

# Japan Stocks

## v4.66 (Nov-03-2024)

Not present Present Preferred

Stock	Time Series Types			
	B/Bmsy	U/Umsy	B/Bmgt	U/Umgt
1. APOLLNEMS [Walleye pollock Nemuro Strait]	TB SSB	ER F	TB SSB	ER F
2. APOLLNSJ [Walleye pollock Sea of Japan North]	TB SSB	ER F	TB SSB	ER F
3. APOLLOKS [Walleye pollock Okhotsk Sea]	TB SSB	ER F	TB SSB	ER F
4. APOLLPJPN [Walleye pollock Pacific Coast of Japan]	TB SSB	ER F	TB SSB	ER F
5. APSHRIMPSOJ [Alaskan pink shrimp Sea of Japan]	TB SSB	ER F	TB SSB	ER F
6. ARGREENNEMS [Arabesque greenling Nemuro Strait]	TB SSB	ER F	TB SSB	ER F
7. ARGREENNHOKK [Arabesque greenling North coast of Hokkaido]	TB SSB	ER F	TB SSB	ER F
8. ARGREENSHOKK [Arabesque greenling South coast of Hokkaido]	TB SSB	ER F	TB SSB	ER F
9. ASCADECS [Amberstripe scad East China Sea]	TB SSB	ER F	TB SSB	ER F
10. BMACKECS [Spotted mackerel East China Sea]	TB SSB	ER F	TB SSB	ER F
11. BMACKPJPN [Spotted mackerel Pacific Coast of Japan]	TB SSB	ER F	TB SSB	ER F
12. BRMSOJ [Yellow sea bream Sea of Japan]	TB SSB	ER F	TB SSB	ER F
13. BSCRAPERSECS [Black scraper Sea of Japan and East China Sea]	TB SSB	ER F	TB SSB	ER F
14. BZCRABSOJ [Beni zuwai crab Sea of Japan]	TB SSB	ER F	TB SSB	ER F
15. CJOBOKWI [Crimson jobfish Okinawa Islands]	TB SSB	ER F	TB SSB	ER F
16. CMACKPJPN [Chub mackerel Pacific Coast of Japan]	TB SSB	ER F	TB SSB	ER F
17. CMACKTSST [Chub mackerel Tsushima Strait]	TB SSB	ER F	TB SSB	ER F
18. DSSMELTPAC [Deep sea smelt Pacific Ocean]	TB SSB	ER F	TB SSB	ER F
19. DSSMELTSOJ [Deep sea smelt Sea of Japan]	TB SSB	ER F	TB SSB	ER F
20. FHFLOUNSOJ [Flathead flounder Sea of Japan]	TB SSB	ER F	TB SSB	ER F
21. FSNAPOKWI [Flame snapper Okinawa Islands]	TB SSB	ER F	TB SSB	ER F
22. HERRHOKK [Pacific herring Hokkaido]	TB SSB	ER F	TB SSB	ER F
23. HHTILEECS [Horsehead tilefish East China Sea]	TB SSB	ER F	TB SSB	ER F
24. JAMBERJPN [Japanese amberjack Japan]	TB SSB	ER F	TB SSB	ER F
25. JANCHOPJPN [Japanese anchovy Pacific Coast of Japan]	TB SSB	ER F	TB SSB	ER F
26. JANCHOSETO [Japanese anchovy Inland Sea of Japan]	TB SSB	ER F	TB SSB	ER F
27. JANCHOTSST [Japanese anchovy Tsushima Strait]	TB SSB	ER F	TB SSB	ER F
28. JCSQUIDJPANAR [Japanese flying squid Japan Autumn recruitment]	TB SSB	ER F	TB SSB	ER F
29. JCSQUIDJPANWR [Japanese flying squid Japan Winter recruitment]	TB SSB	ER F	TB SSB	ER F
30. JMACKPJPN [Japanese jack mackerel Pacific Coast of Japan]	TB SSB	ER F	TB SSB	ER F
31. JMACKTSST [Japanese jack mackerel Tsushima Strait]	TB SSB	ER F	TB SSB	ER F
32. JPUFFIMKB [Japanese pufferfish Ise and Mikawa Bay]	TB SSB	ER F	TB SSB	ER F
33. JPUFFSOJECSSI [Japanese pufferfish Sea of Japan and East China Sea and Seto Inland sea]	TB SSB	ER F	TB SSB	ER F
34. JSNAPOKWI [Japanese snapper Okinawa Islands]	TB SSB	ER F	TB SSB	ER F
35. KCROCKNPAC [Kichiji rockfish North Pacific]	TB SSB	ER F	TB SSB	ER F
36. KCROCKOKS [Kichiji rockfish Okhotsk Sea]	TB SSB	ER F	TB SSB	ER F
37. KCROCKSWHOKK [Kichiji rockfish Southwestern coast of Hokkaido]	TB SSB	ER F	TB SSB	ER F

38. LCODLINGPAC [Longfin codling Pacific Ocean]	TB SSB	ER F	TB SSB	ER F
39. LHAIRTSOJCS [Largehead hairtail Sea of Japan and East China Sea]	TB SSB	ER F	TB SSB	ER F
40. LJOBOKWI [Lavender jobfish Okinawa Islands]	TB SSB	ER F	TB SSB	ER F
41. OFLOUNECS [Japanese flounder East China Sea]	TB SSB	ER F	TB SSB	ER F
42. OFLOUNNSJ [Japanese flounder Sea of Japan North]	TB SSB	ER F	TB SSB	ER F
43. OFLOUNPAC [Japanese flounder Pacific Ocean]	TB SSB	ER F	TB SSB	ER F
44. OFLOUNSETO [Japanese flounder Inland Sea of Japan]	TB SSB	ER F	TB SSB	ER F
45. PCODHOKK [Pacific cod Hokkaido]	TB SSB	ER F	TB SSB	ER F
46. PCODNPAC [Pacific cod North Pacific]	TB SSB	ER F	TB SSB	ER F
47. PCODSOJ [Pacific cod Sea of Japan]	TB SSB	ER F	TB SSB	ER F
48. PHFLOUNNHOKK [Pointhead flounder North coast of Hokkaido]	TB SSB	ER F	TB SSB	ER F
49. PHFLOUNSOJ [Pointhead flounder Sea of Japan]	TB SSB	ER F	TB SSB	ER F
50. PILCHPJPN [Japanese sardine Pacific Coast of Japan]	TB SSB	ER F	TB SSB	ER F
51. PILCHTSST [Japanese sardine Tsushima Strait]	TB SSB	ER F	TB SSB	ER F
52. PSANDLIMKB [Pacific sand lance Ise and Mikawa Bay]	TB SSB	ER F	TB SSB	ER F
53. PSLANCESYS [Pacific sand lance Souya Strait]	TB SSB	ER F	TB SSB	ER F
54. PSLANDLSETOE [Pacific sand lance Inland Sea of Japan (East)]	TB SSB	ER F	TB SSB	ER F
55. RBRMECS [Red seabream East China Sea]	TB SSB	ER F	TB SSB	ER F
56. RBRMSETOE [Red seabream Inland Sea of Japan (East)]	TB SSB	ER F	TB SSB	ER F
57. RBRMSETOW [Red seabream Inland Sea of Japan (West)]	TB SSB	ER F	TB SSB	ER F
58. RHERRPAC [Round herring Pacific Ocean]	TB SSB	ER F	TB SSB	ER F
59. RHERRTSST [Round herring Tsushima Strait]	TB SSB	ER F	TB SSB	ER F
60. RSFLOUNSOJ [Round nose flounder Sea of Japan]	TB SSB	ER F	TB SSB	ER F
61. RSSOLENPAC [Roughscale sole North Pacific]	TB SSB	ER F	TB SSB	ER F
62. SAURNWPAC [Pacific saury Northwest Pacific]	TB SSB	ER F	TB SSB	ER F
63. SHAKOIMKB [Shako Ise and Mikawa Bay]	TB SSB	ER F	TB SSB	ER F
64. SNOWCRABESJ [Snow crab Sea of Japan East]	TB SSB	ER F	TB SSB	ER F
65. SNOWCRABHOKK [Snow crab Hokkaido]	TB SSB	ER F	TB SSB	ER F
66. SNOWCRABNPAC [Snow crab North Pacific]	TB SSB	ER F	TB SSB	ER F
67. SNOWCRABOKS [Snow crab Okhotsk Sea]	TB SSB	ER F	TB SSB	ER F
68. SNOWCRABWSJ [Snow crab Sea of Japan West]	TB SSB	ER F	TB SSB	ER F
69. SPANMACKECS [Japanese Spanish mackerel East China Sea]	TB SSB	ER F	TB SSB	ER F
70. SPANMACKSETO [Japanese Spanish mackerel Inland Sea of Japan]	TB SSB	ER F	TB SSB	ER F
71. SPSQUIDPAC [Spear squid Pacific Ocean]	TB SSB	ER F	TB SSB	ER F
72. SPSQUIDTSSTWC [Spear squid Tsushima warm current]	TB SSB	ER F	TB SSB	ER F
73. SSANDNSJ [Sailfin sandfish Sea of Japan North]	TB SSB	ER F	TB SSB	ER F
74. SSANDWSJ [Sailfin sandfish Sea of Japan West]	TB SSB	ER F	TB SSB	ER F
75. STSQUIDSOJCS [Swordtip squid Sea of Japan and East China Sea]	TB SSB	ER F	TB SSB	ER F
76. WLFLOUNNPAC [Willow flounder North Pacific]	TB SSB	ER F	TB SSB	ER F
77. WSCONGIMKB [Whitespotted conger Ise and Mikawa Bay]	TB SSB	ER F	TB SSB	ER F
78. YGSFISHNPAC [Yellow goosefish North Pacific]	TB SSB	ER F	TB SSB	ER F
79. YSFLOUNNHOKK [Yellow striped flounder North coast of Hokkaido]	TB SSB	ER F	TB SSB	ER F
80. YSFLOUNSOJ [Yellow striped flounder Sea of Japan]	TB SSB	ER F	TB SSB	ER F

## Walleye pollock Nemuro Strait [APOLLNEMS]

Metadata	
<b>Scientific Name</b>	Theragra chalcogramma
<b>Current Assess ID</b>	FAFRFJ-APOLLNEMS-1981-2013-JPNIMP2016
<b>Area</b>	Nemuro Strait
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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>	M-1/yr	2013	0.25
<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	2013	7720		
<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>	-	-	-		

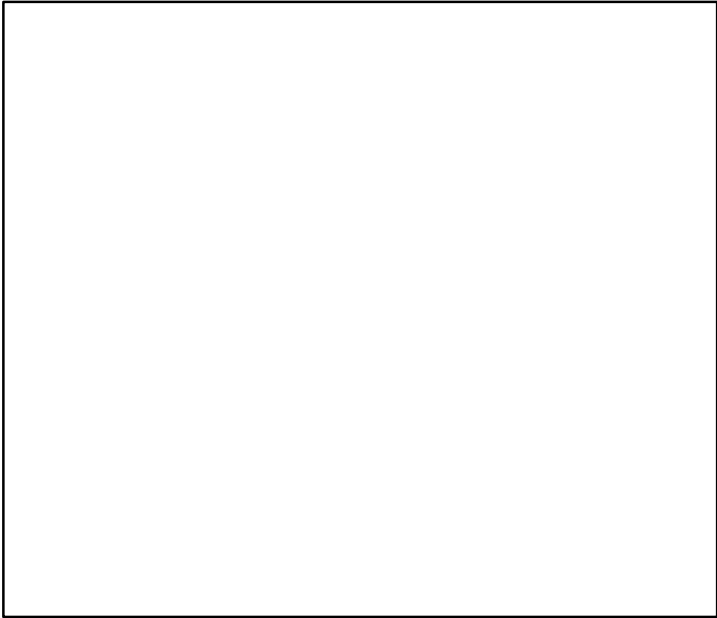
Kobe MSY\*



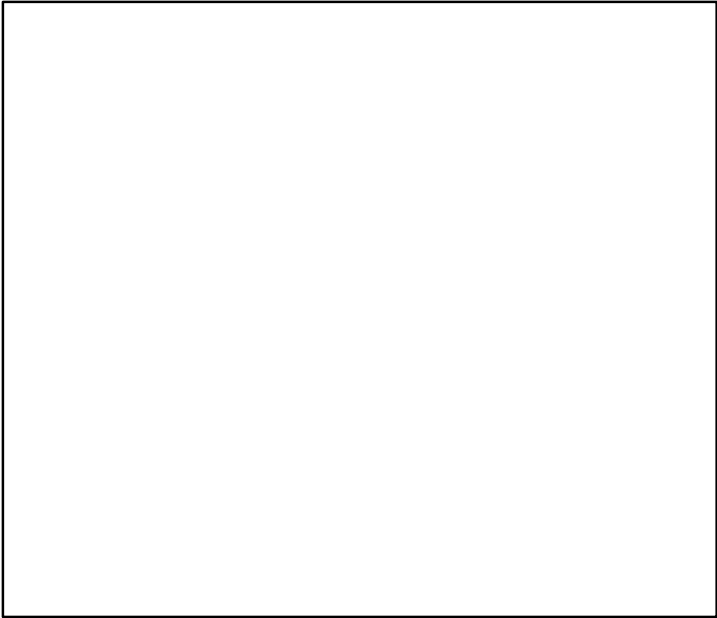
Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

TB\*



SSB\*



TN \*



F\*



ER\*



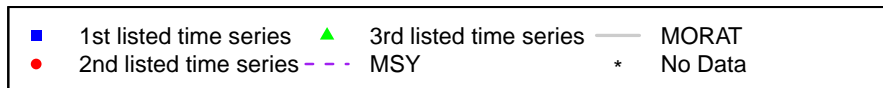
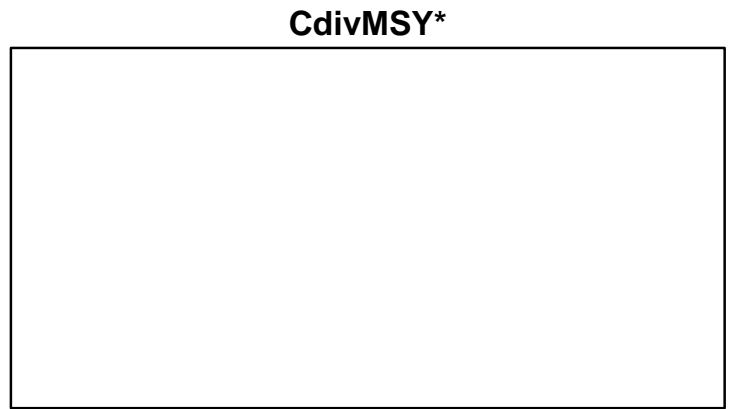
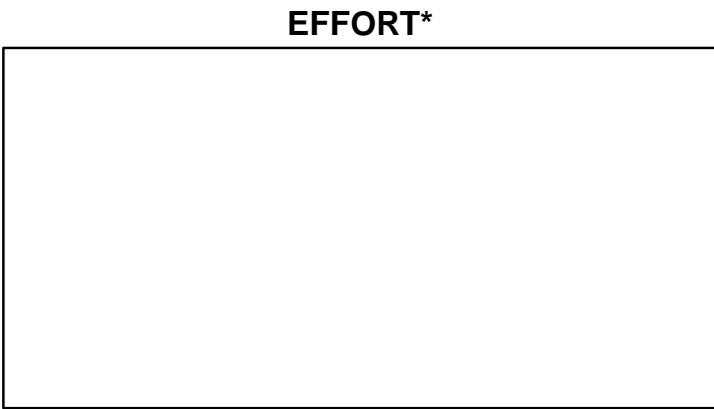
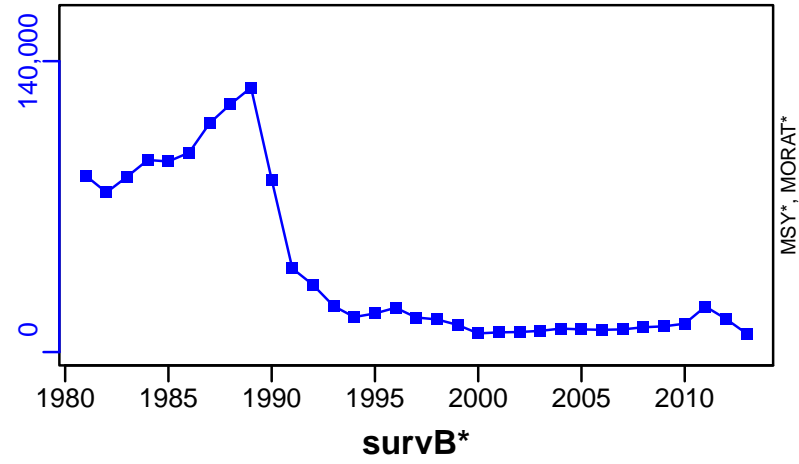
Recruits\*



# Walleye pollock Nemuro Strait [APOLLNEMS]

TC-MT, TL\*, RecC\* (1981-2013-JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



## Walleye pollock Sea of Japan North [APOLLNSJ]

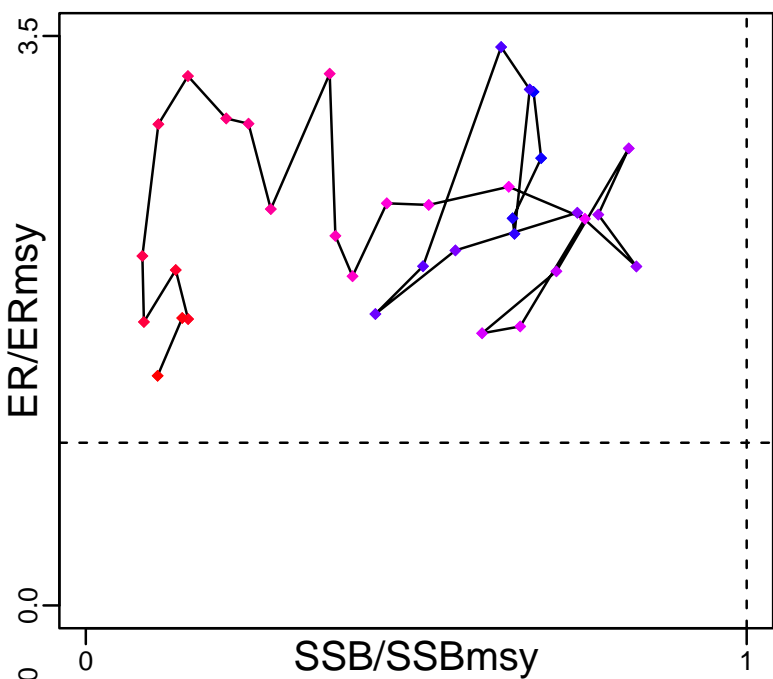
Metadata	
<b>Scientific Name</b>	Theragra chalcogramma
<b>Current Assess ID</b>	FAFRFJ-APOLLNSJ-1970-2013-JPNIMP2016
<b>Area</b>	Sea of Japan North
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	619,267
<b>SSBmsy</b>	SSBmsy-MT	2013	346,887
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.073
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	45,207
<b>M</b>	M-1/yr	2013	0.25
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

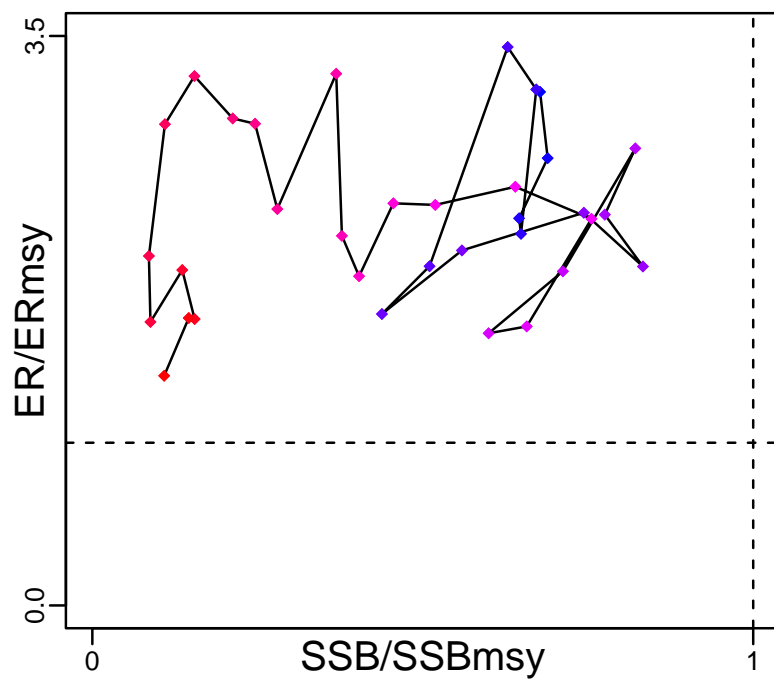
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	95,800	-	2
<b>SSB</b>	SSB-MT	2013	37,700	Both	4
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	$1.34 \times 10^8$	-	2
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.103	-	-
<b>TC</b>	TC-MT	2013	9870		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.155		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.109		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	1.411		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Walleye pollock Sea of Japan North [APOLLNSJ]

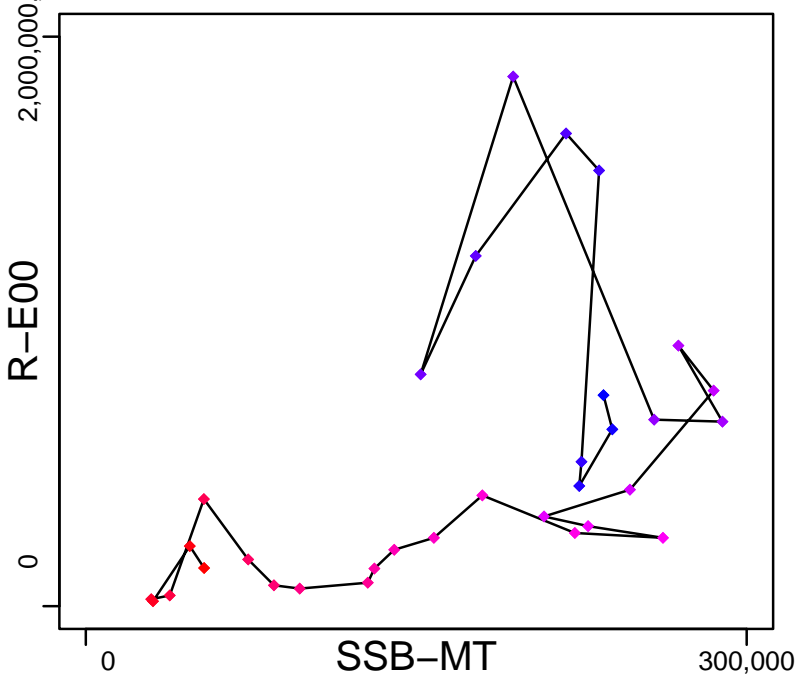
Kobe MSYpref (1970–2013–JPNIMP2016)



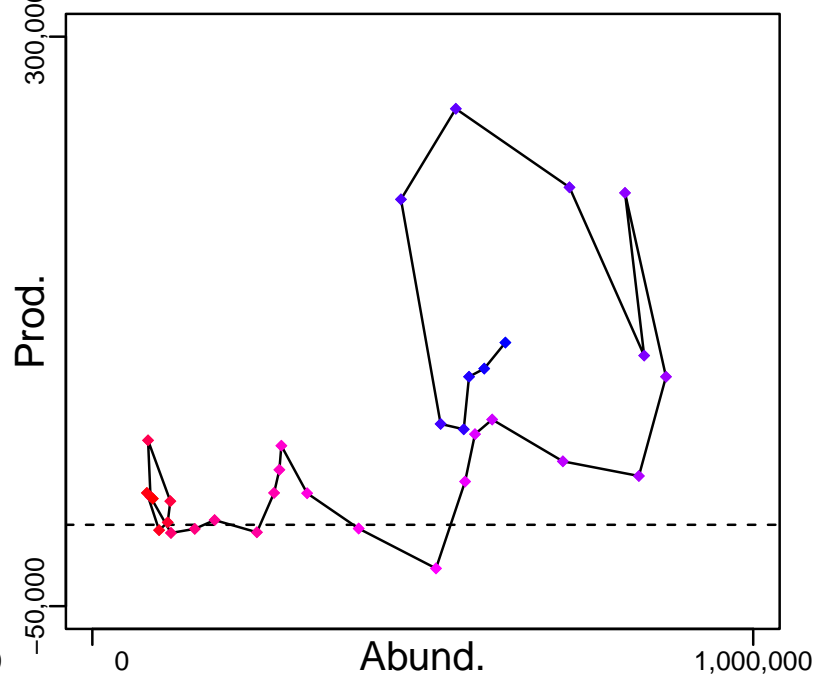
Kobe MGTpref (1970–2013–JPNIMP2016)



Spawner Recruit (1970–2013–JPNIMP2016)



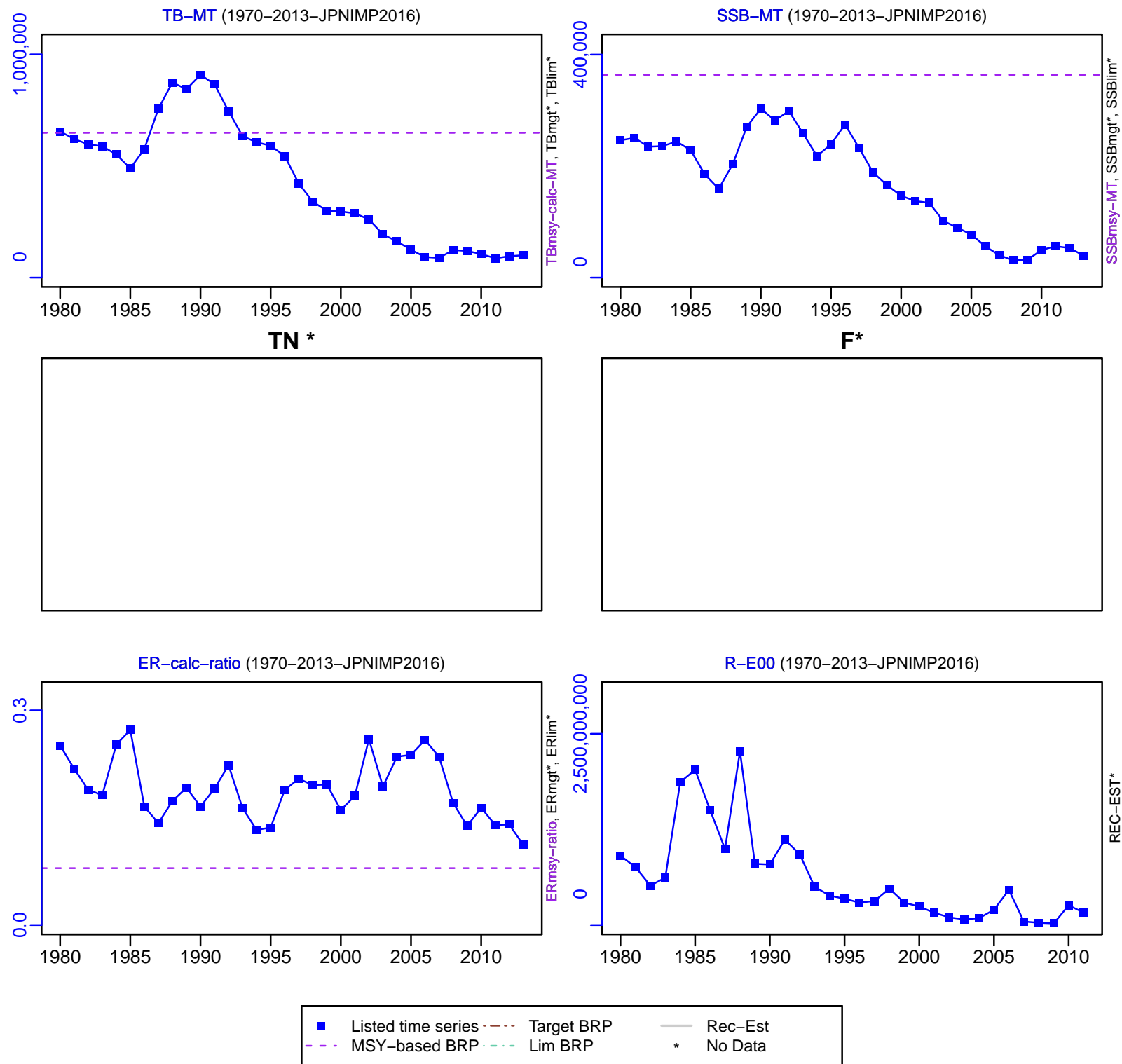
Production (1970–2013–JPNIMP2016)



◆ Start Year ◆ End Year \* No Data



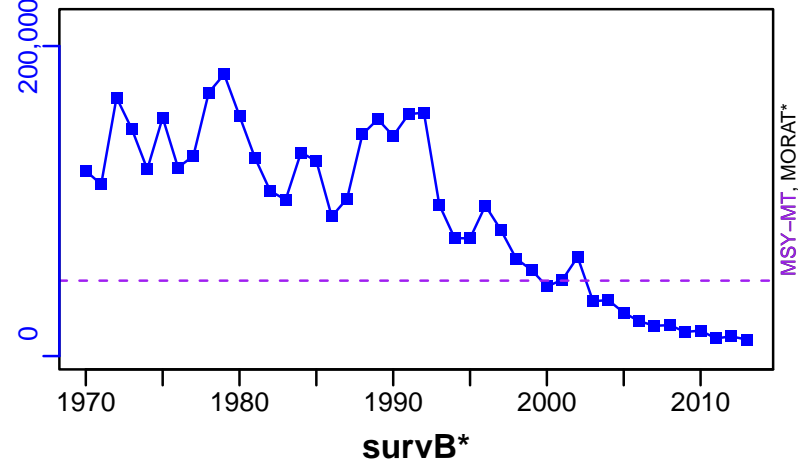
# Walleye pollock Sea of Japan North [APOLLNSJ]



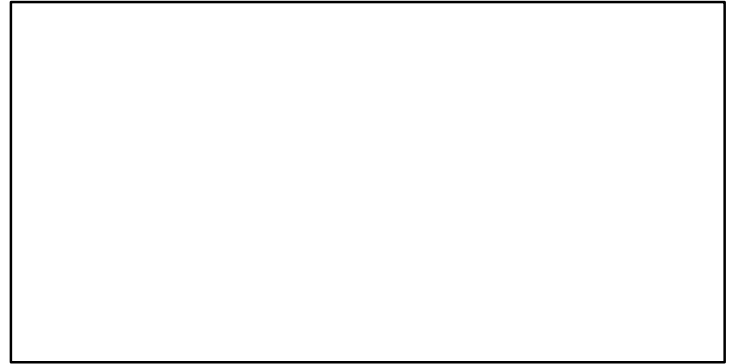
# Walleye pollock Sea of Japan North [APOLLNSJ]

TC-MT, TL\*, RecC\* (1970-2013-JPNIMP2016)

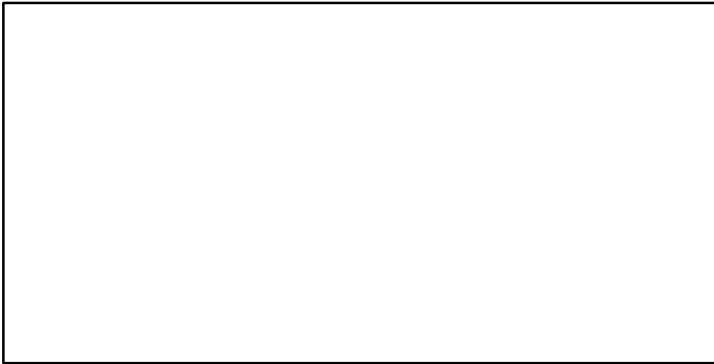
TAC\*, Cpair\*, Cadv\*



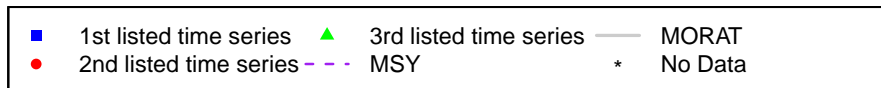
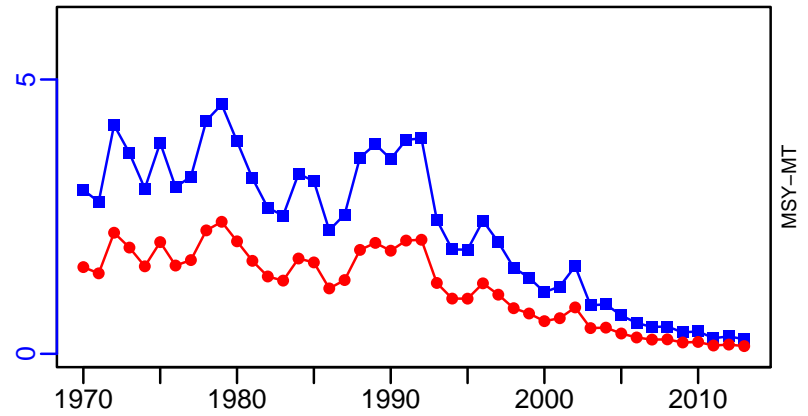
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1970-2013-JPNIMP2016)



## Walleye pollock Okhotsk Sea [APOLLOKS]

Metadata	
<b>Scientific Name</b>	Theragra chalcogramma
<b>Current Assess ID</b>	FAFRFJ-APOLLOKS-1980-2013-JPNIMP2016
<b>Area</b>	Okhotsk Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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>	M-1/yr	2013	0.25
<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	2013	36,400		
<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\***



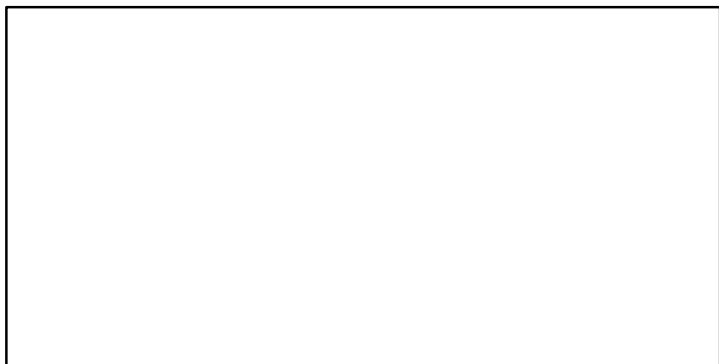
**Production\***



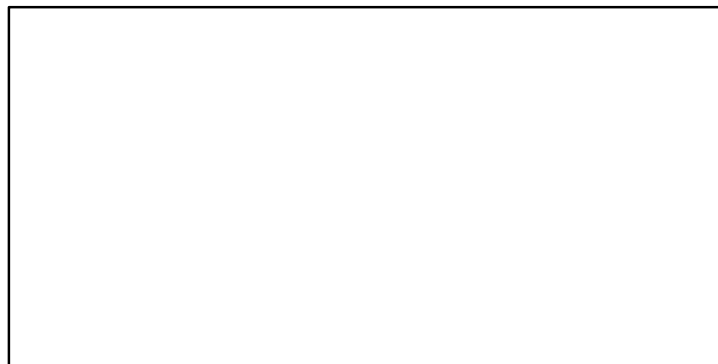
◆ Start Year    ◆ End Year    \* No Data

Walleye pollock Okhotsk Sea [APOLLOKS]

**TB\***



**SSB\***



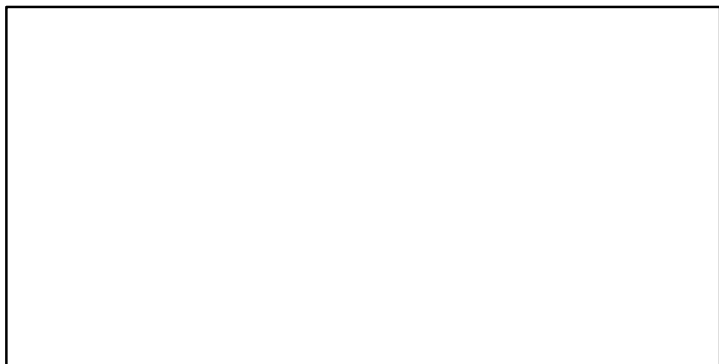
**TN \***



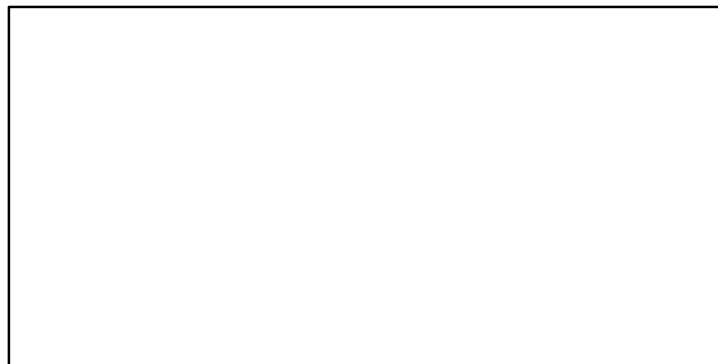
**F\***



**ER\***



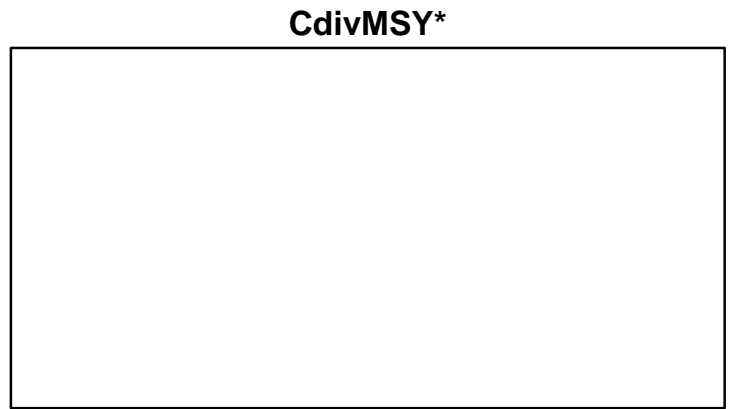
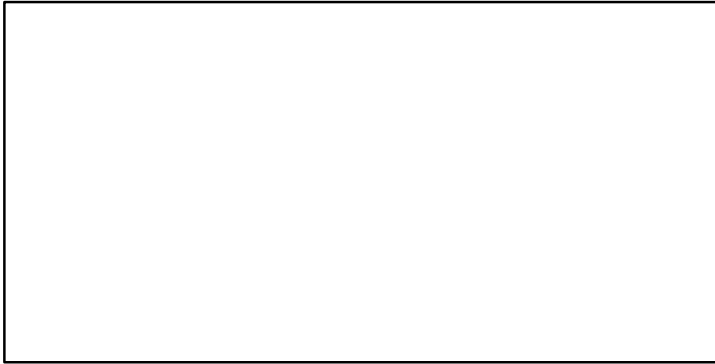
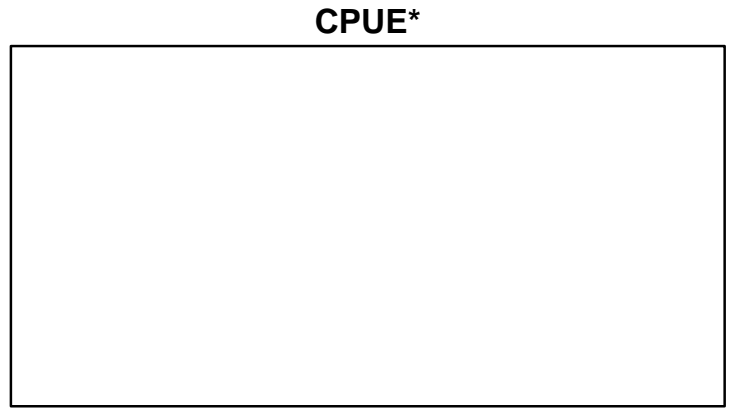
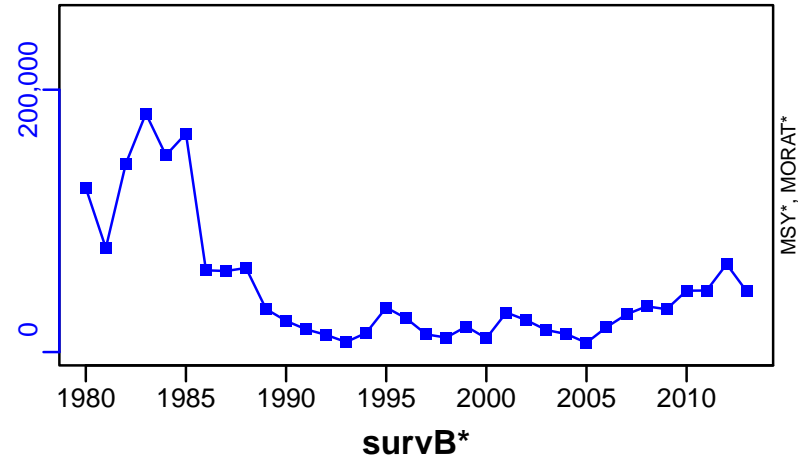
**Recruits\***



# Walleye pollock Okhotsk Sea [APOLLOKS]

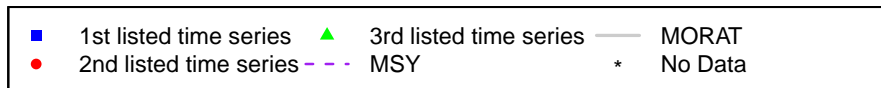
TC-MT, TL\*, RecC\* (1980–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CdivMSY\*



## Walleye pollock Pacific Coast of Japan [APOLLJPJN]

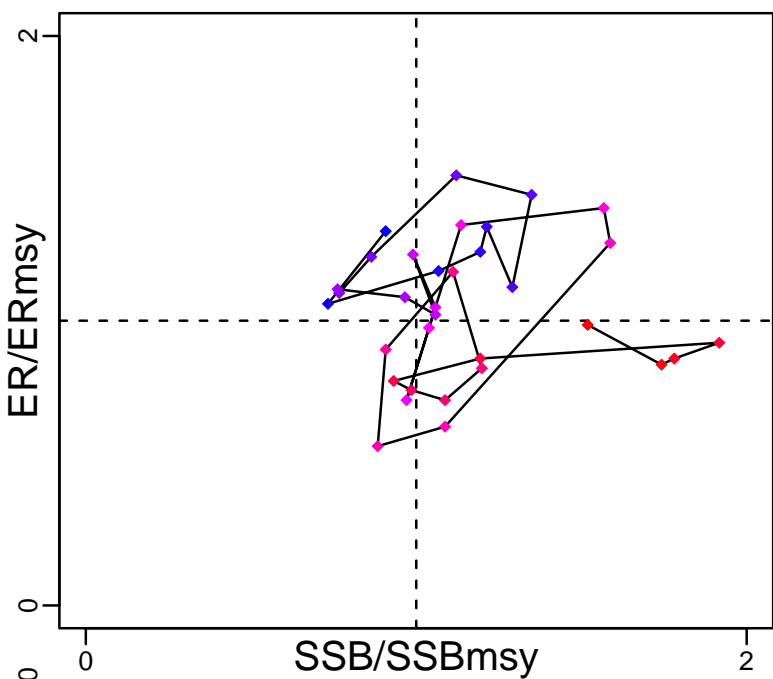
Metadata	
<b>Scientific Name</b>	Theragra chalcogramma
<b>Current Assess ID</b>	FAFRFJ-APOLLJPJN-1975-2013-JPNIMP2016
<b>Area</b>	Pacific Coast of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	1,013,493
<b>SSBmsy</b>	SSBmsy-MT	2013	206,052
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.174
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	176,348
<b>M</b>	M-1/yr	2013	0.25
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

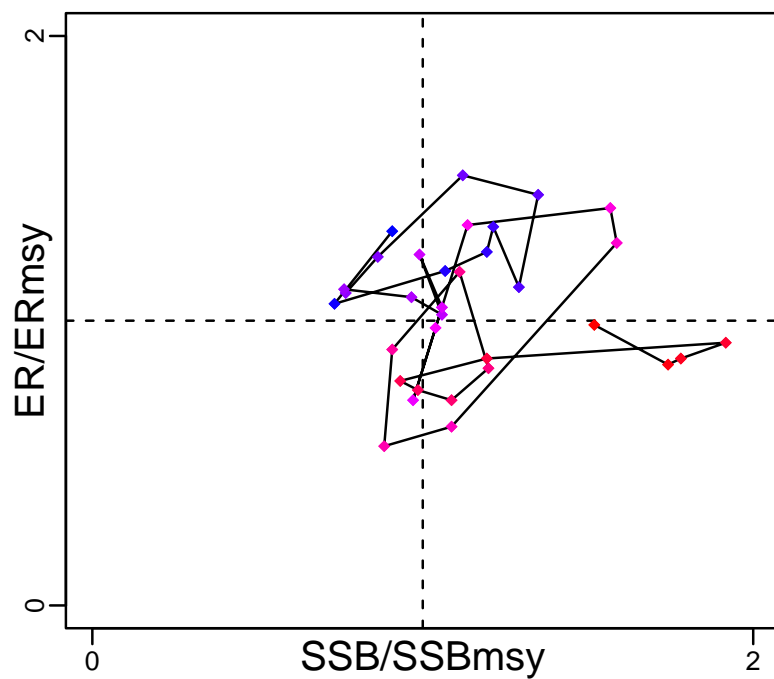
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	910,000	-	0
<b>SSB</b>	SSB-MT	2013	313,000	Both	4
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	$1.53 \times 10^9$	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.171	-	-
<b>TC</b>	TC-MT	2013	156,000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.898		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	1.519		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	0.985		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Walleye pollock Pacific Coast of Japan [APOLLJPN]

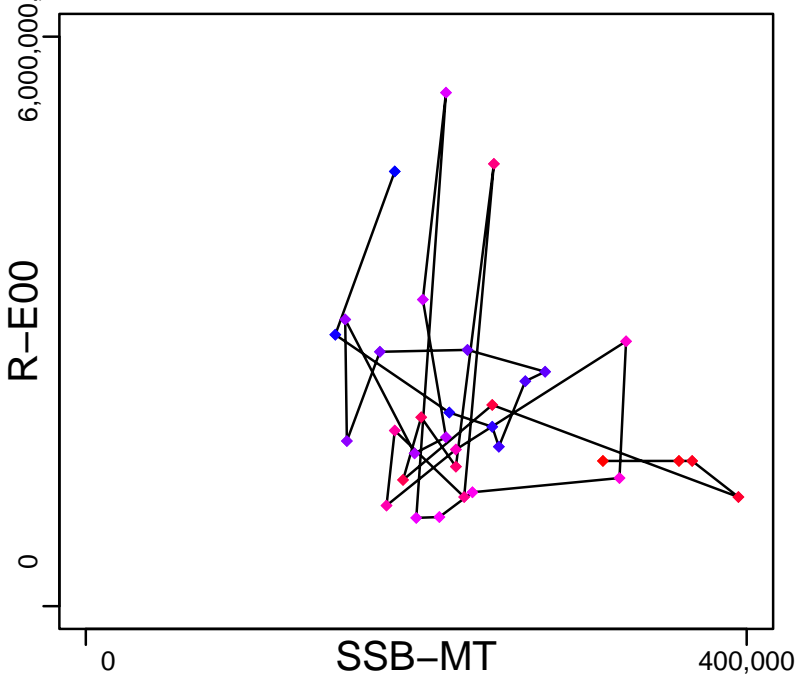
Kobe MSYpref (1975–2013–JPNIMP2016)



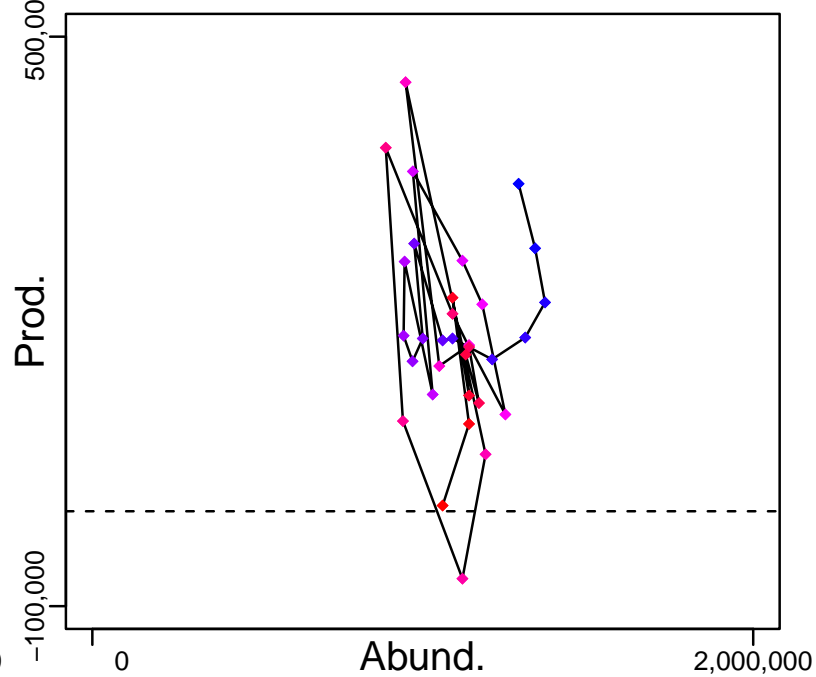
Kobe MGTpref (1975–2013–JPNIMP2016)



Spawner Recruit (1975–2013–JPNIMP2016)



Production (1975–2013–JPNIMP2016)

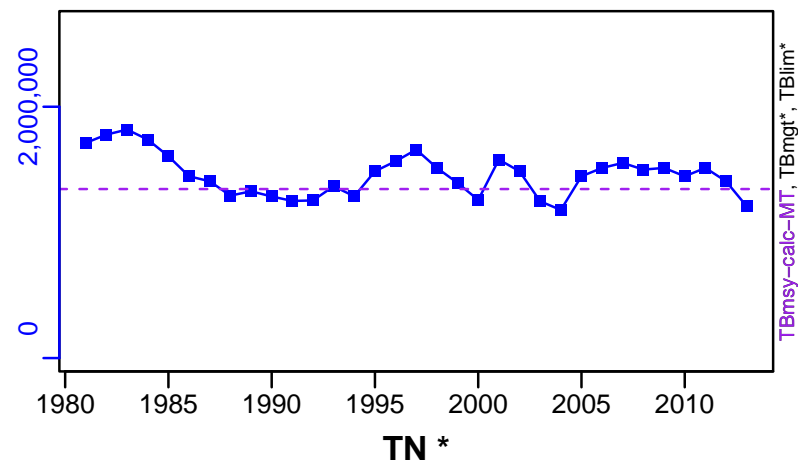


◆ Start Year ◆ End Year \* No Data

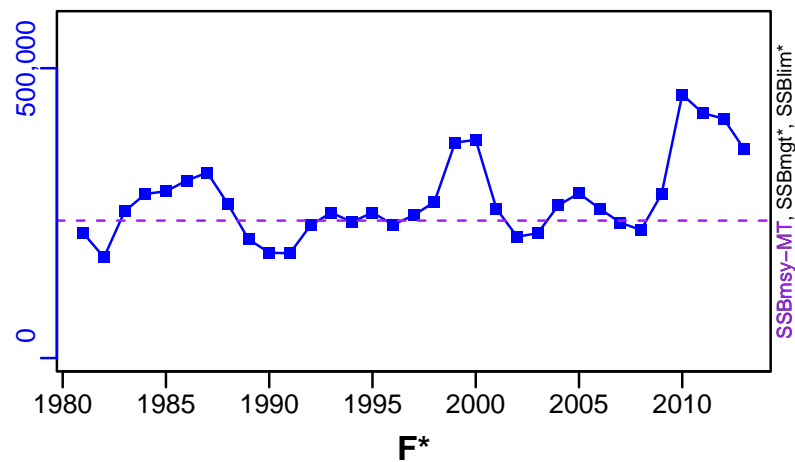


# Walleye pollock Pacific Coast of Japan [APOLLJPJN]

TB-MT (1975-2013-JPNIMP2016)



SSB-MT (1975-2013-JPNIMP2016)



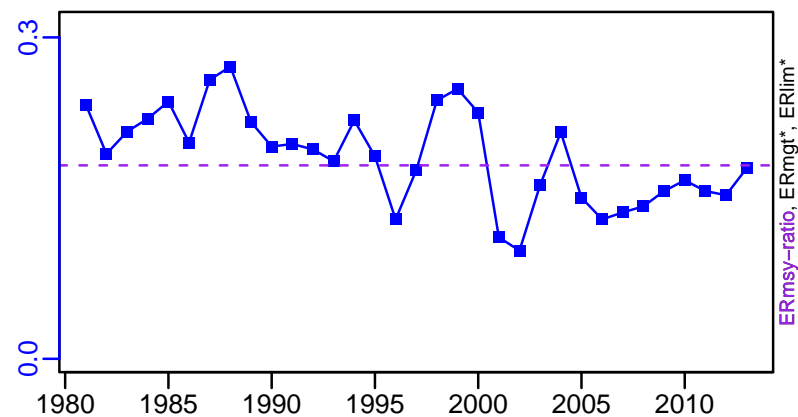
TN \*



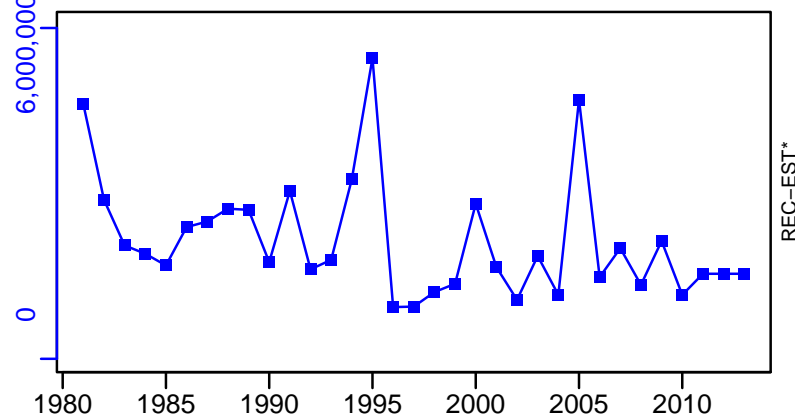
F\*



ER-calc-ratio (1975-2013-JPNIMP2016)

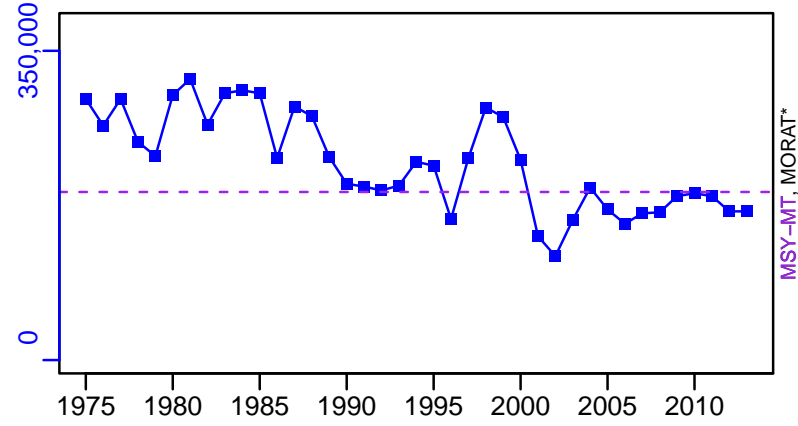


R-E00 (1975-2013-JPNIMP2016)



# Walleye pollock Pacific Coast of Japan [APOLLPJPN]

TC-MT, TL\*, RecC\* (1975–2013–JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



survB\*



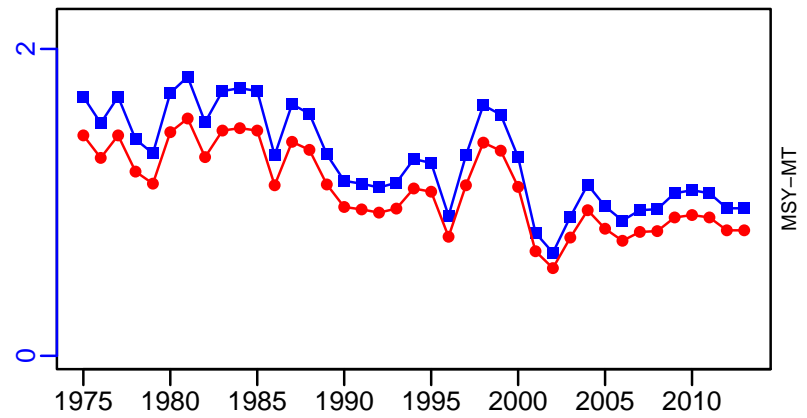
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1975–2013–JPNIMP2016)



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

## Alaskan pink shrimp Sea of Japan [APSHRIMPSOJ]

Metadata	
<b>Scientific Name</b>	Pandalus eous
<b>Current Assess ID</b>	FAFRFJ-APSHRIMPSOJ-1985-2013-JPNIMP2016
<b>Area</b>	Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	1730		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year    ◆ End Year    \* No Data

Alaskan pink shrimp Sea of Japan [APSHRIMPSOJ]

TB\*



SSB\*



TN \*



F\*



ER\*



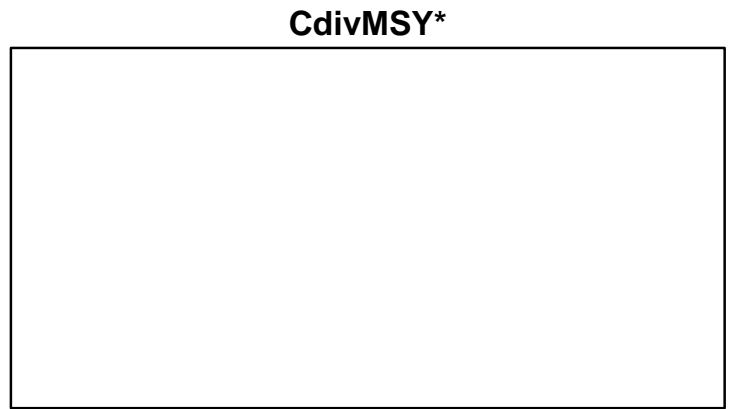
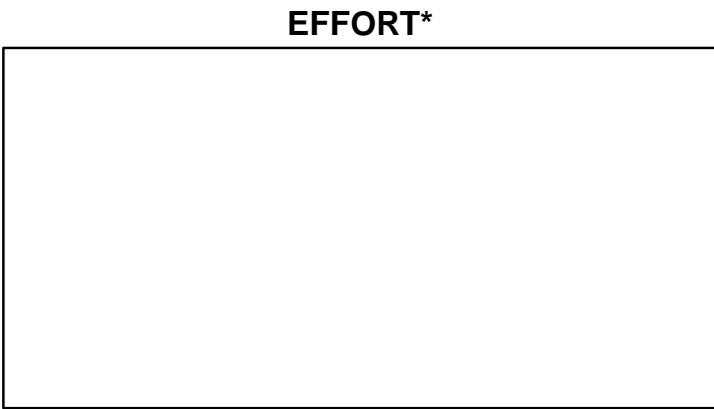
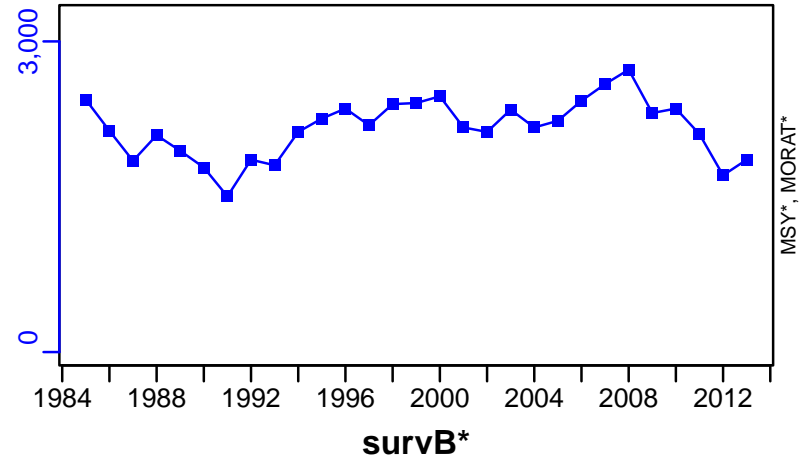
Recruits\*



# Alaskan pink shrimp Sea of Japan [APSHRIMPSOJ]

TC-MT, TL\*, RecC\* (1985–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



## Arabesque greenling Nemuro Strait [ARGREENNEMS]

Metadata	
<b>Scientific Name</b>	Pleurogrammus azonus
<b>Current Assess ID</b>	FAFRFJ-ARGREENNEMS-1985-2013-JPNIMP2016
<b>Area</b>	Nemuro Strait
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	4090		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year   ◆ End Year   \* No Data



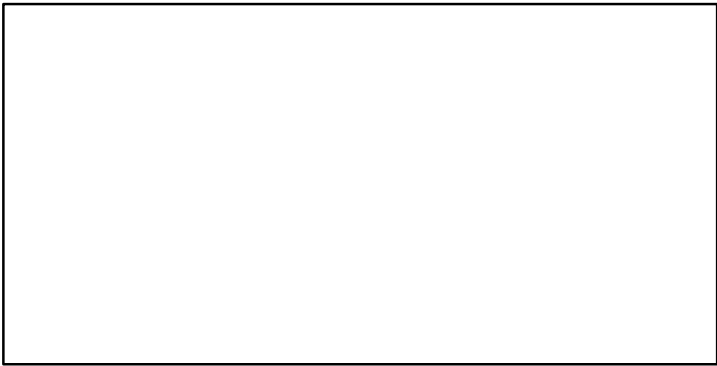
TB\*



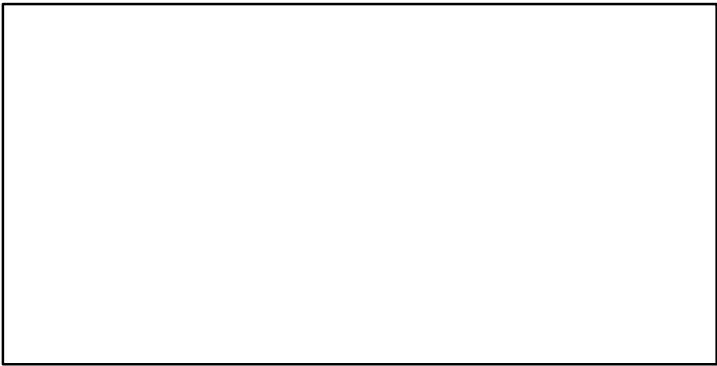
SSB\*



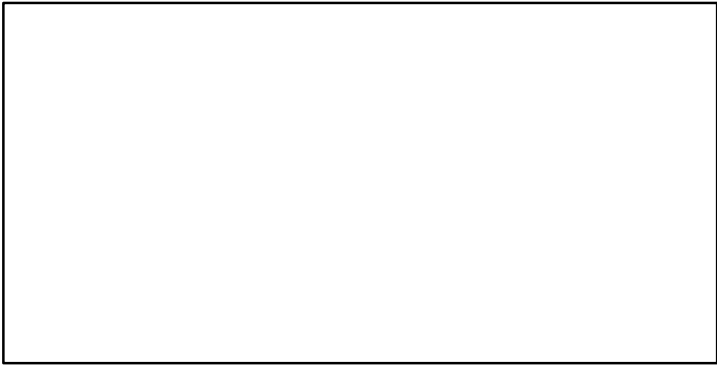
TN \*



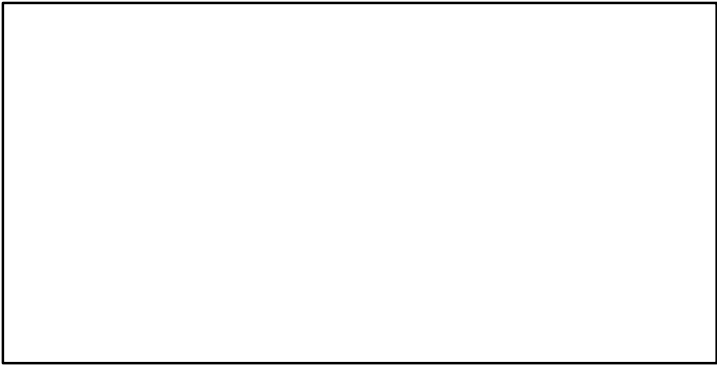
F\*



ER\*



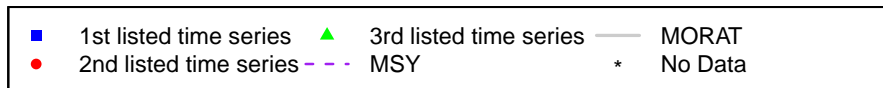
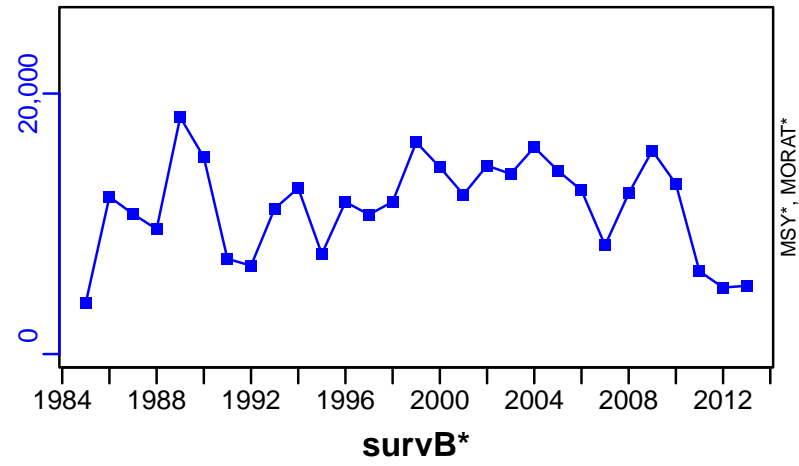
Recruits\*



# Arabesque greenling Nemuro Strait [ARGREENNEMS]

TC-MT, TL\*, RecC\* (1985–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



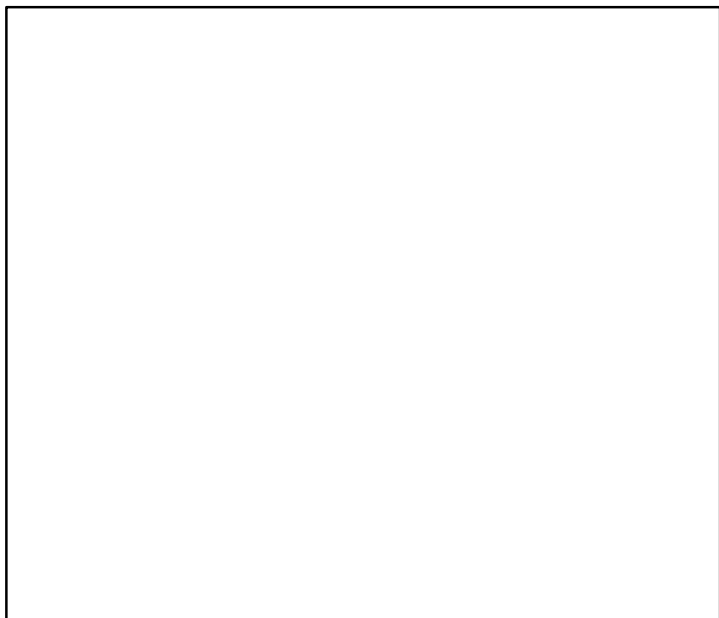
## Arabesque greenling North coast of Hokkaido [ARGREENNHOKK]

Metadata	
<b>Scientific Name</b>	Pleurogrammus azonus
<b>Current Assess ID</b>	FAFRFJ-ARGREENNHOKK-1980-2013-JPNIMP2016
<b>Area</b>	North coast of Hokkaido
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

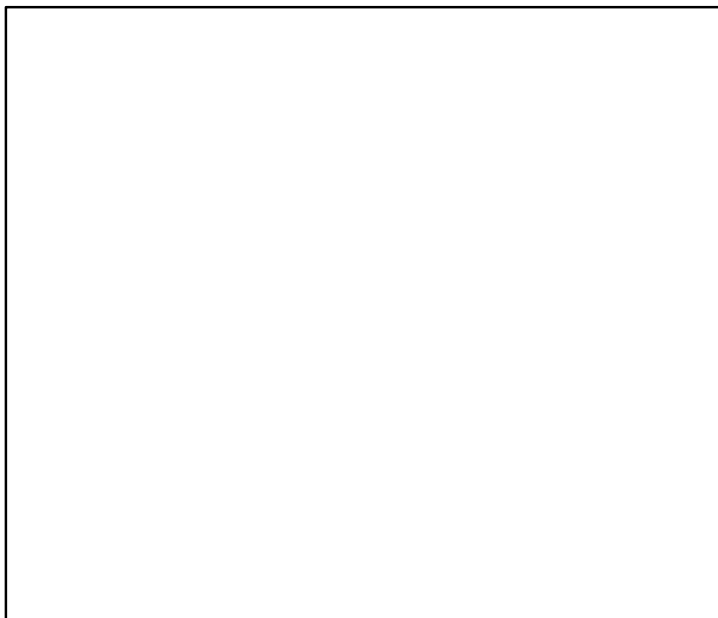
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	46,300		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

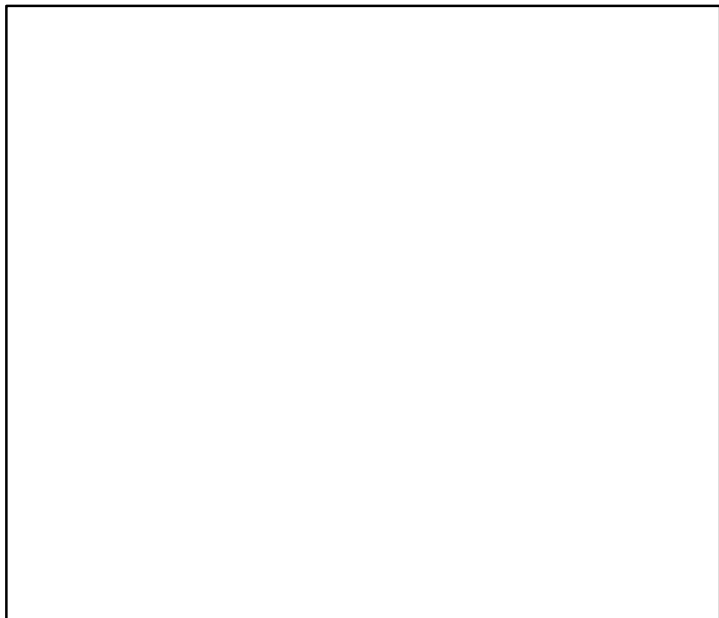
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



