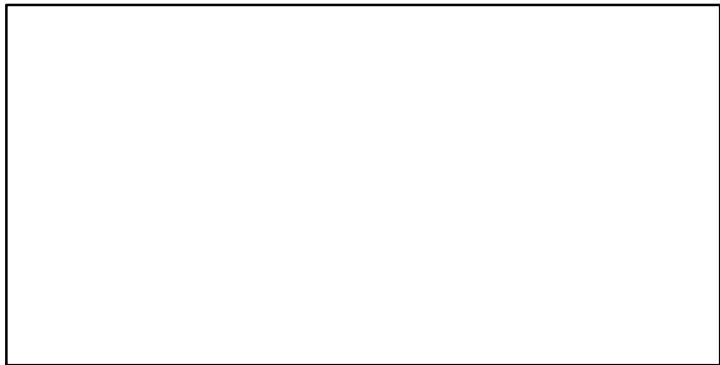
survB\*



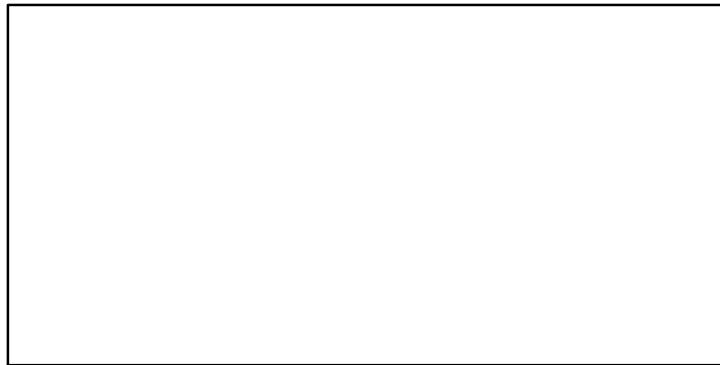
CPUE\*



EFFORT\*



CdivMSY\*



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

## European plaice Eastern English Channel [PLAIC7d]

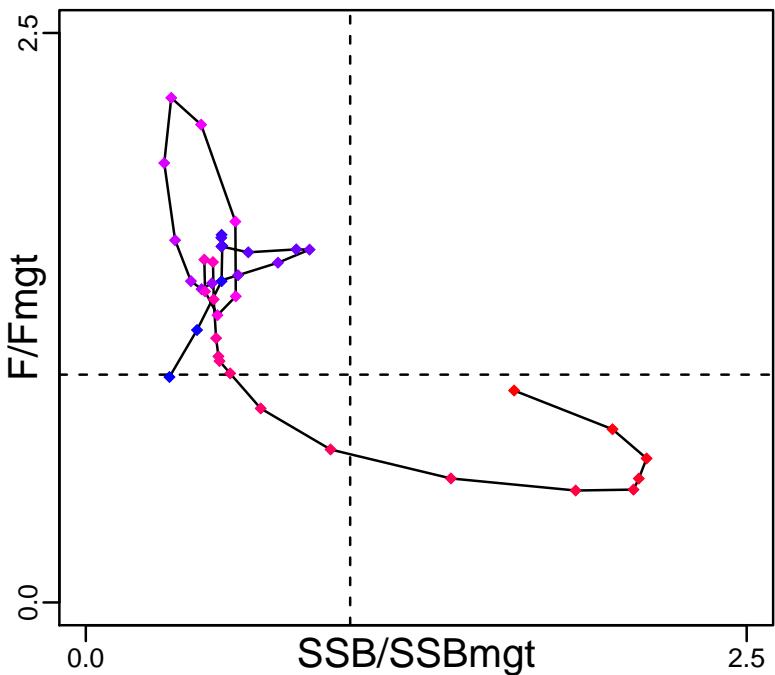
<b>Metadata</b>	
<b>Scientific Name</b>	Pleuronectes platessa
<b>Current Assess ID</b>	WGNSSK-PLAIC7d-1979-2019-ICESIMP2021
<b>Area</b>	Eastern English Channel
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2010, 2013, 2014, 2015, 2016, 2017, 2018, 2019

<b>Reference Points</b>				
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>	
<b>TBmsy</b>	TBmsy-est-MT	2010	15,149	
<b>SSBmsy</b>	-	-	-	
<b>Fmsy</b>	Fmsy-1/yr	2018	0.25	
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.377	
<b>TBmgt</b>	-	-	-	
<b>SSBmgt</b>	SSBmgt-MT	2019	25,826	
<b>Fmgt</b>	Fmgt-1/yr	2019	0.25	
<b>ERmgt</b>	-	-	-	
<b>TB0</b>	-	-	-	
<b>SSB0</b>	-	-	-	
<b>MSY</b>	MSY-est-MT	2010	4969	
<b>M</b>	M-1/yr	2010	0.1	
<b>TBlim</b>	-	-	-	
<b>SSBlim</b>	SSBlim-MT	2018	18,448	
<b>Flim</b>	Flim-1/yr	2018	0.5	
<b>ERlim</b>	-	-	-	

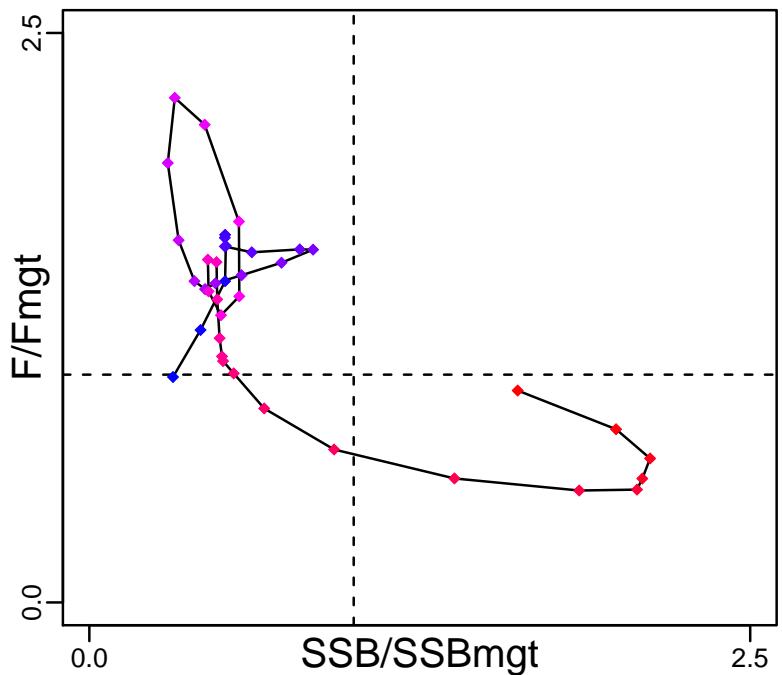
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2010	9230	Both	1+	
<b>SSB</b>	SSB-MT	2019	41,483	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	125,133,500	-	1	
<b>F</b>	F-1/yr	2019	0.233	-	3 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.115	-	-	
<b>TC</b>	TC-MT	2019	6826			
<b>TL</b>	TL-MT	2019	3980			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2010	0.609			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.804			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.306			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.606			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.93			
<b>ER/ERmgt</b>	-	-	-			

European plaice Eastern English Channel [PLAIC7d]

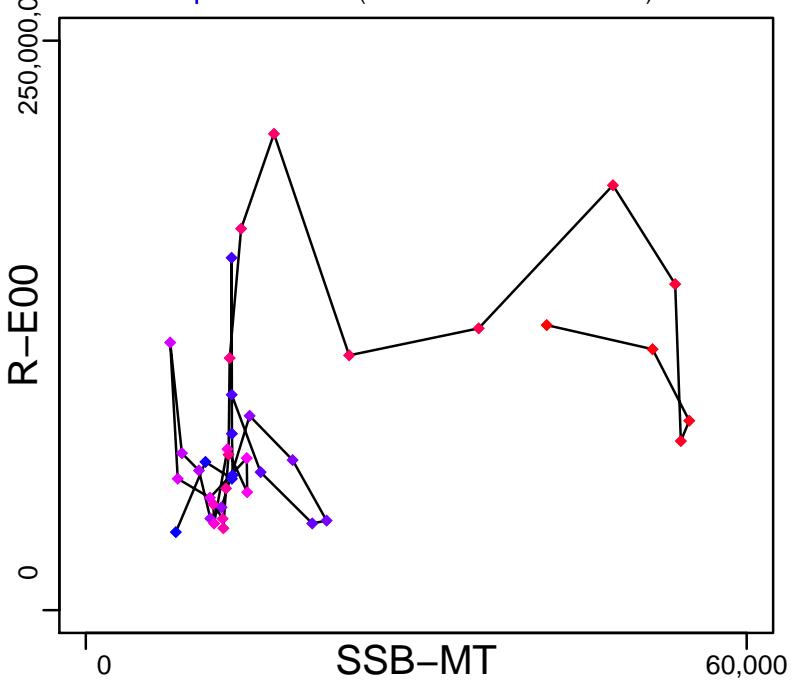
Kobe MSYpref (1979–2019–ICESIMP2021)



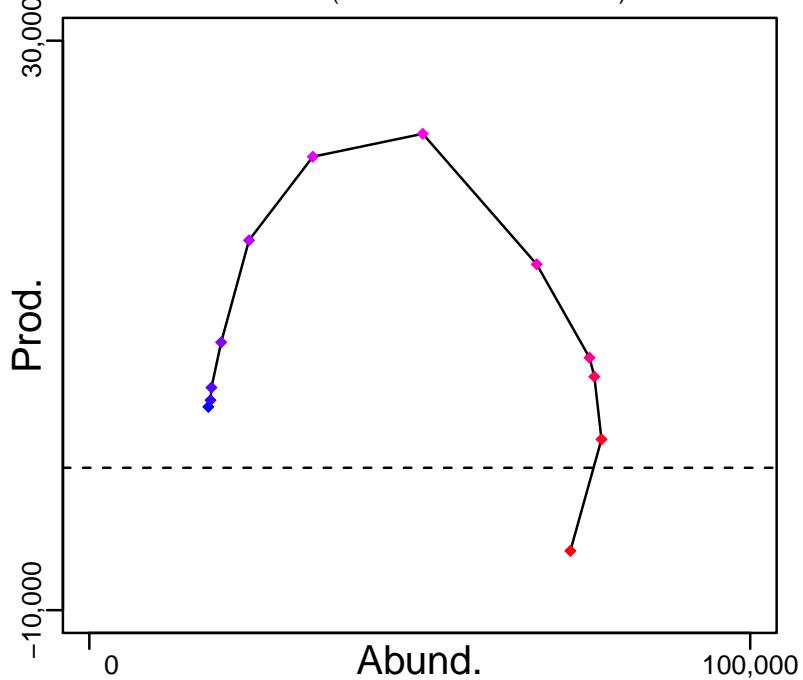
Kobe MGTpref (1979–2019–ICESIMP2021)



Spawner Recruit (1979–2019–ICESIMP2021)



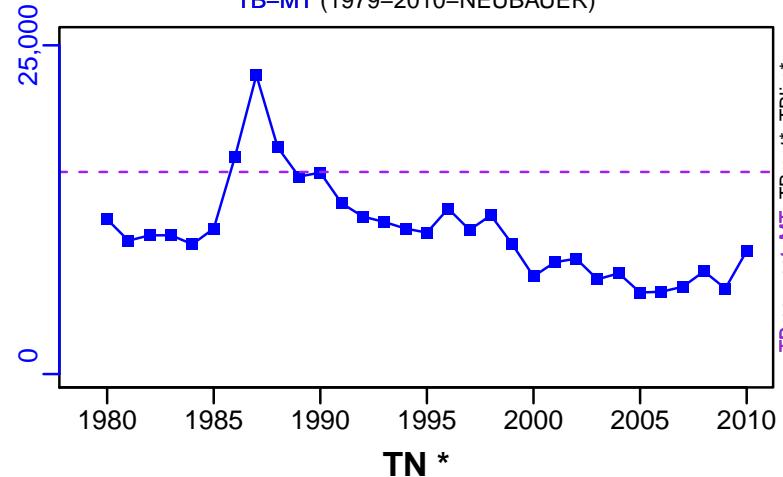
Production (1979–2019–ICESIMP2021)



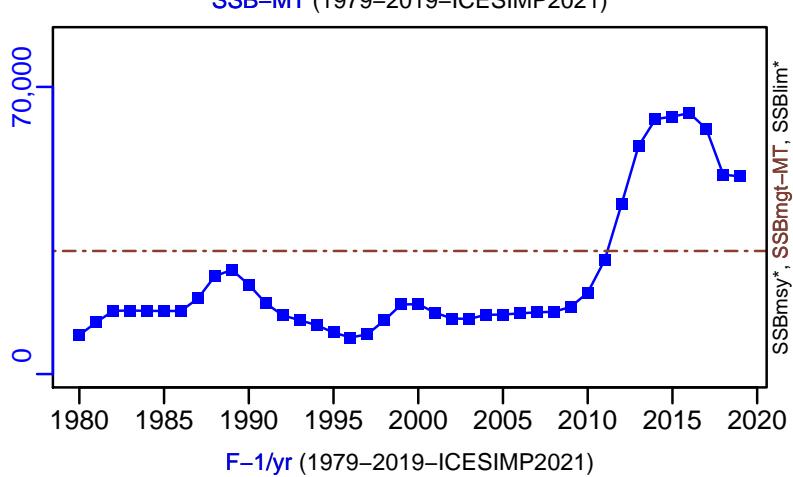
◆ Start Year ◆ End Year \* No Data

### European plaice Eastern English Channel [PLAIC7d]

TB-MT (1979–2010–NEUBAUER)



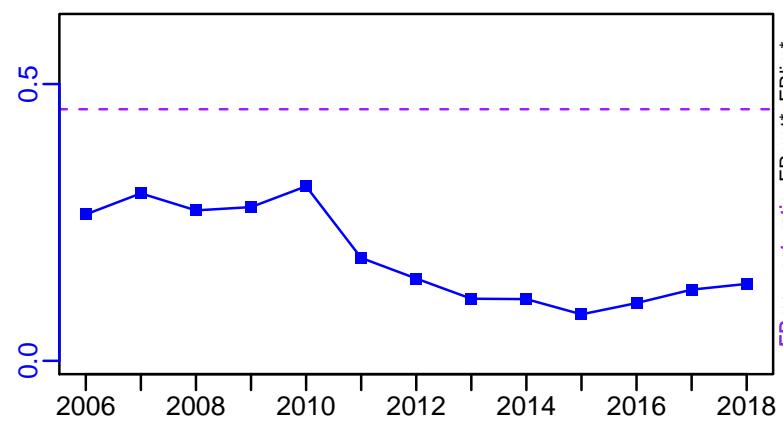
SSB-MT (1979–2019–ICESIMP2021)



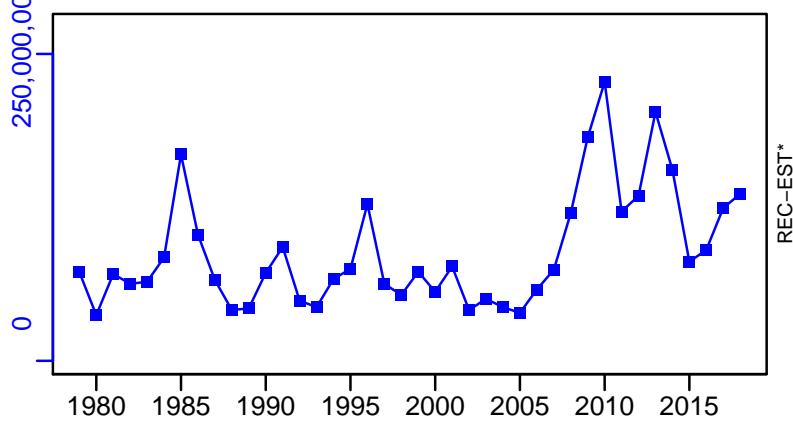
$TN^*$

$F-1/yr$

ER-calc-ratio (1979–2019–ICESIMP2021)



R-E00 (1979–2019–ICESIMP2021)

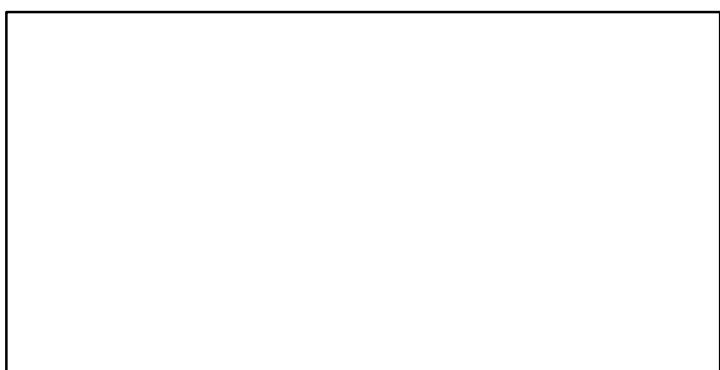
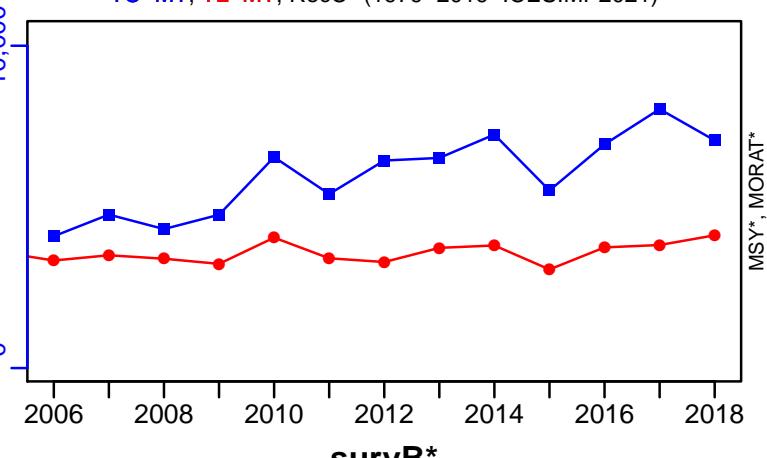


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

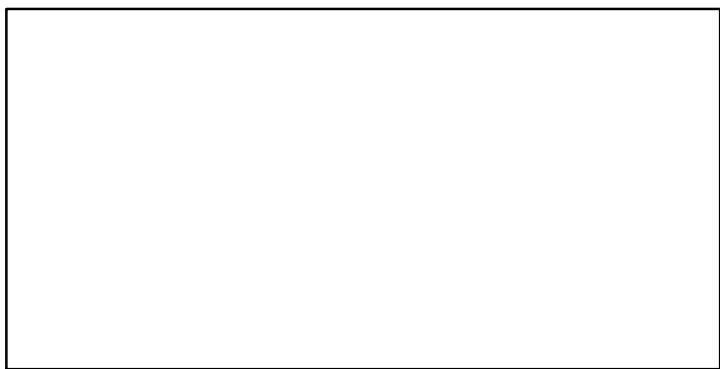
European plaice Eastern English Channel [PLAIC7d]

TC-MT, TL-MT, RecC\* (1979–2019–ICESIMP2021)

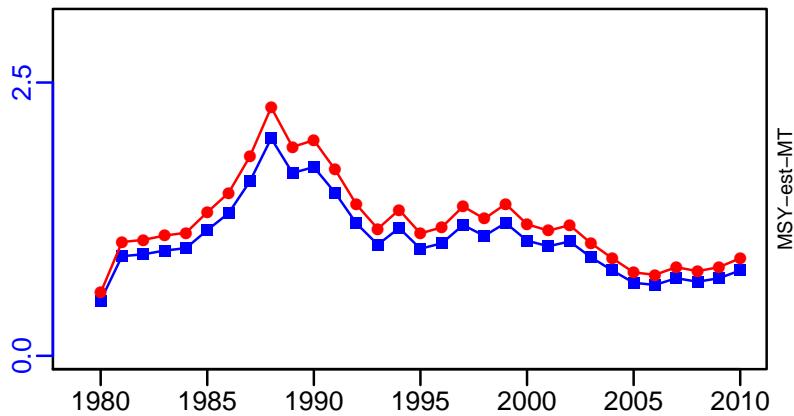
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1979–2010–NEUBAUER)



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

## European plaice Celtic Sea [PLAICCELT]

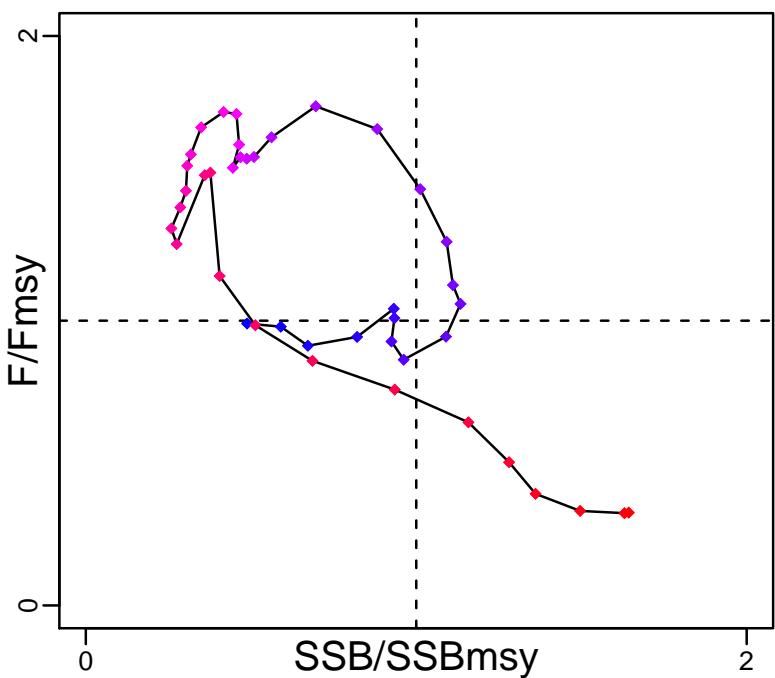
<b>Metadata</b>	
<b>Scientific Name</b>	Pleuronectes platessa
<b>Current Assess ID</b>	WGCSE-PLAICCELT-1977-2019-ICESIMP2021
<b>Area</b>	Celtic Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2017, 2019, 2016, 2014, 2016, 2010

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2019	5008
<b>SSBmsy</b>	SSBmsy-est-MT	2010	2347
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.457
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2019	2287
<b>M</b>	M-1/yr	2010	0.12
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

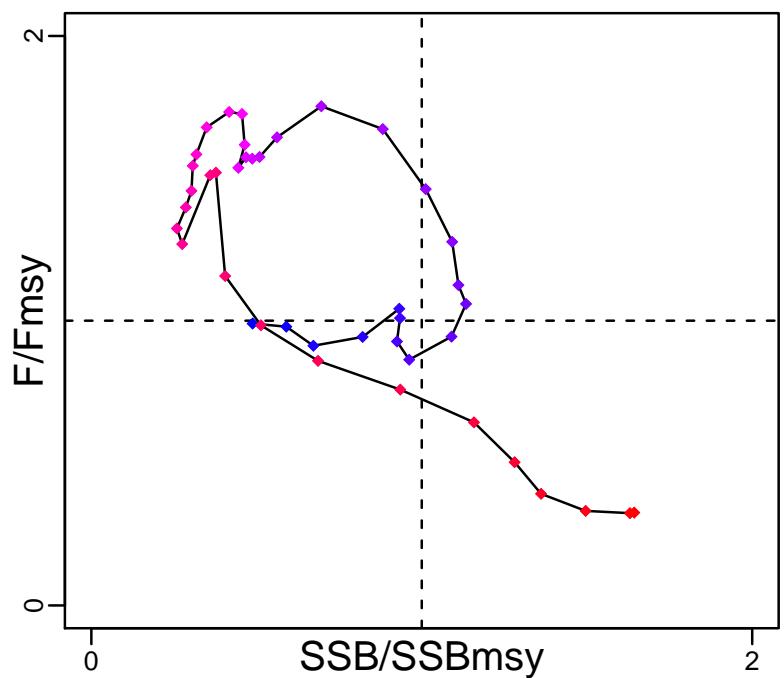
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	7515	-	-	
<b>SSB</b>	SSB-relative	2014	1.33	Both	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-relative	2014	0.393	-	1	
<b>F</b>	F-relative	2014	1.29	-	3 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.117	-	-	
<b>TC</b>	TC-MT	2019	930			
<b>TL</b>	TL-MT	2019	422			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2019	1.501			
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2019	1.551			
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2019	0.326			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.256			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

European plaice Celtic Sea [PLAICCELT]

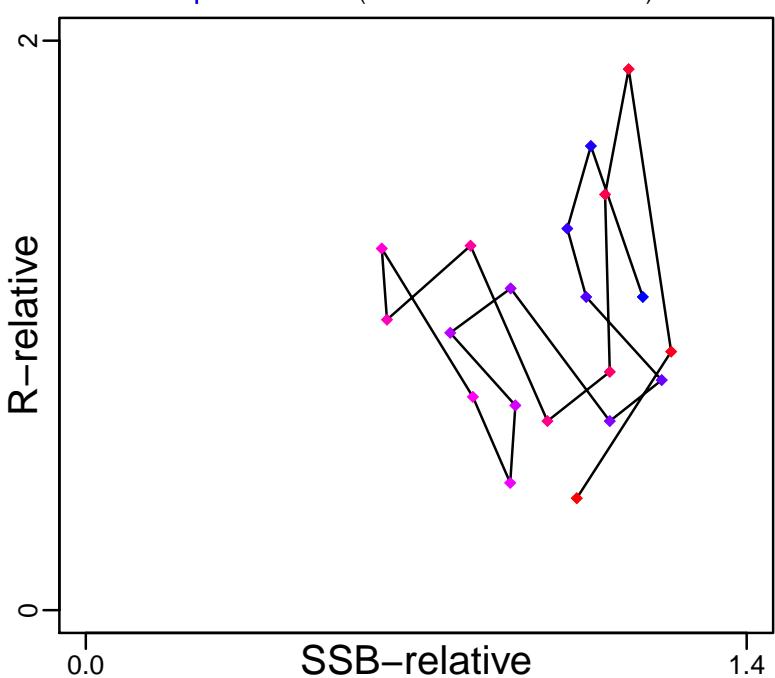
Kobe MSYpref (1977–2019–ICESIMP2021)



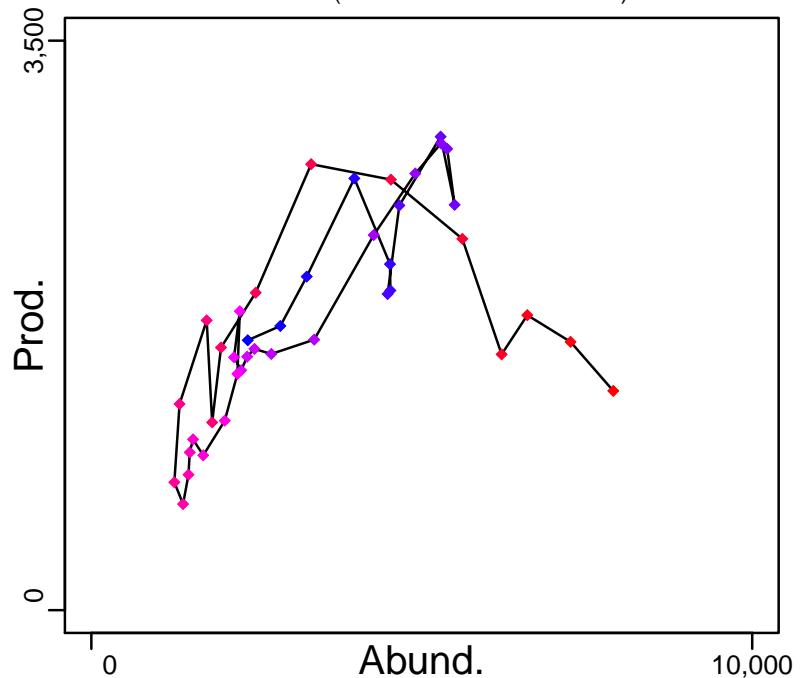
Kobe MGTpref (1977–2019–ICESIMP2021)



Spawner Recruit (1992–2014–ICESIMP2016)



Production (1977–2019–ICESIMP2021)

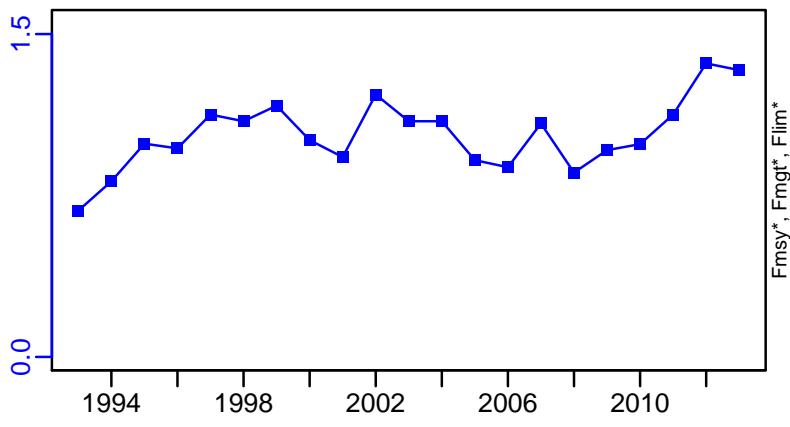
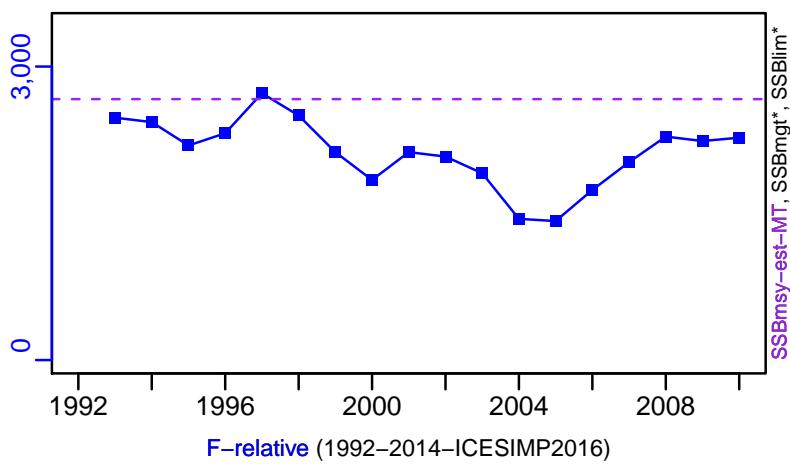
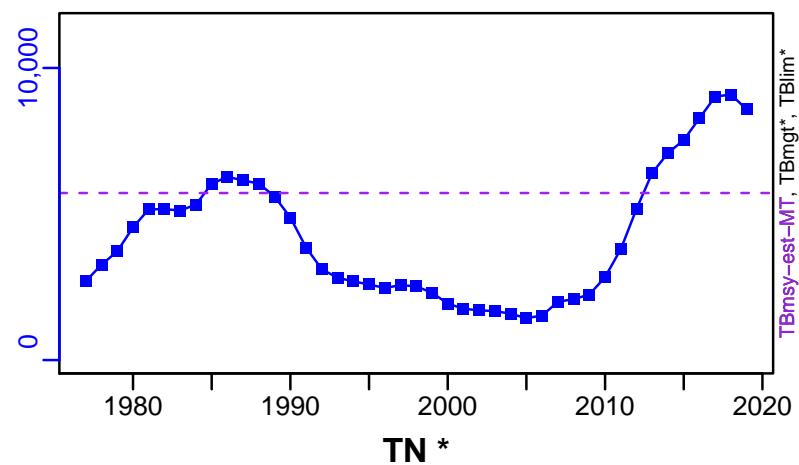


◆ Start Year	◆ End Year	*	No Data
--------------	------------	---	---------

### European plaice Celtic Sea [PLAICCELT]

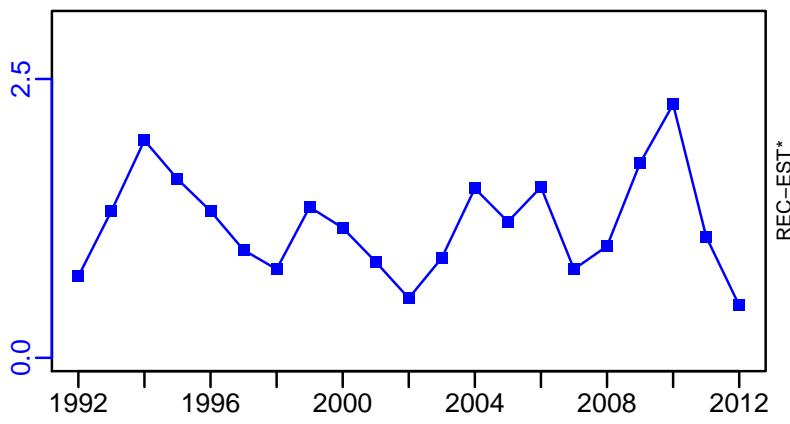
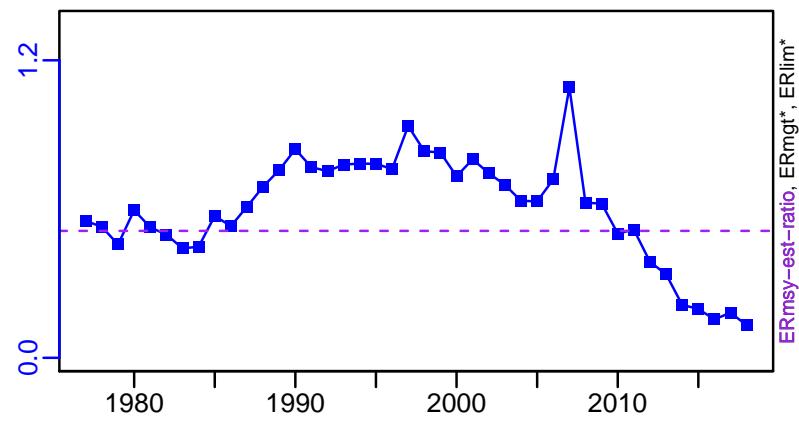
TB-MT (1977–2019–ICESIMP2021)

SSB-MT (1992–2010–NEUBAUER)



ER-calc-ratio (1977–2019–ICESIMP2021)

R-relative (1992–2014–ICESIMP2016)

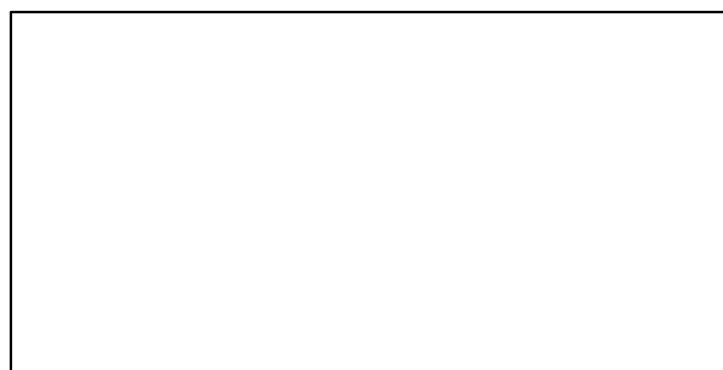
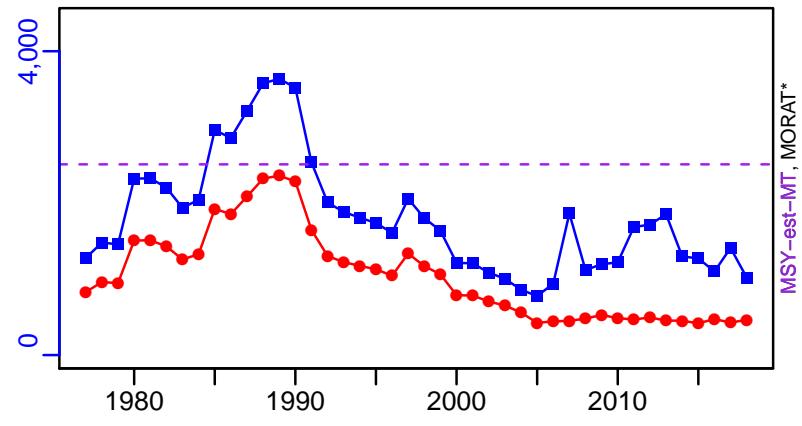


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

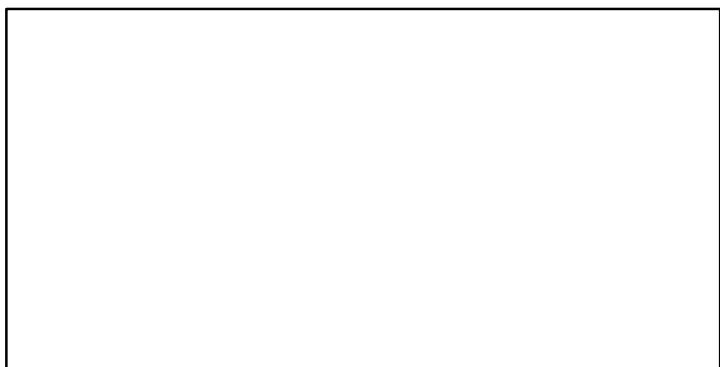
European plaice Celtic Sea [PLAICCELT]

TC-MT, TL-MT, RecC\* (1977–2019–ICESIMP2021)

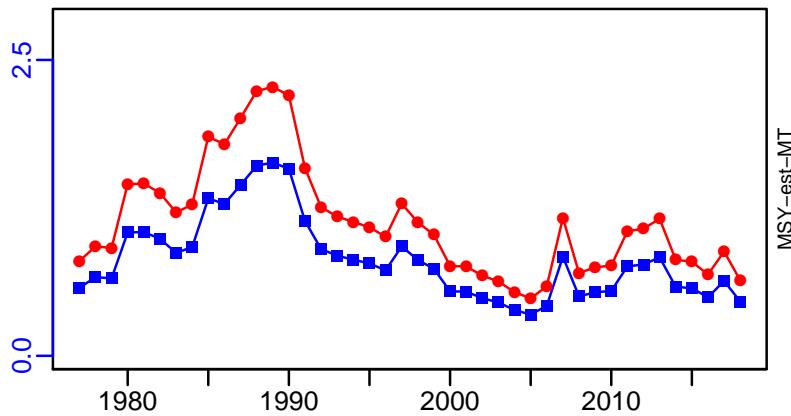
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1977–2019–ICESIMP2021)



## European plaice Western English Channel [PLAICECHW]

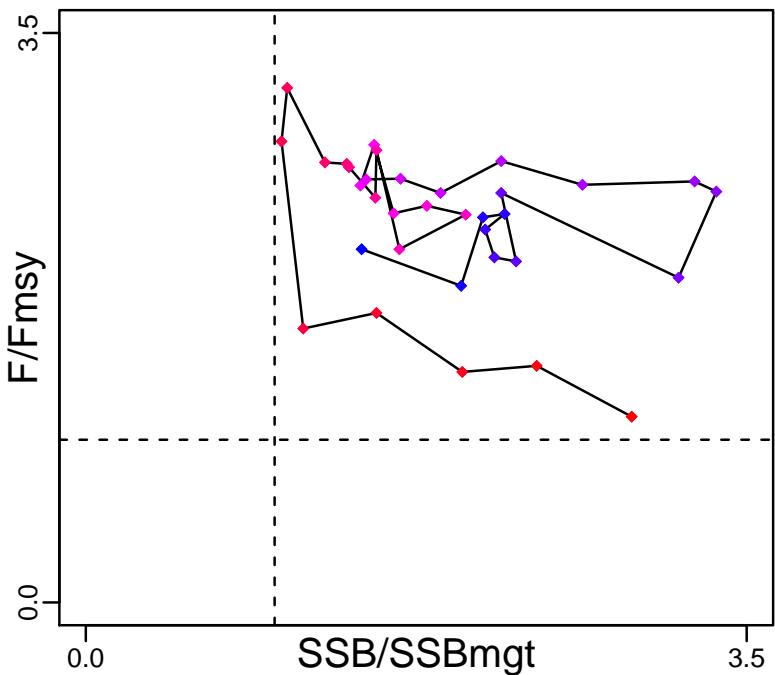
Metadata	
<b>Scientific Name</b>	Pleuronectes platessa
<b>Current Assess ID</b>	WGCSE-PLAICECHW-1978-2019-ICESIMP2021
<b>Area</b>	Western English Channel
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016, 2016, 2018, 2019, 2013, 2014, 2010

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2010	7866
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-relative	2018	0.238
<b>ERmsy</b>	ERmsy-est-ratio	2010	0.256
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-relative	2019	0.66
<b>Fmgt</b>	Fmgt-relative	2019	1.268
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2010	2015
<b>M</b>	M-1/yr	2010	0.12
<b>TBlim</b>	TBlim-MT	2010	1300
<b>SSBlim</b>	-	-	-
<b>Flim</b>	Flim-relative	2018	0.88
<b>ERlim</b>	-	-	-

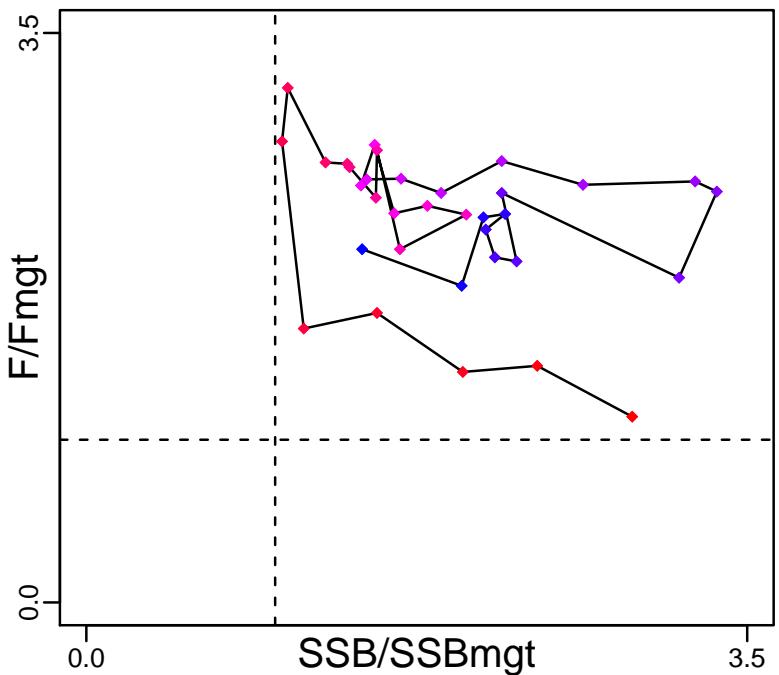
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-relative	2019	1.545	-	-	
<b>SSB</b>	SSB-relative	2019	1.875	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-relative	2019	0.901	-	2	
<b>F</b>	F-relative	2019	0.613	-	3 to 6	
<b>ER</b>	ER-calc-ratio	2014	0.227	-	-	
<b>TC</b>	TC-MT	2016	2940			
<b>TL</b>	TL-MT	2019	1880			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2010	0.981			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2014	1.142			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-est-ratio	2010	0.621			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2014	3.352			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2014	1.142			
<b>ER/ERmgt</b>	-	-	-			

### European plaice Western English Channel [PLAICECHW]

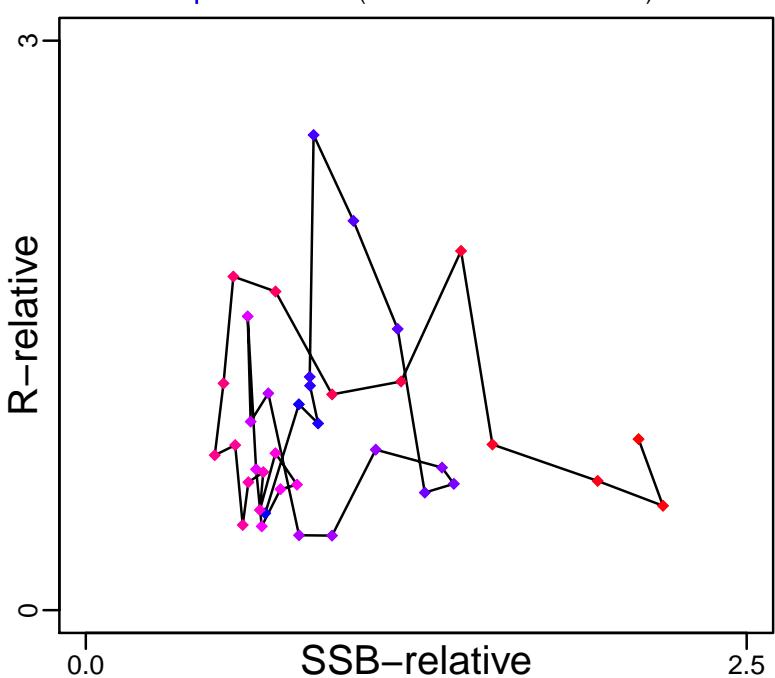
Kobe MSYpref (1979–2014–ICESIMP2016)



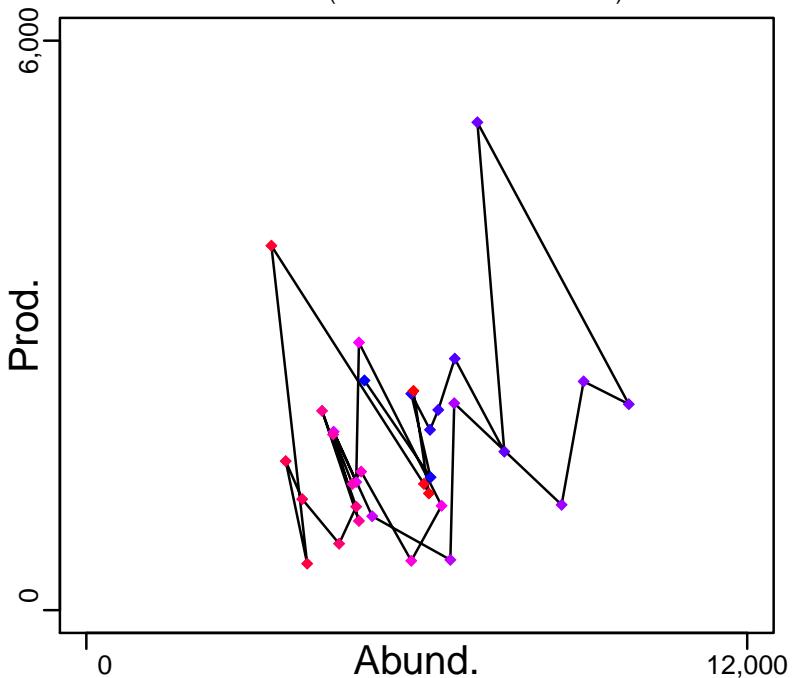
Kobe MGTpref (1979–2014–ICESIMP2016)



Spawner Recruit (1978–2019–ICESIMP2021)



Production (1979–2014–ICESIMP2016)

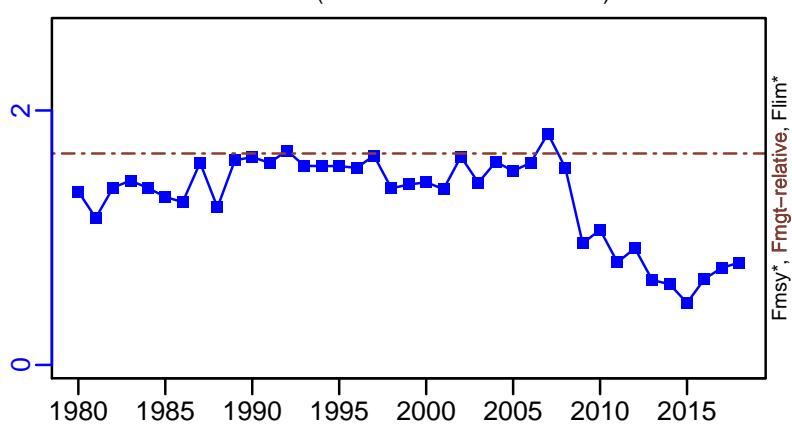
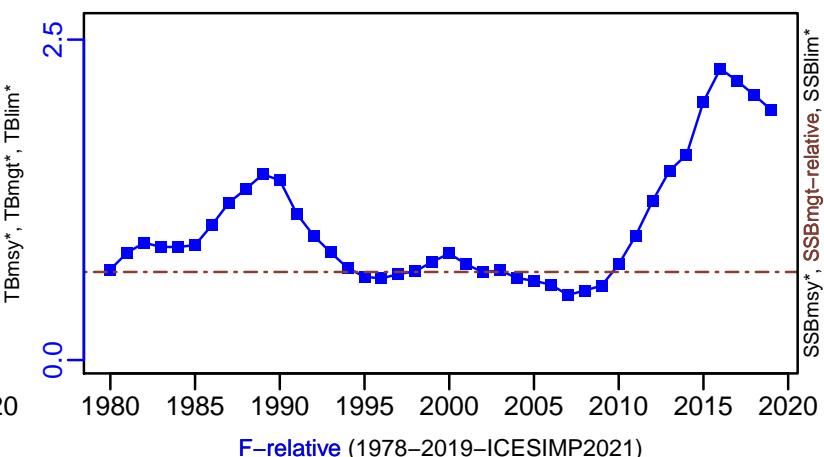
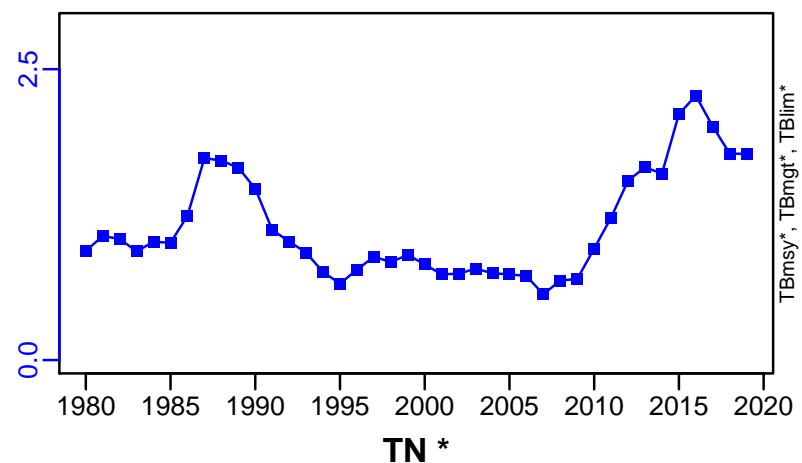


◆ Start Year ♦ End Year \* No Data

### European plaice Western English Channel [PLAICECHW]

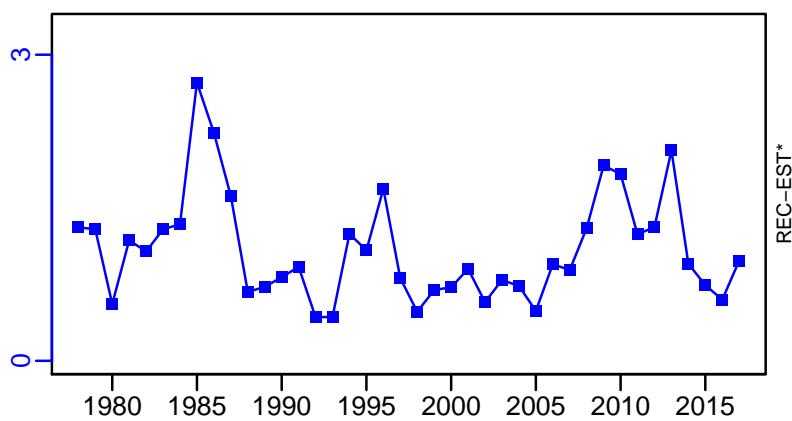
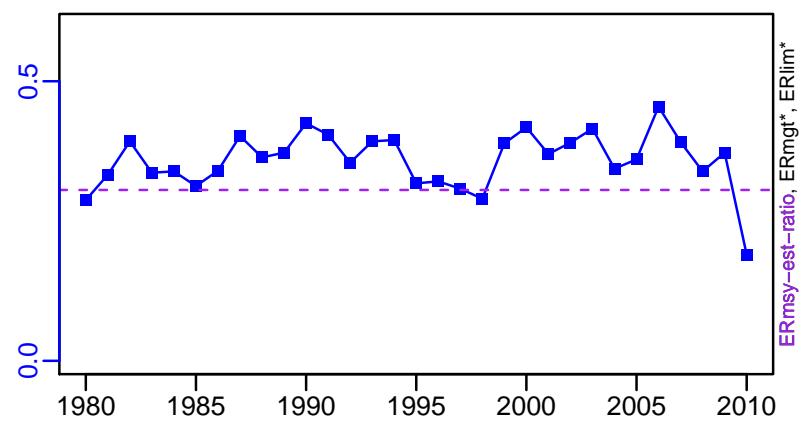
TB-relative (1978–2019–ICESIMP2021)

SSB-relative (1978–2019–ICESIMP2021)



ER-ratio (1979–2010–NEUBAUER)

R-relative (1978–2019–ICESIMP2021)

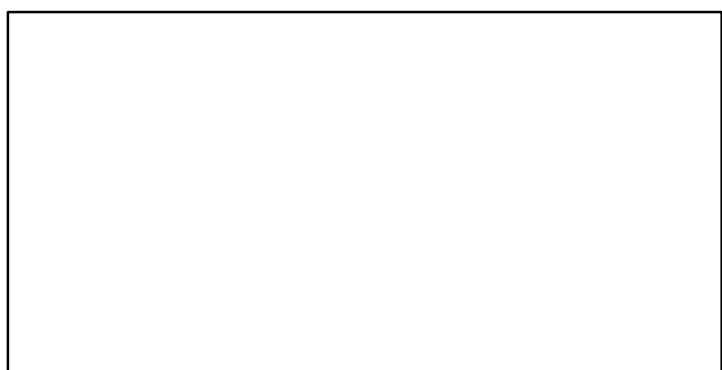
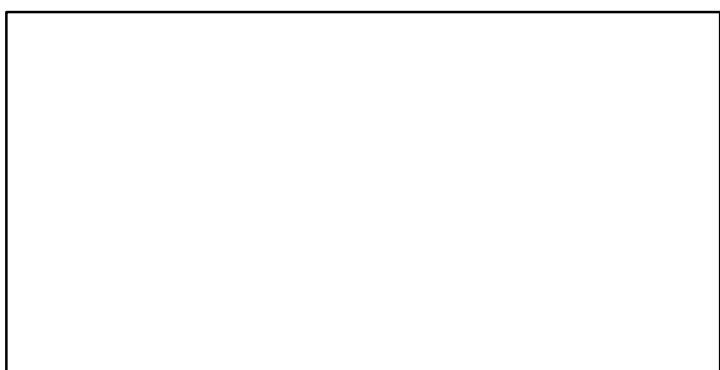
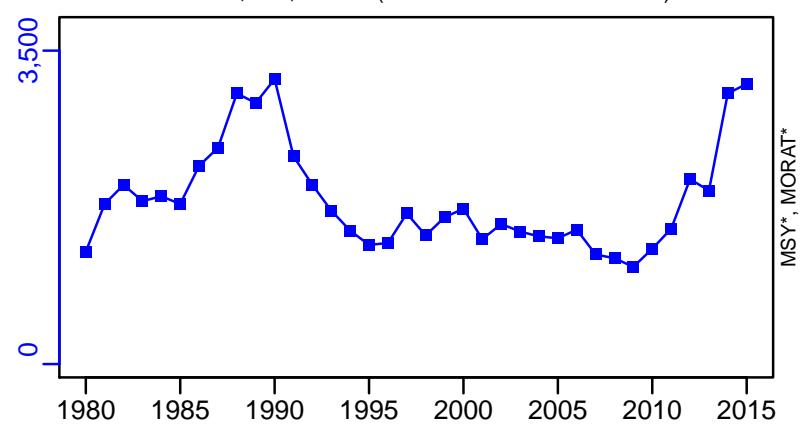


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	— Lim BRP	* No Data

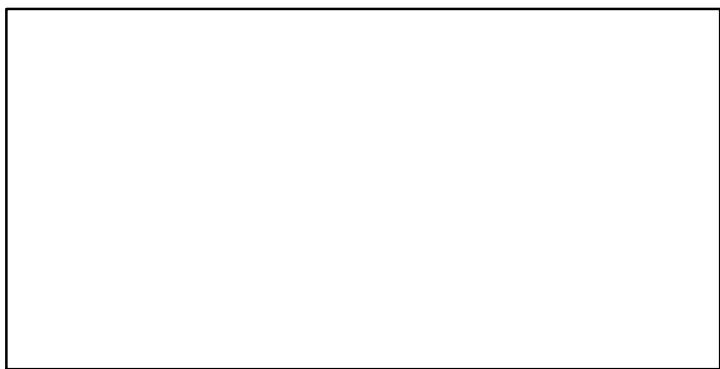
European plaice Western English Channel [PLAICECHW]

TC-MT, TL\*, RecC\* (1978–2016–ICESIMP2016)

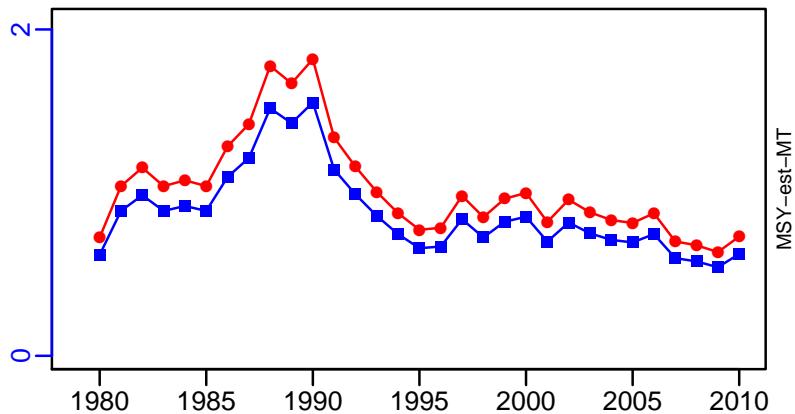
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1979–2010–NEUBAUER)



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

## European plaice Irish Sea [PLAICIS]

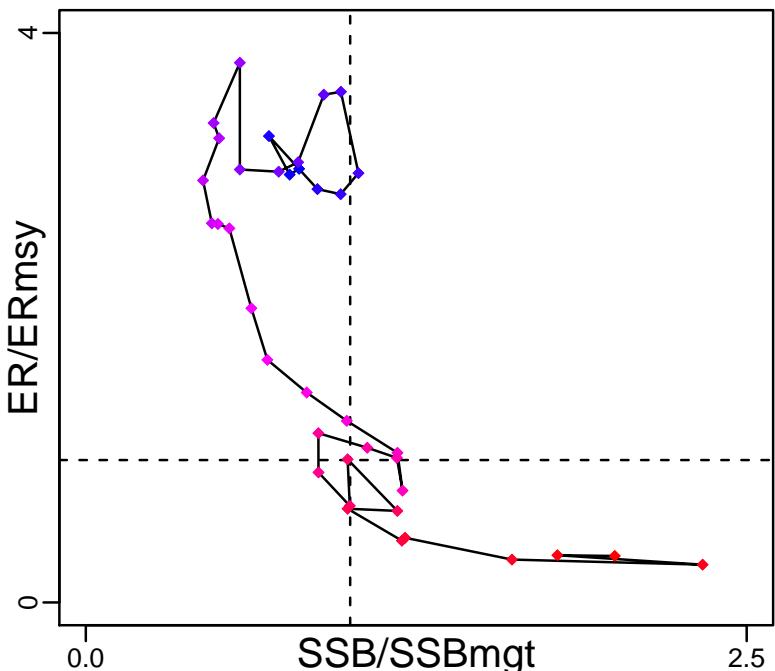
<b>Metadata</b>	
<b>Scientific Name</b>	Pleuronectes platessa
<b>Current Assess ID</b>	WGCSE-PLAICIS-1980-2019-ICESIMP2021
<b>Area</b>	Irish Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016, 2017, 2018, 2019, 2014, 2010

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2010	13,856
<b>Fmsy</b>	Fmsy-1/yr	2018	0.169
<b>ERmsy</b>	ERmsy-ratio	2019	0.196
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	8757
<b>Fmgt</b>	Fmgt-1/yr	2018	0.169
<b>ERmgt</b>	ERmgt-ratio	2019	0.196
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2010	4823
<b>M</b>	M-1/yr	2010	0.12
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	4250
<b>Flim</b>	Flim-1/yr	2018	0.481
<b>ERlim</b>	-	-	-

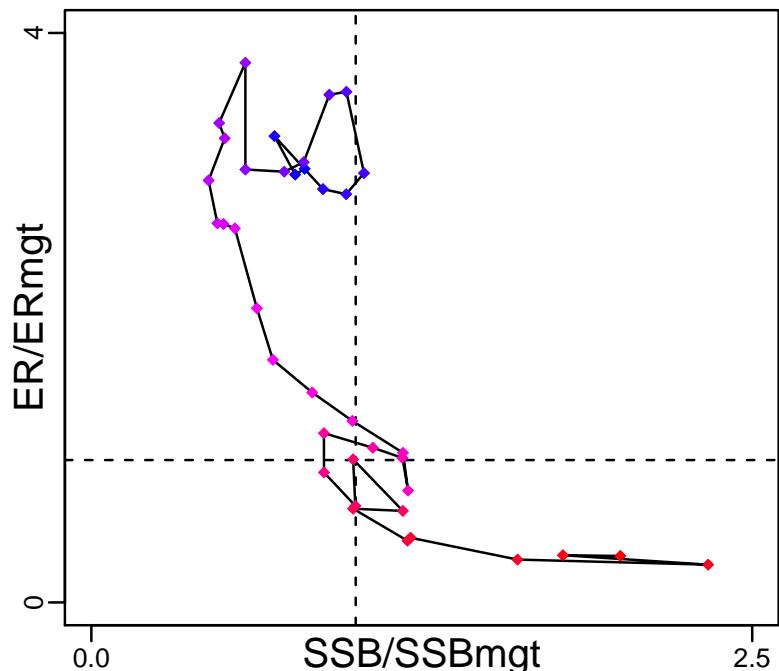
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	19,350	-	-	
<b>SSB</b>	SSB-MT	2019	19,160	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	14,709,000	-	1	
<b>F</b>	F-1/yr	2018	0.066	-	3 to 6	
<b>ER</b>	ER-ratio	2019	0.064	-	3 to 6	
<b>TC</b>	TC-MT	2019	830			
<b>TL</b>	TL-MT	2019	435			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2010	1.739			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.39			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2019	0.327			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	2.188			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2018	0.39			
<b>ER/ERmgt</b>	-	-	-			

European plaice Irish Sea [PLAICIS]

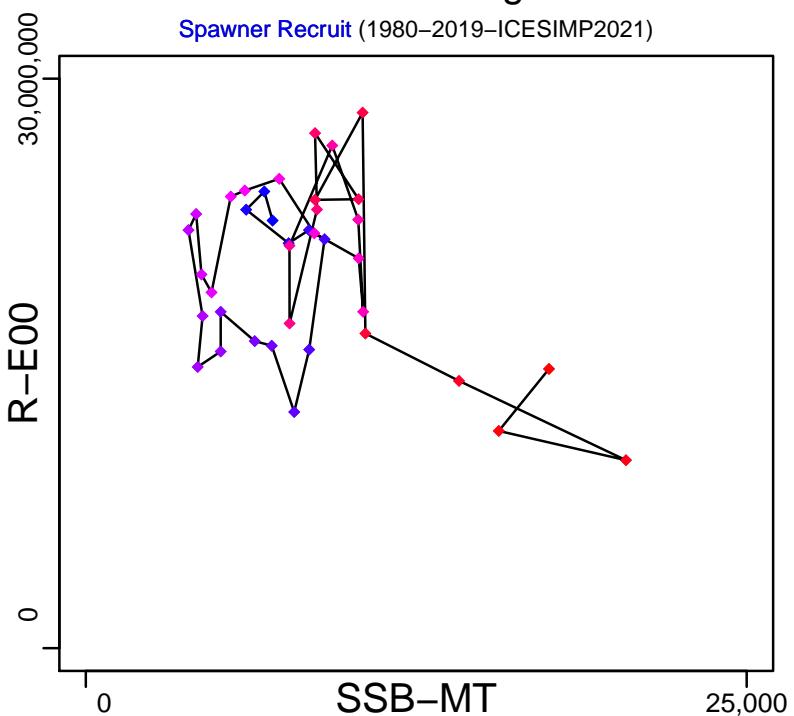
Kobe MSYpref (1980–2019–ICESIMP2021)



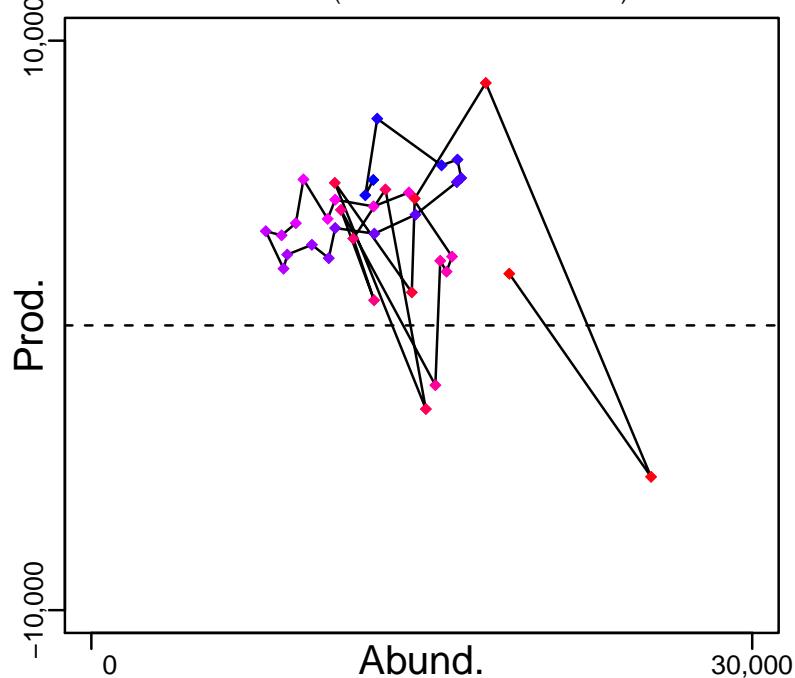
Kobe MGTpref (1980–2019–ICESIMP2021)



Spawner Recruit (1980–2019–ICESIMP2021)



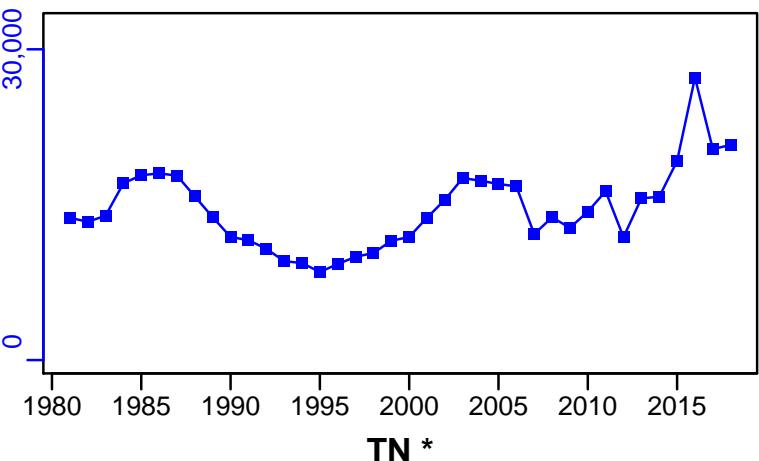
Production (1980–2019–ICESIMP2021)



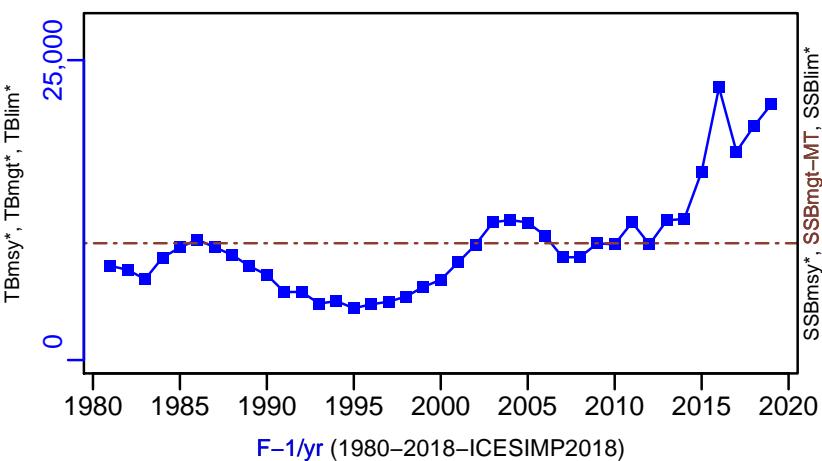
◆ Start Year ◆ End Year \* No Data

### European plaice Irish Sea [PLAICIS]

TB-MT (1980–2019–ICESIMP2021)



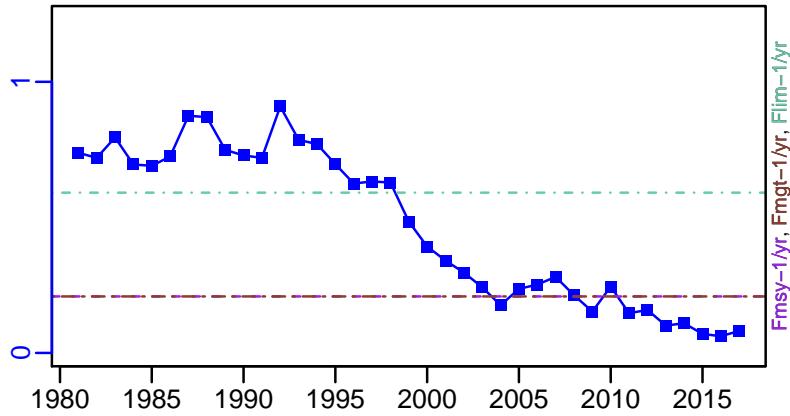
SSB-MT (1980–2019–ICESIMP2021)



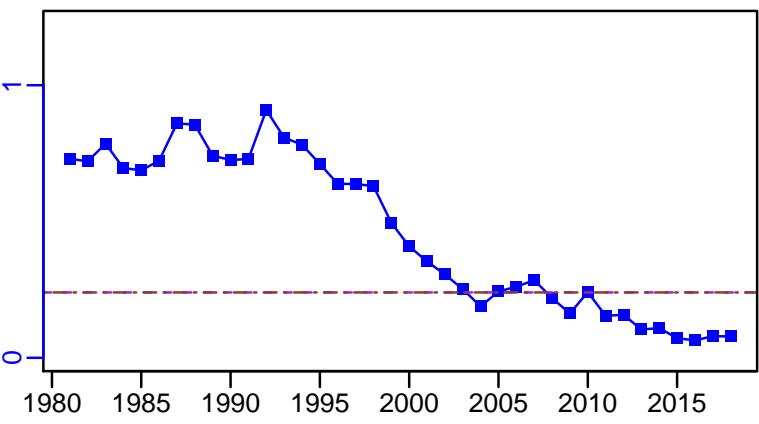
TN \*



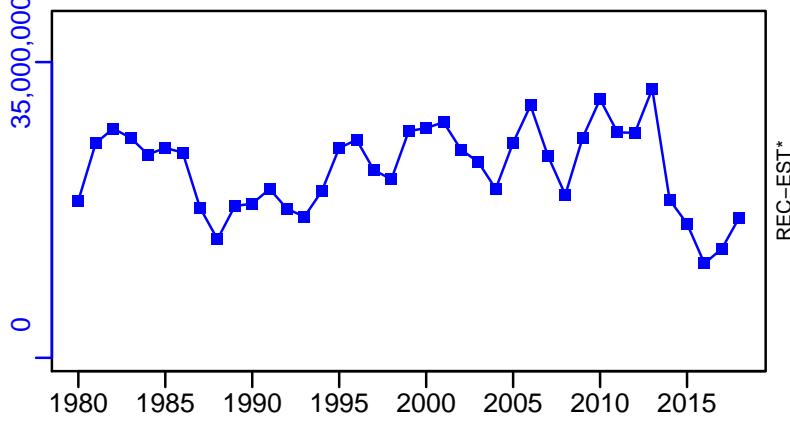
F-1/yr (1980–2018–ICESIMP2018)



ER-ratio (1980–2019–ICESIMP2021)



R-E00 (1980–2019–ICESIMP2021)

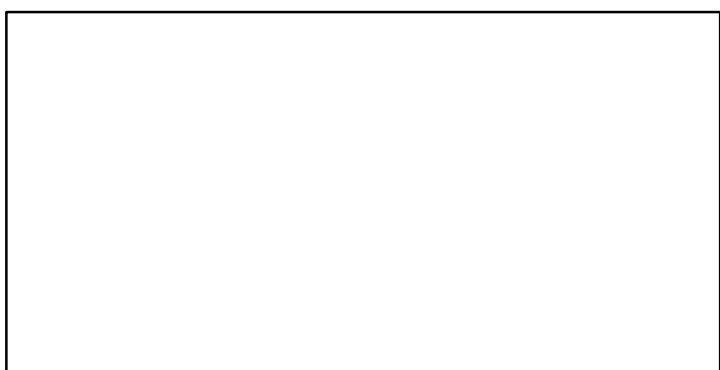
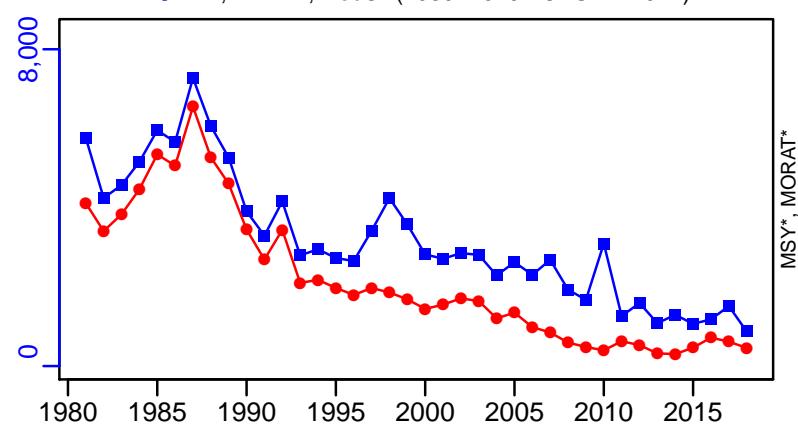


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

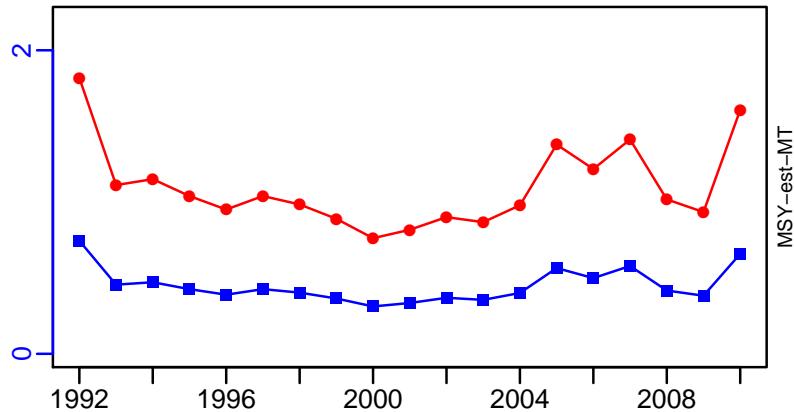
European plaice Irish Sea [PLAICIS]

TC-MT, TL-MT, RecC\* (1980–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1992–2010–NEUBAUER)



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

## European plaice North Sea [PLAICNS]

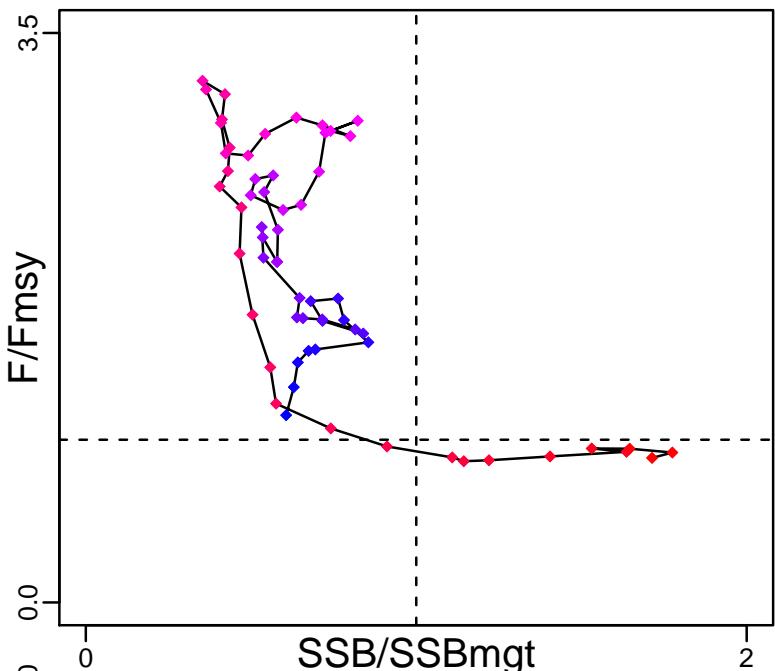
<b>Metadata</b>	
<b>Scientific Name</b>	Pleuronectes platessa
<b>Current Assess ID</b>	WGNSSK-PLAICNS-1956-2019-ICESIMP2021
<b>Area</b>	North Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2010, 2013, 2014, 2015, 2016, 2017, 2018, 2019

<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2010	480,506
<b>Fmsy</b>	Fmsy-1/yr	2019	0.21
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.224
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	564,599
<b>Fmgt</b>	Fmgt-1/yr	2019	0.21
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2010	196,199
<b>M</b>	M-1/yr	2010	0.1
<b>TBlim</b>	TBlim-MT	2010	160,000
<b>SSBlim</b>	SSBlim-MT	2018	207,288
<b>Flim</b>	Flim-1/yr	2018	0.516
<b>ERlim</b>	-	-	-

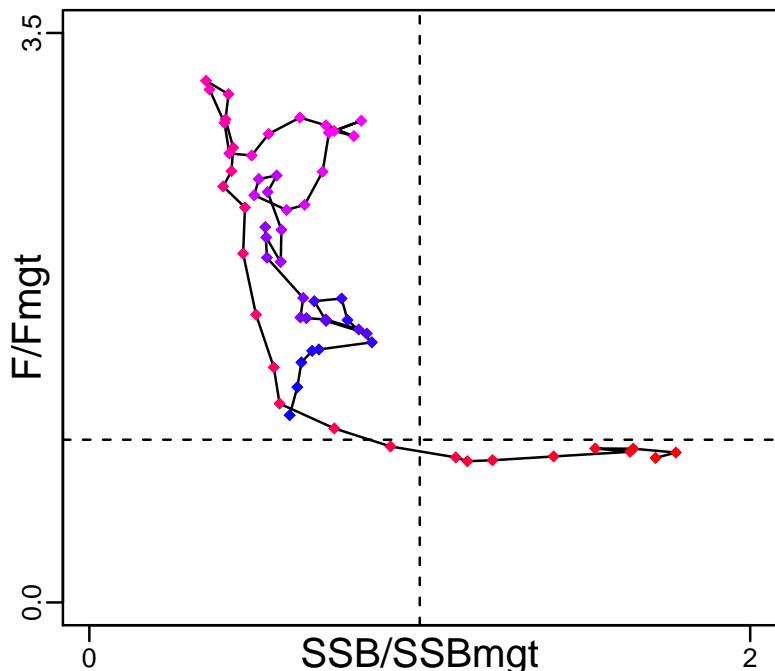
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	1,087,280	-	-	
<b>SSB</b>	SSB-MT	2019	1,052,266	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	3,413,221,000	-	1	
<b>F</b>	F-1/yr	2019	0.187	-	2 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.097	-	-	
<b>TC</b>	TC-MT	2019	105,787			
<b>TL</b>	TL-MT	2019	57,800			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2010	0.959			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.888			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.434			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.864			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.888			
<b>ER/ERmgt</b>	-	-	-			

### European plaice North Sea [PLAICNS]

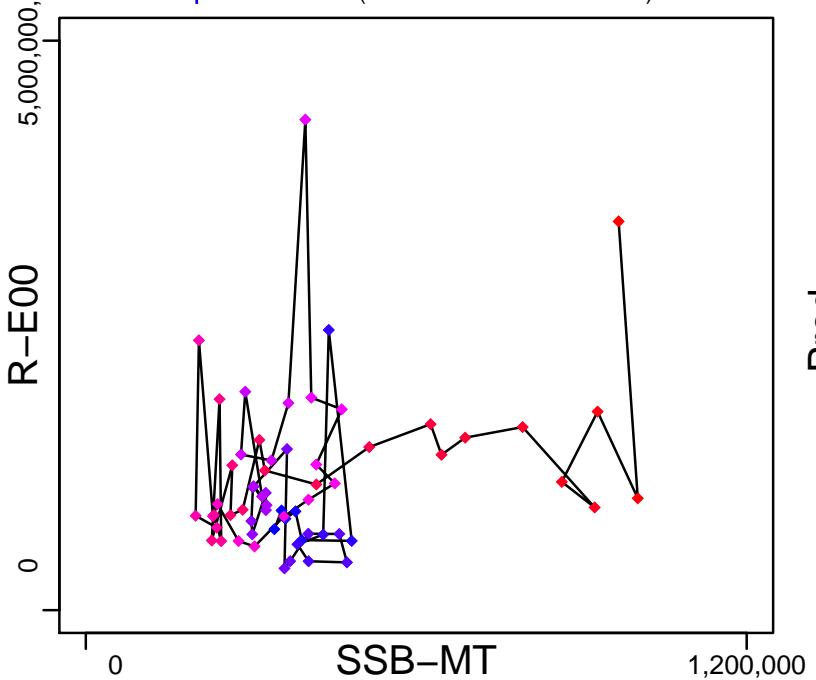
Kobe MSYpref (1956–2019–ICESIMP2021)



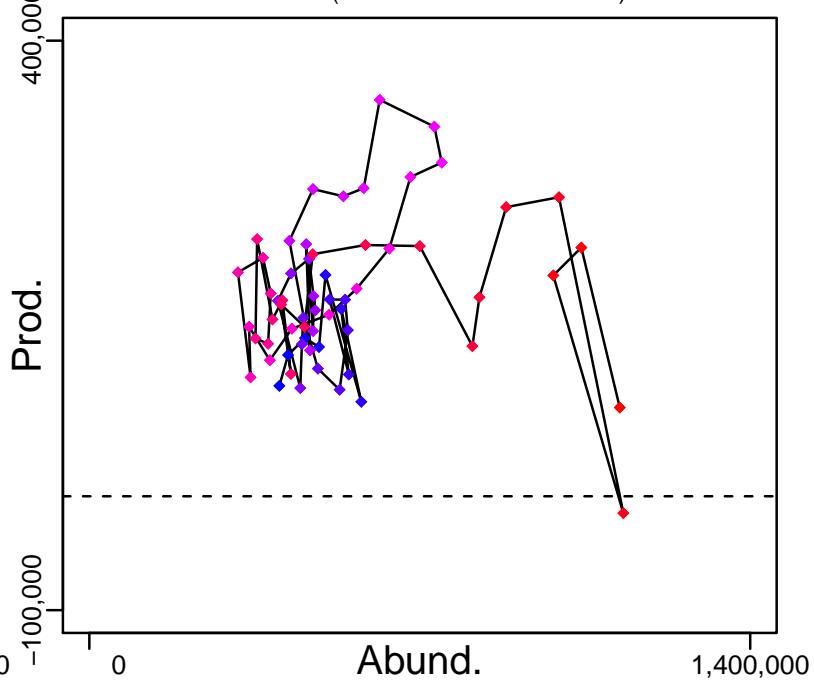
Kobe MGTpref (1956–2019–ICESIMP2021)



Spawner Recruit (1956–2019–ICESIMP2021)



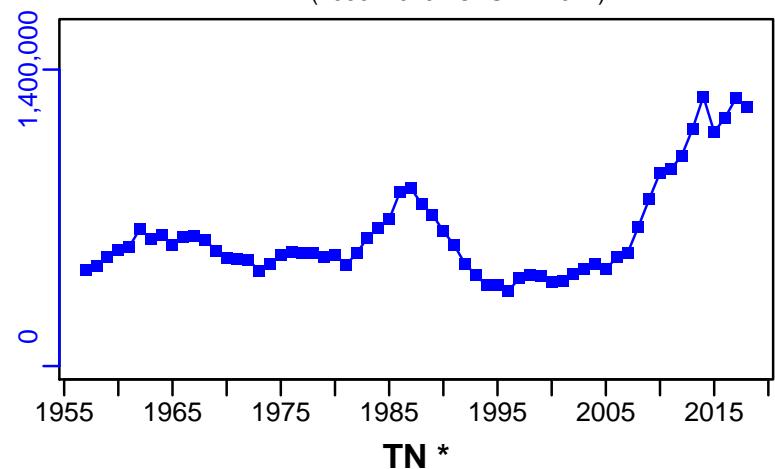
Production (1956–2019–ICESIMP2021)



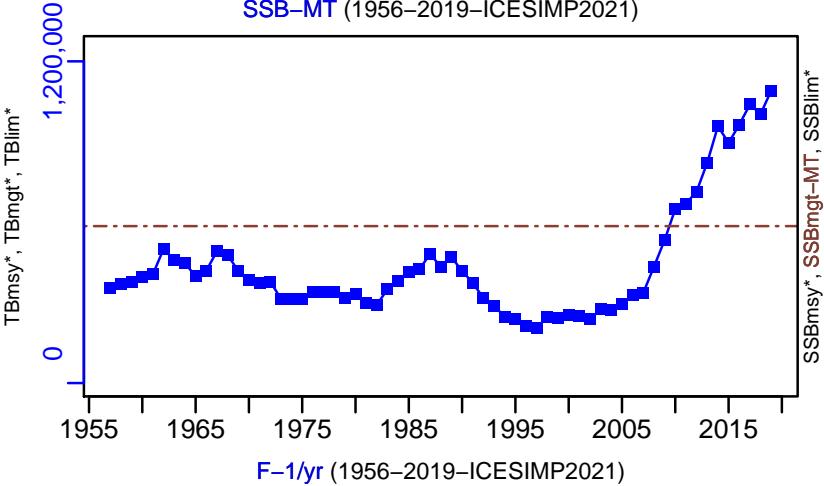
◆ Start Year   ◆ End Year   \* No Data

### European plaice North Sea [PLAICNS]

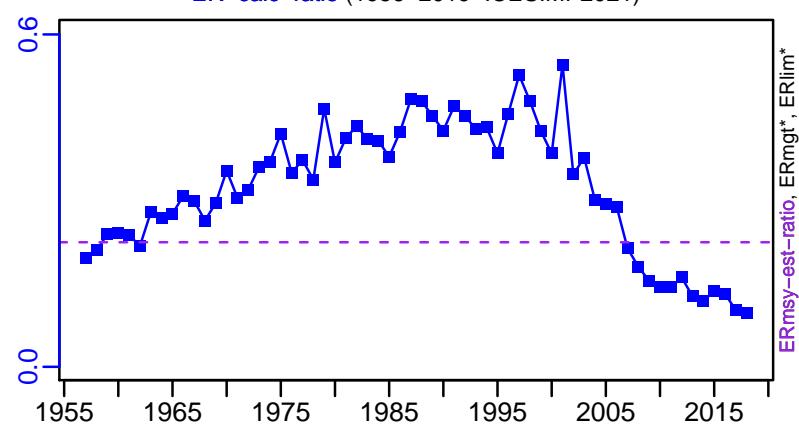
TB-MT (1956–2019–ICESIMP2021)



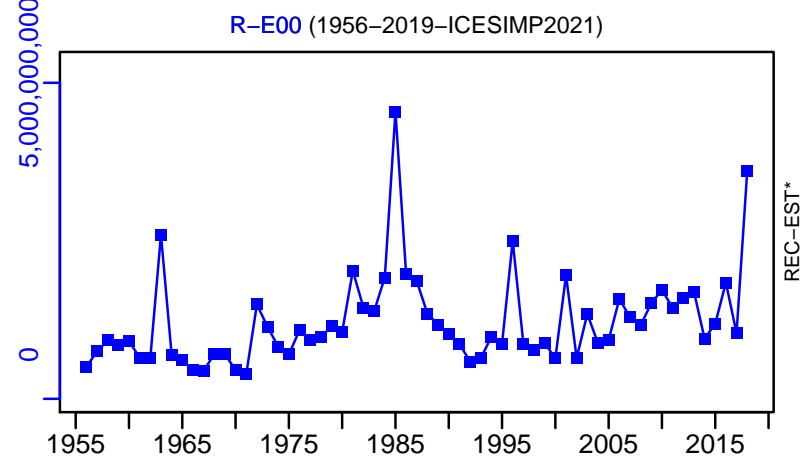
SSB-MT (1956–2019–ICESIMP2021)



ER-calc-ratio (1956–2019–ICESIMP2021)



R-E00 (1956–2019–ICESIMP2021)

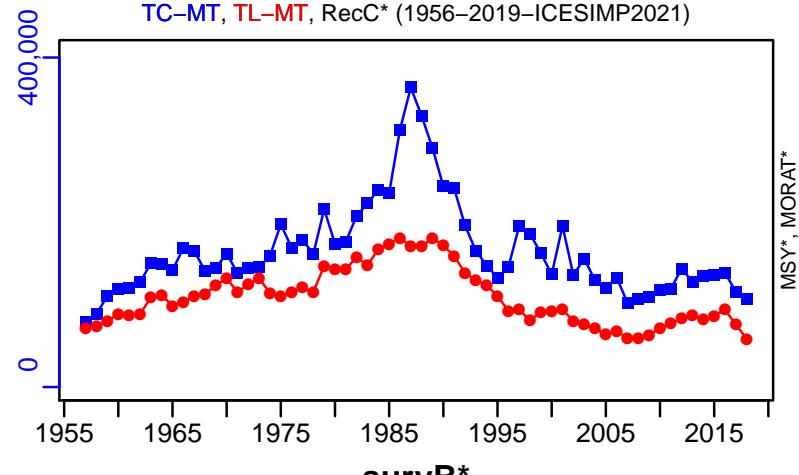


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

European plaice North Sea [PLAICNS]

TC-MT, TL-MT, RecC\* (1956–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



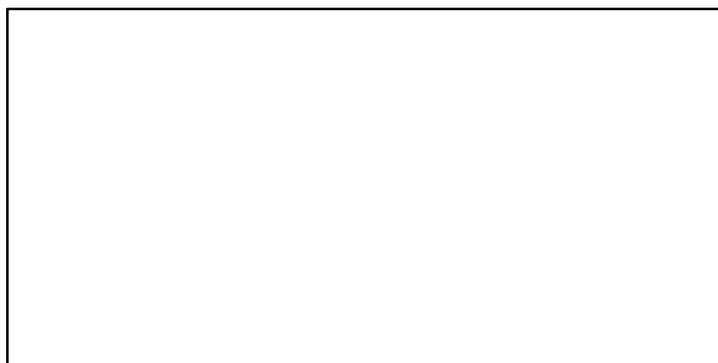
survB\*



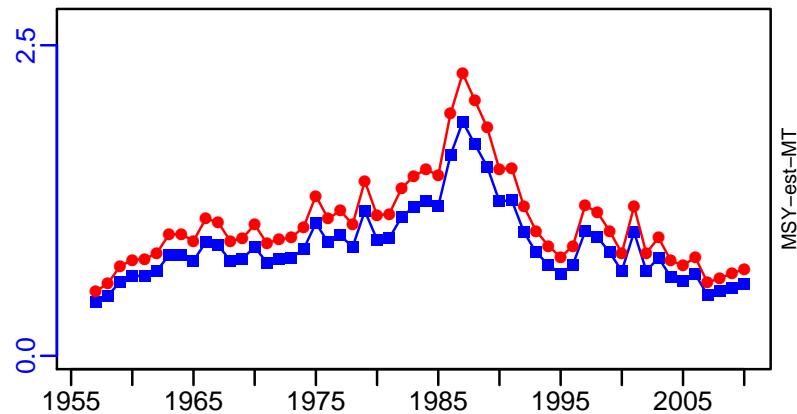
CPUE\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1956–2010–NEUBAUER)



MSY-est-MT

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

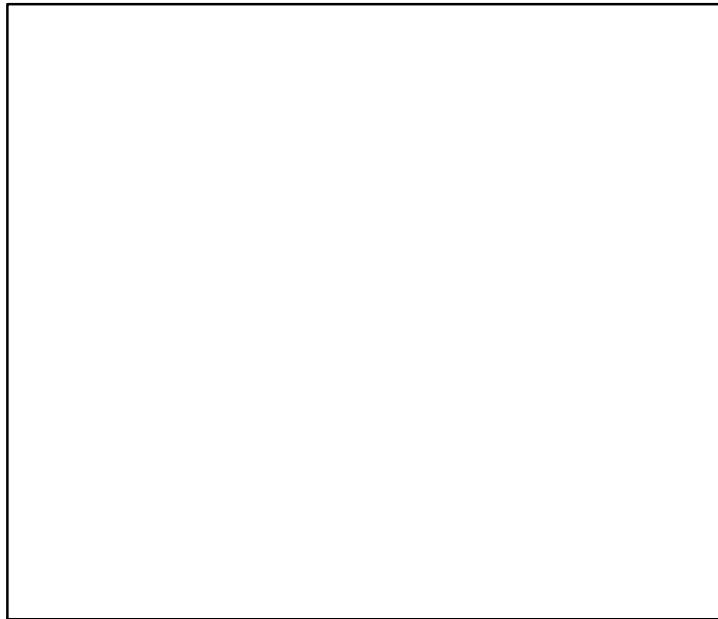
## European plaice ICES 7bc [PLAICVIIbc]

<b>Metadata</b>	
<b>Scientific Name</b>	Pleuronectes platessa
<b>Current Assess ID</b>	WGCSE-PLAICVIIbc-1908-2016-ICESIMP2018
<b>Area</b>	ICES 7bc
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2016, 2015

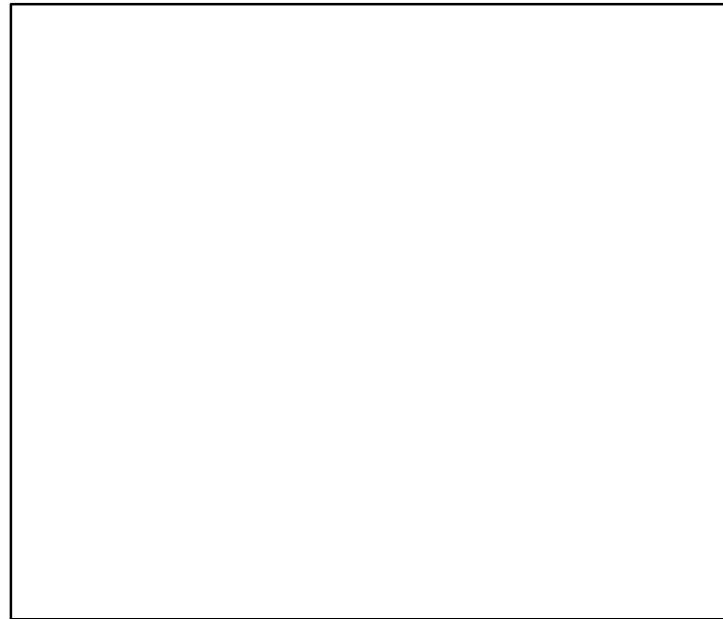
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	29		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

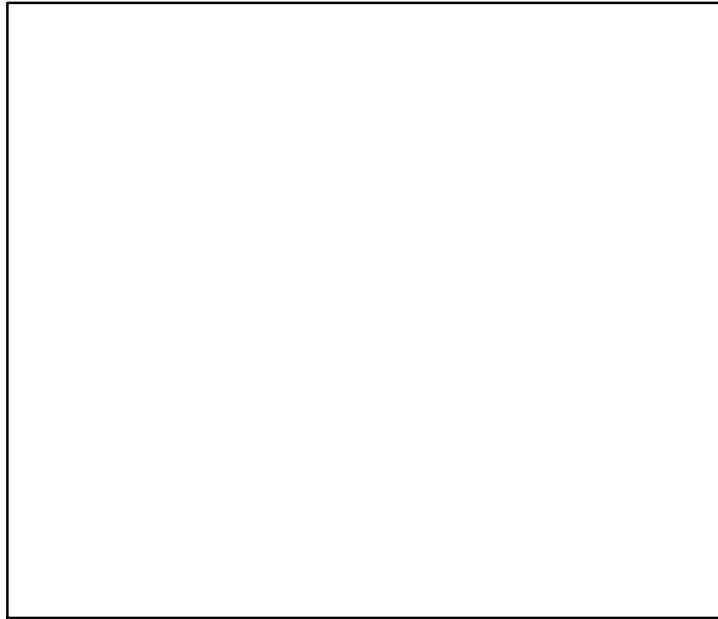
**Kobe MSY\***



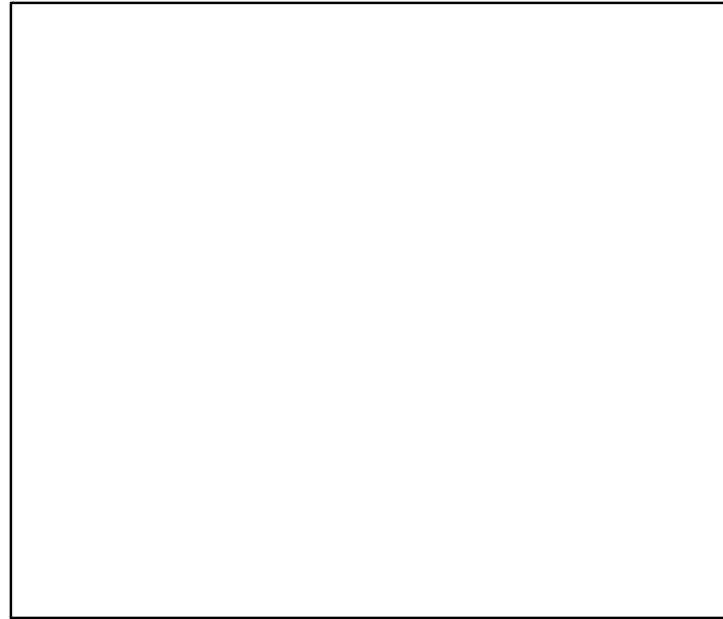
**Kobe MGT\***



**Spawner Recruit\***



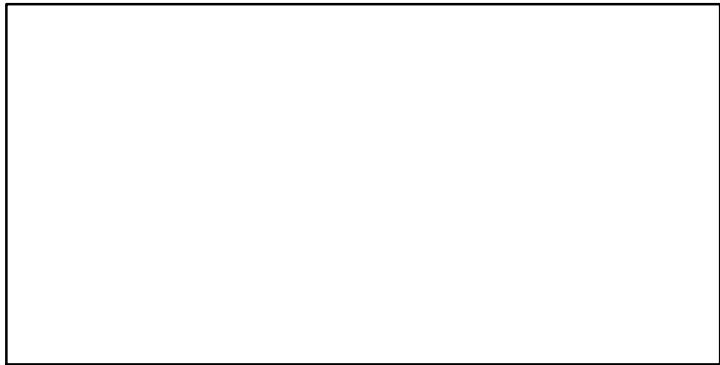
**Production\***



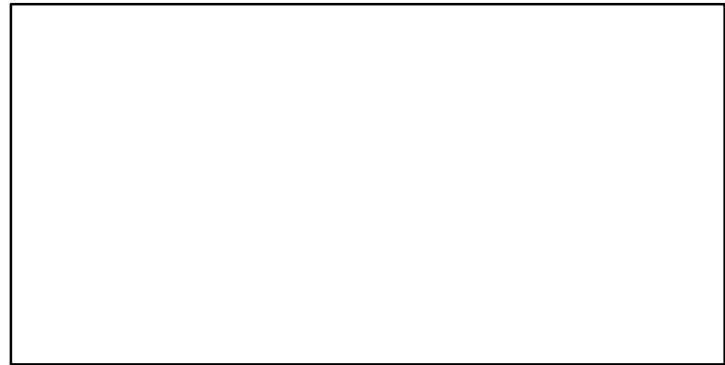
◆ Start Year ♦ End Year \* No Data

European plaice ICES 7bc [PLAICVIIbc]

**TB\***



**SSB\***



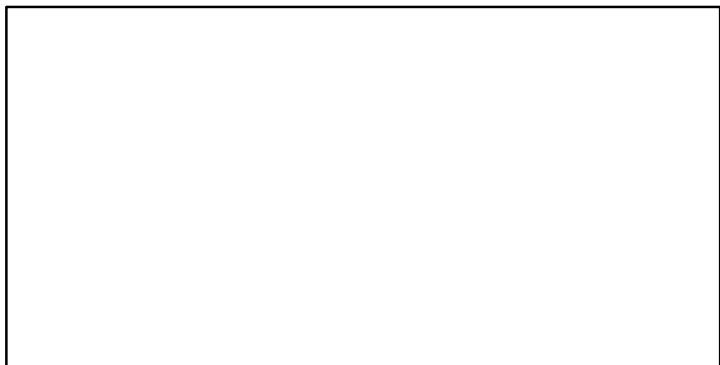
**TN \***



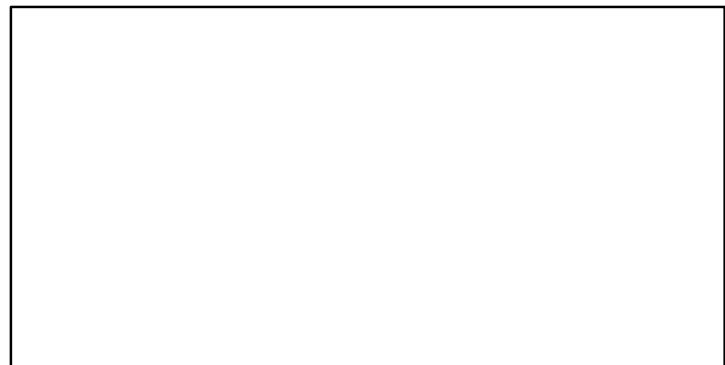
**F\***



**ER\***



**Recruits\***

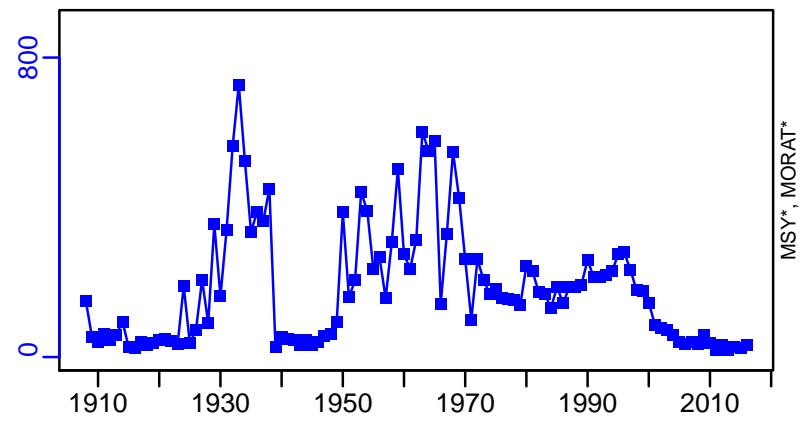


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

European plaice ICES 7bc [PLAICVIIbc]

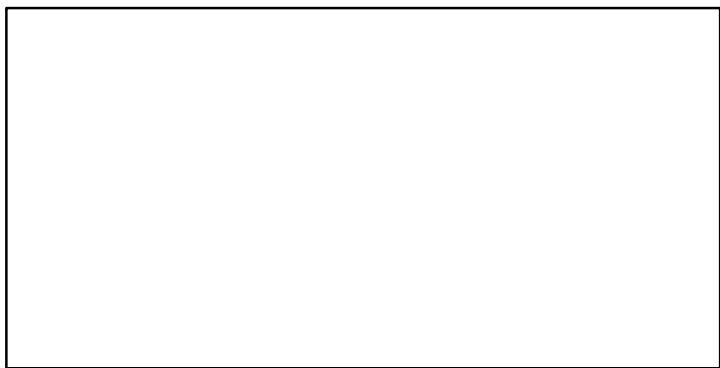
TL-MT, TC\*, RecC\* (1908–2016–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*

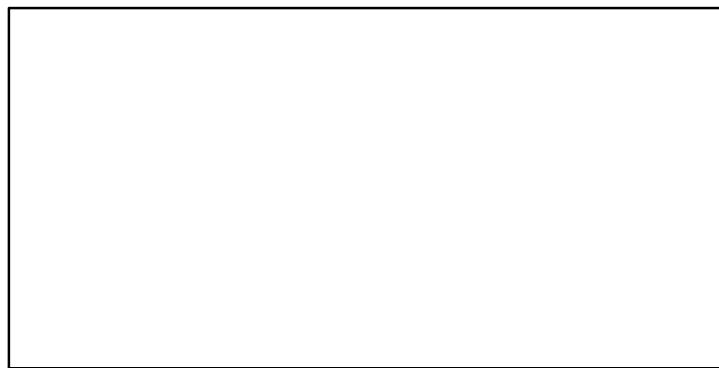


**survB\***

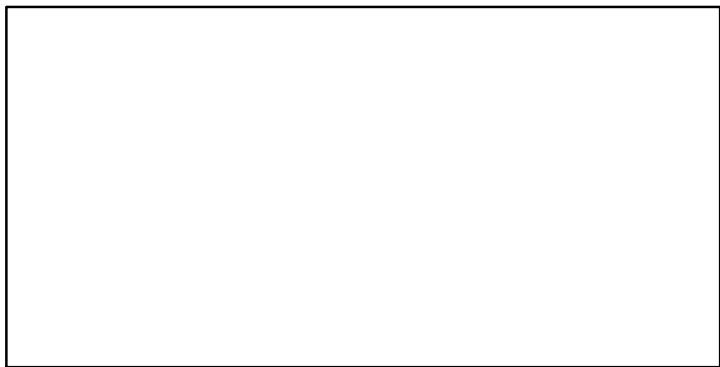
MSY\*, MORAT\*



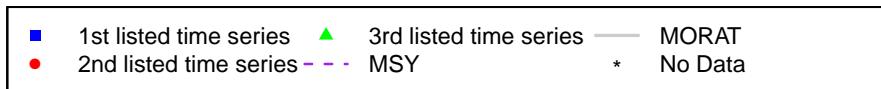
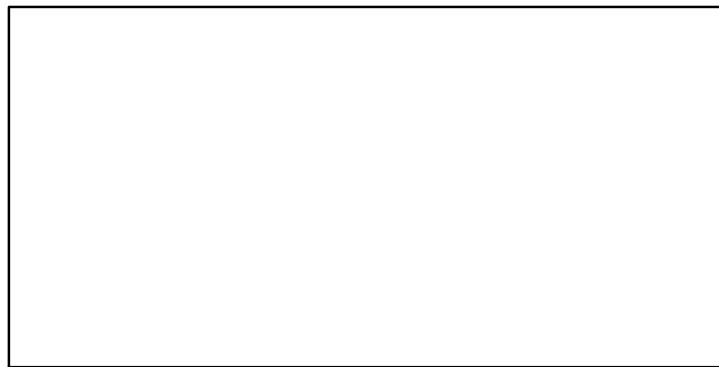
**CPUE\***



**EFFORT\***



**CdivMSY\***



## European plaice ICES 7h-k [PLAICVIIh-k]

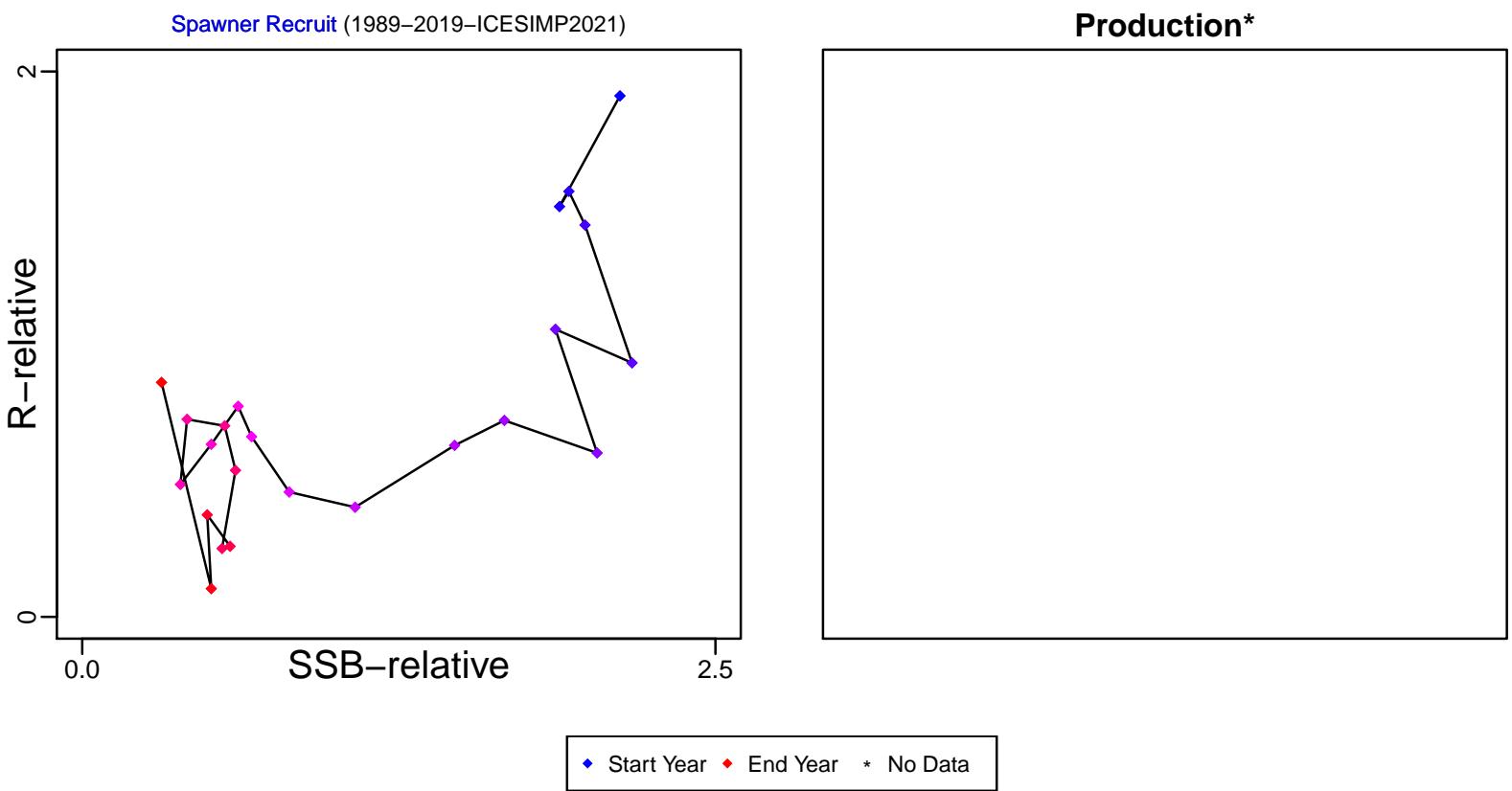
Metadata	
<b>Scientific Name</b>	Pleuronectes platessa
<b>Current Assess ID</b>	WGCSE-PLAICVIIh-k-1989-2019-ICESIMP2021
<b>Area</b>	ICES 7h-k
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2014, 2015, 2016, 2018, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-relative	2018	0.261
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-relative	2019	1.743
<b>Fmgt</b>	Fmgt-relative	2019	0.415
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-relative	2018	236
<b>Flim</b>	Flim-relative	2018	0.436
<b>ERlim</b>	-	-	-

Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	SSB-relative	2019	0.579	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-relative	2019	0.86	-	4	
<b>F</b>	F-relative	2019	0.91	-	4 to 6	
<b>ER</b>	-	-	-	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2019	38			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

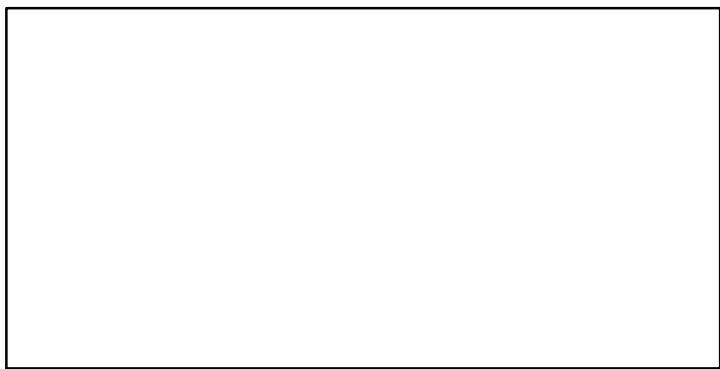
**Kobe MSY\***

**Kobe MGT\***

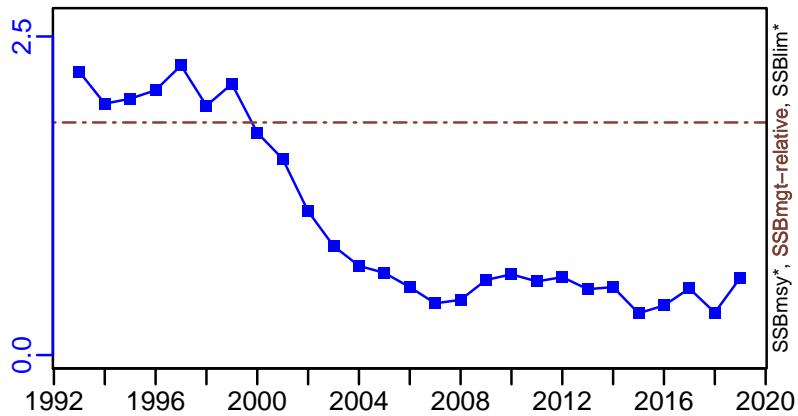


European plaice ICES 7h–k [PLAICVIIh–k]

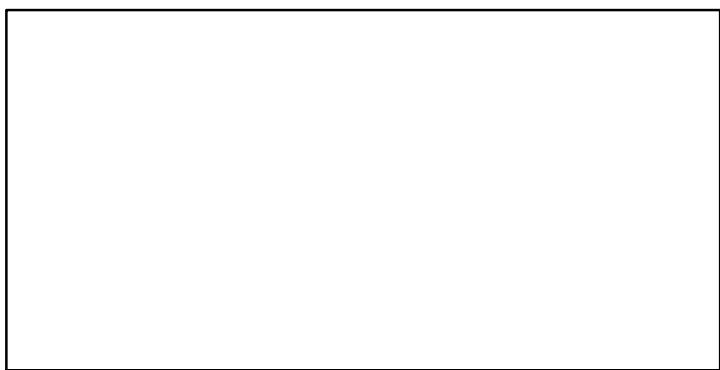
**TB\***



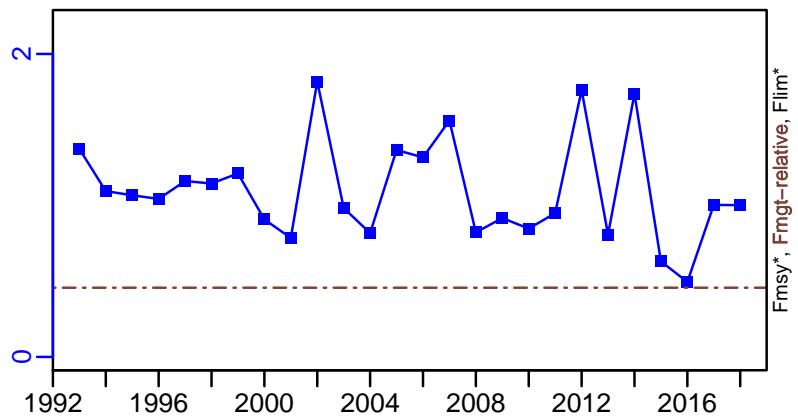
SSB-relative (1989–2019–ICESIMP2021)



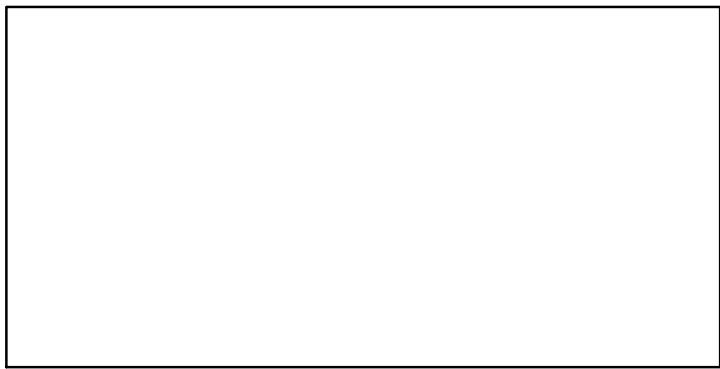
**TN \***



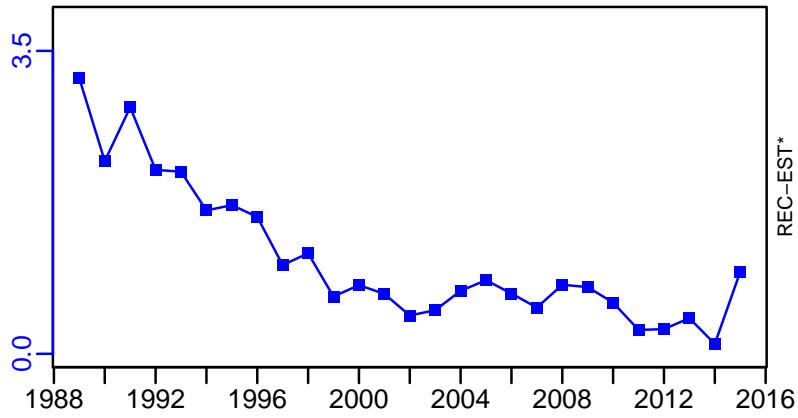
F-relative (1989–2019–ICESIMP2021)



**ER\***



R-relative (1989–2019–ICESIMP2021)

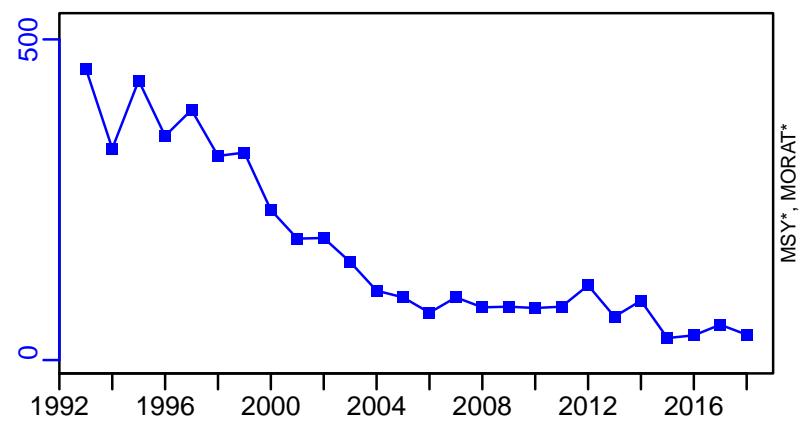


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | --- Lim BRP  | * No Data |

European plaice ICES 7h–k [PLAICVIIh–k]

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

TAC\*, Cpair\*, Cadv\*



survB\*

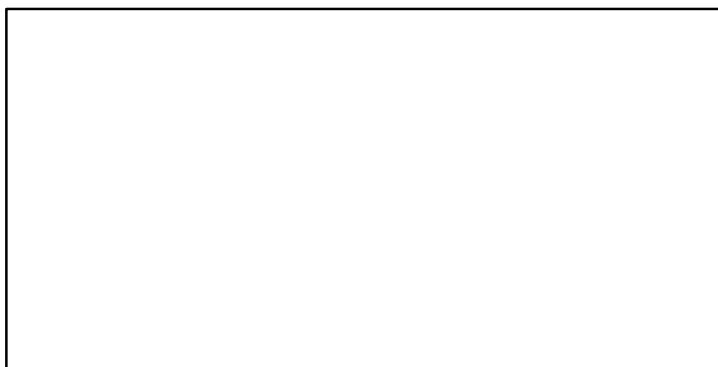
MSY\*, MORAT\*



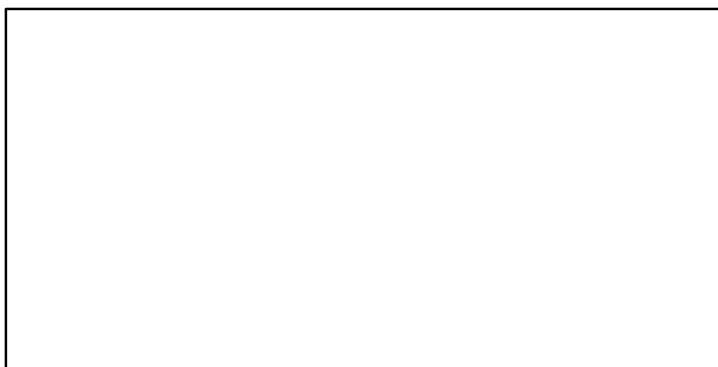
CPUE\*



EFFORT\*



CdivMSY\*



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

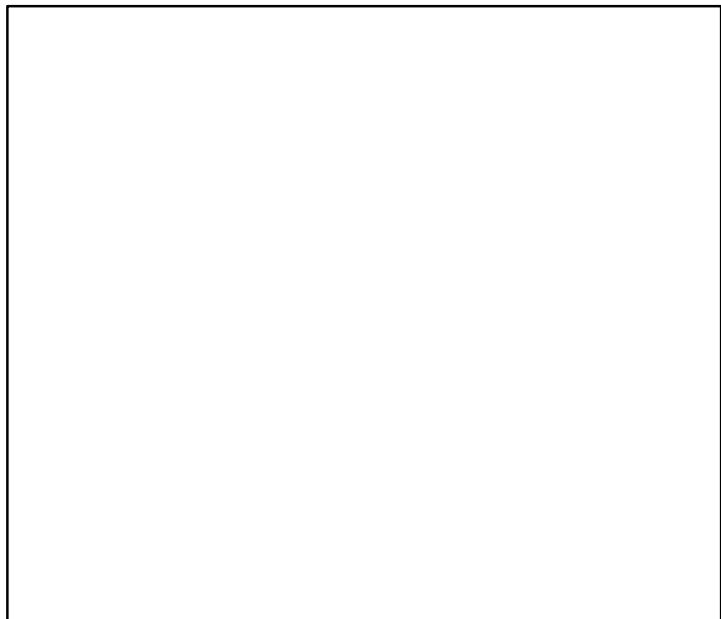
## European plaice ICES 8-9a [PLAICVIII-IXa]

<b>Metadata</b>	
<b>Scientific Name</b>	Pleuronectes platessa
<b>Current Assess ID</b>	WGBIE-PLAICVIII-IXa-1994-2018-ICESIMP2021
<b>Area</b>	ICES 8-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2015, 2016, 2018

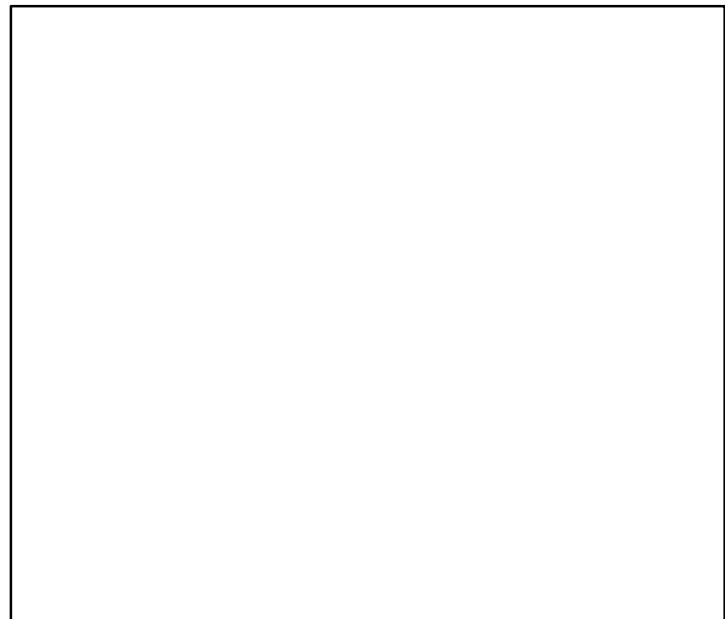
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	133		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***



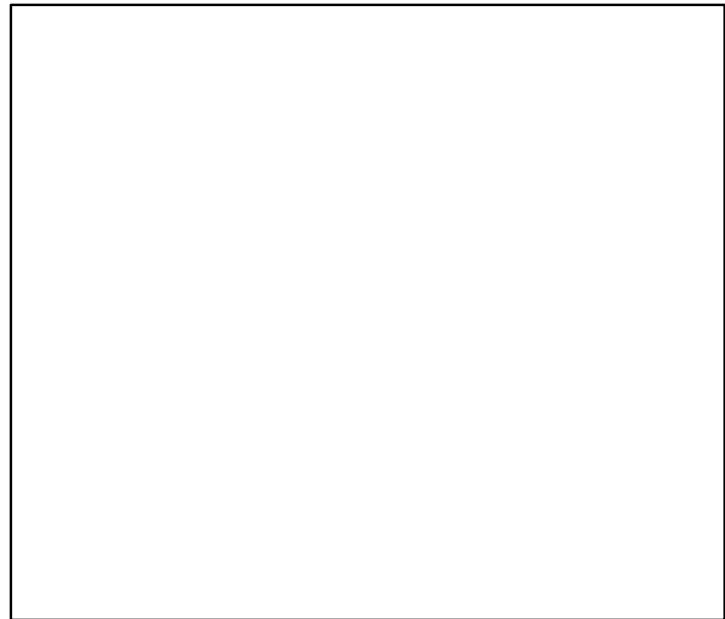
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

European plaice ICES 8–9a [PLAICVIII–IXa]

**TB\***



**SSB\***



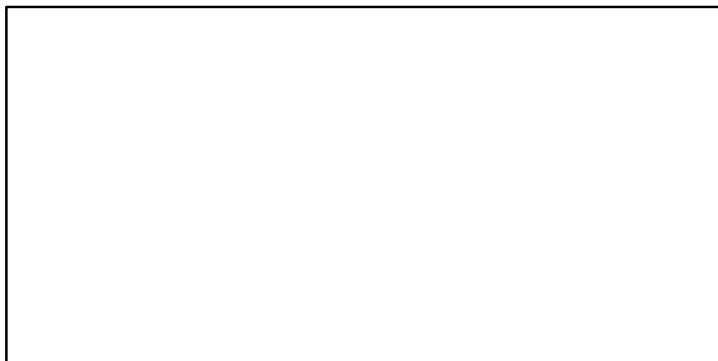
**TN \***



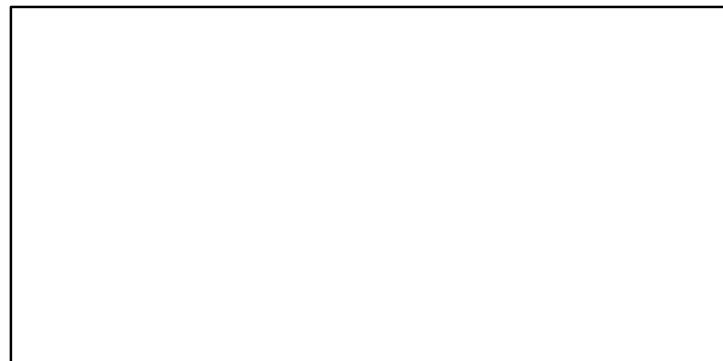
**F\***



**ER\***



**Recruits\***

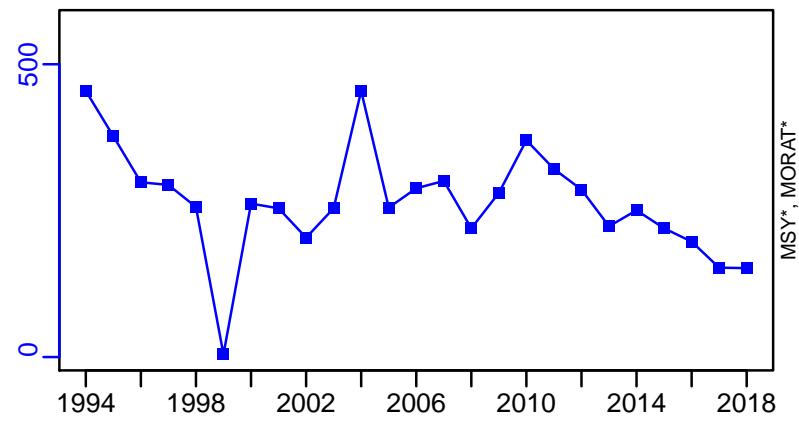


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

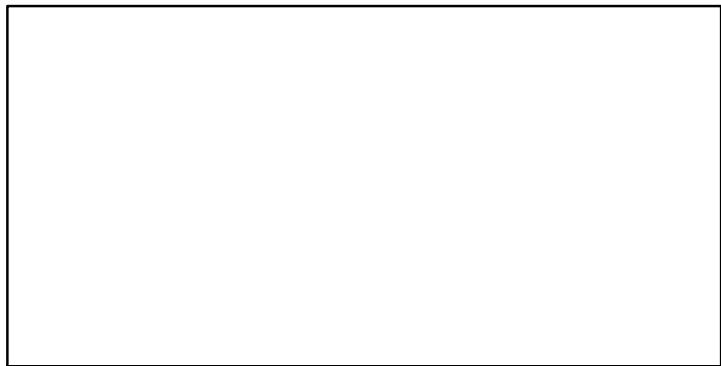
European plaice ICES 8–9a [PLAICVIII–IXa]

TL–MT, TC\*, RecC\* (1994–2018–ICESIMP2021)

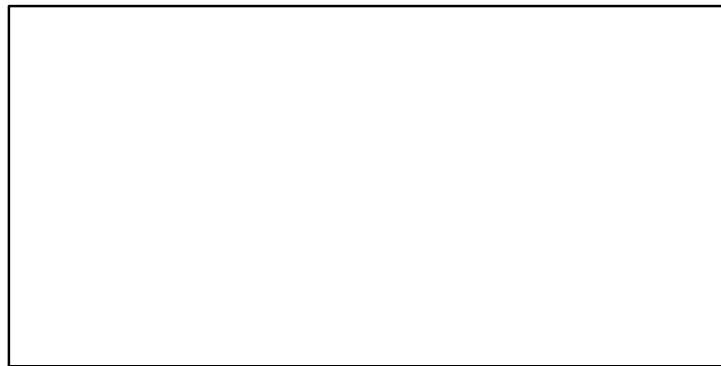
TAC\*, Cpair\*, Cadv\*



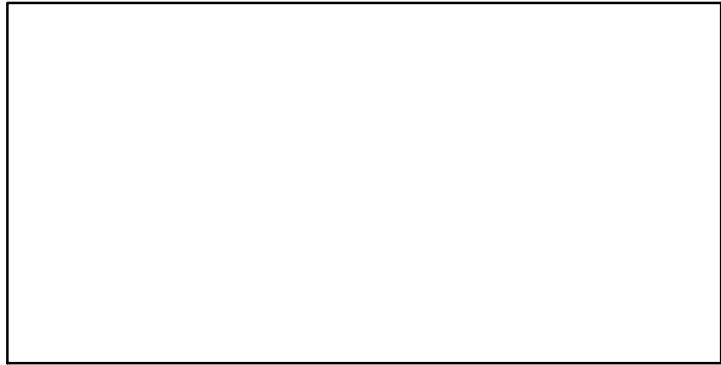
survB\*



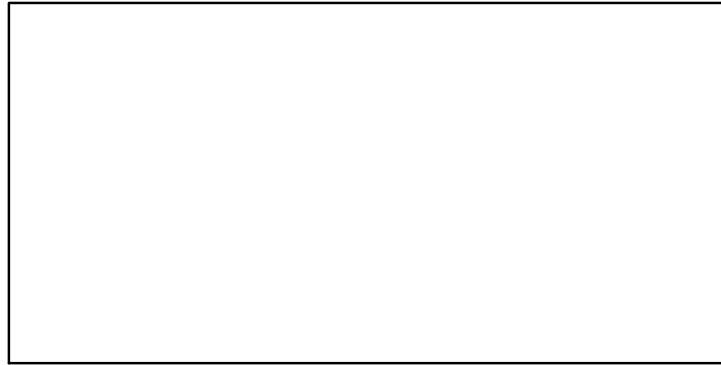
CPUE\*



EFFORT\*



CdivMSY\*



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

### Pollock ICES 3a-4-6 [POLLNS-VI-IIIA]

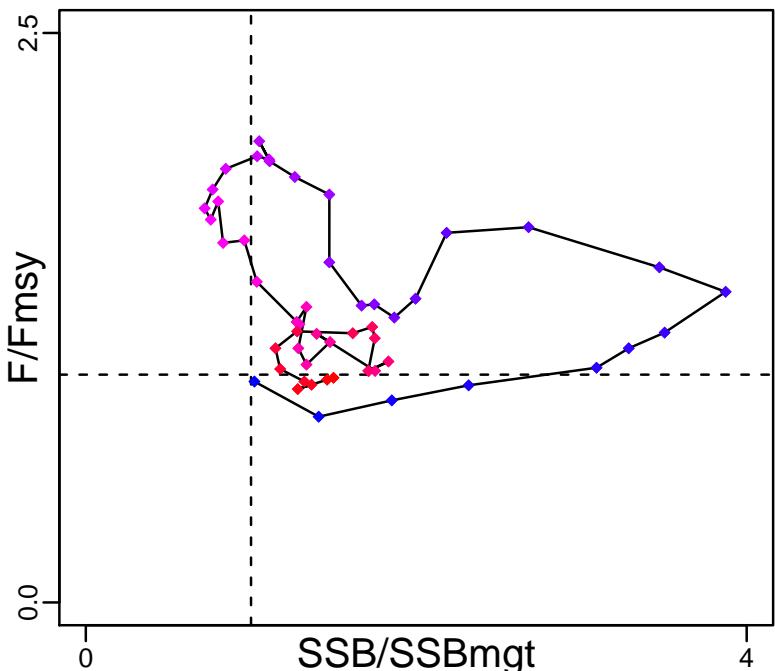
<b>Metadata</b>	
<b>Scientific Name</b>	Pollachius virens
<b>Current Assess ID</b>	WGNSSK-POLLNS-VI-IIIA-1964-2019-ICESIMP2021
<b>Area</b>	ICES 3a-4-6
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2012, 2013, 2014, 2015, 2016, 2016, 2017, 2018, 2019

<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2012	1,268,238
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.363
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.428
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	149,098
<b>Fmgt</b>	Fmgt-1/yr	2019	0.363
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2012	$2 \times 10^5$
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	107,000
<b>Flim</b>	Flim-1/yr	2018	0.56
<b>ERlim</b>	-	-	-

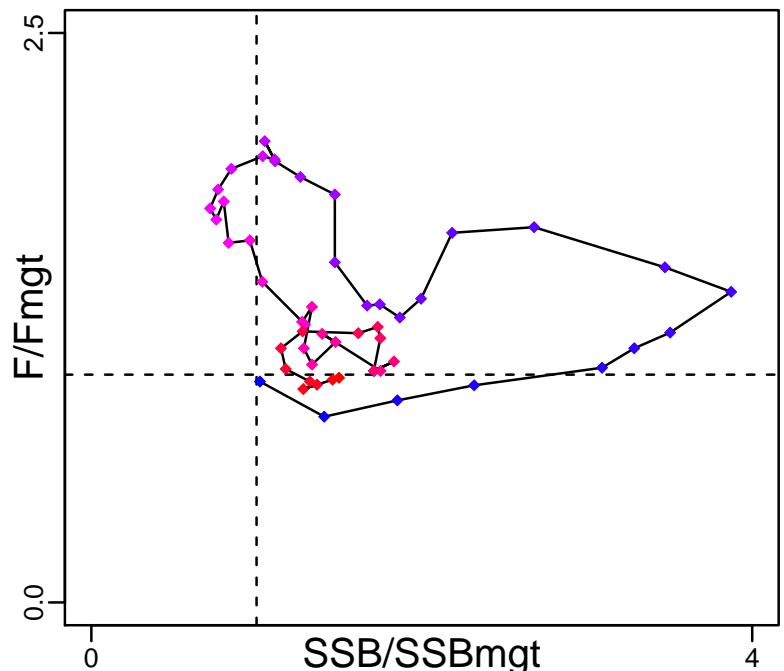
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	383,325	-	-
<b>SSB</b>	SSB-MT	2019	228,110	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	83,040,000	-	3
<b>F</b>	F-1/yr	2019	0.358	-	4 to 7
<b>ER</b>	ER-calc-ratio	2019	0.246	-	-
<b>TC</b>	TC-MT	2019	94,334		
<b>TL</b>	TL-MT	2019	86,540		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	0.341		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.986		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.575		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.53		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.986		
<b>ER/ERmgt</b>	-	-	-		

Pollock ICES 3a–4–6 [POLLNS–VI–IIIa]

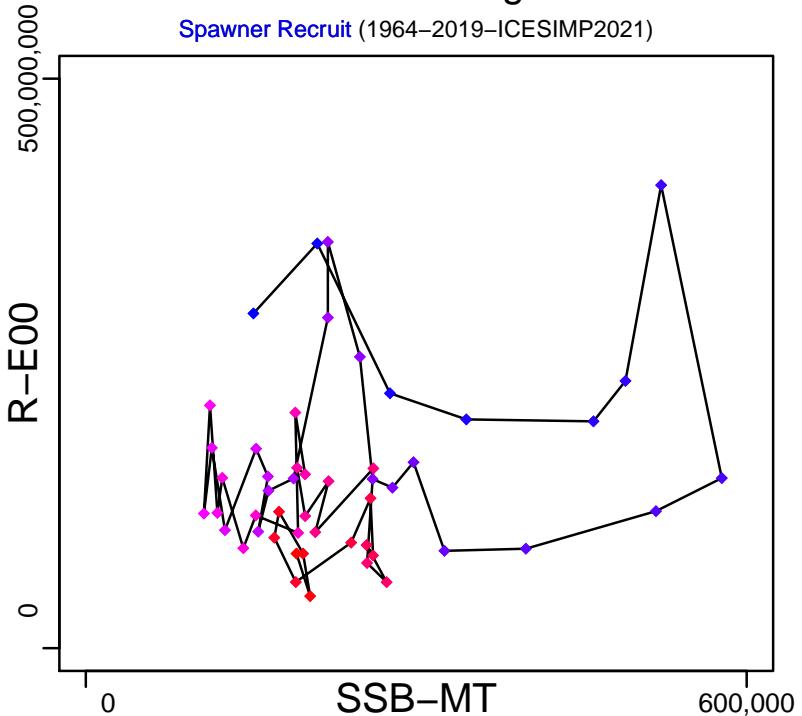
Kobe MSYpref (1964–2019–ICESIMP2021)



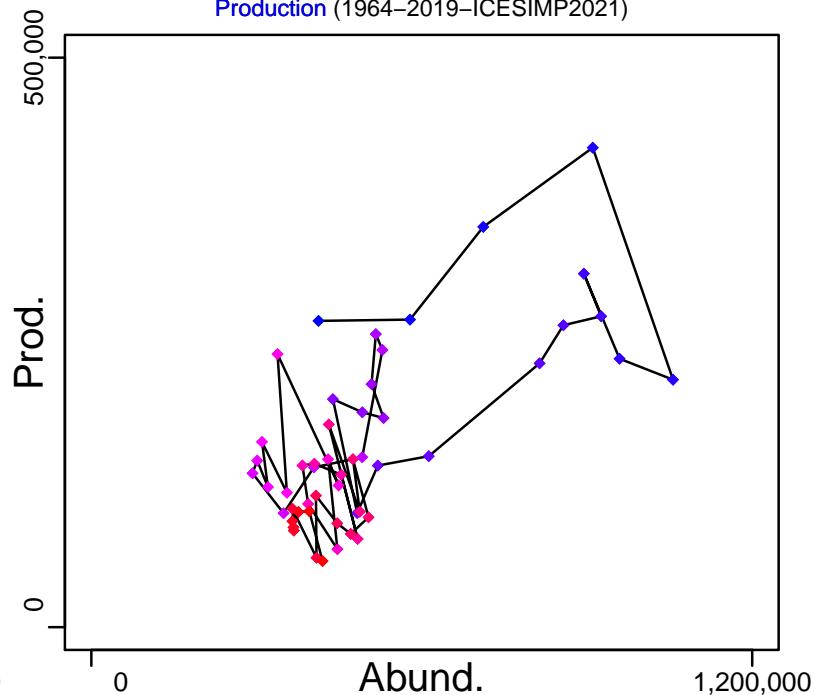
Kobe MGTpref (1964–2019–ICESIMP2021)



Spawner Recruit (1964–2019–ICESIMP2021)



Production (1964–2019–ICESIMP2021)

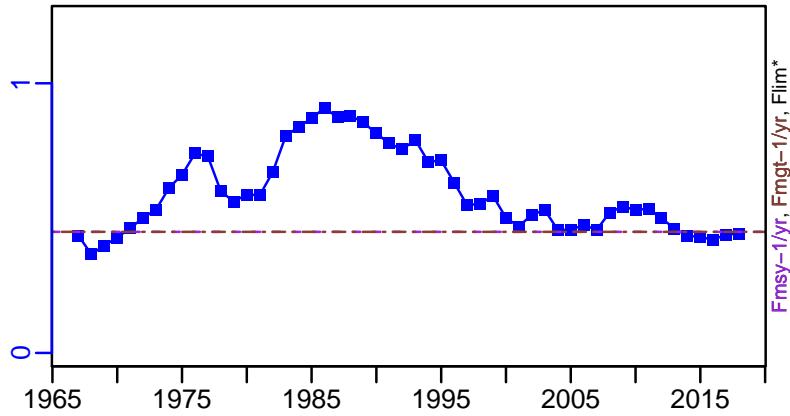
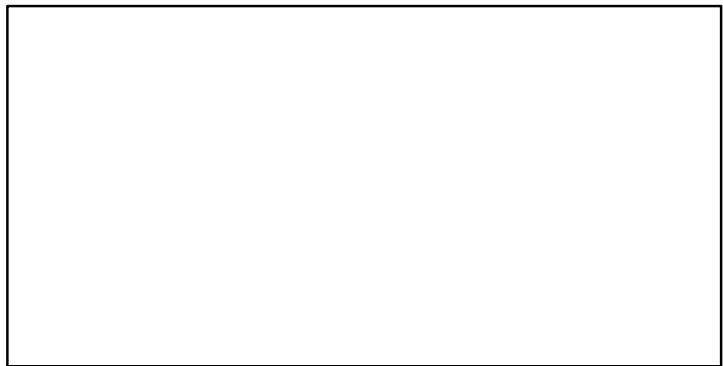
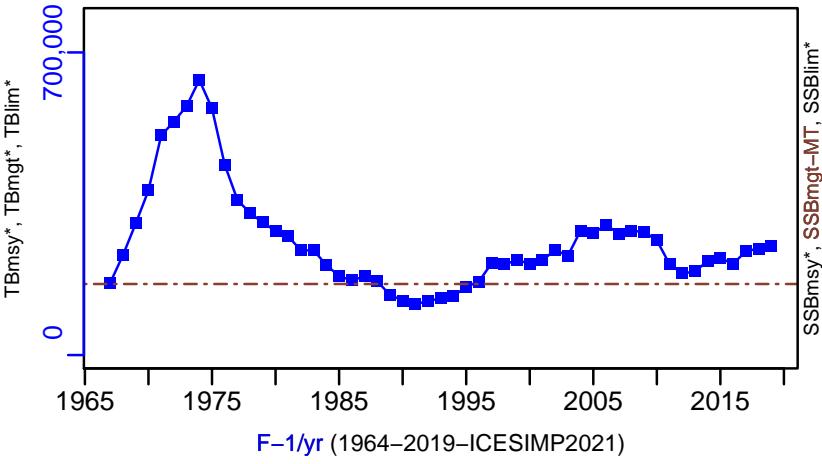
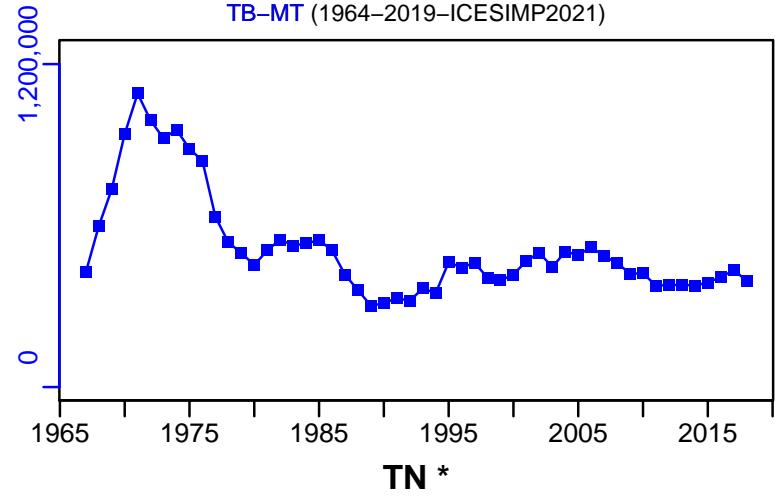


◆ Start Year	◆ End Year	*	No Data
--------------	------------	---	---------

Pollock ICES 3a–4–6 [POLLNS–VI–IIIa]

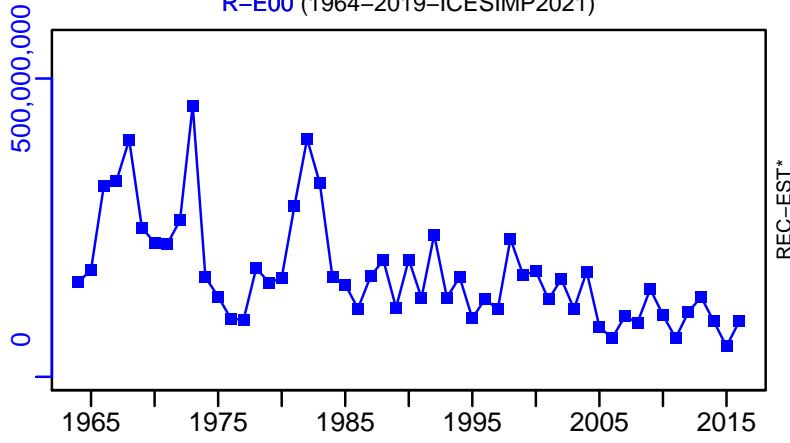
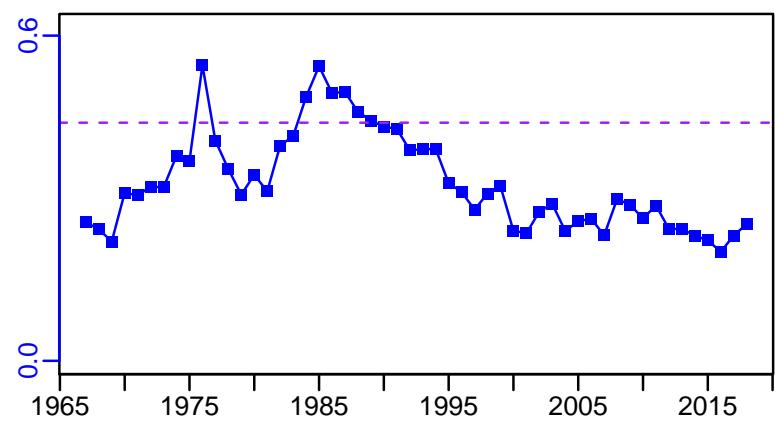
TB-MT (1964–2019–ICESIMP2021)

SSB-MT (1964–2019–ICESIMP2021)



ER-calc-ratio (1964–2019–ICESIMP2021)

R-E00 (1964–2019–ICESIMP2021)

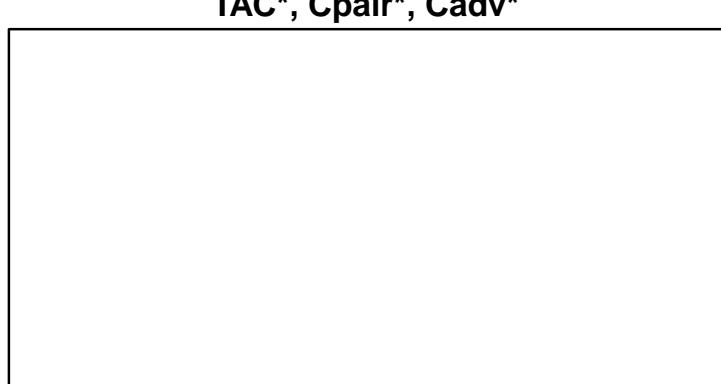
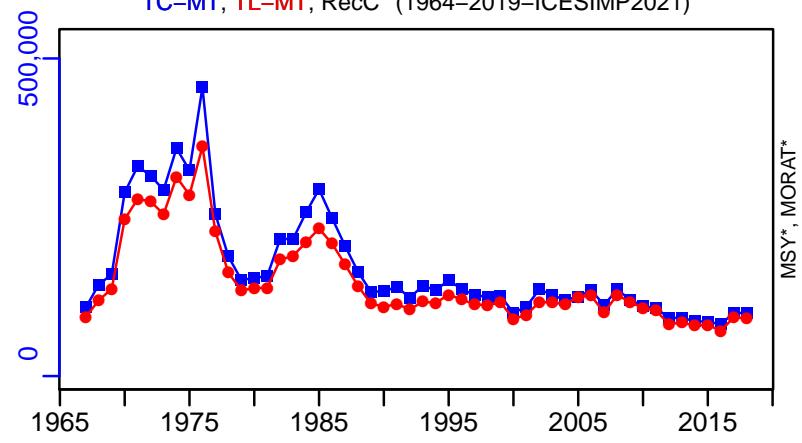


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

Pollock ICES 3a–4–6 [POLLNS–VI–IIIa]

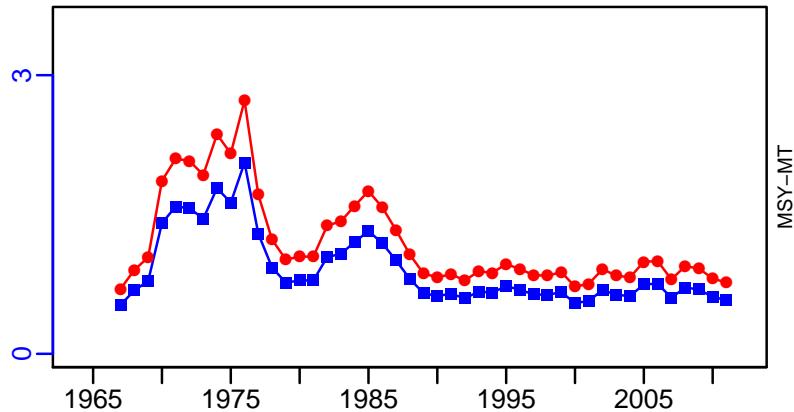
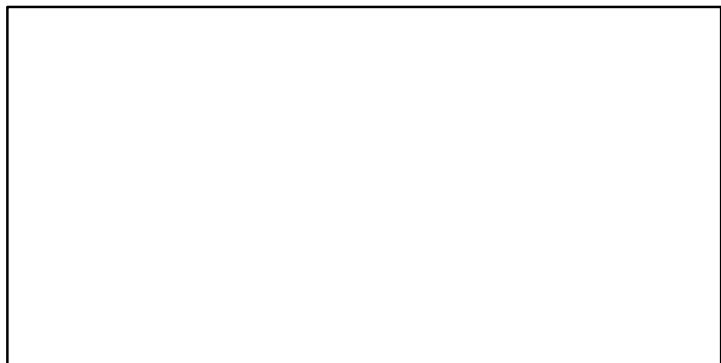
TC–MT, TL–MT, RecC\* (1964–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

TL–MT/MSY–MT, CdivMEANC–ratio, (1964–2012–CHING)