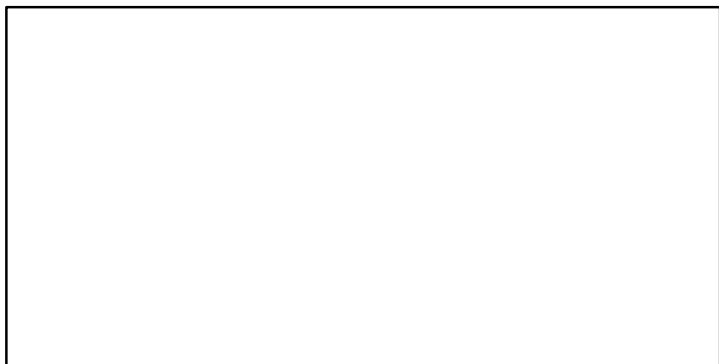
**Production\***



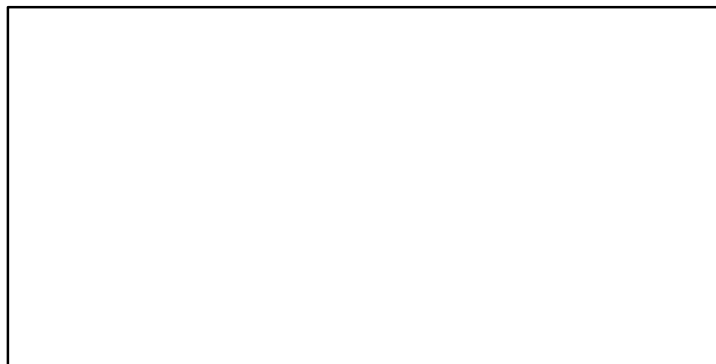
◆ Start Year ◆ End Year \* No Data

Arabesque greenling North coast of Hokkaido [ARGREENNHOKK]

**TB\***



**SSB\***



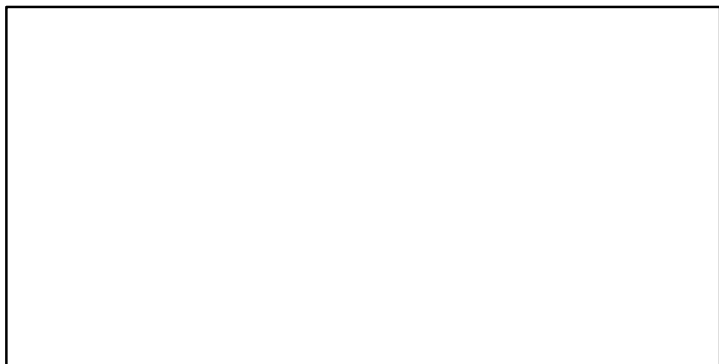
**TN \***



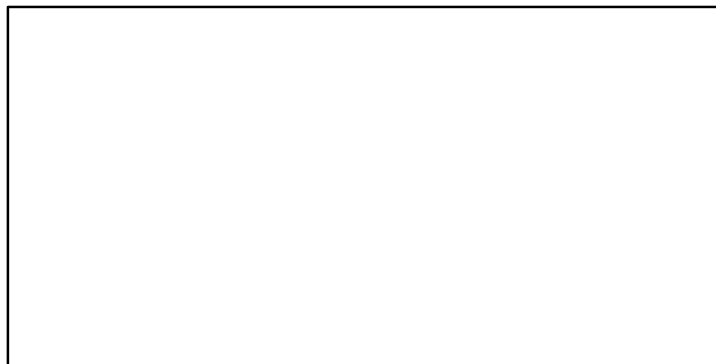
**F\***



**ER\***



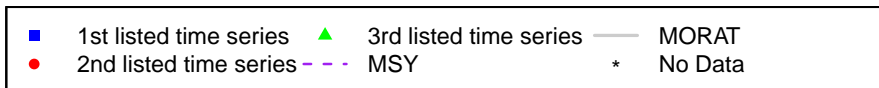
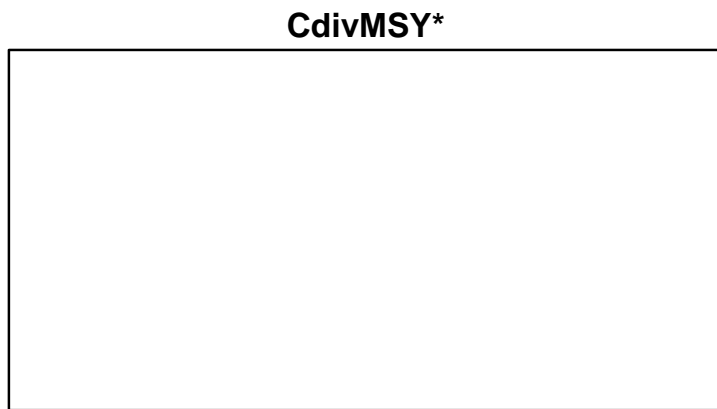
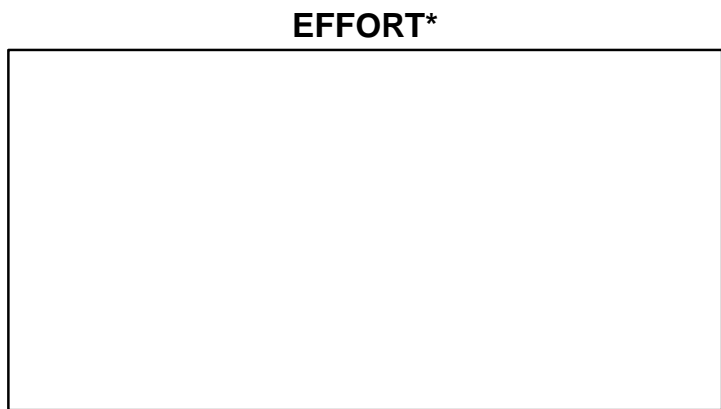
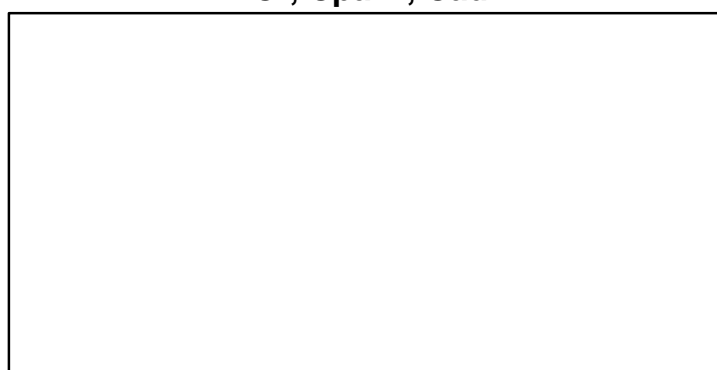
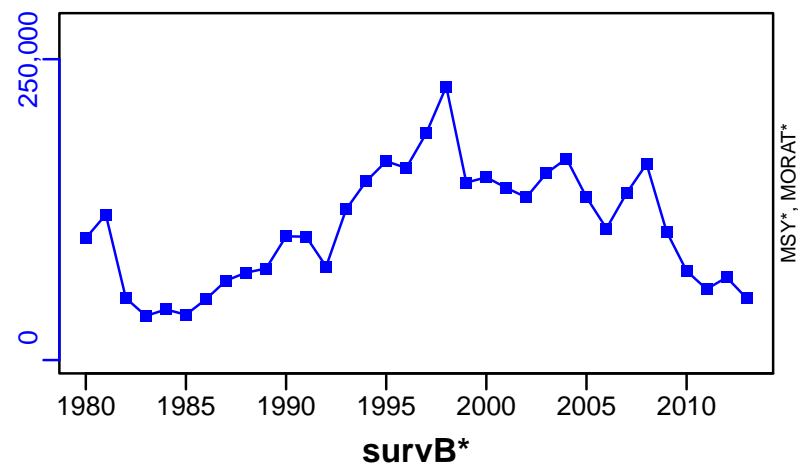
**Recruits\***



# Arabesque greenling North coast of Hokkaido [ARGREENNHOKK]

TC-MT, TL\*, RecC\* (1980–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



## Arabesque greenling South coast of Hokkaido [ARGREENSHOKK]

Metadata	
<b>Scientific Name</b>	Pleurogrammus azonus
<b>Current Assess ID</b>	FAFRFJ-ARGREENSHOKK-1975-2013-JPNIMP2016
<b>Area</b>	South coast of Hokkaido
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	2300		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ◆ End Year \* No Data



Arabesque greenling South coast of Hokkaido [ARGREENSHOKK]

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***

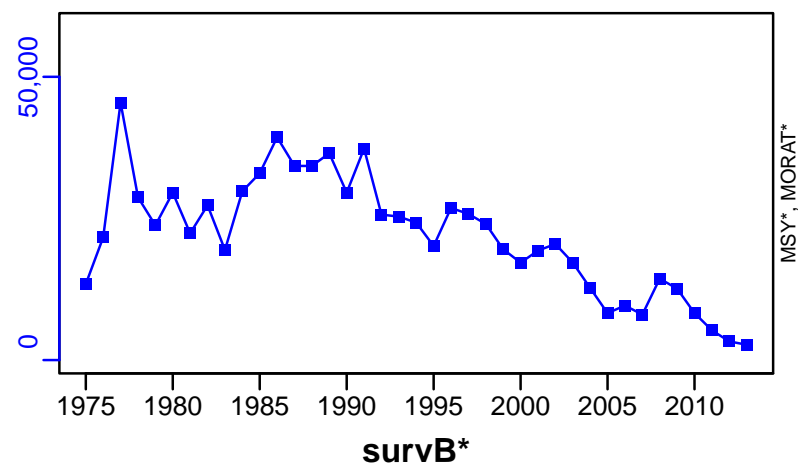


**Recruits\***



# Arabesque greenling South coast of Hokkaido [ARGREENSHOKK]

TC-MT, TL\*, RecC\* (1975–2013–JPNIMP2016)



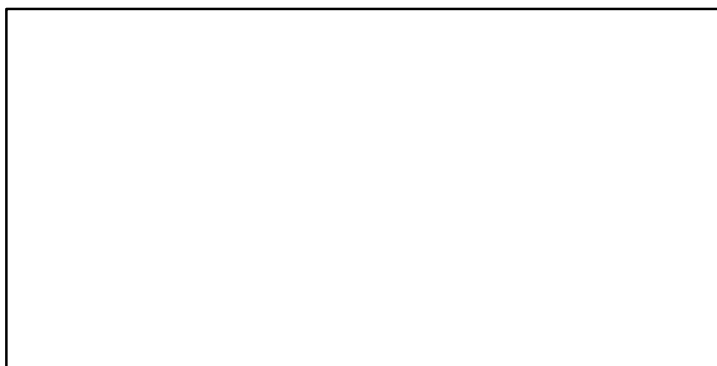
TAC\*, Cpair\*, Cadv\*



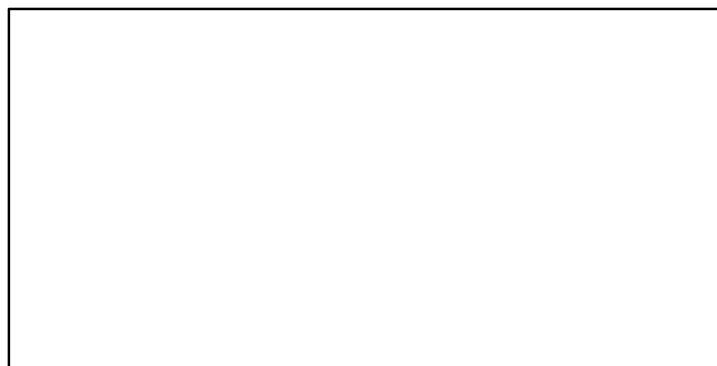
CPUE\*



EFFORT\*



CdivMSY\*



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

## Amberstripe scad East China Sea [ASCADECS]

Metadata	
<b>Scientific Name</b>	Decapterus muroadsi
<b>Current Assess ID</b>	FAFRFJ-ASCADECS-1973-2018-KUROTA
<b>Area</b>	East China Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2018

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2018	7727		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

Amberstripe scad East China Sea [ASCADECS]

TB\*



SSB\*



TN \*



F\*



ER\*

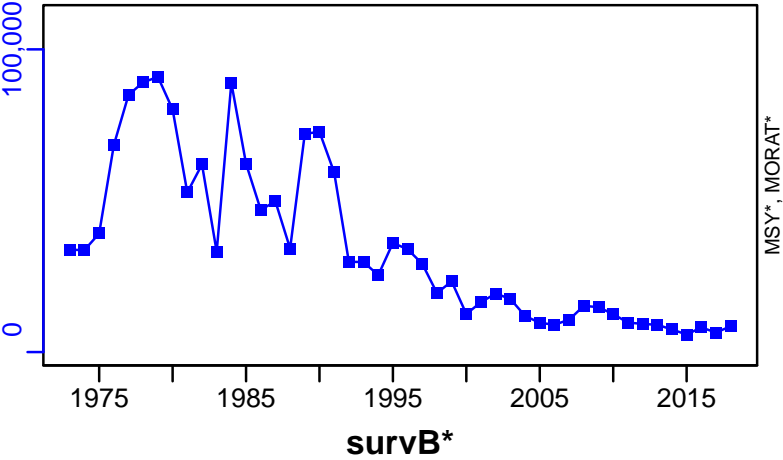


Recruits\*



Amberstripe scad East China Sea [ASCADECS]

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



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Spotted mackerel East China Sea [BMACKECS]

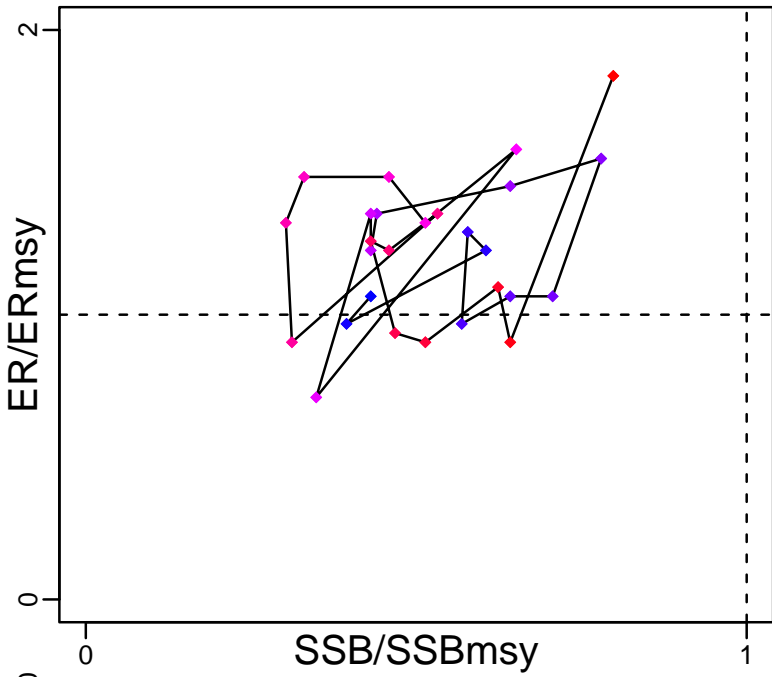
Metadata	
<b>Scientific Name</b>	Scomber australasicus
<b>Current Assess ID</b>	FAFRFJ-BMACKECS-1973-2018-KUROTA
<b>Area</b>	East China Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2018, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2018	245,161
<b>SSBmsy</b>	SSBmsy-MT	2018	109,000
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2018	0.31
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	109,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2018	76,000
<b>M</b>	M-1/yr	2018	0.4
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	51,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

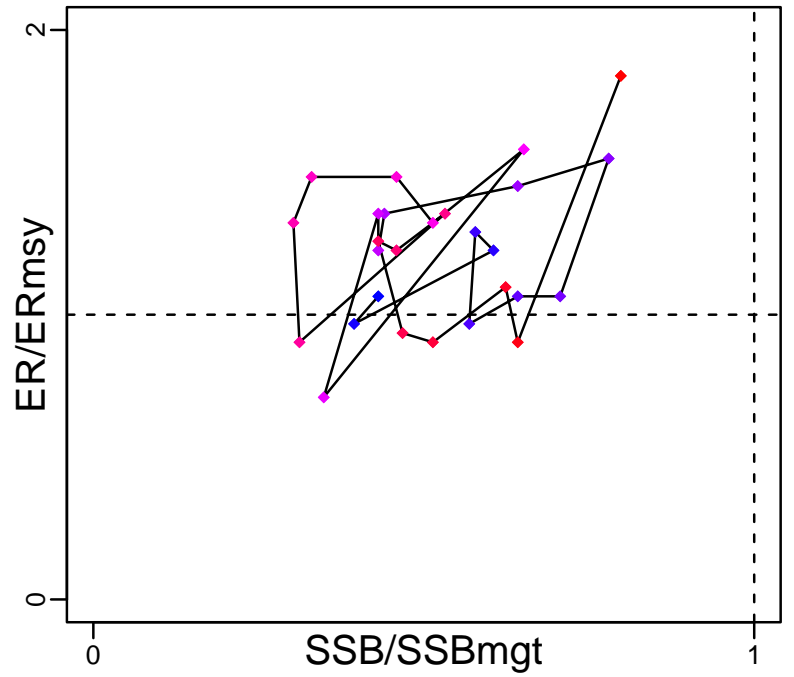
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	204,000	Both	0
<b>SSB</b>	SSB-MT	2018	87,000	Both	1
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	$3.93 \times 10^8$	Both	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.57	Both	-
<b>TC</b>	TC-MT	2018	40,966		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2018	0.832		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2018	0.798		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2018	1.839		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	0.798		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Spotted mackerel East China Sea [BMACKECS]

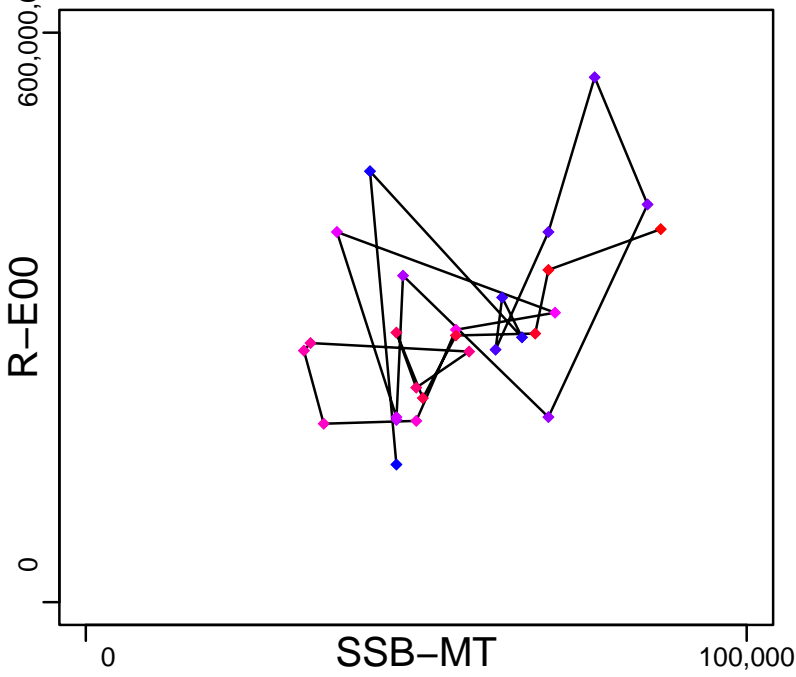
Kobe MSYpref (1973–2018–KUROTA)



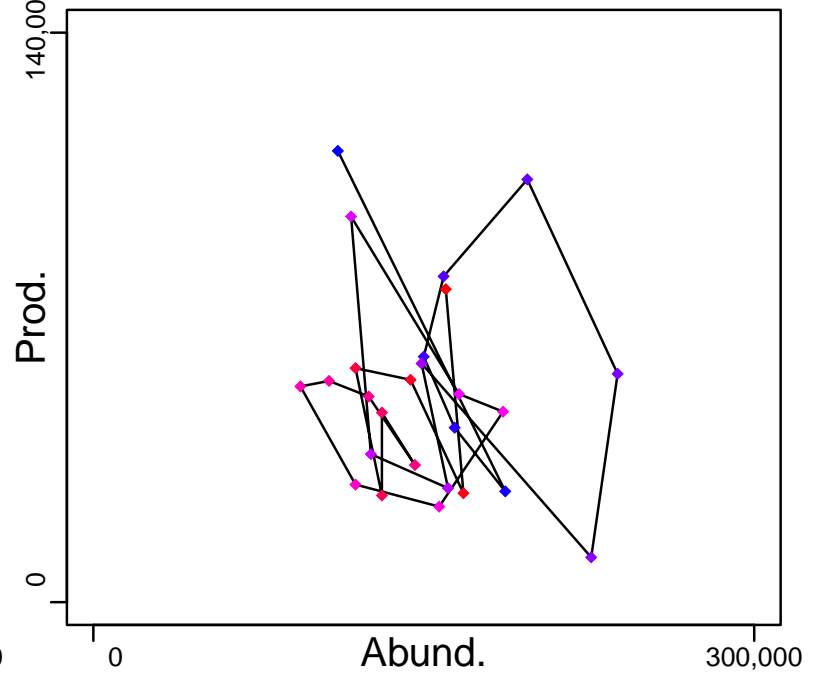
Kobe MGTpref (1973–2018–KUROTA)



Spawner Recruit (1973–2018–KUROTA)



Production (1973–2018–KUROTA)

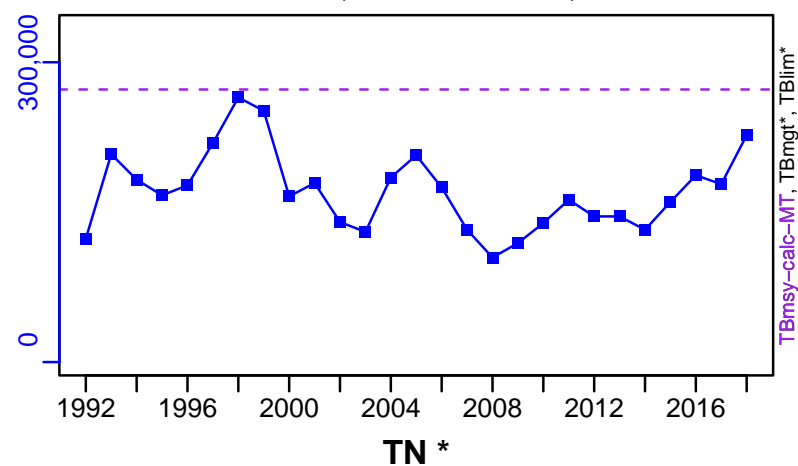


◆ Start Year ◆ End Year \* No Data

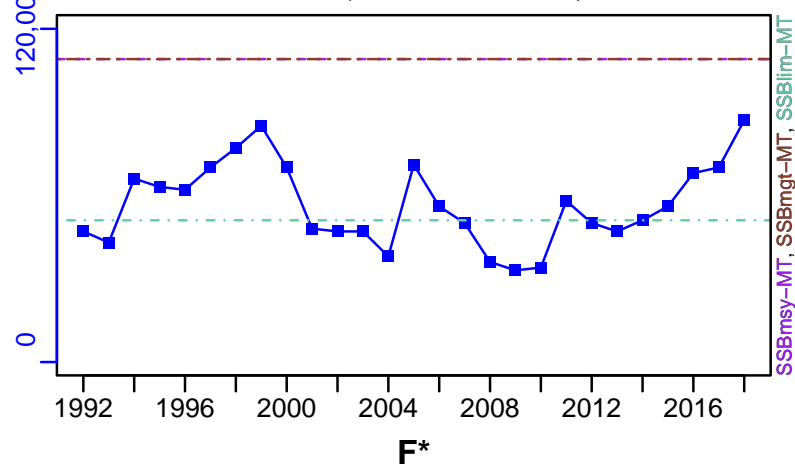


# Spotted mackerel East China Sea [BMACKECS]

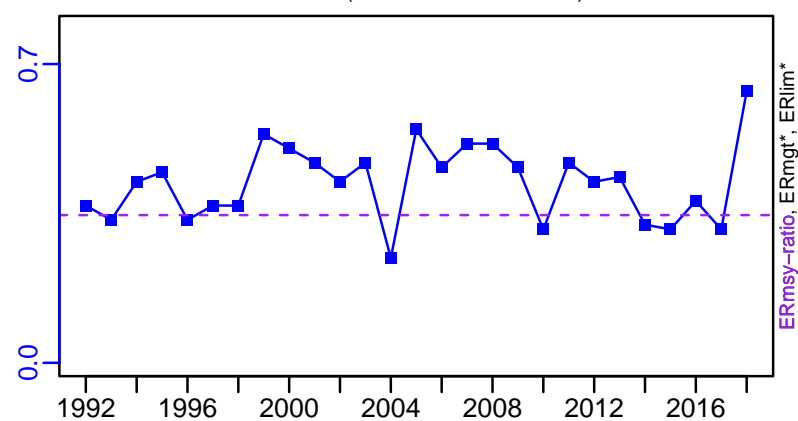
TB-MT (1973–2018–KUROTA)



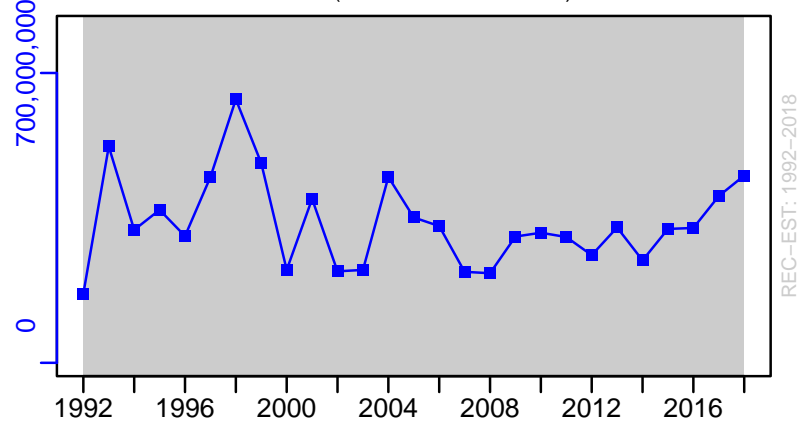
SSB-MT (1973–2018–KUROTA)



ER-ratio (1973–2018–KUROTA)

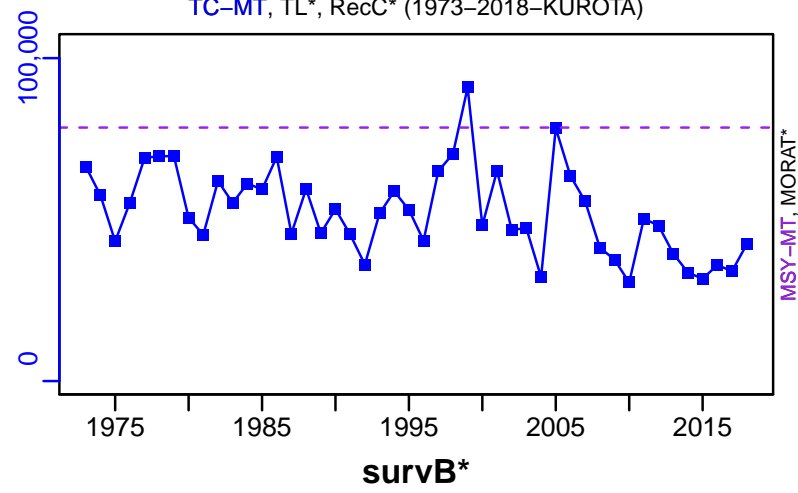


R-E00 (1973–2018–KUROTA)



# Spotted mackerel East China Sea [BMACKECS]

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



TAC\*, Cpair\*, Cadv\*



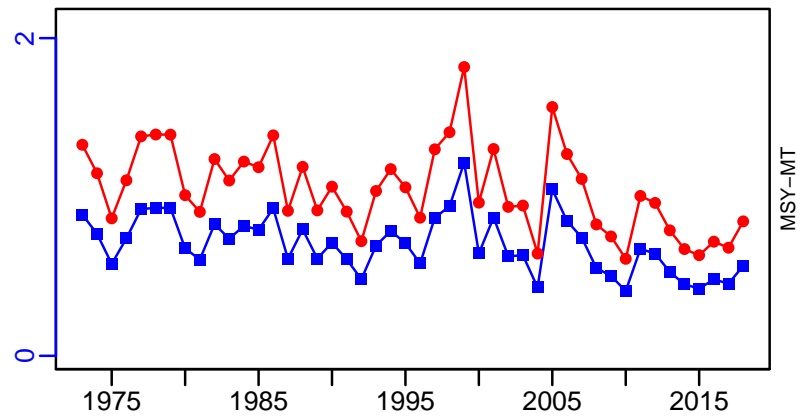
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1973–2018–KUROTA)



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

## Spotted mackerel Pacific Coast of Japan [BMACKPJPN]

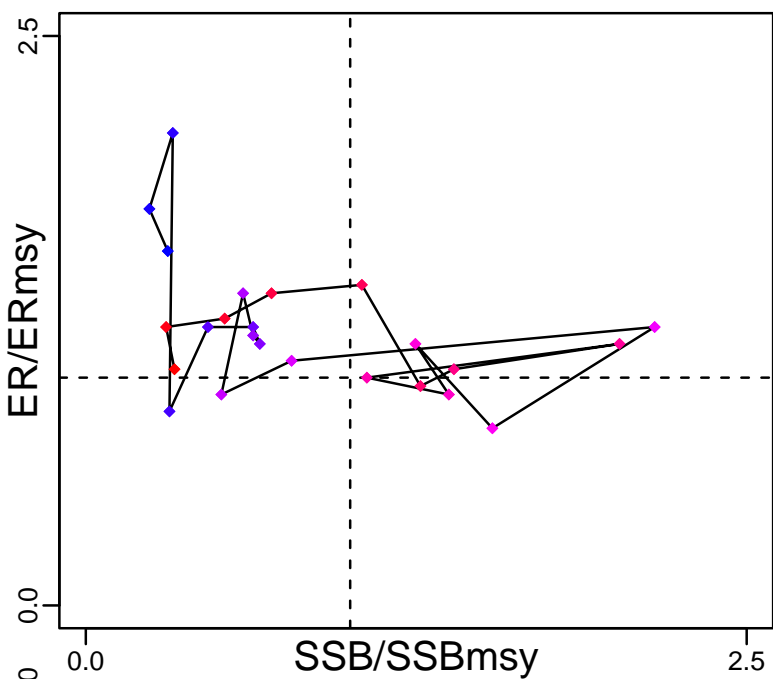
Metadata	
<b>Scientific Name</b>	Scomber australasicus
<b>Current Assess ID</b>	FAFRFJ-BMACKPJPN-1982-2018-KUROTA
<b>Area</b>	Pacific Coast of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2018	388,889
<b>SSBmsy</b>	SSBmsy-MT	2018	158,000
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2018	0.27
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	158,000
<b>Fmgt</b>	-	-	-
<b>ERMgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2018	105,000
<b>M</b>	M-1/yr	2018	0.4
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	50,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

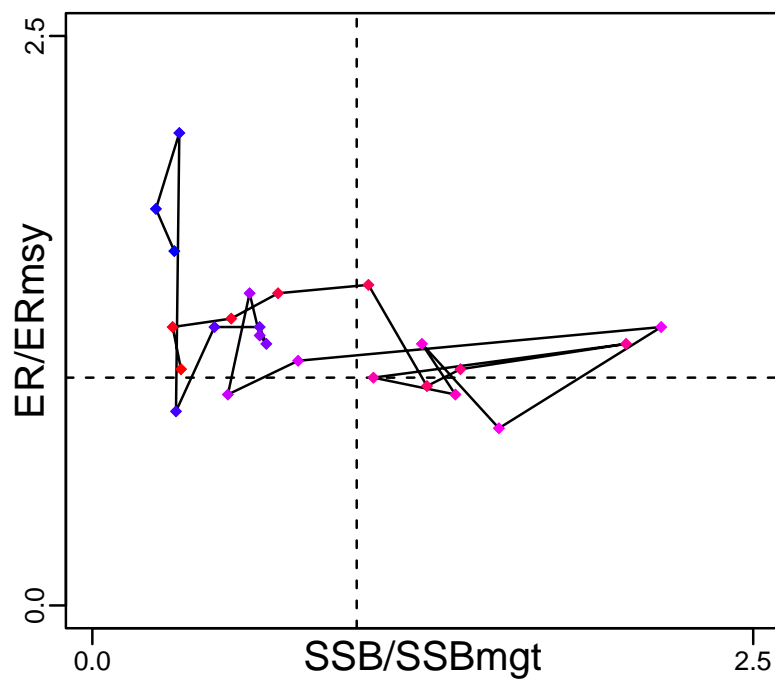
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	124,000	Both	0
<b>SSB</b>	SSB-MT	2018	53,000	Both	2
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	$2.92 \times 10^8$	Both	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.28	Both	-
<b>TC</b>	TC-MT	2018	34,879		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2018	0.319		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2018	0.335		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2018	1.037		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	0.335		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERMgt</b>	-	-	-		

# Spotted mackerel Pacific Coast of Japan [BMACKPJPN]

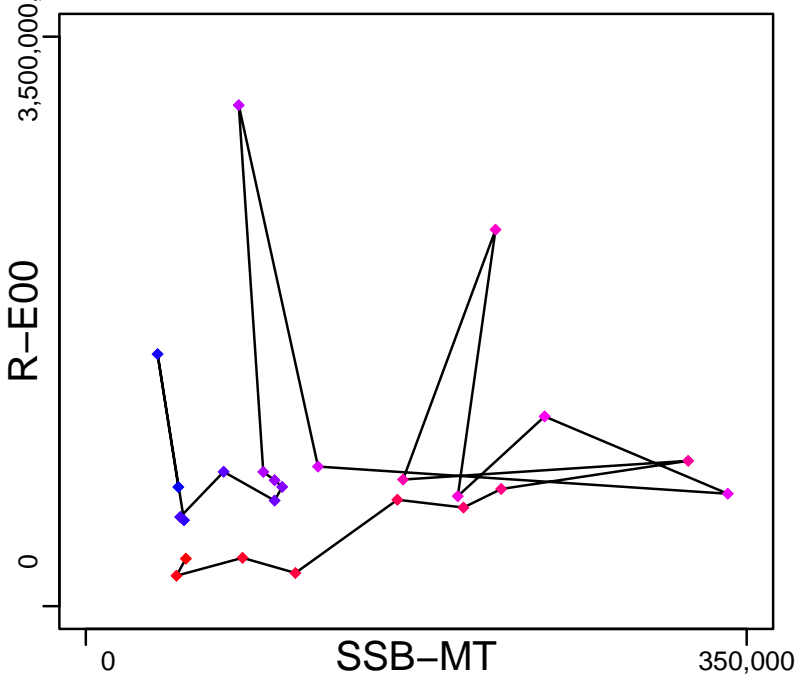
Kobe MSYpref (1982–2018–KUROTA)



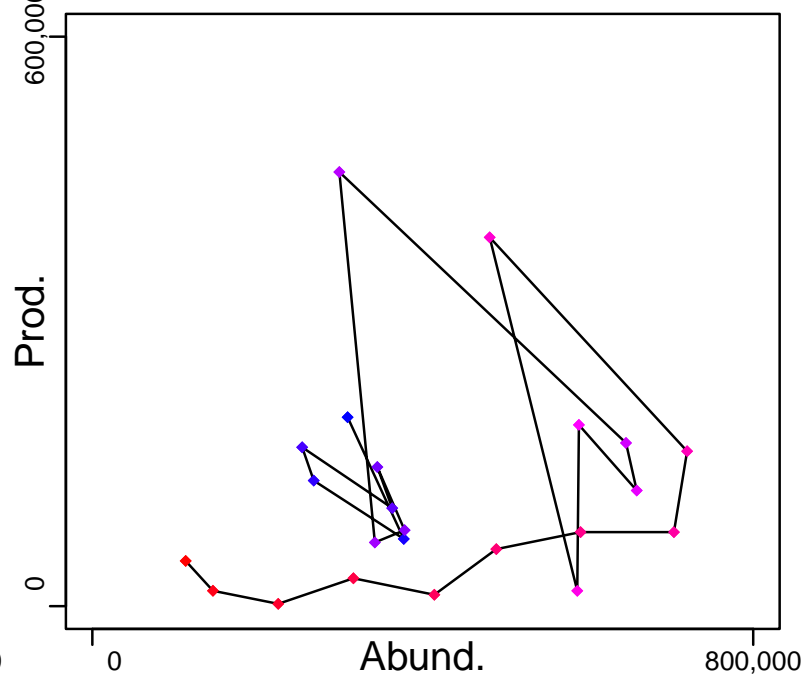
Kobe MGTpref (1982–2018–KUROTA)



Spawner Recruit (1982–2018–KUROTA)



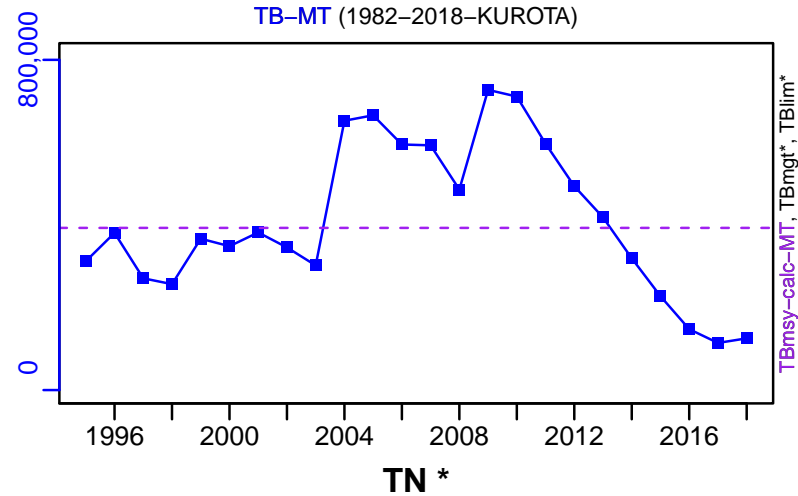
Production (1982–2018–KUROTA)



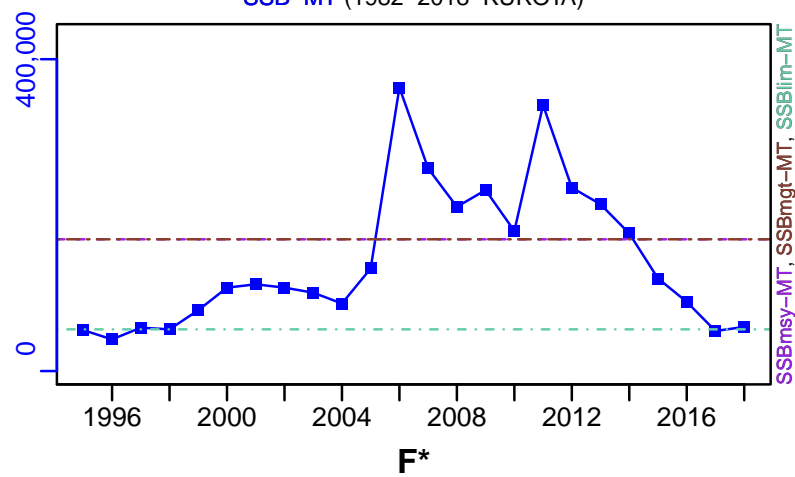
◆ Start Year ◆ End Year \* No Data

# Spotted mackerel Pacific Coast of Japan [BMACKPJPN]

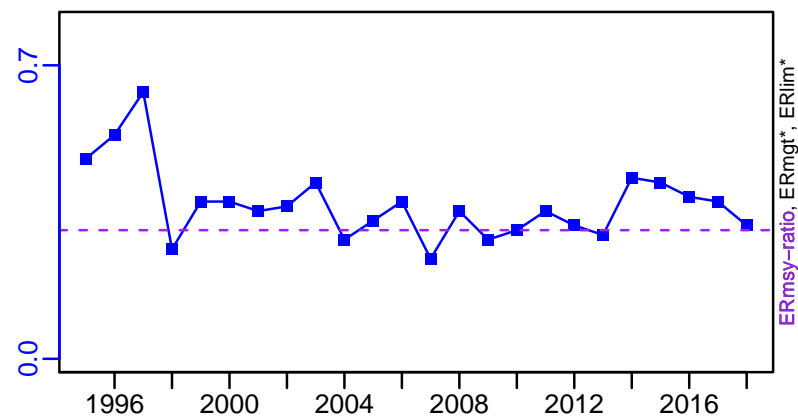
TB-MT (1982-2018-KUROTA)



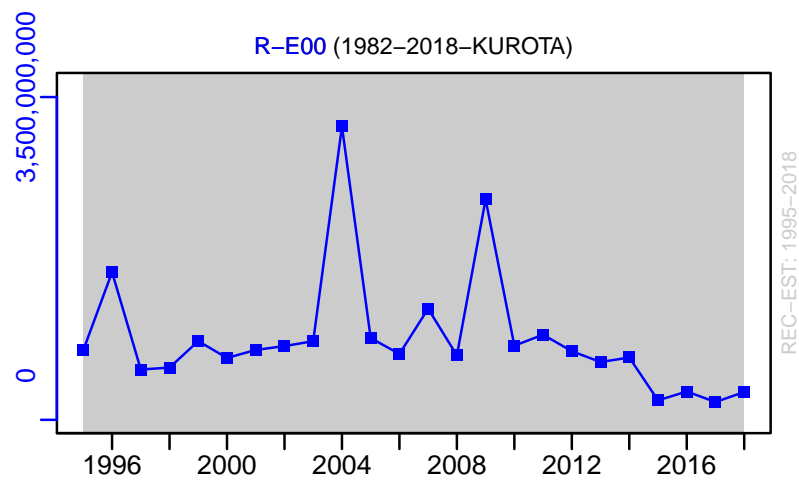
SSB-MT (1982-2018-KUROTA)



ER-ratio (1982-2018-KUROTA)

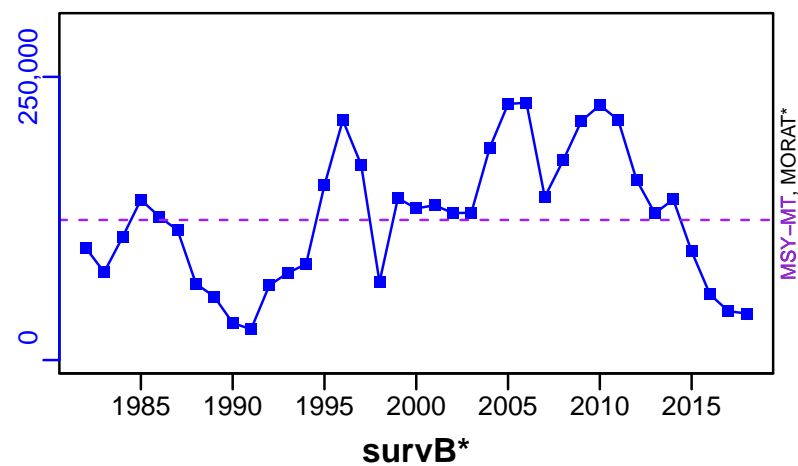


R-E00 (1982-2018-KUROTA)



# Spotted mackerel Pacific Coast of Japan [BMACKPJPN]

TC-MT, TL\*, RecC\* (1982-2018-KUROTA)



TAC\*, Cpair\*, Cadv\*



survB\*



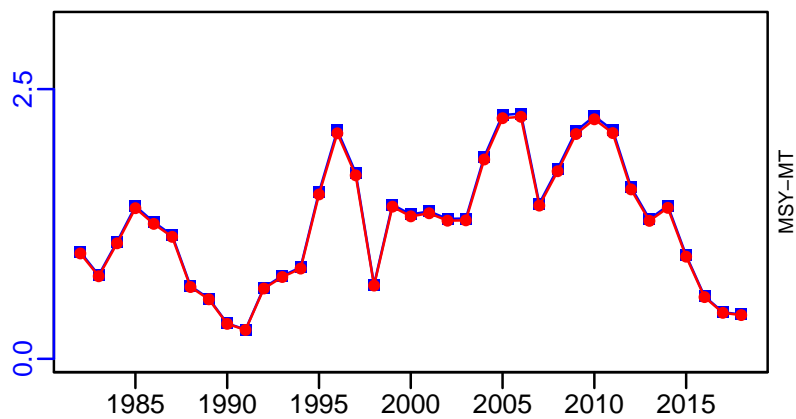
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1982-2018-KUROTA)



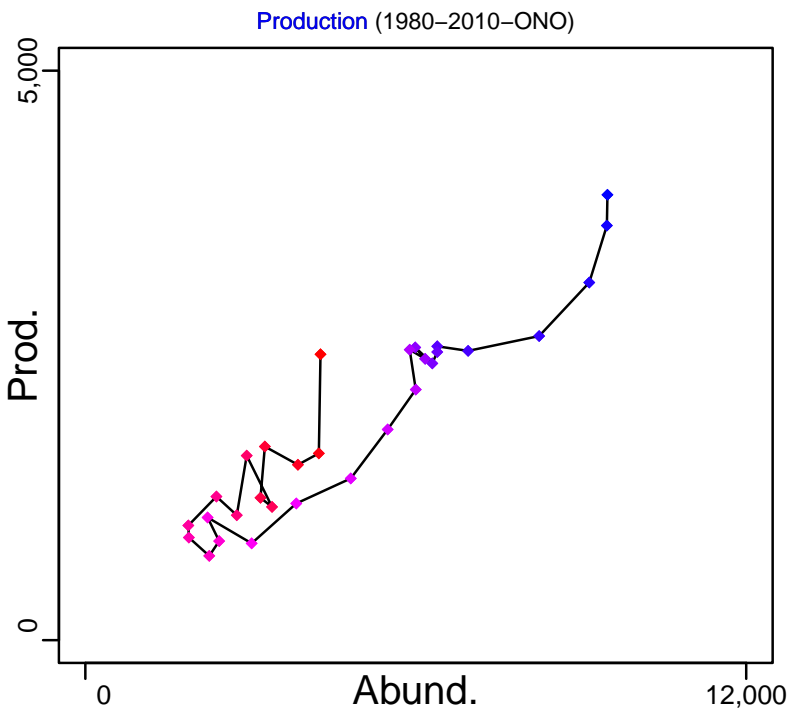
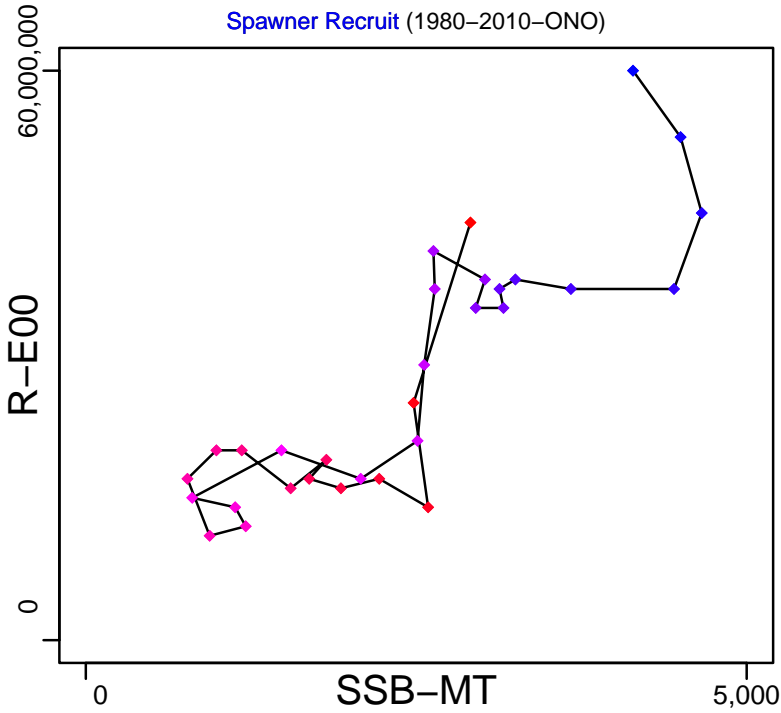
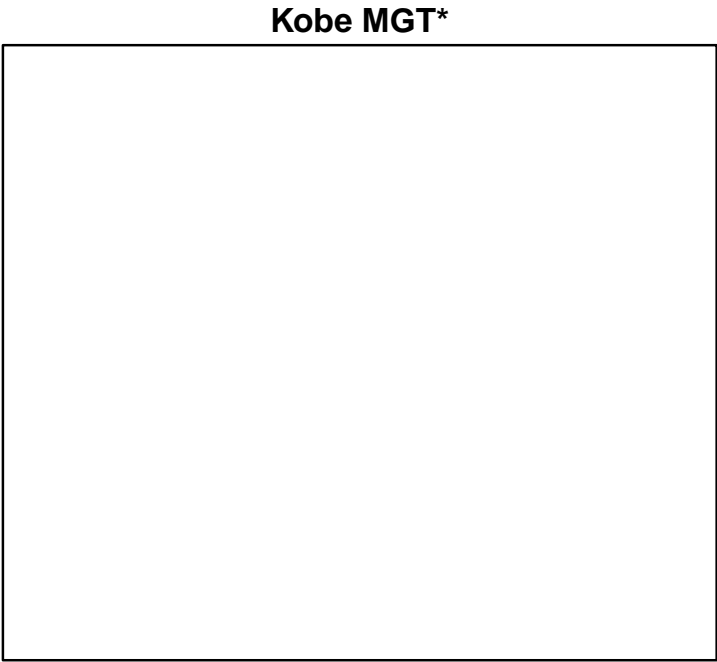
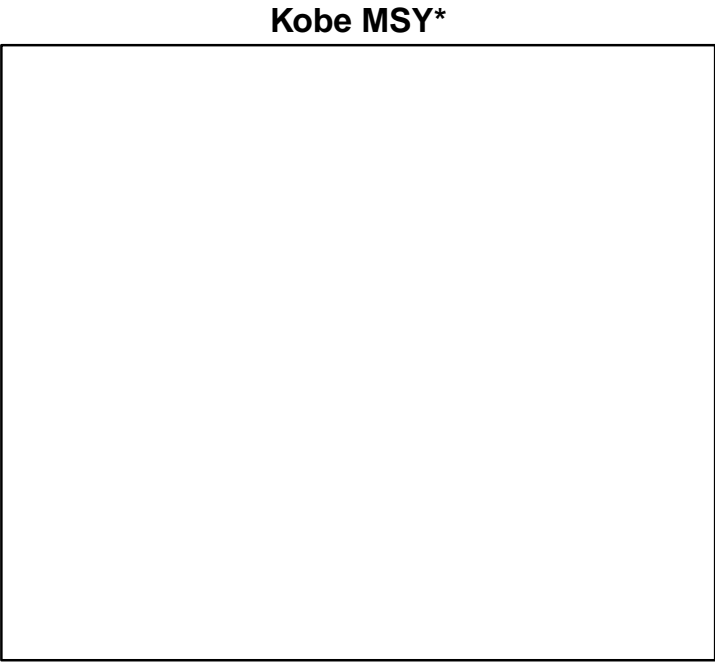
- 1st listed time series    ▲ 3rd listed time series    — MORAT
- 2nd listed time series    - - MSY    \* No Data

## Yellow sea bream Sea of Japan [BRMSOJ]

Metadata	
<b>Scientific Name</b>	Dentex tumifrons
<b>Current Assess ID</b>	FAFRFJ-BRMSOJ-1980-2013-JPNIMP2016
<b>Area</b>	Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2010, 2013

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>	M-1/yr	2013	0.22
<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>	TB-MT	2010	5560	-	0
<b>SSB</b>	SSB-MT	2010	2910	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2010	$4.4 \times 10^7$	-	-
<b>F</b>	F-1/yr	2010	0.46	-	0 to 4
<b>ER</b>	ER-ratio	2010	0.219	-	-
<b>TC</b>	TC-MT	2013	4140		
<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>	-	-	-		

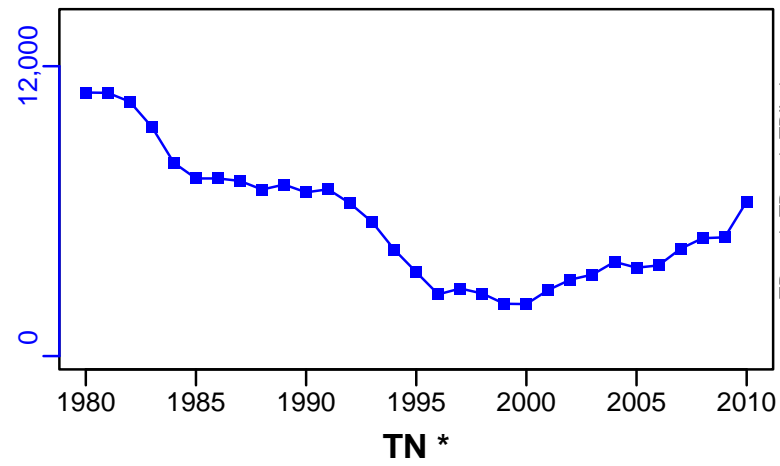


◆ Start Year ◆ End Year \* No Data

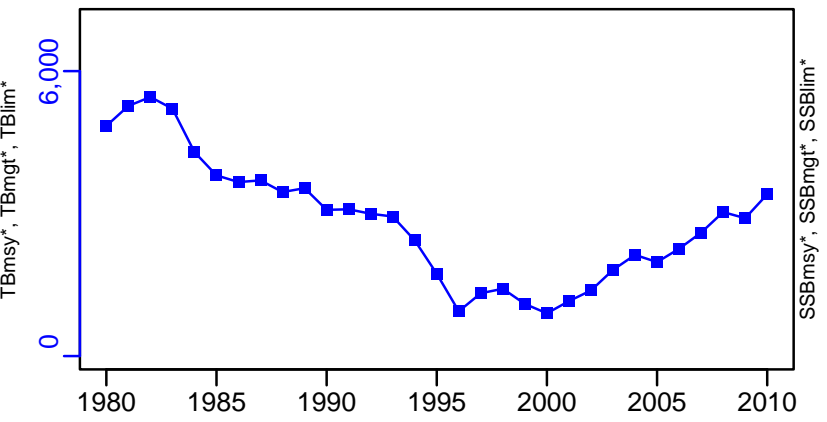


# Yellow sea bream Sea of Japan [BRMSOJ]

TB-MT (1980–2010–ONO)



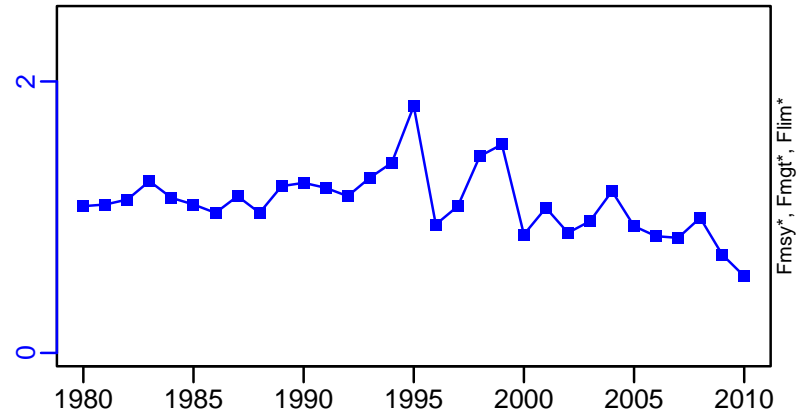
SSB-MT (1980–2010–ONO)



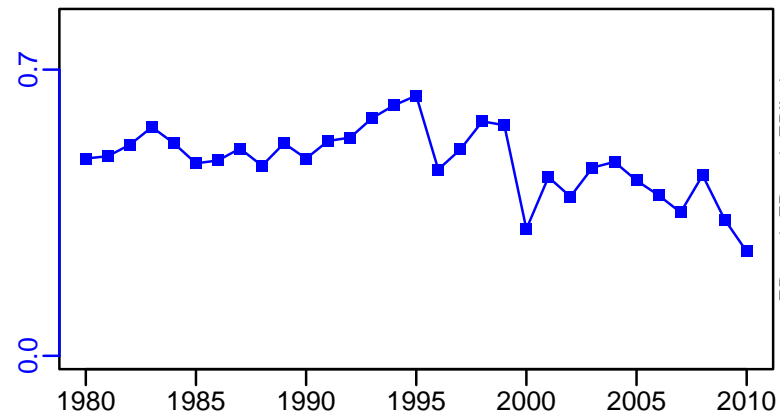
TN \*



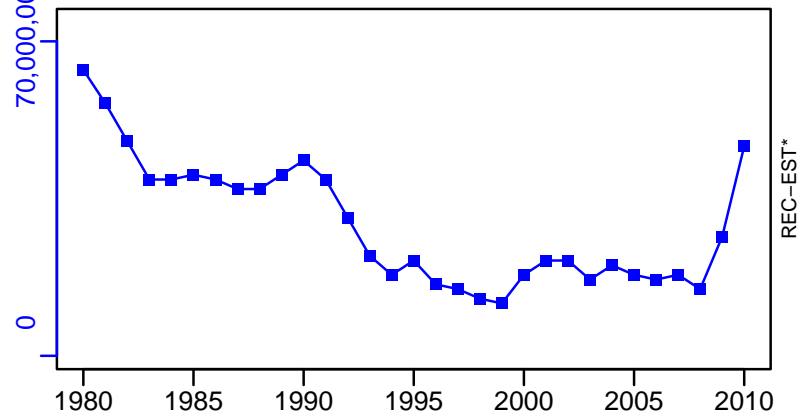
F-1/yr (1980–2010–ONO)



ER-ratio (1980–2010–ONO)

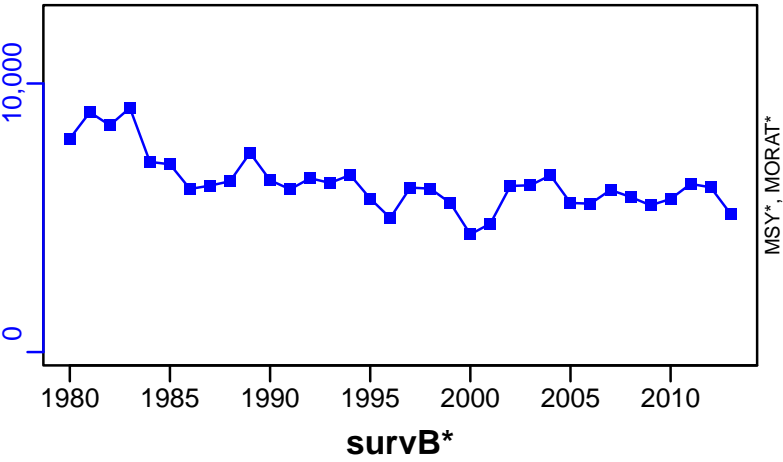


R-E00 (1980–2010–ONO)



Yellow sea bream Sea of Japan [BRMSOJ]

TC-MT, TL\*, RecC\* (1980-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



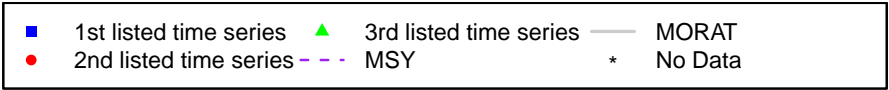
CPUE\*



EFFORT\*



CdivMSY\*



## Black scraper Sea of Japan and East China Sea [BSCRAPERSECS]

Metadata	
<b>Scientific Name</b>	Thamnaconus modestus
<b>Current Assess ID</b>	FAFRFJ-BSCRAPERSECS-2000-2013-JPNIMP2016
<b>Area</b>	Sea of Japan and East China Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	5460		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



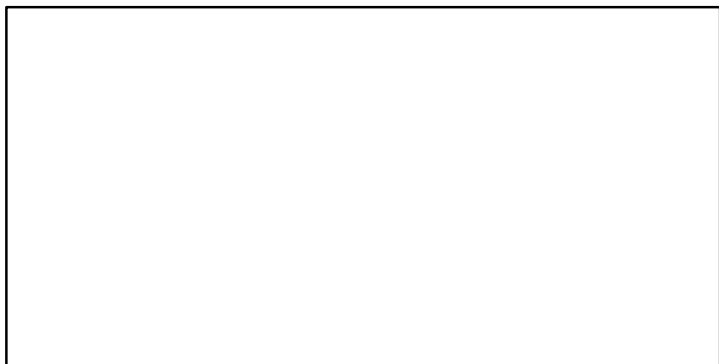
**Production\***



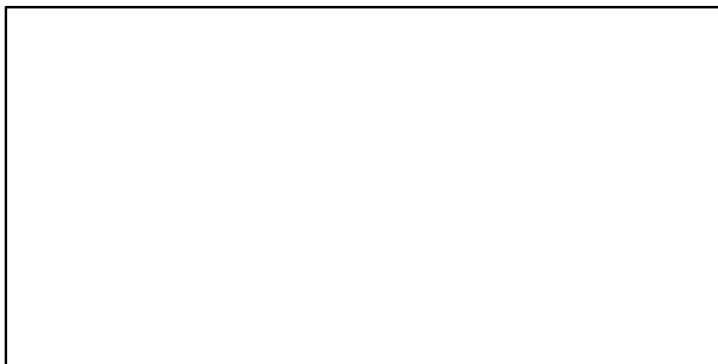
◆ Start Year ◆ End Year \* No Data

Black scraper Sea of Japan and East China Sea [BSCRAPERSEJCS]

**TB\***



**SSB\***



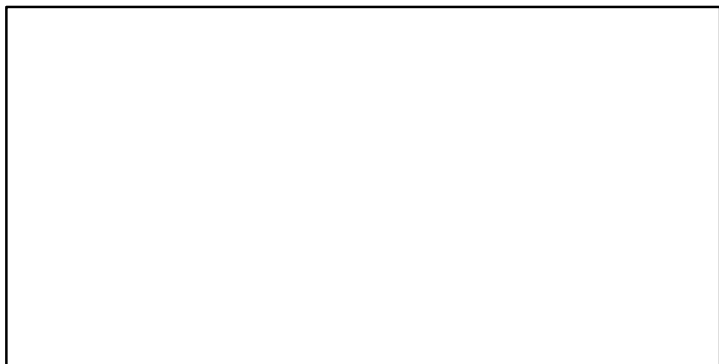
**TN \***



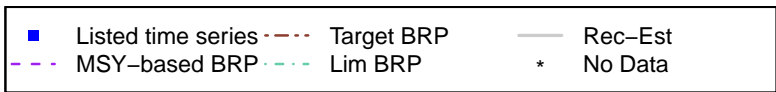
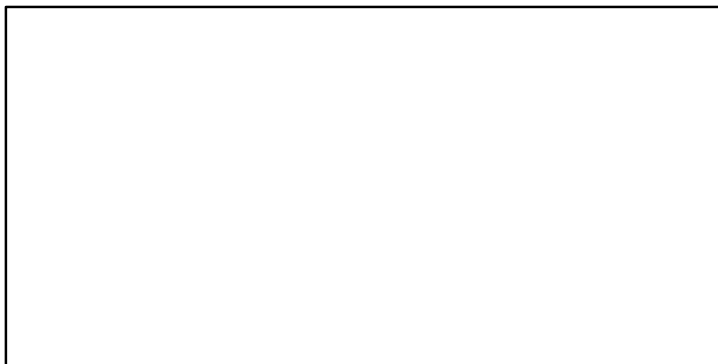
**F\***



**ER\***



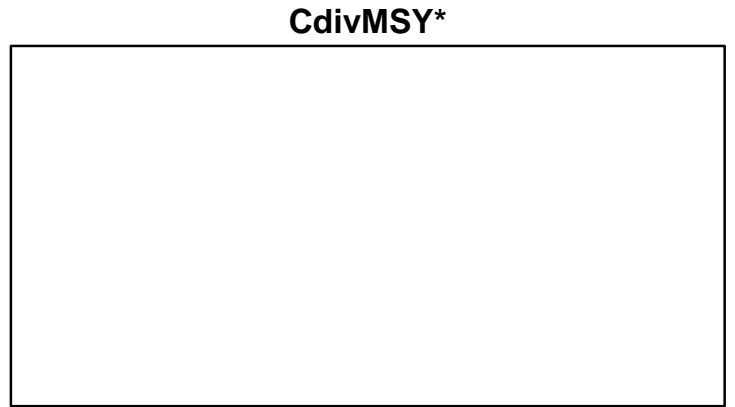
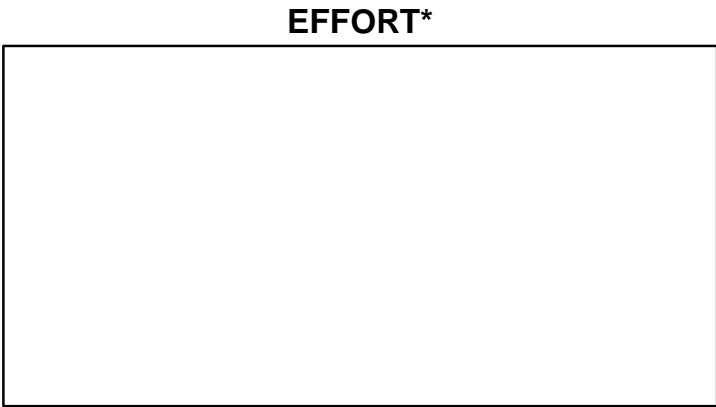
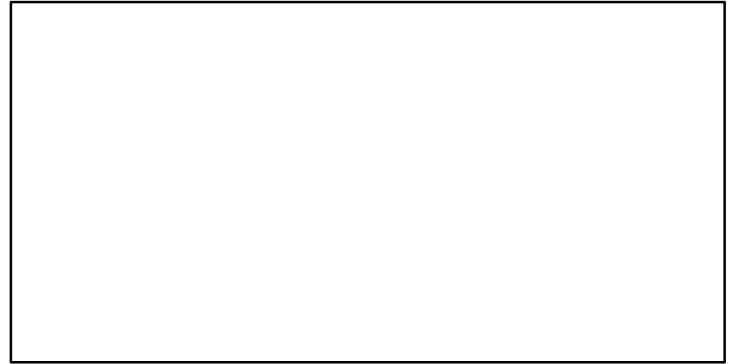
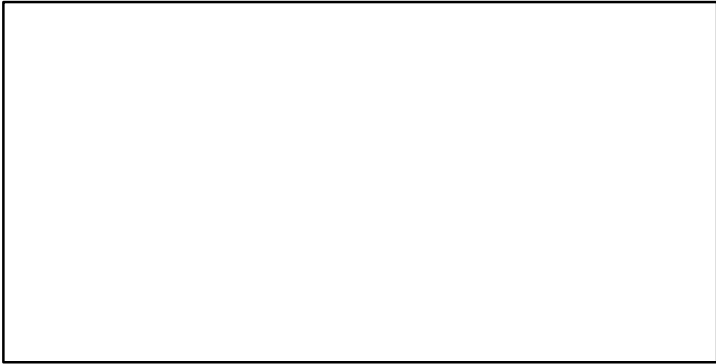
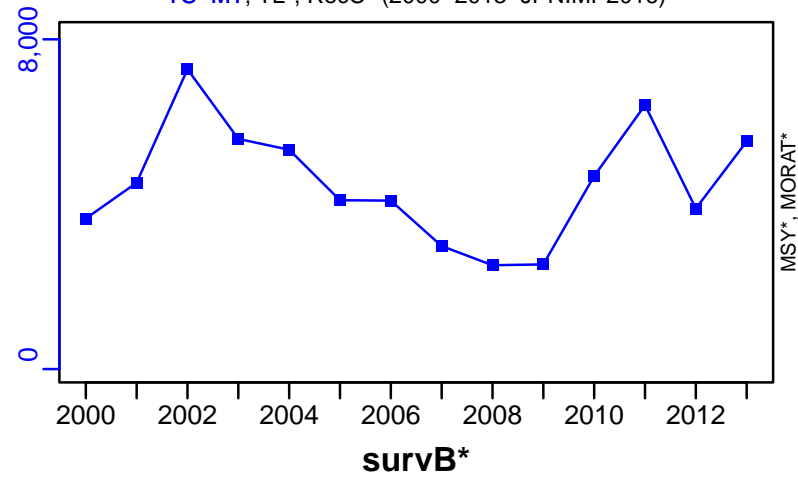
**Recruits\***



# Black scraper Sea of Japan and East China Sea [BSCRAPERSEJCS]

TC-MT, TL\*, RecC\* (2000–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*

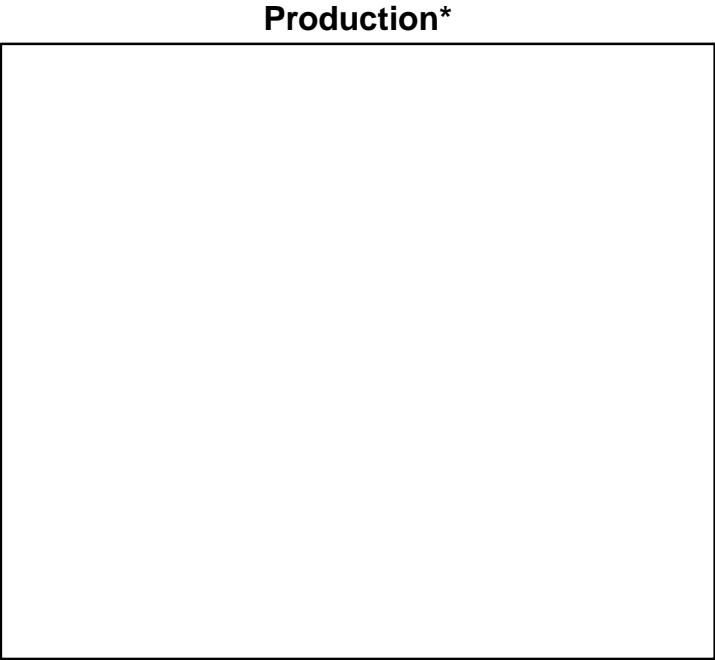
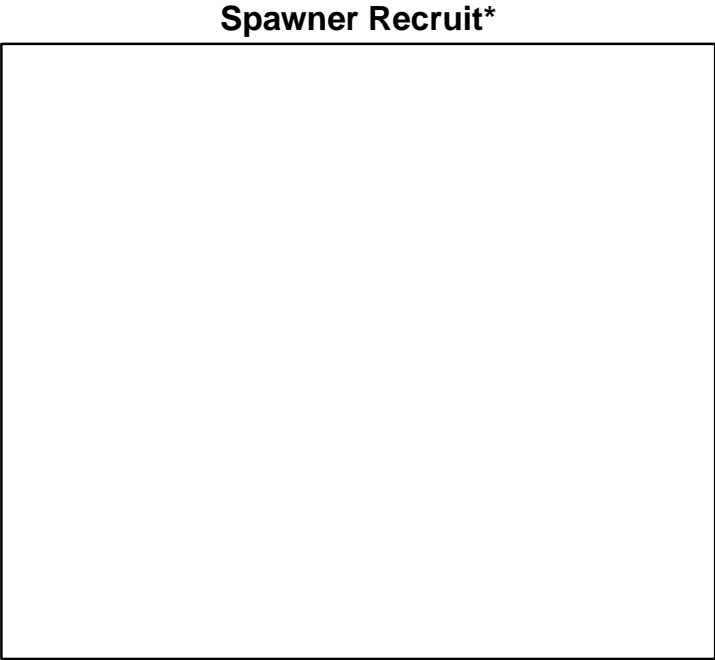
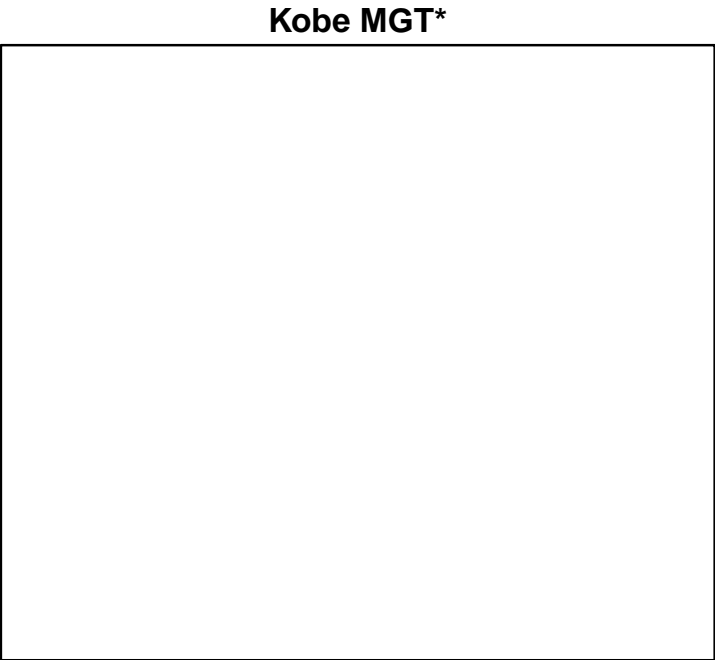
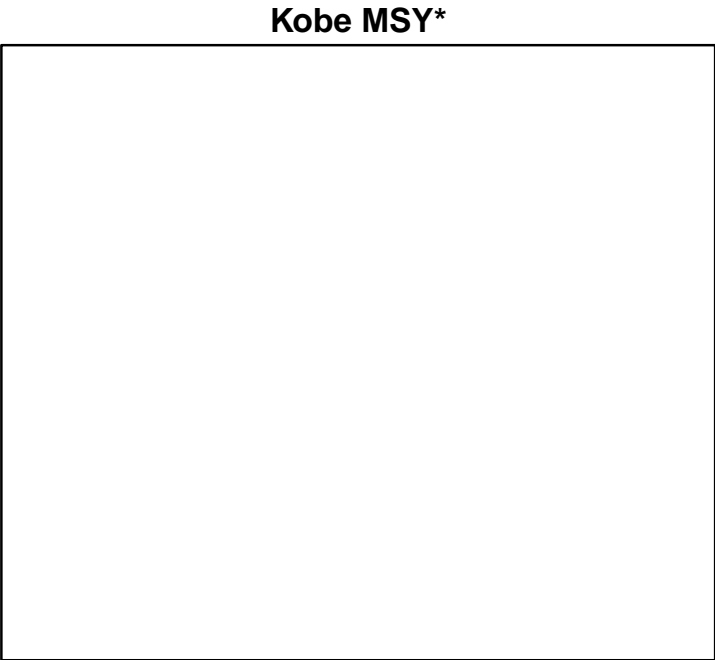


## Beni zuwai crab Sea of Japan [BZCRABSOJ]

Metadata	
<b>Scientific Name</b>	Chionoecetes japonicus
<b>Current Assess ID</b>	FAFRFJ-BZCRABSOJ-1999-2013-JPNIMP2016
<b>Area</b>	Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	15,100		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



◆ Start Year   ◆ End Year   \* No Data



**TB\***



**SSB\***



**TN \***



**F\***



**ER\***

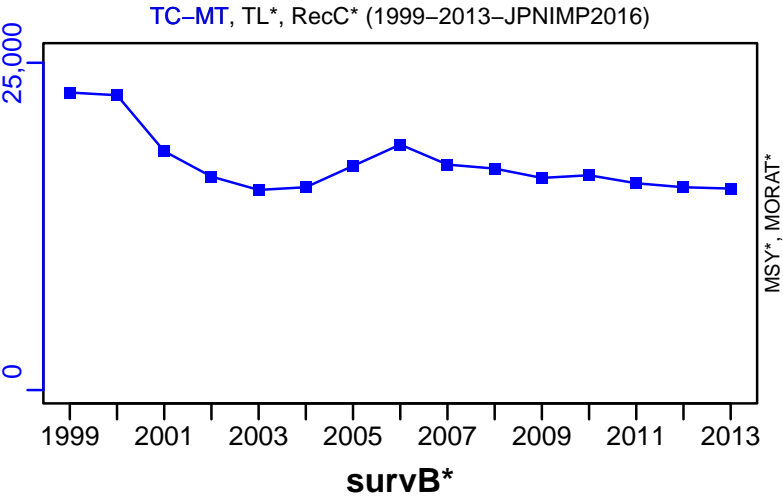


**Recruits\***



Beni zuwai crab Sea of Japan [BZCRABSOJ]

TC-MT, TL\*, RecC\* (1999-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



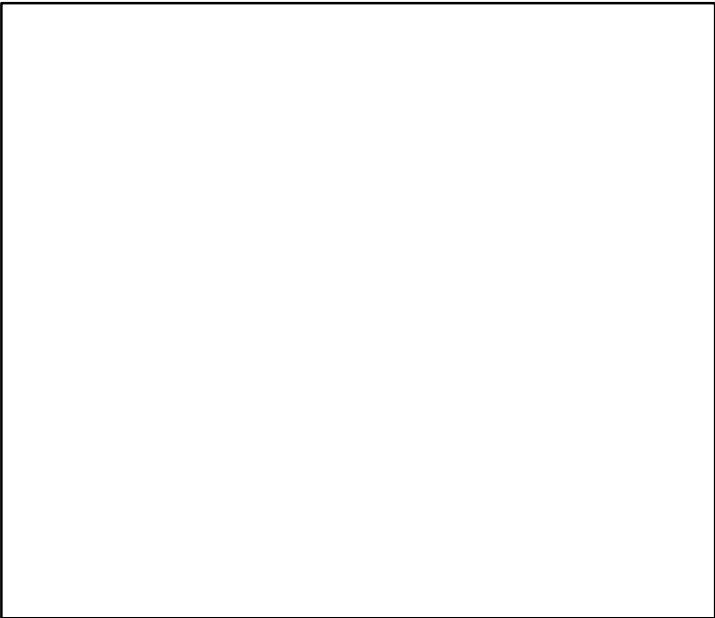
## Crimson jobfish Okinawa Islands [CJOBOKWI]

Metadata	
<b>Scientific Name</b>	Pristipomoides filamentosus
<b>Current Assess ID</b>	FAFRFJ-CJOBOKWI-1989-2013-JPNIMP2016
<b>Area</b>	Okinawa Islands
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	25		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

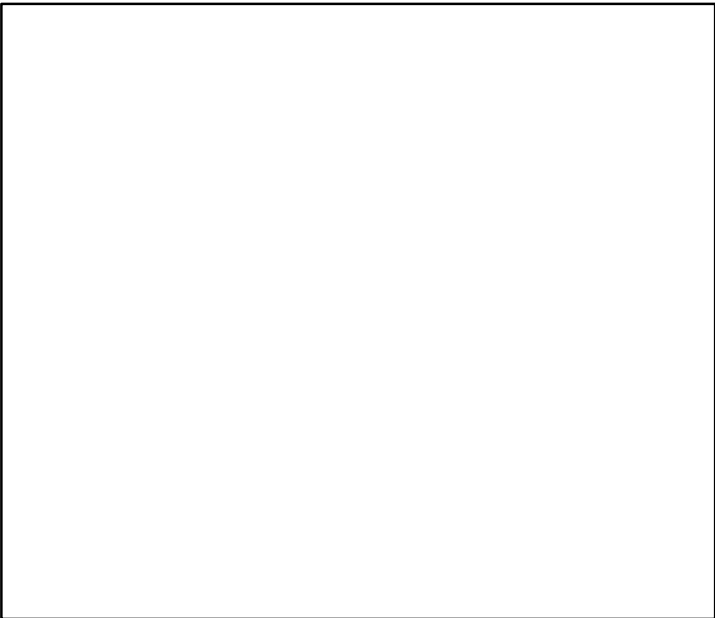
Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year    ◆ End Year    \* No Data

Crimson jobfish Okinawa Islands [CJOBOKWI]

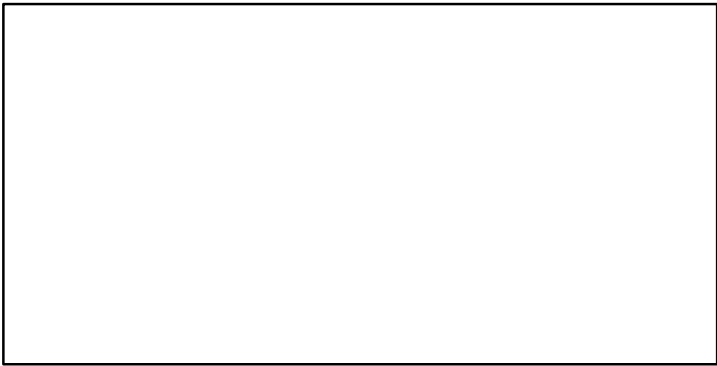
TB\*



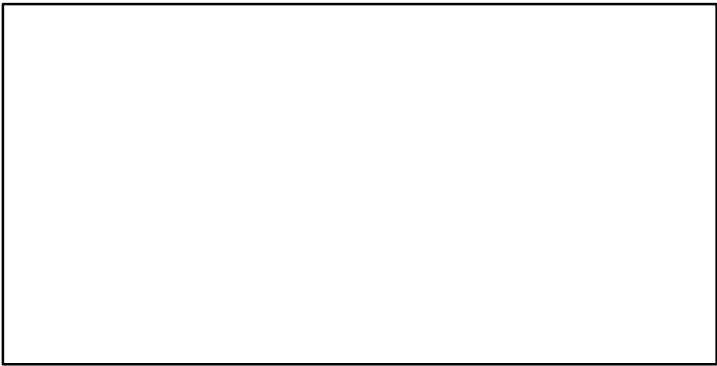
SSB\*



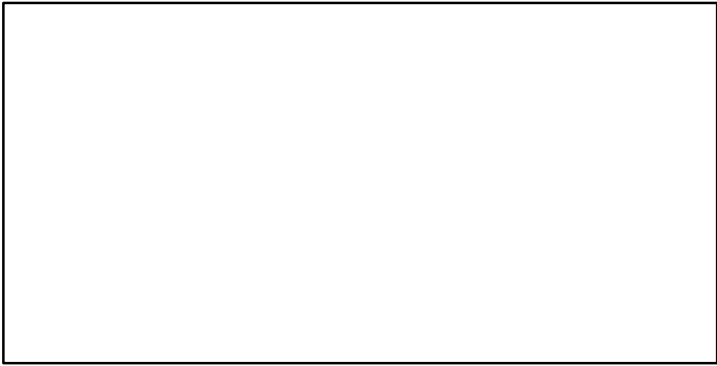
TN \*



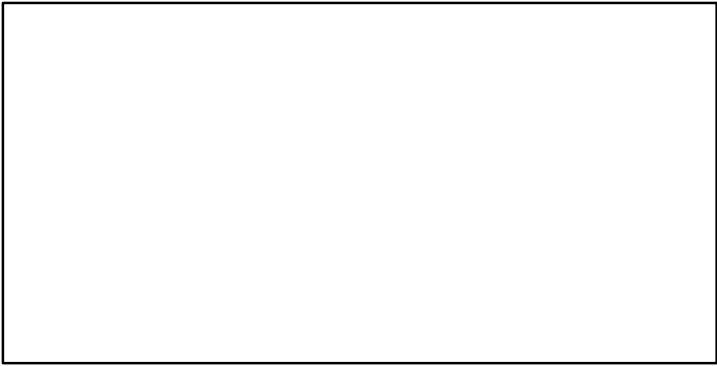
F\*



ER\*



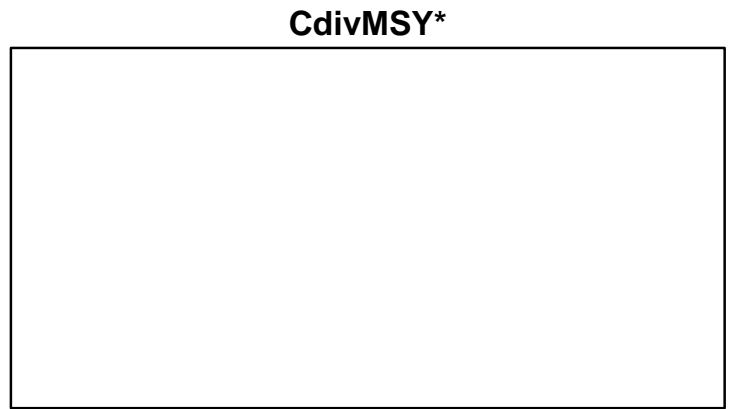
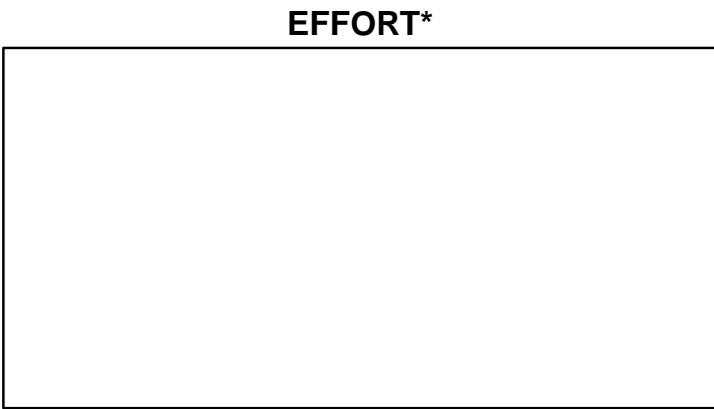
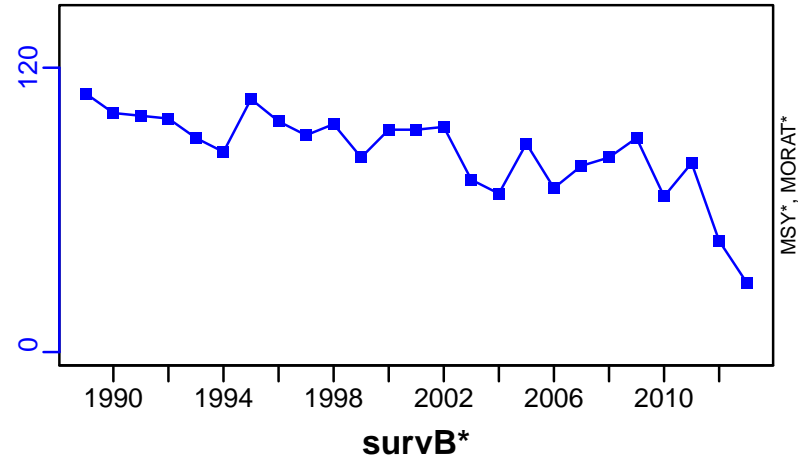
Recruits\*



# Crimson jobfish Okinawa Islands [CJOBOKWI]

TC-MT, TL\*, RecC\* (1989–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



## Chub mackerel Pacific Coast of Japan [CMACKPJPN]

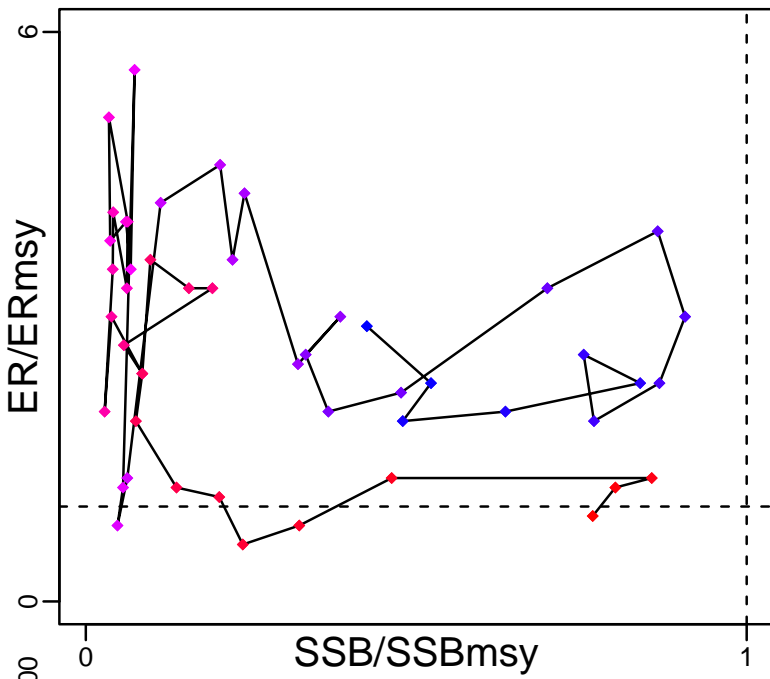
Metadata	
<b>Scientific Name</b>	Scomber japonicus
<b>Current Assess ID</b>	FAFRFJ-CMACKPJPN-1970-2018-KUROTA
<b>Area</b>	Pacific Coast of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2009, 2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2018	3,720,000
<b>SSBmsy</b>	SSBmsy-MT	2018	1,545,000
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2018	0.1
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	1,545,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2018	372,000
<b>M</b>	M-1/yr	2018	0.4
<b>TBlim</b>	TBlim-MT	2009	450
<b>SSBlim</b>	SSBlim-MT	2018	562,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

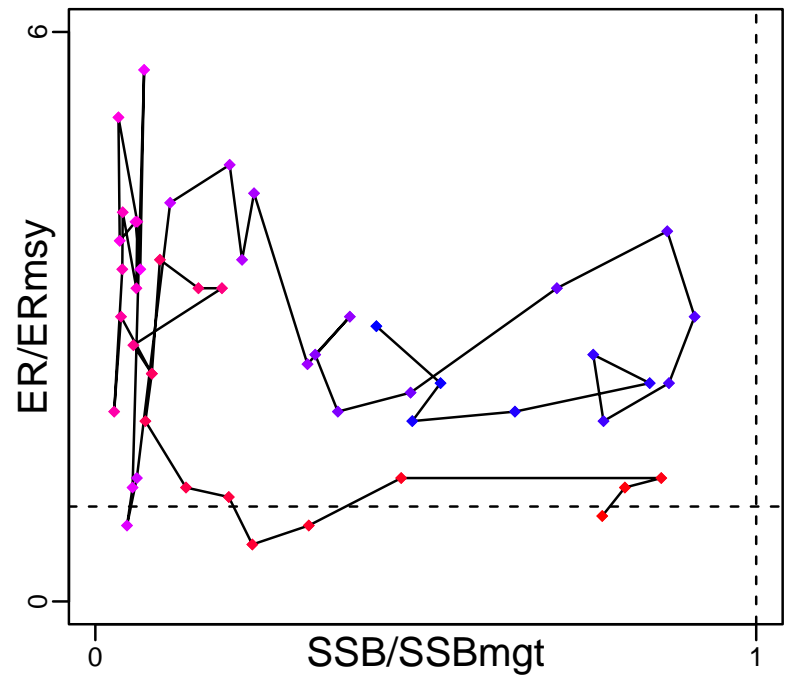
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	5,595,000	Both	0
<b>SSB</b>	SSB-MT	2018	1,185,000	Both	2
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	$2.9212 \times 10^{10}$	Both	0
<b>F</b>	F-1/yr	2009	0.28	Both	0 to 5
<b>ER</b>	ER-ratio	2018	0.09	Both	-
<b>TC</b>	TC-MT	2018	526,573		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2018	1.504		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2018	0.767		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2018	0.9		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	0.767		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Chub mackerel Pacific Coast of Japan [CMACKPJPN]

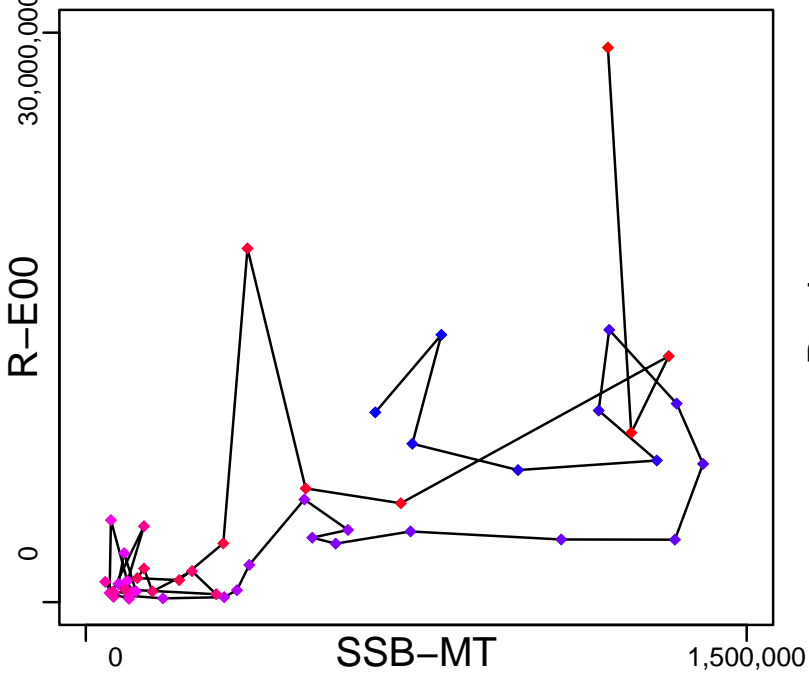
Kobe MSYpref (1970–2018–KUROTA)



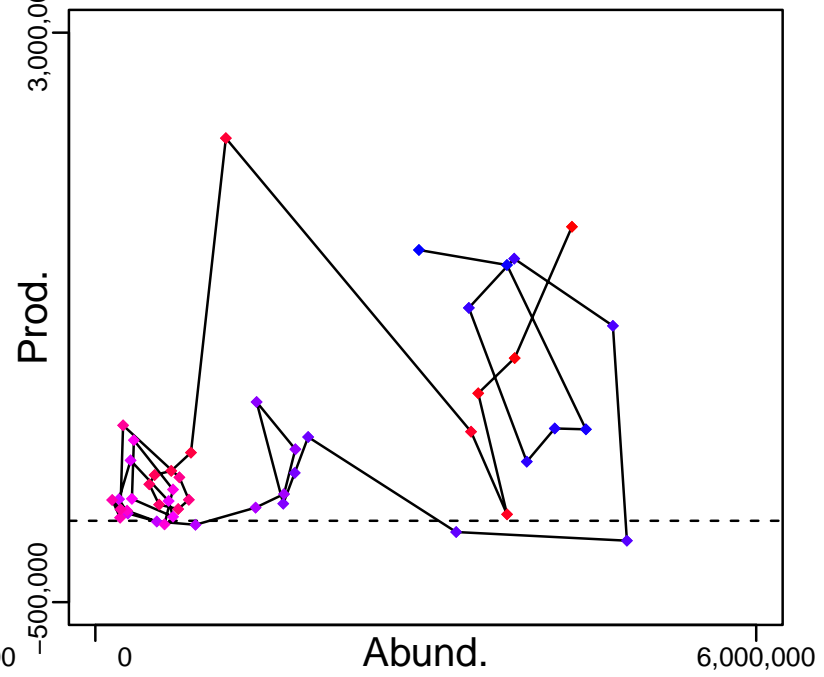
Kobe MGTpref (1970–2018–KUROTA)



Spawner Recruit (1970–2018–KUROTA)



Production (1970–2018–KUROTA)

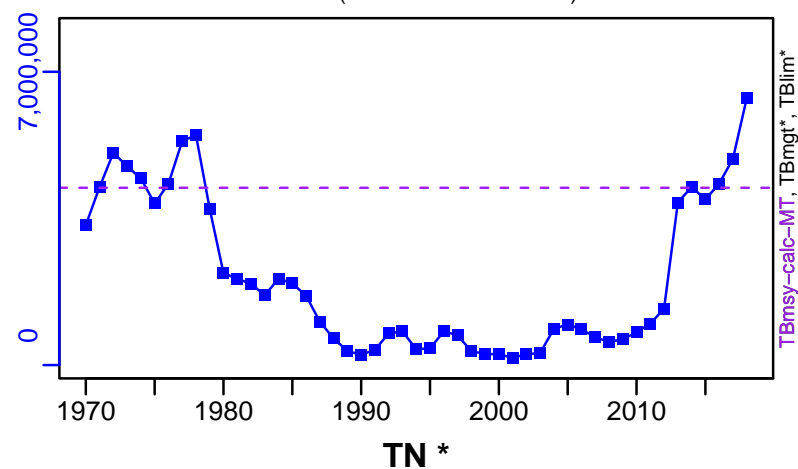


◆ Start Year ◆ End Year \* No Data

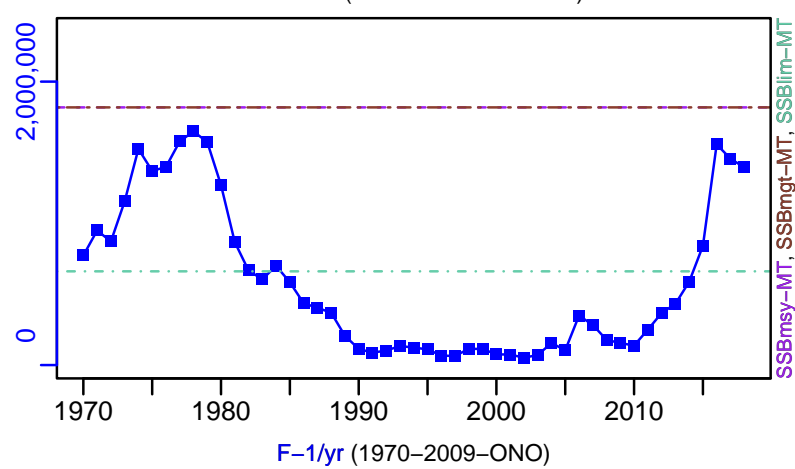


# Chub mackerel Pacific Coast of Japan [CMACKPJPN]

TB-MT (1970-2018-KUROTA)



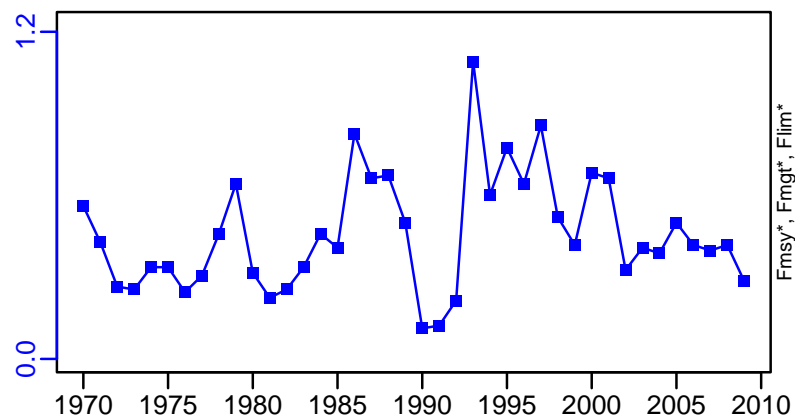
SSB-MT (1970-2018-KUROTA)



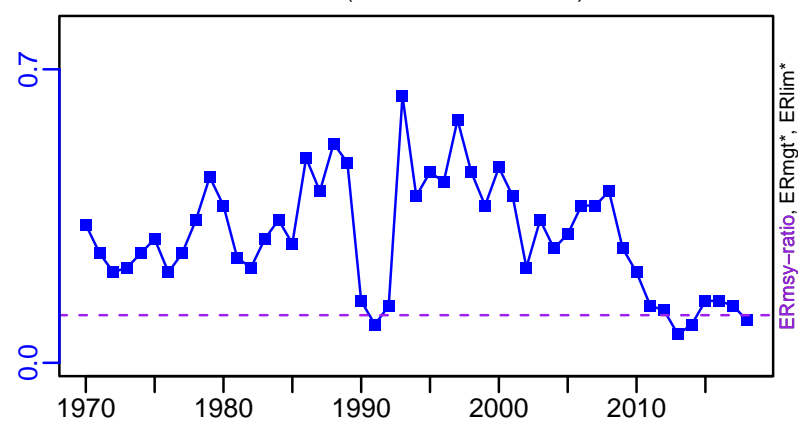
TN \*



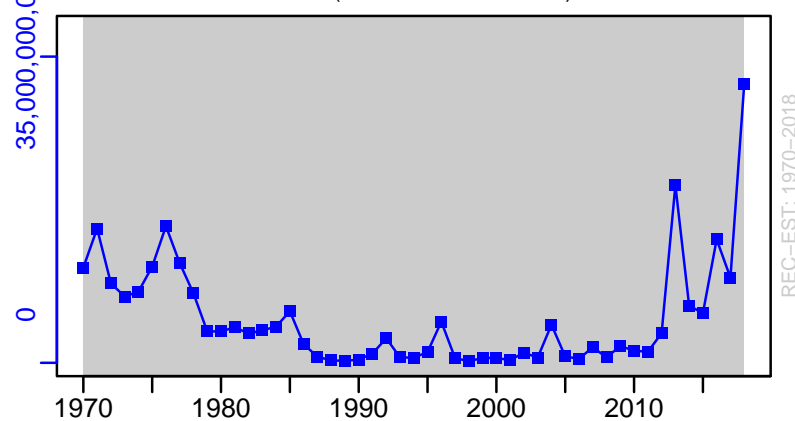
F-1/yr (1970-2009-ONO)



ER-ratio (1970-2018-KUROTA)

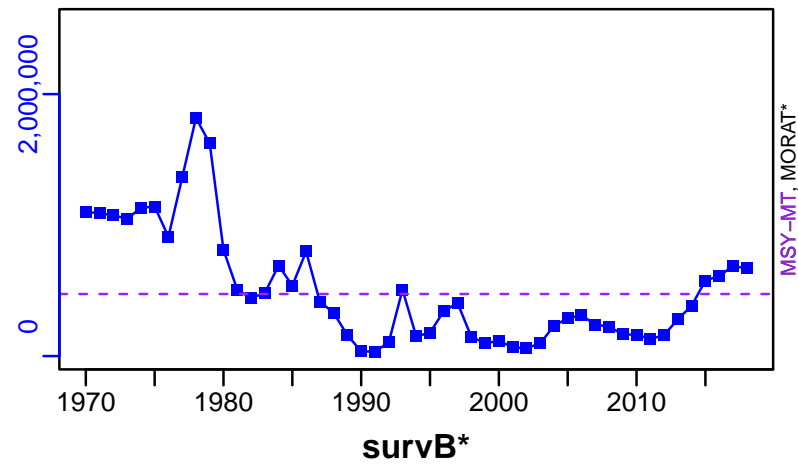


R-E00 (1970-2018-KUROTA)



# Chub mackerel Pacific Coast of Japan [CMACKPJPN]

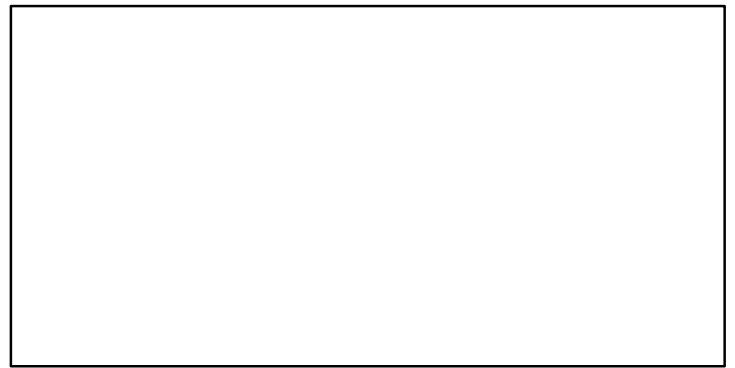
TC-MT, TL\*, RecC\* (1970-2018-KUROTA)



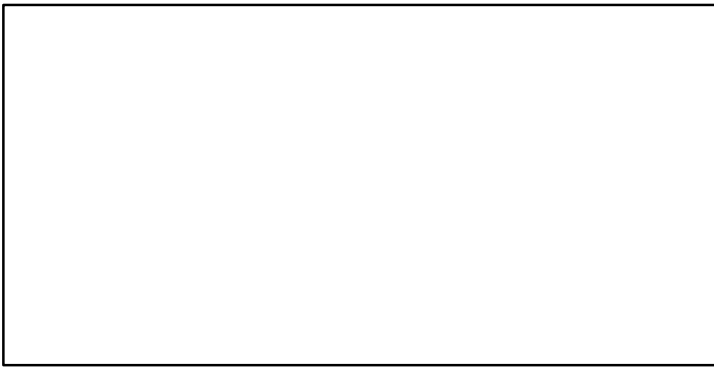
TAC\*, Cpair\*, Cadv\*



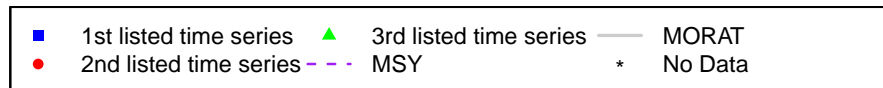
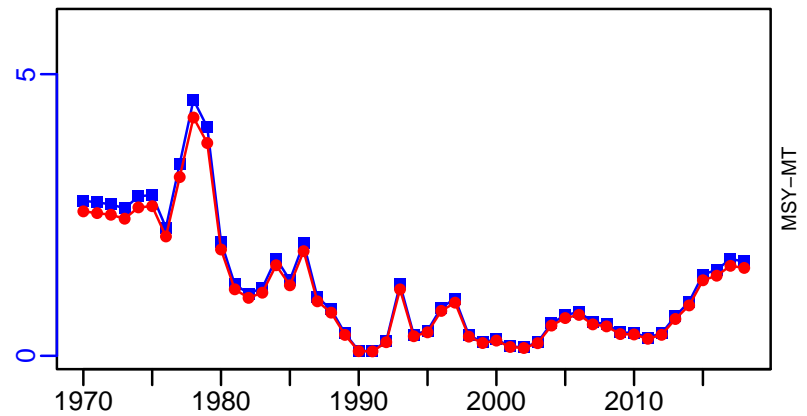
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1970-2018-KUROTA)



## Chub mackerel Tsushima Strait [CMACKTSST]

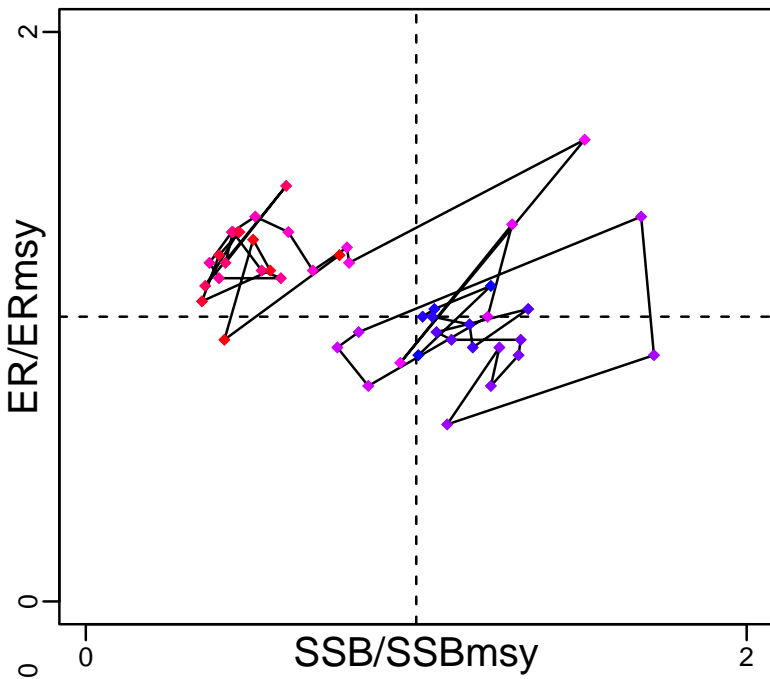
Metadata	
<b>Scientific Name</b>	Scomber japonicus
<b>Current Assess ID</b>	FAFRFJ-CMACKTSST-1973-2018-KUROTA
<b>Area</b>	Tsushima Strait
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2018	872,973
<b>SSBmsy</b>	SSBmsy-MT	2018	310,000
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2018	0.37
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2018	310,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2018	323,000
<b>M</b>	M-1/yr	2018	0.4
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2018	143,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

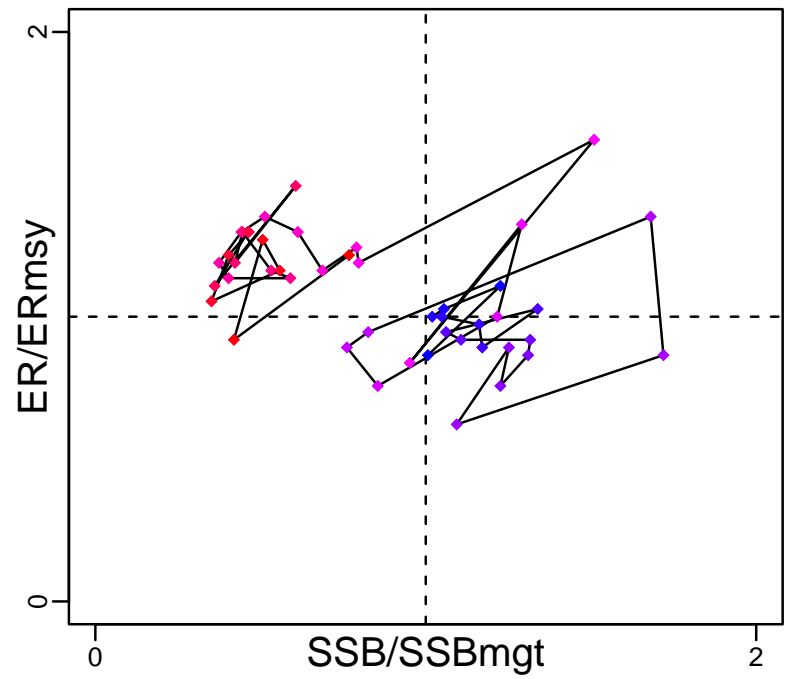
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	654,000	Both	0
<b>SSB</b>	SSB-MT	2018	238,000	Both	1
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	$1.329 \times 10^9$	Both	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.45	Both	-
<b>TC</b>	TC-MT	2018	292,000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2018	0.749		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2018	0.768		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2018	1.216		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2018	0.768		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Chub mackerel Tsushima Strait [CMACKTSST]

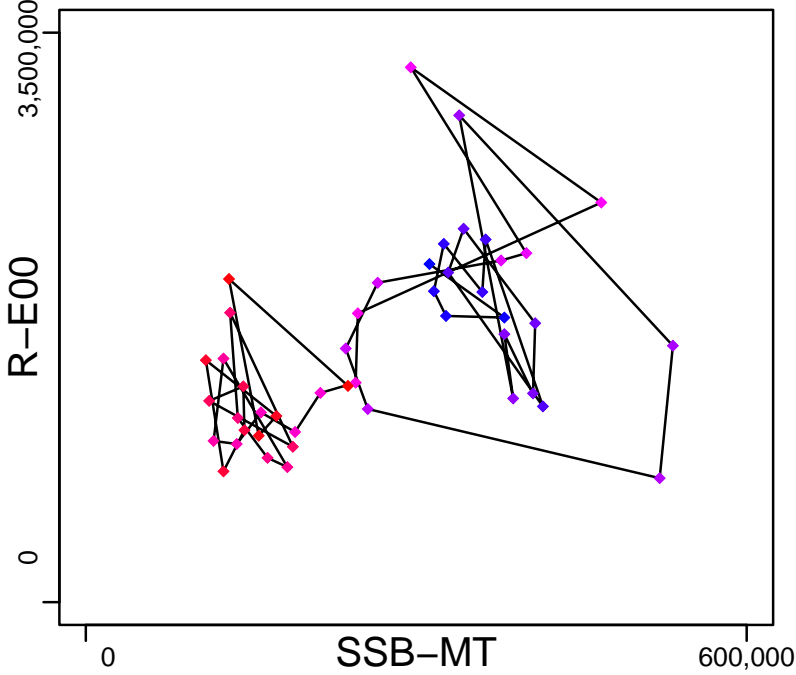
Kobe MSYpref (1973–2018–KUROTA)



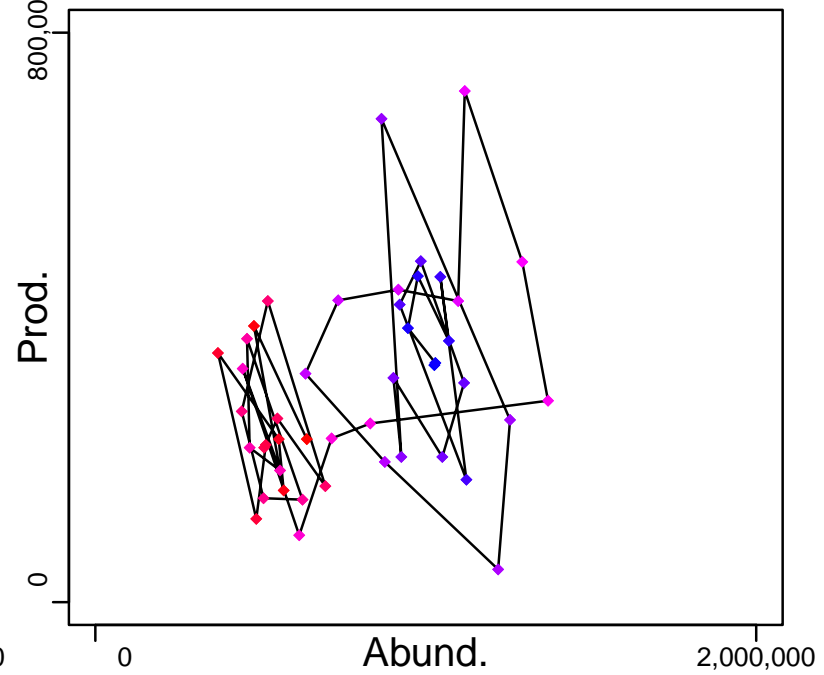
Kobe MGTpref (1973–2018–KUROTA)



Spawner Recruit (1973–2018–KUROTA)



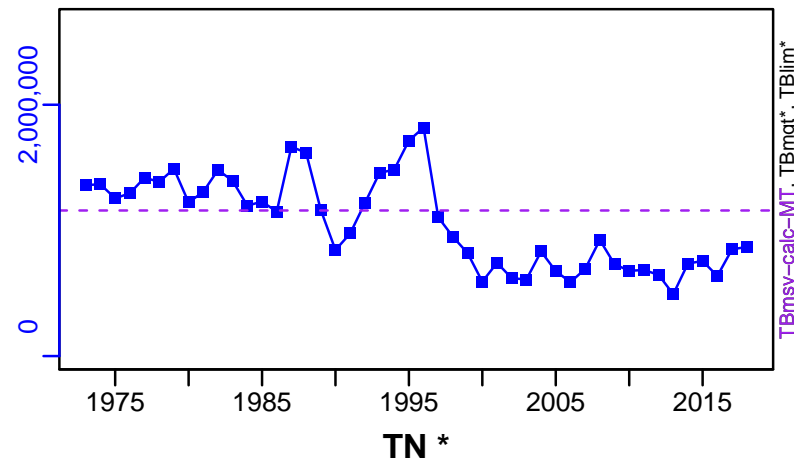
Production (1973–2018–KUROTA)



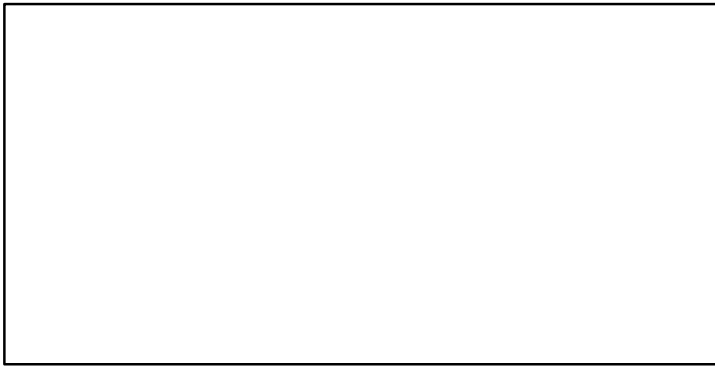
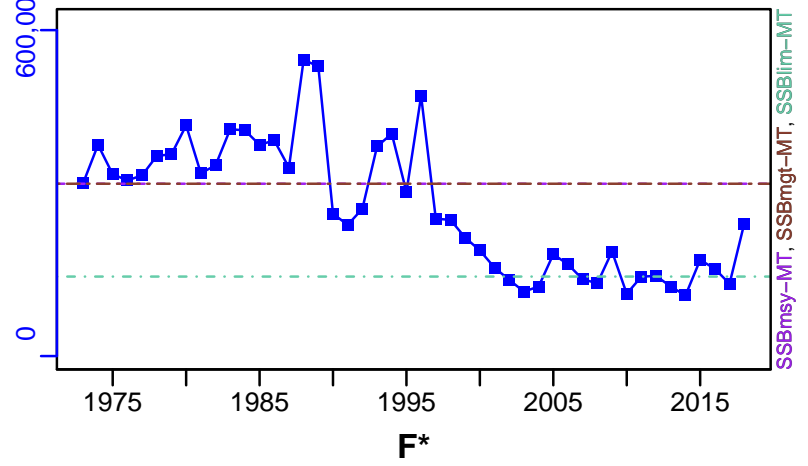
◆ Start Year ◆ End Year \* No Data

# Chub mackerel Tsushima Strait [CMACKTSST]

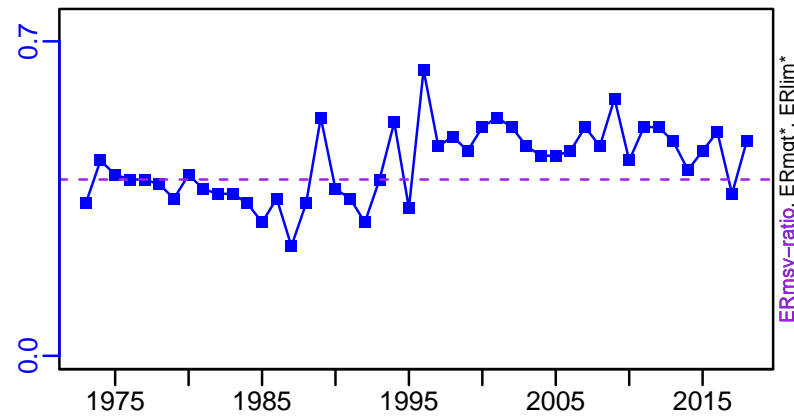
TB-MT (1973–2018–KUROTA)



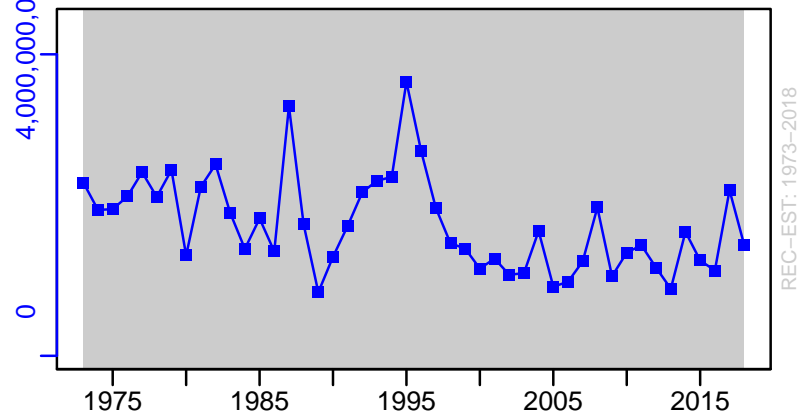
SSB-MT (1973–2018–KUROTA)



ER-ratio (1973–2018–KUROTA)

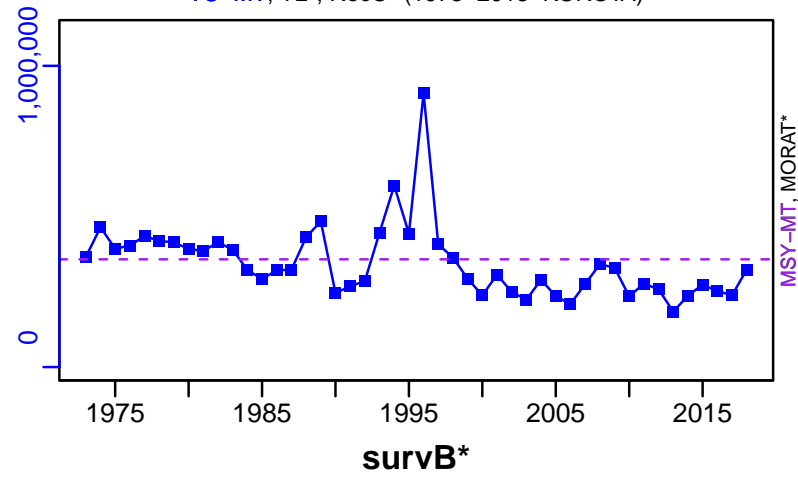


R-E00 (1973–2018–KUROTA)



# Chub mackerel Tsushima Strait [CMACKTSST]

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



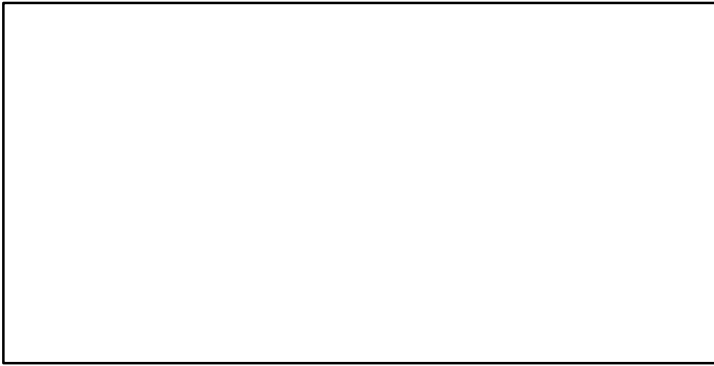
TAC\*, Cpair\*, Cadv\*



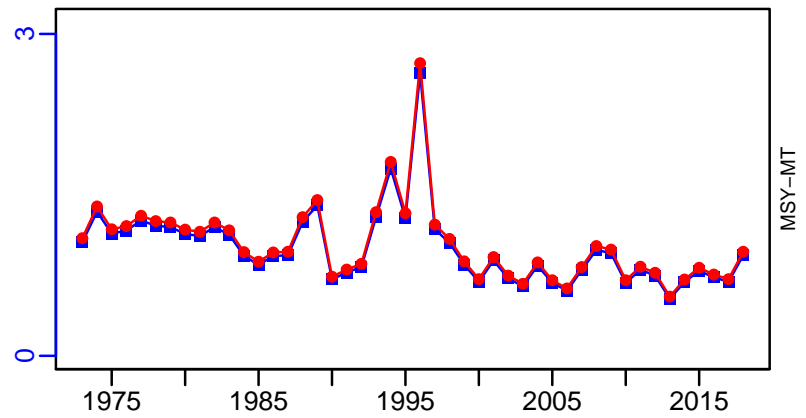
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1973-2018-KUROTA)



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

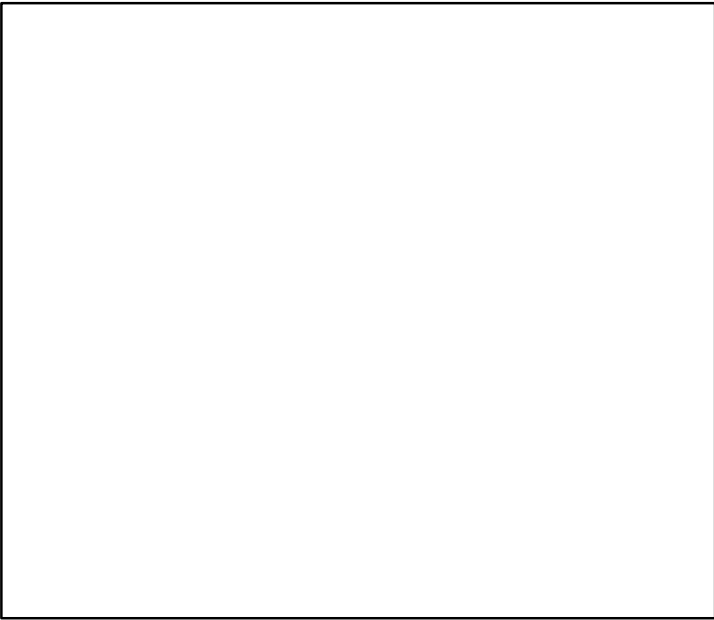
## Deep sea smelt Pacific Ocean [DSSMELTPAC]

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

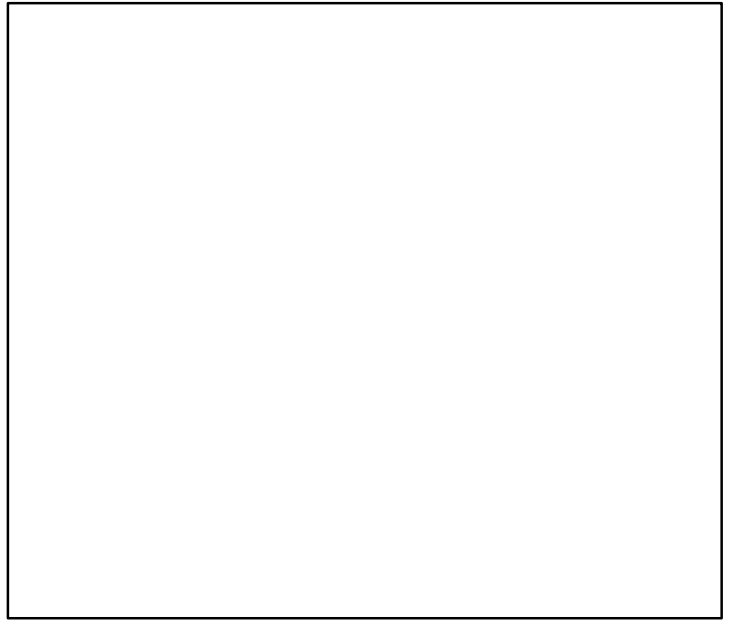
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

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

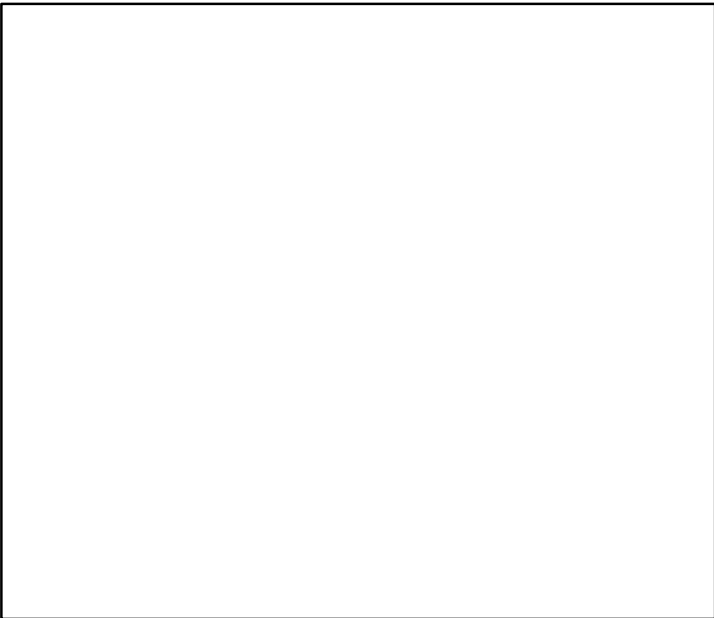
**Kobe MSY\***



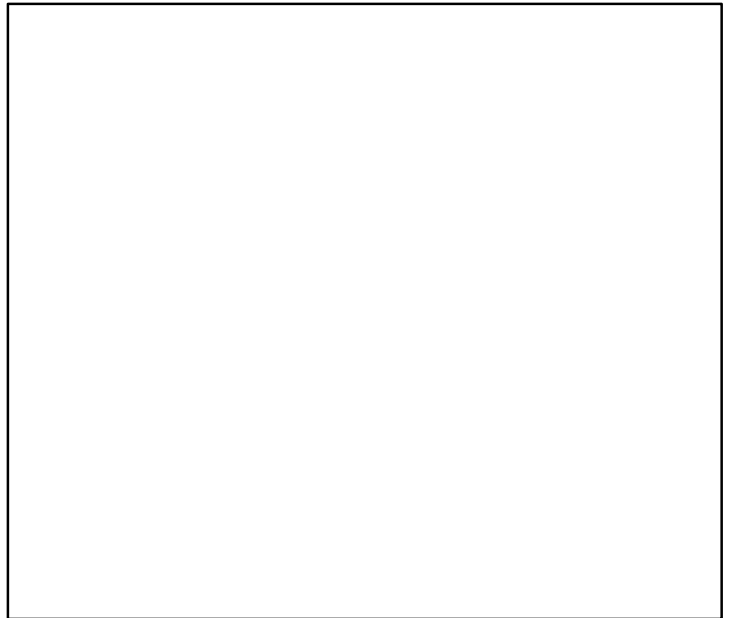
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year   ◆ End Year   \* No Data



Deep sea smelt Pacific Ocean [DSSMELTPAC]

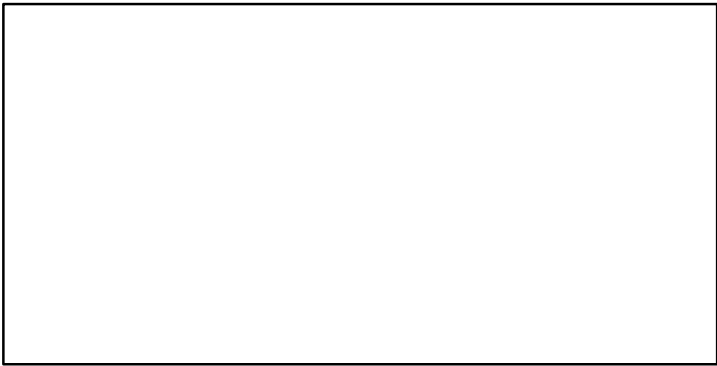
TB\*



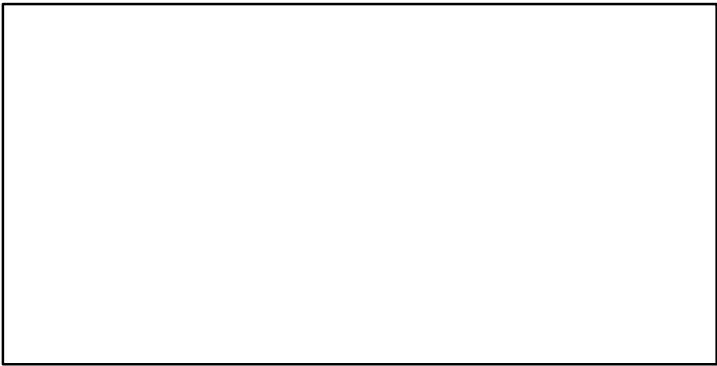
SSB\*



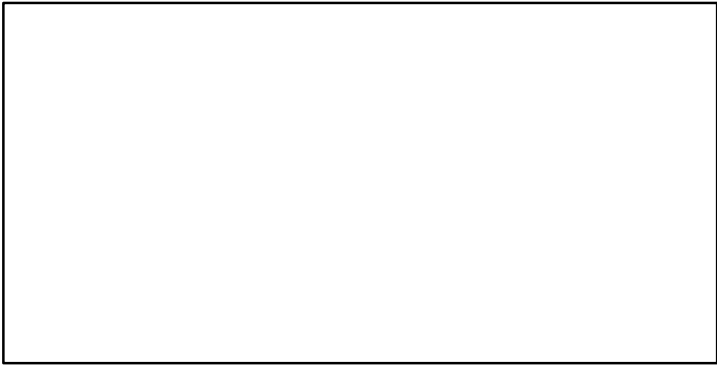
TN \*



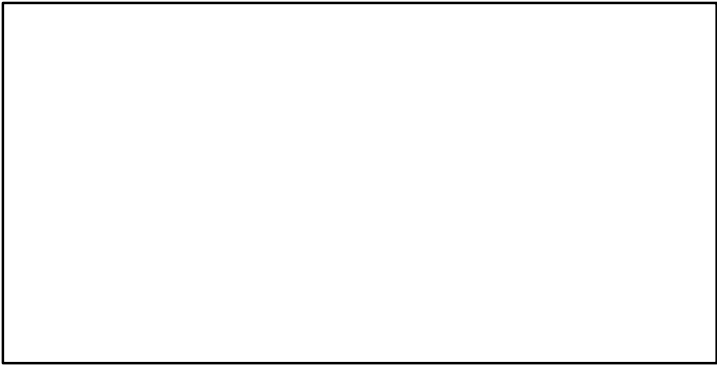
F\*



ER\*



Recruits\*



■ Listed time series

--- MSY-based BRP

--- Target BRP

--- Lim BRP

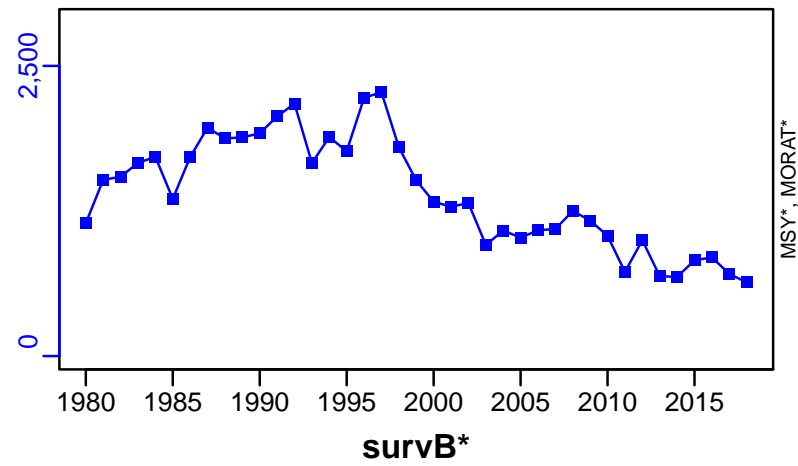
— Rec-Est

\* No Data

# Deep sea smelt Pacific Ocean [DSSMELTPAC]

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

TAC\*, Cpair\*, Cadv\*



CPUE\*

EFFORT\*

CdivMSY\*

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

## Deep sea smelt Sea of Japan [DSSMELTSOJ]

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

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

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

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

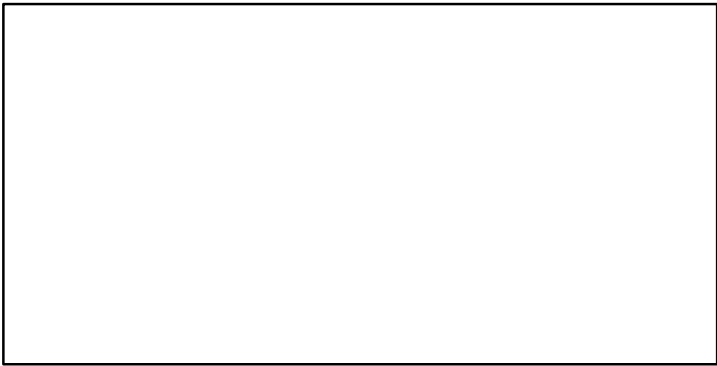
TB\*



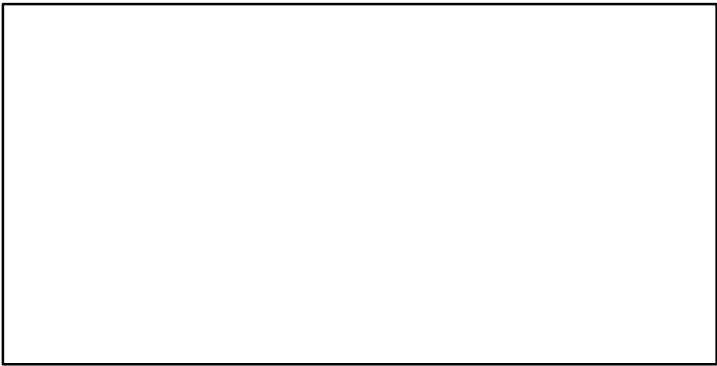
SSB\*



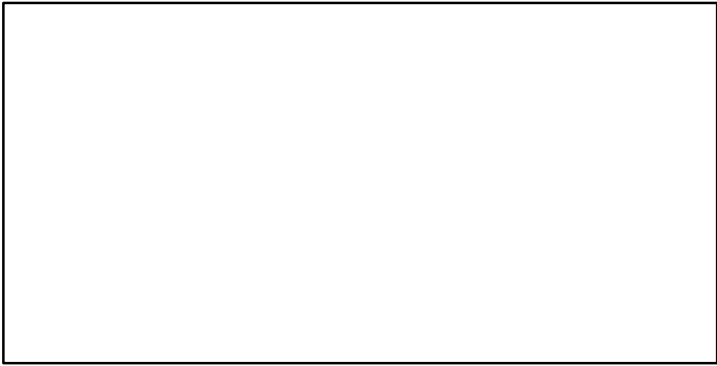
TN \*



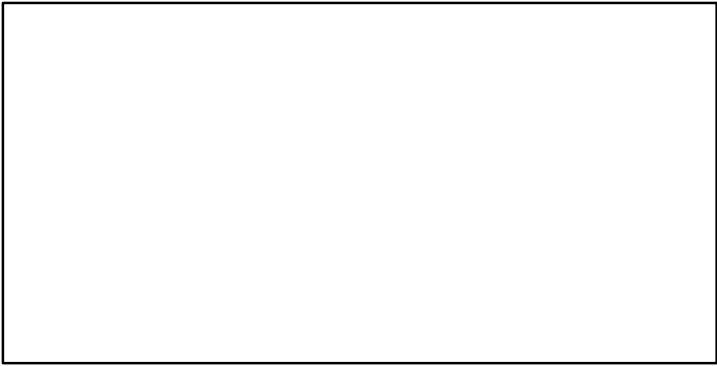
F\*



ER\*

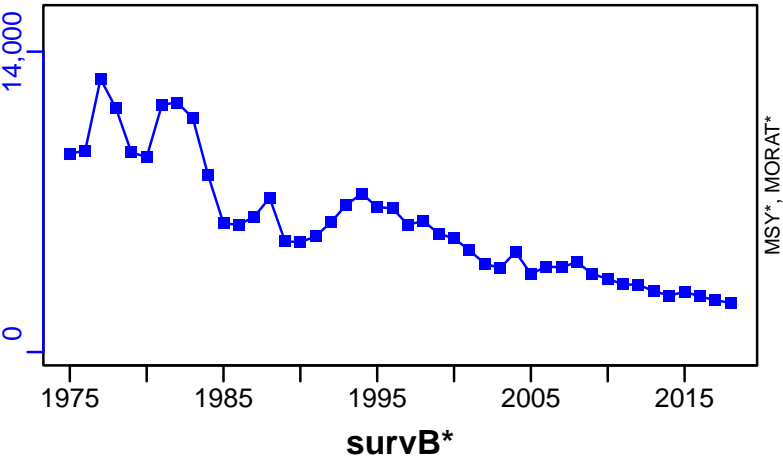


Recruits\*



Deep sea smelt Sea of Japan [DSSMELTSOJ]

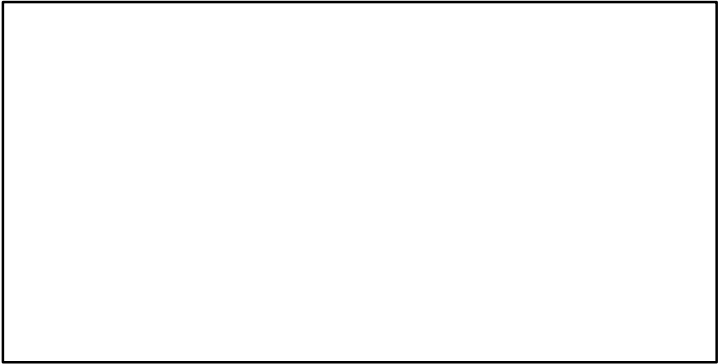
TC-MT, TL\*, RecC\* (1975-2018-KUROTA)



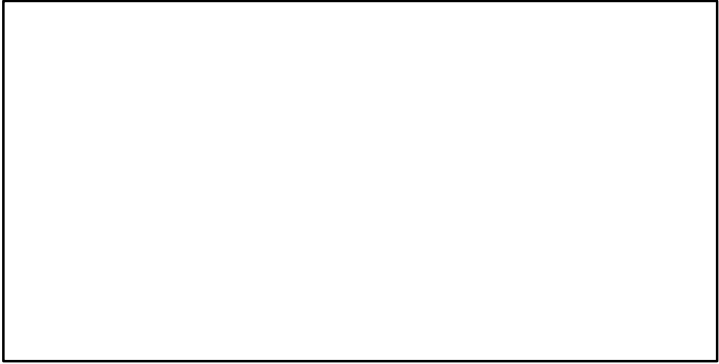
TAC\*, Cpair\*, Cadv\*



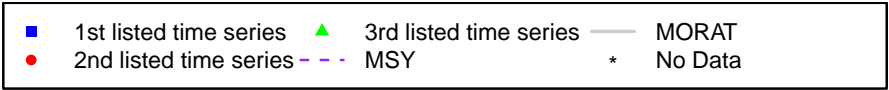
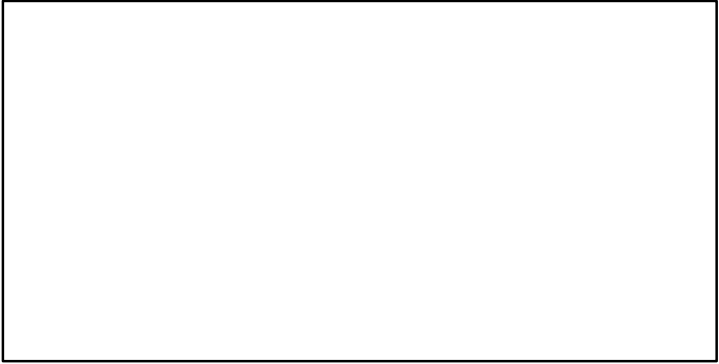
CPUE\*



EFFORT\*



CdivMSY\*



## Flathead flounder Sea of Japan [FHFLOUNSOJ]

Metadata	
<b>Scientific Name</b>	Hippoglossoides dubius
<b>Current Assess ID</b>	FAFRFJ-FHFLOUNSOJ-1991-2013-JPNIMP2016
<b>Area</b>	Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	5450		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data