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

## Porbeagle shark Northeast Atlantic [PORSHARNEATL]

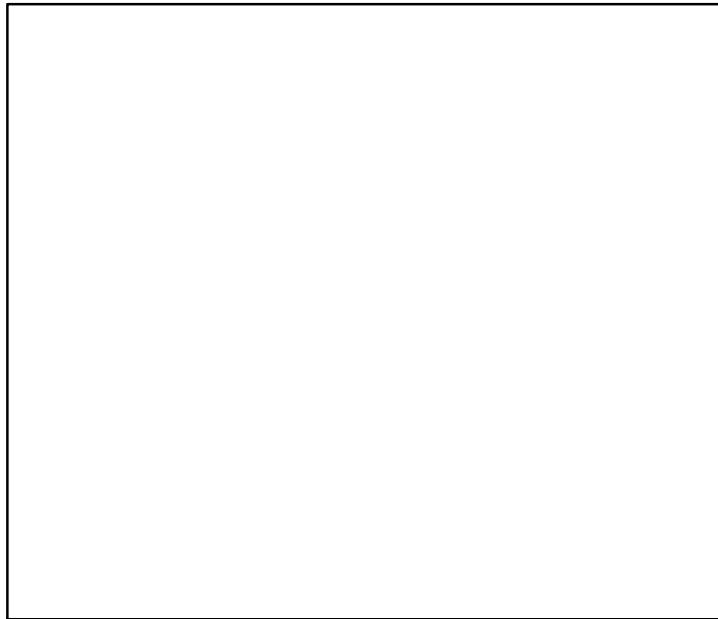
<b>Metadata</b>	
<b>Scientific Name</b>	Lamna nasus
<b>Current Assess ID</b>	WGEF-PORSHARNEATL-1926-2018-ICESIMP2021
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2018

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

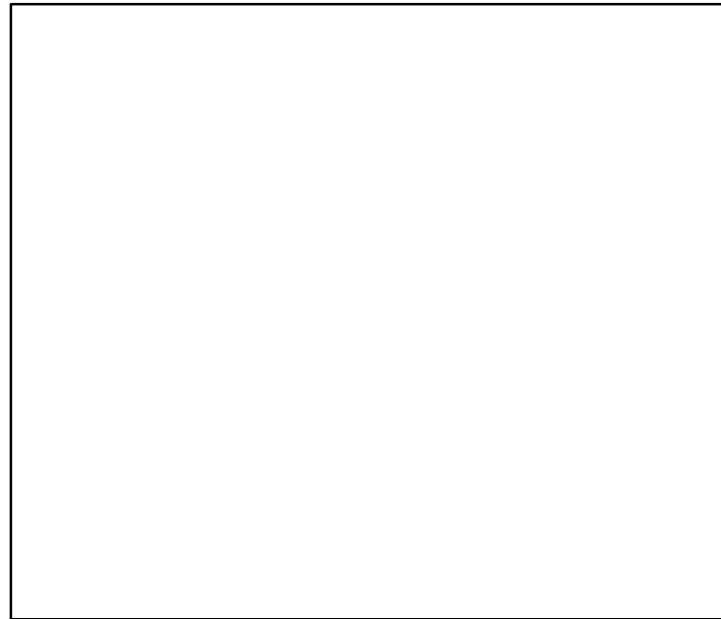
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	7		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Porbeagle shark Northeast Atlantic [PORSHARNEATL]

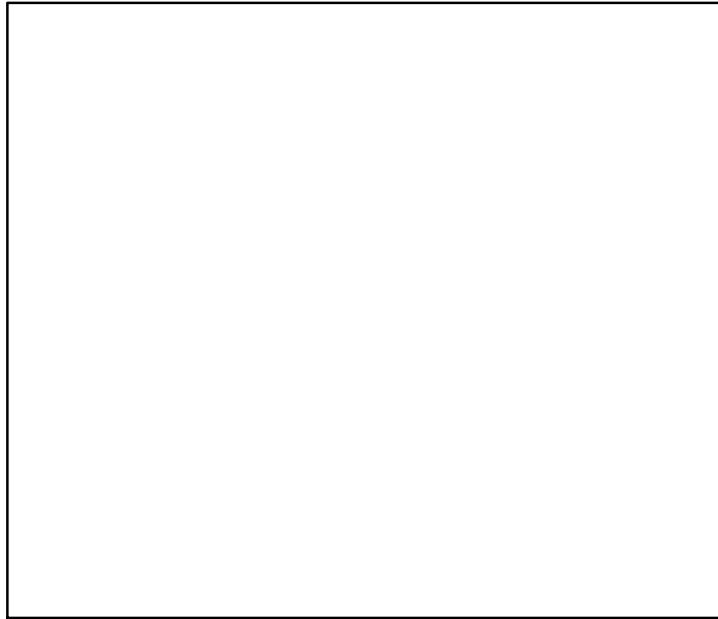
Kobe MSY\*



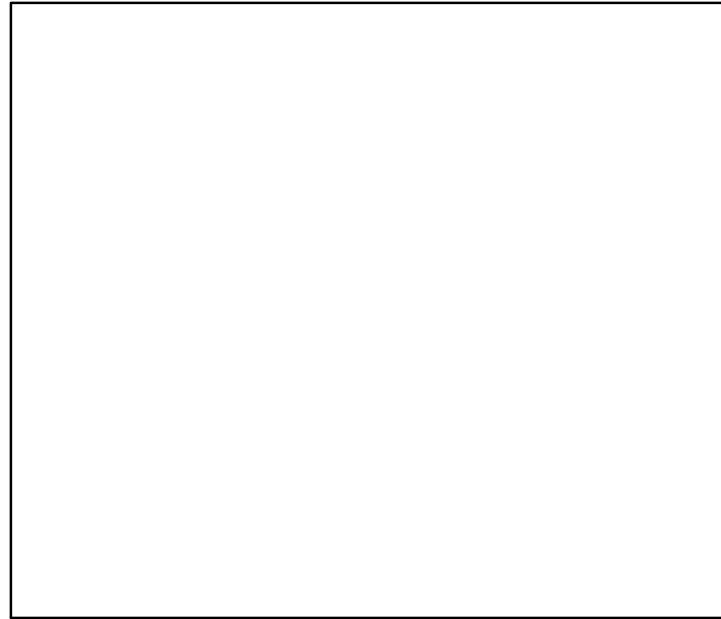
Kobe MGT\*



Spawner Recruit\*



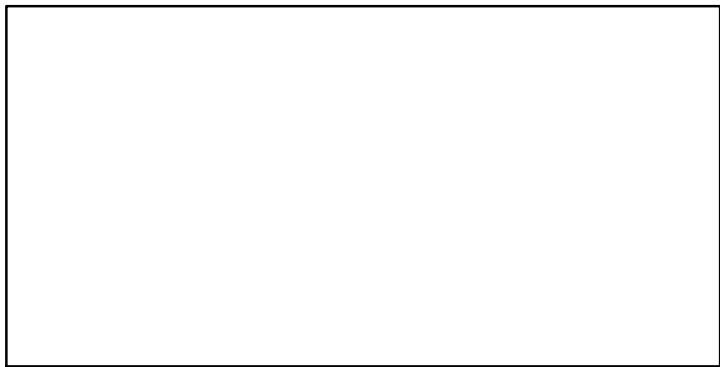
Production\*



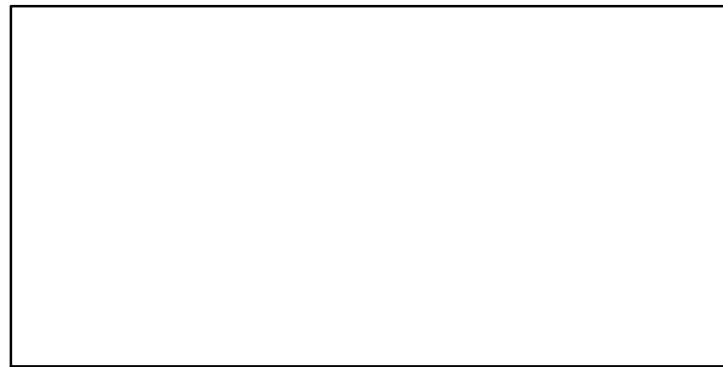
◆ Start Year ♦ End Year \* No Data

**Porbeagle shark Northeast Atlantic [PORSHARNEATL]**

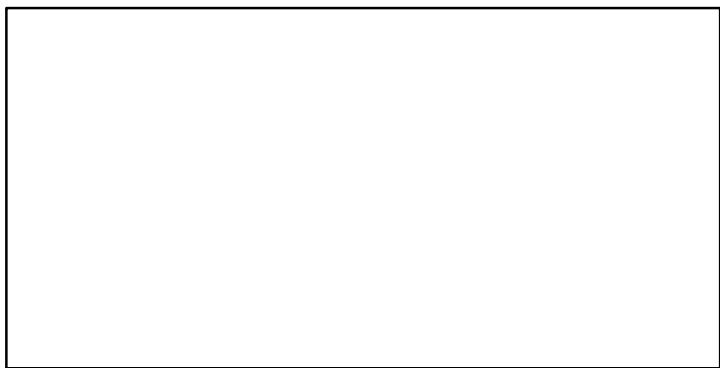
**TB\***



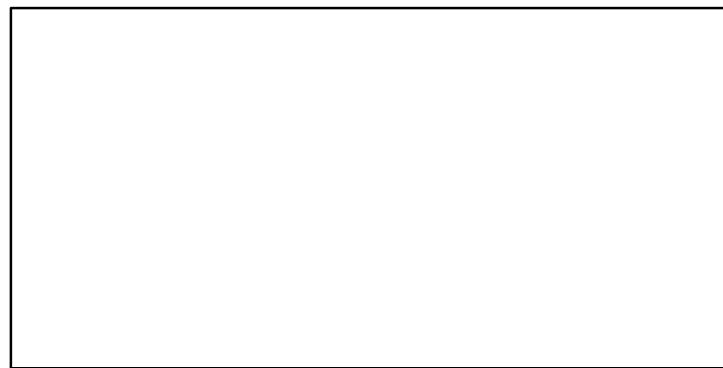
**SSB\***



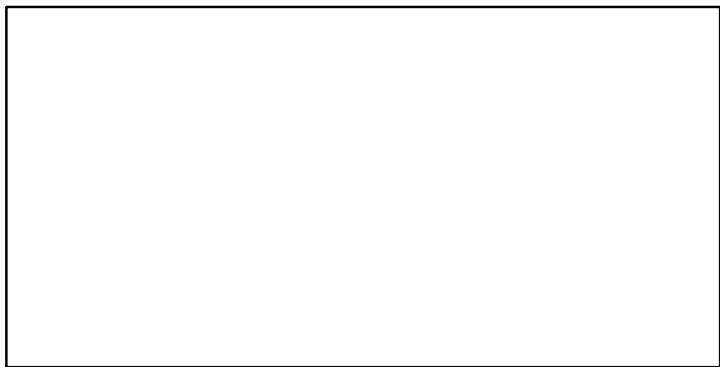
**TN \***



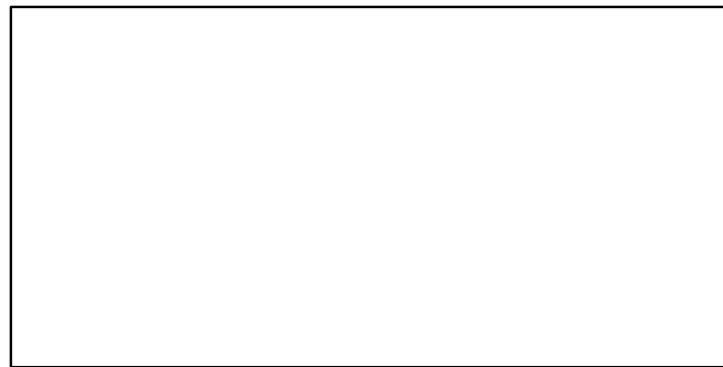
**F\***



**ER\***



**Recruits\***

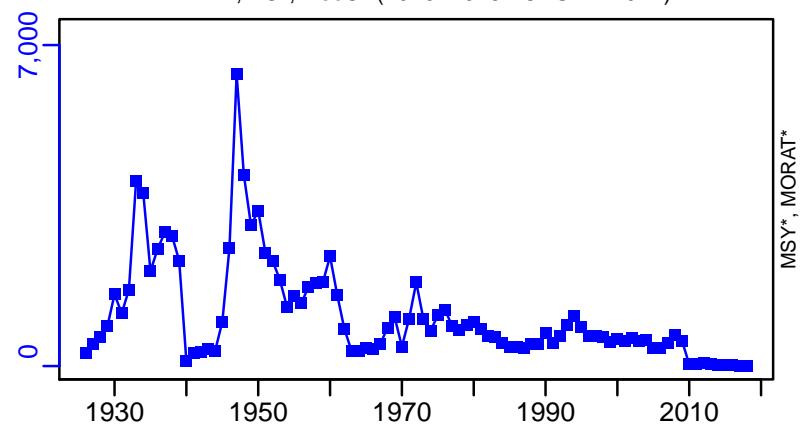


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

Porbeagle shark Northeast Atlantic [PORSHARNEATL]

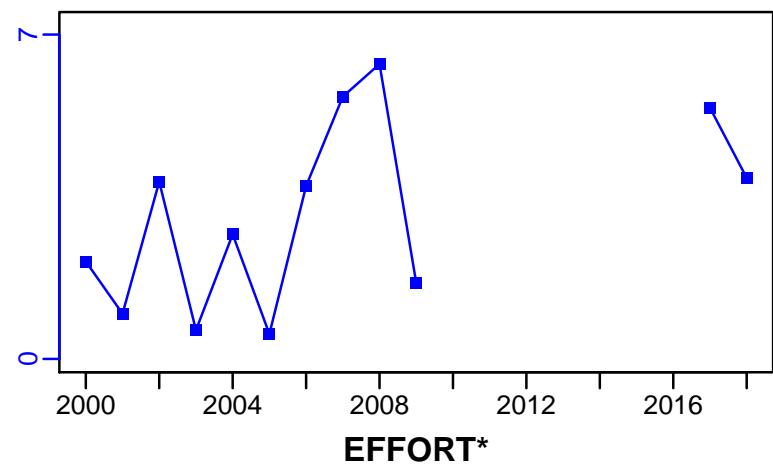
TL-MT, TC\*, RecC\* (1926–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



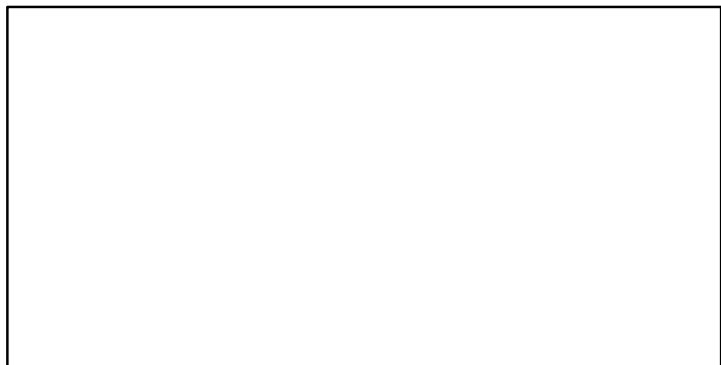
survB-index (1926–2018–ICESIMP2021)

MSY\*, MORAT\*

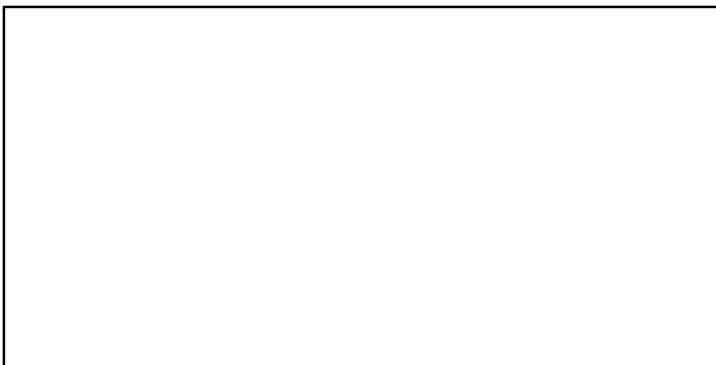


EFFORT\*

CPUE\*



CdivMSY\*



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

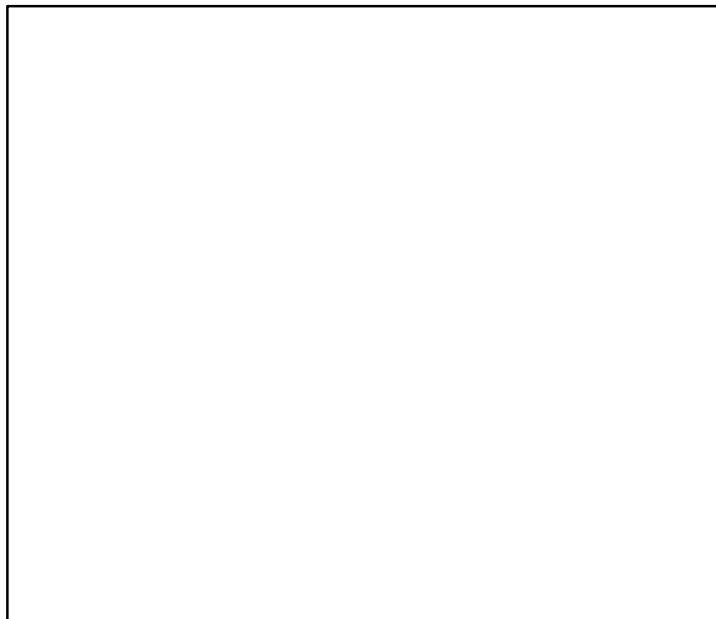
## Red seabream ICES 9 [RBRMIX]

<b>Metadata</b>	
<b>Scientific Name</b>	Pagellus bogaraveo
<b>Current Assess ID</b>	WGDEEP-RBRMIX-1988-2017-ICESIMP2018
<b>Area</b>	ICES 9
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2016, 2017

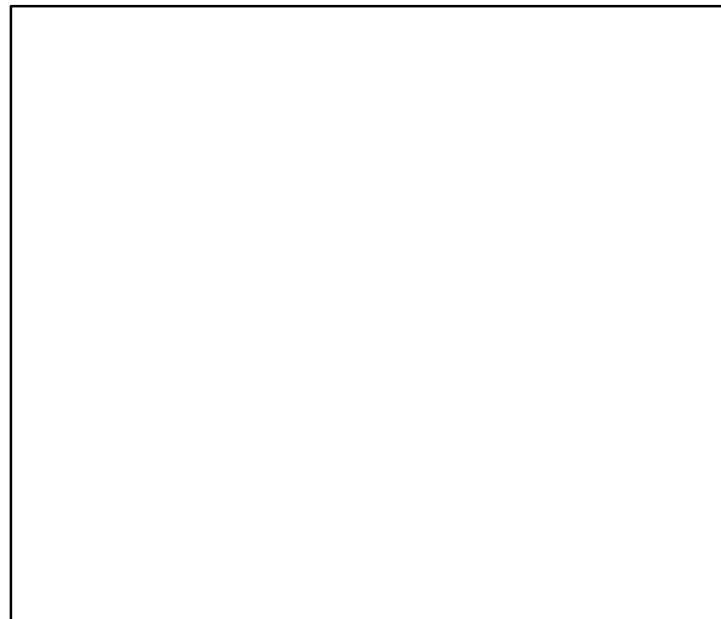
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2016	295		
<b>TL</b>	TL-MT	2017	336		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***



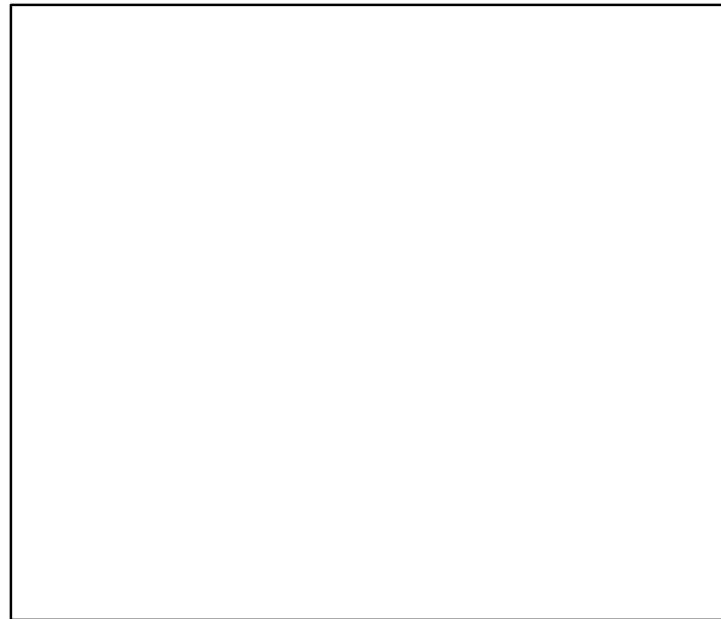
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

**Red seabream ICES 9 [RBRMIX]**

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***



**Recruits\***

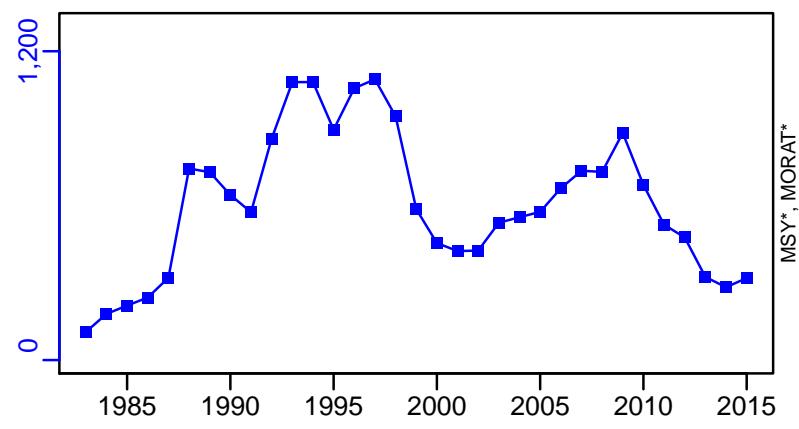


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

**Red seabream ICES 9 [RBRMIX]**

TC-MT, TL\*, RecC\* (1983–2016—ICESIMP2016)

TAC\*, Cpair\*, Cadv\*



**survB\***

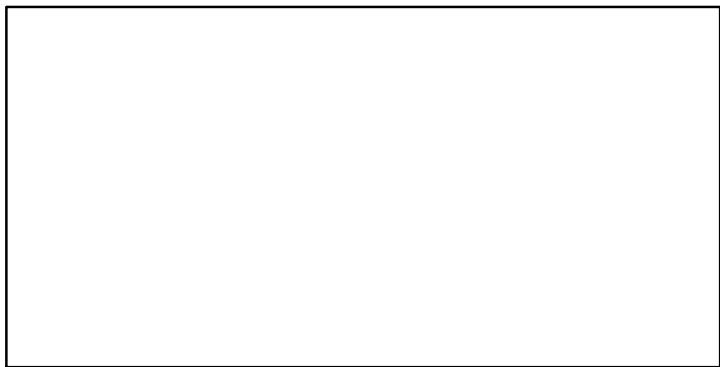
MSY\*, MORAT\*



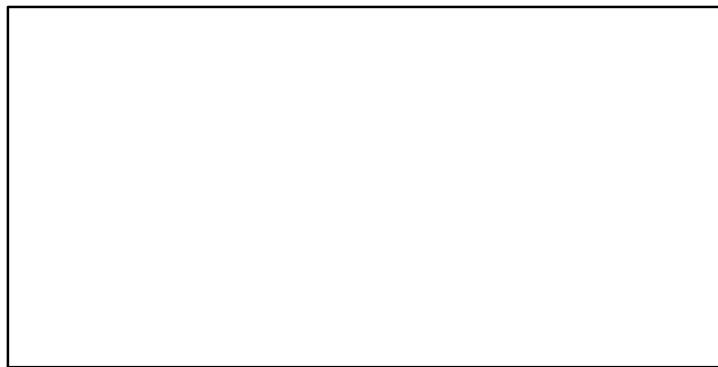
**CPUE\***



**EFFORT\***



**CdivMSY\***



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

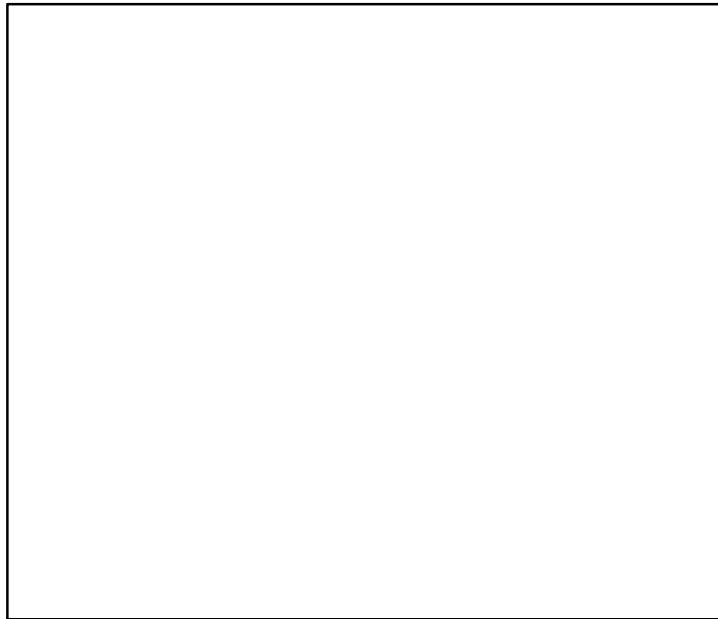
## Red seabream ICES 6-7-8 [RBRMVI-VII-VIII]

<b>Metadata</b>	
<b>Scientific Name</b>	Pagellus bogaraveo
<b>Current Assess ID</b>	WGDEEP-RBRMVI-VII-VIII-1948-2017-ICESIMP2018
<b>Area</b>	ICES 6-7-8
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2016, 2017

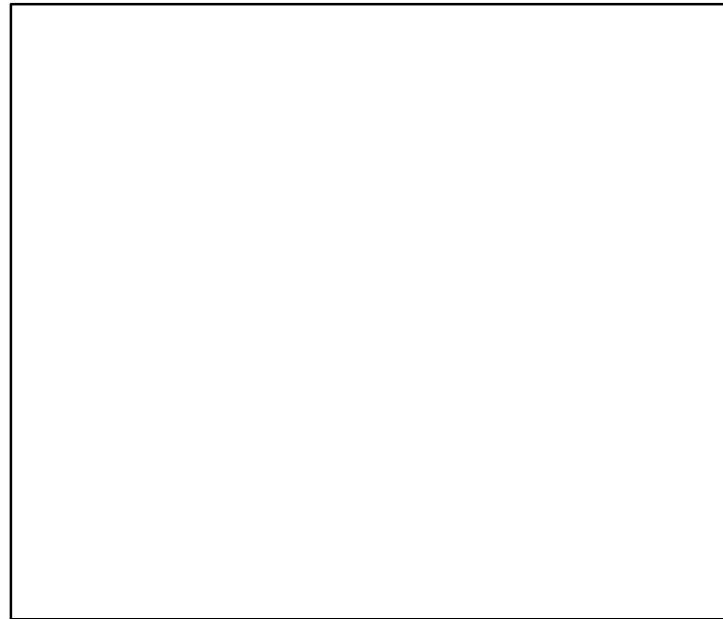
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2017	125		
<b>TL</b>	TL-MT	2017	124		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

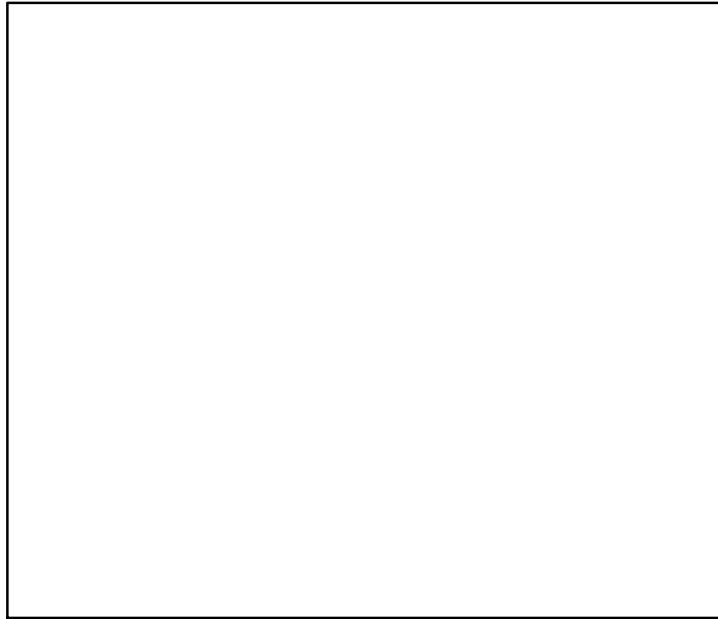
**Kobe MSY\***



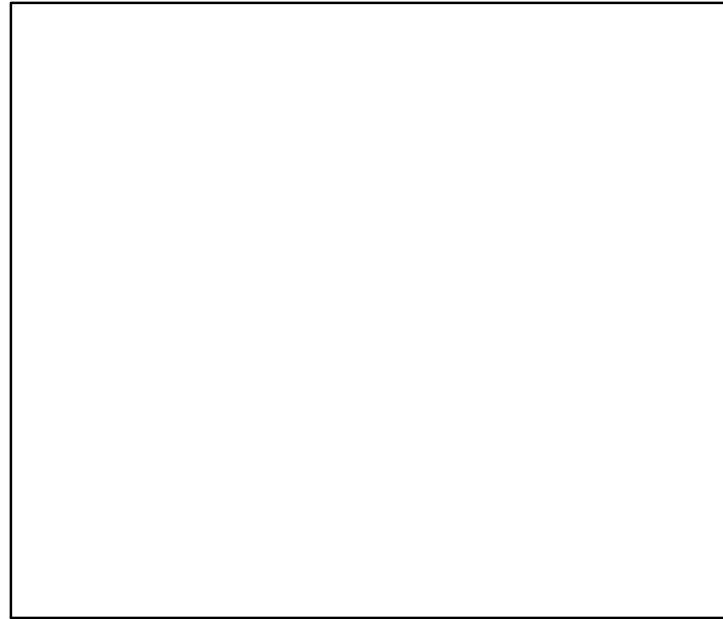
**Kobe MGT\***



**Spawner Recruit\***

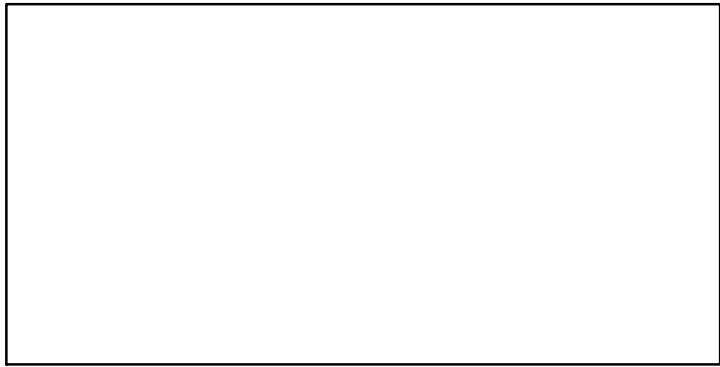


**Production\***

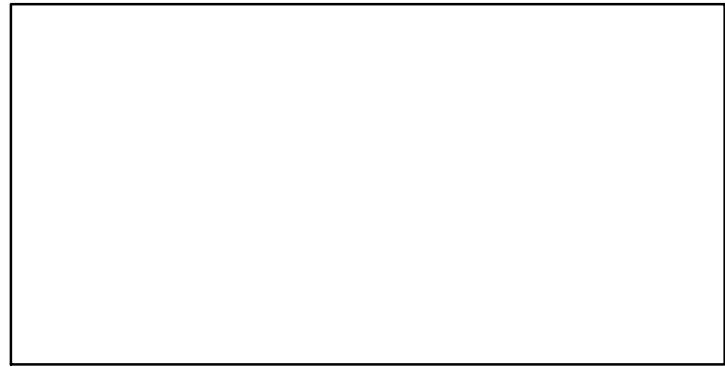


◆ Start Year ♦ End Year \* No Data

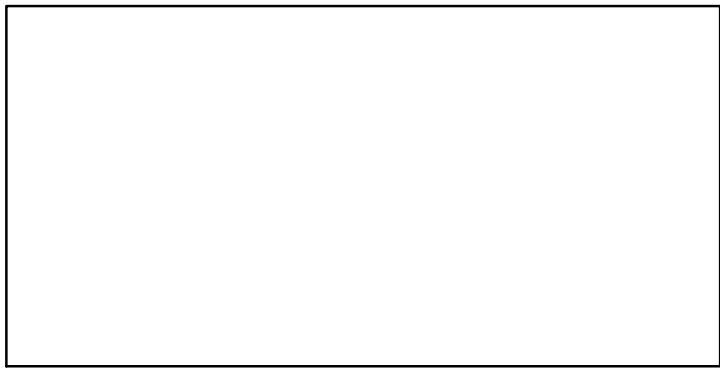
**TB\***



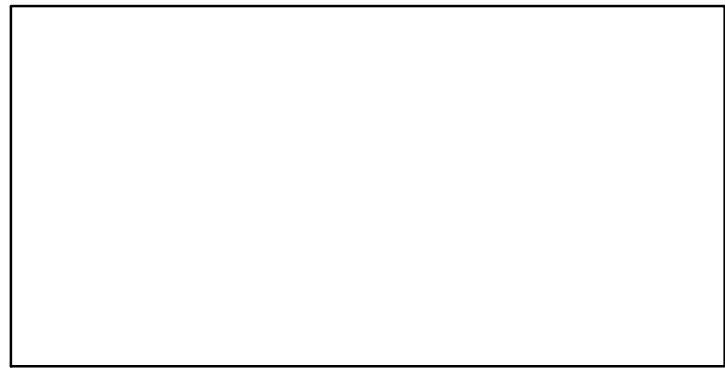
**SSB\***



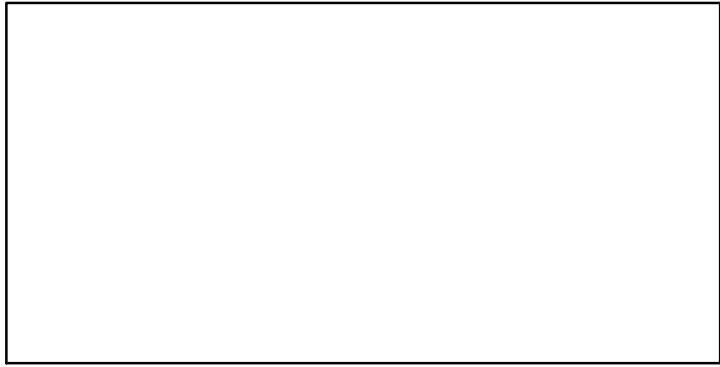
**TN \***



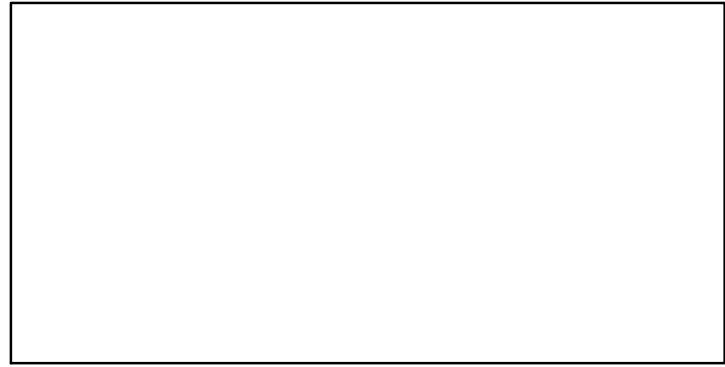
**F\***



**ER\***



**Recruits\***

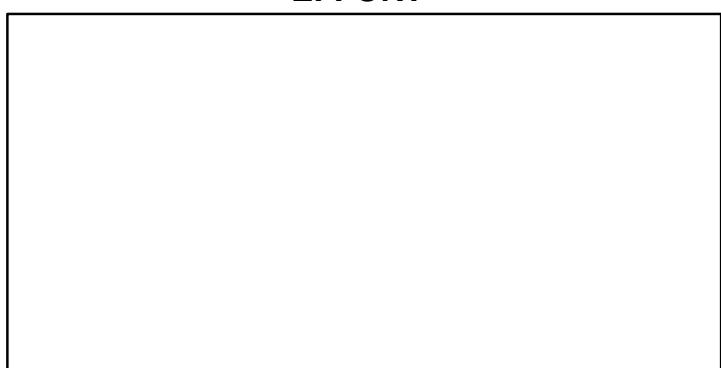
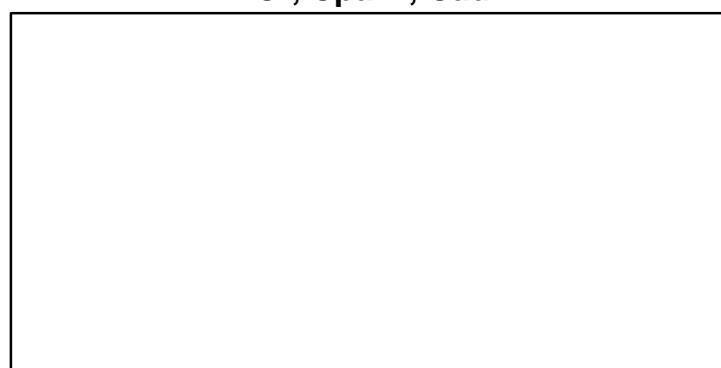
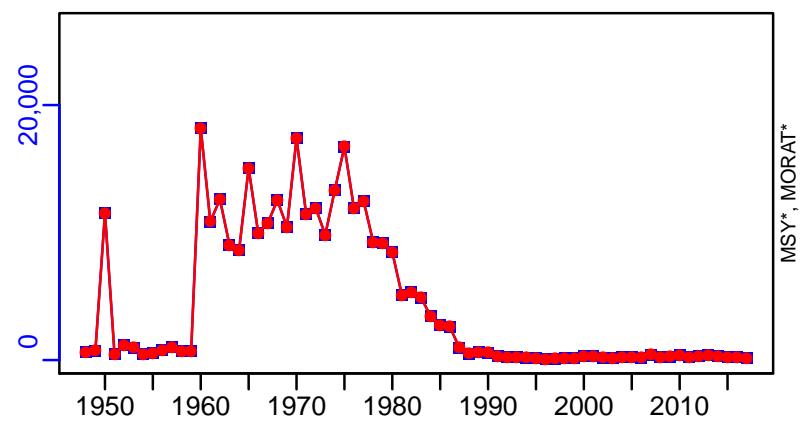


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Red seabream ICES 6–7–8 [RBRMVI–VII–VIII]

TC–MT, TL–MT, RecC\* (1948–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



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

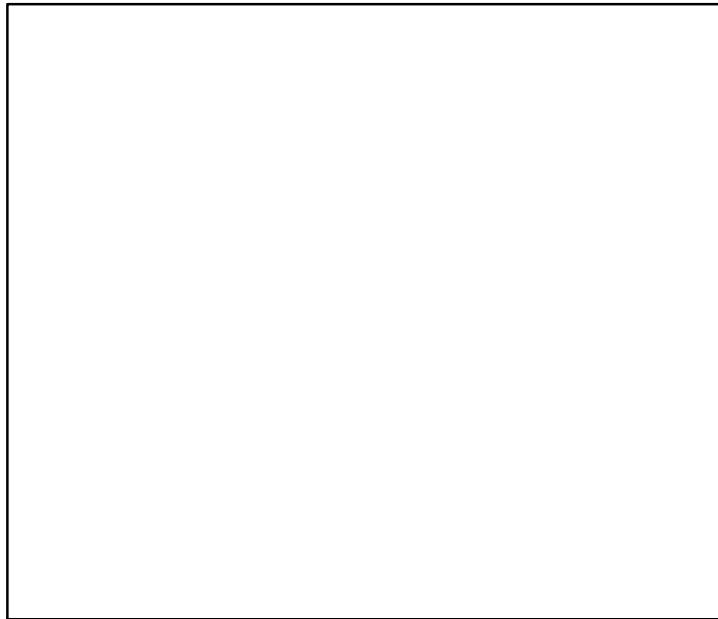
## Red seabream Azores Grounds [RBRMX]

<b>Metadata</b>	
<b>Scientific Name</b>	Pagellus bogaraveo
<b>Current Assess ID</b>	WGDEEP-RBRMX-1980-2018-ICESIMP2021
<b>Area</b>	Azores Grounds
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2016, 2016, 2017, 2018

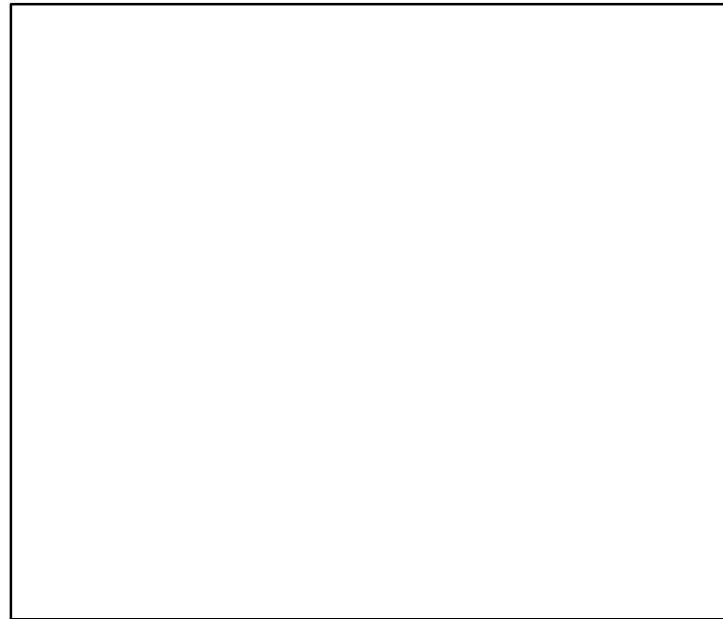
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	445		
<b>TL</b>	TL-MT	2018	445		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

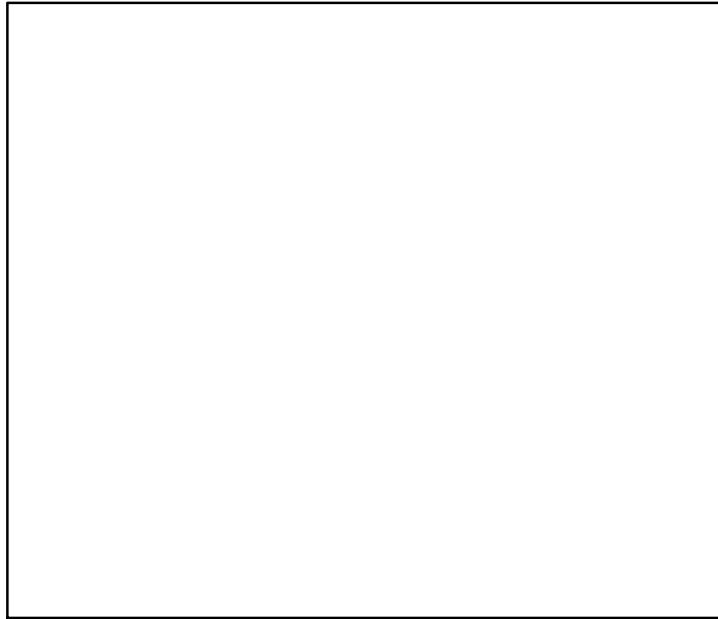
**Kobe MSY\***



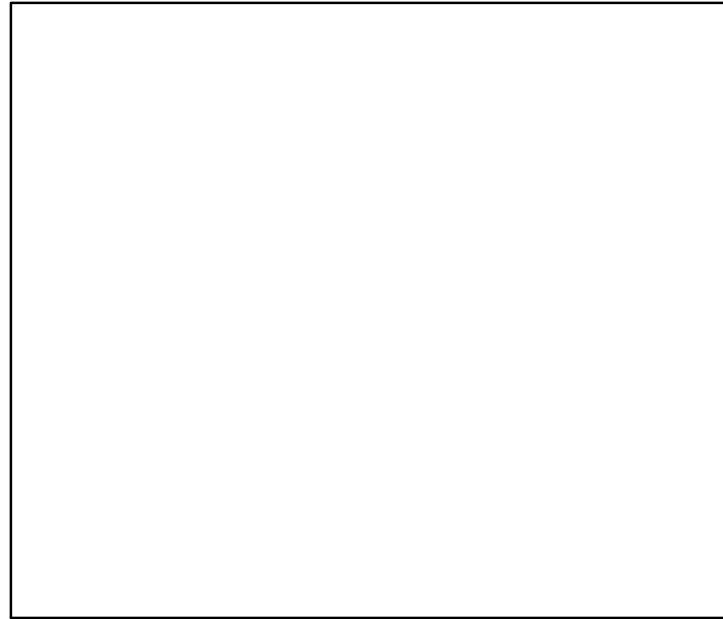
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

Red seabream Azores Grounds [RBRMX]

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***



**Recruits\***

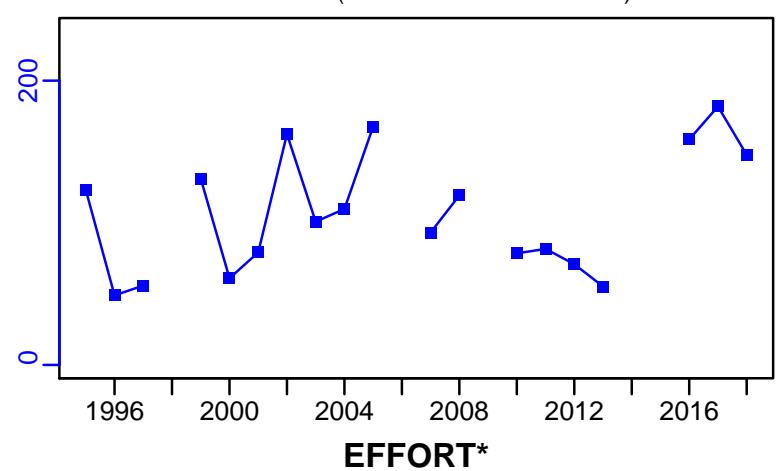
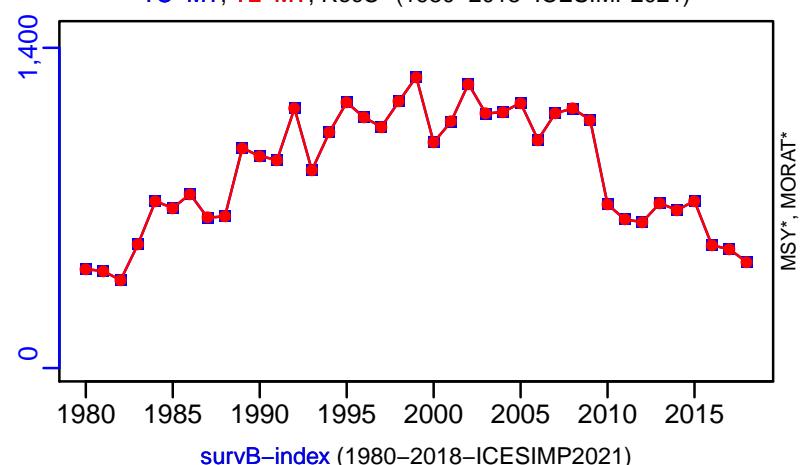


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Red seabream Azores Grounds [RBRMX]

TC-MT, TL-MT, RecC\* (1980–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CPUE\*

CdivMSY\*

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

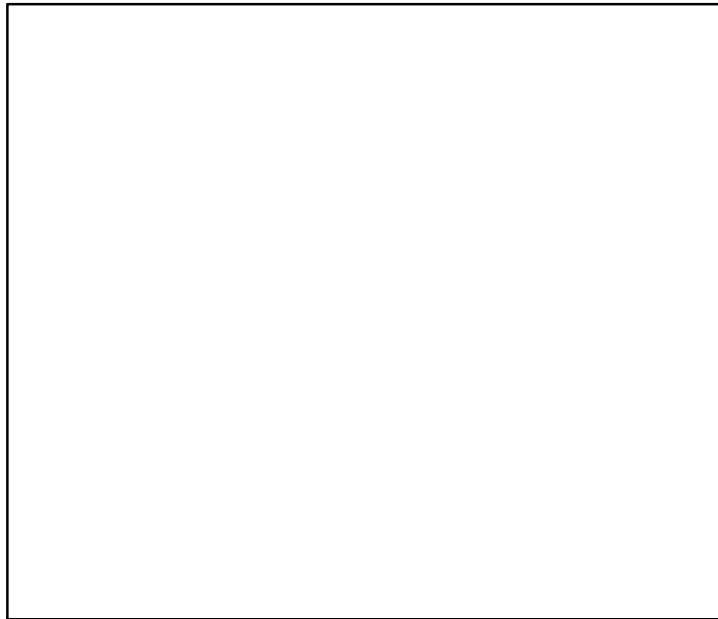
## Beaked redfish Southeast Greenland [REDDEEPXIVb]

<b>Metadata</b>	
<b>Scientific Name</b>	Sebastes mentella
<b>Current Assess ID</b>	NWWG-REDDEEPXIVb-1974-2017-ICESIMP2018
<b>Area</b>	Southeast Greenland
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	North-Western Working Group
<b>Asmts in RAM</b>	2016, 2016, 2017

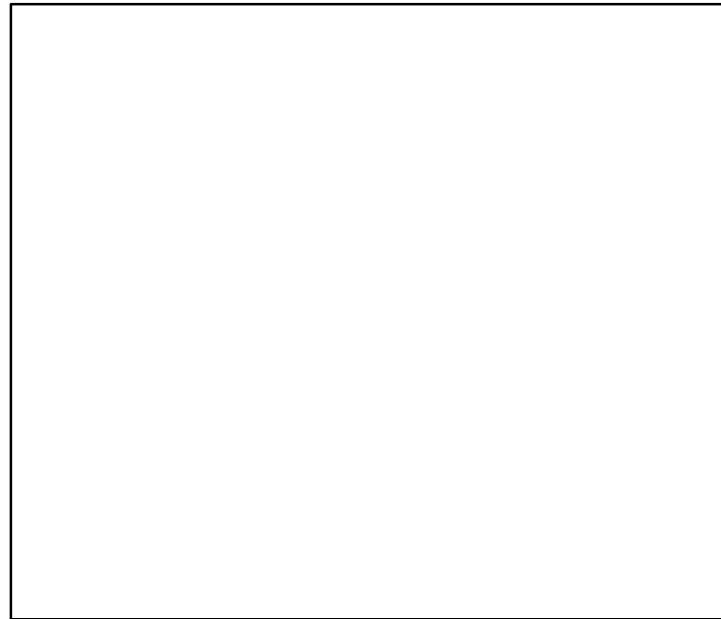
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2016	5980		
<b>TL</b>	TL-MT	2017	3030		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

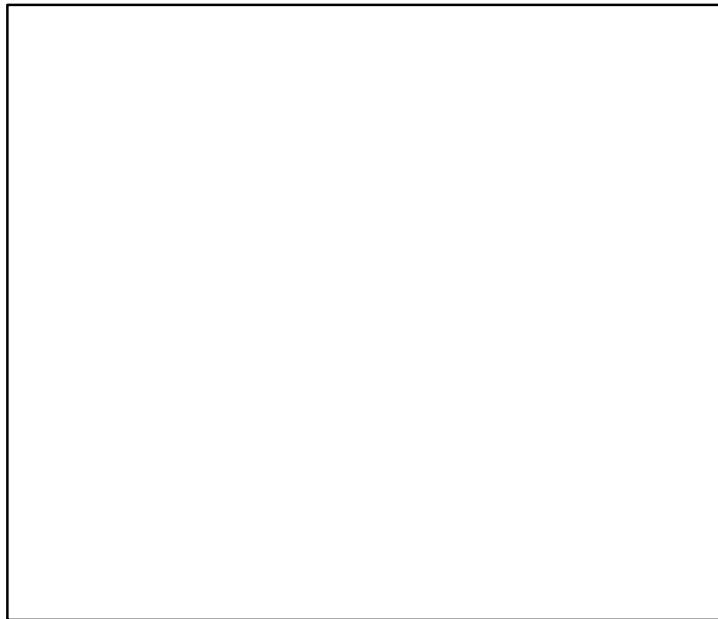
**Kobe MSY\***



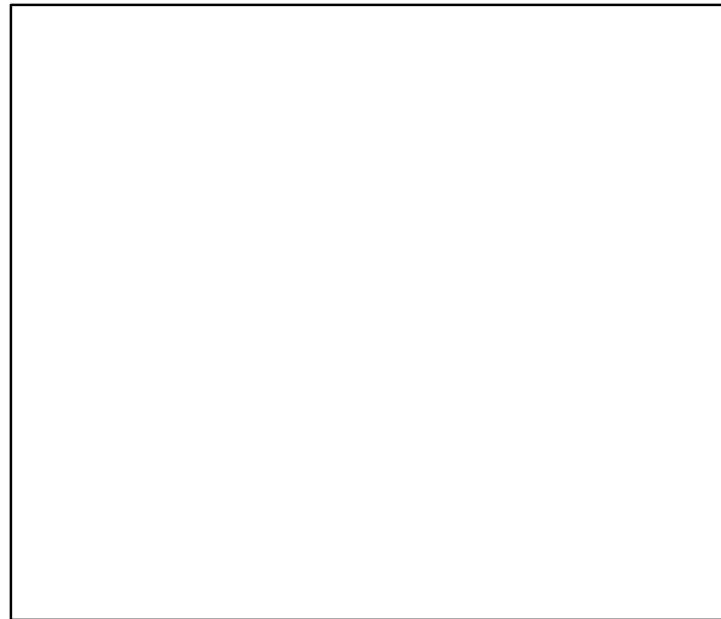
**Kobe MGT\***



**Spawner Recruit\***



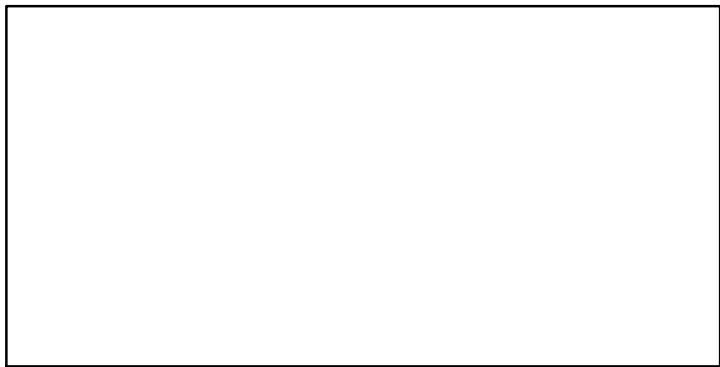
**Production\***



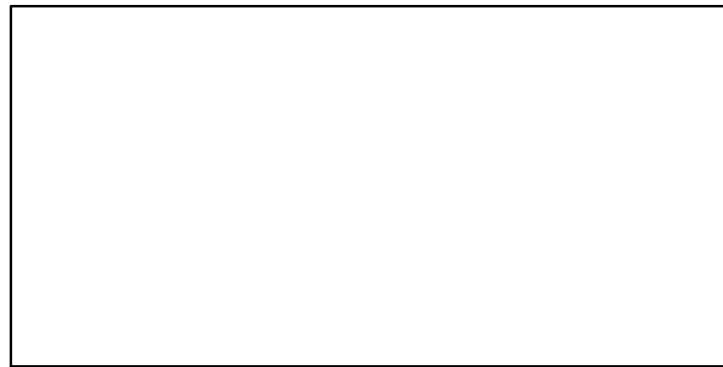
◆ Start Year ♦ End Year \* No Data

**Beaked redfish Southeast Greenland [REDDEEPXIVb]**

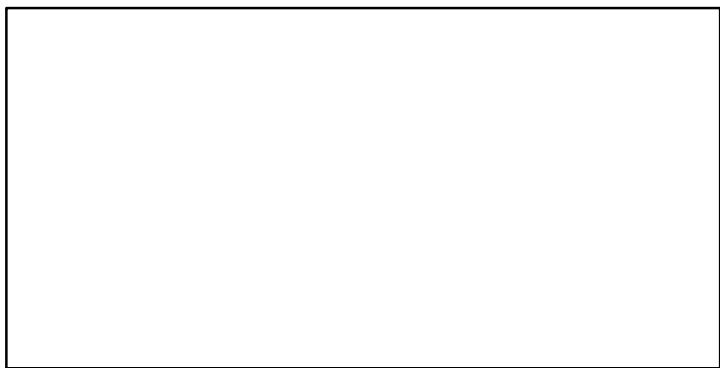
**TB\***



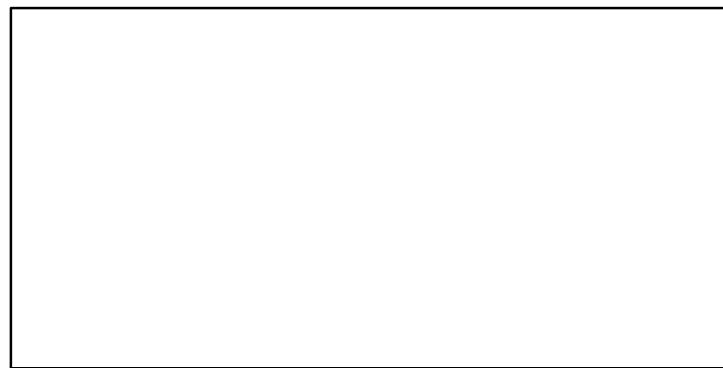
**SSB\***



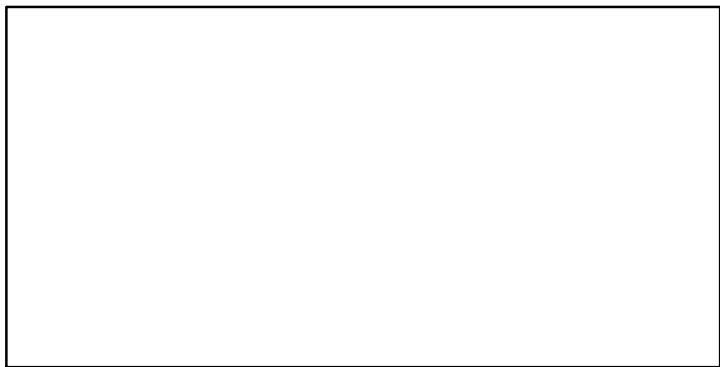
**TN \***



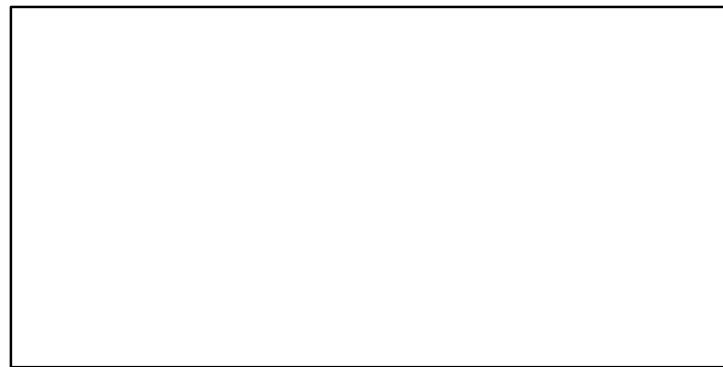
**F\***



**ER\***



**Recruits\***

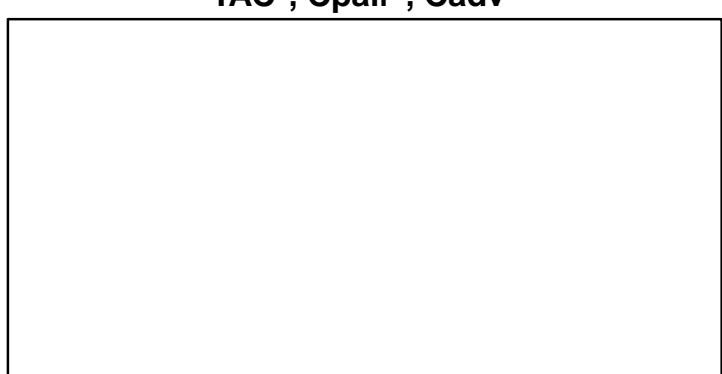
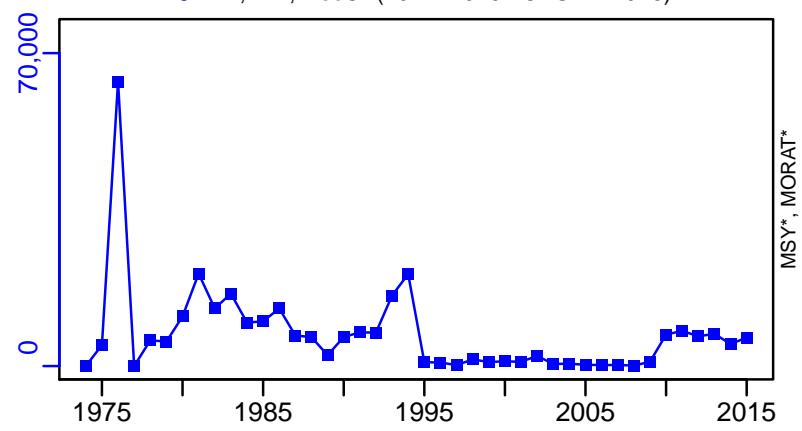


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

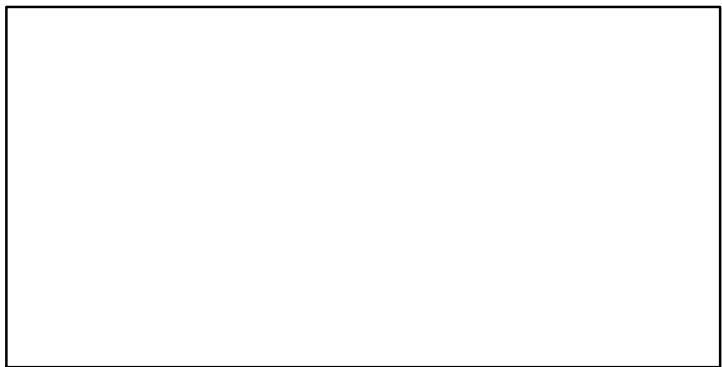
**Beaked redfish Southeast Greenland [REDDEEPXIVb]**

TC-MT, TL\*, RecC\* (1974–2016—ICESIMP2016)

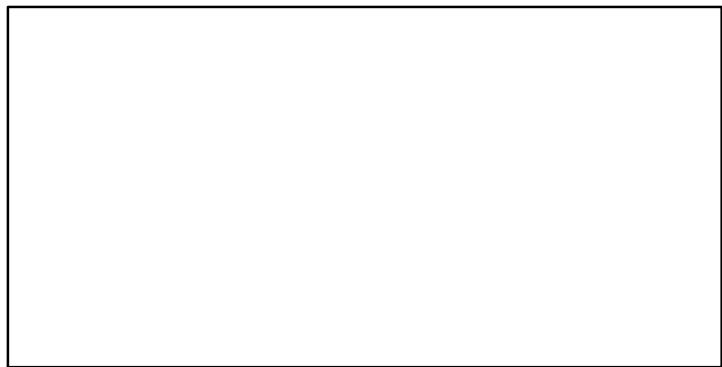
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



**CdivMSY\***



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

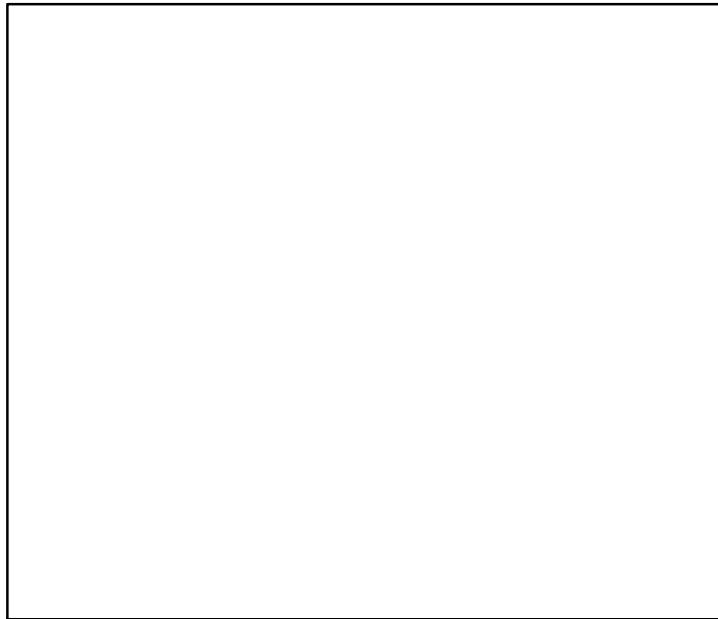
## Red gurnard Northeast Atlantic [RGURNNEATL]

<b>Metadata</b>	
<b>Scientific Name</b>	Chelidonichthys cuculus
<b>Current Assess ID</b>	WGWISE-RGURNNEATL-2006-2018-ICESIMP2021
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Widely Distributed Stocks
<b>Asmts in RAM</b>	2014, 2016, 2018

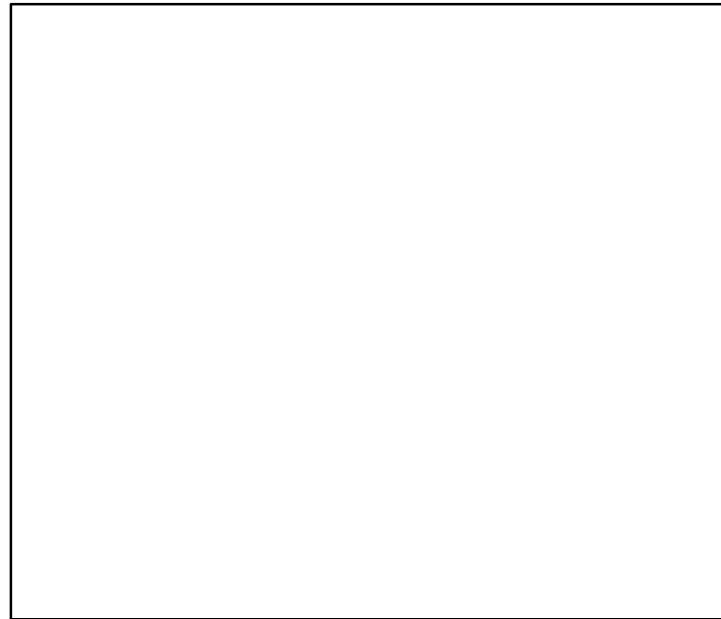
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	4018		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

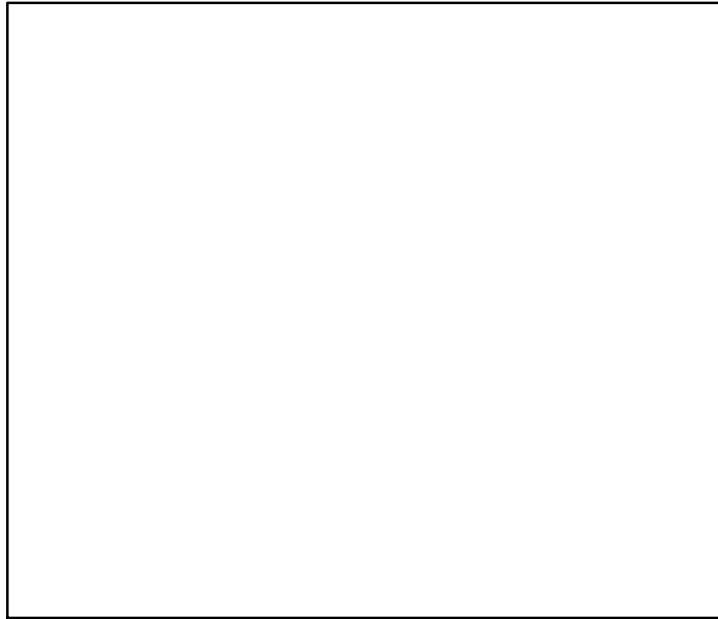
**Kobe MSY\***



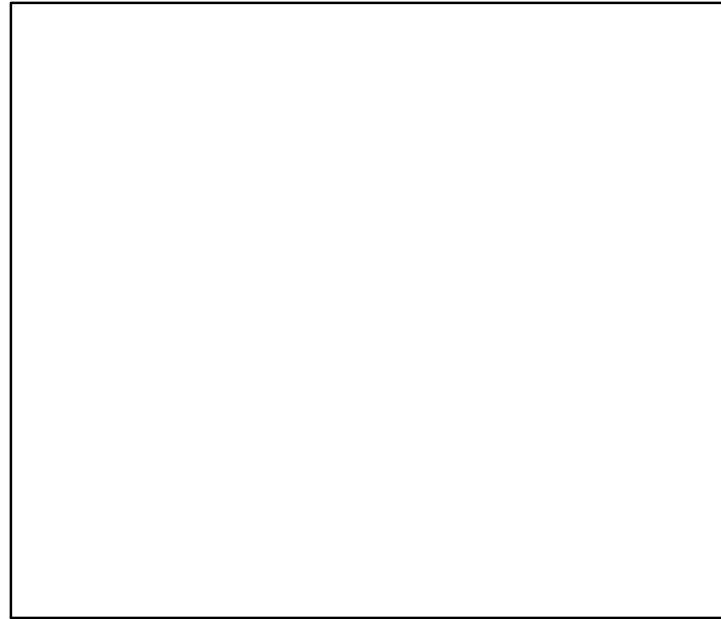
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

**Red gurnard Northeast Atlantic [RGURNNEATL]**

**TB\***



**SSB\***



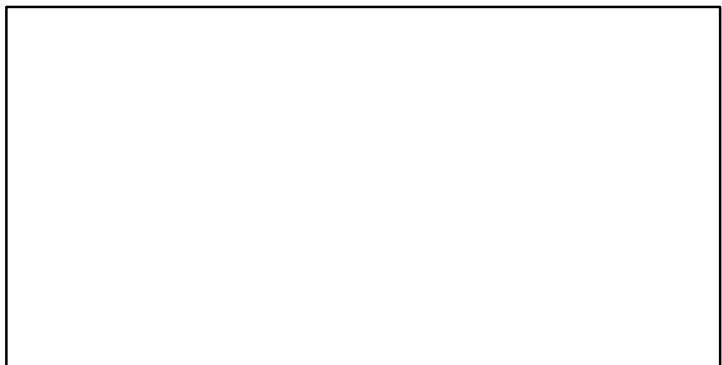
**TN \***



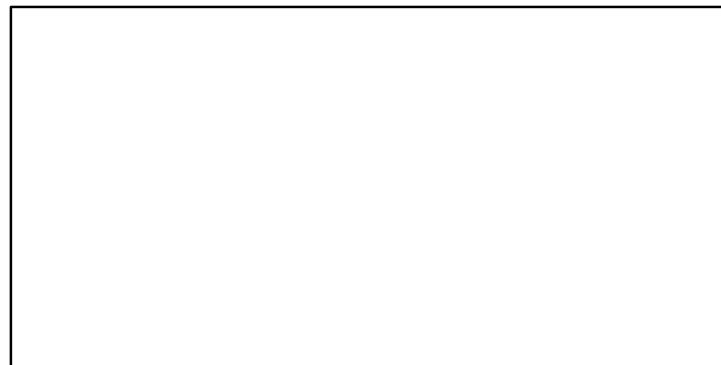
**F\***



**ER\***



**Recruits\***

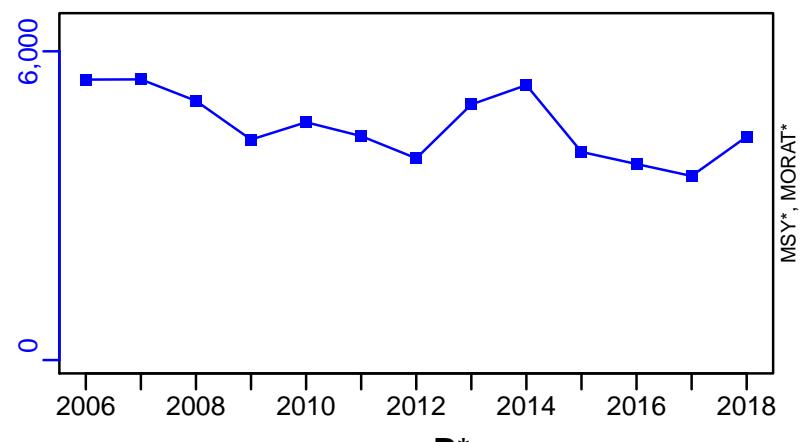


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

**Red gurnard Northeast Atlantic [RGURNNEATL]**

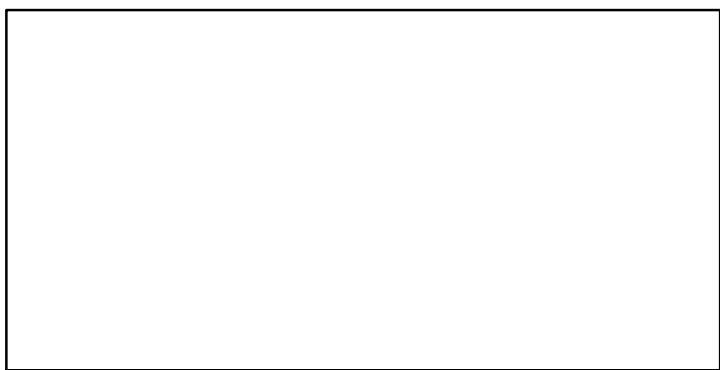
TL-MT, TC\*, RecC\* (2006–2018–ICESIMP2021)

**TAC\*, Cpair\*, Cadv\***



**survB\***

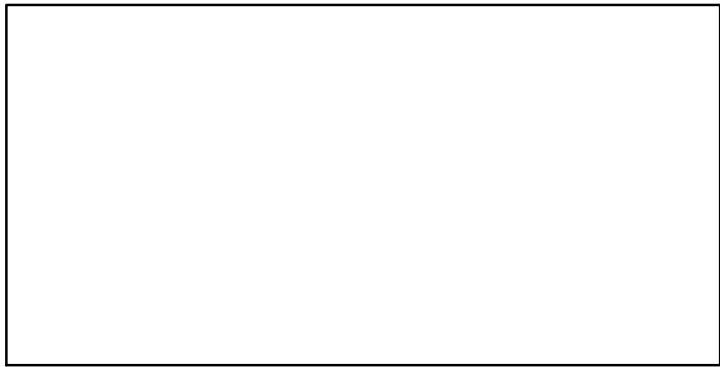
MSY\*, MORAT\*



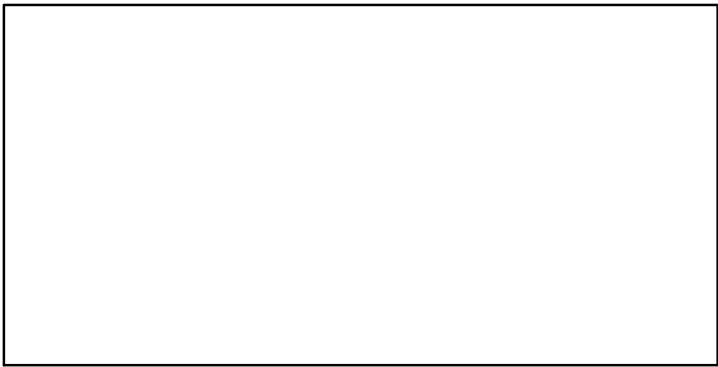
**CPUE\***



**EFFORT\***



**CdivMSY\***



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

## Roughhead grenadier Northeast Atlantic [RHGRENNEATL]

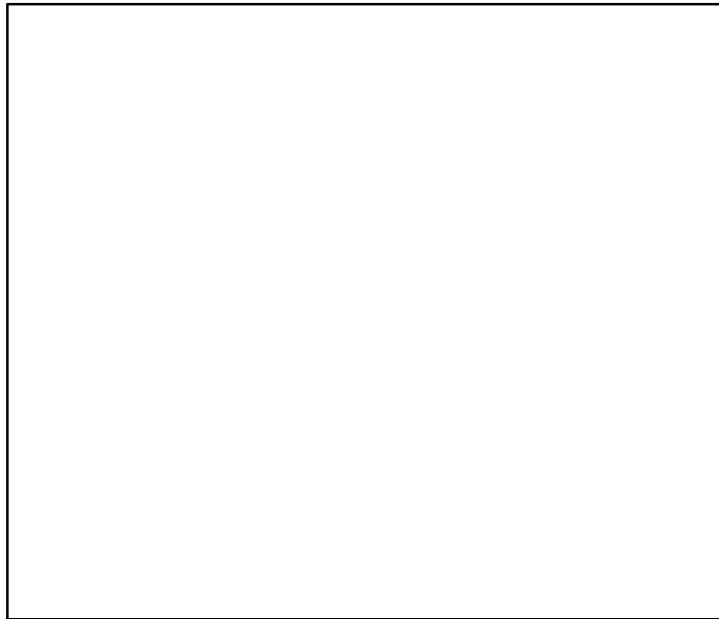
Metadata	
<b>Scientific Name</b>	Macrourus berglax
<b>Current Assess ID</b>	WGDEEP-RHGRENNEATL-1990-2015-ICESIMP2016
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2015

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

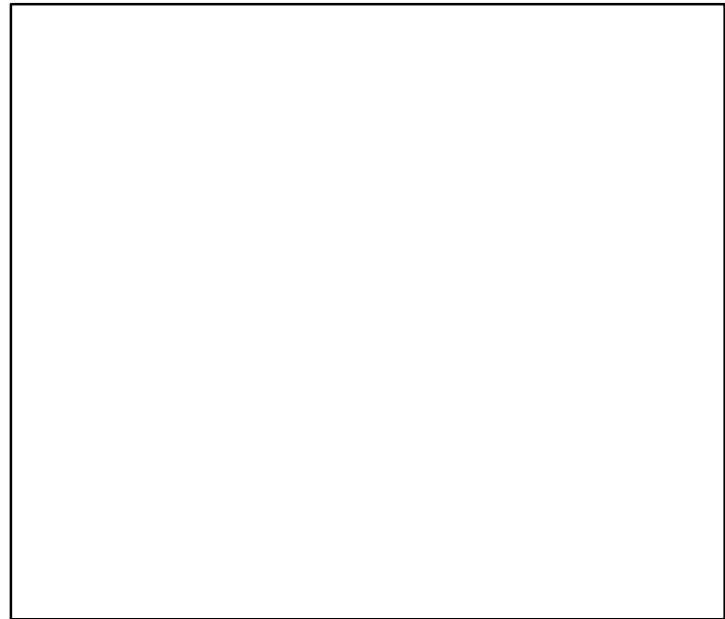
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	654		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Roughhead grenadier Northeast Atlantic [RHGRENNEATL]

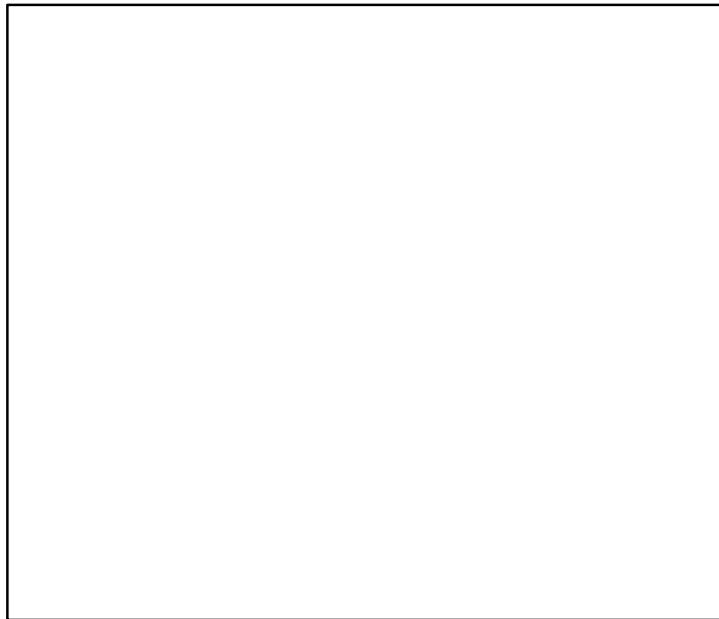
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

Roughhead grenadier Northeast Atlantic [RHGRENNEATL]

**TB\***



**SSB\***



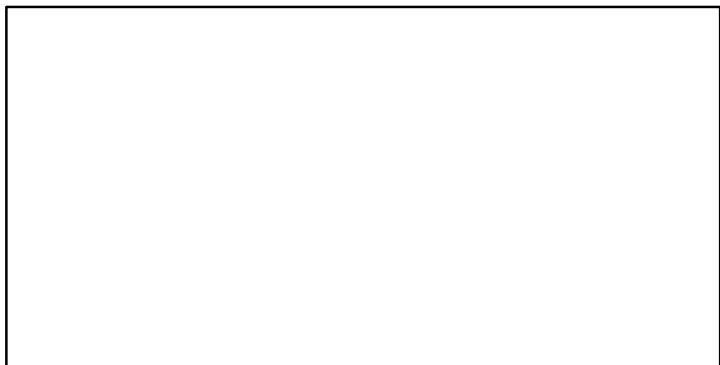
**TN \***



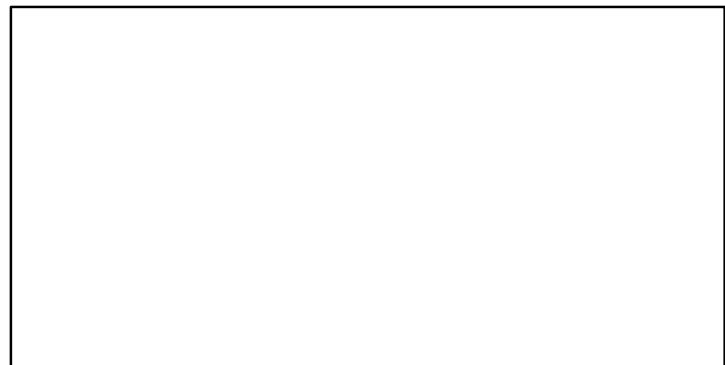
**F\***



**ER\***



**Recruits\***

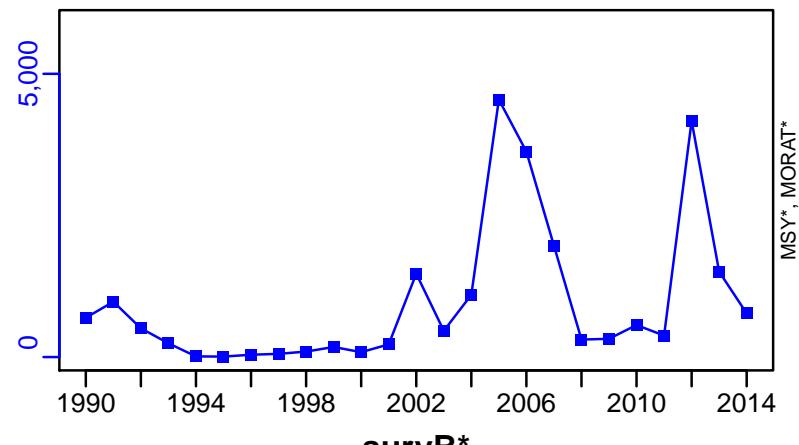


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Roughhead grenadier Northeast Atlantic [RHGRENNEATL]

TL-MT, TC\*, RecC\* (1990–2015–ICESIMP2016)

TAC\*, Cpair\*, Cadv\*



survB\*

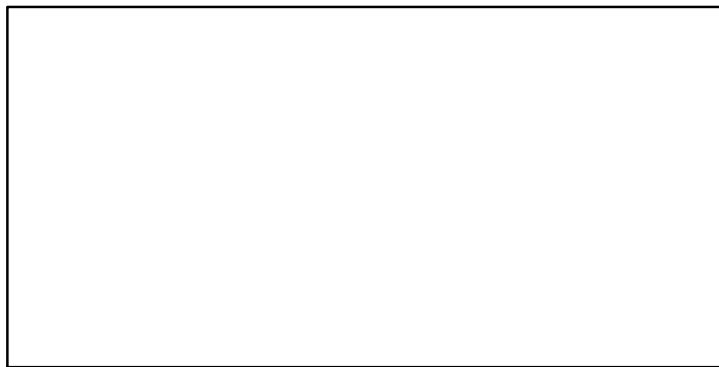
MSY\*, MORAT\*



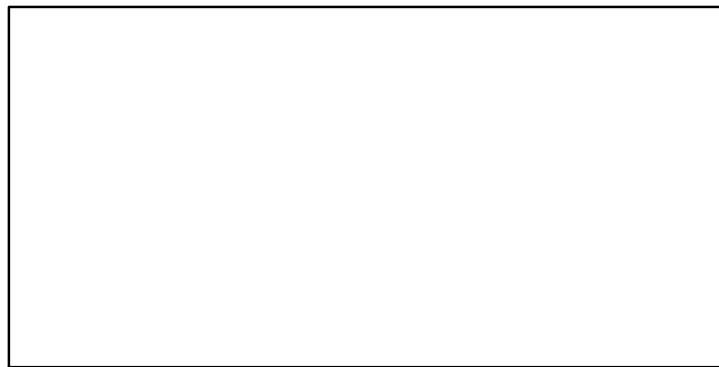
CPUE\*



EFFORT\*



CdivMSY\*



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

**Roundnose grenadier ICES 1-2-4-5a2-8-9-14ab2 [RNGENI-II-IV-Va2-VIII-IX-XIVab2]**

Metadata	
<b>Scientific Name</b>	Coryphaenoides rupestris
<b>Current Assess ID</b>	WGDEEP-RNGENI-II-IV-Va2-VIII-IX-XIVab2-1990-2018-ICESIMP2021
<b>Area</b>	ICES 1-2-4-5a2-8-9-14ab2
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2015, 2016, 2018

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	240		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year   ◆ End Year   \* No Data

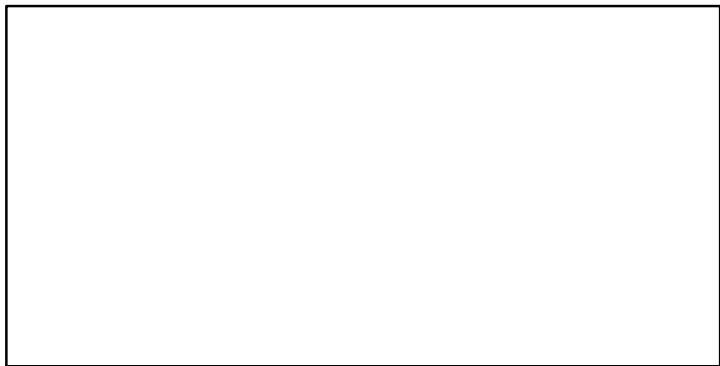
**TB\***



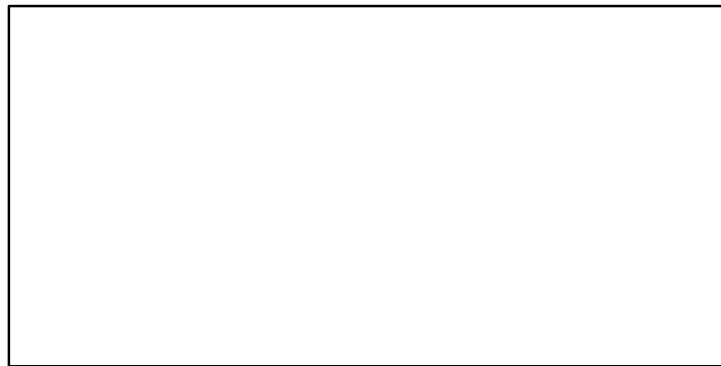
**SSB\***



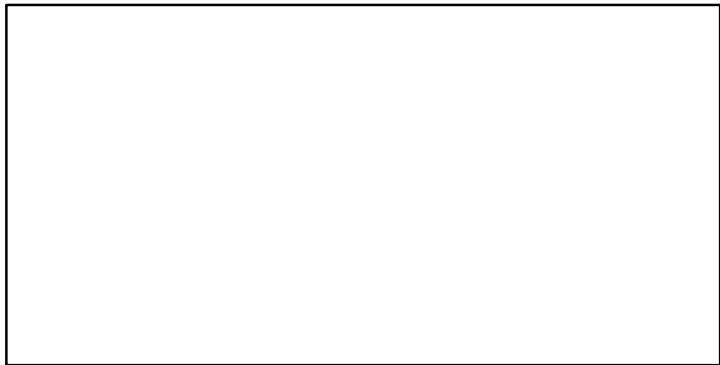
**TN \***



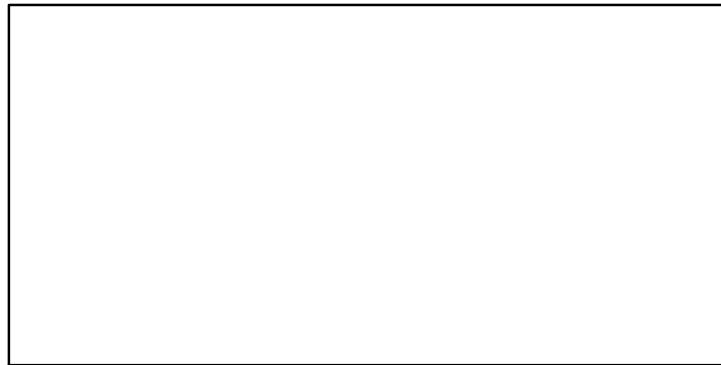
**F\***



**ER\***



**Recruits\***

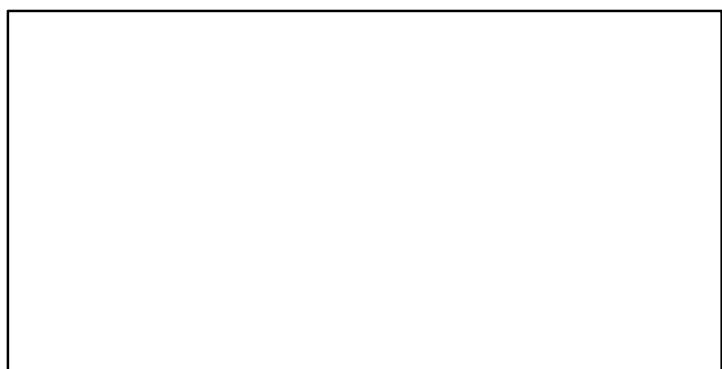
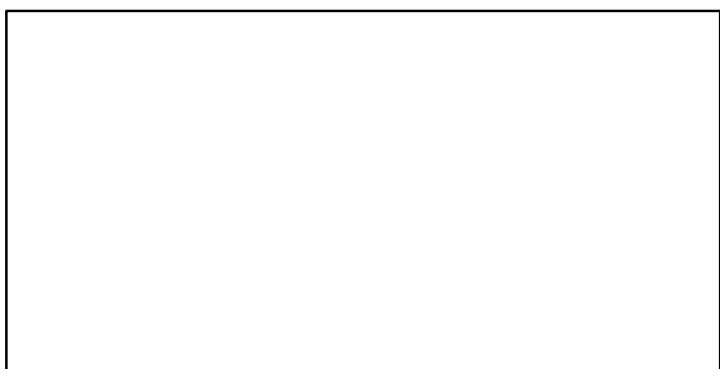
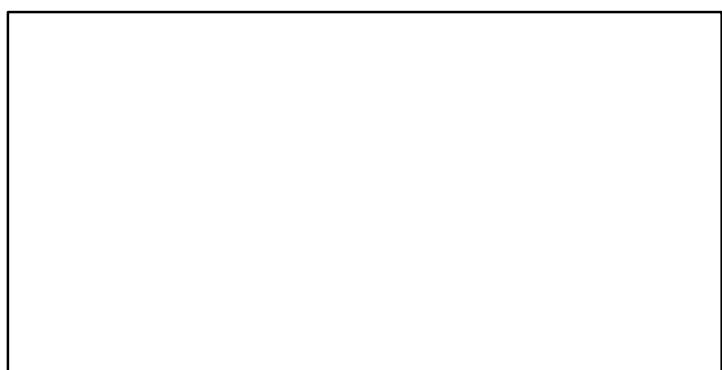
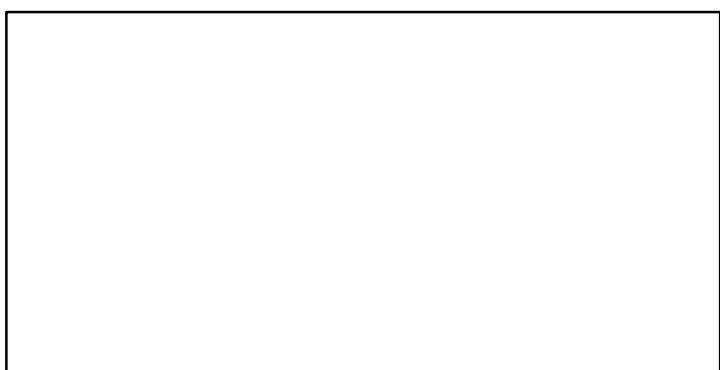
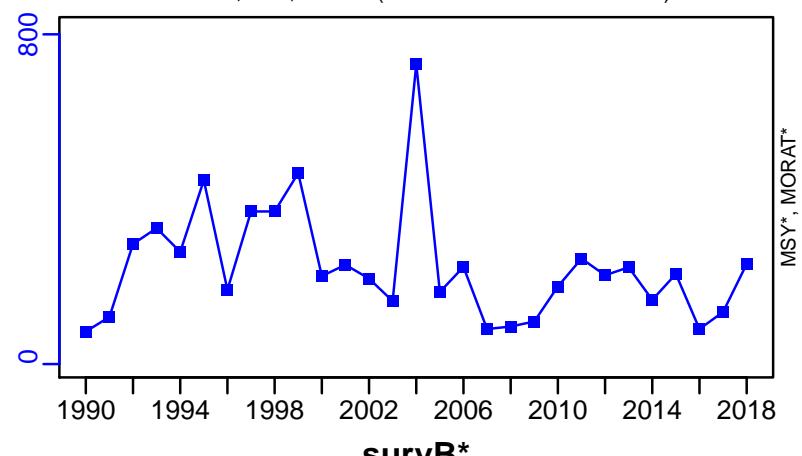


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Roundnose grenadier ICES 1–2–4–5a2–8–9–14ab2 [RNGENI–II–IV–Va2–VIII–IX–XIVab2]

TL–MT, TC\*, RecC\* (1990–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

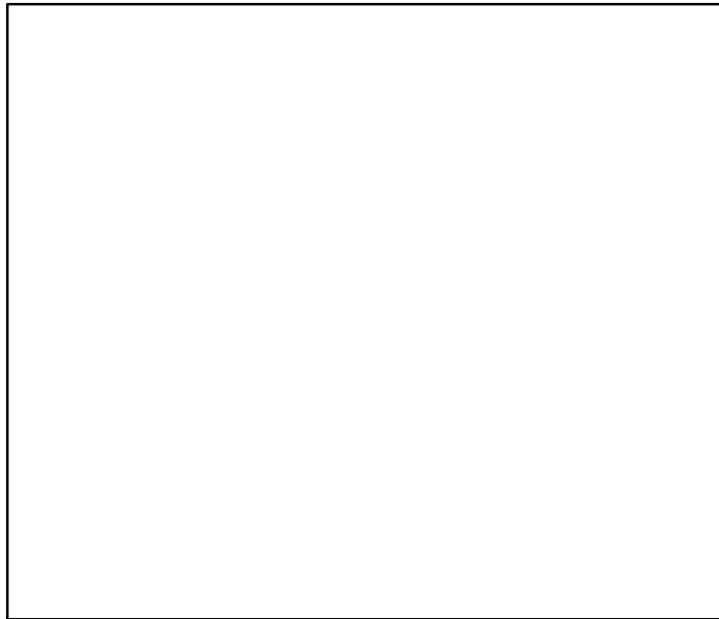
## Roundnose grenadier Mid-Atlantic Ridge [RNGENMATLR]

<b>Metadata</b>	
<b>Scientific Name</b>	Coryphaenoides rupestris
<b>Current Assess ID</b>	WGDEEP-RNGENMATLR-1973-2018-ICESIMP2021
<b>Area</b>	Mid-Atlantic Ridge
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2016, 2018, 2015

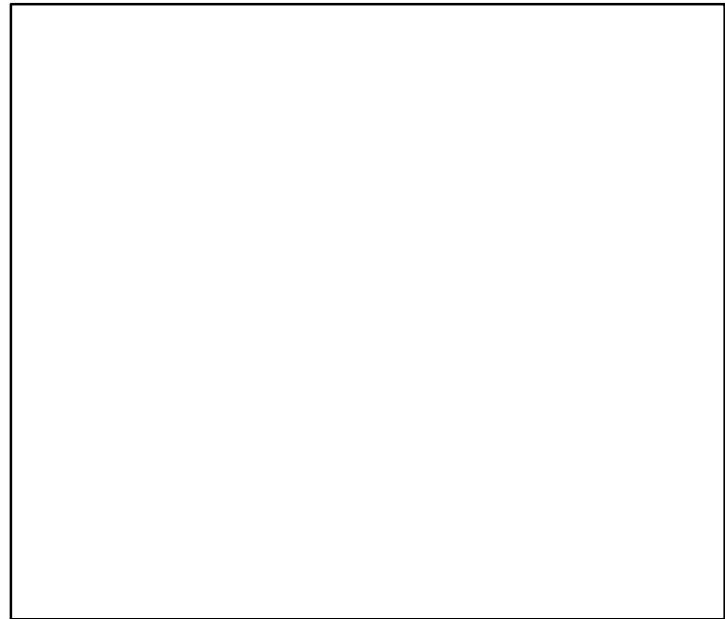
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	27		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

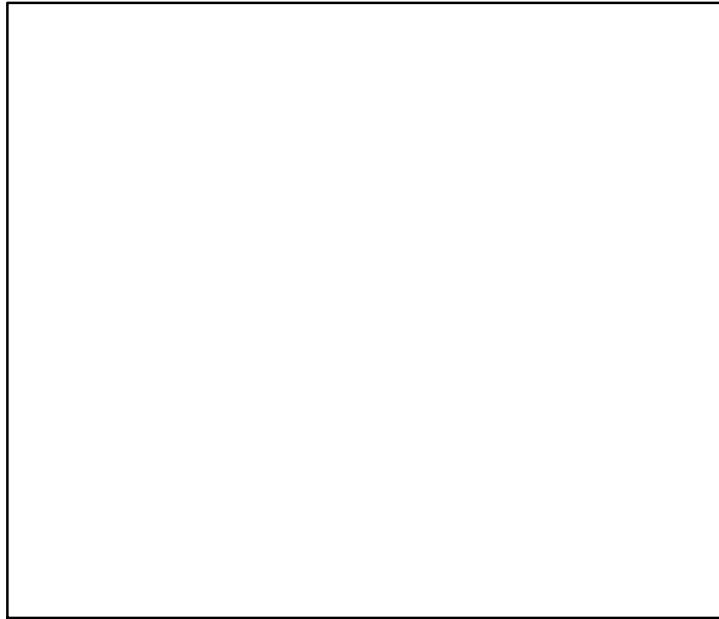
**Kobe MSY\***



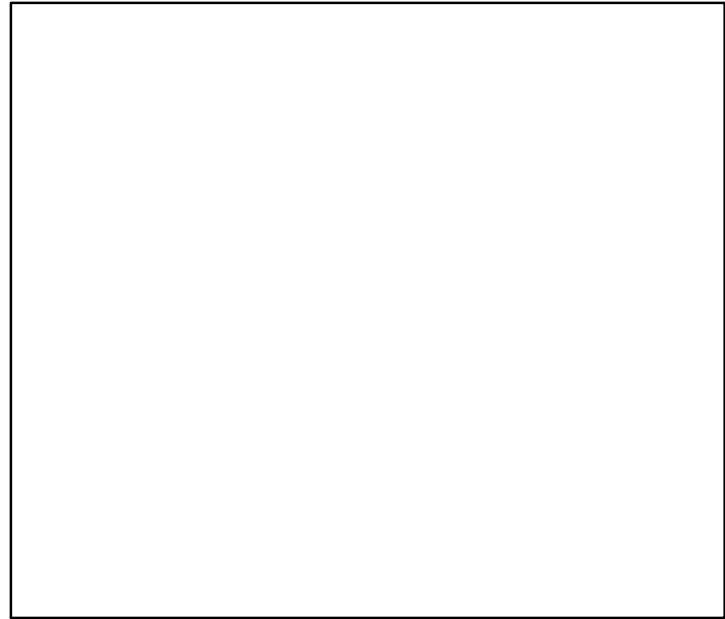
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

Roundnose grenadier Mid-Atlantic Ridge [RNGENMATLR]

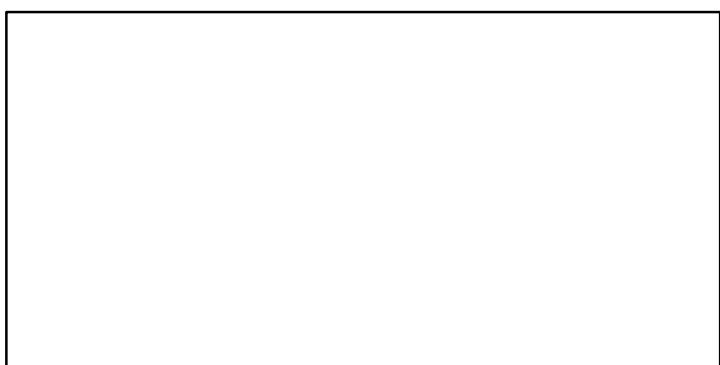
**TB\***



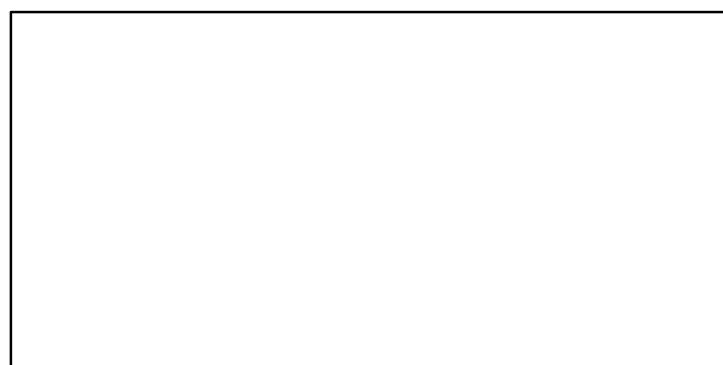
**SSB\***



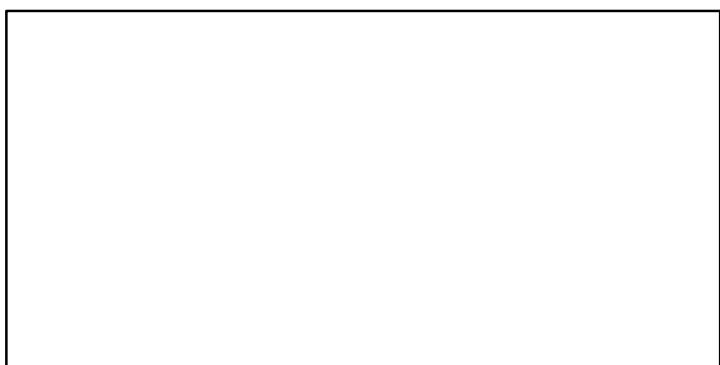
**TN \***



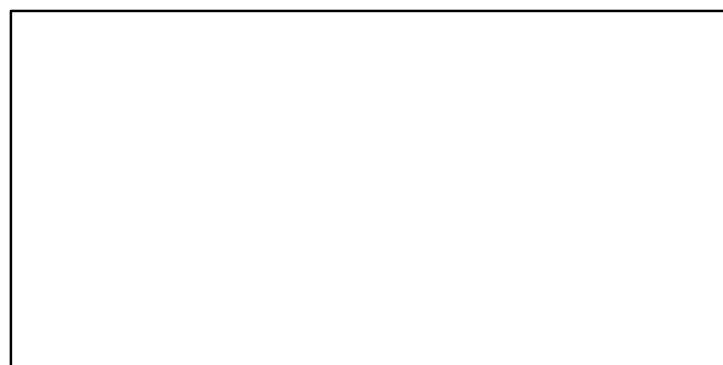
**F\***



**ER\***



**Recruits\***

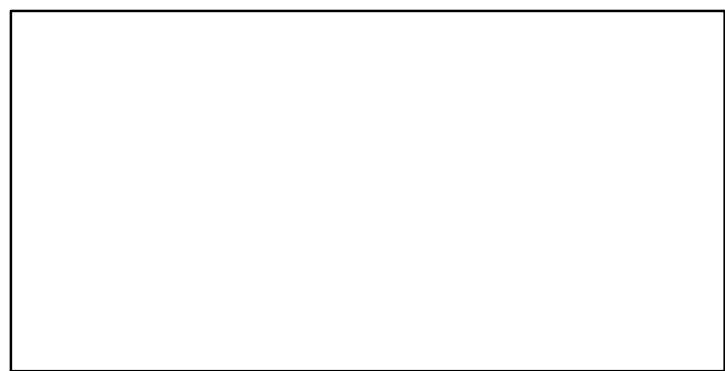
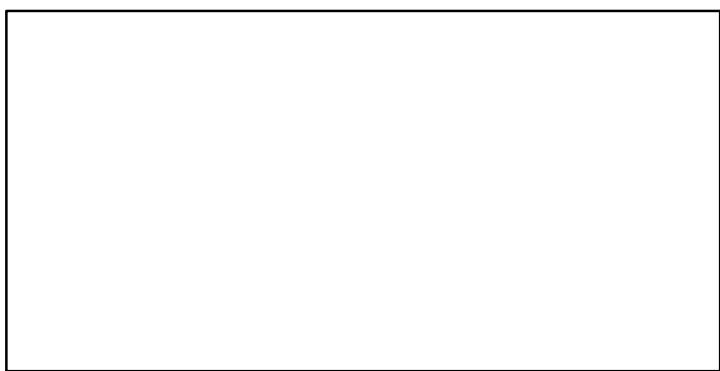
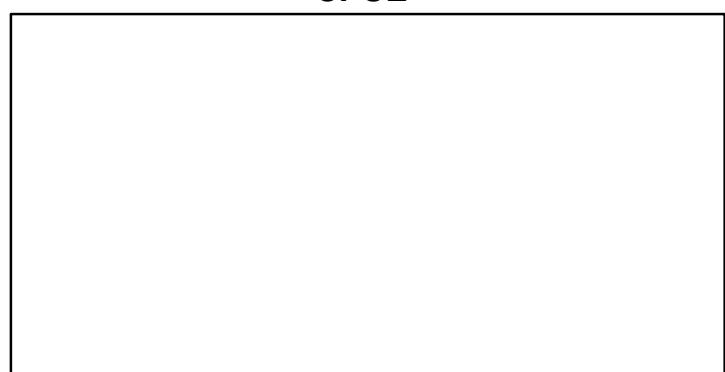
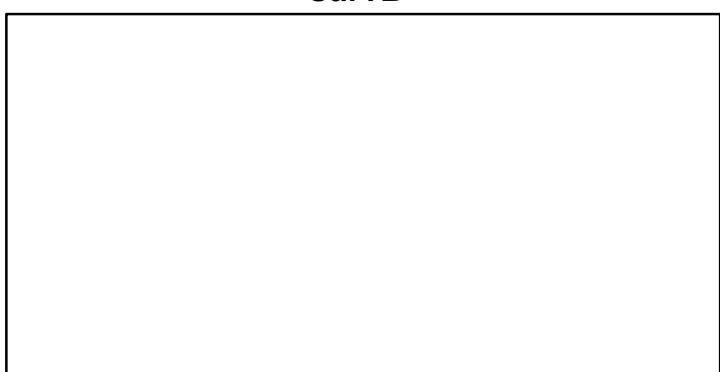
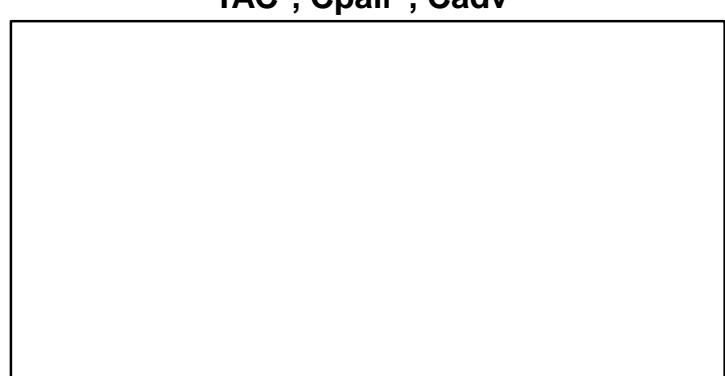
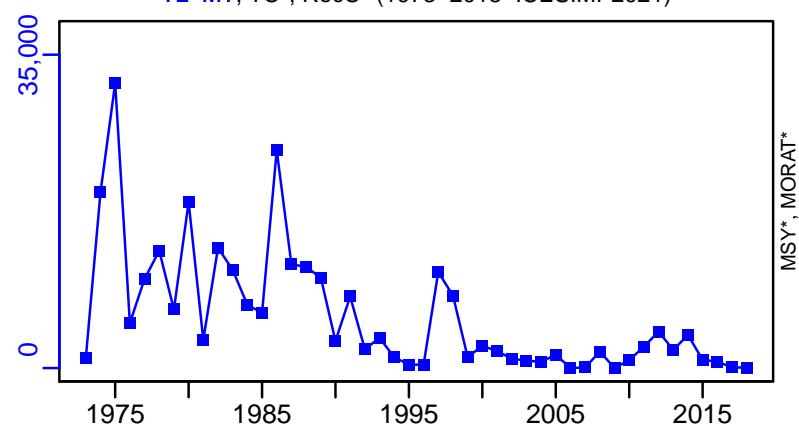


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

Roundnose grenadier Mid-Atlantic Ridge [RNGENMATLR]

TL-MT, TC\*, RecC\* (1973–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

## Roundnose grenadier ICES 5b-6-7-12b [RNGENVb-VI-VII-XIIb]

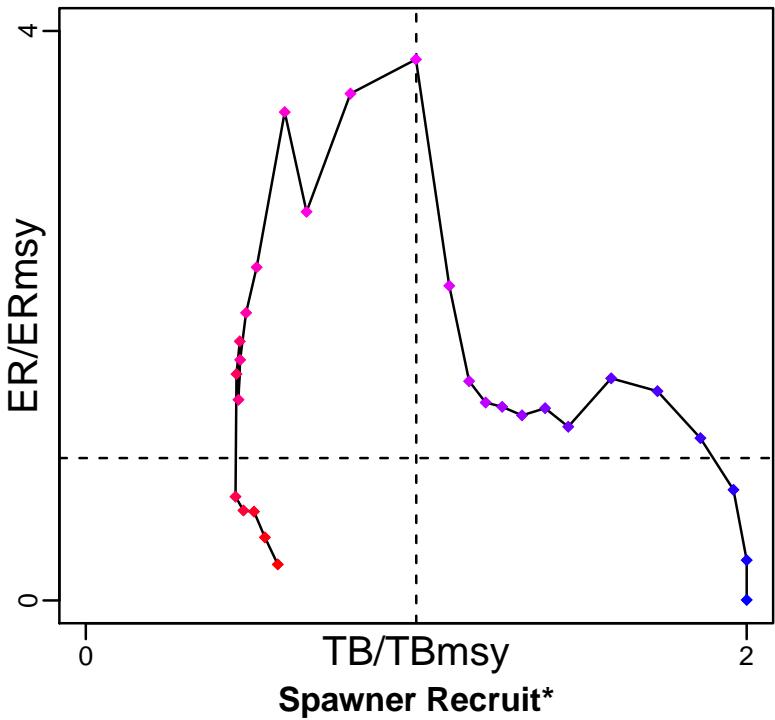
<b>Metadata</b>	
<b>Scientific Name</b>	Coryphaenoides rupestris
<b>Current Assess ID</b>	WGDEEP-RNGENVb-VI-VII-XIIb-1988-2017-ICESIMP2018
<b>Area</b>	ICES 5b-6-7-12b
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2016, 2017

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

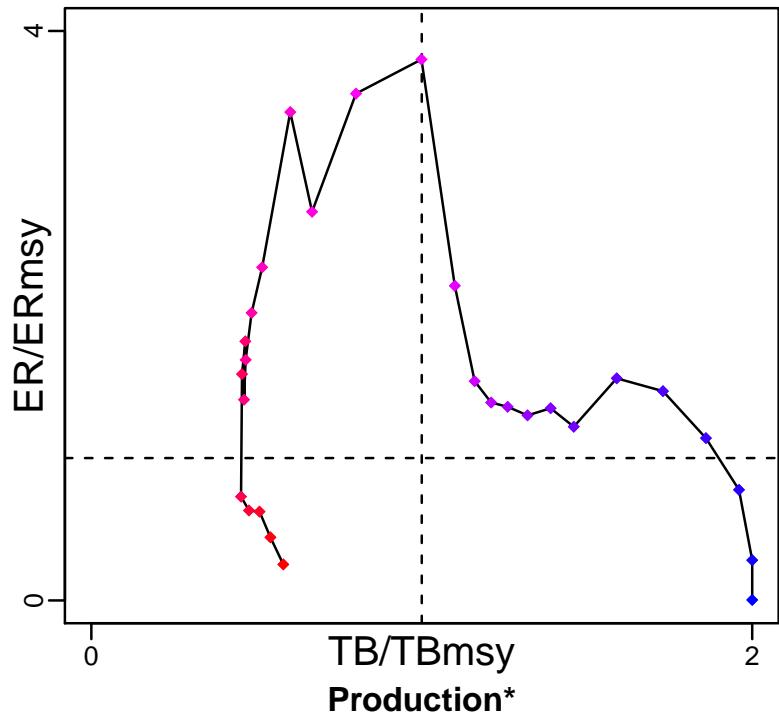
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-	-
<b>TN</b>	-	-	-	-	-	-
<b>R</b>	-	-	-	-	-	-
<b>F</b>	-	-	-	-	-	-
<b>ER</b>	-	-	-	-	-	-
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2017	1660			
<b>TB/TBmsy</b>	TBdivTBmsy-dimensionless	2016	0.581			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ERdivERmsy-dimensionless	2016	0.253			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Roundnose grenadier ICES 5b–6–7–12b [RNGENVb–VI–VII–XIIb]

Kobe MSYpref (1988–2016–ICESIMP2016)



Kobe MGTpref (1988–2016–ICESIMP2016)



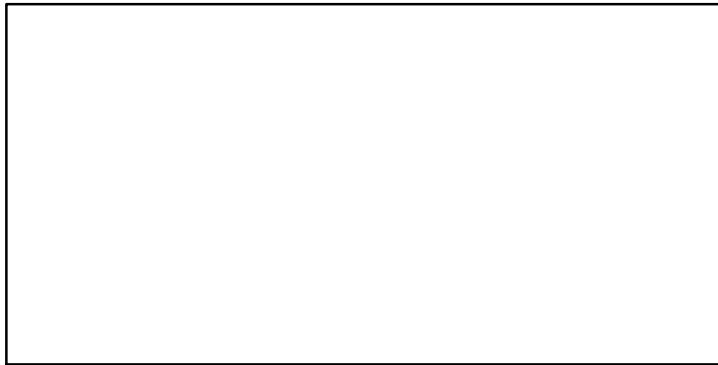
Spawner Recruit\*

Production\*

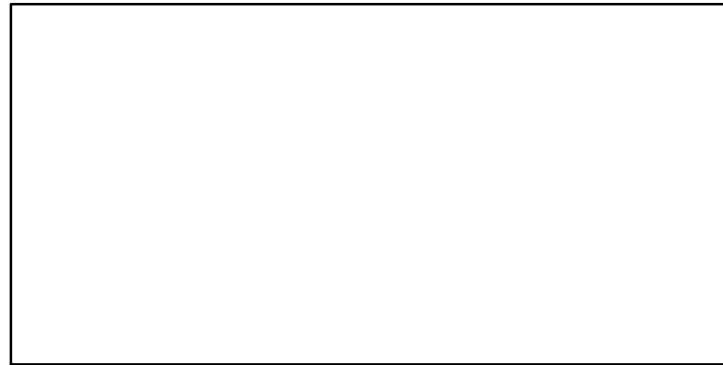
◆ Start Year    ♦ End Year    \* No Data

**Roundnose grenadier ICES 5b–6–7–12b [RNGENVb–VI–VII–XIIb]**

**TB\***



**SSB\***



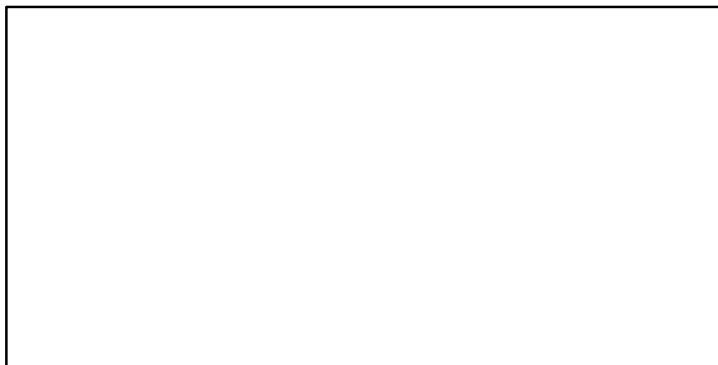
**TN \***



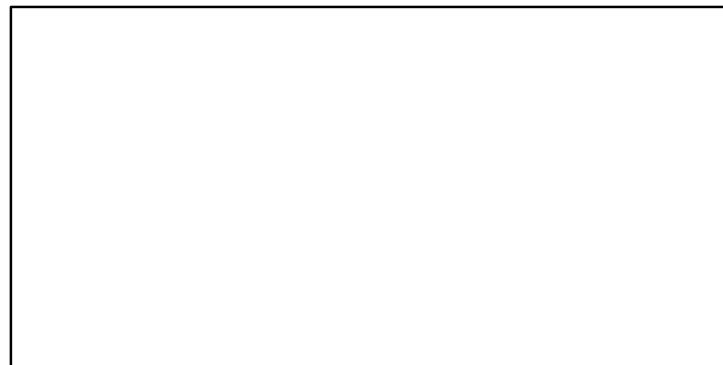
**F\***



**ER\***



**Recruits\***

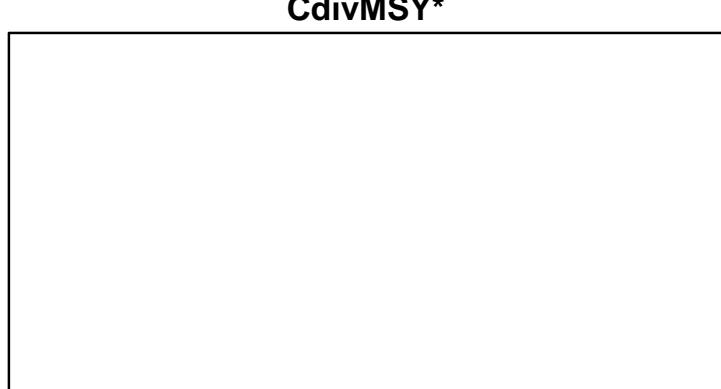
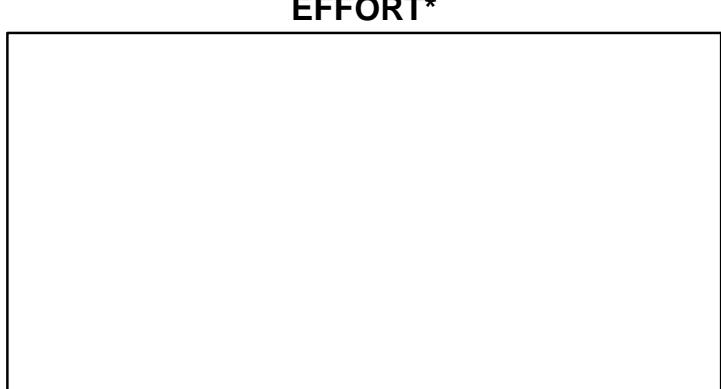
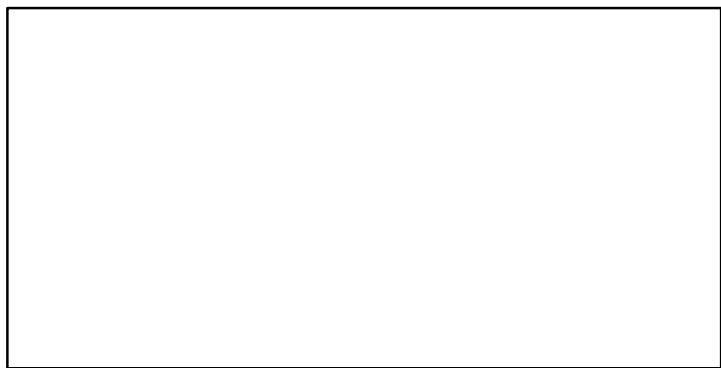
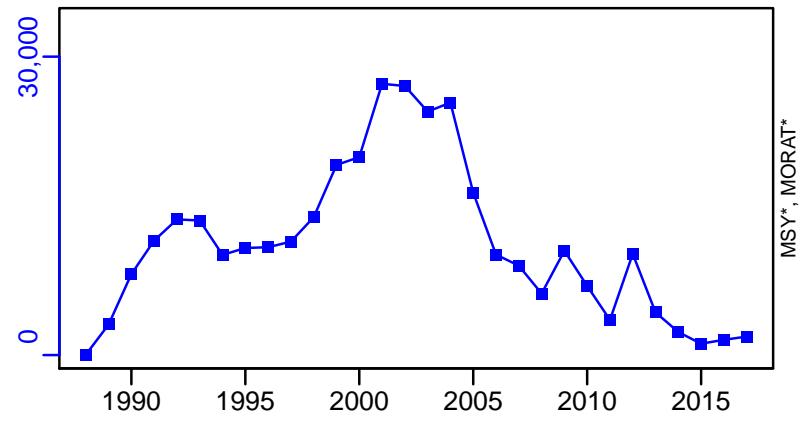


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

**Roundnose grenadier ICES 5b–6–7–12b [RNGENVb–VI–VII–XIIb]**

TL–MT, TC\*, RecC\* (1988–2017–ICESIMP2018)

**TAC\*, Cpair\*, Cadv\***



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

## Roundnose grenadier Kattegat and Skagerrak [RNGRENIIIA]

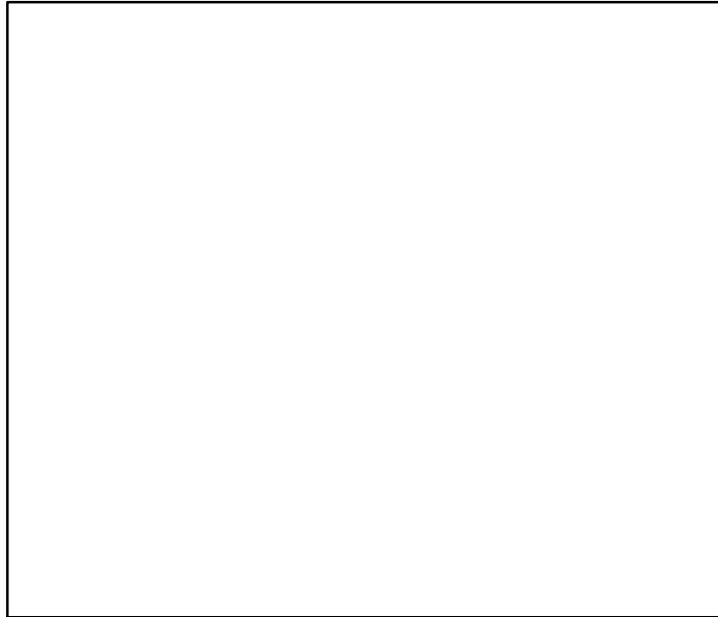
<b>Metadata</b>	
<b>Scientific Name</b>	Coryphaenoides rupestris
<b>Current Assess ID</b>	WGDEEP-RNGRENIIIA-1988-2017-ICESIMP2018
<b>Area</b>	Kattegat and Skagerrak
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
<b>Asmts in RAM</b>	2016, 2017

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

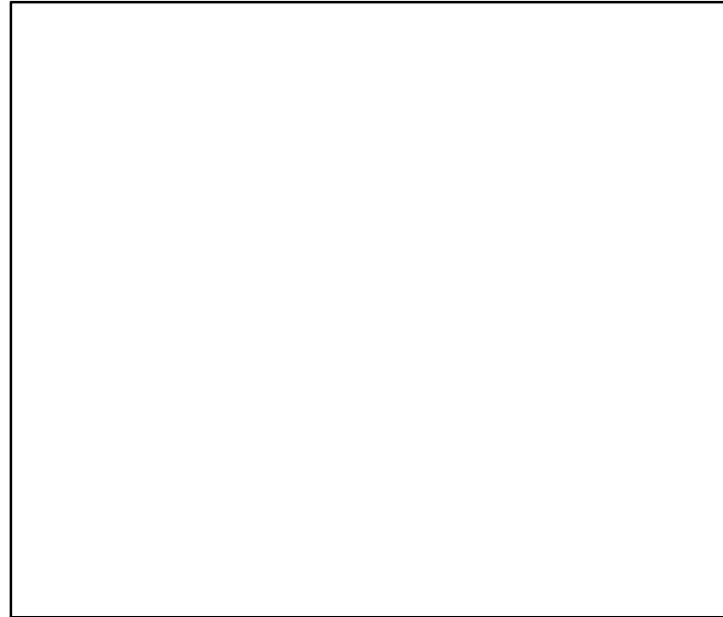
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2016	2		
<b>TL</b>	TL-MT	2017	1		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Roundnose grenadier Kattegat and Skagerrak [RNGRENIIla]

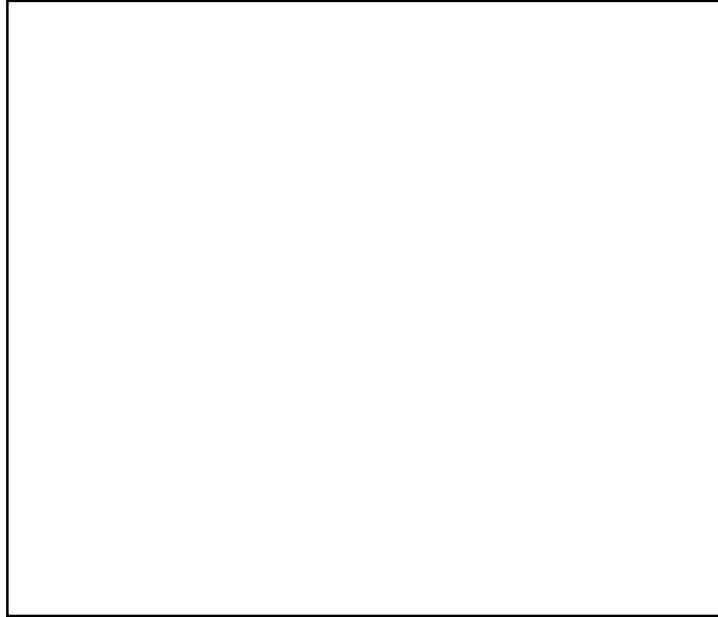
**Kobe MSY\***



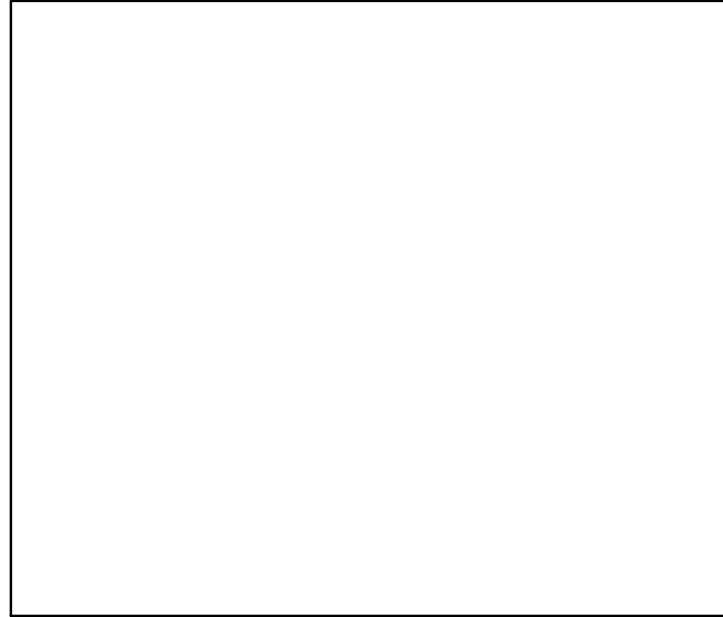
**Kobe MGT\***



**Spawner Recruit\***



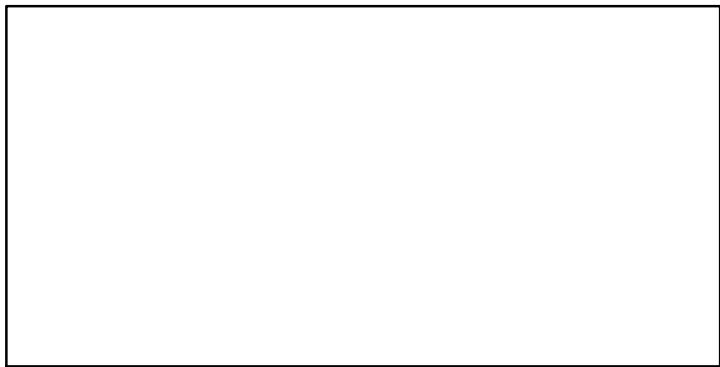
**Production\***



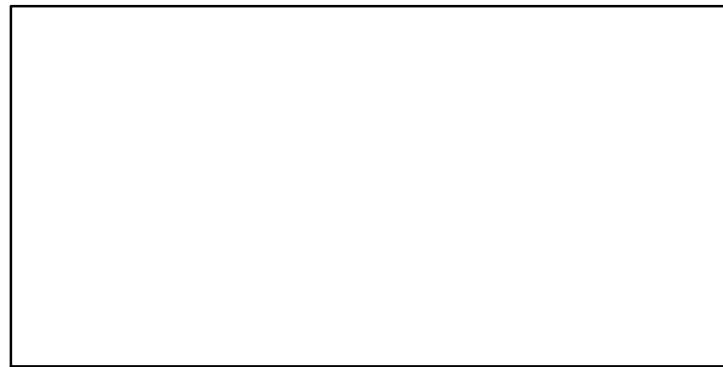
◆ Start Year ♦ End Year \* No Data

Roundnose grenadier Kattegat and Skagerrak [RNGRENIIla]

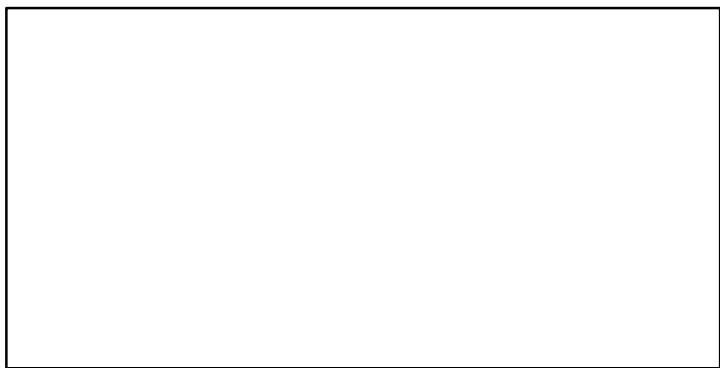
**TB\***



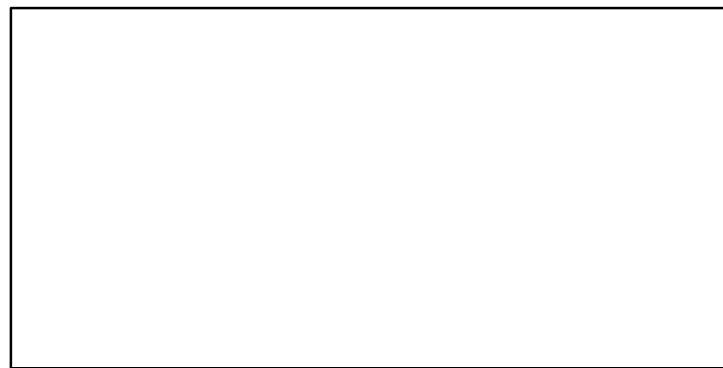
**SSB\***



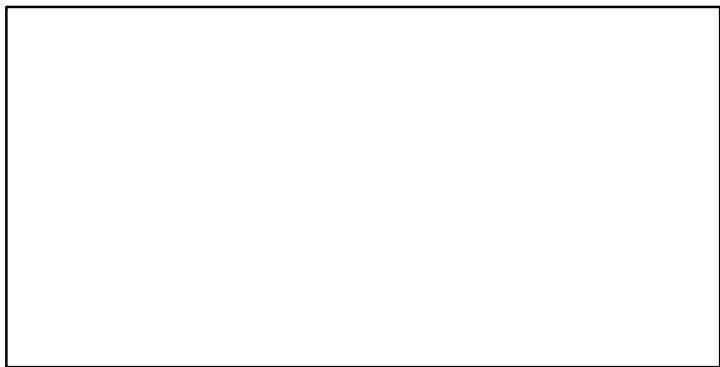
**TN \***



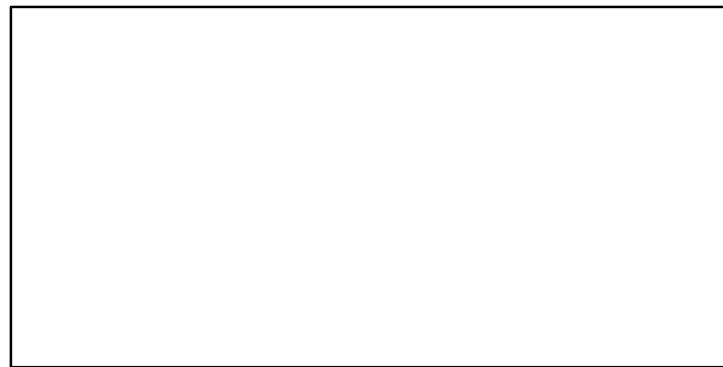
**F\***



**ER\***



**Recruits\***

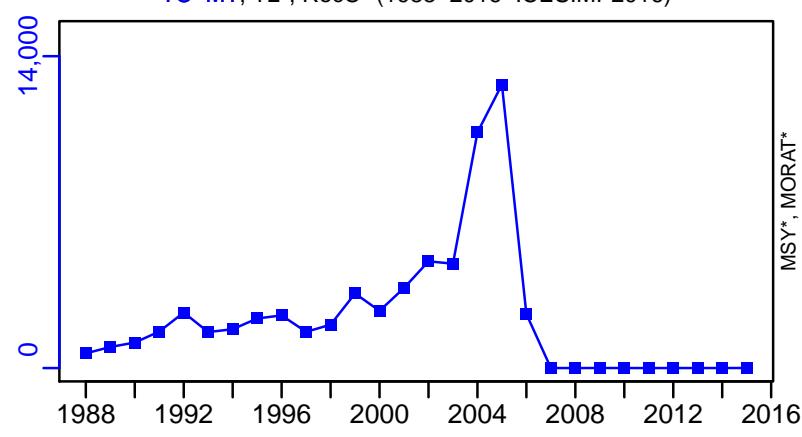


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

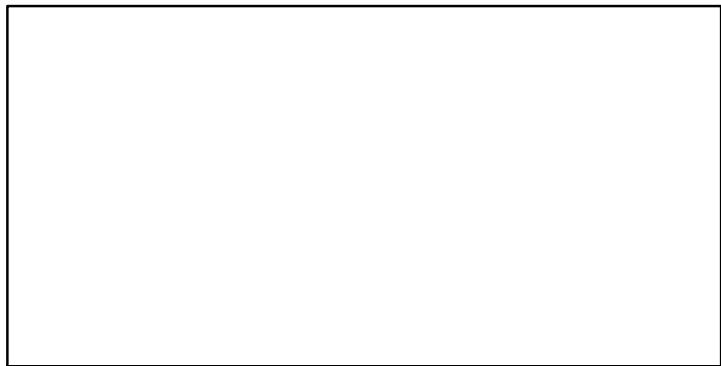
Roundnose grenadier Kattegat and Skagerrak [RNGRENIIla]

TC-MT, TL\*, RecC\* (1988–2016—ICESIMP2016)

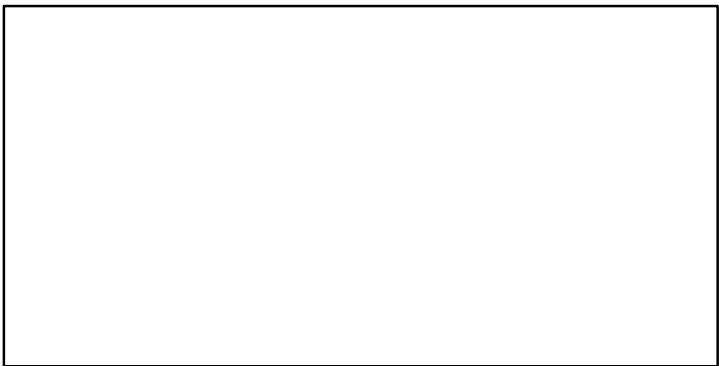
TAC\*, Cpair\*, Cadv\*



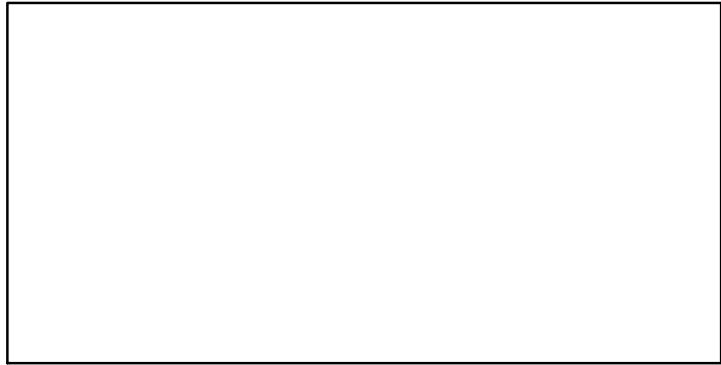
survB\*



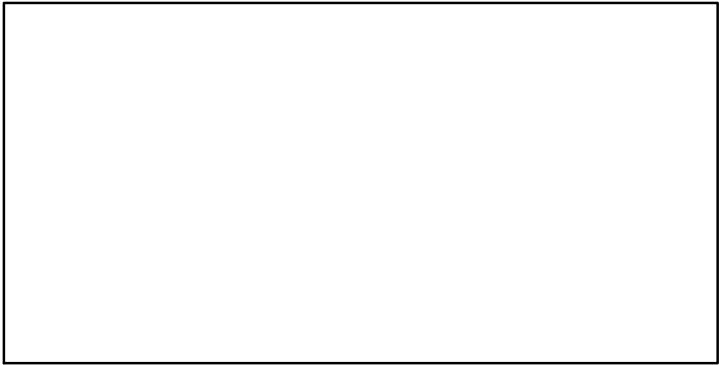
CPUE\*



EFFORT\*



CdivMSY\*



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

## Sardine ICES 8c-9a [SARDPVIIIC-IXa]

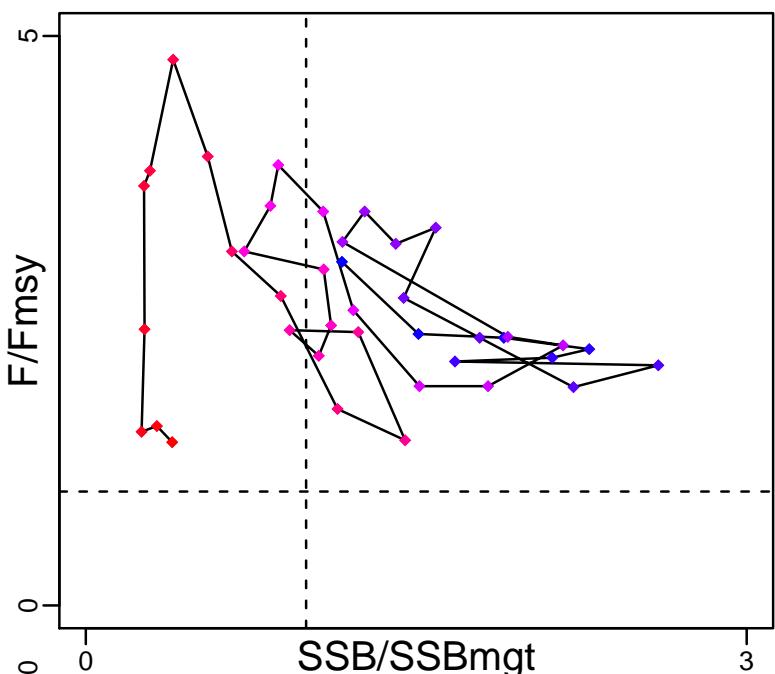
<b>Metadata</b>	
<b>Scientific Name</b>	Sardina pilchardus
<b>Current Assess ID</b>	WGHANSA-SARDPVIIIC-IXa-1978-2018-ICESIMP2018
<b>Area</b>	ICES 8c-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Southern Horse Mackerel, Anchovy and Sardine
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2011

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2014	474,018
<b>SSBmsy</b>	SSBmsy-est-MT	2011	541,285
<b>Fmsy</b>	Fmsy-1/yr	2018	0.12
<b>ERmsy</b>	ERmsy-est-ratio	2018	0.346
<b>TBmgt</b>	TBmgt-MT	2016	368,400
<b>SSBmgt</b>	SSBmgt-MT	2018	446,331
<b>Fmgt</b>	Fmgt-1/yr	2018	0.12
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2014	146,474
<b>M</b>	M-1/yr	2011	0.33
<b>TBlim</b>	TBlim-MT	2015	135,000
<b>SSBlim</b>	SSBlim-MT	2018	337,448
<b>Flim</b>	Flim-1/yr	2018	0.25
<b>ERlim</b>	-	-	-

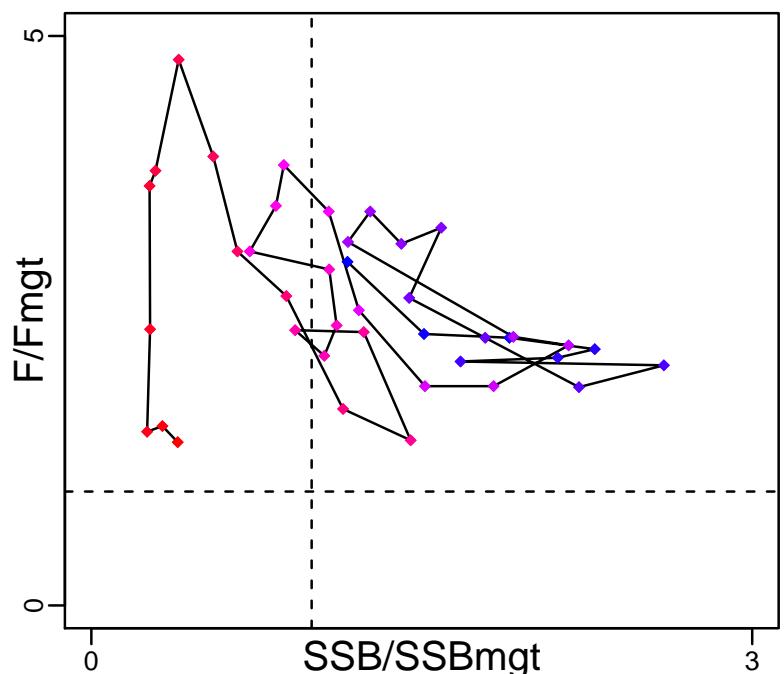
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2017	147,000	Both	-	
<b>SSB</b>	SSB-MT	2018	149,000	Both	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2018	$4.19 \times 10^9$	-	0	
<b>F</b>	F-1/yr	2018	0.172	-	2 to 5	
<b>ER</b>	ER-calc-ratio	2018	0.142	-	-	
<b>TC</b>	TC-MT	2018	21,900			
<b>TL</b>	TL-MT	2018	21,900			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2014	0.359			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2011	0.321			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.433			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2018	0.412			
<b>TB/TBmgt</b>	TB-MT/TBmgt-MT	2016	0.54			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	0.334			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2018	1.433			
<b>ER/ERmgt</b>	-	-	-			

Sardine ICES 8c–9a [SARDPVIIlc–IXa]

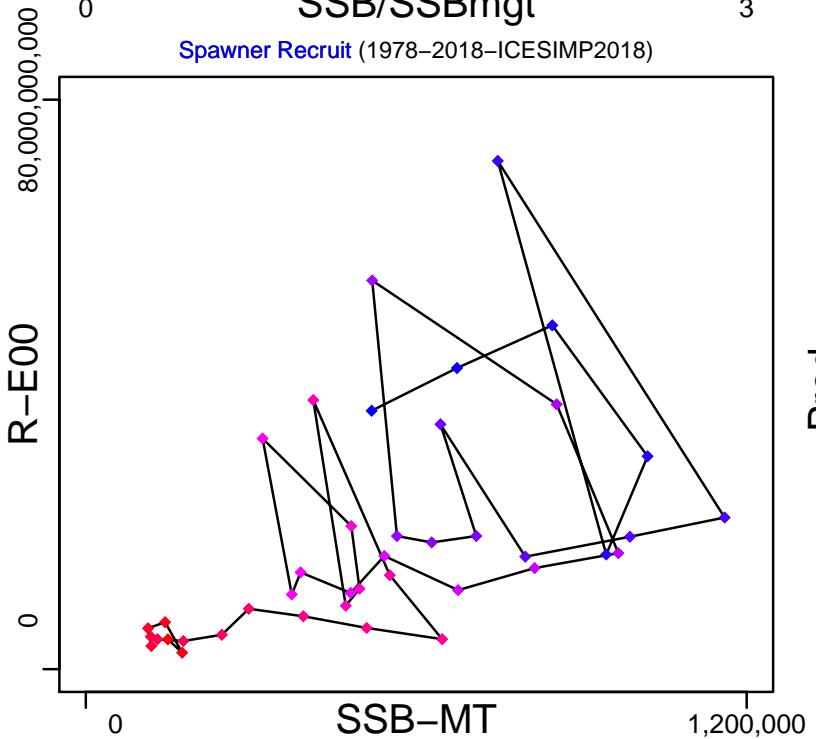
Kobe MSYpref (1978–2018–ICESIMP2018)



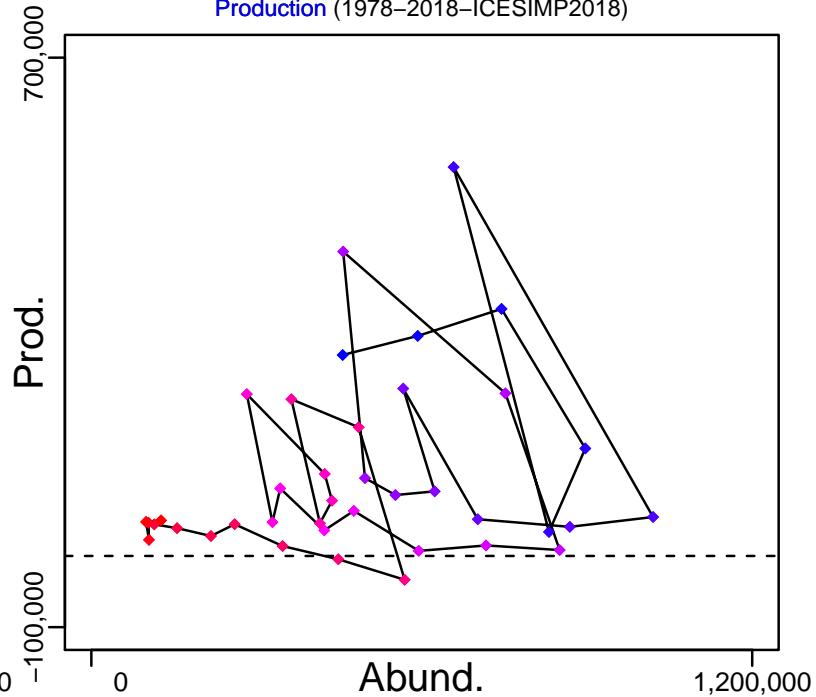
Kobe MGTpref (1978–2018–ICESIMP2018)



Spawner Recruit (1978–2018–ICESIMP2018)



Production (1978–2018–ICESIMP2018)

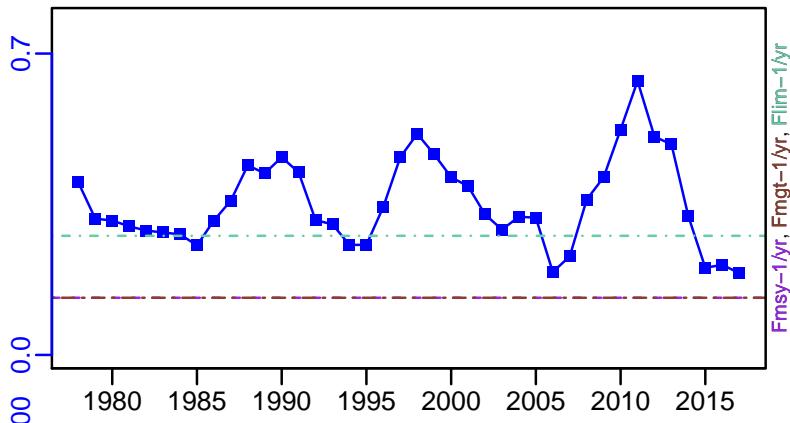
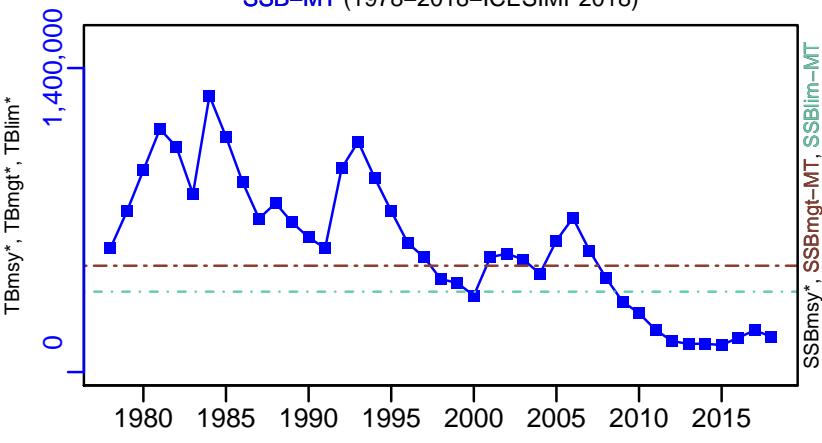
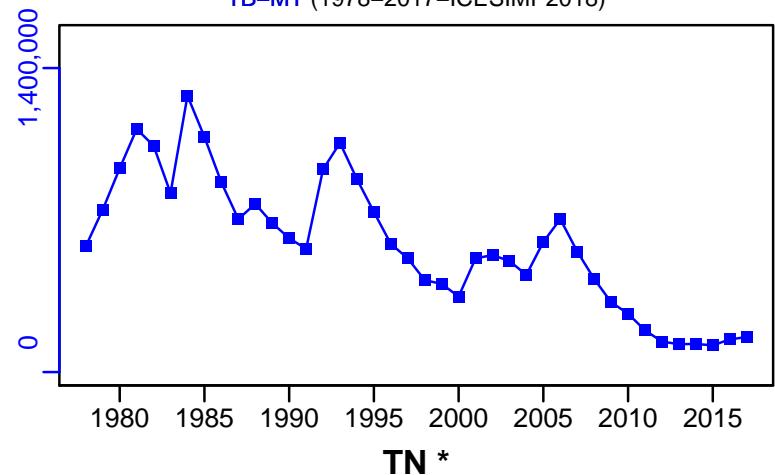


◆ Start Year ♦ End Year \* No Data

Sardine ICES 8c–9a [SARDPVIIc–IXa]

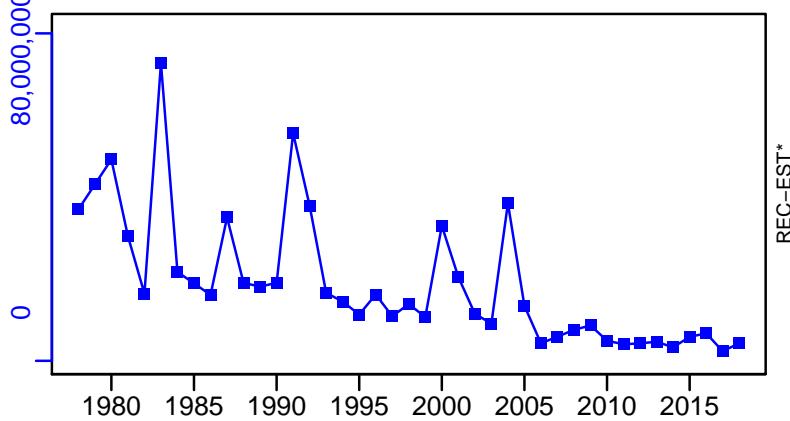
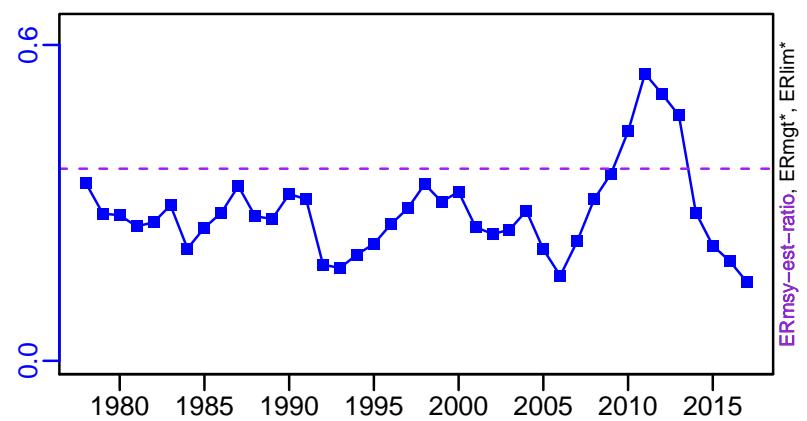
TB-MT (1978–2017–ICESIMP2018)