Flathead flounder Sea of Japan [FHFLOUNSOJ]

TB\*



SSB\*



TN \*



F\*



ER\*

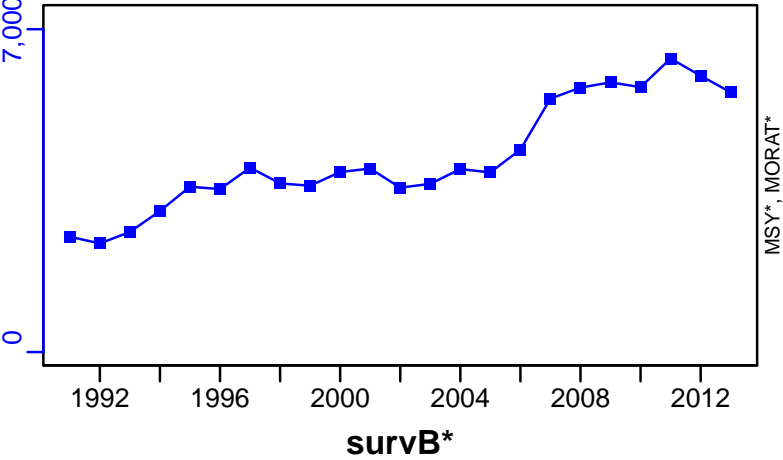


Recruits\*



Flathead flounder Sea of Japan [FHFLOUNSOJ]

TC-MT, TL\*, RecC\* (1991-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



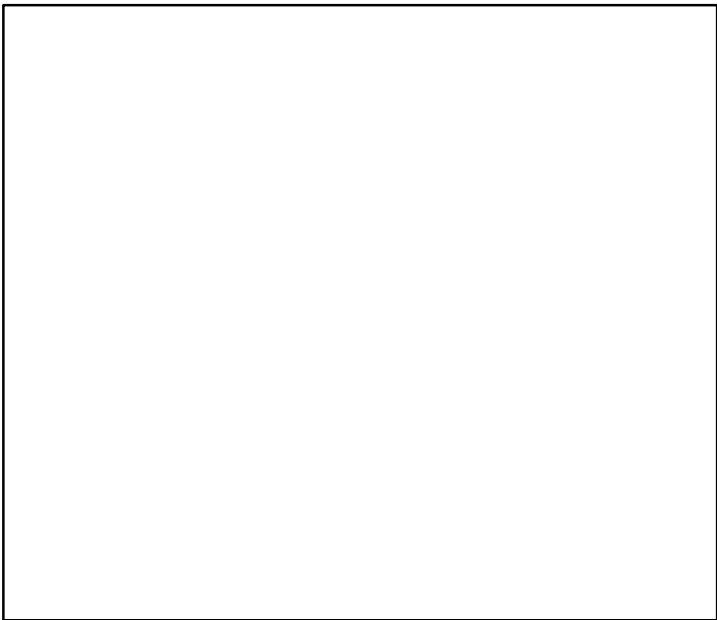
## Flame snapper Okinawa Islands [FSNAPOKWI]

Metadata	
<b>Scientific Name</b>	Etelis coruscans
<b>Current Assess ID</b>	FAFRFJ-FSNAPOKWI-1989-2013-JPNIMP2016
<b>Area</b>	Okinawa Islands
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	103		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

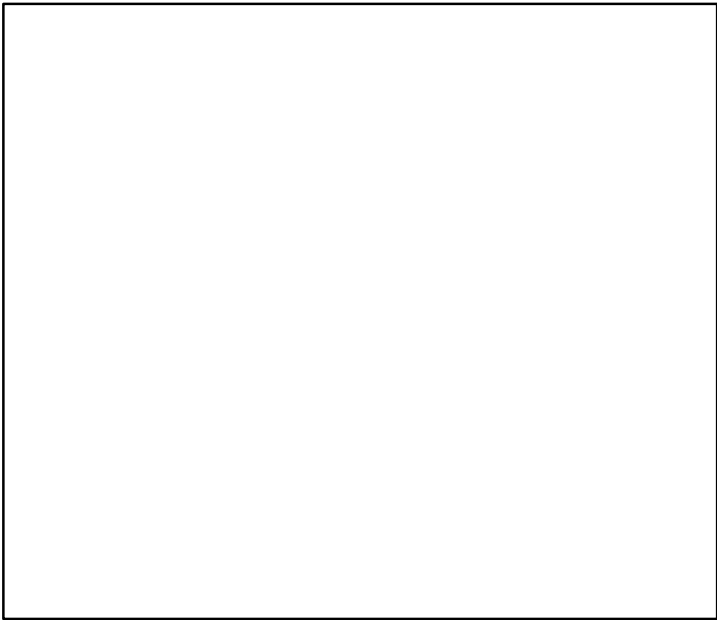
Kobe MSY\*



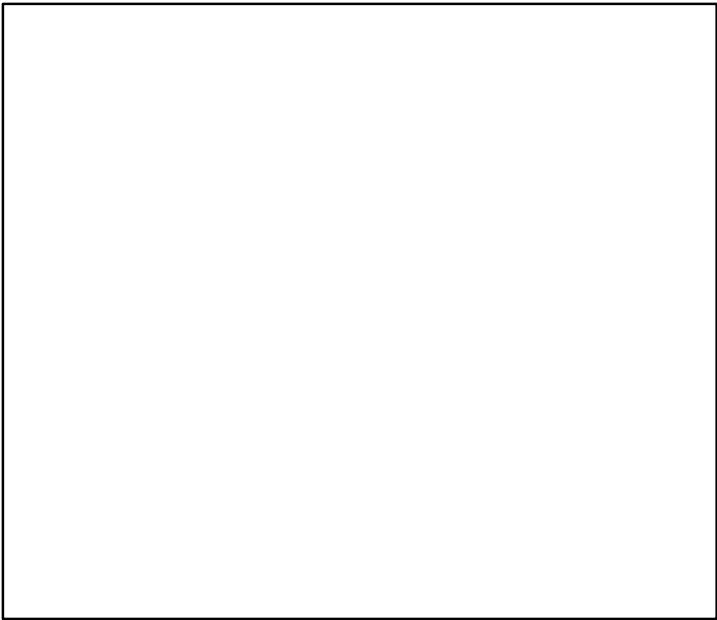
Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

Flame snapper Okinawa Islands [FSNAPOKWI]

TB\*



SSB\*



TN \*



F\*



ER\*



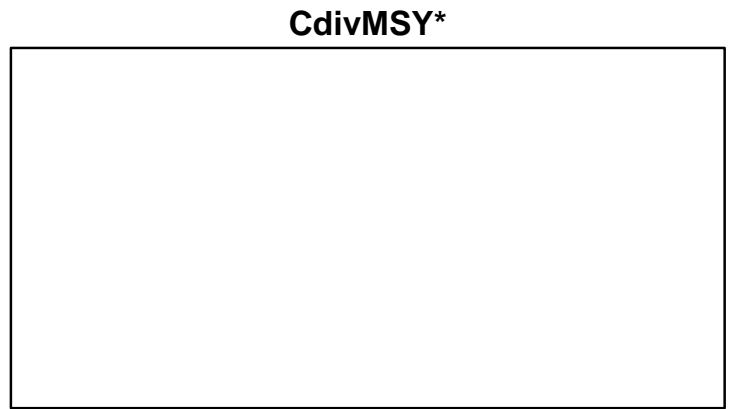
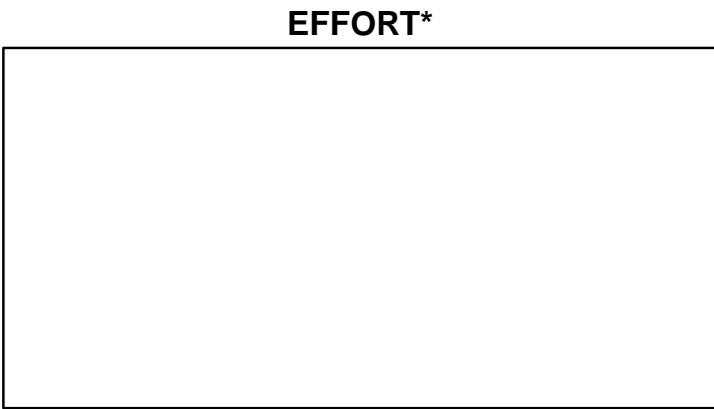
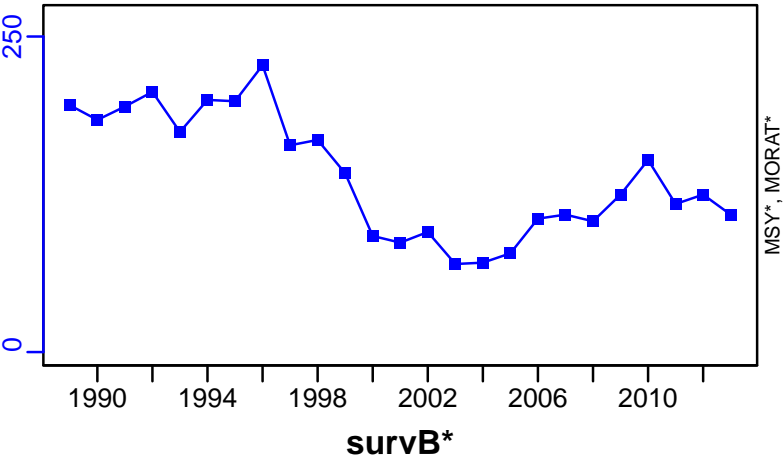
Recruits\*



# Flame snapper Okinawa Islands [FSNAPOKWI]

TC-MT, TL\*, RecC\* (1989-2013-JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



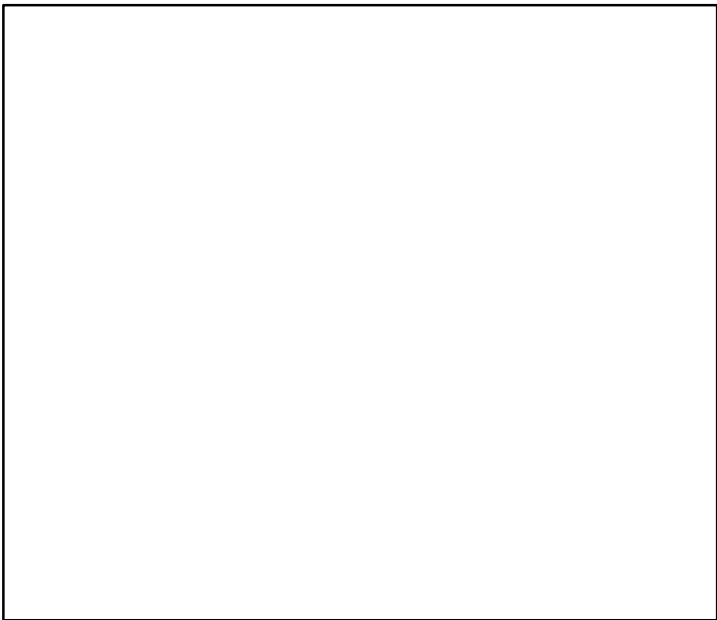
## Pacific herring Hokkaido [HERRHOKK]

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

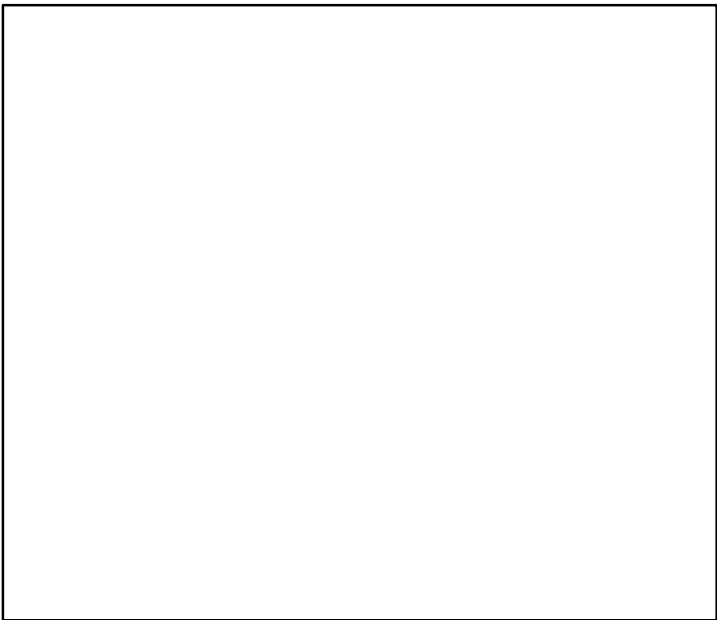
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

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

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data



Pacific herring Hokkaido [HERRHOKK]

TB\*



SSB\*



TN \*



F\*



ER\*

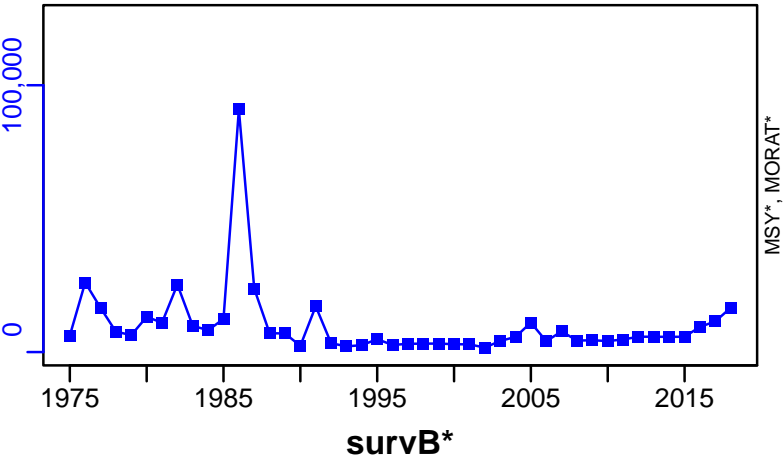


Recruits\*



Pacific herring Hokkaido [HERRHOKK]

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



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



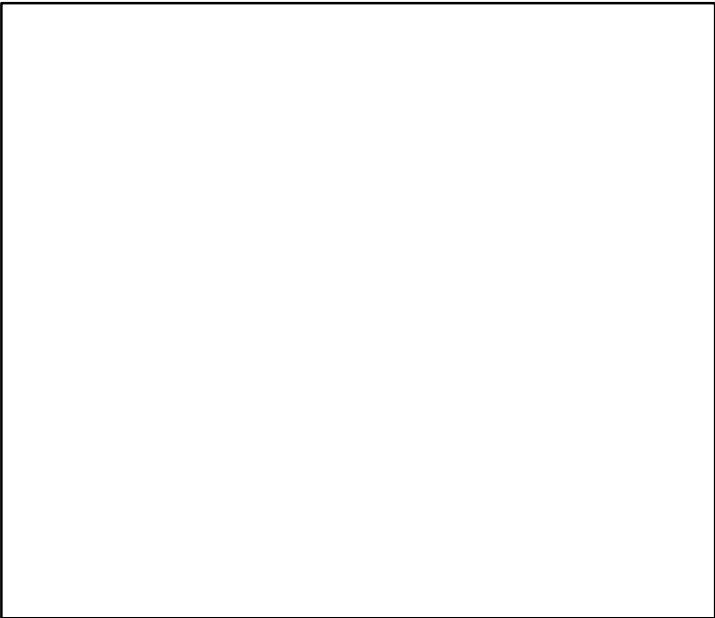
## Horsehead tilefish East China Sea [HHTILEECS]

Metadata	
<b>Scientific Name</b>	Branchiostegus japonicus
<b>Current Assess ID</b>	FAFRFJ-HHTILEECS-1985-2013-JPNIMP2016
<b>Area</b>	East China Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	611		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

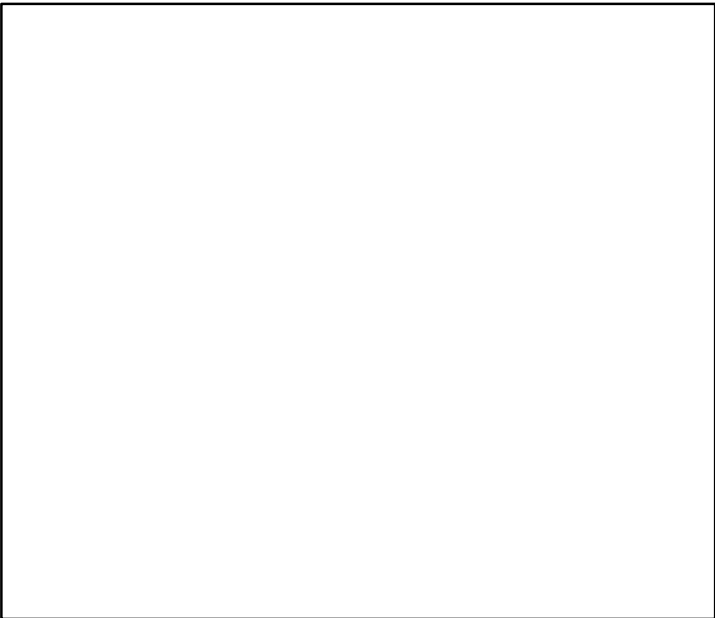
Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

Horsehead tilefish East China Sea [HHTILEECS]

TB\*



SSB\*



TN \*



F\*



ER\*



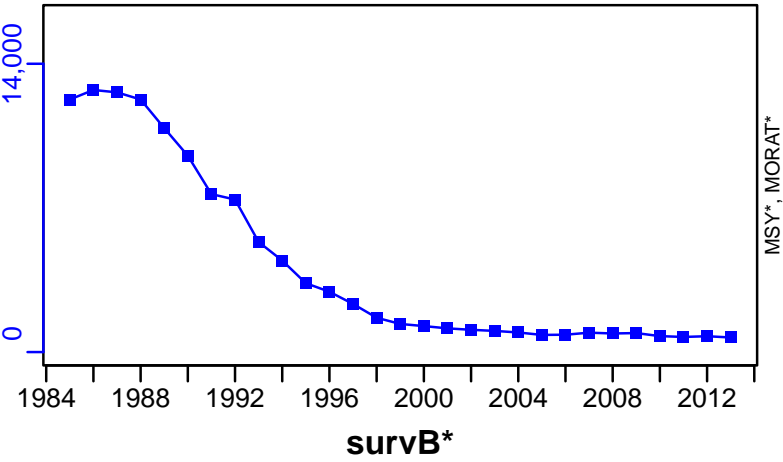
Recruits\*



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

Horsehead tilefish East China Sea [HHTILEECS]

TC-MT, TL\*, RecC\* (1985-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Japanese amberjack Japan [JAMBERJPN]

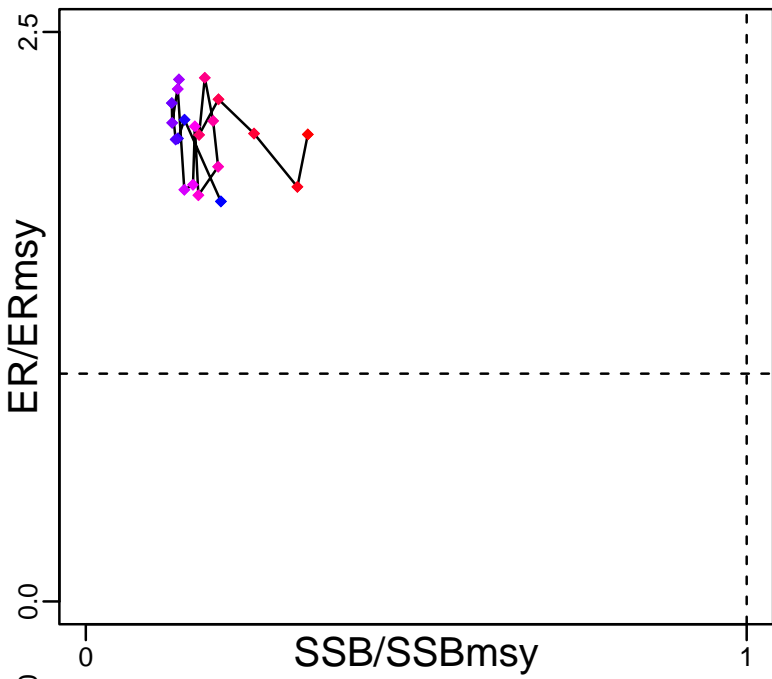
Metadata	
<b>Scientific Name</b>	Seriola quinqueradiata
<b>Current Assess ID</b>	FAFRFJ-JAMBERJPN-1952-2013-JPNIMP2016
<b>Area</b>	Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	615,892
<b>SSBmsy</b>	SSBmsy-MT	2013	381,043
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.219
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	134,880
<b>M</b>	M-1/yr	2013	0.3
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

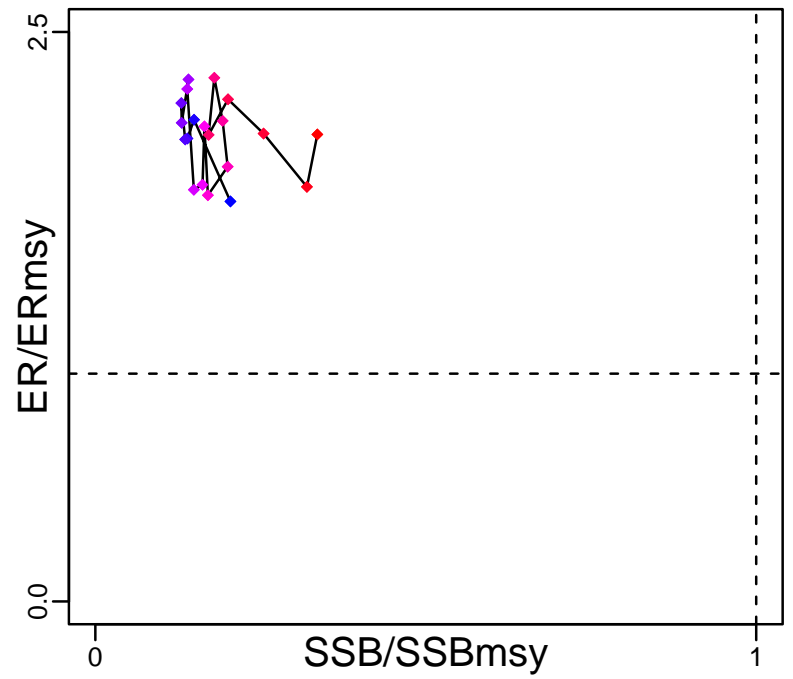
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	294,000	-	0
<b>SSB</b>	SSB-MT	2013	128,000	Both	2
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	$1.39 \times 10^8$	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.449	-	-
<b>TC</b>	TC-MT	2013	132,000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.477		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.336		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	2.05		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Japanese amberjack Japan [JAMBERJPN]

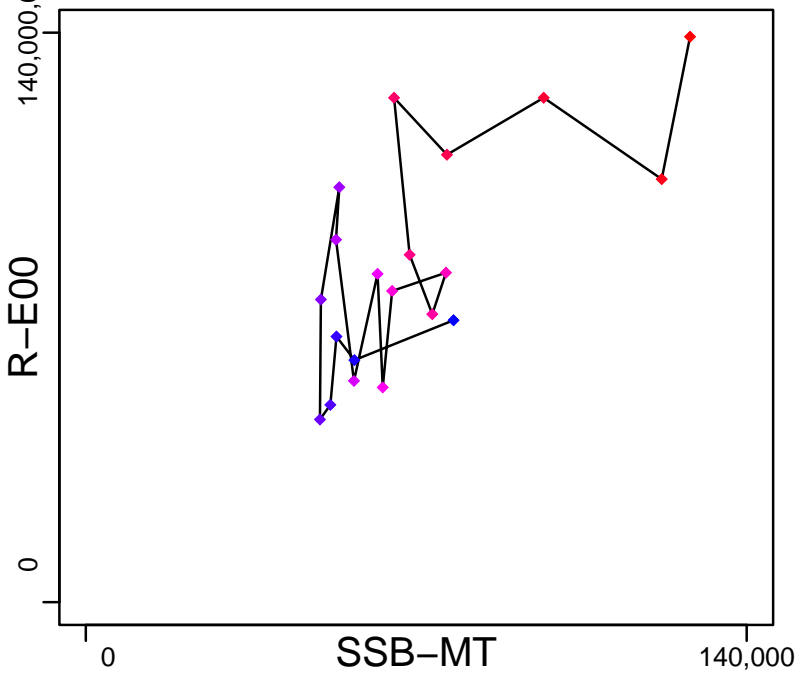
Kobe MSYpref (1952–2013–JPNIMP2016)



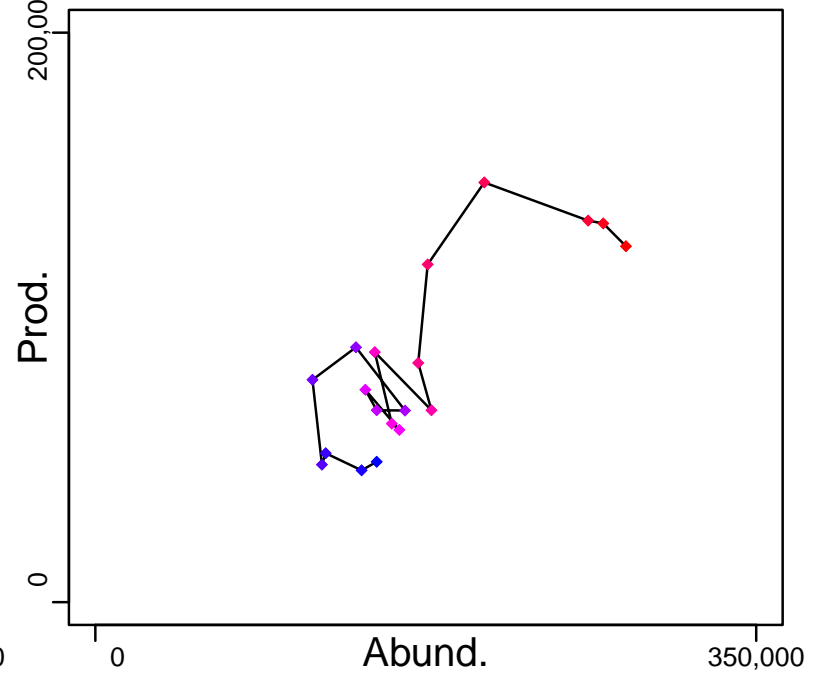
Kobe MGTpref (1952–2013–JPNIMP2016)



Spawner Recruit (1952–2013–JPNIMP2016)



Production (1952–2013–JPNIMP2016)

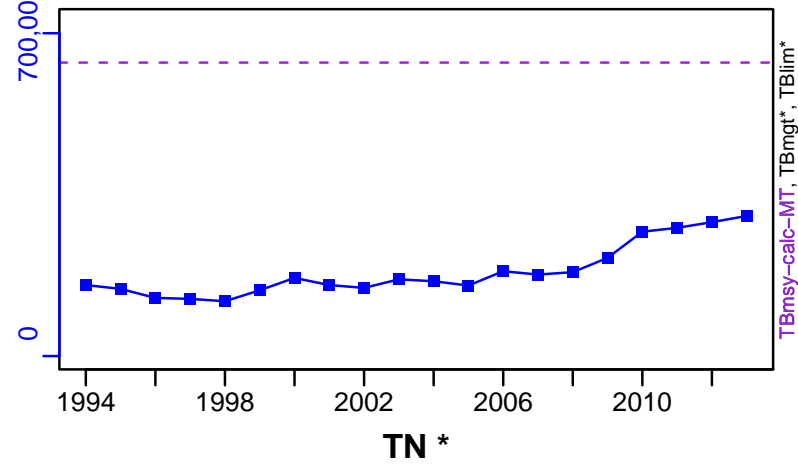


◆ Start Year ◆ End Year \* No Data

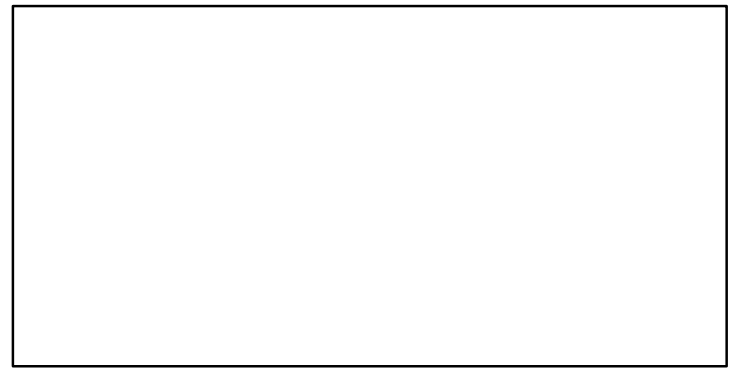
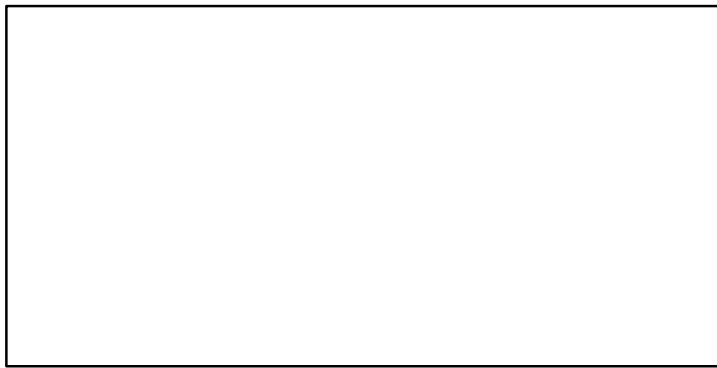
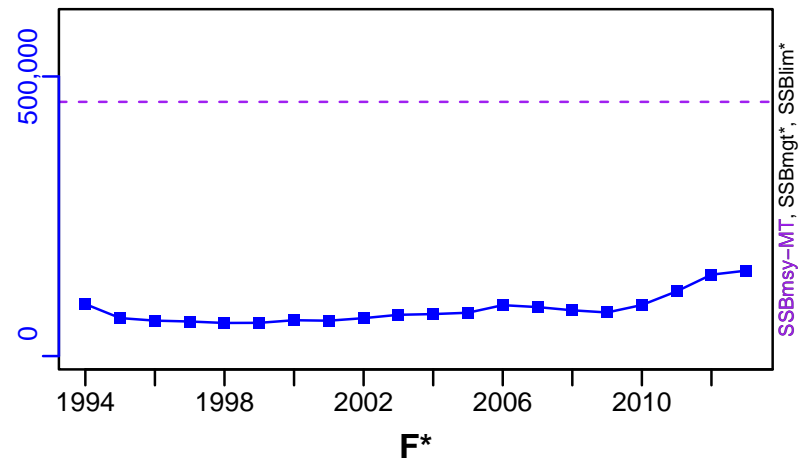


# Japanese amberjack Japan [JAMBERJPN]

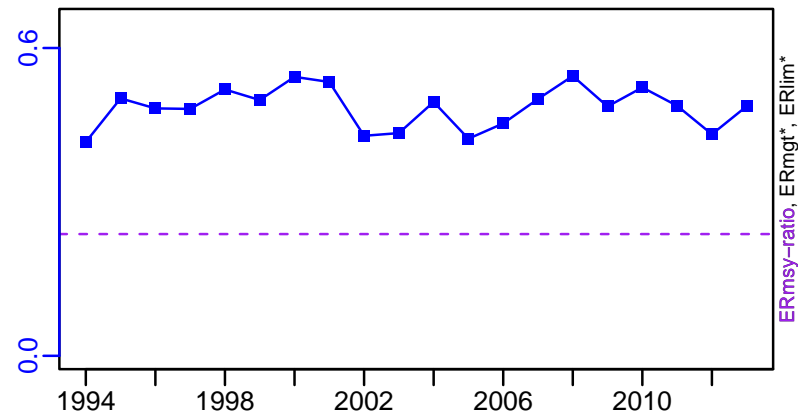
TB-MT (1952-2013-JPNIMP2016)



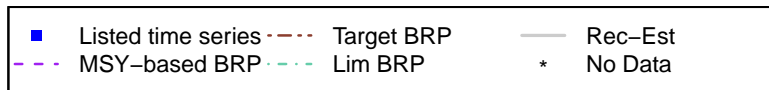
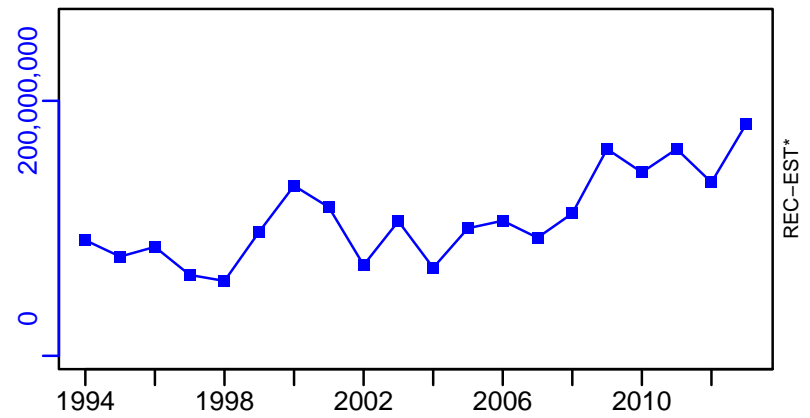
SSB-MT (1952-2013-JPNIMP2016)



ER-calc-ratio (1952-2013-JPNIMP2016)

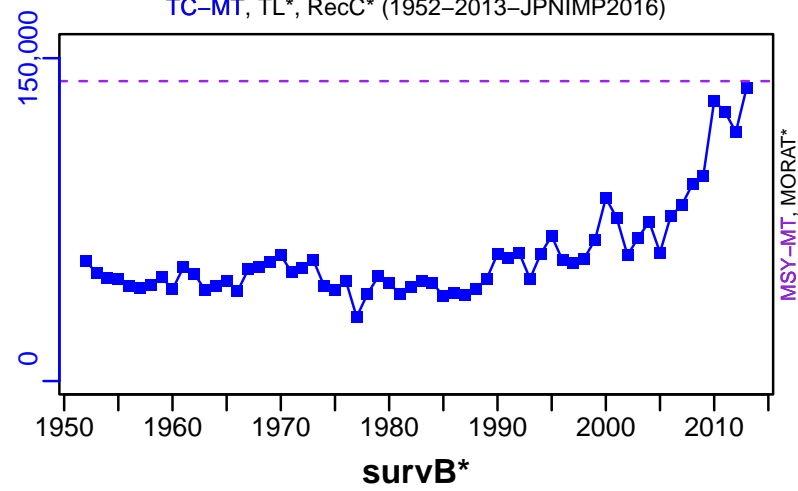


R-E00 (1952-2013-JPNIMP2016)



# Japanese amberjack Japan [JAMBERJPN]

TC-MT, TL\*, RecC\* (1952-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



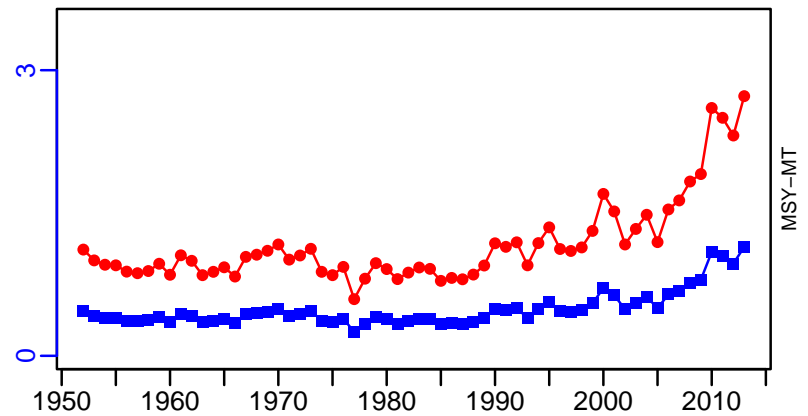
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1952-2013-JPNIMP2016)



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

## Japanese anchovy Pacific Coast of Japan [JANCHOPJPN]

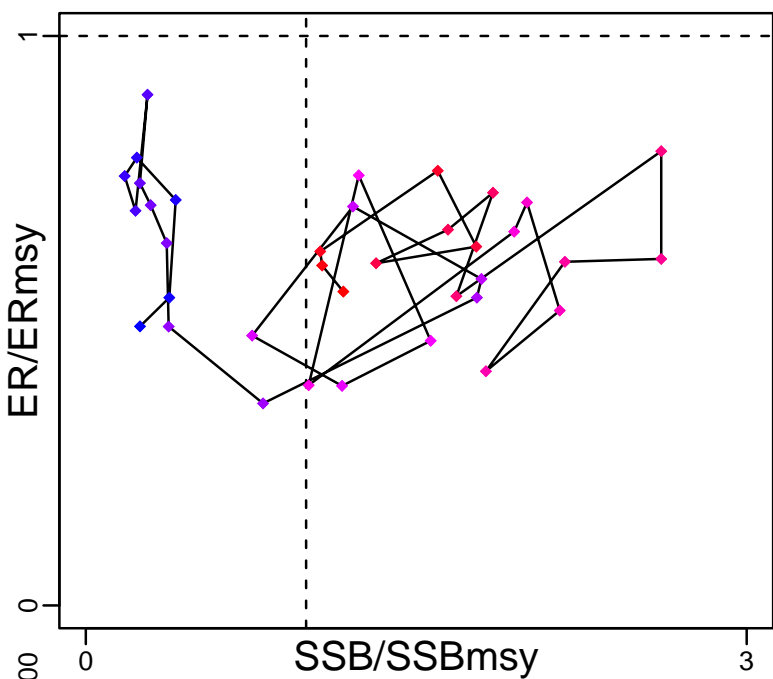
Metadata	
<b>Scientific Name</b>	Engraulis japonicus
<b>Current Assess ID</b>	FAFRFJ-JANCHOPJPN-1978-2018-KUROTA
<b>Area</b>	Pacific Coast of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2018

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

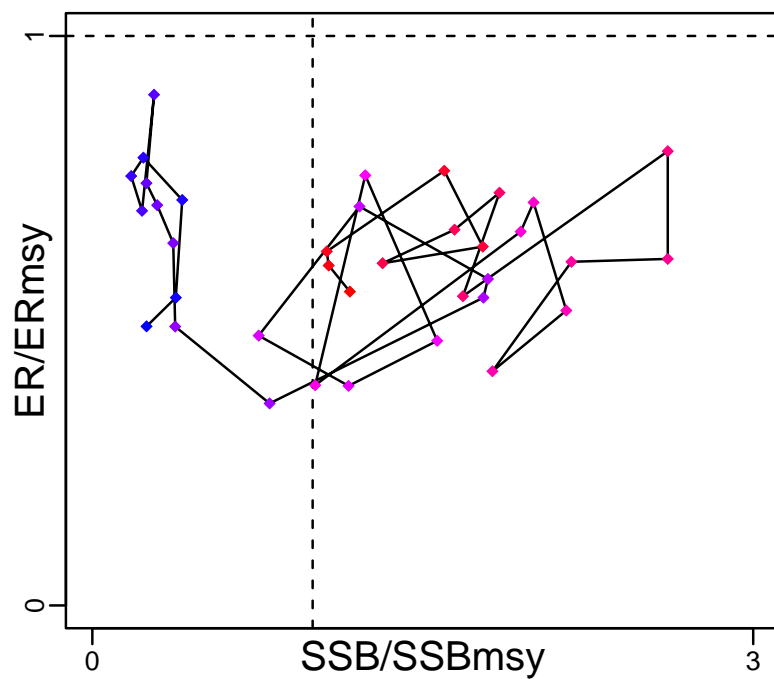
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	625,000	-	0
<b>SSB</b>	SSB-MT	2018	401,000	-	1
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	$8.02 \times 10^{10}$	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2018	0.25	-	-
<b>TC</b>	TC-MT	2018	31,250		
<b>TL</b>	-	-	-		
<b>TB/TBmsy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

# Japanese anchovy Pacific Coast of Japan [JANCHOPJPN]

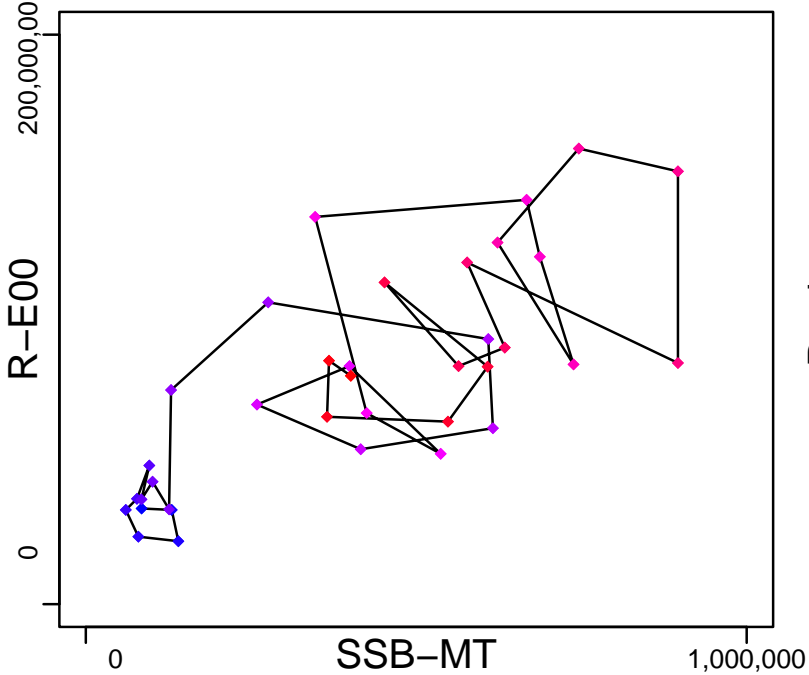
Kobe MSYpref (1978–2013–JPNIMP2016)



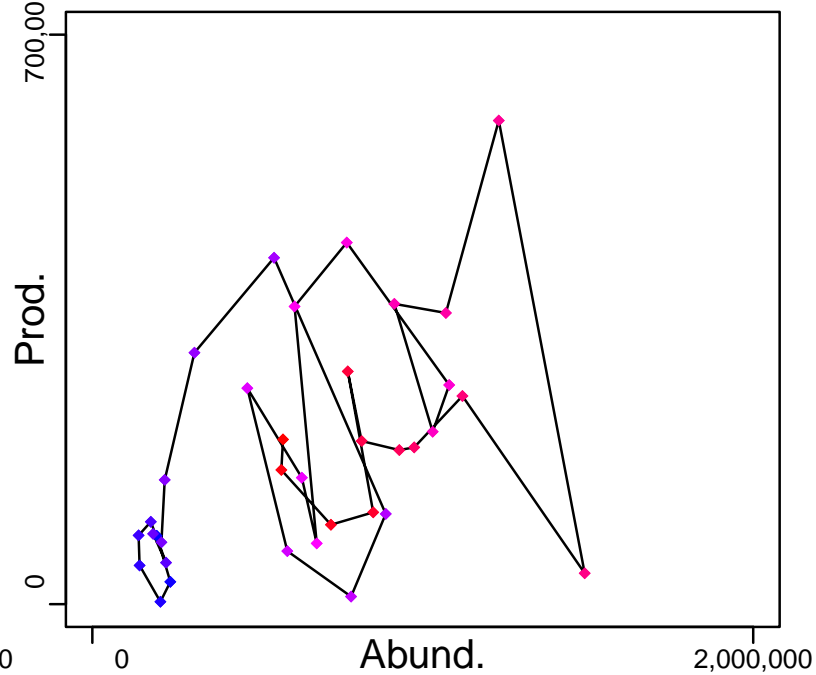
Kobe MGTpref (1978–2013–JPNIMP2016)



Spawner Recruit (1978–2018–KUROTA)



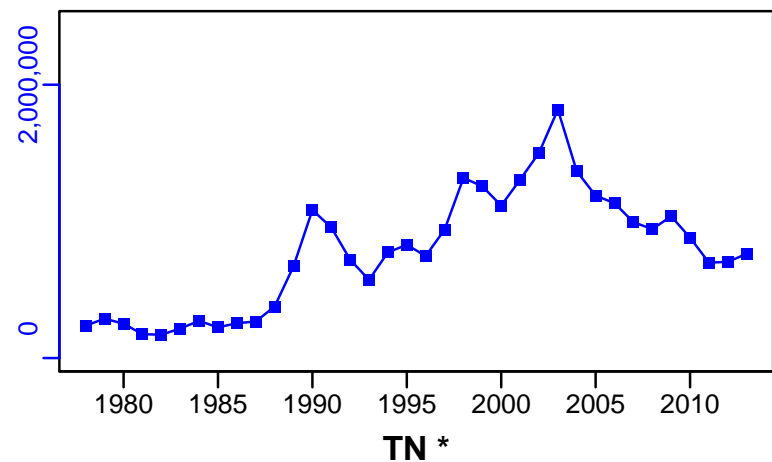
Production (1978–2018–KUROTA)



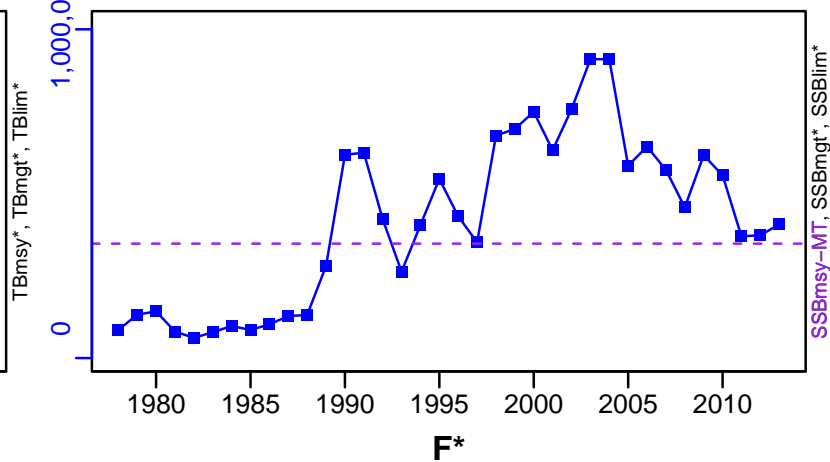
◆ Start Year ◆ End Year \* No Data

# Japanese anchovy Pacific Coast of Japan [JANCHOPJPN]

TB-MT (1978-2018-KUROTA)



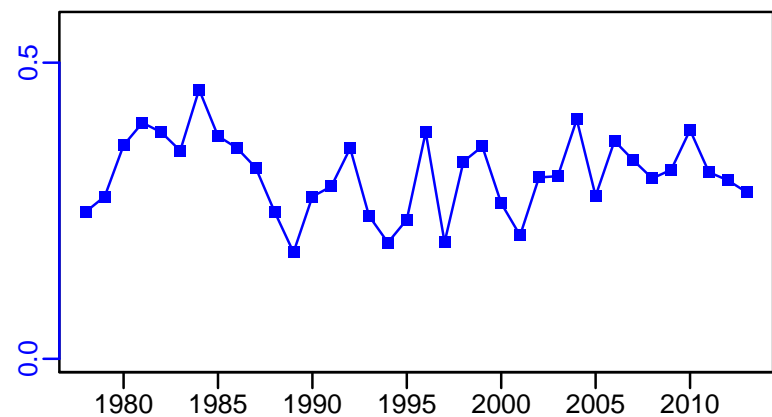
SSB-MT (1978-2018-KUROTA)



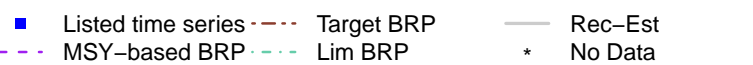
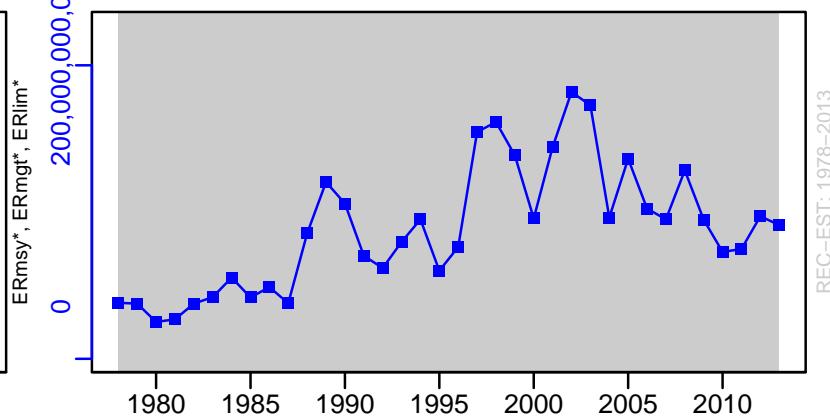
TN \*

F\*

ER-calc-ratio (1978-2018-KUROTA)

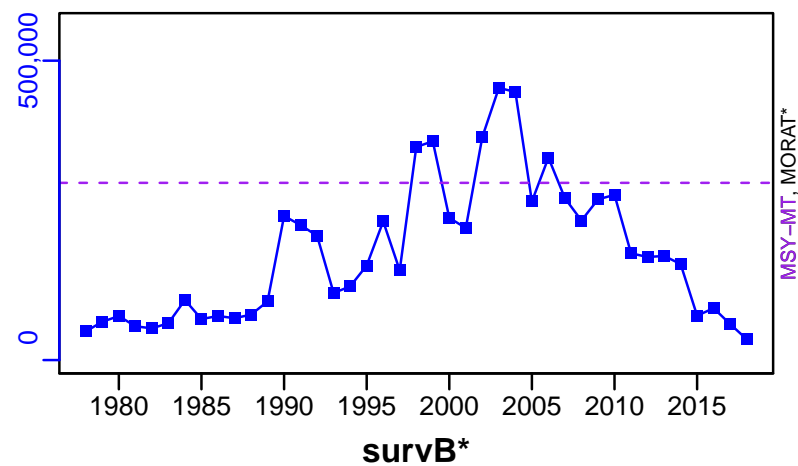


R-E00 (1978-2018-KUROTA)



# Japanese anchovy Pacific Coast of Japan [JANCHOPJPN]

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



TAC\*, Cpair\*, Cadv\*



survB\*



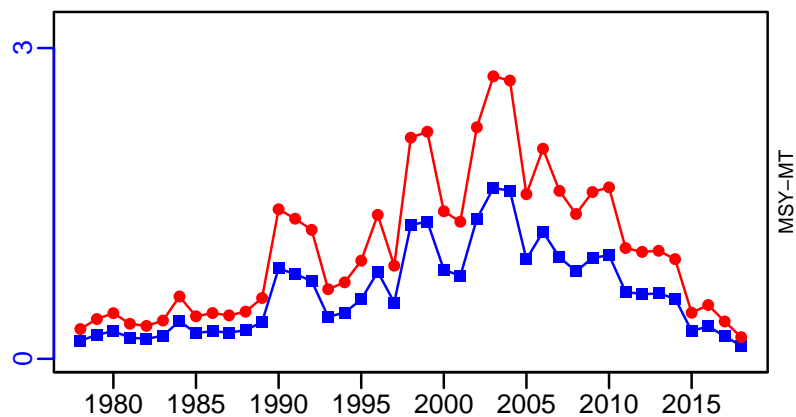
CPUE\*



EFFORT\*



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



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

## Japanese anchovy Inland Sea of Japan [JANCHOSETO]

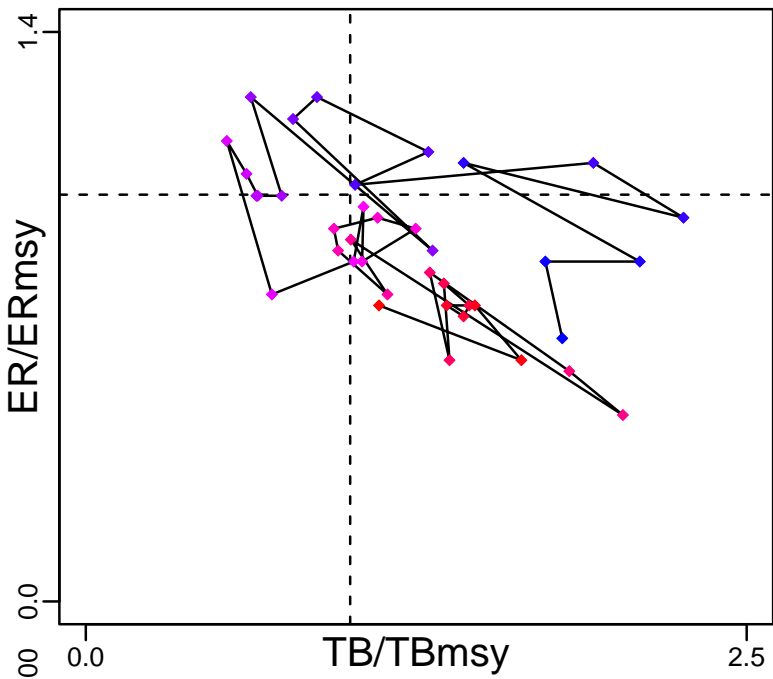
Metadata	
<b>Scientific Name</b>	Engraulis japonicus
<b>Current Assess ID</b>	FAFRFJ-JANCHOSETO-1955-2018-KUROTA
<b>Area</b>	Inland Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2018

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

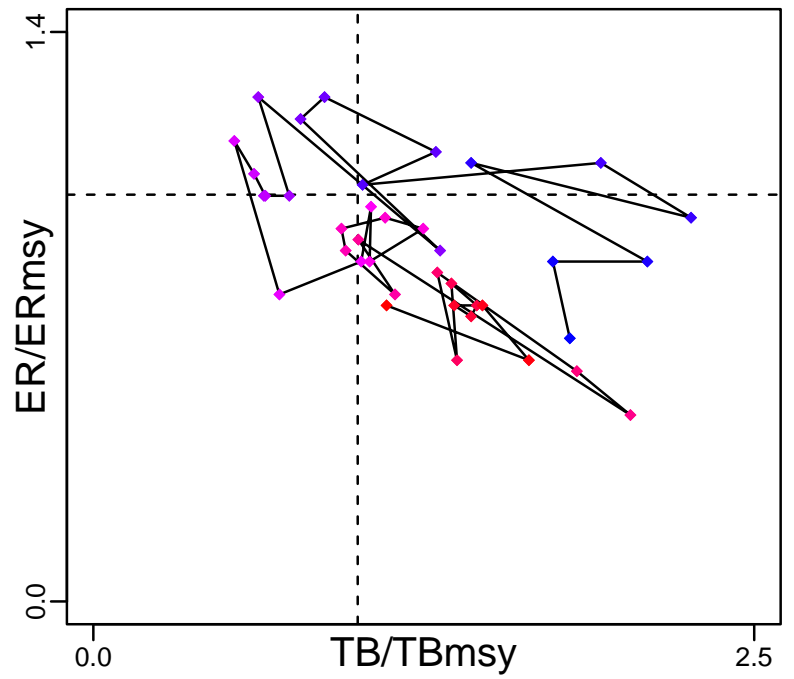
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	208,000	-	0
<b>SSB</b>	SSB-MT	2018	51,000	-	0.4166667
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	$2.33 \times 10^{11}$	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.27	-	-
<b>TC</b>	TC-MT	2018	57,100		
<b>TL</b>	-	-	-		
<b>TB/TBmsy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

# Japanese anchovy Inland Sea of Japan [JANCHOSETO]

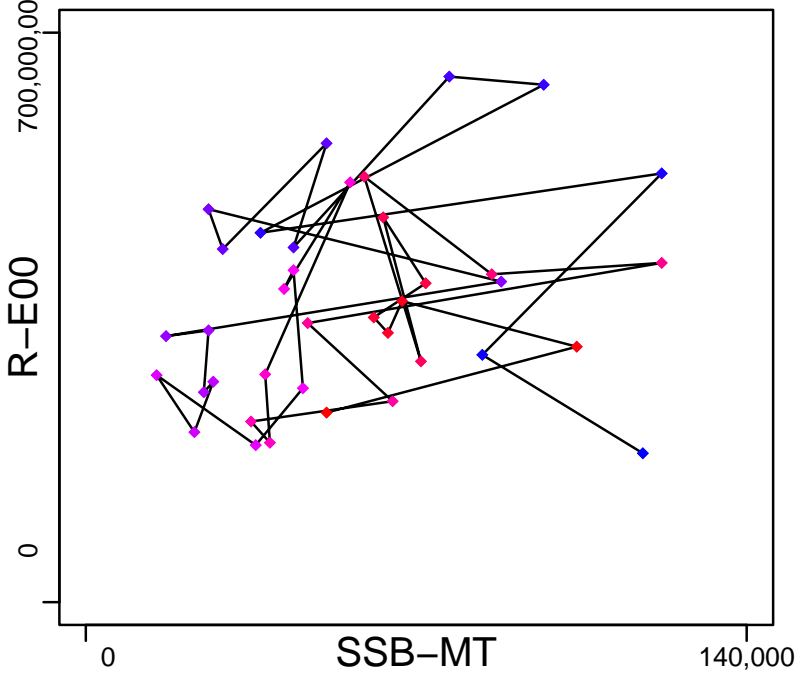
Kobe MSYpref (1955–2018–KUROTA)



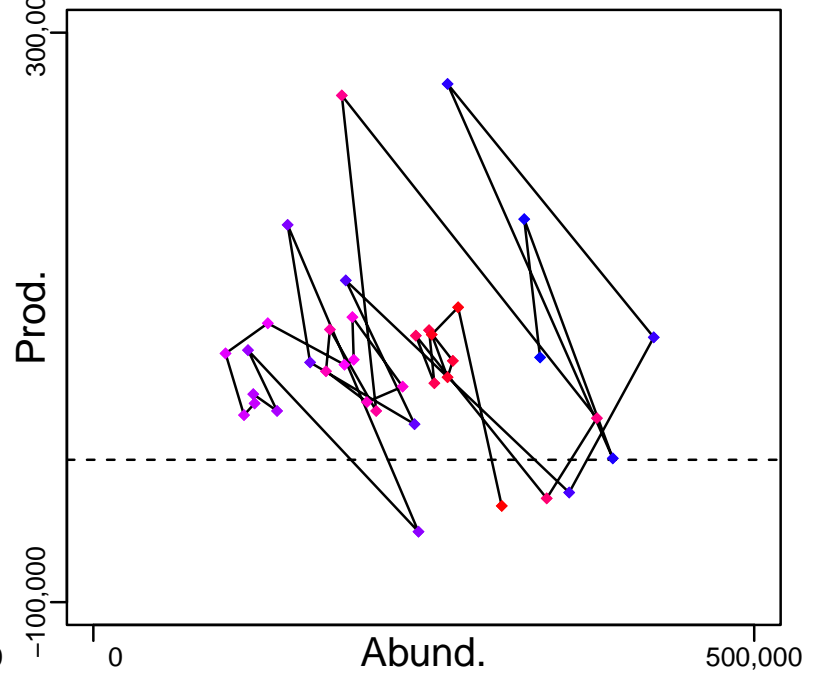
Kobe MGTpref (1955–2018–KUROTA)



Spawner Recruit (1955–2018–KUROTA)



Production (1955–2018–KUROTA)

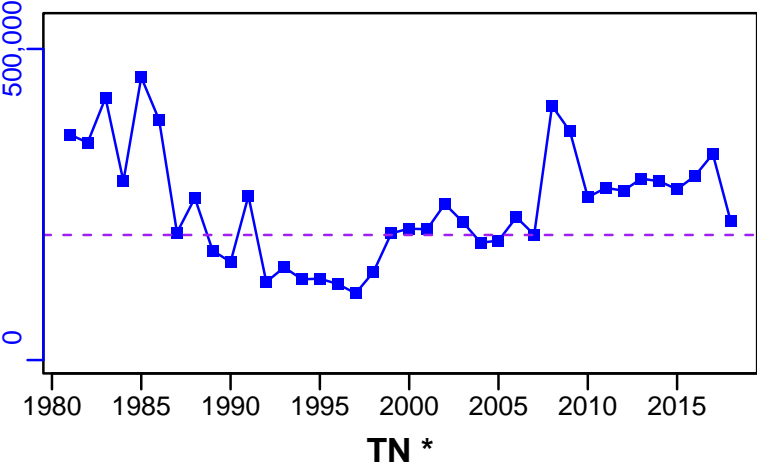


◆ Start Year ◆ End Year \* No Data

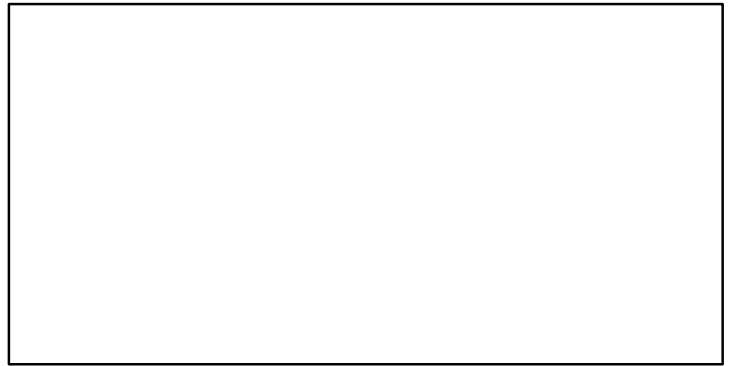
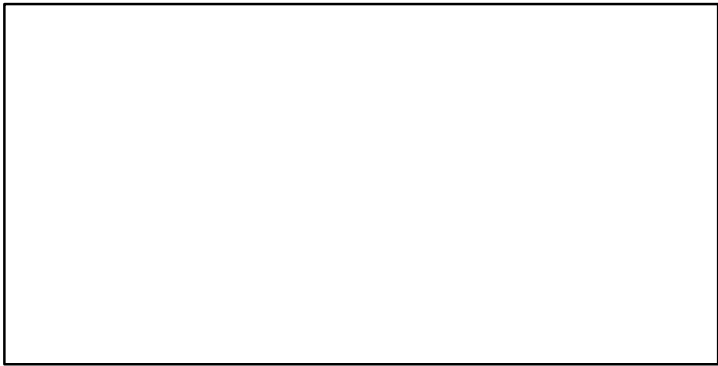
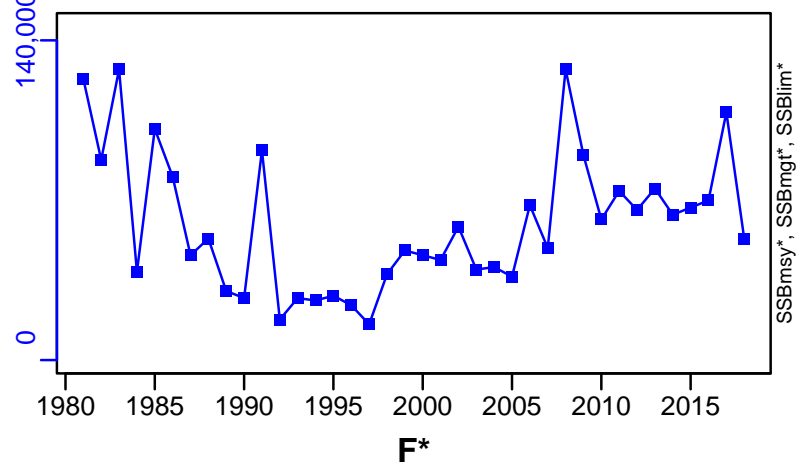


# Japanese anchovy Inland Sea of Japan [JANCHOSETO]

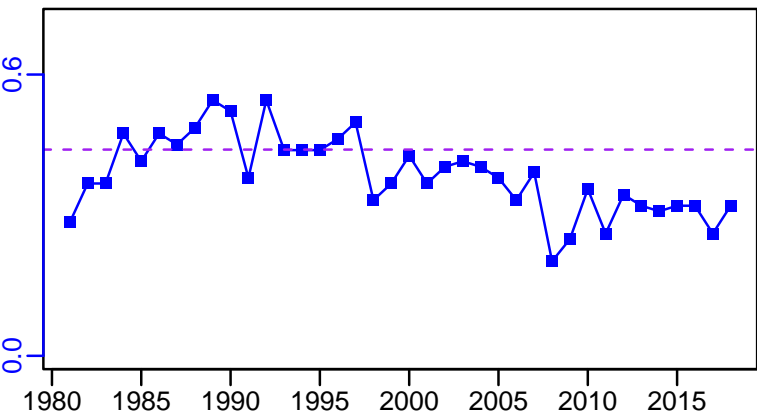
TB-MT (1955–2018–KUROTA)



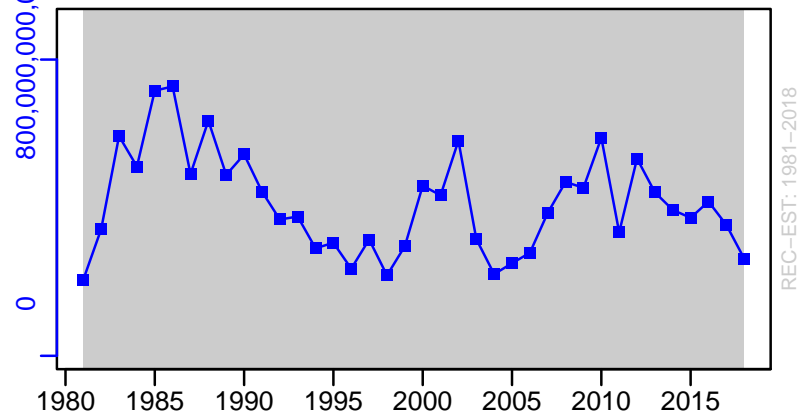
SSB-MT (1955–2018–KUROTA)



ER-ratio (1955–2018–KUROTA)

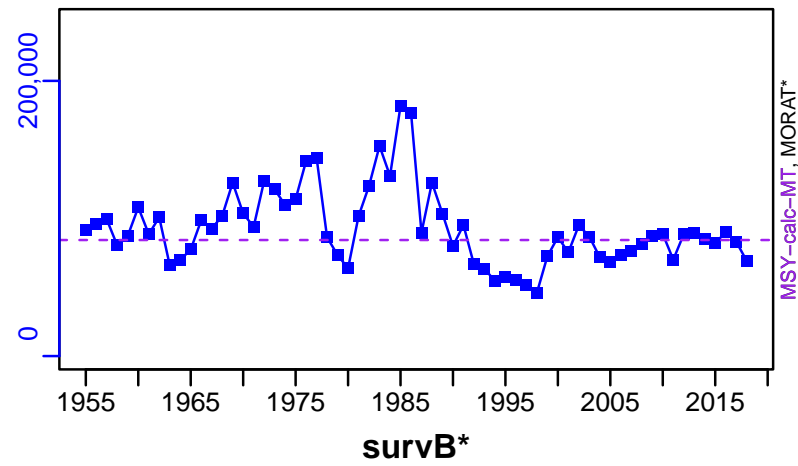


R-E00 (1955–2018–KUROTA)



# Japanese anchovy Inland Sea of Japan [JANCHOSETO]

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



TAC\*, Cpair\*, Cadv\*



survB\*



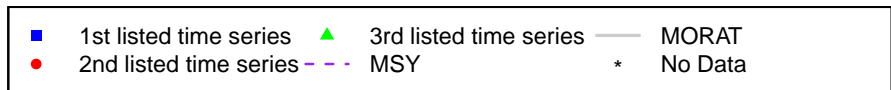
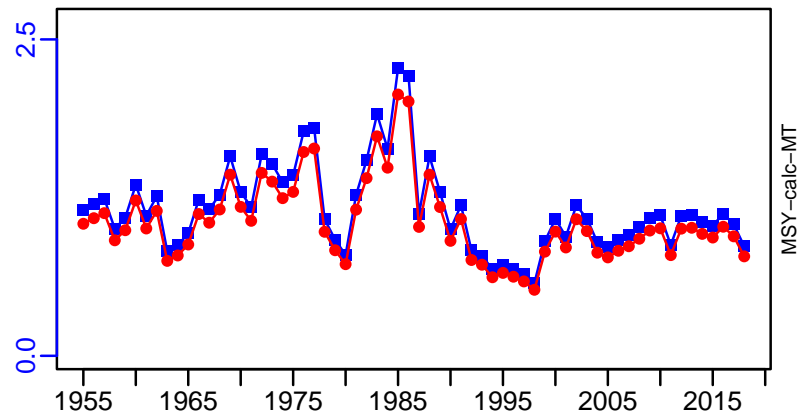
CPUE\*



EFFORT\*



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



## Japanese anchovy Tsushima Strait [JANCHOTSST]

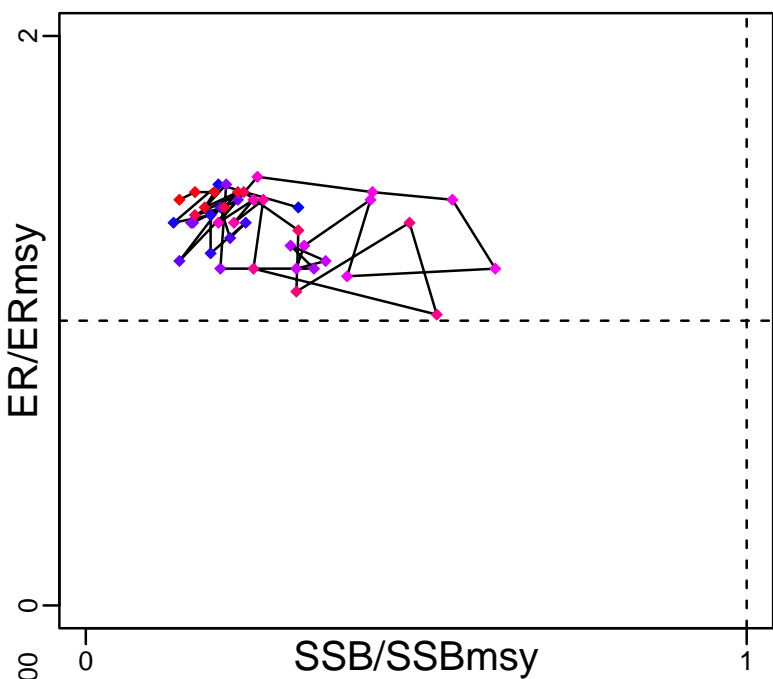
Metadata	
<b>Scientific Name</b>	Engraulis japonicus
<b>Current Assess ID</b>	FAFRFJ-JANCHOTSST-1977-2018-KUROTA
<b>Area</b>	Tsushima Strait
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2018

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

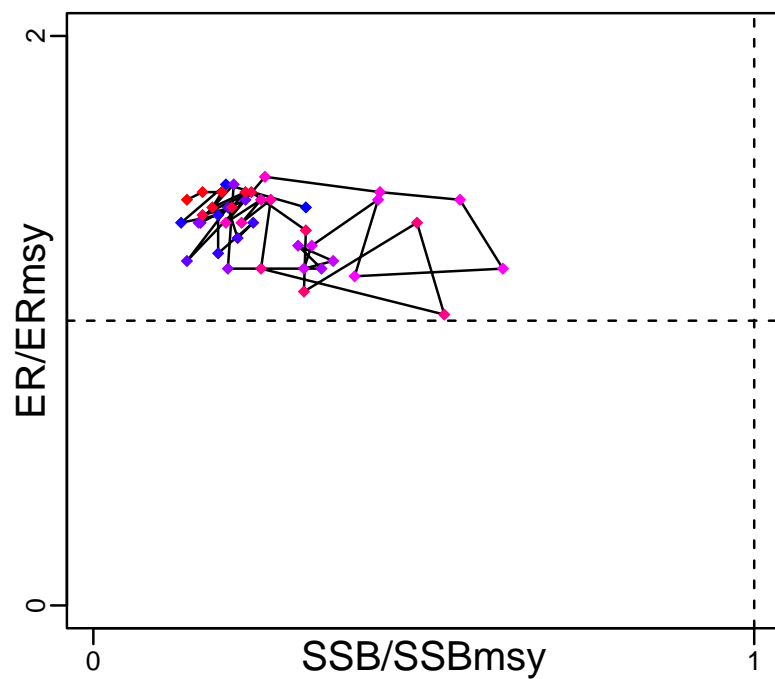
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	88,000	Both	0
<b>SSB</b>	SSB-MT	2018	48,000	Both	1
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	$5.6135 \times 10^{10}$	Both	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.53	Both	-
<b>TC</b>	TC-MT	2018	43,100		
<b>TL</b>	-	-	-		
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

# Japanese anchovy Tsushima Strait [JANCHOTSST]

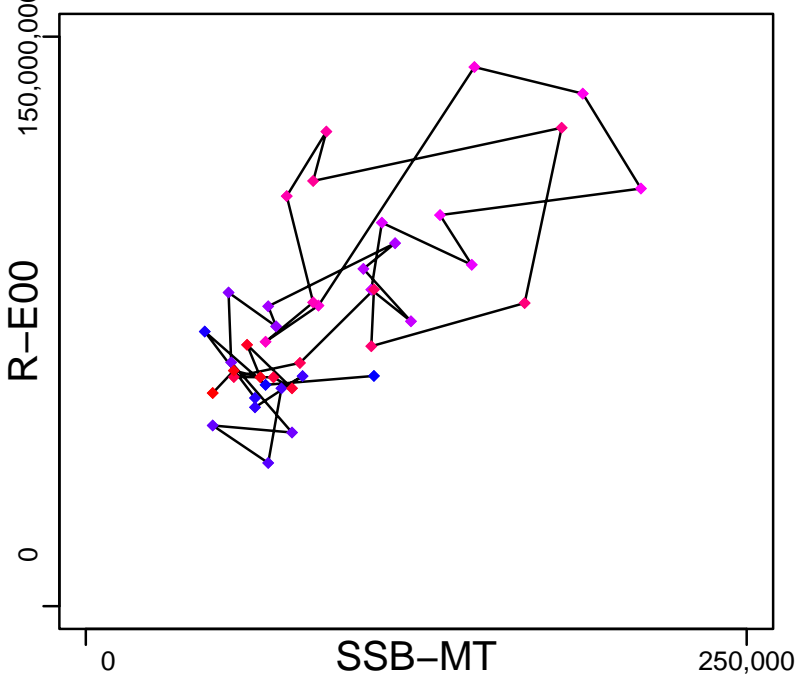
Kobe MSYpref (1977–2018–KUROTA)



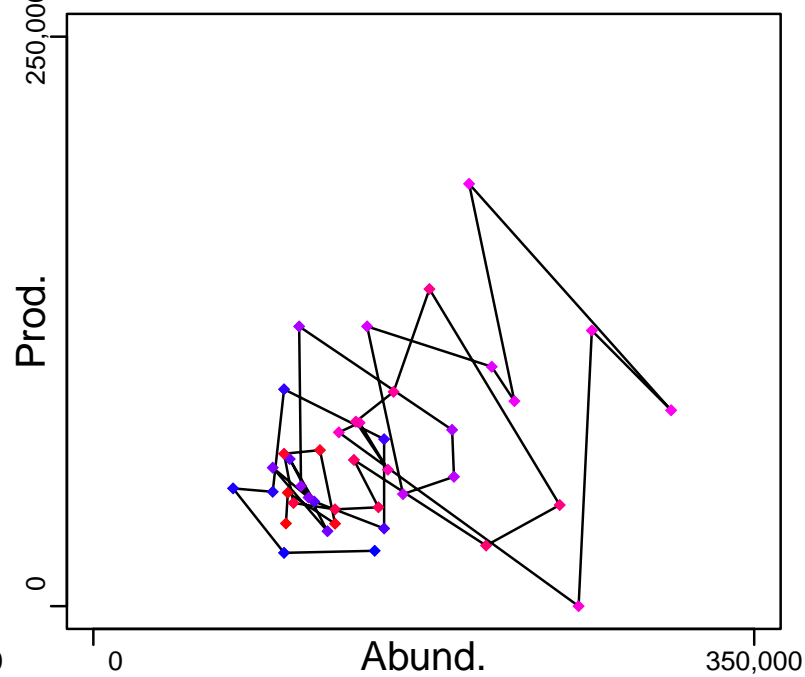
Kobe MGTpref (1977–2018–KUROTA)



Spawner Recruit (1977–2018–KUROTA)



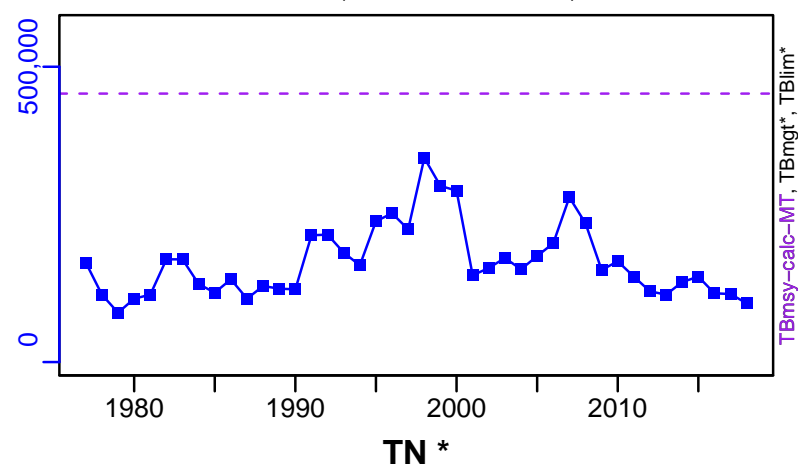
Production (1977–2018–KUROTA)



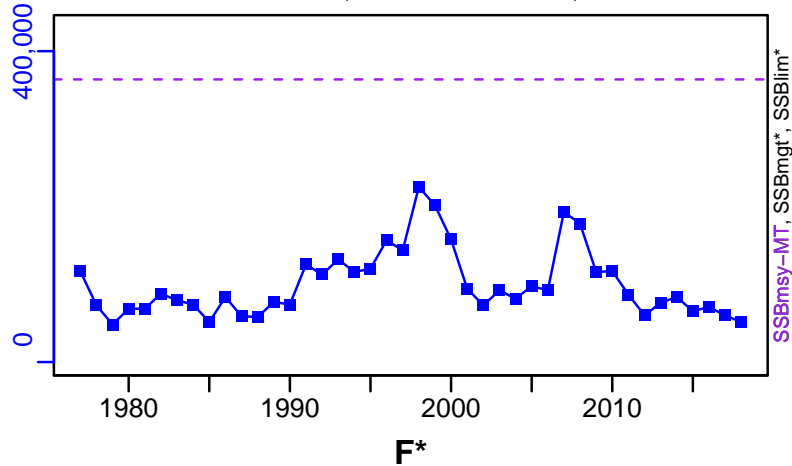
◆ Start Year ◆ End Year \* No Data

# Japanese anchovy Tsushima Strait [JANCHOTSST]

TB-MT (1977-2018-KUROTA)



SSB-MT (1977-2018-KUROTA)

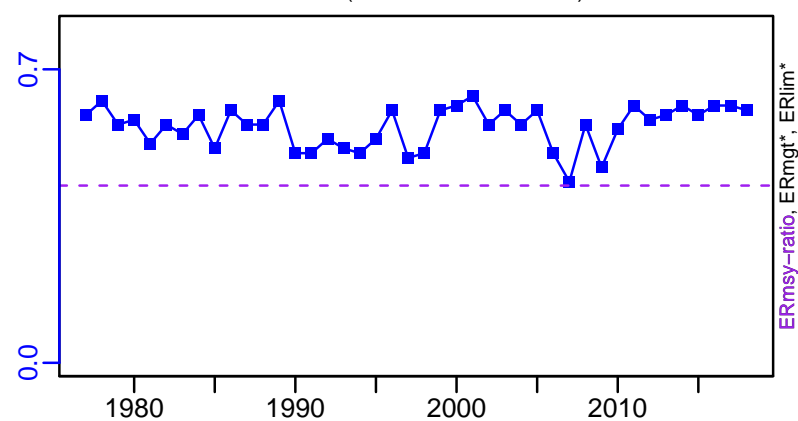


TN \*

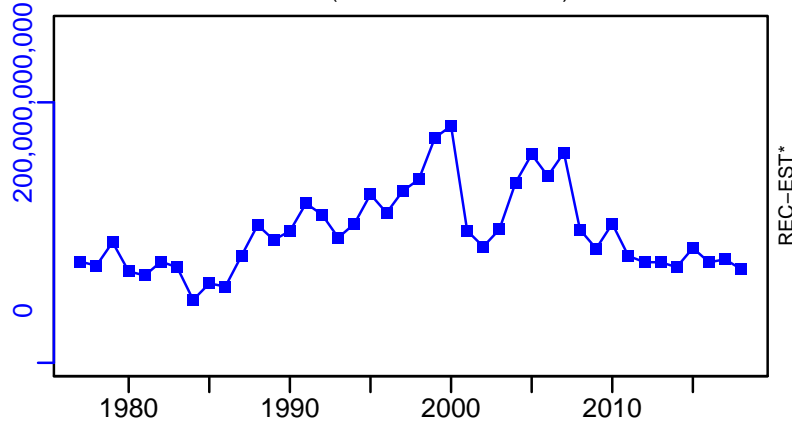
F\*



ER-ratio (1977-2018-KUROTA)

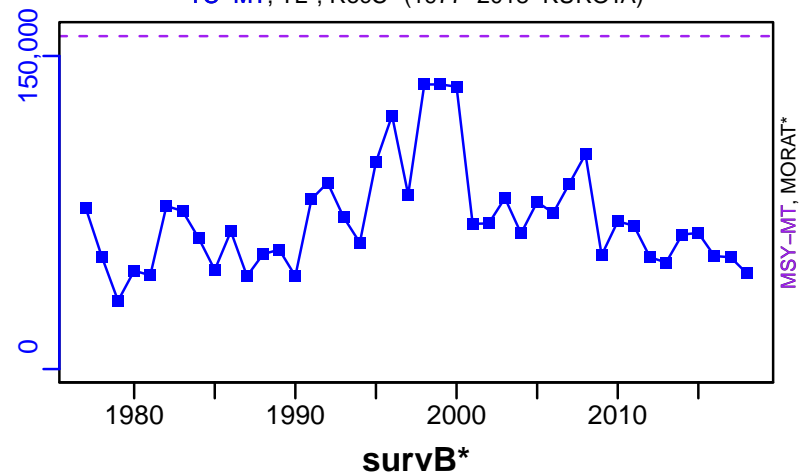


R-E00 (1977-2018-KUROTA)



# Japanese anchovy Tsushima Strait [JANCHOTSST]

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



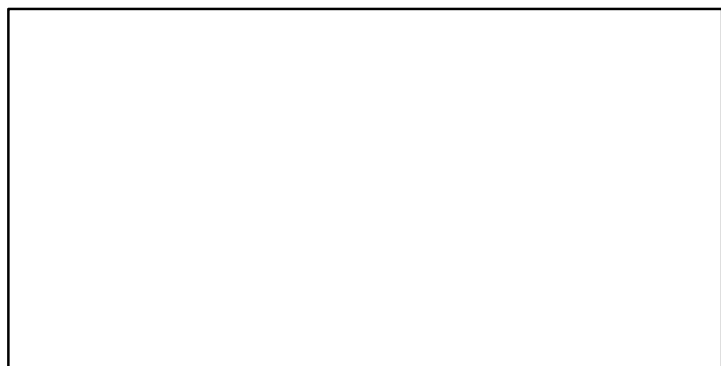
TAC\*, Cpair\*, Cadv\*



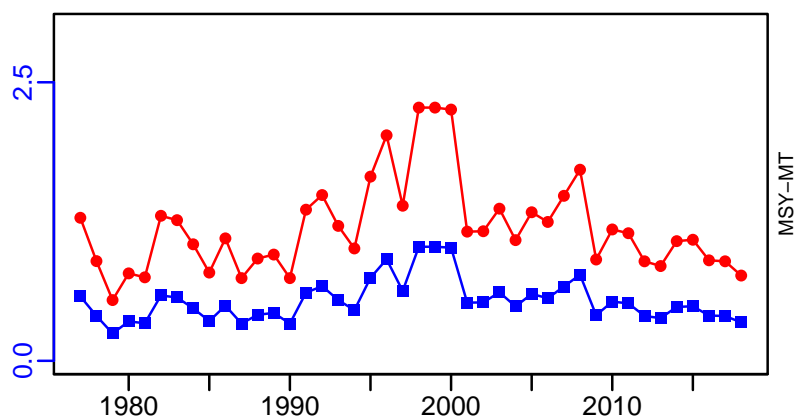
CPUE\*



EFFORT\*



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



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

## Japanese flying squid Japan Autumn recruitment [JCSQUIDJPNAR]

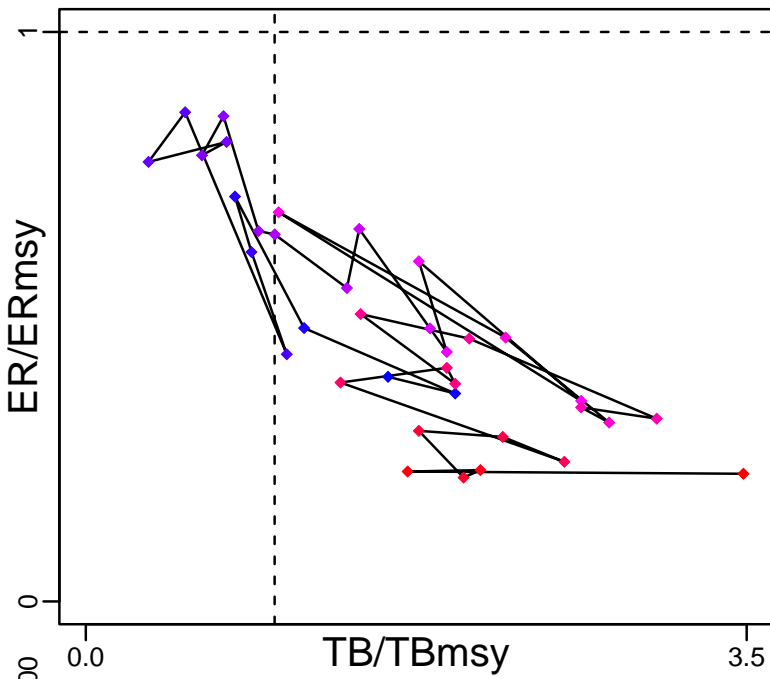
Metadata	
<b>Scientific Name</b>	Todarodes pacificus
<b>Current Assess ID</b>	FAFRFJ-JCSQUIDJPNAR-1979-2014-JPNIMP2016
<b>Area</b>	Japan Autumn recruitment
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2014

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2014	674,723
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2014	0.446
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-calc-MT	2014	300,926
<b>M</b>	M-1/yr	2014	1.2
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

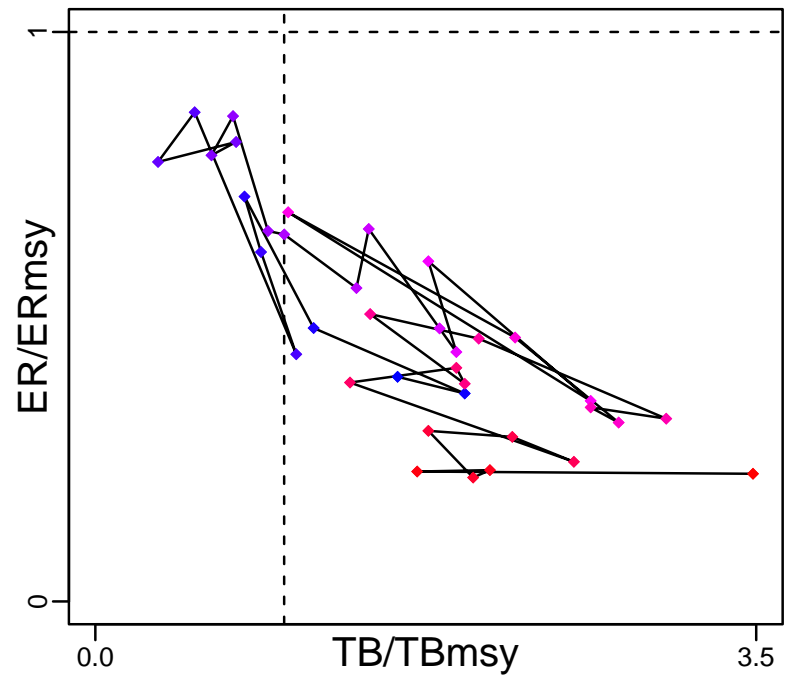
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2014	2,350,000	-	0.5
<b>SSB</b>	SSB-MT	2014	1,110,000	Both	0.5
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2014	$8.37 \times 10^9$	-	0.5
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2014	0.1	-	-
<b>TC</b>	TC-MT	2014	235,000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2014	3.483		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2014	0.224		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Japanese flying squid Japan Autumn recruitment [JCSQUIDJPNAR]

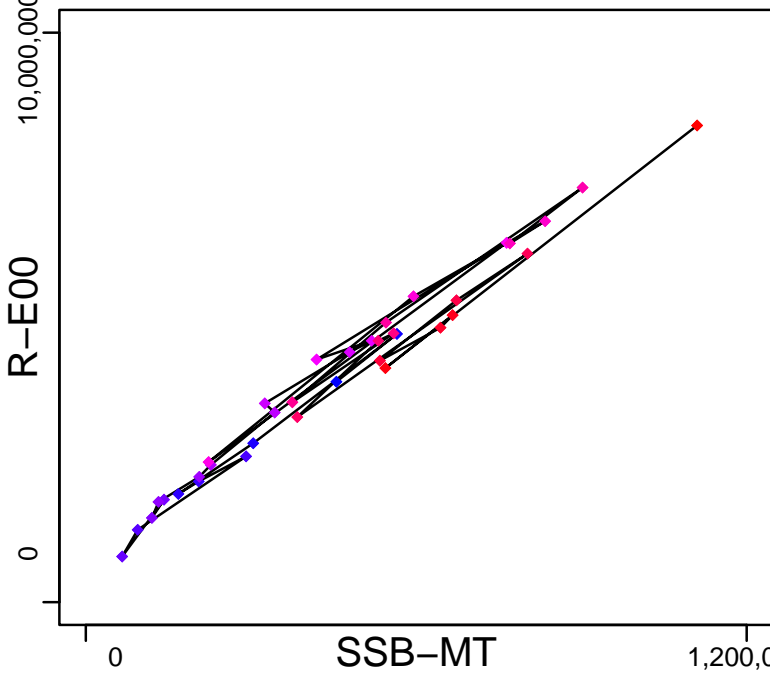
Kobe MSYpref (1979–2014–JPNIMP2016)



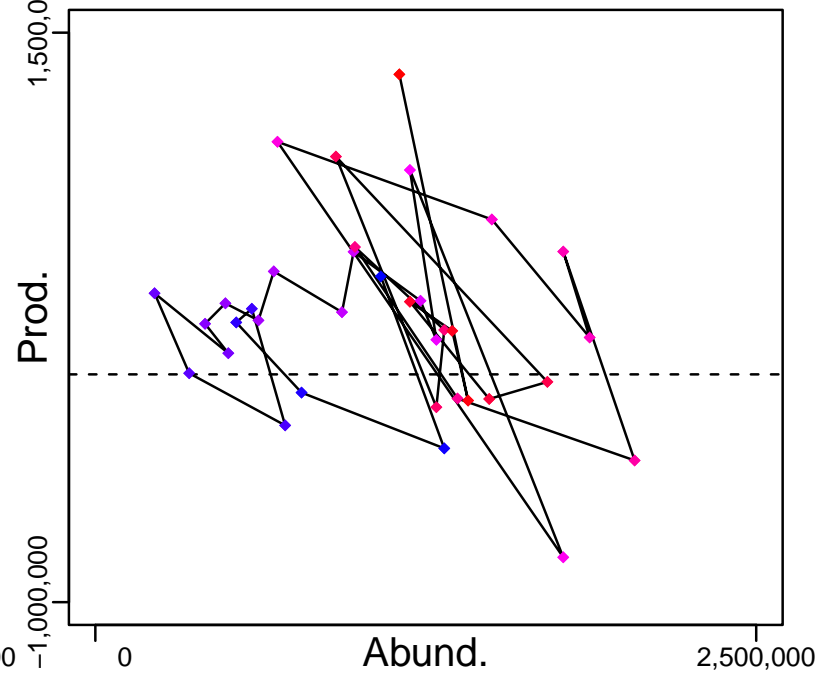
Kobe MGTpref (1979–2014–JPNIMP2016)



Spawner Recruit (1979–2014–JPNIMP2016)



Production (1979–2014–JPNIMP2016)

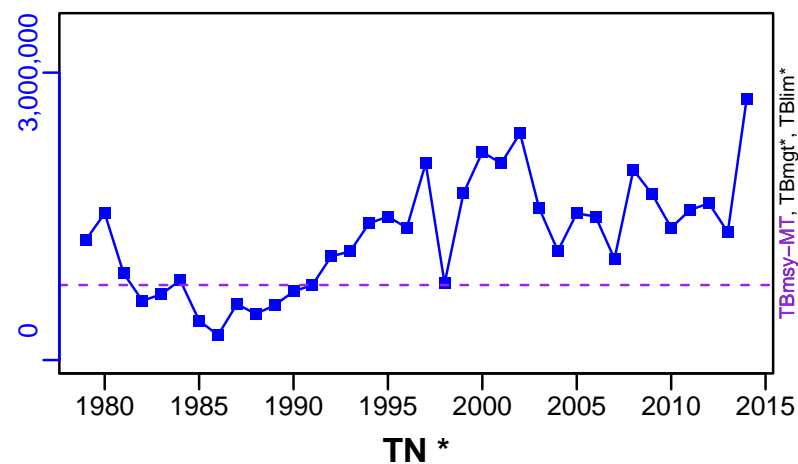


◆ Start Year ◆ End Year \* No Data

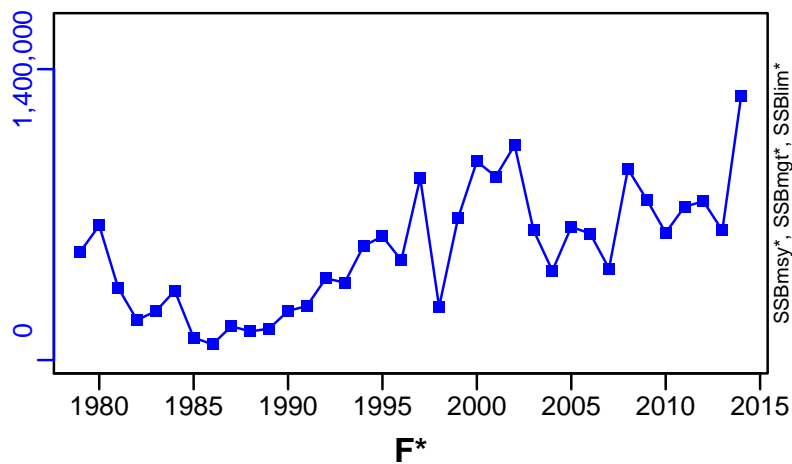


# Japanese flying squid Japan Autumn recruitment [JCSQUIDJPNAR]

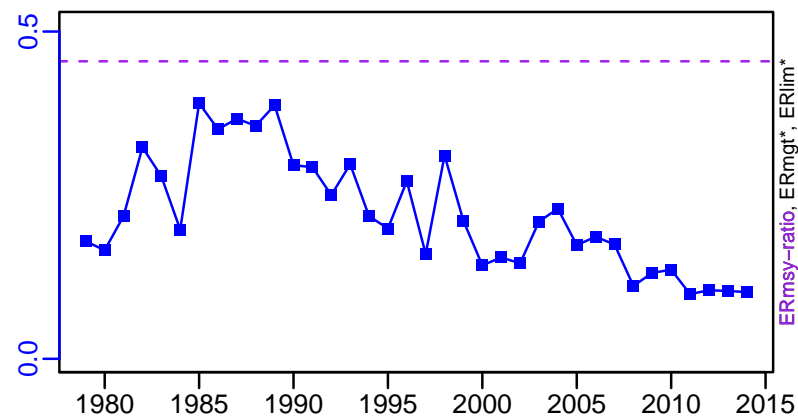
TB-MT (1979–2014–JPNIMP2016)



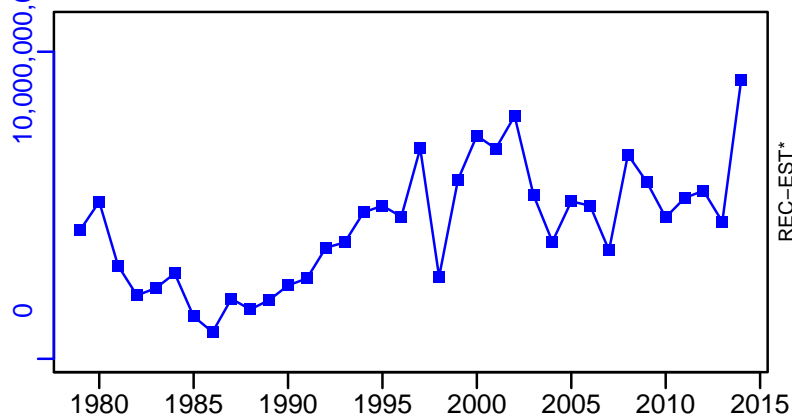
SSB-MT (1979–2014–JPNIMP2016)



ER-calc-ratio (1979–2014–JPNIMP2016)



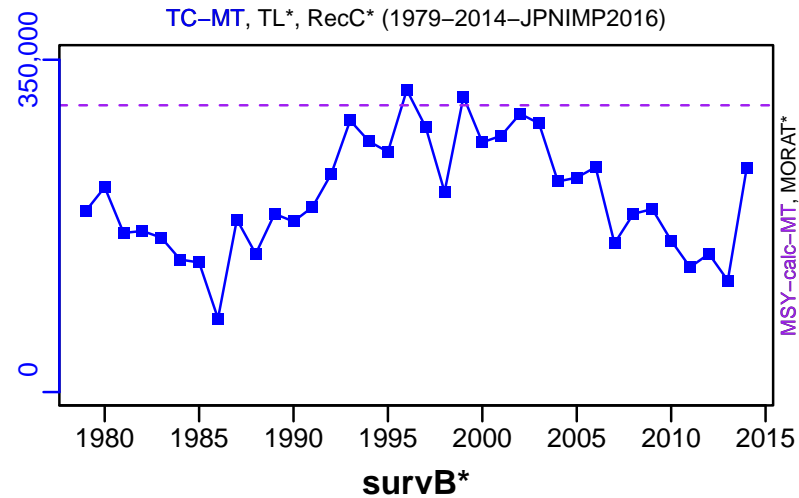
R-E00 (1979–2014–JPNIMP2016)



# Japanese flying squid Japan Autumn recruitment [JCSQUIDJPNAR]

TC-MT, TL\*, RecC\* (1979-2014-JPNIMP2016)

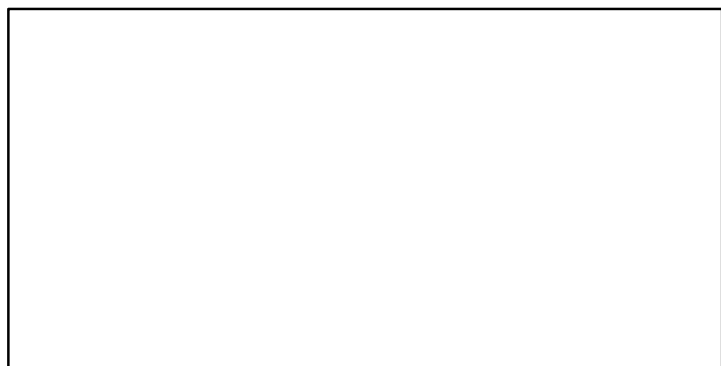
TAC\*, Cpair\*, Cadv\*



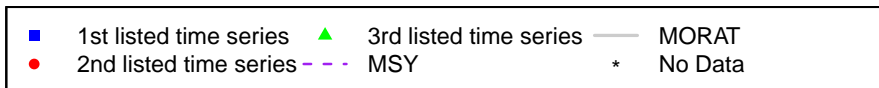
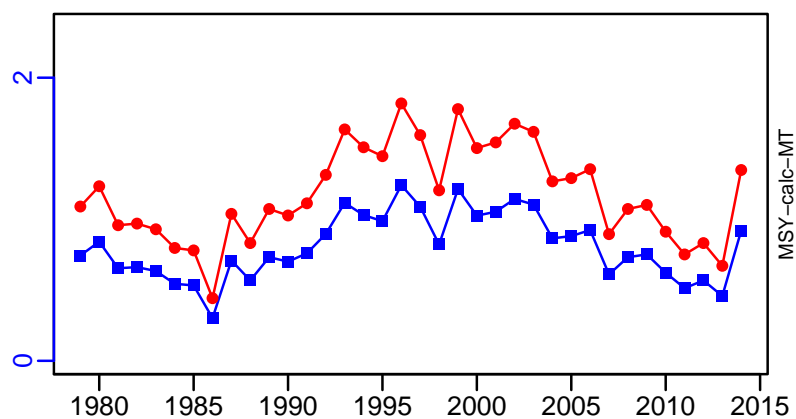
CPUE\*



EFFORT\*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1979-2014-JPNIMP2016)



## Japanese flying squid Japan Winter recruitment [JCSQUIDJPNWR]

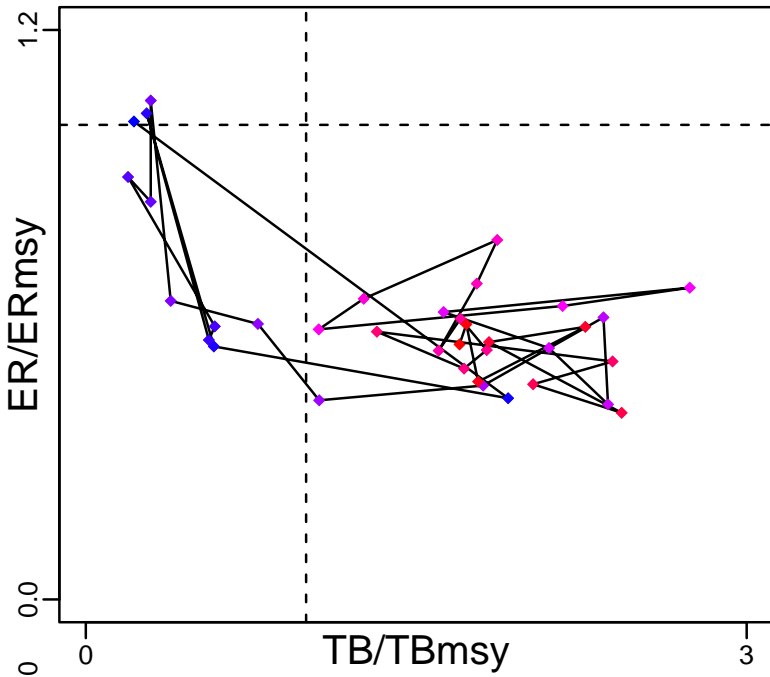
Metadata	
<b>Scientific Name</b>	Todarodes pacificus
<b>Current Assess ID</b>	FAFRFJ-JCSQUIDJPNWR-1979-2014-JPNIMP2016
<b>Area</b>	Japan Winter recruitment
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2014

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2014	485,117
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2014	0.459
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-calc-MT	2014	222,669
<b>M</b>	M-1/yr	2014	1.2
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

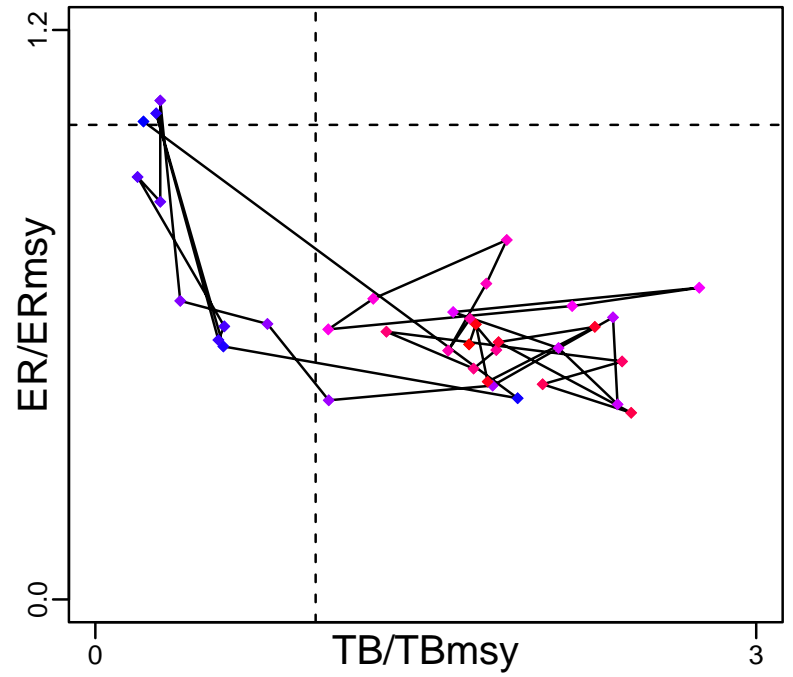
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2014	823,000	-	0.5
<b>SSB</b>	SSB-MT	2014	301,000	Both	0.5
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2014	$2.66 \times 10^9$	-	0.5
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2014	0.247	-	-
<b>TC</b>	TC-MT	2014	203,000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2014	1.696		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2014	0.537		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Japanese flying squid Japan Winter recruitment [JCSQUIDJPNWR]

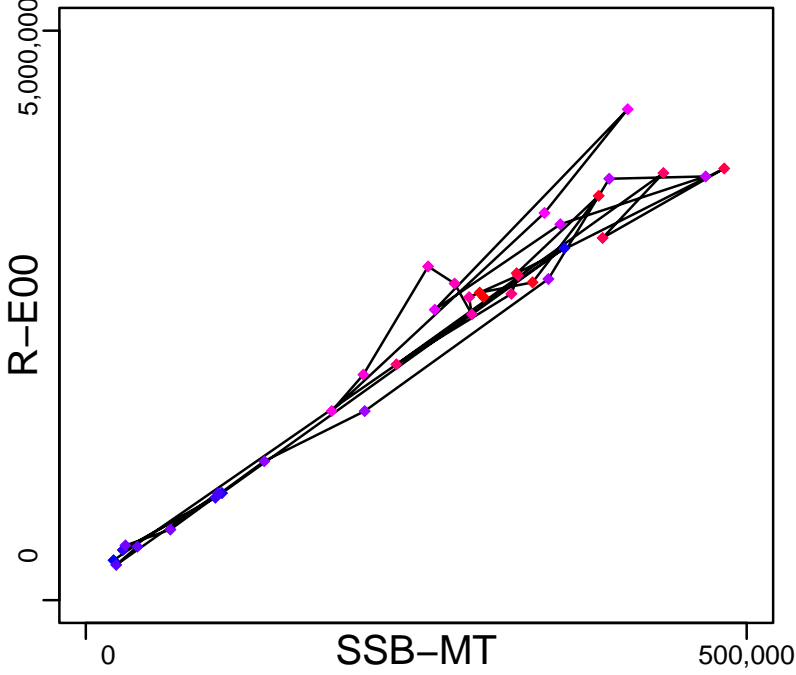
Kobe MSYpref (1979–2014–JPNIMP2016)



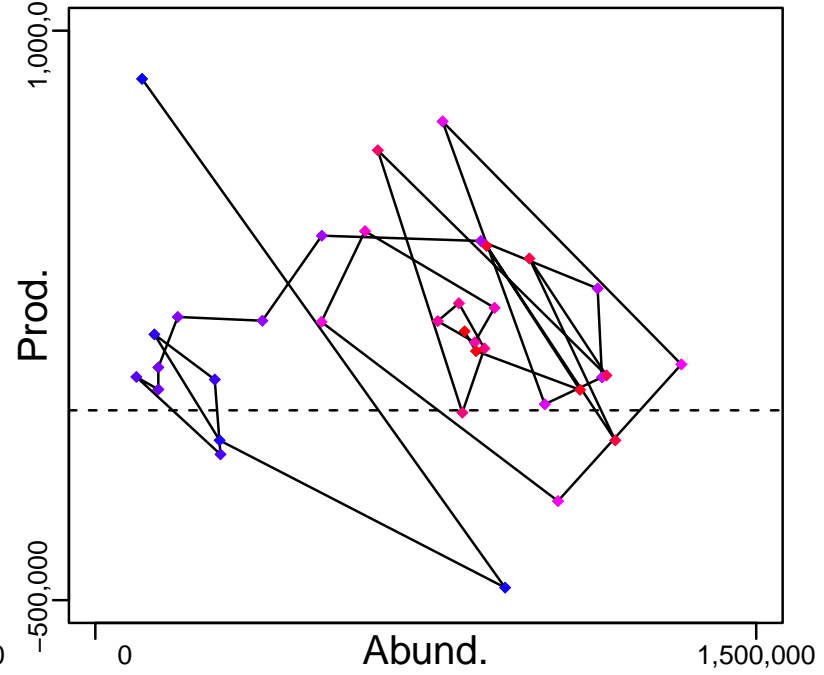
Kobe MGTpref (1979–2014–JPNIMP2016)



Spawner Recruit (1979–2014–JPNIMP2016)



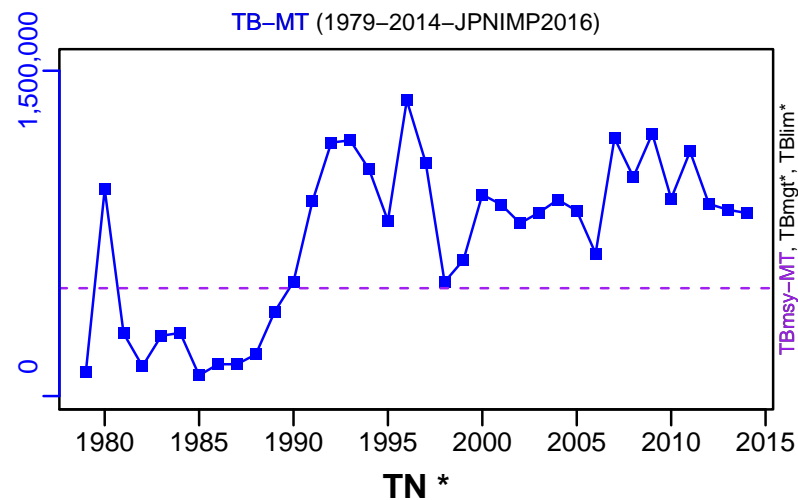
Production (1979–2014–JPNIMP2016)



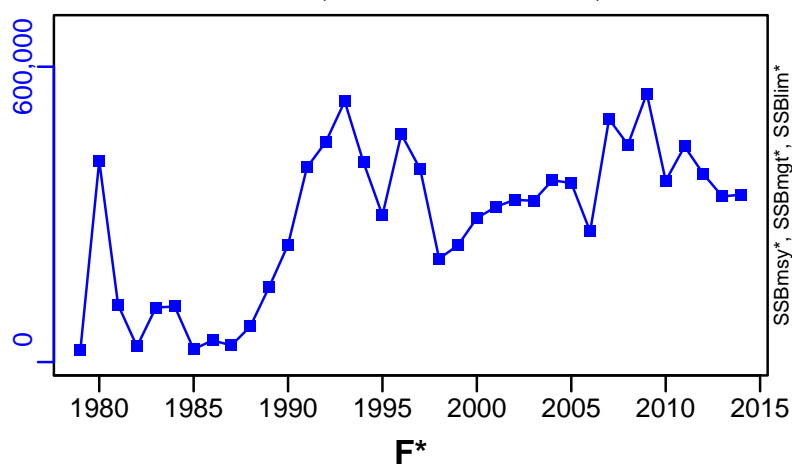
◆ Start Year ◆ End Year \* No Data

# Japanese flying squid Japan Winter recruitment [JCSQUIDJPNWR]

TB-MT (1979–2014–JPNIMP2016)



SSB-MT (1979–2014–JPNIMP2016)

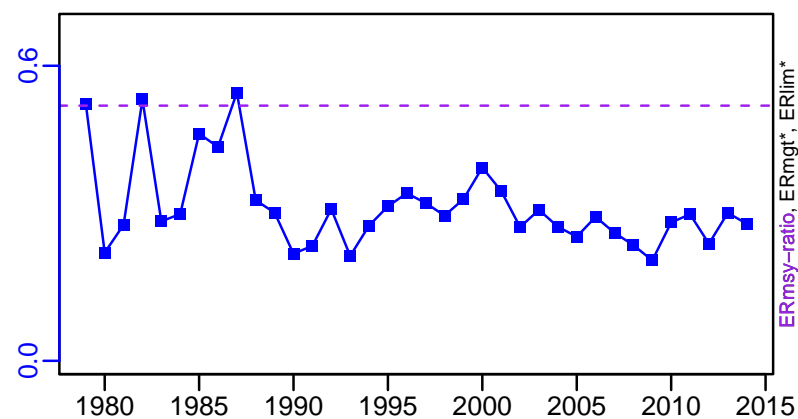


TN \*

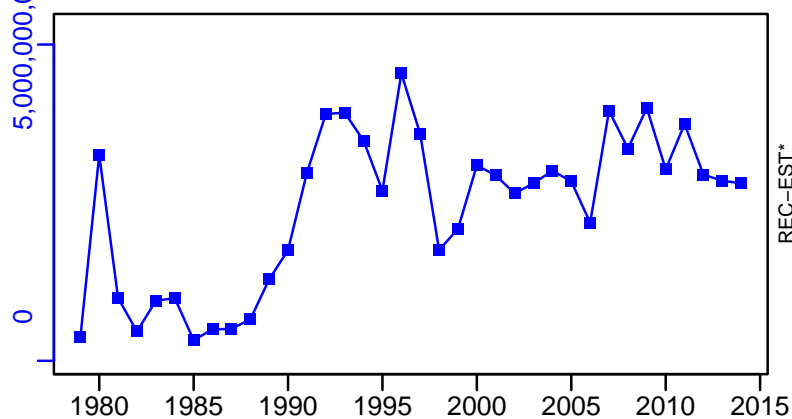
F\*



ER-calc-ratio (1979–2014–JPNIMP2016)

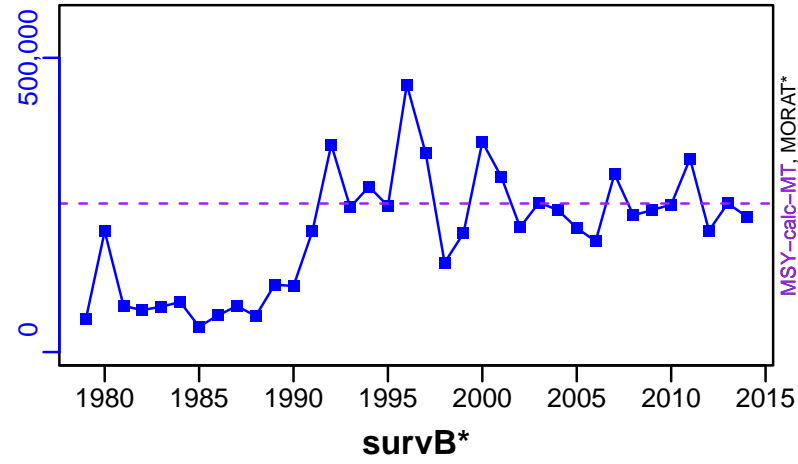


R-E00 (1979–2014–JPNIMP2016)



# Japanese flying squid Japan Winter recruitment [JCSQUIDJPNWR]

TC-MT, TL\*, RecC\* (1979–2014–JPNIMP2016)



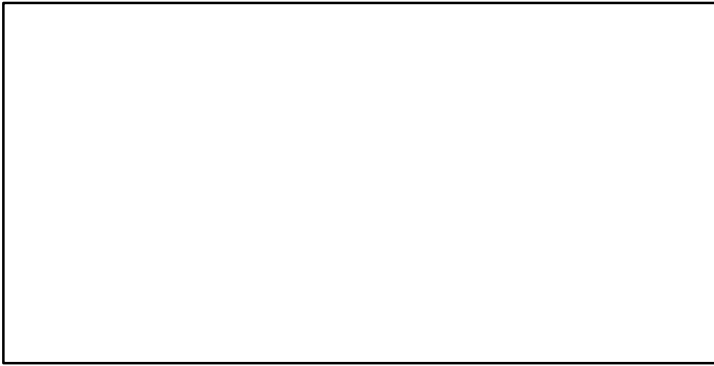
TAC\*, Cpair\*, Cadv\*



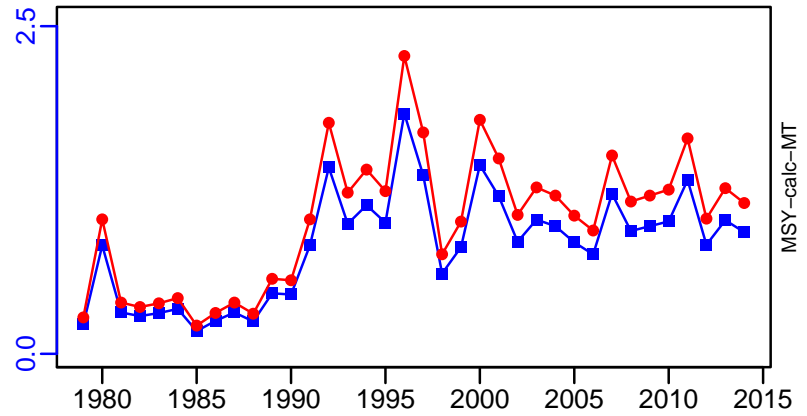
CPUE\*



EFFORT\*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1979–2014–JPNIMP2016)



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

## Japanese jack mackerel Pacific Coast of Japan [JMACKPJPN]

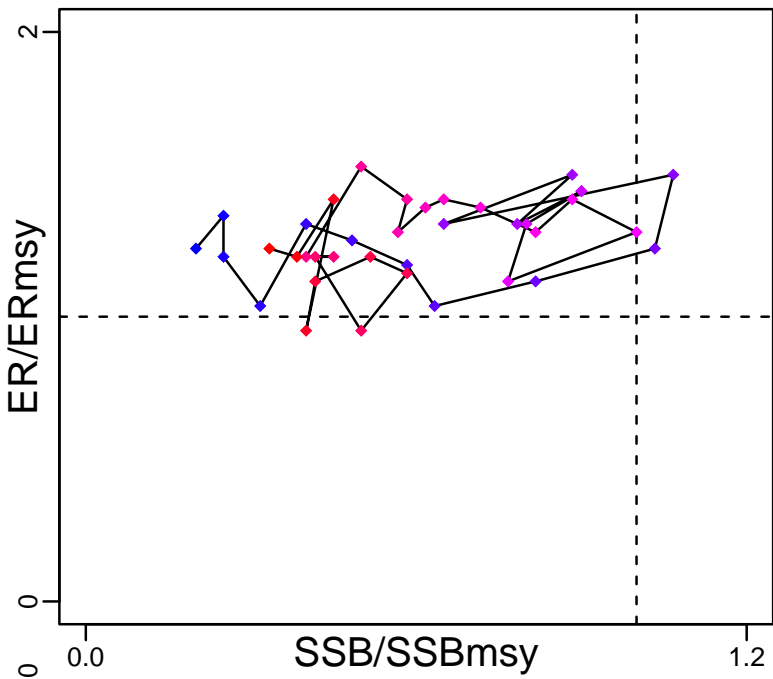
Metadata	
<b>Scientific Name</b>	Trachurus japonicus
<b>Current Assess ID</b>	FAFRFJ-JMACKPJPN-1982-2019-KUROTA
<b>Area</b>	Pacific Coast of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2009, 2013, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2019	109,510
<b>SSBmsy</b>	SSBmsy-MT	2019	60,000
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2019	0.347
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	60,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2019	38,000
<b>M</b>	M-1/yr	2019	0.5
<b>TBlim</b>	TBlim-MT	2009	24
<b>SSBlim</b>	SSBlim-MT	2019	15,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

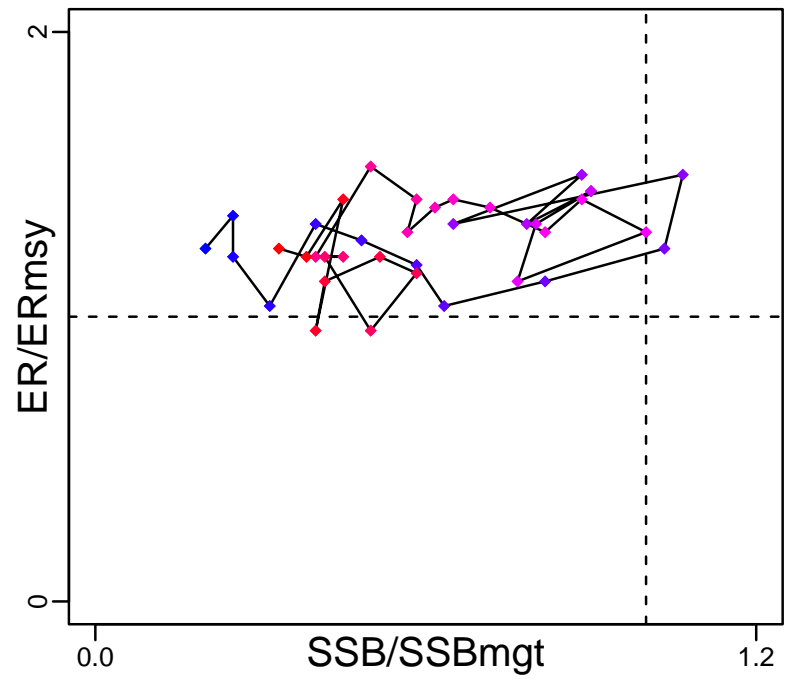
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	38,000	Both	0
<b>SSB</b>	SSB-MT	2019	20,000	Both	1
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	$3.43 \times 10^8$	Both	0
<b>F</b>	F-1/yr	2009	1.26	Both	0 to 2
<b>ER</b>	ER-ratio	2019	0.43	Both	-
<b>TC</b>	TC-MT	2019	16,000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2019	0.347		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2019	0.333		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2019	1.239		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.333		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Japanese jack mackerel Pacific Coast of Japan [JMACKPJPN]

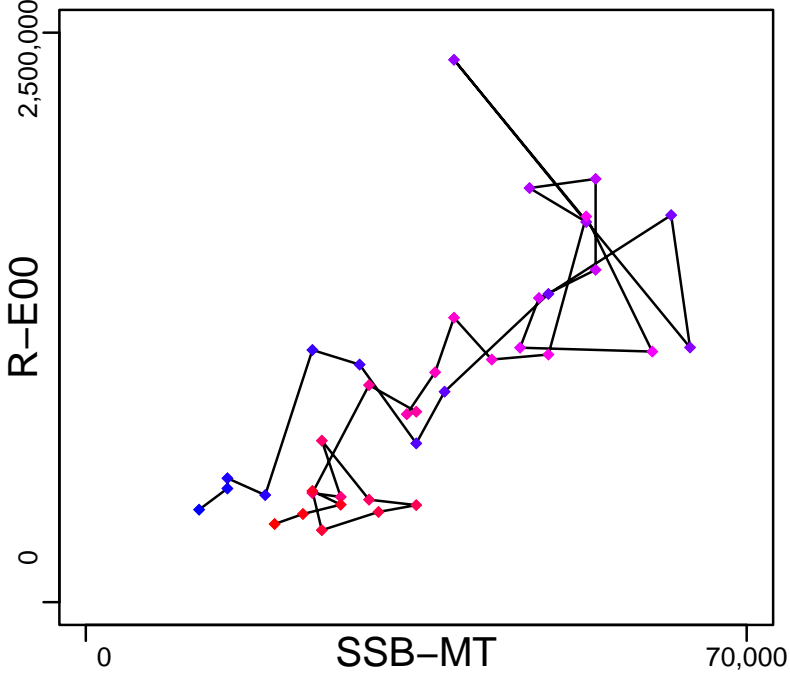
Kobe MSYpref (1982–2019–KUROTA)



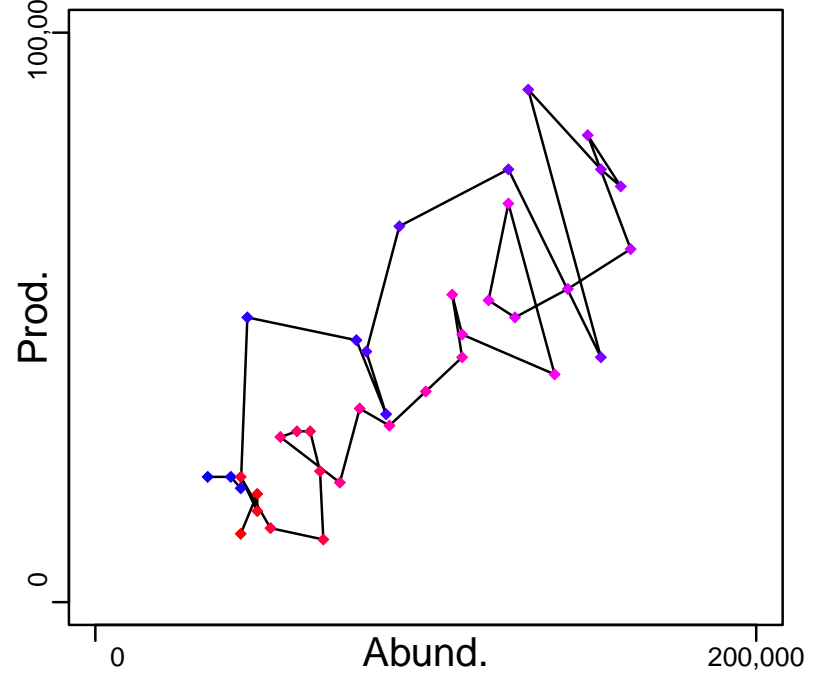
Kobe MGTpref (1982–2019–KUROTA)



Spawner Recruit (1982–2019–KUROTA)



Production (1982–2019–KUROTA)

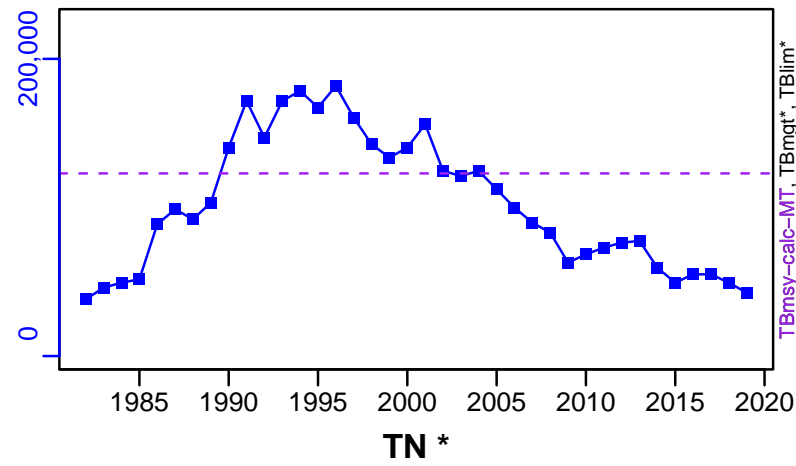


◆ Start Year ◆ End Year \* No Data

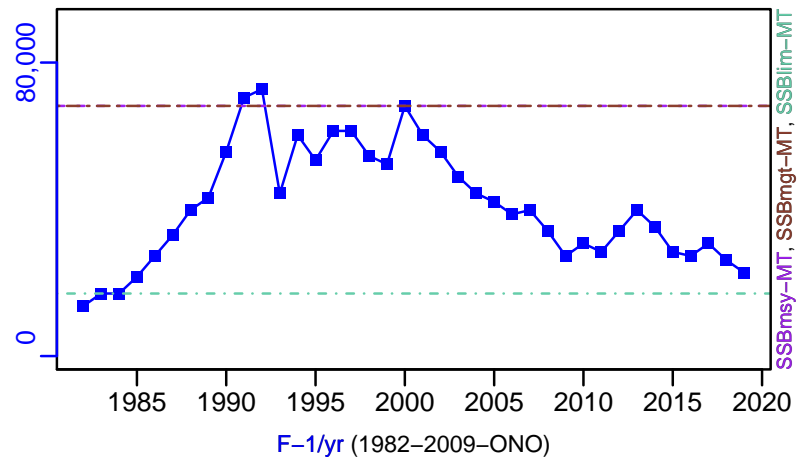


# Japanese jack mackerel Pacific Coast of Japan [JMACKPJPN]

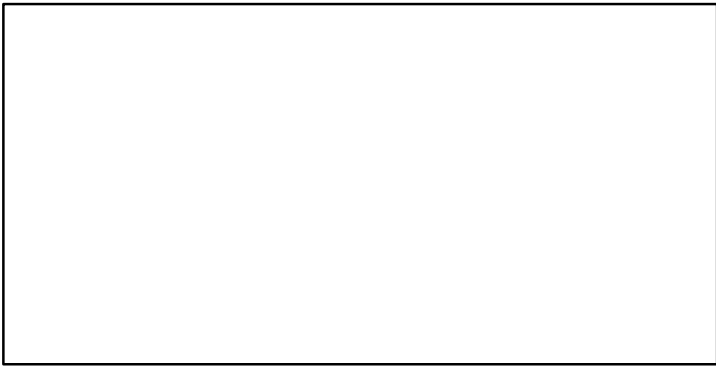
TB-MT (1982-2019-KUROTA)



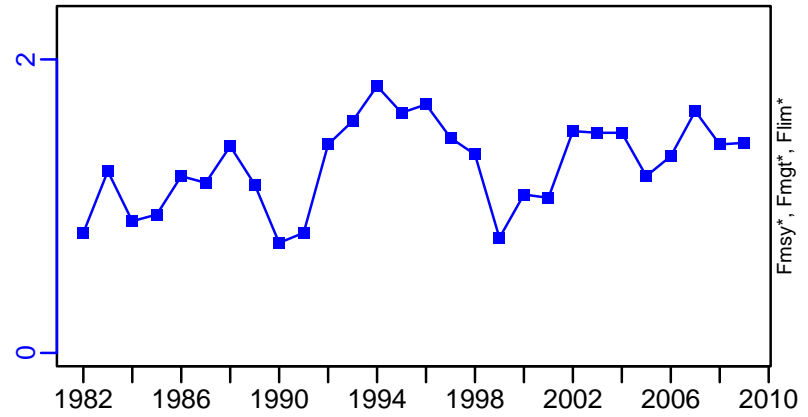
SSB-MT (1982-2019-KUROTA)



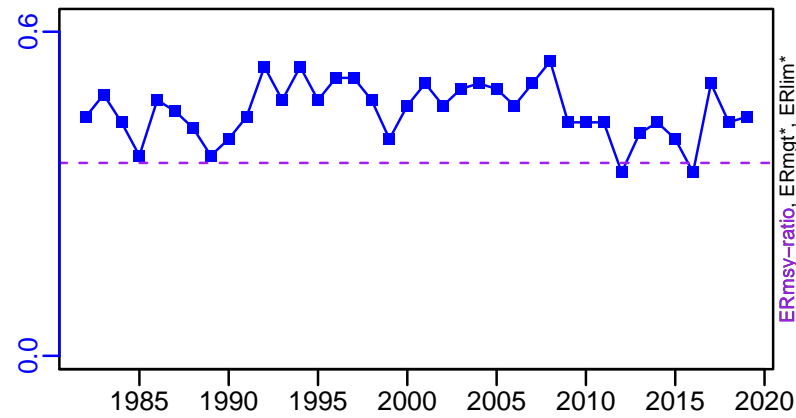
TN \*



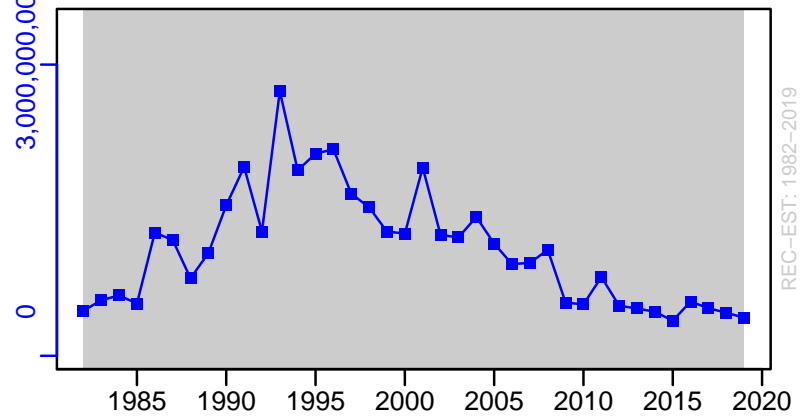
F-1/yr (1982-2009-ONO)



ER-ratio (1982-2019-KUROTA)

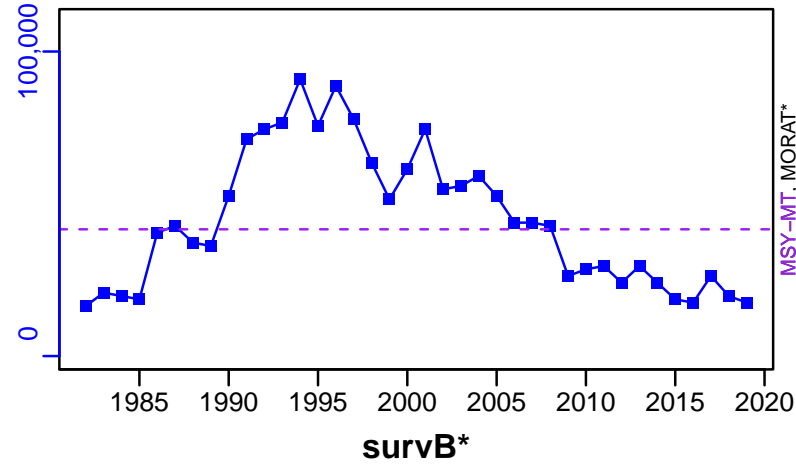


R-E00 (1982-2019-KUROTA)



# Japanese jack mackerel Pacific Coast of Japan [JMACKPJPN]

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



TAC\*, Cpair\*, Cadv\*



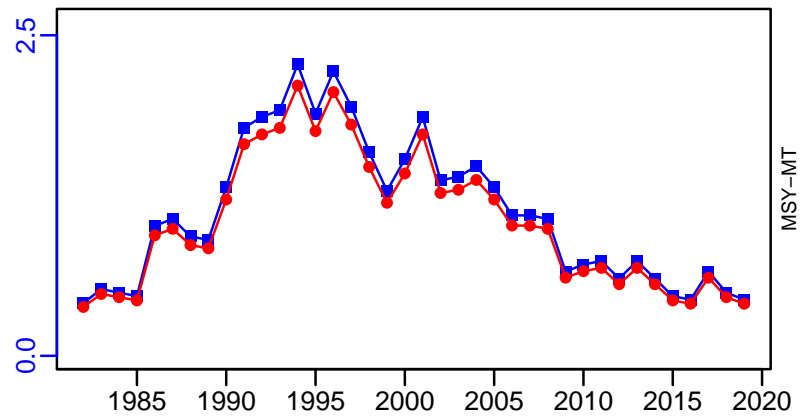
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1982-2019-KUROTA)



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

## Japanese jack mackerel Tsushima Strait [JMACKTSST]

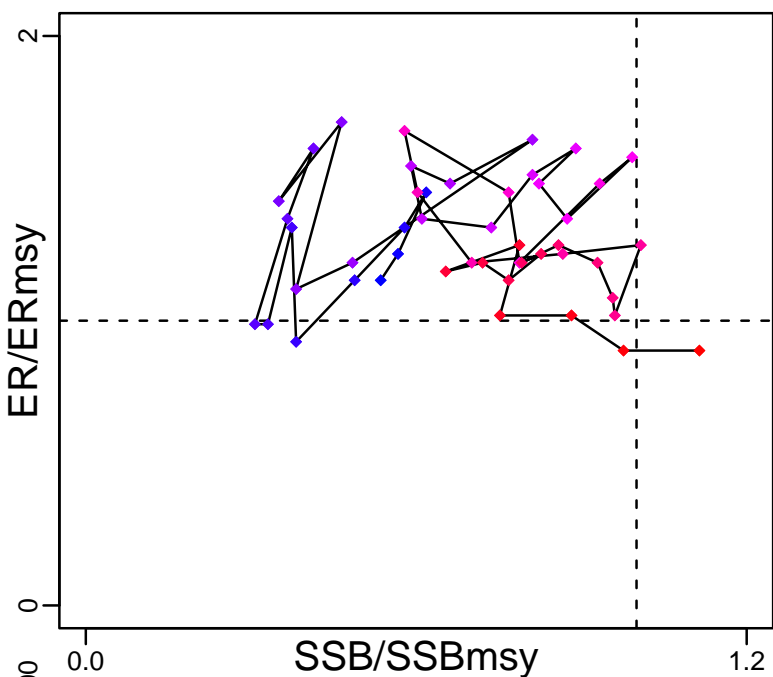
Metadata	
<b>Scientific Name</b>	Trachurus japonicus
<b>Current Assess ID</b>	FAFRFJ-JMACKTSST-1973-2019-KUROTA
<b>Area</b>	Tsushima Strait
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2010, 2013, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2019	487,654
<b>SSBmsy</b>	SSBmsy-MT	2019	254,000
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2019	0.324
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	254,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2019	158,000
<b>M</b>	M-1/yr	2019	0.5
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2019	107,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

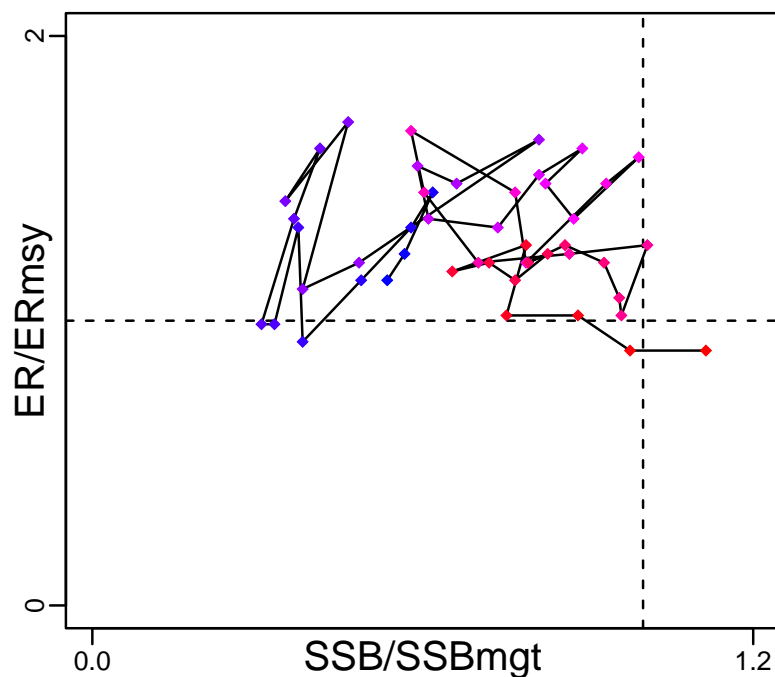
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	418,000	Both	0
<b>SSB</b>	SSB-MT	2019	283,000	Both	1
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	$3.035 \times 10^9$	Both	0
<b>F</b>	F-1/yr	2010	0.736	-	0 to 3
<b>ER</b>	ER-ratio	2019	0.29	Both	-
<b>TC</b>	TC-MT	2019	121,000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2019	0.857		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2019	1.114		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2019	0.895		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.114		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Japanese jack mackerel Tsushima Strait [JMACKTSST]

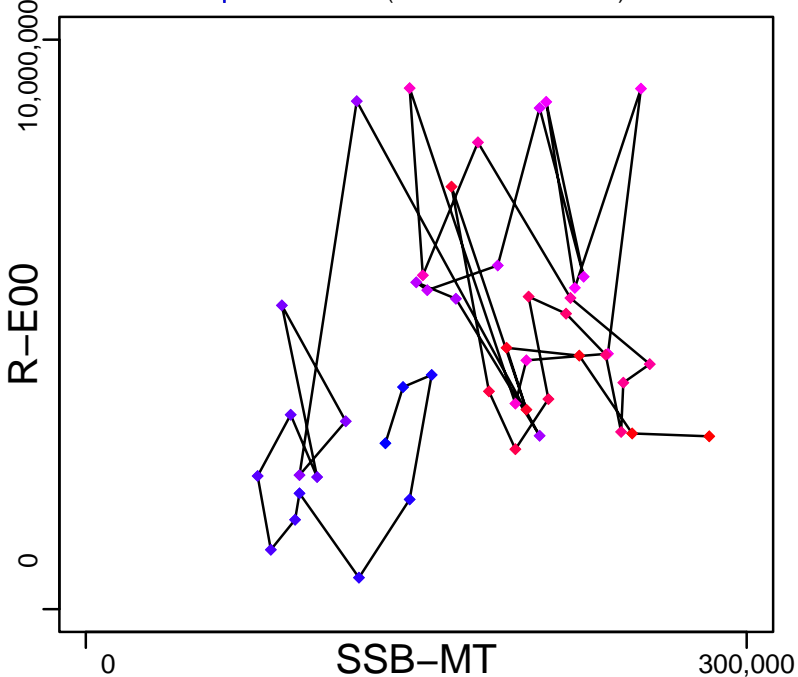
Kobe MSYpref (1973–2019–KUROTA)