SSB-MT (1978–2018–ICESIMP2018)



ER-calc-ratio (1978–2018–ICESIMP2018)

R-E00 (1978–2018–ICESIMP2018)

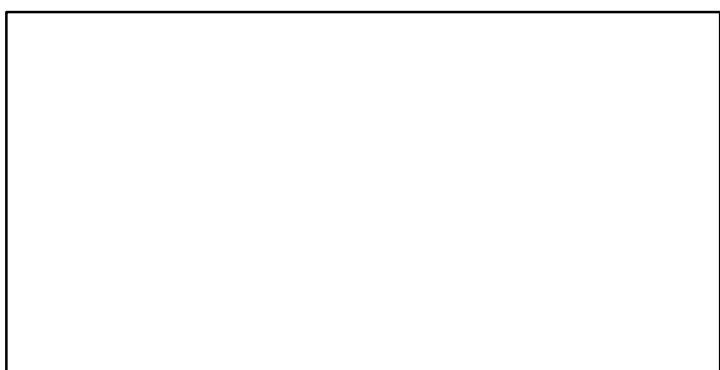
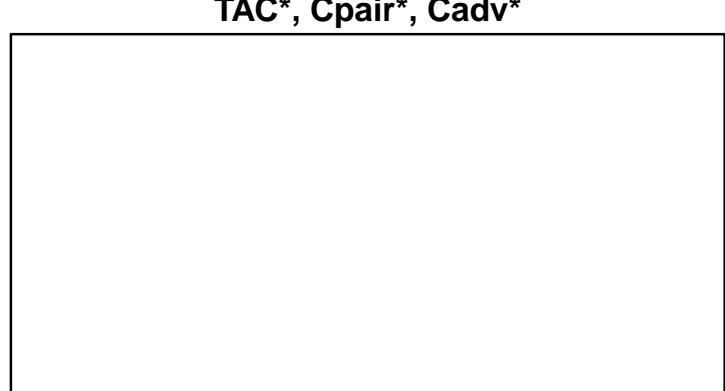
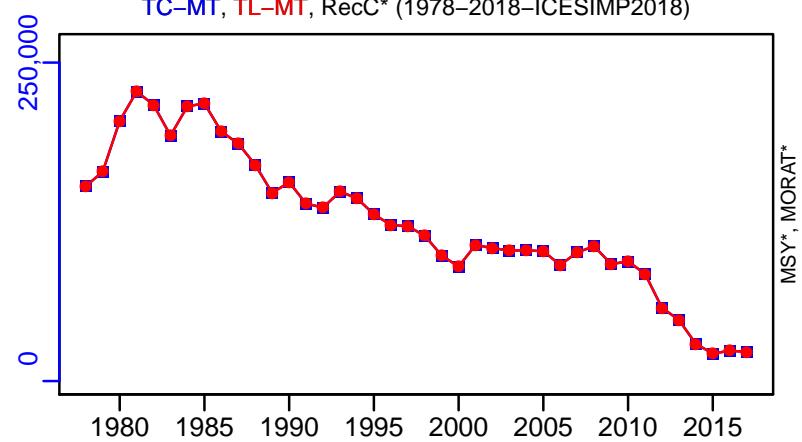


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

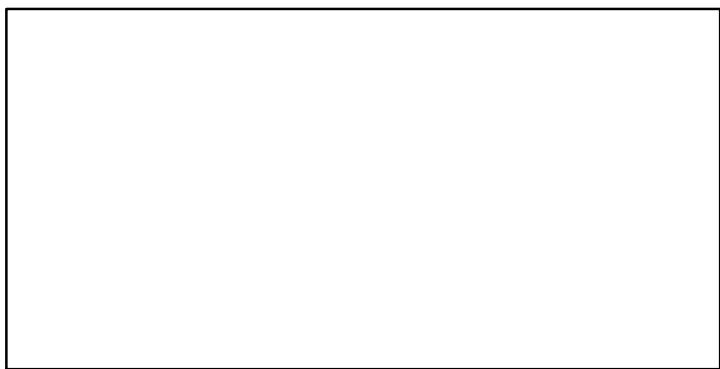
Sardine ICES 8c–9a [SARDPVIIlc–IXa]

TC–MT, TL–MT, RecC\* (1978–2018–ICESIMP2018)

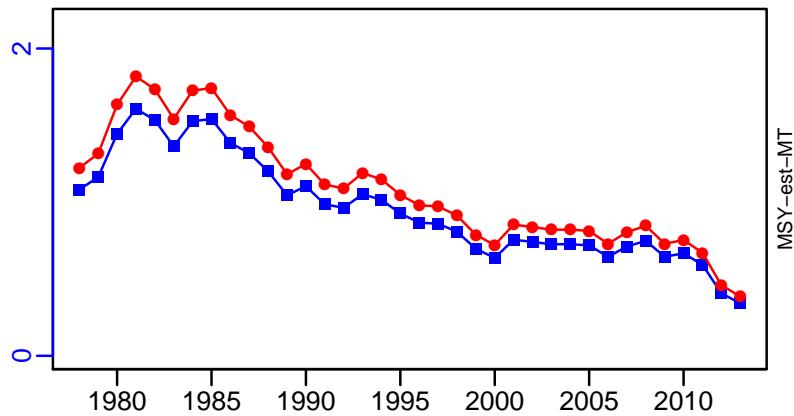
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC–MT/MSY–est–MT, CdivMEANC–ratio, (1978–2014–ICESIMP2016)



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

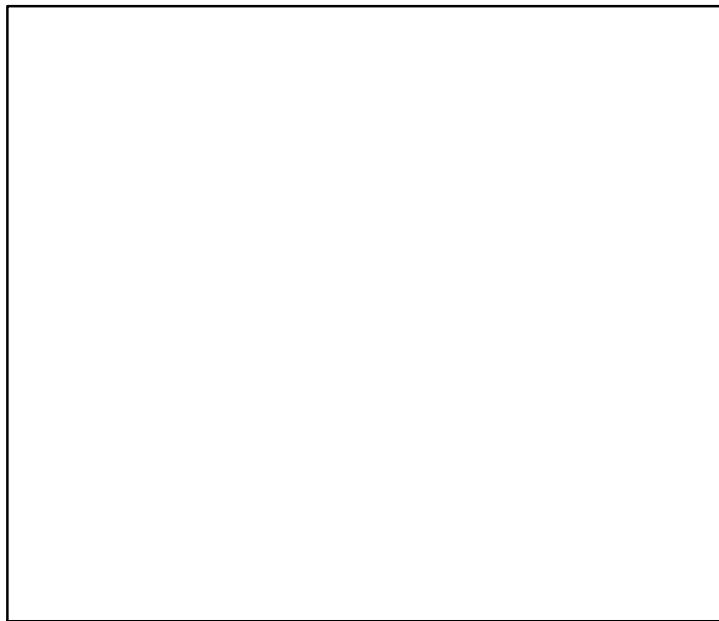
## Sardine ICES 7 [SARDVII]

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

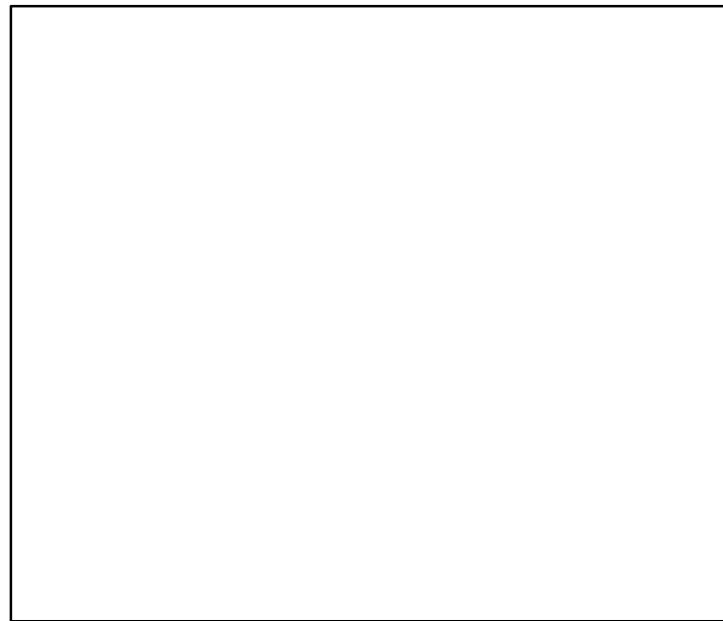
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

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

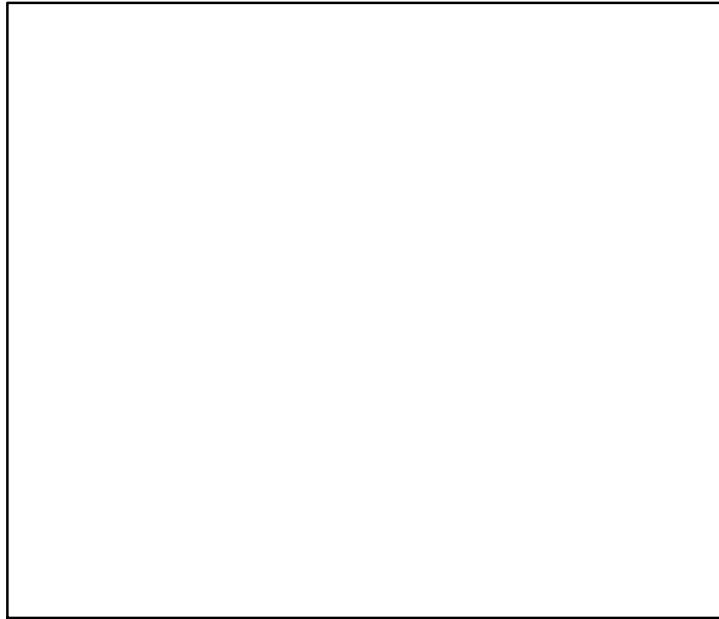
**Kobe MSY\***



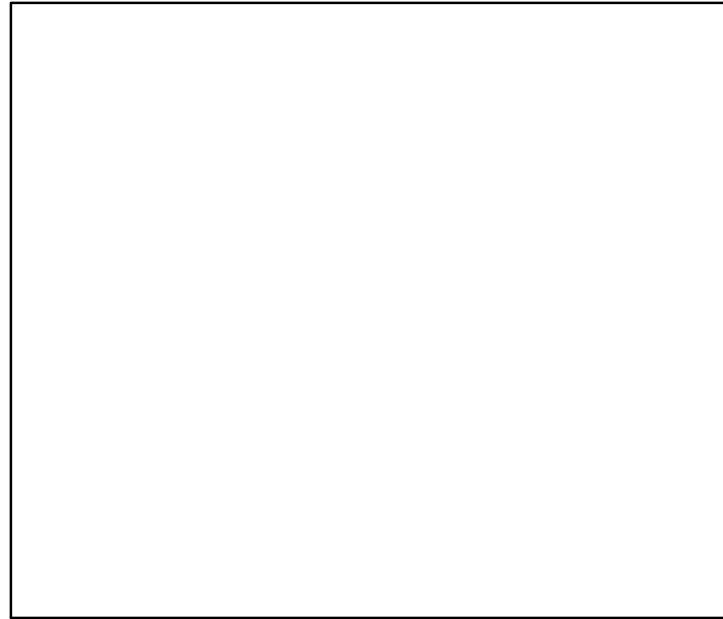
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

Sardine ICES 7 [SARDVII]

**TB\***



**SSB\***



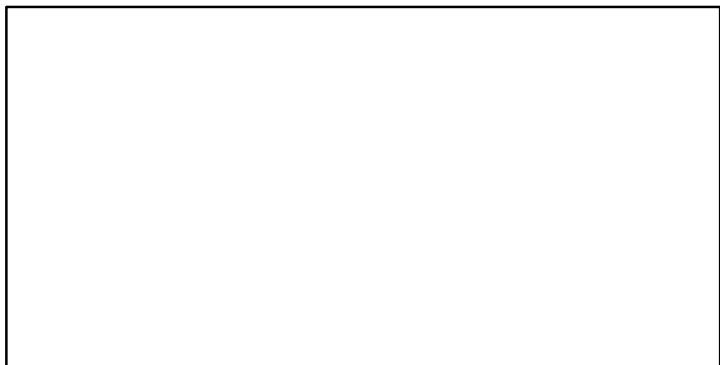
**TN \***



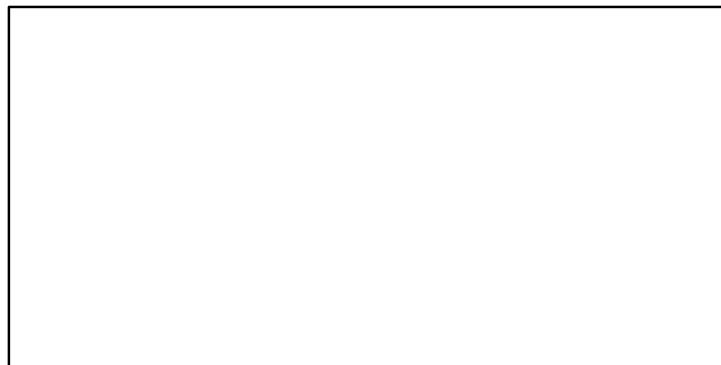
**F\***



**ER\***



**Recruits\***

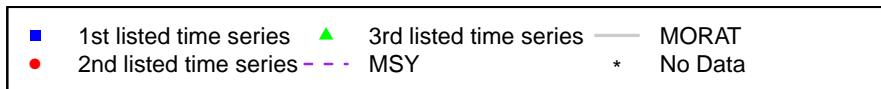
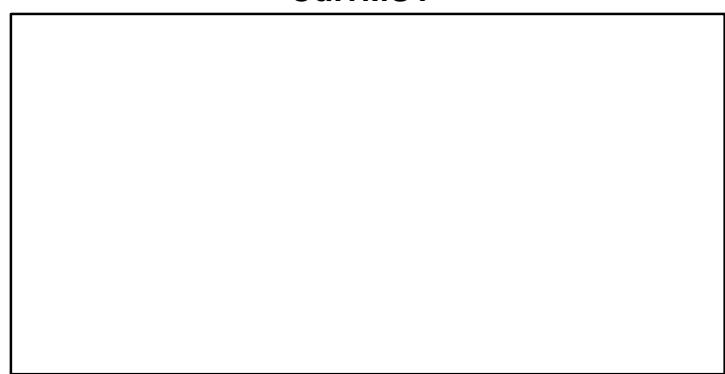
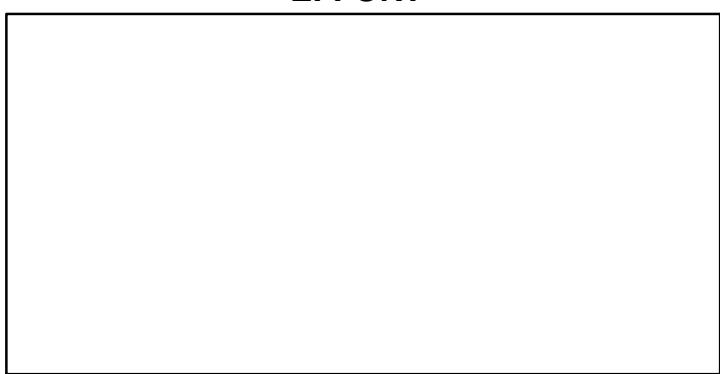
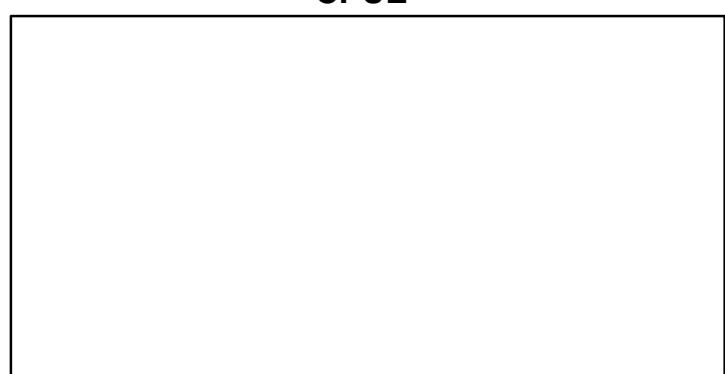
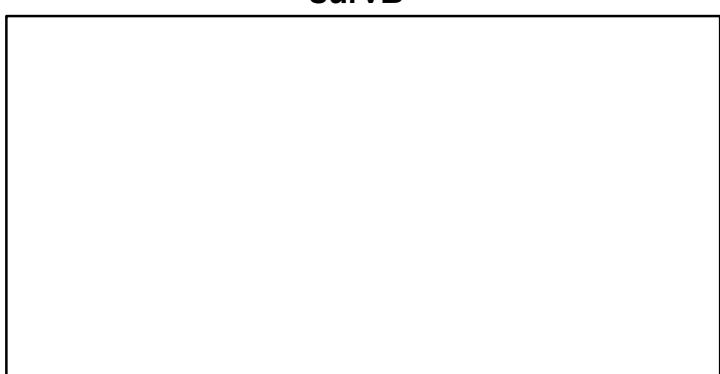
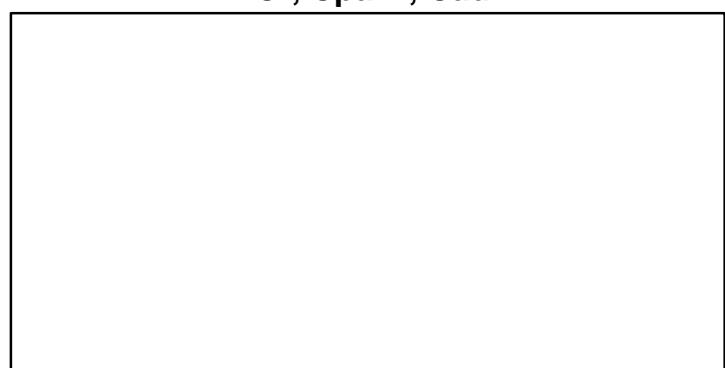
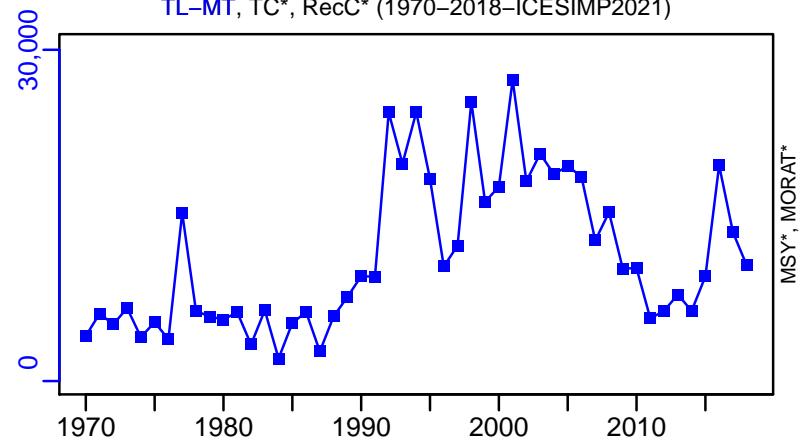


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Sardine ICES 7 [SARDVII]

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

TAC\*, Cpair\*, Cadv\*



## Sardine ICES 8abd [SARDVIIIabd]

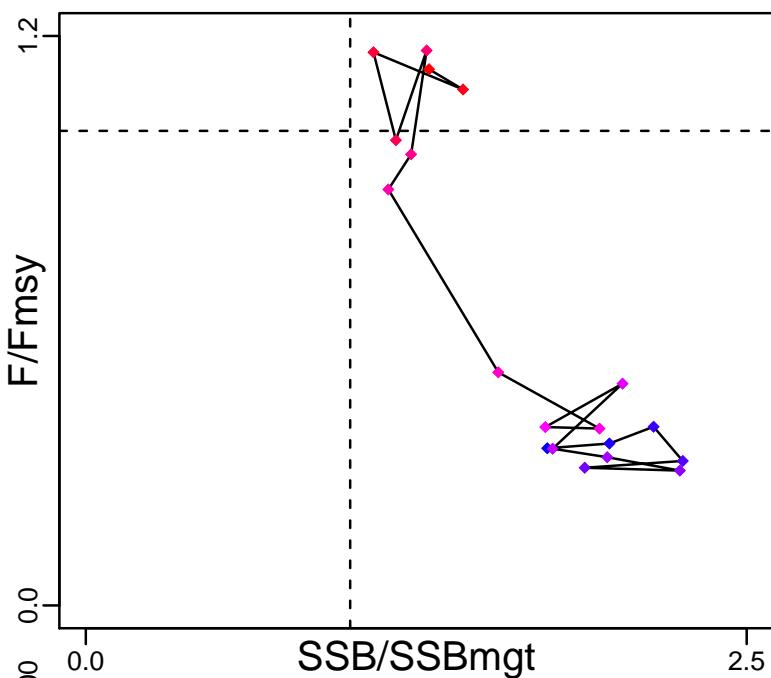
Metadata	
<b>Scientific Name</b>	Sardina pilchardus
<b>Current Assess ID</b>	WGHANSA-SARDVIIIabd-2000-2019-ICESIMP2021
<b>Area</b>	ICES 8abd
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Southern Horse Mackerel, Anchovy and Sardine
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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.453
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.565
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	78,700
<b>Fmgt</b>	Fmgt-1/yr	2019	0.453
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-relative	2018	63,328
<b>Flim</b>	Flim-relative	2018	0.478
<b>ERlim</b>	-	-	-

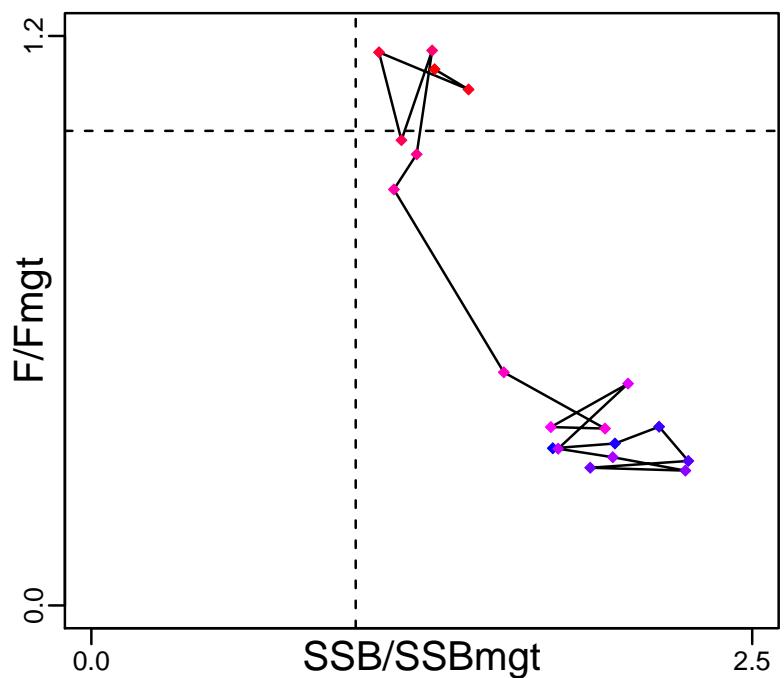
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	SSB-MT	2019	100,828	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	4,899,952,193	-	0	
<b>F</b>	F-1/yr	2019	0.512	-	2 to 5	
<b>ER</b>	ER-calc-ratio	2019	0.395	-	-	
<b>TC</b>	TC-MT	2019	32,299			
<b>TL</b>	TL-MT	2018	30,300			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	1.13			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.698			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.281			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.13			
<b>ER/ERmgt</b>	-	-	-			

Sardine ICES 8abd [SARDVIIabbd]

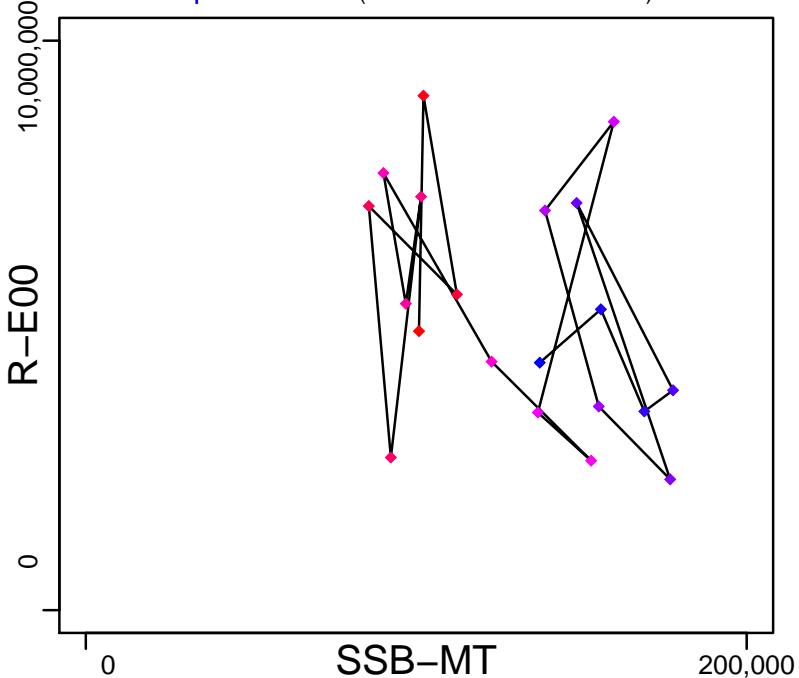
Kobe MSYpref (2000–2019–ICESIMP2021)



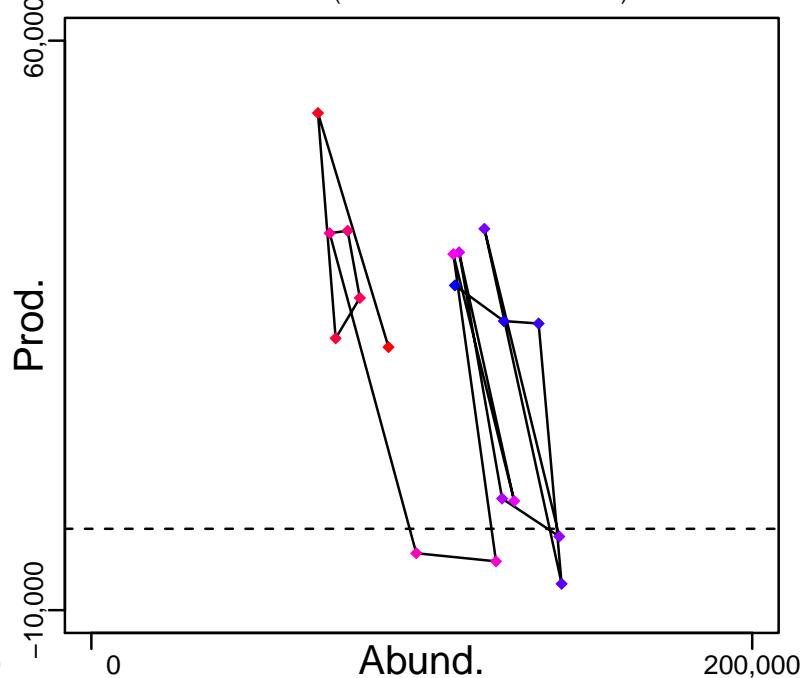
Kobe MGTpref (2000–2019–ICESIMP2021)



Spawner Recruit (2000–2019–ICESIMP2021)



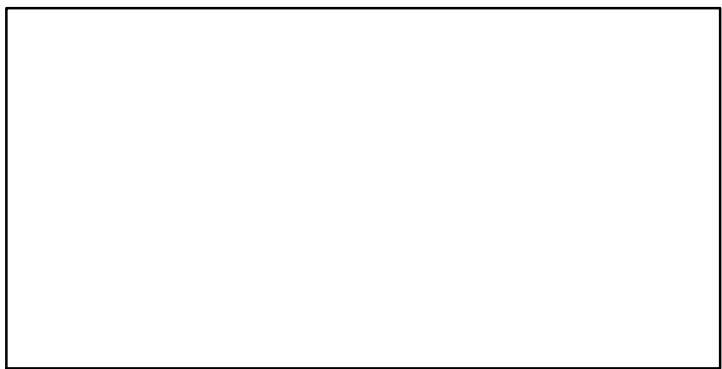
Production (2000–2019–ICESIMP2021)



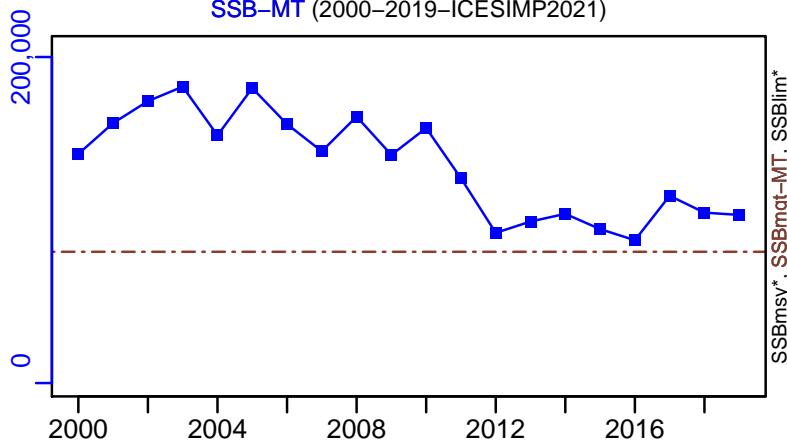
◆ Start Year ◆ End Year \* No Data

Sardine ICES 8abd [SARDVIIIab]

**TB\***



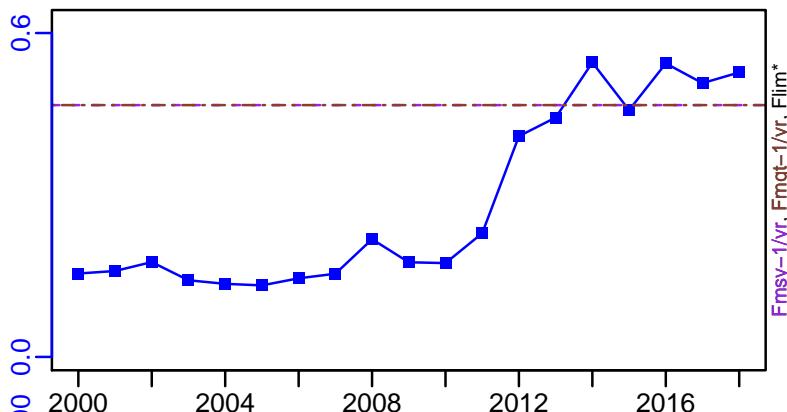
**SSB-MT (2000–2019–ICESIMP2021)**



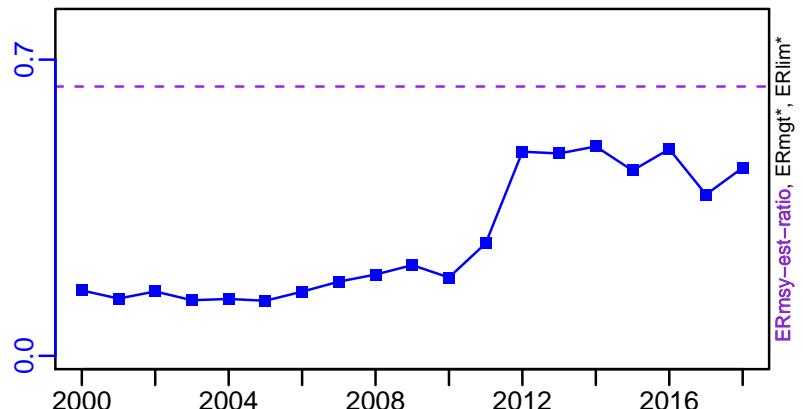
**TN \***



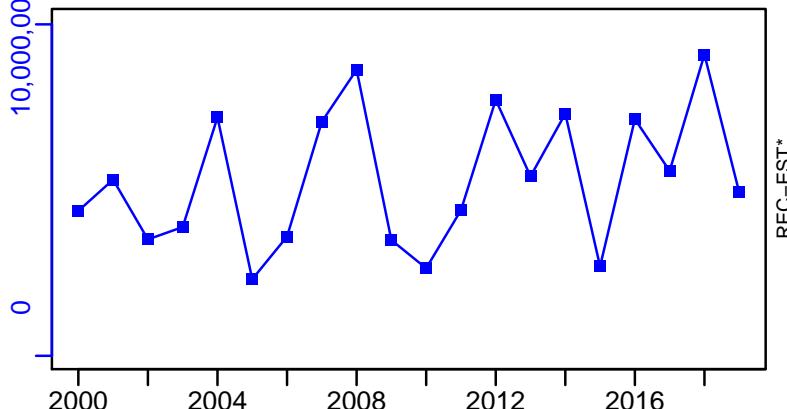
**F-1/yr (2000–2019–ICESIMP2021)**



**ER-calc-ratio (2000–2019–ICESIMP2021)**



**R-E00 (2000–2019–ICESIMP2021)**

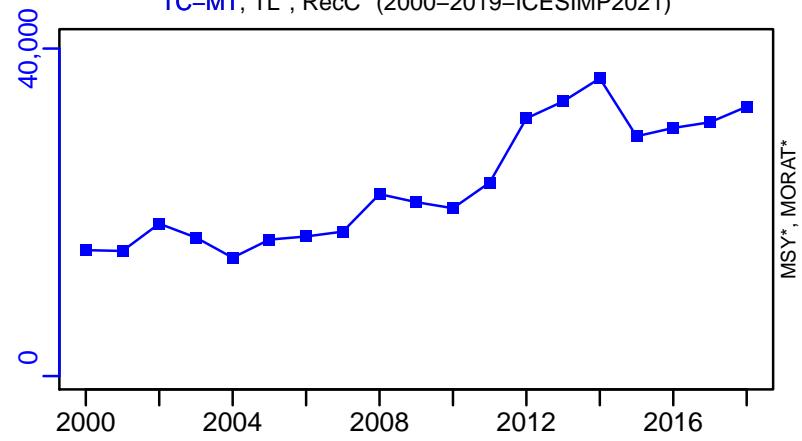


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	--- Lim BRP	* No Data

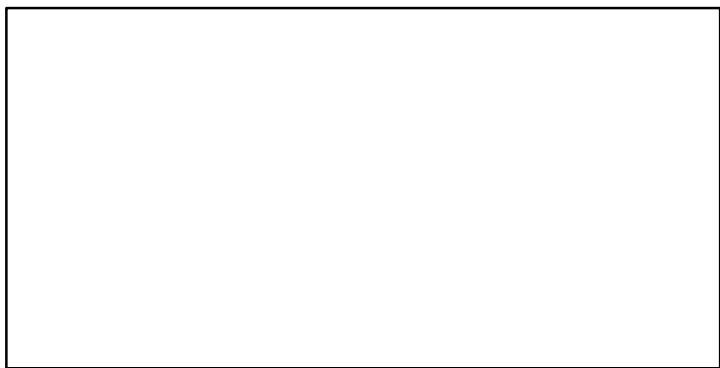
Sardine ICES 8abd [SARDVIIabbd]

TC-MT, TL\*, RecC\* (2000–2019—ICESIMP2021)

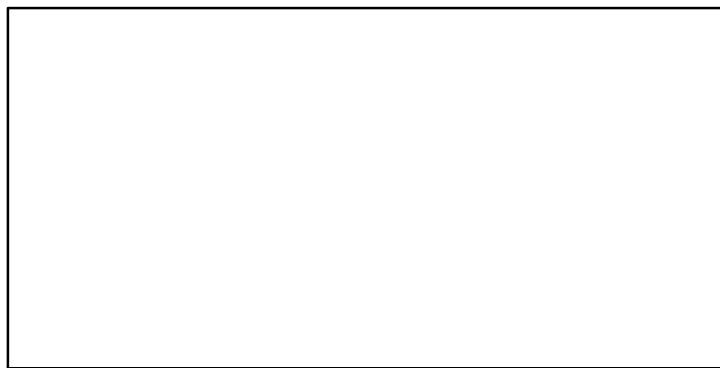
TAC\*, Cpair\*, Cadv\*



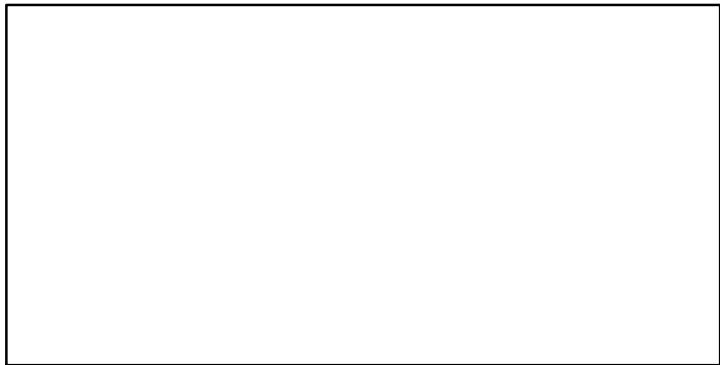
survB\*



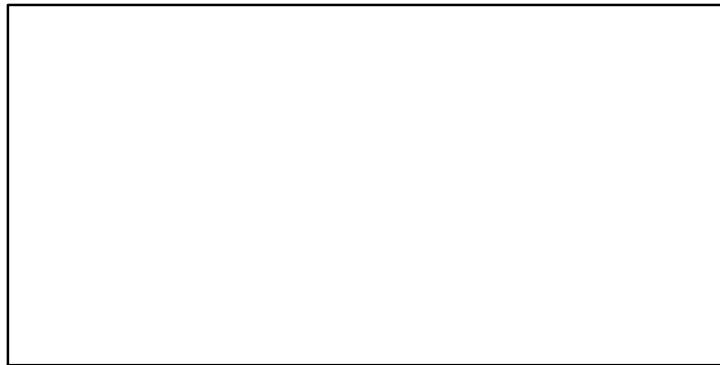
CPUE\*



EFFORT\*



CdivMSY\*



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

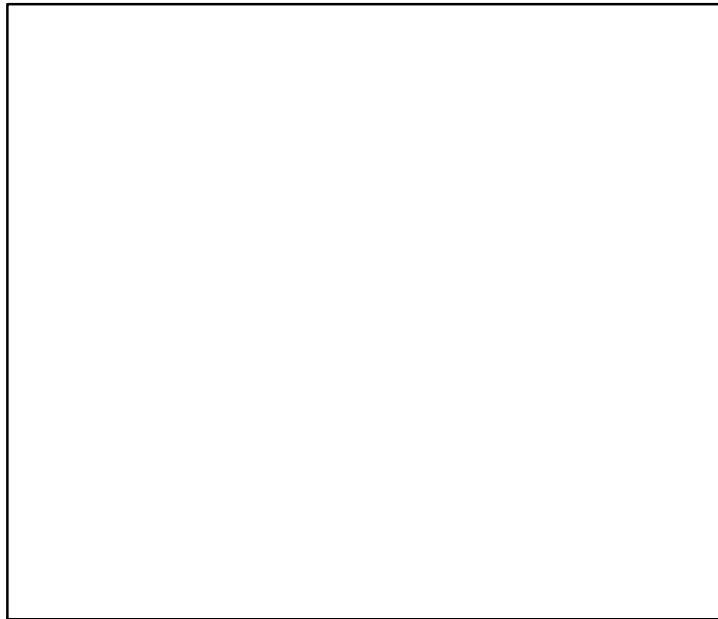
## Sandy ray ICES 6-7 [SDRAYVI-VII]

Metadata	
<b>Scientific Name</b>	Leucoraja circularis
<b>Current Assess ID</b>	WGEF-SDRAYVI-VII-2009-2015-ICESIMP2018
<b>Area</b>	ICES 6-7
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

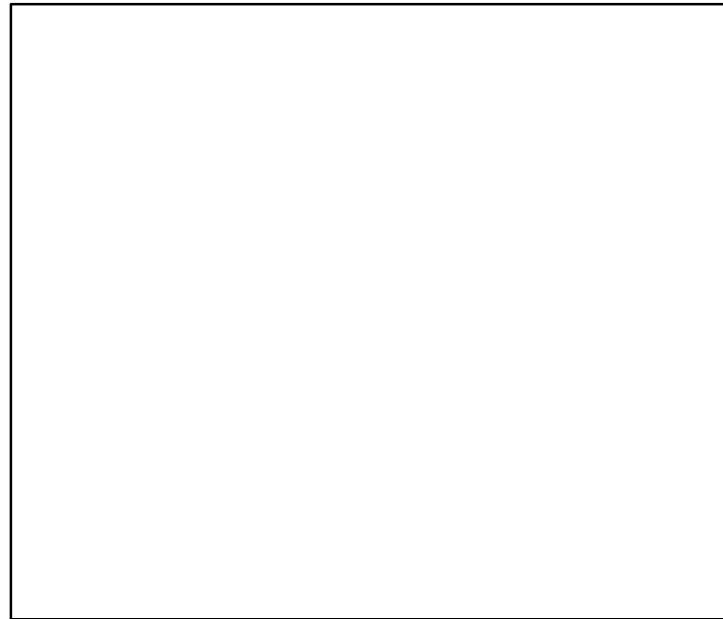
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	63		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

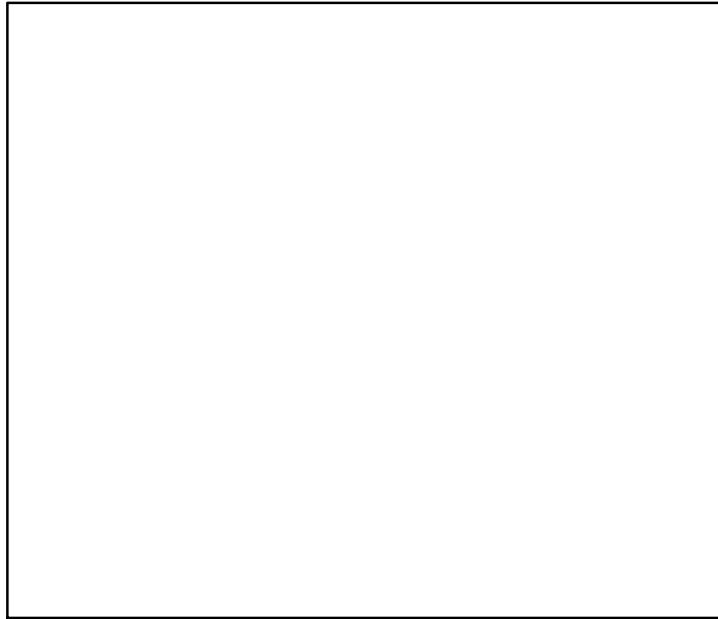
**Kobe MSY\***



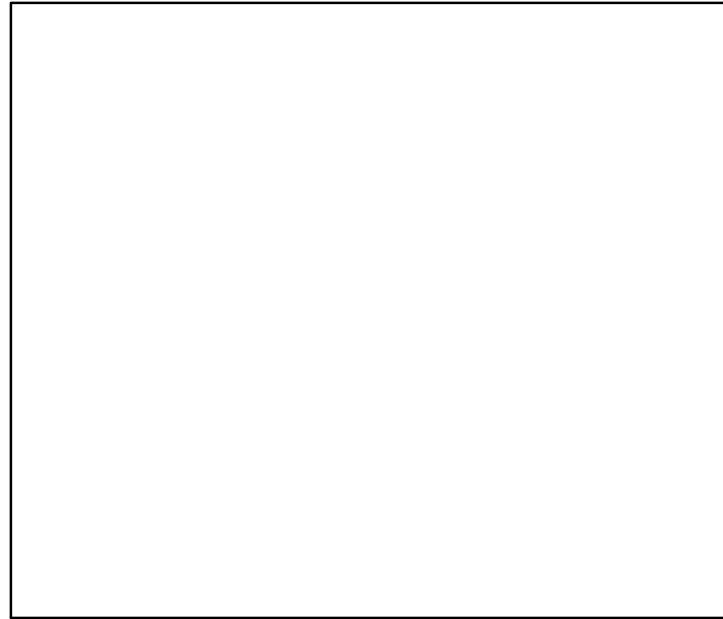
**Kobe MGT\***



**Spawner Recruit\***



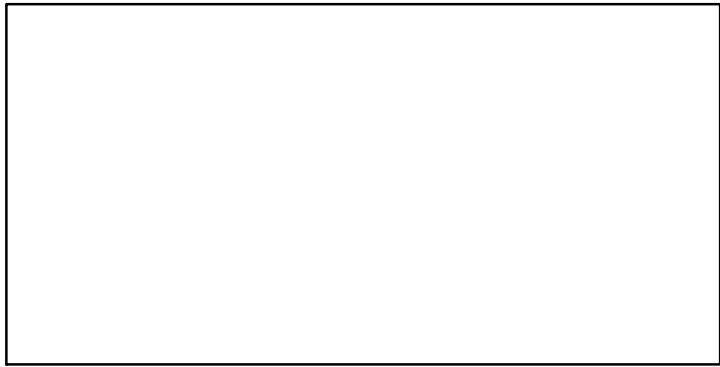
**Production\***



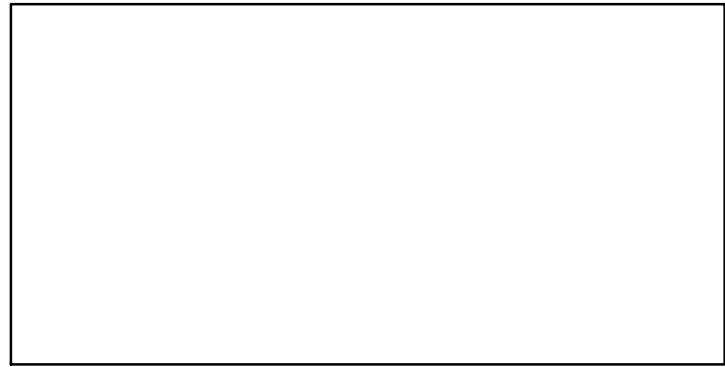
◆ Start Year ♦ End Year \* No Data

Sandy ray ICES 6–7 [SDRAYVI–VII]

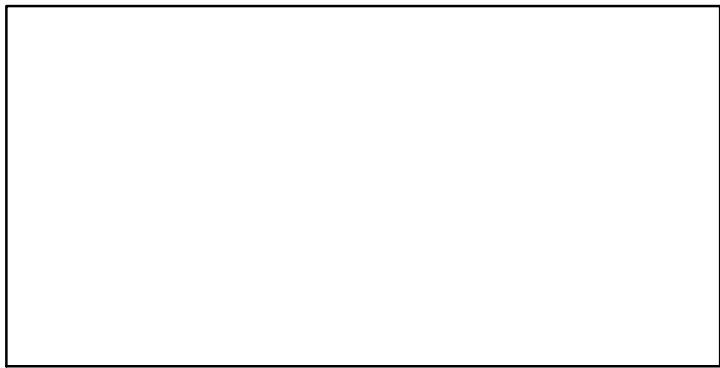
**TB\***



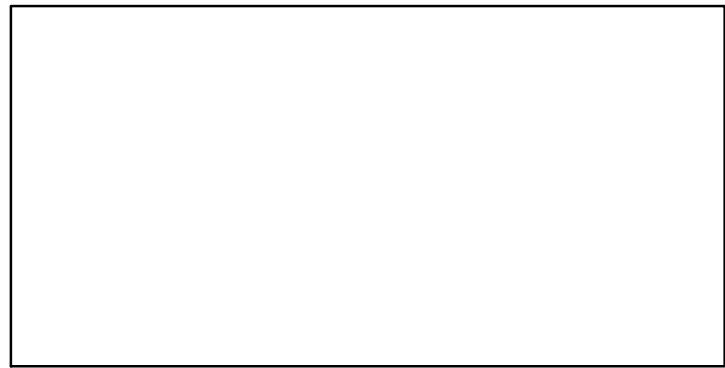
**SSB\***



**TN \***



**F\***



**ER\***



**Recruits\***

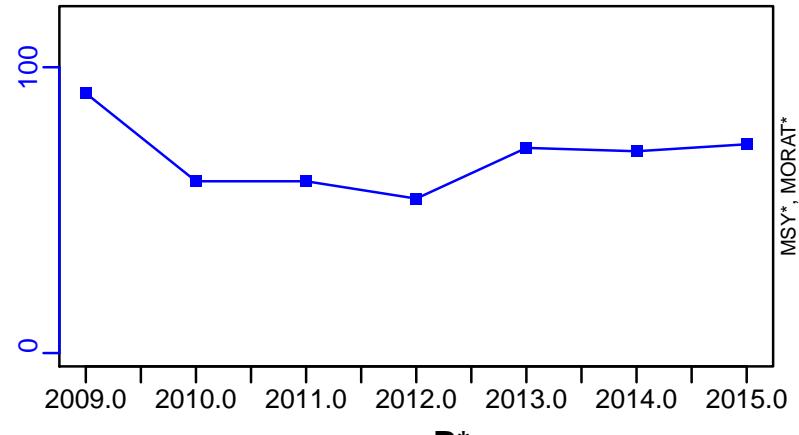


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Sandy ray ICES 6–7 [SDRAYVI–VII]

TL–MT, TC\*, RecC\* (2009–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



survB\*

MSY\*, MORAT\*

CPUE\*

EFFORT\*

CdivMSY\*

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

## Sandeel Sandeel Area 1 [SEELNSSA1]

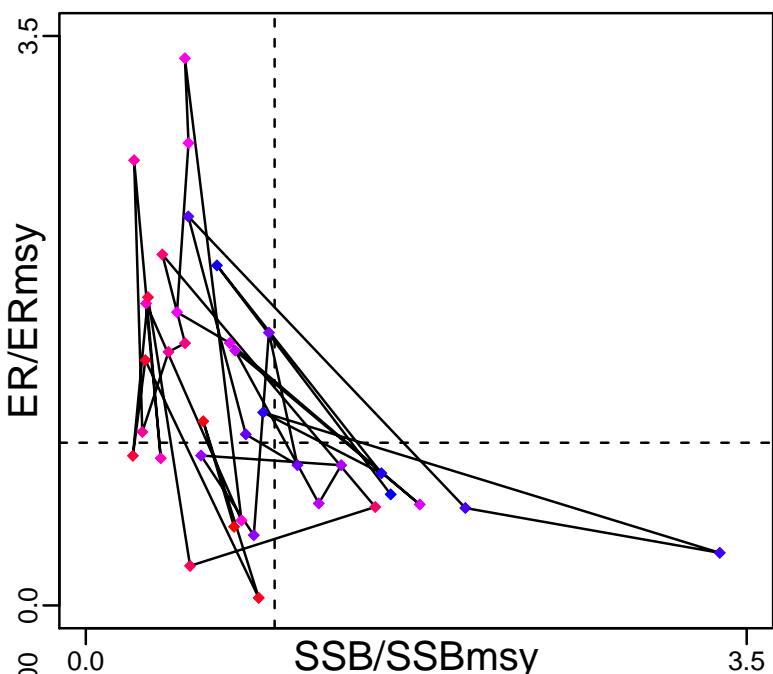
<b>Metadata</b>	
<b>Scientific Name</b>	Ammodytes spp
<b>Current Assess ID</b>	HAWG-SEELNSSA1-1983-2019-ICESIMP2021
<b>Area</b>	Sandeel Area 1
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2011

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2011	767,066
<b>SSBmsy</b>	SSBmsy-est-MT	2019	295,326
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.516
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	145,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2019	343,668
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2011	160,000
<b>SSBlim</b>	SSBlim-MT	2018	110,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

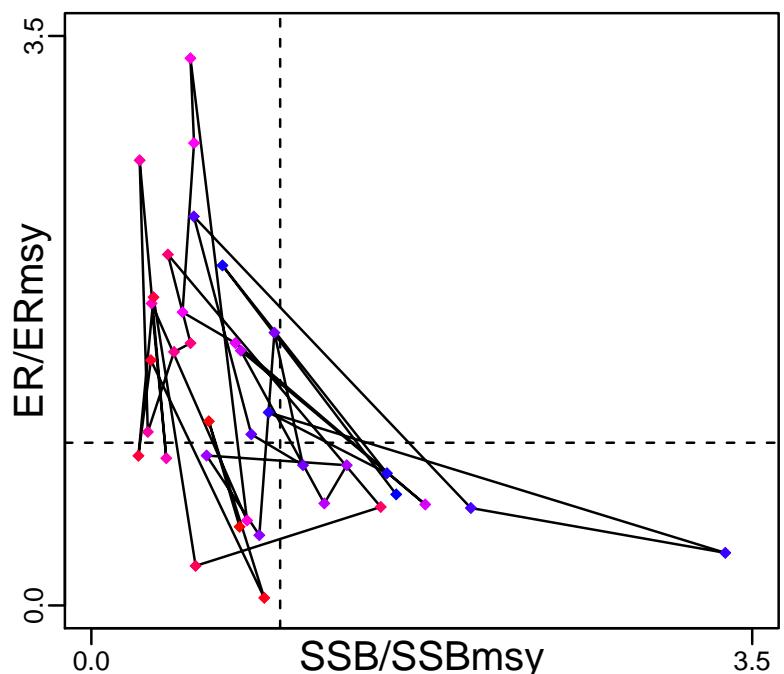
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2015	351,000	Both	-	
<b>SSB</b>	SSB-MT	2019	97,636	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	$1.0787 \times 10^{11}$	-	0	
<b>F</b>	F-1/yr	2019	0.633	-	1 to 2	
<b>ER</b>	ER-calc-ratio	2019	0.25	-	-	
<b>TC</b>	TC-MT	2019	130,460			
<b>TL</b>	TL-MT	2019	130,460			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	1.995			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2019	0.331			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.483			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	1.917			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Sand eel Sandeel Area 1 [SEELNSSA1]

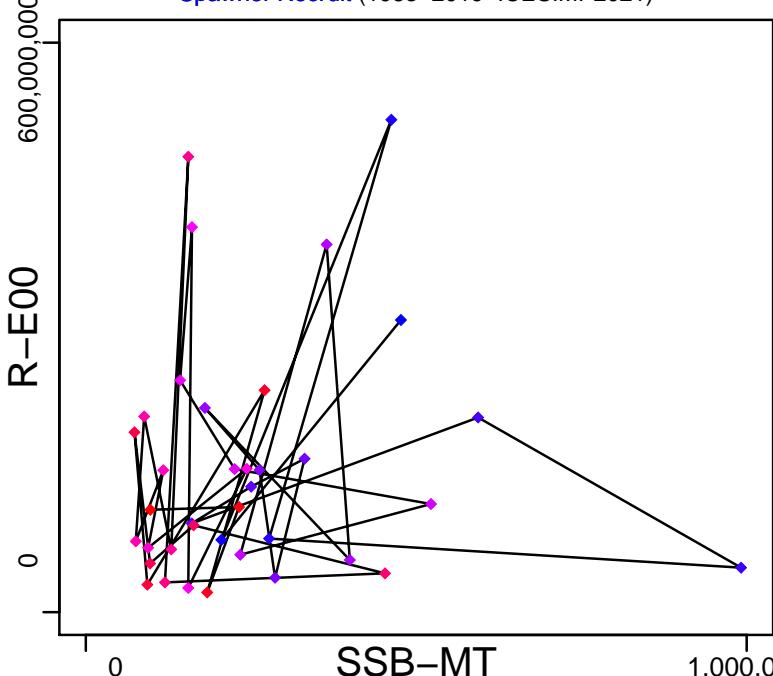
Kobe MSYpref (1983–2019–ICESIMP2021)



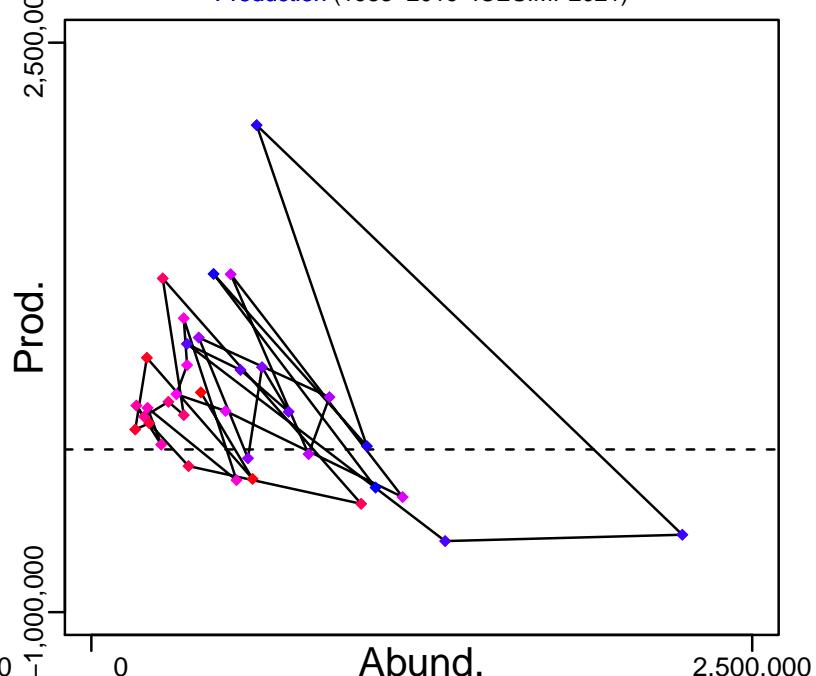
Kobe MGTpref (1983–2019–ICESIMP2021)



Spawner Recruit (1983–2019–ICESIMP2021)



Production (1983–2019–ICESIMP2021)

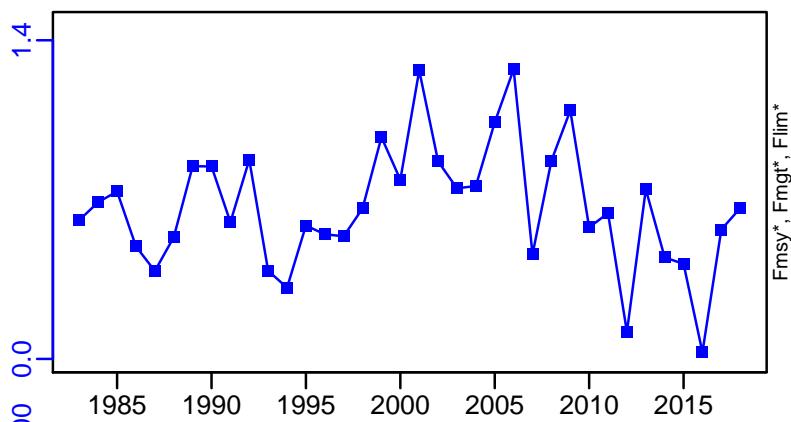
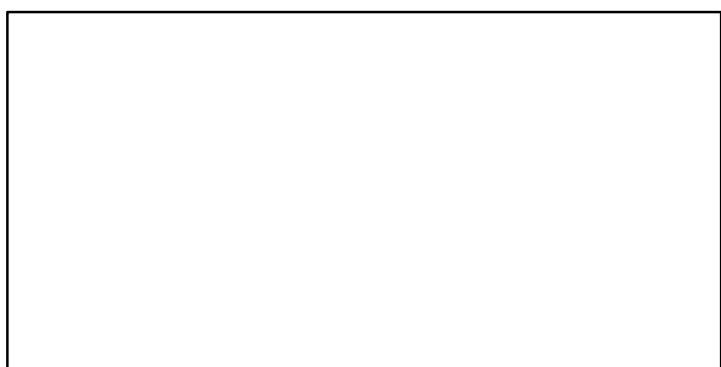
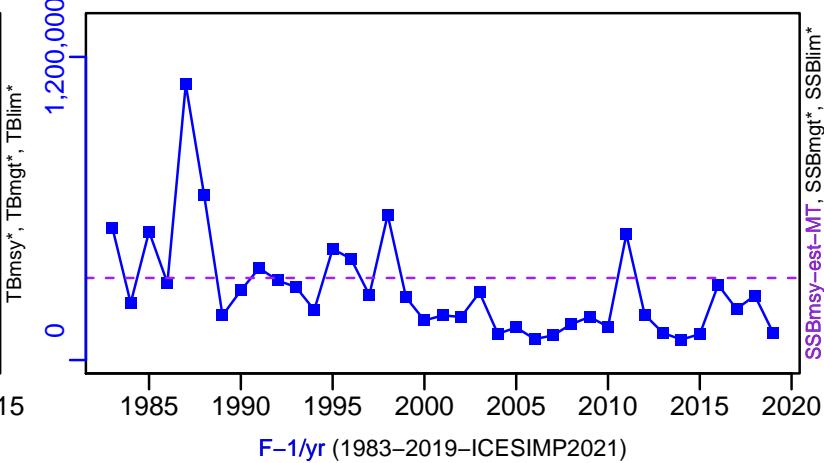
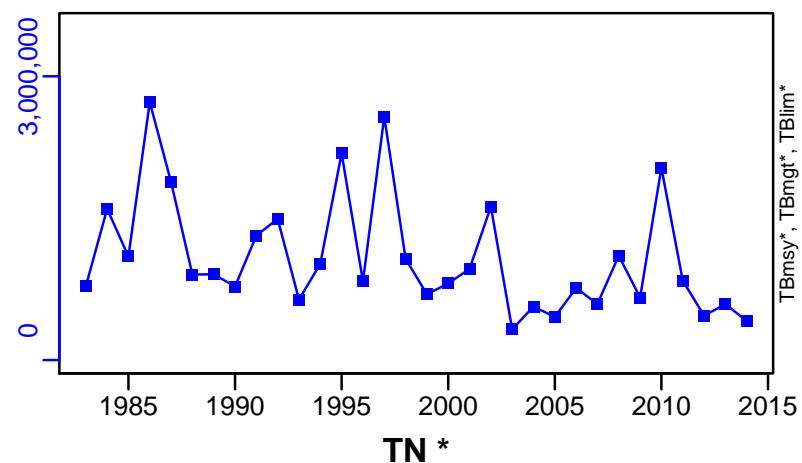


◆ Start Year ♦ End Year \* No Data

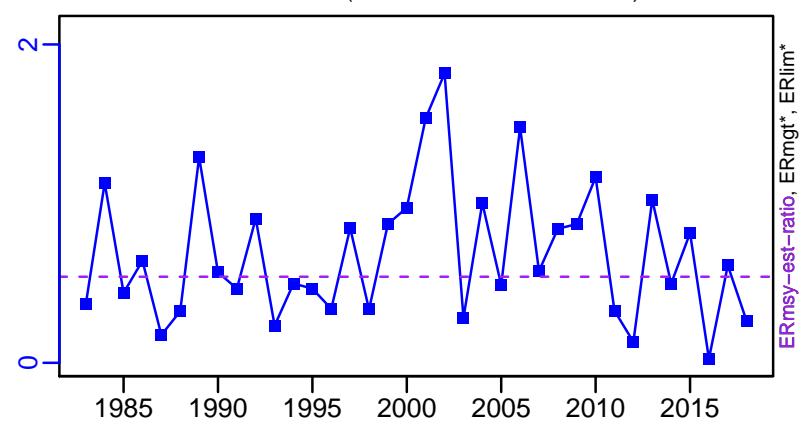
### Sand eel Sandeel Area 1 [SEELNSSA1]

TB-MT (1983–2015–ICESIMP2016)

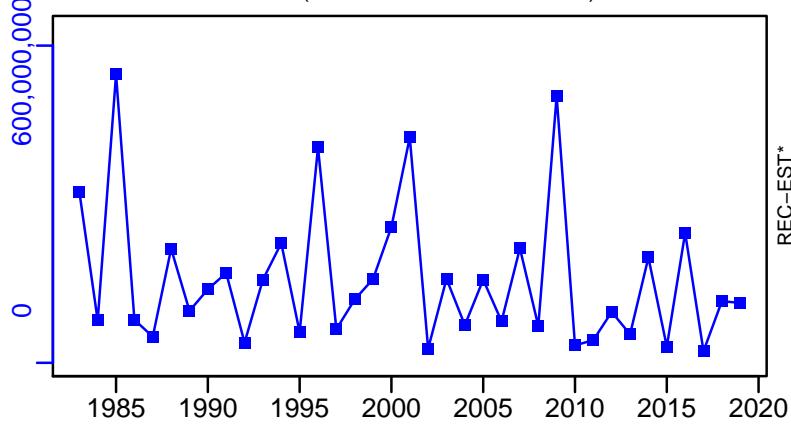
SSB-MT (1983–2019–ICESIMP2021)



ER-calc-ratio (1983–2019–ICESIMP2021)



R-E00 (1983–2019–ICESIMP2021)

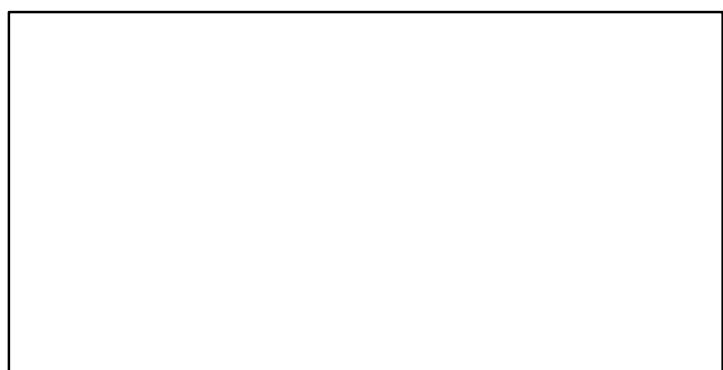
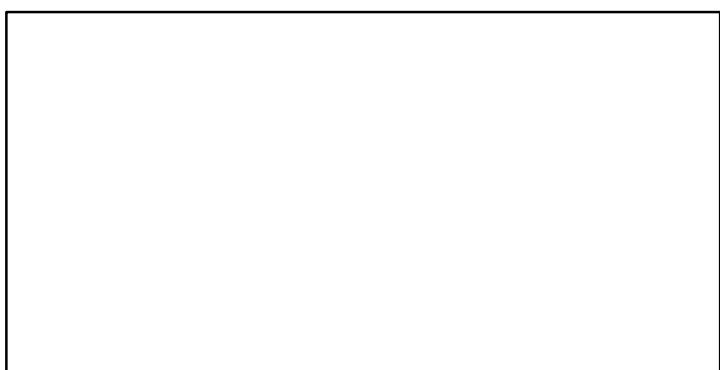
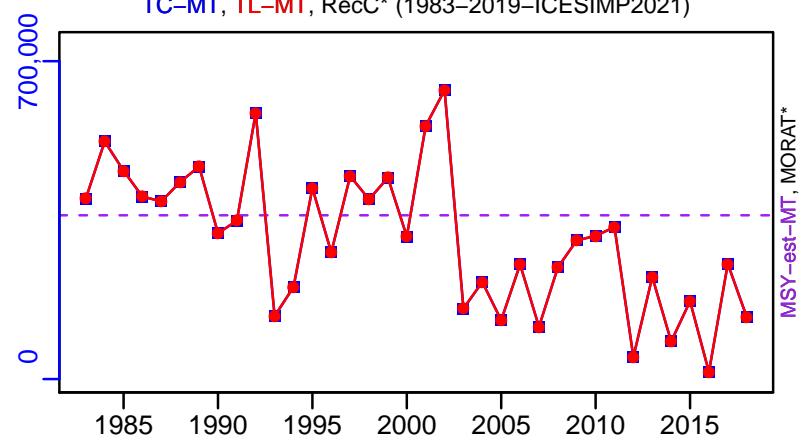


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

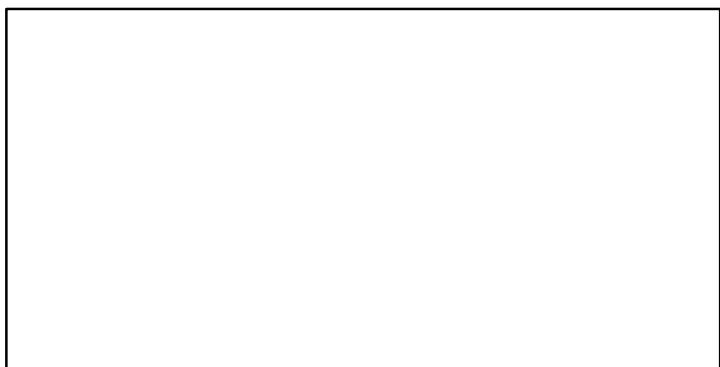
Sand eel Sandeel Area 1 [SEELNSSA1]

TC-MT, TL-MT, RecC\* (1983–2019–ICESIMP2021)

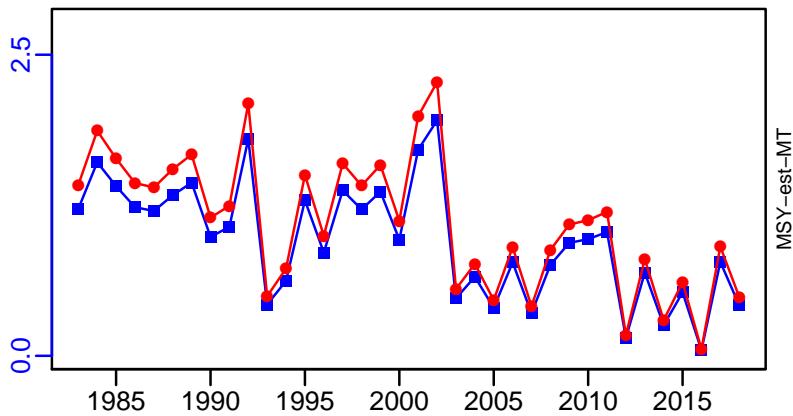
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1983–2019–ICESIMP2021)



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

## Sand eel Sandeel Area 2 [SEELNSSA2]

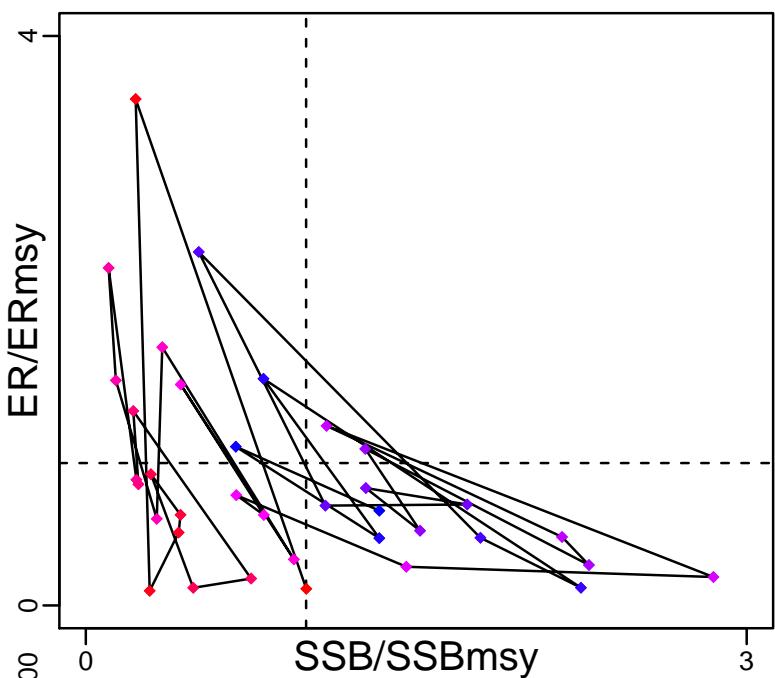
Metadata	
<b>Scientific Name</b>	Ammodytes spp
<b>Current Assess ID</b>	HAWG-SEELNSSA2-1983-2019-ICESIMP2021
<b>Area</b>	Sandeel Area 2
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2011	218,674
<b>SSBmsy</b>	SSBmsy-est-MT	2019	105,246
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.74
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	84,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2019	175,581
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2011	70,000
<b>SSBlim</b>	SSBlim-MT	2018	56,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

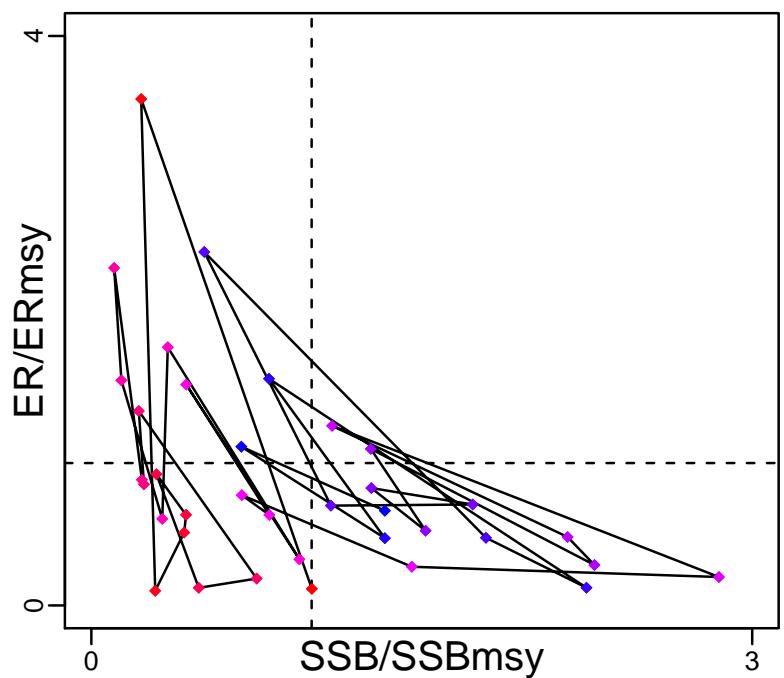
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	174,000	Both	-
<b>SSB</b>	SSB-MT	2019	55,770	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	20,477,415,000	-	0
<b>F</b>	F-1/yr	2019	0.206	-	1 to 2
<b>ER</b>	ER-calc-ratio	2019	0.087	-	-
<b>TC</b>	TC-MT	2019	20,568		
<b>TL</b>	TL-MT	2019	20,568		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	1.838		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2019	0.53		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.117		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	1.274		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Sand eel Sandeel Area 2 [SEELNSSA2]**

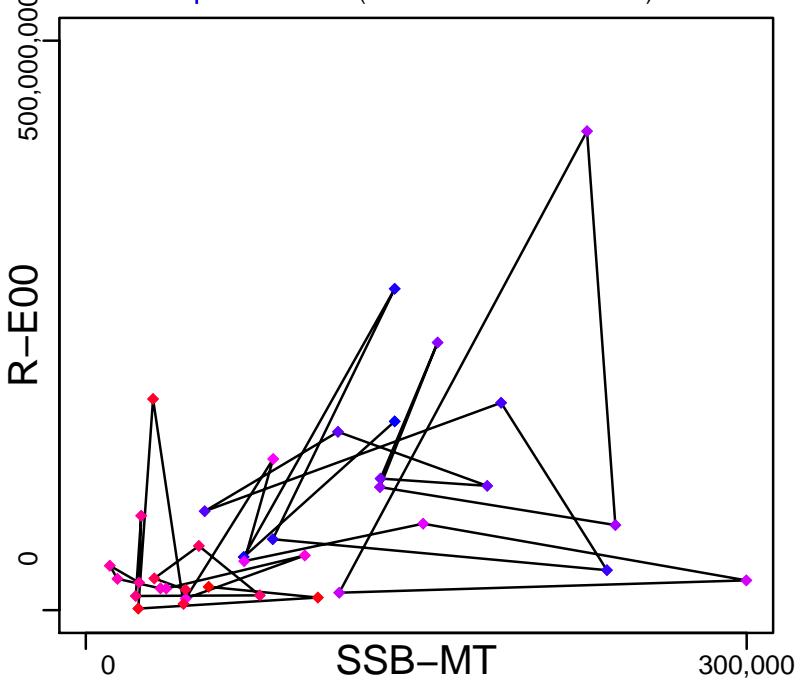
Kobe MSYpref (1983–2019–ICESIMP2021)



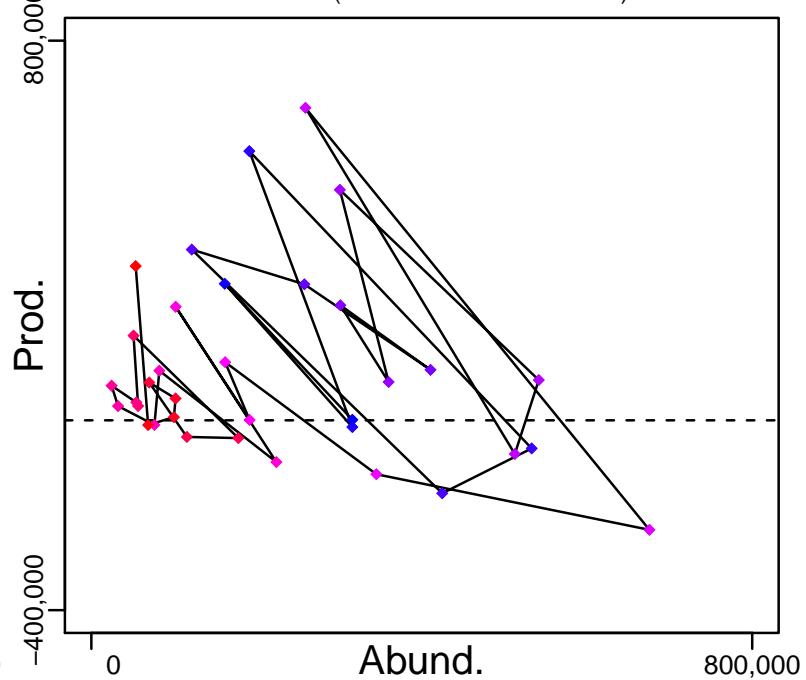
Kobe MGTpref (1983–2019–ICESIMP2021)



Spawner Recruit (1983–2019–ICESIMP2021)



Production (1983–2019–ICESIMP2021)

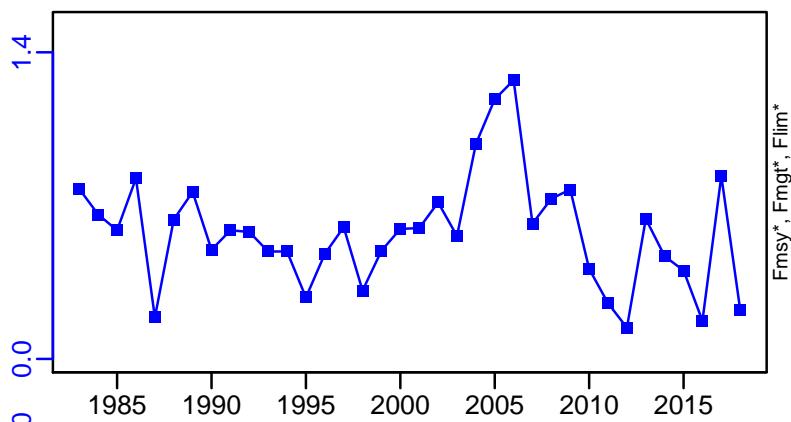
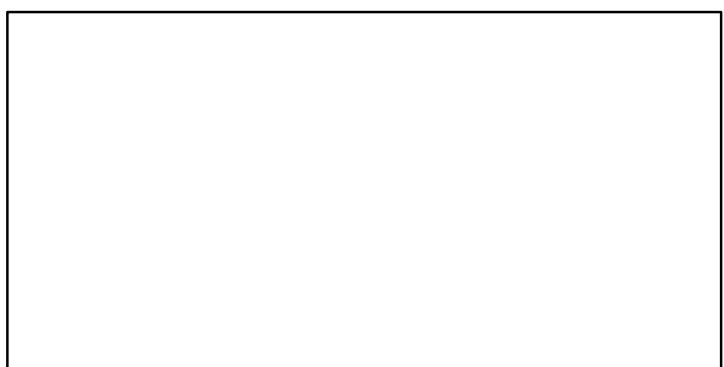
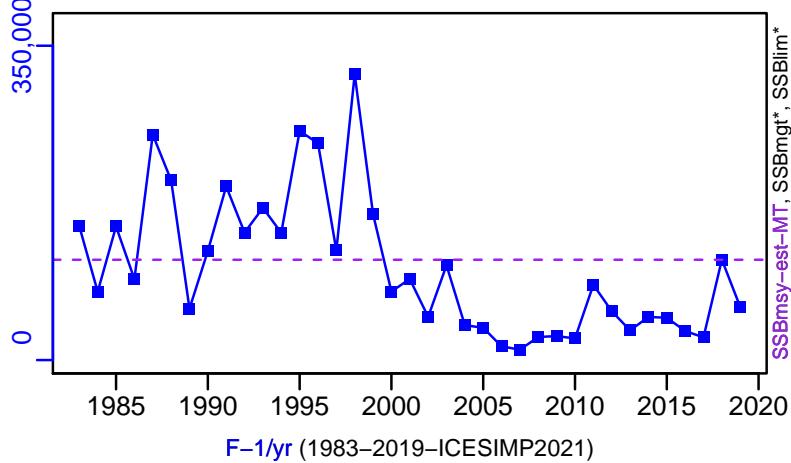
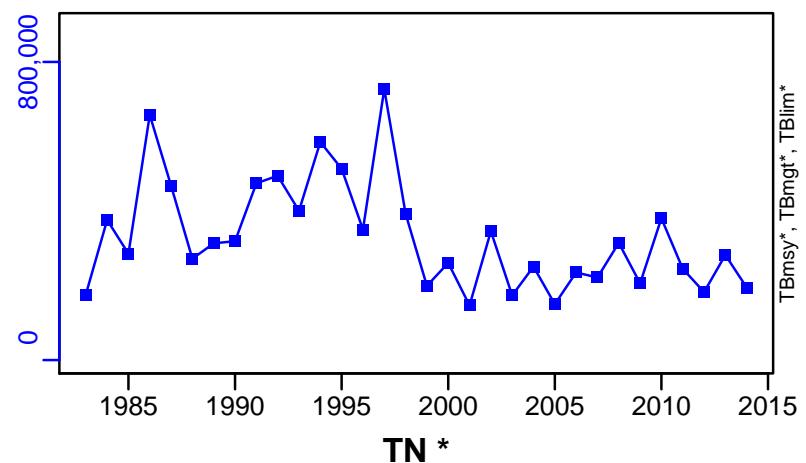


◆ Start Year ◆ End Year \* No Data

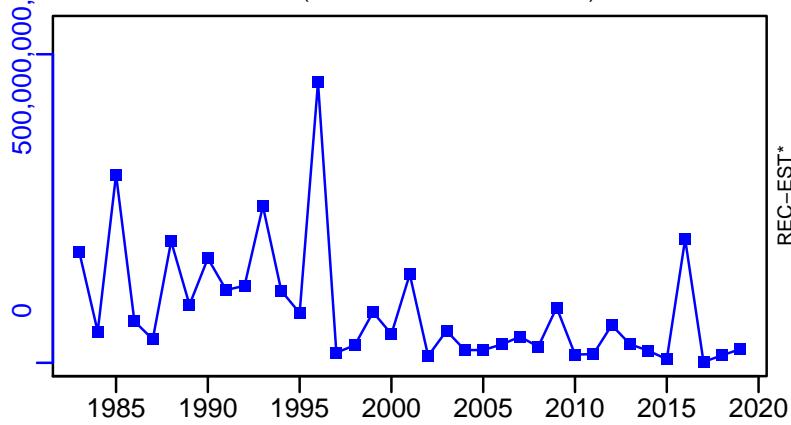
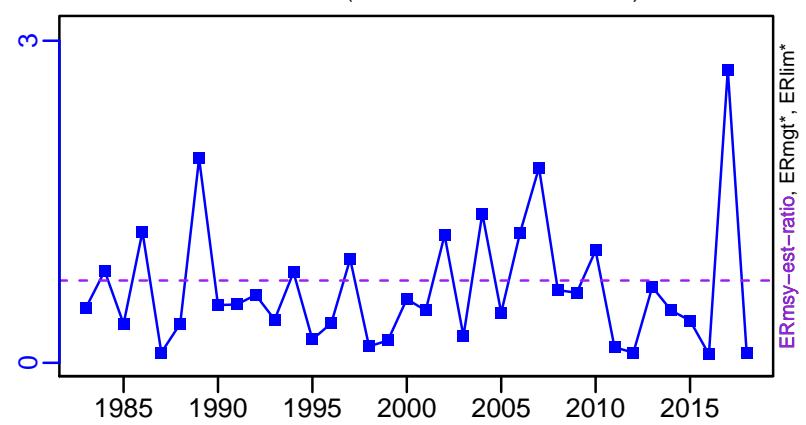
### Sand eel Sandeel Area 2 [SEELNSSA2]

TB-MT (1983–2015–ICESIMP2016)

SSB-MT (1983–2019–ICESIMP2021)



ER-calc-ratio (1983–2019–ICESIMP2021)

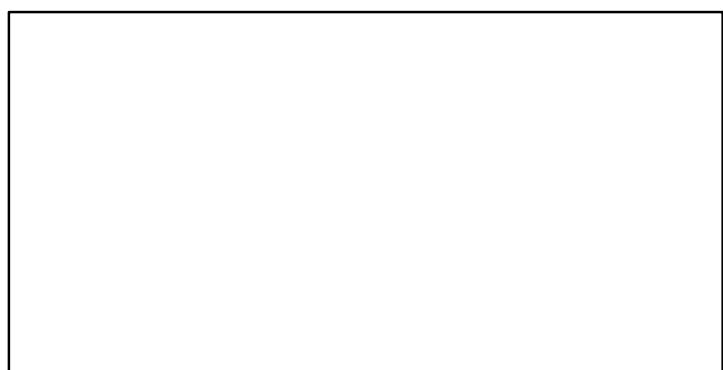
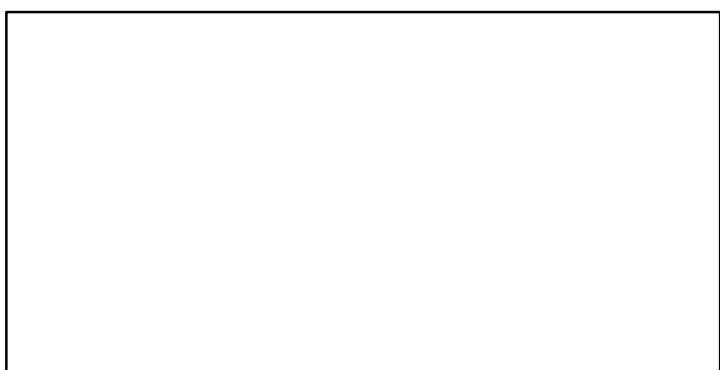
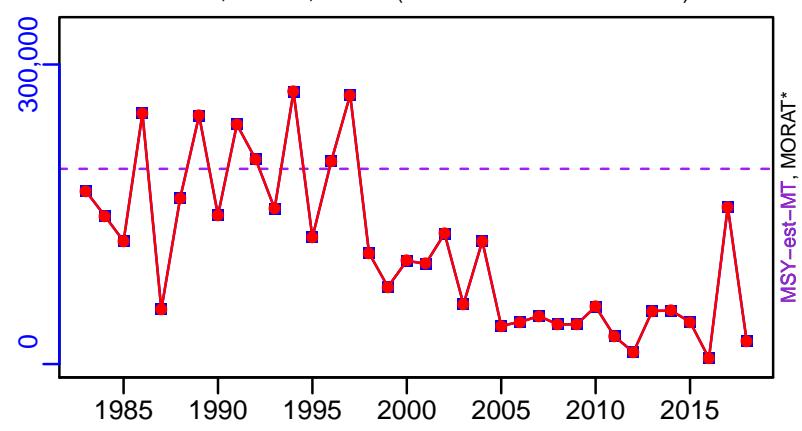


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

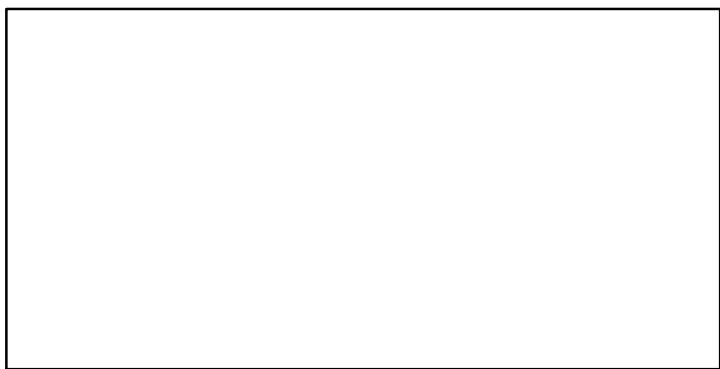
Sand eel Sandeel Area 2 [SEELNSSA2]

TC-MT, TL-MT, RecC\* (1983–2019–ICESIMP2021)

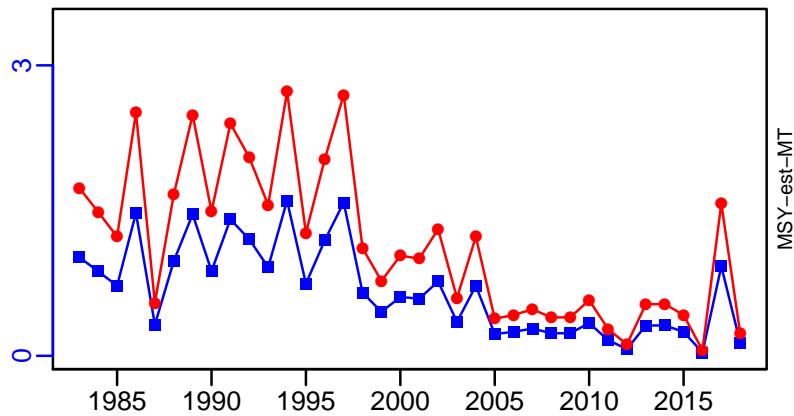
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1983–2019–ICESIMP2021)



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

### Sand eel Sandeel Area 3 [SEELNSSA3]

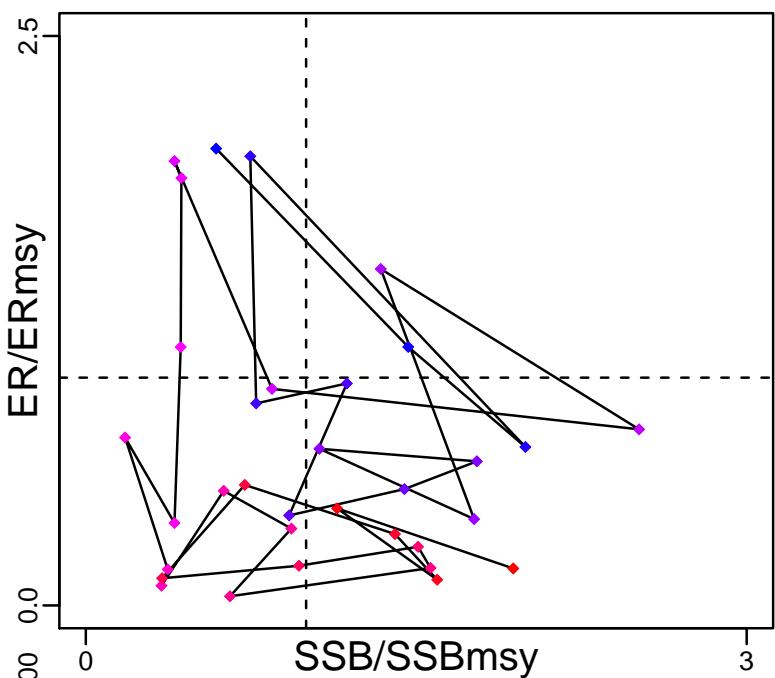
Metadata	
<b>Scientific Name</b>	Ammodytes spp
<b>Current Assess ID</b>	HAWG-SEELNSSA3-1986-2019-ICESIMP2021
<b>Area</b>	Sandeel Area 3
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2011	619,811
<b>SSBmsy</b>	SSBmsy-est-MT	2019	140,238
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.751
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	129,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2019	237,984
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2011	$1 \times 10^5$
<b>SSBlim</b>	SSBlim-MT	2018	80,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

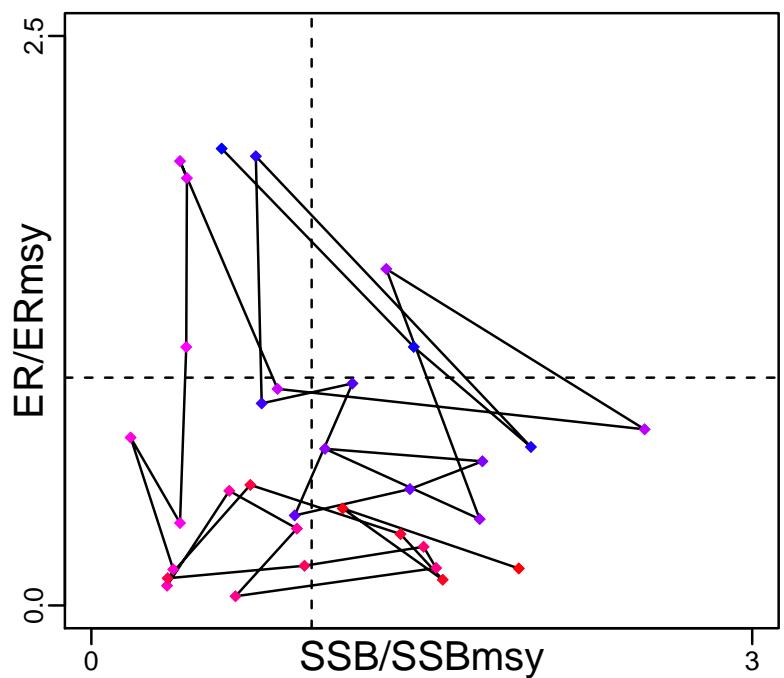
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	535,000	Both	-
<b>SSB</b>	SSB-MT	2019	182,590	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	98,516,876,000	-	0
<b>F</b>	F-1/yr	2019	0.342	-	1 to 2
<b>ER</b>	ER-calc-ratio	2019	0.122	-	-
<b>TC</b>	TC-MT	2019	74,933		
<b>TL</b>	TL-MT	2019	74,933		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	0.71		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2019	1.302		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.162		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	2.636		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Sand eel Sandeel Area 3 [SEELNSSA3]

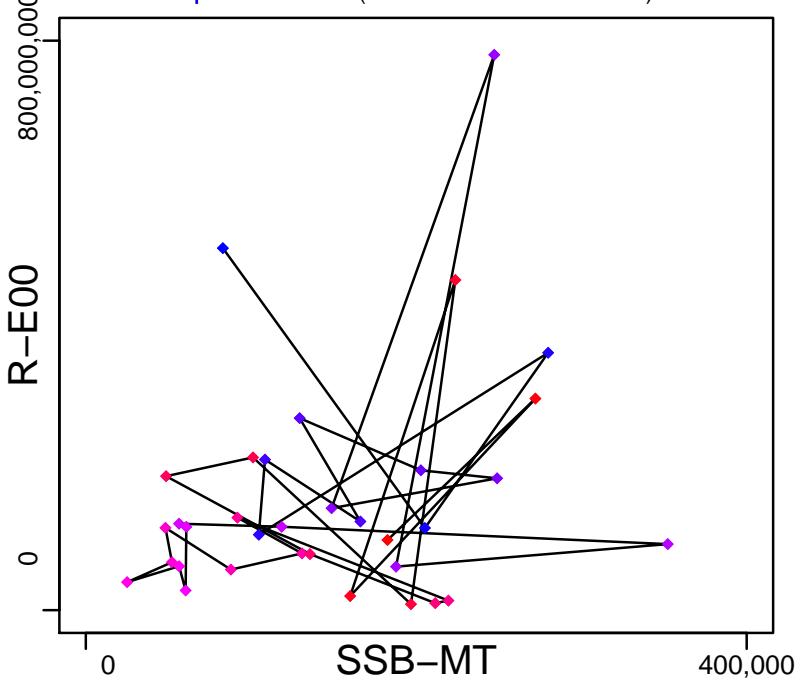
Kobe MSYpref (1986–2019–ICESIMP2021)



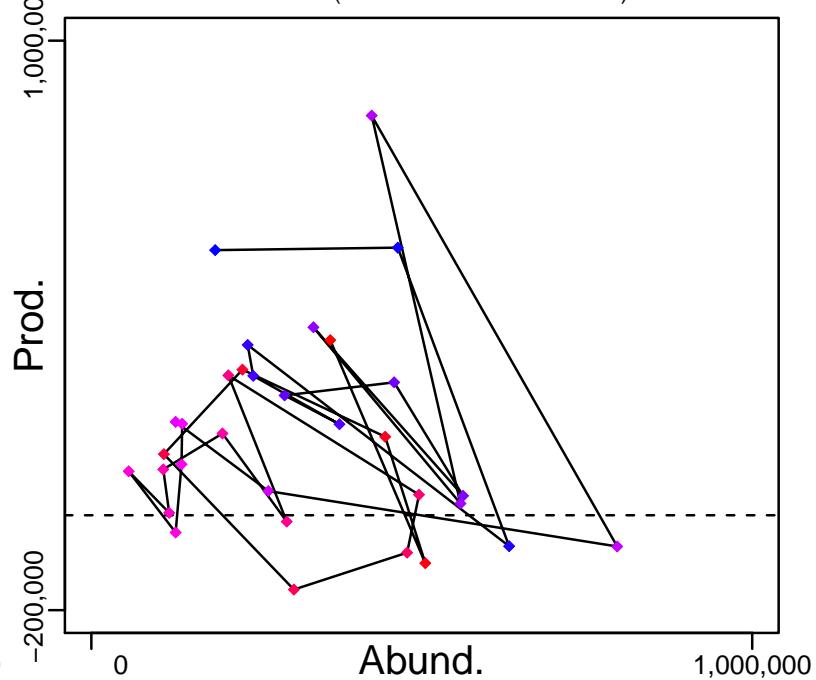
Kobe MGTpref (1986–2019–ICESIMP2021)



Spawner Recruit (1986–2019–ICESIMP2021)



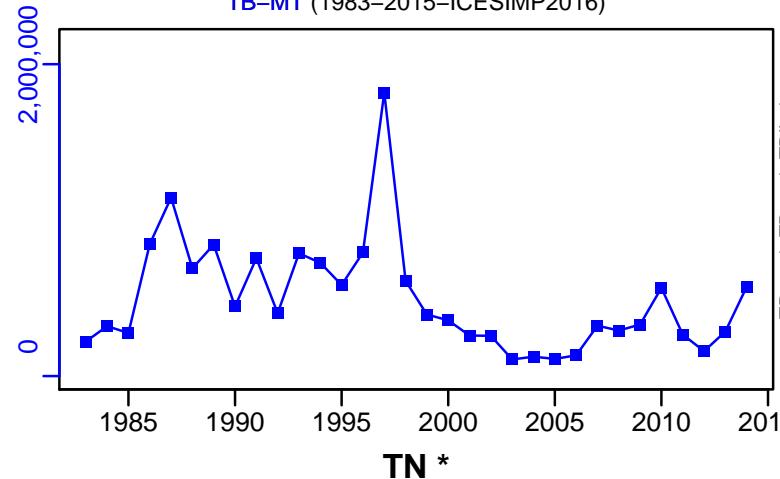
Production (1986–2019–ICESIMP2021)



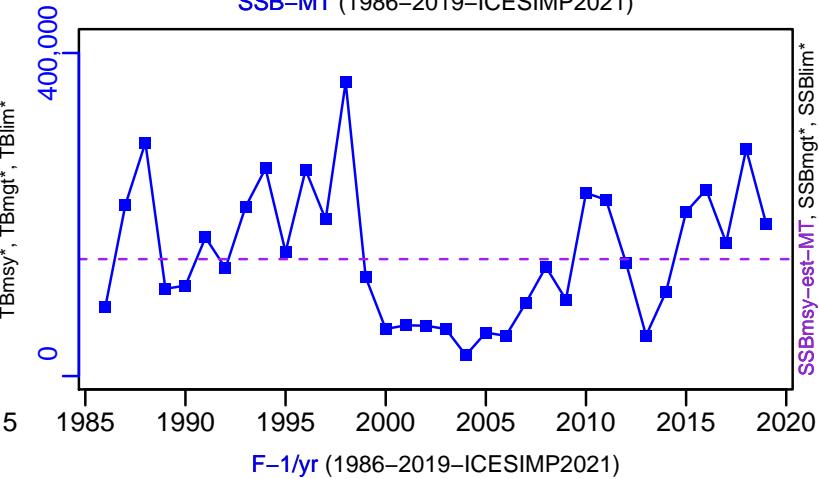
◆ Start Year   ◆ End Year   \* No Data

### Sand eel Sandeel Area 3 [SEELNSSA3]

TB-MT (1983–2015–ICESIMP2016)



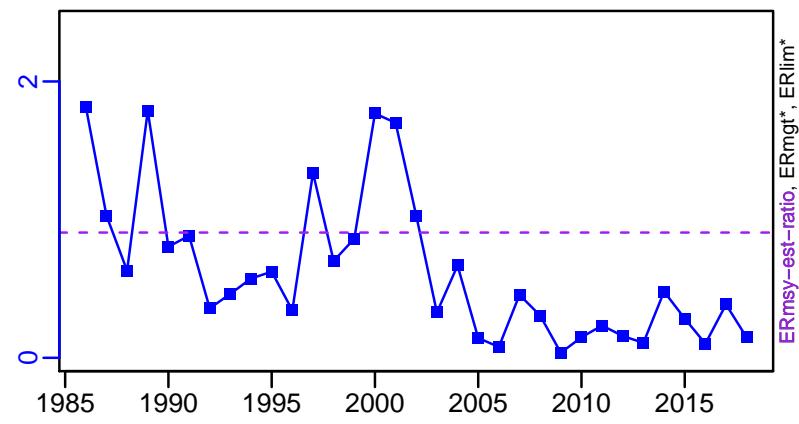
SSB-MT (1986–2019–ICESIMP2021)



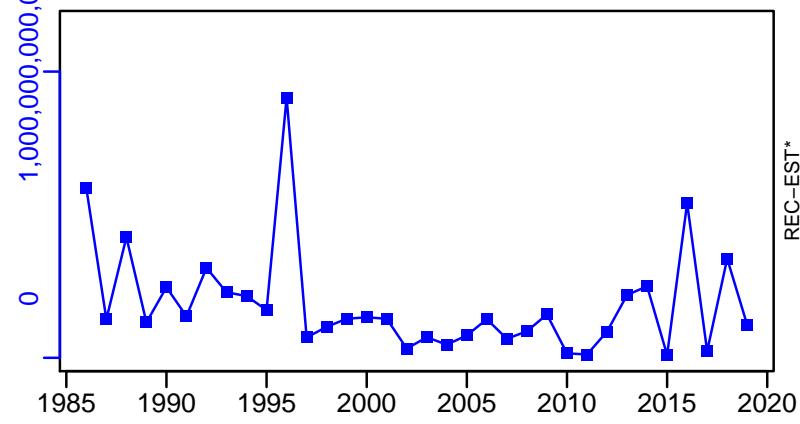
TN \*



ER-calc-ratio (1986–2019–ICESIMP2021)



R-E00 (1986–2019–ICESIMP2021)

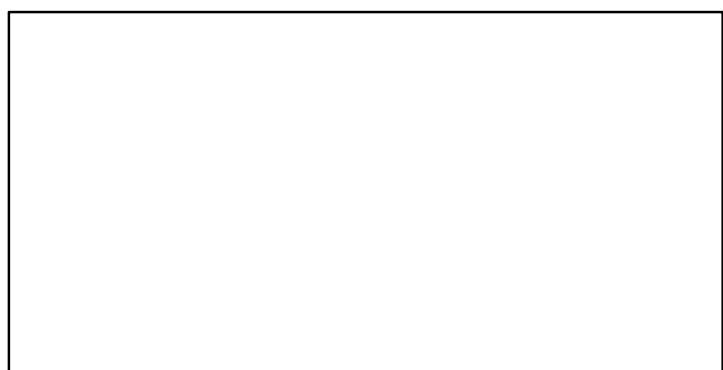
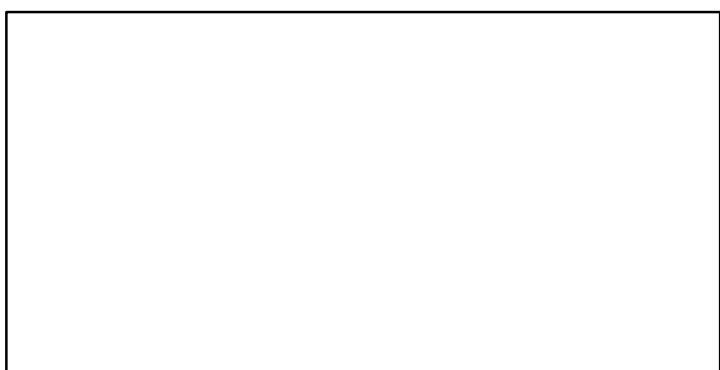
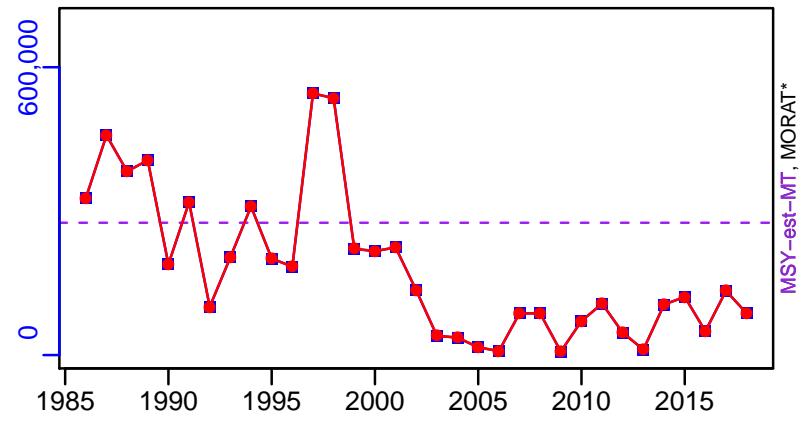


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	* No Data

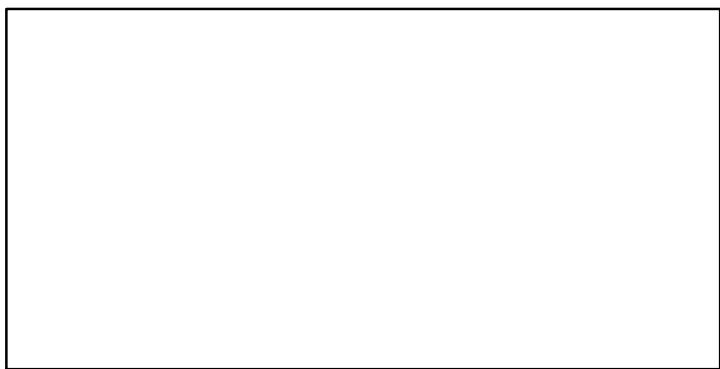
Sand eel Sandeel Area 3 [SEELNSSA3]

TC-MT, TL-MT, RecC\* (1986–2019–ICESIMP2021)

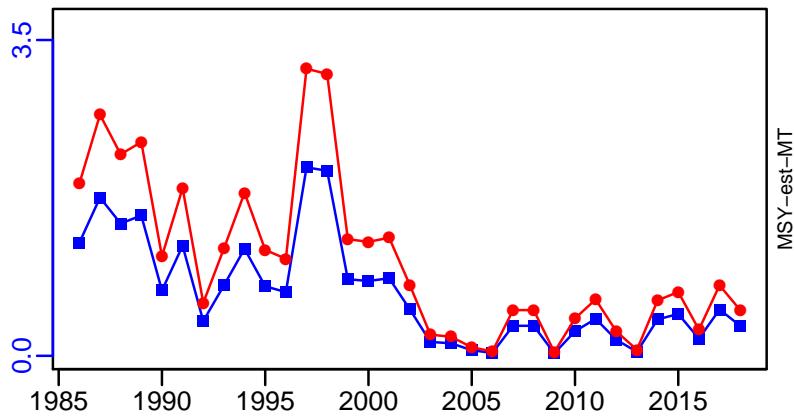
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1986–2019–ICESIMP2021)



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

## Sandeel Sandeel Area 4 [SEELNSSA4]

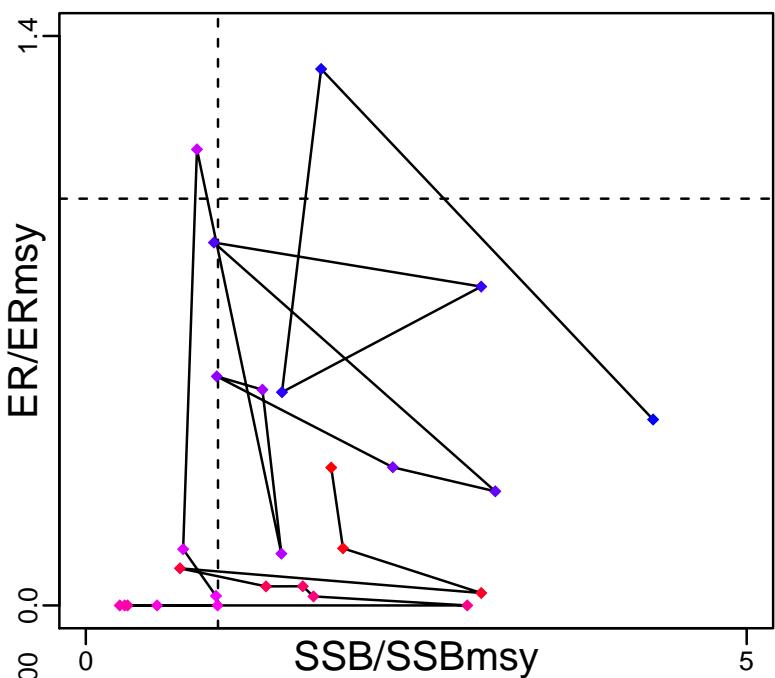
<b>Metadata</b>	
<b>Scientific Name</b>	Ammodytes spp
<b>Current Assess ID</b>	HAWG-SEELNSSA4-1993-2019-ICESIMP2021
<b>Area</b>	Sandeel Area 4
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2019	83,217
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.36
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	102,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2019	67,591
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	48,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

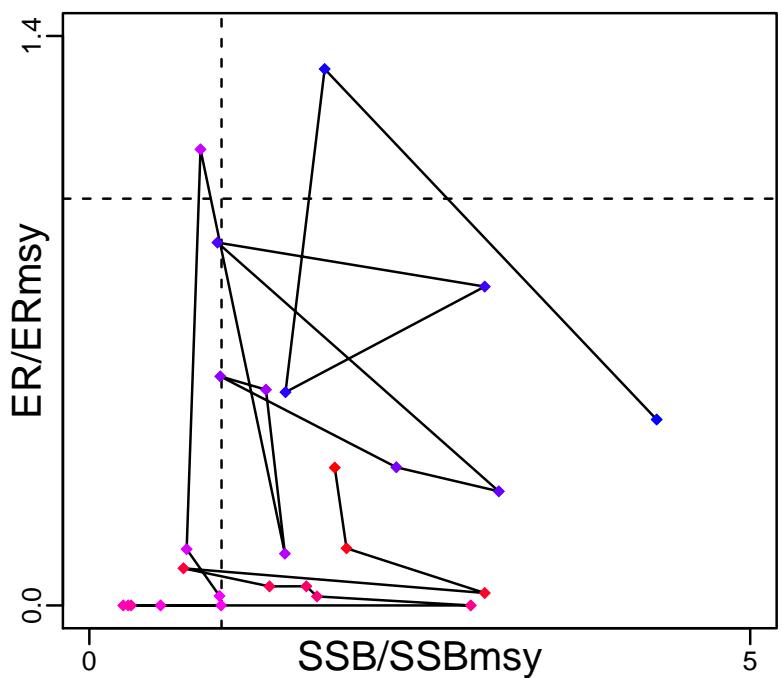
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-MT	2019	169,058	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	80,801,275,000	-	0
<b>F</b>	F-1/yr	2019	0.152	-	1 to 2
<b>ER</b>	ER-calc-ratio	2019	0.122	-	-
<b>TC</b>	TC-MT	2019	42,526		
<b>TL</b>	TL-MT	2019	42,526		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2019	2.032		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.339		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	1.912		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Sand eel Sandeel Area 4 [SEELNSSA4]

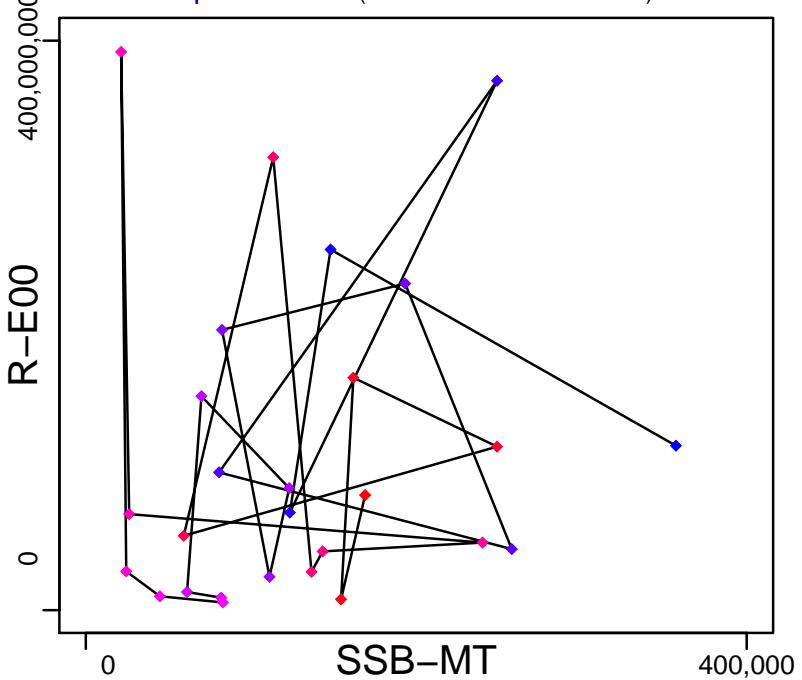
Kobe MSYpref (1993–2019–ICESIMP2021)



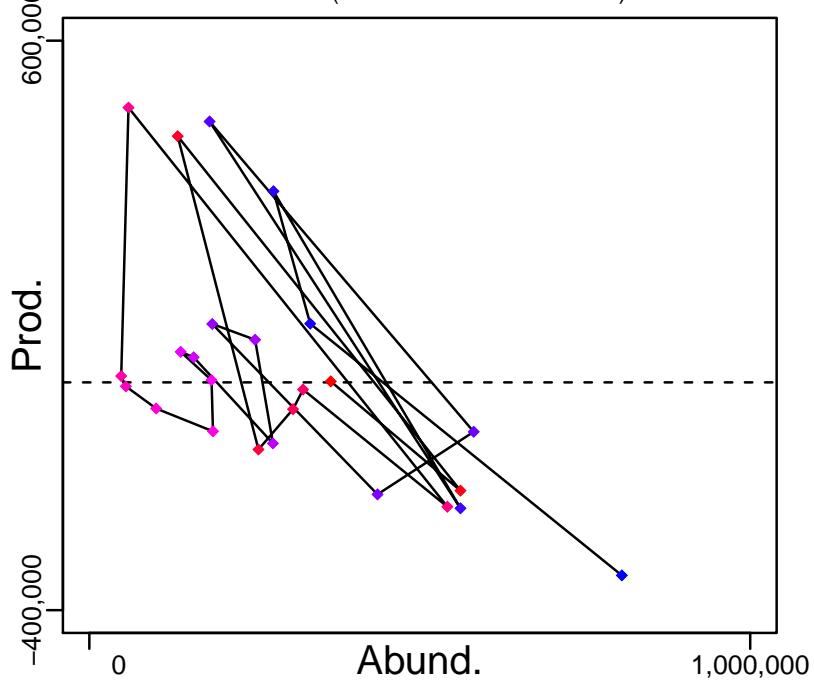
Kobe MGTpref (1993–2019–ICESIMP2021)



Spawner Recruit (1993–2019–ICESIMP2021)



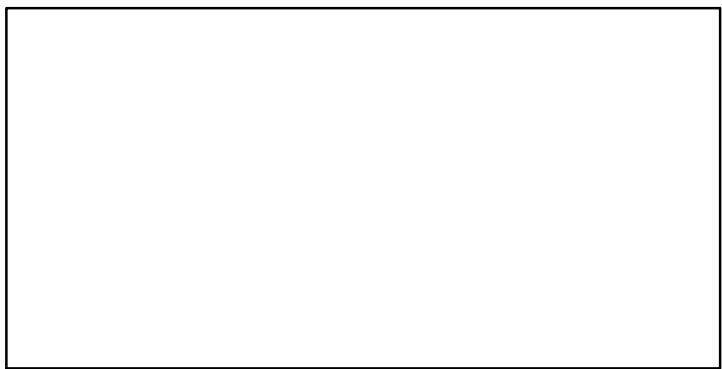
Production (1993–2019–ICESIMP2021)



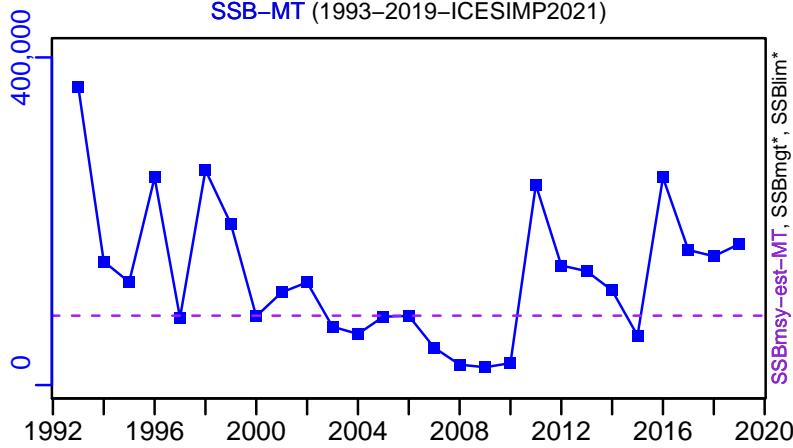
◆ Start Year ◆ End Year \* No Data

Sand eel Sandeel Area 4 [SEELNSSA4]

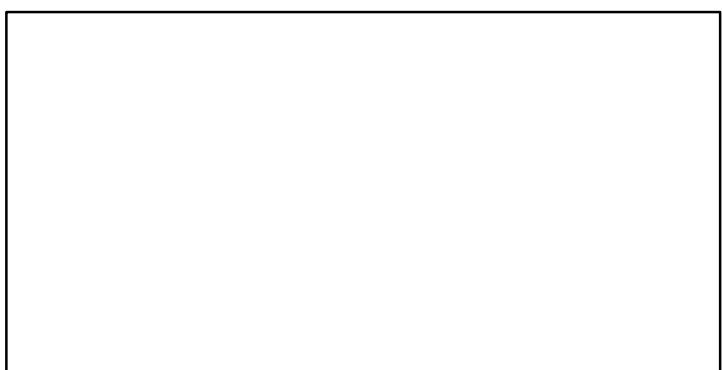
**TB\***



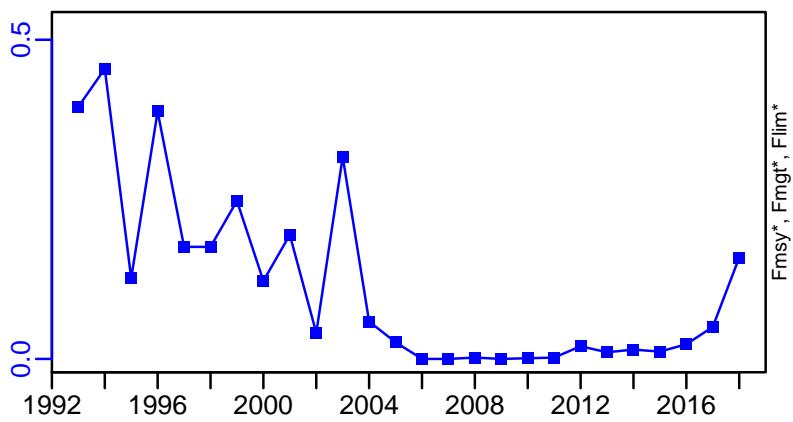
**SSB-MT (1993–2019–ICESIMP2021)**



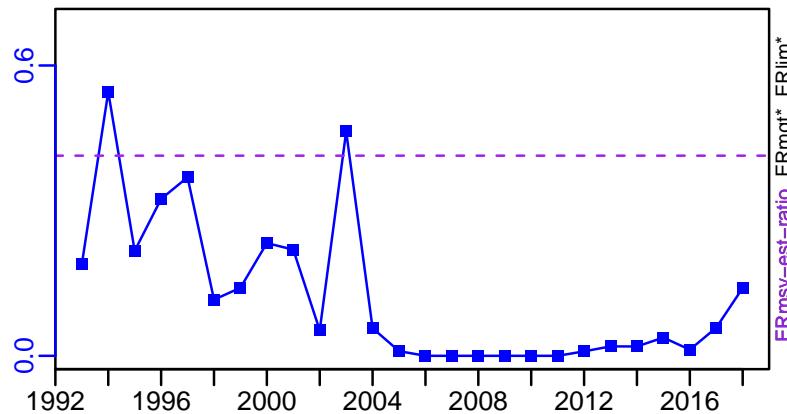
**TN \***



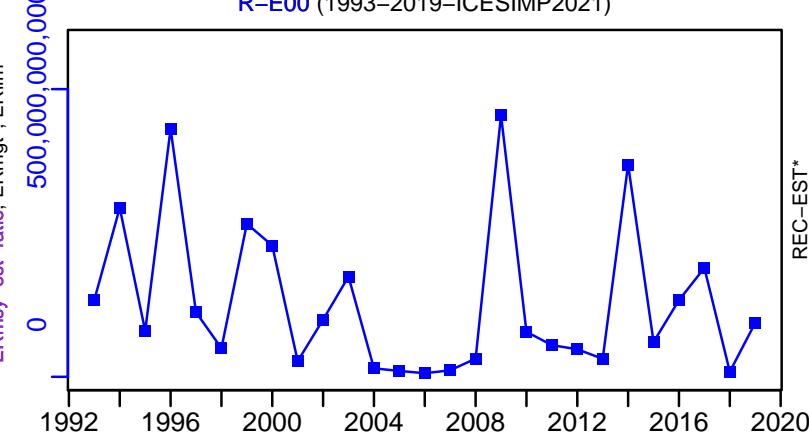
**F-1/yr (1993–2019–ICESIMP2021)**



**ER-calc-ratio (1993–2019–ICESIMP2021)**



**R-E00 (1993–2019–ICESIMP2021)**

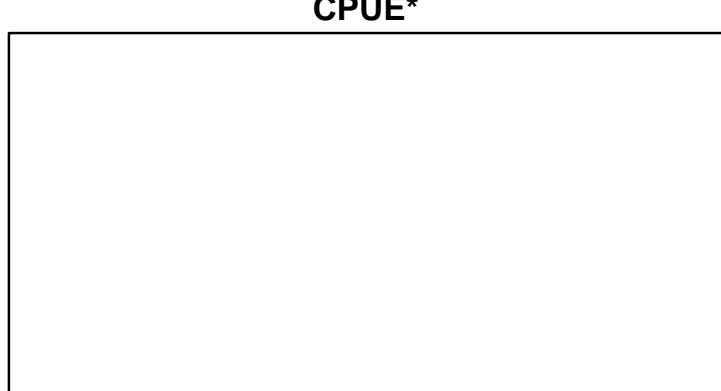
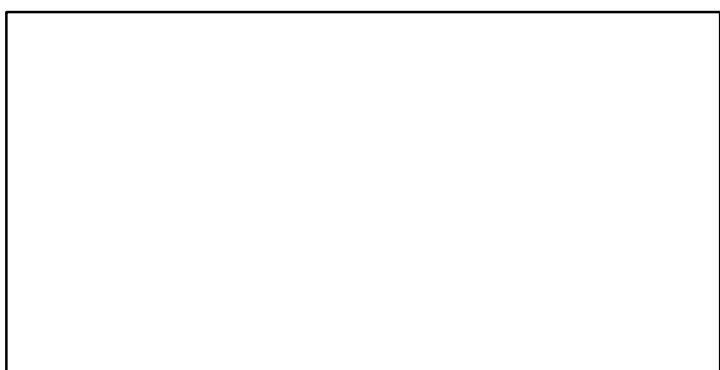
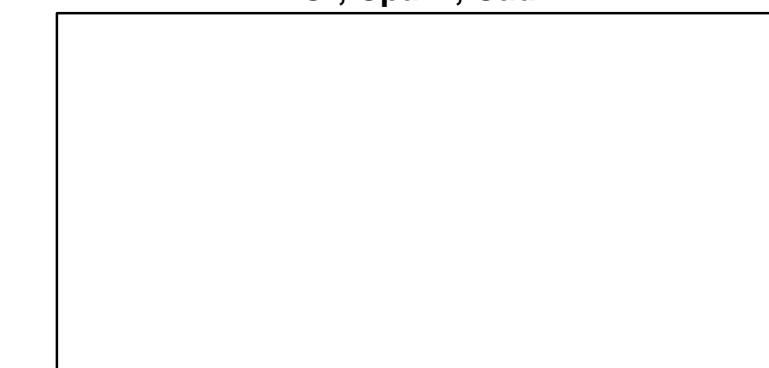
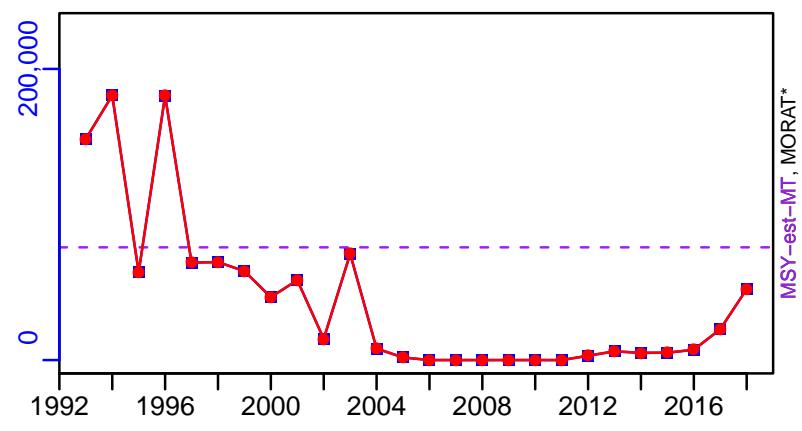


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	— Lim BRP	* No Data

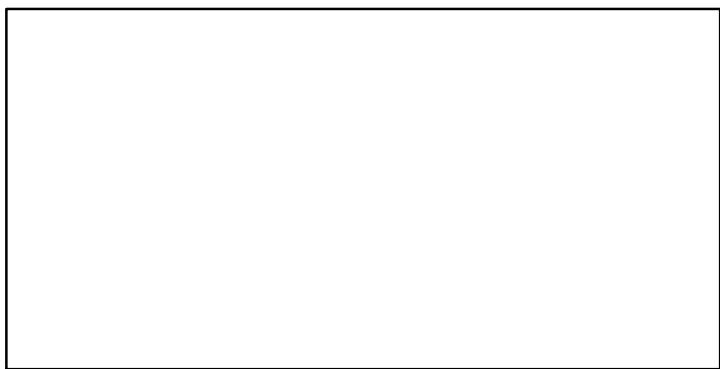
Sand eel Sandeel Area 4 [SEELNSSA4]

TC-MT, TL-MT, RecC\* (1993–2019–ICESIMP2021)

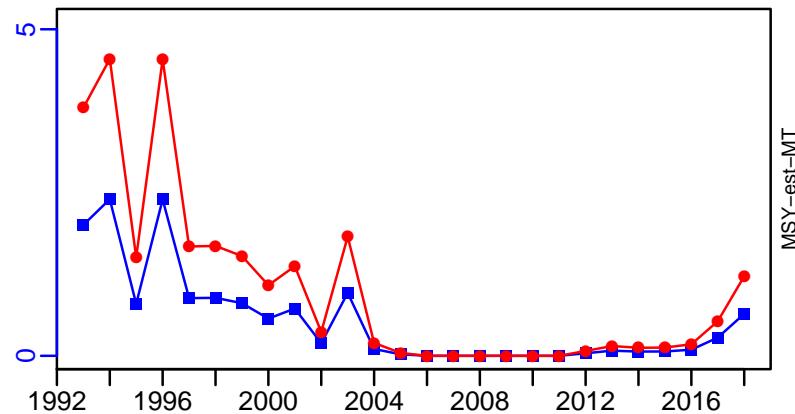
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1993–2019–ICESIMP2021)



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

## Sand eel Sandeel Area 5 [SEELNSSA5]

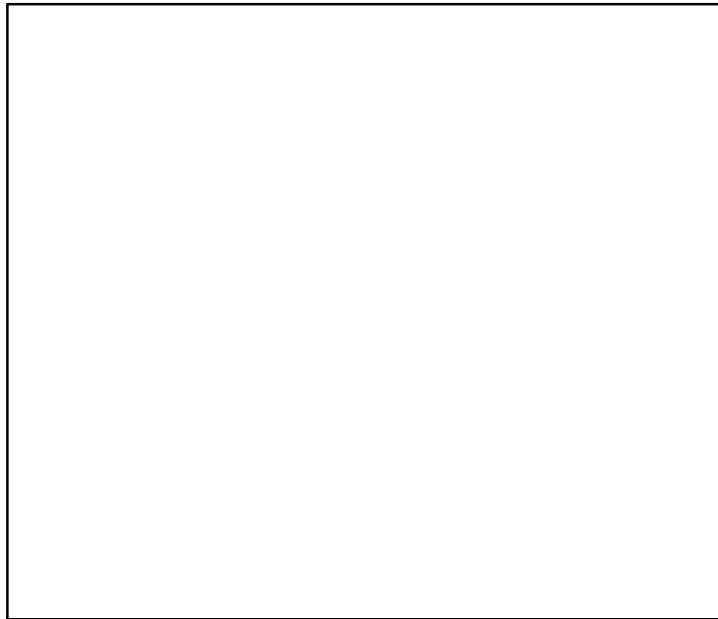
Metadata	
<b>Scientific Name</b>	Ammodytes spp
<b>Current Assess ID</b>	HAWG-SEELNSSA5-1982-2018-ICESIMP2021
<b>Area</b>	Sandeel Area 5
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts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

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

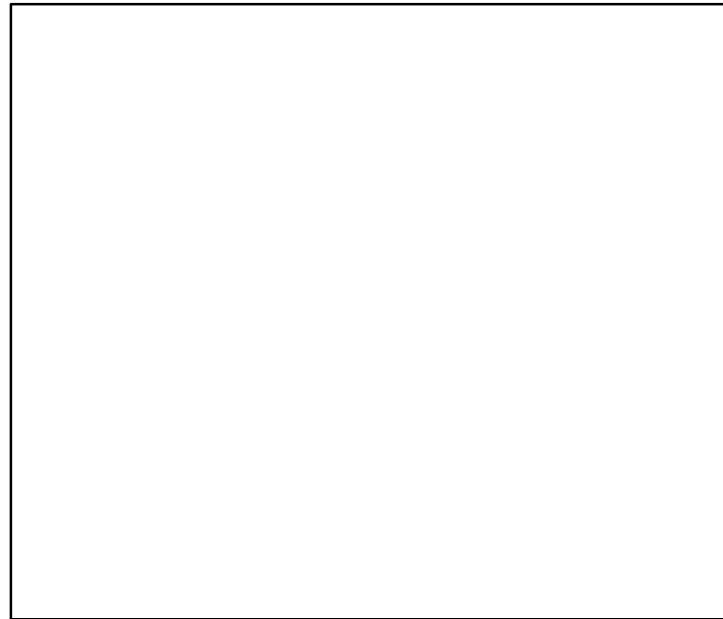
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	0		
<b>TL</b>	TL-MT	2015	0		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Sand eel Sandeel Area 5 [SEELNSSA5]

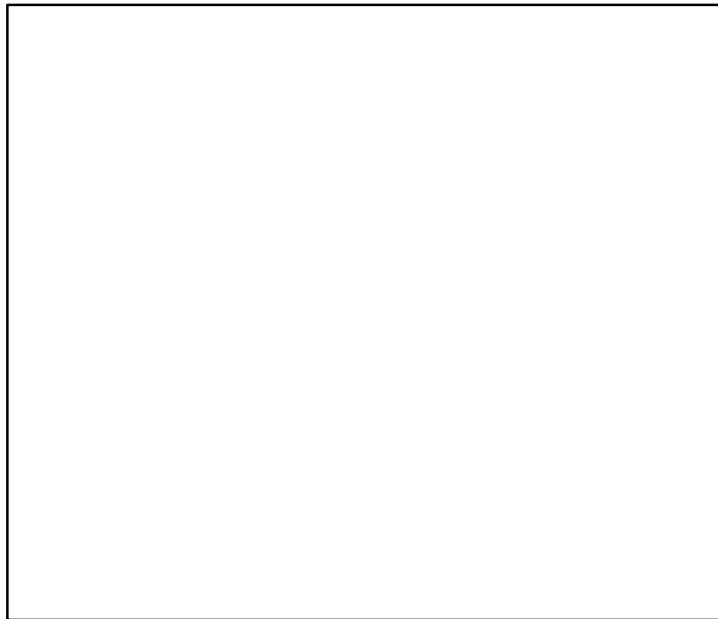
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



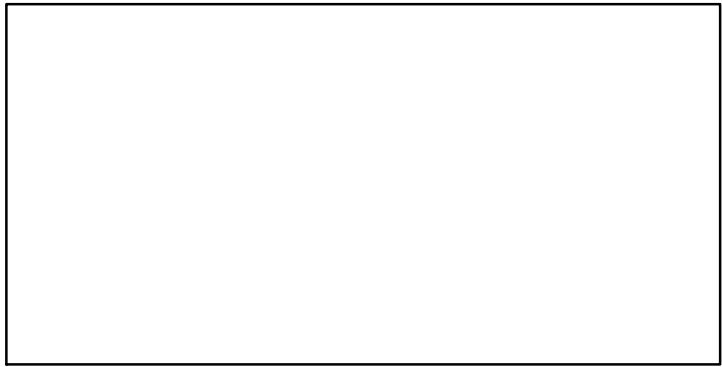
**Production\***



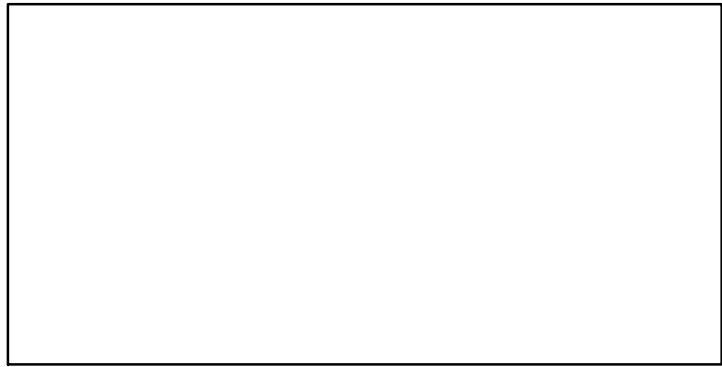
◆ Start Year ♦ End Year \* No Data

Sand eel Sandeel Area 5 [SEELNSSA5]

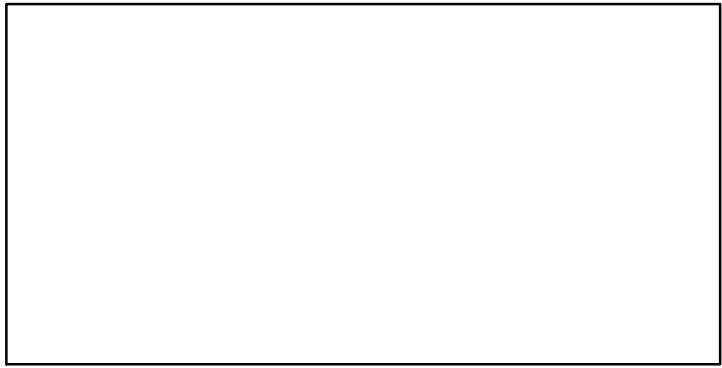
**TB\***



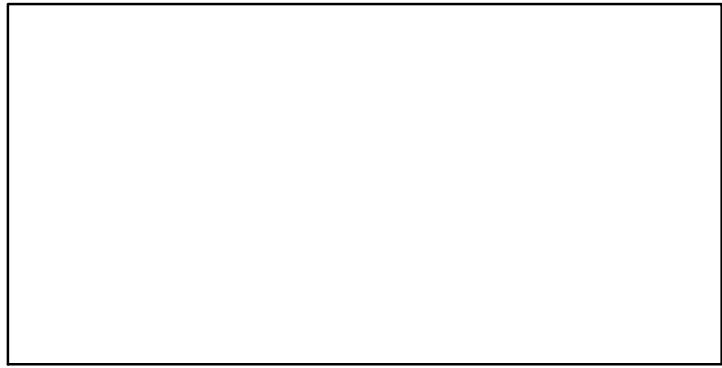
**SSB\***



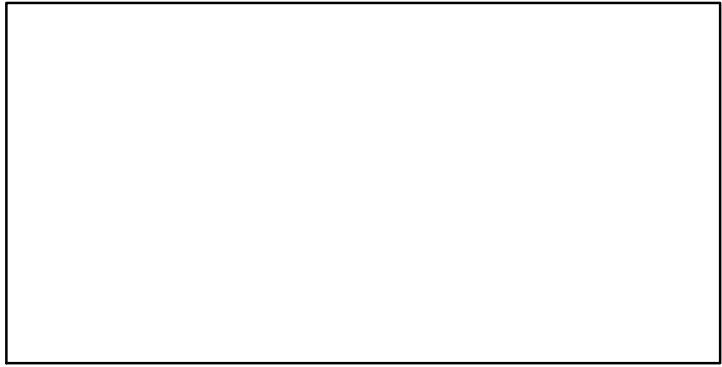
**TN \***



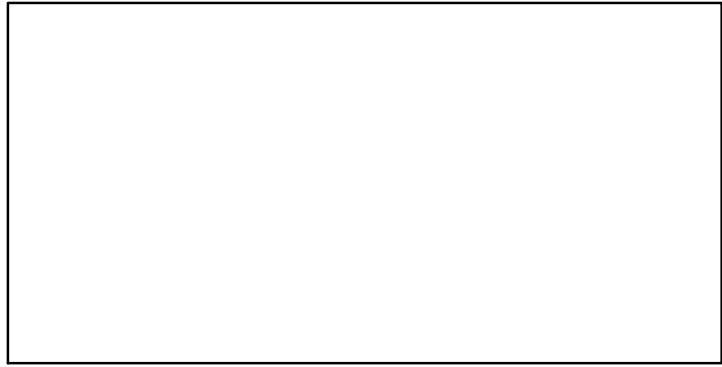
**F\***



**ER\***



**Recruits\***

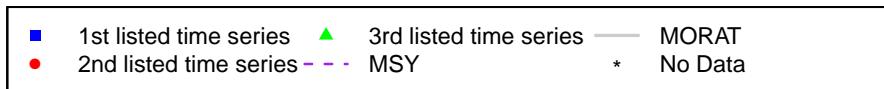
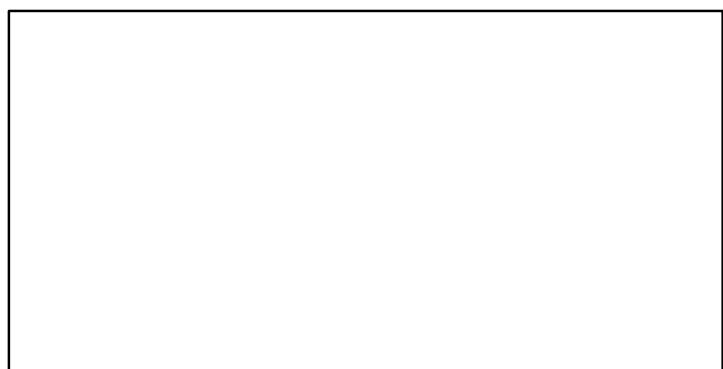
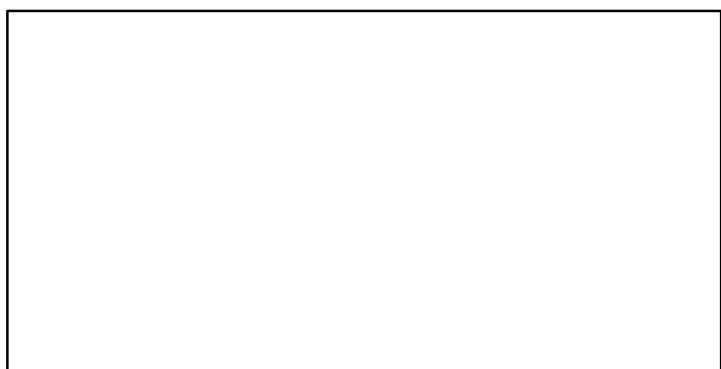
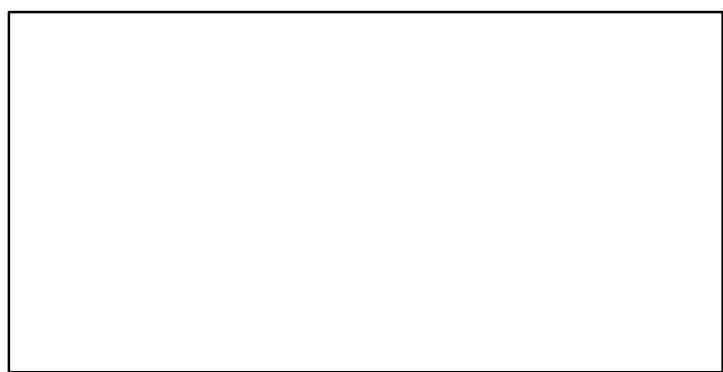
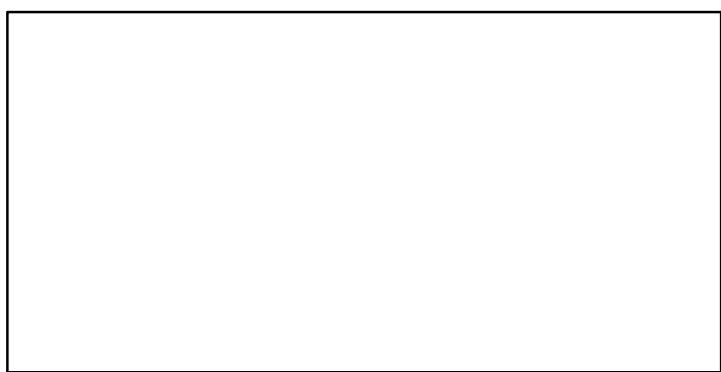
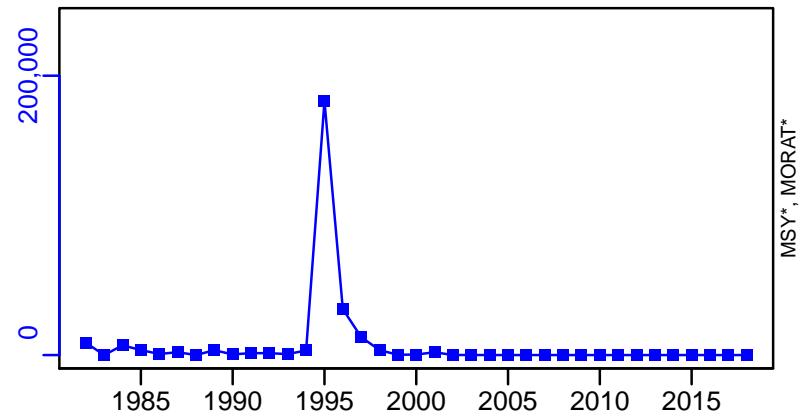


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Sand eel Sandeel Area 5 [SEELNSSA5]

TC-MT, TL\*, RecC\* (1982–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



## Sand eel Sandeel Area 6 [SEELNSSA6]

Metadata	
<b>Scientific Name</b>	Ammodytes spp
<b>Current Assess ID</b>	HAWG-SEELNSSA6-1983-2018-ICESIMP2021
<b>Area</b>	Sandeel Area 6
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2015, 2015, 2016, 2018

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	0		
<b>TL</b>	TL-MT	2016	123		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year   ◆ End Year   \* No Data

Sand eel Sandeel Area 6 [SEELNSSA6]

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***



**Recruits\***

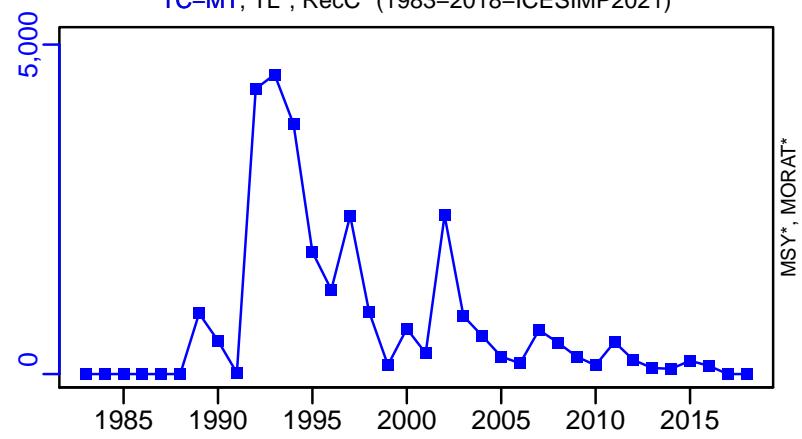


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Sand eel Sandeel Area 6 [SEELNSSA6]

TC-MT, TL\*, RecC\* (1983–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



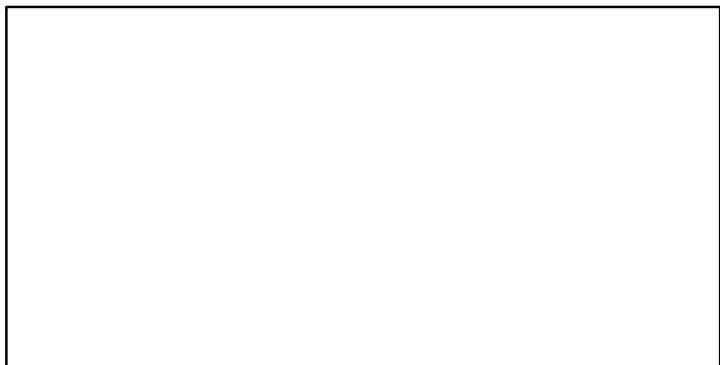
survB\*



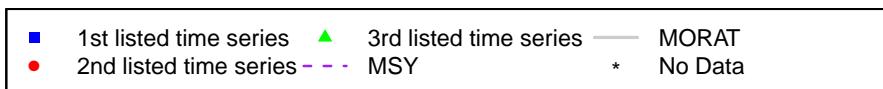
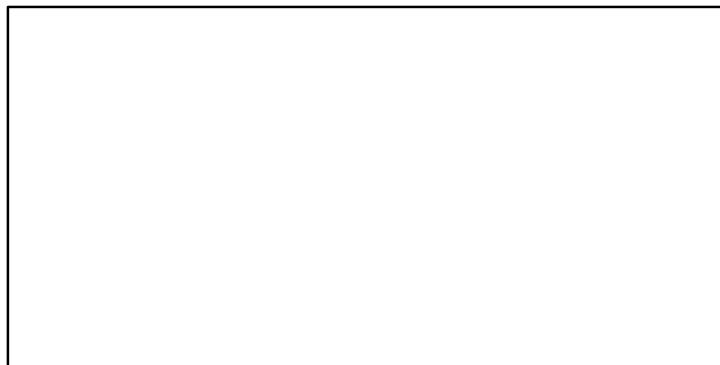
CPUE\*



EFFORT\*



CdivMSY\*



## Sand eel Sandeel Area 7 [SEELNSSA7]

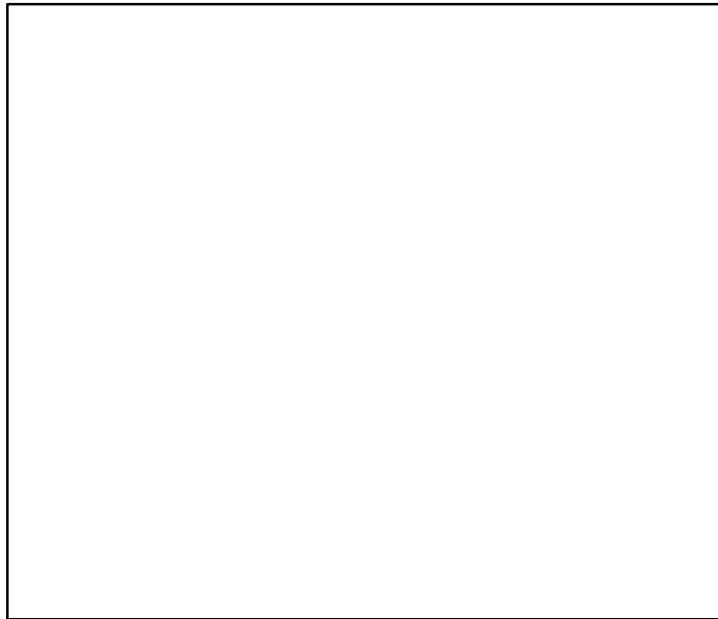
Metadata	
<b>Scientific Name</b>	Ammodytes spp
<b>Current Assess ID</b>	HAWG-SEELNSSA7-1983-2018-ICESIMP2021
<b>Area</b>	Sandeel Area 7
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2015, 2015, 2016, 2018

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

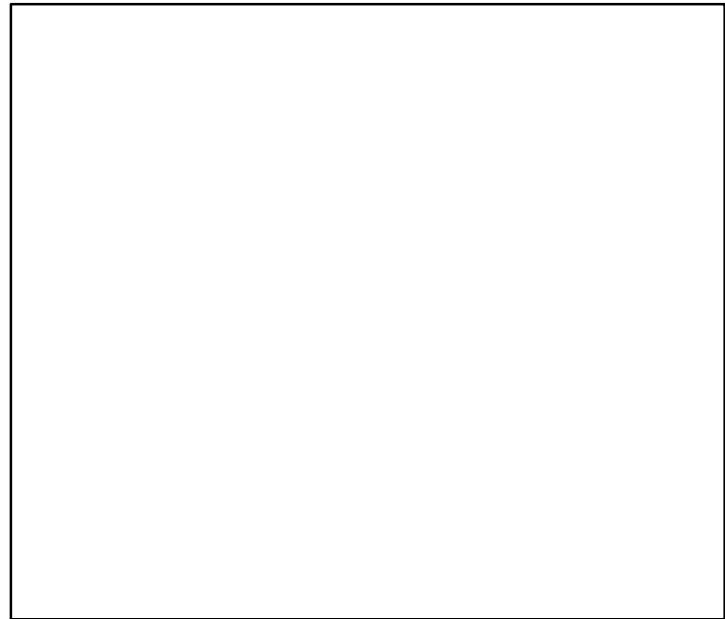
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	0		
<b>TL</b>	TL-MT	2015	0		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Sand eel Sandeel Area 7 [SEELNSSA7]

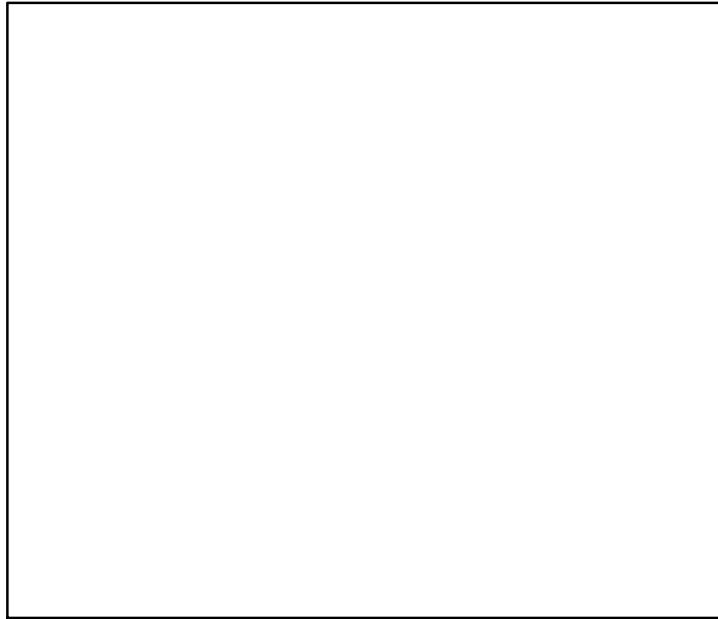
**Kobe MSY\***



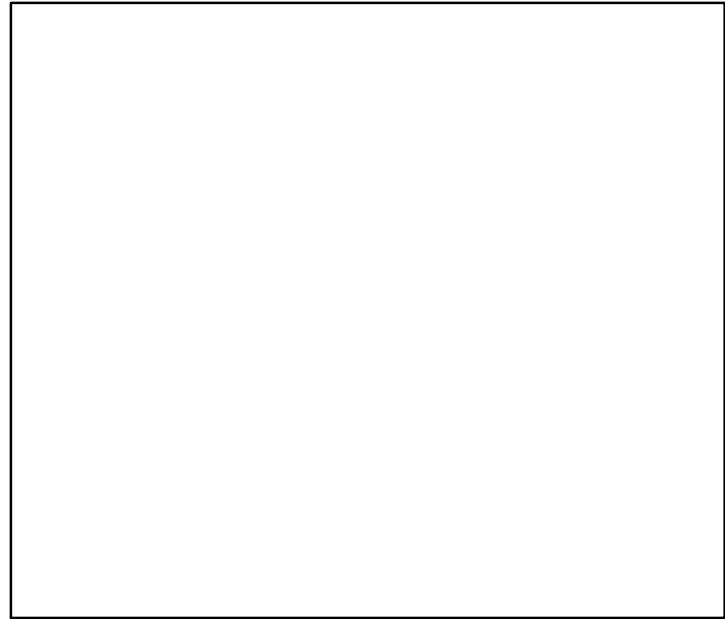
**Kobe MGT\***



**Spawner Recruit\***



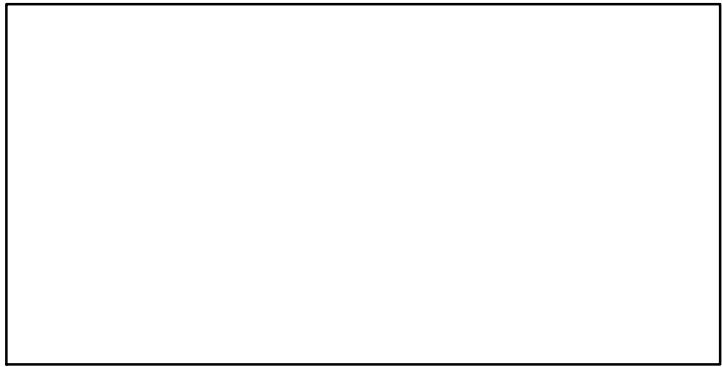
**Production\***



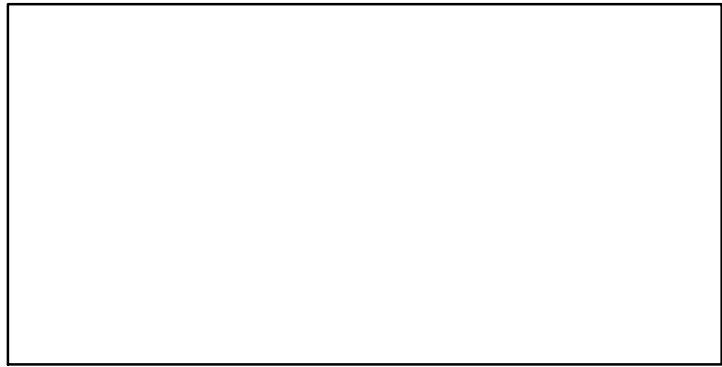
◆ Start Year ♦ End Year \* No Data

Sand eel Sandeel Area 7 [SEELNSSA7]

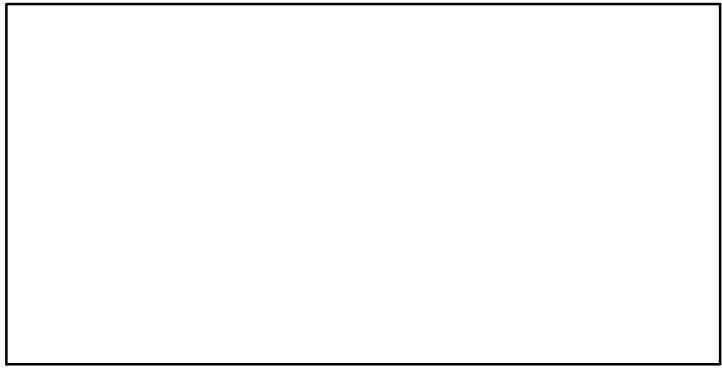
**TB\***



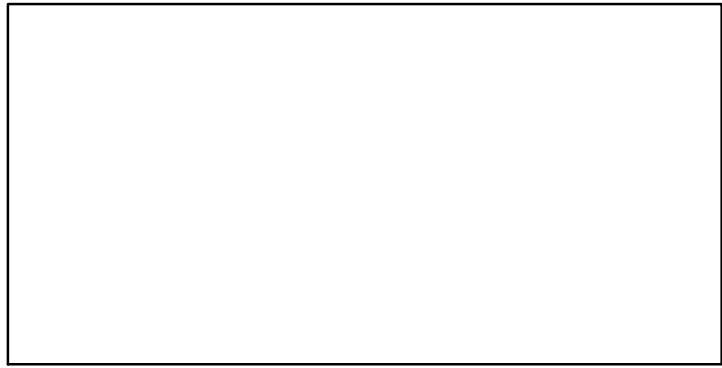
**SSB\***



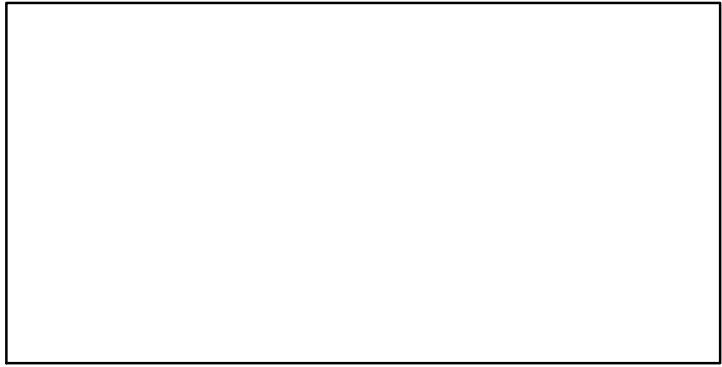
**TN \***



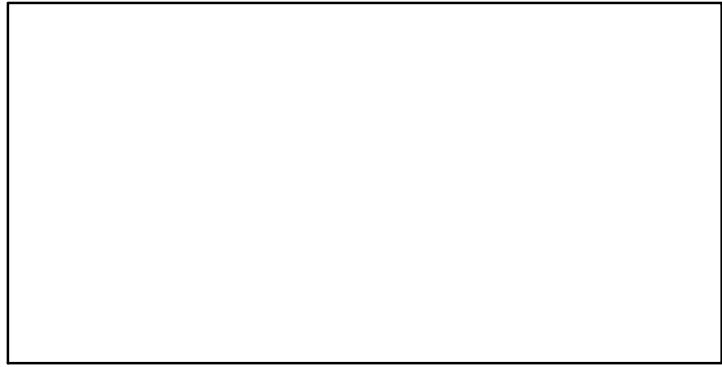
**F\***



**ER\***



**Recruits\***

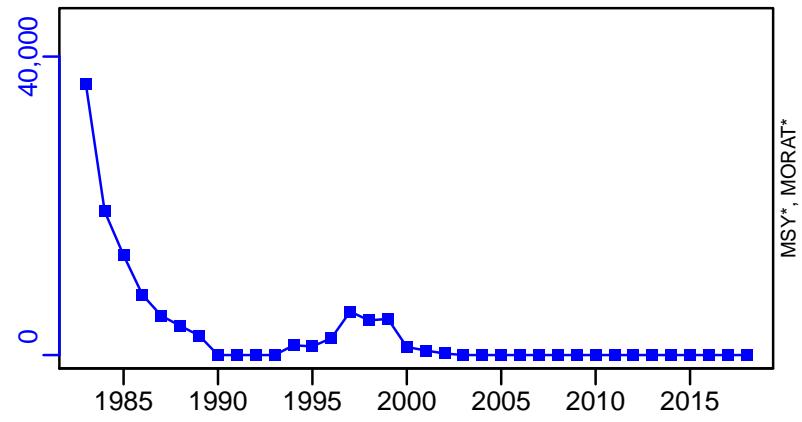


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

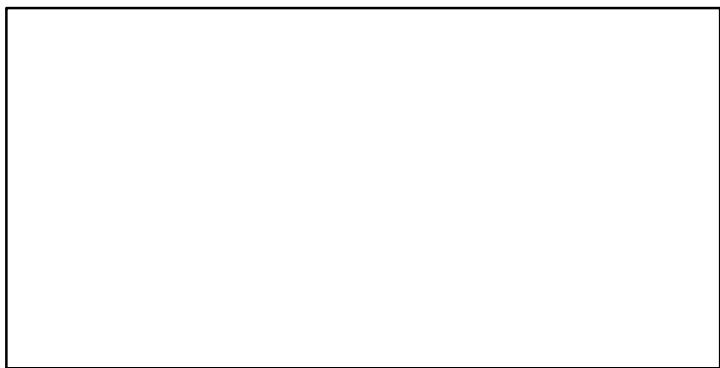
Sand eel Sandeel Area 7 [SEELNSSA7]

TC-MT, TL\*, RecC\* (1983–2018–ICESIMP2021)

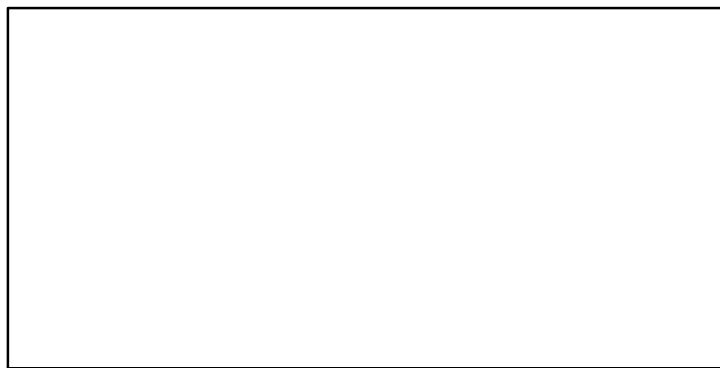
TAC\*, Cpair\*, Cadv\*



survB\*



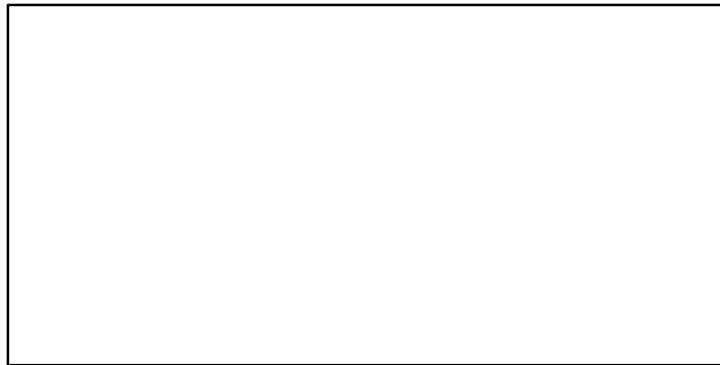
CPUE\*



EFFORT\*



CdivMSY\*



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

## Sand eel West of Scotland [SEELVla]

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

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

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

**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\***

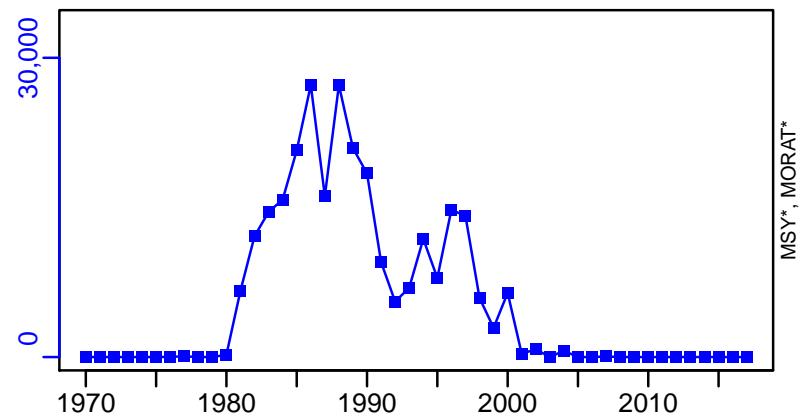


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

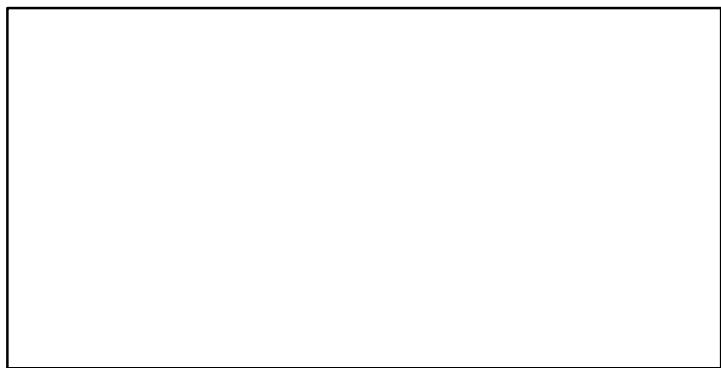
Sand eel West of Scotland [SEELVla]

TL-MT, TC\*, RecC\* (1970–2017–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*

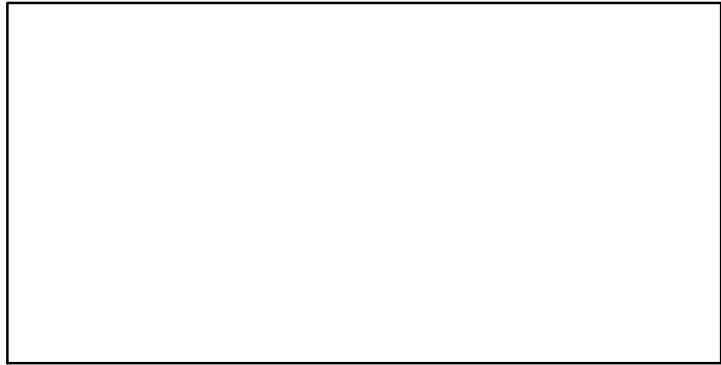


survB\*



CPUE\*

EFFORT\*



CdivMSY\*

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

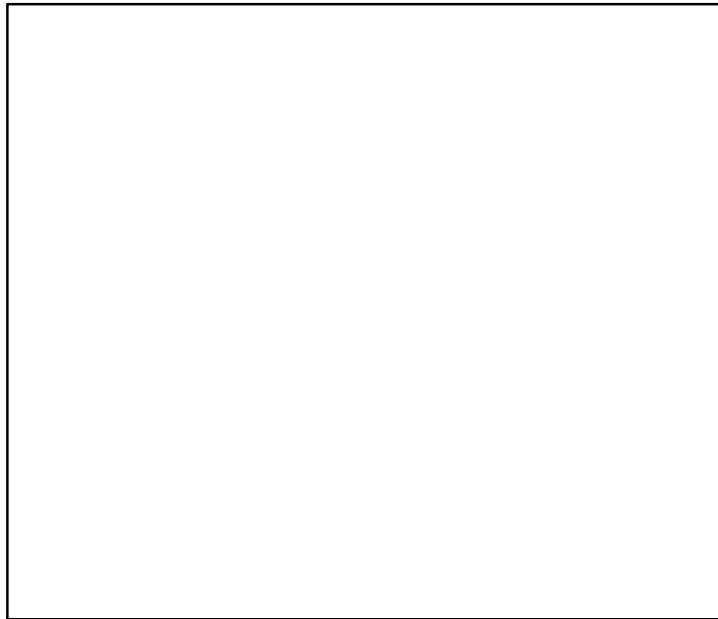
## Smalleyed ray ICES 7de [SERAYVIIde]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja microcellata
<b>Current Assess ID</b>	WGEF-SERAYVIIde-2009-2015-ICESIMP2018
<b>Area</b>	ICES 7de
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

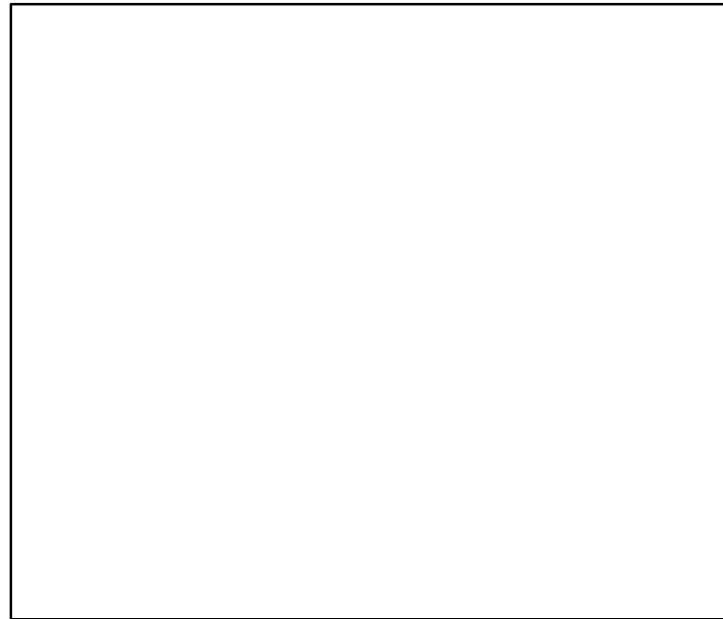
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	56		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

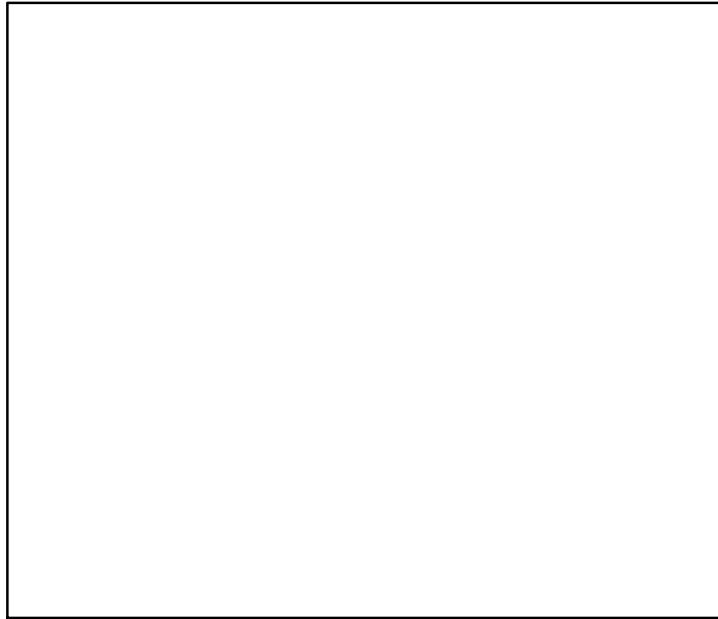
**Kobe MSY\***



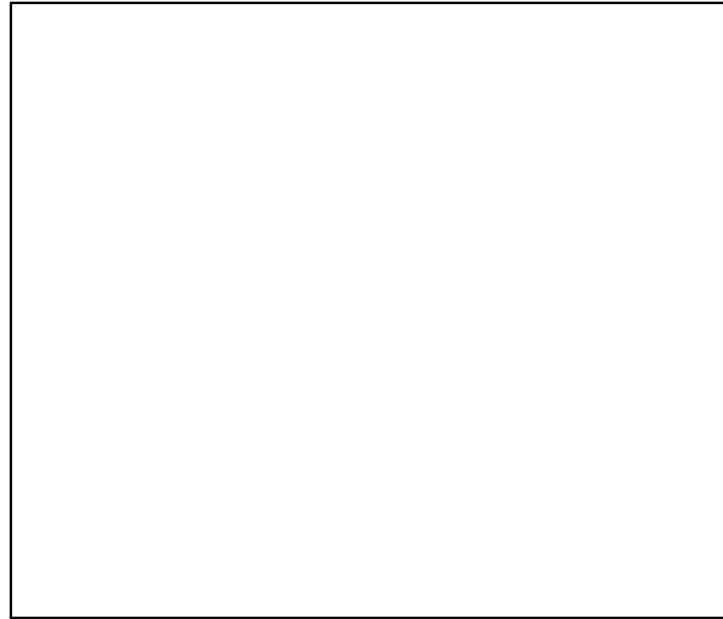
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

**TB\***



**SSB\***



**TN \***



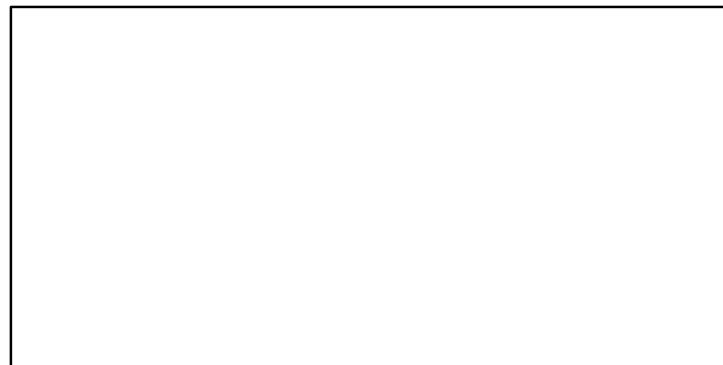
**F\***



**ER\***



**Recruits\***

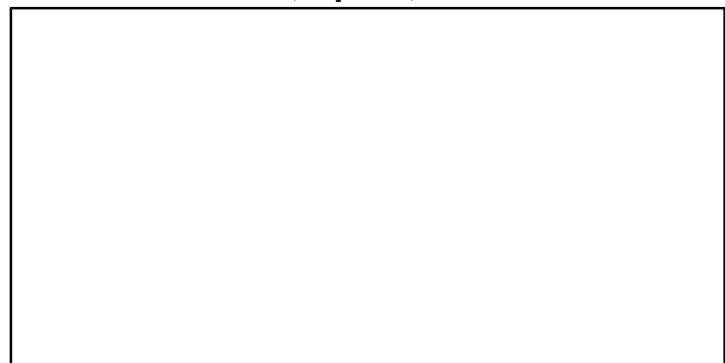
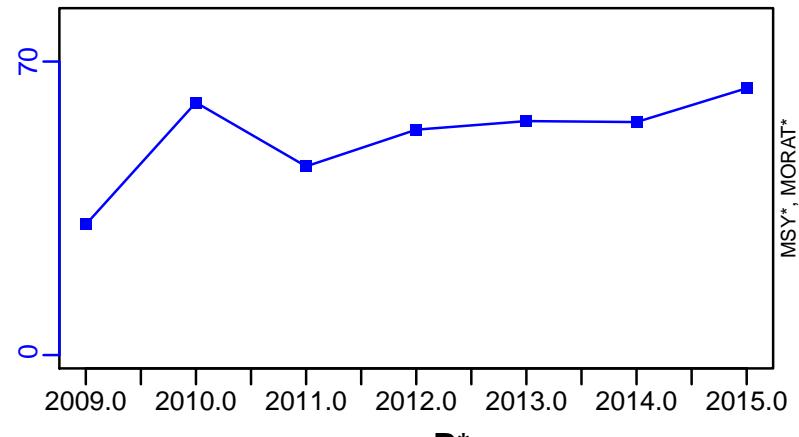


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Smalleyed ray ICES 7de [SERAYVIIde]

TL-MT, TC\*, RecC\* (2009–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*

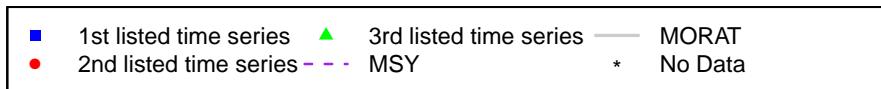


survB\*

CPUE\*

EFFORT\*

CdivMSY\*



## Smalleyed ray Celtic Sea [SERAYVIIIf-g]

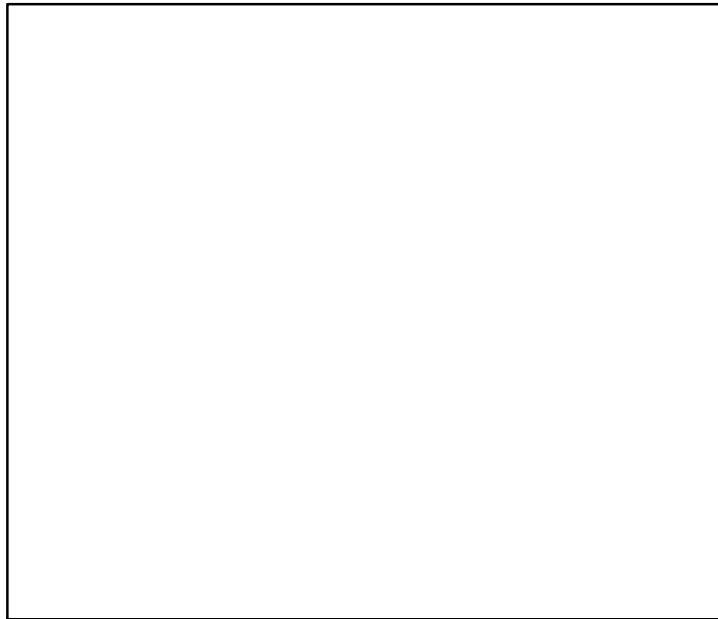
<b>Metadata</b>	
<b>Scientific Name</b>	Raja microcellata
<b>Current Assess ID</b>	WGEF-SERAYVIIIf-g-1993-2015-ICESIMP2018
<b>Area</b>	Celtic Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

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

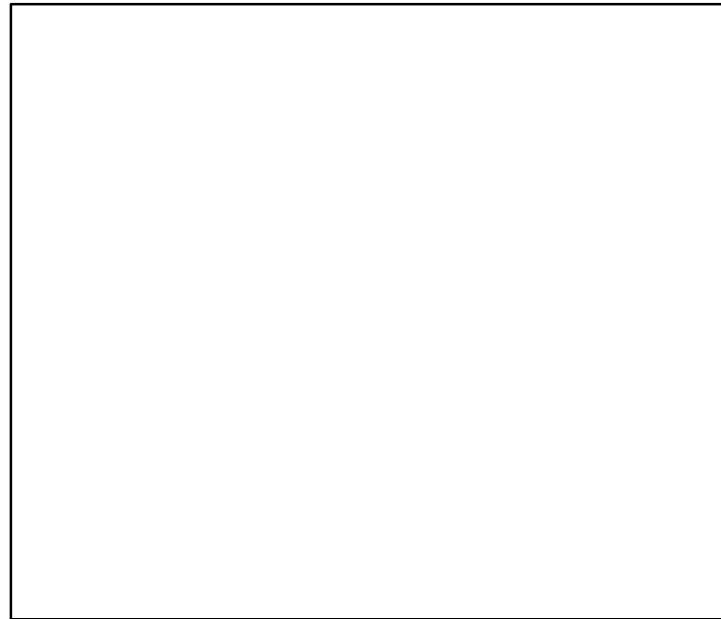
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	2.03	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	208		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Smalleyed ray Celtic Sea [SERAYVIIIf-g]**

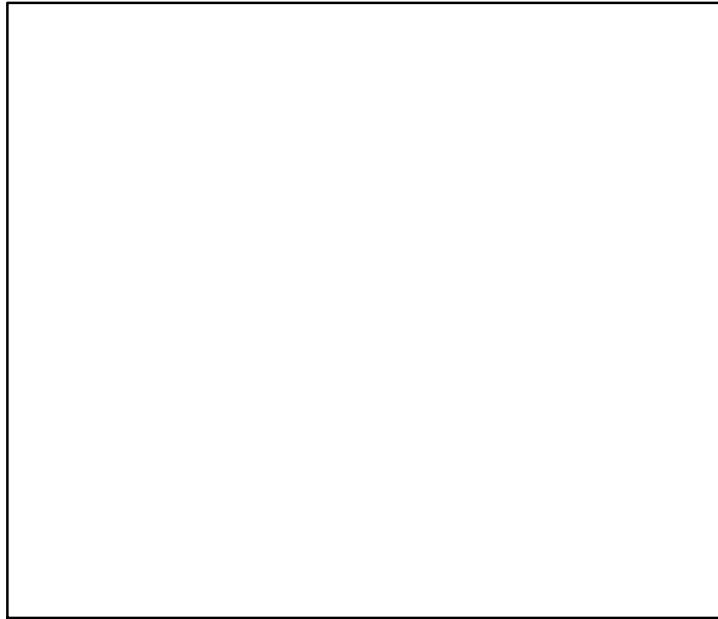
**Kobe MSY\***



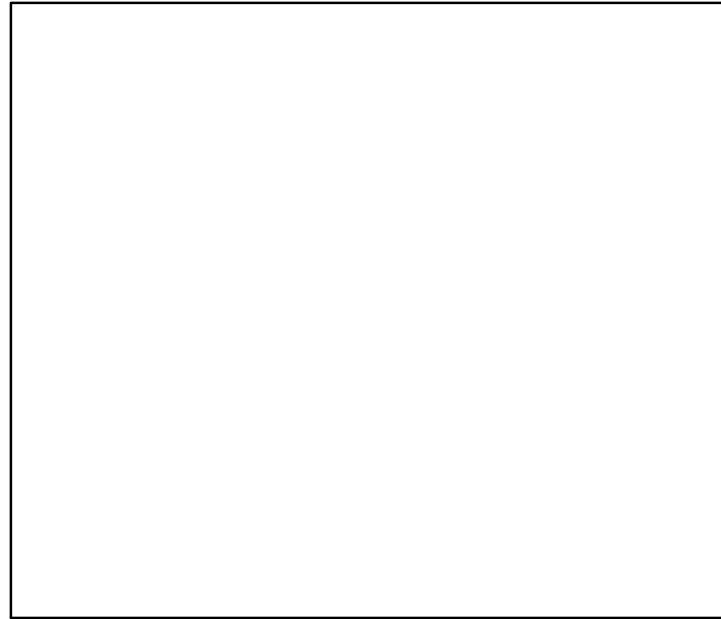
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



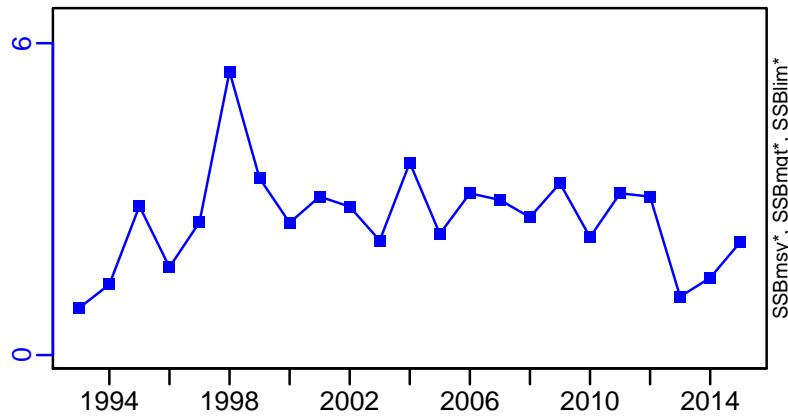
◆ Start Year ♦ End Year \* No Data

**Smalleyed ray Celtic Sea [SERAYVIIIf-g]**

**TB\***



**SSB-index (1993–2015–ICESIMP2018)**



SSBmsy\*, SSBmgt\*, SSBLim\*

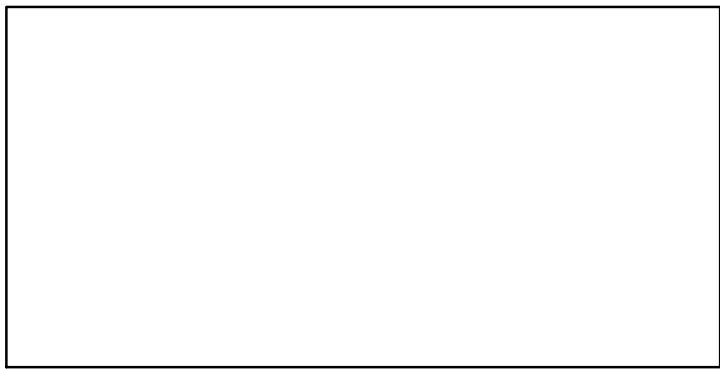
**TN \***



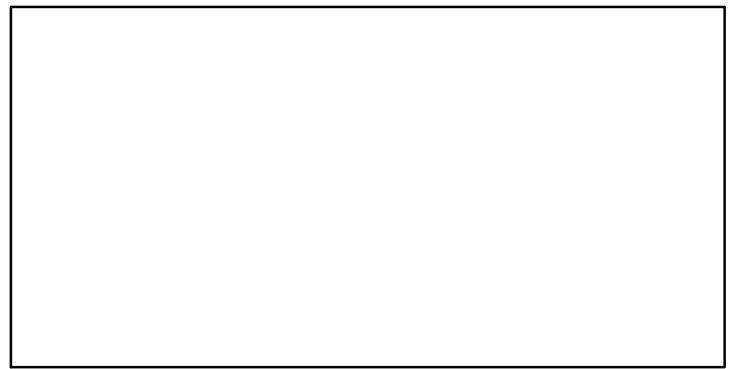
**F\***



**ER\***



**Recruits\***

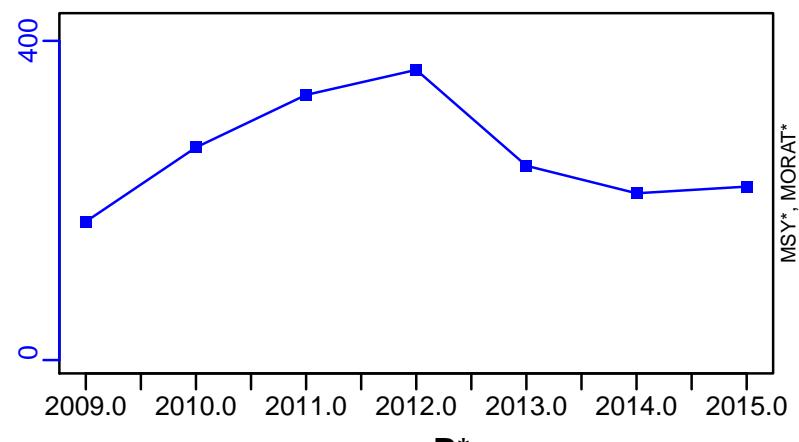


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

**Smalleyed ray Celtic Sea [SERAYVIIIf-g]**

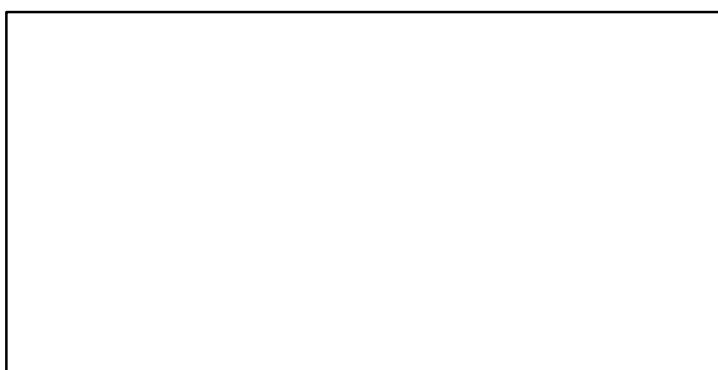
TL-MT, TC\*, RecC\* (1993–2015–ICESIMP2018)

**TAC\*, Cpair\*, Cadv\***

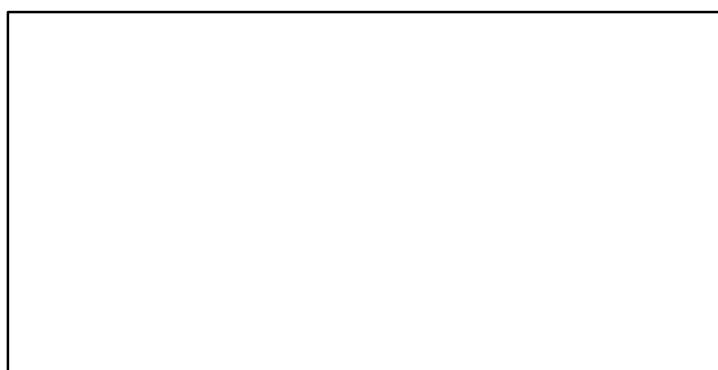


**survB\***

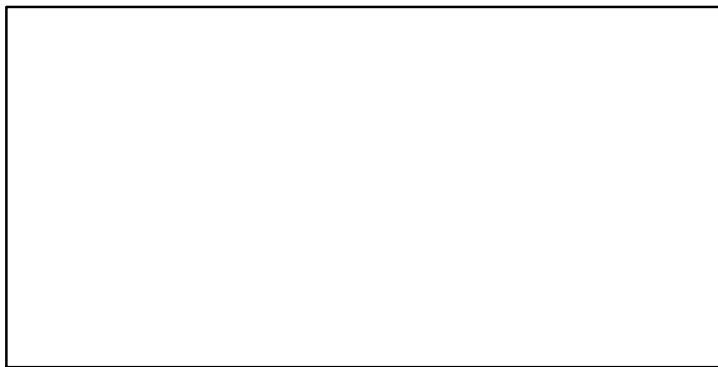
MSY\*, MORAT\*



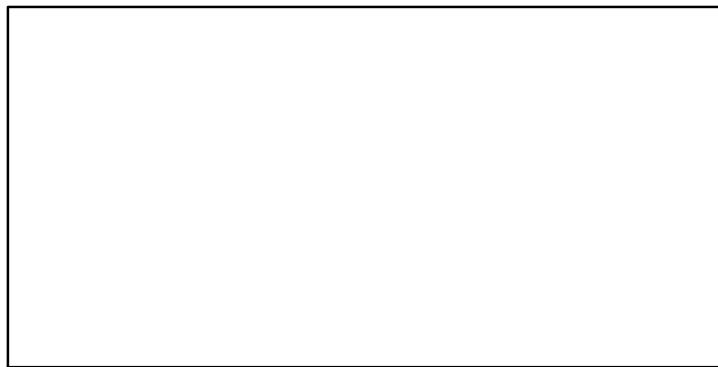
**CPUE\***



**EFFORT\***



**CdivMSY\***



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

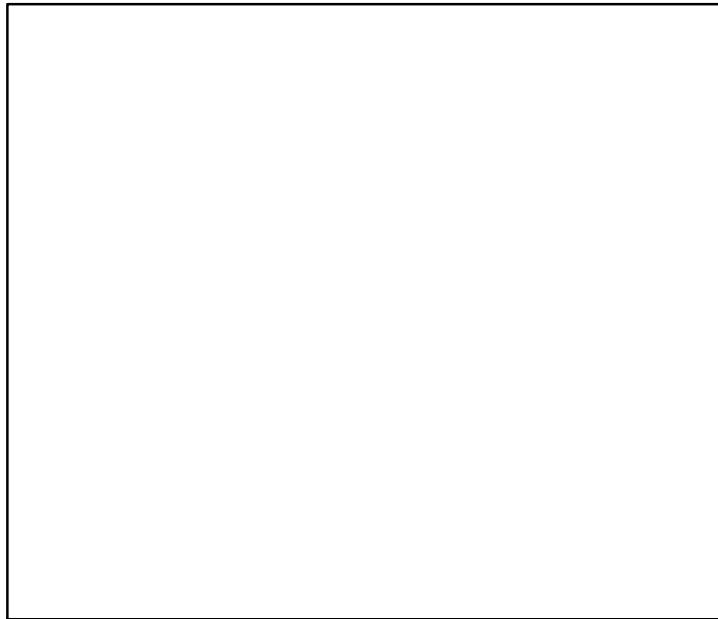
## Shagreen ray ICES 6-7 [SGRAYVI-VII]

<b>Metadata</b>	
<b>Scientific Name</b>	Leucoraja fullonica
<b>Current Assess ID</b>	WGEF-SGRAYVI-VII-2009-2015-ICESIMP2018
<b>Area</b>	ICES 6-7
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

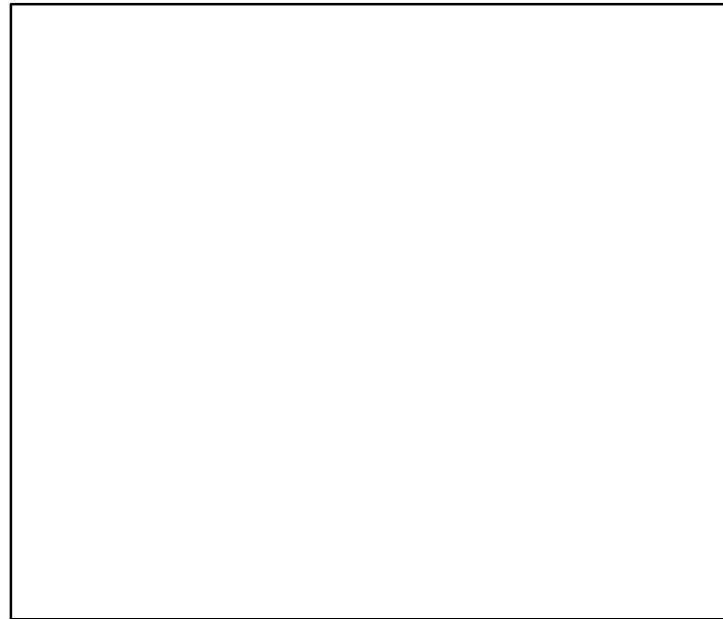
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	196		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

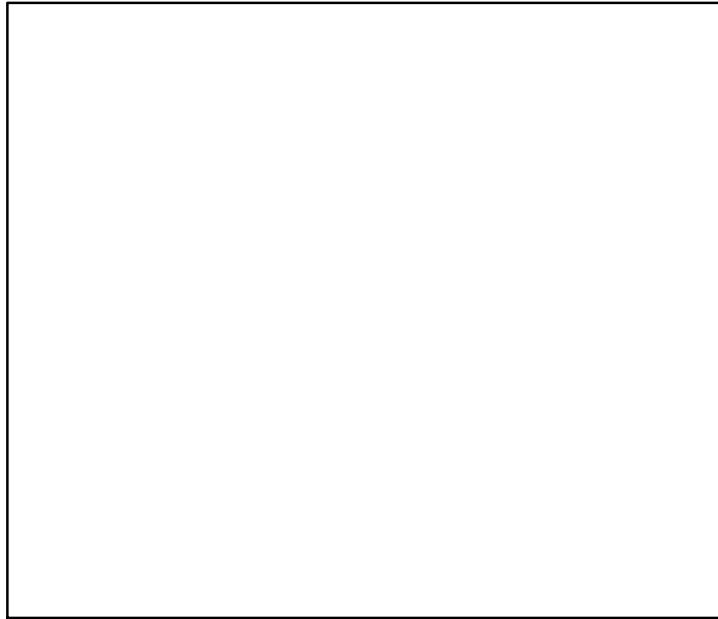
**Kobe MSY\***



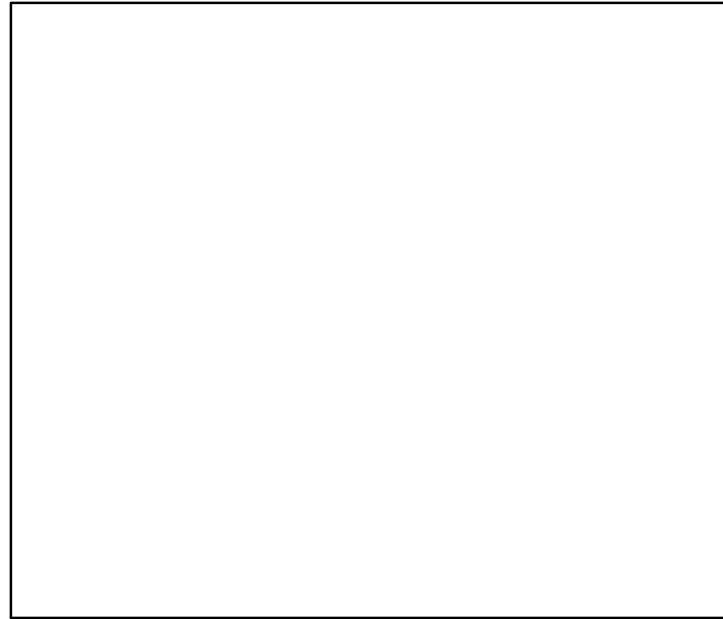
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

**Shagreen ray ICES 6–7 [SGRAYVI–VII]**

**TB\***



**SSB\***



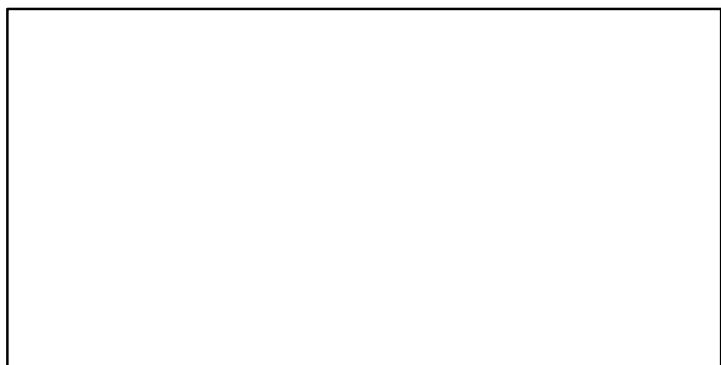
**TN \***



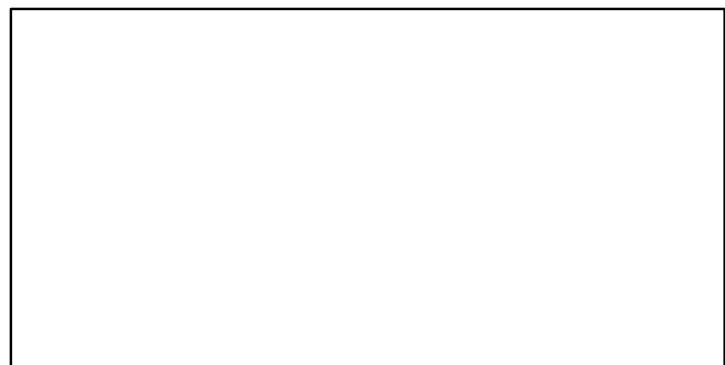
**F\***



**ER\***



**Recruits\***

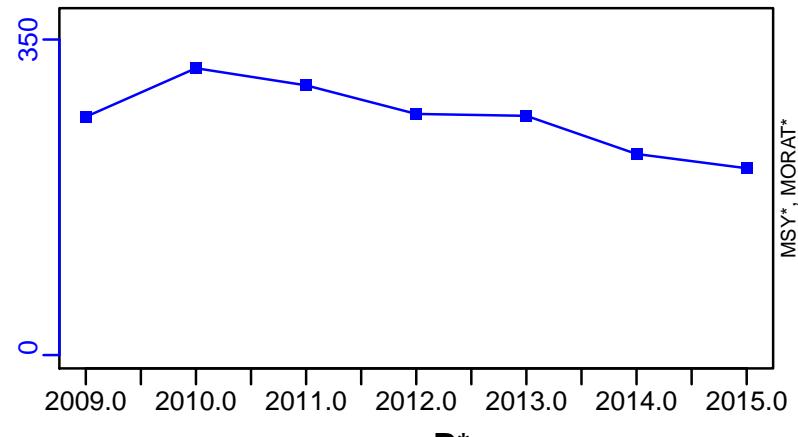


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

**Shagreen ray ICES 6–7 [SGRAYVI–VII]**

TL–MT, TC\*, RecC\* (2009–2015–ICESIMP2018)

**TAC\*, Cpair\*, Cadv\***



**survB\***

MSY\*, MORAT\*

**CPUE\***

**EFFORT\***

**CdivMSY\***



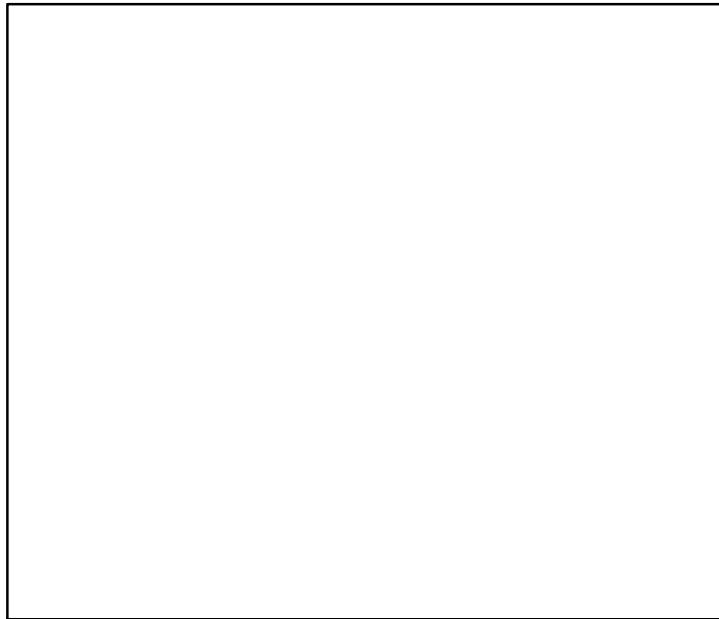
## Smooth hound Northeast Atlantic [SHSPPNEATL]

<b>Metadata</b>	
<b>Scientific Name</b>	Mustelus spp
<b>Current Assess ID</b>	WGEF-SHSPPNEATL-1997-2018-ICESIMP2021
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2018, 2016

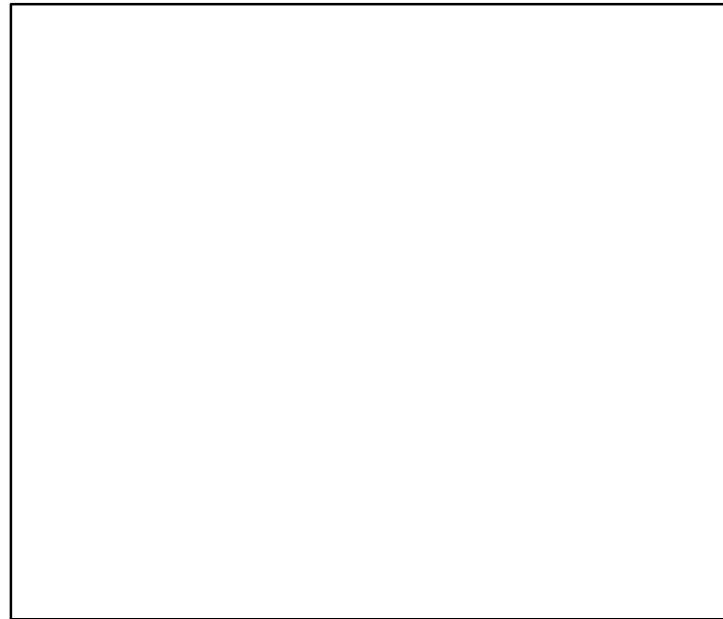
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	2.33	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	3684		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

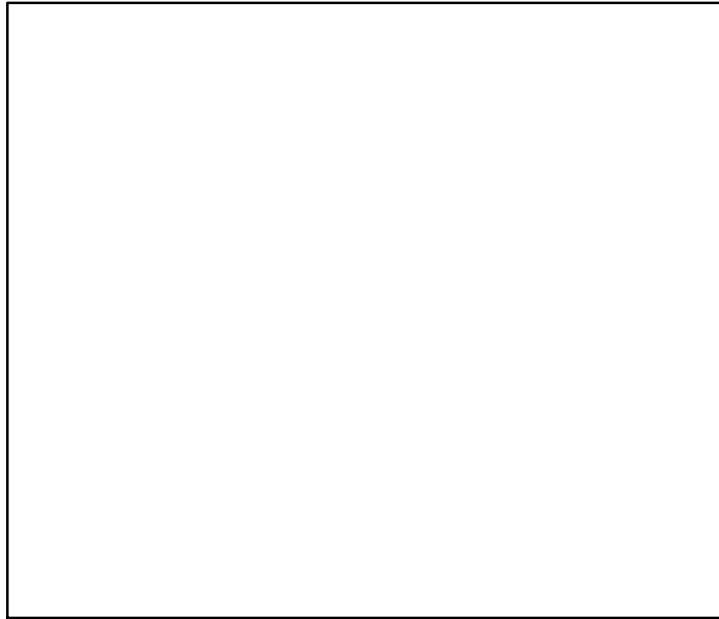
**Kobe MSY\***



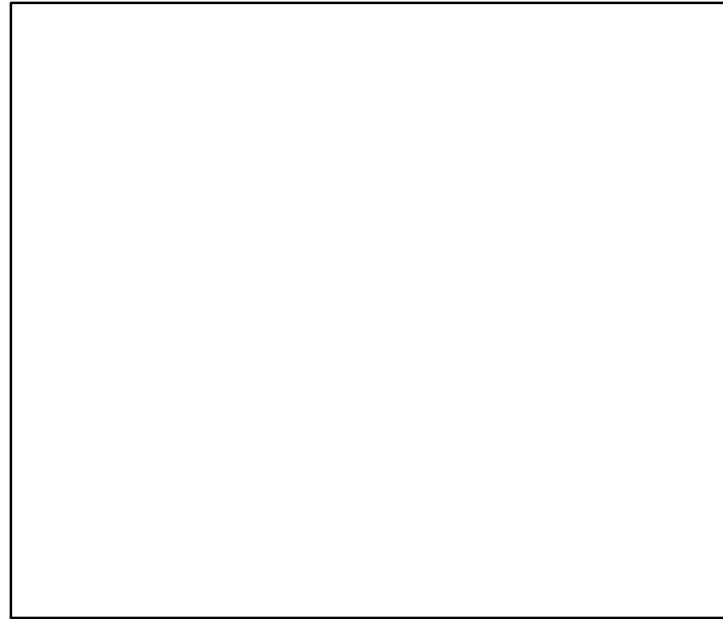
**Kobe MGT\***



**Spawner Recruit\***



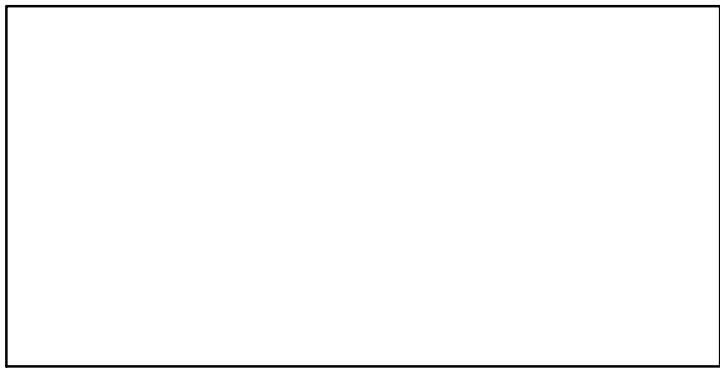
**Production\***



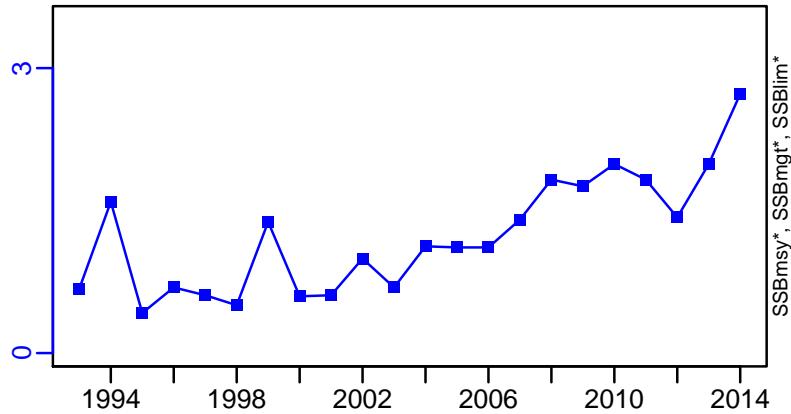
◆ Start Year   ◆ End Year   \* No Data

**Smooth hound Northeast Atlantic [SHSPPNEATL]**

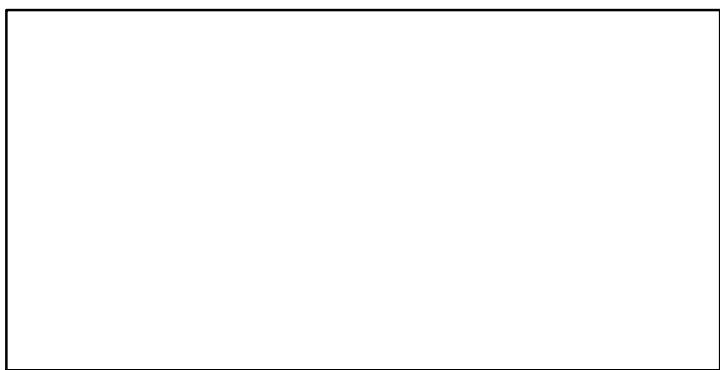
**TB\***



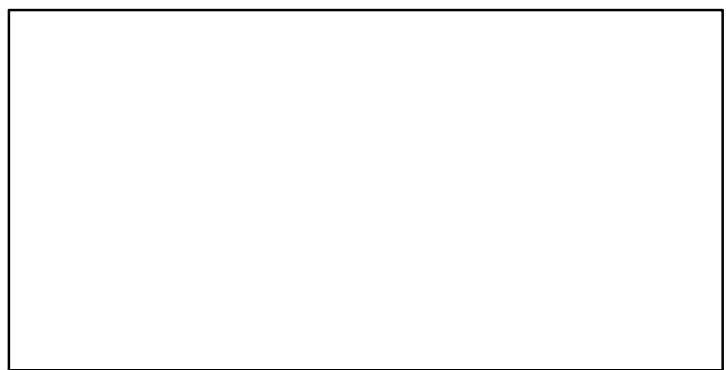
**SSB-index (1993–2014–ICESIMP2018)**



**TN \***



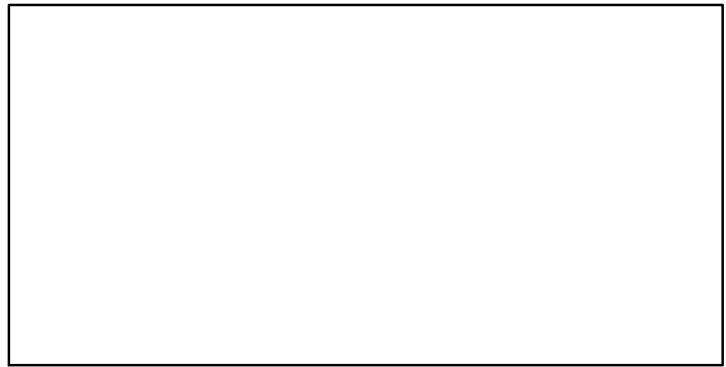
**F\***



**ER\***



**Recruits\***

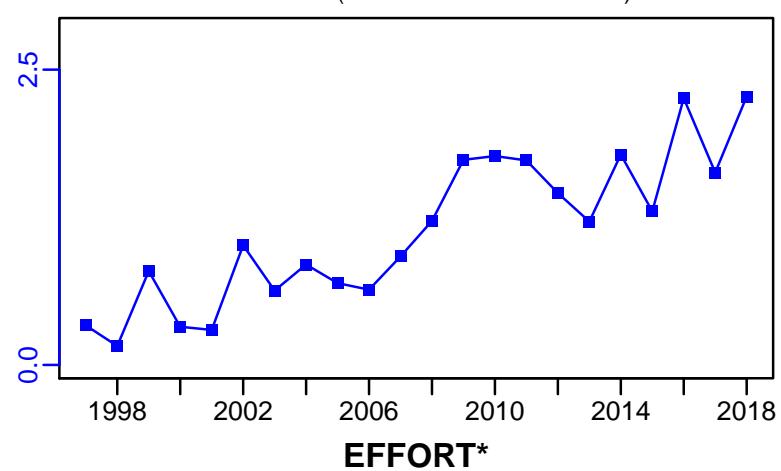
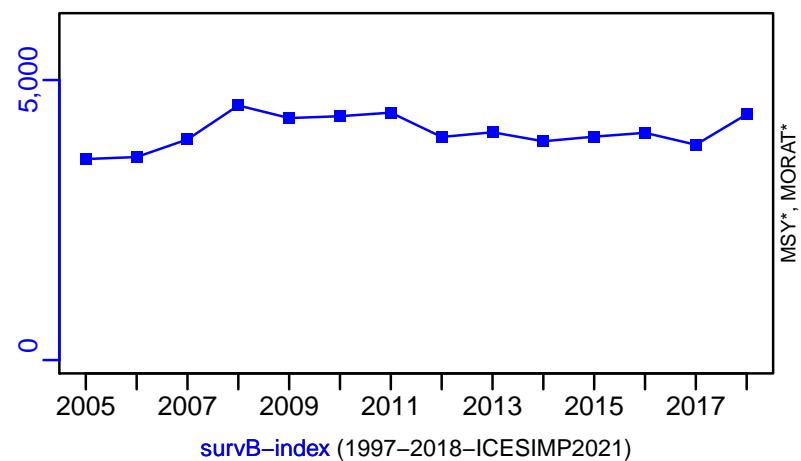


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

**Smooth hound Northeast Atlantic [SHSPPNEATL]**

TL-MT, TC\*, RecC\* (1997–2018–ICESIMP2021)

**TAC\*, Cpair\*, Cadv\***



**EFFORT\***

**CPUE\***

**CdivMSY\***



- |  |  |  |   |
|--|--|--|---|
| <ul style="list-style-type: none"> <li>■ 1st listed time series</li> <li>● 2nd listed time series</li> </ul> | <ul style="list-style-type: none"> <li>▲ 3rd listed time series</li> <li>• 4th listed time series</li> </ul> | <ul style="list-style-type: none"> <li>— MORAT</li> <li>- - MSY</li> </ul> | <ul style="list-style-type: none"> <li>* No Data</li> </ul> |
|--|--|--|---|

## Common sole Celtic Sea [SOLECS]

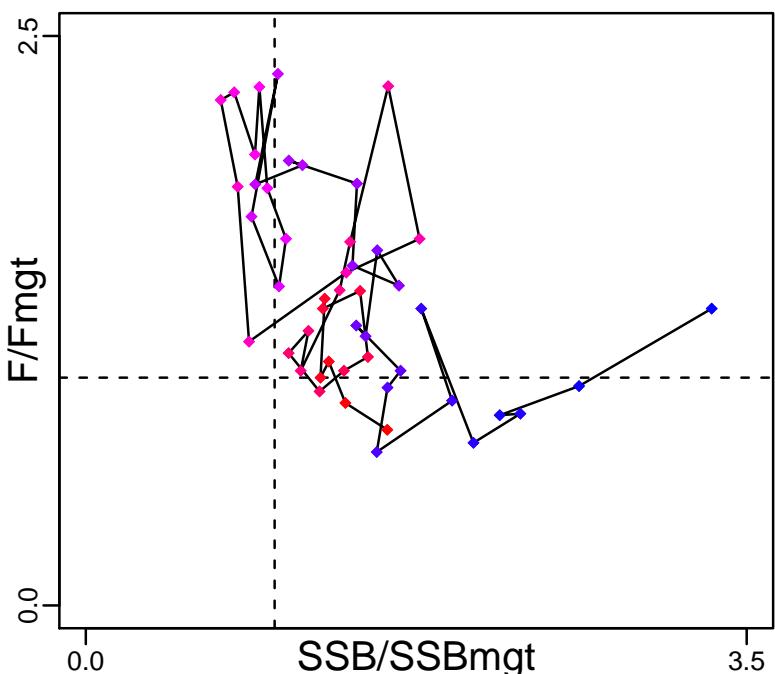
<b>Metadata</b>	
<b>Scientific Name</b>	Solea solea
<b>Current Assess ID</b>	WGCSE-SOLECS-1970-2019-ICESIMP2021
<b>Area</b>	Celtic Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2011

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2011	4199
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.274
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.593
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	2228
<b>Fmgt</b>	Fmgt-1/yr	2019	0.297
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	1133
<b>M</b>	M-1/yr	2011	0.1
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	1700
<b>Flim</b>	Flim-1/yr	2018	0.488
<b>ERlim</b>	-	-	-

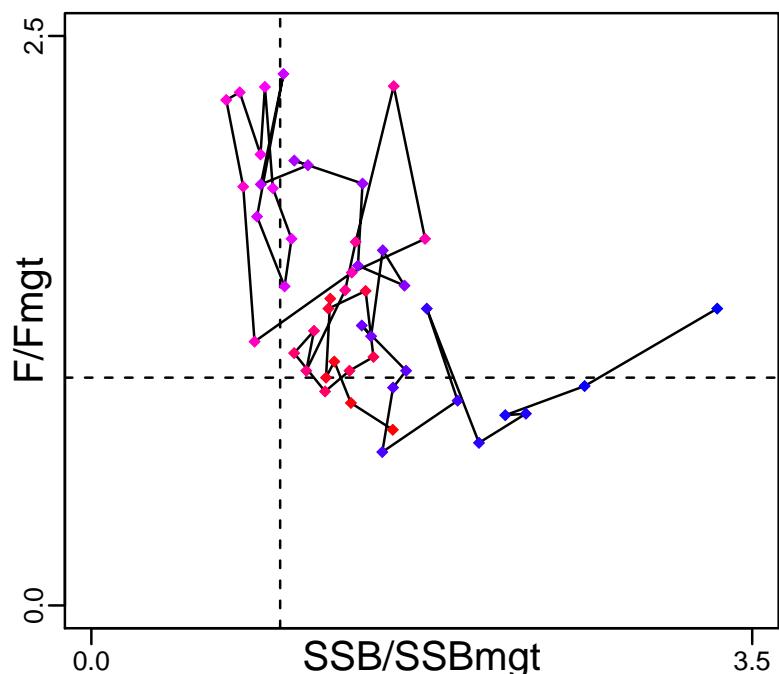
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	6924	-	-	
<b>SSB</b>	SSB-MT	2019	4420	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	4,975,000	-	1	
<b>F</b>	F-1/yr	2019	0.229	-	4 to 8	
<b>ER</b>	ER-calc-ratio	2019	0.156	-	-	
<b>TC</b>	TC-MT	2019	997			
<b>TL</b>	TL-MT	2019	850			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	1.293			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.456			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.263			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.984			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.771			
<b>ER/ERmgt</b>	-	-	-			

Common sole Celtic Sea [SOLECS]

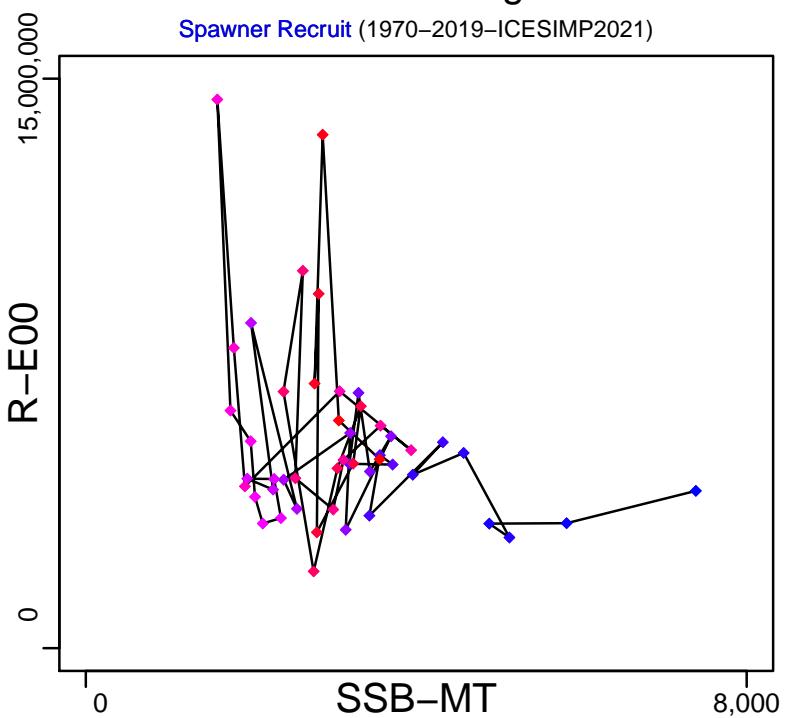
Kobe MSYpref (1970–2019–ICESIMP2021)



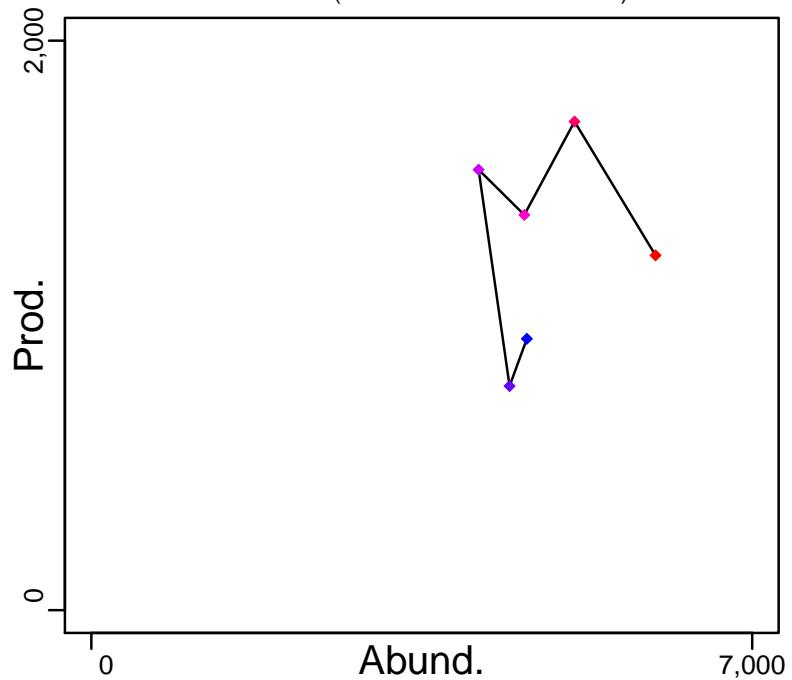
Kobe MGTpref (1970–2019–ICESIMP2021)



Spawner Recruit (1970–2019–ICESIMP2021)



Production (1970–2019–ICESIMP2021)

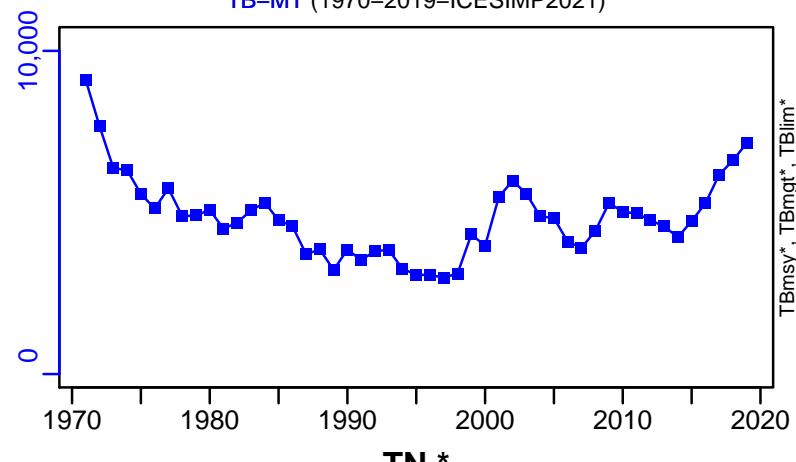


◆ Start Year	◆ End Year	*	No Data
--------------	------------	---	---------

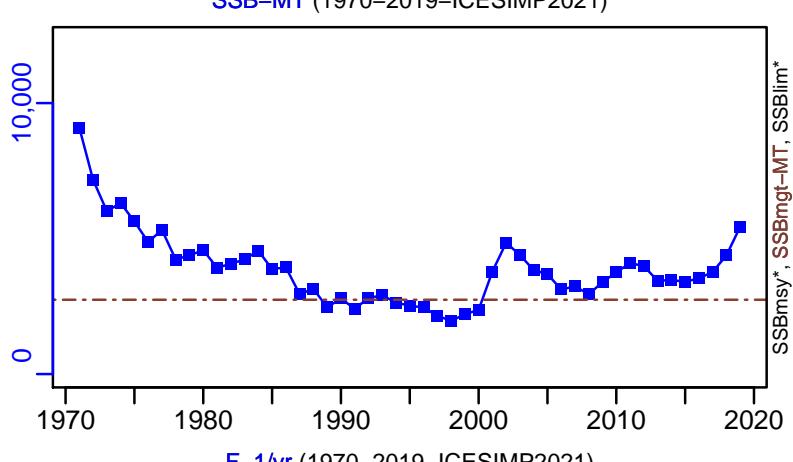
Common sole Celtic Sea [SOLECS]

TB-MT (1970–2019–ICESIMP2021)

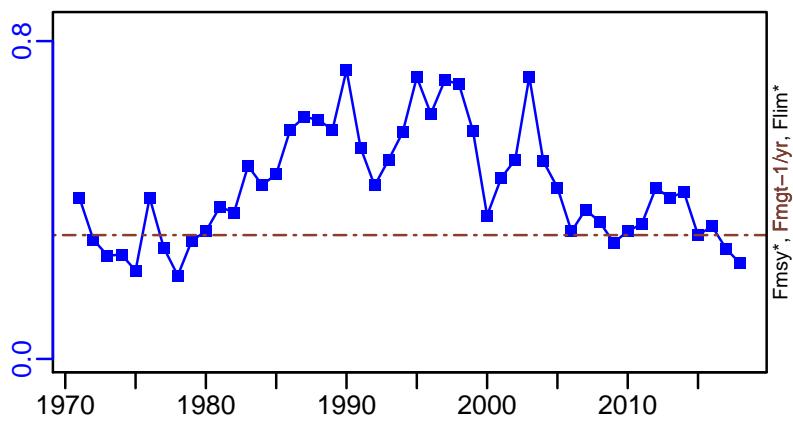
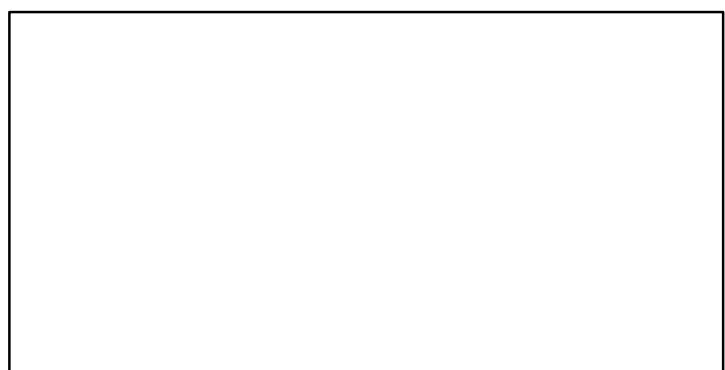
SSB-MT (1970–2019–ICESIMP2021)



TN \*

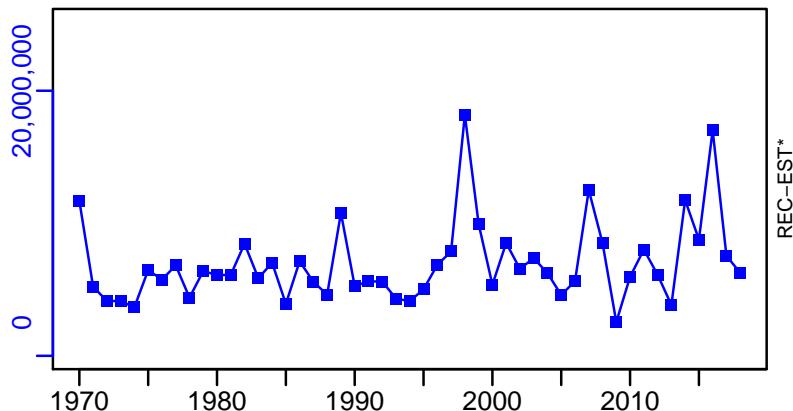
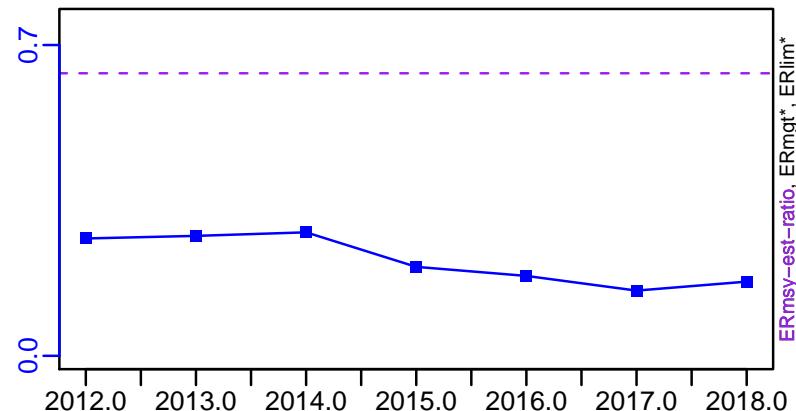


F-1/yr (1970–2019–ICESIMP2021)



ER-calc-ratio (1970–2019–ICESIMP2021)

R-E00 (1970–2019–ICESIMP2021)

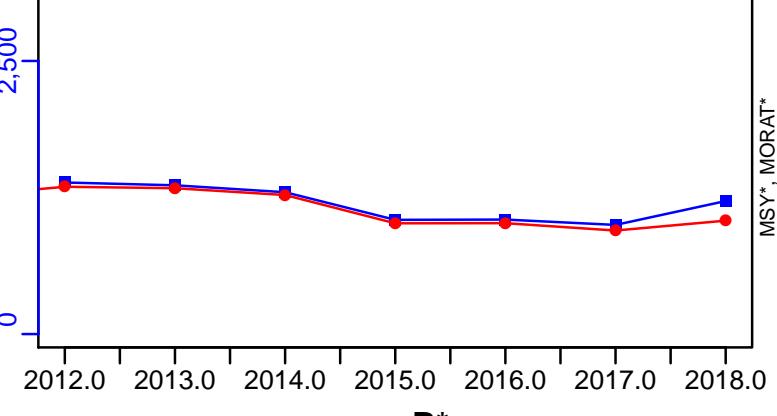


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

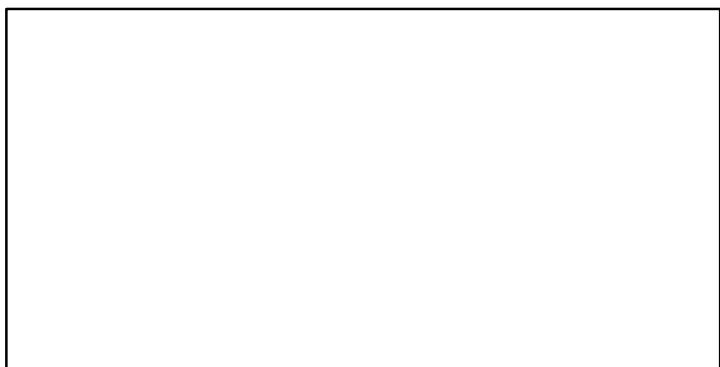
Common sole Celtic Sea [SOLECS]

TC-MT, TL-MT, RecC\* (1970–2019–ICESIMP2021)

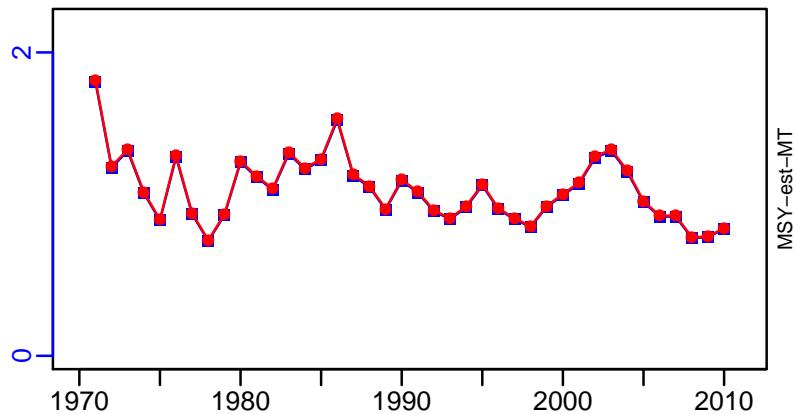
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1970–2011–NEUBAUER)



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

## Common sole ICES 22-24-3a [SOLEIIIa-2224]

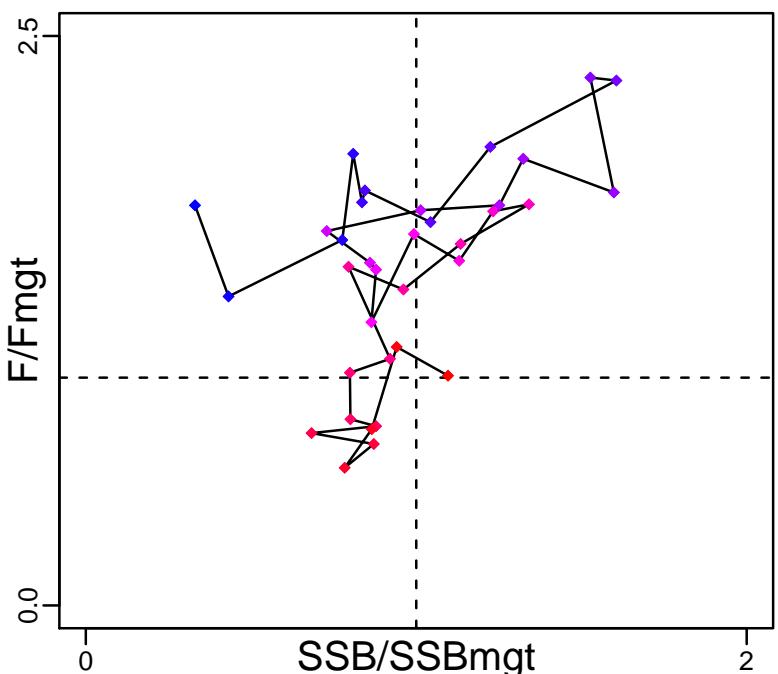
<b>Metadata</b>	
<b>Scientific Name</b>	Solea solea
<b>Current Assess ID</b>	WGBFAS-SOLEIIIa-2224-1983-2019-ICESIMP2021
<b>Area</b>	ICES 22-24-3a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2011

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2011	3213
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.23
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.293
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	2600
<b>Fmgt</b>	Fmgt-1/yr	2019	0.23
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	930
<b>M</b>	M-1/yr	2011	0.1
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	1850
<b>Flim</b>	Flim-1/yr	2018	0.315
<b>ERlim</b>	-	-	-

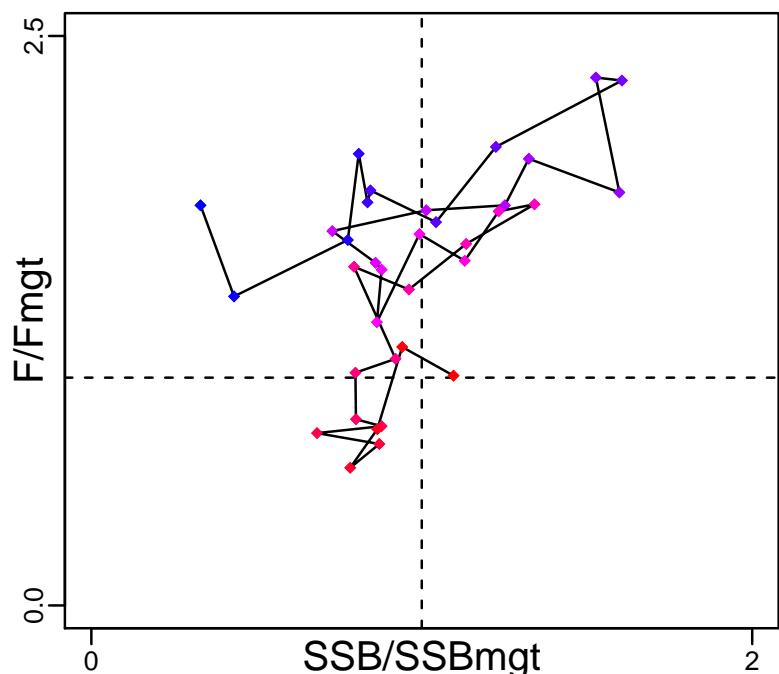
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2018	3460	Both	-
<b>SSB</b>	SSB-MT	2019	2802	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	2618	-	1
<b>F</b>	F-1/yr	2019	0.232	-	4 to 8
<b>ER</b>	ER-calc-ratio	2019	0.143	-	-
<b>TC</b>	TC-MT	2011	538		
<b>TL</b>	TL-MT	2019	434		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	0.787		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.213		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.488		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.078		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.009		
<b>ER/ERmgt</b>	-	-	-		

Common sole ICES 22–24–3a [SOLEIIIa-2224]

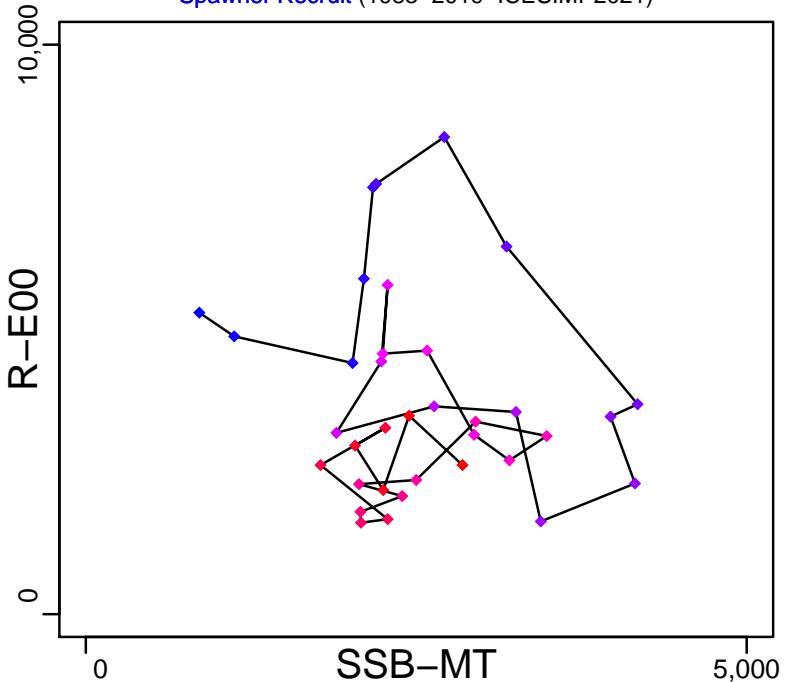
Kobe MSYpref (1983–2019–ICESIMP2021)



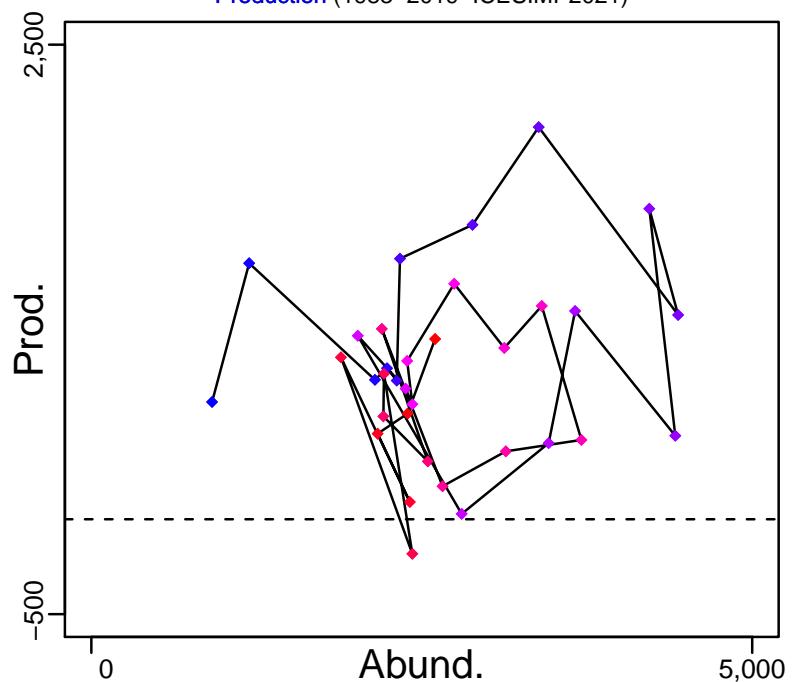
Kobe MGTpref (1983–2019–ICESIMP2021)



Spawner Recruit (1983–2019–ICESIMP2021)



Production (1983–2019–ICESIMP2021)

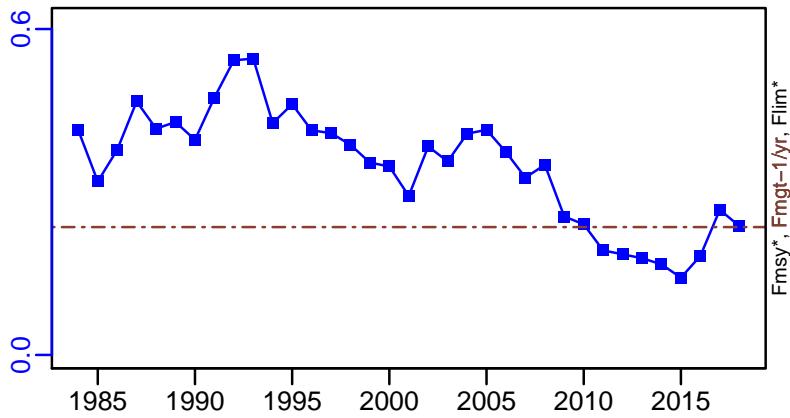
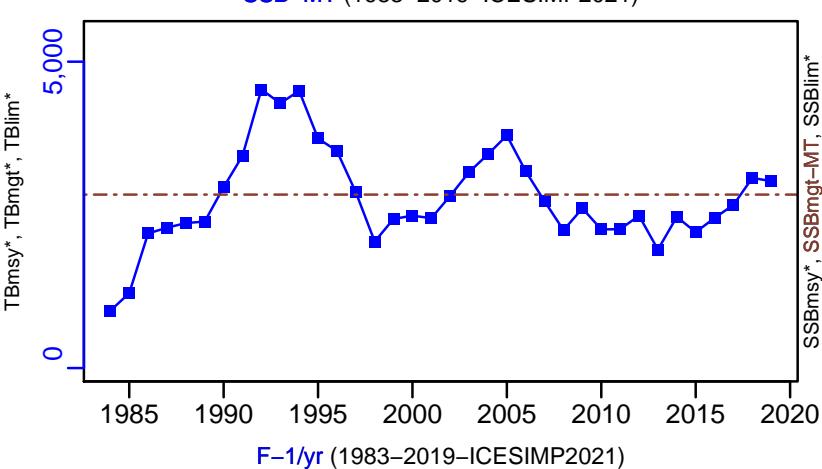
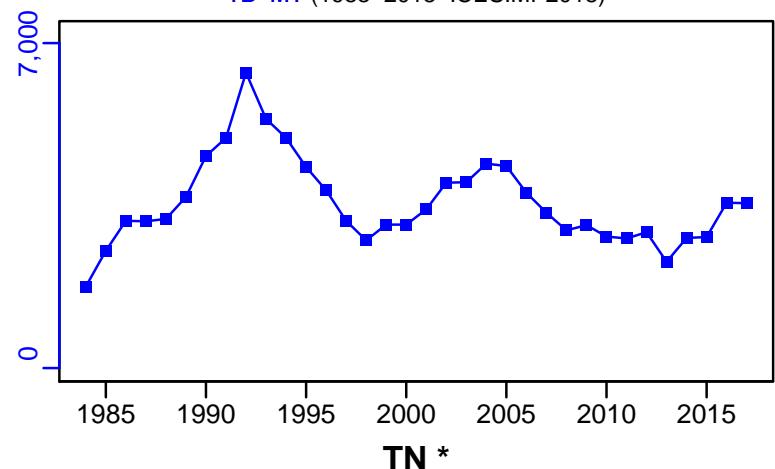


◆ Start Year   ◆ End Year   \* No Data

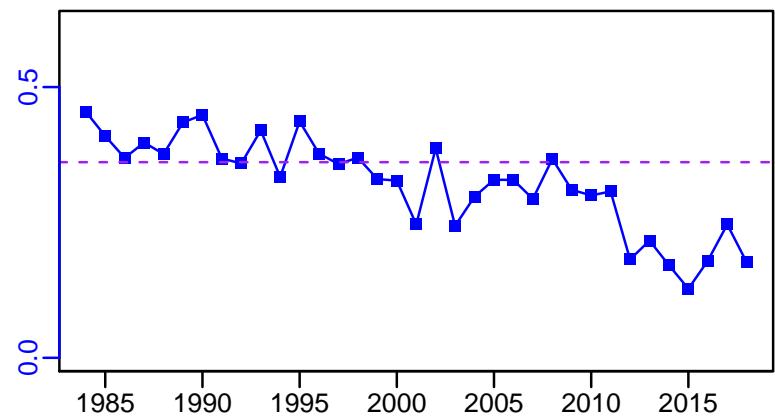
Common sole ICES 22–24–3a [SOLEIIIa-2224]

TB-MT (1983–2018–ICESIMP2018)

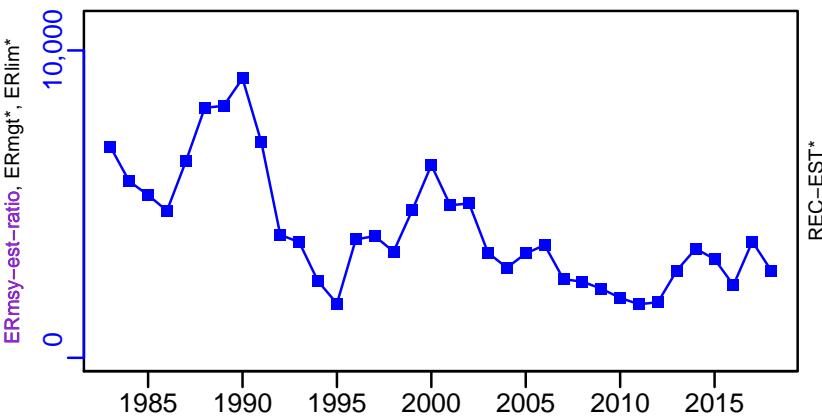
SSB-MT (1983–2019–ICESIMP2021)



ER-calc-ratio (1983–2019–ICESIMP2021)



R-E00 (1983–2019–ICESIMP2021)

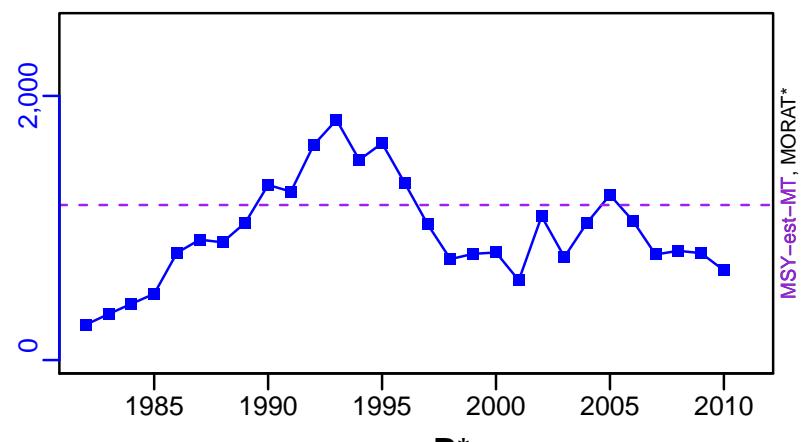


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

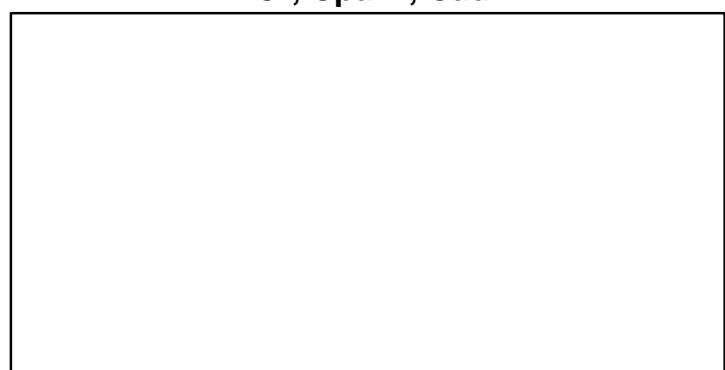
Common sole ICES 22–24–3a [SOLEIIIa-2224]

TC-MT, TL\*, RecC\* (1982–2011–NEUBAUER)

TAC\*, Cpair\*, Cadv\*



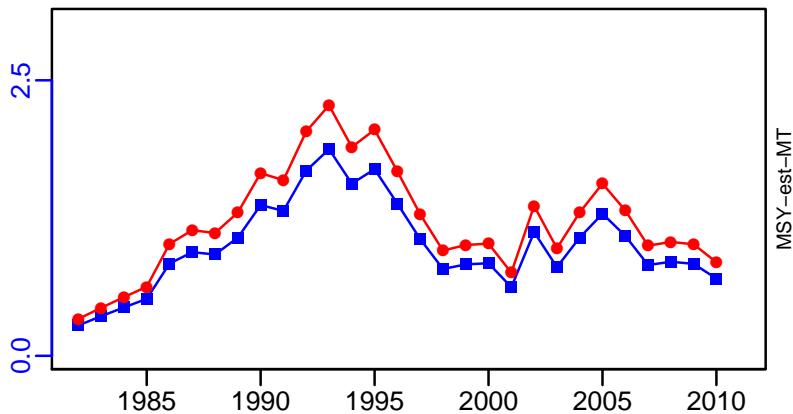
CPUE\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1982–2011–NEUBAUER)



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

## Common sole Irish Sea [SOLEIS]

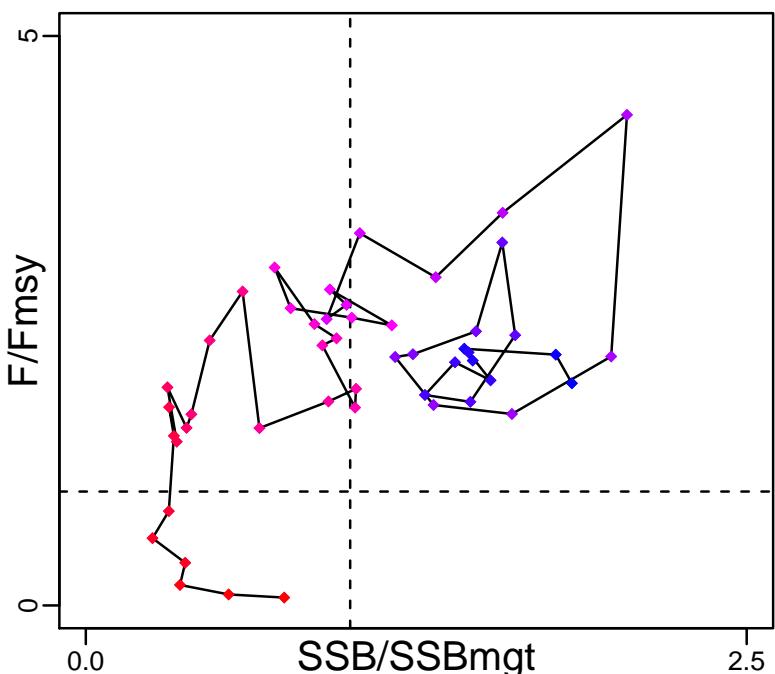
<b>Metadata</b>	
<b>Scientific Name</b>	Solea solea
<b>Current Assess ID</b>	WGCSSE-SOLEIS-1968-2019-ICESIMP2021
<b>Area</b>	Irish Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2011

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2011	7686
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.2
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.149
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	3500
<b>Fmgt</b>	Fmgt-1/yr	2019	0.2
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	1355
<b>M</b>	M-1/yr	2011	0.1
<b>TBlim</b>	TBlim-MT	2011	2200
<b>SSBlim</b>	SSBlim-MT	2018	2500
<b>Flim</b>	Flim-1/yr	2018	0.29
<b>ERlim</b>	-	-	-

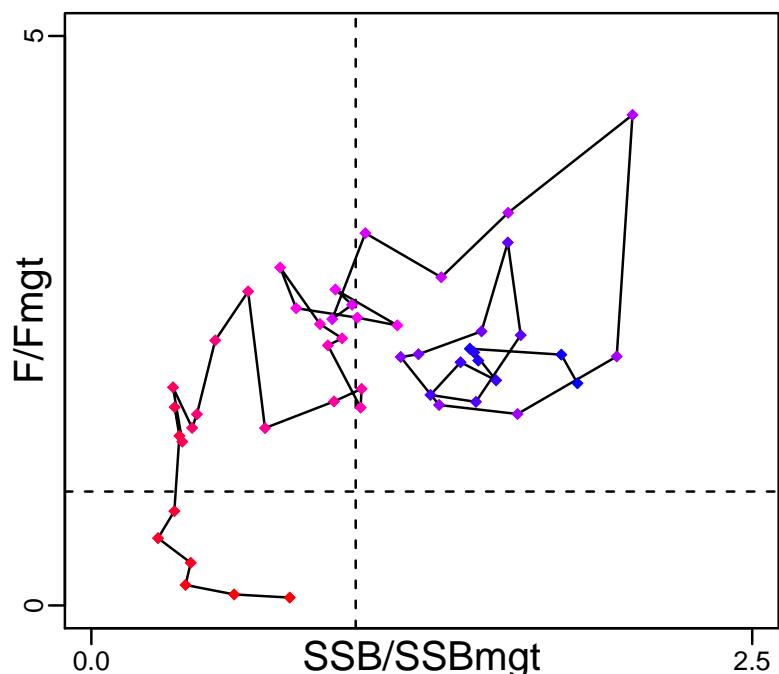
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	3427	-	-	
<b>SSB</b>	SSB-MT	2019	3079	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	1339	-	2	
<b>F</b>	F-1/yr	2019	0.014	-	4 to 7	
<b>ER</b>	ER-calc-ratio	2019	0.012	-	-	
<b>TC</b>	TC-MT	2019	38			
<b>TL</b>	TL-MT	2019	36			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	0.191			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.069			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.082			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.88			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.069			
<b>ER/ERmgt</b>	-	-	-			

### Common sole Irish Sea [SOLEIS]

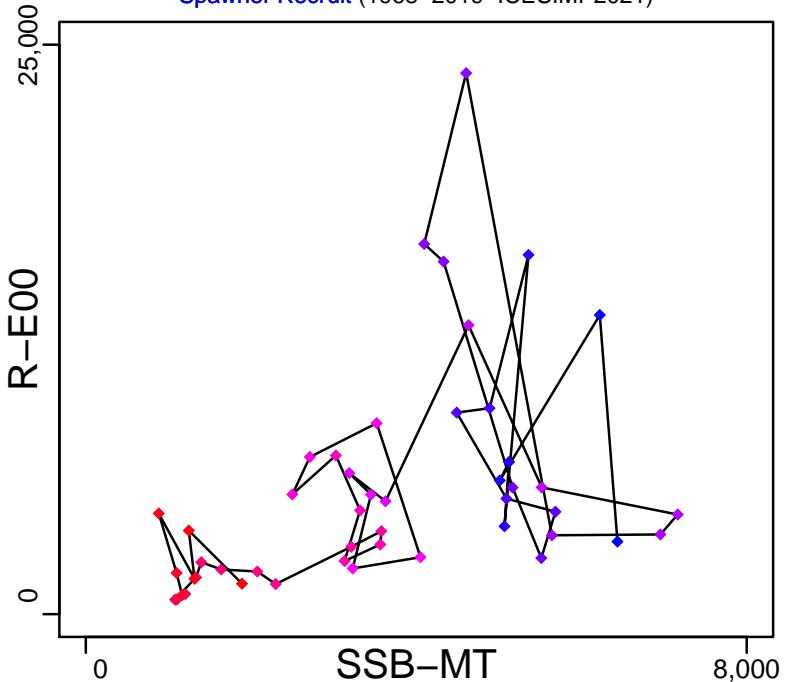
Kobe MSYpref (1968–2019–ICESIMP2021)



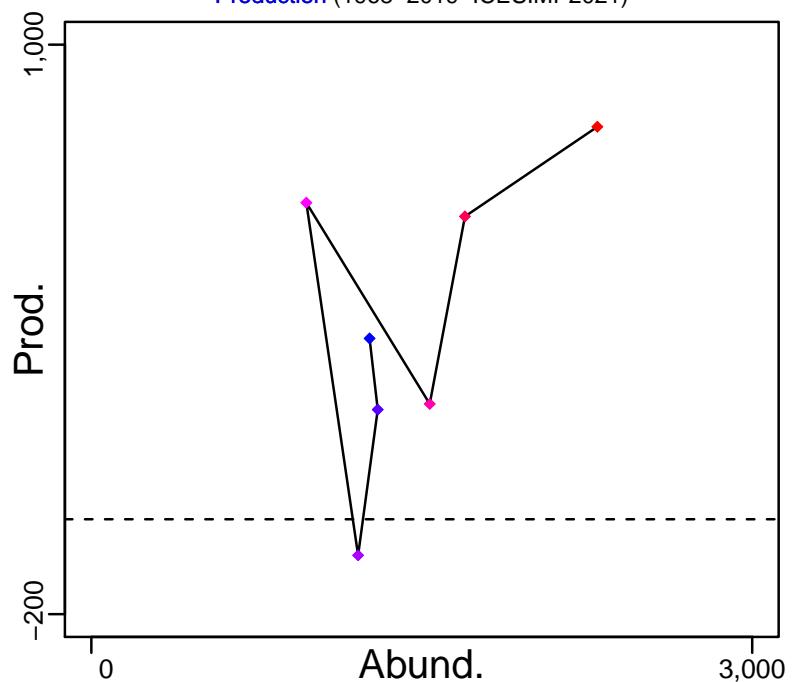
Kobe MGTpref (1968–2019–ICESIMP2021)



Spawner Recruit (1968–2019–ICESIMP2021)



Production (1968–2019–ICESIMP2021)

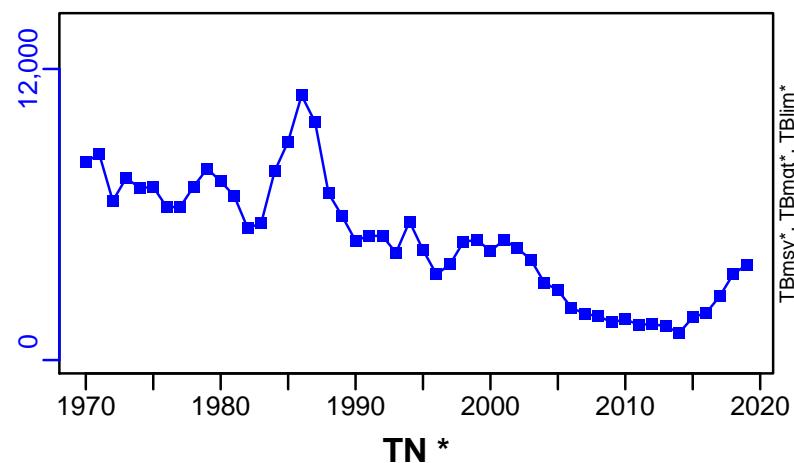


◆ Start Year ♦ End Year \* No Data

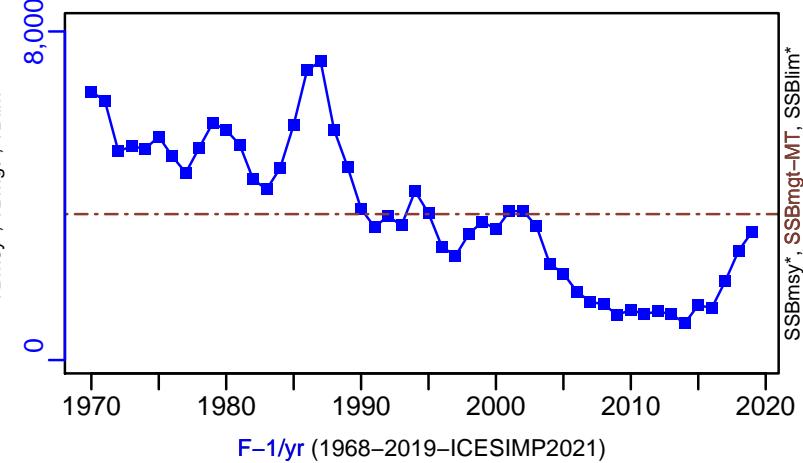
### Common sole Irish Sea [SOLEIS]

TB-MT (1968–2019–ICESIMP2021)

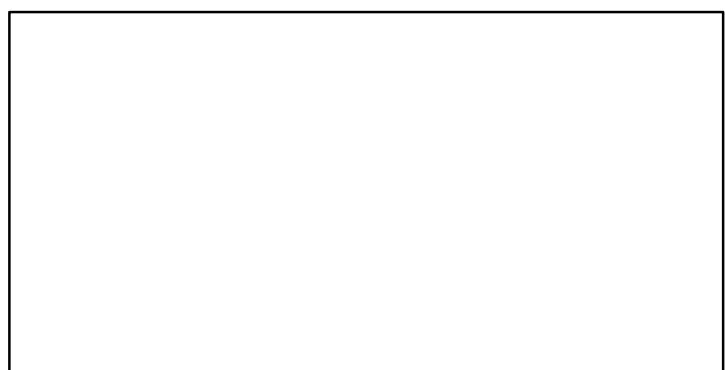
SSB-MT (1968–2019–ICESIMP2021)



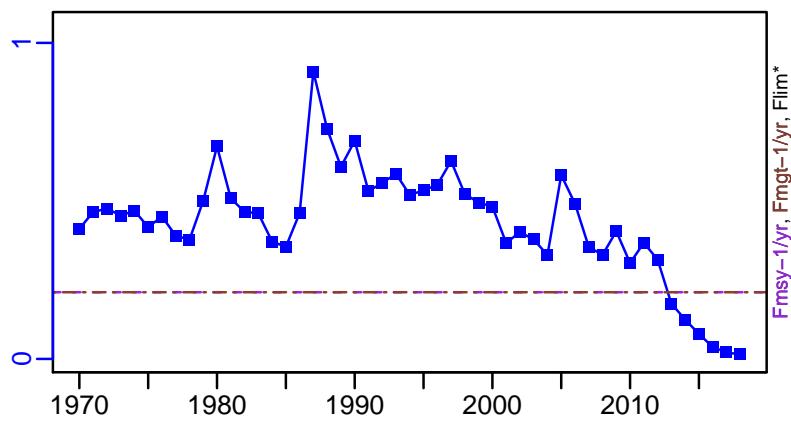
TN \*



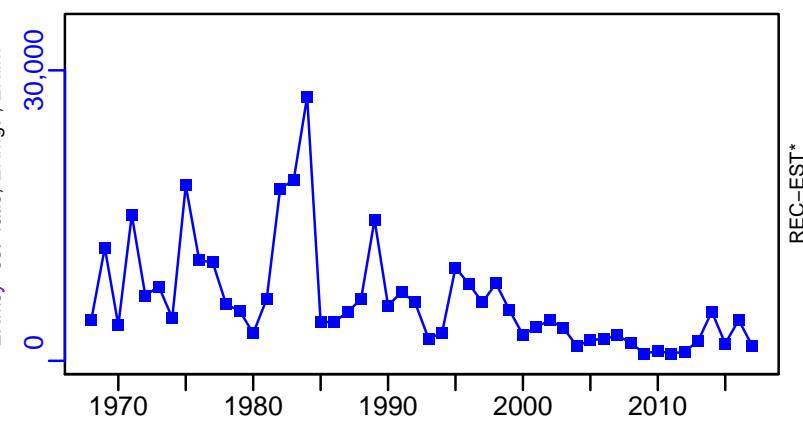
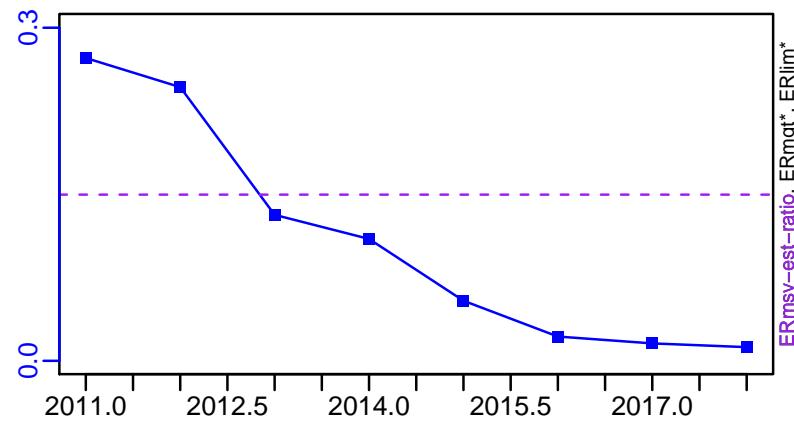
SSBmsy\*, TBmg\*, TBlim\*



ER-calc-ratio (1968–2019–ICESIMP2021)



F-1/yr (1968–2019–ICESIMP2021)



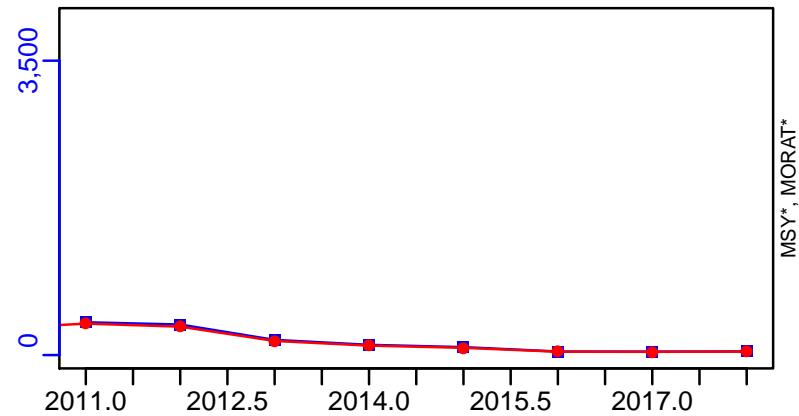
R-E00 (1968–2019–ICESIMP2021)

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

**Common sole Irish Sea [SOLEIS]**

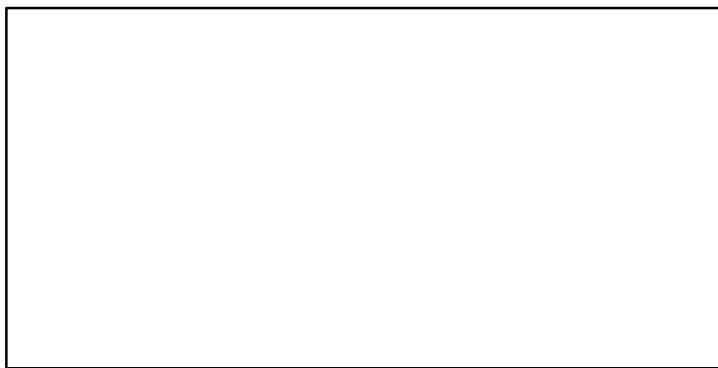
TC-MT, TL-MT, RecC\* (1968–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*

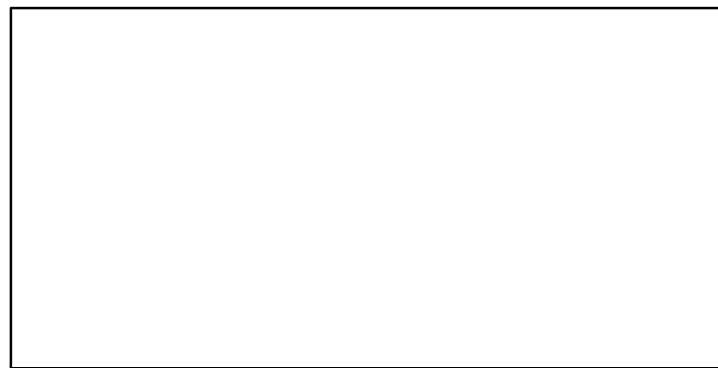


MSY\*, MORAT\*

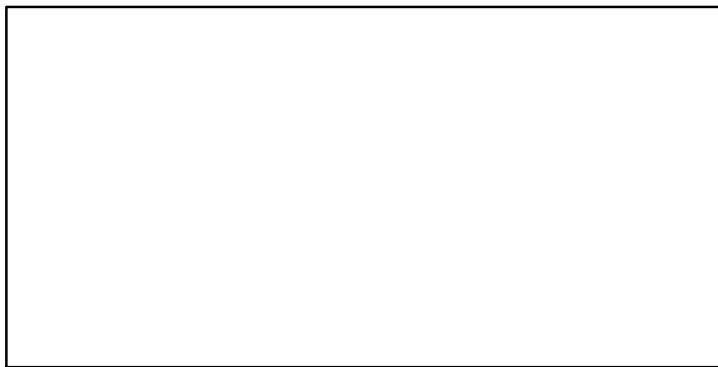
**survB\***



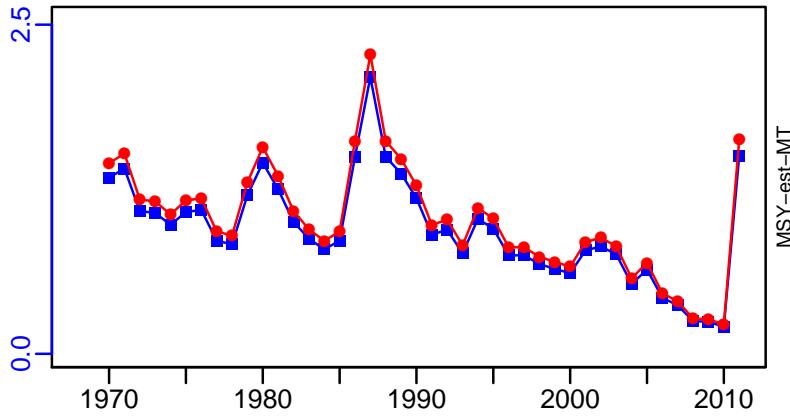
**CPUE\***



**EFFORT\***



TL-MT/MSY-est-MT, CdiveMEANC-ratio, (1968–2011–NEUBAUER)



MSY-est-MT

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

## Common sole North Sea [SOLENS]

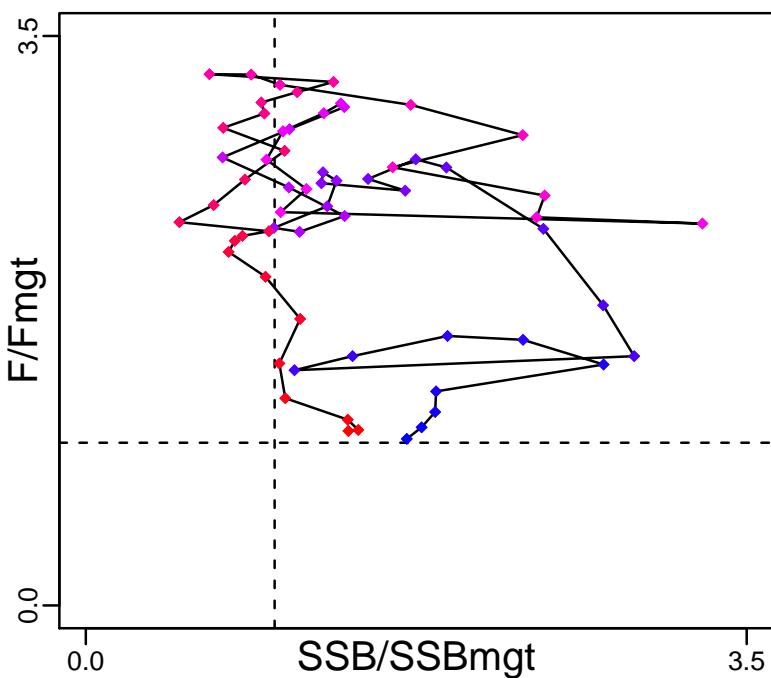
<b>Metadata</b>	
<b>Scientific Name</b>	Solea solea
<b>Current Assess ID</b>	WGNSSK-SOLENS-1956-2019-ICESIMP2021
<b>Area</b>	North Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2010, 2013, 2014, 2015, 2016, 2017, 2018, 2019

<b>Reference Points</b>				
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>	
<b>TBmsy</b>	-	-	-	
<b>SSBmsy</b>	SSBmsy-est-MT	2010	52,678	
<b>Fmsy</b>	Fmsy-1/yr	2018	0.2	
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.479	
<b>TBmgt</b>	-	-	-	
<b>SSBmgt</b>	SSBmgt-MT	2019	37,000	
<b>Fmgt</b>	Fmgt-1/yr	2019	0.202	
<b>ERmgt</b>	-	-	-	
<b>TB0</b>	-	-	-	
<b>SSB0</b>	-	-	-	
<b>MSY</b>	MSY-est-MT	2010	25,055	
<b>M</b>	M-1/yr	2010	0.1	
<b>TBlim</b>	TBlim-MT	2010	25,000	
<b>SSBlim</b>	SSBlim-MT	2018	26,300	
<b>Flim</b>	Flim-1/yr	2018	0.62	
<b>ERlim</b>	-	-	-	

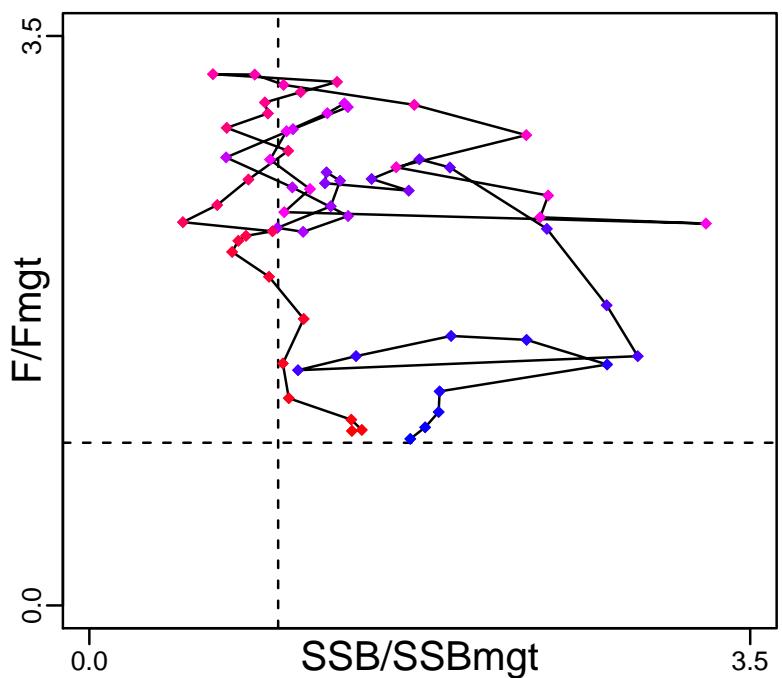
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2018	64,800	Both	-	
<b>SSB</b>	SSB-MT	2019	55,591	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	476,477,000	-	1	
<b>F</b>	F-1/yr	2019	0.217	-	2 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.172	-	-	
<b>TC</b>	TC-MT	2017	15,400			
<b>TL</b>	TL-MT	2019	11,199			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2010	0.668			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.09			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.359			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.502			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.073			
<b>ER/ERmgt</b>	-	-	-			

Common sole North Sea [SOLENS]

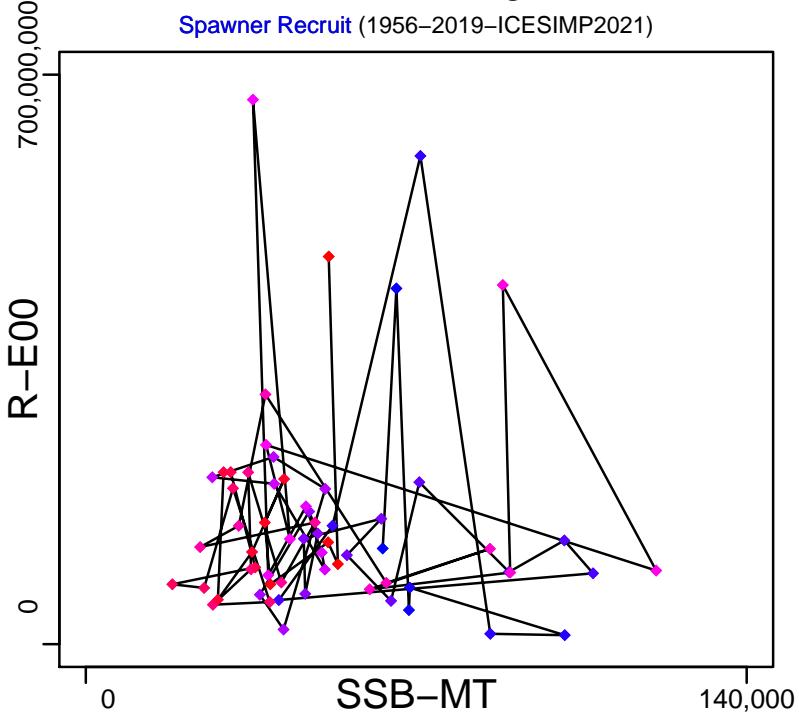
Kobe MSYpref (1956–2019–ICESIMP2021)



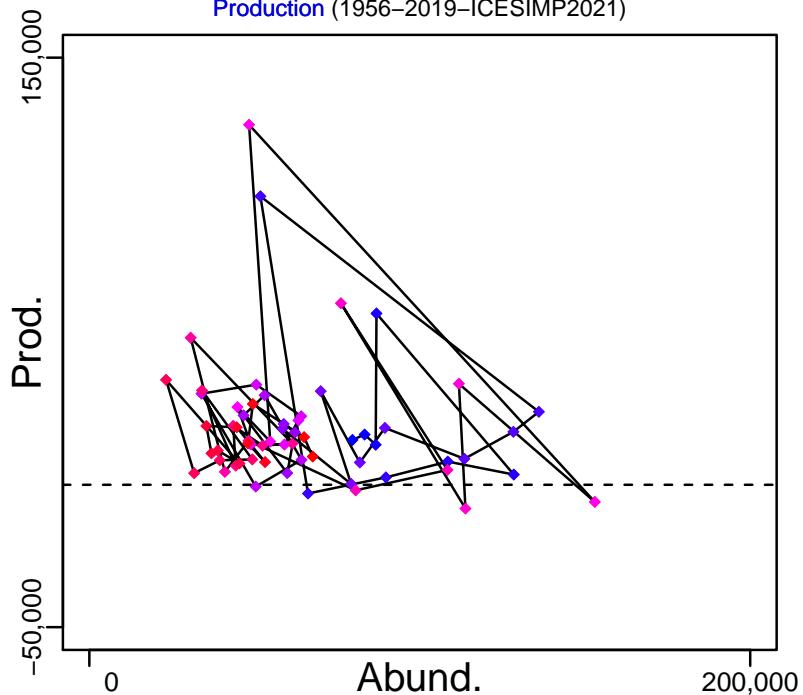
Kobe MGTpref (1956–2019–ICESIMP2021)



Spawner Recruit (1956–2019–ICESIMP2021)



Production (1956–2019–ICESIMP2021)

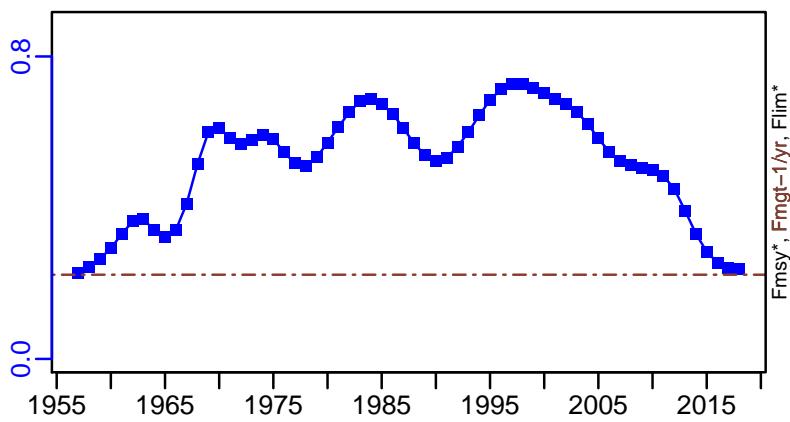
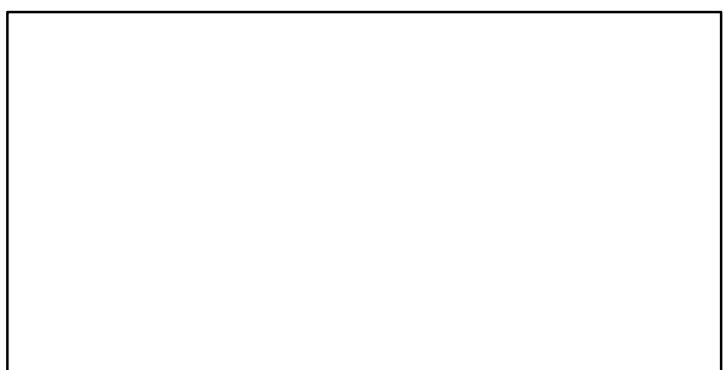
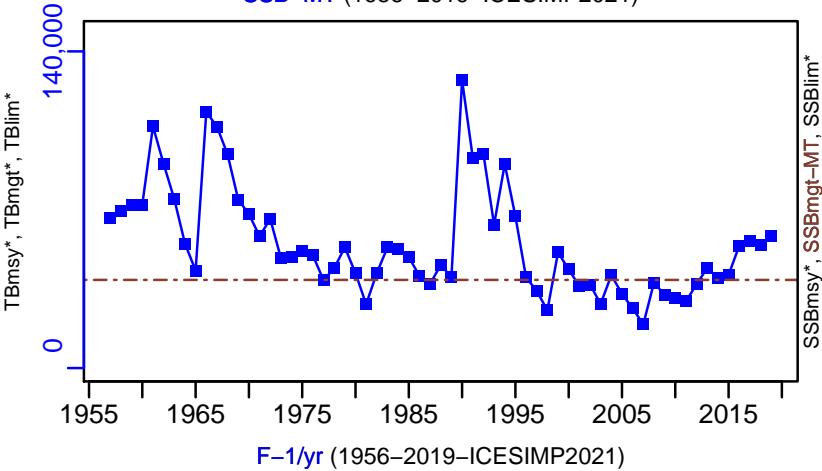
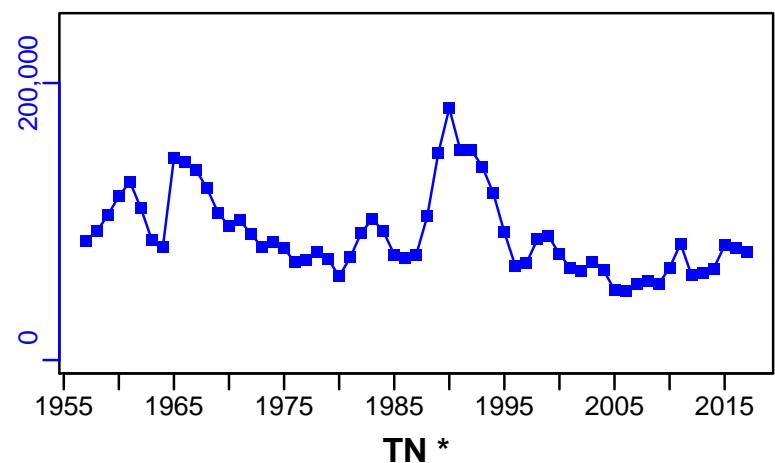


◆ Start Year ◆ End Year \* No Data

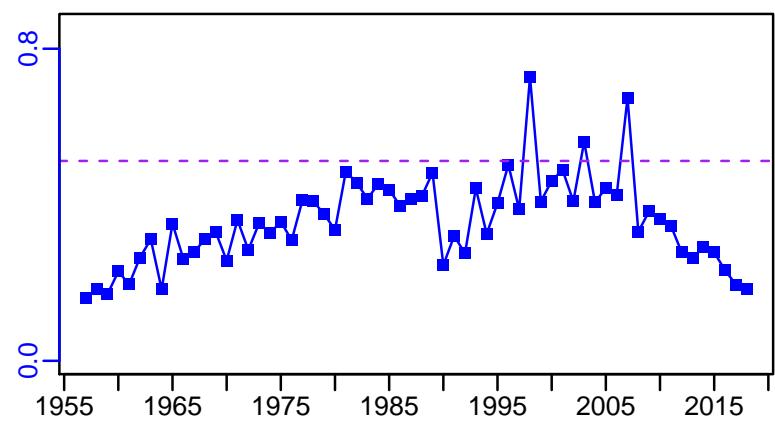
### Common sole North Sea [SOLENS]

TB-MT (1956–2018–ICESIMP2018)

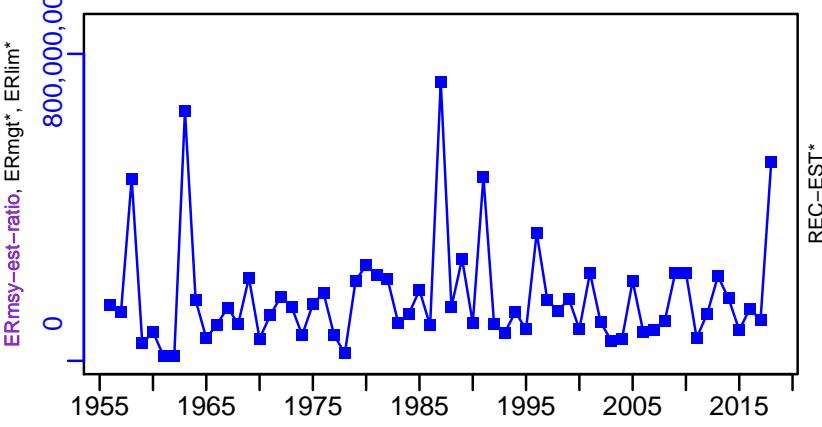
SSB-MT (1956–2019–ICESIMP2021)



ER-calc-ratio (1956–2019–ICESIMP2021)



R-E00 (1956–2019–ICESIMP2021)

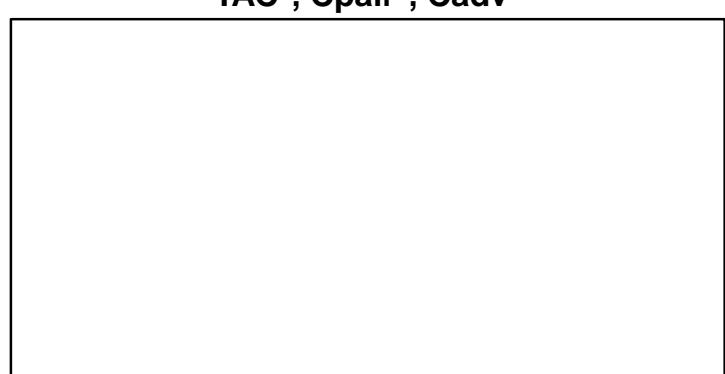
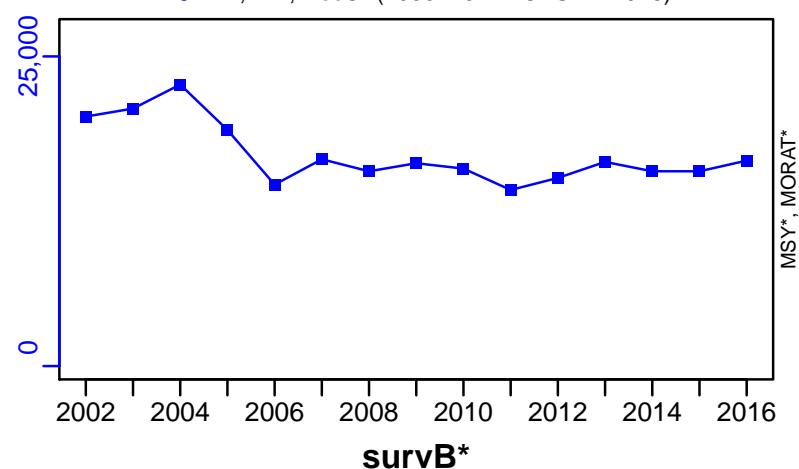


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	* No Data

**Common sole North Sea [SOLENS]**

TC-MT, TL\*, RecC\* (1956–2017–ICESIMP2018)

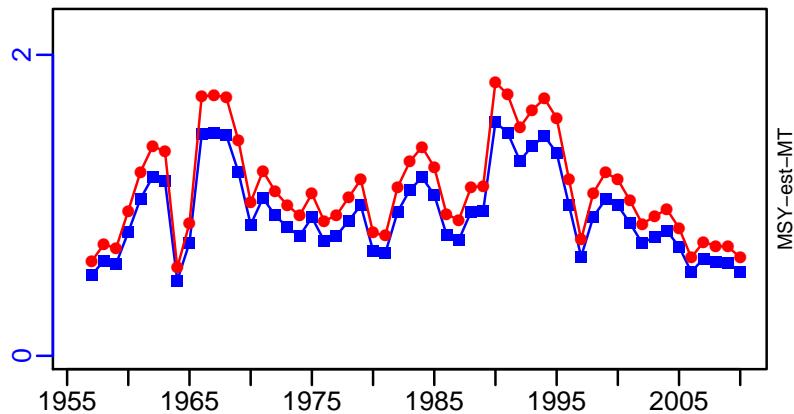
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1956–2010–NEUBAUER)



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

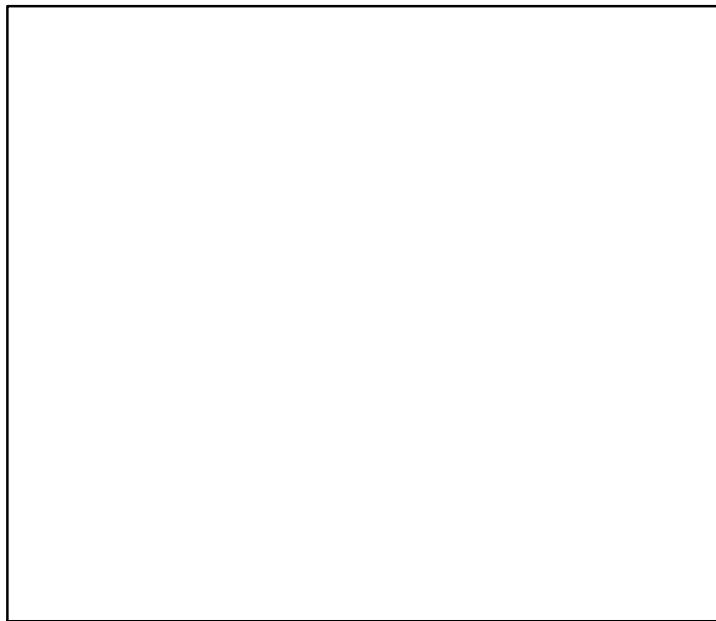
## Common sole ICES 7bc [SOLEVIIbc]

<b>Metadata</b>	
<b>Scientific Name</b>	Solea solea
<b>Current Assess ID</b>	WGCSSE-SOLEVIIbc-1908-2016-ICESIMP2018
<b>Area</b>	ICES 7bc
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2016, 2015

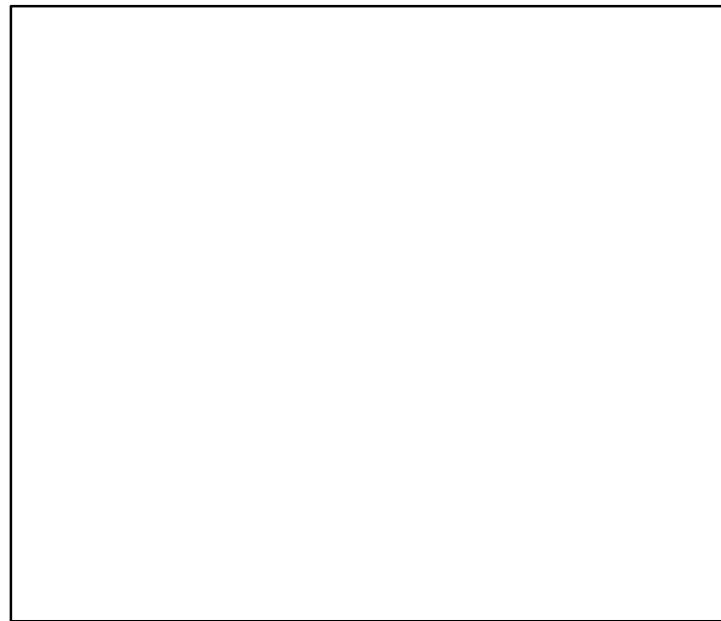
<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim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

<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	43		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

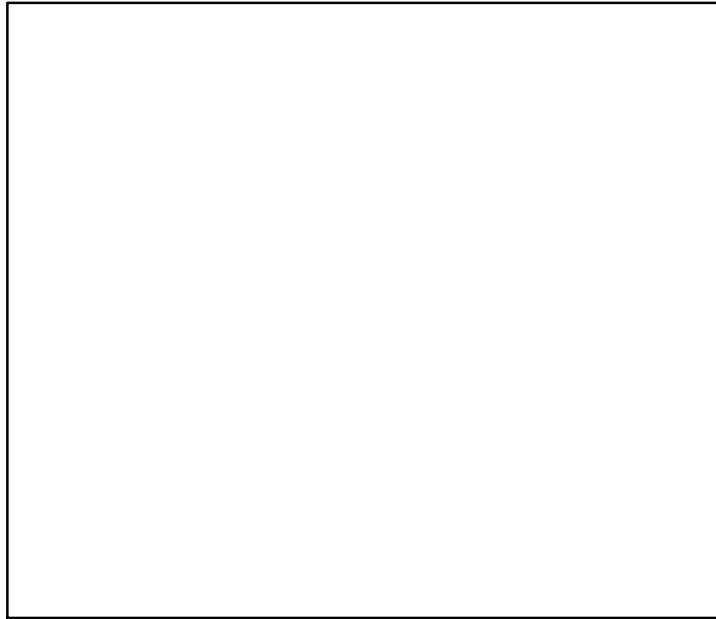
**Kobe MSY\***



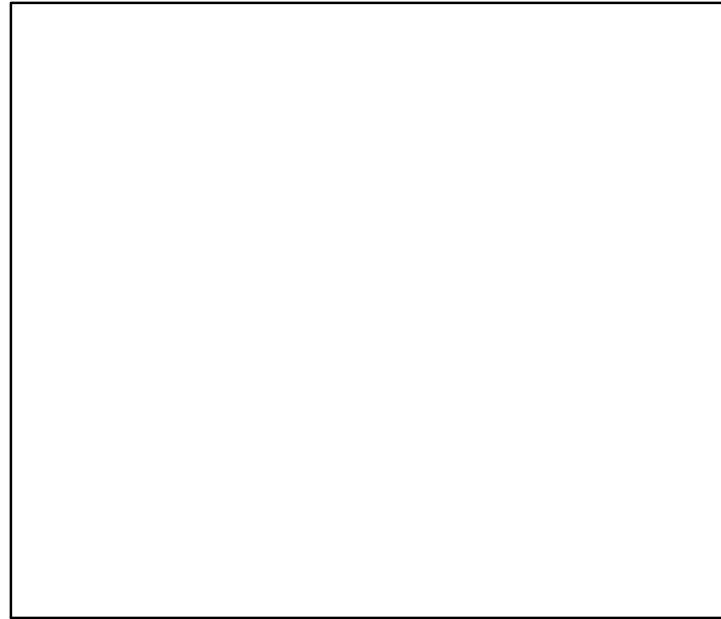
**Kobe MGT\***



**Spawner Recruit\***



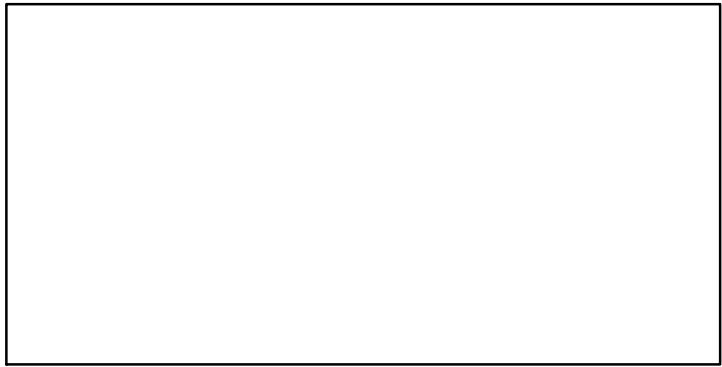
**Production\***



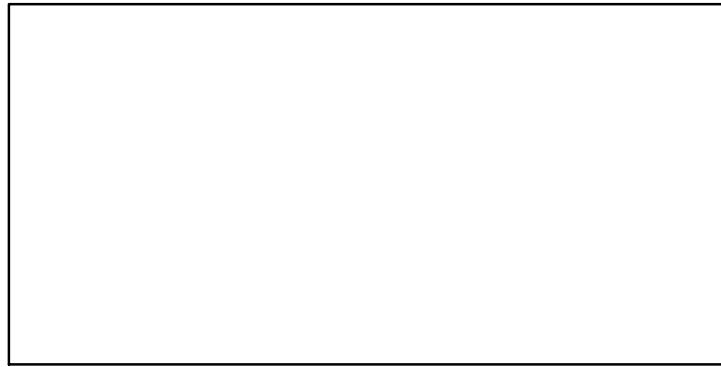
◆ Start Year ♦ End Year \* No Data

Common sole ICES 7bc [SOLEVIIbc]

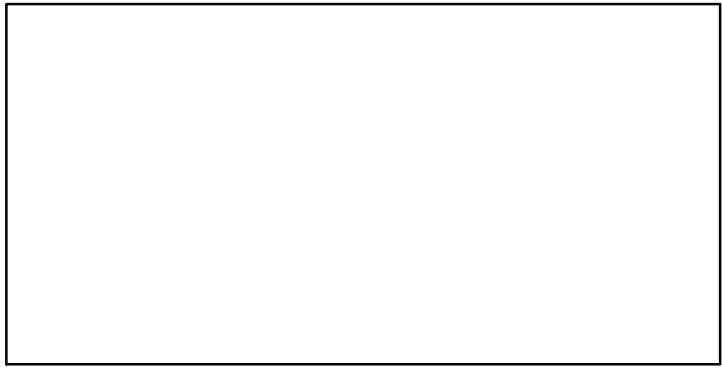
**TB\***



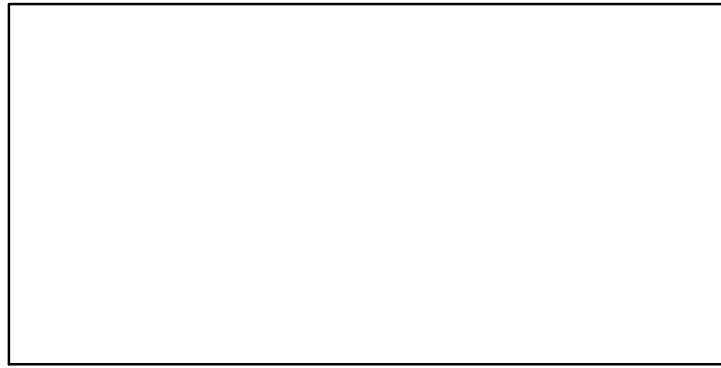
**SSB\***



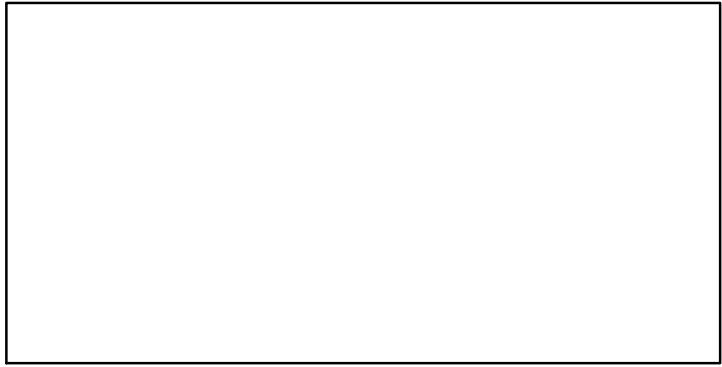
**TN \***



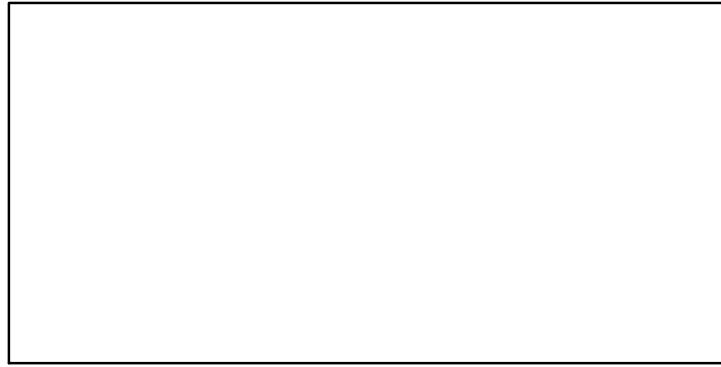
**F\***



**ER\***



**Recruits\***

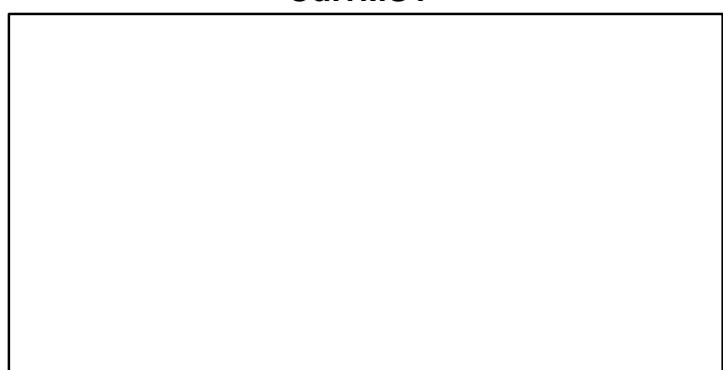
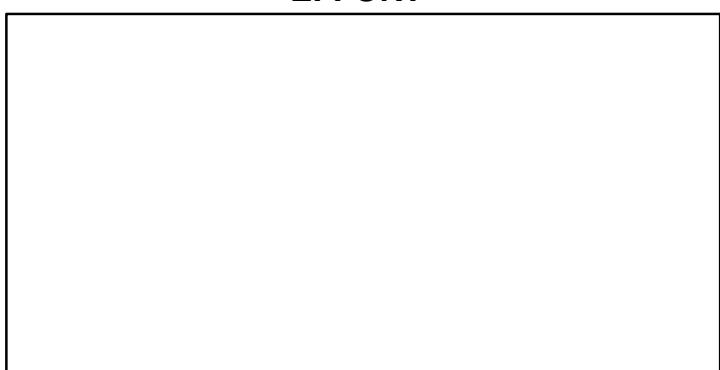
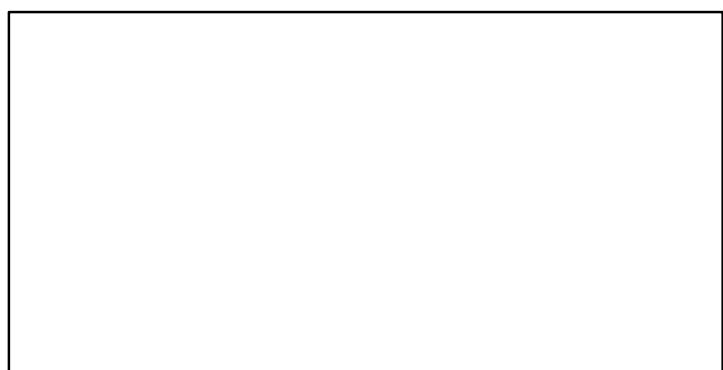
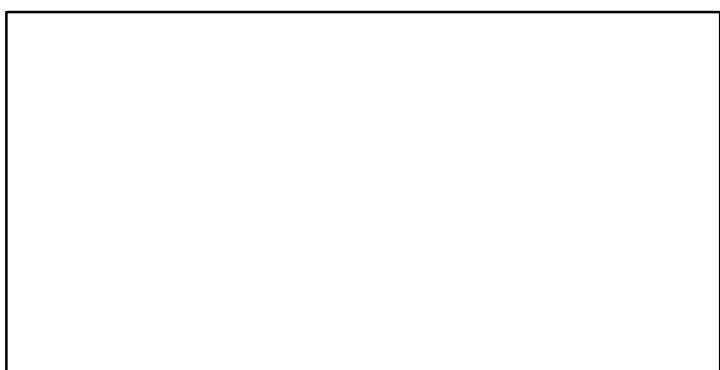
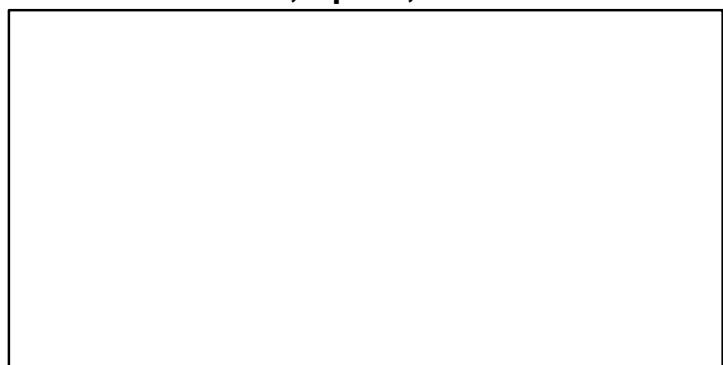
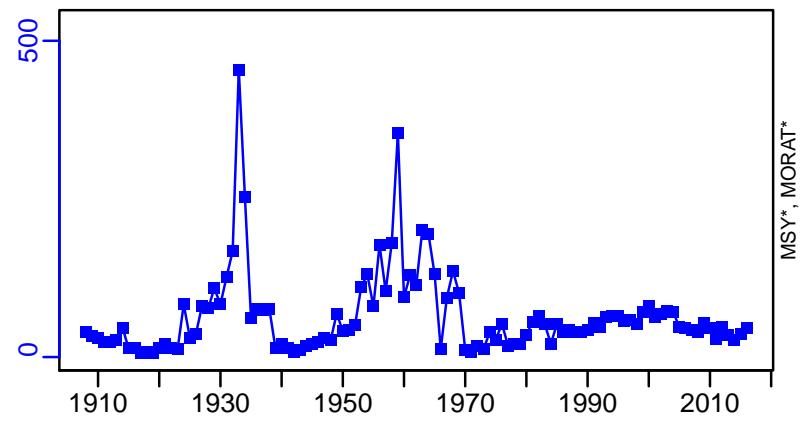