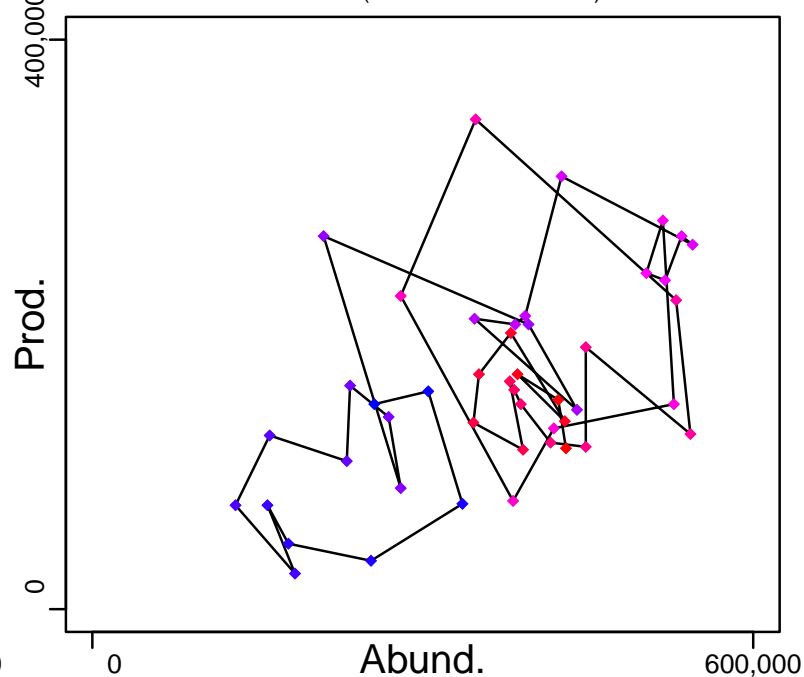
Kobe MGTpref (1973–2019–KUROTA)



Spawner Recruit (1973–2019–KUROTA)

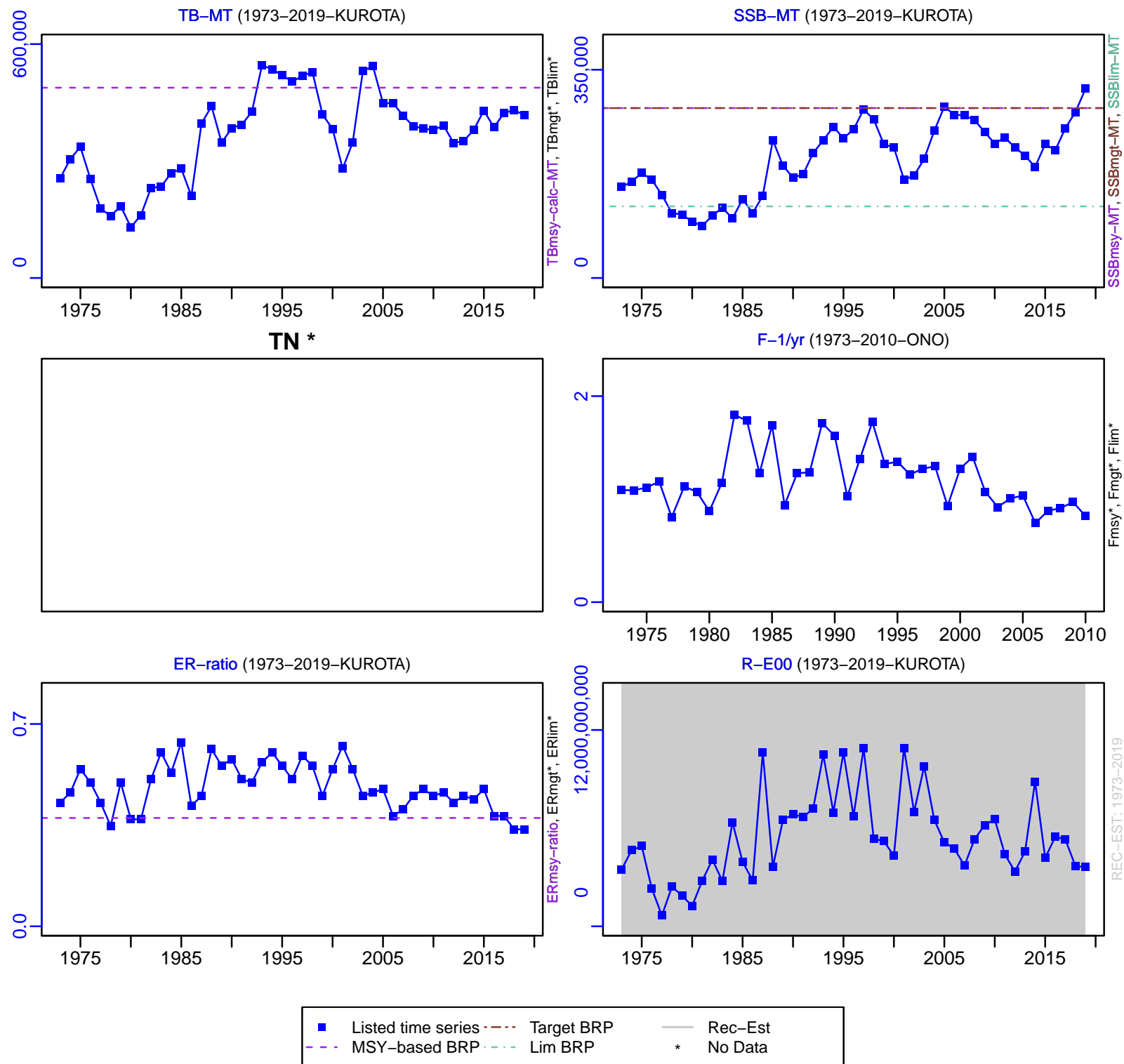


Production (1973–2019–KUROTA)



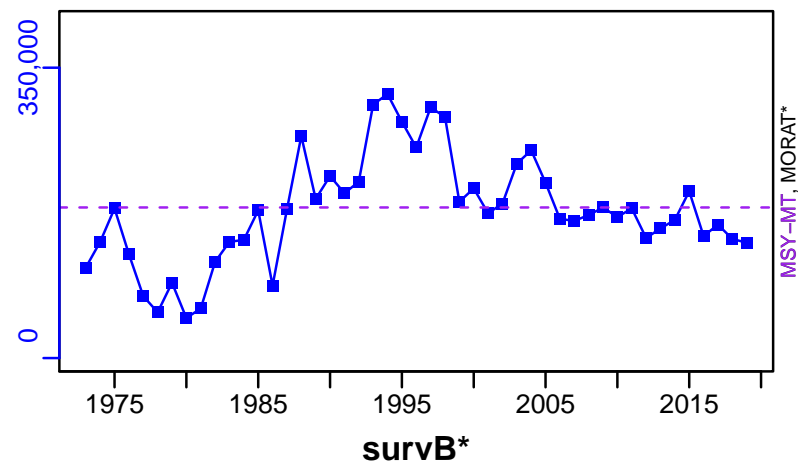
◆ Start Year ◆ End Year \* No Data

# Japanese jack mackerel Tsushima Strait [JMACKTSST]



# Japanese jack mackerel Tsushima Strait [JMACKTSST]

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



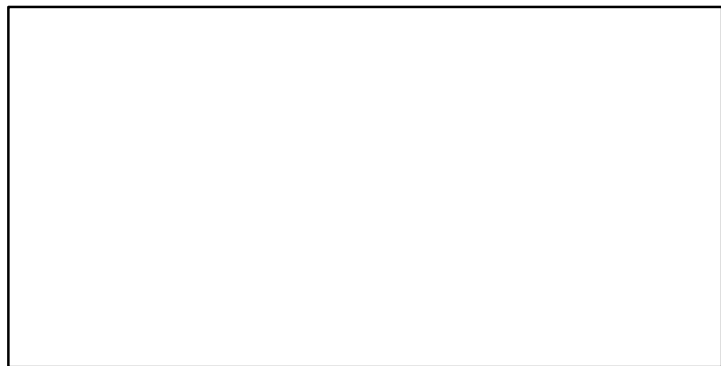
TAC\*, Cpair\*, Cadv\*



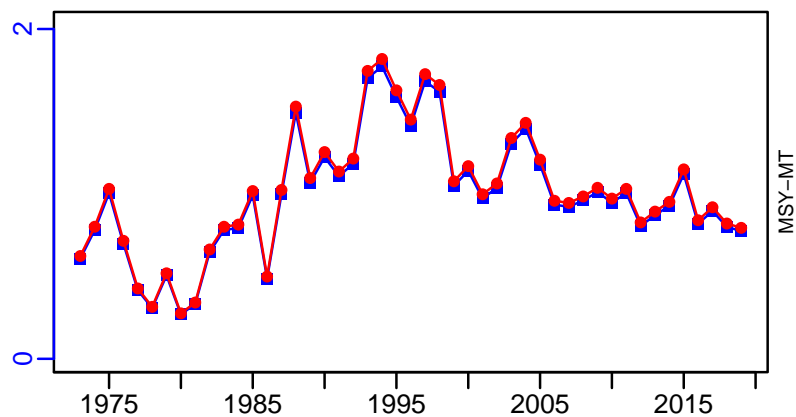
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1973-2019-KUROTA)



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

## Japanese pufferfish Ise and Mikawa Bay [JPUFFIMKB]

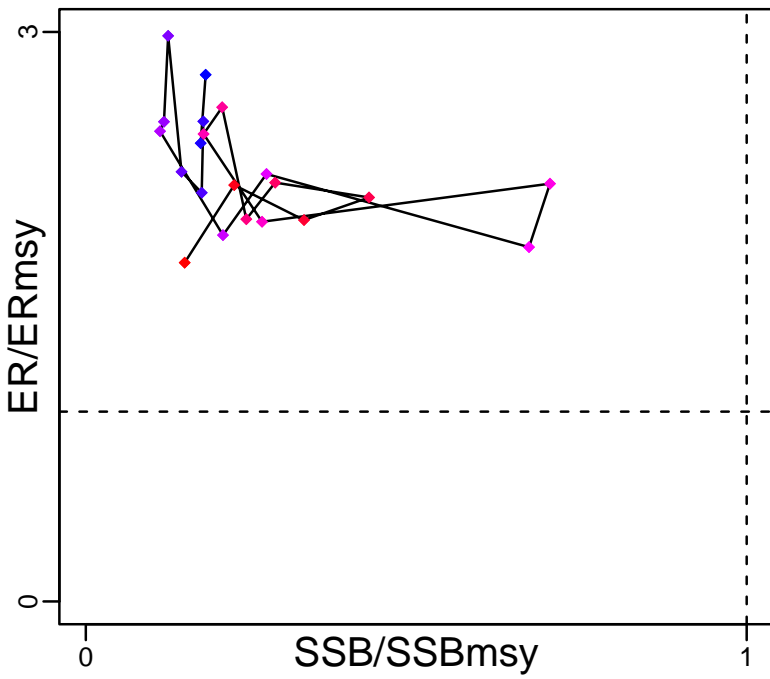
Metadata	
<b>Scientific Name</b>	Takifugu rubripes
<b>Current Assess ID</b>	FAFRFJ-JPUFFIMKB-1993-2013-JPNIMP2016
<b>Area</b>	Ise and Mikawa Bay
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	471
<b>SSBmsy</b>	SSBmsy-MT	2013	252
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.284
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	134
<b>M</b>	M-1/yr	2013	0.25
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

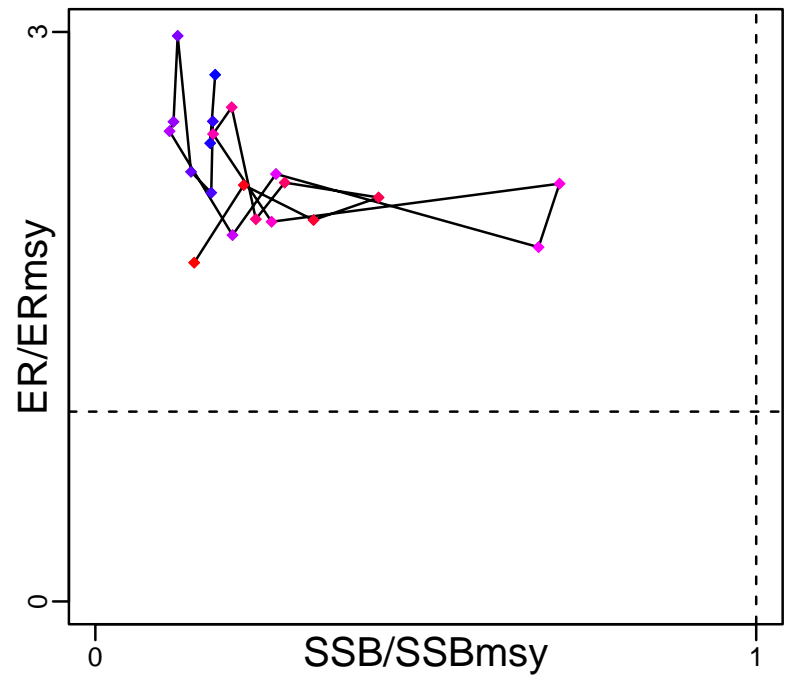
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	132	-	0
<b>SSB</b>	SSB-MT	2013	38	Both	2
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	119,000	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.507	-	-
<b>TC</b>	TC-MT	2013	67		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.28		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.15		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	1.785		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Japanese pufferfish Ise and Mikawa Bay [JPUFFIMKB]

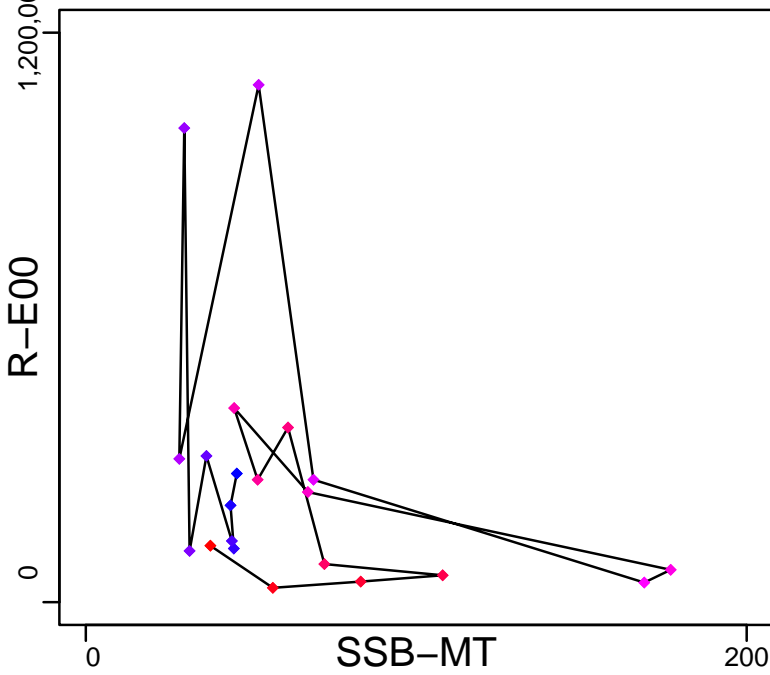
Kobe MSYpref (1993–2013–JPNIMP2016)



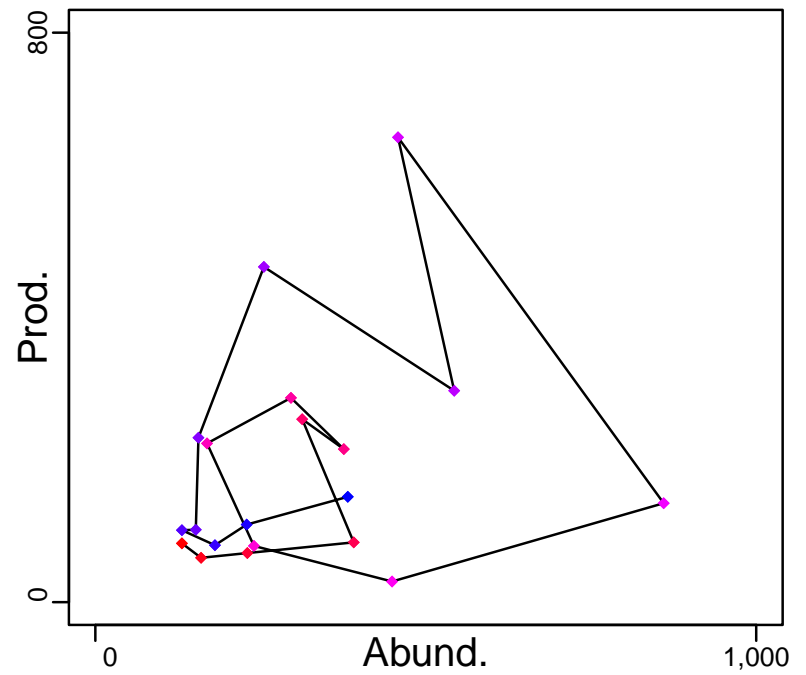
Kobe MGTpref (1993–2013–JPNIMP2016)



Spawner Recruit (1993–2013–JPNIMP2016)



Production (1993–2013–JPNIMP2016)

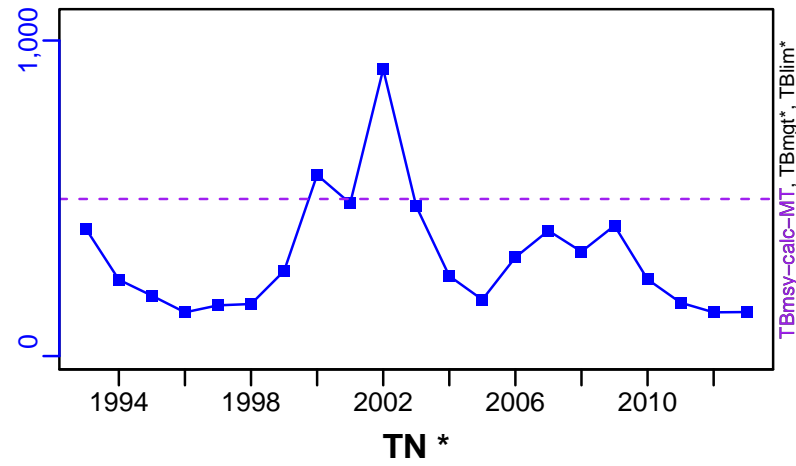


◆ Start Year ◆ End Year \* No Data

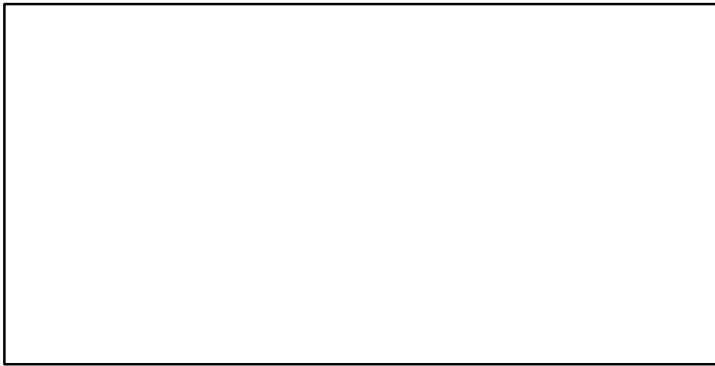
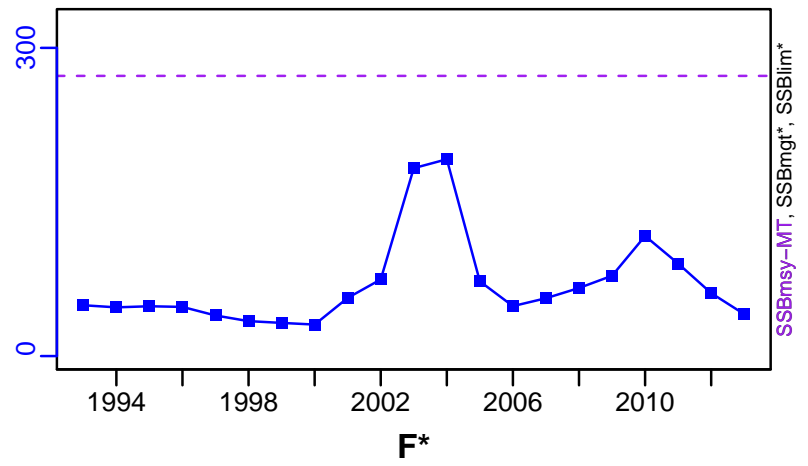


# Japanese pufferfish Ise and Mikawa Bay [JPUFFIMKB]

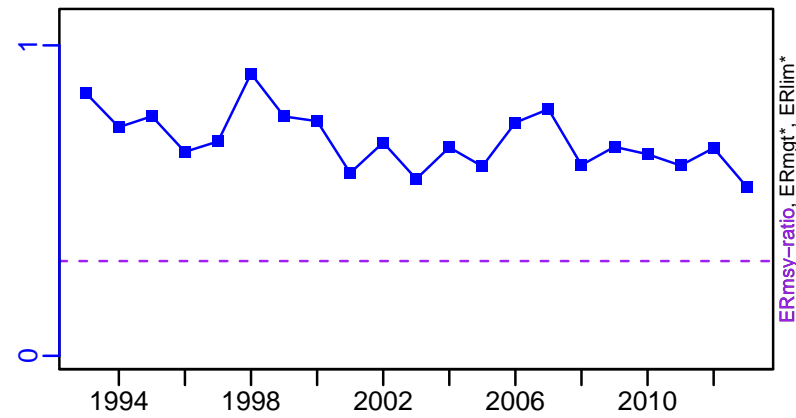
TB-MT (1993-2013-JPNIMP2016)



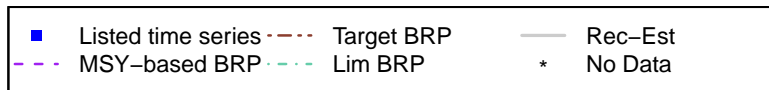
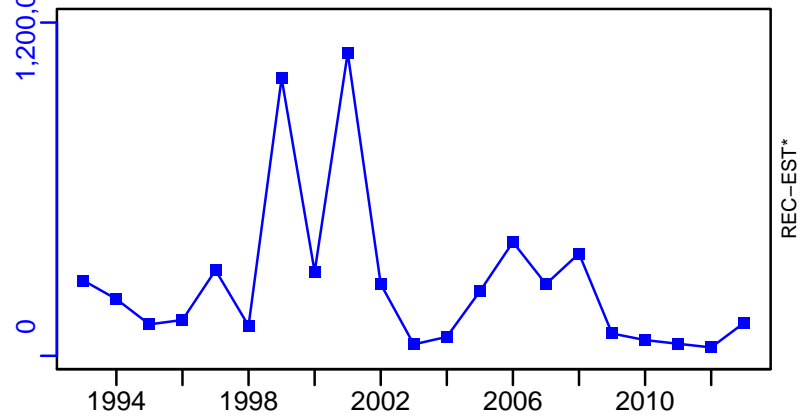
SSB-MT (1993-2013-JPNIMP2016)



ER-calc-ratio (1993-2013-JPNIMP2016)

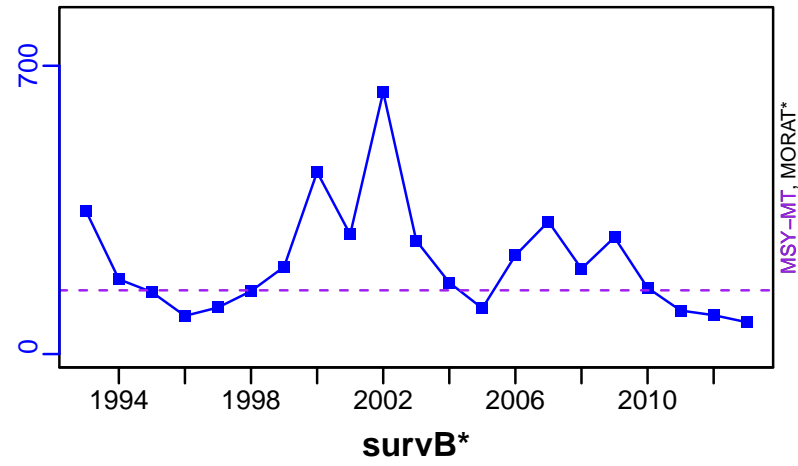


R-E00 (1993-2013-JPNIMP2016)



# Japanese pufferfish Ise and Mikawa Bay [JPUFFIMKB]

TC-MT, TL\*, RecC\* (1993–2013–JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



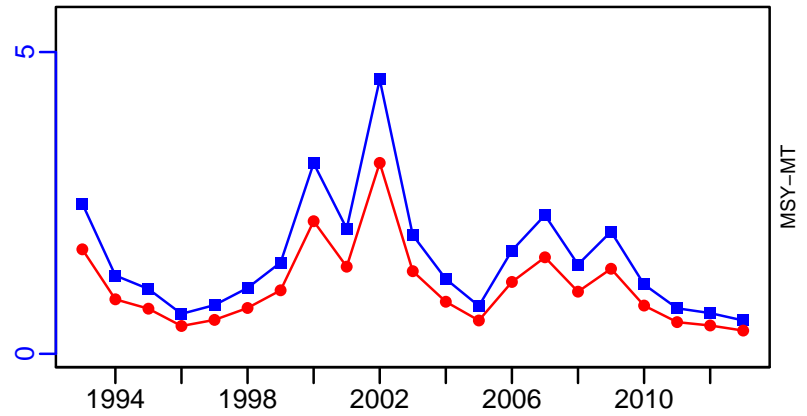
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1993–2013–JPNIMP2016)



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

**Japanese pufferfish Sea of Japan and East China Sea and Seto Inland sea  
[JPUFFSOJECSSI]**

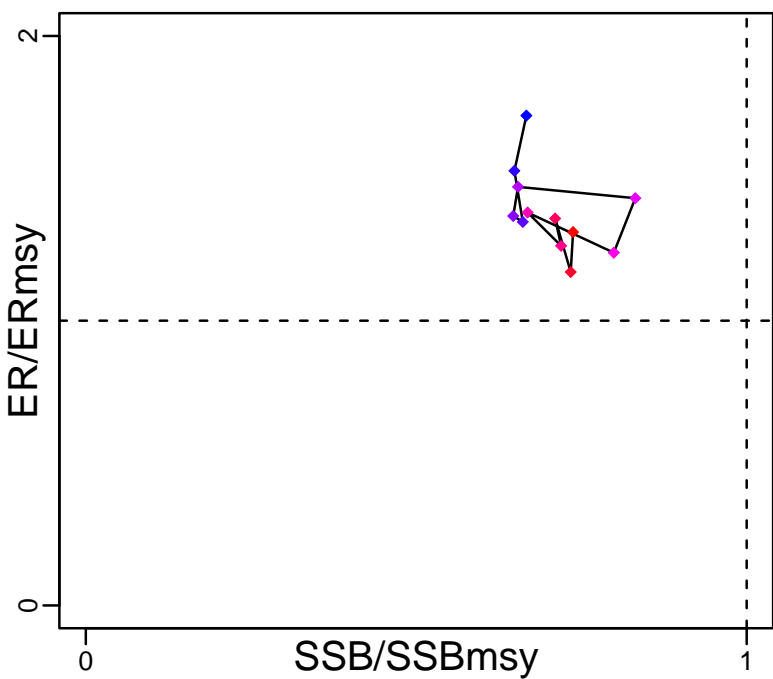
Metadata	
<b>Scientific Name</b>	Takifugu rubripes
<b>Current Assess ID</b>	FAFRFJ-JPUFFSOJECSSI-1993-2013-JPNIMP2016
<b>Area</b>	Sea of Japan and East China Sea and Seto Inland sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	1120
<b>SSBmsy</b>	SSBmsy-MT	2013	552
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.23
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	258
<b>M</b>	M-1/yr	2013	0.25
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

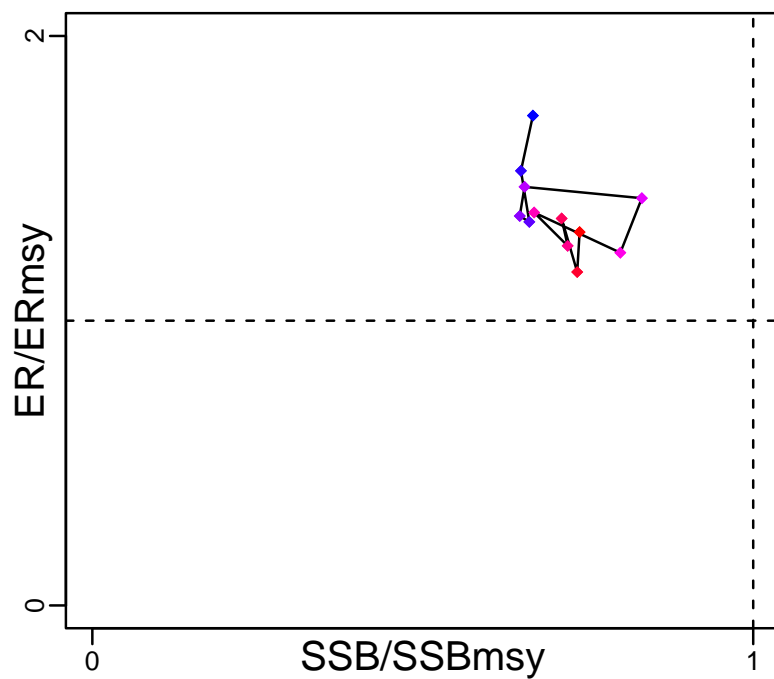
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	829	-	0
<b>SSB</b>	SSB-MT	2013	407	Both	3
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	203,000	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.302	-	-
<b>TC</b>	TC-MT	2013	250		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.74		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.737		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	1.311		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Japanese pufferfish Sea of Japan and East China Sea and Seto Inland sea [JPUFFSOJECSSI]

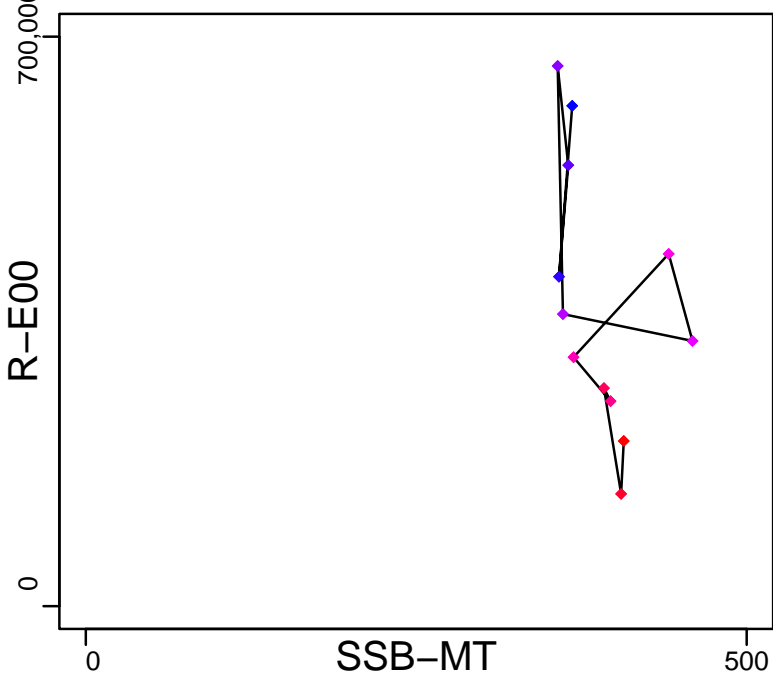
Kobe MSYpref (1993–2013–JPNIMP2016)



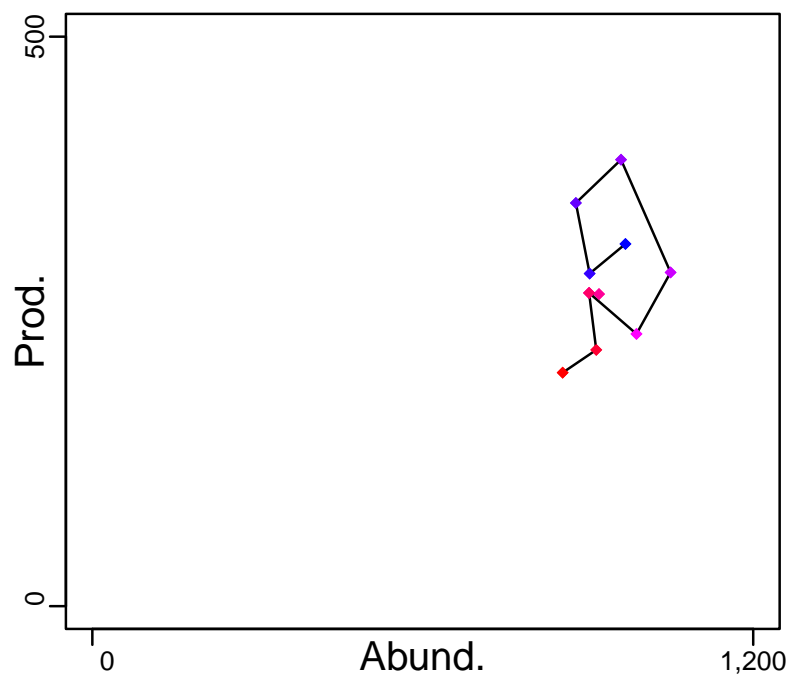
Kobe MGTpref (1993–2013–JPNIMP2016)



Spawner Recruit (1993–2013–JPNIMP2016)



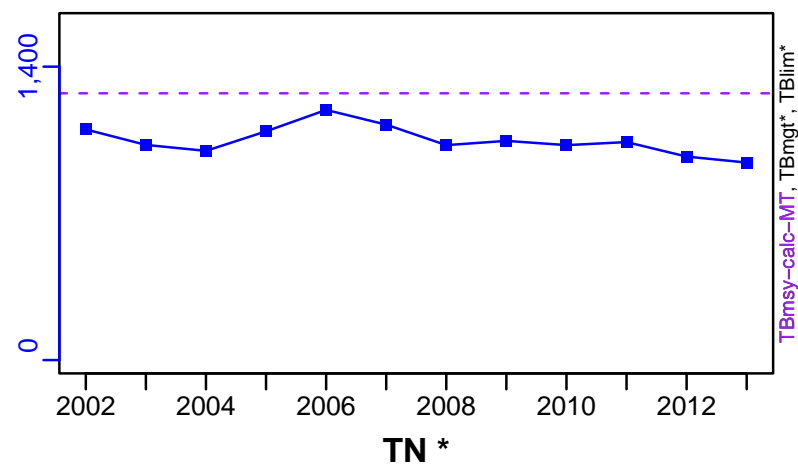
Production (1993–2013–JPNIMP2016)



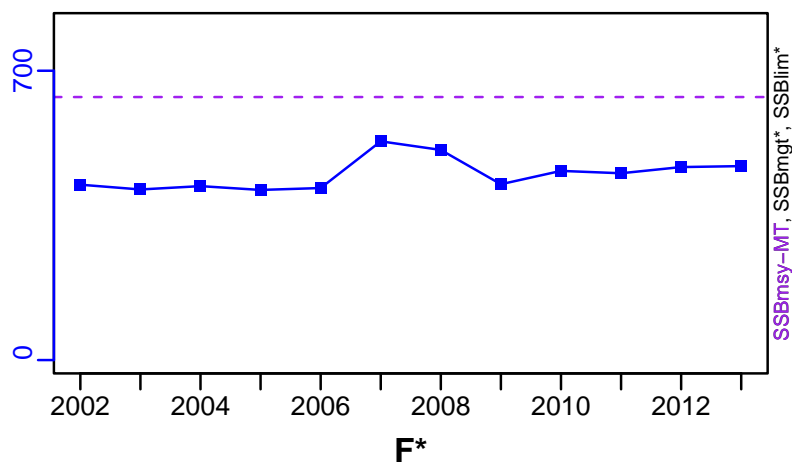
◆ Start Year ◆ End Year \* No Data

# Japanese pufferfish Sea of Japan and East China Sea and Seto Inland sea [JPUFFSOJECSSI]

TB-MT (1993–2013–JPNIMP2016)



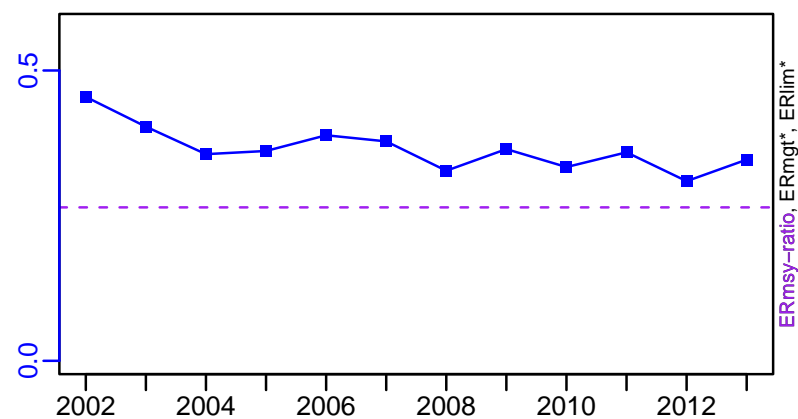
SSB-MT (1993–2013–JPNIMP2016)



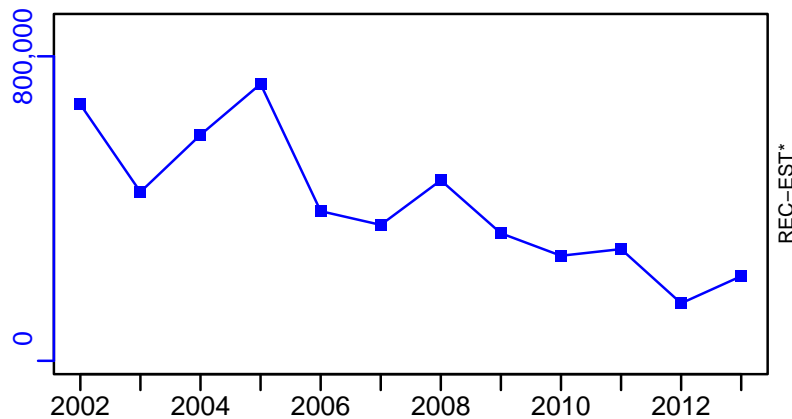
TN \*

F\*

ER-calc-ratio (1993–2013–JPNIMP2016)

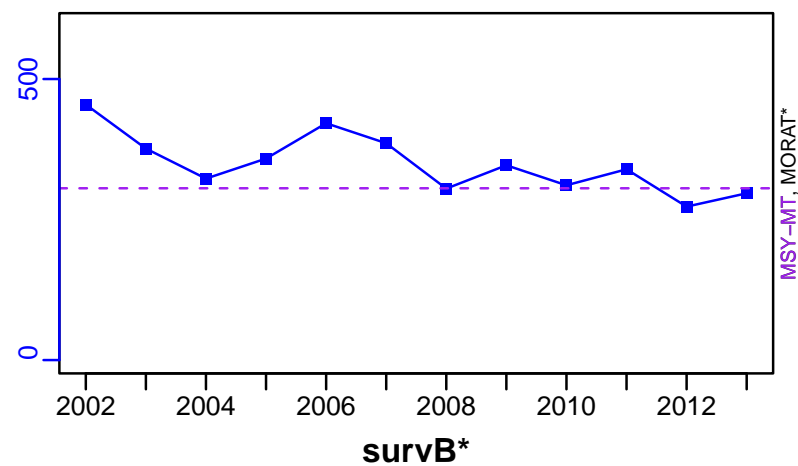


R-E00 (1993–2013–JPNIMP2016)



Japanese pufferfish Sea of Japan and East China Sea and Seto Inland sea [JPUFFSOJECSSI]

TC-MT, TL\*, RecC\* (1993–2013–JPNIMP2016)



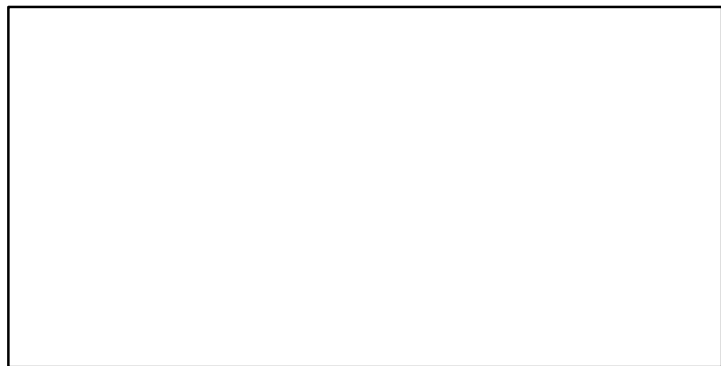
TAC\*, Cpair\*, Cadv\*



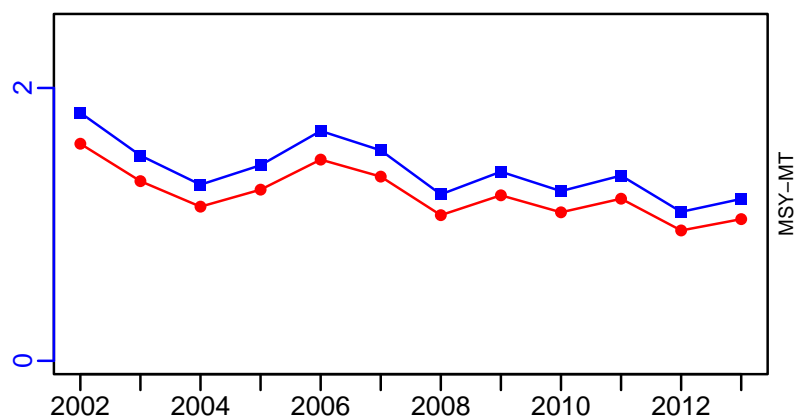
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1993–2013–JPNIMP2016)



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

## Japanese snapper Okinawa Islands [JSNAPOKWI]

Metadata	
<b>Scientific Name</b>	Paracaesio caerulea
<b>Current Assess ID</b>	FAFRFJ-JSNAPOKWI-1989-2013-JPNIMP2016
<b>Area</b>	Okinawa Islands
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	153		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data



Japanese snapper Okinawa Islands [JSNAPOKWI]

TB\*



SSB\*



TN \*



F\*



ER\*

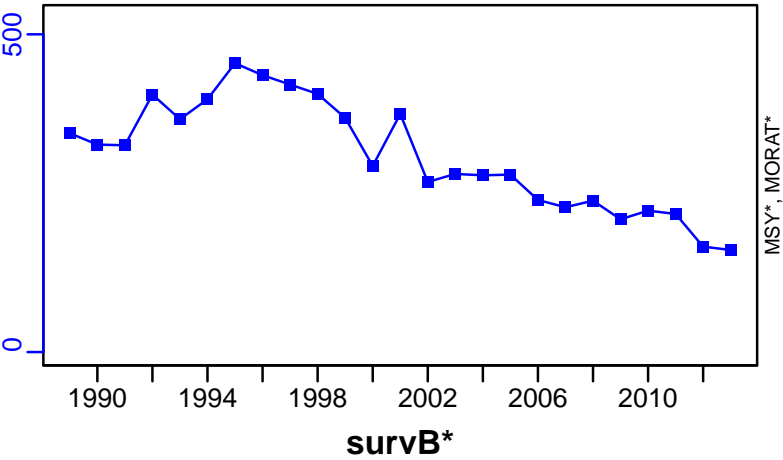


Recruits\*



Japanese snapper Okinawa Islands [JSNAPOKWI]

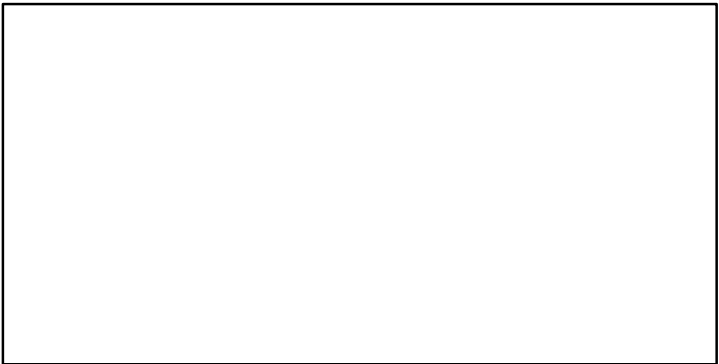
TC-MT, TL\*, RecC\* (1989-2013-JPNIMP2016)



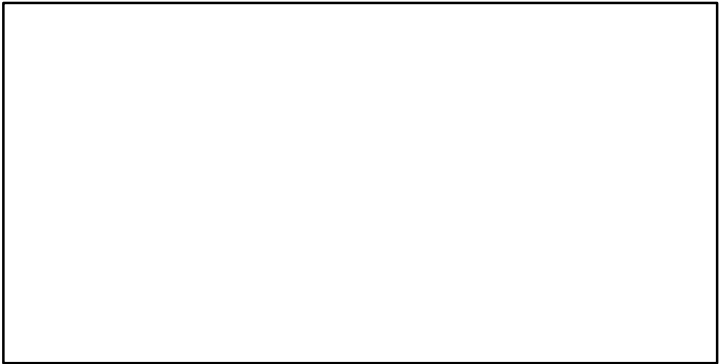
TAC\*, Cpair\*, Cadv\*



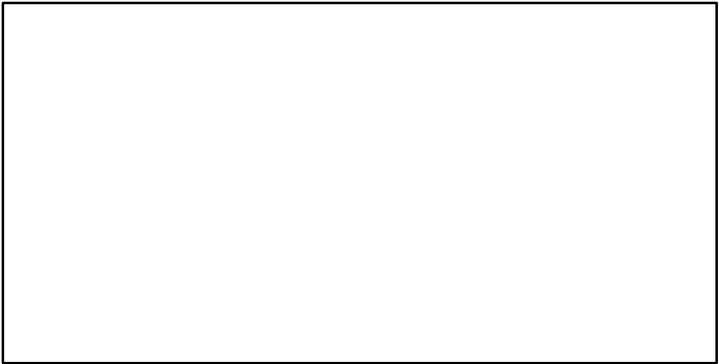
CPUE\*



EFFORT\*



CdivMSY\*



## Kichiji rockfish North Pacific [KCROCKNPAC]

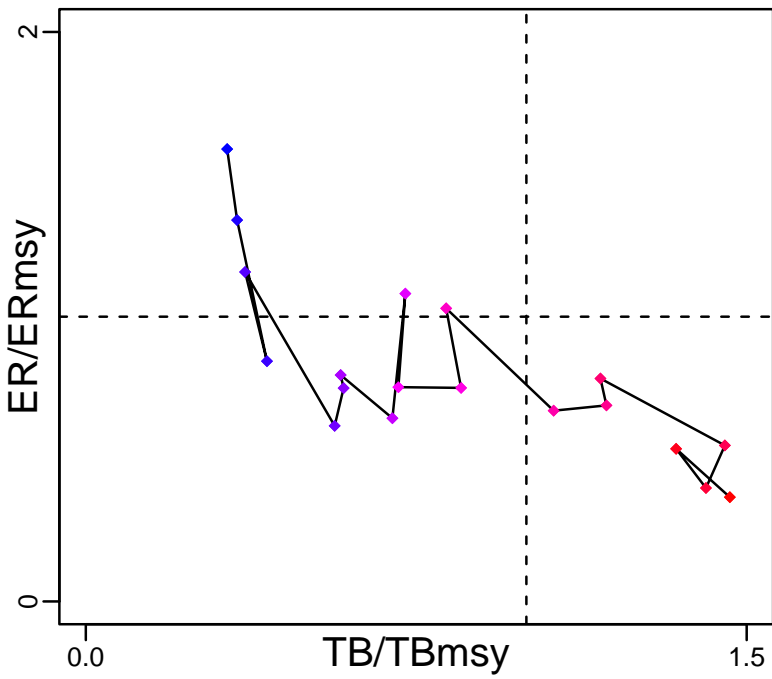
Metadata	
<b>Scientific Name</b>	Sebastolobus macrochir
<b>Current Assess ID</b>	FAFRFJ-KCROCKNPAC-1975-2013-JPNIMP2016
<b>Area</b>	North Pacific
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2013	4426
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.168
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-calc-MT	2013	744
<b>M</b>	M-1/yr	2013	0.125
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

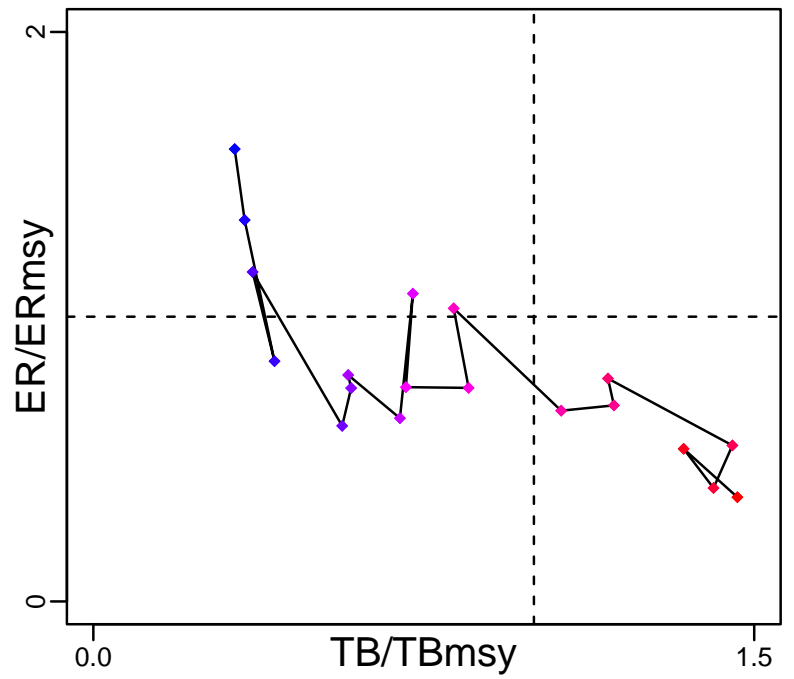
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	6470	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.062	-	-
<b>TC</b>	TC-MT	2013	398		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2013	1.462		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	0.366		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Kichiji rockfish North Pacific [KCROCKNPAC]

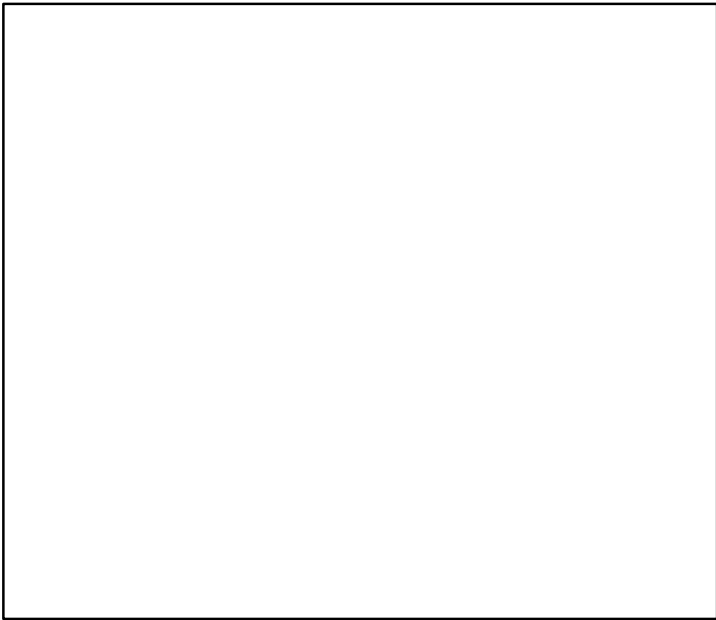
Kobe MSYpref (1975–2013–JPNIMP2016)



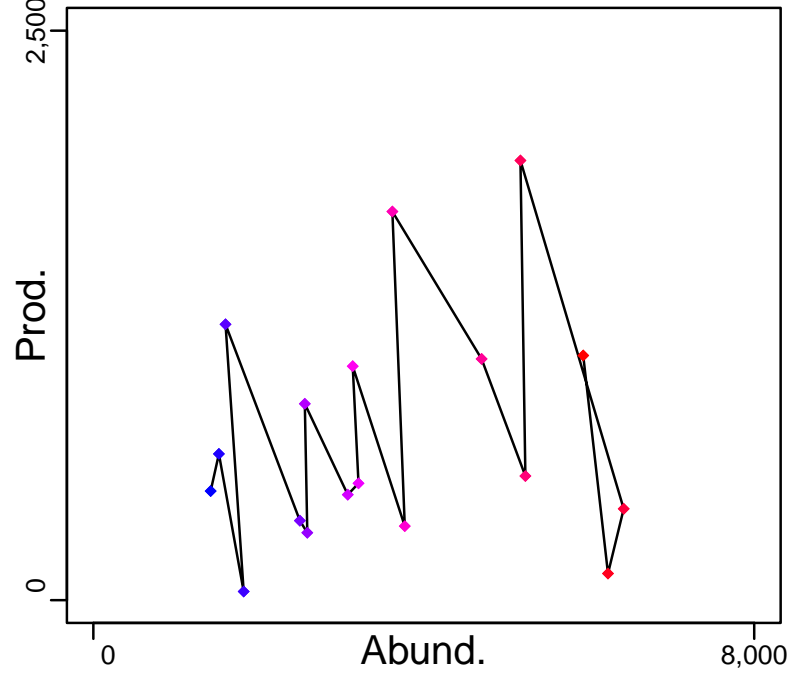
Kobe MGTpref (1975–2013–JPNIMP2016)



Spawner Recruit\*



Production (1975–2013–JPNIMP2016)

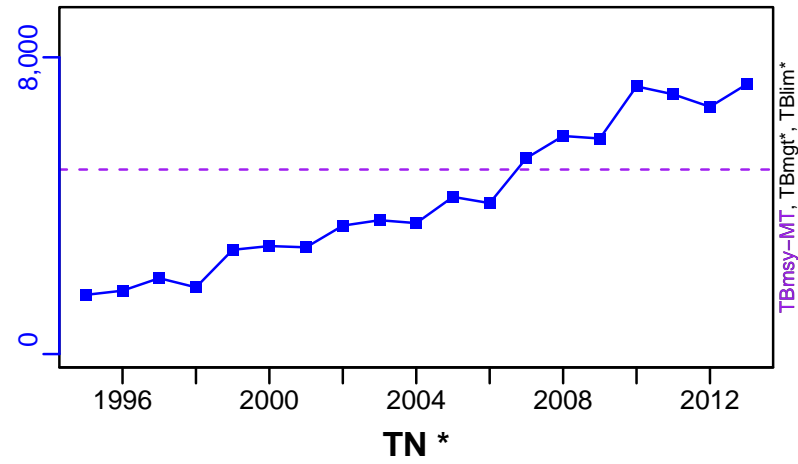


◆ Start Year ◆ End Year \* No Data

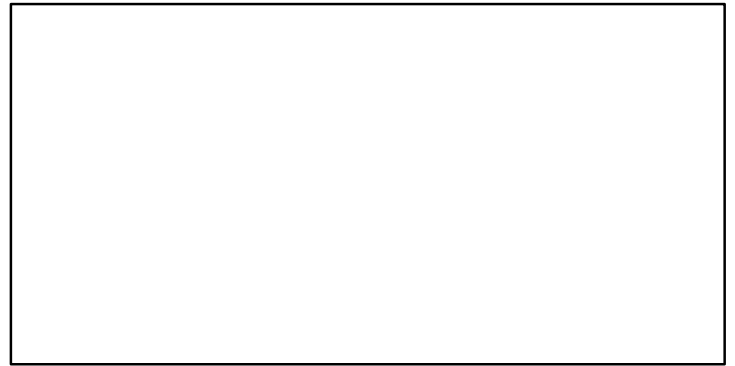
# Kichiji rockfish North Pacific [KCROCKNPAC]

TB-MT (1975-2013-JPNIMP2016)

SSB\*

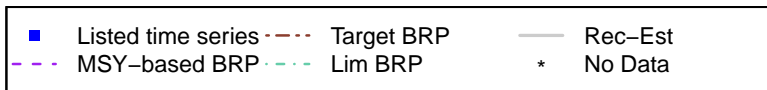
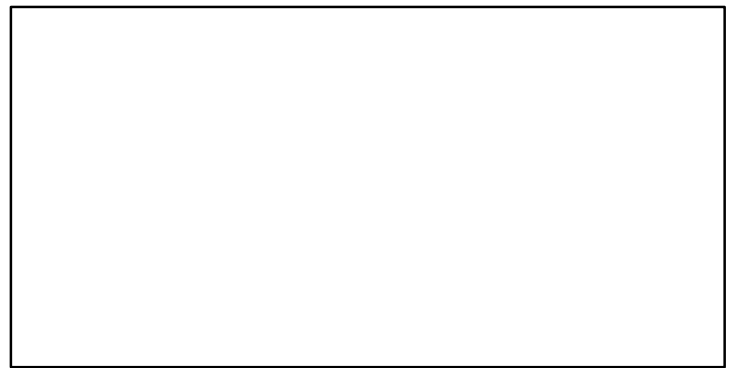
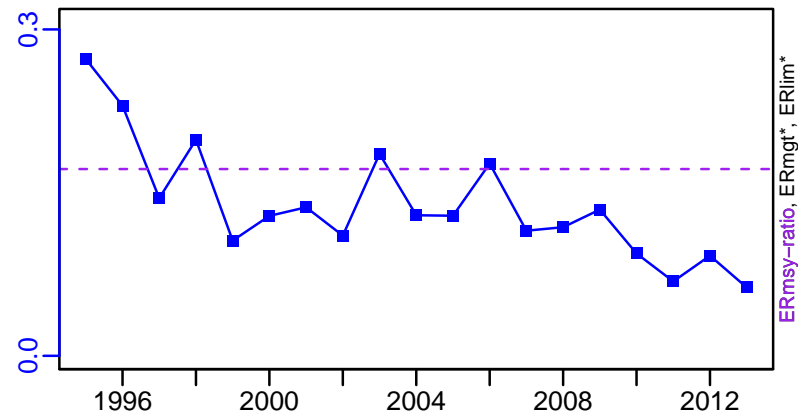


F\*



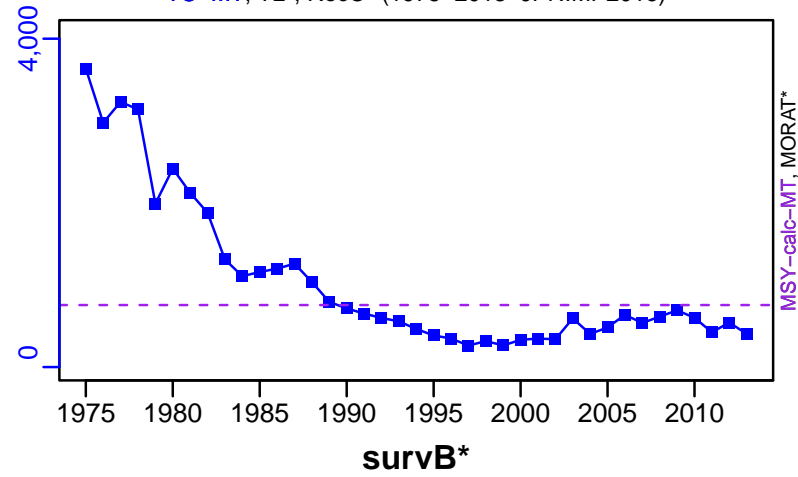
ER-calc-ratio (1975-2013-JPNIMP2016)

Recruits\*



# Kichiji rockfish North Pacific [KCROCKNPAC]

TC-MT, TL\*, RecC\* (1975–2013–JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



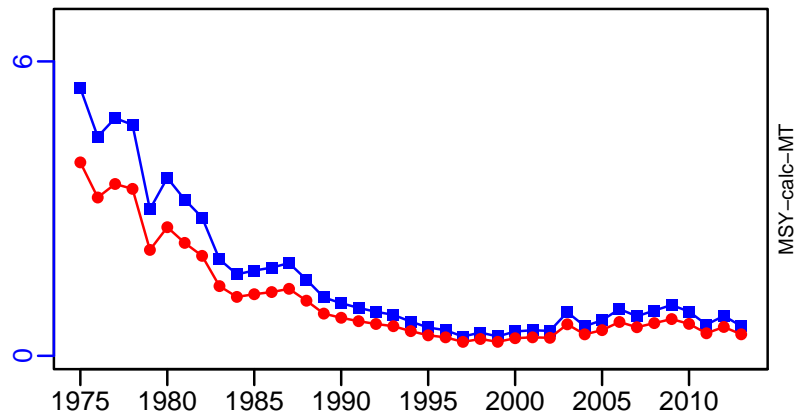
CPUE\*



EFFORT\*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1975–2013–JPNIMP2016)



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

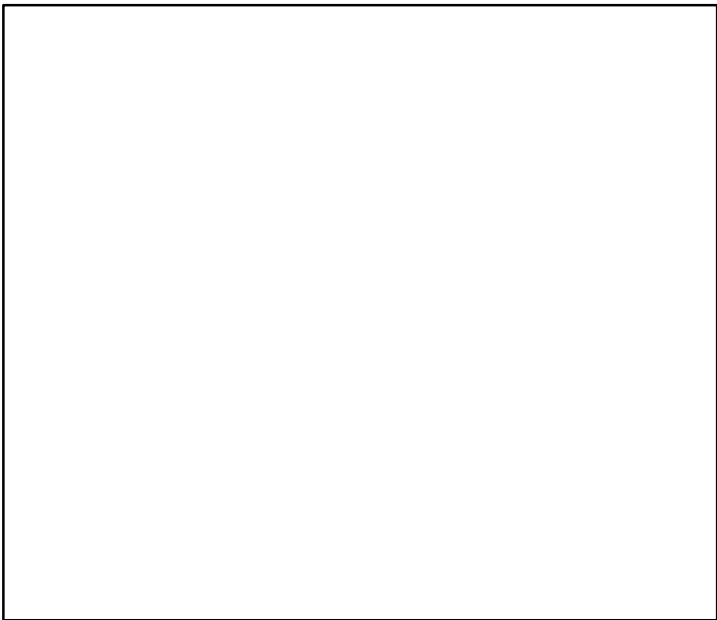
## Kichiji rockfish Okhotsk Sea [KCROCKOKS]

Metadata	
<b>Scientific Name</b>	Sebastolobus macrochir
<b>Current Assess ID</b>	FAFRFJ-KCROCKOKS-1975-2013-JPNIMP2016
<b>Area</b>	Okhotsk Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

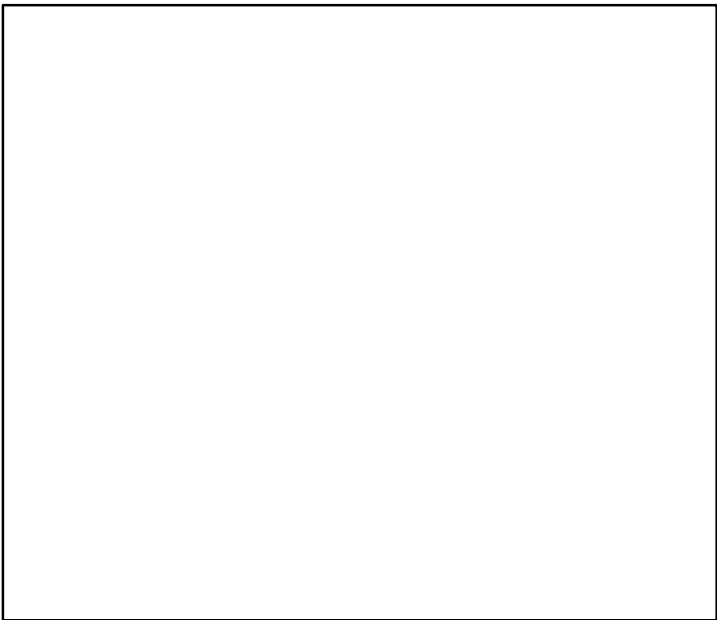
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	309		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

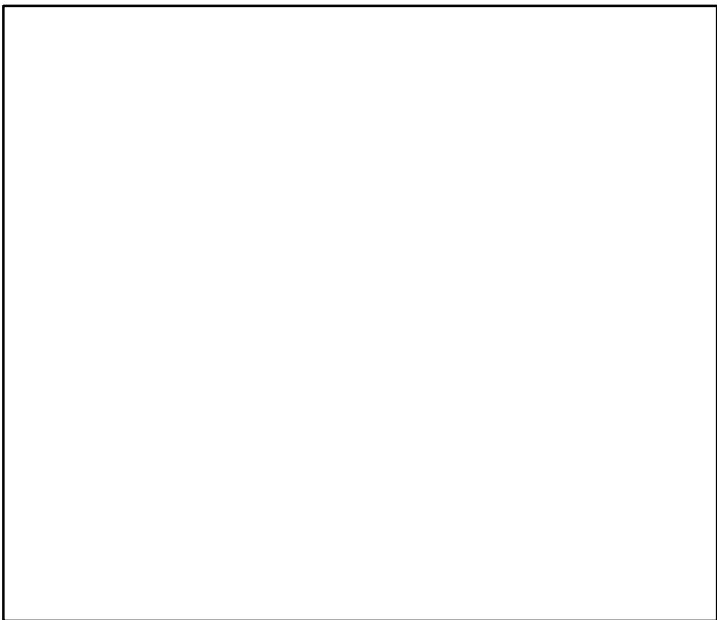
Kobe MSY\*



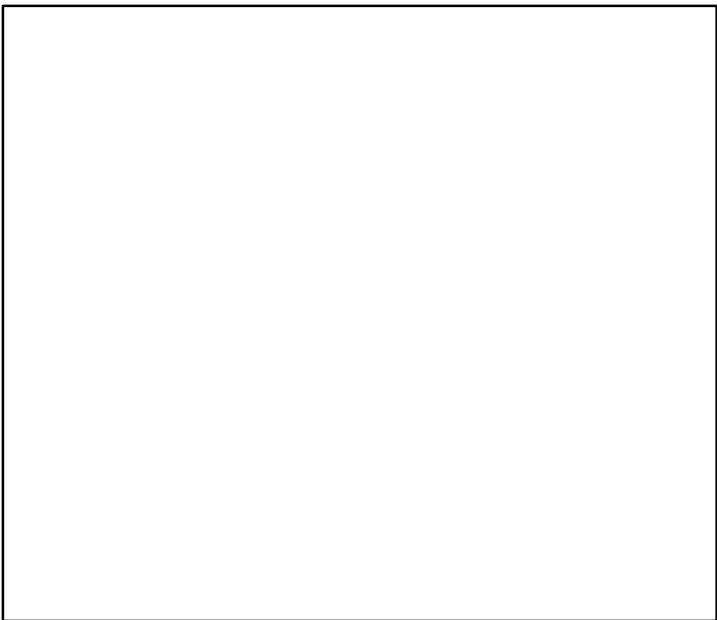
Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data



Kichiji rockfish Okhotsk Sea [KCROCKOKS]

TB\*



SSB\*



TN \*



F\*



ER\*



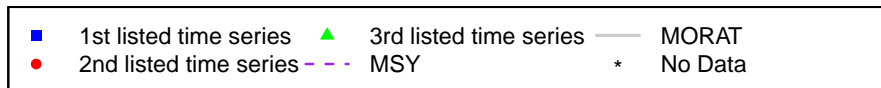
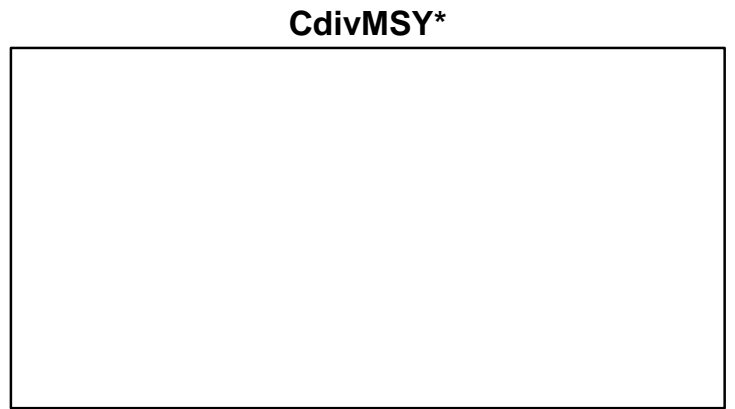
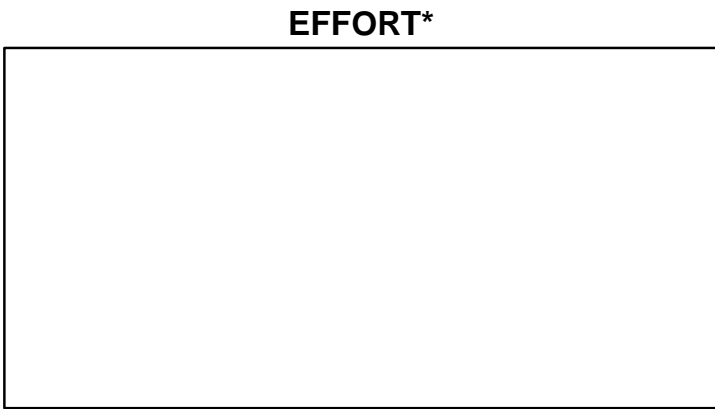
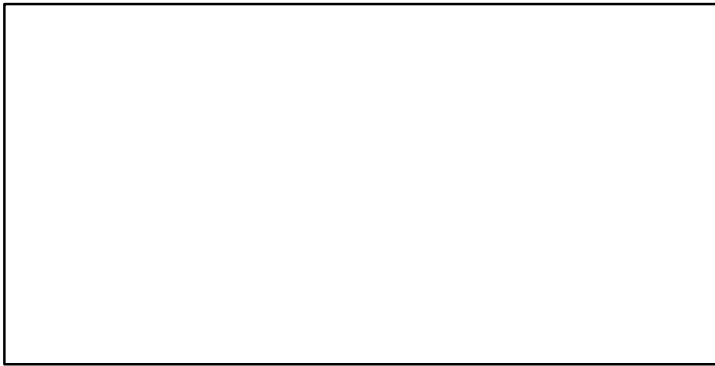
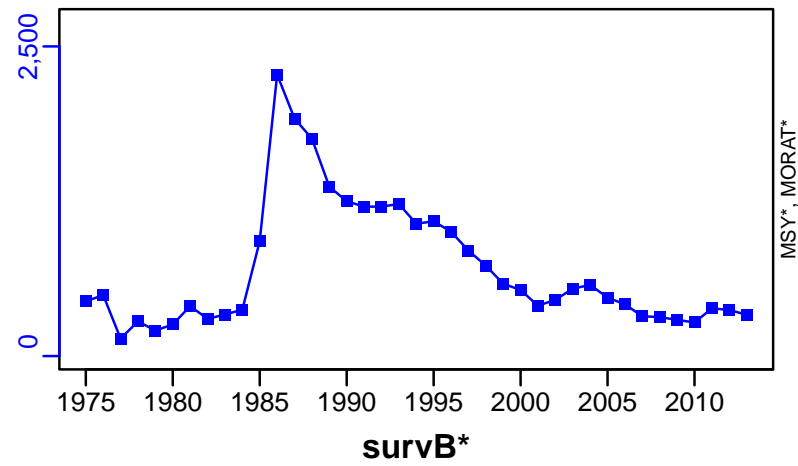
Recruits\*



# Kichiji rockfish Okhotsk Sea [KCROCKOKS]

TC-MT, TL\*, RecC\* (1975-2013-JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



# Kichiji rockfish Southwestern coast of Hokkaido [KCROCKSWHOKK]

Metadata	
<b>Scientific Name</b>	Sebastolobus macrochir
<b>Current Assess ID</b>	FAFRFJ-KCROCKSWHOKK-1975-2013-JPNIMP2016
<b>Area</b>	Southwestern coast of Hokkaido
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	363		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



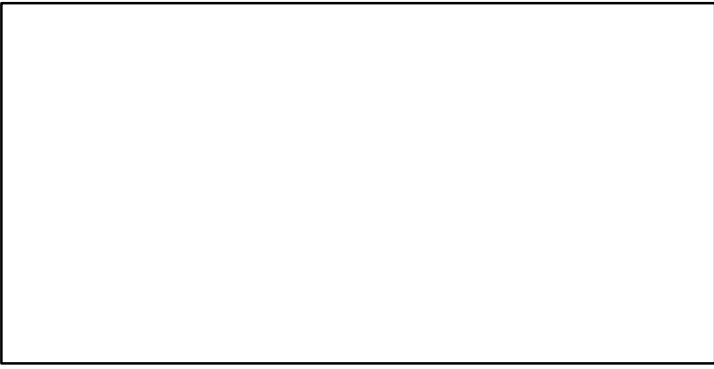
**Production\***



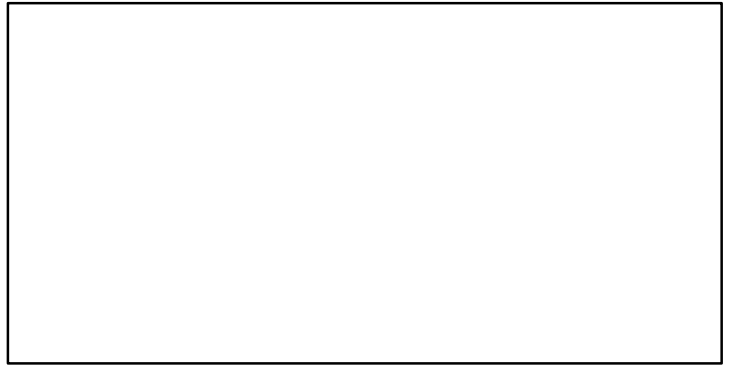
◆ Start Year ◆ End Year \* No Data

Kichiji rockfish Southwestern coast of Hokkaido [KCROCKSWHOKK]

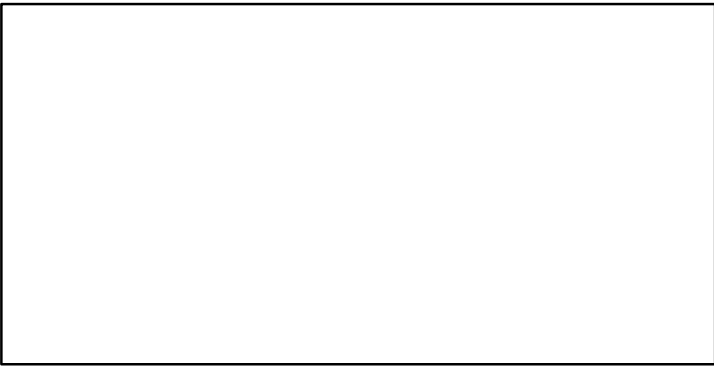
**TB\***



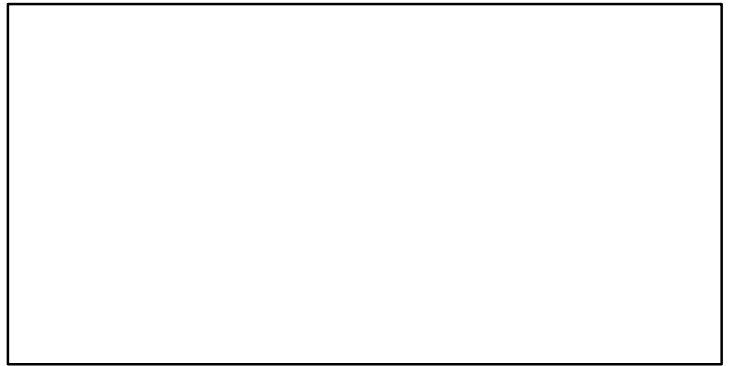
**SSB\***



**TN \***



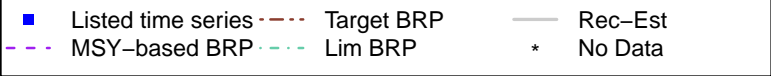
**F\***



**ER\***



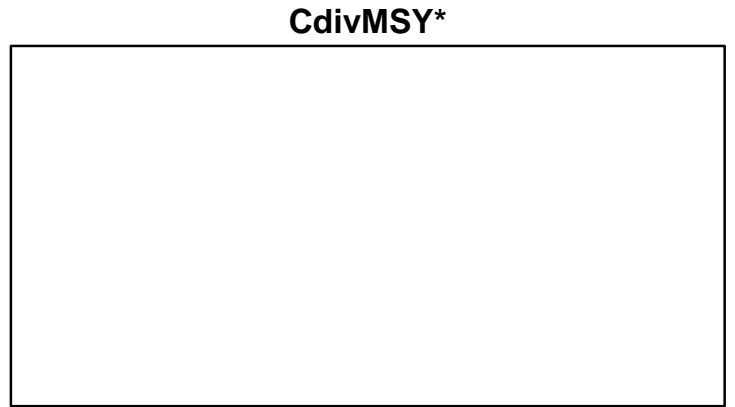
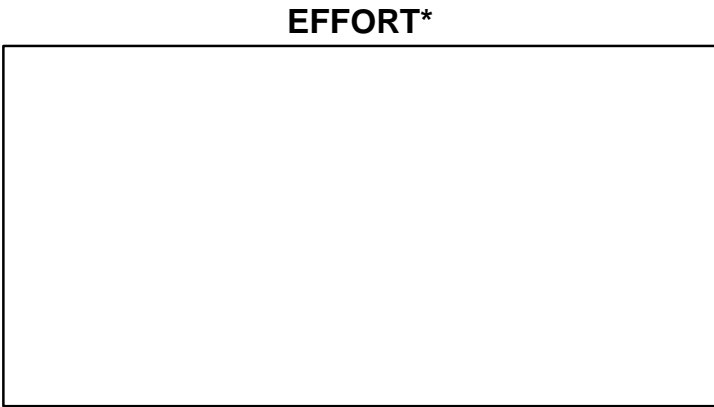
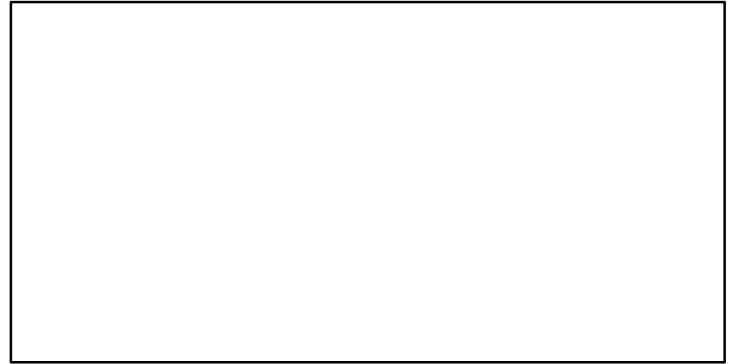
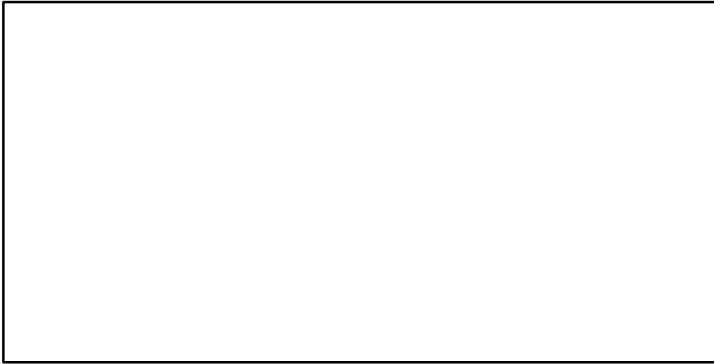
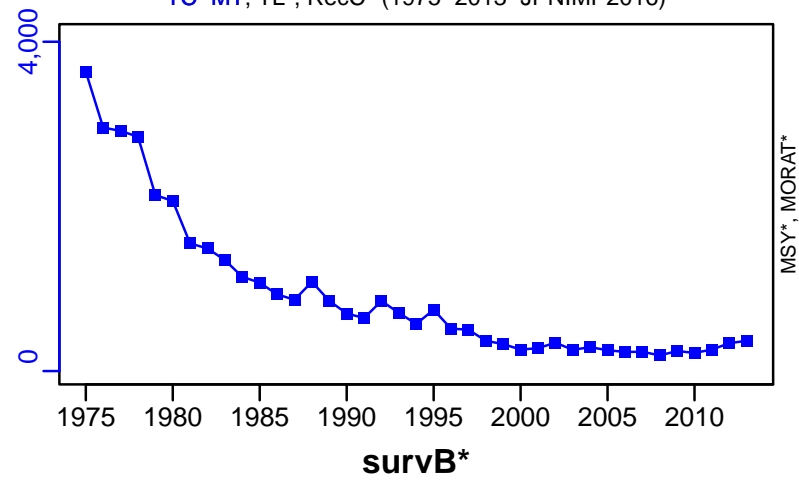
**Recruits\***



# Kichiji rockfish Southwestern coast of Hokkaido [KCROCKSWHOKK]

TC-MT, TL\*, RecC\* (1975-2013-JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



## Longfin codling Pacific Ocean [LCODLINGPAC]

Metadata	
<b>Scientific Name</b>	Laemonema longipes
<b>Current Assess ID</b>	FAFRFJ-LCODLINGPAC-1989-2013-JPNIMP2016
<b>Area</b>	Pacific Ocean
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	16,300		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

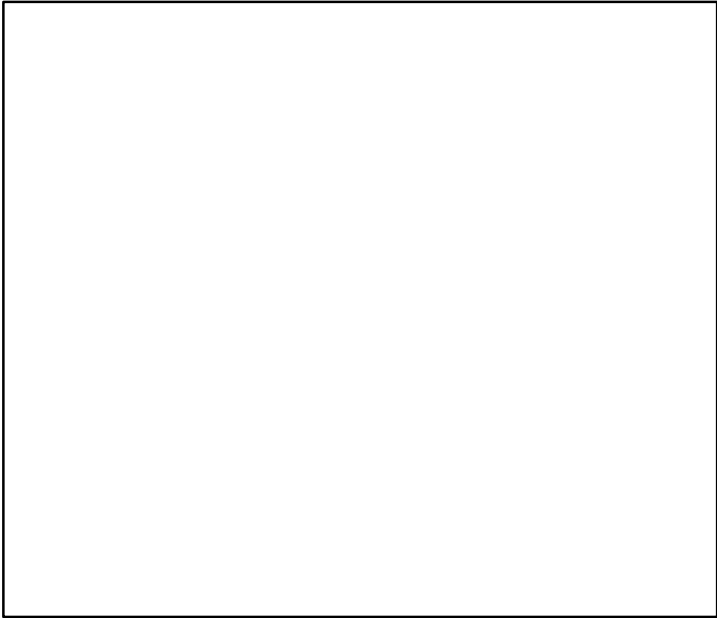
Kobe MSY\*



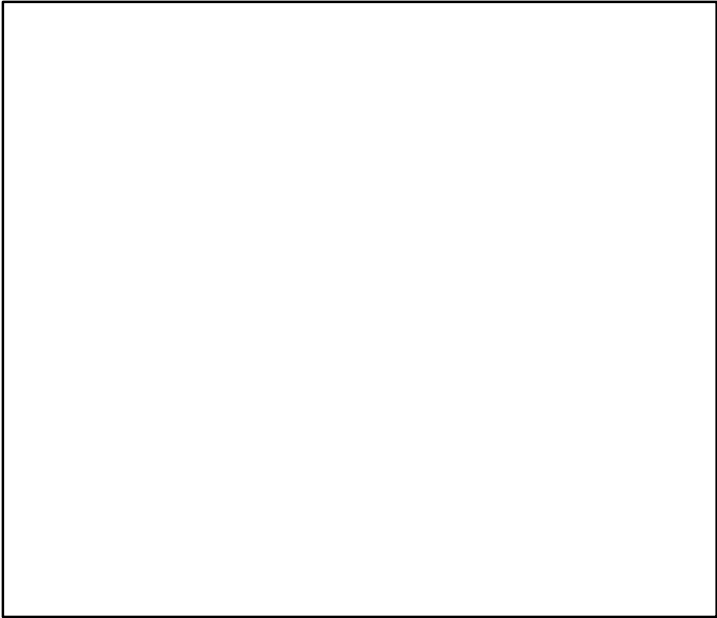
Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data



TB\*



SSB\*



TN \*



F\*



ER\*

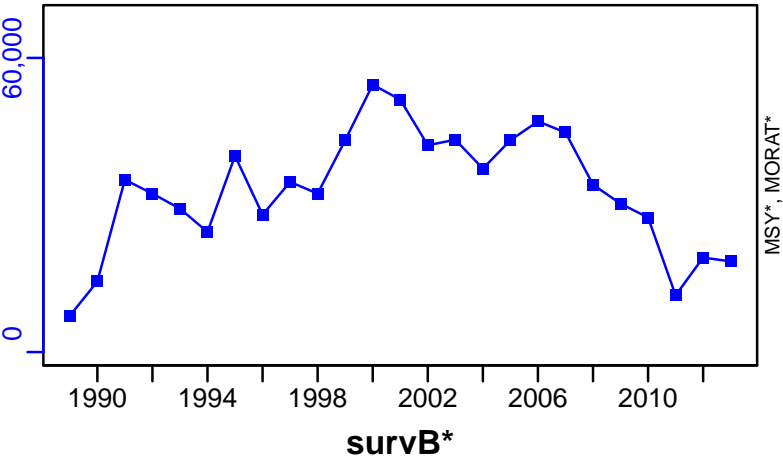


Recruits\*



Longfin codling Pacific Ocean [LCODLINGPAC]

TC-MT, TL\*, RecC\* (1989-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Largehead hairtail Sea of Japan and East China Sea [LHAIRTSOJECS]

Metadata	
<b>Scientific Name</b>	Trichiurus lepturus
<b>Current Assess ID</b>	FAFRFJ-LHAIRTSOJECS-1981-2013-JPNIMP2016
<b>Area</b>	Sea of Japan and East China Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	2070		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



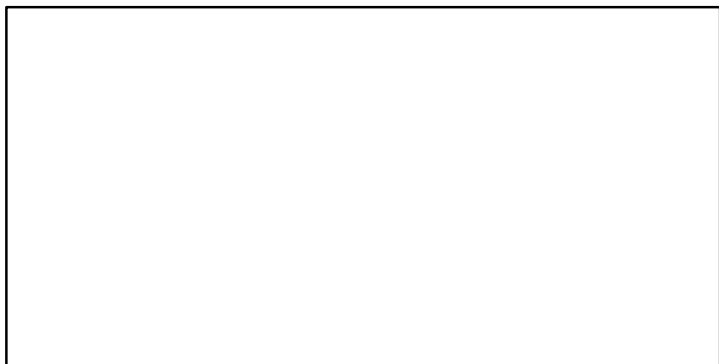
**Production\***



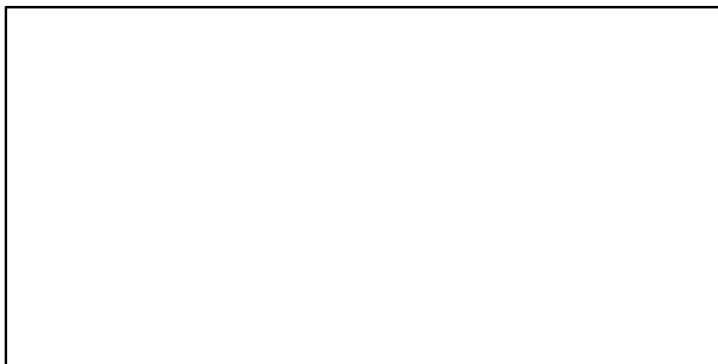
◆ Start Year ◆ End Year \* No Data

Largehead hairtail Sea of Japan and East China Sea [LHAIRTSOJECS]

**TB\***



**SSB\***



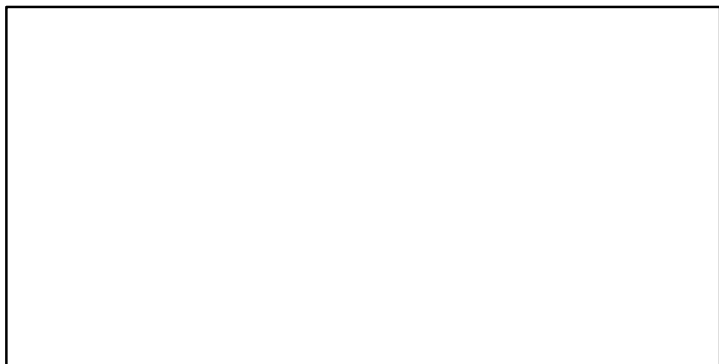
**TN \***



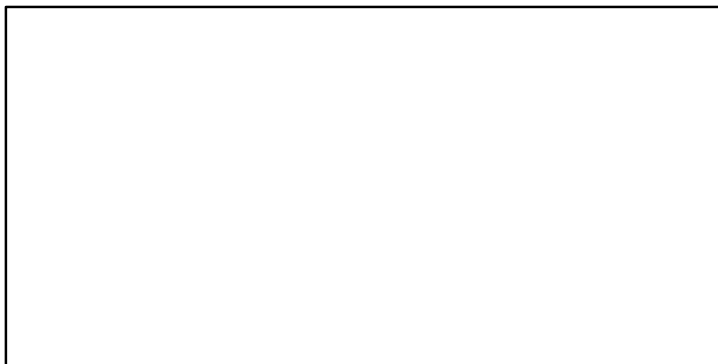
**F\***



**ER\***



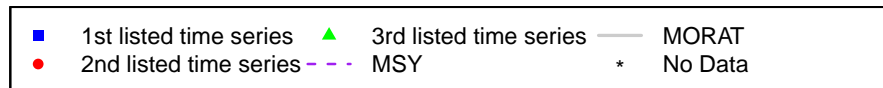
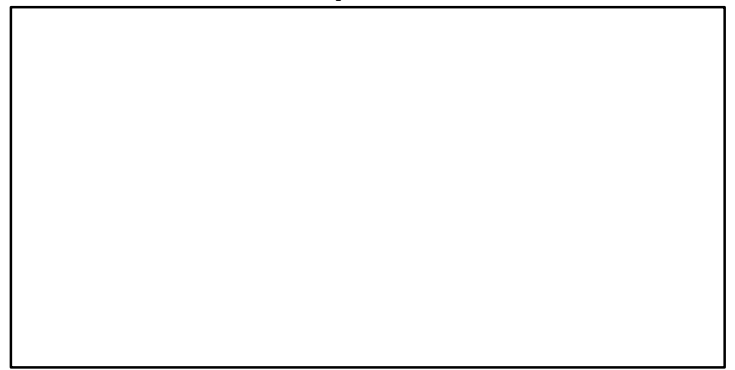
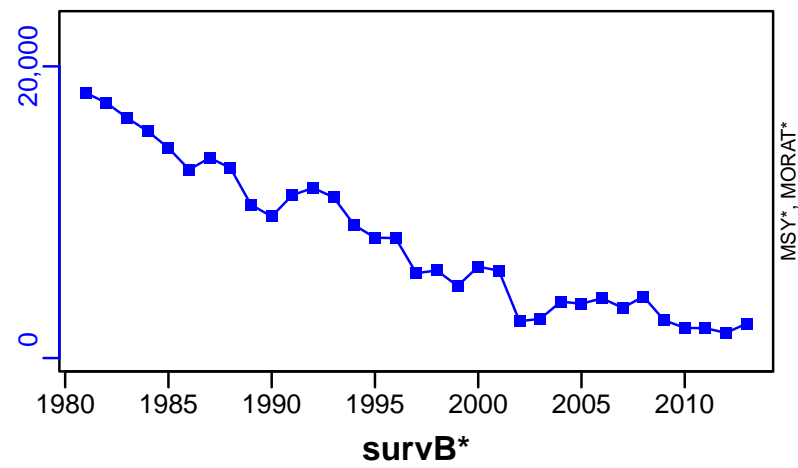
**Recruits\***



# Largehead hairtail Sea of Japan and East China Sea [LHAIRTSOJECS]

TC-MT, TL\*, RecC\* (1981–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



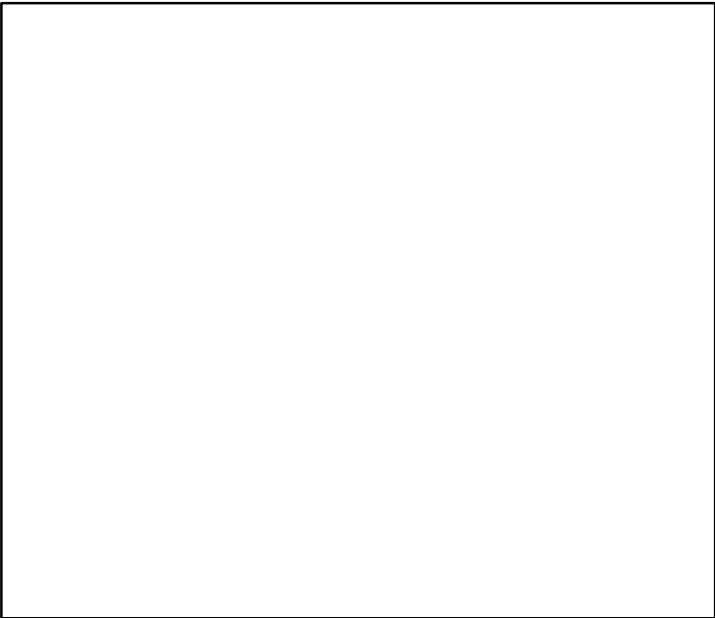
## Lavender jobfish Okinawa Islands [LJOBOKWI]

Metadata	
<b>Scientific Name</b>	Pristipomoides sieboldii
<b>Current Assess ID</b>	FAFRFJ-LJOBOKWI-1989-2013-JPNIMP2016
<b>Area</b>	Okinawa Islands
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

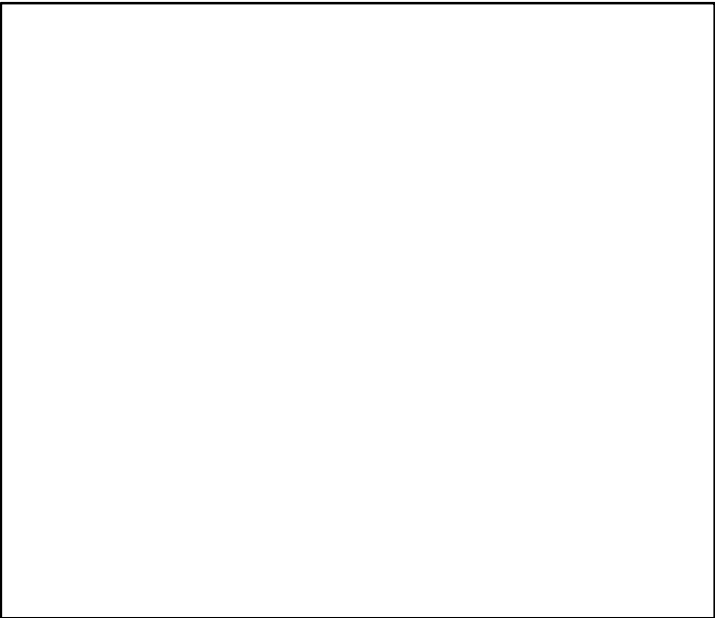
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	103		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

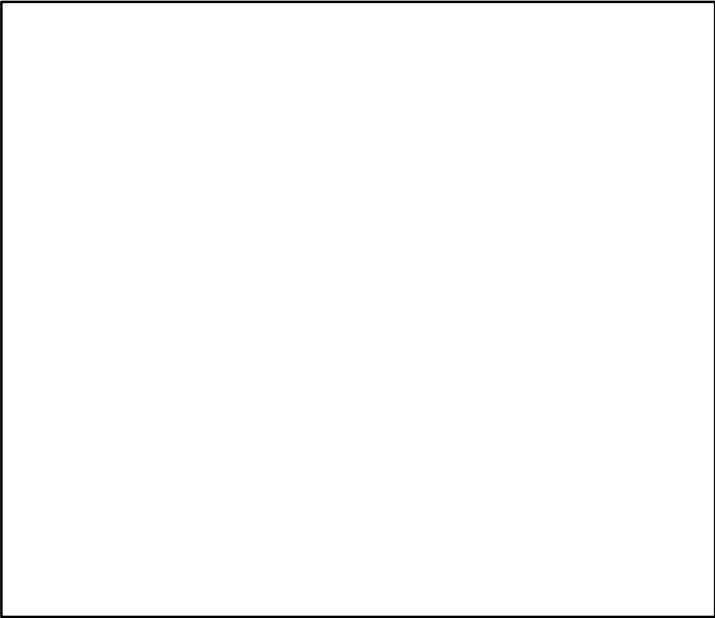
Kobe MSY\*



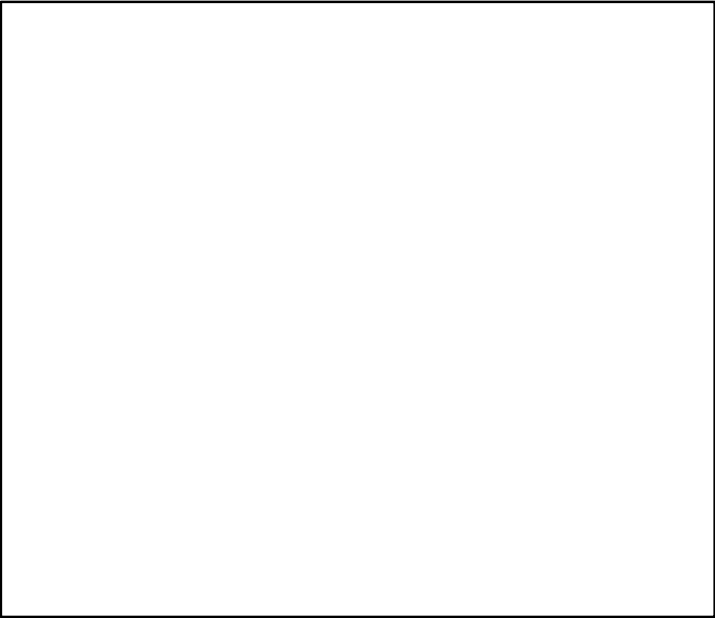
Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data



Lavender jobfish Okinawa Islands [LJOBOKWI]

TB\*



SSB\*



TN \*



F\*



ER\*

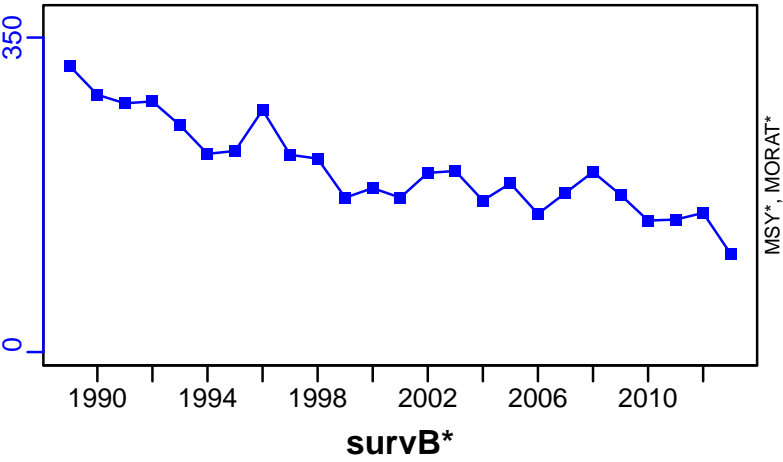


Recruits\*



Lavender jobfish Okinawa Islands [LJOBOKWI]

TC-MT, TL\*, RecC\* (1989-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Japanese flounder East China Sea [OFLOUNECS]

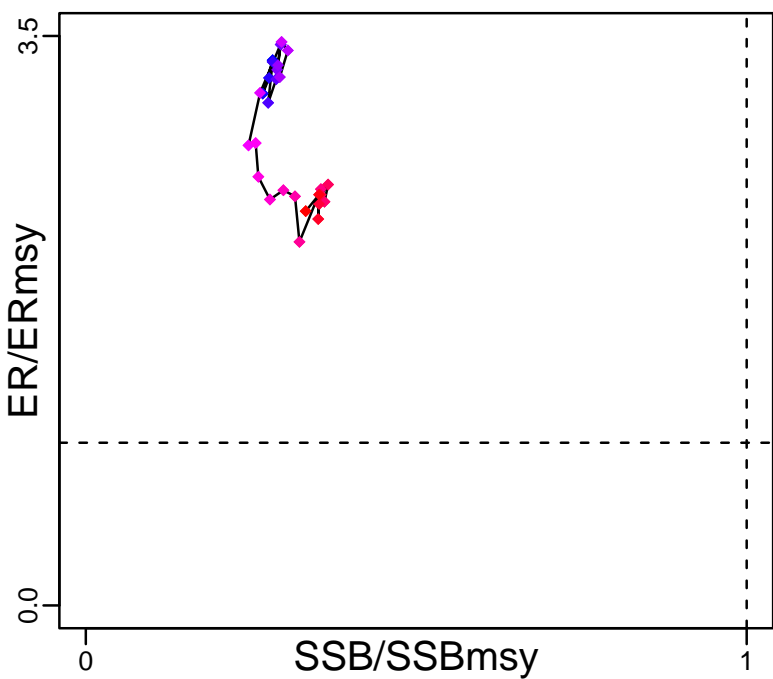
Metadata	
<b>Scientific Name</b>	Paralichthys olivaceus
<b>Current Assess ID</b>	FAFRFJ-OFLOUNECS-1975-2013-JPNIMP2016
<b>Area</b>	East China Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2010

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	7826
<b>SSBmsy</b>	SSBmsy-MT	2013	7393
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.151
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	1182
<b>M</b>	M-1/yr	2013	0.208
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2010	2181
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

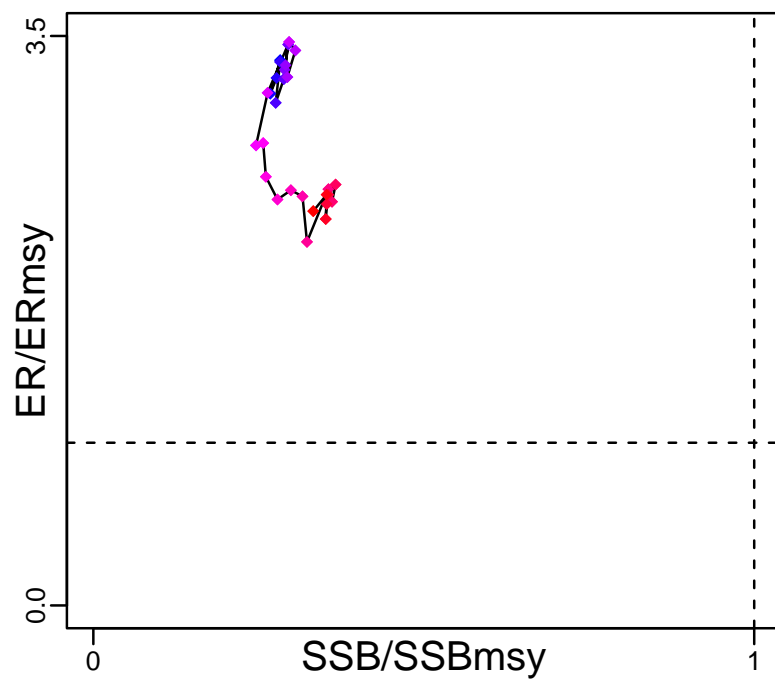
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	3170	-	1
<b>SSB</b>	SSB-MT	2013	2460	Both	2
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	1,290,000	-	0
<b>F</b>	F-1/yr	2010	0.59	-	0 to 7
<b>ER</b>	ER-calc-ratio	2013	0.366	-	-
<b>TC</b>	TC-MT	2013	1160		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.405		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.333		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	2.423		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Japanese flounder East China Sea [OFLOUNECS]

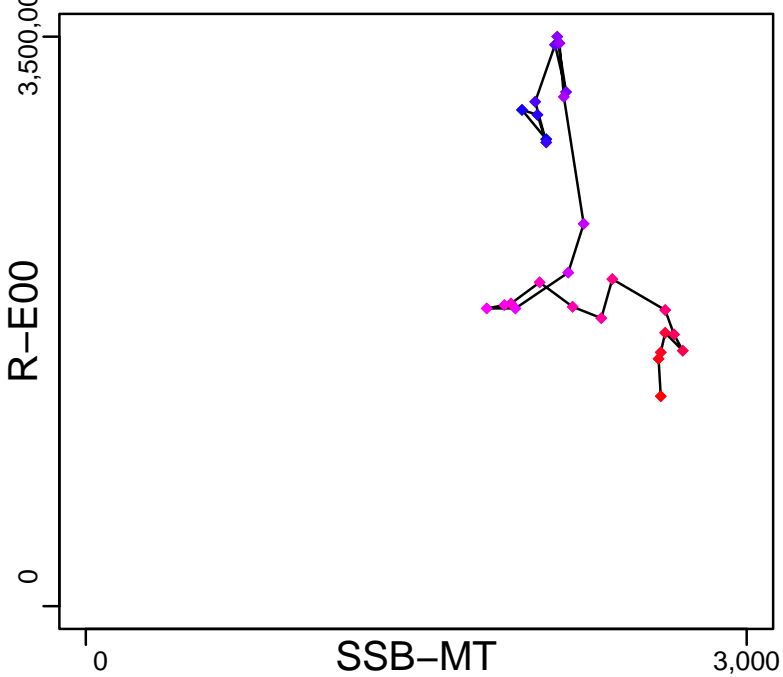
Kobe MSYpref (1975–2013–JPNIMP2016)



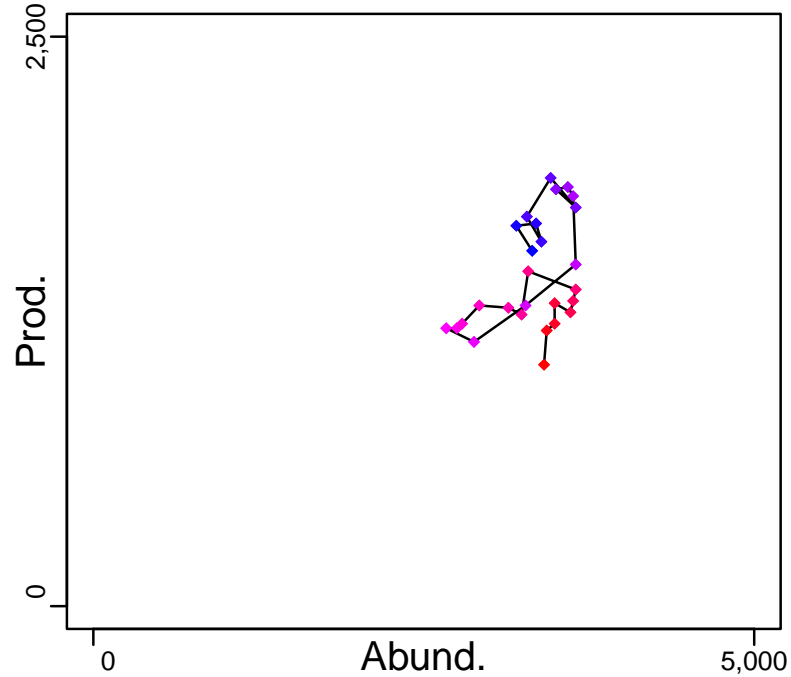
Kobe MGTpref (1975–2013–JPNIMP2016)



Spawner Recruit (1975–2013–JPNIMP2016)



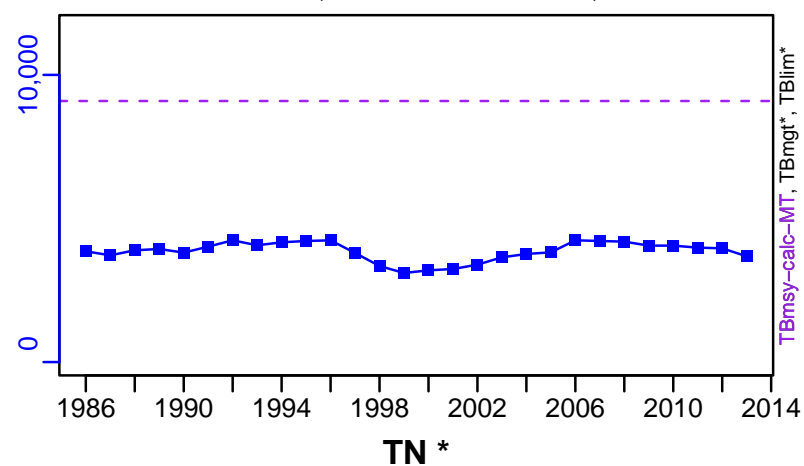
Production (1975–2013–JPNIMP2016)



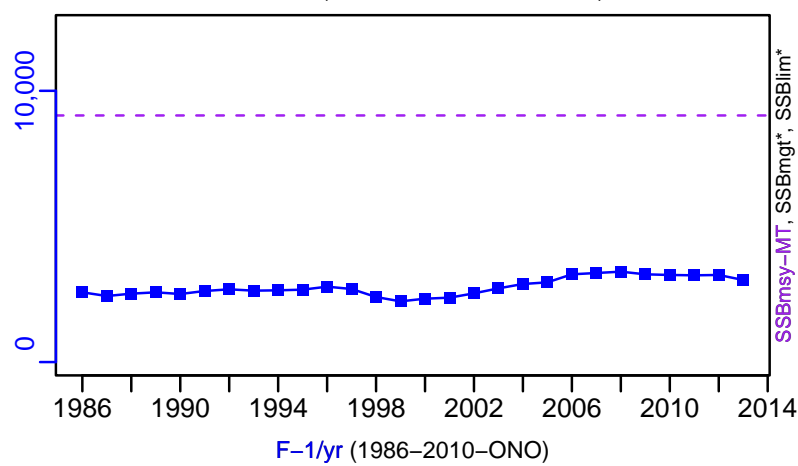
◆ Start Year ◆ End Year \* No Data

# Japanese flounder East China Sea [OFLOUNECS]

TB-MT (1975-2013-JPNIMP2016)



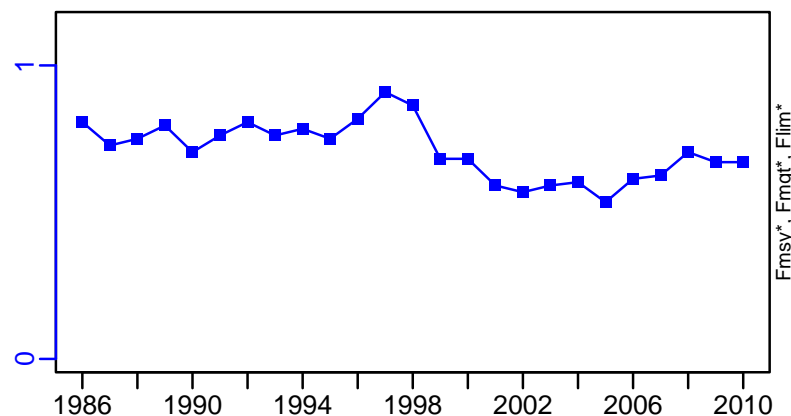
SSB-MT (1975-2013-JPNIMP2016)



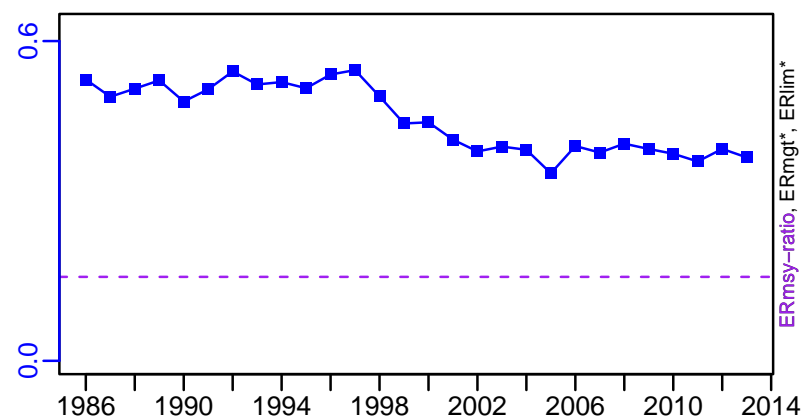
TN \*



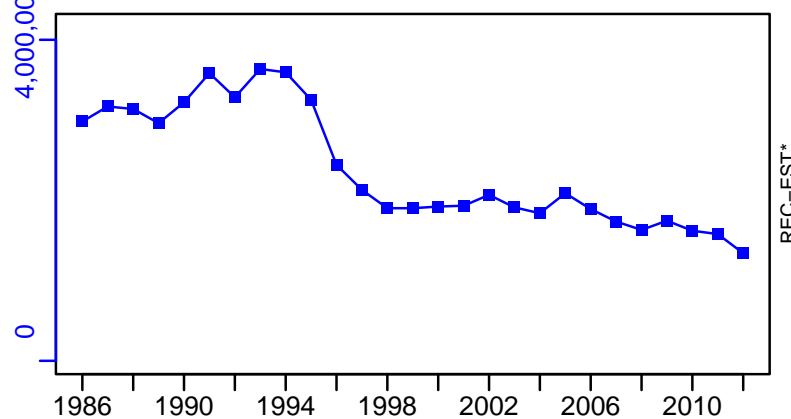
F-1/yr (1986-2010-ONO)



ER-calc-ratio (1975-2013-JPNIMP2016)

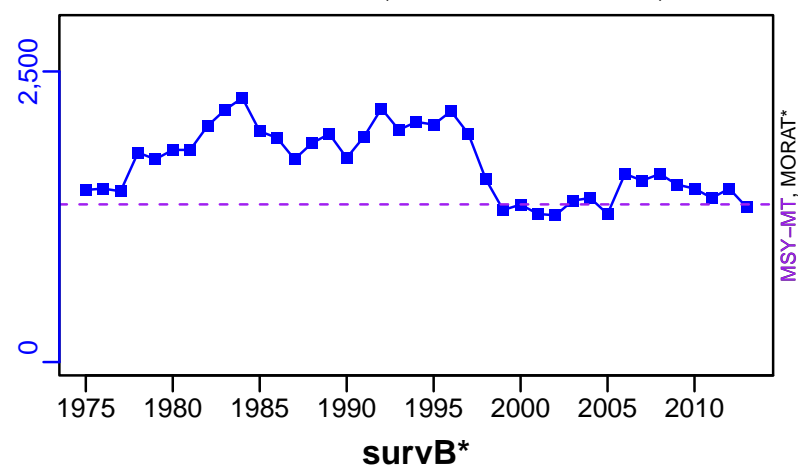


R-E00 (1975-2013-JPNIMP2016)



# Japanese flounder East China Sea [OFLOUNECS]

TC-MT, TL\*, RecC\* (1975–2013–JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



survB\*



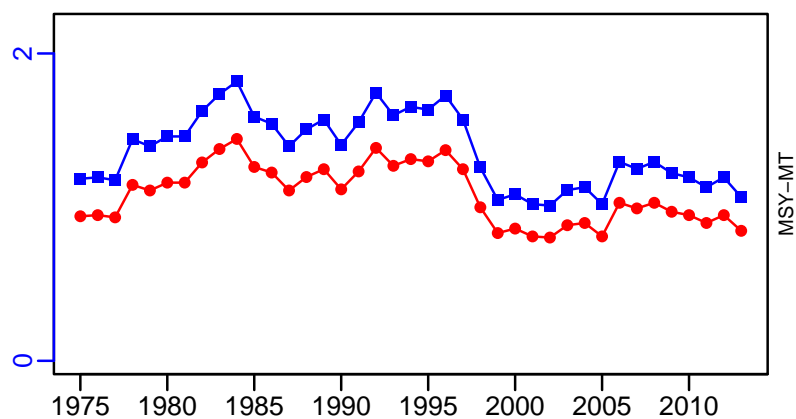
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1975–2013–JPNIMP2016)



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

## Japanese flounder Sea of Japan North [OFLOUNNSJ]

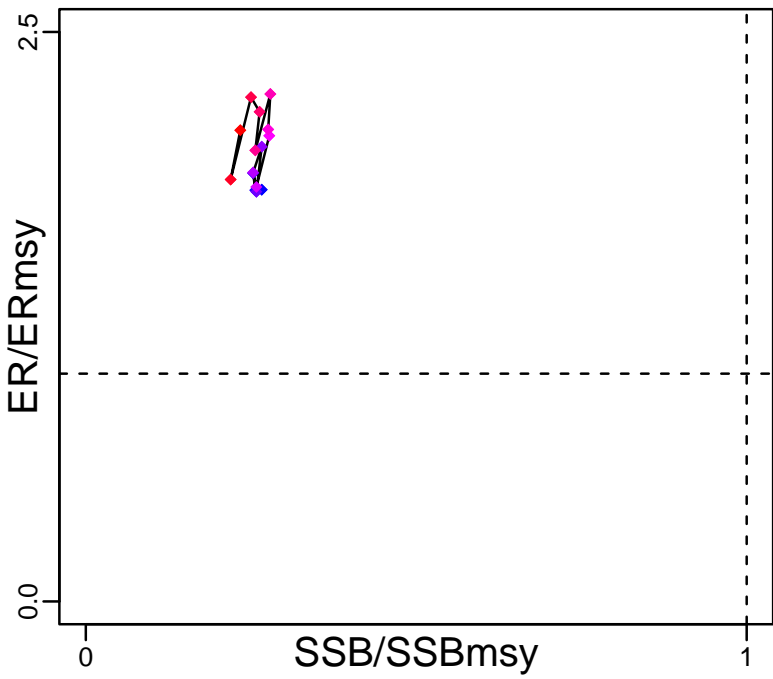
Metadata	
<b>Scientific Name</b>	Paralichthys olivaceus
<b>Current Assess ID</b>	FAFRFJ-OFLOUNNSJ-1970-2013-JPNIMP2016
<b>Area</b>	Sea of Japan North
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2010

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	7172
<b>SSBmsy</b>	SSBmsy-MT	2013	6160
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.217
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	1556
<b>M</b>	M-1/yr	2013	0.2
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2010	2900
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

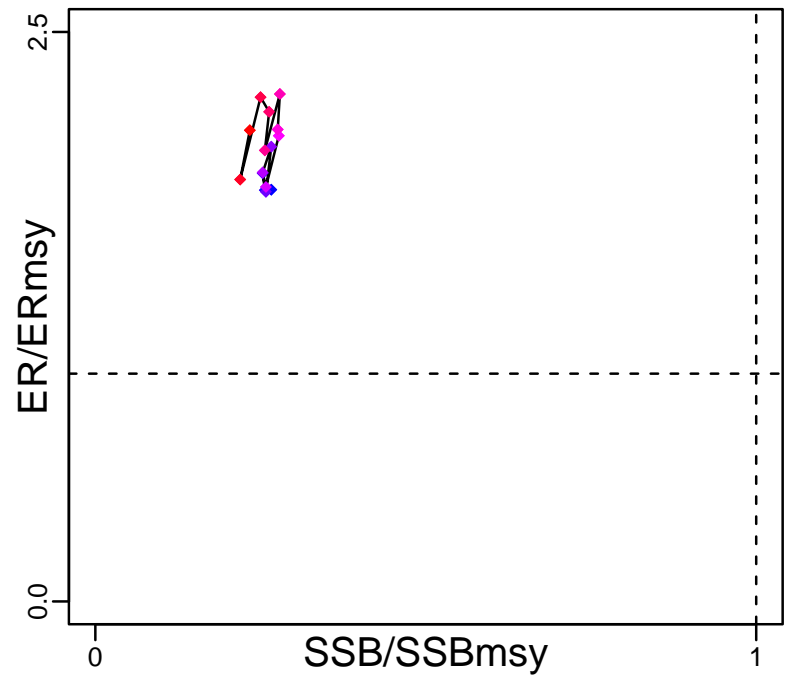
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	2210	-	1
<b>SSB</b>	SSB-MT	2013	1440	Both	2
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	1,990,000	-	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.449	-	-
<b>TC</b>	TC-MT	2013	992		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.308		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.234		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	2.069		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Japanese flounder Sea of Japan North [OFLOUNNSJ]

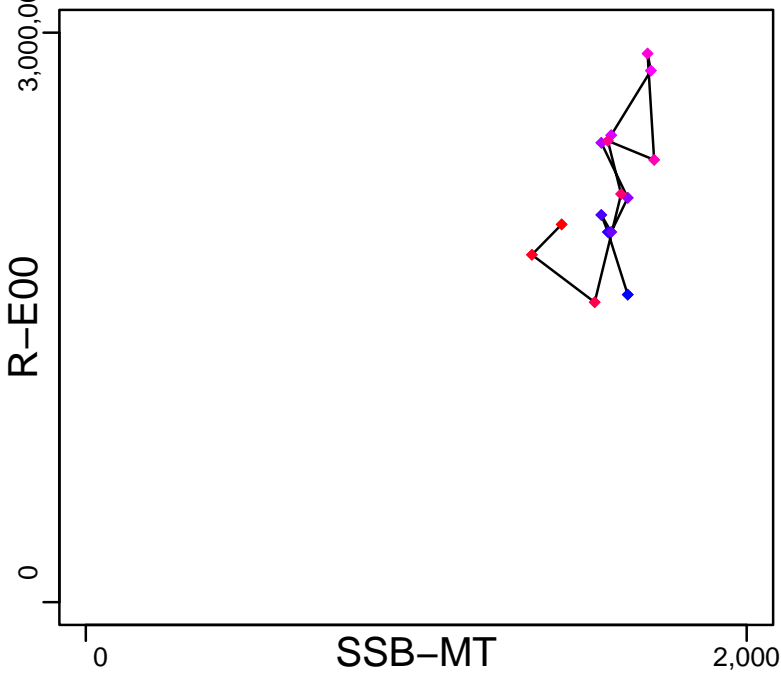
Kobe MSYpref (1970–2013–JPNIMP2016)



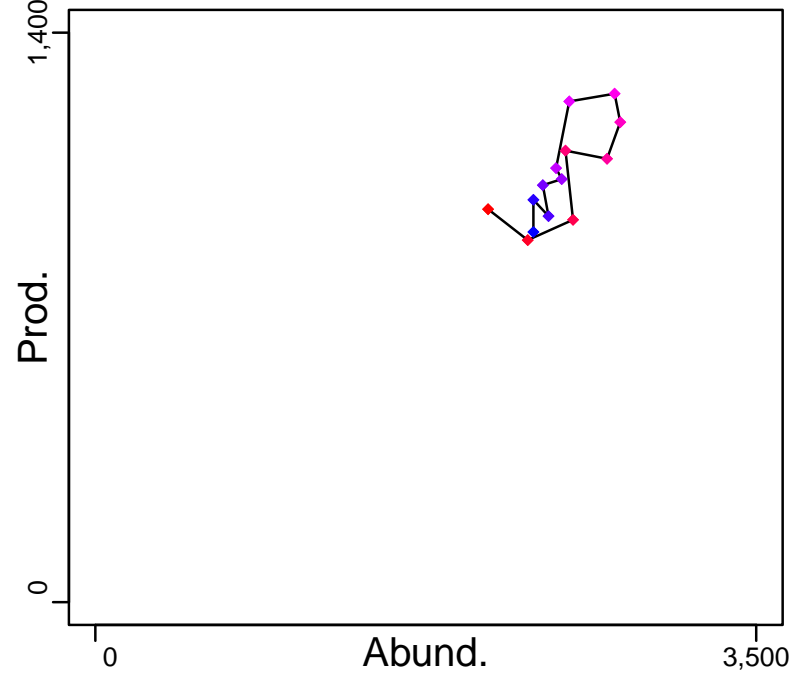
Kobe MGTpref (1970–2013–JPNIMP2016)



Spawner Recruit (1970–2013–JPNIMP2016)



Production (1970–2013–JPNIMP2016)

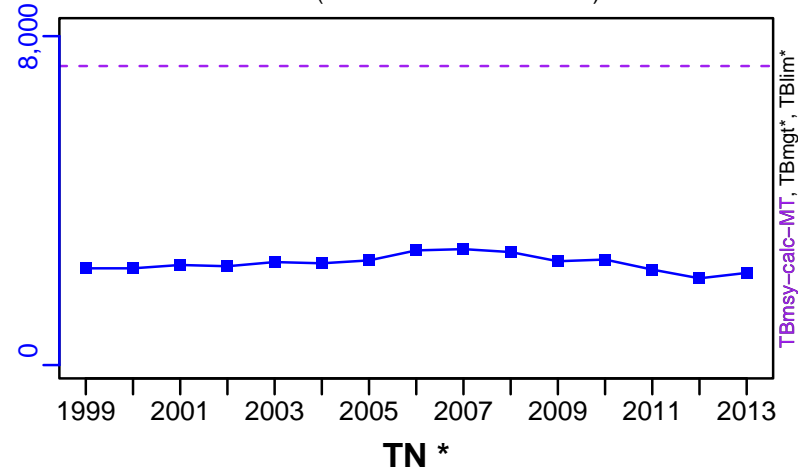


◆ Start Year ◆ End Year \* No Data

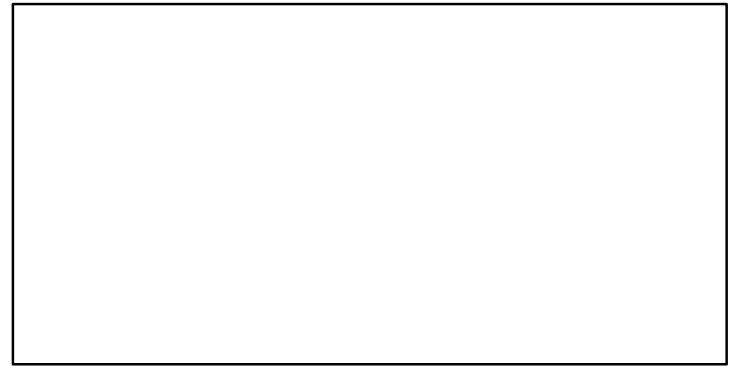
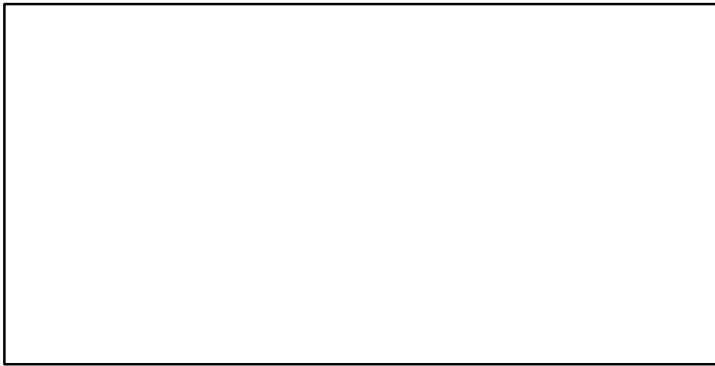
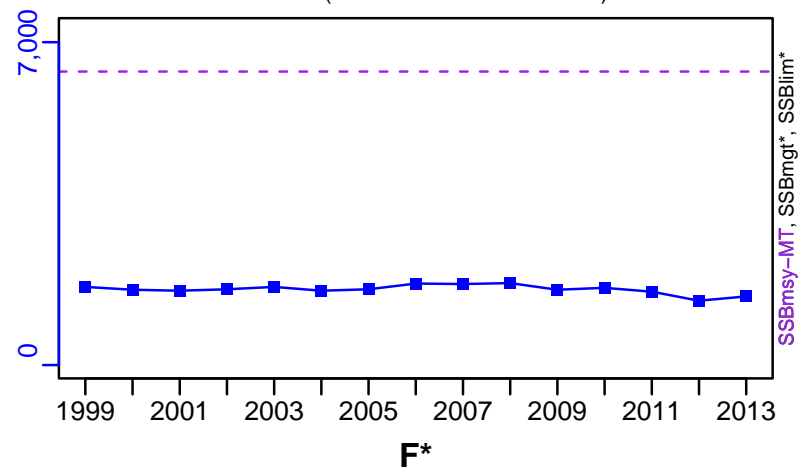


# Japanese flounder Sea of Japan North [OFLOUNNSJ]

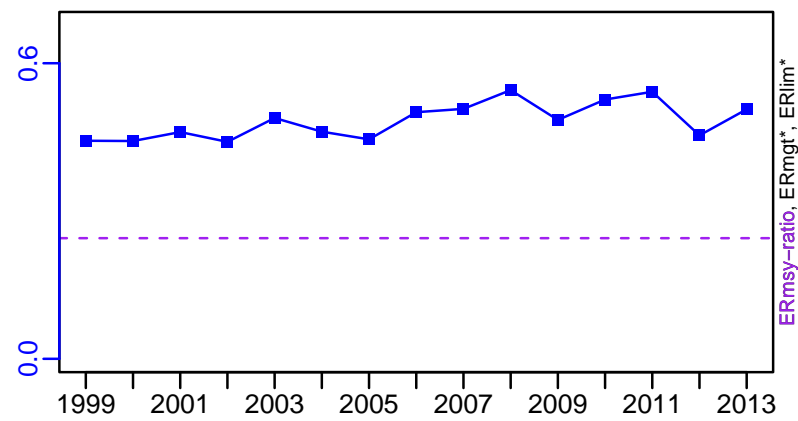
TB-MT (1970-2013-JPNIMP2016)



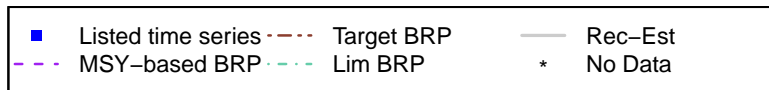
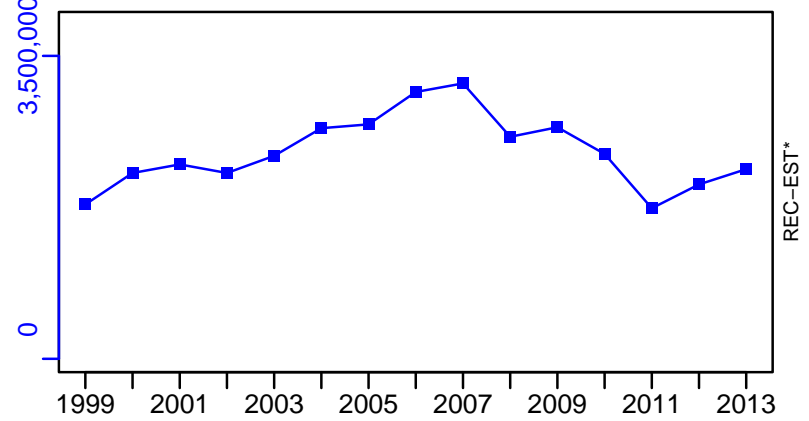
SSB-MT (1970-2013-JPNIMP2016)



ER-calc-ratio (1970-2013-JPNIMP2016)

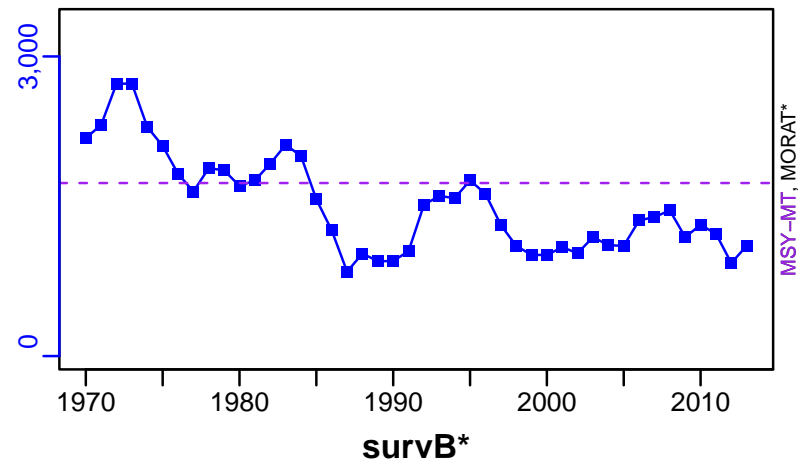


R-E00 (1970-2013-JPNIMP2016)



# Japanese flounder Sea of Japan North [OFLOUNNSJ]

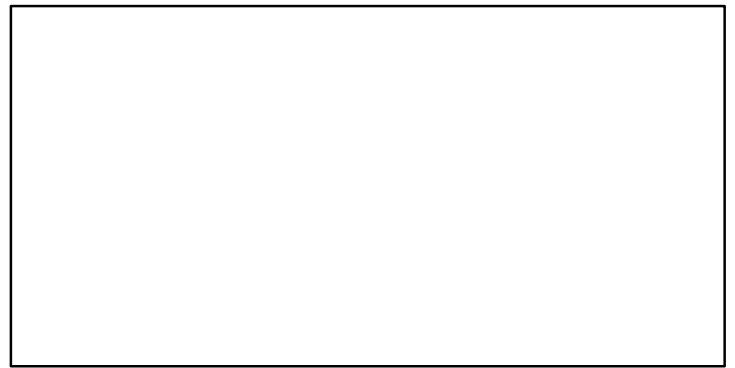
TC-MT, TL\*, RecC\* (1970-2013-JPNIMP2016)



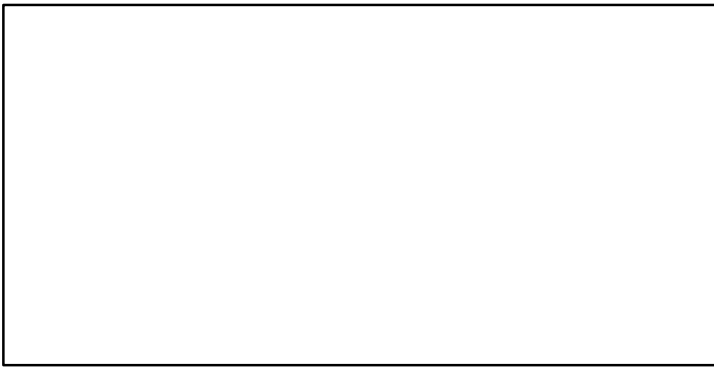
TAC\*, Cpair\*, Cadv\*



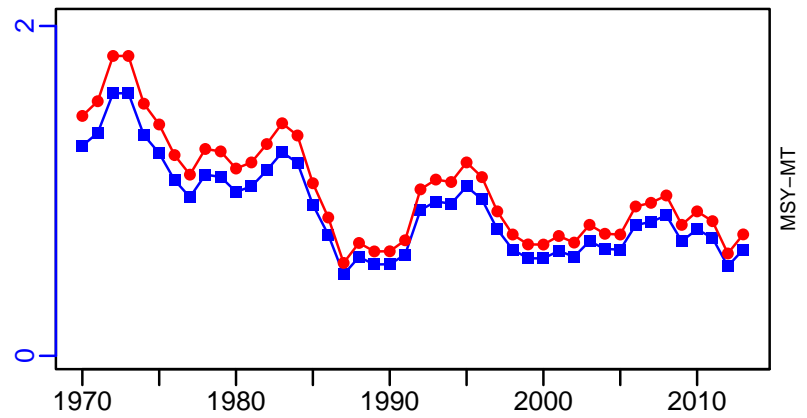
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1970-2013-JPNIMP2016)



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

## Japanese flounder Pacific Ocean [OFLOUNPAC]

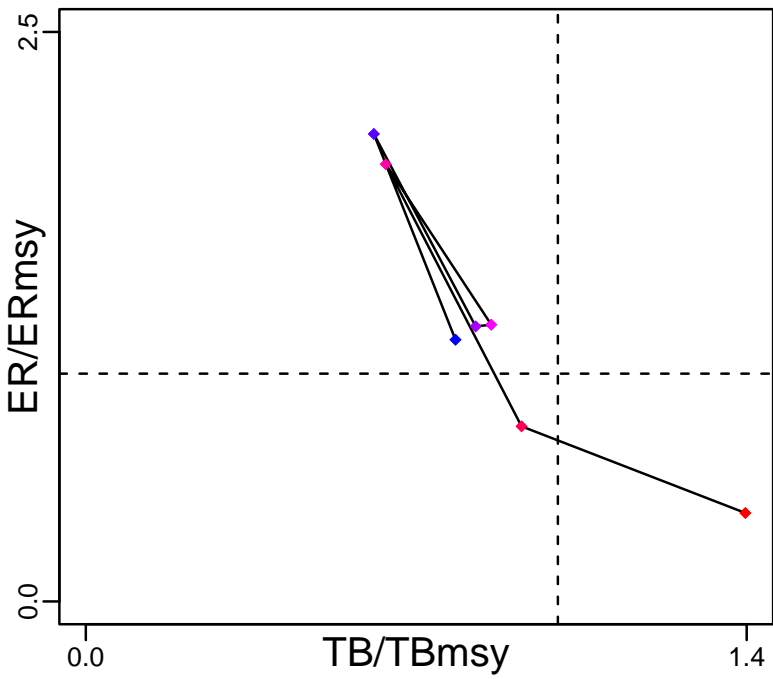
Metadata	
<b>Scientific Name</b>	Paralichthys olivaceus
<b>Current Assess ID</b>	FAFRFJ-OFLOUNPAC-1970-2013-JPNIMP2016
<b>Area</b>	Pacific Ocean
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2009

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2013	5146
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.419
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-calc-MT	2013	2156
<b>M</b>	M-1/yr	2013	0.21
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2009	1600
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

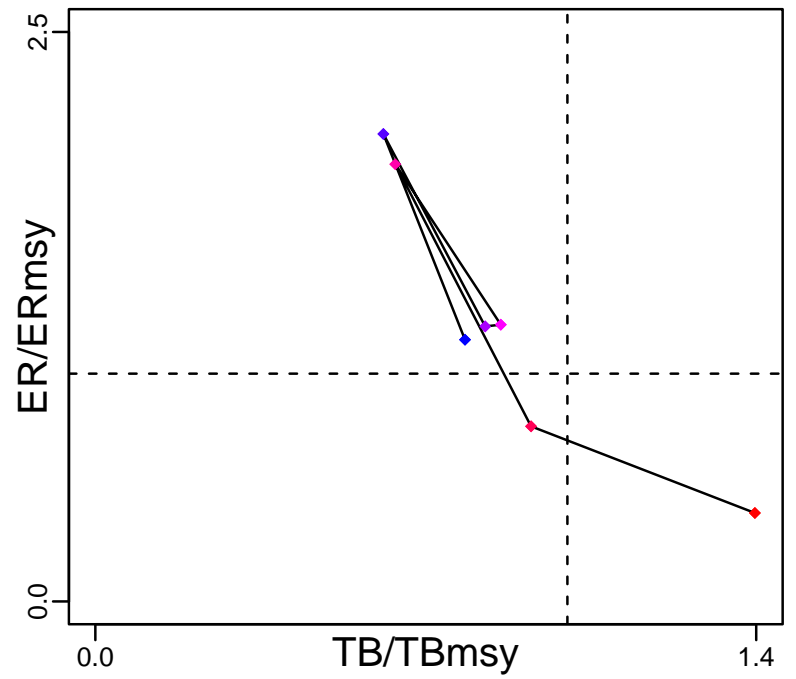
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	7190	-	1
<b>SSB</b>	SSB-MT	2013	1070	Both	3
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	1,940,000	-	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.163	-	-
<b>TC</b>	TC-MT	2013	2380		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2013	1.397		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	0.388		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Japanese flounder Pacific Ocean [OFLOUNPAC]

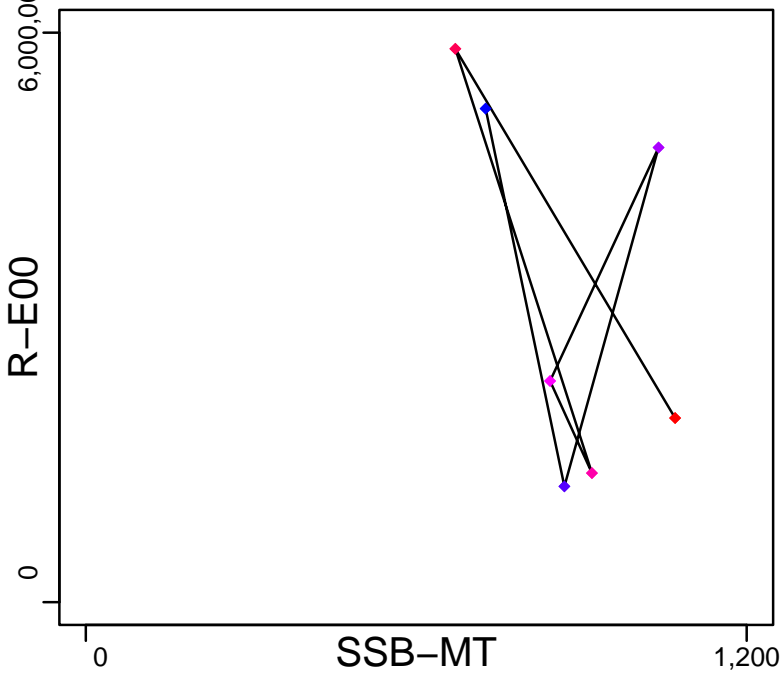
Kobe MSYpref (1970–2013–JPNIMP2016)



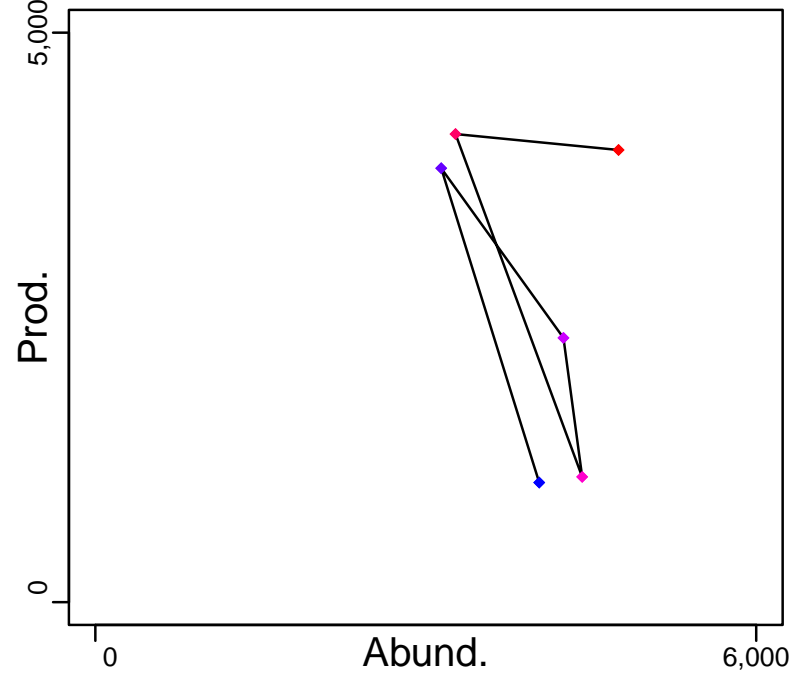
Kobe MGTpref (1970–2013–JPNIMP2016)