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Common sole ICES 7bc [SOLEVIIbc]

TL-MT, TC\*, RecC\* (1908–2016–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



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

## Common sole Eastern English Channel [SOLEVIIId]

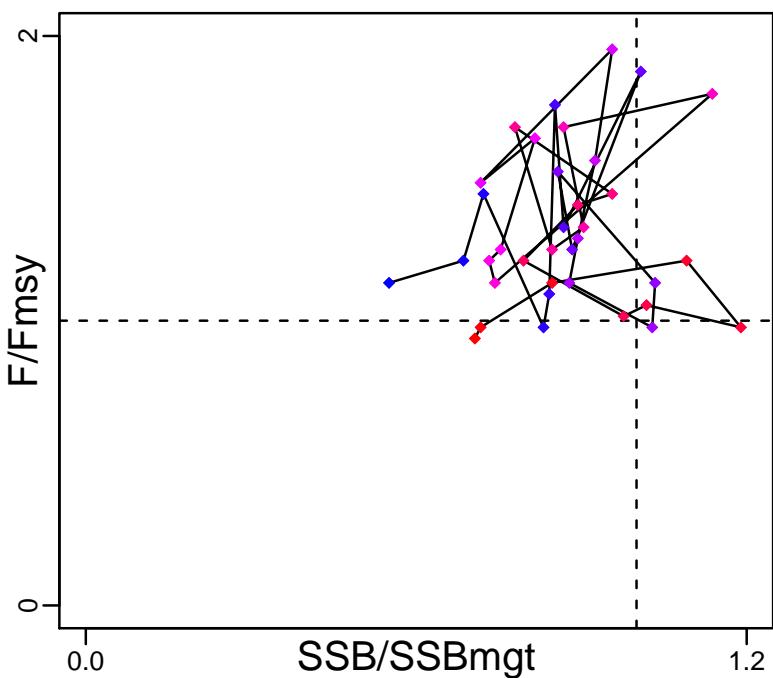
<b>Metadata</b>	
<b>Scientific Name</b>	Solea solea
<b>Current Assess ID</b>	WGNSSK-SOLEVIIId-1981-2018-ICESIMP2021
<b>Area</b>	Eastern English Channel
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2011, 2013, 2014, 2015, 2016, 2017, 2018, 2018

<b>Reference Points</b>				
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>	
<b>TBmsy</b>	TBmsy-est-MT	2011	16,106	
<b>SSBmsy</b>	-	-	-	
<b>Fmsy</b>	Fmsy-1/yr	2018	0.256	
<b>ERmsy</b>	ERmsy-est-ratio	2018	0.187	
<b>TBmgt</b>	-	-	-	
<b>SSBmgt</b>	SSBmgt-MT	2018	19,251	
<b>Fmgt</b>	Fmgt-1/yr	2018	0.256	
<b>ERmgt</b>	-	-	-	
<b>TB0</b>	-	-	-	
<b>SSB0</b>	-	-	-	
<b>MSY</b>	MSY-est-MT	2011	4828	
<b>M</b>	M-1/yr	2011	0.1	
<b>TBlim</b>	-	-	-	
<b>SSBlim</b>	SSBlim-MT	2018	13,751	
<b>Flim</b>	Flim-1/yr	2018	0.359	
<b>ERlim</b>	-	-	-	

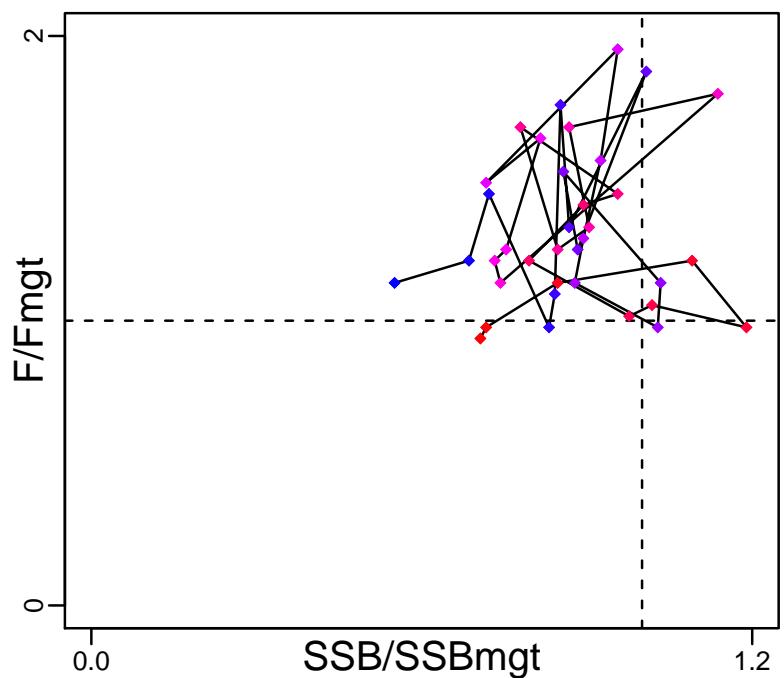
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2018	17,300	Both	-	
<b>SSB</b>	SSB-MT	2018	14,300	Both	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2018	24,900,000	-	1	
<b>F</b>	F-1/yr	2018	0.24	-	3 to 7	
<b>ER</b>	ER-calc-ratio	2018	0.14	-	-	
<b>TC</b>	TC-MT	2018	2430			
<b>TL</b>	TL-MT	2018	2230			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	1.366			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.938			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2018	0.752			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	0.743			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2018	0.938			
<b>ER/ERmgt</b>	-	-	-			

**Common sole Eastern English Channel [SOLEVId]**

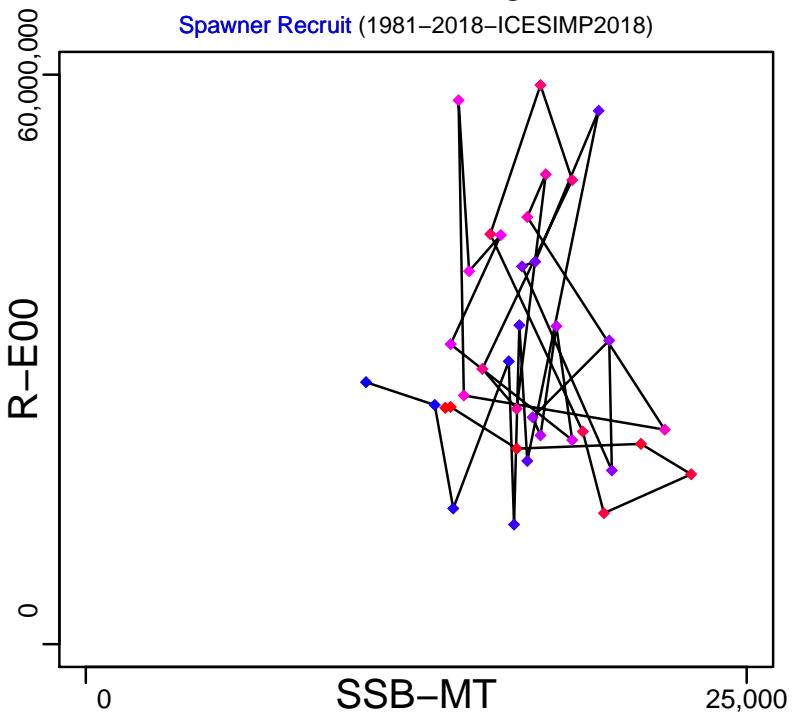
Kobe MSYpref (1981–2018–ICESIMP2018)



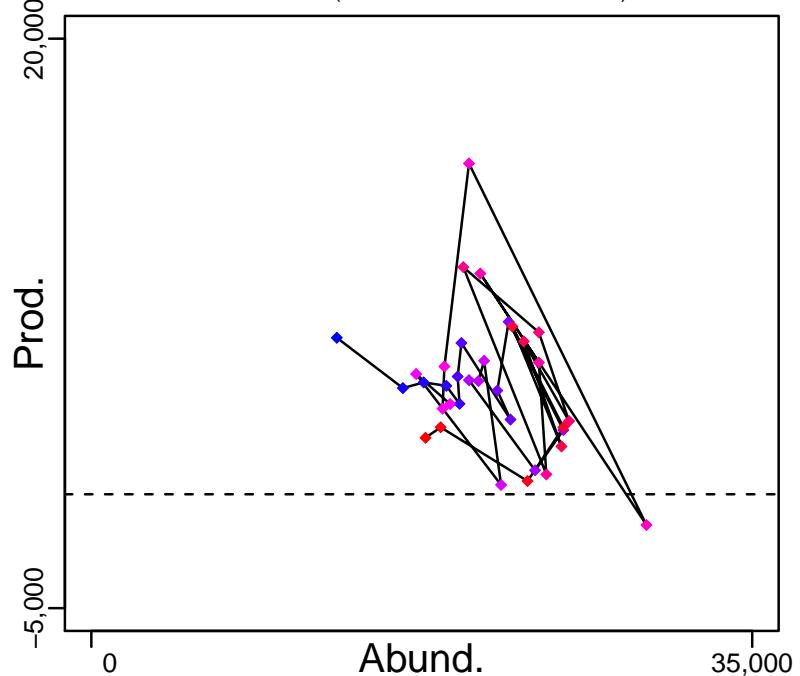
Kobe MGTpref (1981–2018–ICESIMP2018)



Spawner Recruit (1981–2018–ICESIMP2018)



Production (1981–2018–ICESIMP2018)

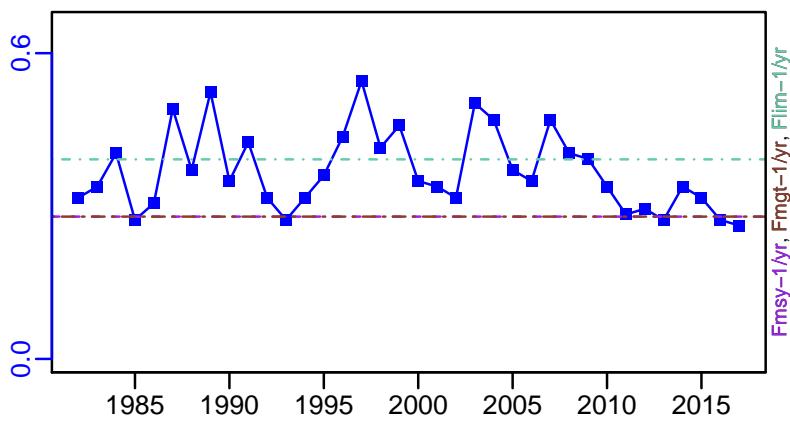
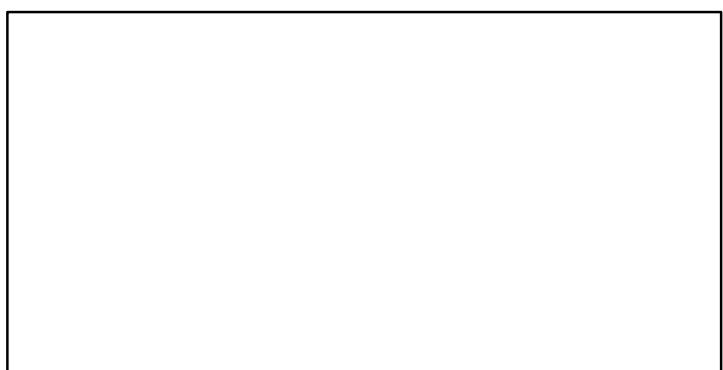
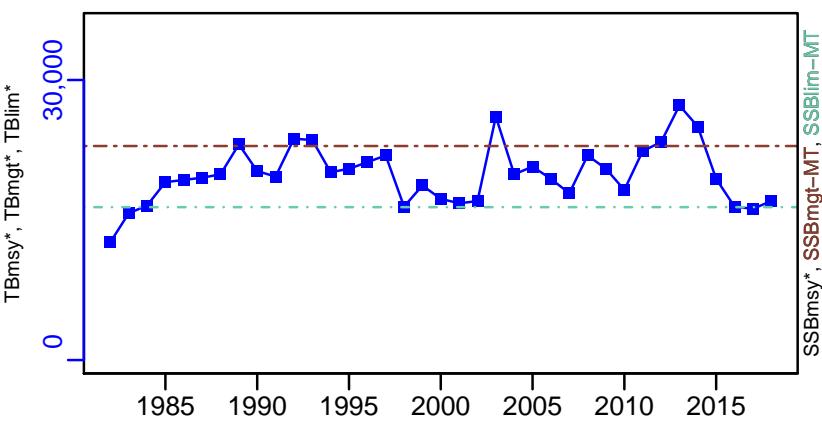
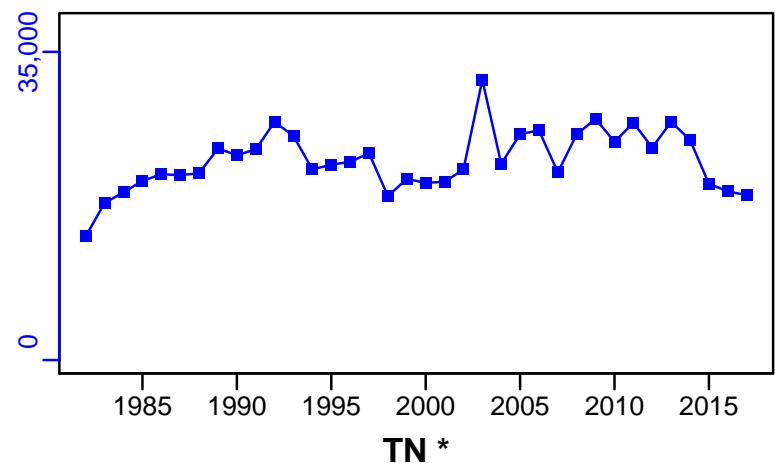


◆ Start Year   ◆ End Year   \* No Data

Common sole Eastern English Channel [SOLEVId]

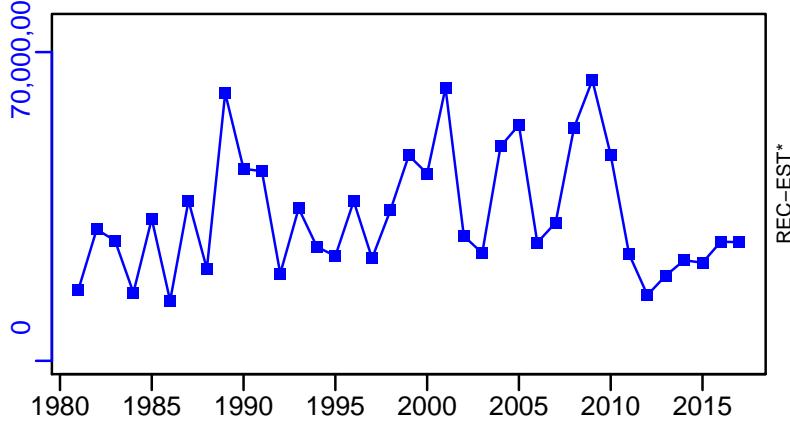
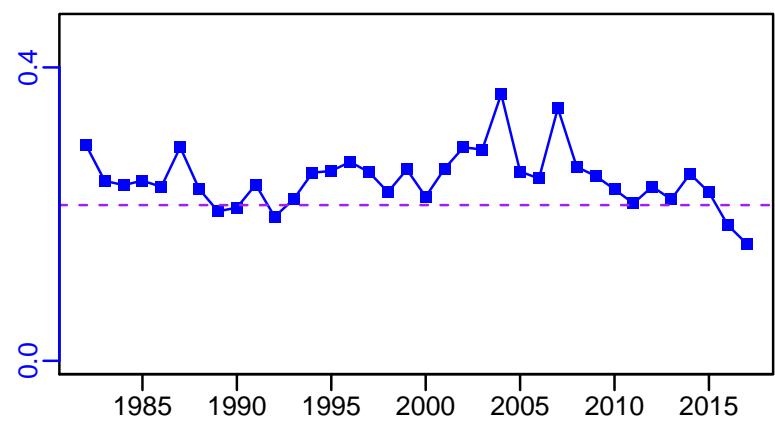
TB-MT (1981–2018–ICESIMP2018)

SSB-MT (1981–2018–ICESIMP2018)



ER-calc-ratio (1981–2018–ICESIMP2018)

R-E00 (1981–2018–ICESIMP2018)

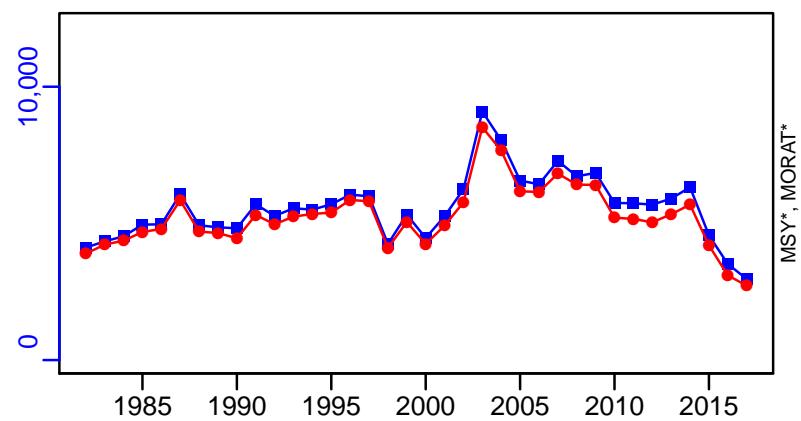


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	* No Data

Common sole Eastern English Channel [SOLEVId]

TC-MT, TL-MT, RecC\* (1981–2018–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



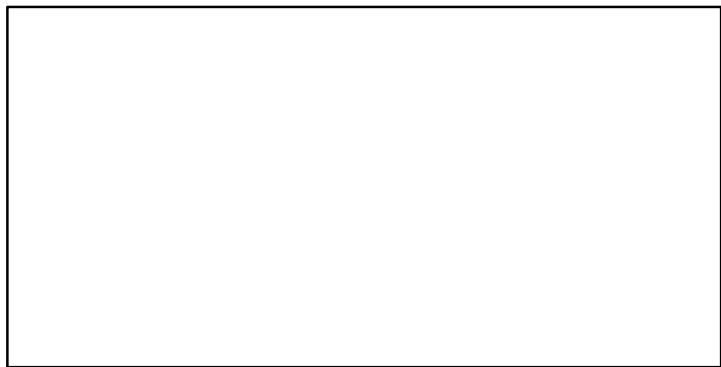
survB\*



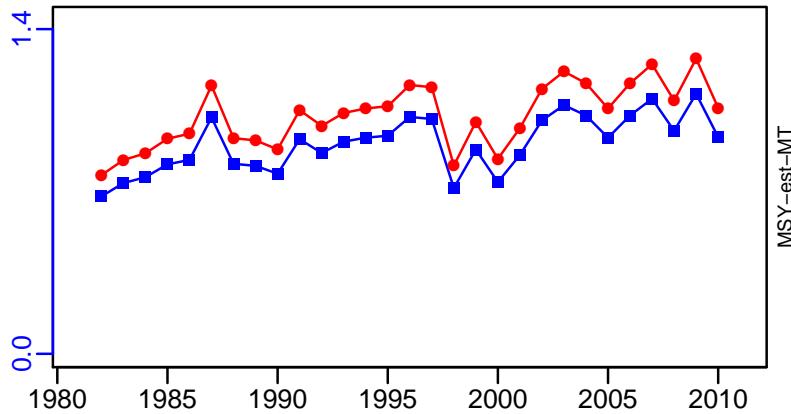
CPUE\*



EFFORT\*



TL-MT/MSY-est-MT, CdiveMEANC-ratio, (1981–2011–NEUBAUER)



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

## Common sole Western English Channel [SOLEVIIe]

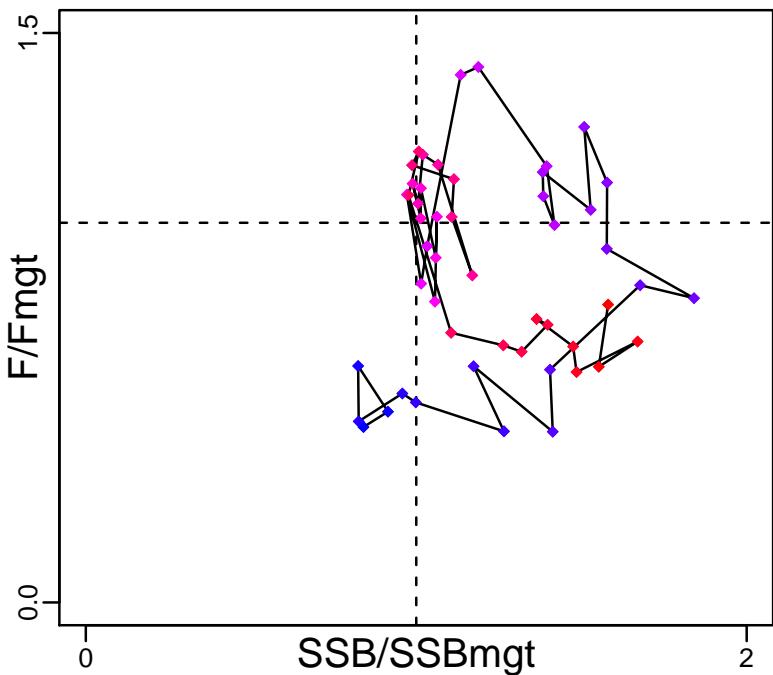
<b>Metadata</b>	
<b>Scientific Name</b>	Solea solea
<b>Current Assess ID</b>	WGCSE-SOLEVIIe-1967-2019-ICESIMP2021
<b>Area</b>	Western English Channel
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2015, 2016, 2017, 2018, 2019, 2013, 2014, 2010

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2010	7740
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.291
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.263
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	2900
<b>Fmgt</b>	Fmgt-1/yr	2019	0.29
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2010	1123
<b>M</b>	M-1/yr	2010	0.1
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	2039
<b>Flim</b>	Flim-1/yr	2018	0.44
<b>ERlim</b>	-	-	-

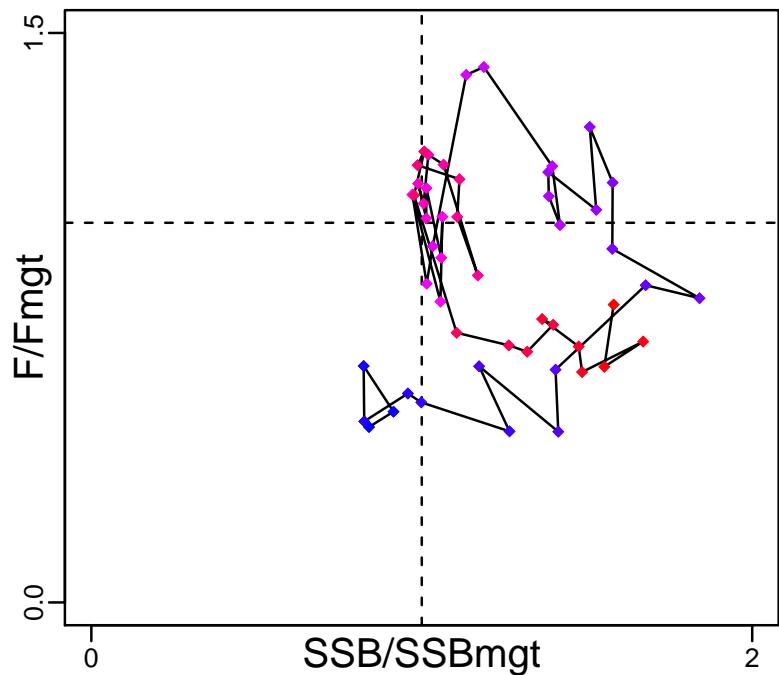
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	5934	-	-	
<b>SSB</b>	SSB-MT	2019	4756	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	3,973,000	-	2	
<b>F</b>	F-1/yr	2019	0.228	-	3 to 9	
<b>ER</b>	ER-calc-ratio	2019	0.181	-	-	
<b>TC</b>	TC-MT	2017	924			
<b>TL</b>	TL-MT	2019	1075			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2010	0.429			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.739			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.688			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.64			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.784			
<b>ER/ERmgt</b>	-	-	-			

**Common sole Western English Channel [SOLEVII]**

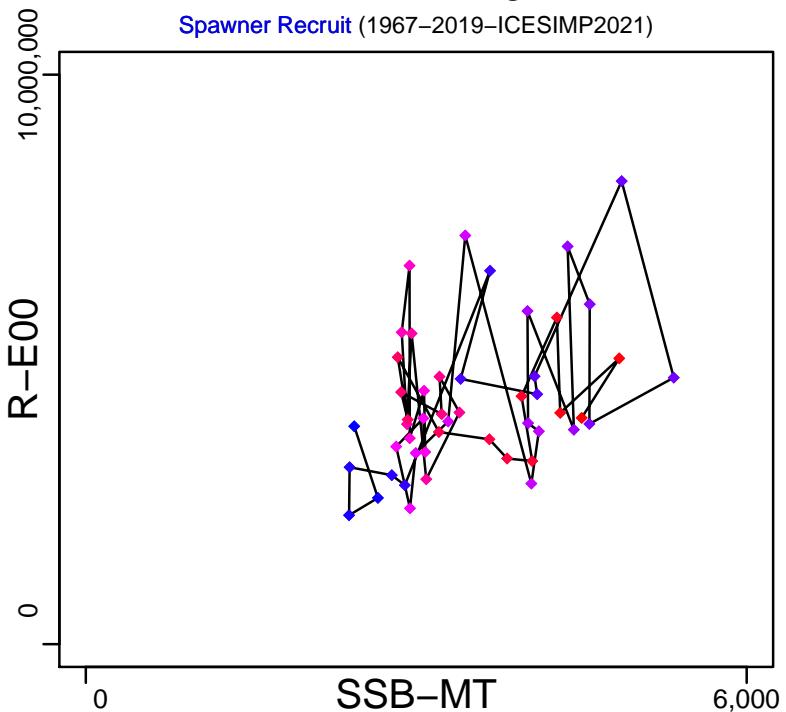
Kobe MSYpref (1967–2019–ICESIMP2021)



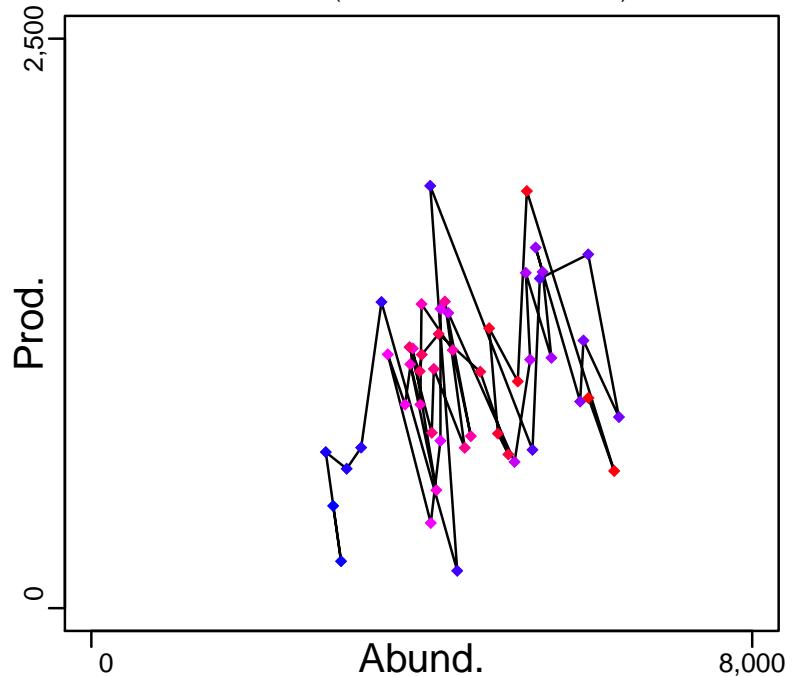
Kobe MGTpref (1967–2019–ICESIMP2021)



Spawner Recruit (1967–2019–ICESIMP2021)



Production (1967–2019–ICESIMP2021)

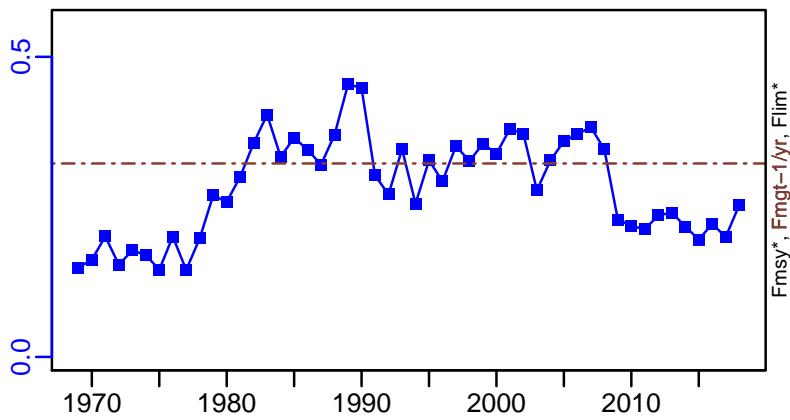
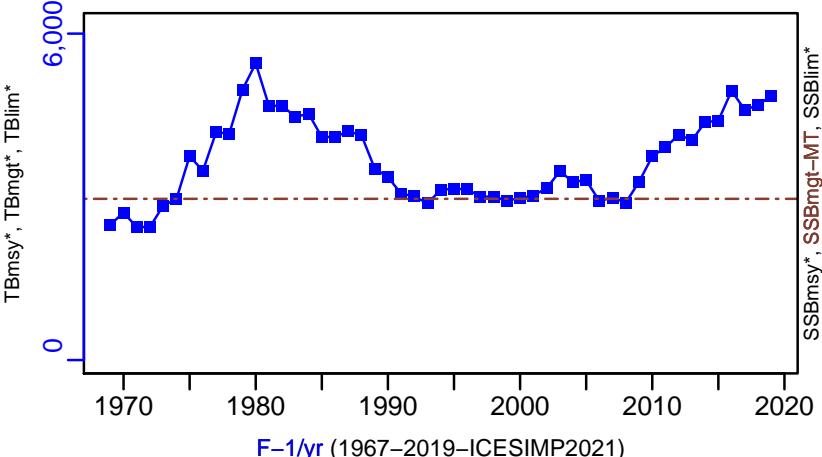
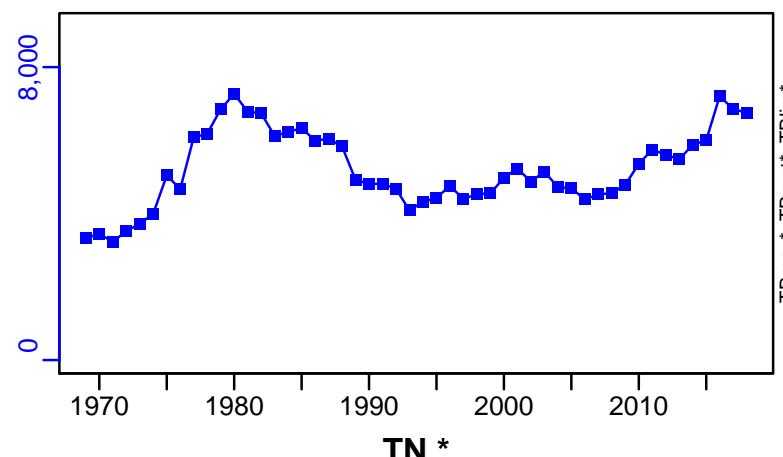


◆ Start Year   ◆ End Year   \* No Data

### Common sole Western English Channel [SOLEVille]

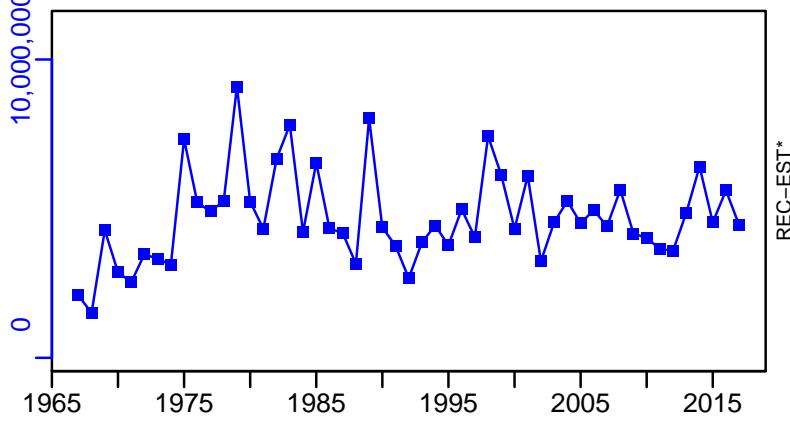
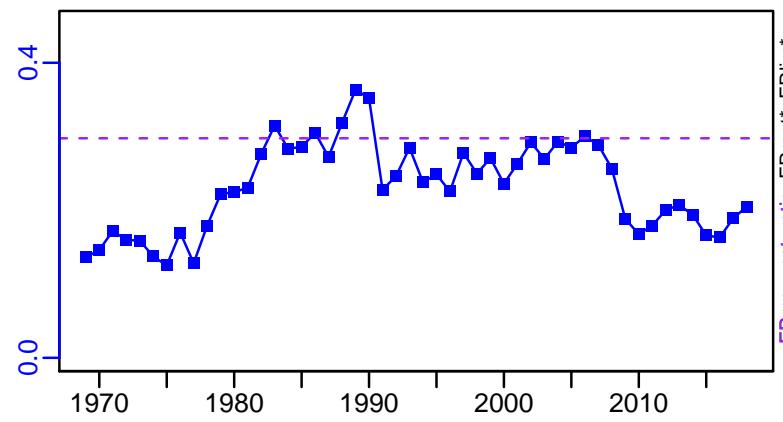
TB-MT (1967–2019–ICESIMP2021)

SSB-MT (1967–2019–ICESIMP2021)



ER-calc-ratio (1967–2019–ICESIMP2021)

R-E00 (1967–2019–ICESIMP2021)

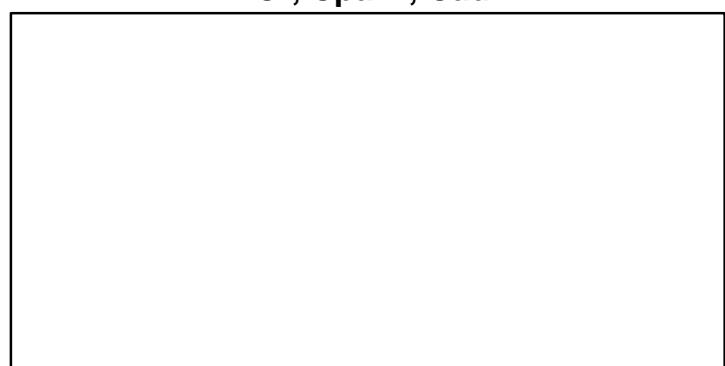
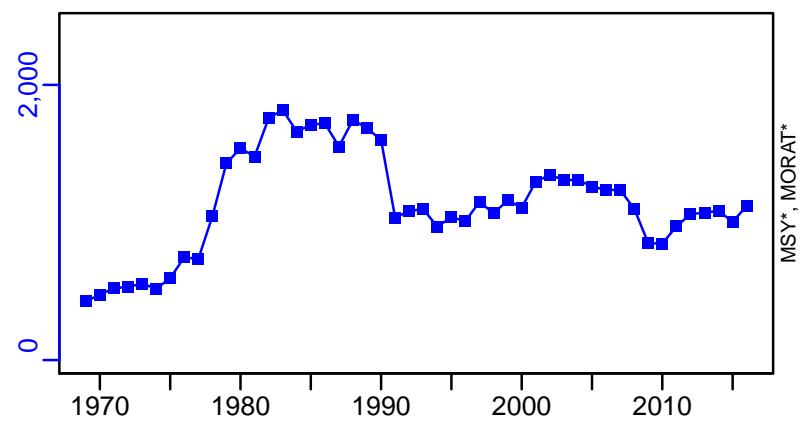


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

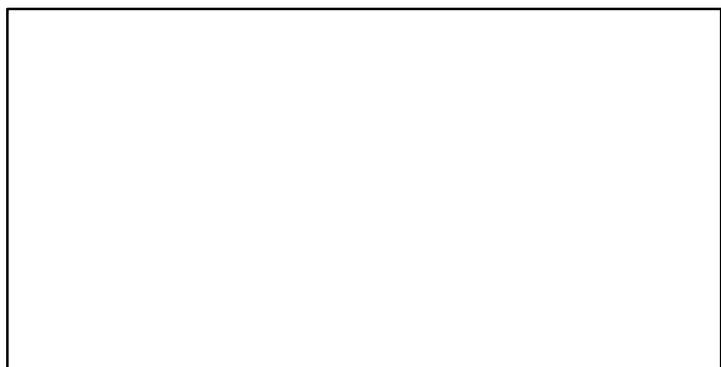
Common sole Western English Channel [SOLEVille]

TC-MT, TL\*, RecC\* (1967–2017–ICESIMP2018)

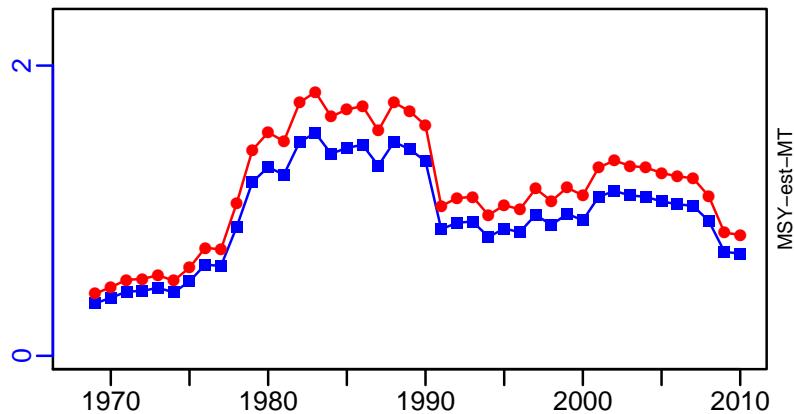
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL-MT/MSY-est-MT, CdiveMEANC-ratio, (1968–2010–NEUBAUER)



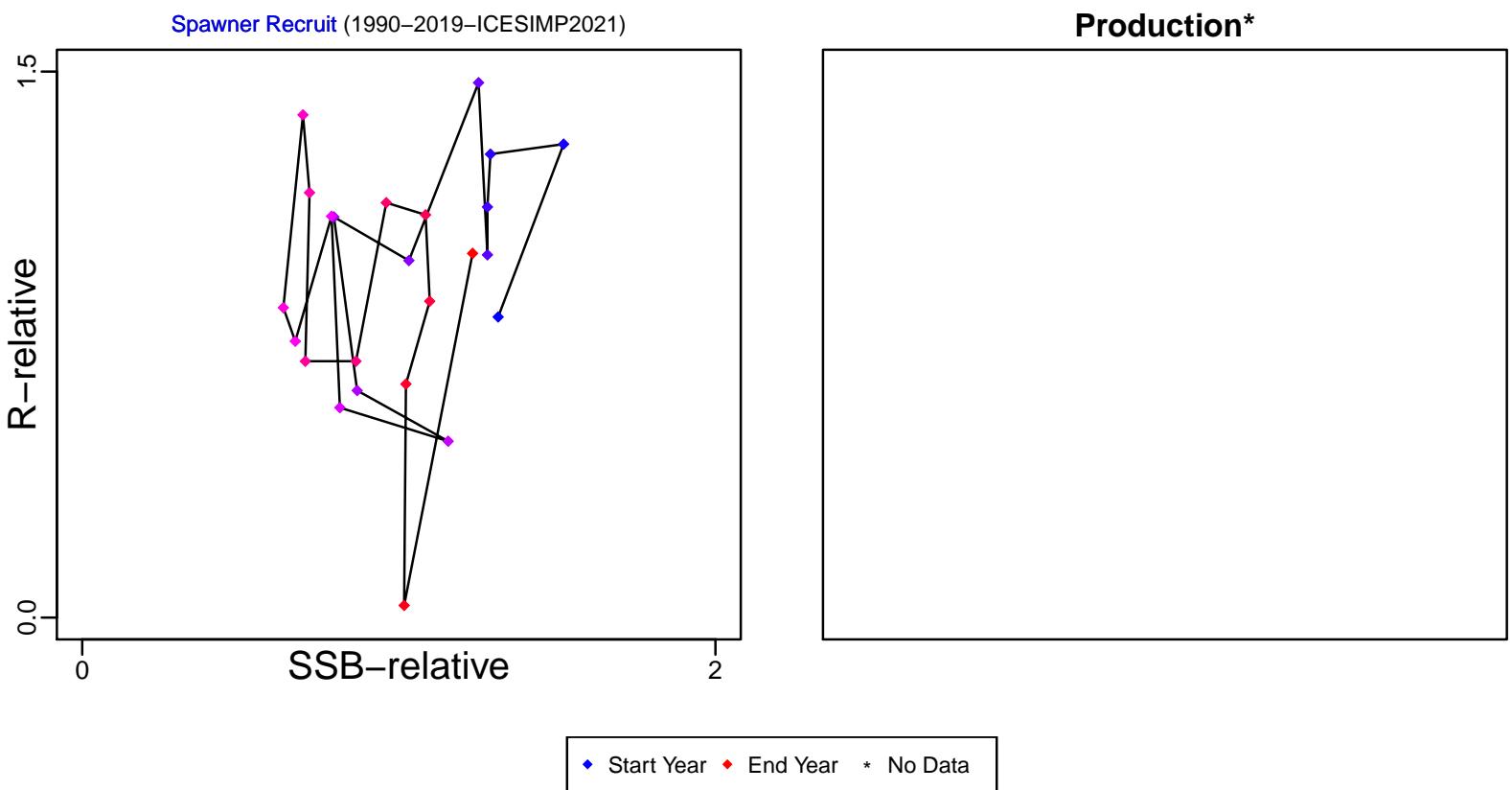
■ 1st listed time series	▲ 3rd listed time series	— MORAT
● 2nd listed time series	- - - MSY	* No Data

## Common sole ICES 7h-k [SOLEVIIh-k]

<b>Metadata</b>	
<b>Scientific Name</b>	Solea solea
<b>Current Assess ID</b>	WGCSE-SOLEVIIh-k-1990-2019-ICESIMP2021
<b>Area</b>	ICES 7h-k
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2014, 2015, 2016, 2018, 2019

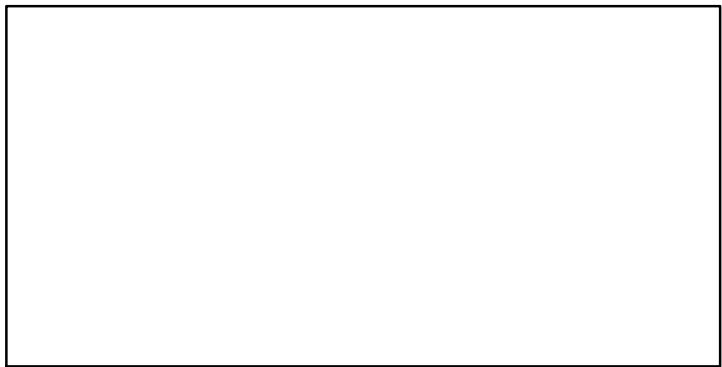
<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-relative	2018	0.161
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-relative	2019	1.109
<b>Fmgt</b>	Fmgt-relative	2019	0.675
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-relative	2018	425
<b>Flim</b>	Flim-relative	2018	0.222
<b>ERlim</b>	-	-	-

<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	SSB-relative	2019	0.865	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-relative	2019	1.001	-	3	
<b>F</b>	F-relative	2019	0.468	-	3 to 6	
<b>ER</b>	-	-	-	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2019	75			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

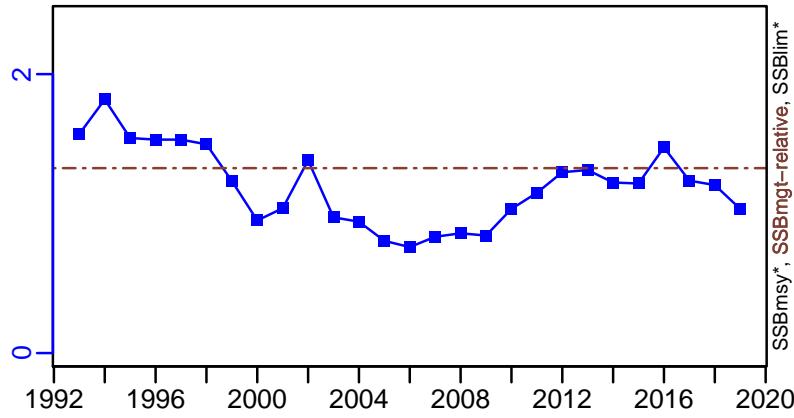
**Kobe MSY\*****Kobe MGT\***

Common sole ICES 7h–k [SOLEVIIh–k]

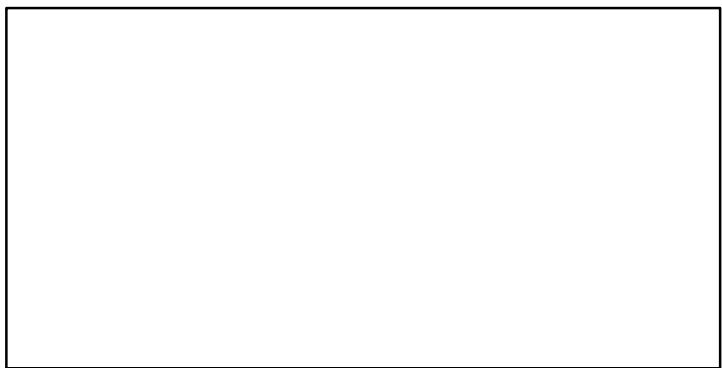
**TB\***



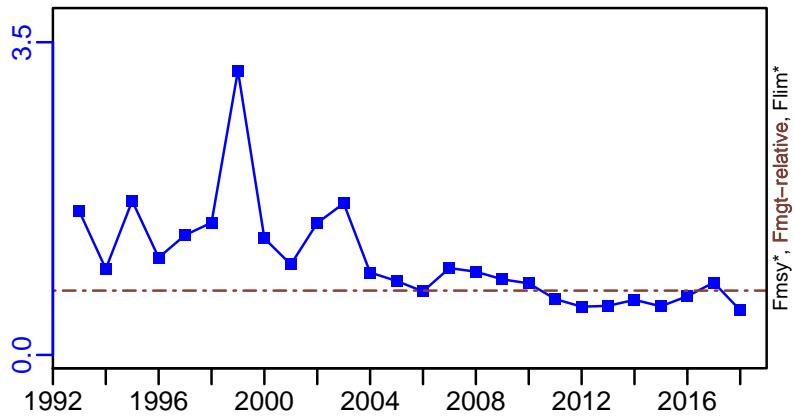
SSB-relative (1990–2019–ICESIMP2021)



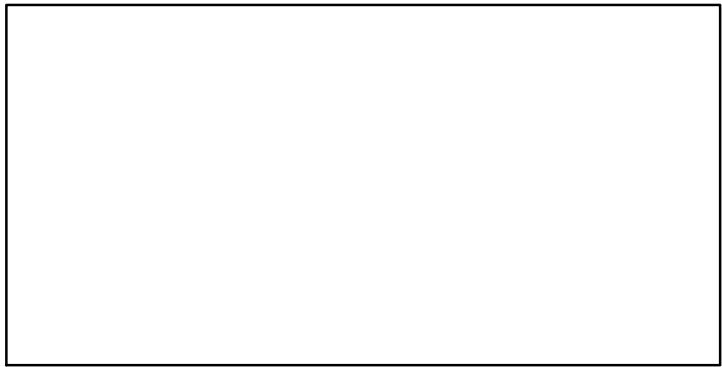
**TN \***



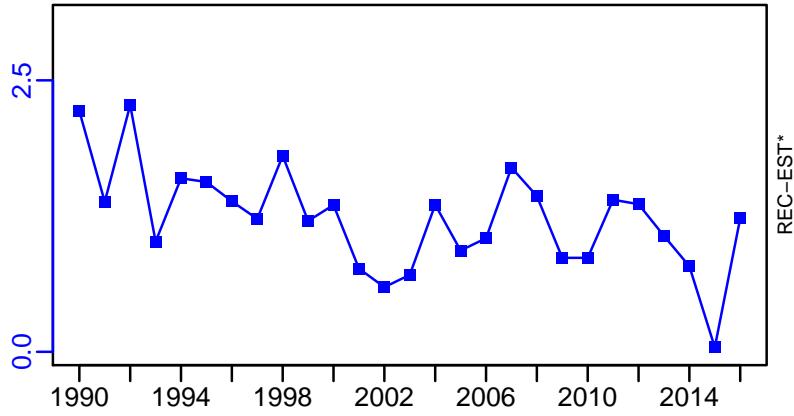
F-relative (1990–2019–ICESIMP2021)



**ER\***



R-relative (1990–2019–ICESIMP2021)

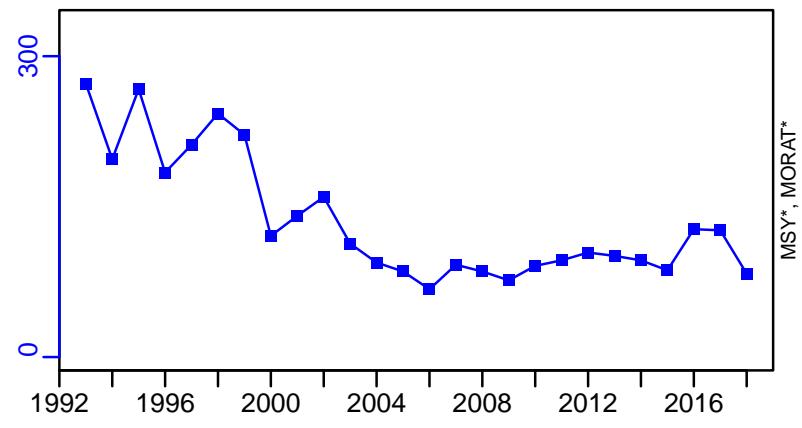


- Listed time series    - - - Target BRP    — Rec-Est
- - MSY-based BRP    - - Lim BRP    \* No Data

Common sole ICES 7h–k [SOLEVIIh–k]

TL–MT, TC\*, RecC\* (1990–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



survB\*

CPUE\*

EFFORT\*

CdivMSY\*

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

## Common sole ICES 8ab [SOLEVIIIab]

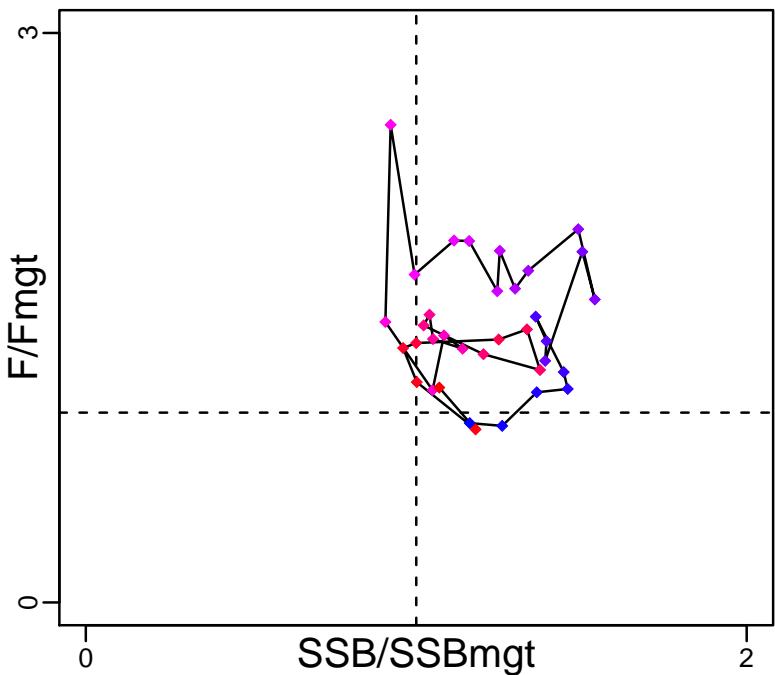
<b>Metadata</b>	
<b>Scientific Name</b>	Solea solea
<b>Current Assess ID</b>	WGBIE-SOLEVIIIab-1982-2019-ICESIMP2021
<b>Area</b>	ICES 8ab
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2016, 2017, 2018, 2019, 2014, 2015, 2011, 2013

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2011	40,458
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2017	0.33
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.352
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	10,600
<b>Fmgt</b>	Fmgt-1/yr	2019	0.33
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	7983
<b>M</b>	M-1/yr	2011	0.1
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	7600
<b>Flim</b>	Flim-1/yr	2017	0.6
<b>ERlim</b>	-	-	-

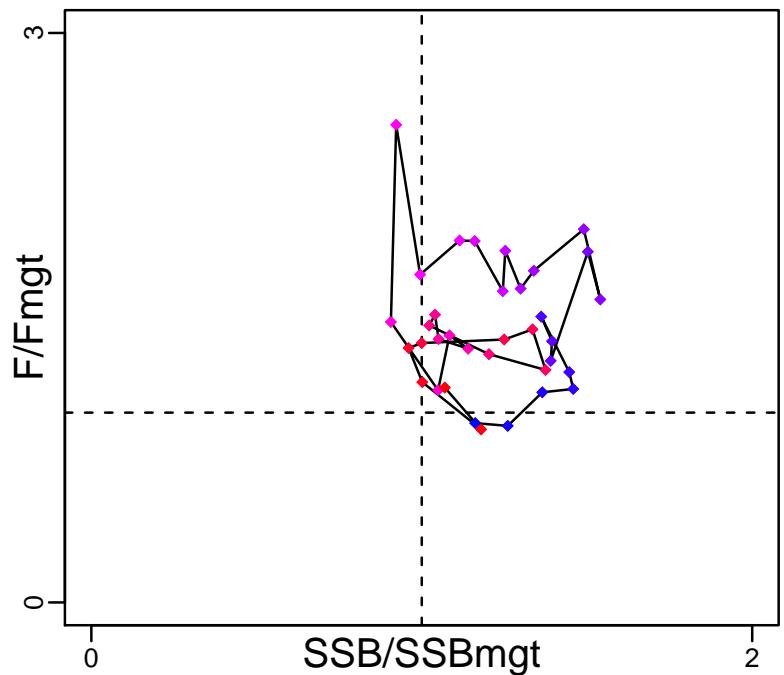
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2018	16,000	Both	-	
<b>SSB</b>	SSB-MT	2019	12,653	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	20,828,590	-	2	
<b>F</b>	F-1/yr	2019	0.374	-	3 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.224	-	-	
<b>TC</b>	TC-MT	2018	3300			
<b>TL</b>	TL-MT	2019	3469			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	0.329			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	1.103			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.637			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.194			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.132			
<b>ER/ERmgt</b>	-	-	-			

Common sole ICES 8ab [SOLEVIIlab]

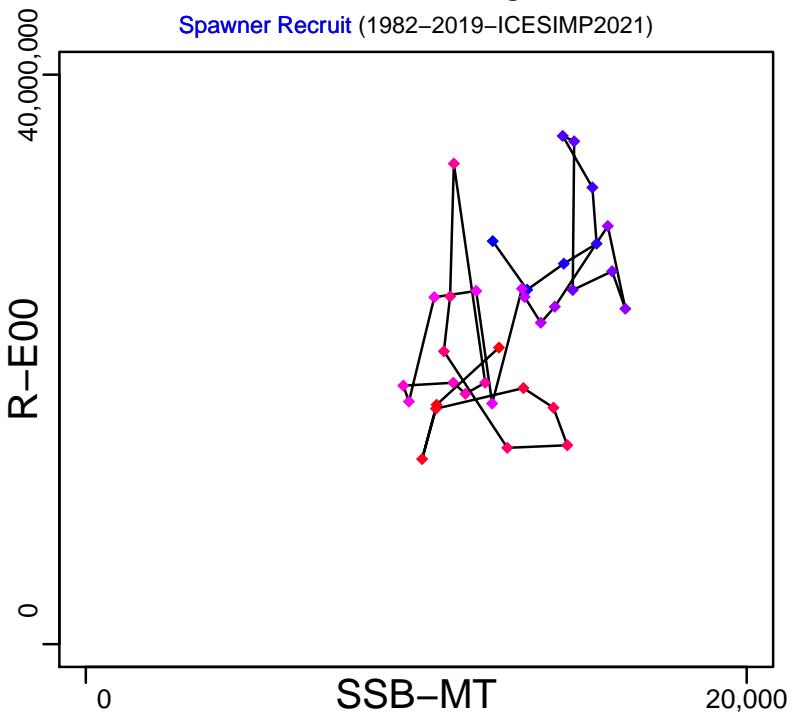
Kobe MSYpref (1982–2019–ICESIMP2021)



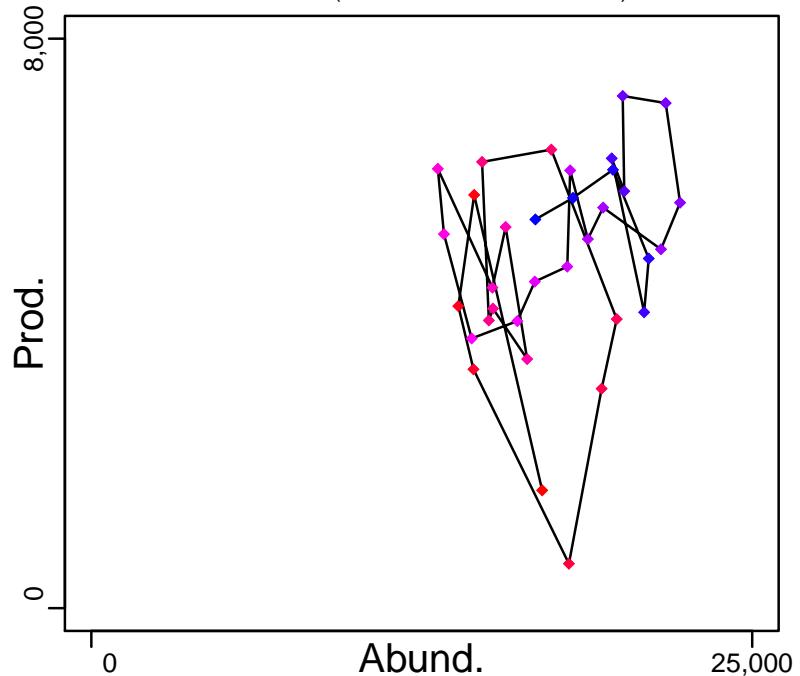
Kobe MGTpref (1982–2019–ICESIMP2021)



Spawner Recruit (1982–2019–ICESIMP2021)



Production (1982–2019–ICESIMP2021)

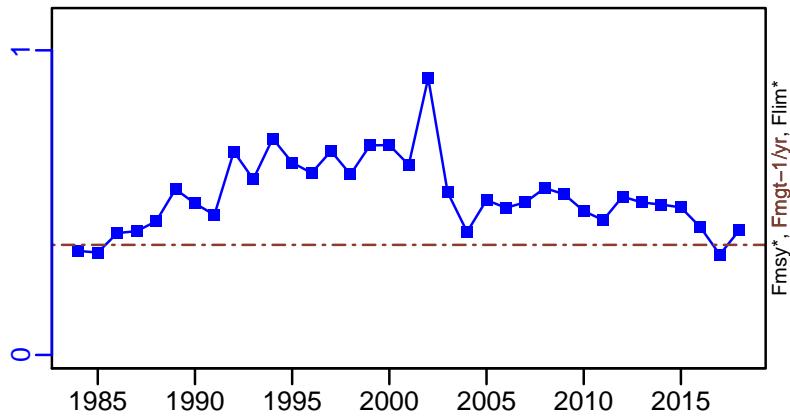
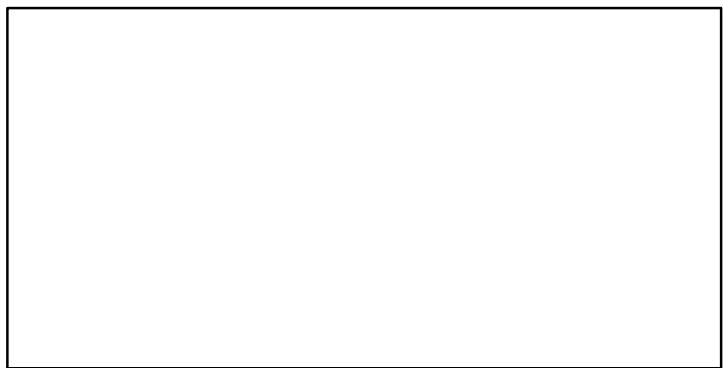
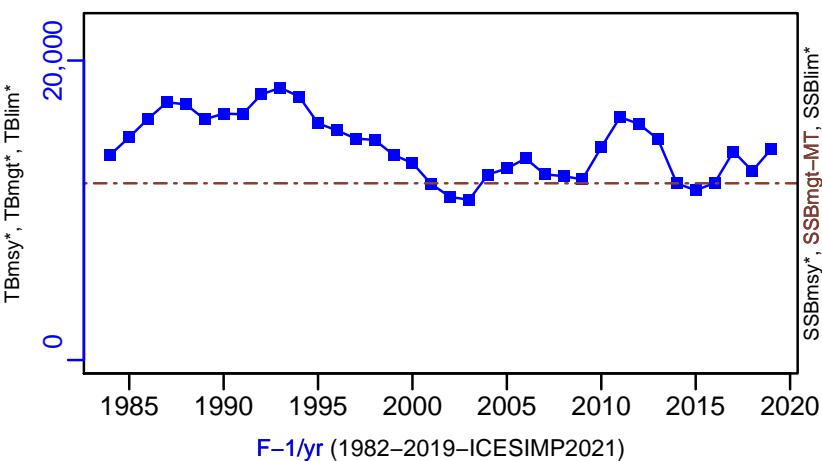
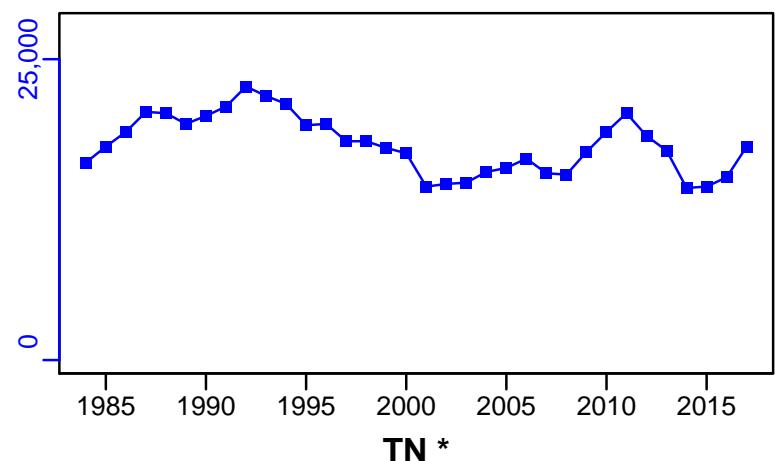


◆ Start Year ♦ End Year \* No Data

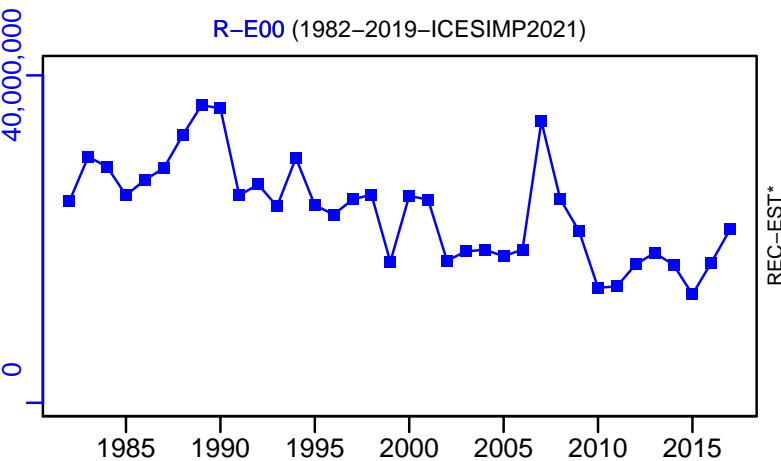
Common sole ICES 8ab [SOLEVIIIab]

TB-MT (1982–2018–ICESIMP2018)

SSB-MT (1982–2019–ICESIMP2021)



ER-calc-ratio (1982–2019–ICESIMP2021)

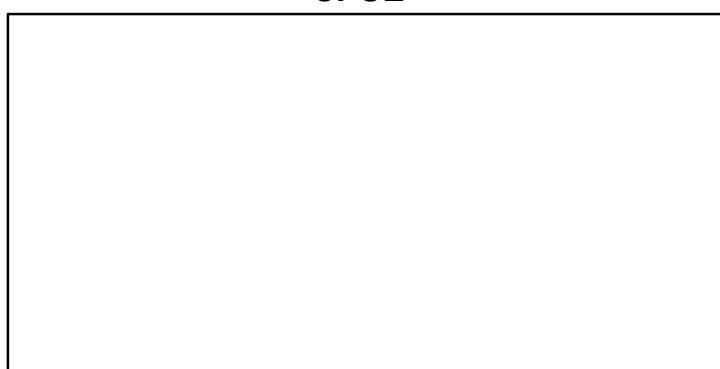
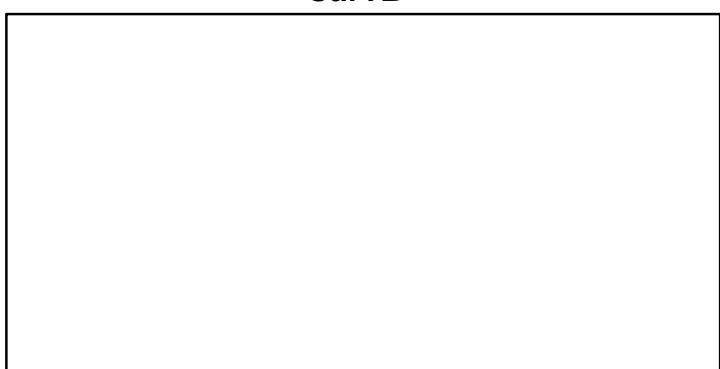
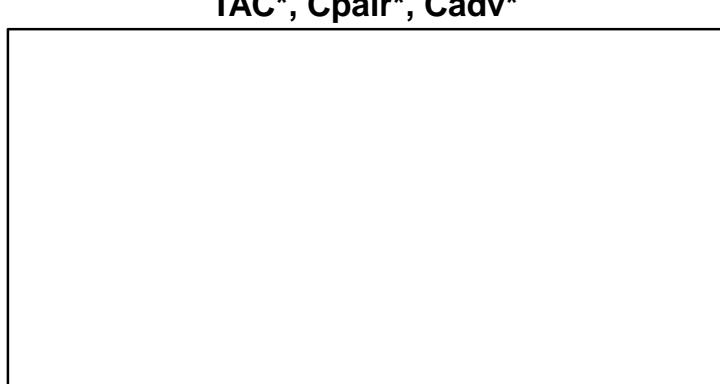
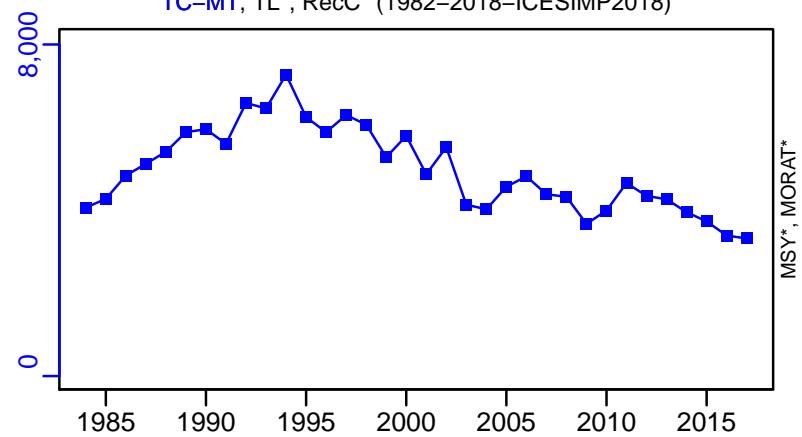


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

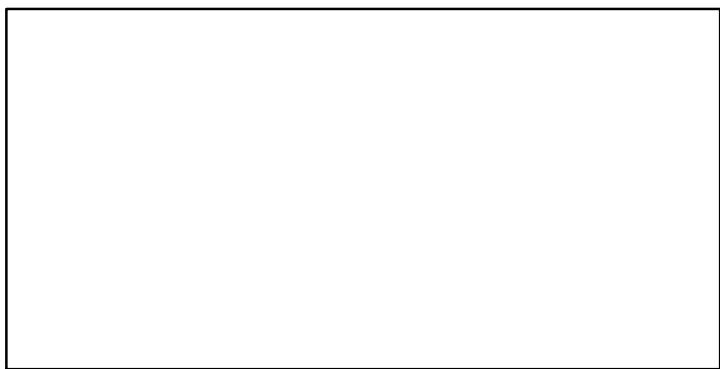
Common sole ICES 8ab [SOLEVIIlab]

TC-MT, TL\*, RecC\* (1982–2018–ICESIMP2018)

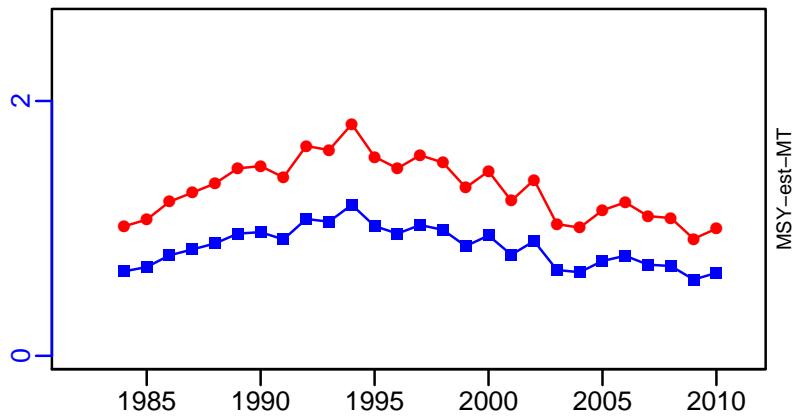
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1982–2011–NEUBAUER)



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

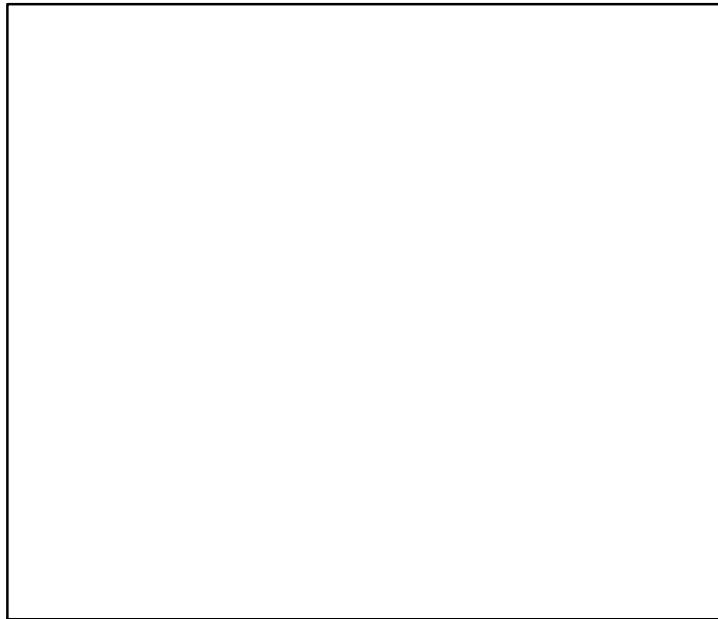
## Common sole ICES 8c-9a [SOLEVIIIC-IXa]

<b>Metadata</b>	
<b>Scientific Name</b>	Solea solea
<b>Current Assess ID</b>	WGBIE-SOLEVIIIC-IXa-2000-2018-ICESIMP2021
<b>Area</b>	ICES 8c-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2011, 2018

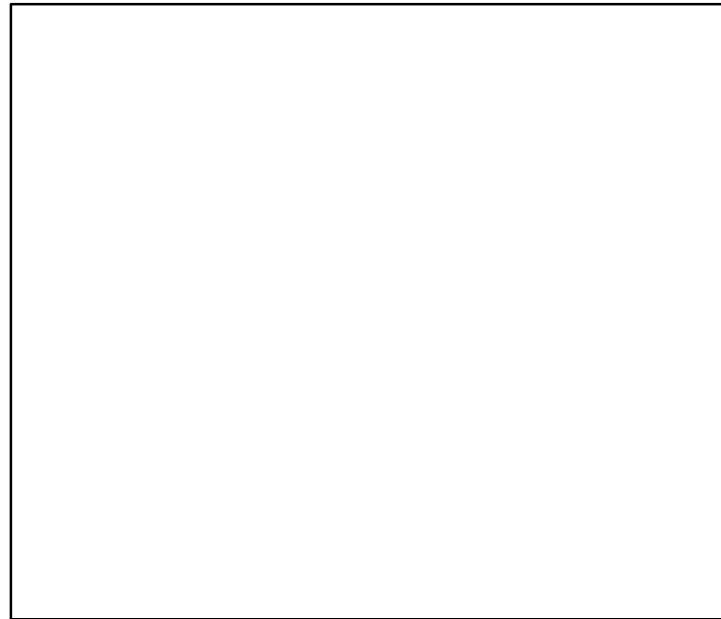
<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim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

<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	579		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

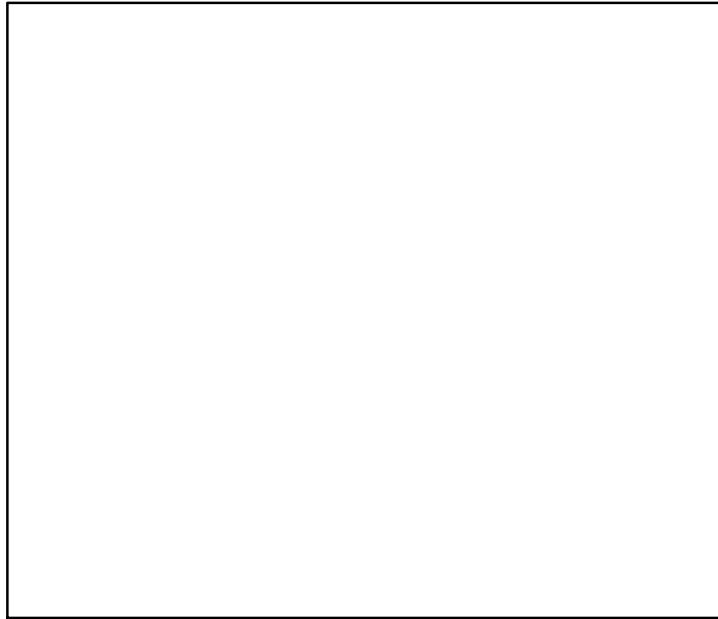
**Kobe MSY\***



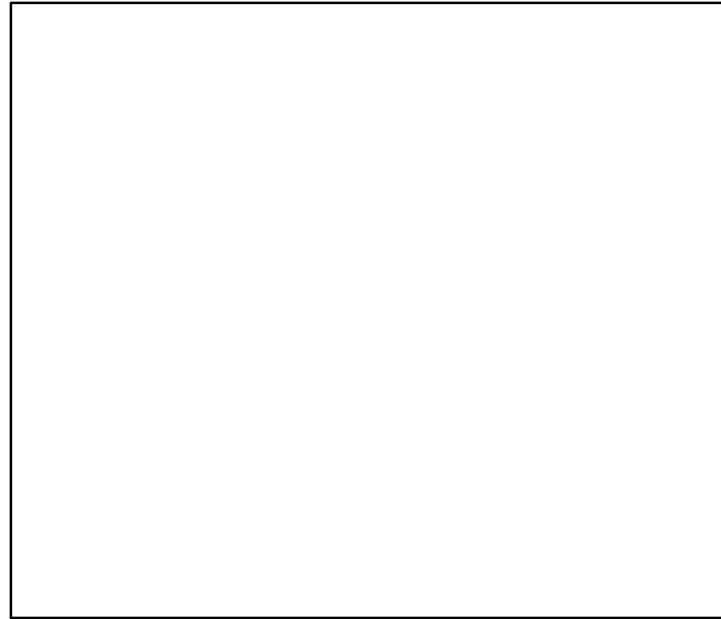
**Kobe MGT\***



**Spawner Recruit\***



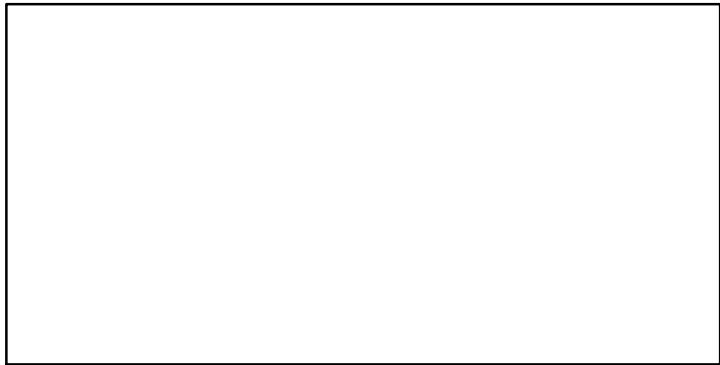
**Production\***



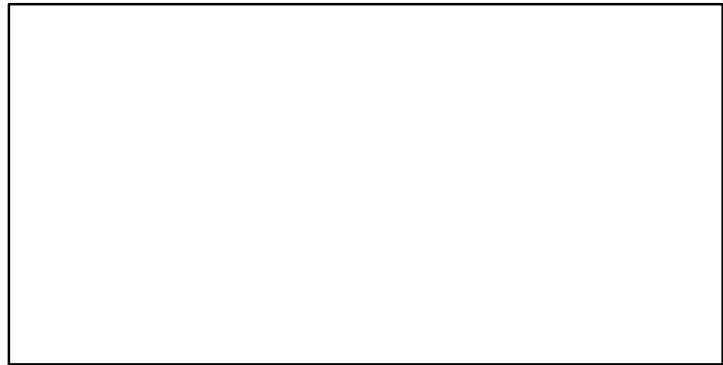
◆ Start Year ♦ End Year \* No Data

**Common sole ICES 8c–9a [SOLEVIIIC–IXa]**

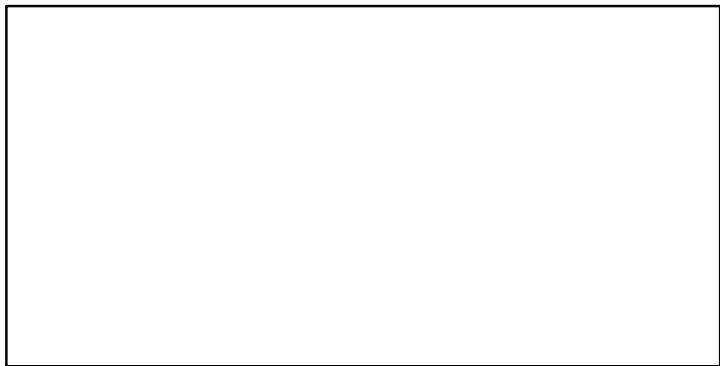
**TB\***



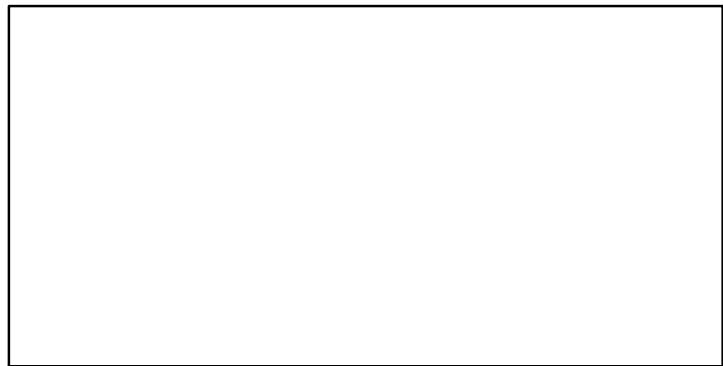
**SSB\***



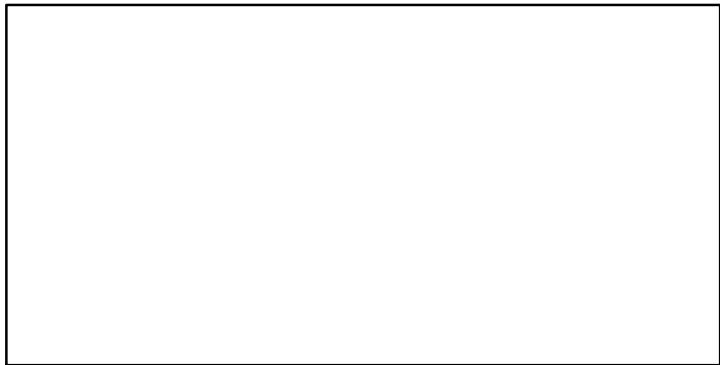
**TN \***



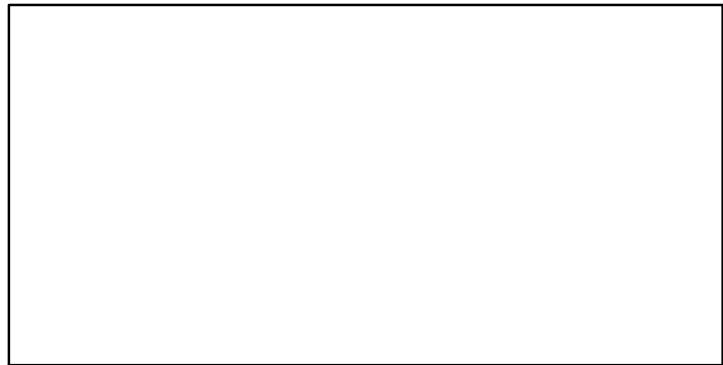
**F\***



**ER\***



**Recruits\***

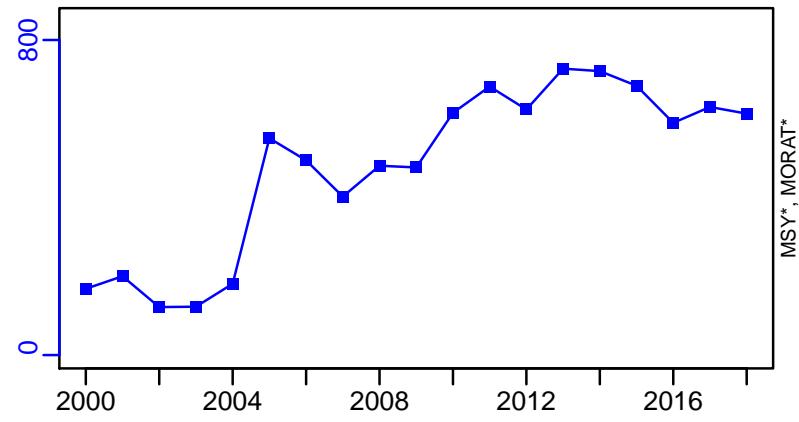


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

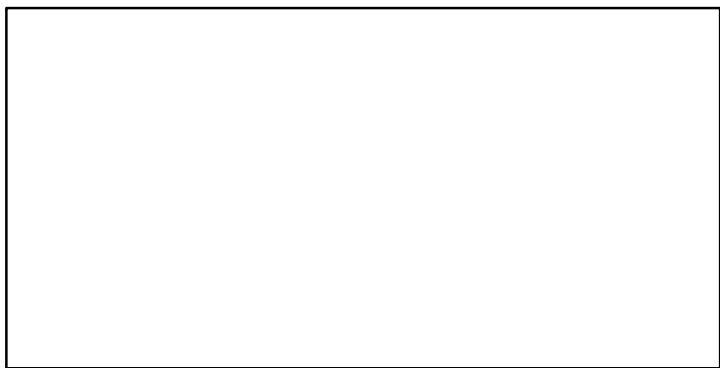
**Common sole ICES 8c–9a [SOLEVIIIC–IXa]**

TL–MT, TC\*, RecC\* (2000–2018–ICESIMP2021)

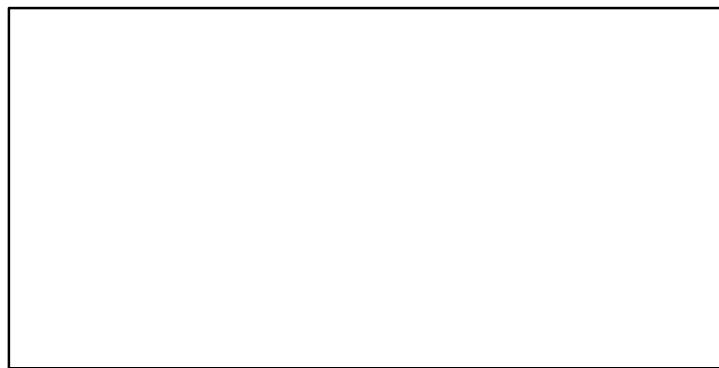
TAC\*, Cpair\*, Cadv\*



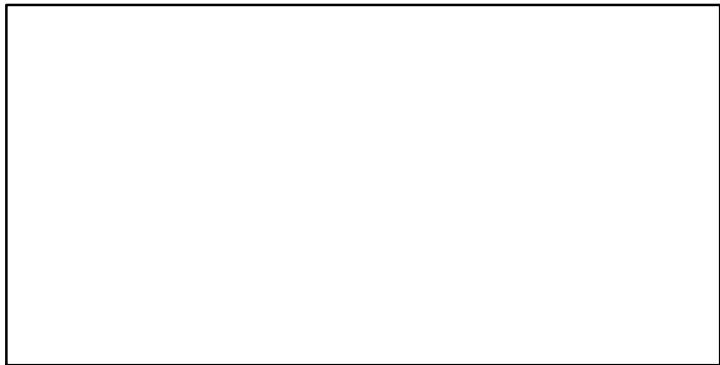
**survB\***



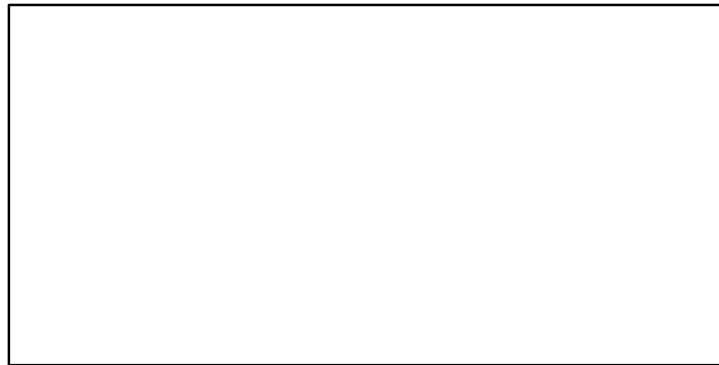
**CPUE\***



**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]

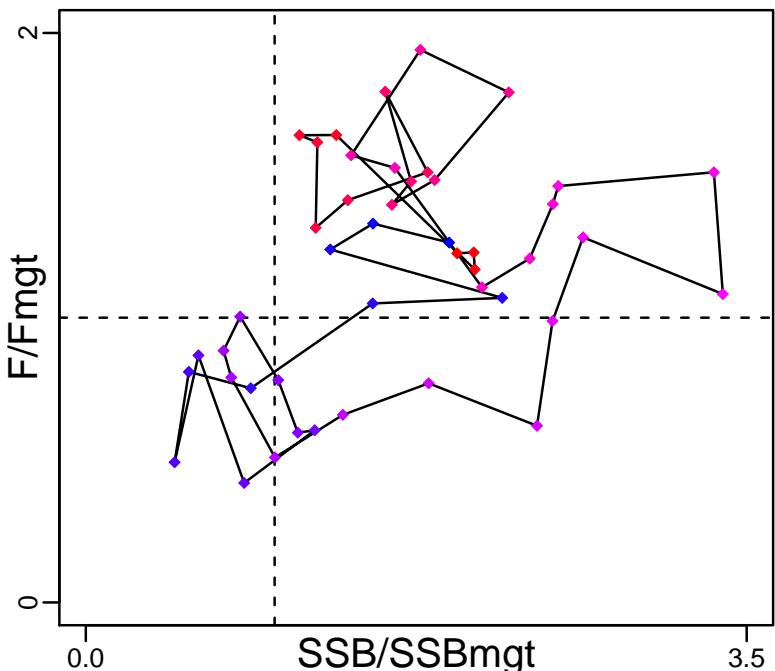
<b>Metadata</b>	
<b>Scientific Name</b>	Sprattus sprattus
<b>Current Assess ID</b>	WGBFAS-SPRAT22-32-1973-2019-ICESIMP2021
<b>Area</b>	Baltic Areas 22-32
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2011, 2013, 2014, 2015, 2016, 2017, 2018, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2011	1,478,431
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.26
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.127
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	570,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.26
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	252,295
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	410,000
<b>Flim</b>	Flim-1/yr	2018	0.39
<b>ERlim</b>	-	-	-

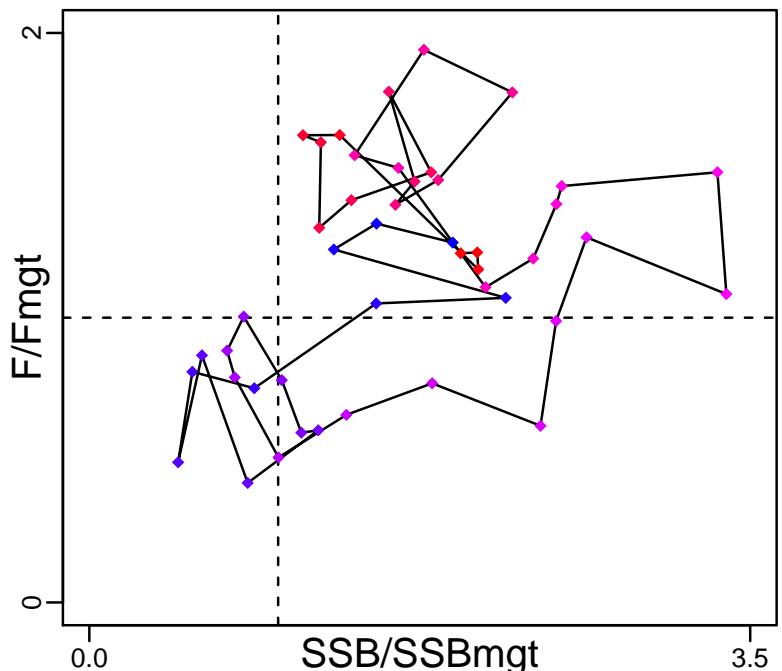
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	1,664,000	-	-	
<b>SSB</b>	SSB-MT	2019	1,103,000	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	59,567,000	-	1	
<b>F</b>	F-1/yr	2019	0.319	-	3 to 5	
<b>ER</b>	ER-calc-ratio	2019	0.176	-	-	
<b>TC</b>	TC-MT	2019	308,827			
<b>TL</b>	TL-MT	2019	308,827			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	1.015			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.065			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	1.387			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.935			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.226			
<b>ER/ERmgt</b>	-	-	-			

Sprat Baltic Areas 22–32 [SPRAT22–32]

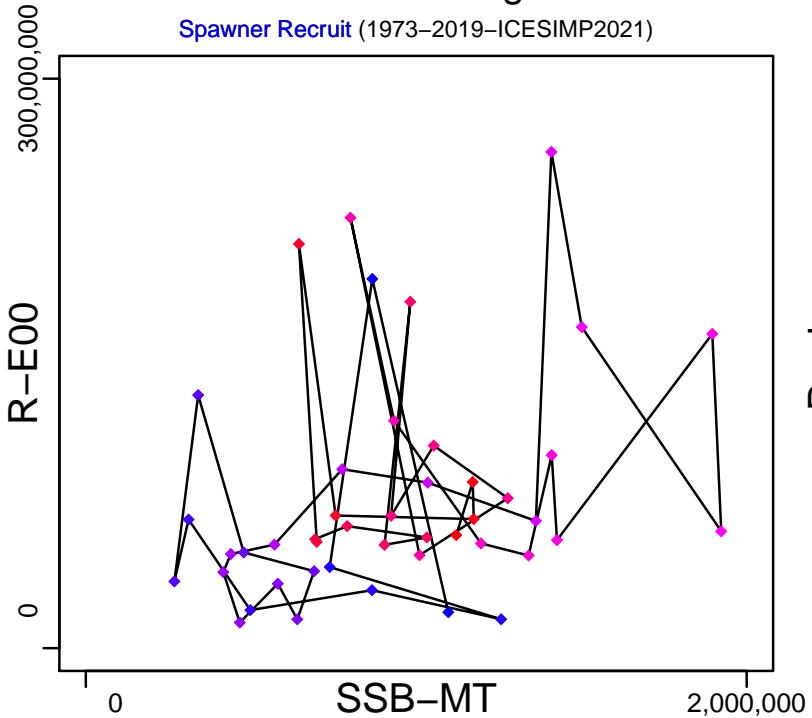
Kobe MSYpref (1973–2019–ICESIMP2021)



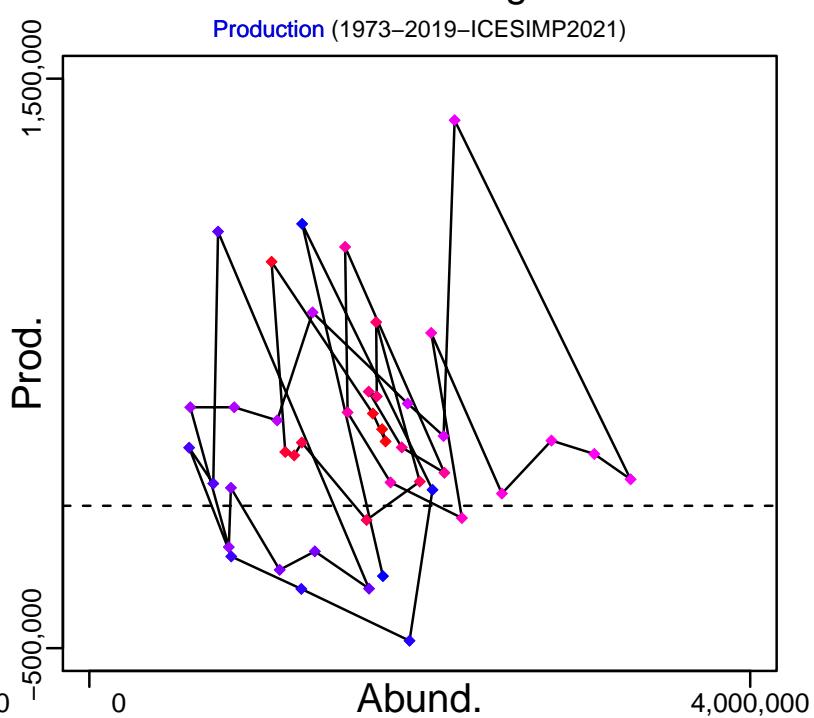
Kobe MGTpref (1973–2019–ICESIMP2021)



Spawner Recruit (1973–2019–ICESIMP2021)



Production (1973–2019–ICESIMP2021)

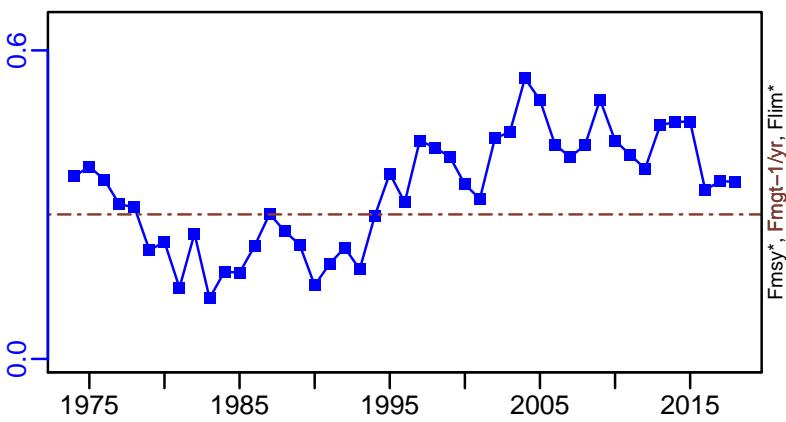
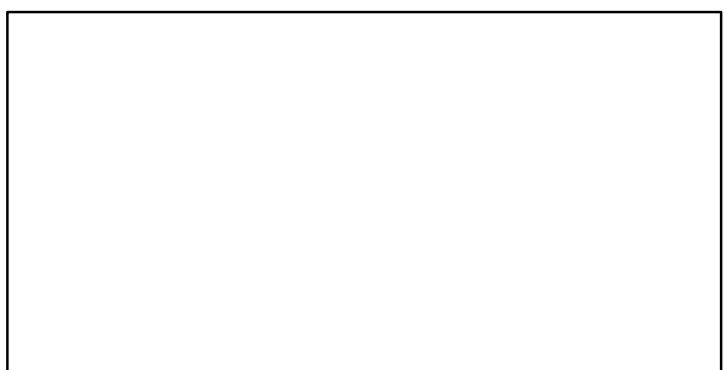
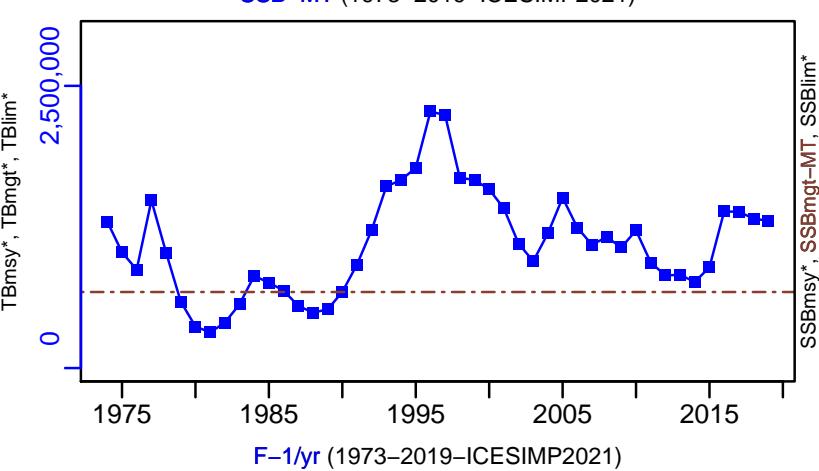
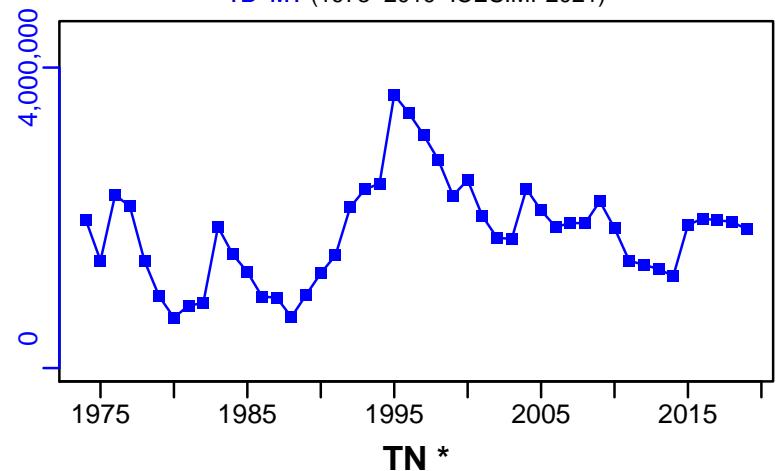


◆ Start Year ◆ End Year \* No Data

Sprat Baltic Areas 22–32 [SPRAT22–32]

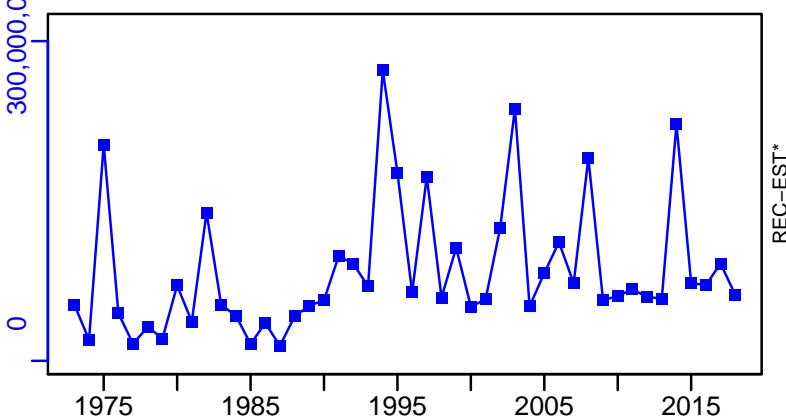
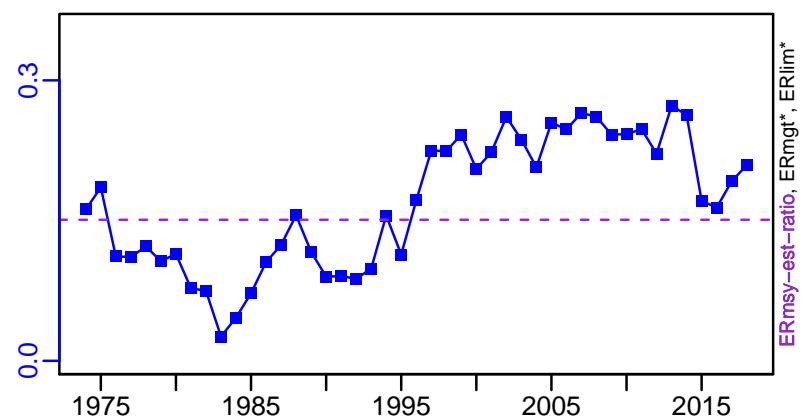
TB-MT (1973–2019–ICESIMP2021)

SSB-MT (1973–2019–ICESIMP2021)



ER-calc-ratio (1973–2019–ICESIMP2021)

R-E00 (1973–2019–ICESIMP2021)

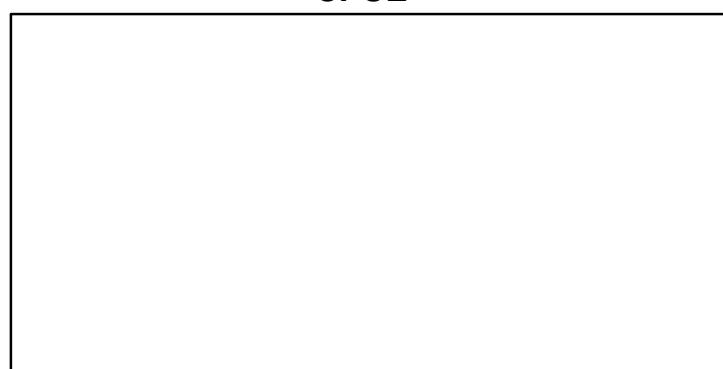
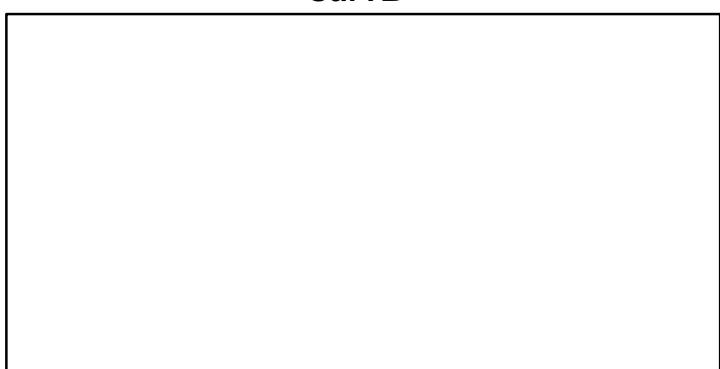
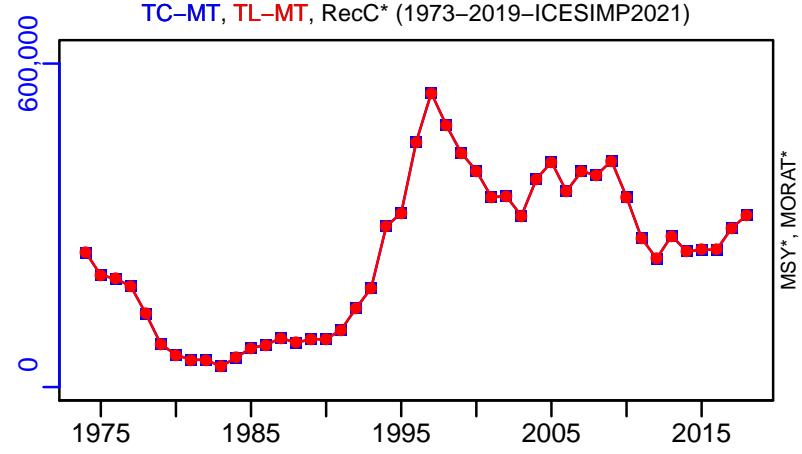


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

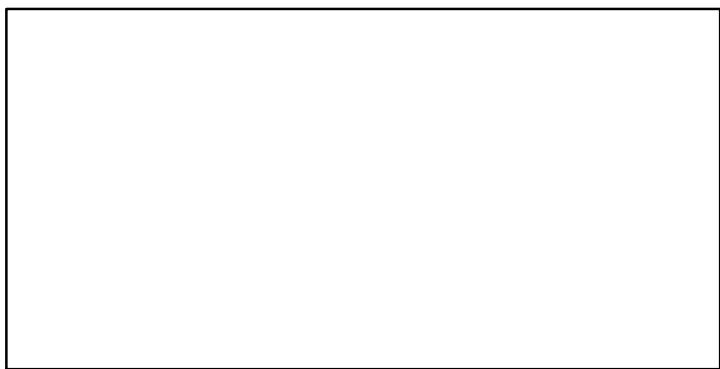
Sprat Baltic Areas 22–32 [SPRAT22–32]

TC-MT, TL-MT, RecC\* (1973–2019–ICESIMP2021)

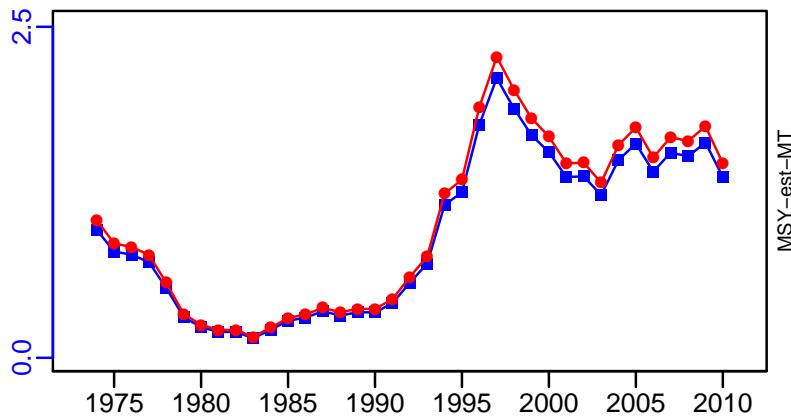
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TL-MT/MSY-est-MT, CdiveMEANC-ratio, (1973–2011–NEUBAUER)



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

## Sprat ICES 3a-4 [SPRATIIIa-IV]

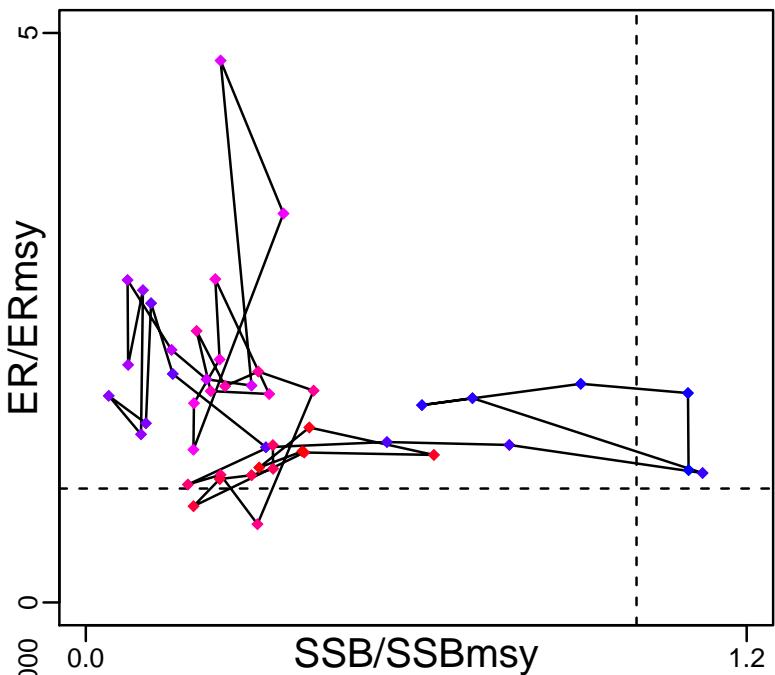
<b>Metadata</b>	
<b>Scientific Name</b>	Sprattus sprattus
<b>Current Assess ID</b>	HAWG-SPRATIIIa-IV-1974-2019-ICESIMP2021
<b>Area</b>	ICES 3a-4
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2019	553,343
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.356
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2019	364,373
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

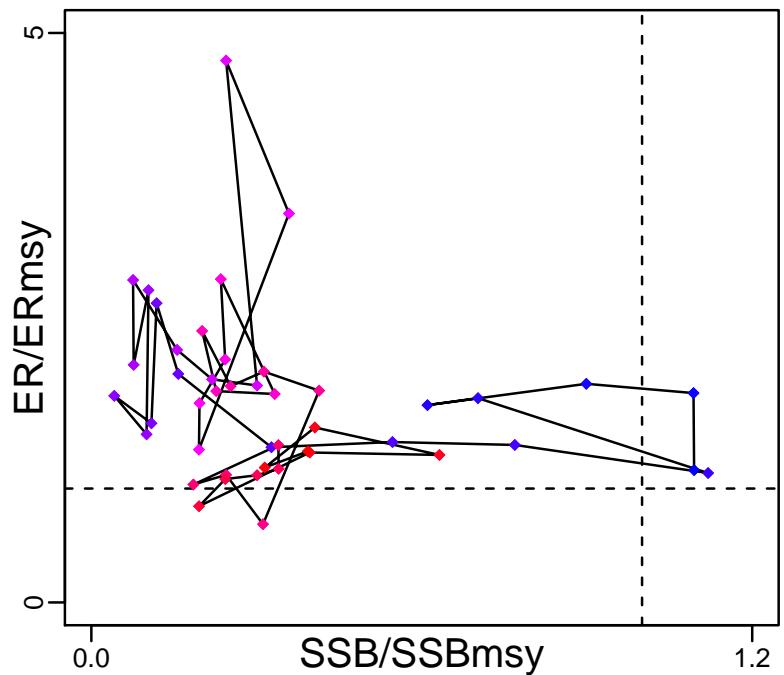
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	SSB-MT	2019	248,824	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	$1.2695 \times 10^{11}$	-	0	
<b>F</b>	F-1/yr	2019	1.4	-	1 to 2	
<b>ER</b>	ER-calc-ratio	2019	0.473	-	-	
<b>TC</b>	TC-MT	2019	190,052			
<b>TL</b>	TL-MT	2019	190,052			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2019	0.45			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	1.327			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Sprat ICES 3a–4 [SPRATIIIa–IV]

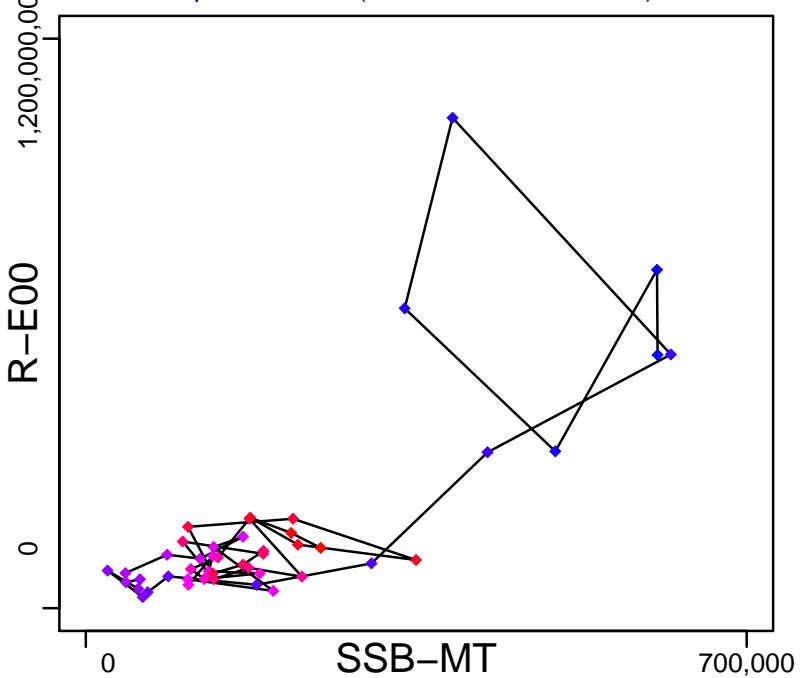
Kobe MSYpref (1974–2019–ICESIMP2021)



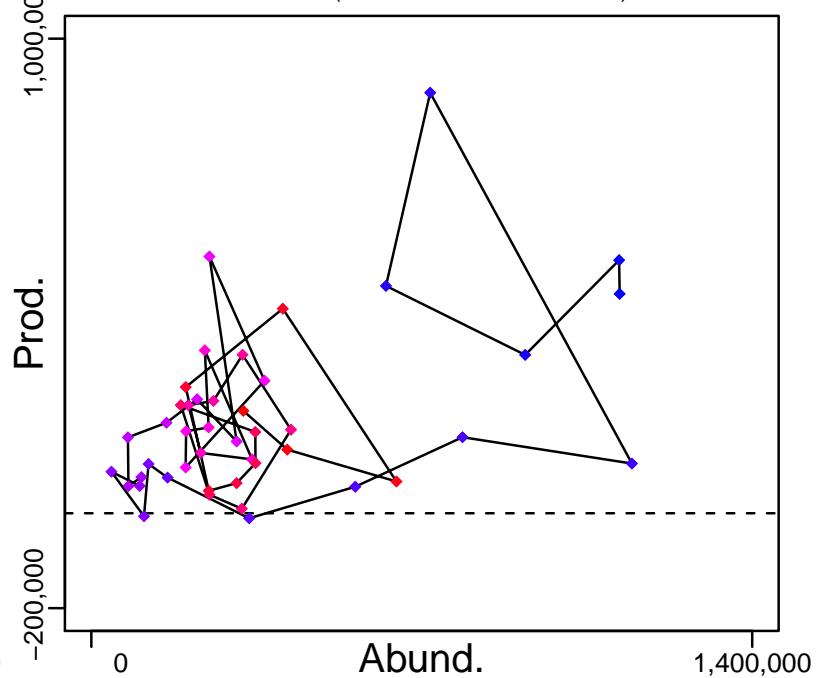
Kobe MGTpref (1974–2019–ICESIMP2021)



Spawner Recruit (1974–2019–ICESIMP2021)



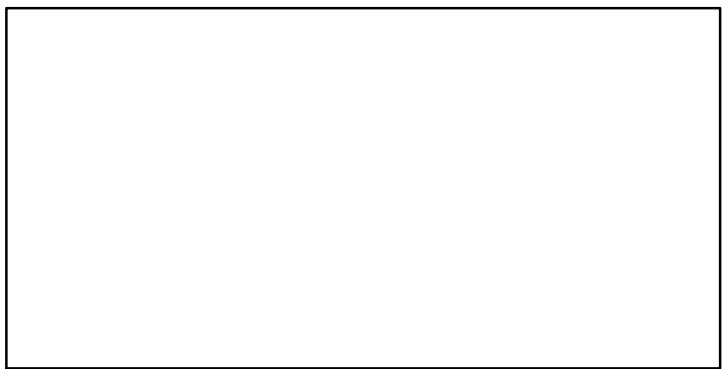
Production (1974–2019–ICESIMP2021)



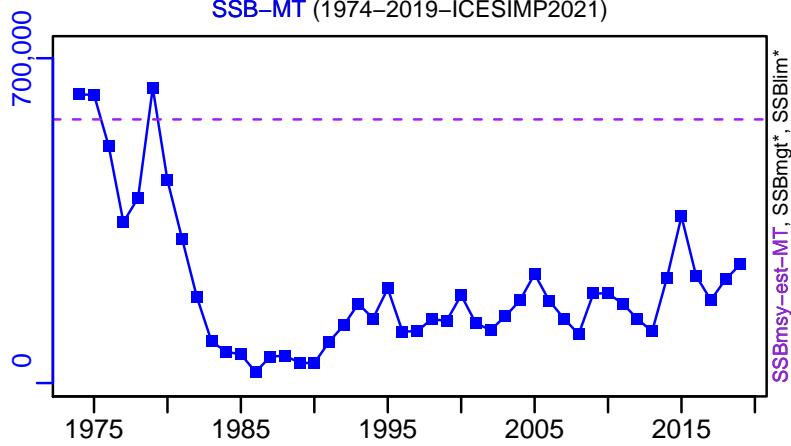
◆ Start Year ♦ End Year \* No Data

Sprat ICES 3a–4 [SPRATIIIa–IV]

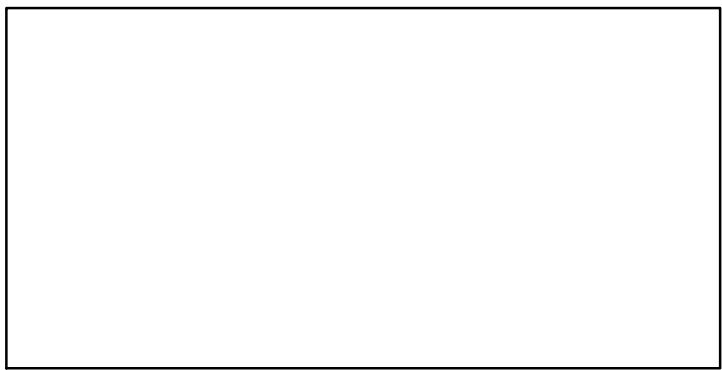
**TB\***



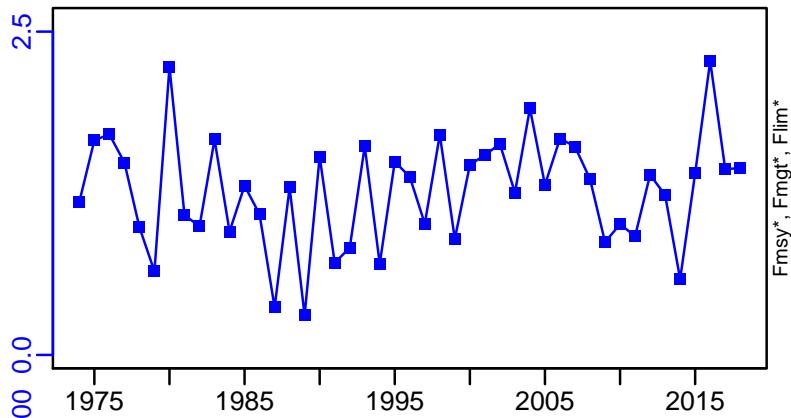
**SSB-MT (1974–2019–ICESIMP2021)**



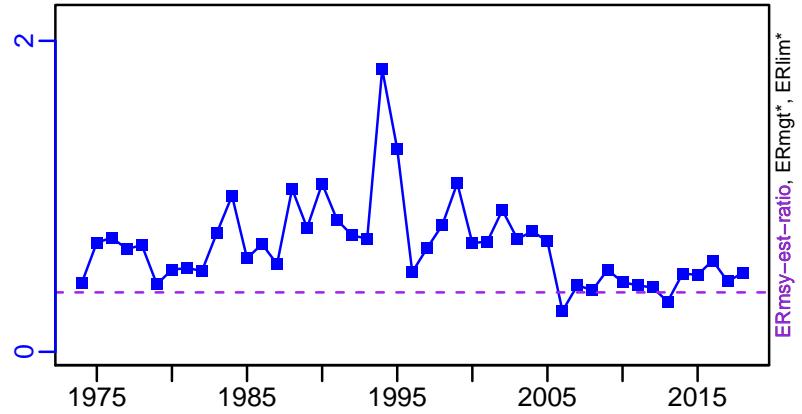
**TN \***



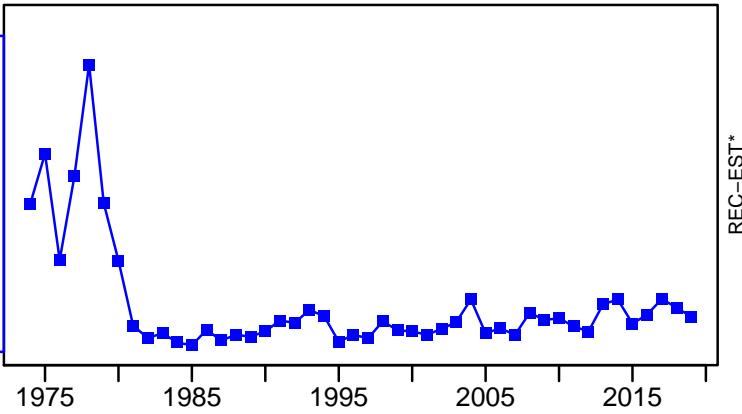
**F-1/yr (1974–2019–ICESIMP2021)**



**ER-calc-ratio (1974–2019–ICESIMP2021)**



**R-E00 (1974–2019–ICESIMP2021)**

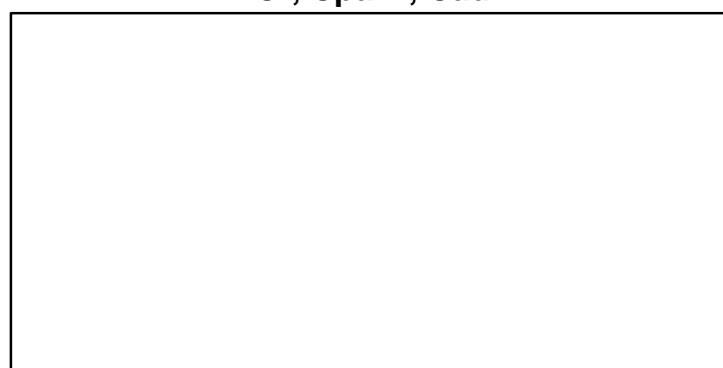
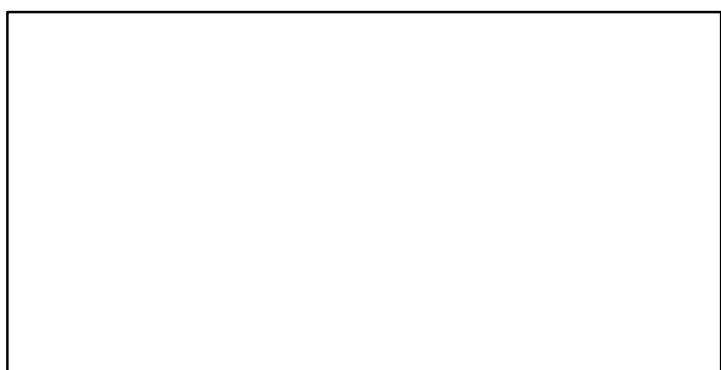
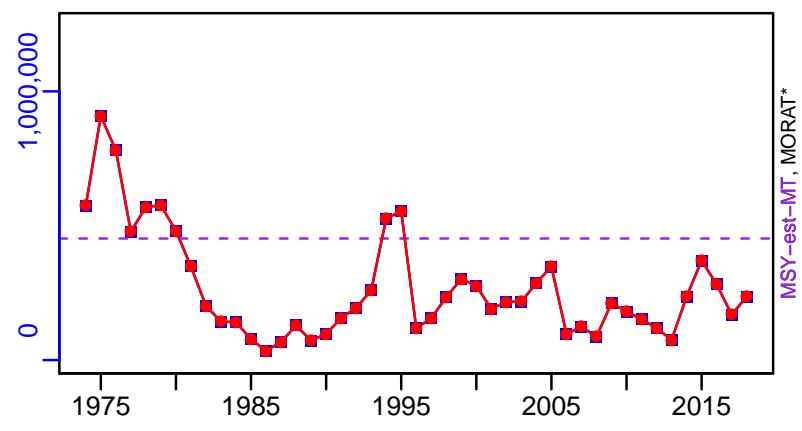


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

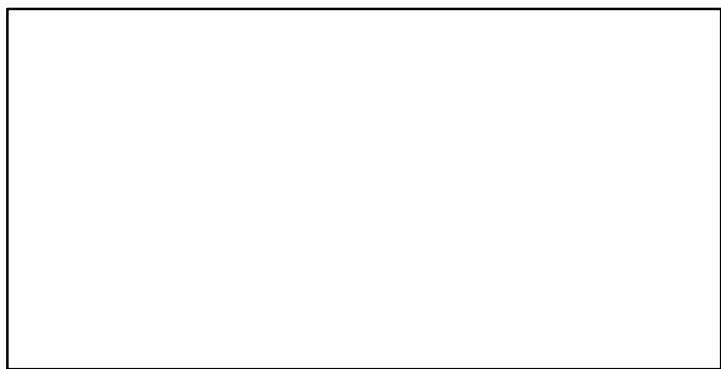
Sprat ICES 3a–4 [SPRATIIIa–IV]

TC–MT, TL–MT, RecC\* (1974–2019–ICESIMP2021)

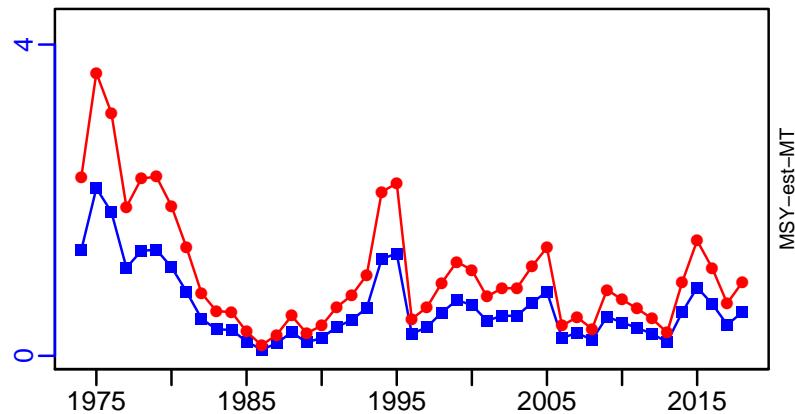
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC–MT/MSY–est–MT, CdivMEANC–ratio, (1974–2019–ICESIMP2021)



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

## Sprat ICES 7de [SPRATVIIde]

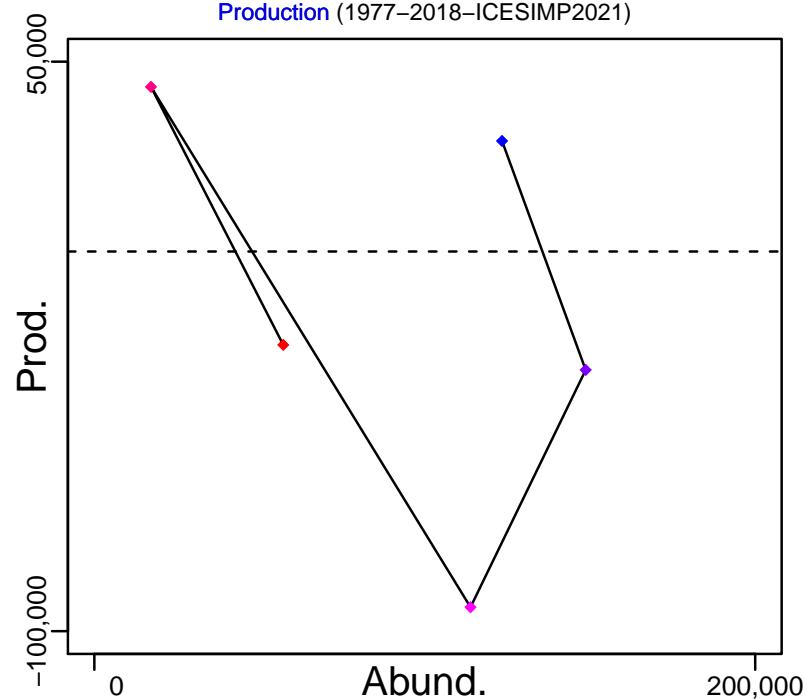
Metadata	
<b>Scientific Name</b>	Sprattus sprattus
<b>Current Assess ID</b>	HAWG-SPRATVIIde-1977-2018-ICESIMP2021
<b>Area</b>	ICES 7de
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERrmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	-
<b>SSB</b>	SSB-MT	2018	17,091	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	F-1/yr	2018	0.11	-	-	
<b>ER</b>	ER-calc-ratio	2018	0.075	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2018	2252			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERrmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Kobe MSY\*****Kobe MGT\*****Spawner Recruit\***

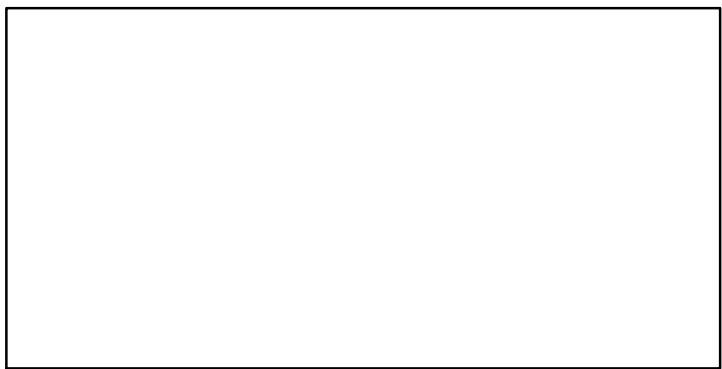
Production (1977–2018–ICESIMP2021)



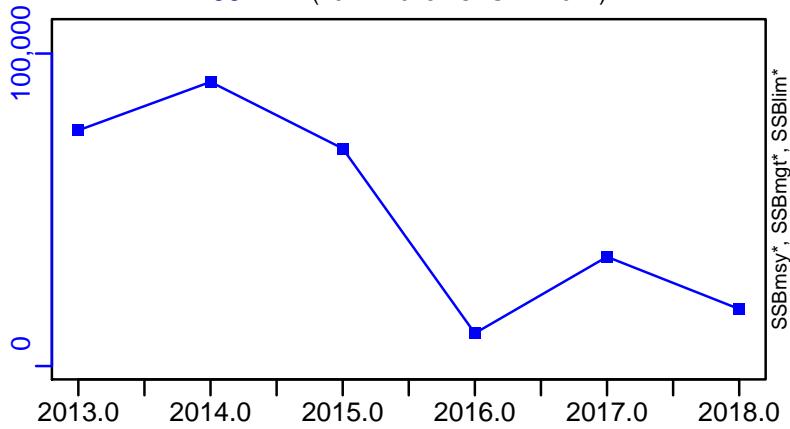
◆ Start Year   ◆ End Year   \* No Data

Sprat ICES 7de [SPRATVIIde]

**TB\***



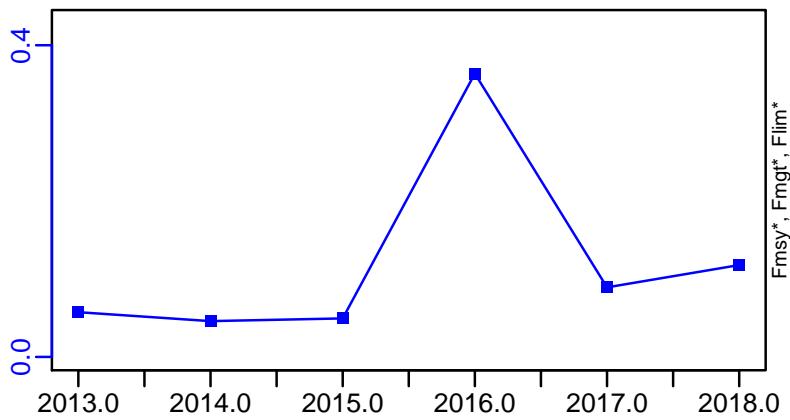
**SSB-MT (1977–2018–ICESIMP2021)**



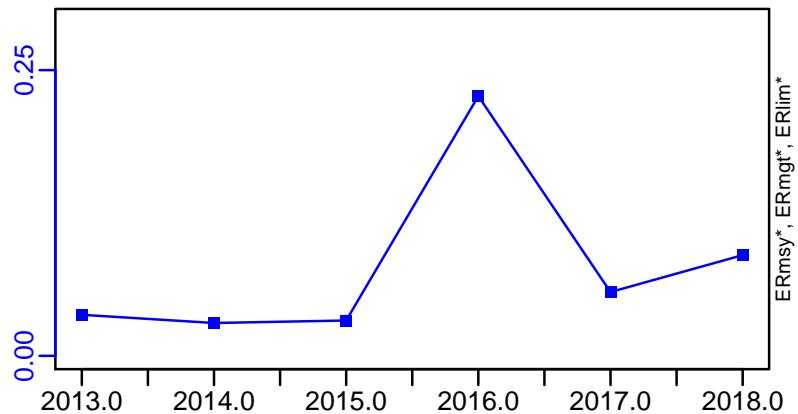
**TN \***



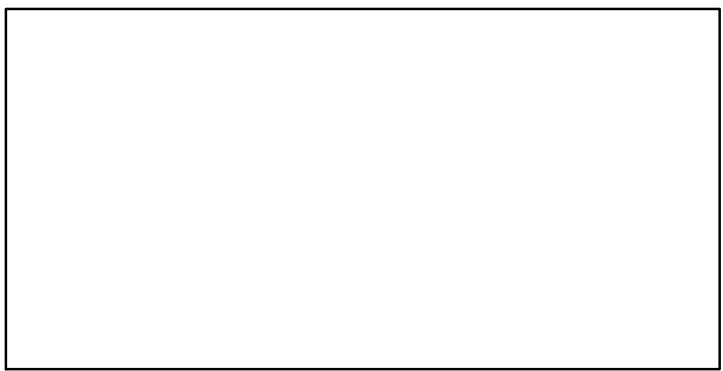
**F-1/yr (1977–2018–ICESIMP2021)**



**ER-calc-ratio (1977–2018–ICESIMP2021)**



**Recruits\***

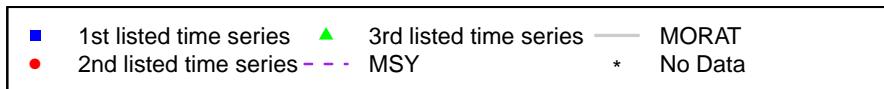
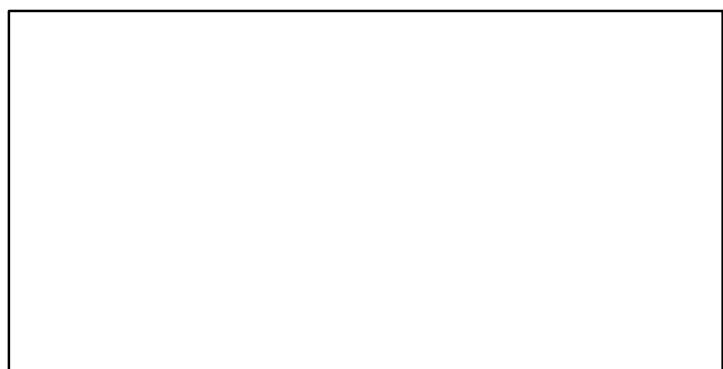
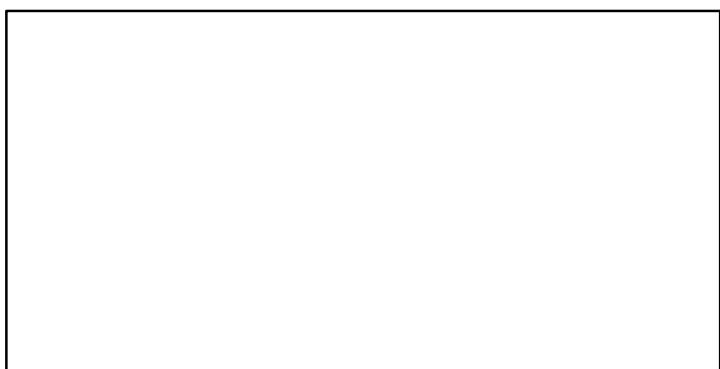
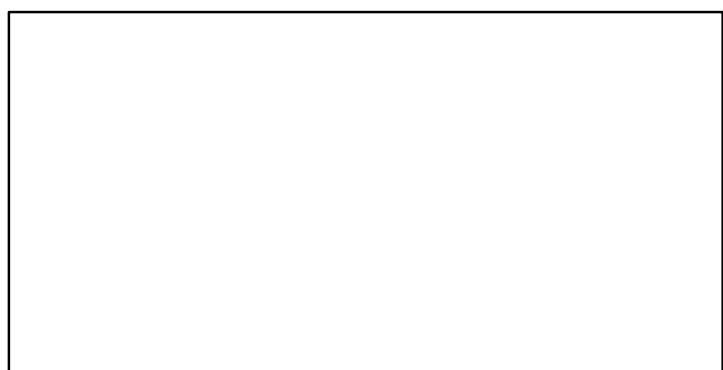
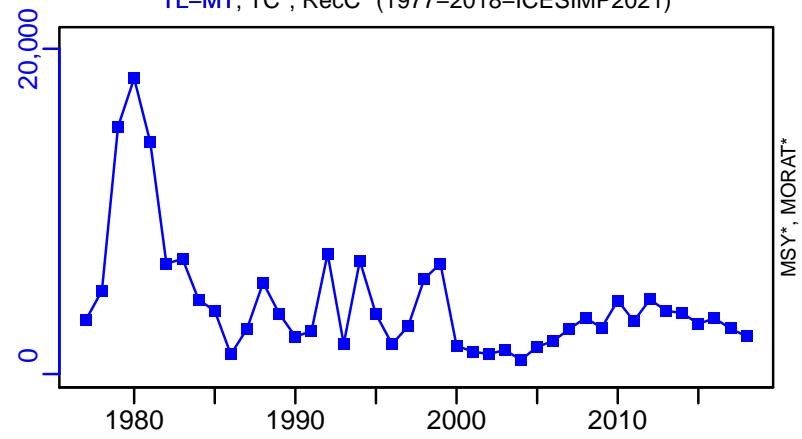


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	— Lim BRP	* No Data

Sprat ICES 7de [SPRATVIIde]

TL-MT, TC\*, RecC\* (1977–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



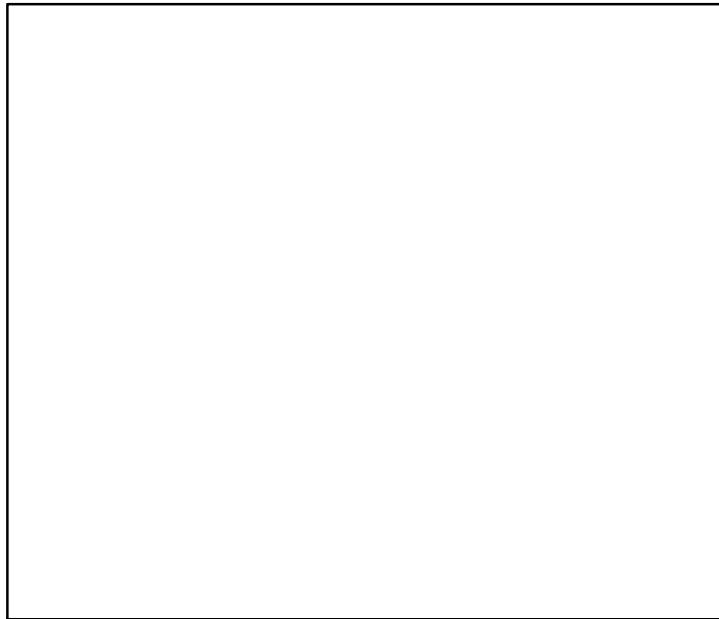
## Sprat ICES 6-7abcfghijk [SPRATVI-VIIabcfghijk]

<b>Metadata</b>	
<b>Scientific Name</b>	Sprattus sprattus
<b>Current Assess ID</b>	HAWG-SPRATVI-VIIabcfghijk-1985-2018-ICESIMP2021
<b>Area</b>	ICES 6-7abcfghijk
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Herring Assessment Working Group for the Area South of 62N
<b>Asmts in RAM</b>	2016, 2015, 2018

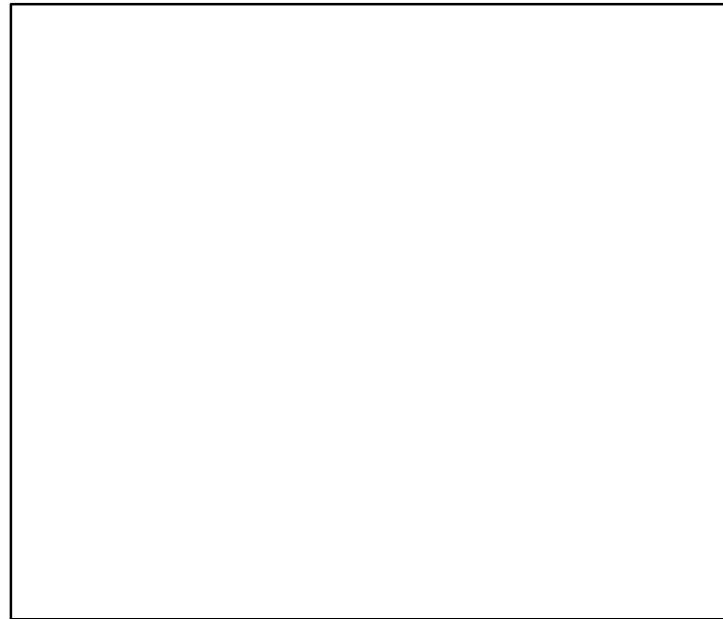
<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim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

<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	3590		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

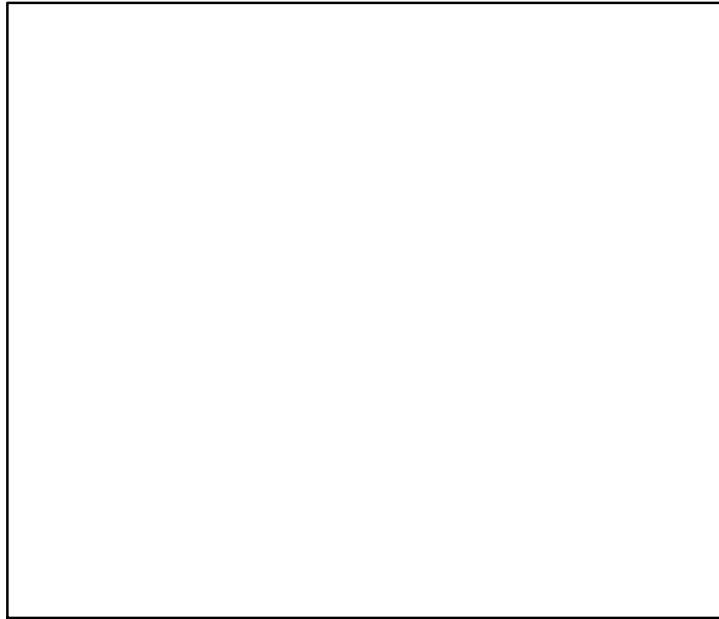
**Kobe MSY\***



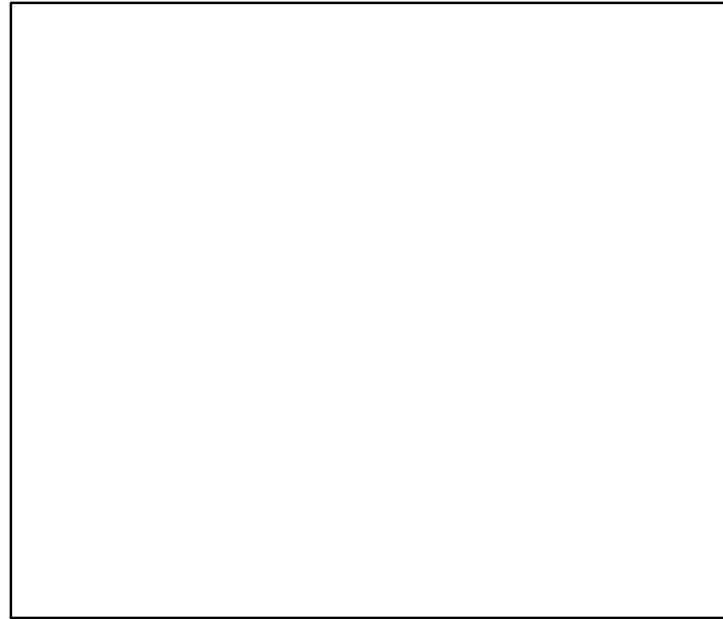
**Kobe MGT\***



**Spawner Recruit\***



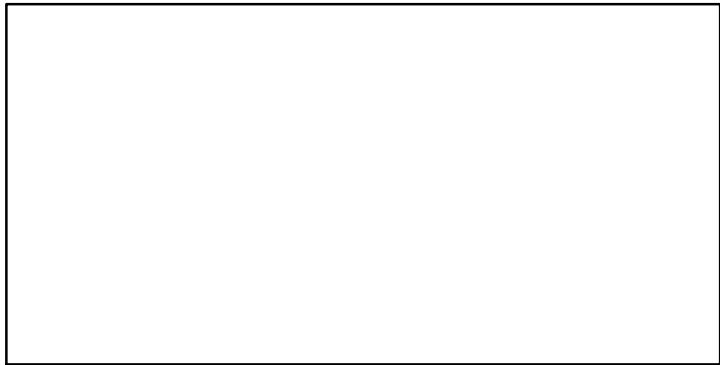
**Production\***



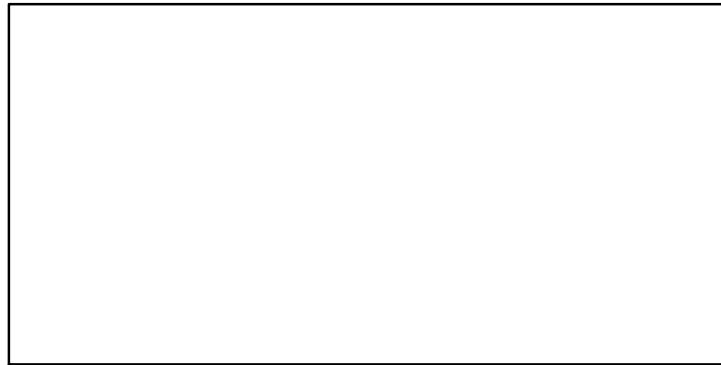
◆ Start Year ♦ End Year \* No Data

**Sprat ICES 6–7abcfghijk [SPRATVI–VIIabcfghijk]**

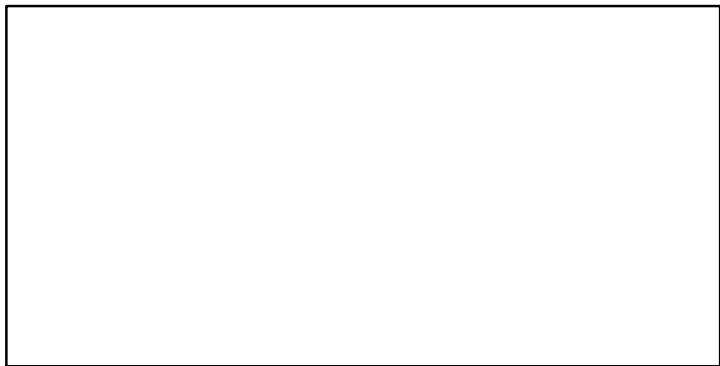
**TB\***



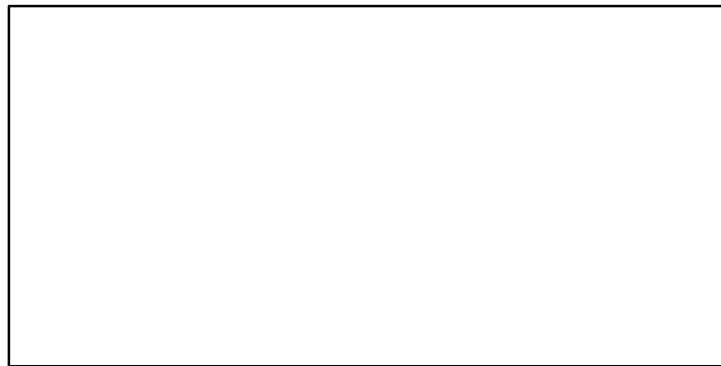
**SSB\***



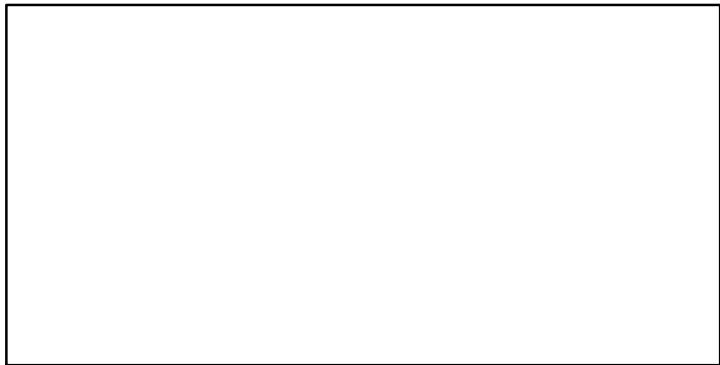
**TN \***



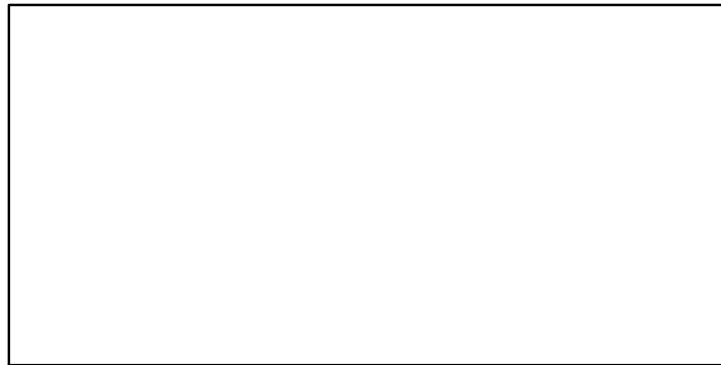
**F\***



**ER\***



**Recruits\***

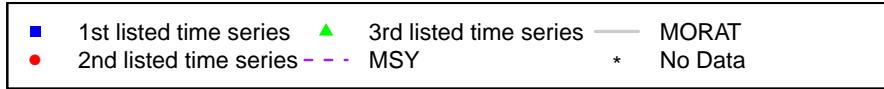
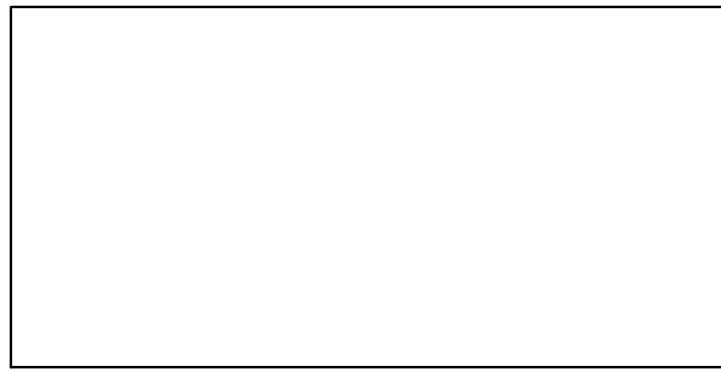
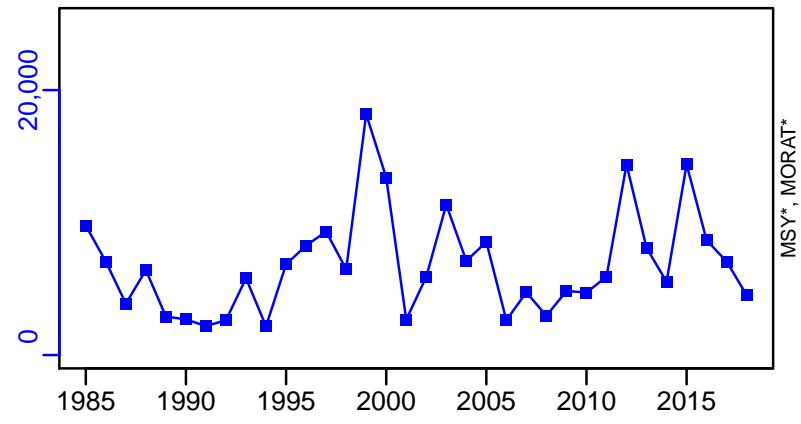


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

**Sprat ICES 6–7abcfghijk [SPRATVI–VIIabcfghijk]**

TL–MT, TC\*, RecC\* (1985–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



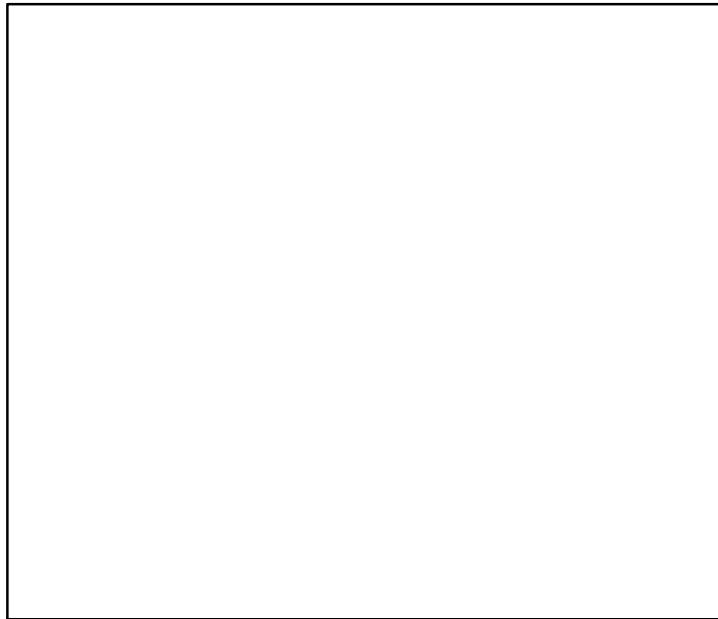
## Spotted ray ICES 3a-4-7d [SPRAYIIla-IV-VIId]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja montagui
<b>Current Assess ID</b>	WGEF-SPRAYIIla-IV-VIId-1993-2018-ICESIMP2021
<b>Area</b>	ICES 3a-4-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2018, 2016

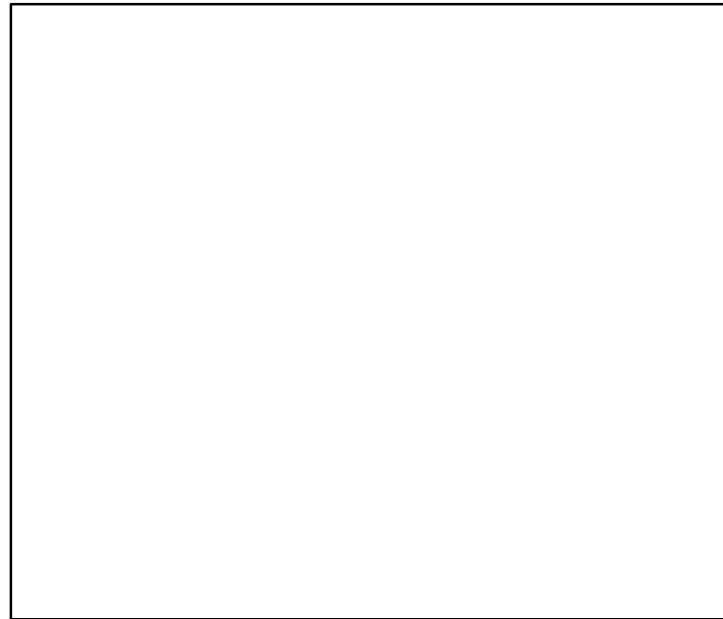
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	2.05	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	355		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

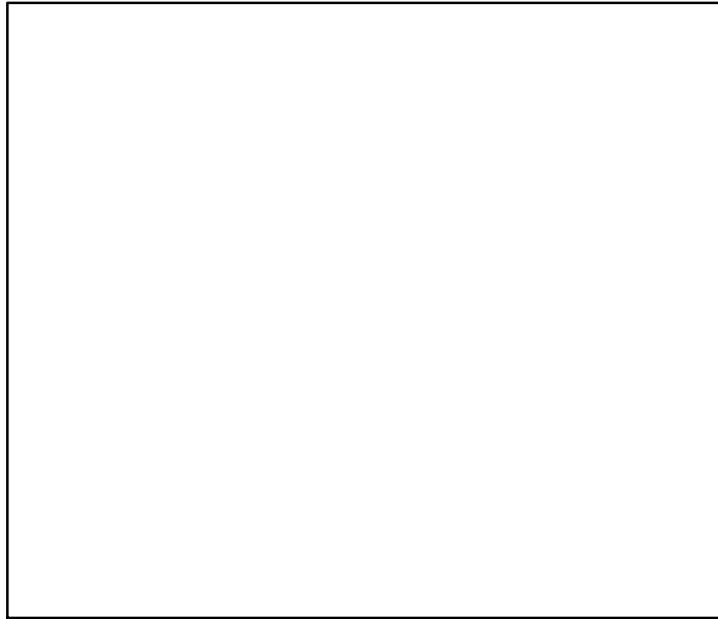
Kobe MSY\*



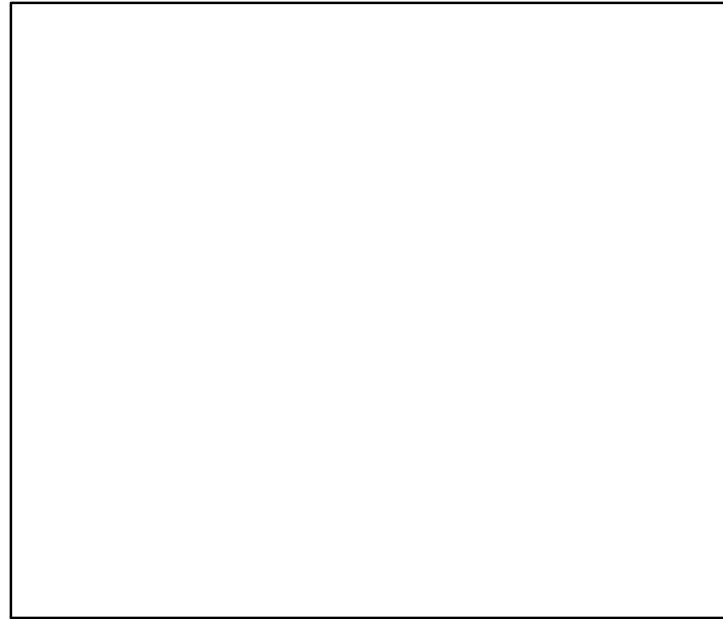
Kobe MGT\*



Spawner Recruit\*



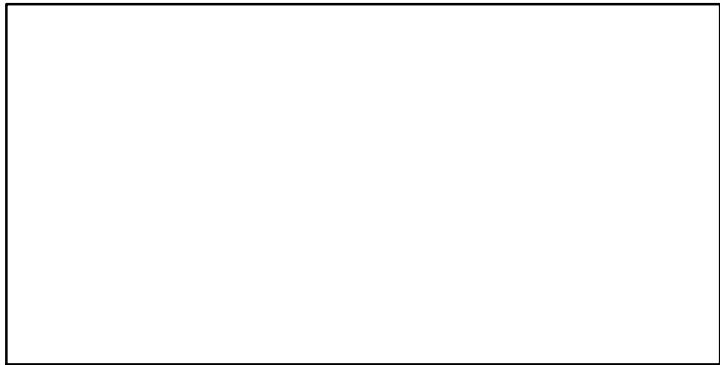
Production\*



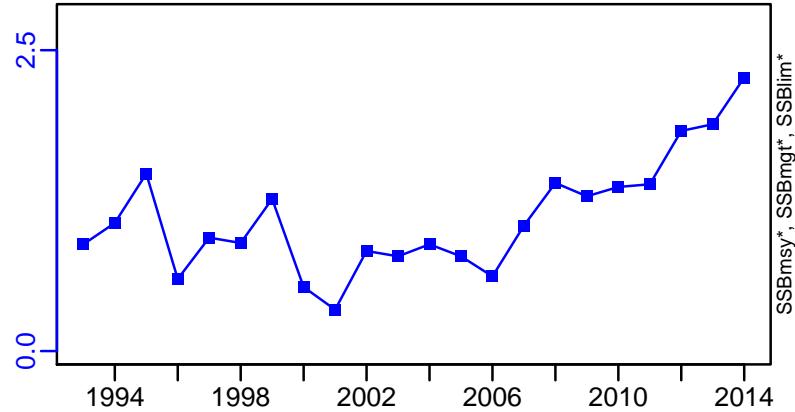
◆ Start Year ♦ End Year \* No Data

Spotted ray ICES 3a–4–7d [SPRAYIIIa–IV–VIIId]

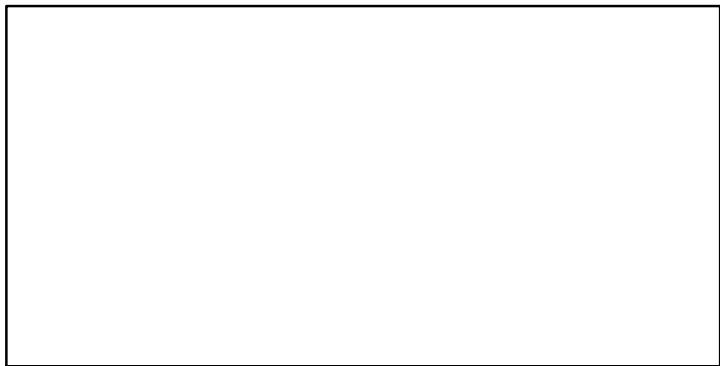
**TB\***



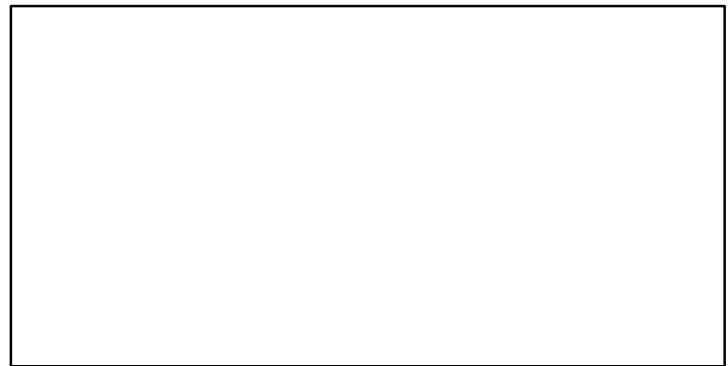
SSB-index (1993–2014–ICESIMP2018)



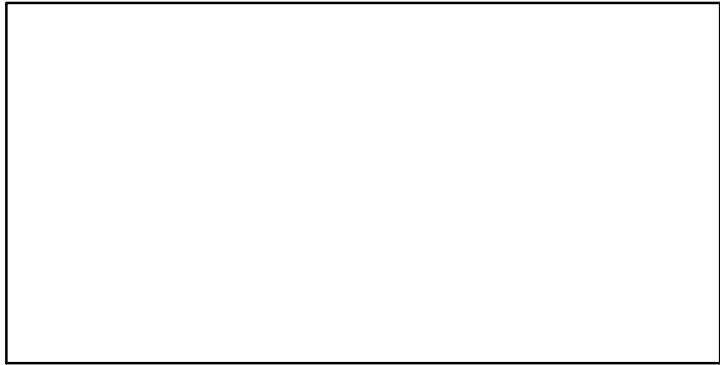
**TN \***



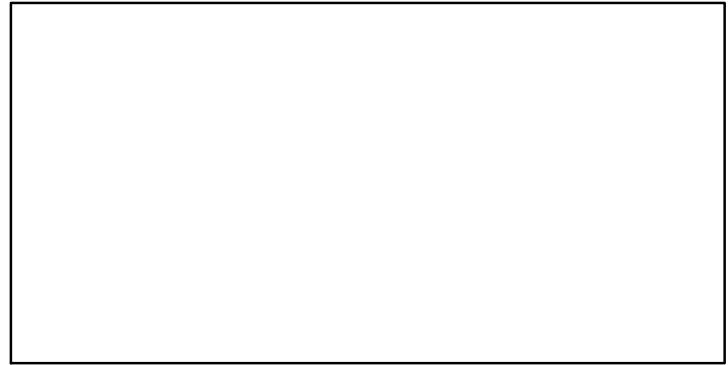
**F\***



**ER\***



**Recruits\***

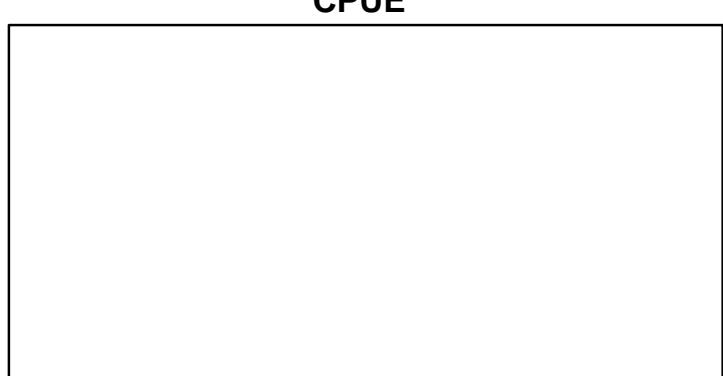
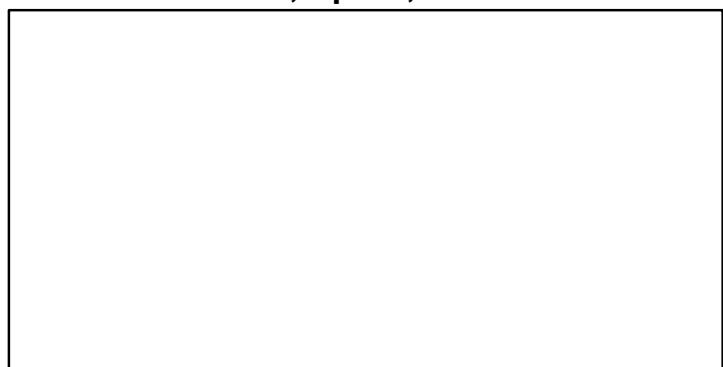
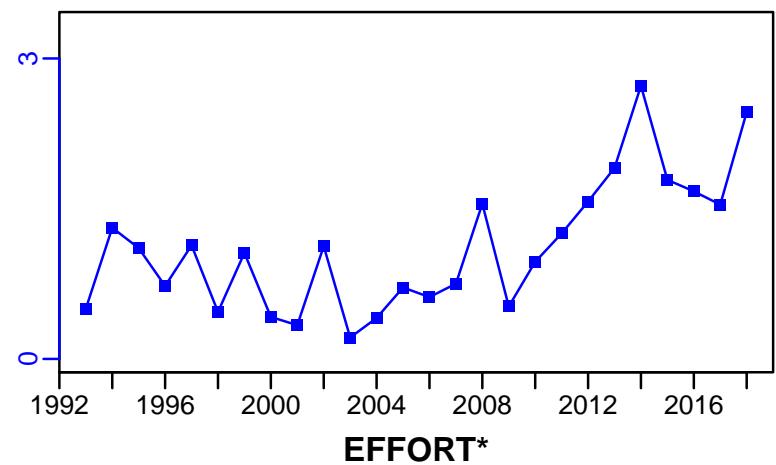
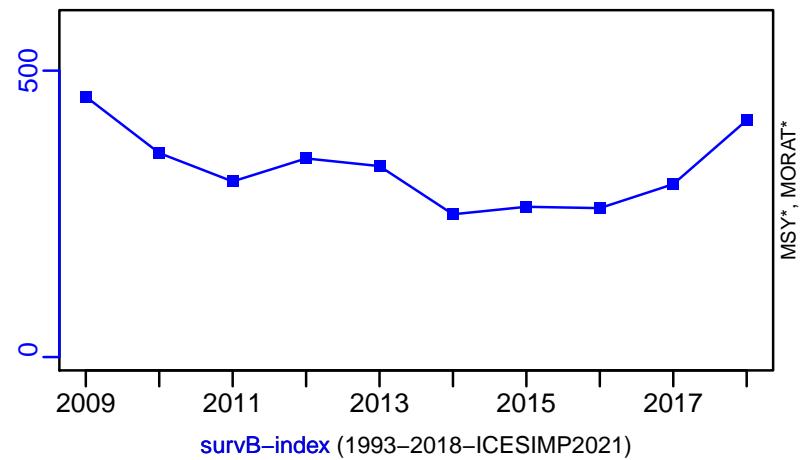


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

**Spotted ray ICES 3a–4–7d [SPRAYIIla–IV–VIId]**

TL-MT, TC\*, RecC\* (1993–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



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

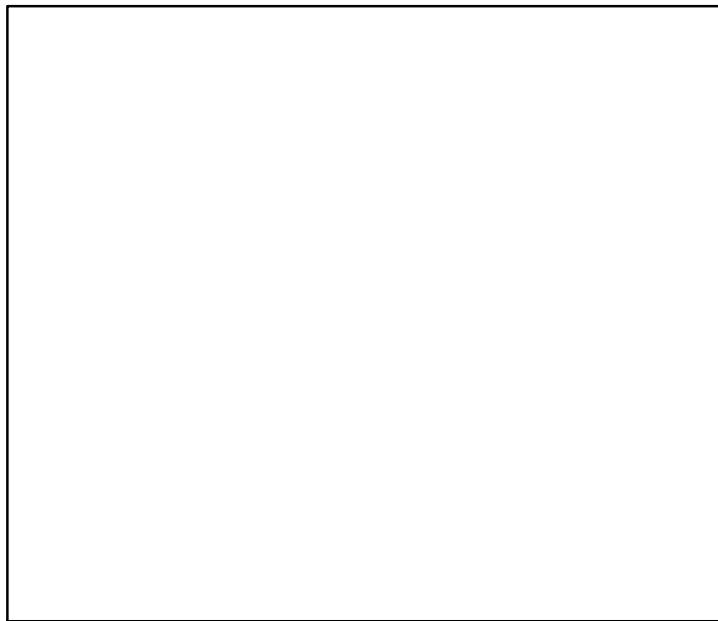
## Spotted ray Portugese Waters -East [SPRAYIXa]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja montagui
<b>Current Assess ID</b>	WGEF-SPRAYIXa-2003-2015-ICESIMP2018
<b>Area</b>	Portugese Waters -East
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

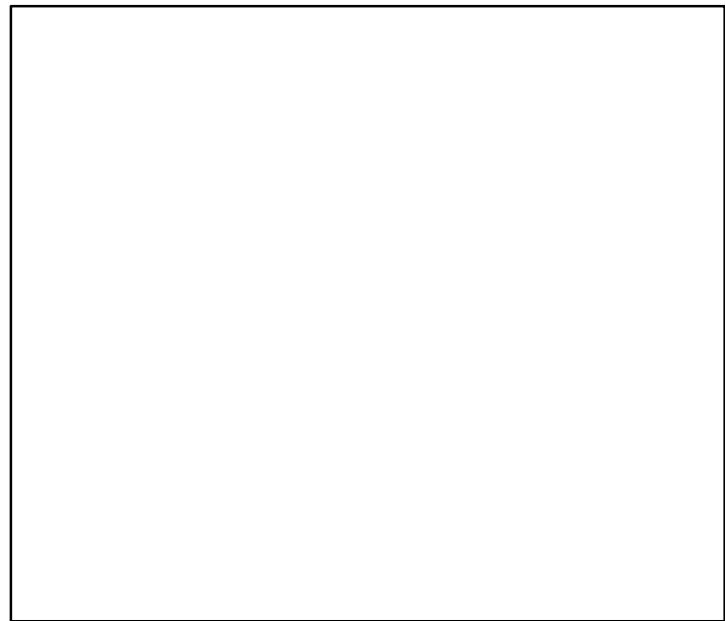
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	2.35	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	68		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

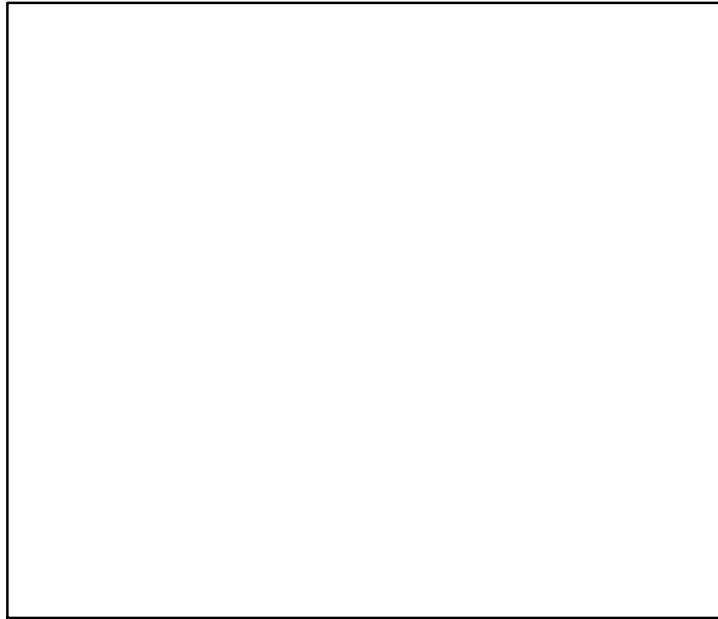
**Kobe MSY\***



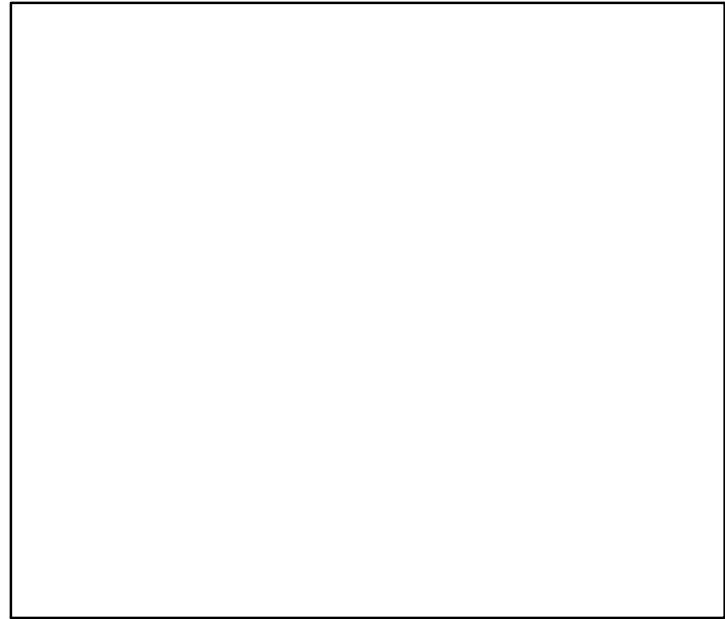
**Kobe MGT\***



**Spawner Recruit\***



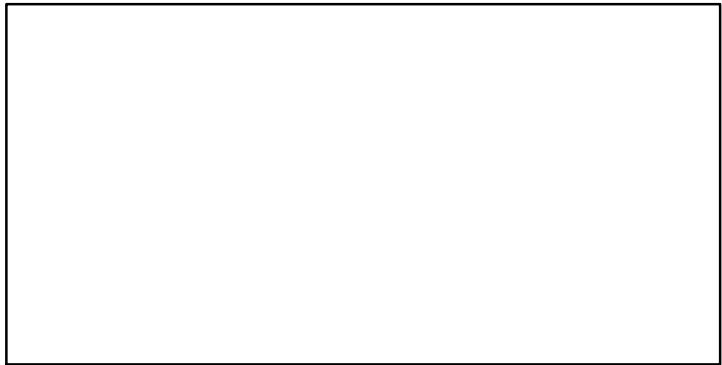
**Production\***



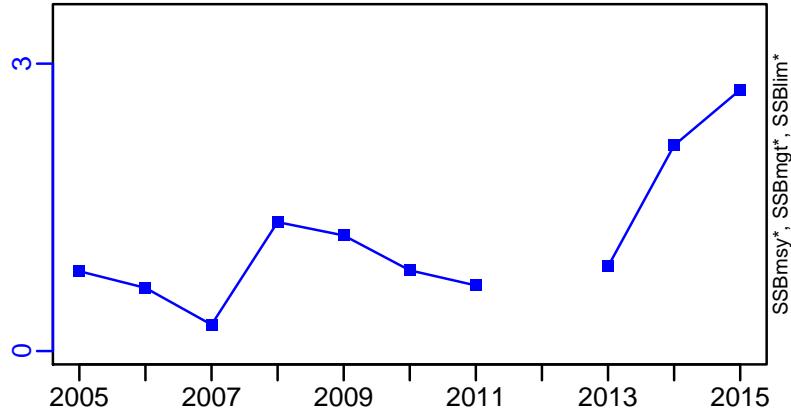
◆ Start Year ♦ End Year \* No Data

**Spotted ray Portuguese Waters –East [SPRAYIXa]**

**TB\***



**SSB–index (2003–2015–ICESIMP2018)**



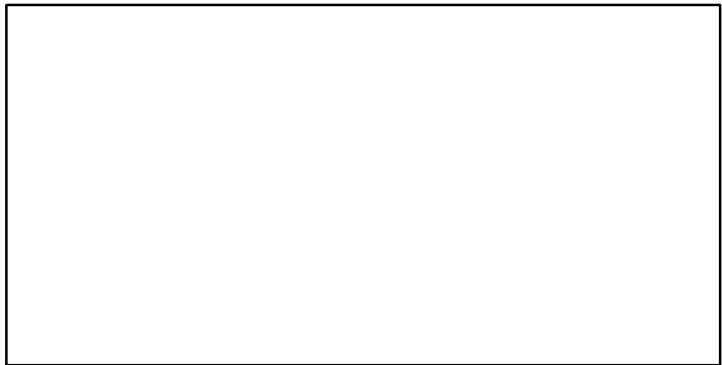
**TN \***



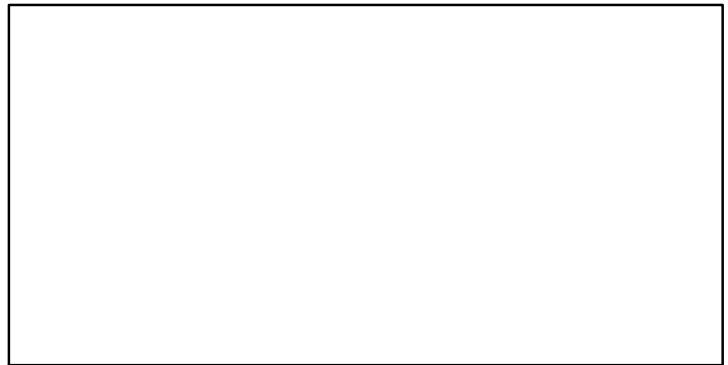
**F\***



**ER\***



**Recruits\***

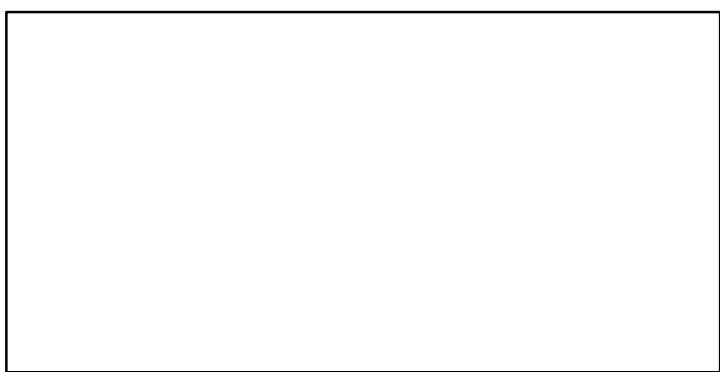
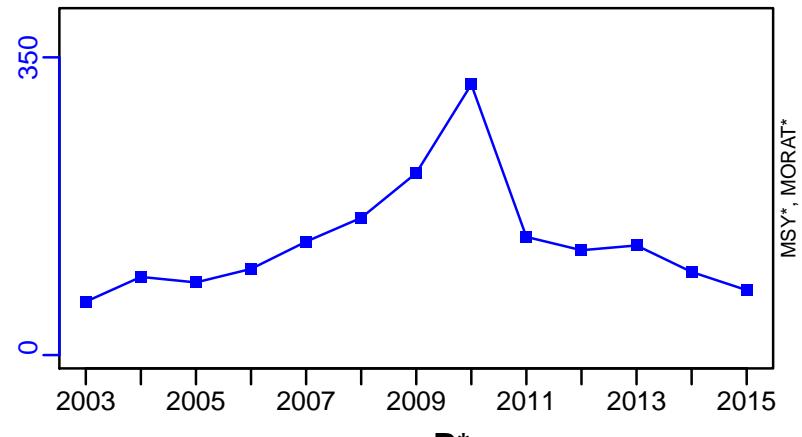


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

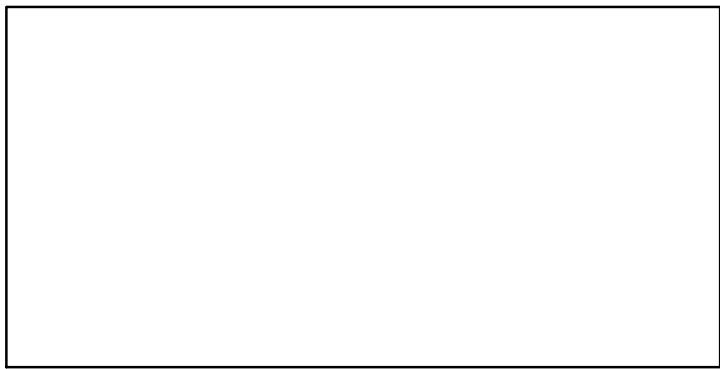
**Spotted ray Portuguese Waters –East [SPRAYIXa]**

TL-MT, TC\*, RecC\* (2003–2015–ICESIMP2018)

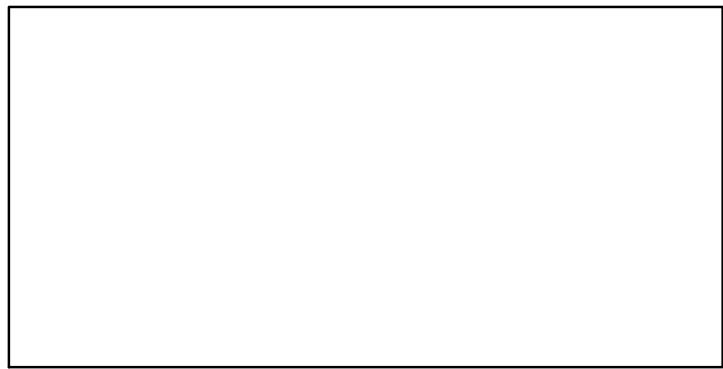
**TAC\*, Cpair\*, Cadv\***



**EFFORT\***



**CdivMSY\***



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

## Spotted ray ICES 7aefgh [SPRAYVIIaefgh]

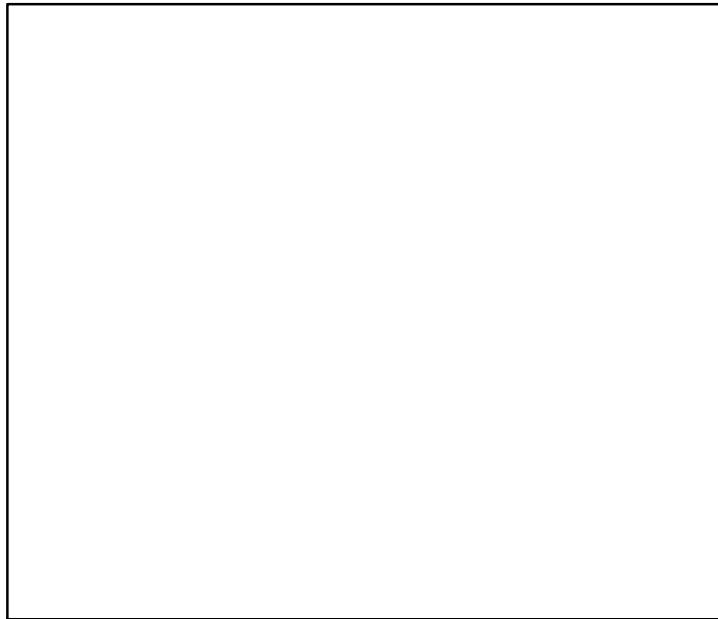
<b>Metadata</b>	
<b>Scientific Name</b>	Raja montagui
<b>Current Assess ID</b>	WGEF-SPRAYVIIaefgh-1993-2015-ICESIMP2018
<b>Area</b>	ICES 7aefgh
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

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

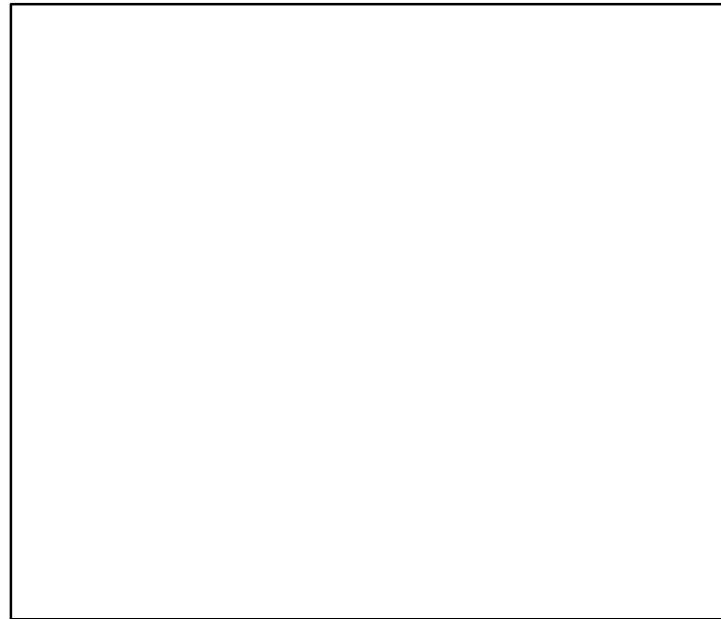
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	7	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	837		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Spotted ray ICES 7aefgh [SPRAYVIIaefgh]**

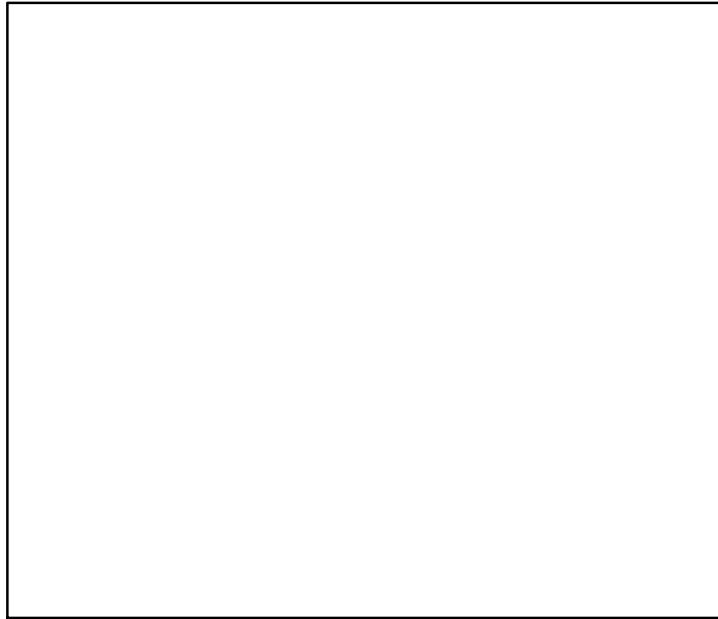
**Kobe MSY\***



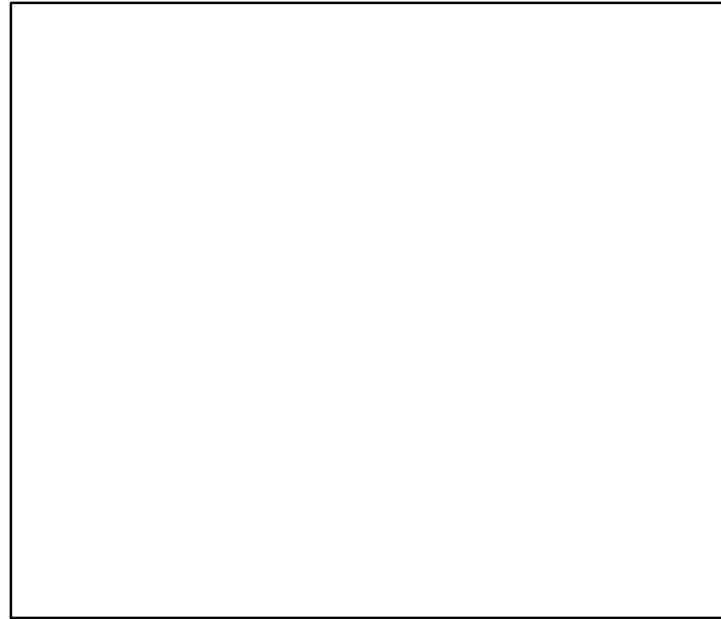
**Kobe MGT\***



**Spawner Recruit\***



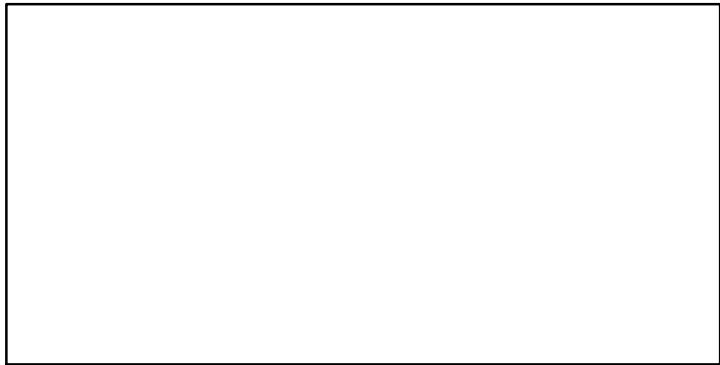
**Production\***



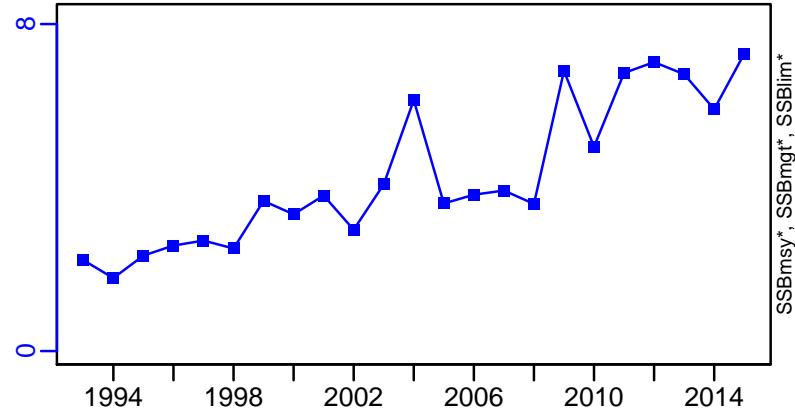
◆ Start Year ♦ End Year \* No Data

Spotted ray ICES 7aefgh [SPRAYVIIaefgh]

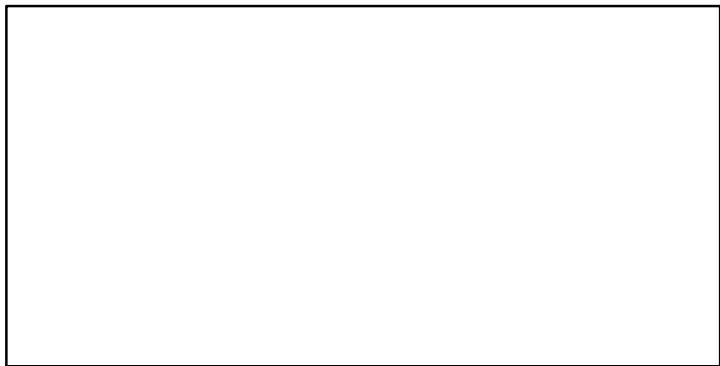
**TB\***



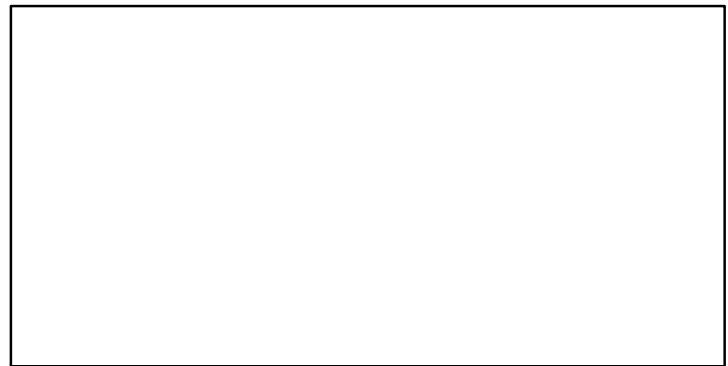
SSB-index (1993–2015–ICESIMP2018)



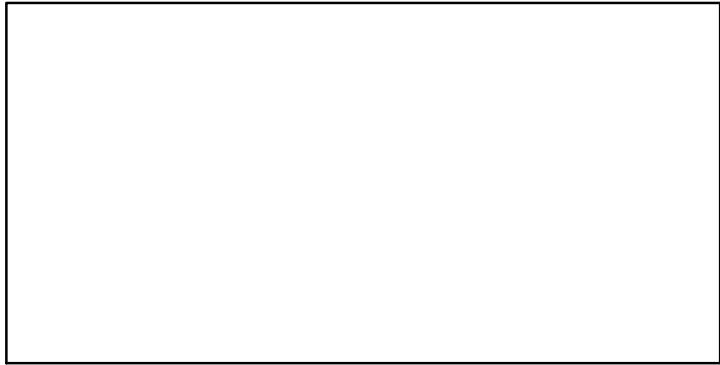
**TN \***



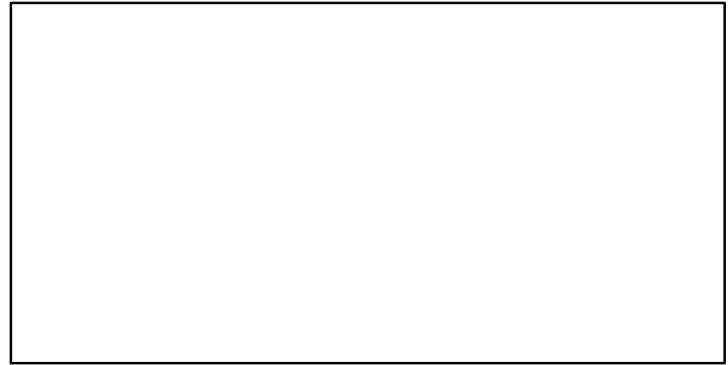
**F\***



**ER\***



**Recruits\***

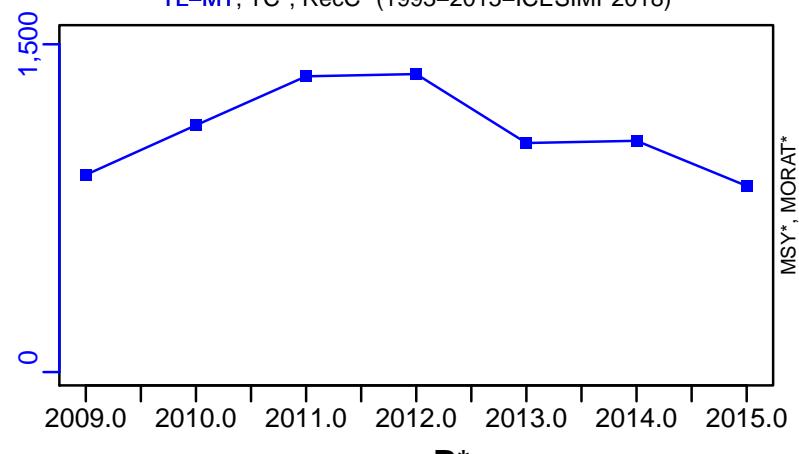


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | ··· Lim BRP  | * No Data |

**Spotted ray ICES 7aefgh [SPRAYVIIaefgh]**

TL-MT, TC\*, RecC\* (1993–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



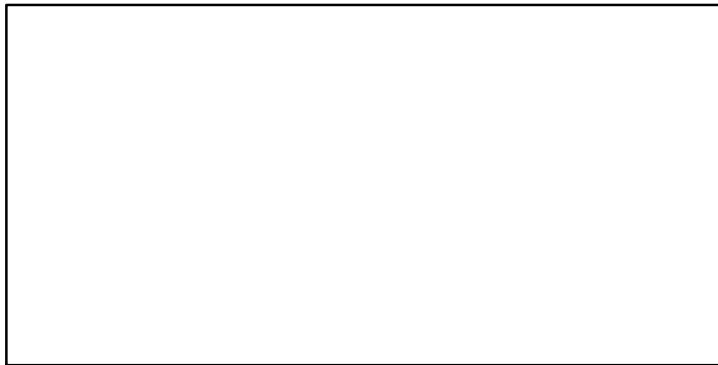
**survB\***



**CPUE\***



**EFFORT\***



**CdivMSY\***



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

## Spotted ray Bay of Biscay [SPRAYVIII]

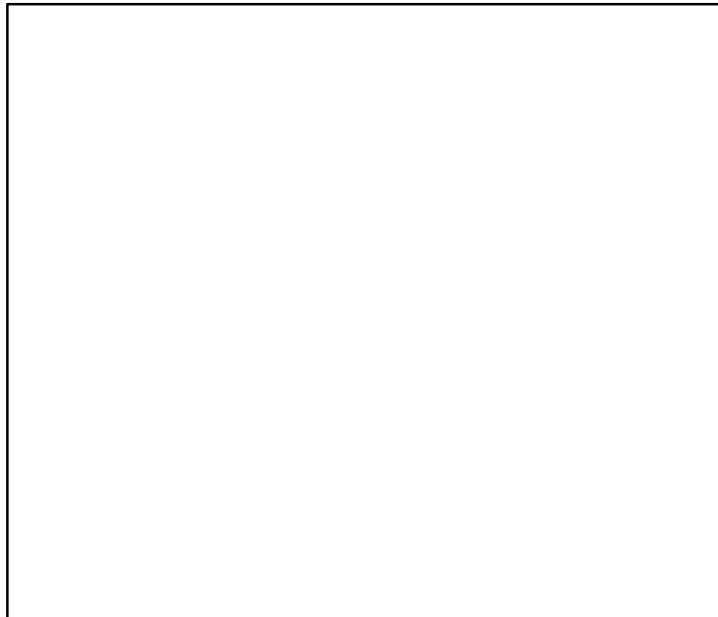
<b>Metadata</b>	
<b>Scientific Name</b>	Raja montagui
<b>Current Assess ID</b>	WGEF-SPRAYVIII-1999-2015-ICESIMP2018
<b>Area</b>	Bay of Biscay
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

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

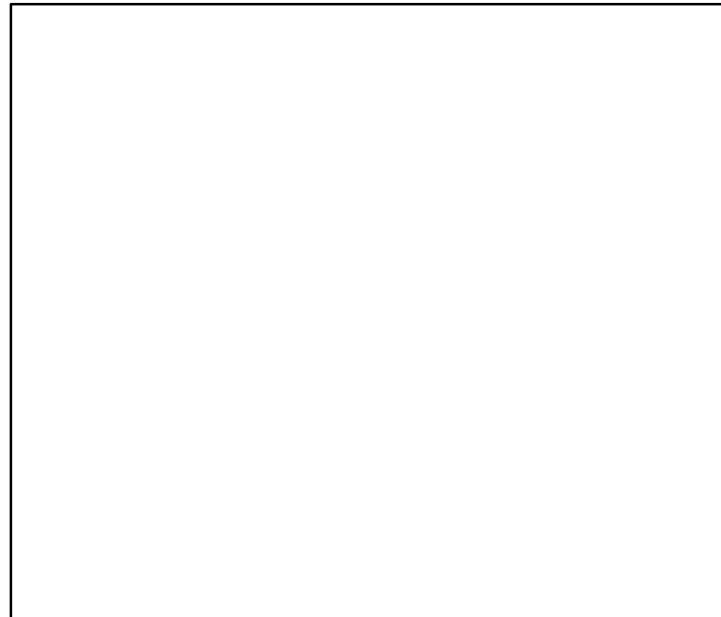
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	1.29	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	176		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Spotted ray Bay of Biscay [SPRAYVIII]**

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



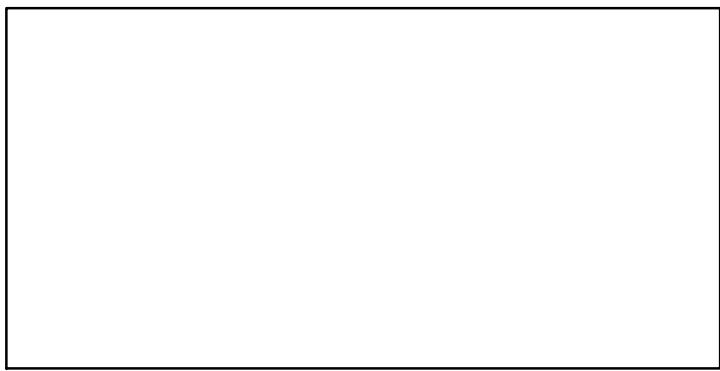
**Production\***



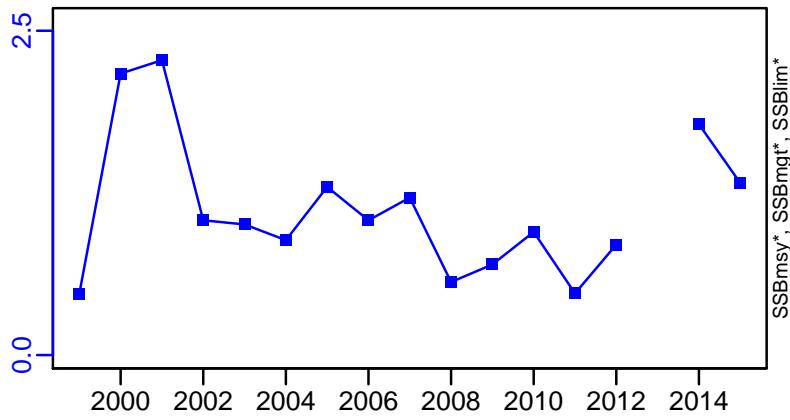
◆ Start Year ♦ End Year \* No Data

**Spotted ray Bay of Biscay [SPRAYVIII]**

**TB\***



**SSB-index (1999–2015–ICESIMP2018)**



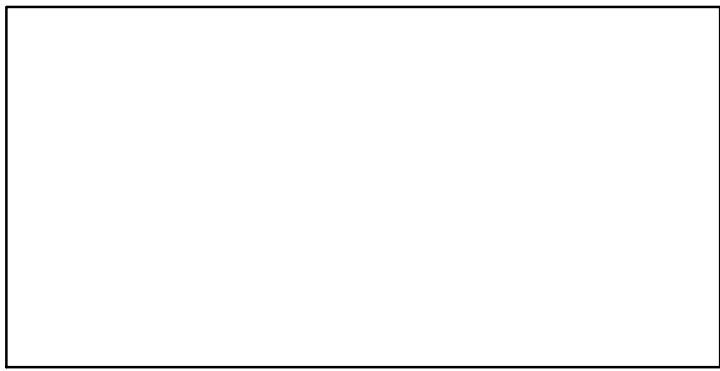
**TN \***



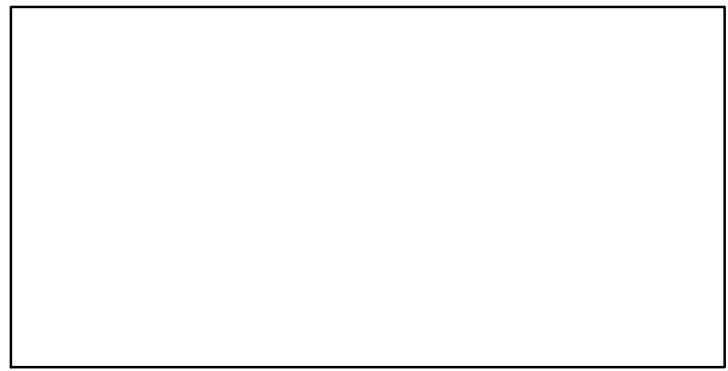
**F\***



**ER\***



**Recruits\***

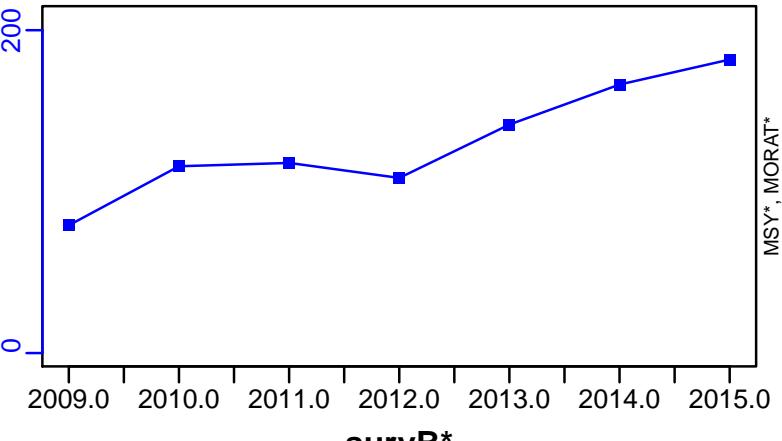


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

**Spotted ray Bay of Biscay [SPRAYVIII]**

TL-MT, TC\*, RecC\* (1999–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



**survB\***



**CPUE\***



**EFFORT\***



**CdivMSY\***



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

## Spotted ray ICES 6-7bj [SPRAYVI-VIIbj]

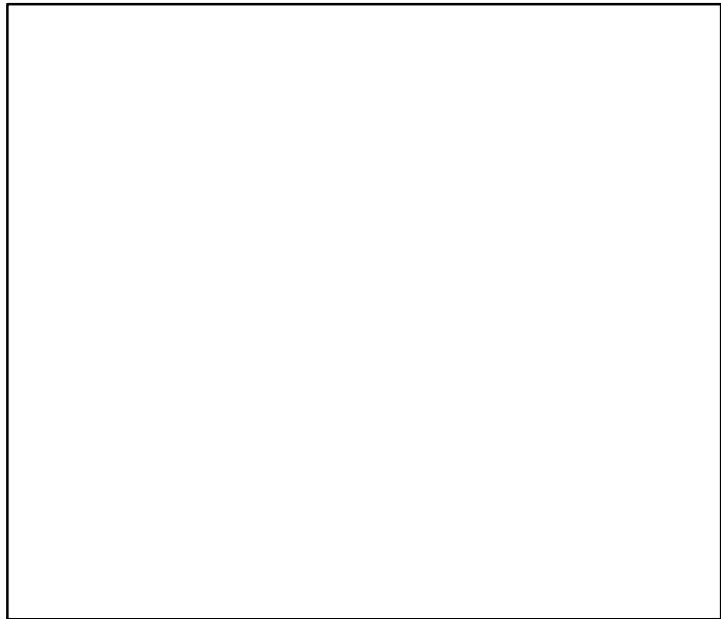
<b>Metadata</b>	
<b>Scientific Name</b>	Raja montagui
<b>Current Assess ID</b>	WGEF-SPRAYVI-VIIbj-2005-2015-ICESIMP2018
<b>Area</b>	ICES 6-7bj
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

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

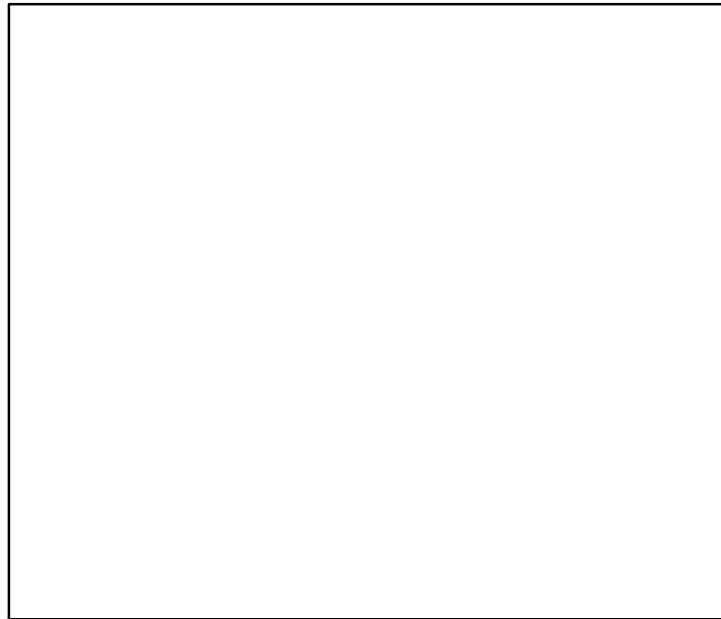
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	9	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	119		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Spotted ray ICES 6–7bj [SPRAYVI–VIIbj]**

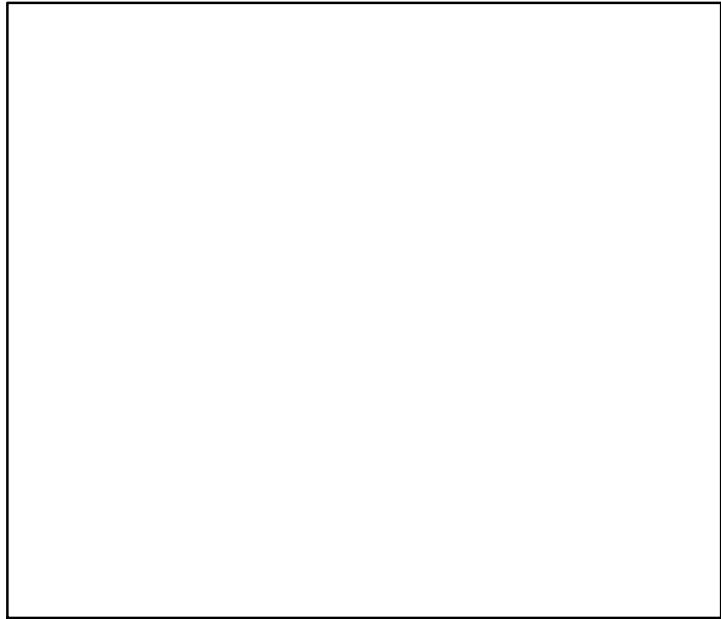
**Kobe MSY\***



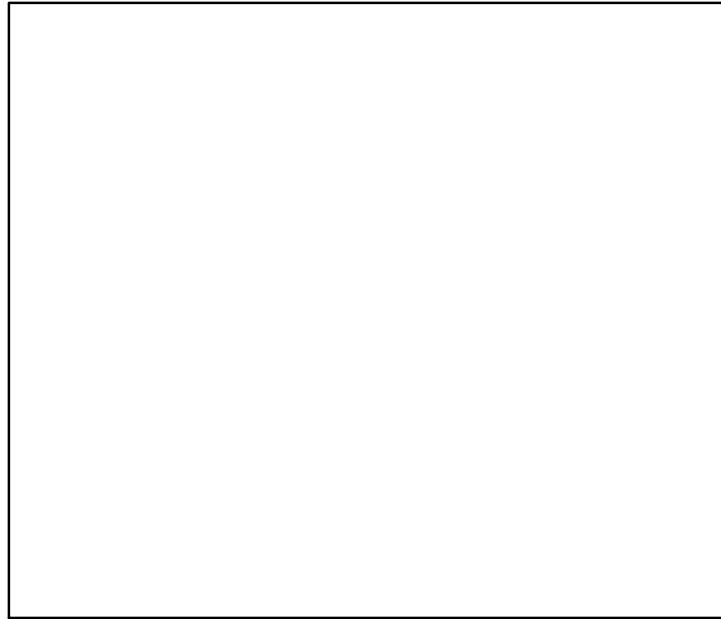
**Kobe MGT\***



**Spawner Recruit\***



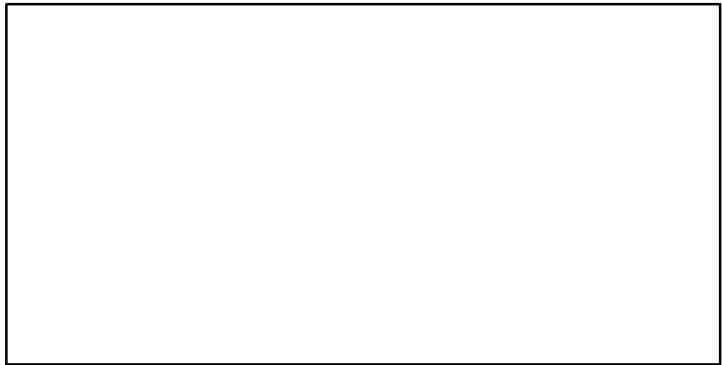
**Production\***



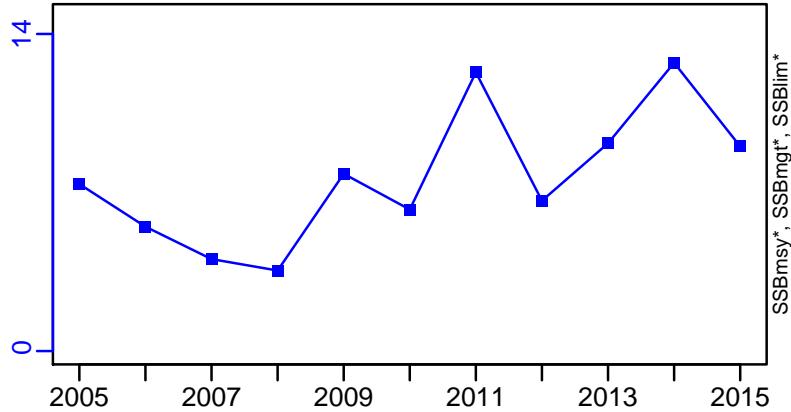
◆ Start Year ♦ End Year \* No Data

**Spotted ray ICES 6–7bj [SPRAYVI–VIIbj]**

**TB\***



**SSB–index (2005–2015–ICESIMP2018)**



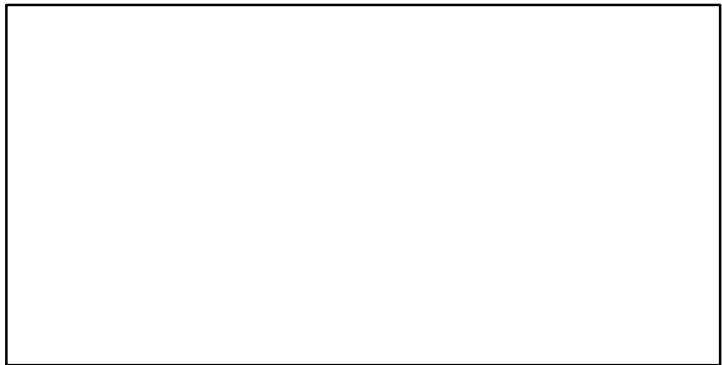
**TN \***



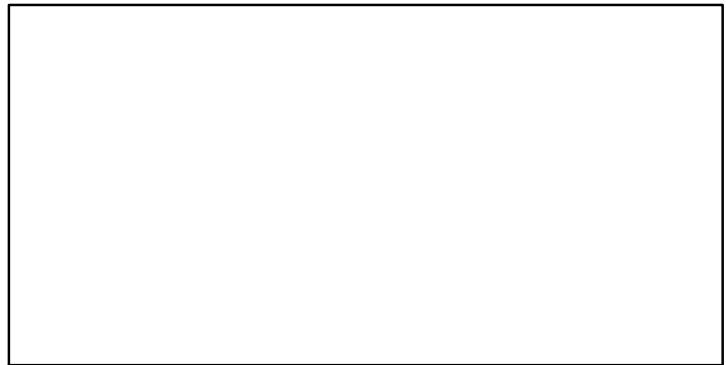
**F\***



**ER\***



**Recruits\***

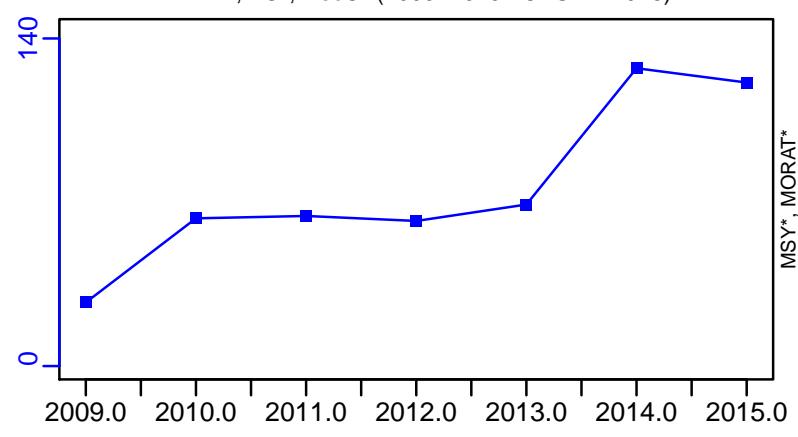


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

**Spotted ray ICES 6–7bj [SPRAYVI–VIIbj]**

TL–MT, TC\*, RecC\* (2005–2015–ICESIMP2018)

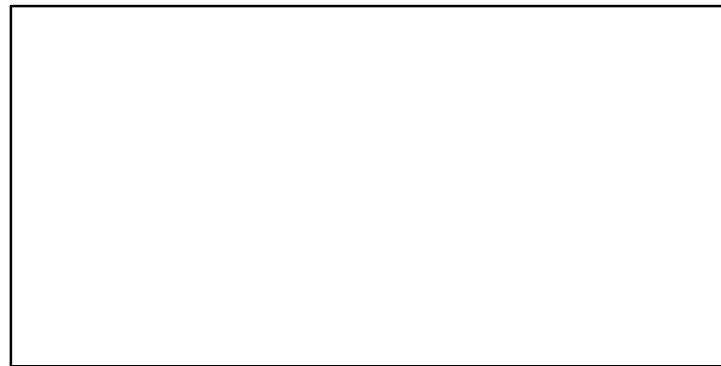
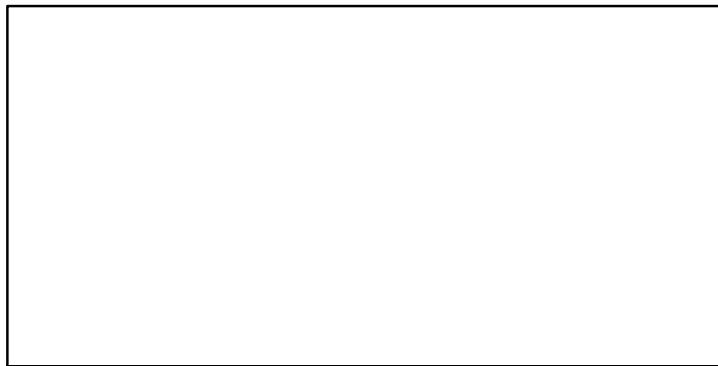
TAC\*, Cpair\*, Cadv\*



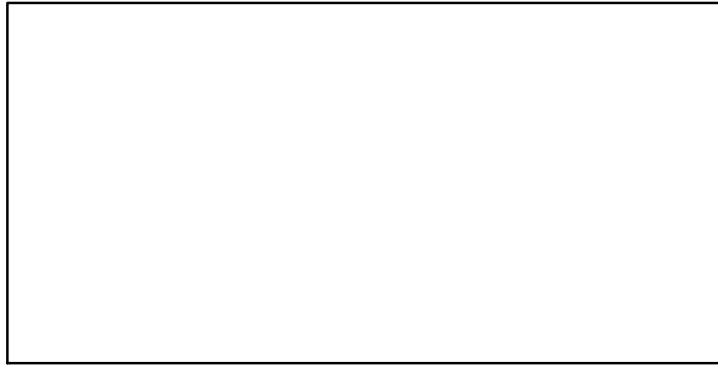
**survB\***

MSY\*, MORAT\*

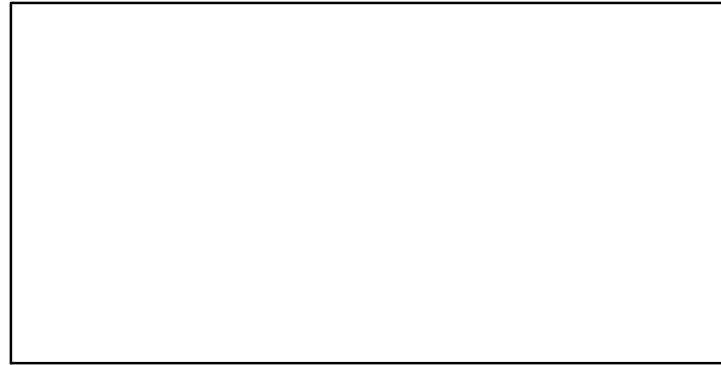
**CPUE\***



**EFFORT\***



**CdivMSY\***



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

## Spurdog Northeast Atlantic [SPURDNEATL]

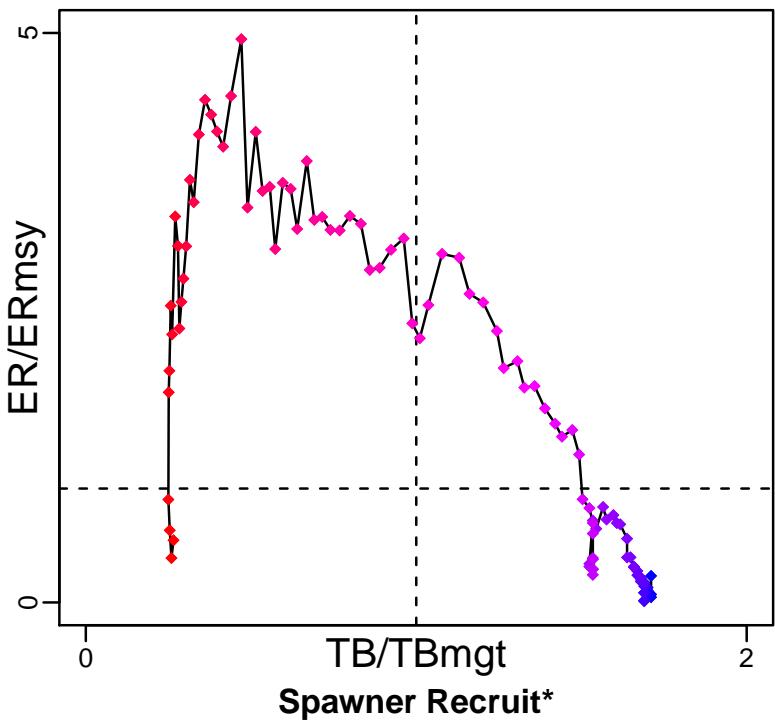
<b>Metadata</b>	
<b>Scientific Name</b>	Squalus acanthias
<b>Current Assess ID</b>	WGEF-SPURDNEATL-1905-2016-ICESIMP2018
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2016

<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2014	0.029
<b>TBmgt</b>	TBmgt-MT	2016	964,563
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2014	0.029
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

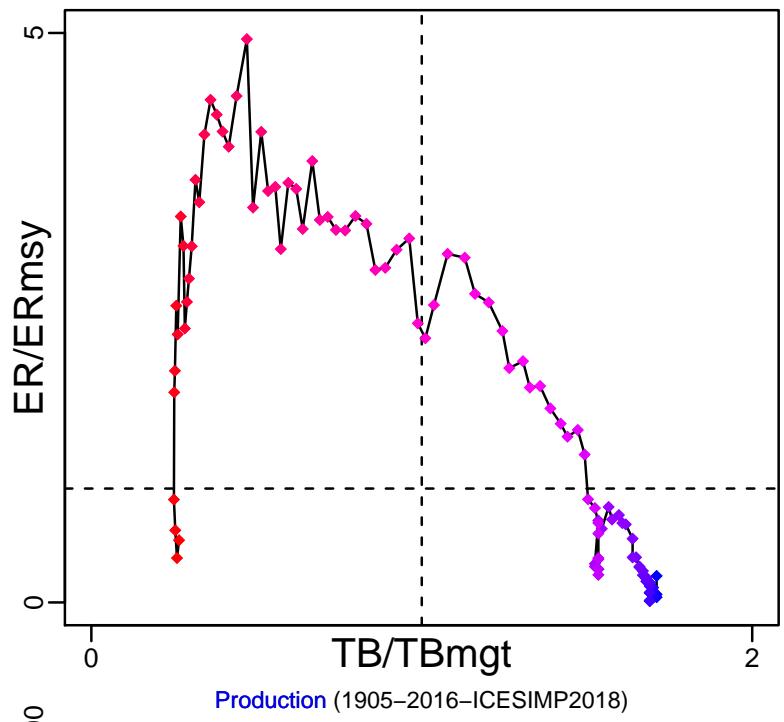
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2016	296,000	Both	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2016	121,000	-	0	
<b>F</b>	F-1/yr	2016	0.012	-	-	
<b>ER</b>	ER-calc-ratio	2016	0.01	-	-	
<b>TC</b>	TC-MT	2014	2380			
<b>TL</b>	TL-MT	2016	2640			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2014	0.466			
<b>TB/TBmgt</b>	TB-MT/TBmgt-MT	2016	0.307			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Spurdog Northeast Atlantic [SPURDNEATL]**

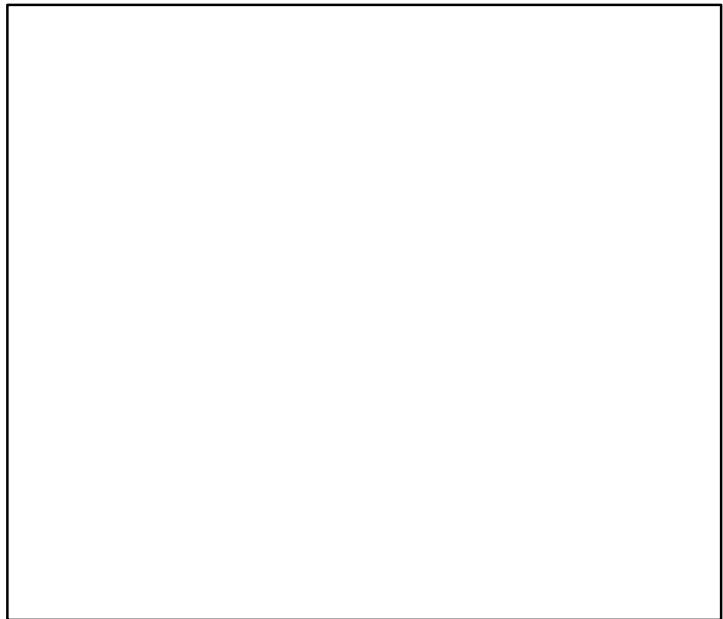
Kobe MSYpref (1905–2016–ICESIMP2018)



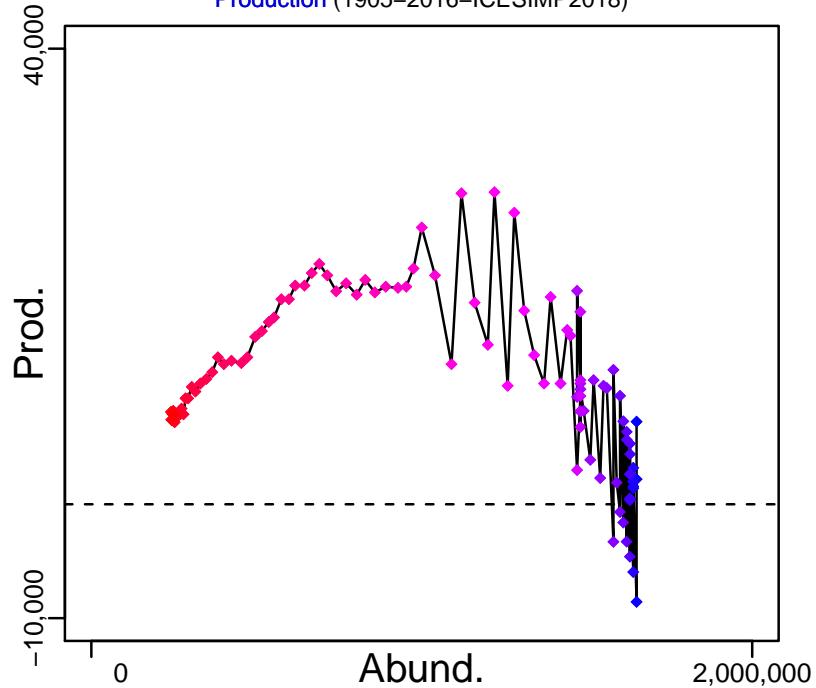
Kobe MGTpref (1905–2016–ICESIMP2018)



**Spawner Recruit\***



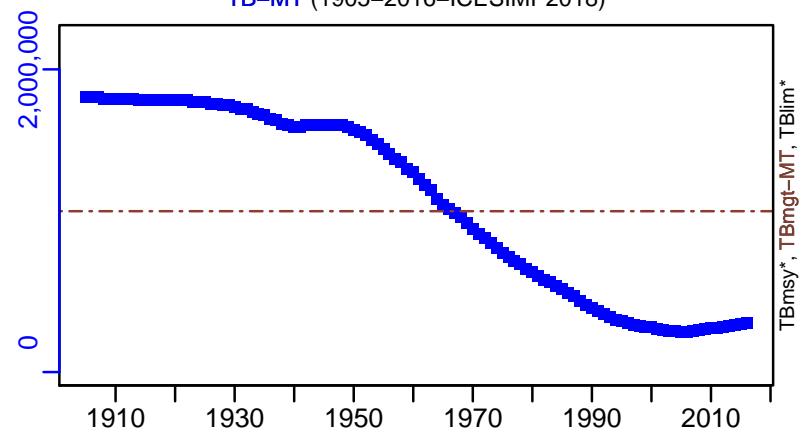
Production (1905–2016–ICESIMP2018)



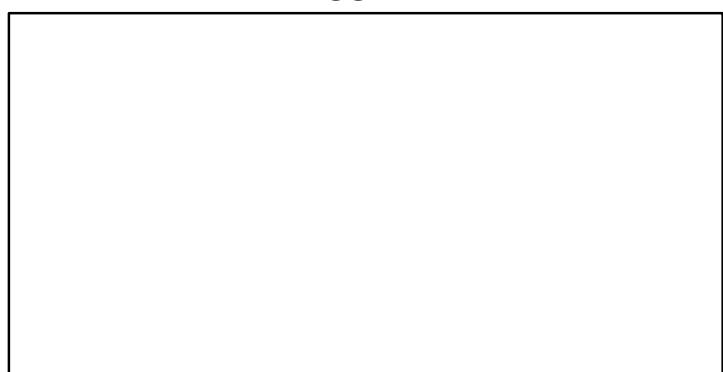
♦ Start Year ♦ End Year \* No Data

Spurdog Northeast Atlantic [SPURDNEATL]

TB-MT (1905–2016–ICESIMP2018)



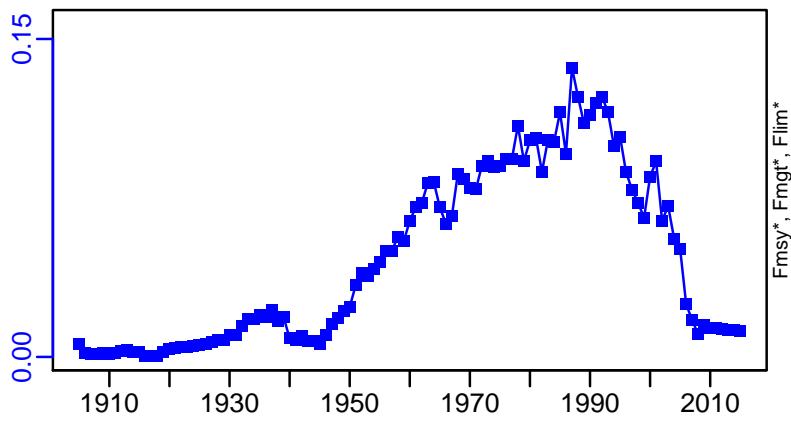
SSB\*



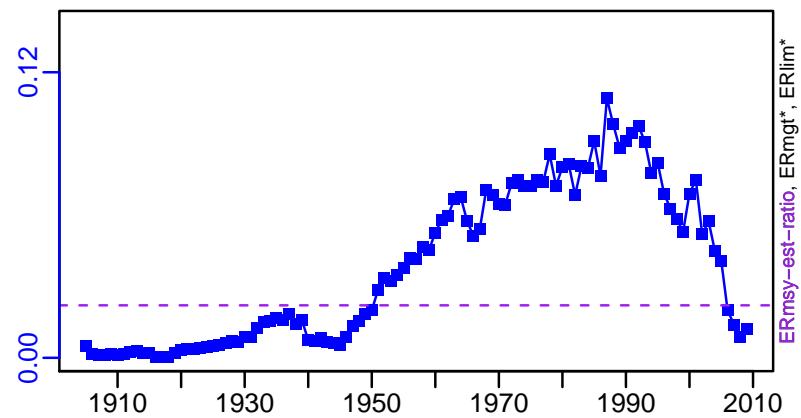
TN \*



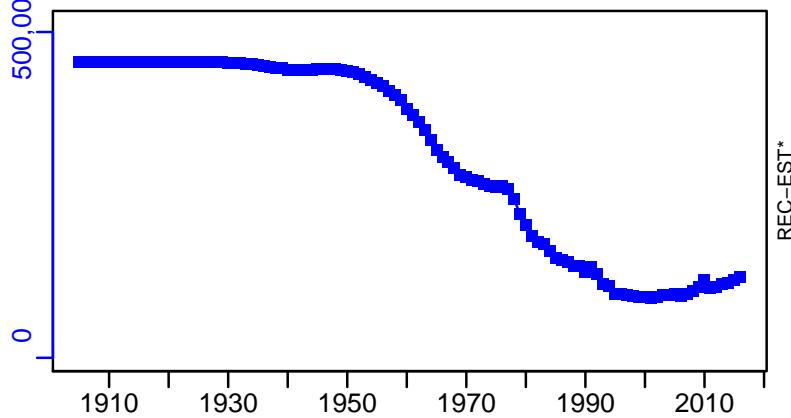
F-1/yr (1905–2016–ICESIMP2018)



ER-calc-ratio (1905–2016–ICESIMP2018)



R-E00 (1905–2016–ICESIMP2018)

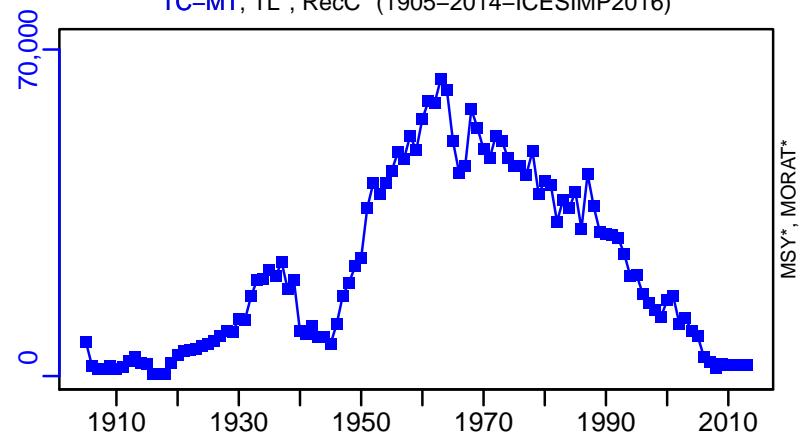


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

**Spurdog Northeast Atlantic [SPURDNEATL]**

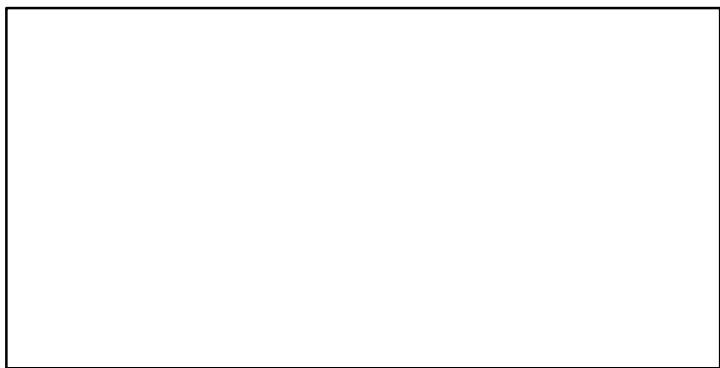
TC-MT, TL\*, RecC\* (1905–2014—ICESIMP2016)

TAC\*, Cpair\*, Cadv\*

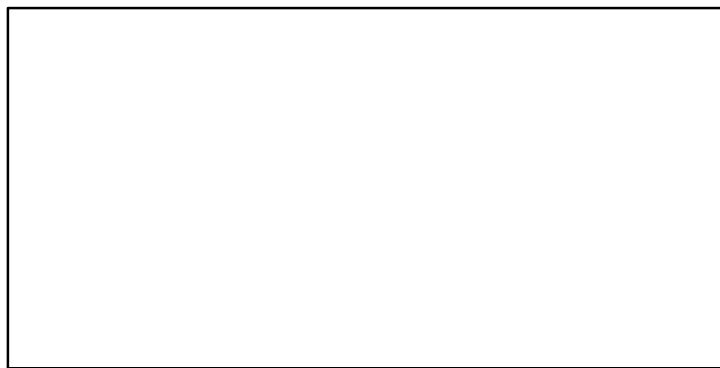


**survB\***

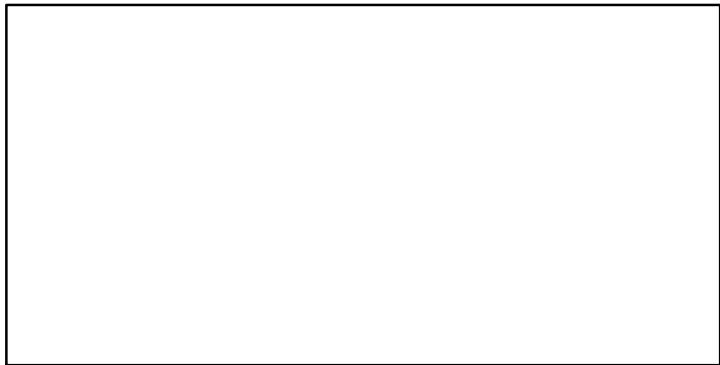
MSY\*, MORAT\*



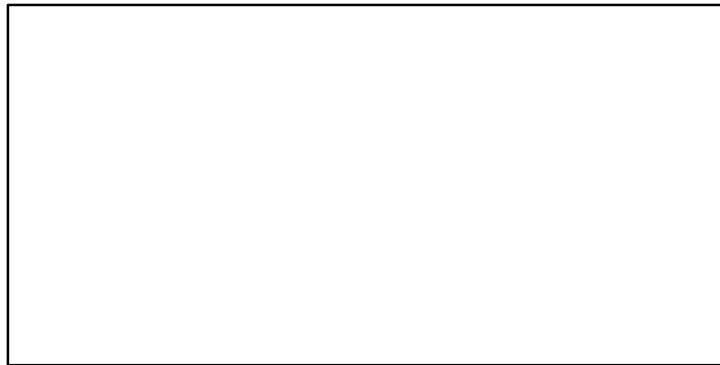
**CPUE\***



**EFFORT\***



**CdivMSY\***



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

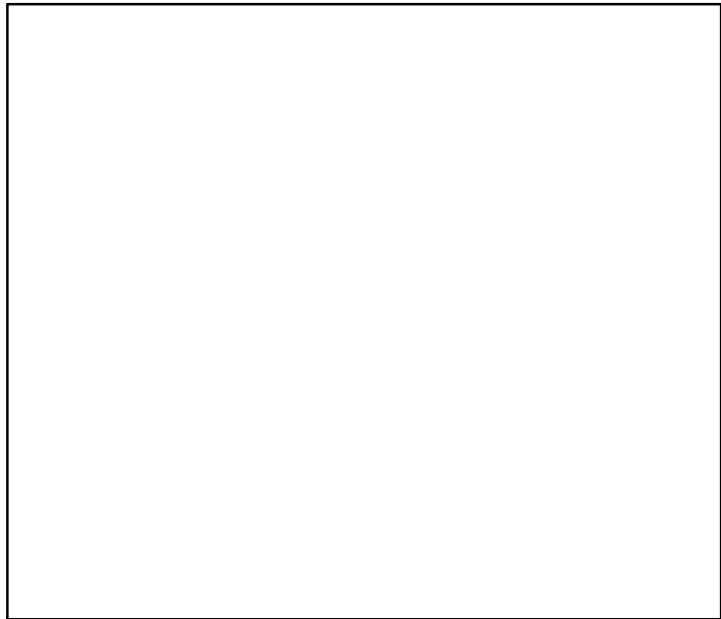
## Starry ray ICES 2-3a-4 [STRAYII-IIIA-IV]

<b>Metadata</b>	
<b>Scientific Name</b>	Amblyraja radiata
<b>Current Assess ID</b>	WGEF-STRAYII-IIIA-IV-1991-2018-ICESIMP2021
<b>Area</b>	ICES 2-3a-4
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2018

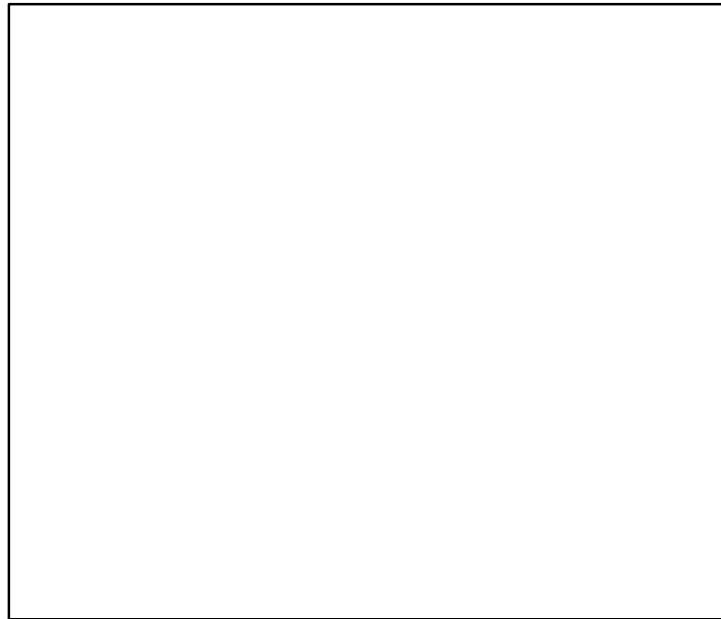
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	0.41	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	1.341		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

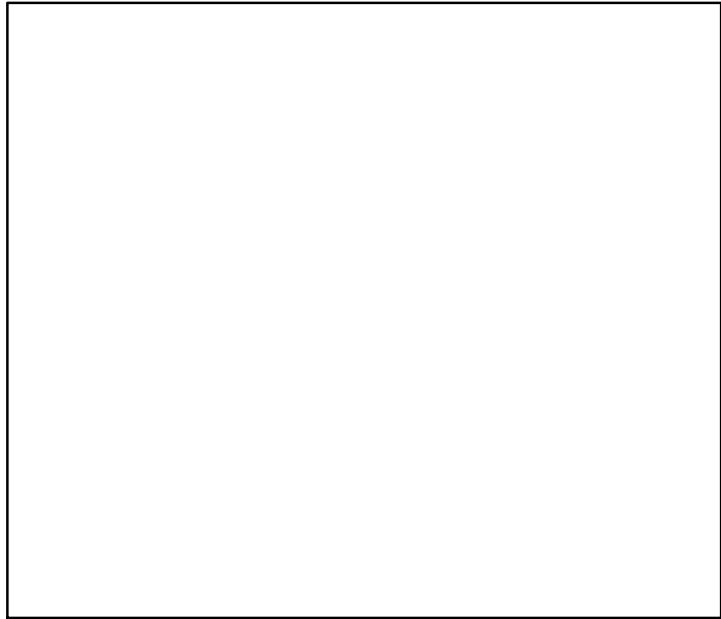
**Kobe MSY\***



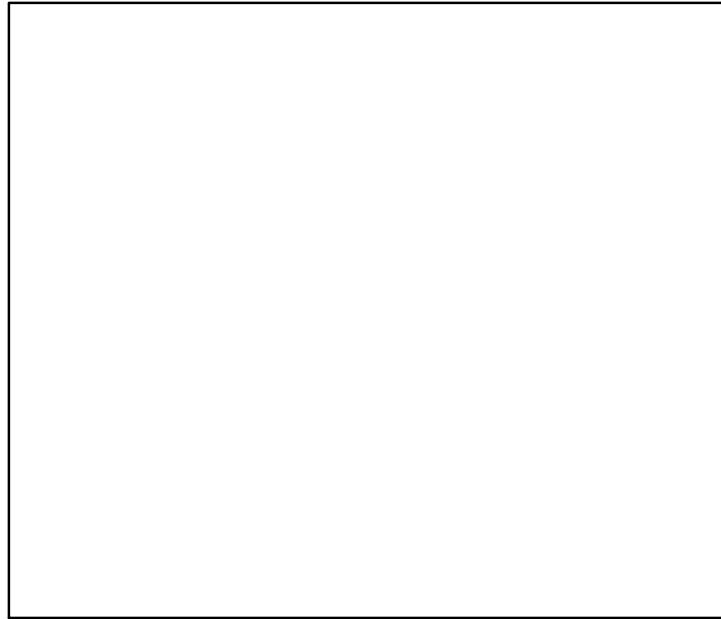
**Kobe MGT\***



**Spawner Recruit\***



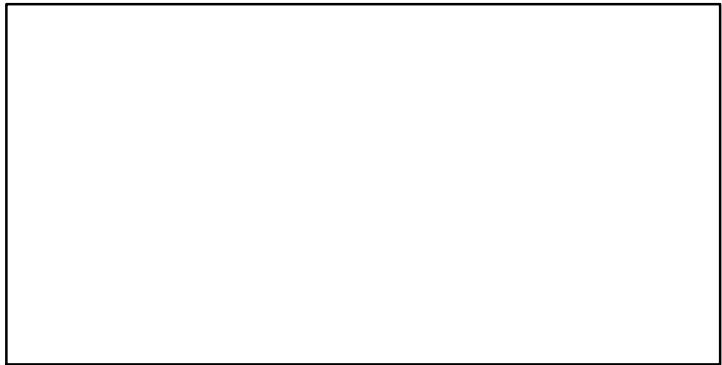
**Production\***



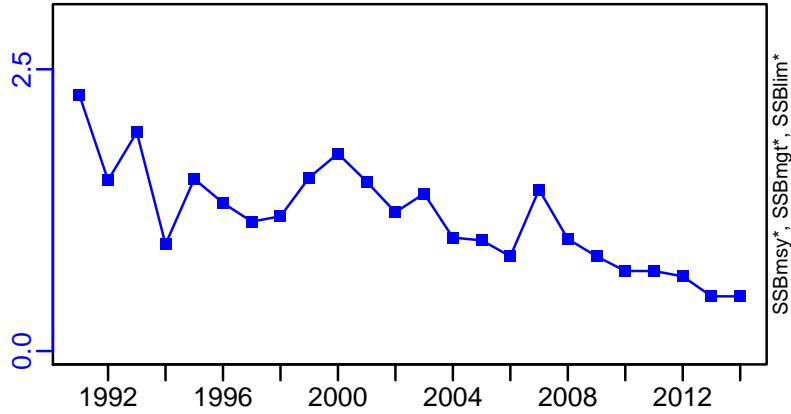
◆ Start Year ♦ End Year \* No Data

**Starry ray ICES 2–3a–4 [STRAYII–IIIa–IV]**

**TB\***



**SSB–index (1991–2014–ICESIMP2018)**



SSB<sub>mgt\*</sub>, SSB<sub>lim\*</sub>

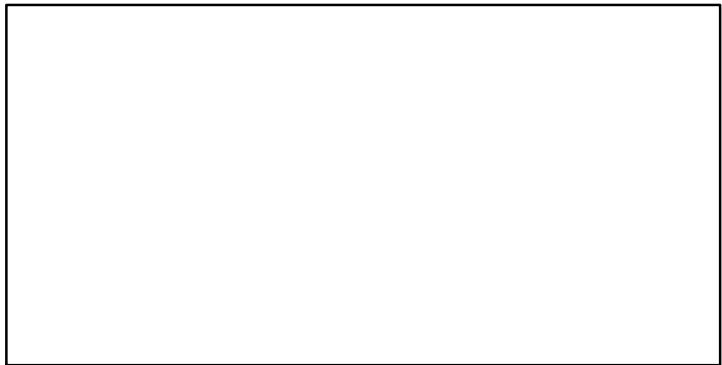
**TN \***



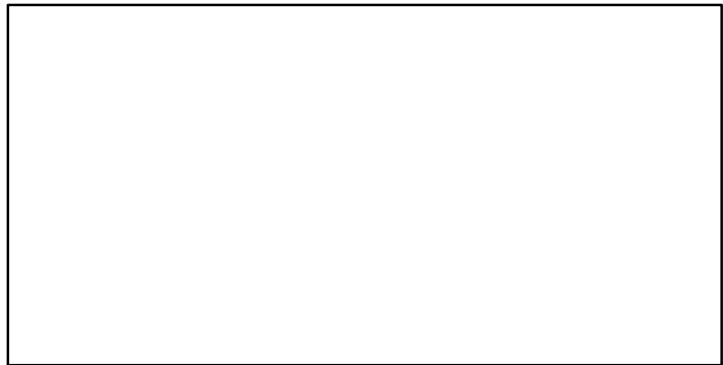
**F\***



**ER\***



**Recruits\***

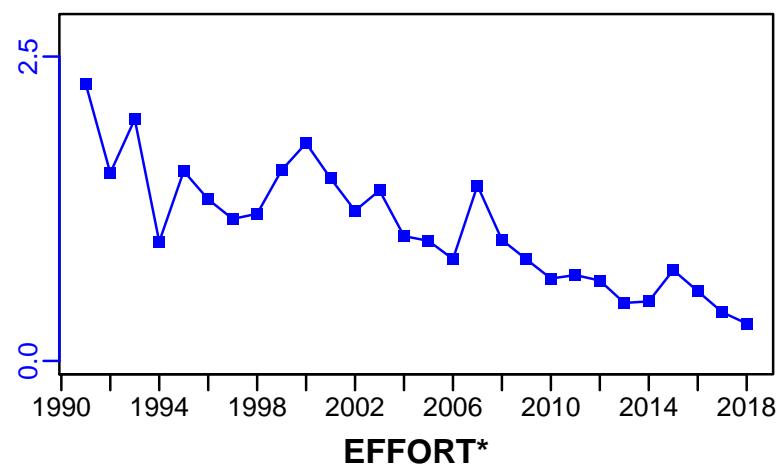
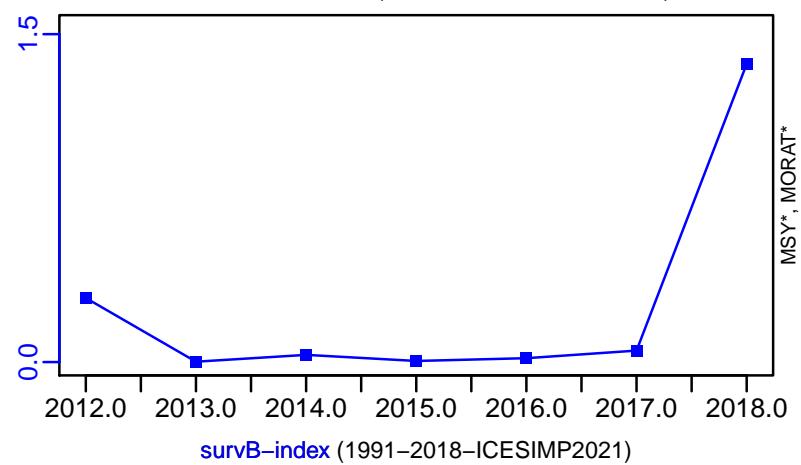


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

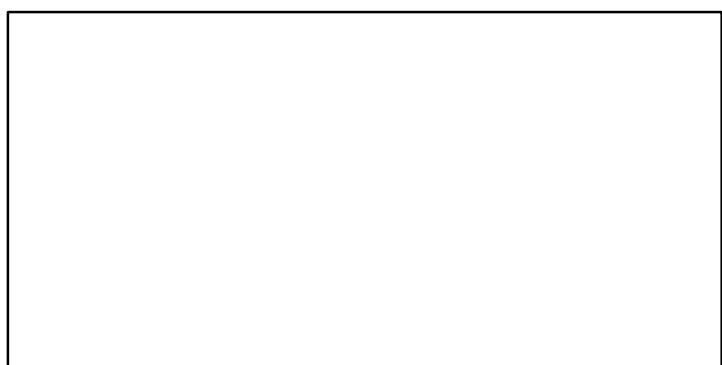
**Starry ray ICES 2-3a-4 [STRAYII-IIla-IV]**

TL-MT, TC\*, RecC\* (1991–2018–ICESIMP2021)

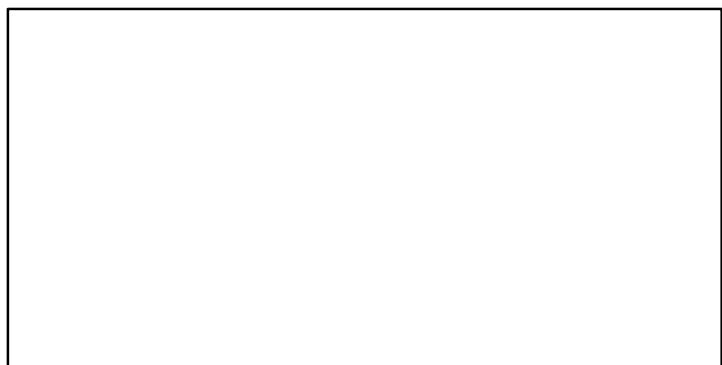
TAC\*, Cpair\*, Cadv\*



CPUE\*



CdivMSY\*



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

### Striped red mullet ICES 3a-4-7d [STRMULLIlla-IV-VIId]

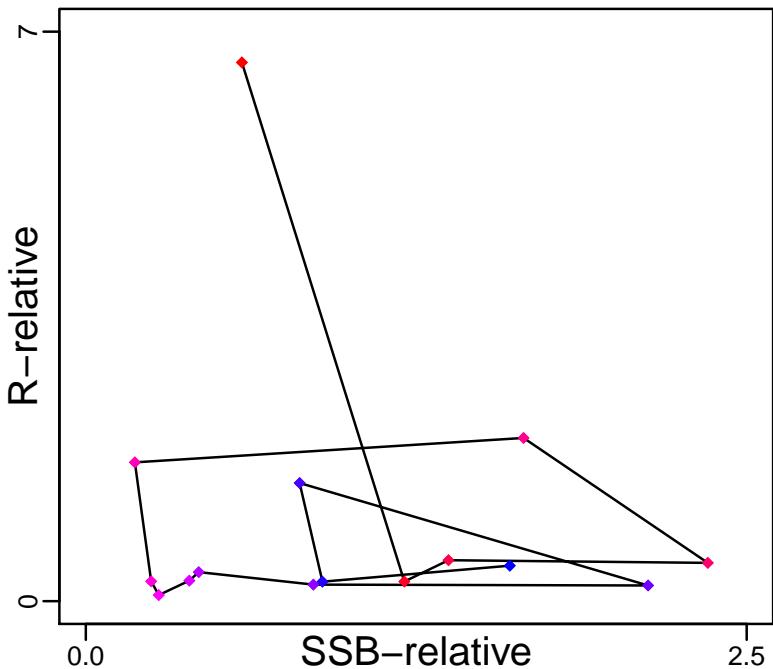
<b>Metadata</b>	
<b>Scientific Name</b>	Mullus surmuletus
<b>Current Assess ID</b>	WGNSSK-STRMULLIlla-IV-VIId-2004-2018-ICESIMP2021
<b>Area</b>	ICES 3a-4-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2014, 2016, 2018

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

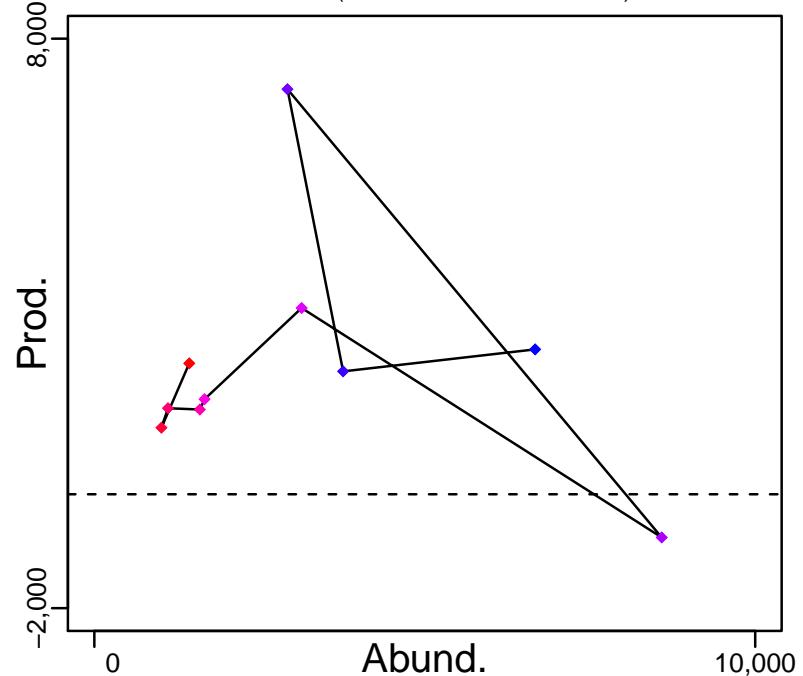
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	-	-	-	-	-	
<b>SSB</b>	SSB-relative	2018	0.59	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-relative	2018	7	-	-	
<b>F</b>	F-relative	2018	2.077	-	1 to 2	
<b>ER</b>	ER-calc-ratio	2014	0.511	-	-	
<b>TC</b>	TC-MT	2018	1648			
<b>TL</b>	TL-MT	2018	1648			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Kobe MSY\*****Kobe MGT\***

Spawner Recruit (2004–2018–ICESIMP2021)



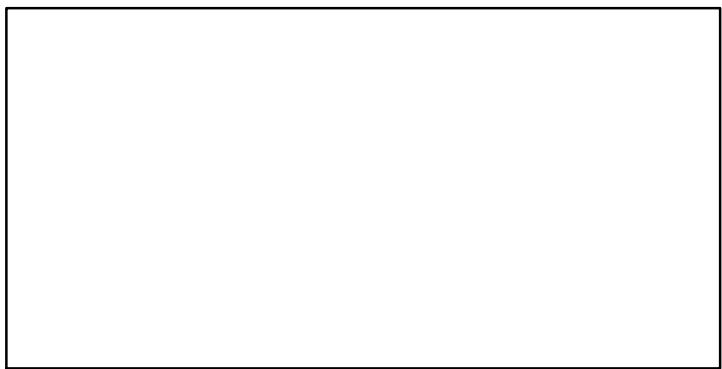
Production (1975–2014–ICESIMP2018)



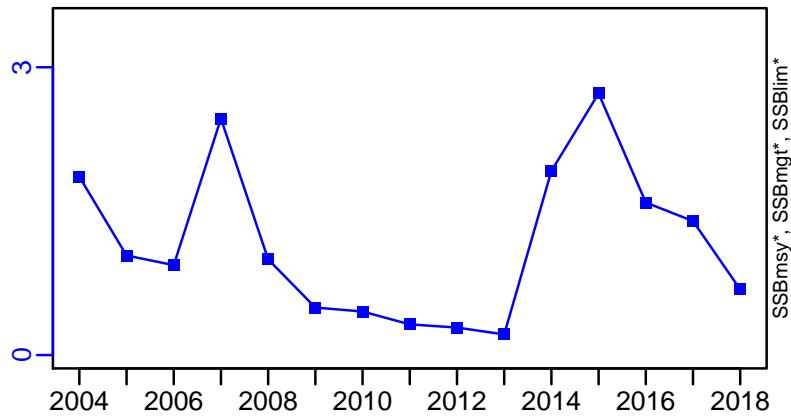
◆ Start Year   ◆ End Year   \* No Data

Striped red mullet ICES 3a-4-7d [STRMULLIa-IV-VIId]

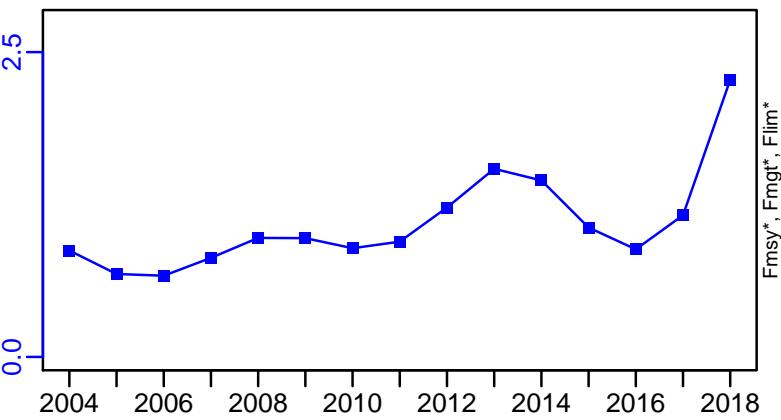
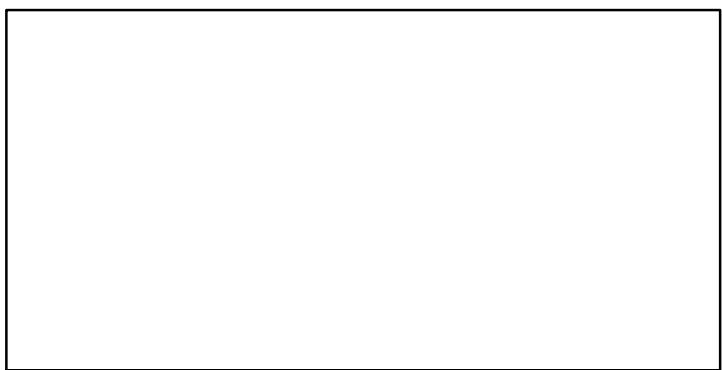
**TB\***



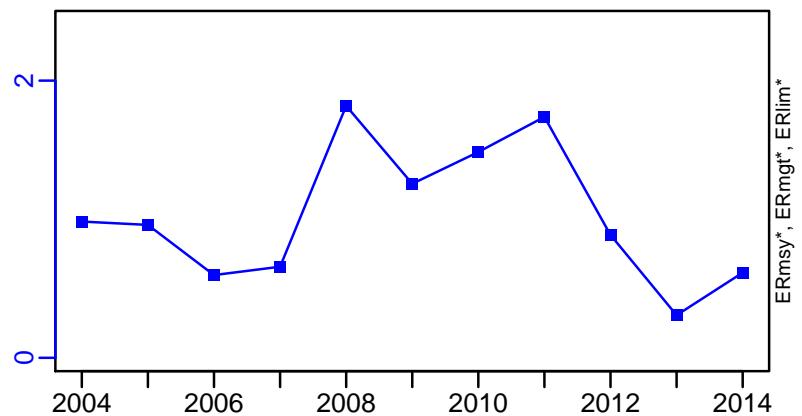
SSB-relative (2004–2018–ICESIMP2021)



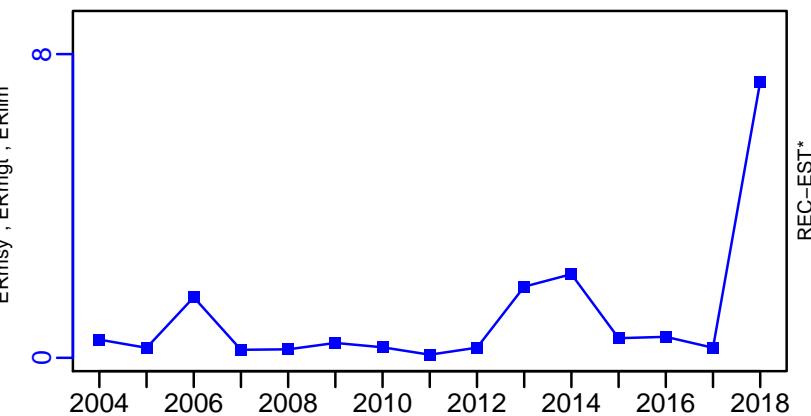
**TN \***



ER-calc-ratio (1975–2014–ICESIMP2018)



R-relative (2004–2018–ICESIMP2021)

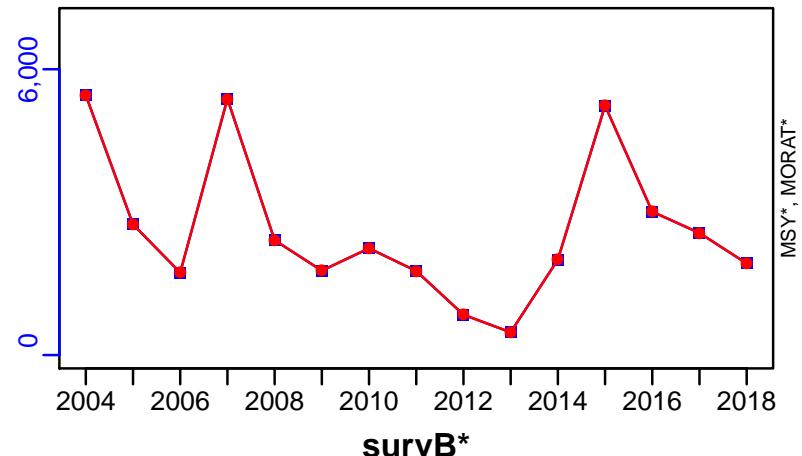


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	·· Lim BRP	* No Data

Striped red mullet ICES 3a-4-7d [STRMULLIlla-IV-VIId]

TC-MT, TL-MT, RecC\* (2004–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



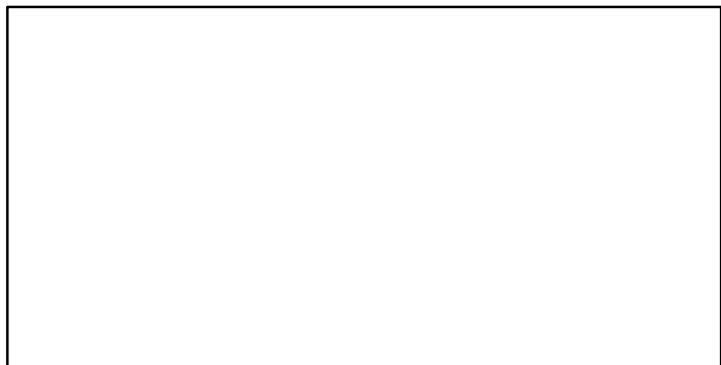
survB\*



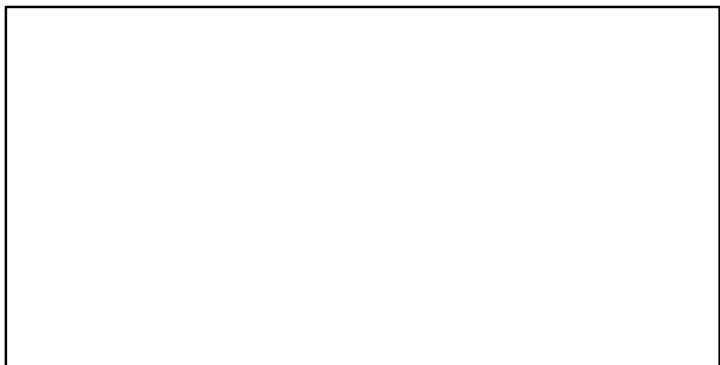
CPUE\*



EFFORT\*



CdivMSY\*



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

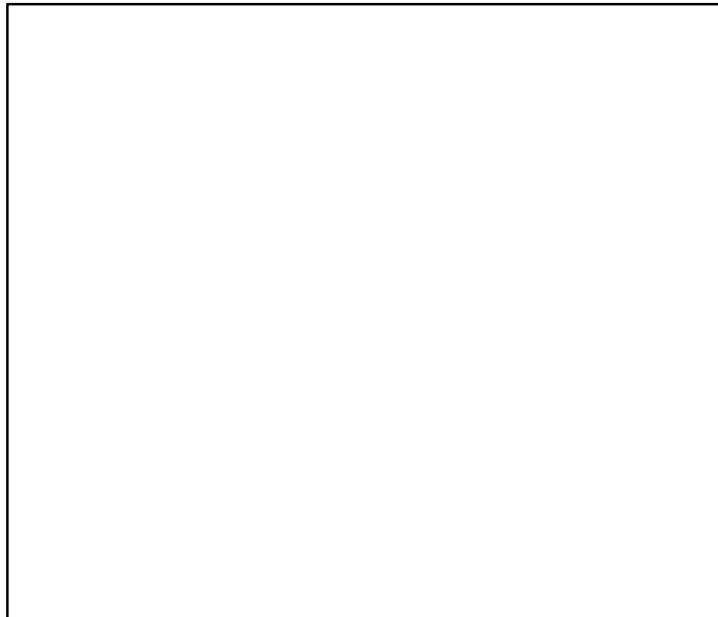
**Striped red mullet ICES 6-7abcefghijk-8-9a [STRMULLVI-VIIabcefghijk-VIII-IXa]**

Metadata	
<b>Scientific Name</b>	Mullus surmuletus
<b>Current Assess ID</b>	WGWISE-STRMULLVI-VIIabcefghijk-VIII-IXa-1975-2016-ICESIMP2018
<b>Area</b>	ICES 6-7abcefghijk-8-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Widely Distributed Stocks
<b>Asmts in RAM</b>	2014, 2016

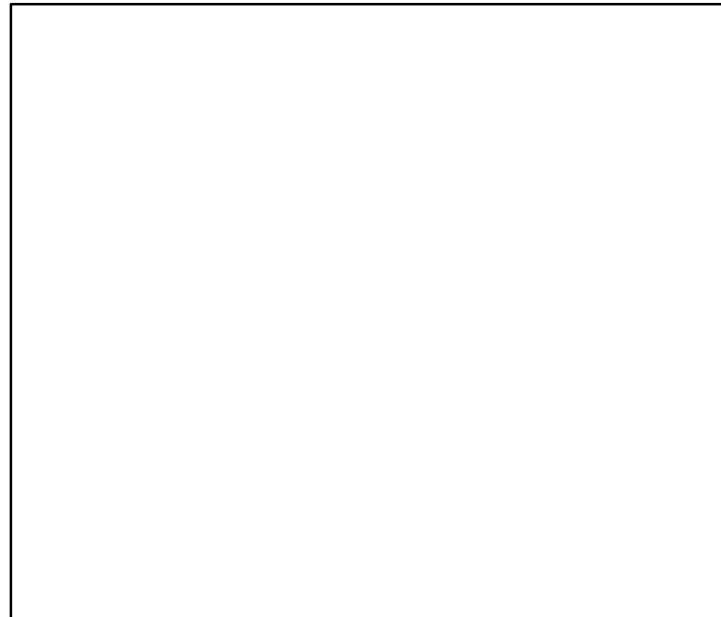
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	1730		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



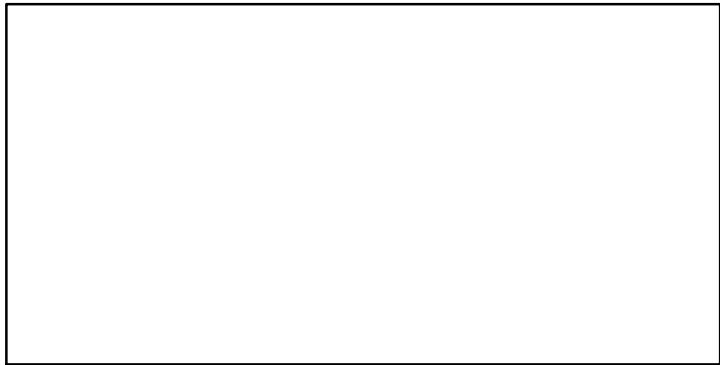
**Production\***



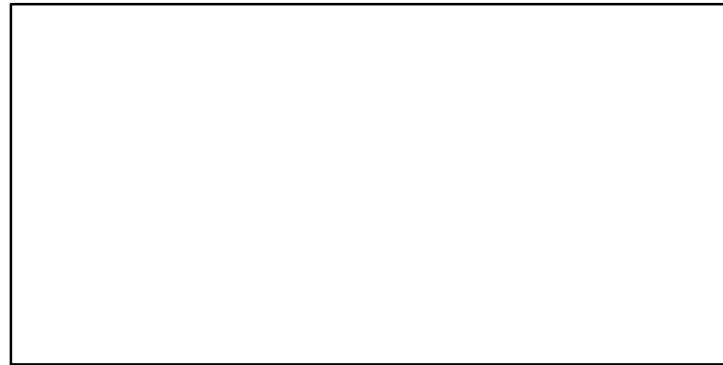
◆ Start Year ♦ End Year \* No Data

**Striped red mullet ICES 6–7abcefghijk–8–9a [STRMULLVI–VIIabcefghijk–VIII–IXa]**

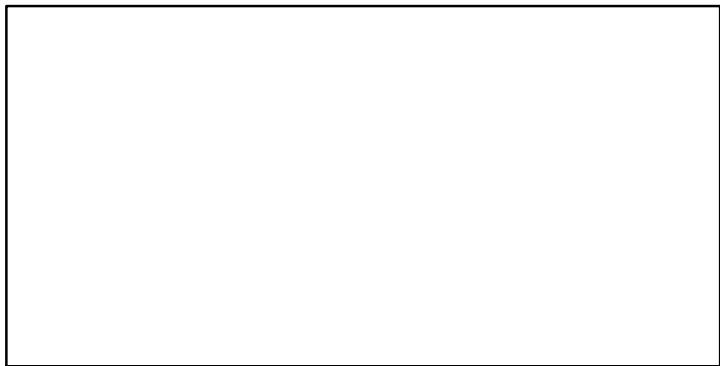
**TB\***



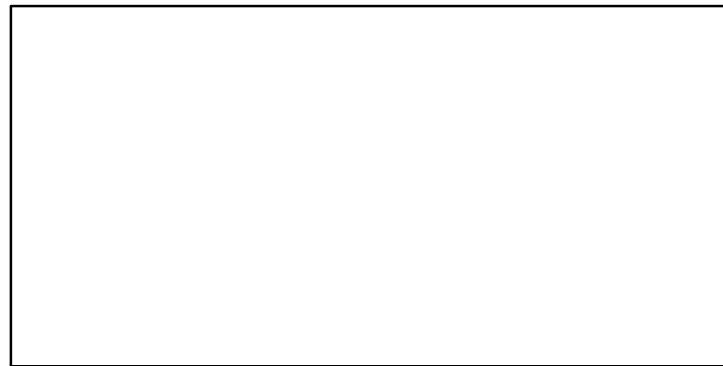
**SSB\***



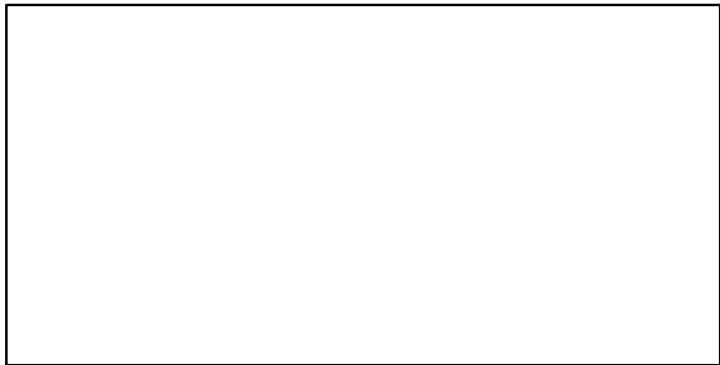
**TN \***



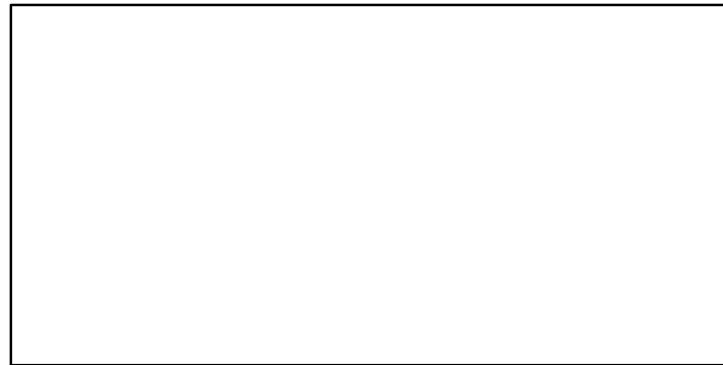
**F\***



**ER\***



**Recruits\***

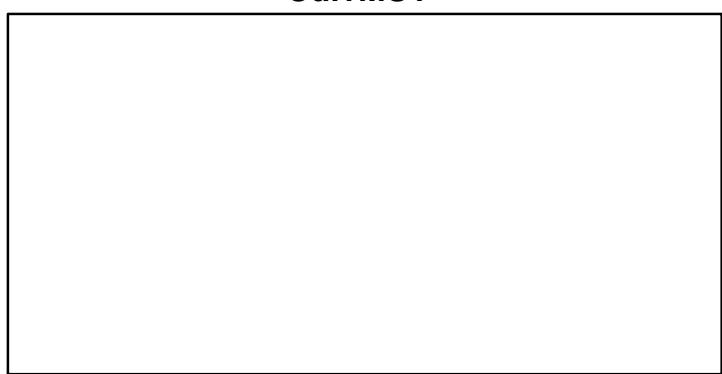
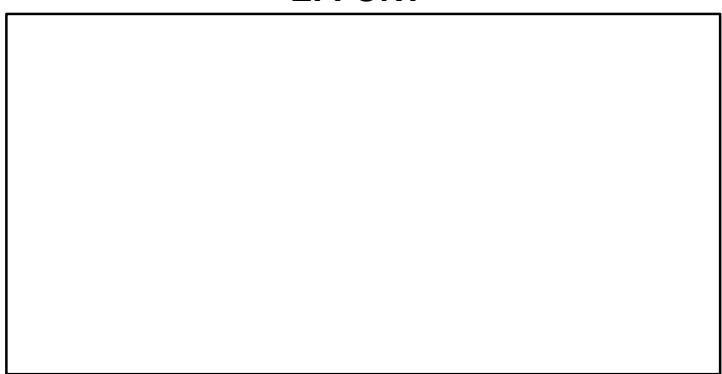
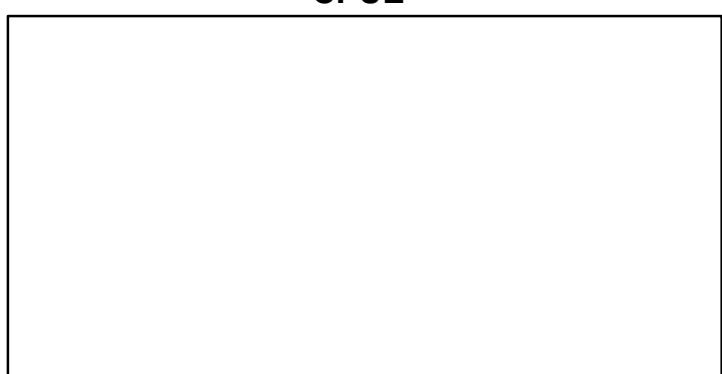
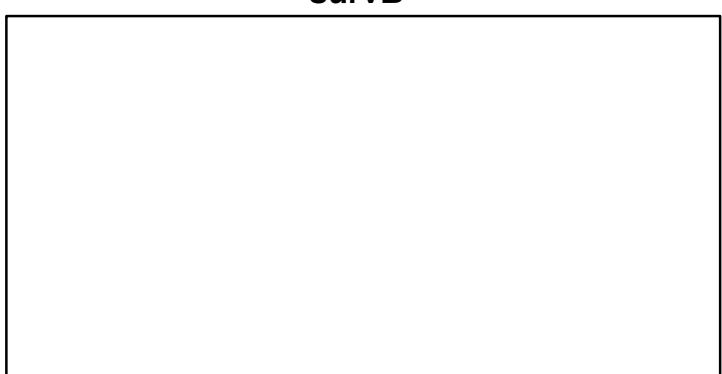
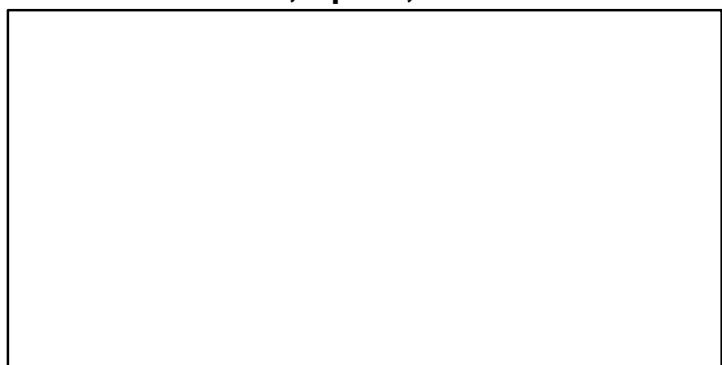
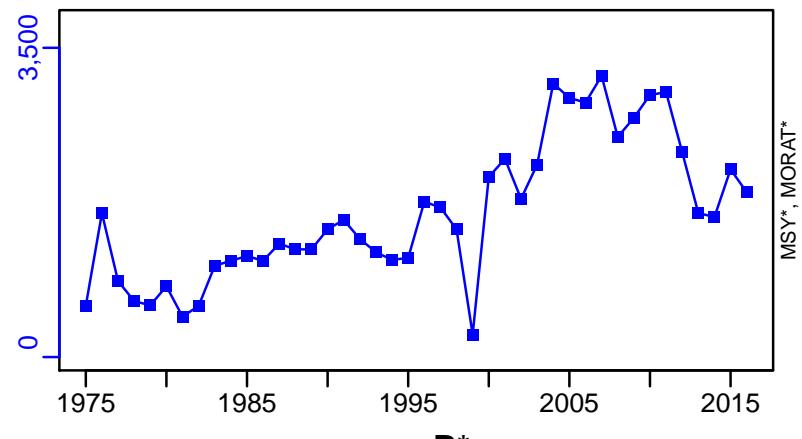


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Striped red mullet ICES 6–7abcefghijk–8–9a [STRMULLVI–VIIabcefghijk–VIII–IXa]

TL–MT, TC\*, RecC\* (1975–2016–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



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

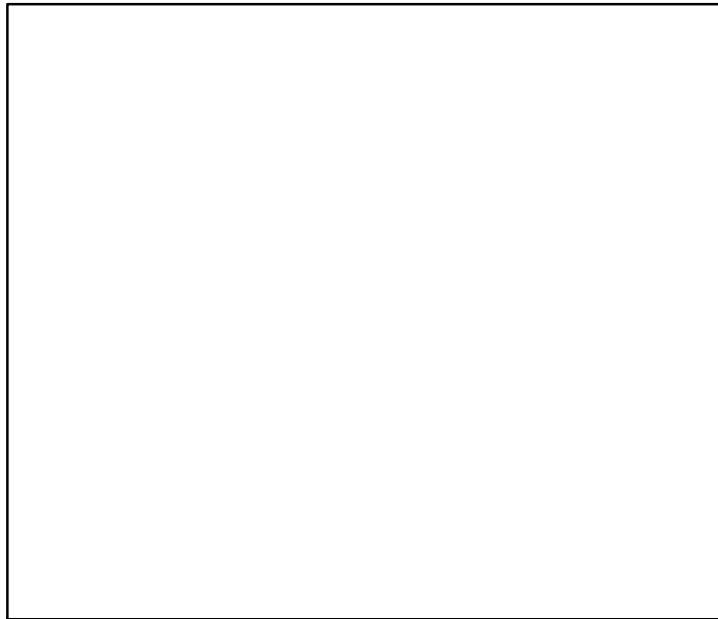
## Sea trout Baltic Areas 22-32 [STROUT22-32]

<b>Metadata</b>	
<b>Scientific Name</b>	Salmo trutta
<b>Current Assess ID</b>	WGBAST-STROUT22-32-2001-2016-ICESIMP2018
<b>Area</b>	Baltic Areas 22-32
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Assessment Working Group on Baltic Salmon and Trout
<b>Asmts in RAM</b>	2016

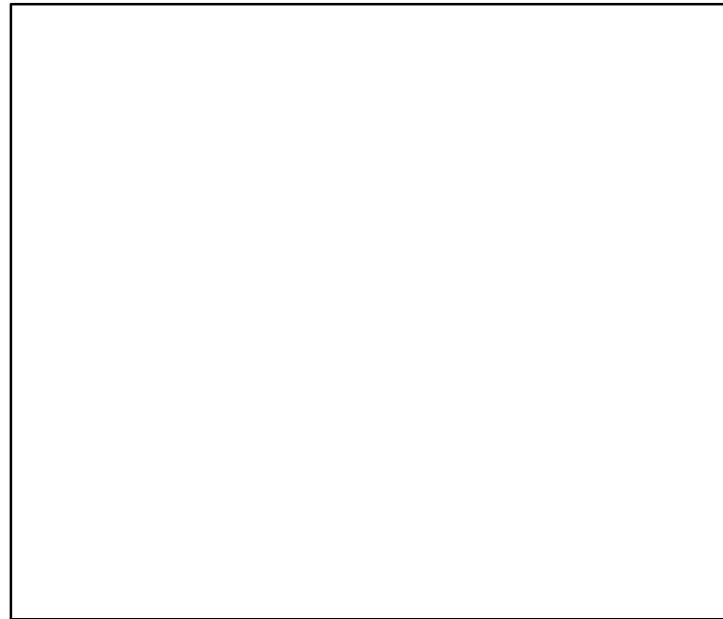
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2016	232		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

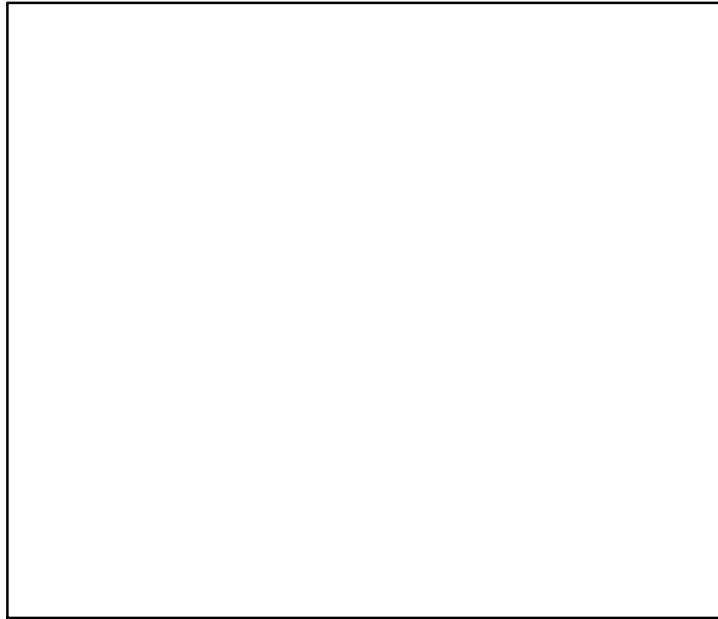
**Kobe MSY\***



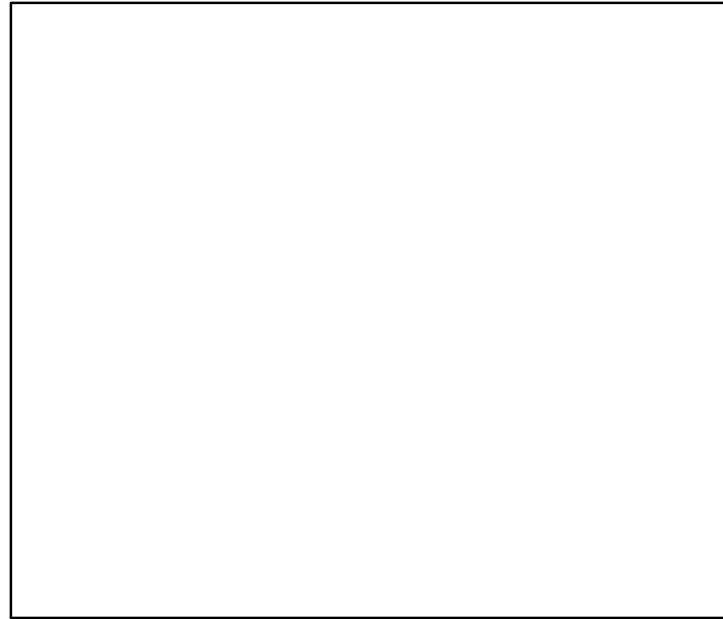
**Kobe MGT\***



**Spawner Recruit\***



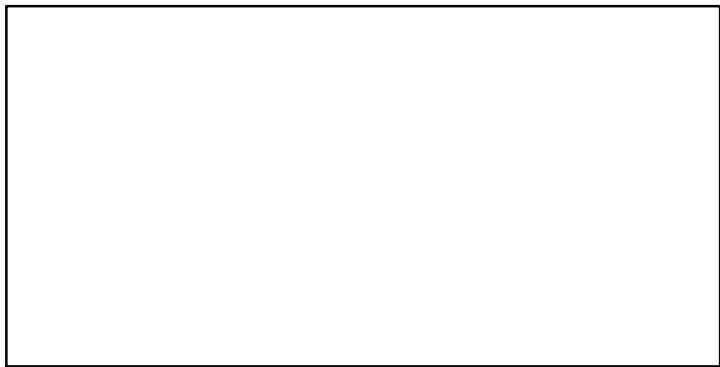
**Production\***



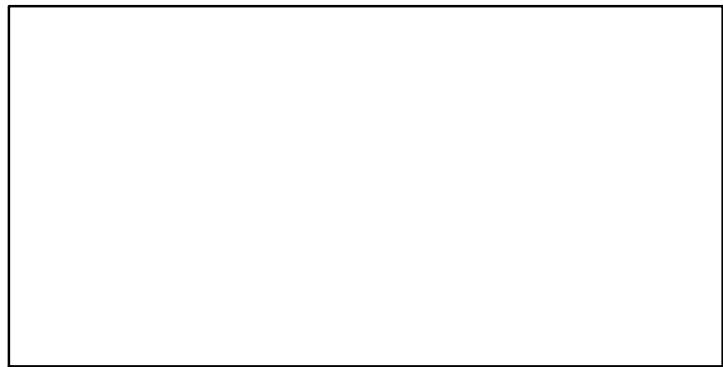
◆ Start Year ♦ End Year \* No Data

**Sea trout Baltic Areas 22–32 [STROUT22–32]**

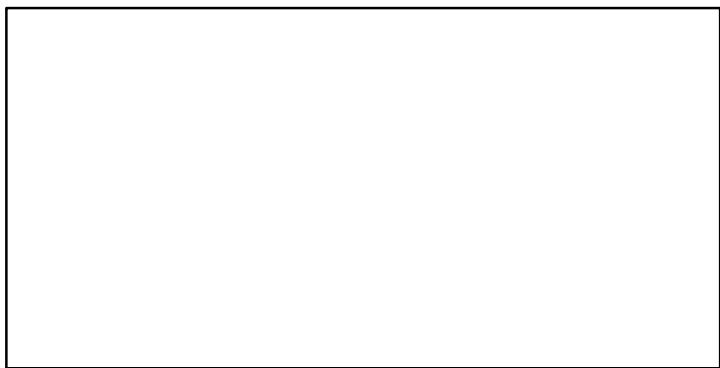
**TB\***



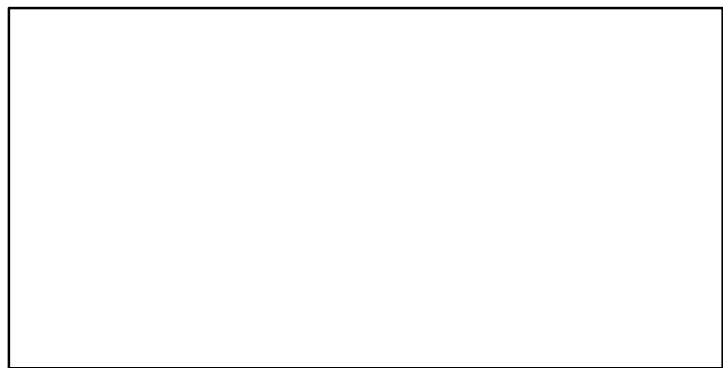
**SSB\***



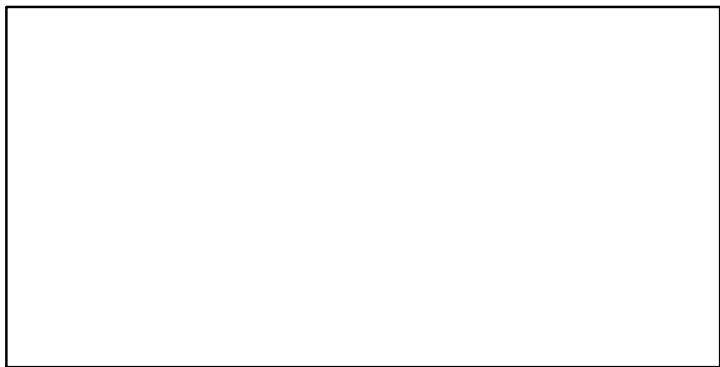
**TN \***



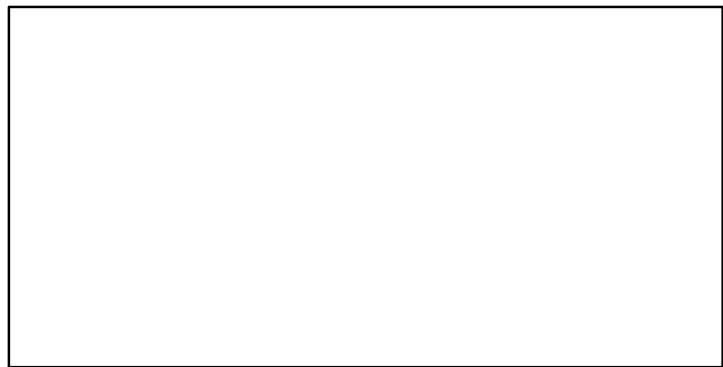
**F\***



**ER\***



**Recruits\***

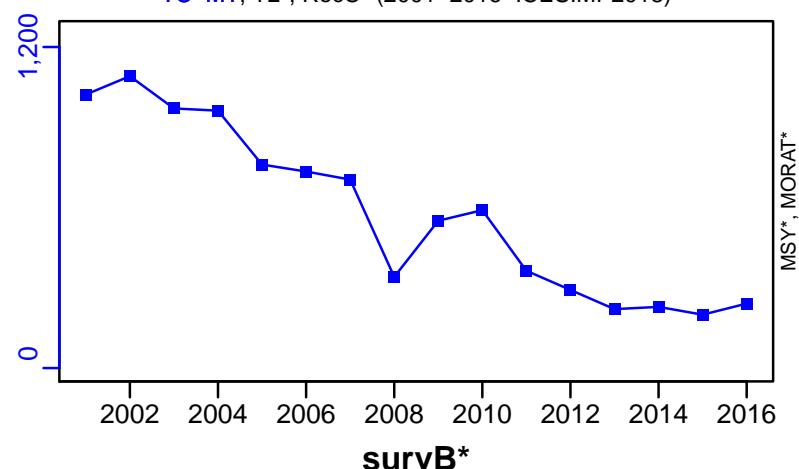


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Sea trout Baltic Areas 22–32 [STROUT22–32]

TC-MT, TL\*, RecC\* (2001–2016—ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



survB\*

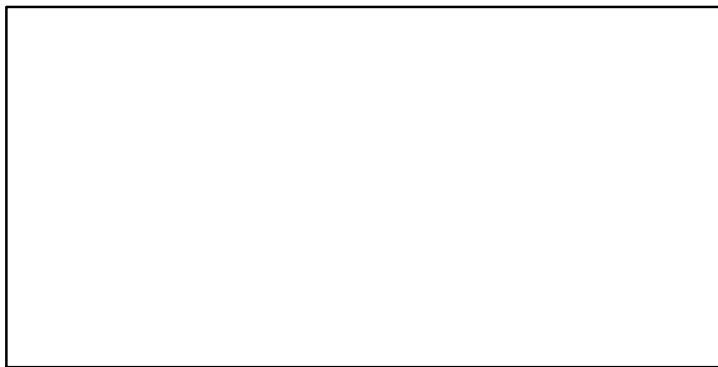
MSY\*, MORAT\*



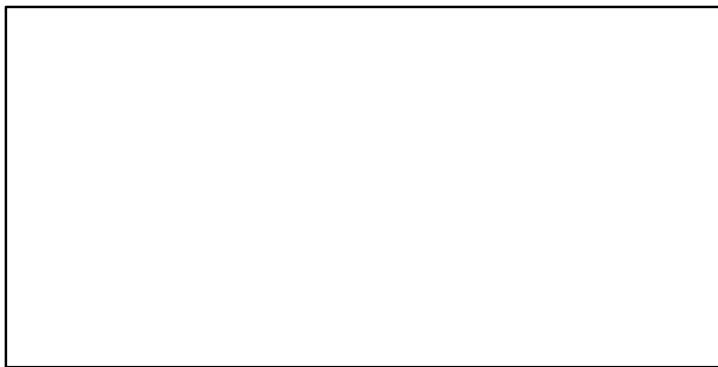
CPUE\*



EFFORT\*



CdivMSY\*



- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>■ 1st listed time series</li> <li>● 2nd listed time series</li> </ul> | <ul style="list-style-type: none"> <li>▲ 3rd listed time series</li> <li>- - MSY</li> </ul> | <ul style="list-style-type: none"> <li>— MORAT</li> <li>* No Data</li> </ul> |
|--|---|--|

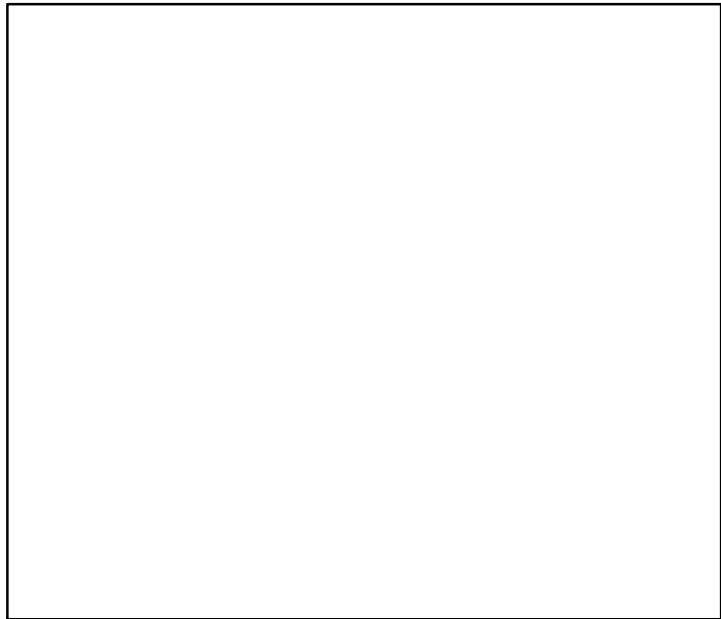
## Thornback skate ICES 3a-4-7d [TBSKAIIla-IV-VIId]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja clavata
<b>Current Assess ID</b>	WGEF-TBSKAIIla-IV-VIId-1993-2018-ICESIMP2021
<b>Area</b>	ICES 3a-4-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2018, 2016

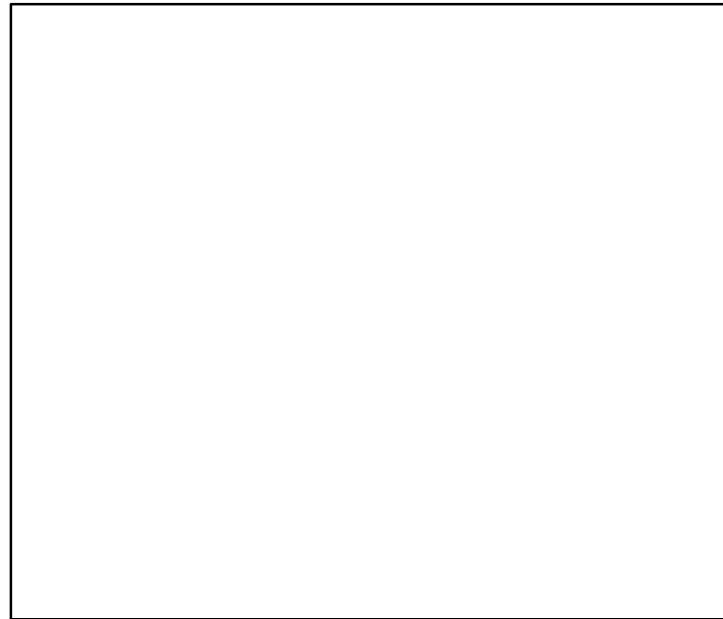
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2014	2.84	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	2219		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

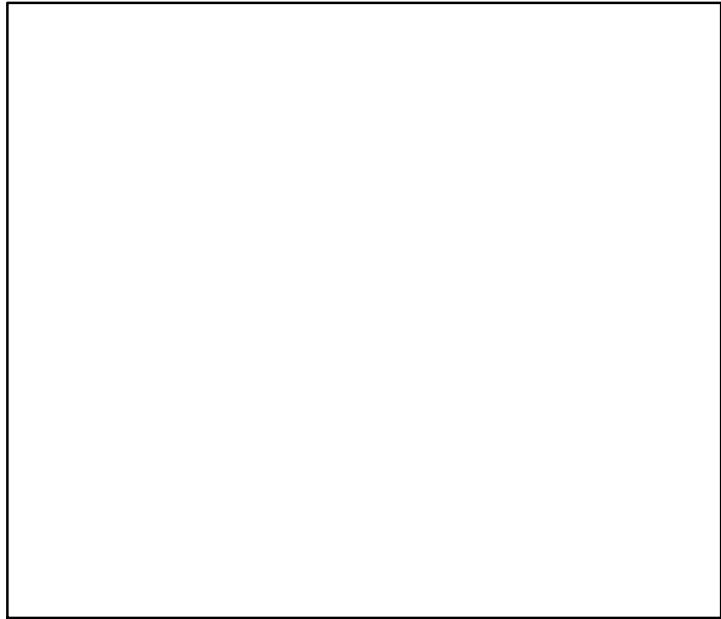
**Kobe MSY\***



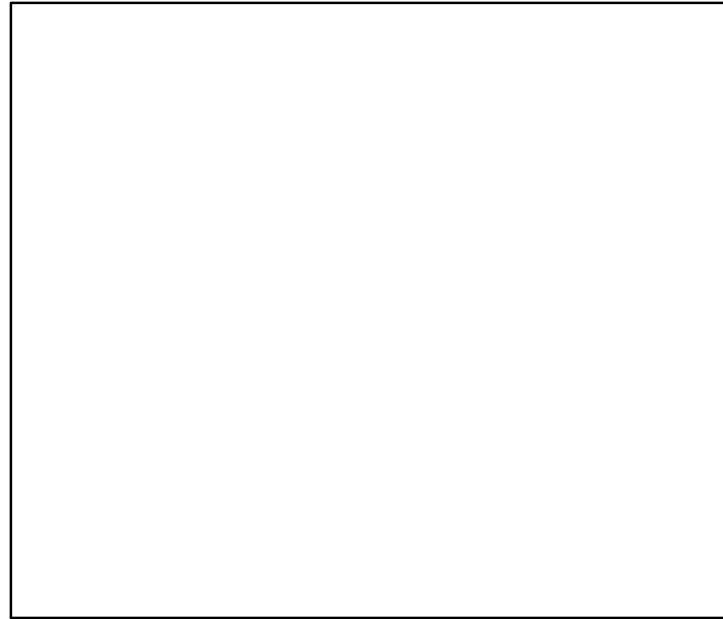
**Kobe MGT\***



**Spawner Recruit\***



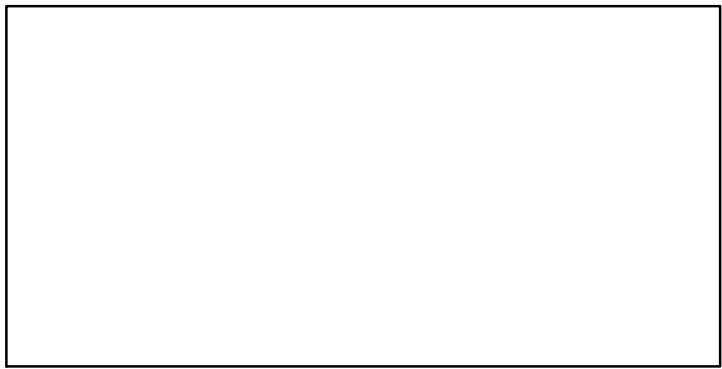
**Production\***



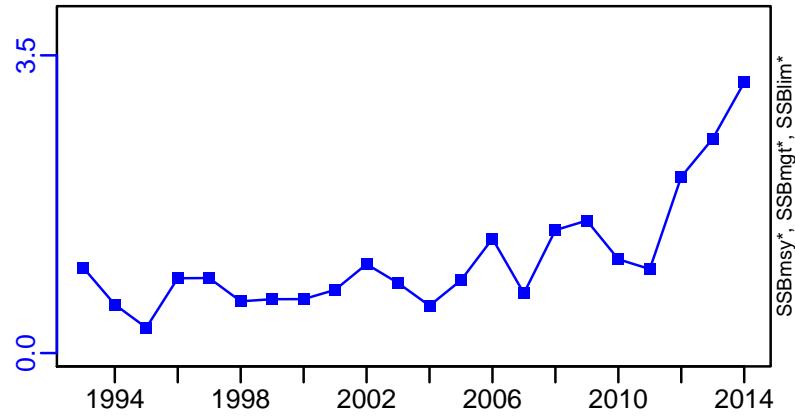
◆ Start Year ♦ End Year \* No Data

Thornback skate ICES 3a–4–7d [TBSKAIIla–IV–VIIId]

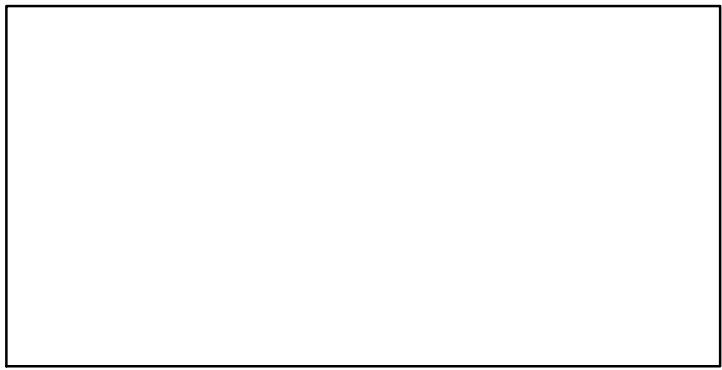
**TB\***



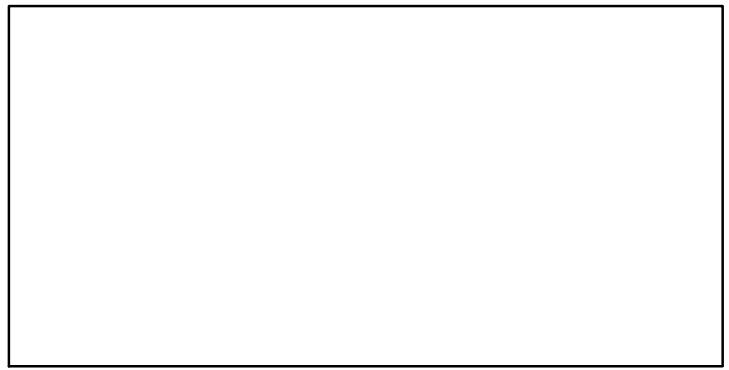
SSB-index (1993–2014–ICESIMP2018)



**TN \***



**F\***



**ER\***



**Recruits\***

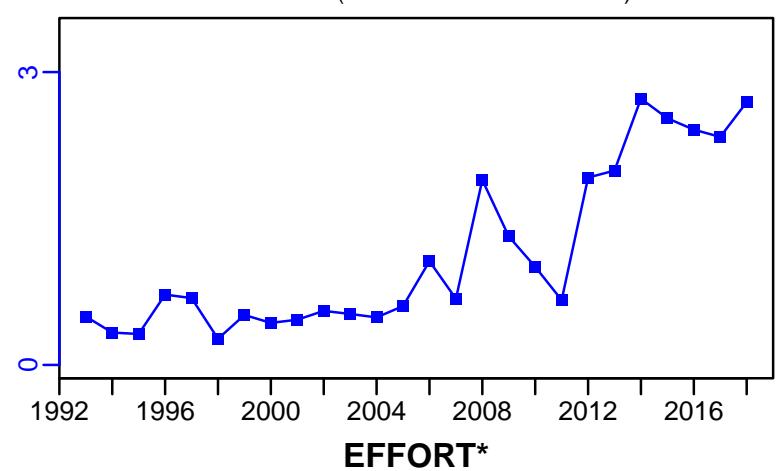
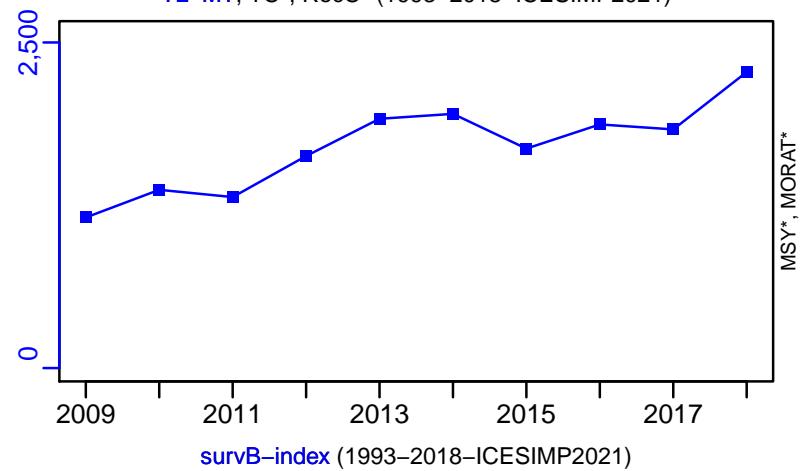


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | ··· Lim BRP  | * No Data |

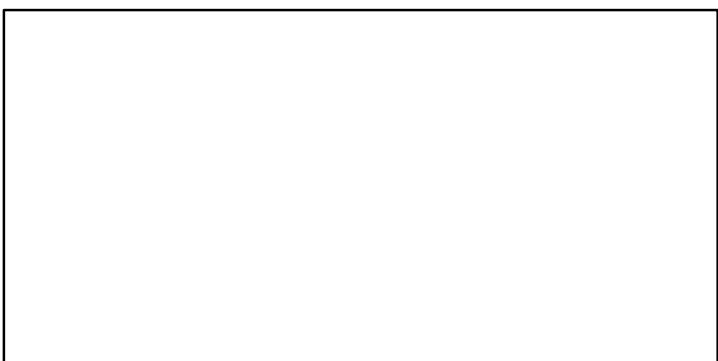
Thornback skate ICES 3a–4–7d [TBSKAIIla–IV–VIIId]

TL–MT, TC\*, RecC\* (1993–2018–ICESIMP2021)

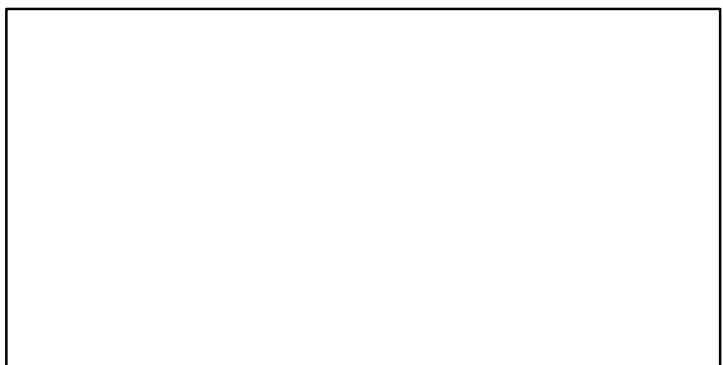
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



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

## Thornback skate Portugese Waters -East [TBSKAIxa]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja clavata
<b>Current Assess ID</b>	WGEF-TBSKAIxa-1997-2015-ICESIMP2018
<b>Area</b>	Portugese Waters -East
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	1.93	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	724		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

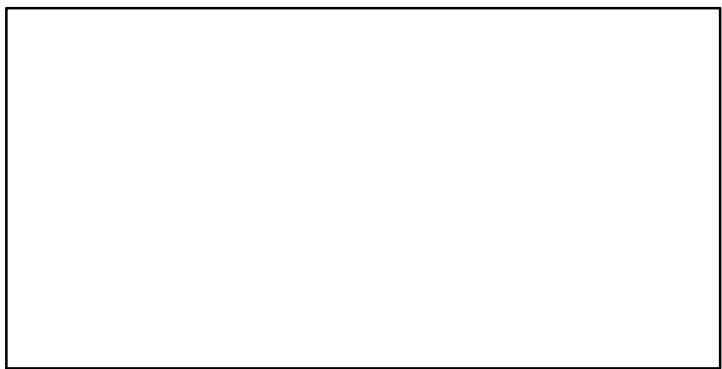
**Spawner Recruit\***

**Production\***

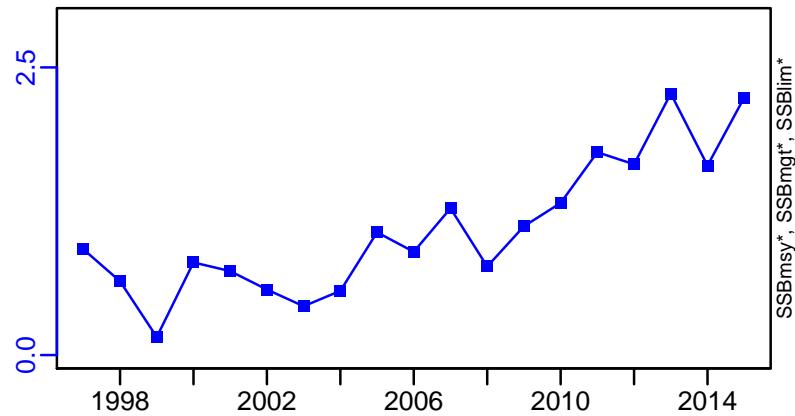
◆ Start Year ♦ End Year \* No Data

Thornback skate Portuguese Waters –East [TBSKAIxa]

**TB\***



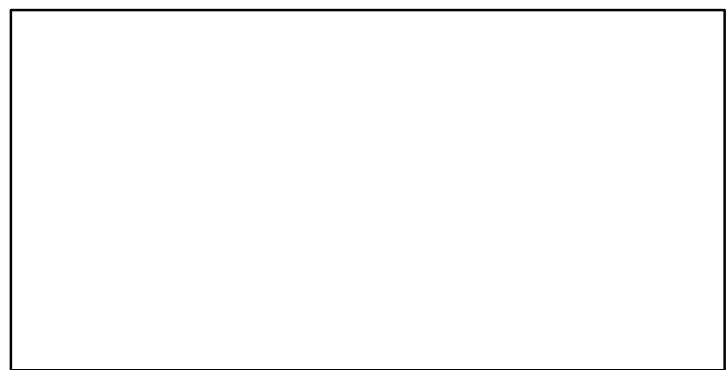
SSB–index (1997–2015–ICESIMP2018)



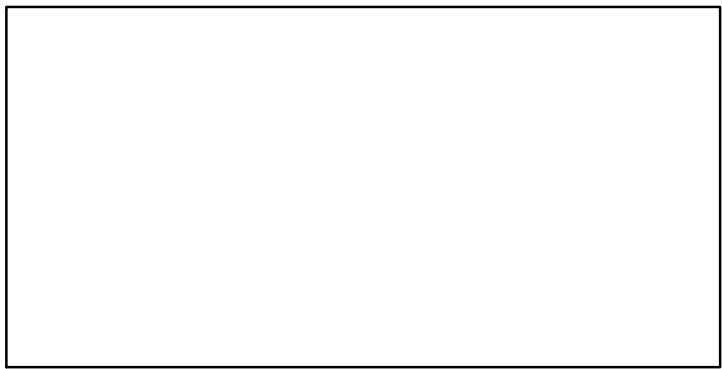
**TN \***



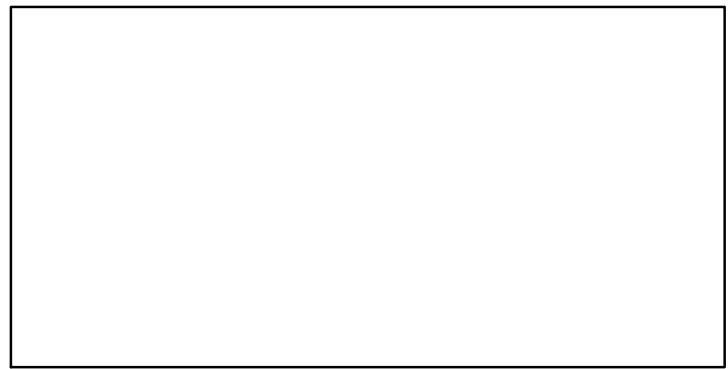
**F\***



**ER\***



**Recruits\***

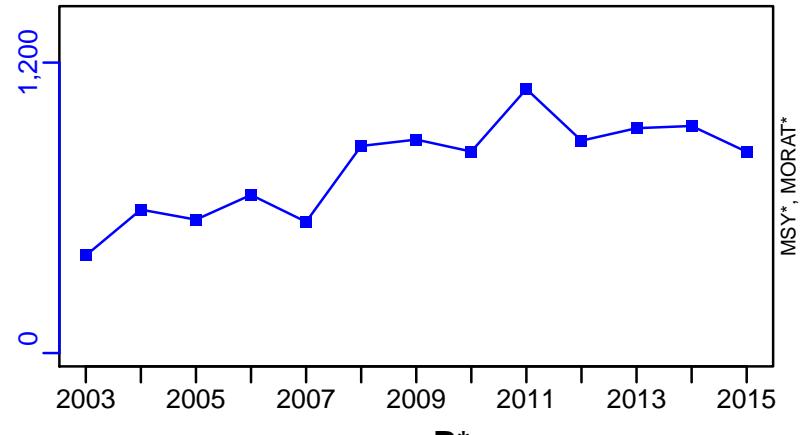


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

Thornback skate Portuguese Waters –East [TBSKAIxa]

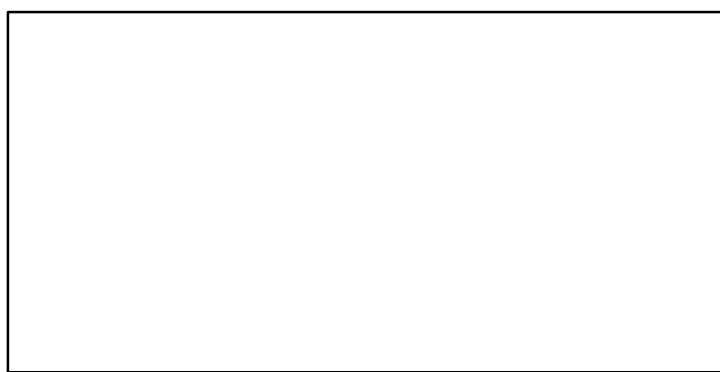
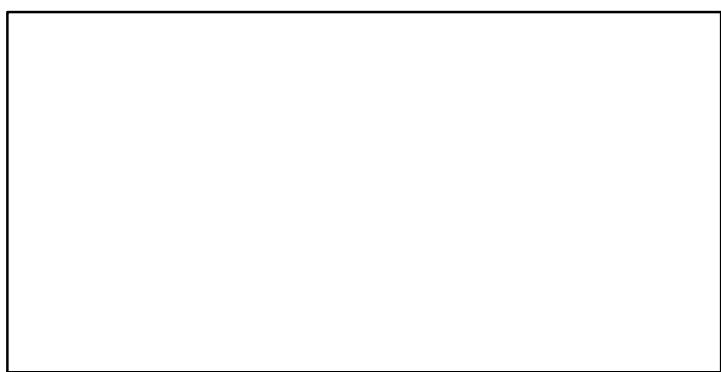
TL–MT, TC\*, RecC\* (1997–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*

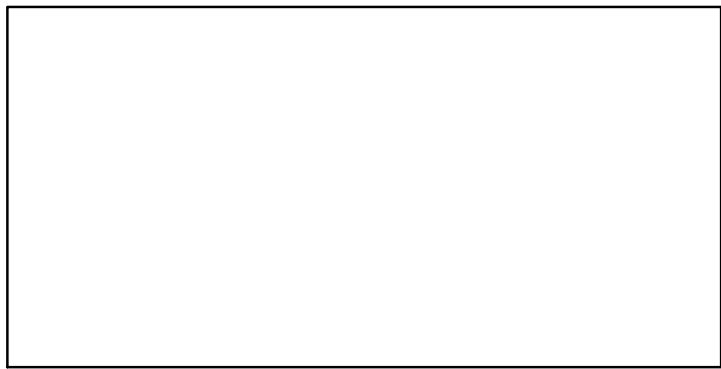


MSY\*, MORAT\*

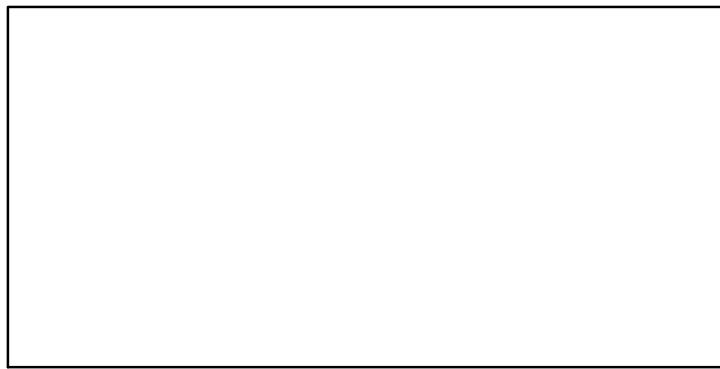
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



**CdivMSY\***



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

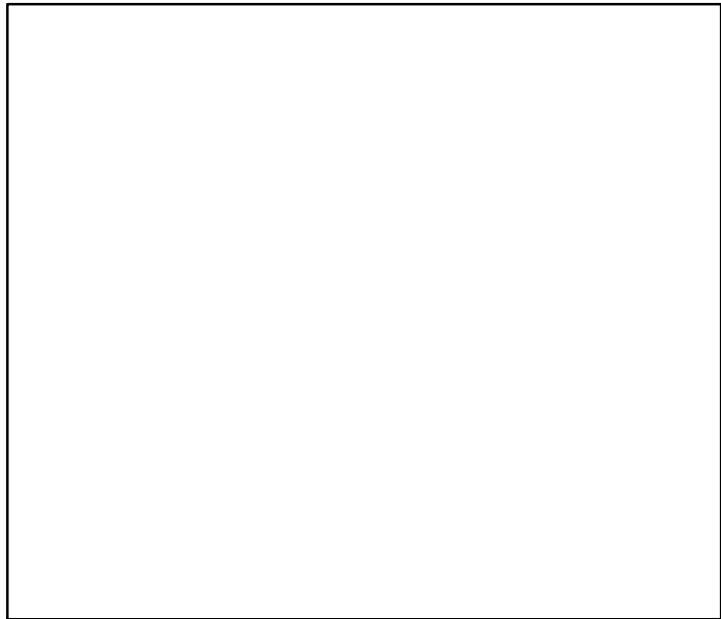
## Thornback skate ICES 6 [TBSKAVI]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja clavata
<b>Current Assess ID</b>	WGEF-TBSKAVI-2005-2015-ICESIMP2018
<b>Area</b>	ICES 6
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

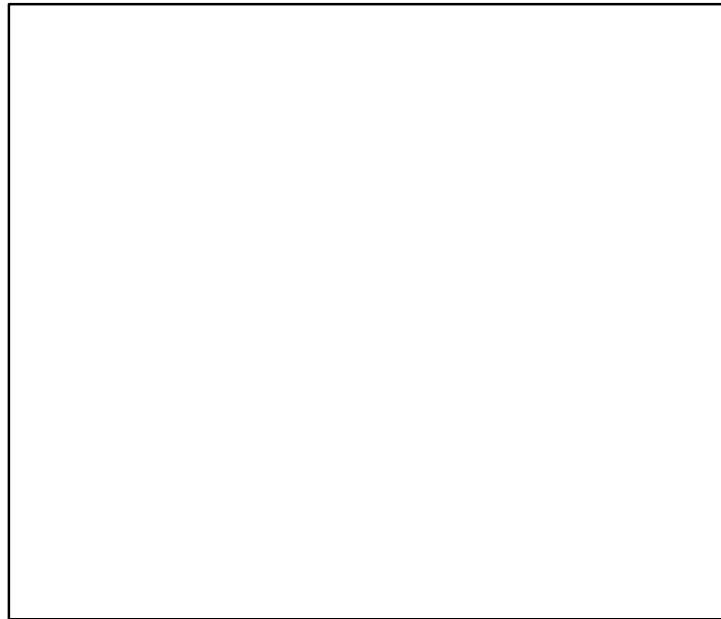
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	8	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	241		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

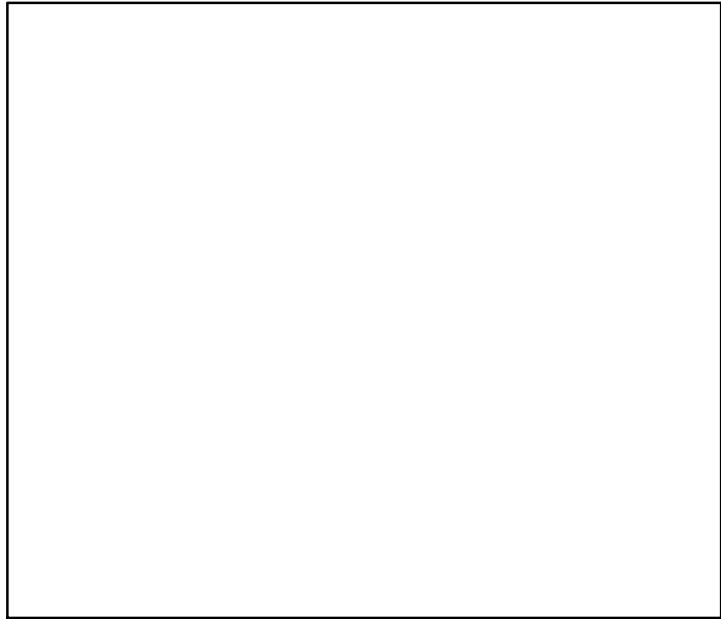
**Kobe MSY\***



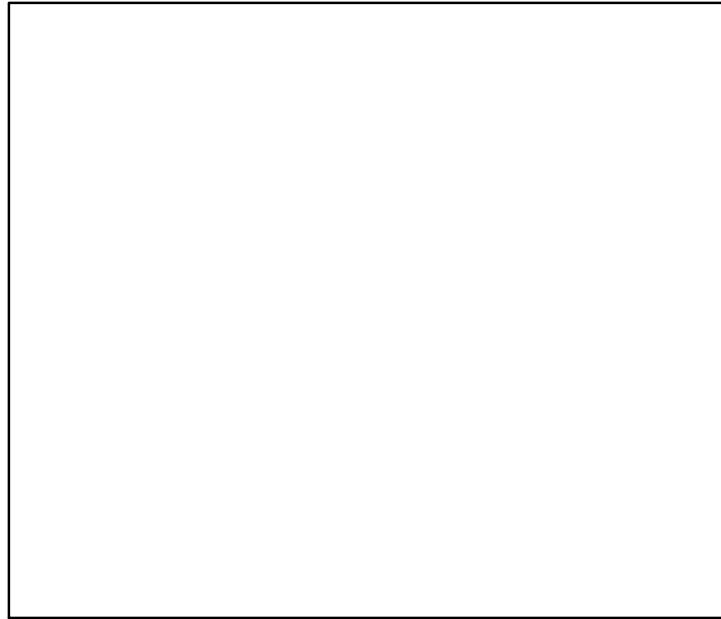
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



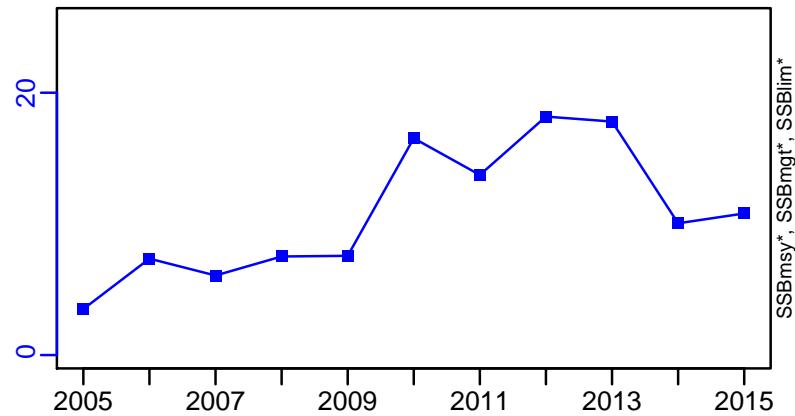
◆ Start Year ♦ End Year \* No Data

Thornback skate ICES 6 [TBSKAVI]

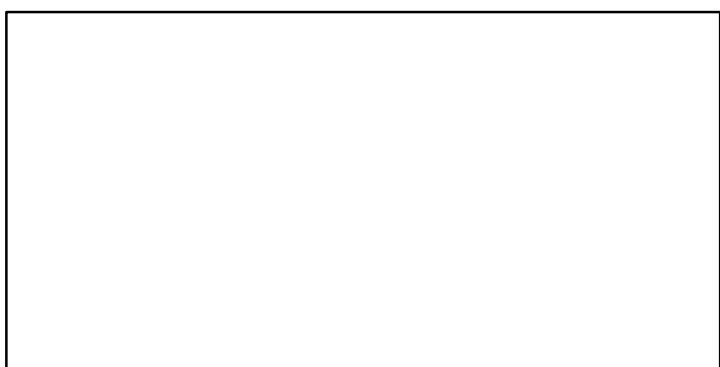
**TB\***



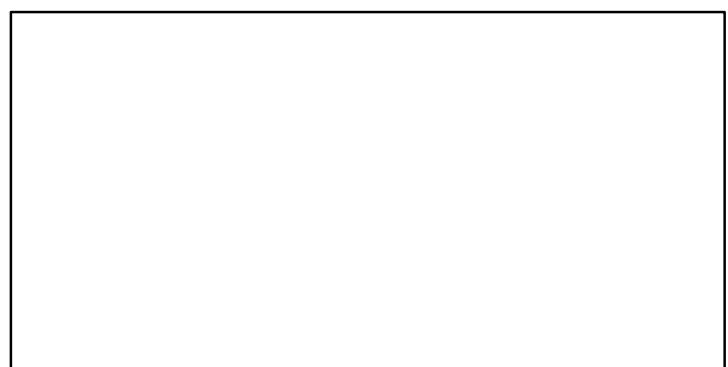
SSB-index (2005–2015–ICESIMP2018)



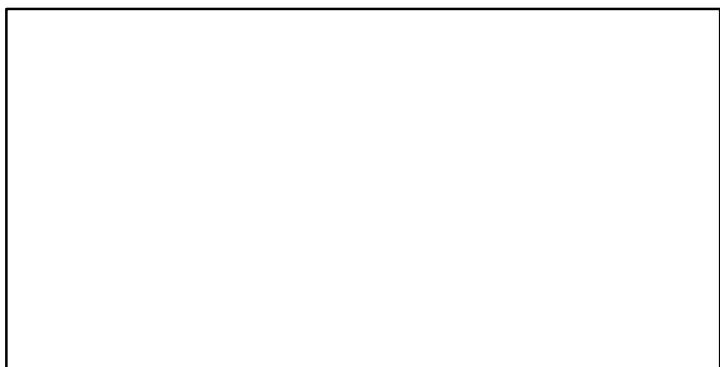
**TN \***



**F\***



**ER\***



**Recruits\***

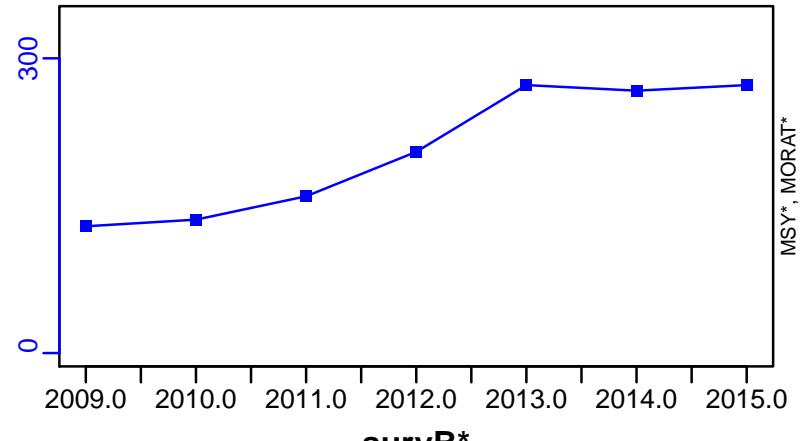


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

Thornback skate ICES 6 [TBSKAVI]

TL-MT, TC\*, RecC\* (2005–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*

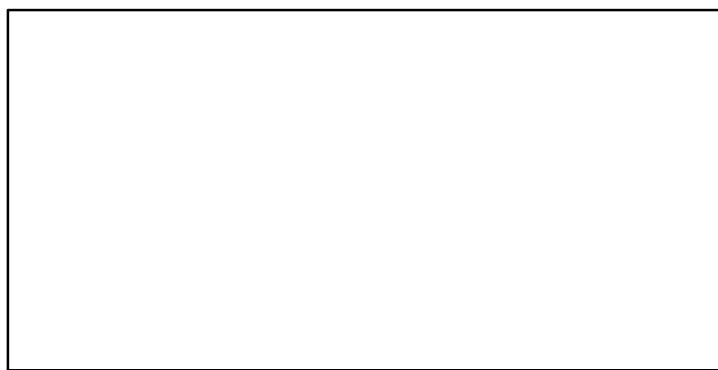


survB\*

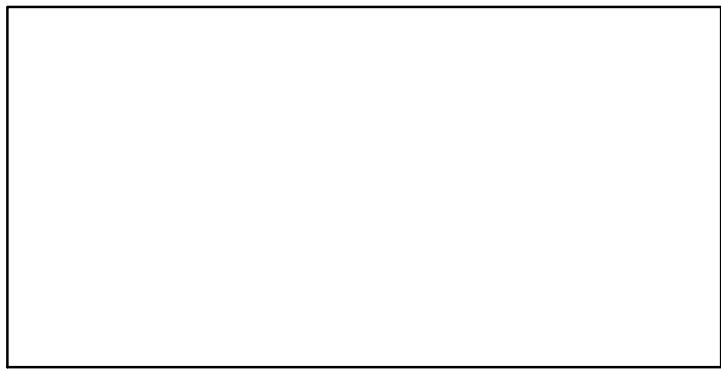
MSY\*, MORAT\*



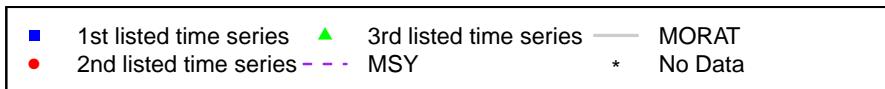
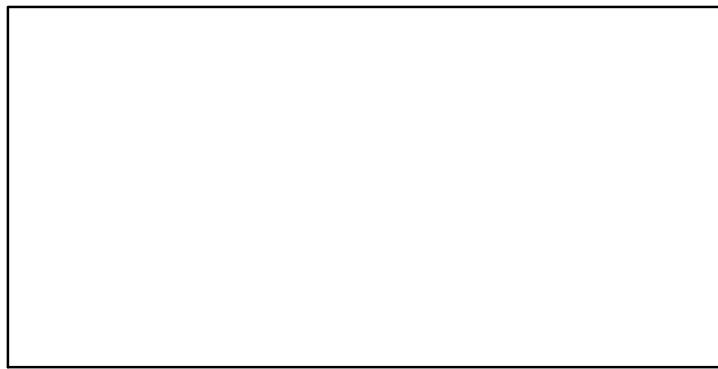
CPUE\*



EFFORT\*



CdivMSY\*



## Thornback skate ICES 7afg [TBSKAVIIafg]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja clavata
<b>Current Assess ID</b>	WGEF-TBSKAVIIafg-1993-2015-ICESIMP2018
<b>Area</b>	ICES 7afg
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	9	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	893		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

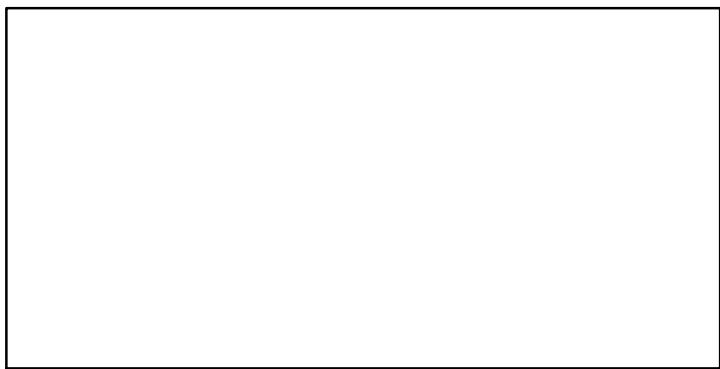
**Spawner Recruit\***

**Production\***

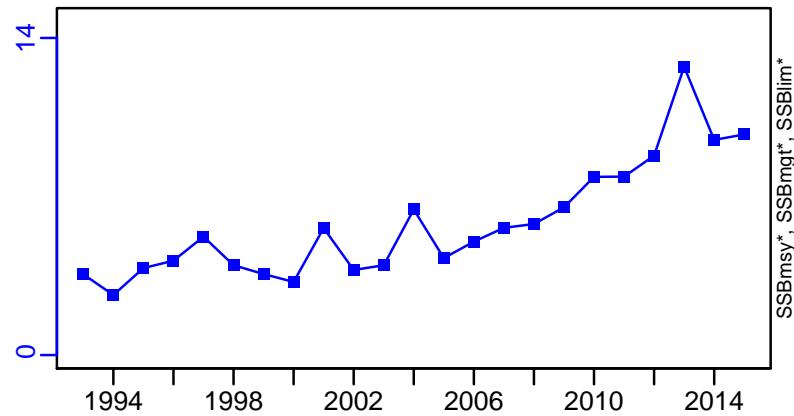
◆ Start Year ♦ End Year \* No Data

Thornback skate ICES 7afg [TBSKAVIIafg]

**TB\***



SSB-index (1993–2015–ICESIMP2018)



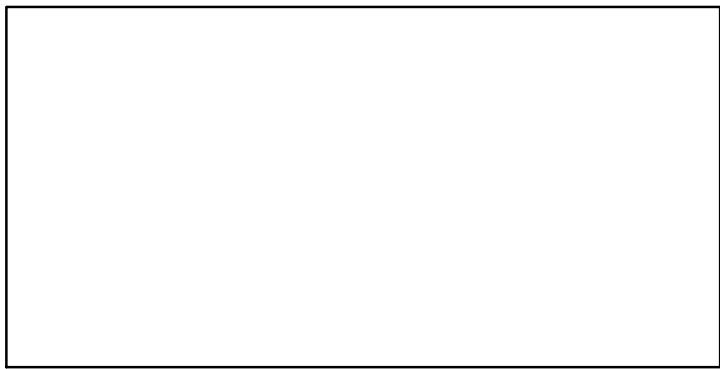
**TN \***



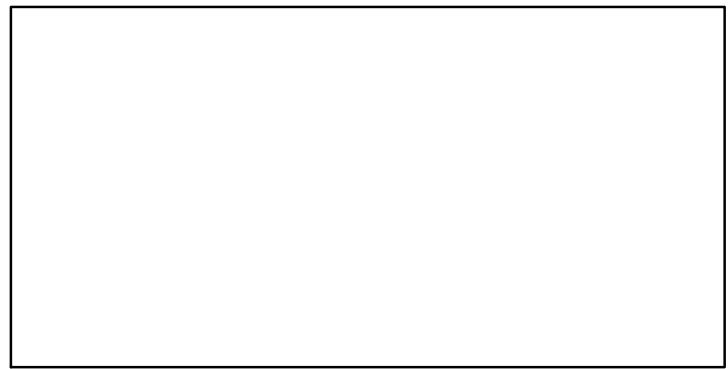
**F\***



**ER\***



**Recruits\***

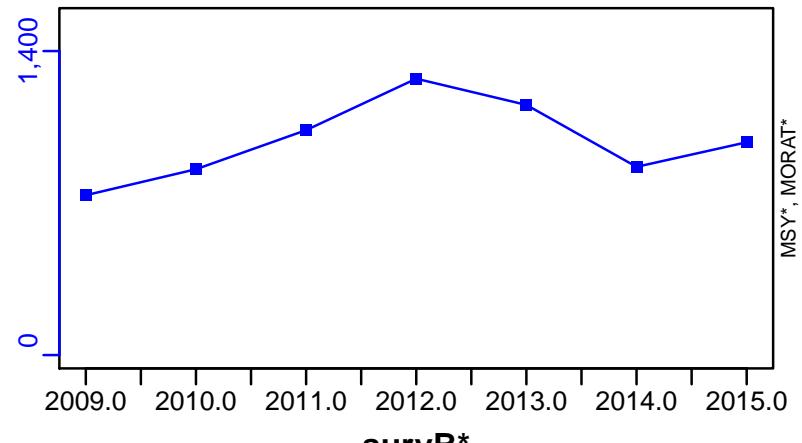


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

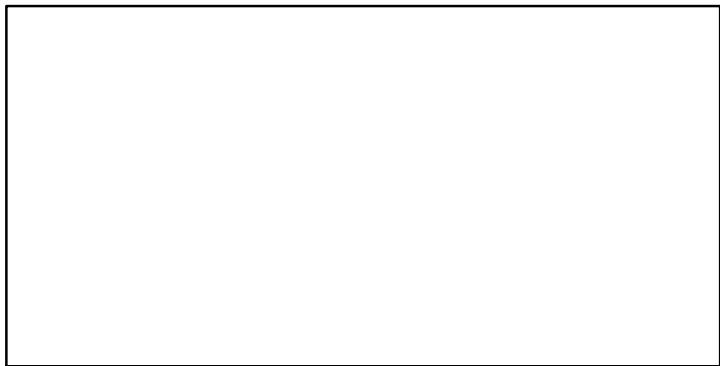
Thornback skate ICES 7afg [TBSKAVIIafg]

TL-MT, TC\*, RecC\* (1993–2015–ICESIMP2018)

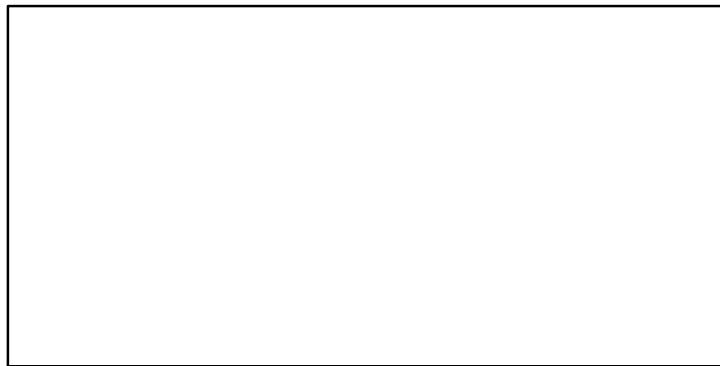
TAC\*, Cpair\*, Cadv\*



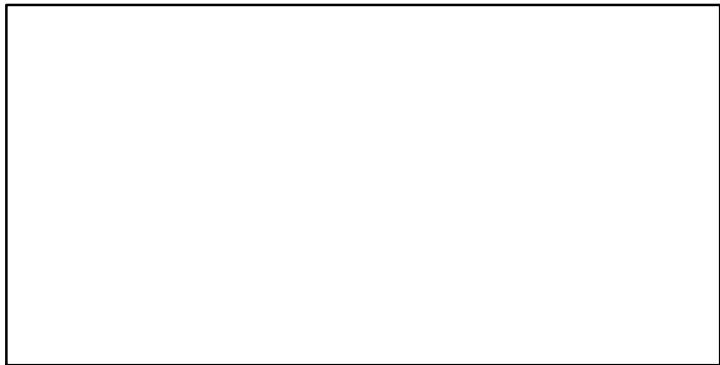
survB\*



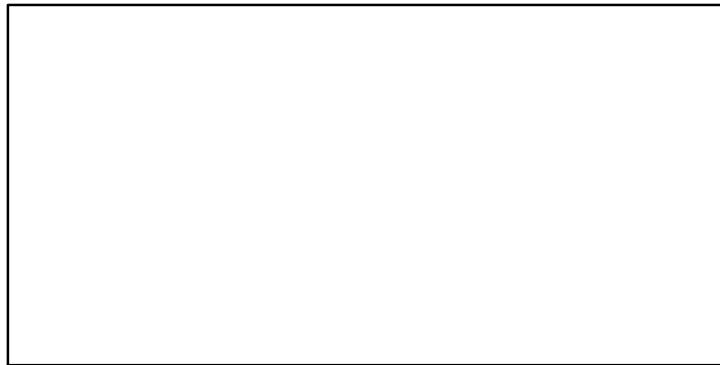
CPUE\*



EFFORT\*



CdivMSY\*



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

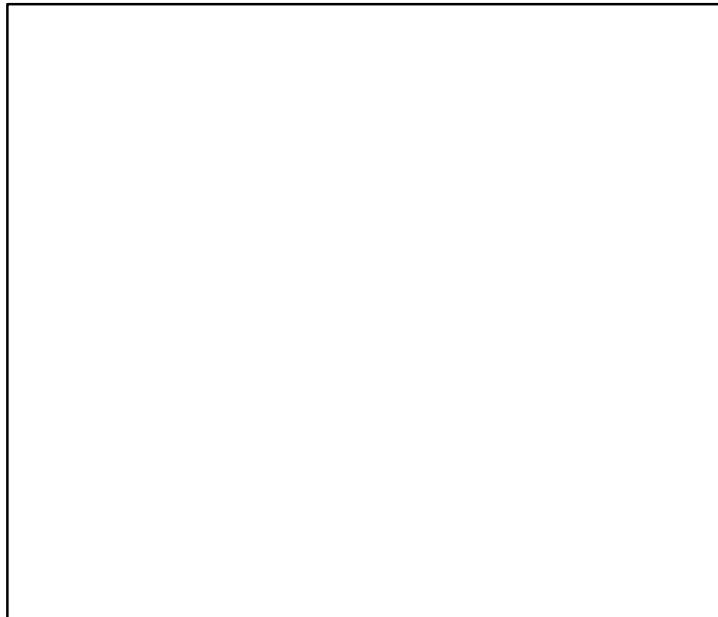
## Thornback skate Western English Channel [TBSKAVIle]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja clavata
<b>Current Assess ID</b>	WGEF-TBSKAVIle-2009-2015-ICESIMP2018
<b>Area</b>	Western English Channel
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

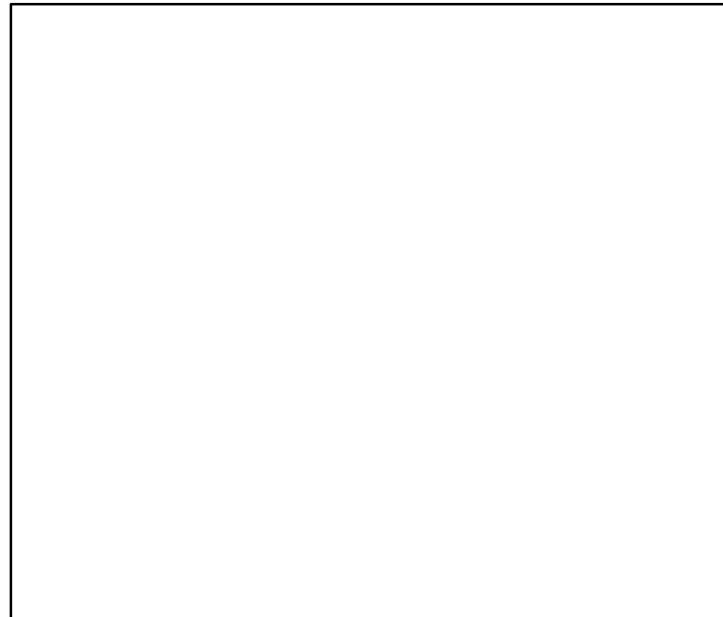
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	391		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



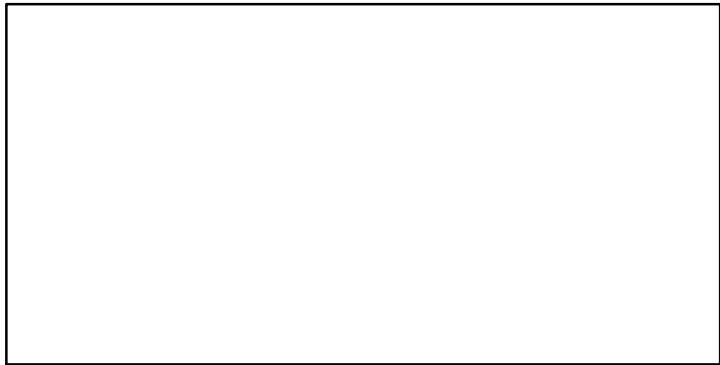
**Production\***



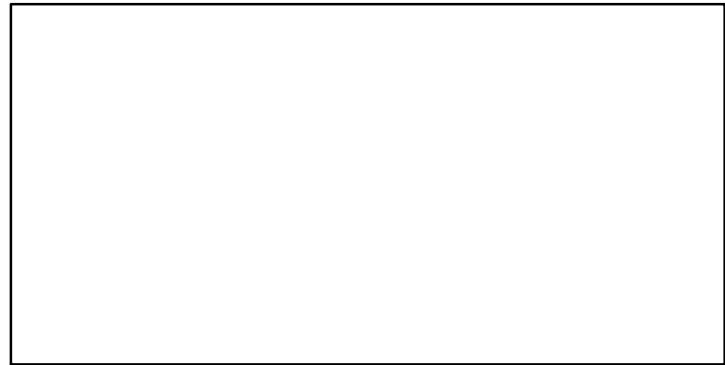
◆ Start Year ♦ End Year \* No Data

Thornback skate Western English Channel [TBSKAVIle]

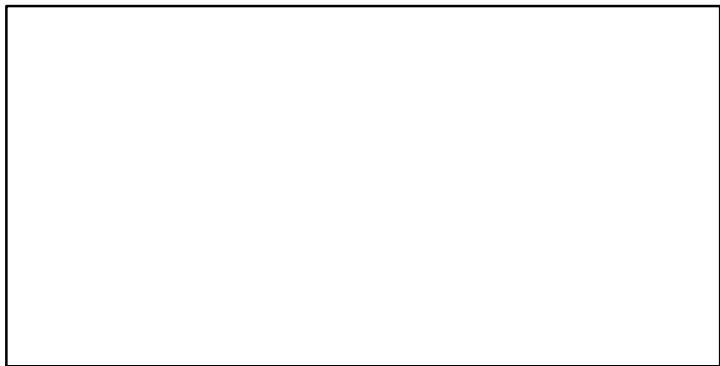
**TB\***



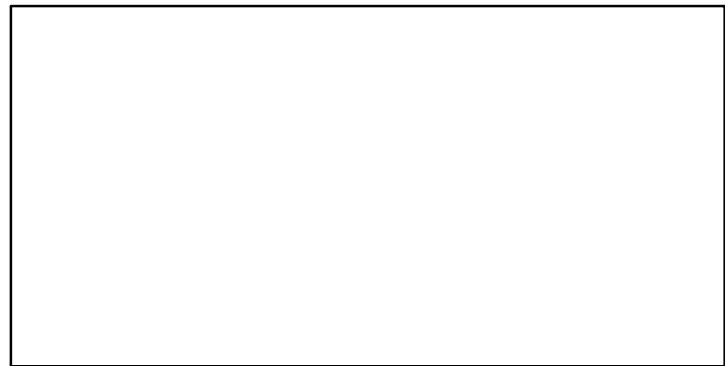
**SSB\***



**TN \***



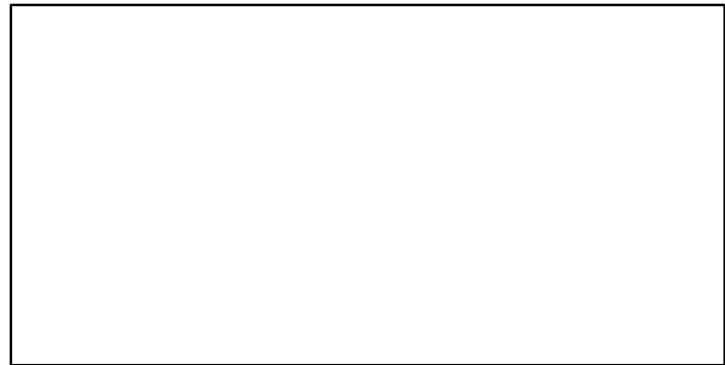
**F\***



**ER\***



**Recruits\***

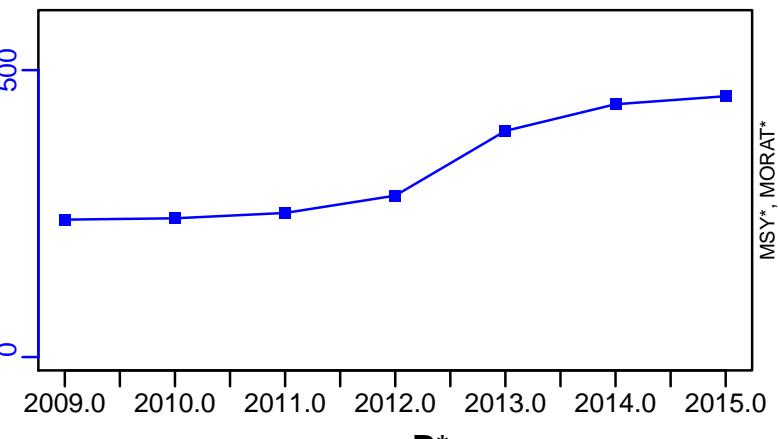


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Thornback skate Western English Channel [TBSKAVIle]

TL-MT, TC\*, RecC\* (2009–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



survB\*

MSY\*, MORAT\*

CPUE\*

EFFORT\*

CdivMSY\*

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

## Thornback skate Bay of Biscay [TBSKAVIII]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja clavata
<b>Current Assess ID</b>	WGEF-TBSKAVIII-1999-2015-ICESIMP2018
<b>Area</b>	Bay of Biscay
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	1.04	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2015	400		
<b>TL</b>	TL-MT	2015	395		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Thornback skate Bay of Biscay [TBSKAVIII]

**Kobe MSY\***

**Kobe MGT\***

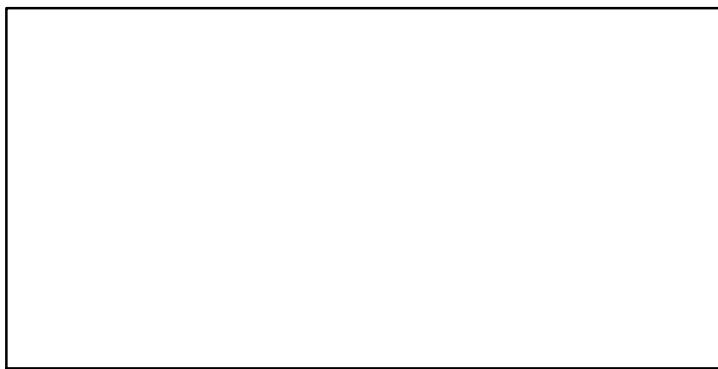
**Spawner Recruit\***

**Production\***

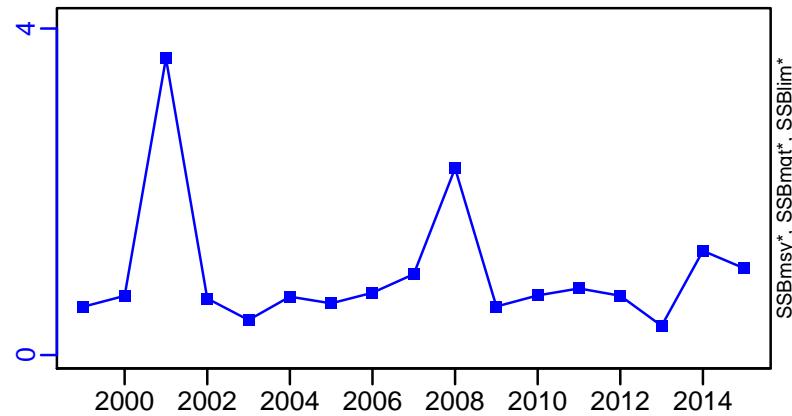
◆ Start Year ♦ End Year \* No Data

Thornback skate Bay of Biscay [TBSKAVIII]

**TB\***



SSB-index (1999–2015–ICESIMP2018)



SSB<sub>mgt\*</sub>, SSB<sub>lim\*</sub>

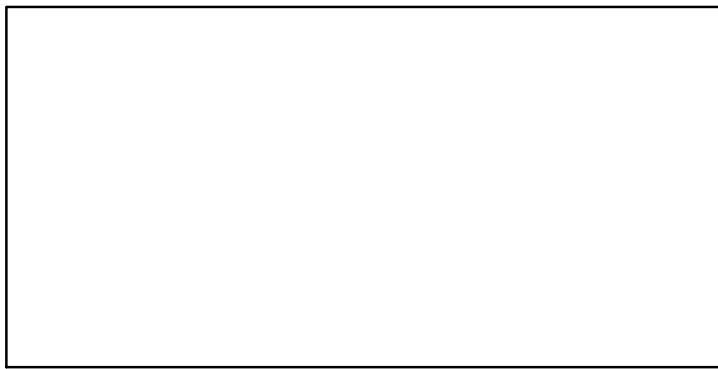
**TN \***



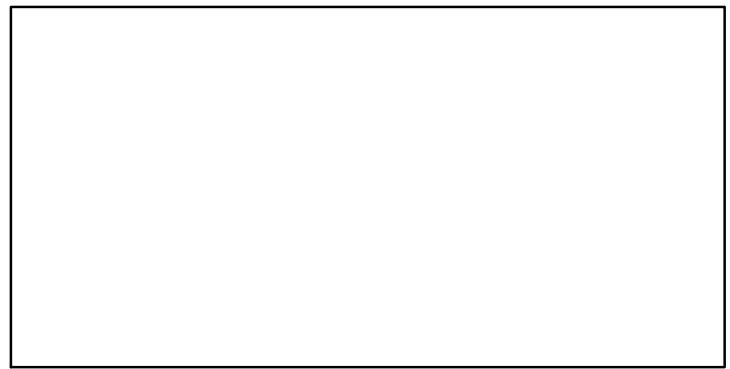
**F\***



**ER\***



**Recruits\***

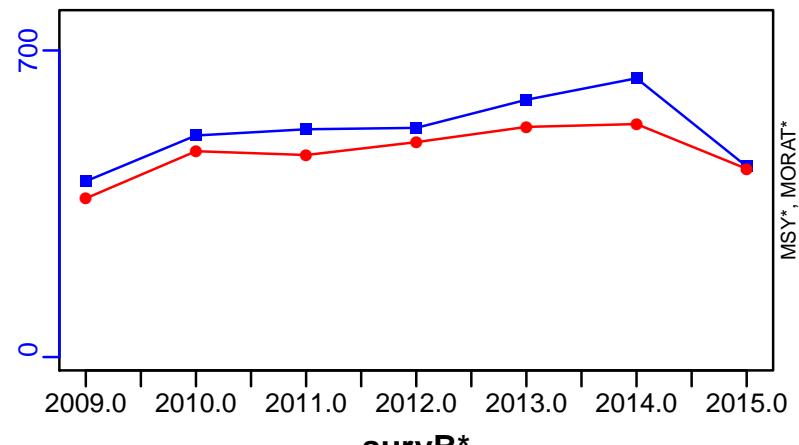


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | * No Data |

Thornback skate Bay of Biscay [TBSKAVIII]

TC-MT, TL-MT, RecC\* (1999–2015–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



survB\*

MSY\*, MORAT\*

CPUE\*

EFFORT\*

CdivMSY\*



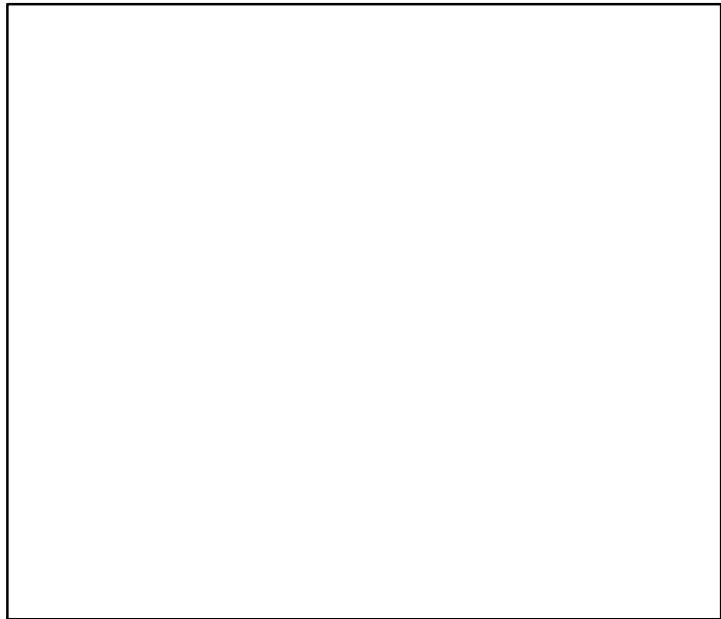
## Tope shark Northeast Atlantic [TPSHARNEATL]

Metadata	
<b>Scientific Name</b>	Galeorhinus galeus
<b>Current Assess ID</b>	WGEF-TPSHARNEATL-2005-2018-ICESIMP2021
<b>Area</b>	Northeast Atlantic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2014, 2016, 2018

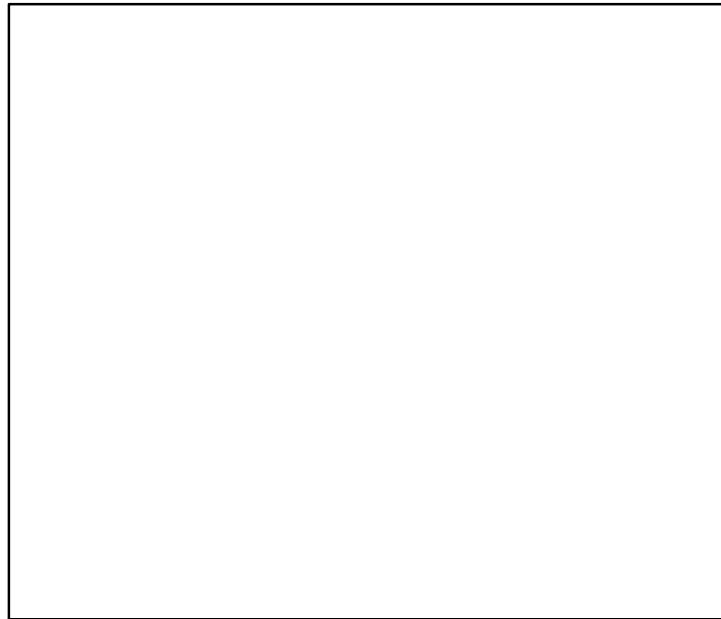
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2018	452		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

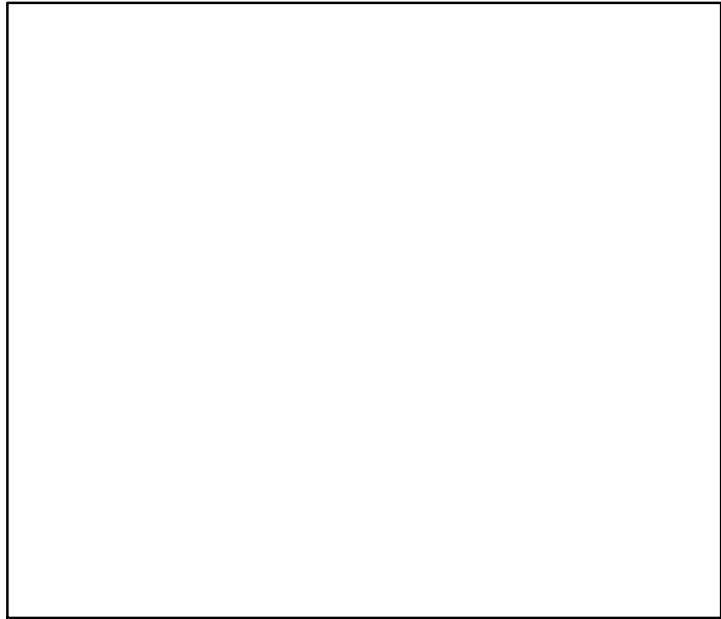
**Kobe MSY\***



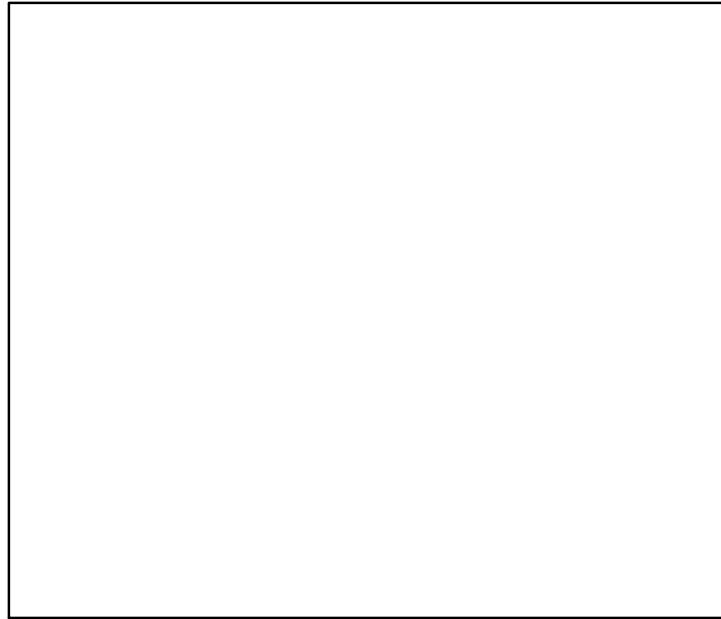
**Kobe MGT\***



**Spawner Recruit\***



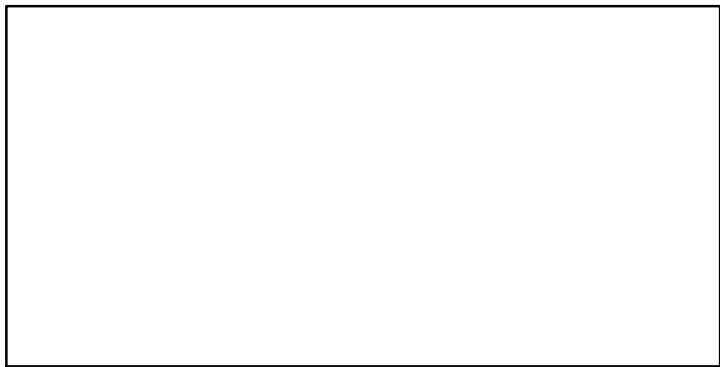
**Production\***



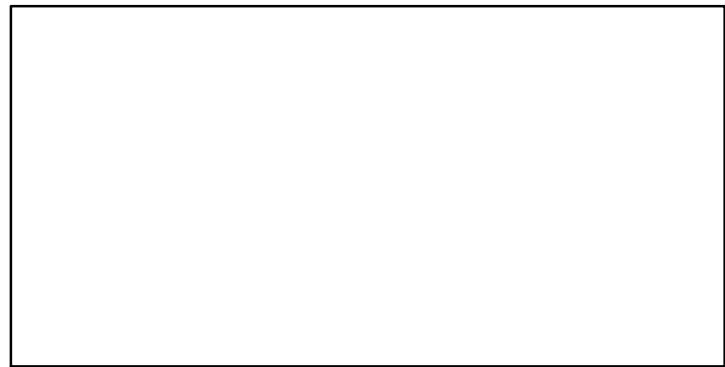
◆ Start Year ◆ End Year \* No Data

Tope shark Northeast Atlantic [TPSHARNEATL]

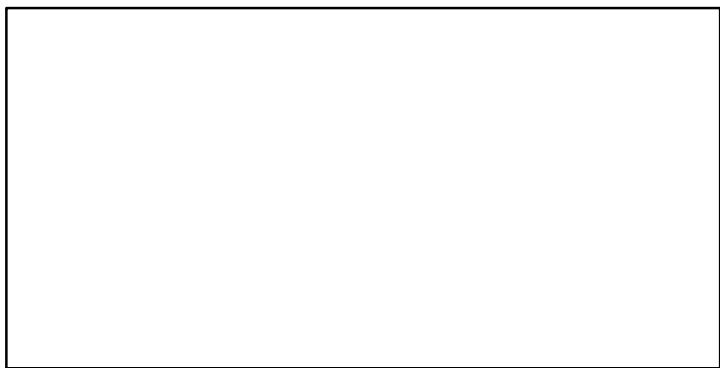
**TB\***



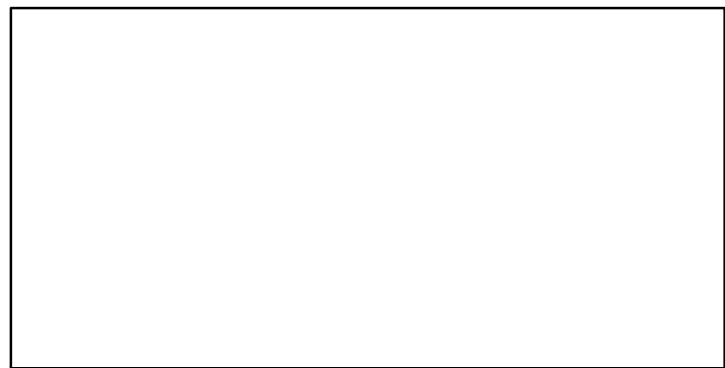
**SSB\***



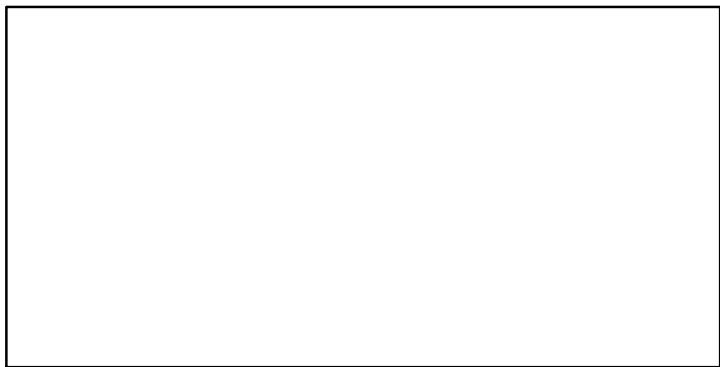
**TN \***



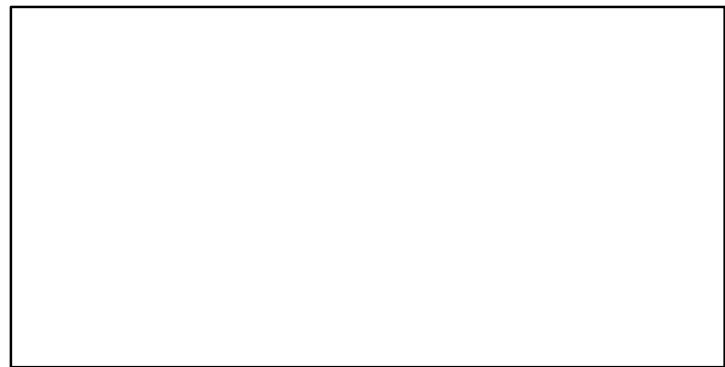
**F\***



**ER\***



**Recruits\***

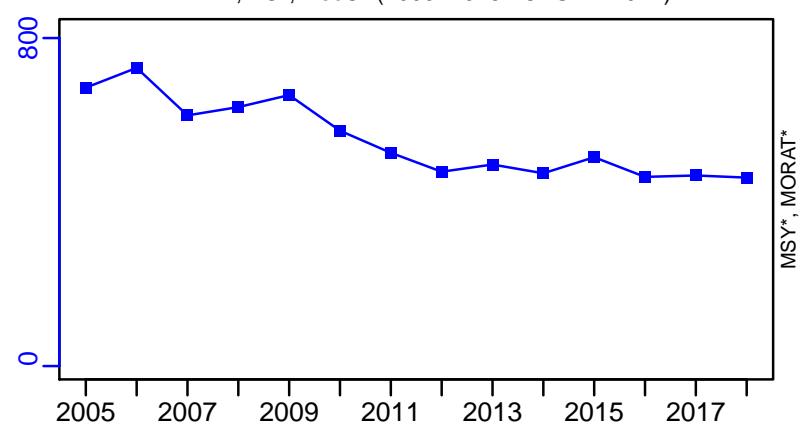


- |       |                    |       |            |   |         |
|-------|--------------------|-------|------------|---|---------|
| ■     | Listed time series | - - - | Target BRP | — | Rec-Est |
| - - - | MSY-based BRP      | - - - | Lim BRP    | * | No Data |

Tope shark Northeast Atlantic [TPSHARNEATL]

TL-MT, TC\*, RecC\* (2005–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*

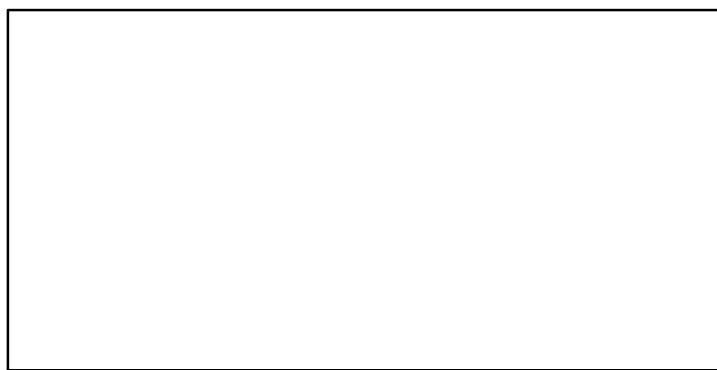


survB\*

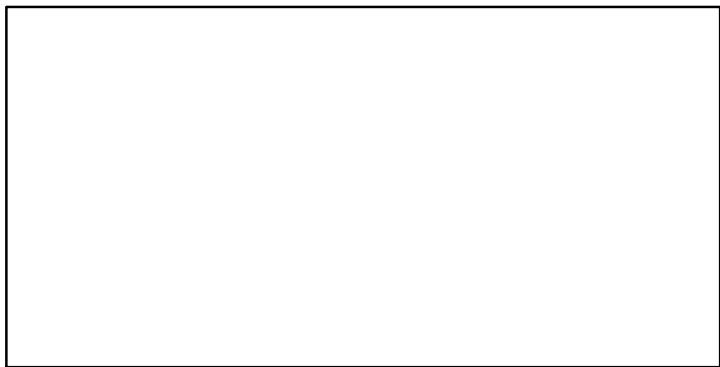
MSY\*, MORAT\*



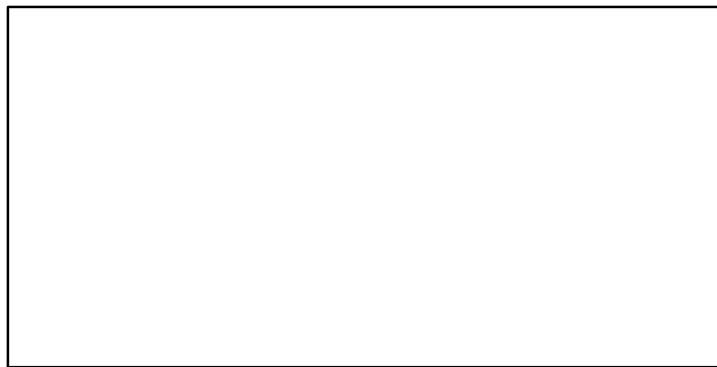
CPUE\*



EFFORT\*



CdivMSY\*



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

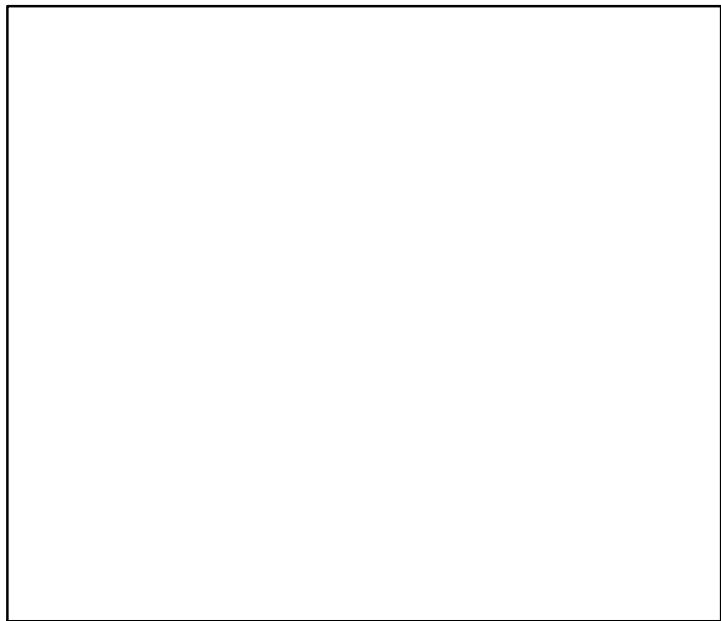
## Turbot Baltic Areas 22-32 [TUR2232]

<b>Metadata</b>	
<b>Scientific Name</b>	Scophthalmus maximus
<b>Current Assess ID</b>	WGBFAS-TUR2232-1970-2017-ICESIMP2018
<b>Area</b>	Baltic Areas 22-32
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Baltic Fisheries Assessment Working Group
<b>Asmts in RAM</b>	2016, 2016, 2017

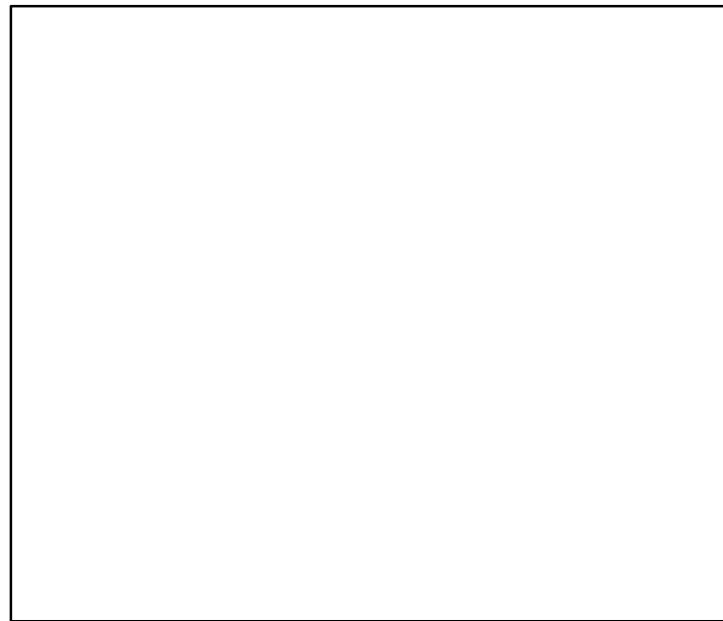
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2017	322		
<b>TL</b>	TL-MT	2017	264		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

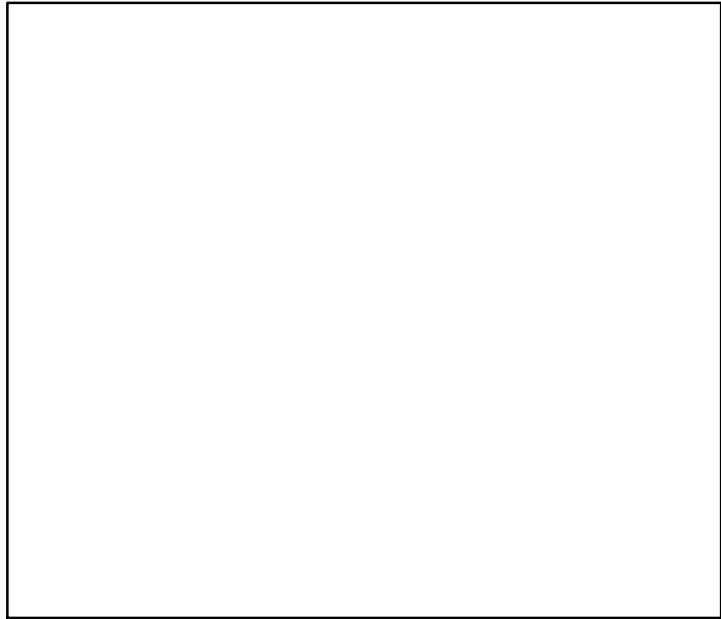
**Kobe MSY\***



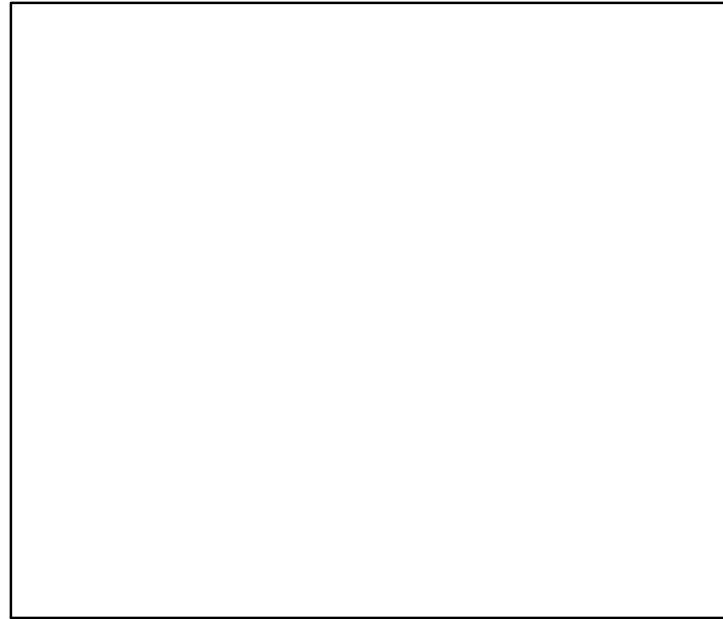
**Kobe MGT\***



**Spawner Recruit\***

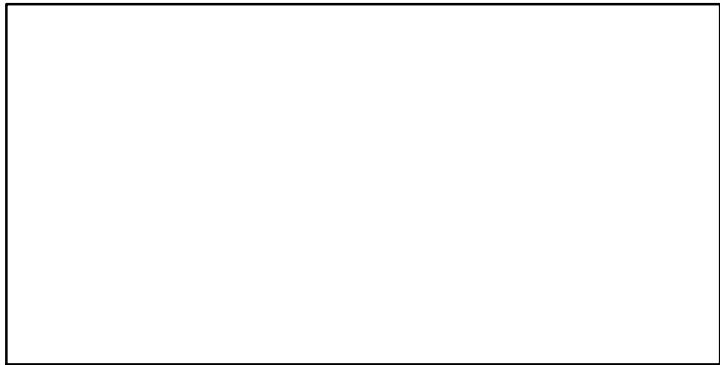


**Production\***

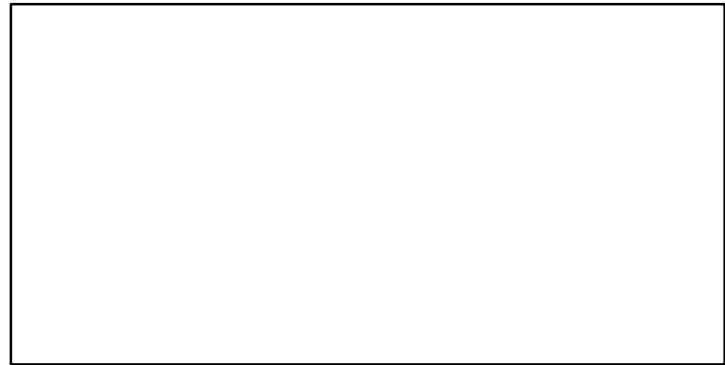


◆ Start Year ♦ End Year \* No Data

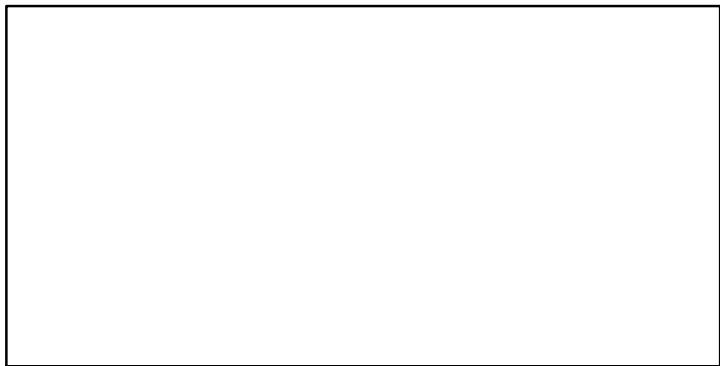
**TB\***



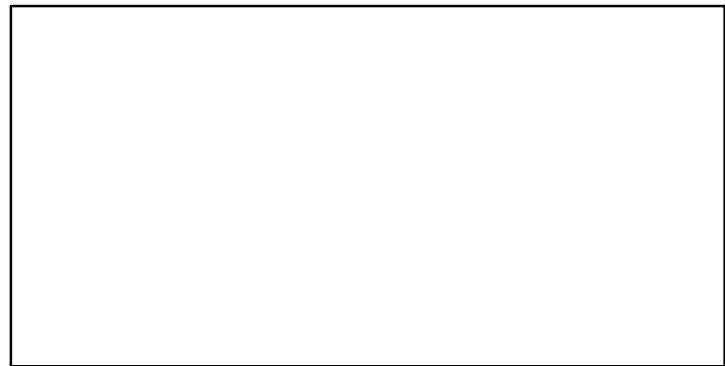
**SSB\***



**TN \***



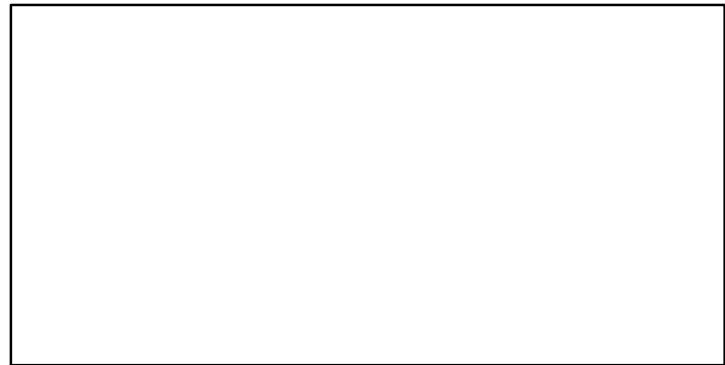
**F\***



**ER\***



**Recruits\***

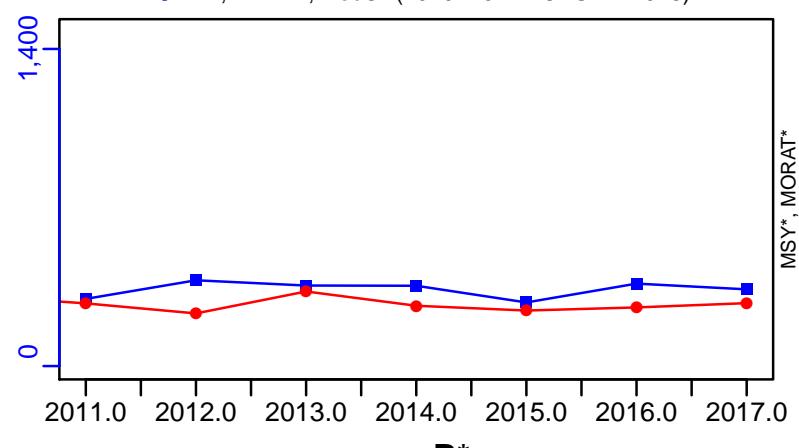


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Turbot Baltic Areas 22–32 [TUR2232]

TC-MT, TL-MT, RecC\* (1970–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



survB\*

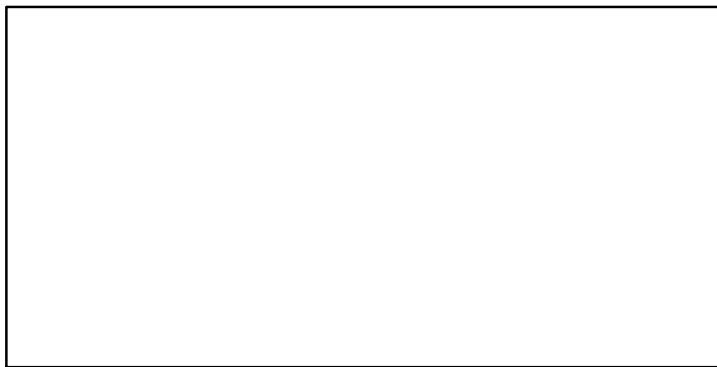
MSY\*, MORAT\*



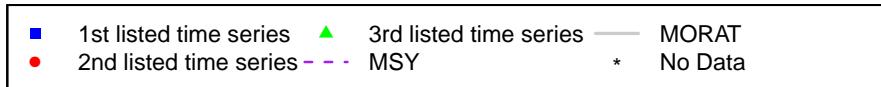
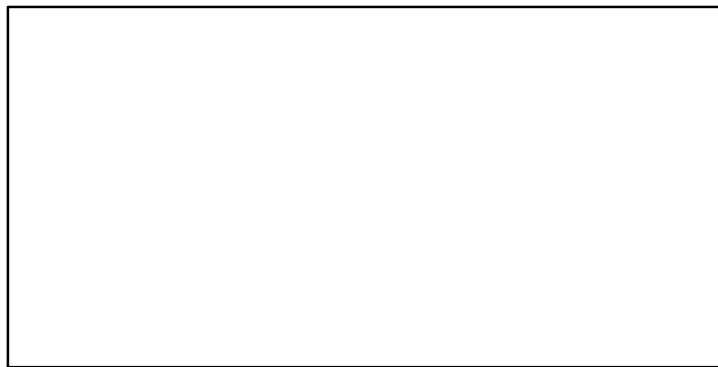
CPUE\*



EFFORT\*



CdivMSY\*



## Turbot Kattegat and Skagerrak [TURIIIa]

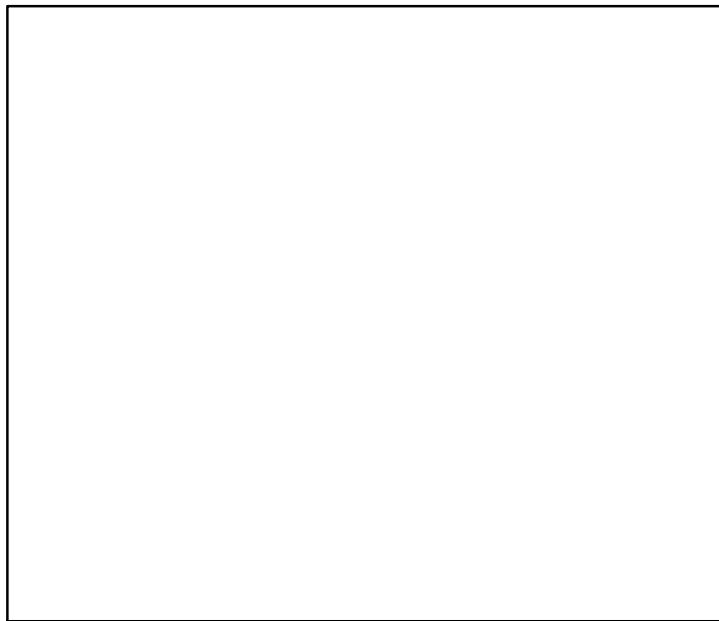
<b>Metadata</b>	
<b>Scientific Name</b>	Scophthalmus maximus
<b>Current Assess ID</b>	WGNSSK-TURIIIa-1950-2019-ICESIMP2021
<b>Area</b>	Kattegat and Skagerrak
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2019, 2016, 2015

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

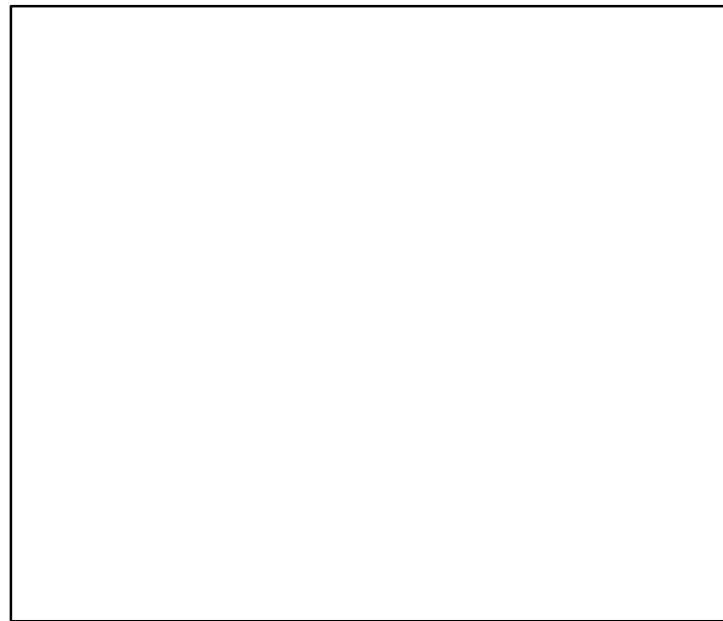
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	0.652	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2019	174		
<b>TL</b>	TL-MT	2019	153		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Turbot Kattegat and Skagerrak [TURIlla]**

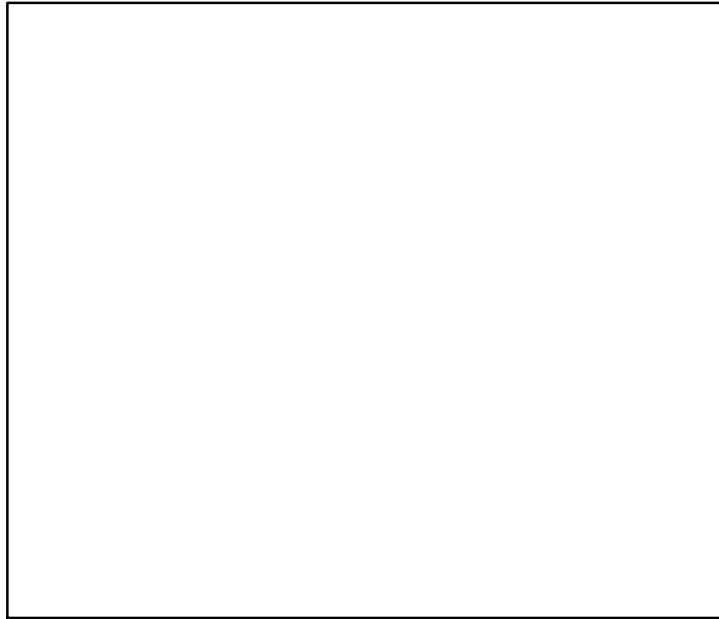
**Kobe MSY\***



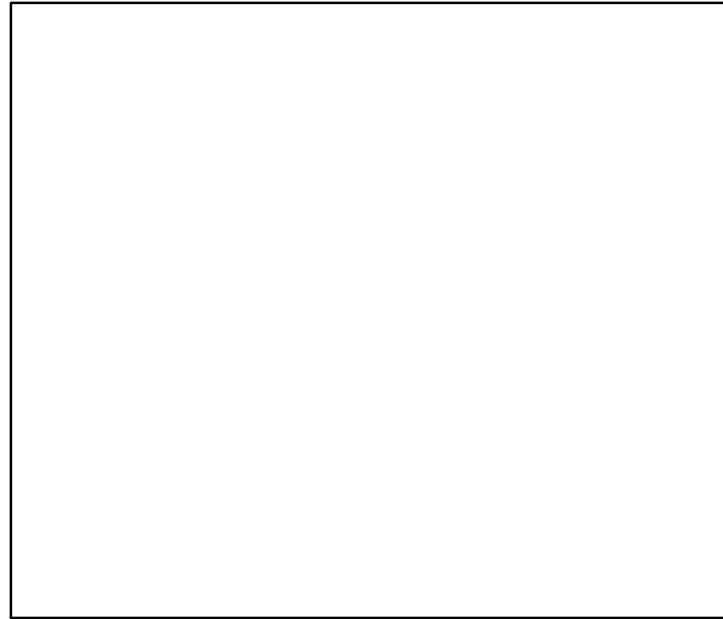
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



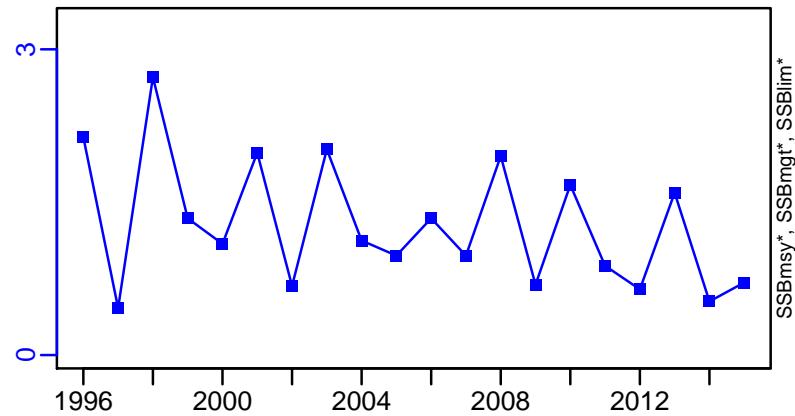
◆ Start Year ♦ End Year \* No Data

**Turbot Kattegat and Skagerrak [TURIIla]**

**TB\***



**SSB-index (1964–2015–ICESIMP2018)**



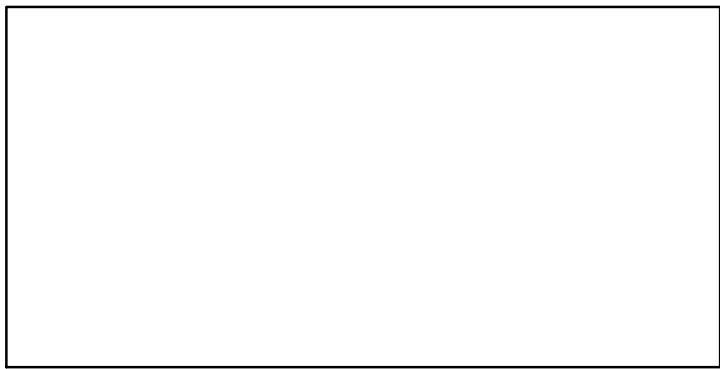
**TN \***



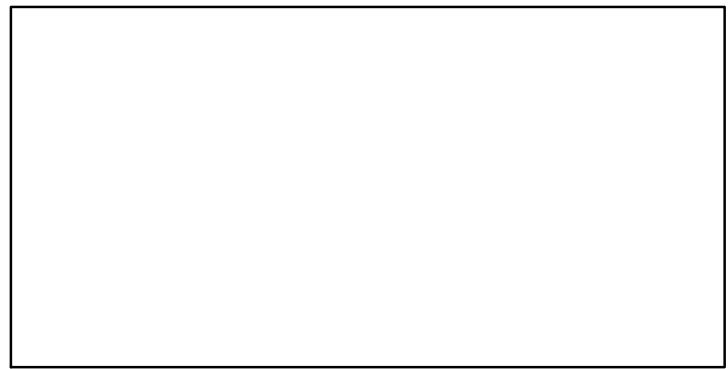
**F\***



**ER\***



**Recruits\***

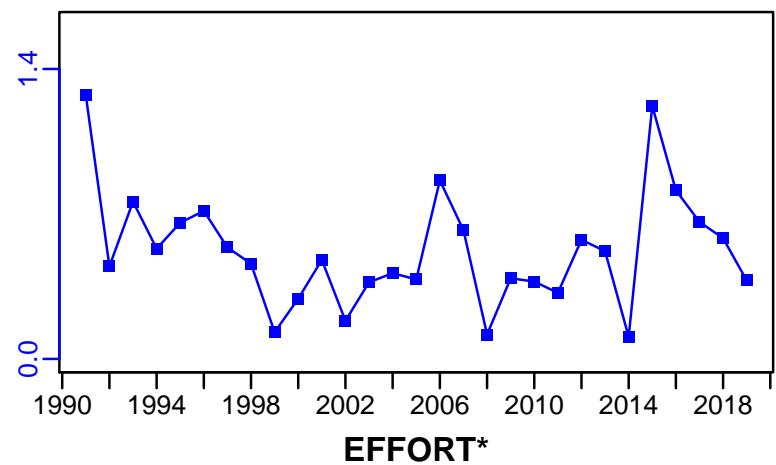
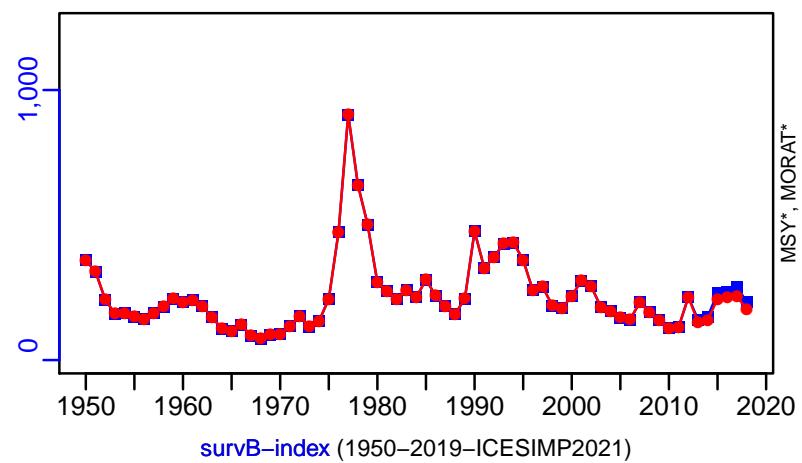


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | ··· Lim BRP  | * No Data |

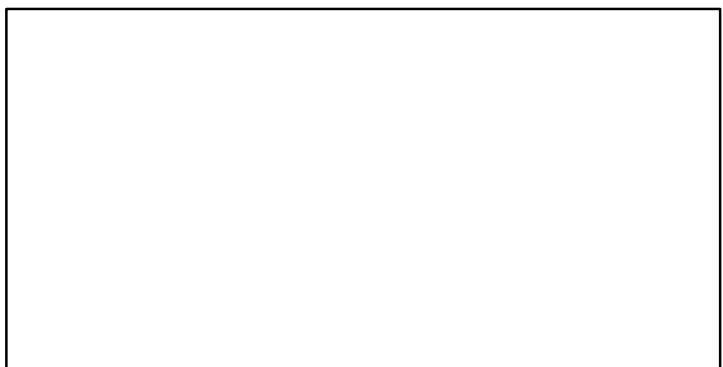
**Turbot Kattegat and Skagerrak [TURIIla]**

TC-MT, TL-MT, RecC\* (1950–2019–ICESIMP2021)

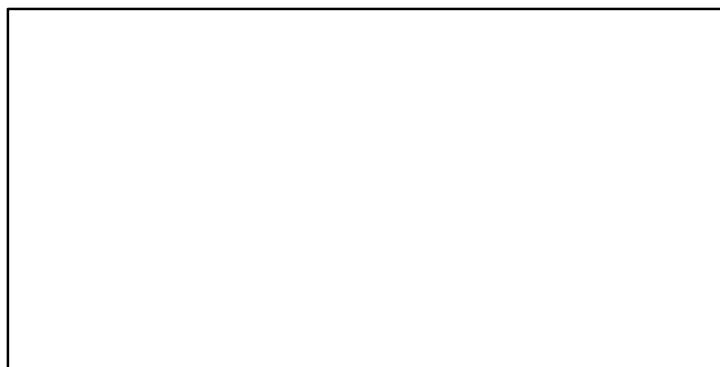
**TAC\*, Cpair\*, Cadv\***



**CPUE\***



**CdivMSY\***



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

## Turbot North Sea [TURIV]

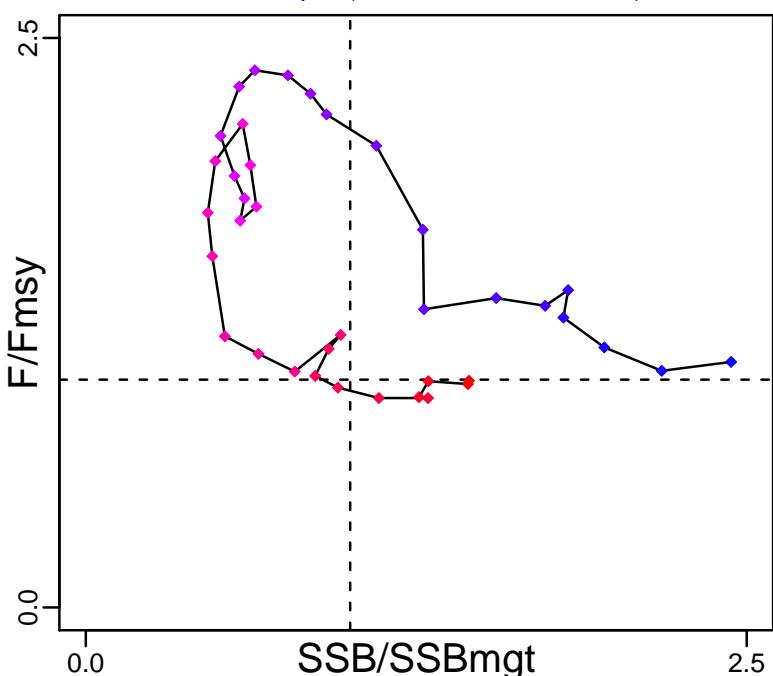
<b>Metadata</b>	
<b>Scientific Name</b>	Scophthalmus maximus
<b>Current Assess ID</b>	WGNSSK-TURIV-1980-2019-ICESIMP2021
<b>Area</b>	North Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2019

<b>Reference Points</b>				
Type	ID	Asmt Year	Value	
<b>TBmsy</b>	-	-	-	
<b>SSBmsy</b>	-	-	-	
<b>Fmsy</b>	Fmsy-1/yr	2019	0.36	
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.617	
<b>TBmgt</b>	-	-	-	
<b>SSBmgt</b>	SSBmgt-MT	2019	6353	
<b>Fmgt</b>	Fmgt-1/yr	2019	0.36	
<b>ERmgt</b>	-	-	-	
<b>TB0</b>	-	-	-	
<b>SSB0</b>	-	-	-	
<b>MSY</b>	-	-	-	
<b>M</b>	-	-	-	
<b>TBlim</b>	-	-	-	
<b>SSBlim</b>	-	-	-	
<b>Flim</b>	-	-	-	
<b>ERlim</b>	-	-	-	

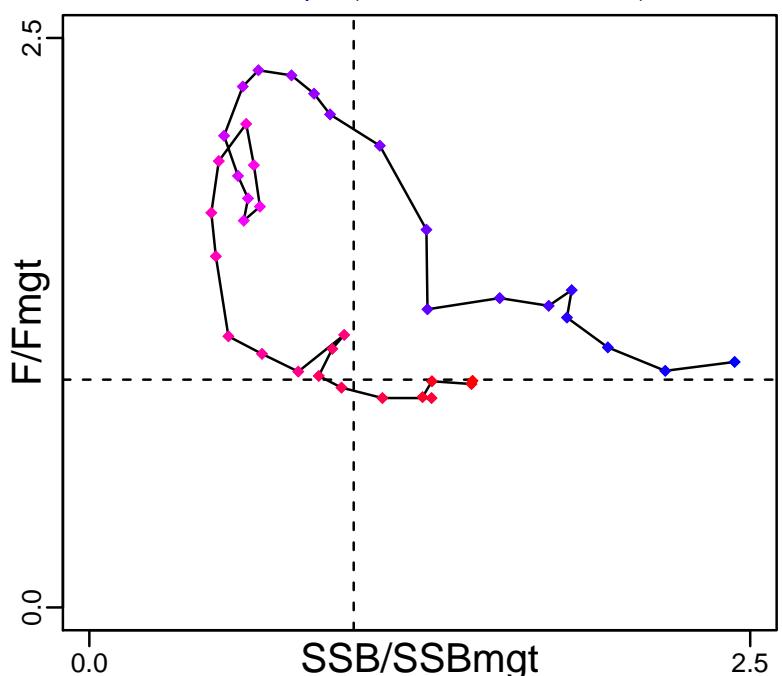
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2019	13,630	-	-	
<b>SSB</b>	SSB-MT	2019	8523	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	4,492,019	-	1	
<b>F</b>	F-1/yr	2019	0.358	-	2 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.266	-	-	
<b>TC</b>	TC-MT	2019	3626			
<b>TL</b>	TL-MT	2019	3140			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.995			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.431			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.342			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.995			
<b>ER/ERmgt</b>	-	-	-			

Turbot North Sea [TURIV]

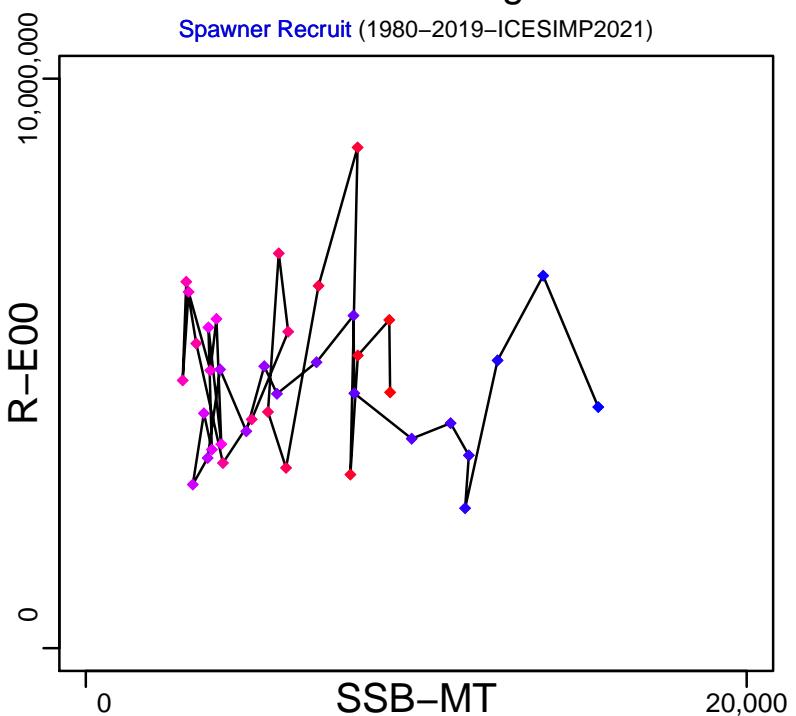
Kobe MSYpref (1980–2019–ICESIMP2021)



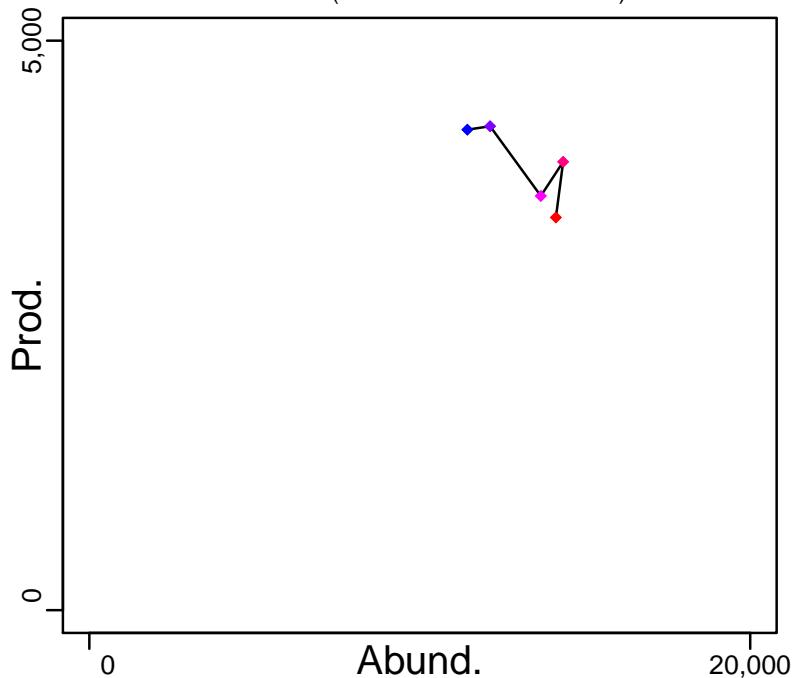
Kobe MGTpref (1980–2019–ICESIMP2021)



Spawner Recruit (1980–2019–ICESIMP2021)



Production (1980–2019–ICESIMP2021)

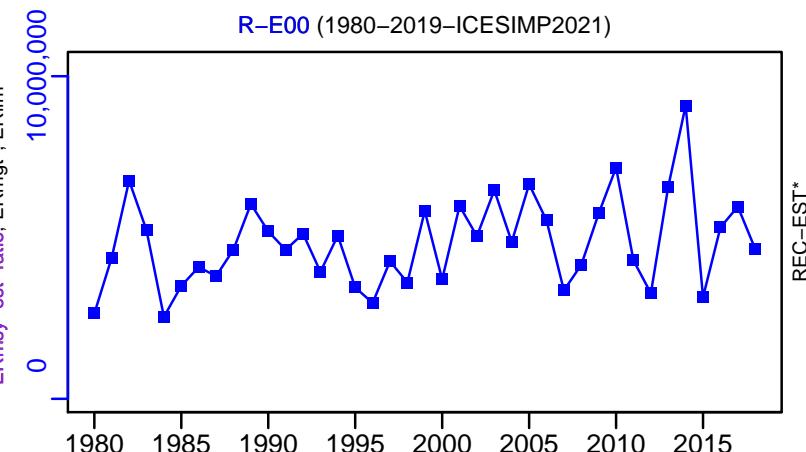
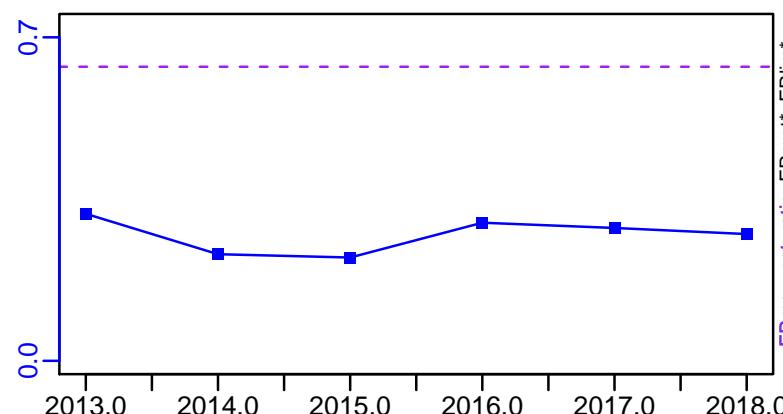
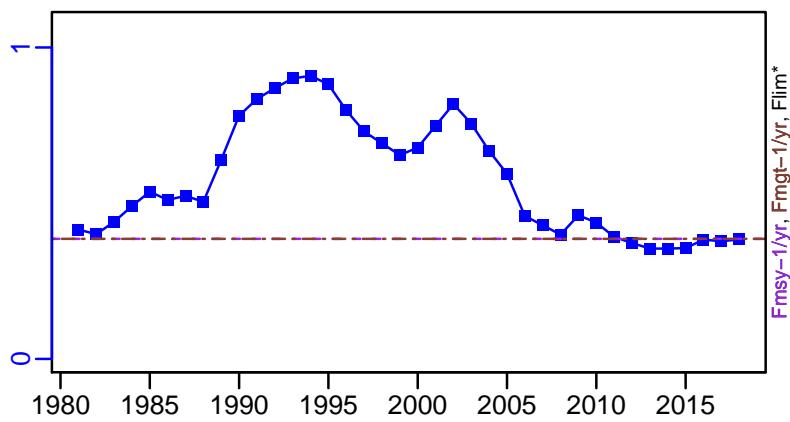
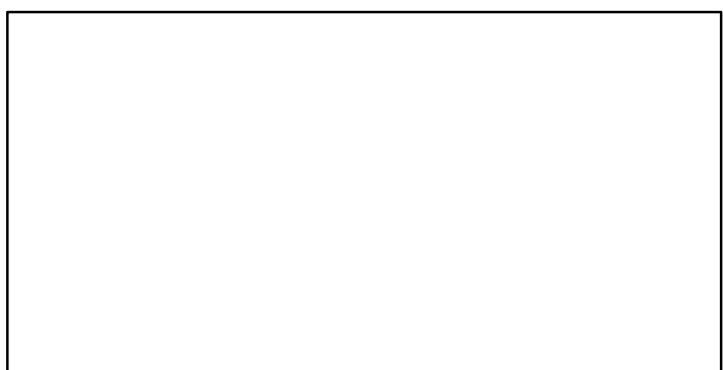
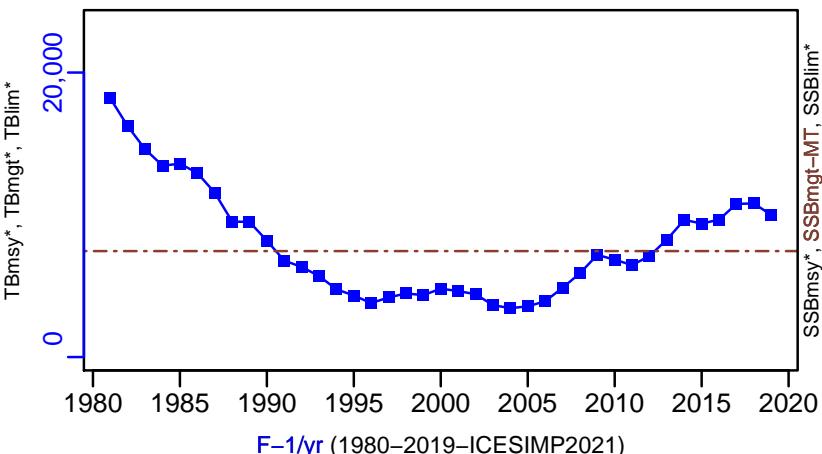
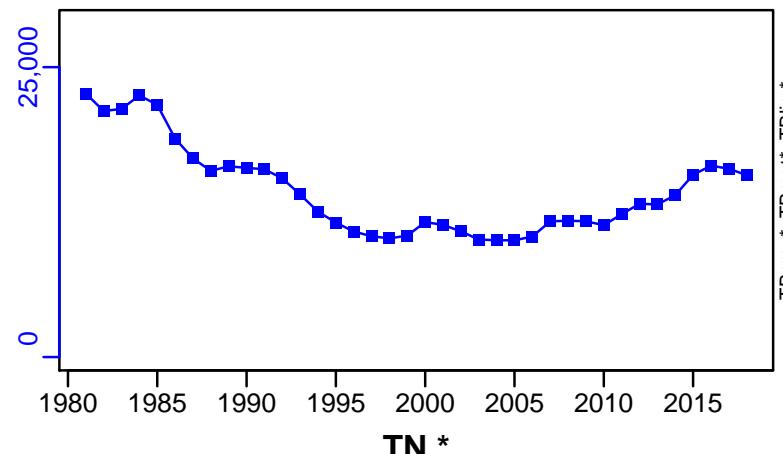


◆ Start Year ◆ End Year \* No Data

### Turbot North Sea [TURIV]

TB-MT (1980–2019–ICESIMP2021)

SSB-MT (1980–2019–ICESIMP2021)

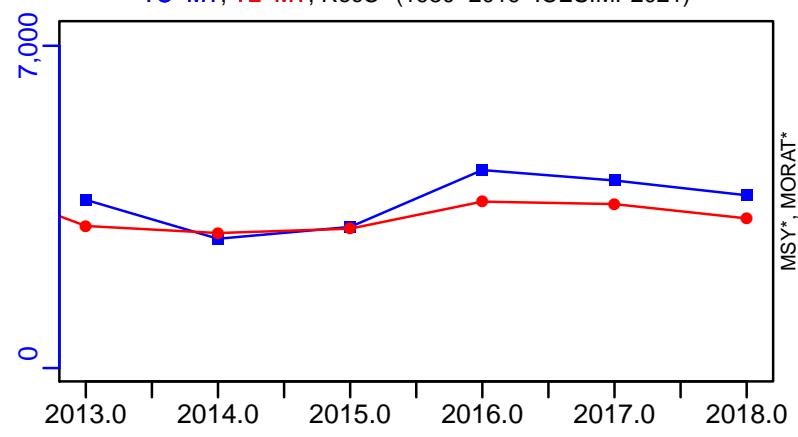


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	--- Lim BRP	* No Data

Turbot North Sea [TURIV]

TC-MT, TL-MT, RecC\* (1980–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



survB\*

MSY\*, MORAT\*

CPUE\*

EFFORT\*

CdivMSY\*

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

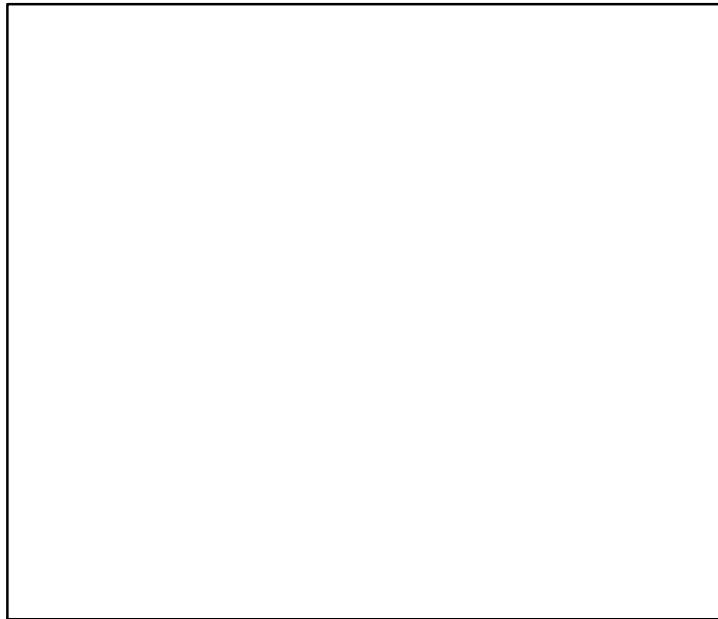
## Undulate ray ICES 7de [URAYVIIde]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja undulata
<b>Current Assess ID</b>	WGEF-URAYVIIde-2008-2017-ICESIMP2018
<b>Area</b>	ICES 7de
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2015, 2017

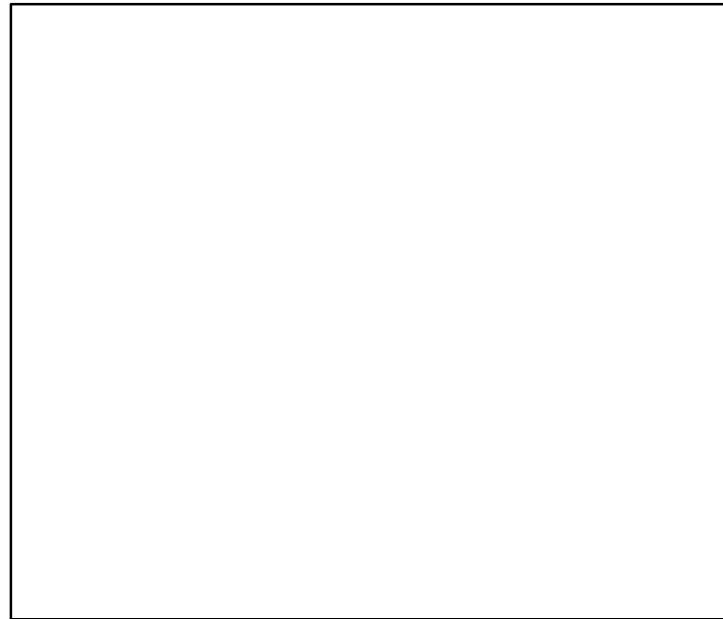
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	912	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2017	1380		
<b>TL</b>	TL-MT	2017	139		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

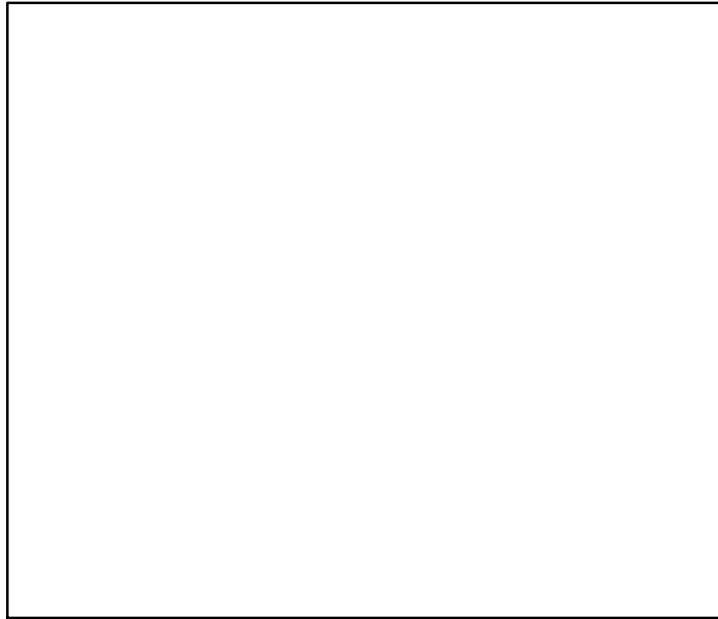
**Kobe MSY\***



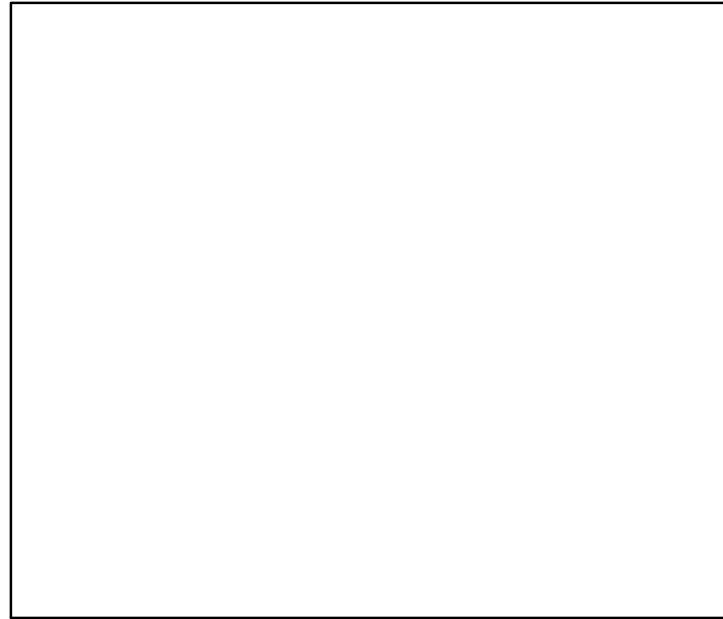
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



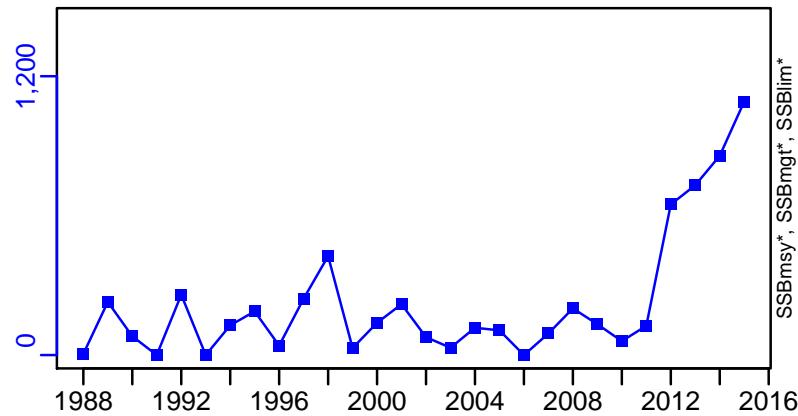
◆ Start Year ♦ End Year \* No Data

Undulate ray ICES 7de [URAYVIIde]

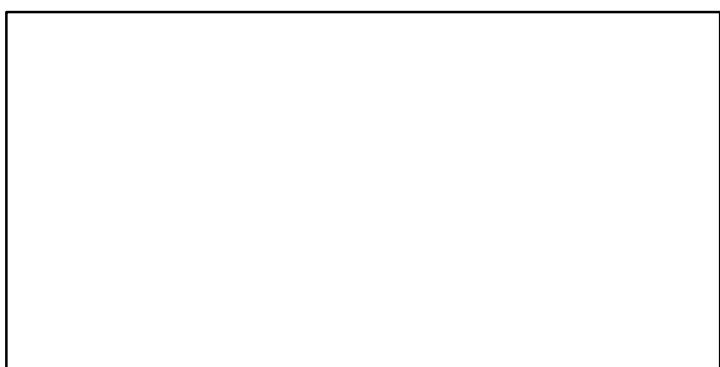
**TB\***



SSB-index (1988–2015–ICESIMP2018)



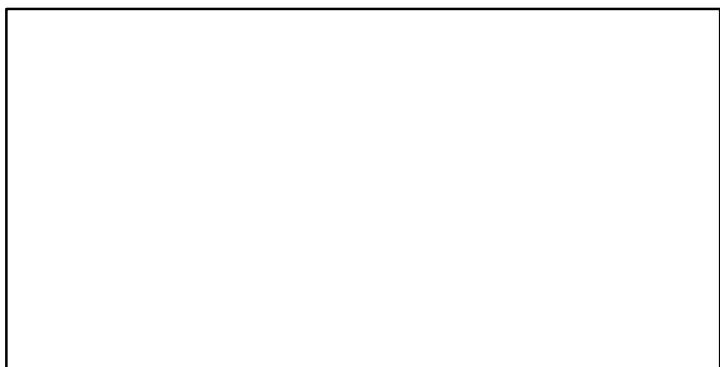
**TN \***



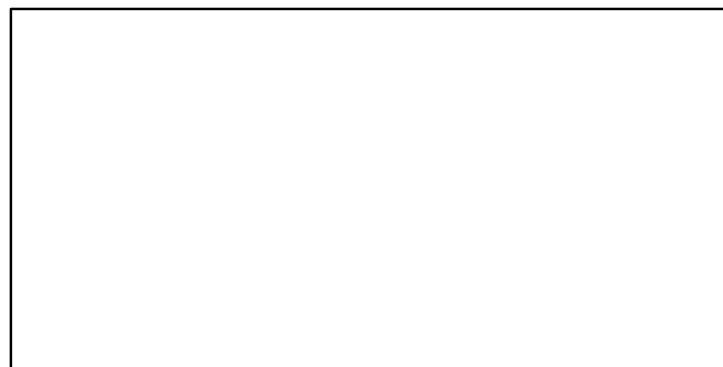
**F\***



**ER\***



**Recruits\***

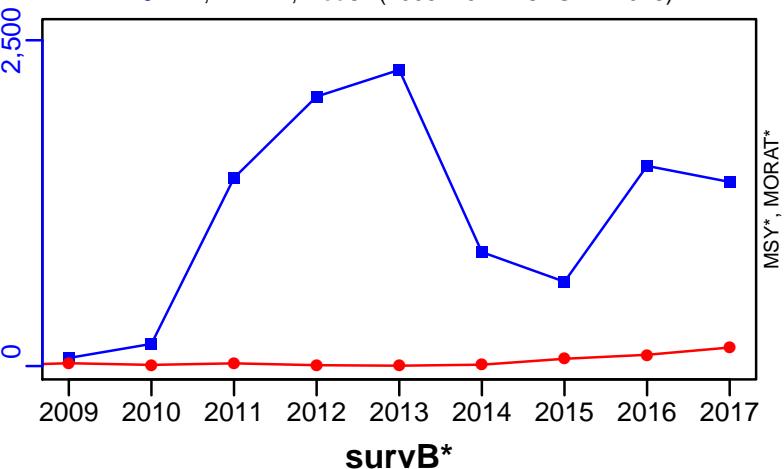


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | ··· Lim BRP  | * No Data |

Undulate ray ICES 7de [URAYVIIde]

TC-MT, TL-MT, RecC\* (2008–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



survB\*

CPUE\*

EFFORT\*

CdivMSY\*

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

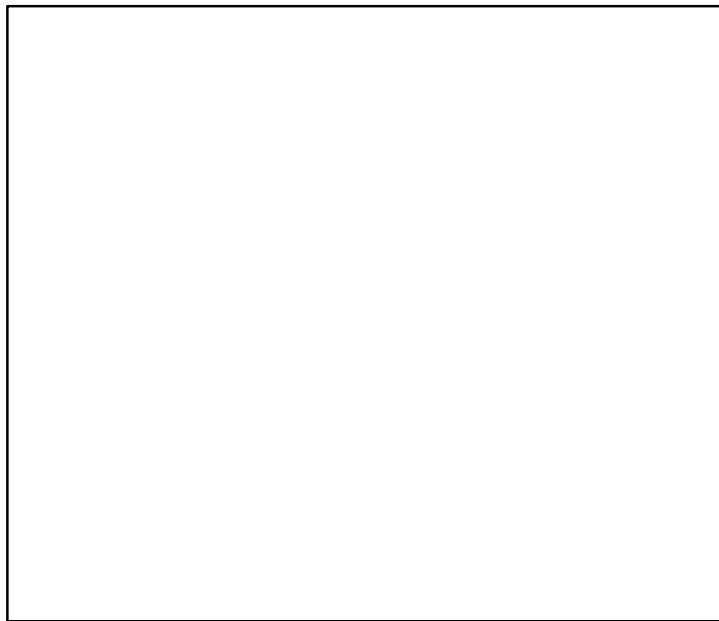
## Undulate ray ICES 8ab [URAYVIIlab]

<b>Metadata</b>	
<b>Scientific Name</b>	Raja undulata
<b>Current Assess ID</b>	WGEF-URAYVIIlab-2009-2017-ICESIMP2018
<b>Area</b>	ICES 8ab
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Elasmobranch Fishes
<b>Asmts in RAM</b>	2017

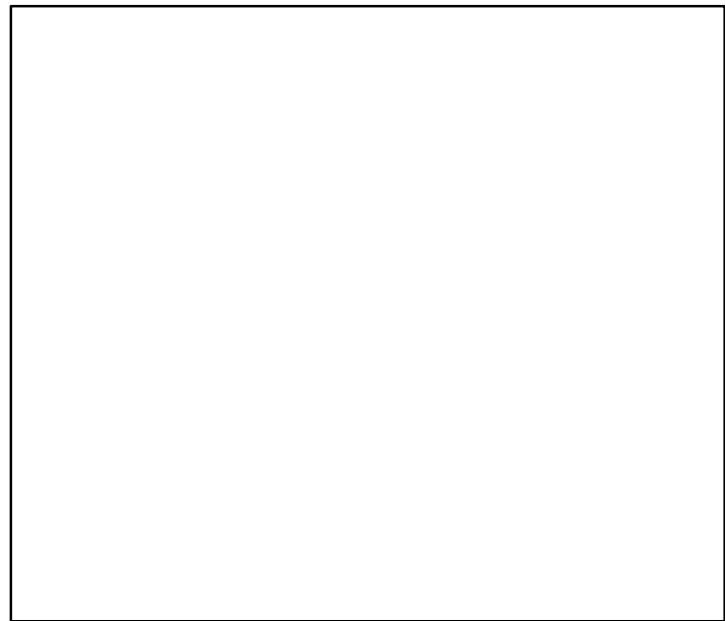
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2017	336		
<b>TL</b>	TL-MT	2017	22		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

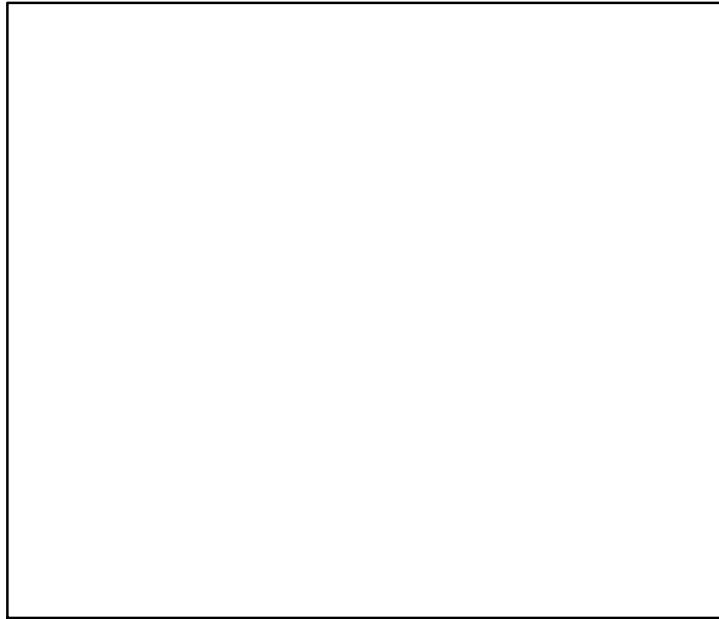
**Kobe MSY\***



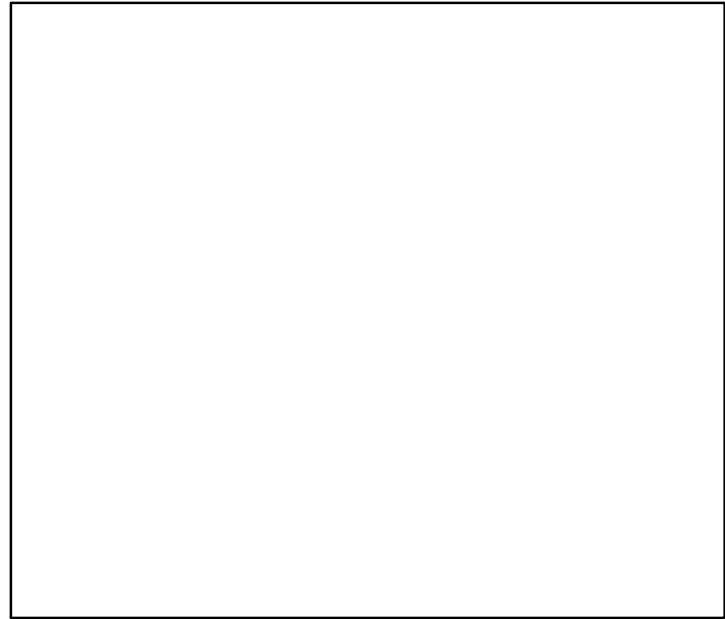
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ♦ End Year \* No Data

**Undulate ray ICES 8ab [URAYVIIlab]**

**TB\***



**SSB\***



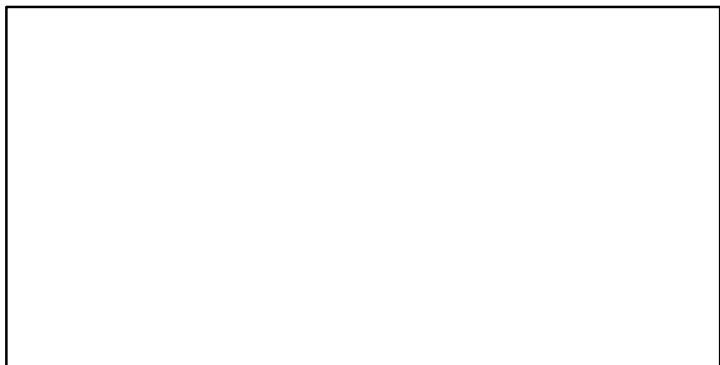
**TN \***



**F\***



**ER\***



**Recruits\***

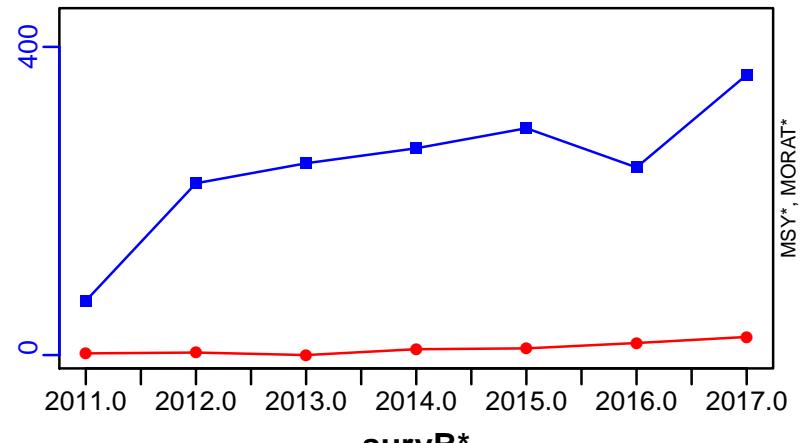


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

Undulate ray ICES 8ab [URAYVIIlab]

TC-MT, TL-MT, RecC\* (2009–2017–ICESIMP2018)

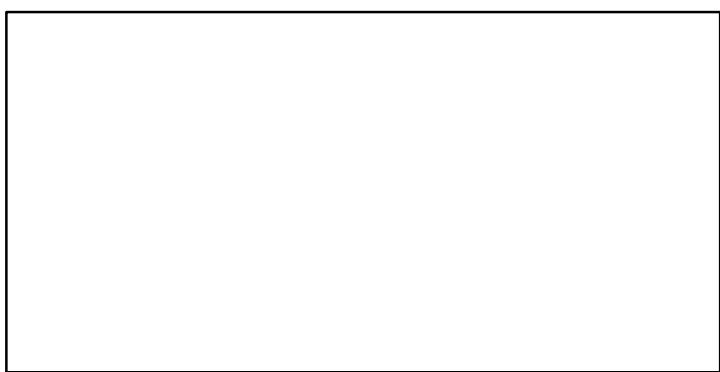
TAC\*, Cpair\*, Cadv\*



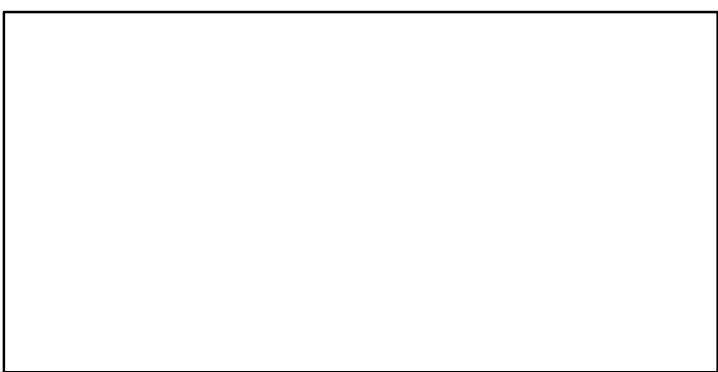
survB\*

MSY\*, MORAT\*

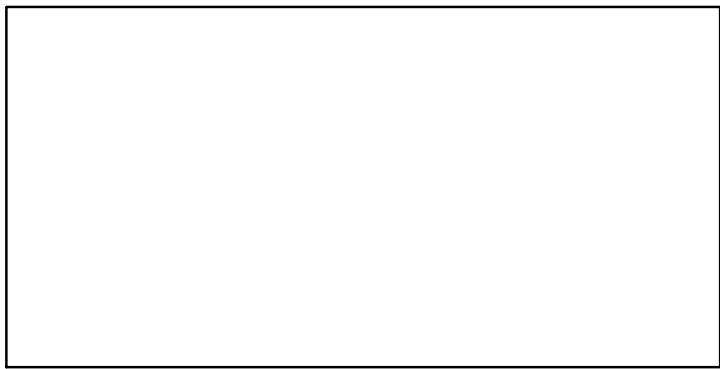
TAC\*, Cpair\*, Cadv\*



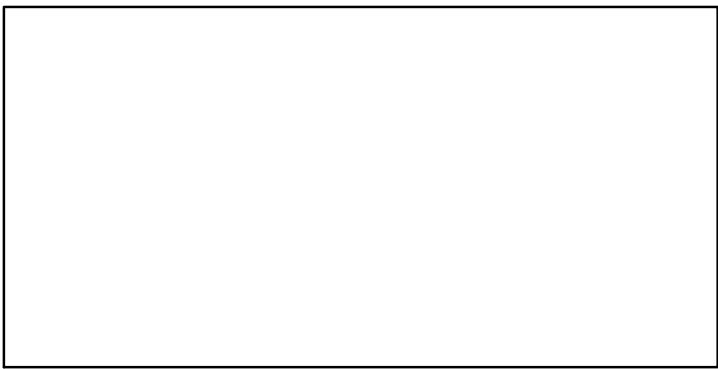
CPUE\*



EFFORT\*



CdivMSY\*



- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>■ 1st listed time series</li> <li>● 2nd listed time series</li> </ul> | <ul style="list-style-type: none"> <li>▲ 3rd listed time series</li> <li>- - - MSY</li> </ul> | <ul style="list-style-type: none"> <li>— MORAT</li> <li>* No Data</li> </ul> |
|--|---|--|

## White anglerfish ICES 8c-9a [WANGLVIIIC-IXa]

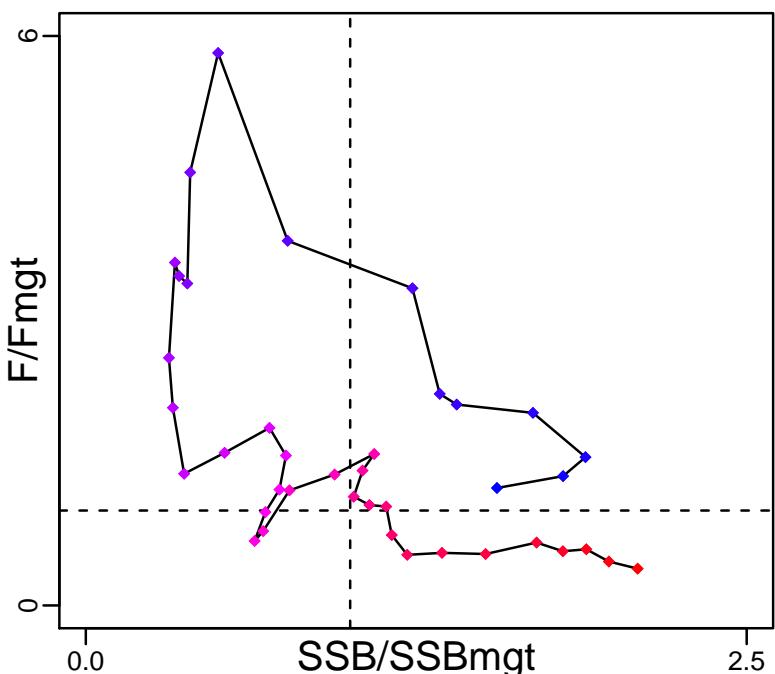
<b>Metadata</b>	
<b>Scientific Name</b>	Lophius piscatorius
<b>Current Assess ID</b>	WGBIE-WANGLVIIIC-IXa-1980-2019-ICESIMP2021
<b>Area</b>	ICES 8c-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2014, 2015, 2016, 2017, 2018, 2019, 2013

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2015	27,703
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.24
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.455
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	6283
<b>Fmgt</b>	Fmgt-1/yr	2019	0.24
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2015	6271
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	1993
<b>Flim</b>	Flim-1/yr	2018	0.56
<b>ERlim</b>	-	-	-

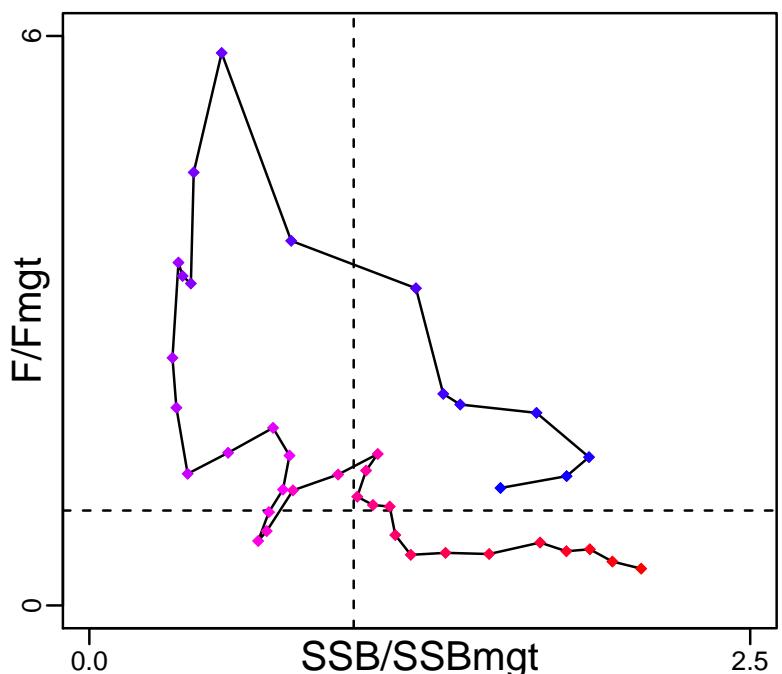
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	14,645	-	-	
<b>SSB</b>	SSB-MT	2019	13,477	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	712,159	-	0	
<b>F</b>	F-1/yr	2019	0.093	-	-	
<b>ER</b>	ER-calc-ratio	2019	0.078	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2019	1153			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2015	0.339			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.525			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.172			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	2.145			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.388			
<b>ER/ERmgt</b>	-	-	-			

White anglerfish ICES 8c–9a [WANGLVIIIC–IXa]

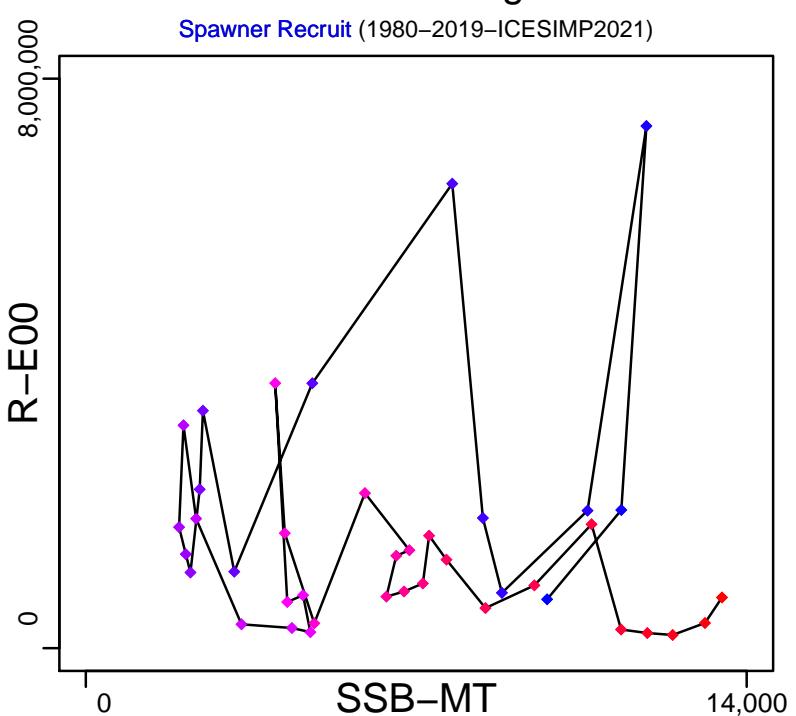
Kobe MSYpref (1980–2019–ICESIMP2021)



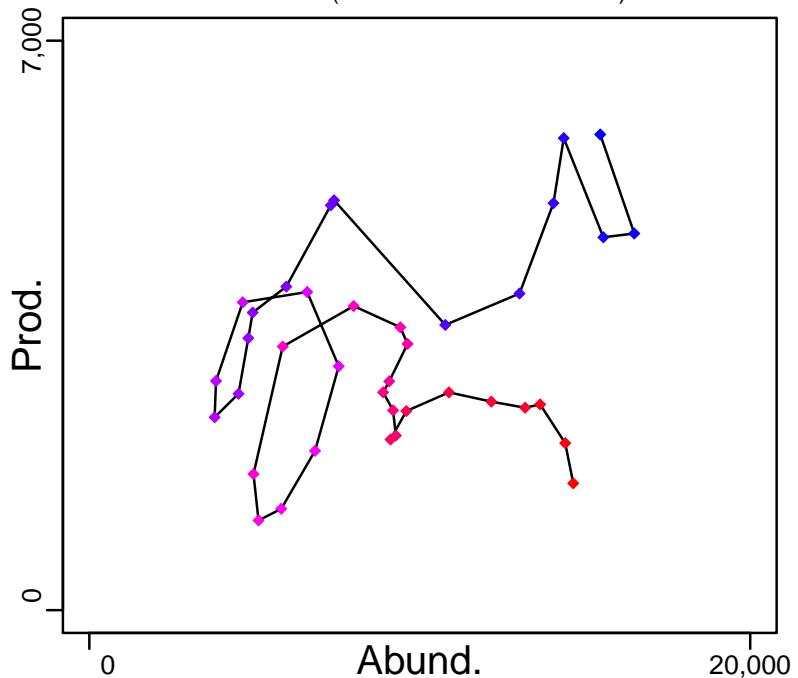
Kobe MGTpref (1980–2019–ICESIMP2021)



Spawner Recruit (1980–2019–ICESIMP2021)



Production (1980–2019–ICESIMP2021)

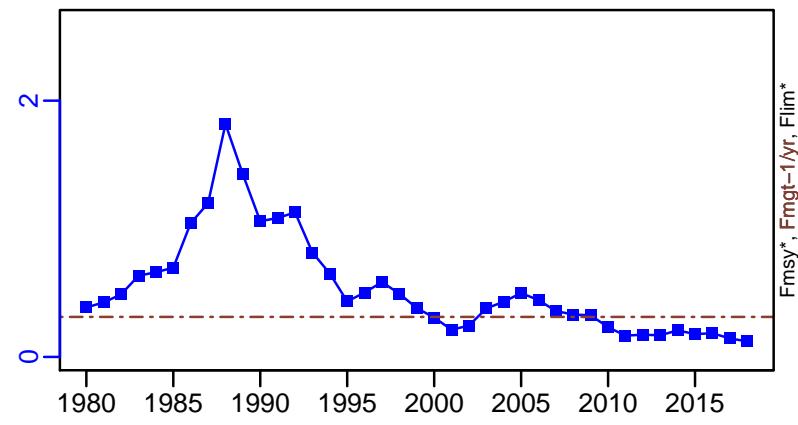
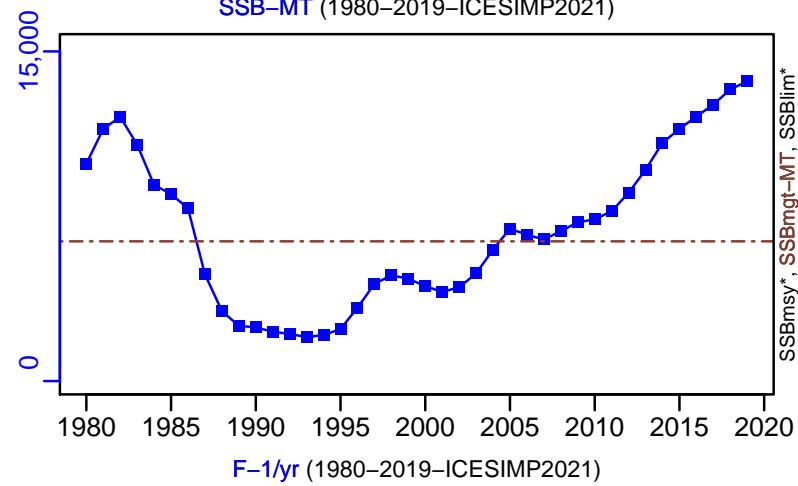
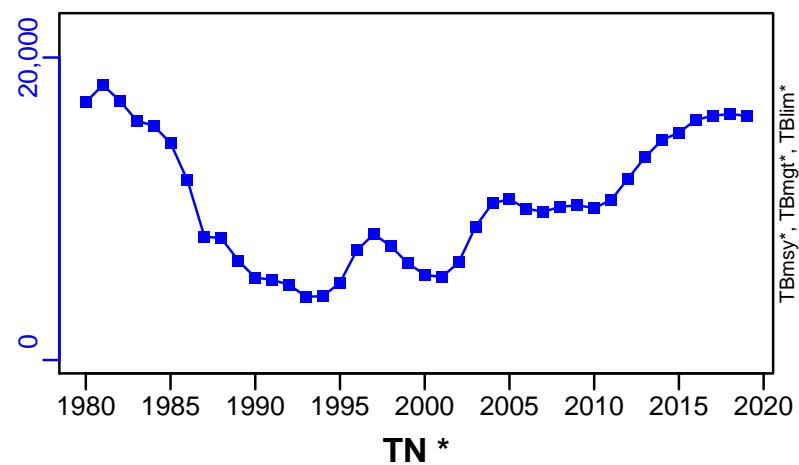


◆ Start Year   ◆ End Year   \* No Data

White anglerfish ICES 8c–9a [WANGLVIIIC–IXa]

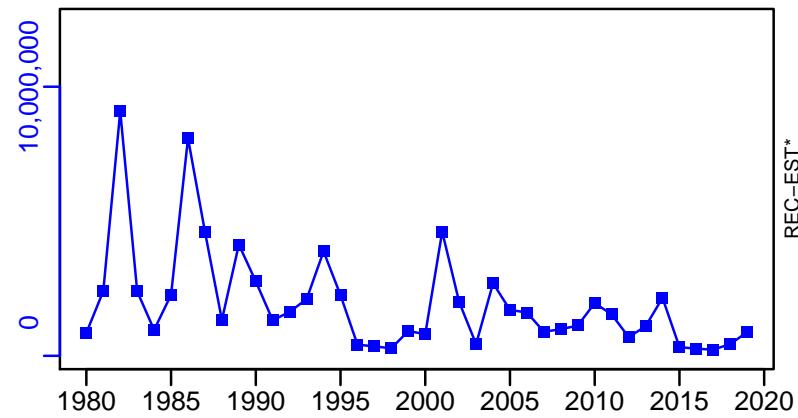
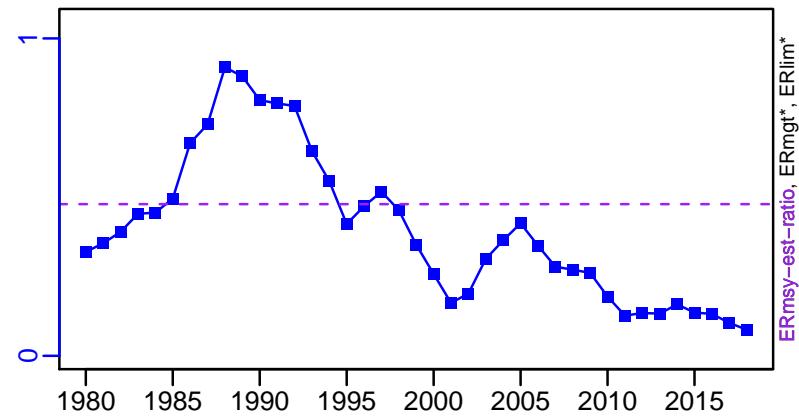
TB-MT (1980–2019–ICESIMP2021)

SSB-MT (1980–2019–ICESIMP2021)



ER-calc-ratio (1980–2019–ICESIMP2021)

R-E00 (1980–2019–ICESIMP2021)

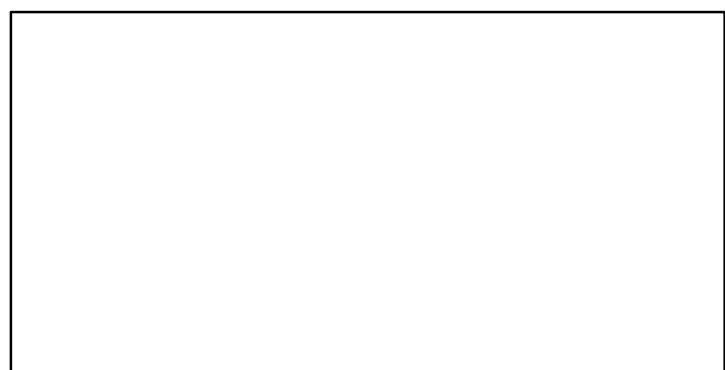
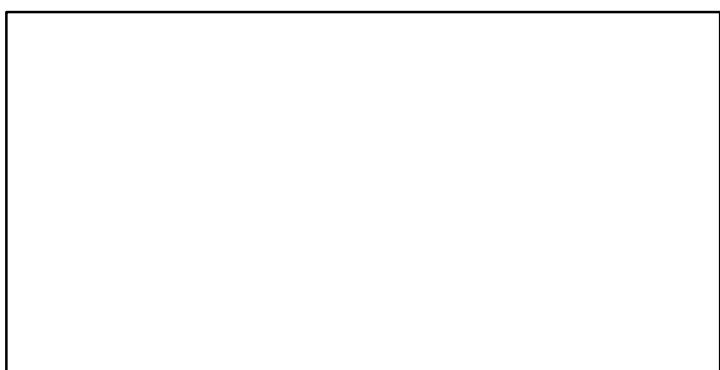
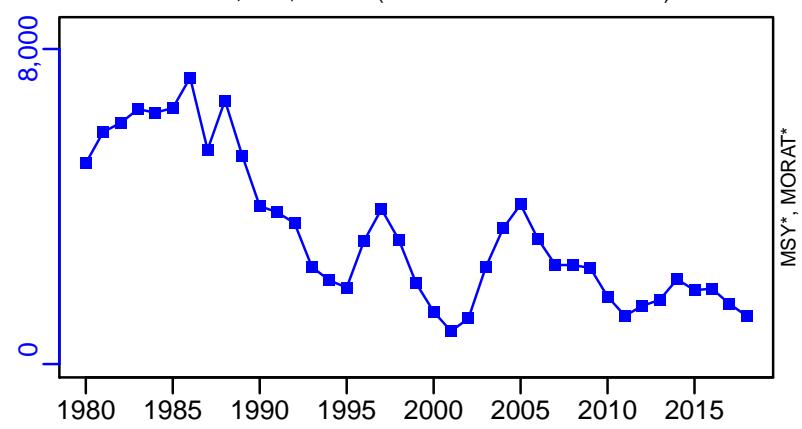


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

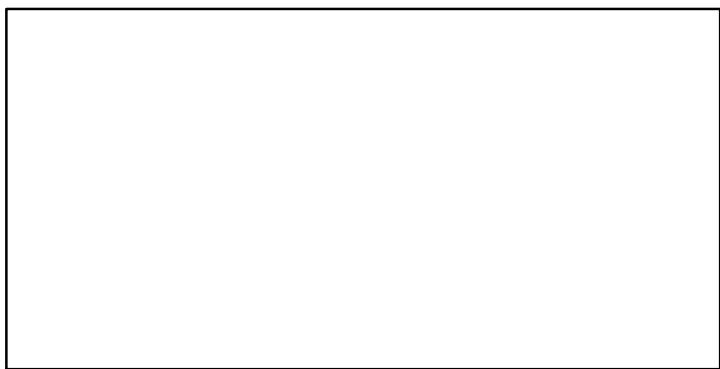
White anglerfish ICES 8c–9a [WANGLVIIIC–IXa]

TL–MT, TC\*, RecC\* (1980–2019–ICESIMP2021)

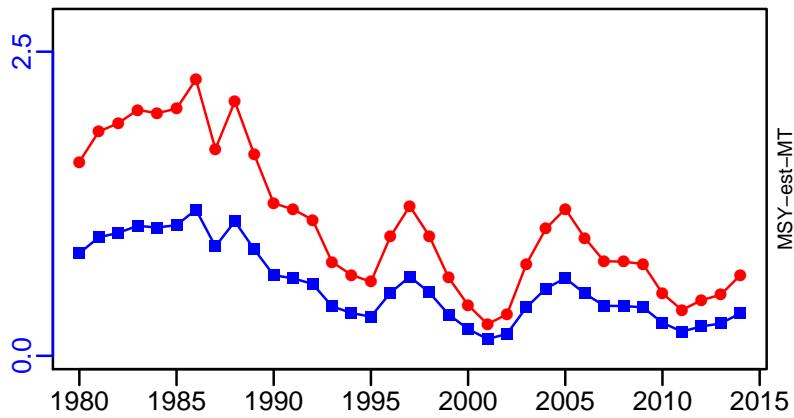
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TL–MT/MSY–est–MT, CdivMEANC–ratio, (1980–2015–ICESIMP2016)



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

## White anglerfish ICES 7-8abd [WANGLVII-VIIIabd]

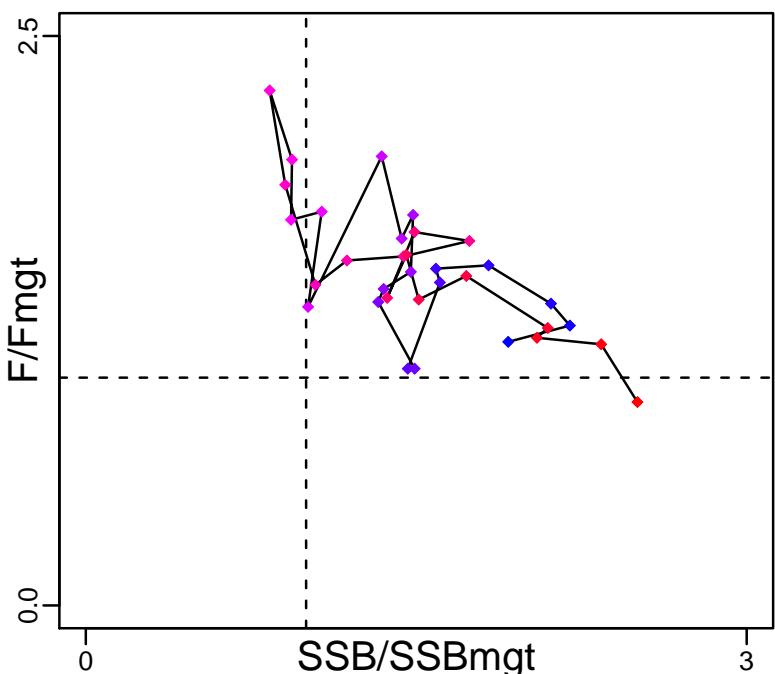
<b>Metadata</b>	
<b>Scientific Name</b>	Lophius piscatorius
<b>Current Assess ID</b>	WGBIE-WANGLVII-VIIIabd-1986-2019-ICESIMP2021
<b>Area</b>	ICES 7-8abd
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2016, 2018, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.28
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.713
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	22,278
<b>Fmgt</b>	Fmgt-1/yr	2019	0.28
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	16,032
<b>Flim</b>	Flim-1/yr	2018	0.53
<b>ERlim</b>	-	-	-

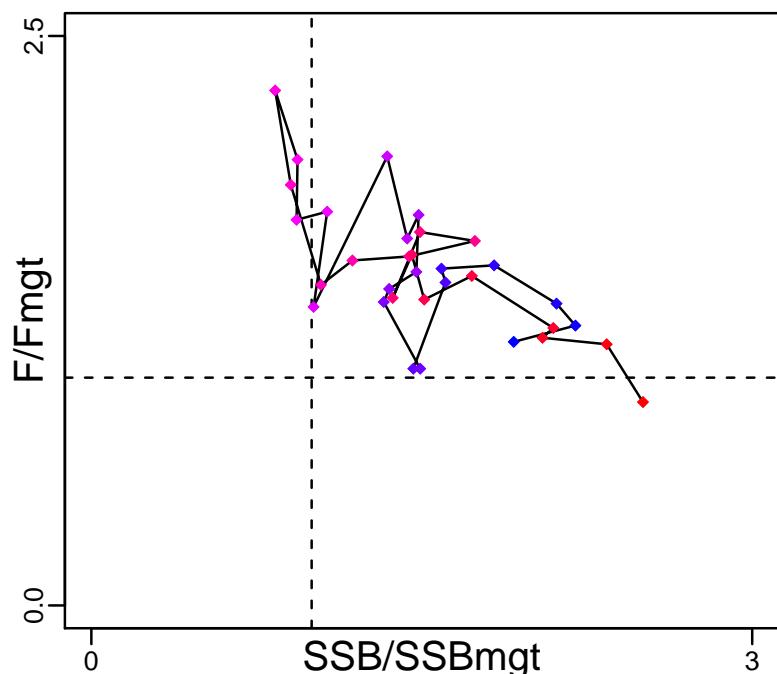
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	115,872	-	-	
<b>SSB</b>	SSB-MT	2019	72,848	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	32,059,000	-	0	
<b>F</b>	F-1/yr	2019	0.25	-	3 to 6	
<b>ER</b>	ER-calc-ratio	2019	0.205	-	-	
<b>TC</b>	TC-MT	2019	23,768			
<b>TL</b>	TL-MT	2019	22,371			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	1.004			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.288			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	3.27			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.893			
<b>ER/ERmgt</b>	-	-	-			

White anglerfish ICES 7–8abd [WANGLVII–VIIIabd]

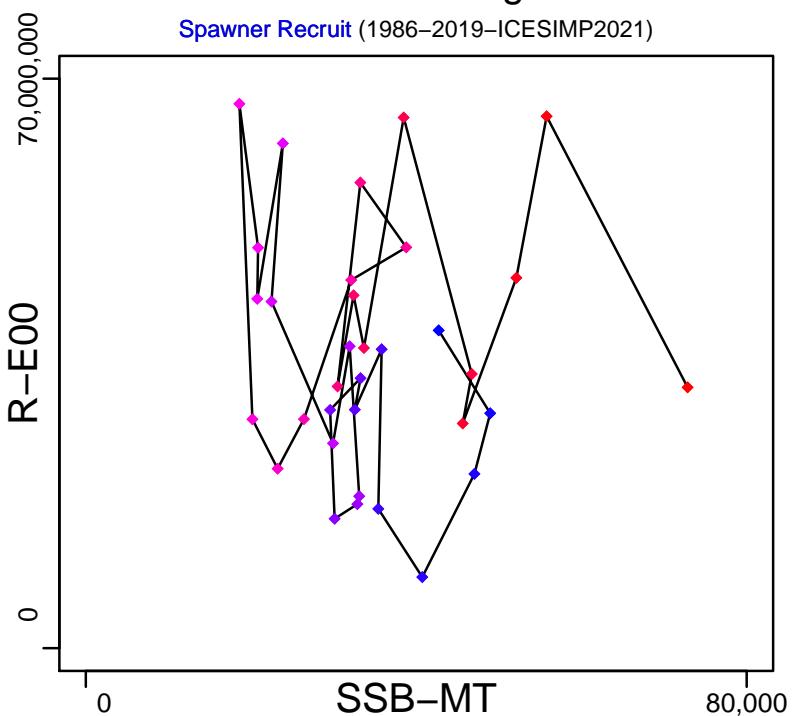
Kobe MSYpref (1986–2019–ICESIMP2021)



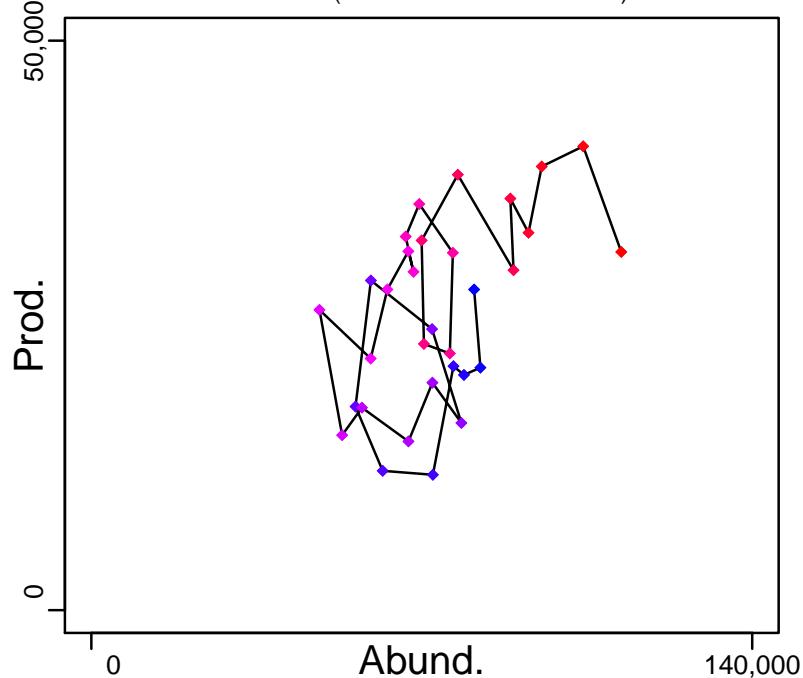
Kobe MGTpref (1986–2019–ICESIMP2021)



Spawner Recruit (1986–2019–ICESIMP2021)



Production (1986–2019–ICESIMP2021)

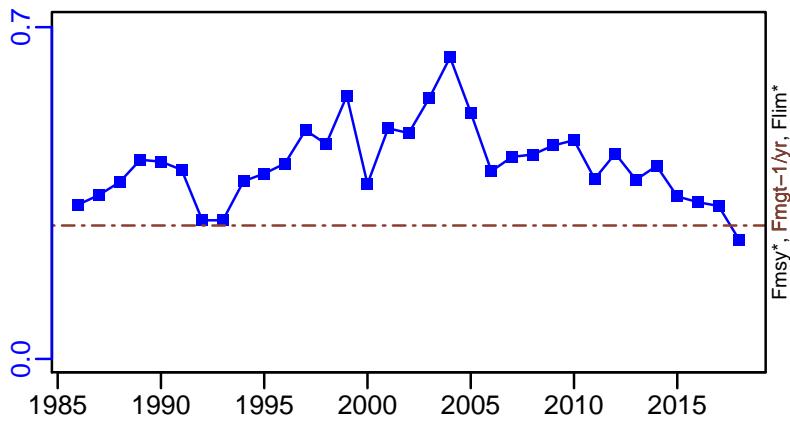
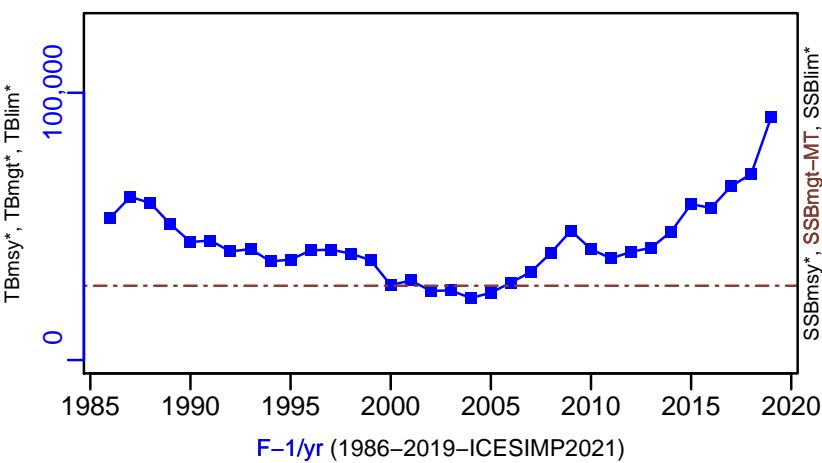
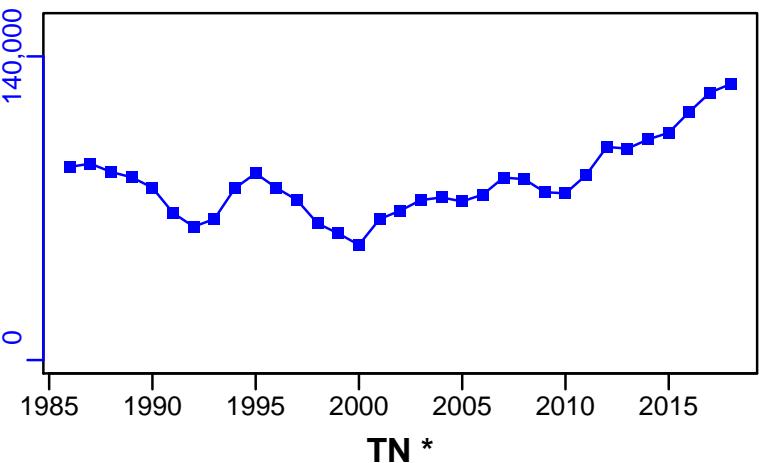


◆ Start Year ◆ End Year \* No Data

### White anglerfish ICES 7–8abd [WANGLVII–VIIIabd]

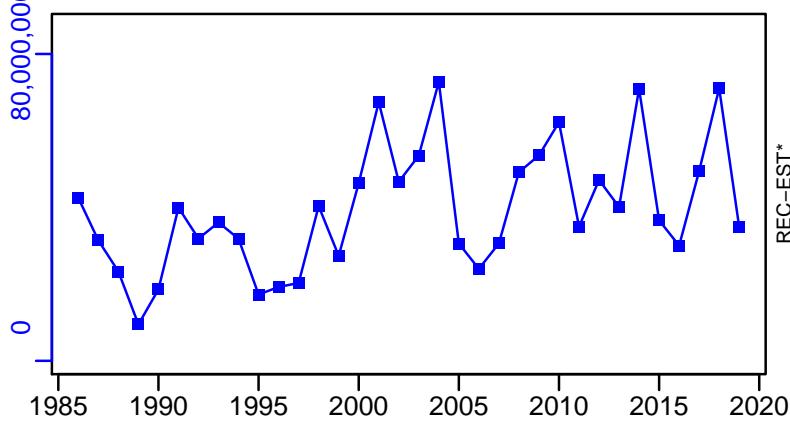
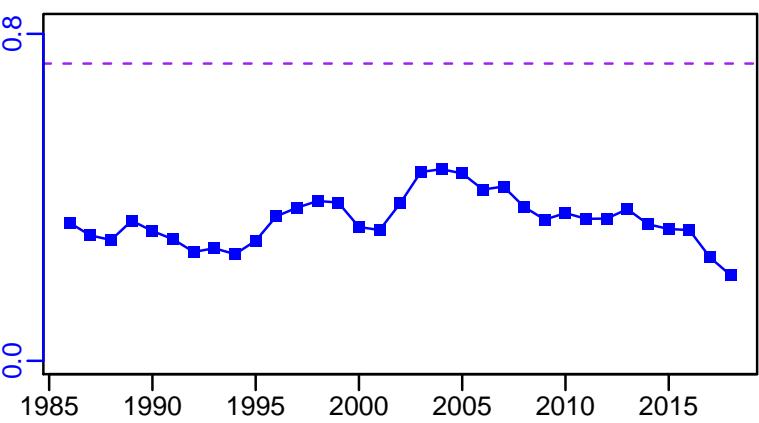
**TB-MT** (1986–2019–ICESIMP2021)

**SSB-MT** (1986–2019–ICESIMP2021)



**ER-calc-ratio** (1986–2019–ICESIMP2021)

**R-E00** (1986–2019–ICESIMP2021)

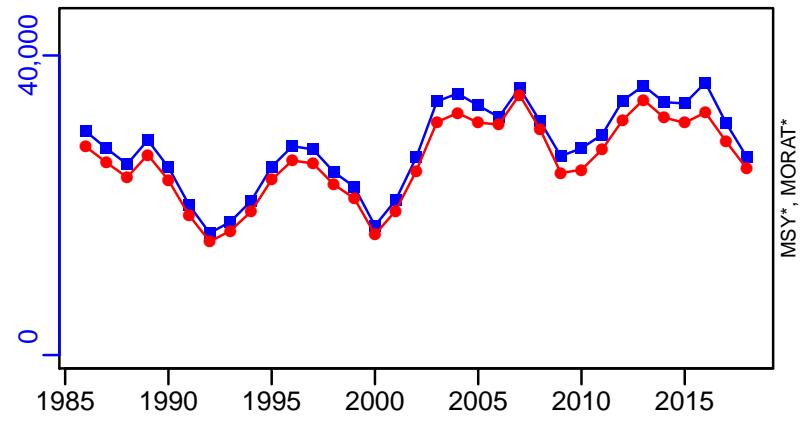


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	* No Data

White anglerfish ICES 7–8abd [WANGLVII–VIIIabd]

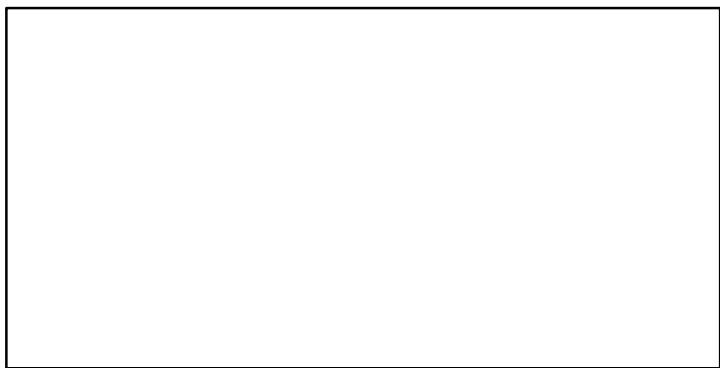
TC–MT, TL–MT, RecC\* (1986–2019–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*

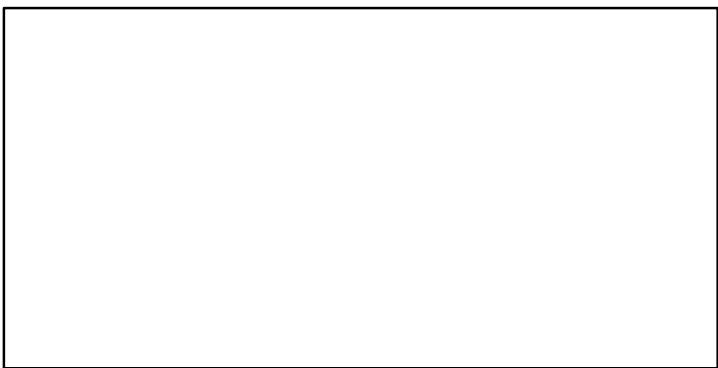


MSY\*, MORAT\*

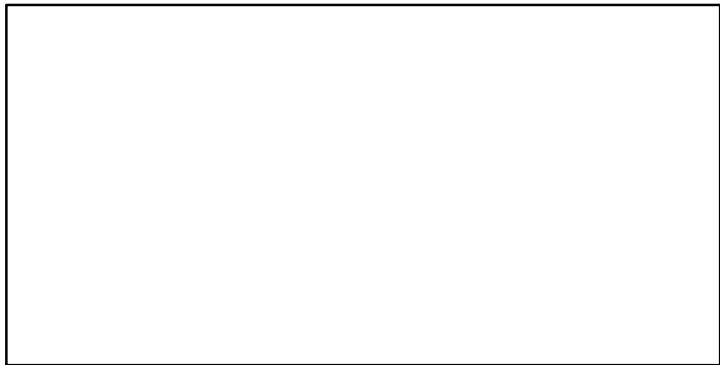
survB\*



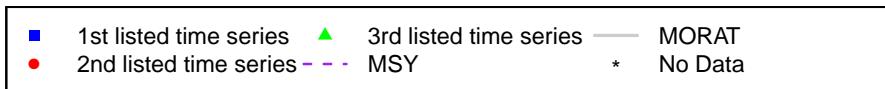
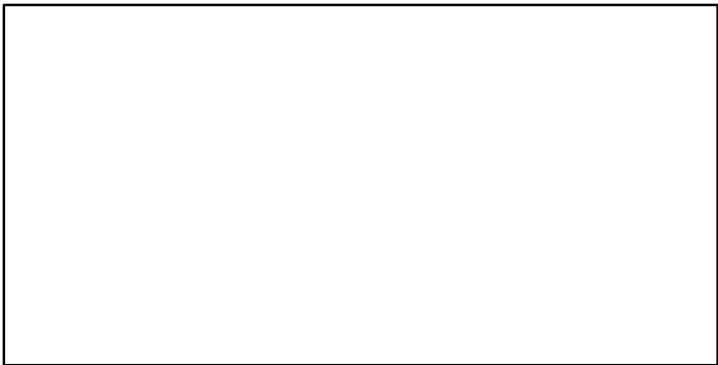
CPUE\*



EFFORT\*



CdivMSY\*



## Whiting Kattegat and Skagerrak [WHITIIIa]

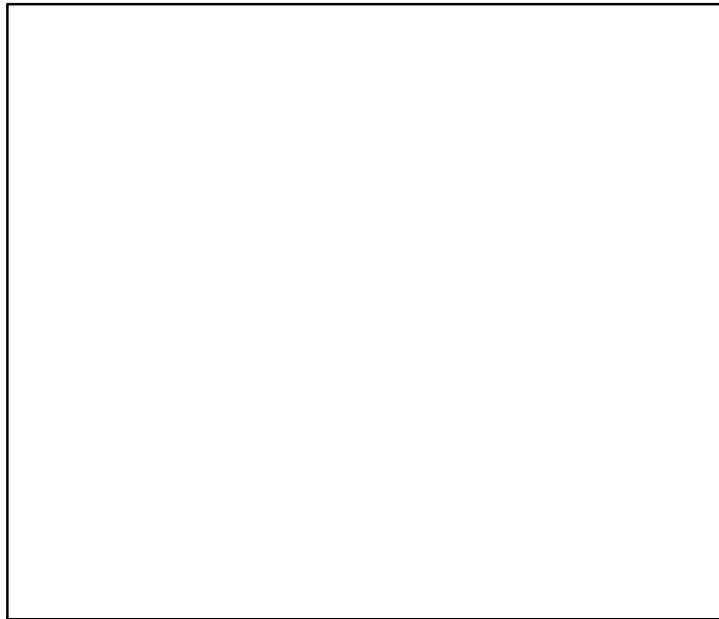
<b>Metadata</b>	
<b>Scientific Name</b>	Merlangius merlangus
<b>Current Assess ID</b>	WGNSSK-WHITIIIa-1975-2018-ICESIMP2021
<b>Area</b>	Kattegat and Skagerrak
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2014, 2016, 2018

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

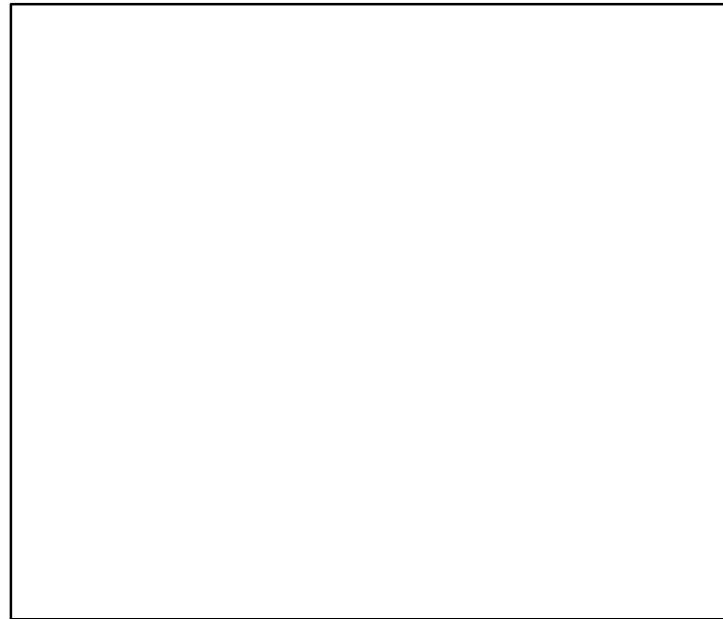
<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	1743		
<b>TL</b>	TL-MT	2018	372		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Whiting Kattegat and Skagerrak [WHITIIa]**

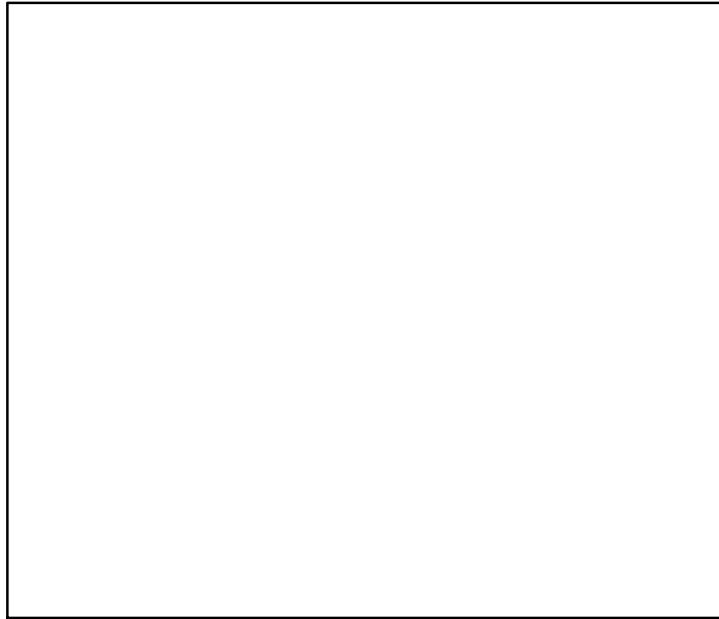
**Kobe MSY\***



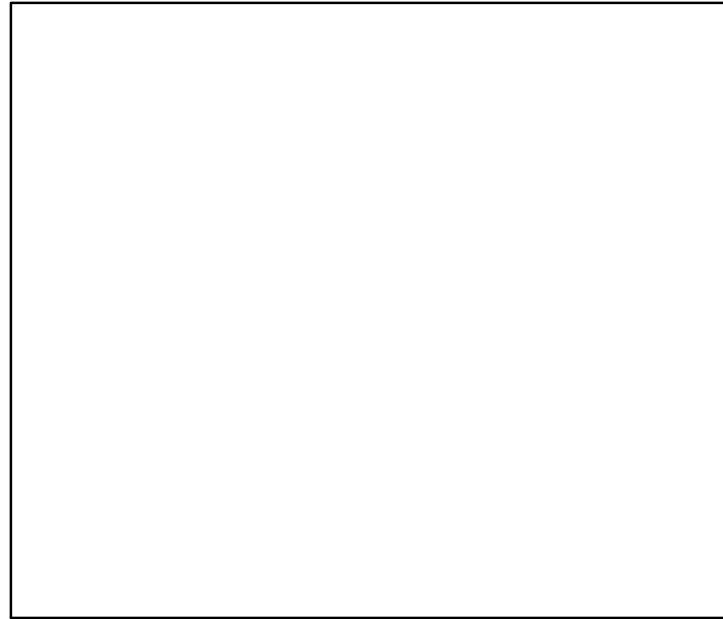
**Kobe MGT\***



**Spawner Recruit\***



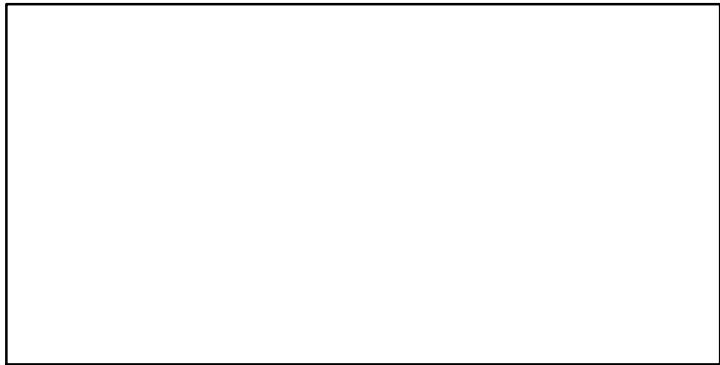
**Production\***



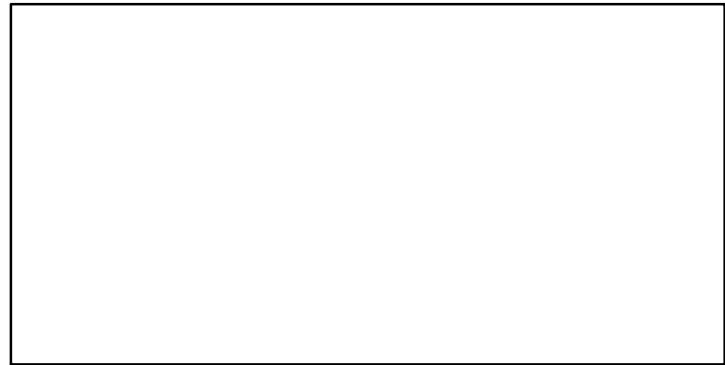
◆ Start Year ♦ End Year \* No Data

**Whiting Kattegat and Skagerrak [WHITIIa]**

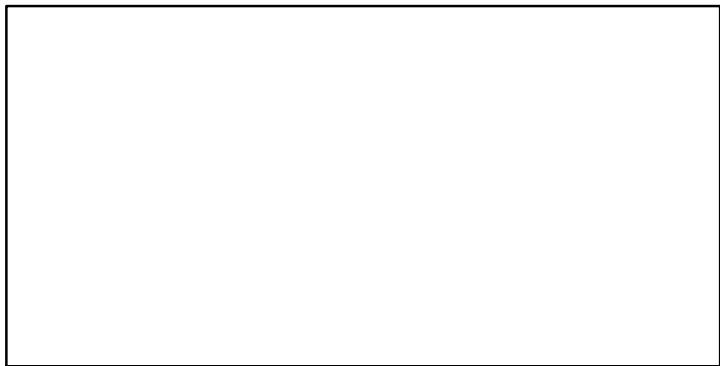
**TB\***



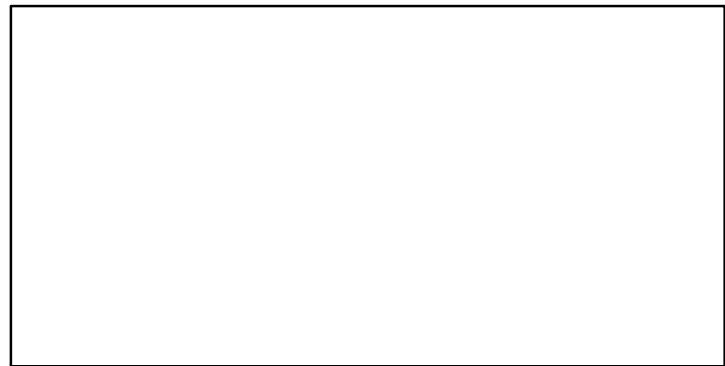
**SSB\***



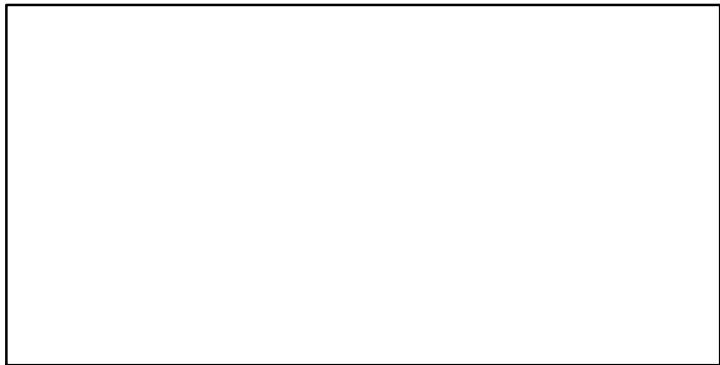
**TN \***



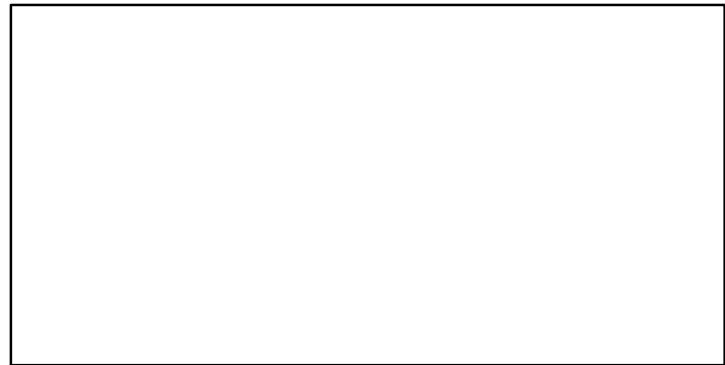
**F\***



**ER\***



**Recruits\***

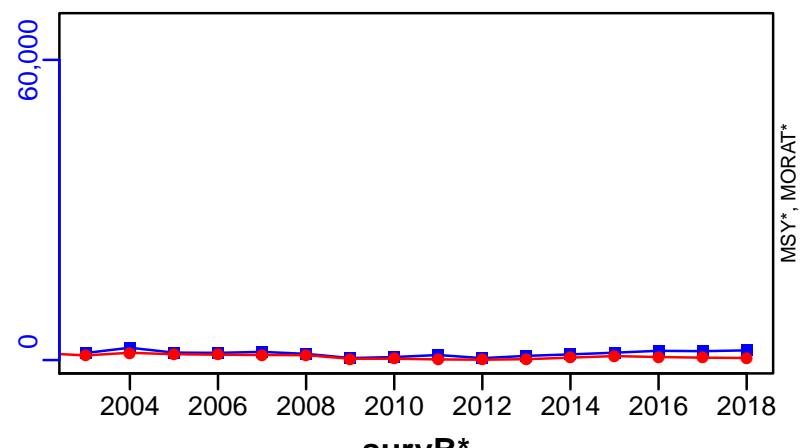


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

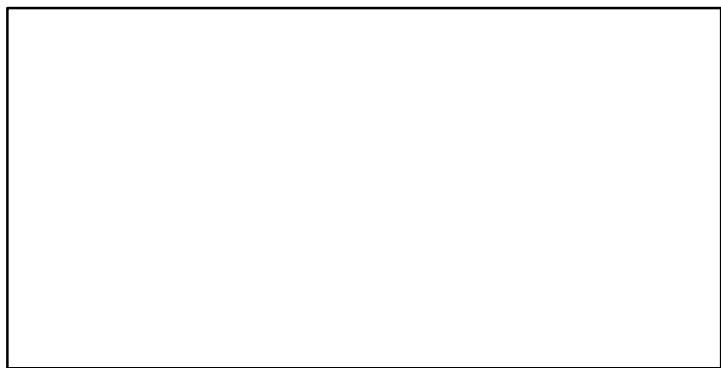
Whiting Kattegat and Skagerrak [WHITIIia]

TC-MT, TL-MT, RecC\* (1975–2018–ICESIMP2021)

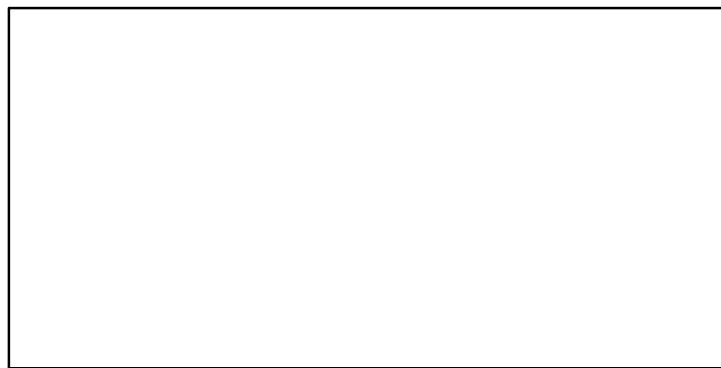
TAC\*, Cpair\*, Cadv\*



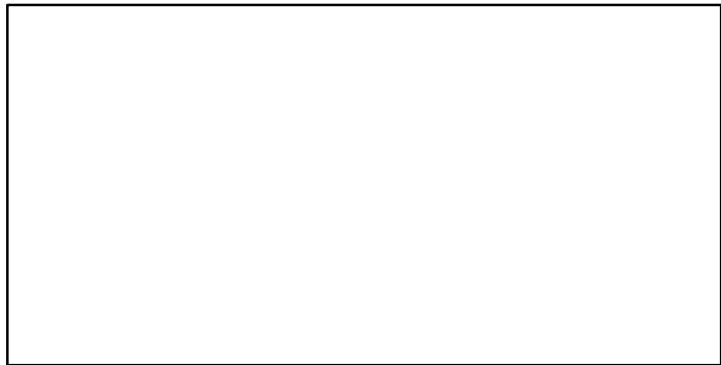
survB\*



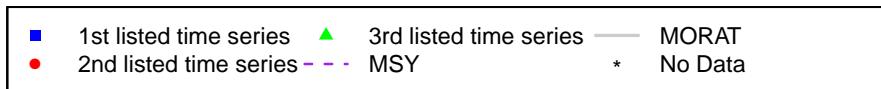
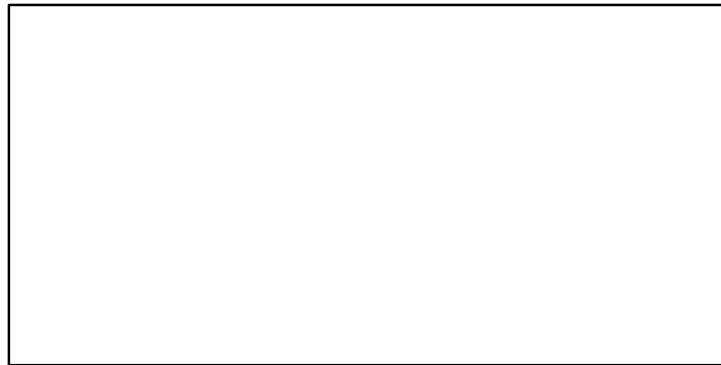
CPUE\*



EFFORT\*



CdivMSY\*



## Whiting ICES 4-7d [WHITNS-VIId]

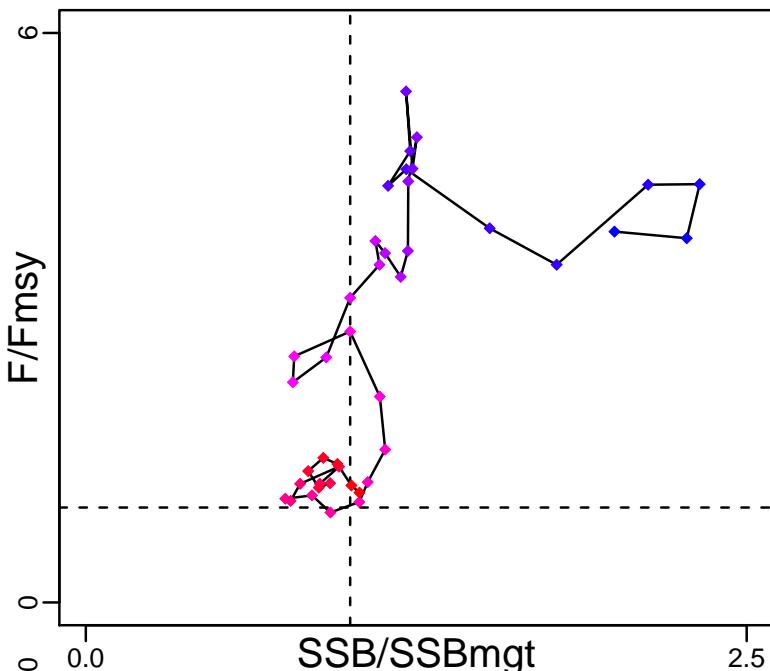
<b>Metadata</b>	
<b>Scientific Name</b>	Merlangius merlangus
<b>Current Assess ID</b>	WGNSSK-WHITNS-VIId-1978-2019-ICESIMP2021
<b>Area</b>	ICES 4-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2018, 2019, 2012, 2013, 2014, 2015, 2016, 2017

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2015	445,591
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.172
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.342
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	166,708
<b>Fmgt</b>	Fmgt-1/yr	2019	0.172
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2015	78,441
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	119,970
<b>Flim</b>	Flim-1/yr	2018	0.458
<b>ERlim</b>	-	-	-

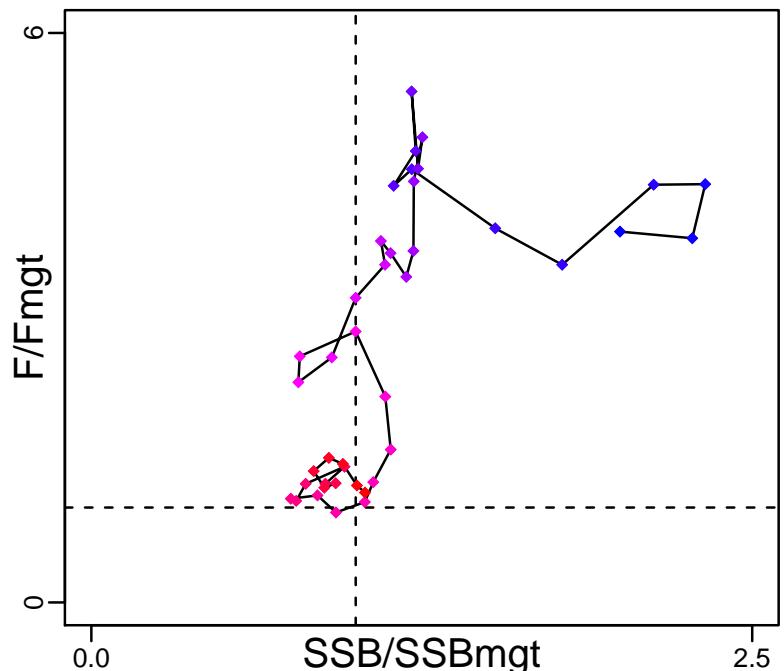
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2019	293,190	-	-
<b>SSB</b>	SSB-MT	2019	163,406	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	11,883,334,000	-	0
<b>F</b>	F-1/yr	2019	0.199	-	2 to 6
<b>ER</b>	ER-calc-ratio	2019	0.096	-	-
<b>TC</b>	TC-MT	2019	28,083		
<b>TL</b>	TL-MT	2019	16,444		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2015	1.573		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	1.157		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.28		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.98		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.157		
<b>ER/ERmgt</b>	-	-	-		

Whiting ICES 4-7d [WHITNS-VIId]

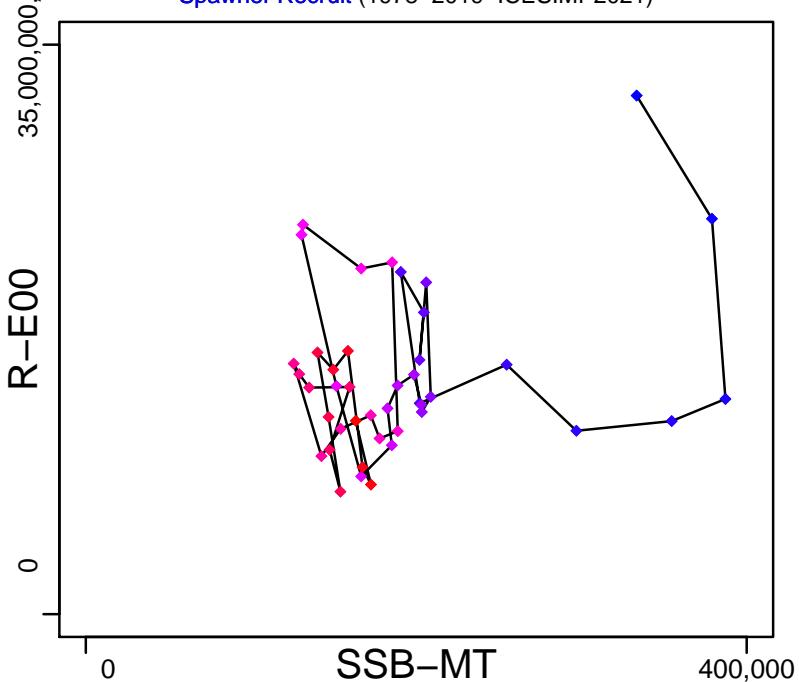
Kobe MSYpref (1978–2019–ICESIMP2021)



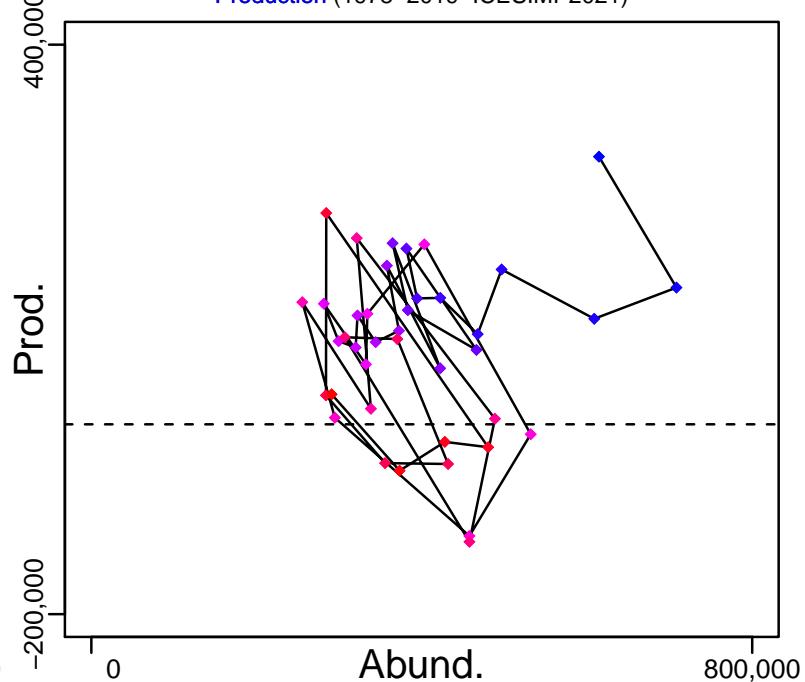
Kobe MGTpref (1978–2019–ICESIMP2021)



Spawner Recruit (1978–2019–ICESIMP2021)



Production (1978–2019–ICESIMP2021)

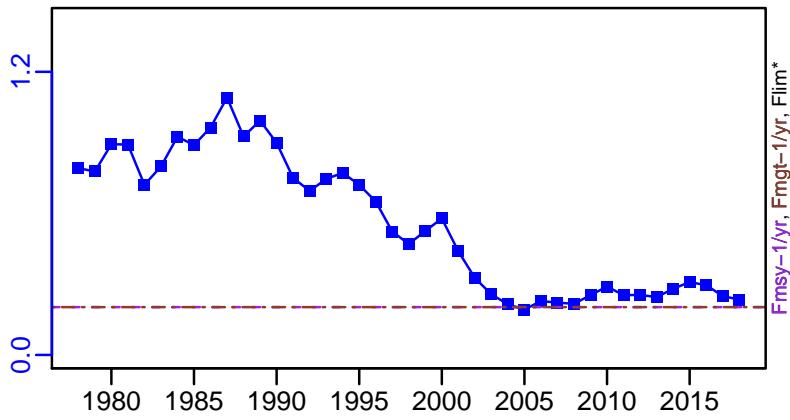
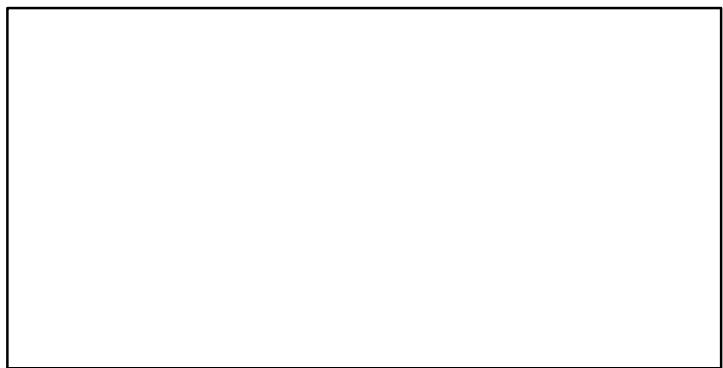
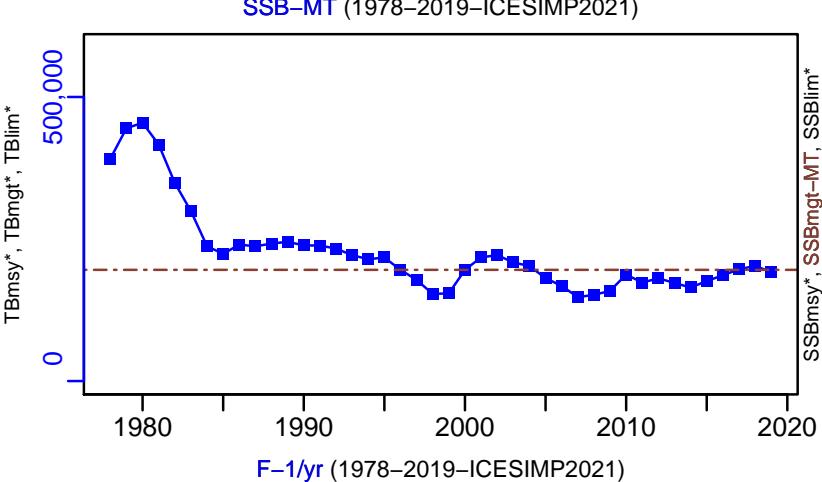
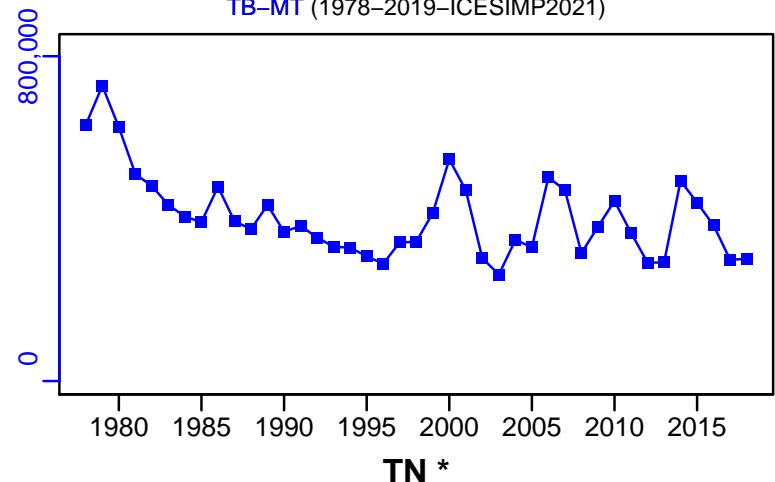


◆ Start Year   ◆ End Year   \* No Data

### Whiting ICES 4-7d [WHITNS-VIId]

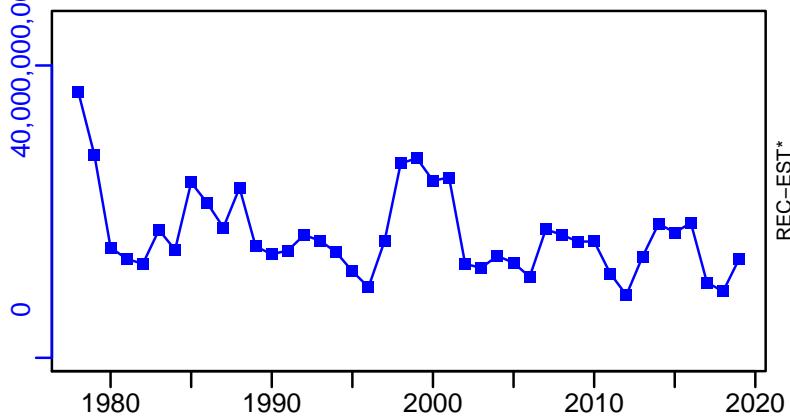
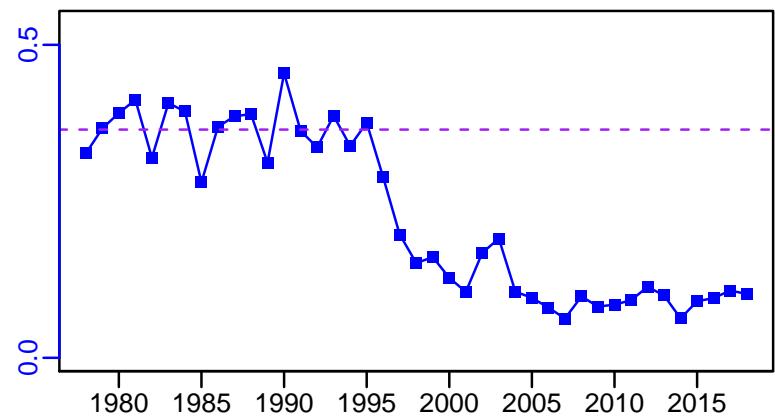
TB-MT (1978–2019–ICESIMP2021)

SSB-MT (1978–2019–ICESIMP2021)



ER-calc-ratio (1978–2019–ICESIMP2021)

R-E00 (1978–2019–ICESIMP2021)

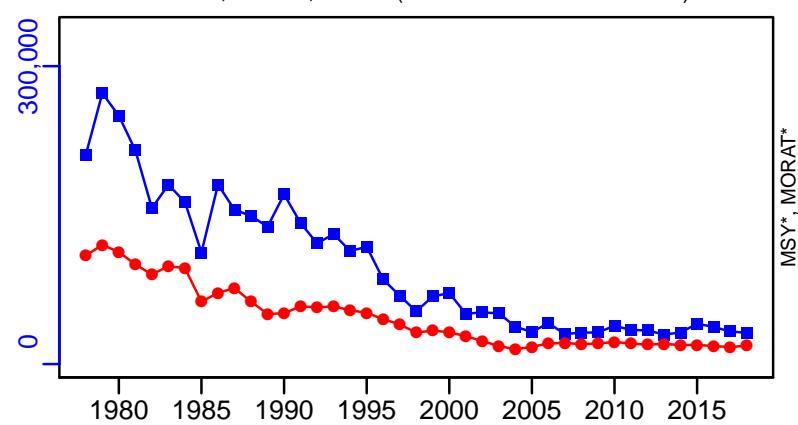


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

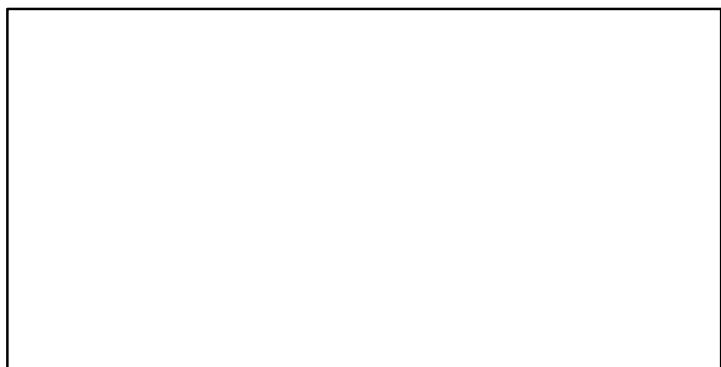
Whiting ICES 4–7d [WHITNS–VII<sup>d</sup>]

TC–MT, TL–MT, RecC\* (1978–2019–ICESIMP2021)

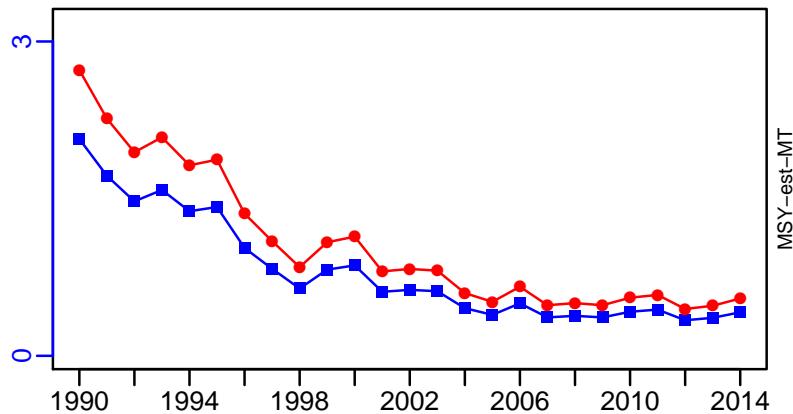
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC–MT/MSY–est–MT, CdiveMEANC–ratio, (1989–2015–ICESIMP2016)



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

## Whiting West of Scotland [WHITVla]

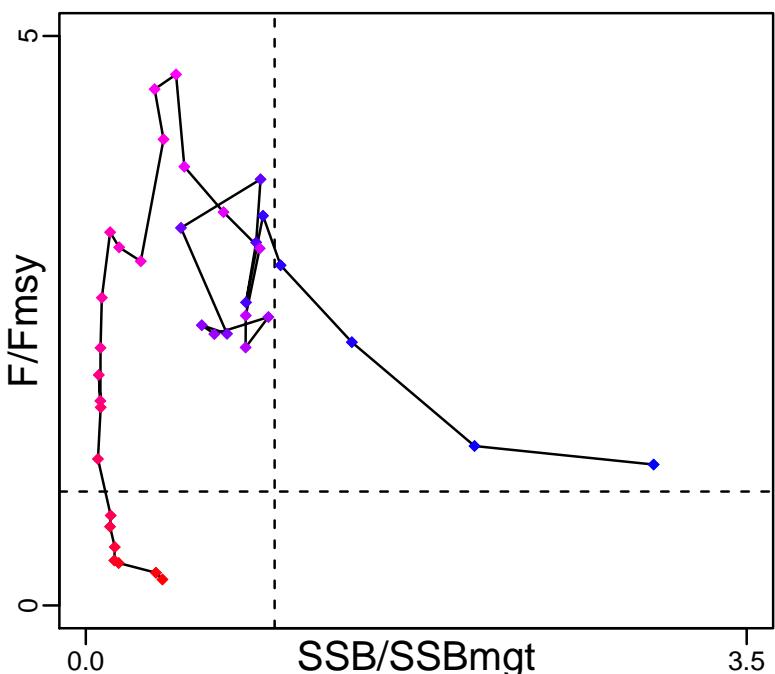
<b>Metadata</b>	
<b>Scientific Name</b>	Merlangius merlangus
<b>Current Assess ID</b>	WGCSE-WHITVla-1980-2018-ICESIMP2021
<b>Area</b>	West of Scotland
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2018, 2012

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2015	49,397
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2018	0.18
<b>ERmsy</b>	ERmsy-est-ratio	2018	0.085
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	44,600
<b>Fmgt</b>	Fmgt-1/yr	2018	0.18
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2015	11,828
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2017	31,880
<b>Flim</b>	Flim-1/yr	2017	0.27
<b>ERlim</b>	-	-	-

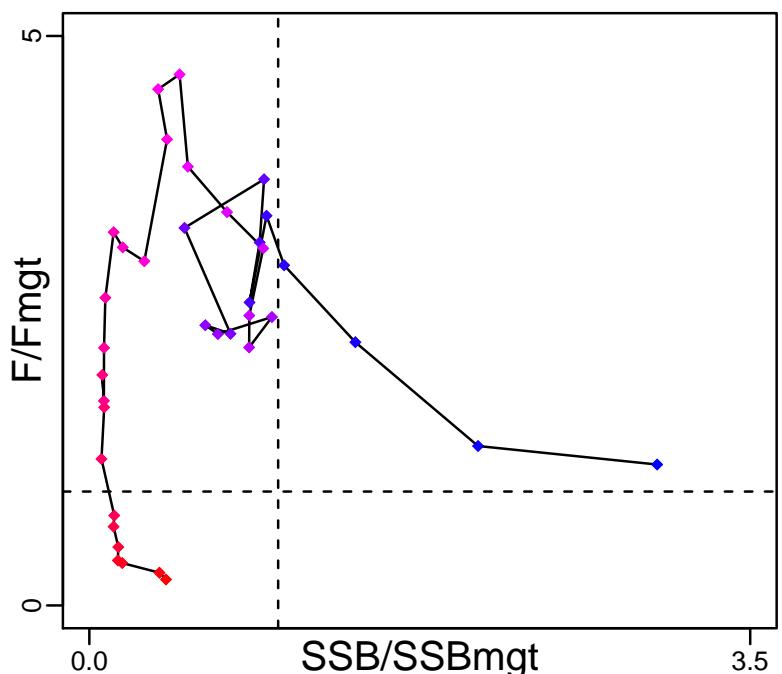
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2018	31,460	-	-	
<b>SSB</b>	SSB-MT	2018	23,143	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2018	117,219,140	-	1	
<b>F</b>	F-1/yr	2018	0.041	-	2 to 4	
<b>ER</b>	ER-calc-ratio	2018	0.054	-	-	
<b>TC</b>	TC-MT	2018	1383			
<b>TL</b>	TL-MT	2018	176			
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2015	0.609			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.228			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2018	0.637			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	0.519			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2018	0.228			
<b>ER/ERmgt</b>	-	-	-			

**Whiting West of Scotland [WHITVla]**

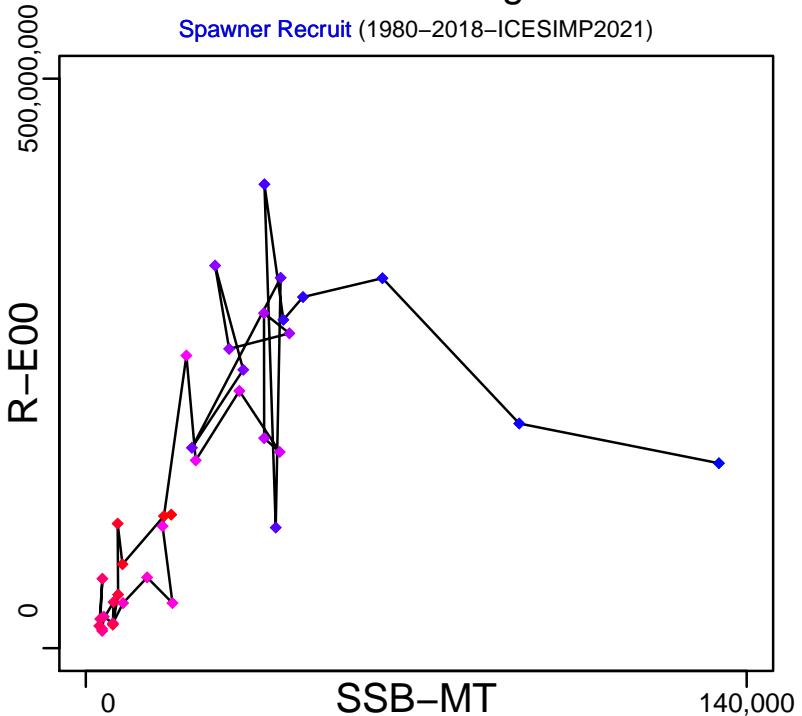
Kobe MSYpref (1980–2018–ICESIMP2021)



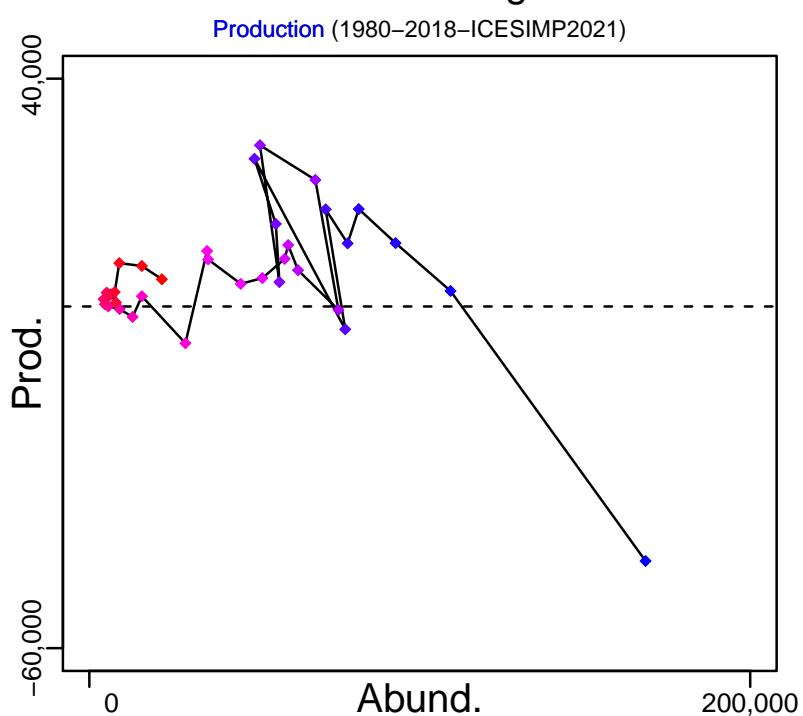
Kobe MGTpref (1980–2018–ICESIMP2021)



Spawner Recruit (1980–2018–ICESIMP2021)



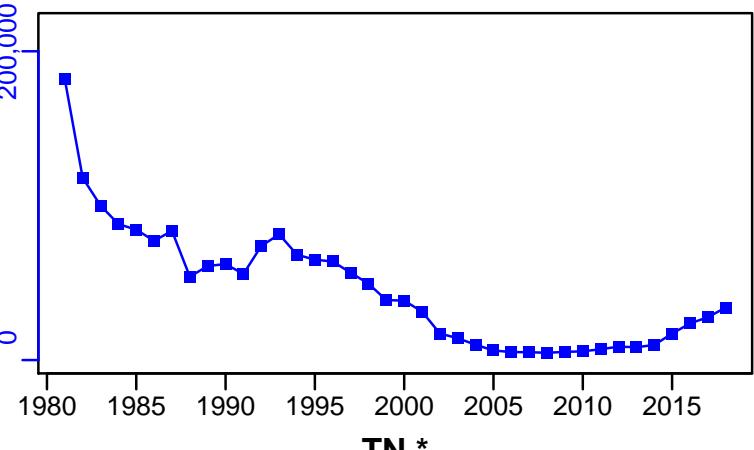
Production (1980–2018–ICESIMP2021)



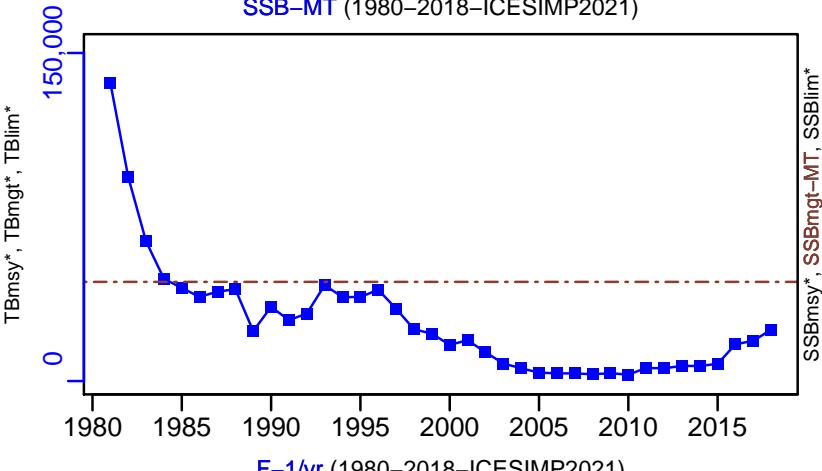
◆ Start Year   ◆ End Year   \* No Data

### Whiting West of Scotland [WHITVla]

TB-MT (1980–2018–ICESIMP2021)

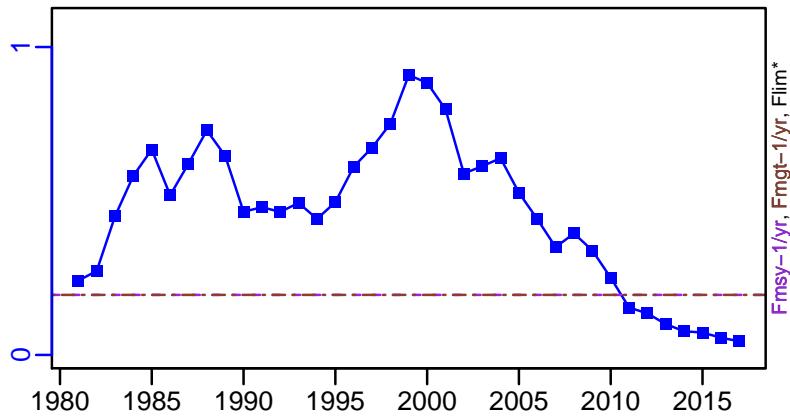
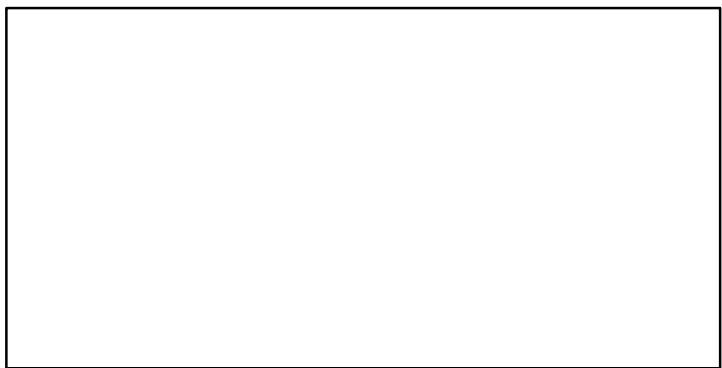


SSB-MT (1980–2018–ICESIMP2021)



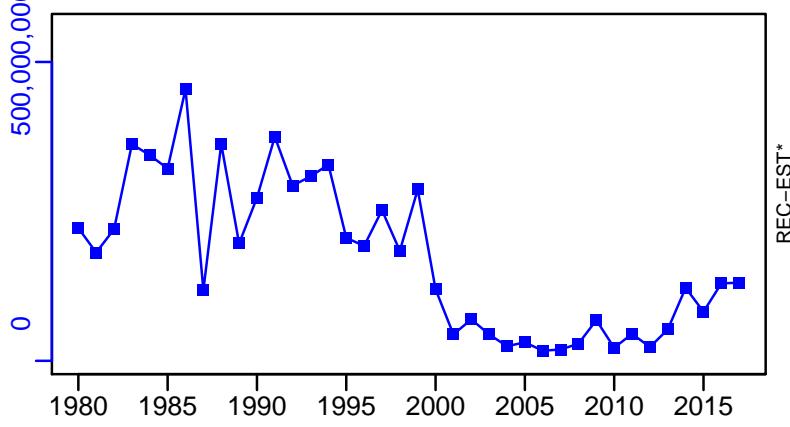
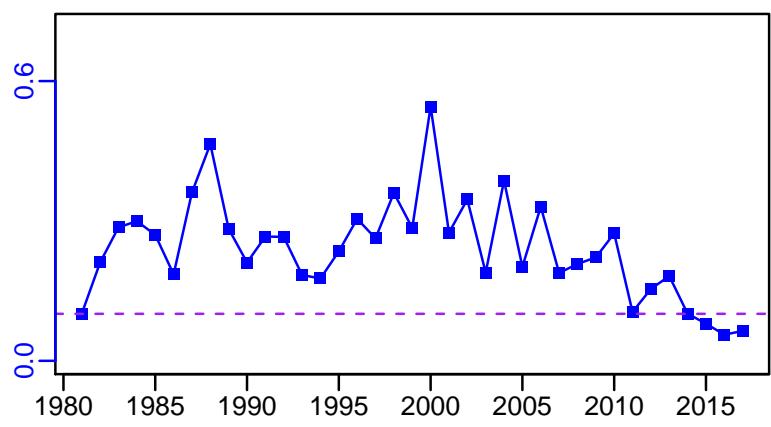
**TN \***

**F-1/yr (1980–2018–ICESIMP2021)**



ER-calc-ratio (1980–2018–ICESIMP2021)

R-E00 (1980–2018–ICESIMP2021)

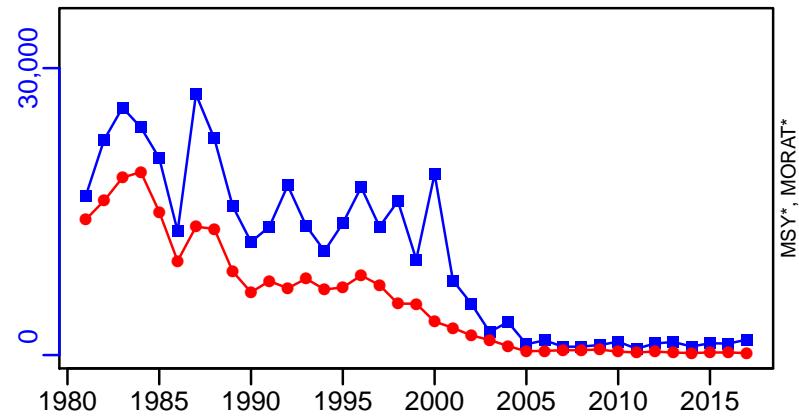


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

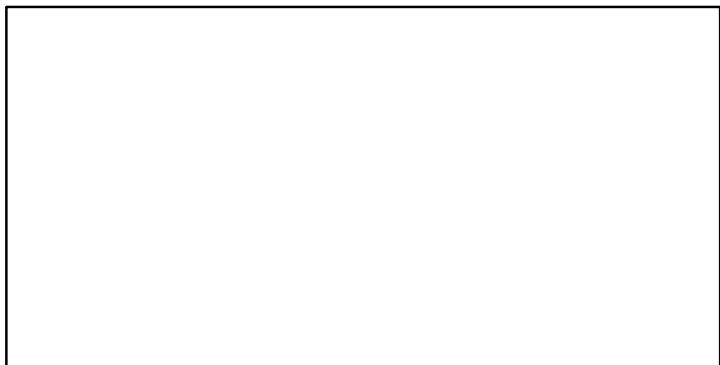
**Whiting West of Scotland [WHITVla]**

TC-MT, TL-MT, RecC\* (1980–2018–ICESIMP2021)

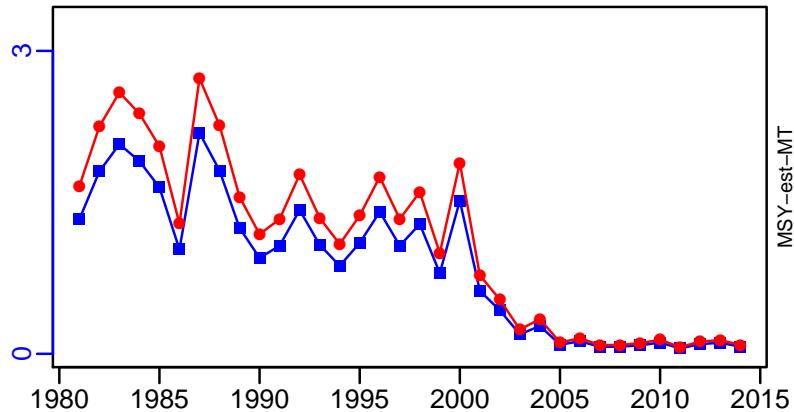
TAC\*, Cpair\*, Cadv\*



**EFFORT\***



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1980–2015–ICESIMP2016)



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

## Whiting Rockall Bank [WHITVIb]

<b>Metadata</b>	
<b>Scientific Name</b>	Merlangius merlangus
<b>Current Assess ID</b>	WGCSE-WHITVIb-1961-2017-ICESIMP2021
<b>Area</b>	Rockall Bank
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2014, 2017

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2017	40		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

**Whiting Rockall Bank [WHITVlb]**

**TB\***



**SSB\***



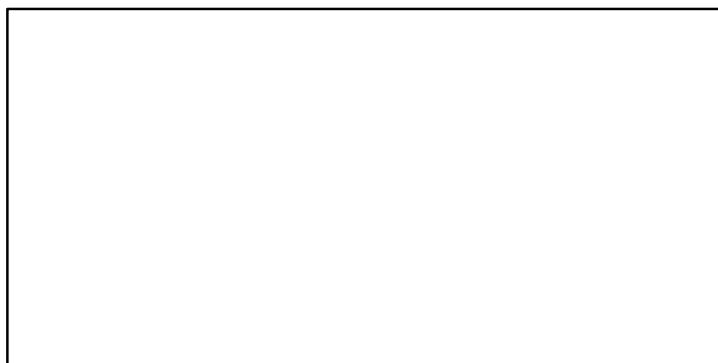
**TN \***



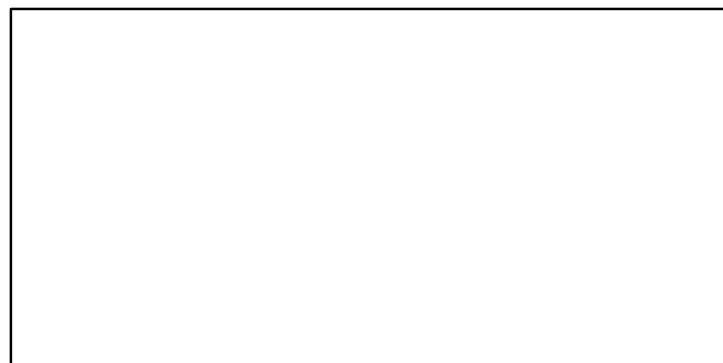
**F\***



**ER\***



**Recruits\***

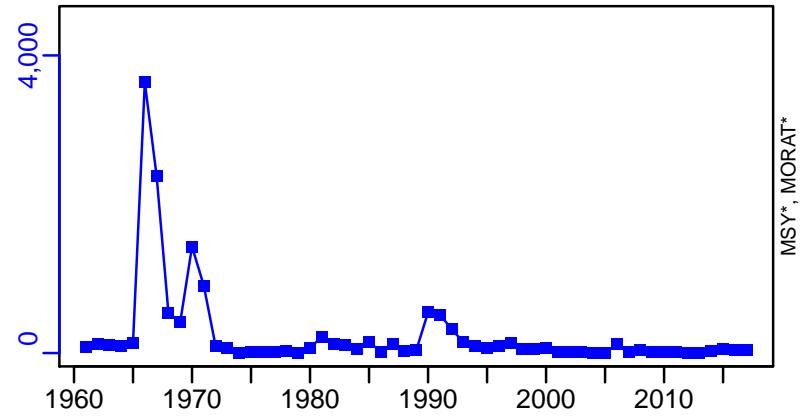


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

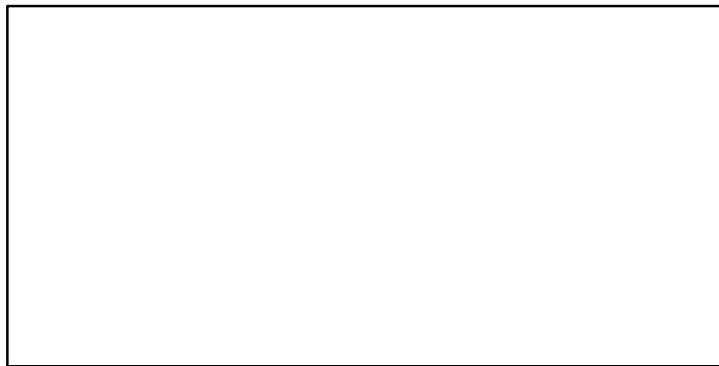
Whiting Rockall Bank [WHITVlb]

TL-MT, TC\*, RecC\* (1961–2017–ICESIMP2021)

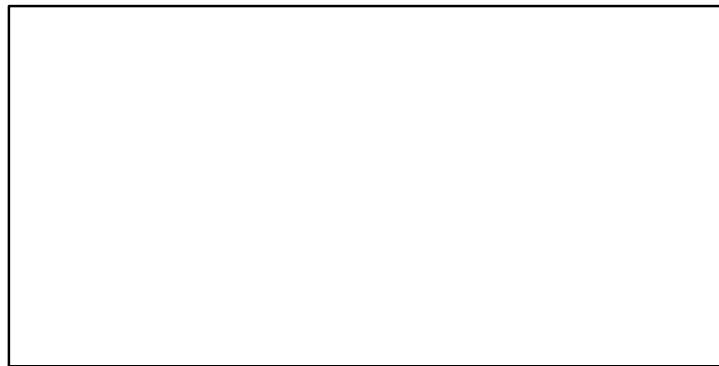
TAC\*, Cpair\*, Cadv\*



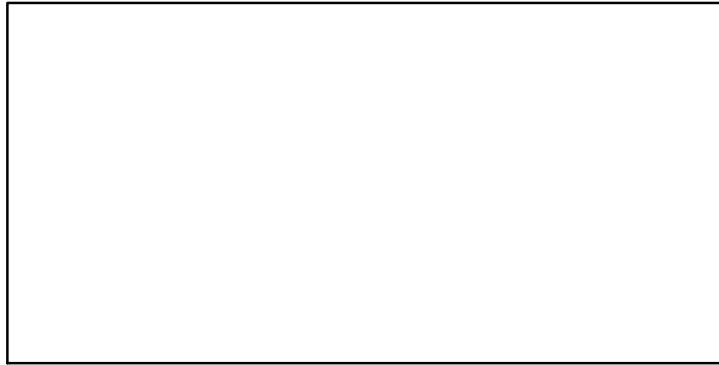
**survB\***



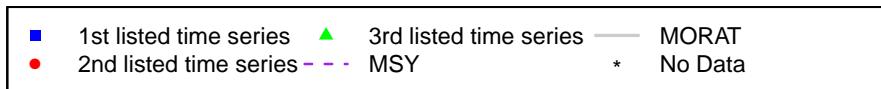
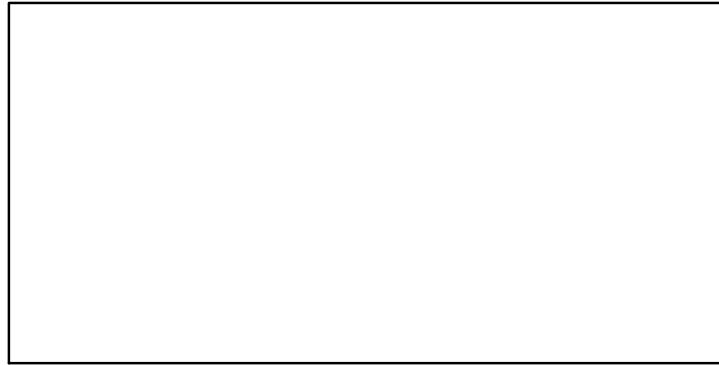
**CPUE\***



**EFFORT\***



**CdivMSY\***



## Whiting Irish Sea [WHITVIIa]

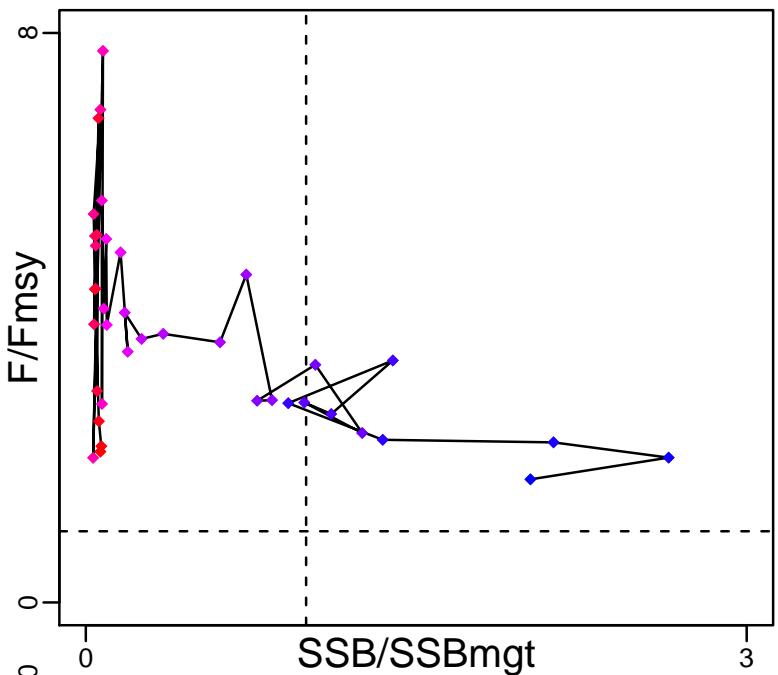
<b>Metadata</b>	
<b>Scientific Name</b>	Merlangius merlangus
<b>Current Assess ID</b>	WGCSE-WHITVIIa-1980-2019-ICESIMP2021
<b>Area</b>	Irish Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2016, 2017, 2019

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-est-MT	2016	589
<b>Fmsy</b>	Fmsy-1/yr	2019	0.219
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.362
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	16,300
<b>Fmgt</b>	Fmgt-1/yr	2019	0.219
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2016	149
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2017	10,000
<b>Flim</b>	Flim-1/yr	2017	0.371
<b>ERlim</b>	-	-	-

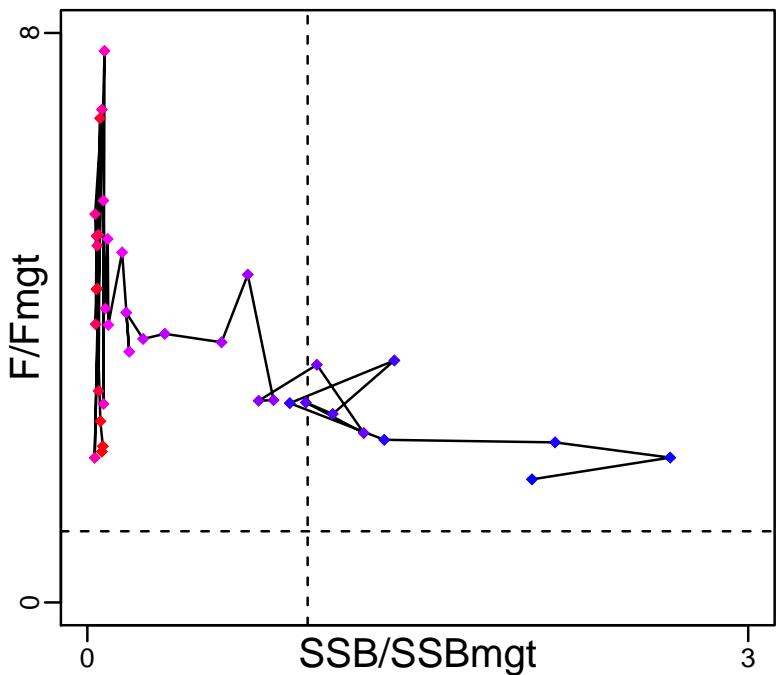
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2019	2175	-	-	
<b>SSB</b>	SSB-MT	2019	1376	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2019	118,853,000	-	0	
<b>F</b>	F-1/yr	2019	0.464	-	1 to 3	
<b>ER</b>	ER-calc-ratio	2019	0.413	-	-	
<b>TC</b>	TC-MT	2019	899			
<b>TL</b>	TL-MT	2019	46			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2016	0.405			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	2.119			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	1.143			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.084			
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	2.119			
<b>ER/ERmgt</b>	-	-	-			

**Whiting Irish Sea [WHITVIIa]**

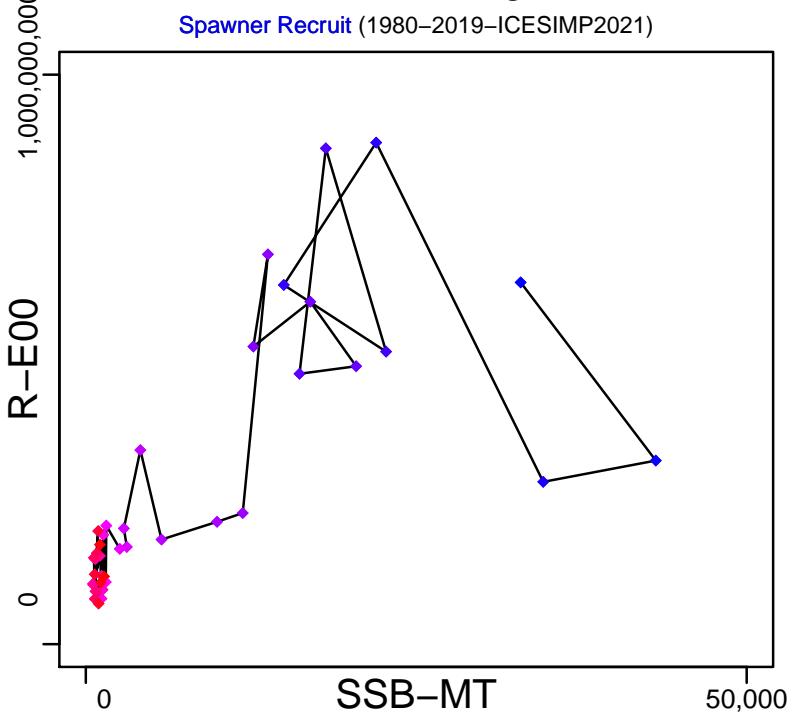
Kobe MSYpref (1980–2019–ICESIMP2021)



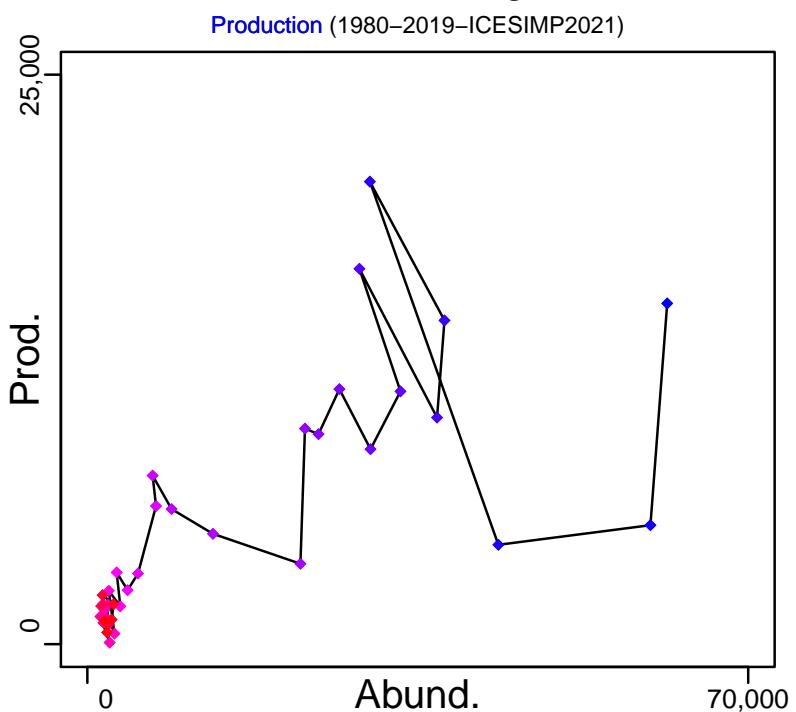
Kobe MGTpref (1980–2019–ICESIMP2021)



Spawner Recruit (1980–2019–ICESIMP2021)



Production (1980–2019–ICESIMP2021)

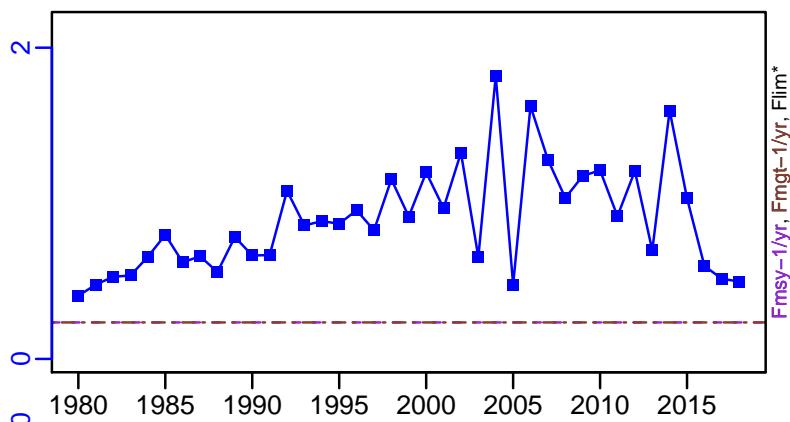
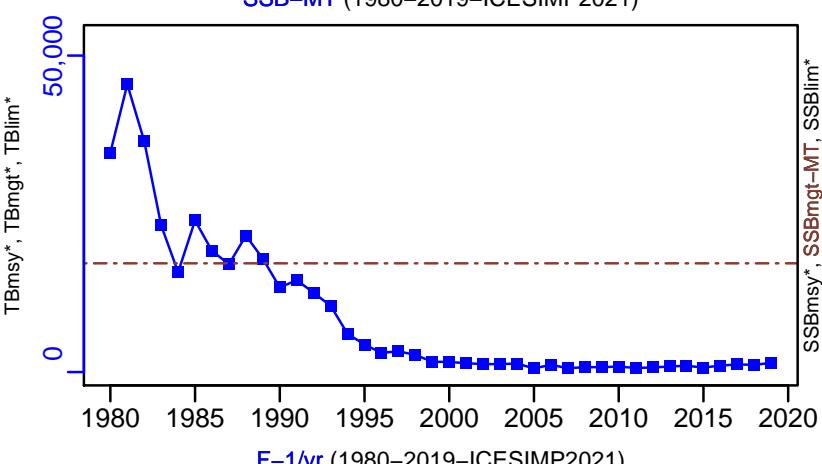
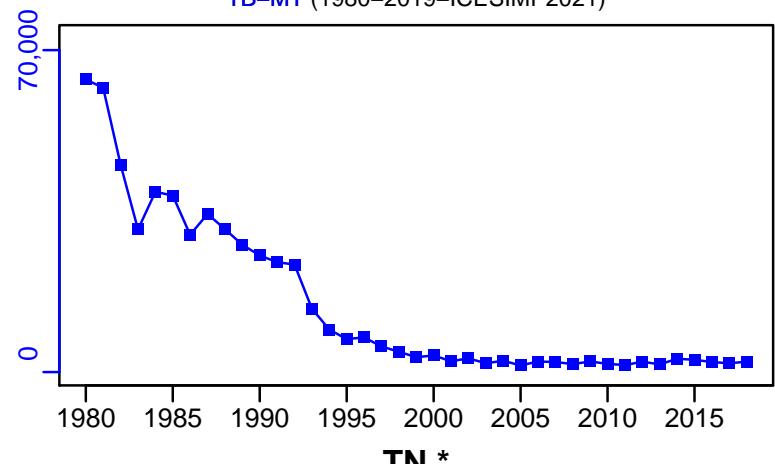


◆ Start Year   ◆ End Year   \* No Data

### Whiting Irish Sea [WHITVIIa]

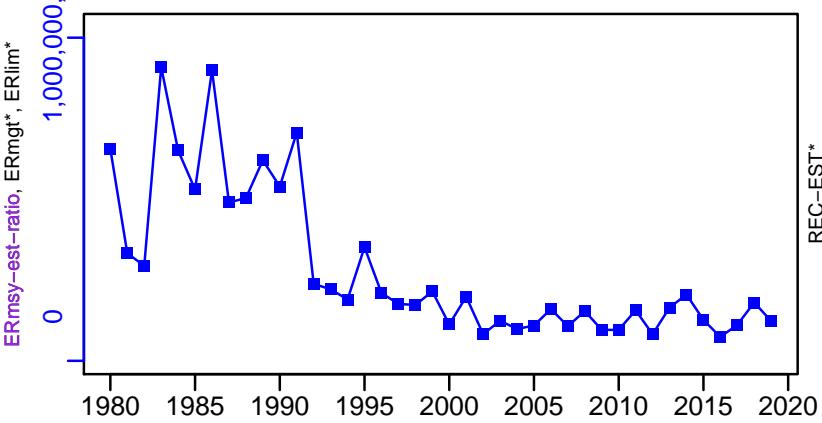
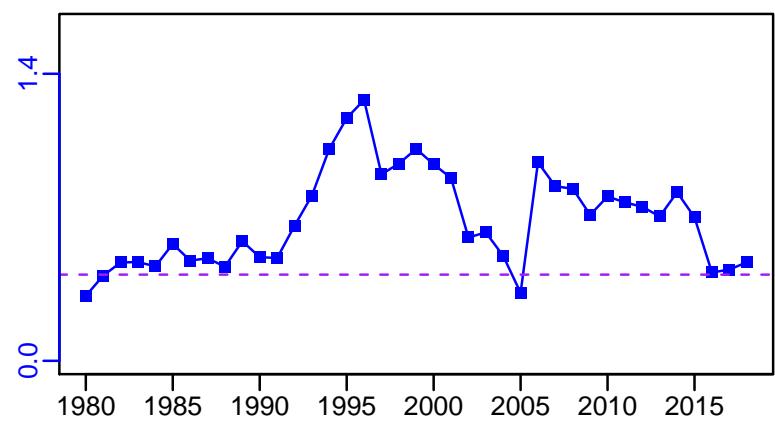
TB-MT (1980–2019–ICESIMP2021)

SSB-MT (1980–2019–ICESIMP2021)



ER-calc-ratio (1980–2019–ICESIMP2021)

R-E00 (1980–2019–ICESIMP2021)

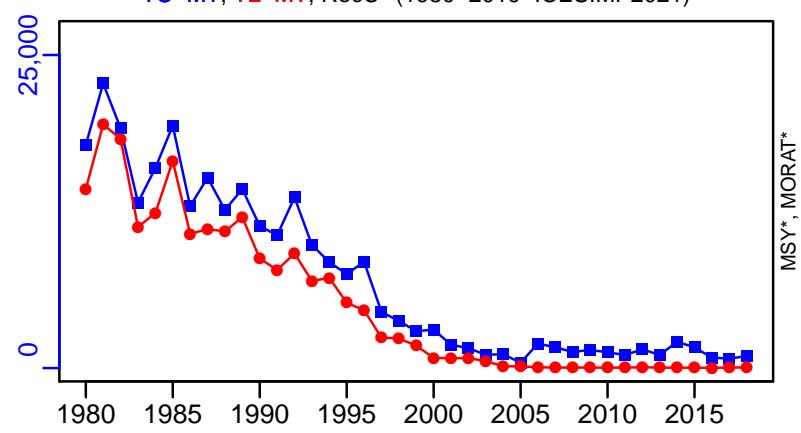


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	— Lim BRP	* No Data

**Whiting Irish Sea [WHITVIIa]**

TC-MT, TL-MT, RecC\* (1980–2019–ICESIMP2021)

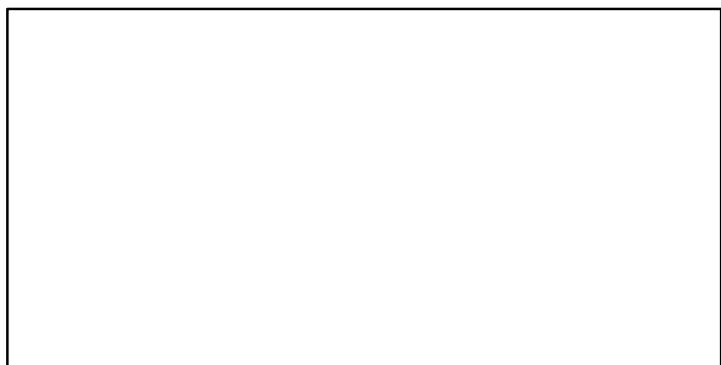
TAC\*, Cpair\*, Cadv\*



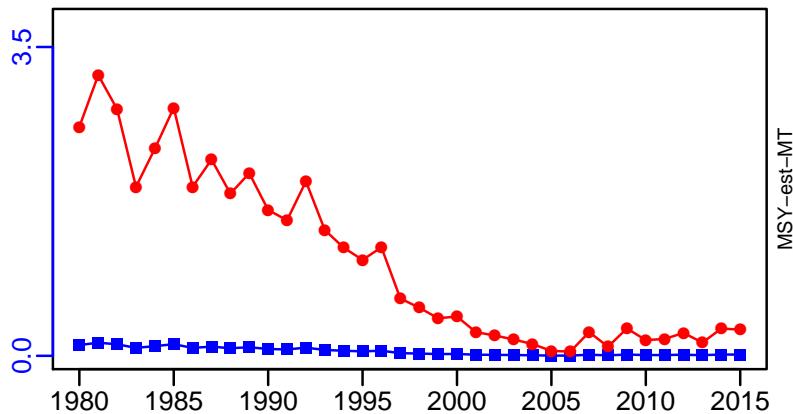
CPUE\*



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1980–2016–ICESIMP2018)



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

## Whiting Celtic Sea [WHITVIIbce-k]

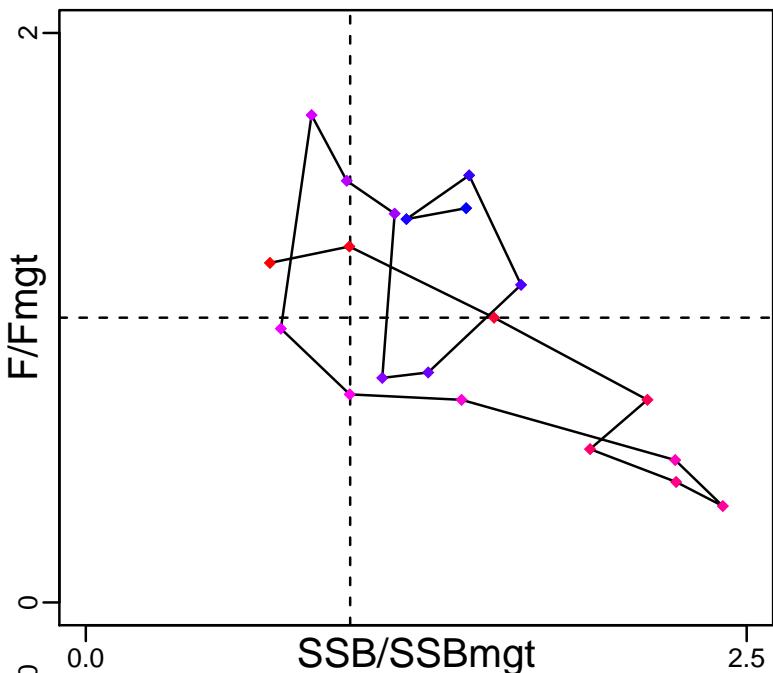
<b>Metadata</b>	
<b>Scientific Name</b>	Merlangius merlangus
<b>Current Assess ID</b>	WGCSE-WHITVIIbce-k-1999-2019-ICESIMP2021
<b>Area</b>	Celtic Sea
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on Celtic Seas Ecosystems
<b>Asmts in RAM</b>	2013, 2014, 2015, 2016, 2017, 2019, 2012

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-est-MT	2012	56,736
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2017	0.52
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.208
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	35,000
<b>Fmgt</b>	Fmgt-1/yr	2019	0.52
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2012	21,000
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2017	25,000
<b>Flim</b>	Flim-1/yr	2017	1.12
<b>ERlim</b>	-	-	-

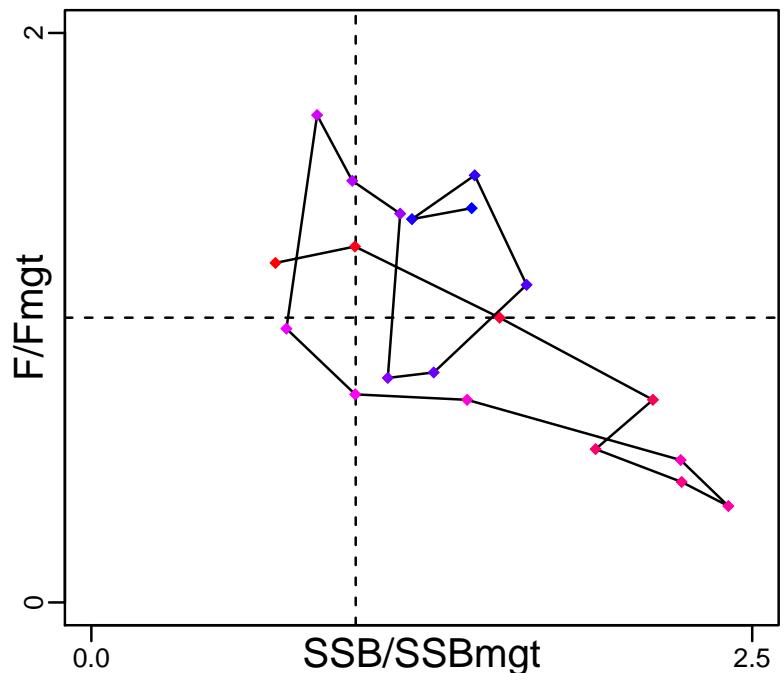
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2016	95,300	Both	-
<b>SSB</b>	SSB-MT	2019	17,423	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	844,529,000	-	0
<b>F</b>	F-1/yr	2019	0.62	-	2 to 5
<b>ER</b>	ER-calc-ratio	2019	0.237	-	-
<b>TC</b>	TC-MT	2017	22,500		
<b>TL</b>	TL-MT	2019	8773		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	1.29		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	0.827		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	1.136		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.498		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	1.192		
<b>ER/ERmgt</b>	-	-	-		

**Whiting Celtic Sea [WHITVIIbce–k]**

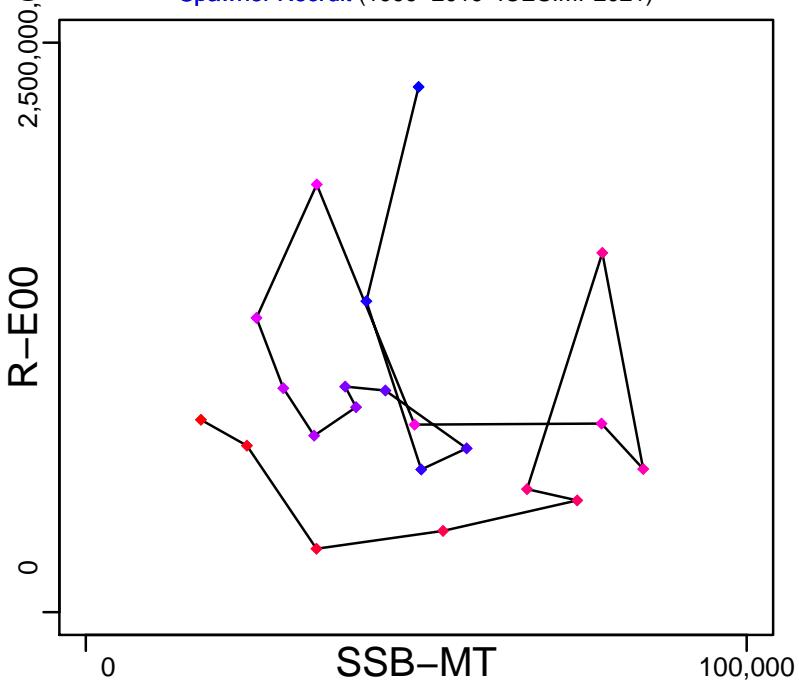
Kobe MSYpref (1999–2019–ICESIMP2021)



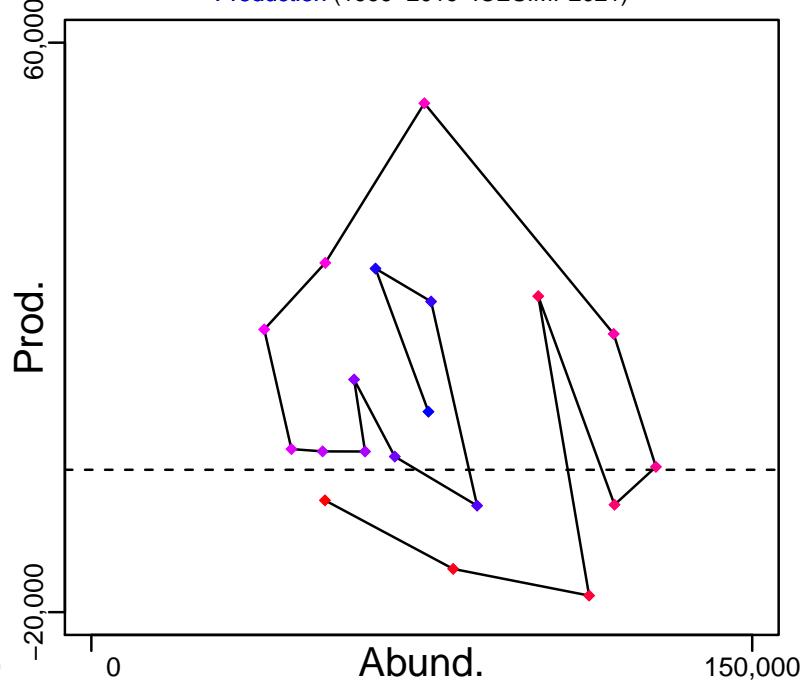
Kobe MGTpref (1999–2019–ICESIMP2021)



Spawner Recruit (1999–2019–ICESIMP2021)



Production (1999–2019–ICESIMP2021)

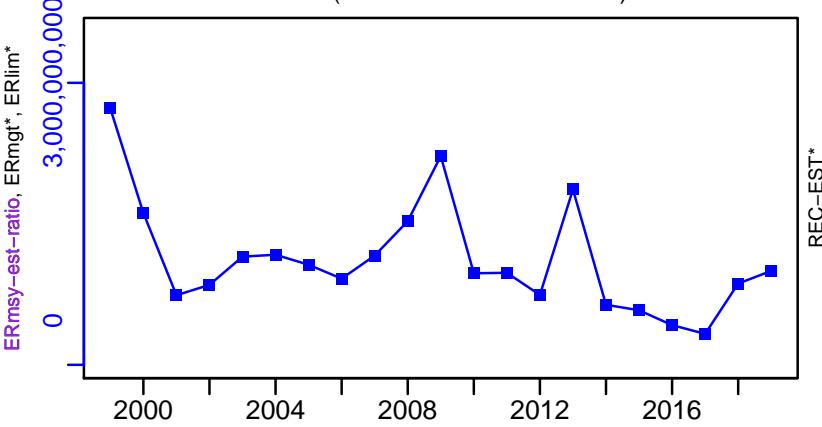
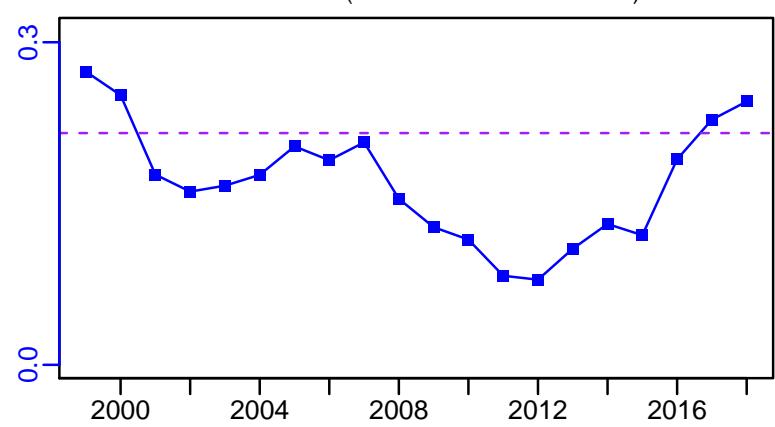
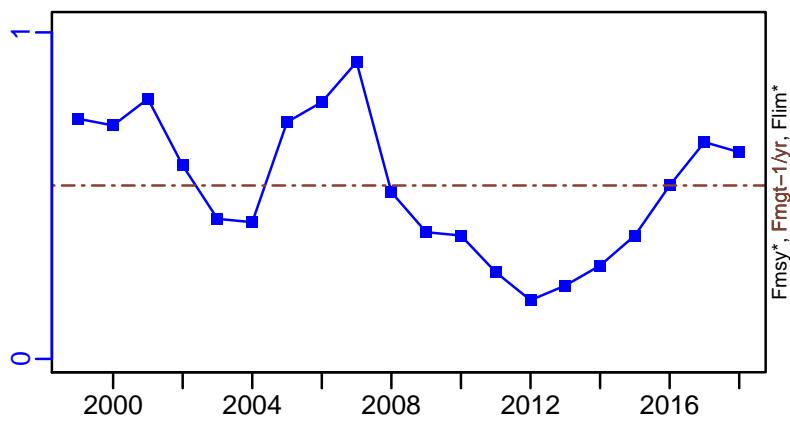
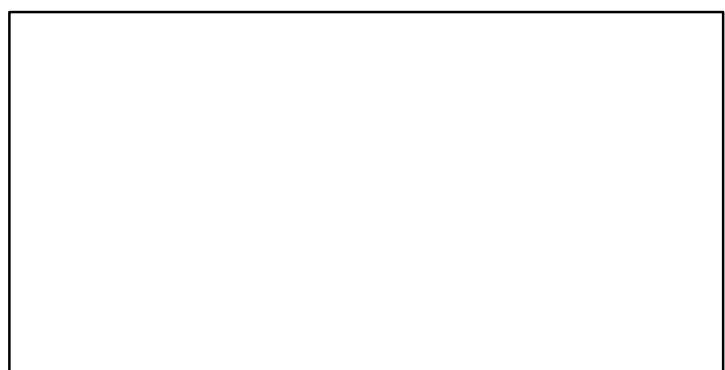
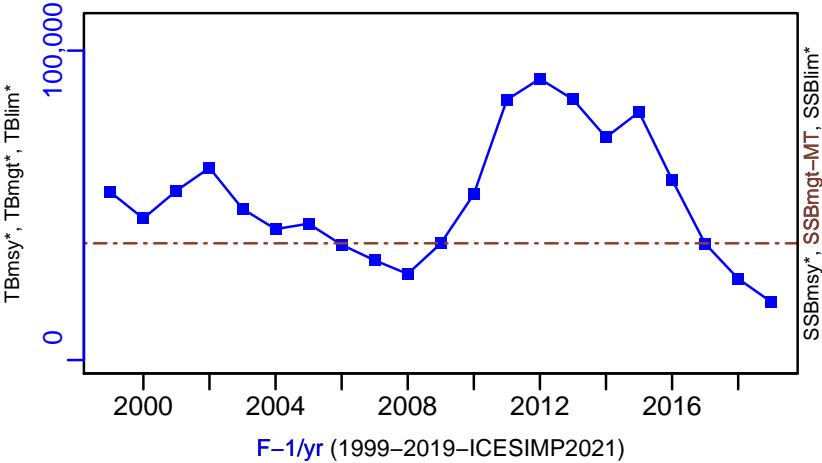
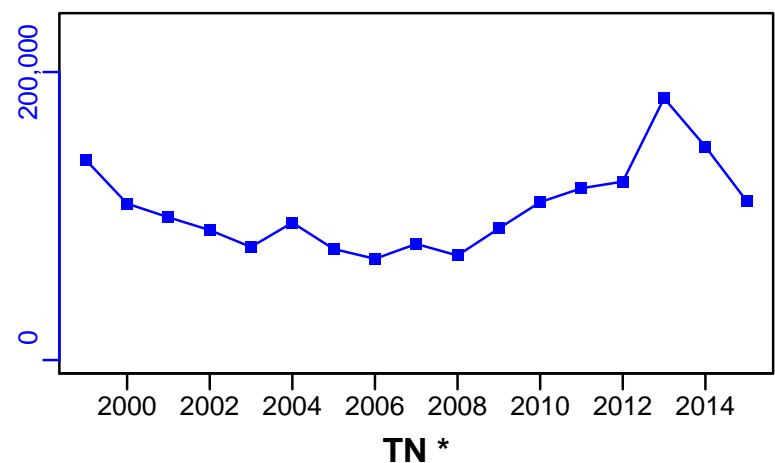


◆ Start Year ◆ End Year \* No Data

### Whiting Celtic Sea [WHITVIIbce–k]

TB-MT (1999–2016–ICESIMP2016)

SSB-MT (1999–2019–ICESIMP2021)

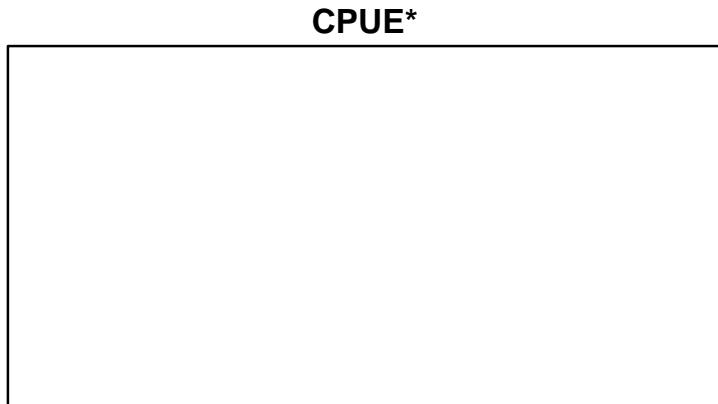
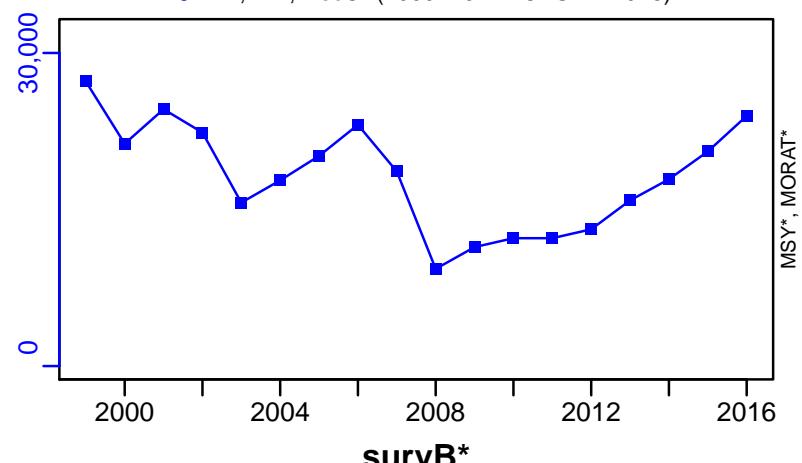


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	* No Data

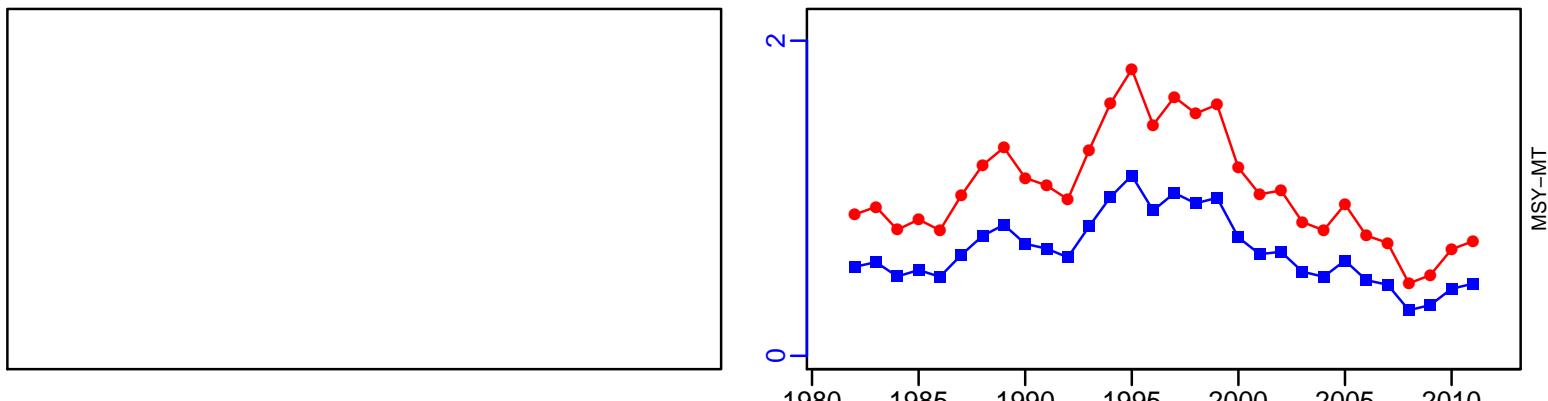
**Whiting Celtic Sea [WHITVIIbce–k]**

TC–MT, TL\*, RecC\* (1999–2017–ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



TL–MT/MSY–MT, CdivMEANC–ratio, (1981–2012–CHING)



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

## Whiting ICES 8-9a [WHITVIII-IXa]

<b>Metadata</b>	
<b>Scientific Name</b>	Merlangius merlangus
<b>Current Assess ID</b>	WGBIE-WHITVIII-IXa-1994-2018-ICESIMP2021
<b>Area</b>	ICES 8-9a
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion
<b>Asmts in RAM</b>	2015, 2016, 2016, 2018

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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2018	2194		
<b>TL</b>	TL-MT	2018	1539		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Kobe MSY\***

**Kobe MGT\***

**Spawner Recruit\***

**Production\***

◆ Start Year ♦ End Year \* No Data

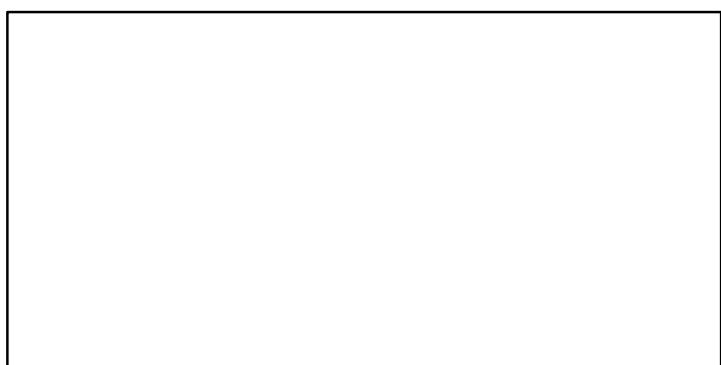
**TB\***



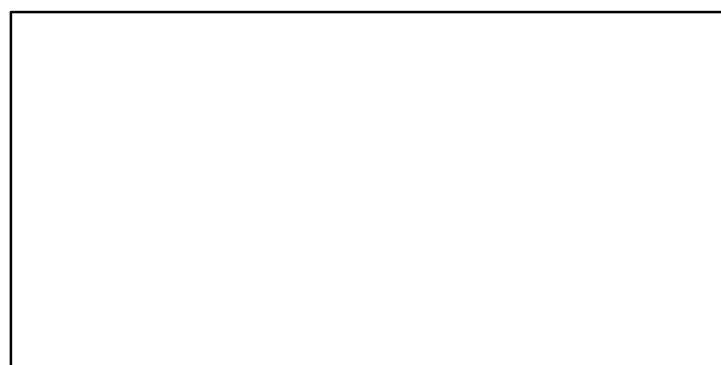
**SSB\***



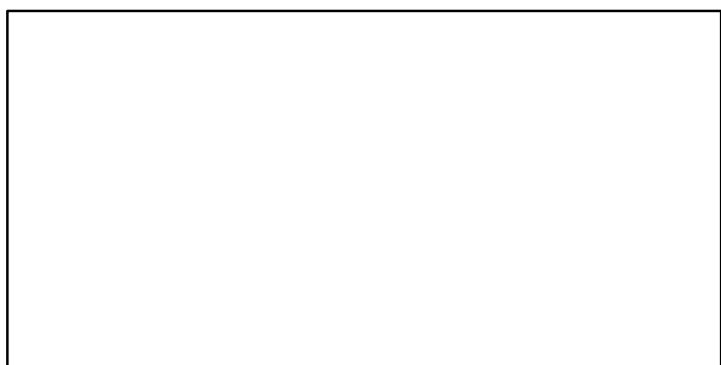
**TN \***



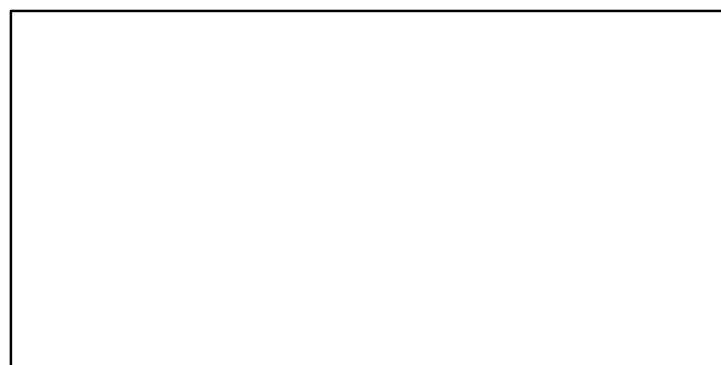
**F\***



**ER\***



**Recruits\***

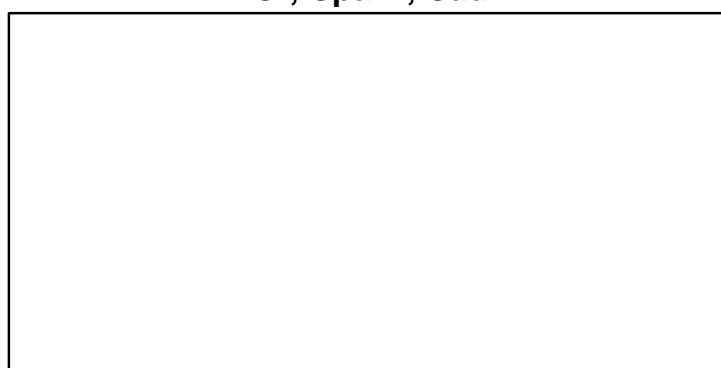
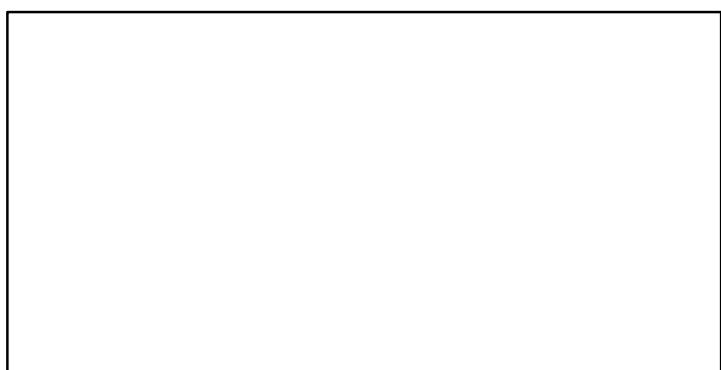
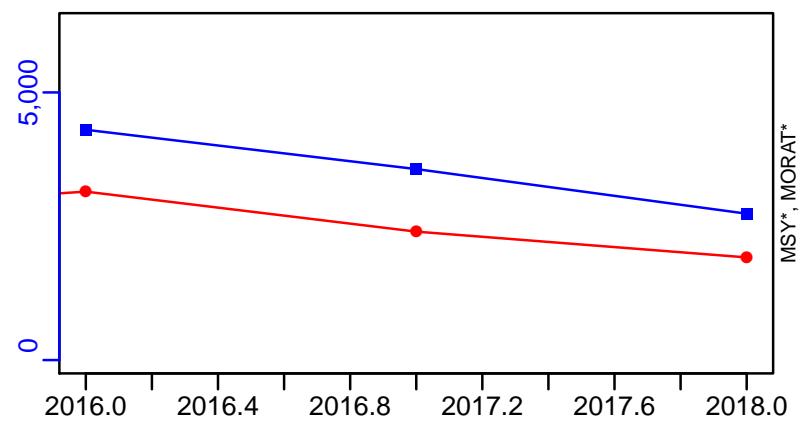


- |                      |                  |           |
|----------------------|------------------|-----------|
| ■ Listed time series | - - - Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP    | * No Data |

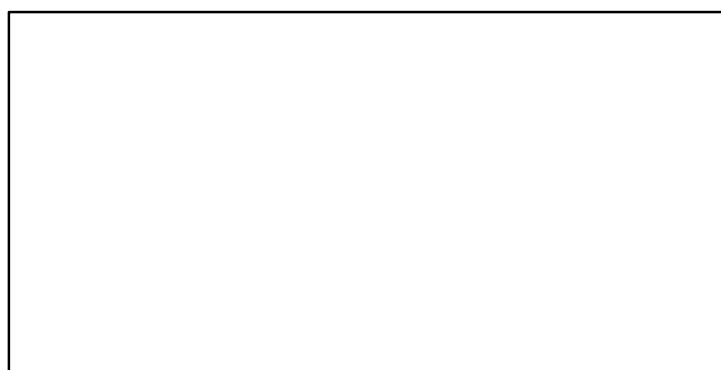
Whiting ICES 8–9a [WHITVIII–IXa]

TC–MT, TL–MT, RecC\* (1994–2018–ICESIMP2021)

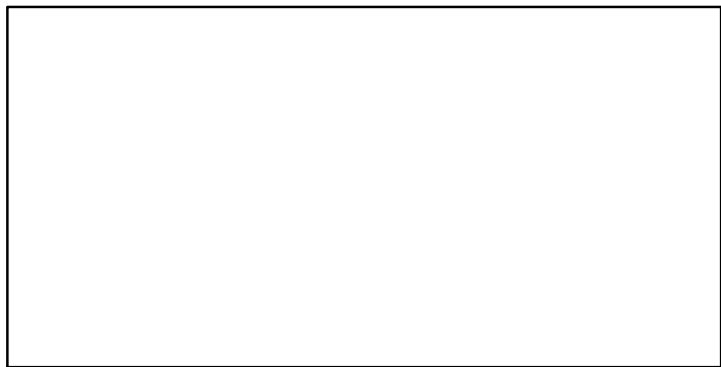
TAC\*, Cpair\*, Cadv\*



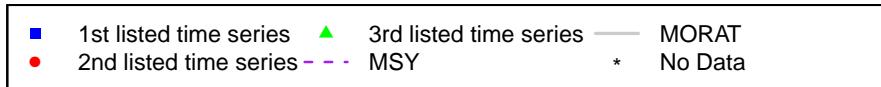
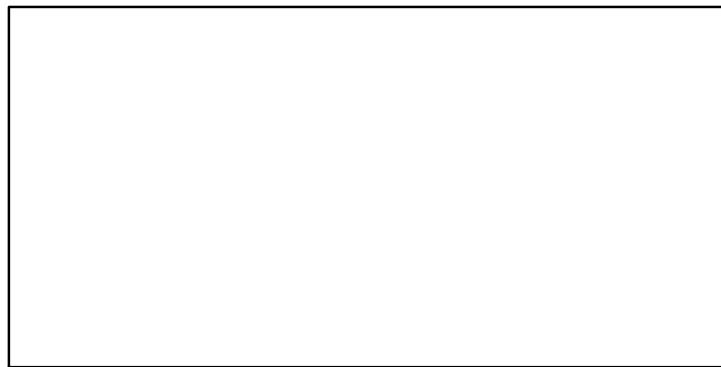
CPUE\*



EFFORT\*



CdivMSY\*



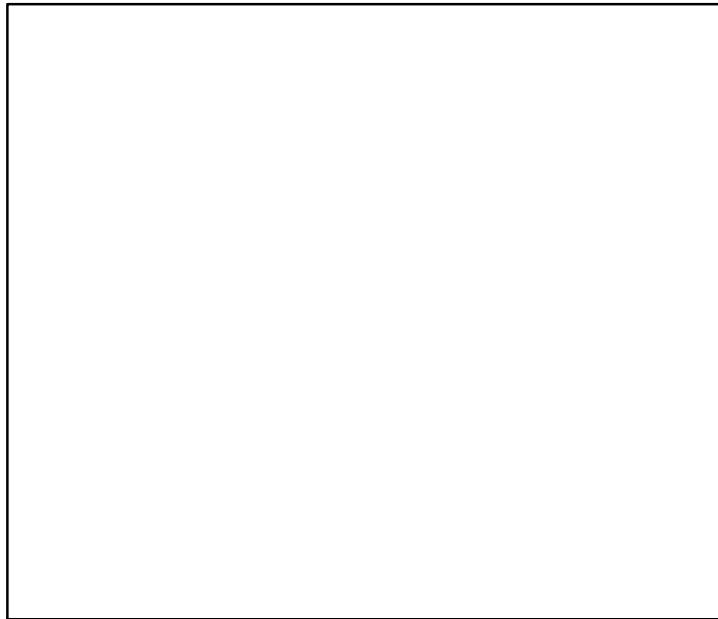
## Witch flounder ICES 3a-4-7d [WITFLOUNIIIa-IV-VIId]

<b>Metadata</b>	
<b>Scientific Name</b>	Glyptocephalus cynoglossus
<b>Current Assess ID</b>	WGNSSK-WITFLOUNIIIa-IV-VIId-1975-2016-ICESIMP2018
<b>Area</b>	ICES 3a-4-7d
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
<b>Asmts in RAM</b>	2015, 2016

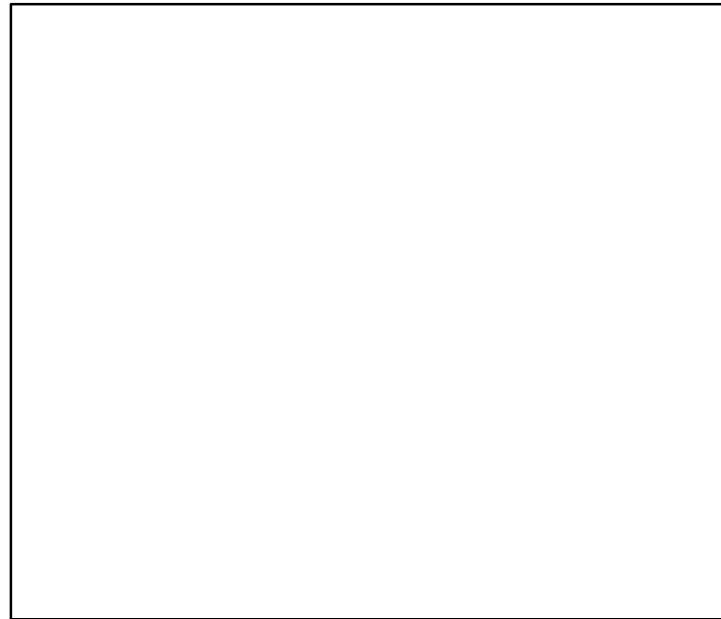
<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>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

<b>Time Series</b>					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-index	2015	0.189	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	2740		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

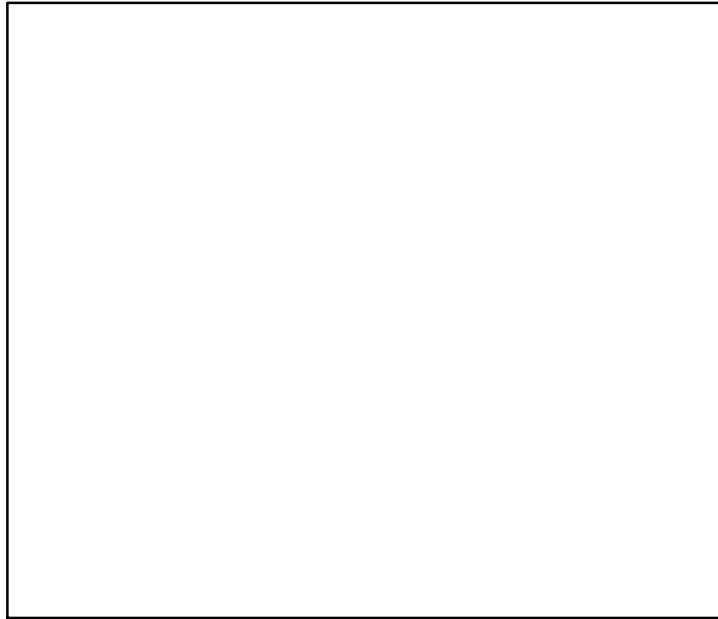
Kobe MSY\*



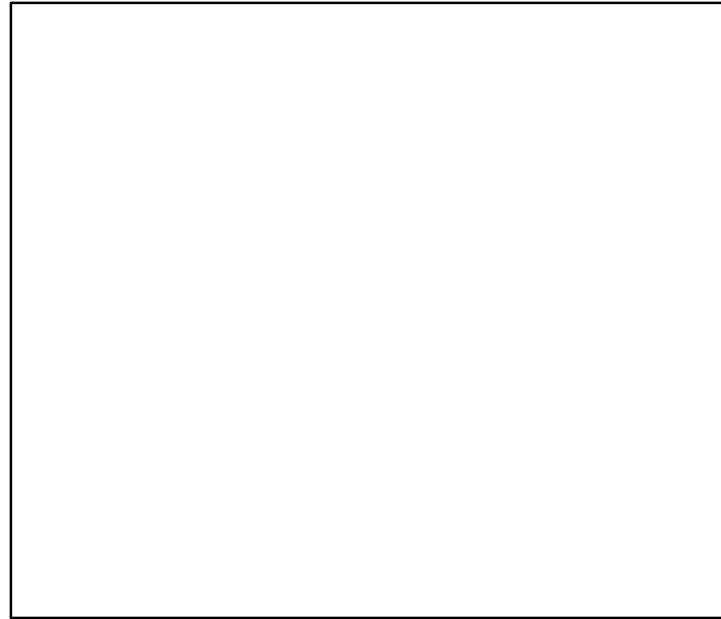
Kobe MGT\*



Spawner Recruit\*



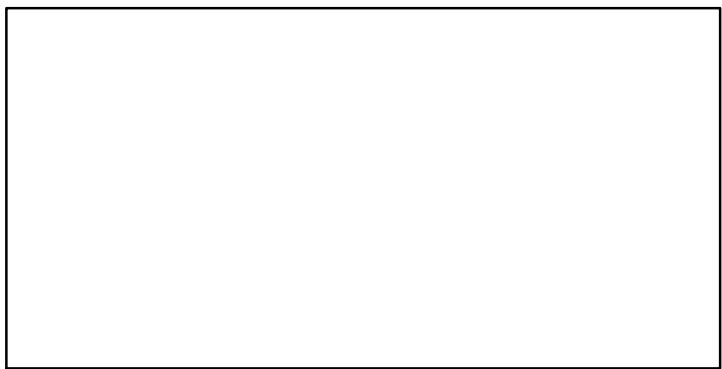
Production\*



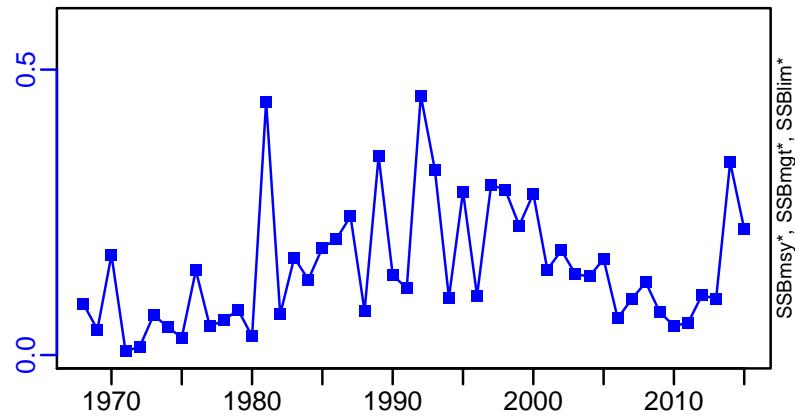
◆ Start Year ♦ End Year \* No Data

Witch flounder ICES 3a–4–7d [WITFLOUNIIla–IV–VIIId]

**TB\***



SSB-index (1968–2015–ICESIMP2018)



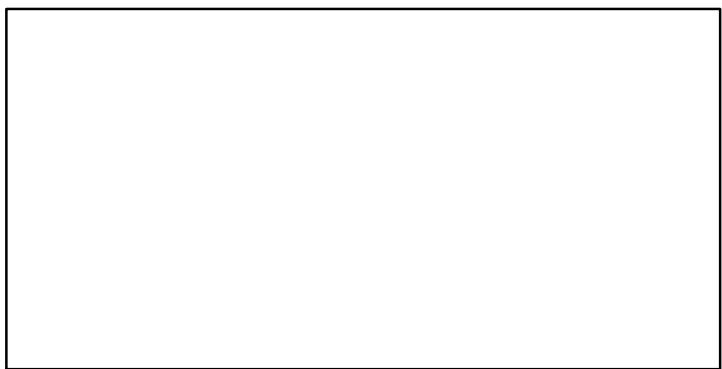
**TN \***



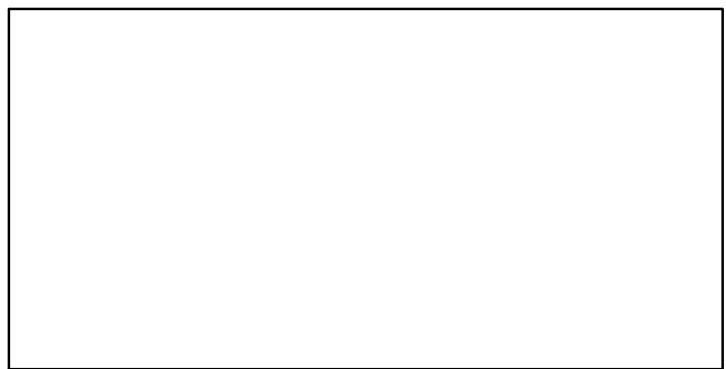
**F\***



**ER\***



**Recruits\***

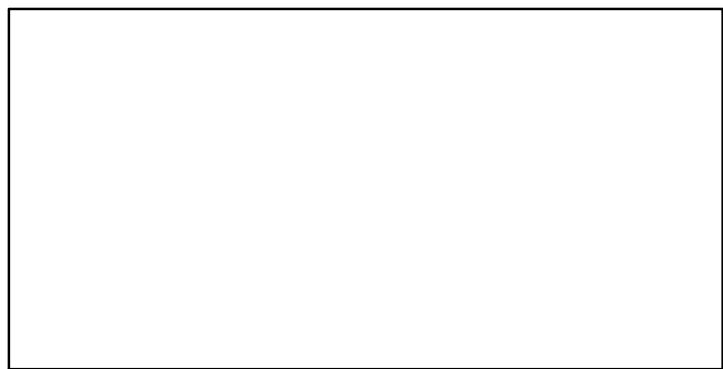
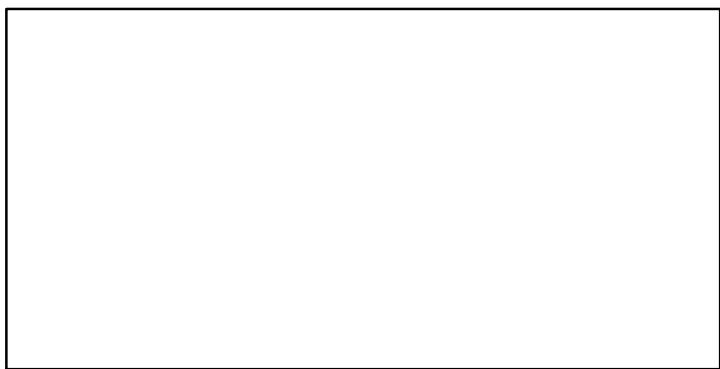
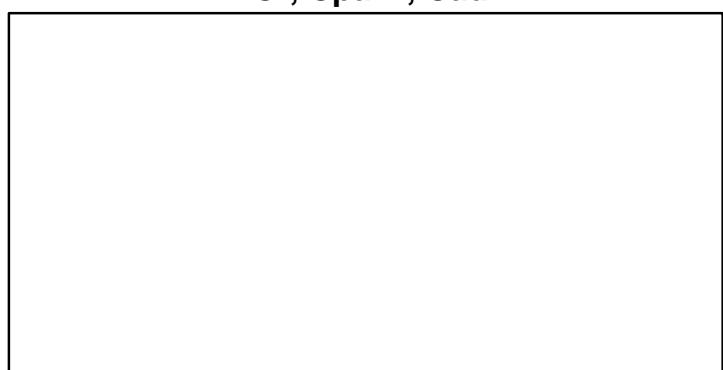
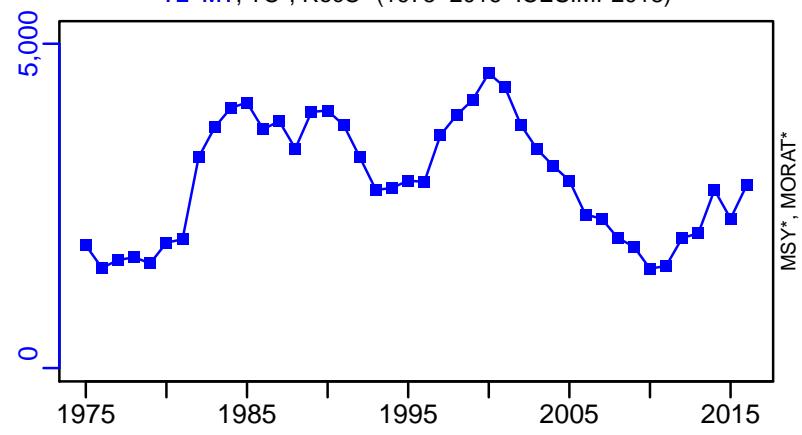


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | ··· Lim BRP  | * No Data |

**Witch flounder ICES 3a–4–7d [WITFLOUNIIla–IV–VIIId]**

TL–MT, TC\*, RecC\* (1975–2016–ICESIMP2018)

**TAC\*, Cpair\*, Cadv\***



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