Spawner Recruit (1970–2013–JPNIMP2016)



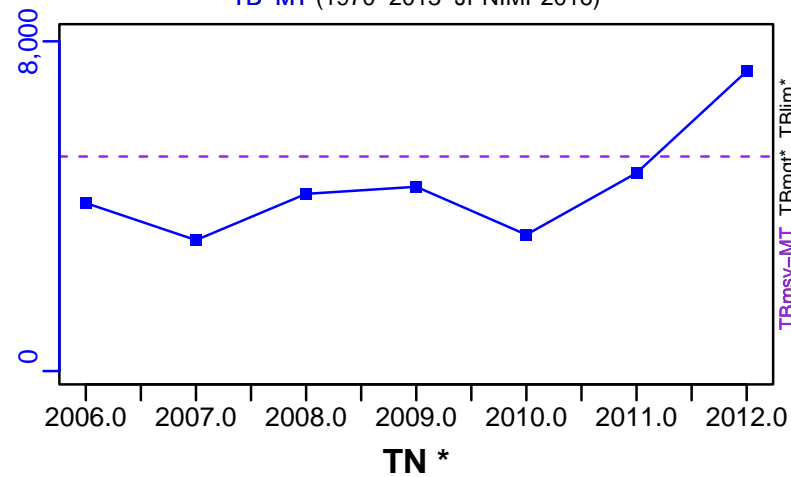
Production (1970–2013–JPNIMP2016)



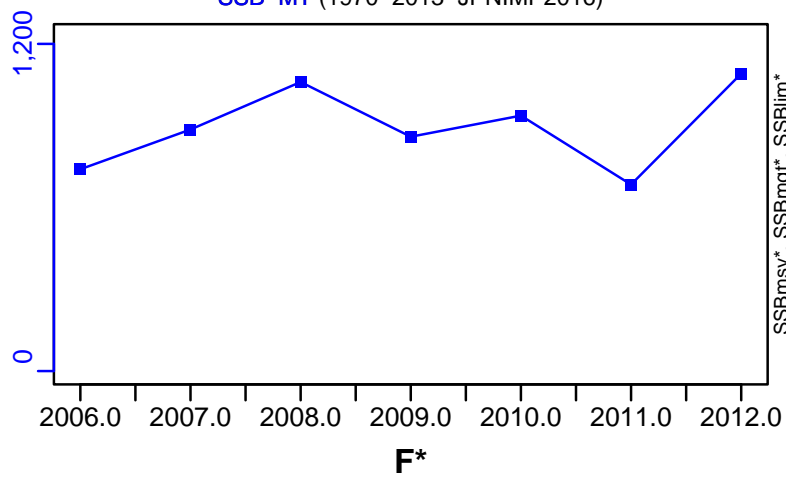
◆ Start Year ◆ End Year \* No Data

# Japanese flounder Pacific Ocean [OFLOUNPAC]

TB-MT (1970-2013-JPNIMP2016)



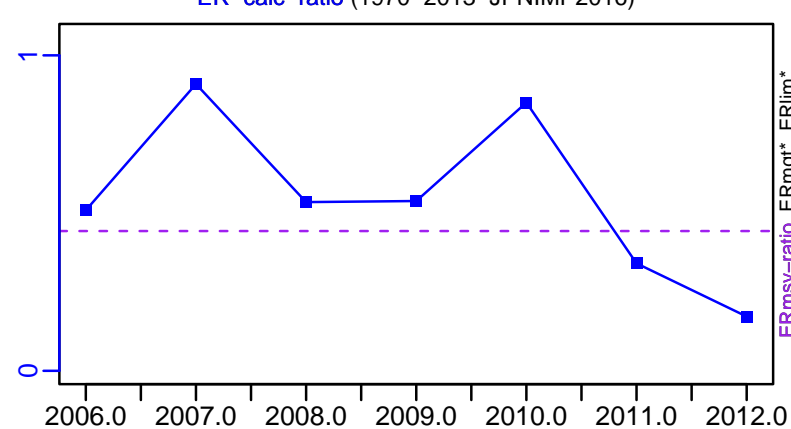
SSB-MT (1970-2013-JPNIMP2016)



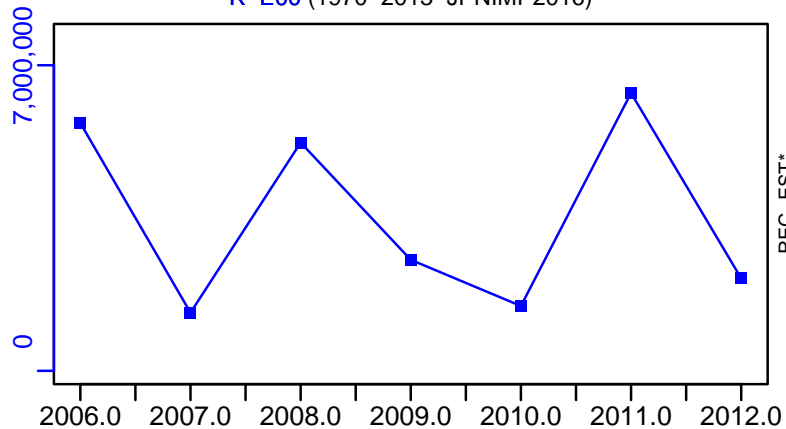
TN \*

F\*

ER-calc-ratio (1970-2013-JPNIMP2016)



R-E00 (1970-2013-JPNIMP2016)

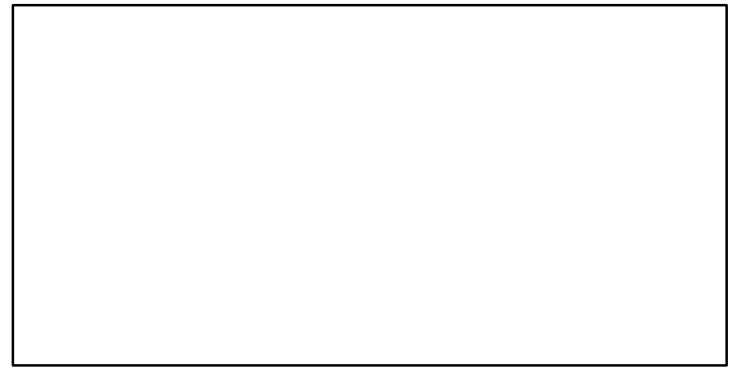
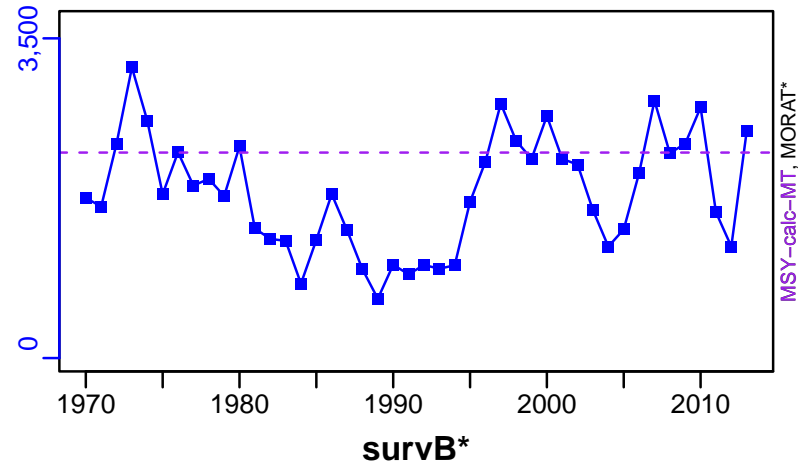


■ Listed time series
 - - - Target BRP
 — Rec-Est
   
- - - MSY-based BRP
 - - - Lim BRP
   
 \* No Data

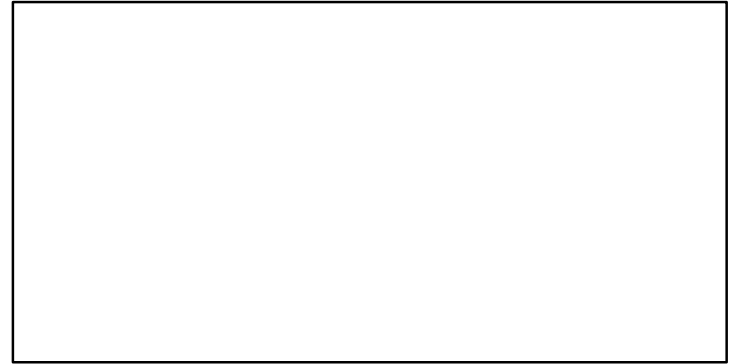
# Japanese flounder Pacific Ocean [OFLOUNPAC]

TC-MT, TL\*, RecC\* (1970-2013-JPNIMP2016)

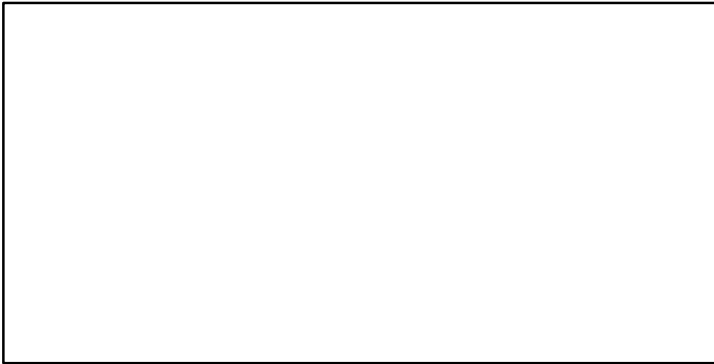
TAC\*, Cpair\*, Cadv\*



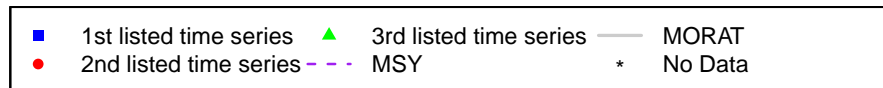
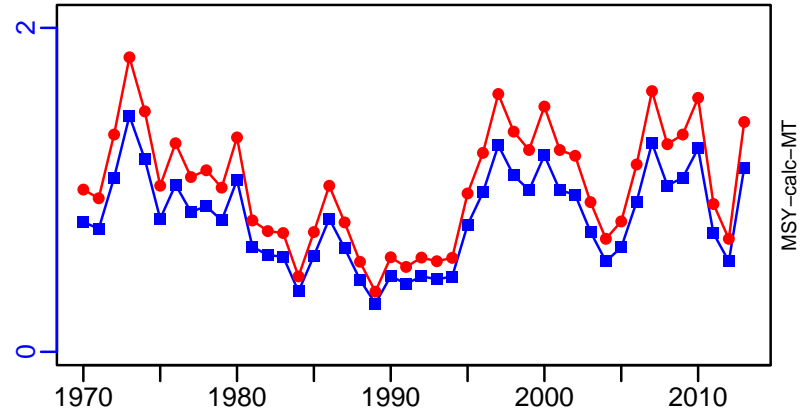
CPUE\*



EFFORT\*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1970-2013-JPNIMP2016)



## Japanese flounder Inland Sea of Japan [OFLOUNSETO]

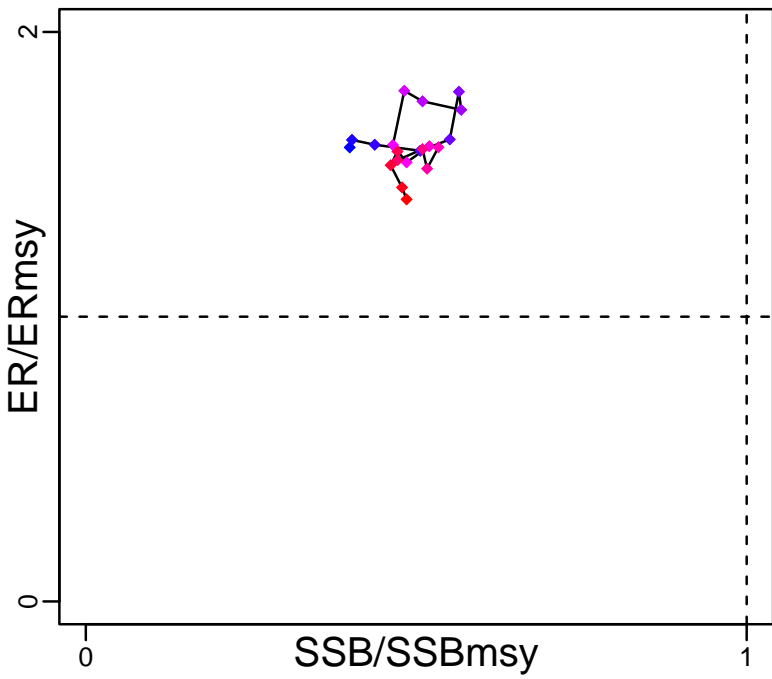
Metadata	
<b>Scientific Name</b>	Paralichthys olivaceus
<b>Current Assess ID</b>	FAFRFJ-OFLOUNSETO-1965-2013-JPNIMP2016
<b>Area</b>	Inland Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2010

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	4012
<b>SSBmsy</b>	SSBmsy-MT	2013	2905
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.218
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	875
<b>M</b>	M-1/yr	2013	0.31
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2010	992
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

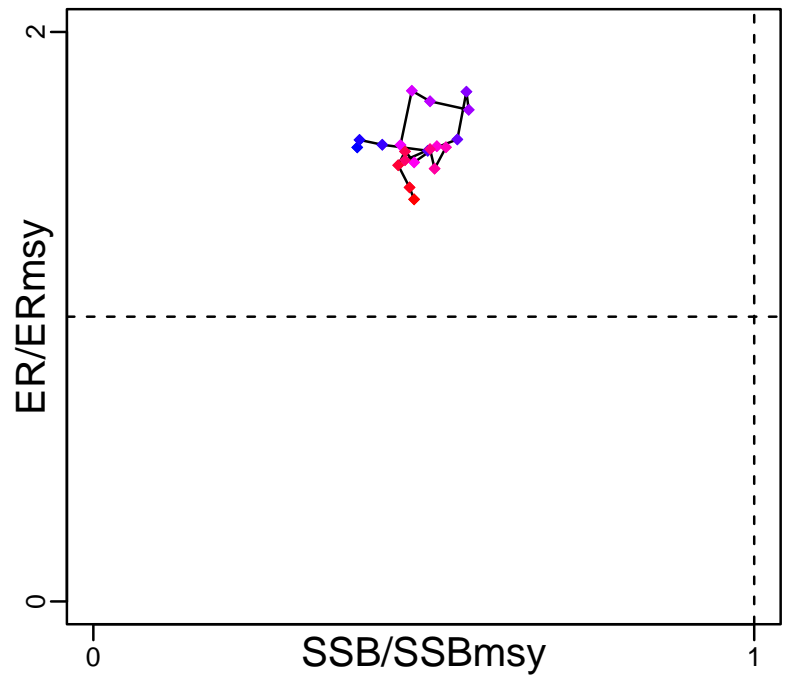
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	2170	-	0
<b>SSB</b>	SSB-MT	2013	1410	Both	2
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	897,000	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.308	-	-
<b>TC</b>	TC-MT	2013	668		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.541		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.485		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	1.412		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Japanese flounder Inland Sea of Japan [OFLOUNSETO]

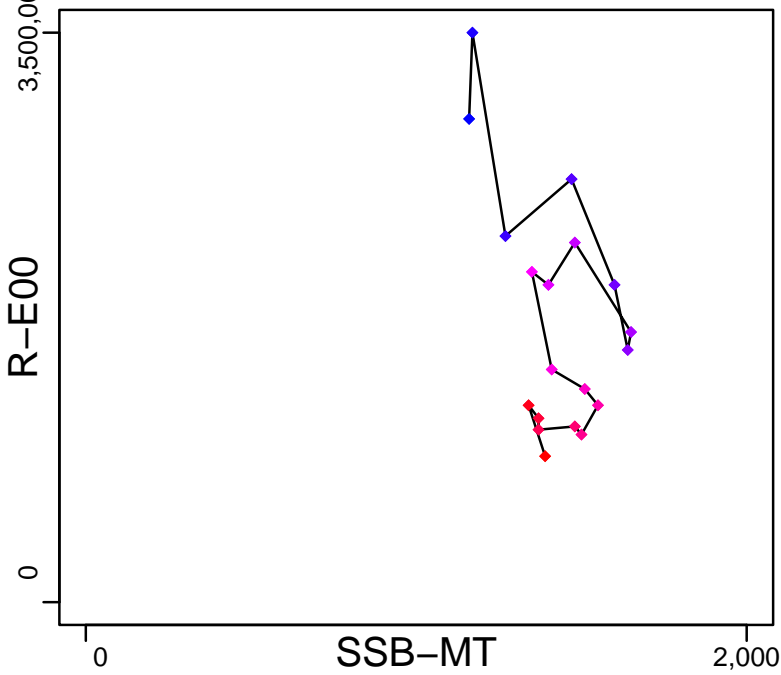
Kobe MSYpref (1965–2013–JPNIMP2016)



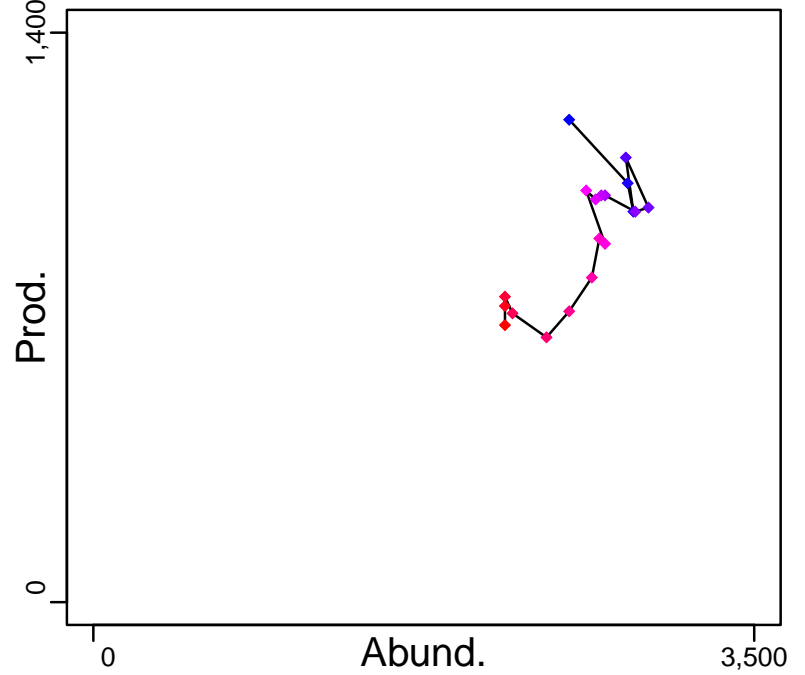
Kobe MGTpref (1965–2013–JPNIMP2016)



Spawner Recruit (1965–2013–JPNIMP2016)



Production (1965–2013–JPNIMP2016)

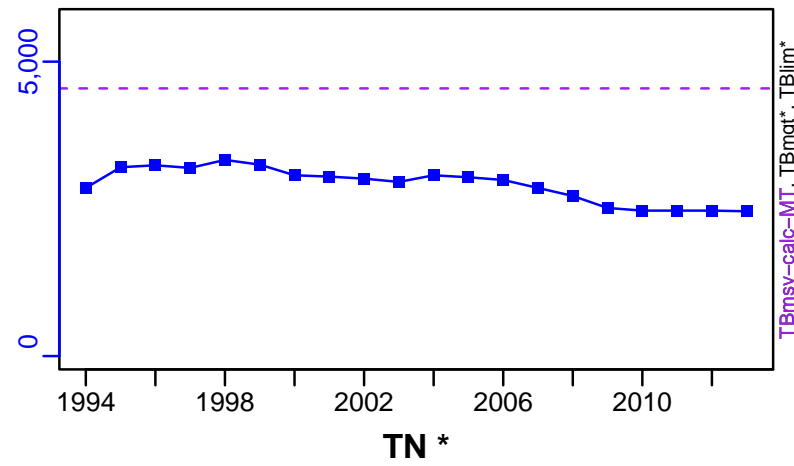


◆ Start Year ◆ End Year \* No Data

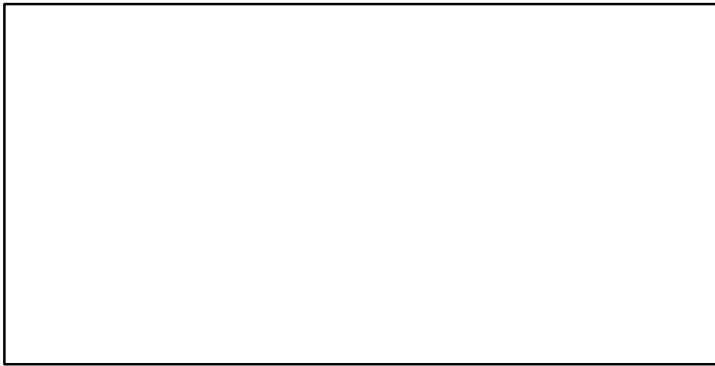
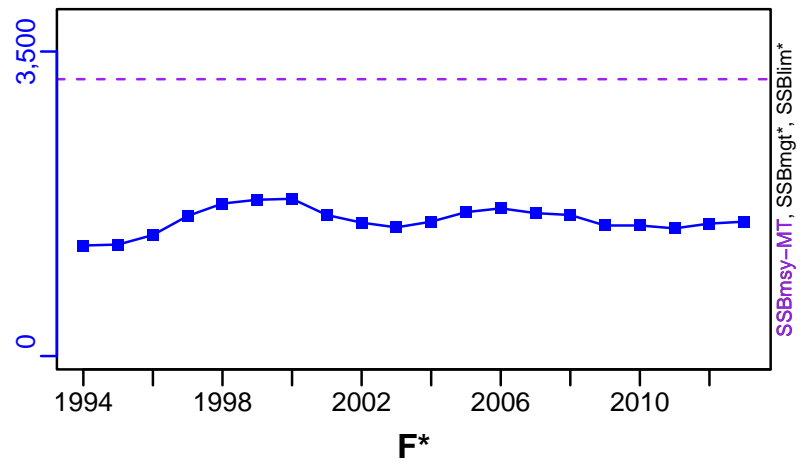


# Japanese flounder Inland Sea of Japan [OFLOUNSETO]

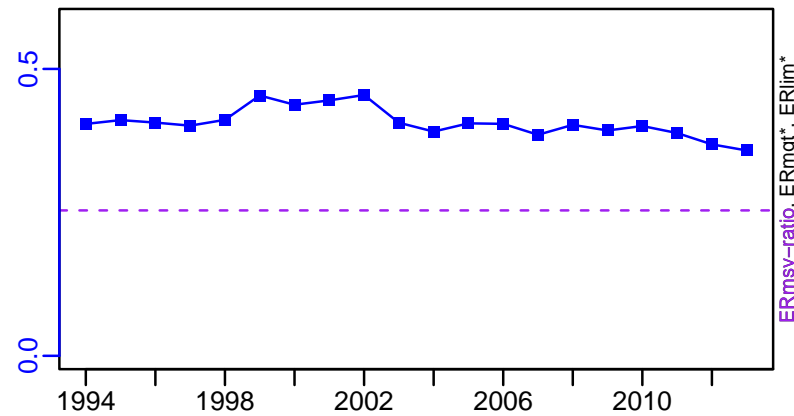
TB-MT (1965-2013-JPNIMP2016)



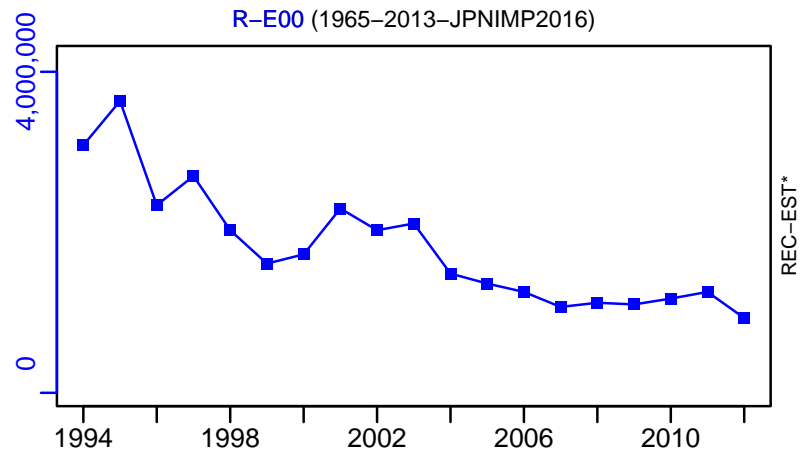
SSB-MT (1965-2013-JPNIMP2016)



ER-calc-ratio (1965-2013-JPNIMP2016)



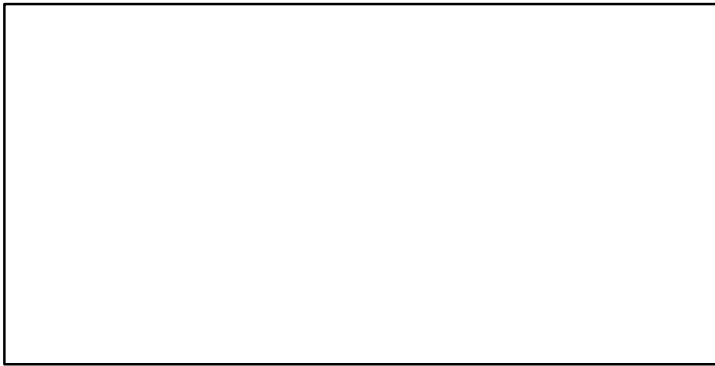
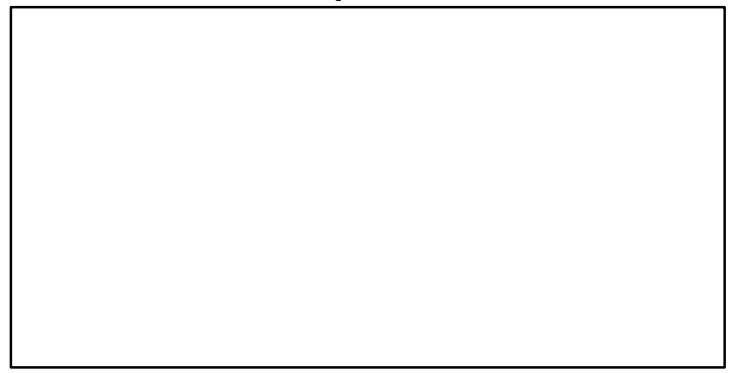
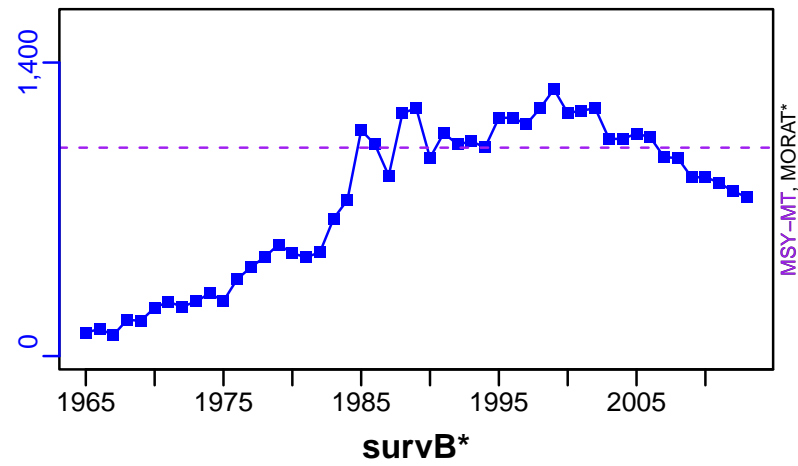
R-E00 (1965-2013-JPNIMP2016)



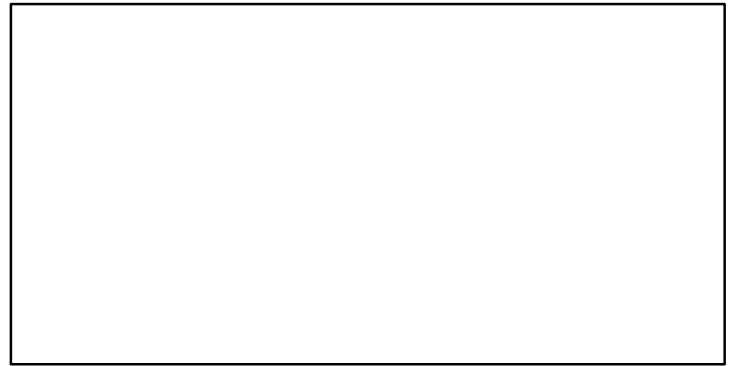
# Japanese flounder Inland Sea of Japan [OFLOUNSETO]

TC-MT, TL\*, RecC\* (1965–2013–JPNIMP2016)

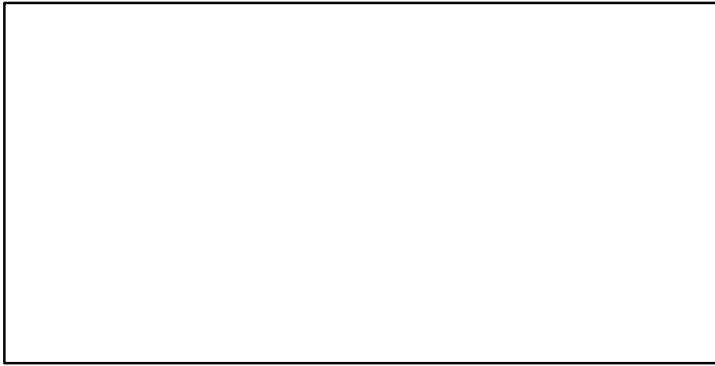
TAC\*, Cpair\*, Cadv\*



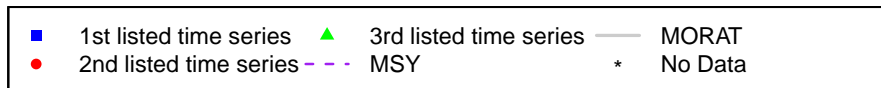
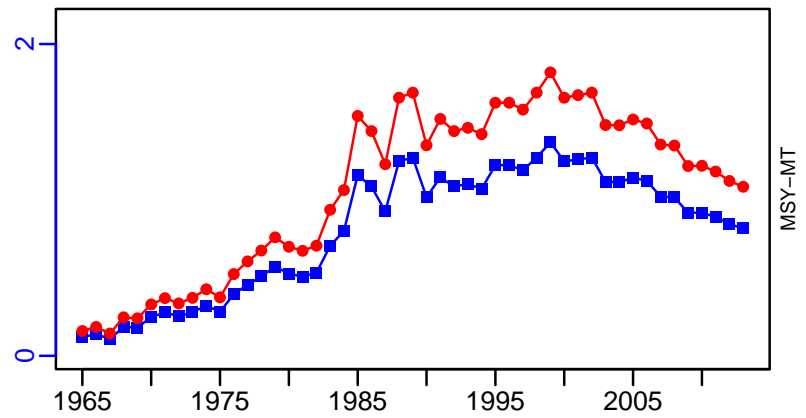
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1965–2013–JPNIMP2016)



## Pacific cod Hokkaido [PCODHOKK]

Metadata	
<b>Scientific Name</b>	Gadus macrocephalus
<b>Current Assess ID</b>	FAFRFJ-PCODHOKK-1985-2013-JPNIMP2016
<b>Area</b>	Hokkaido
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2013	0.313
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	28,900		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

TB\*



SSB\*



TN \*



F\*



ER\*

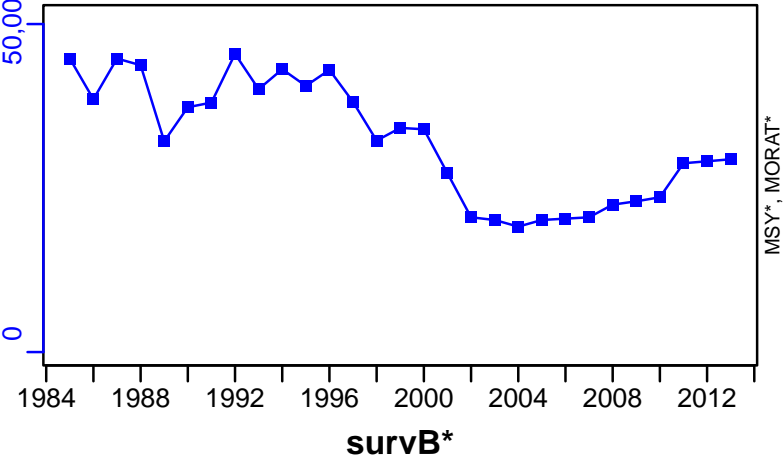


Recruits\*



Pacific cod Hokkaido [PCODHOKK]

TC-MT, TL\*, RecC\* (1985-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Pacific cod North Pacific [PCODNPAC]

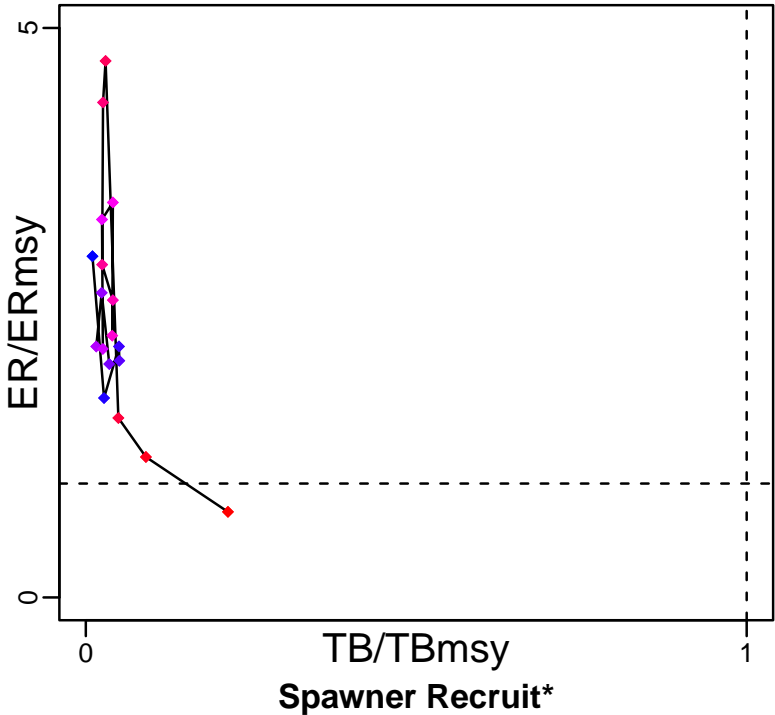
Metadata	
<b>Scientific Name</b>	Gadus macrocephalus
<b>Current Assess ID</b>	FAFRFJ-PCODNPAC-1975-2014-JPNIMP2016
<b>Area</b>	North Pacific
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2014

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2014	1,297,226
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2014	0.145
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-calc-MT	2014	188,098
<b>M</b>	M-1/yr	2014	0.313
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

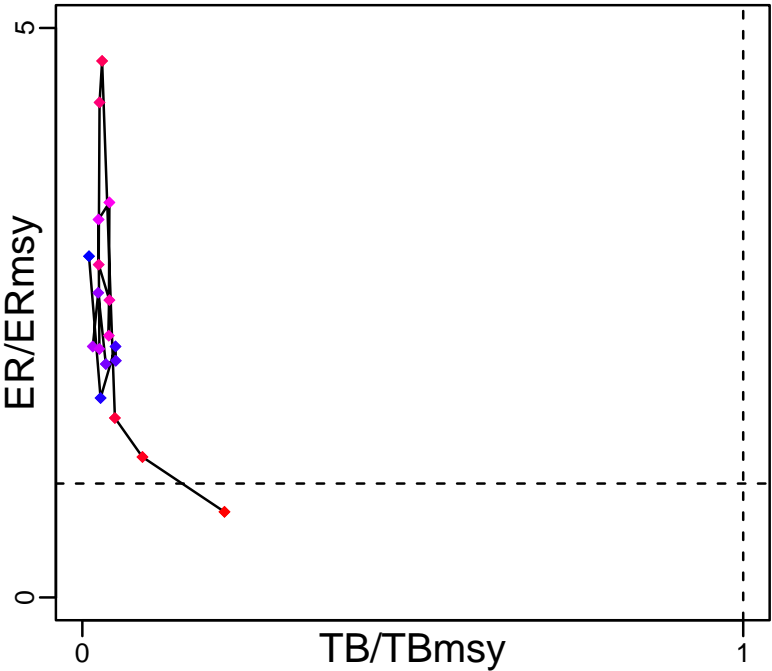
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2014	267,000	-	1
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2014	0.109	-	-
<b>TC</b>	TC-MT	2014	30,400		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2014	0.206		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2014	0.751		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Pacific cod North Pacific [PCODNPAC]

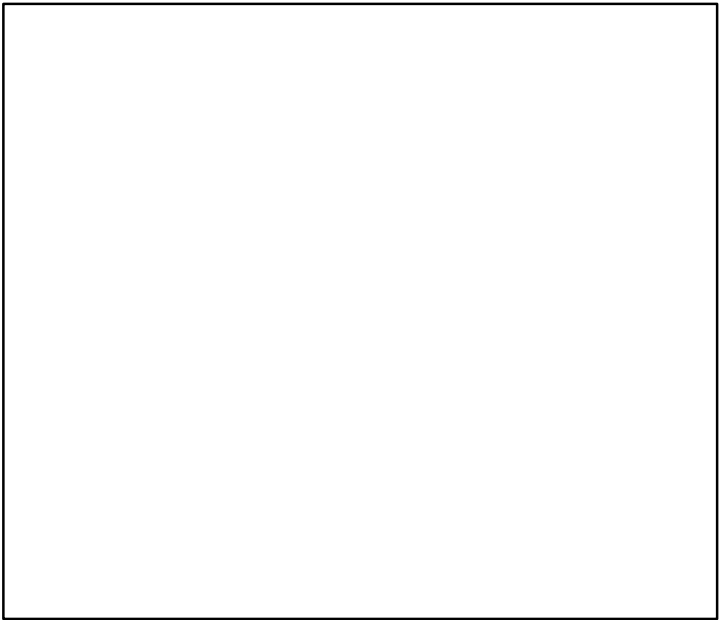
Kobe MSYpref (1975–2014–JPNIMP2016)



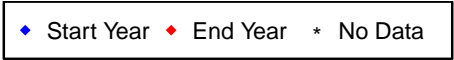
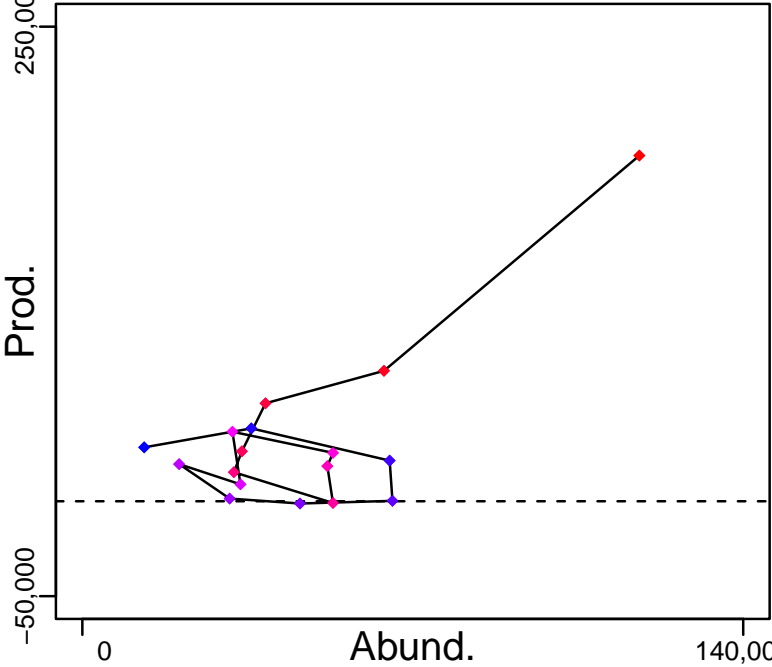
Kobe MGTpref (1975–2014–JPNIMP2016)



Spawner Recruit\*



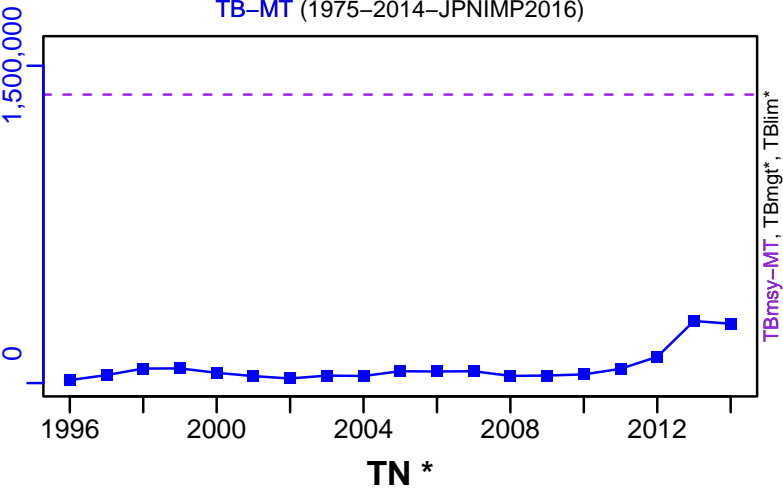
Production (1975–2014–JPNIMP2016)





Pacific cod North Pacific [PCODNPAC]

TB-MT (1975-2014-JPNIMP2016)



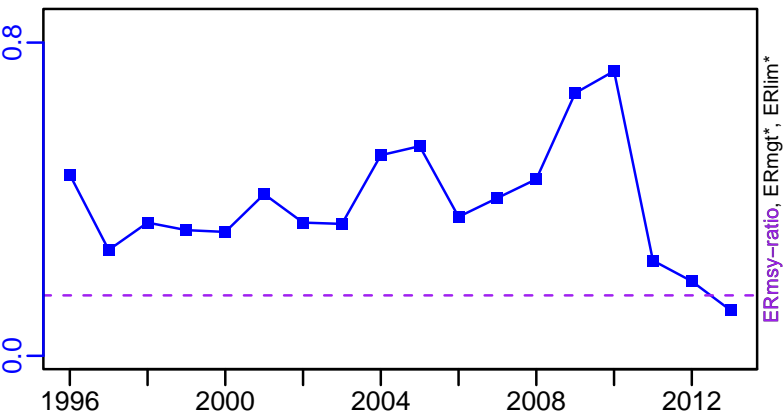
SSB\*



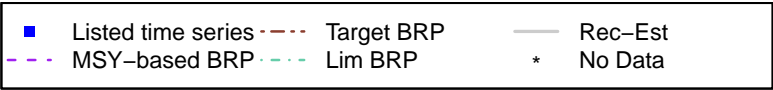
F\*



ER-calc-ratio (1975-2014-JPNIMP2016)

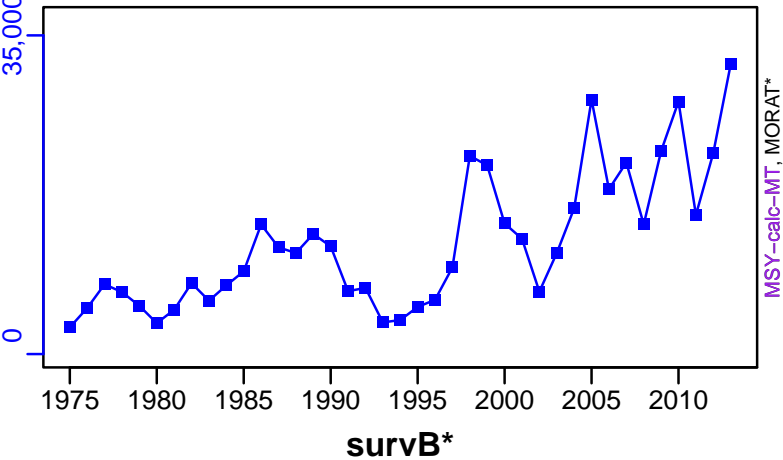


Recruits\*

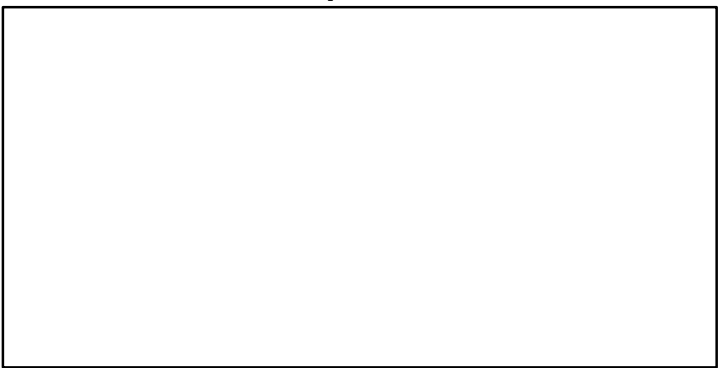


Pacific cod North Pacific [PCODNPAC]

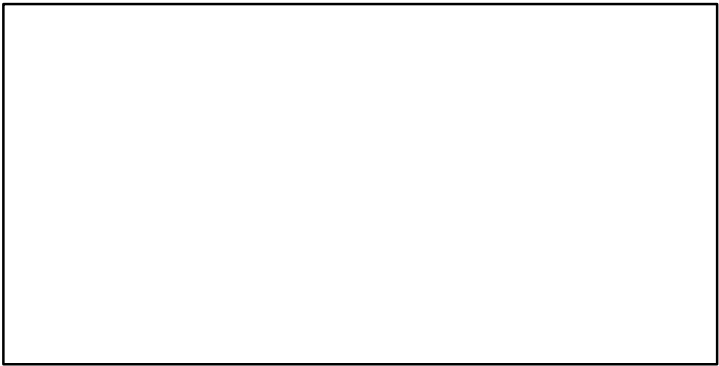
TC-MT, TL\*, RecC\* (1975-2014-JPNIMP2016)



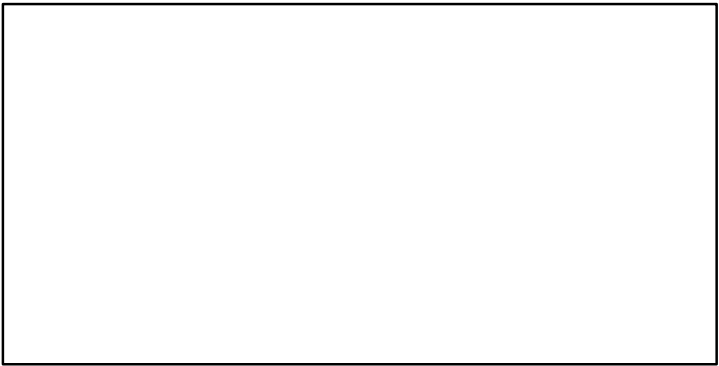
TAC\*, Cpair\*, Cadv\*



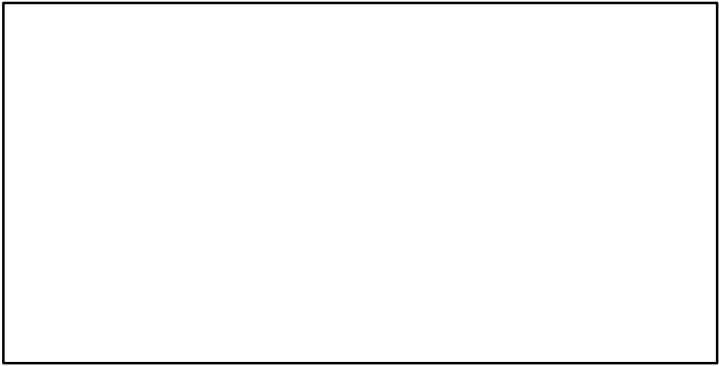
survB\*



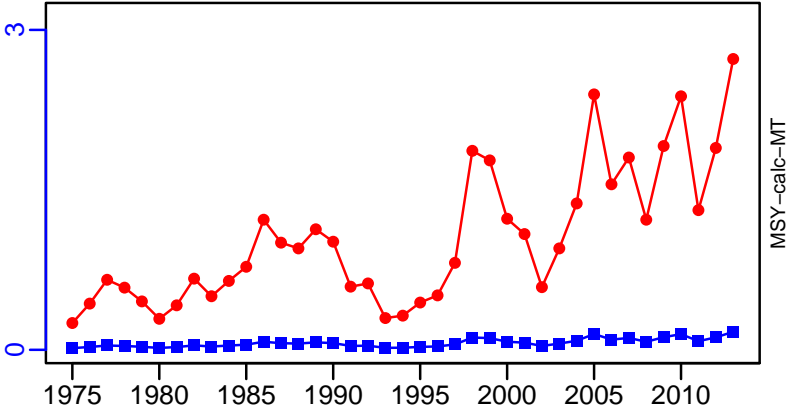
CPUE\*



EFFORT\*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1975-2014-JPNIMP2016)



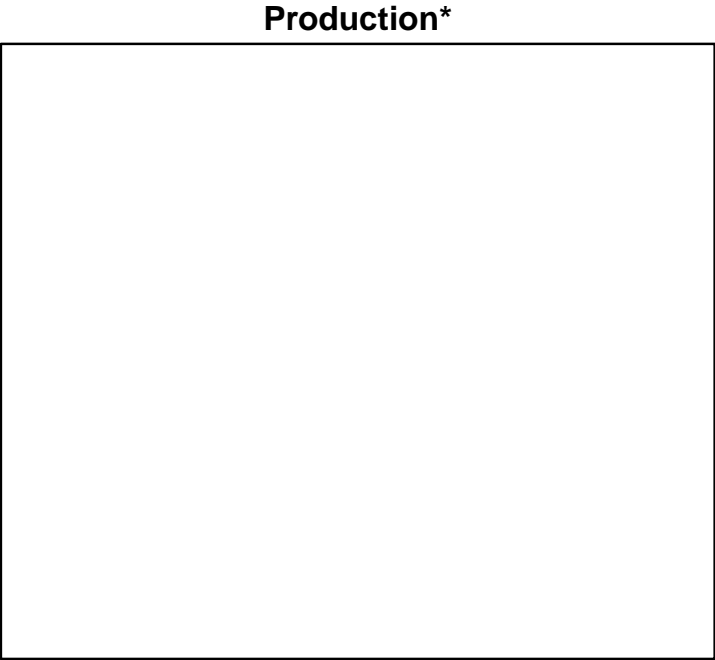
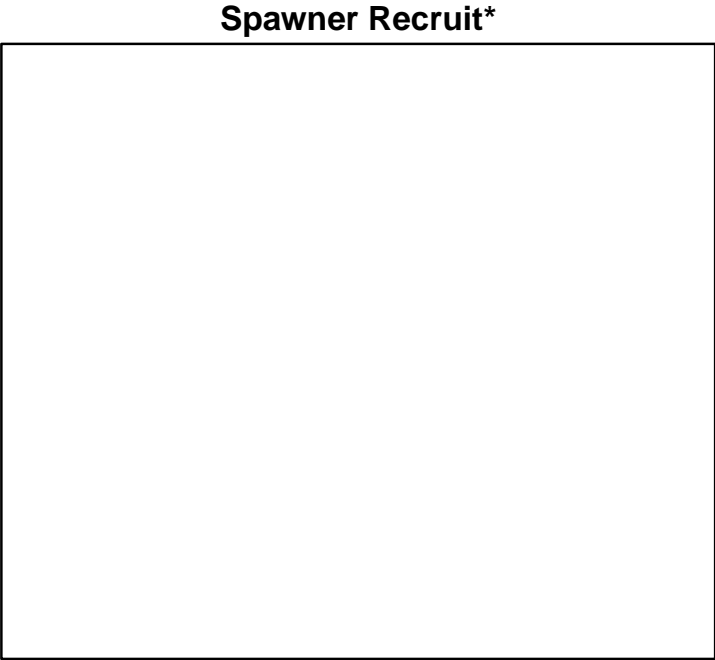
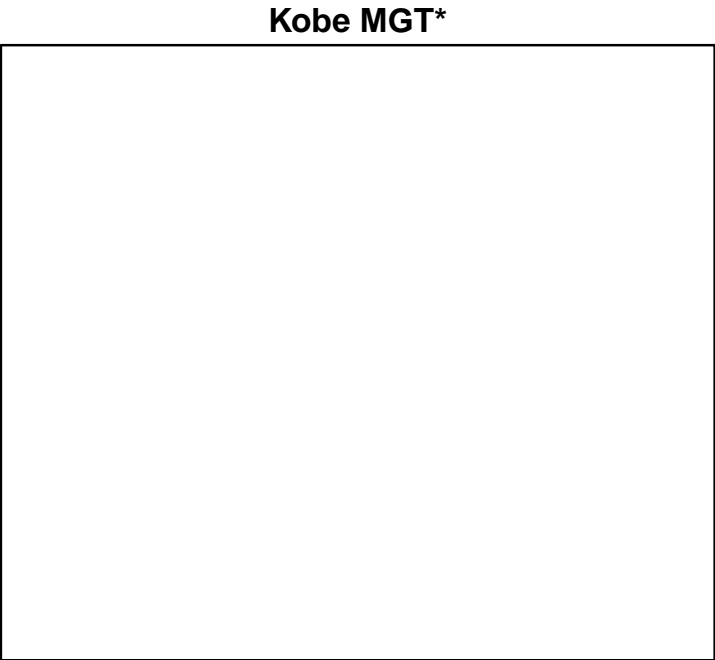
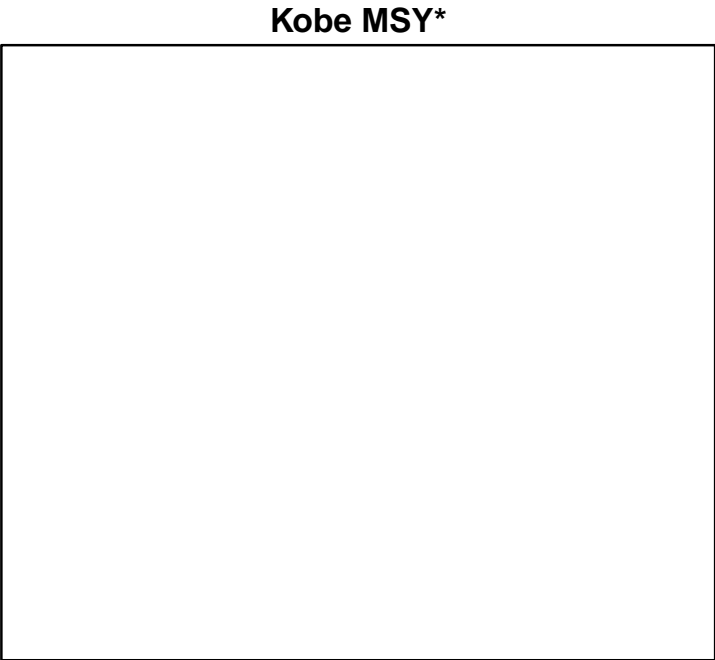
- |                          |                          |           |
|--------------------------|--------------------------|-----------|
| ■ 1st listed time series | ▲ 3rd listed time series | — MORAT   |
| ● 2nd listed time series | - - - MSY                | * No Data |

## Pacific cod Sea of Japan [PCODSOJ]

Metadata	
<b>Scientific Name</b>	Gadus macrocephalus
<b>Current Assess ID</b>	FAFRFJ-PCODSOJ-1964-2013-JPNIMP2016
<b>Area</b>	Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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>	M-1/yr	2013	0.313
<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	2013	3920		
<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>	-	-	-		



◆ Start Year   ◆ End Year   \* No Data

Pacific cod Sea of Japan [PCODSOJ]

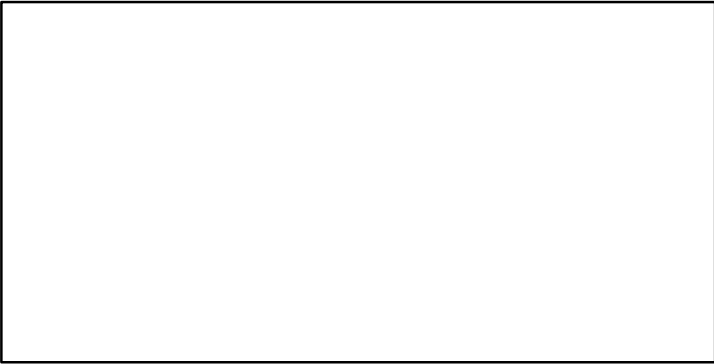
**TB\***



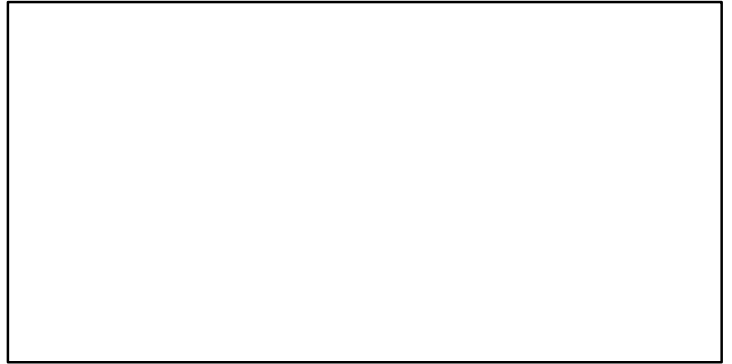
**SSB\***



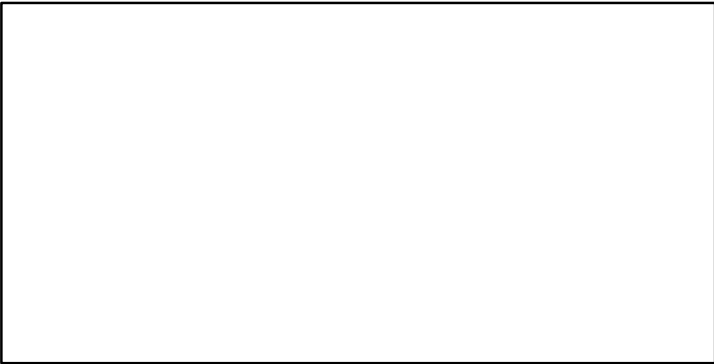
**TN \***



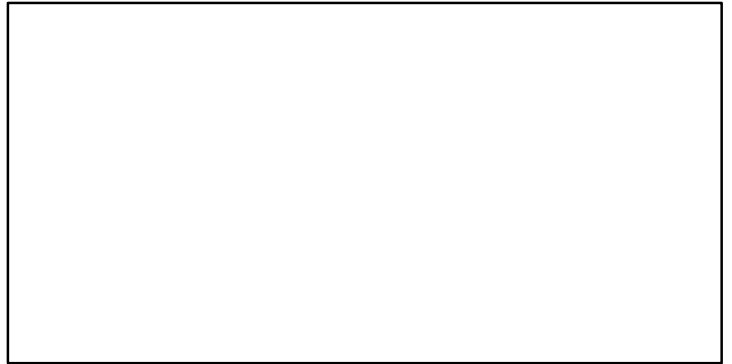
**F\***



**ER\***



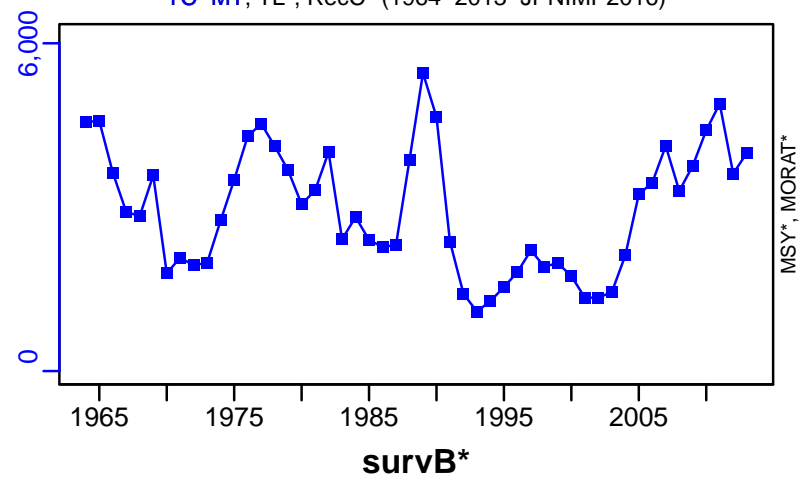
**Recruits\***



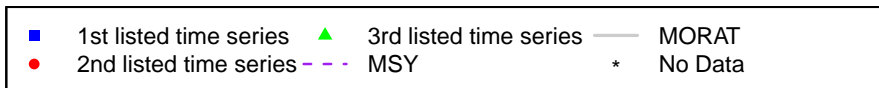
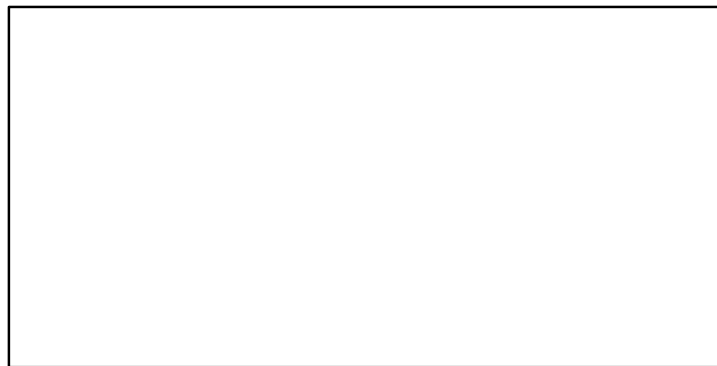
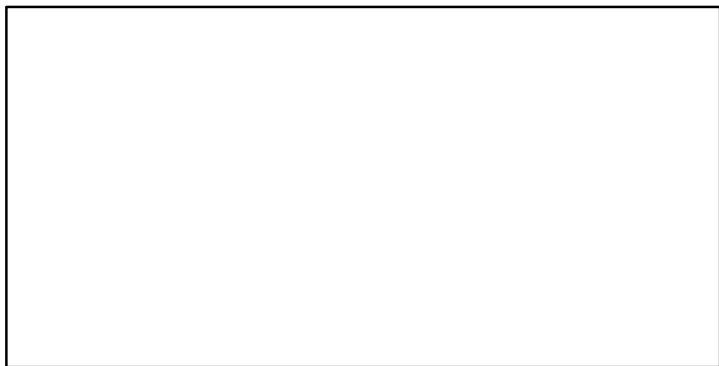
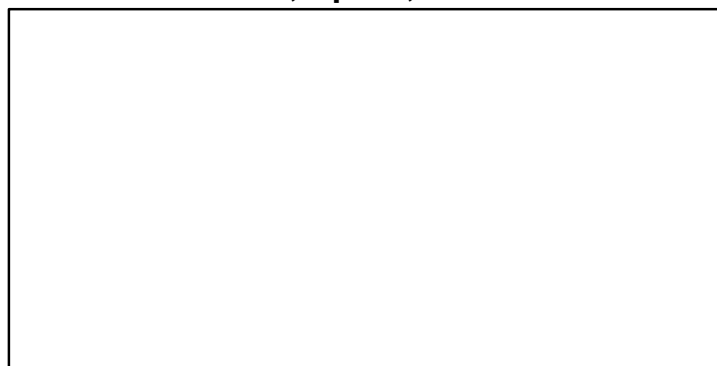
# Pacific cod Sea of Japan [PCODSOJ]

TC-MT, TL\*, RecC\* (1964-2013-JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



MSY\*, MORAT\*



## Pointhead flounder North coast of Hokkaido [PHFLOUNNHOKK]

Metadata	
<b>Scientific Name</b>	Cleisthenes herzensteini
<b>Current Assess ID</b>	FAFRFJ-PHFLOUNNHOKK-1985-2013-JPNIMP2016
<b>Area</b>	North coast of Hokkaido
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2013	0.3
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	2000		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ◆ End Year \* No Data

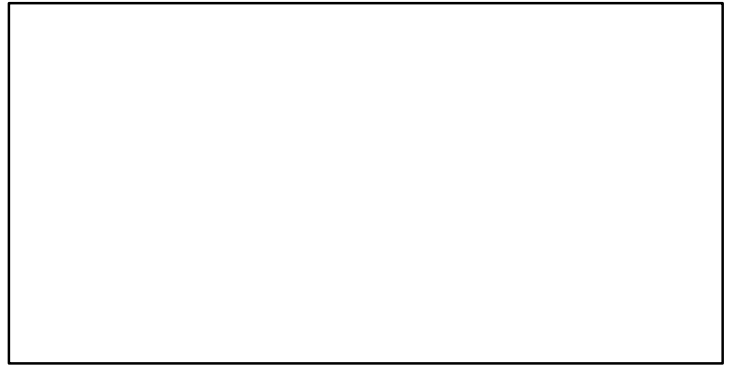


Pointhead flounder North coast of Hokkaido [PHFLOUNNHOKK]

**TB\***



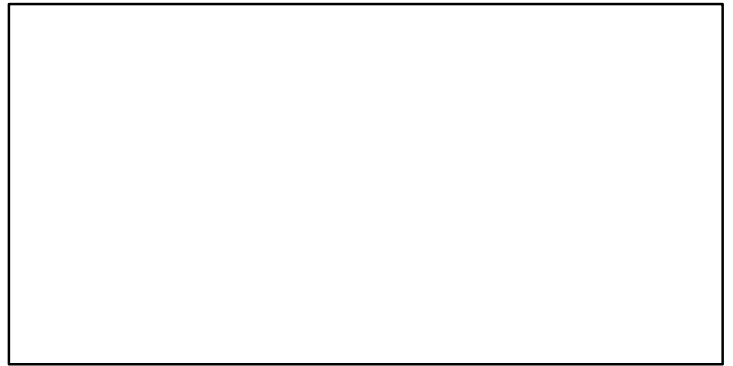
**SSB\***



**TN \***



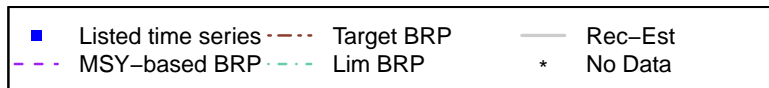
**F\***



**ER\***



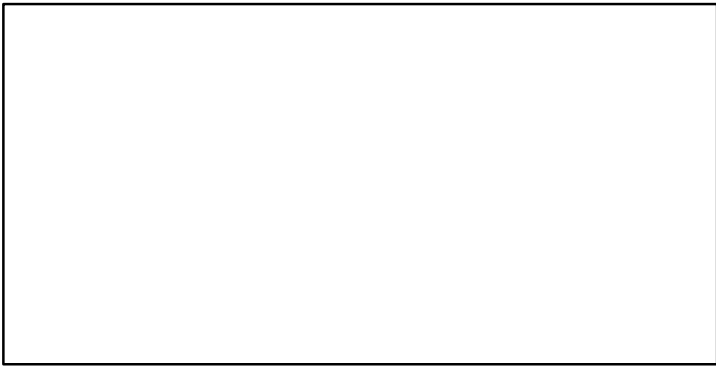
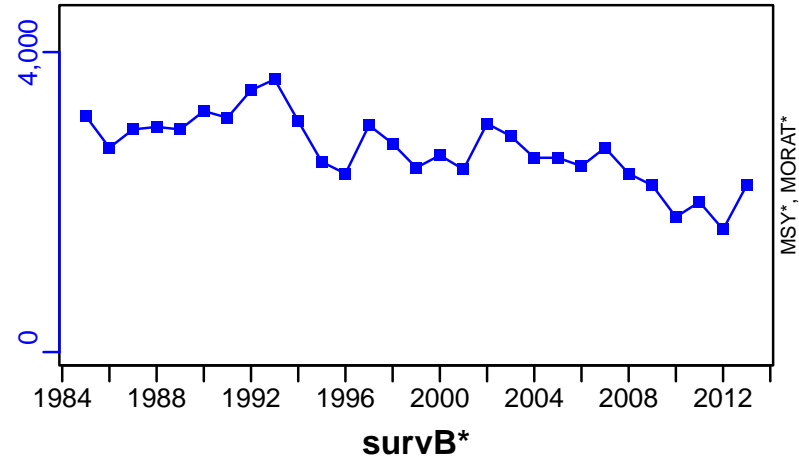
**Recruits\***



# Pointhead flounder North coast of Hokkaido [PHFLOUNNHOKK]

TC-MT, TL\*, RecC\* (1985-2013-JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



## Pointhead flounder Sea of Japan [PHFLOUNSOJ]

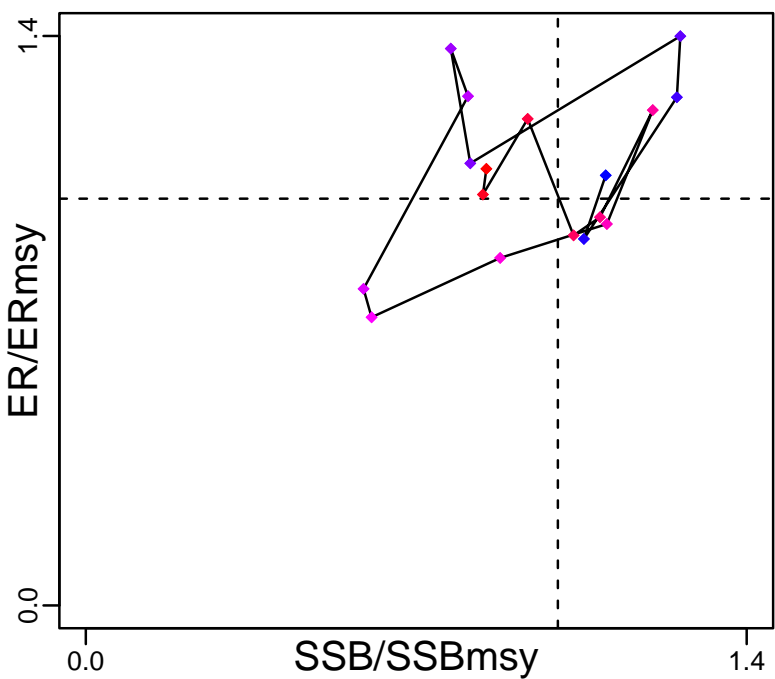
Metadata	
<b>Scientific Name</b>	Cleisthenes herzensteini
<b>Current Assess ID</b>	FAFRFJ-PHFLOUNSOJ-1966-2013-JPNIMP2016
<b>Area</b>	Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	9285
<b>SSBmsy</b>	SSBmsy-MT	2013	4113
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.319
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	2962
<b>M</b>	M-1/yr	2013	0.3
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

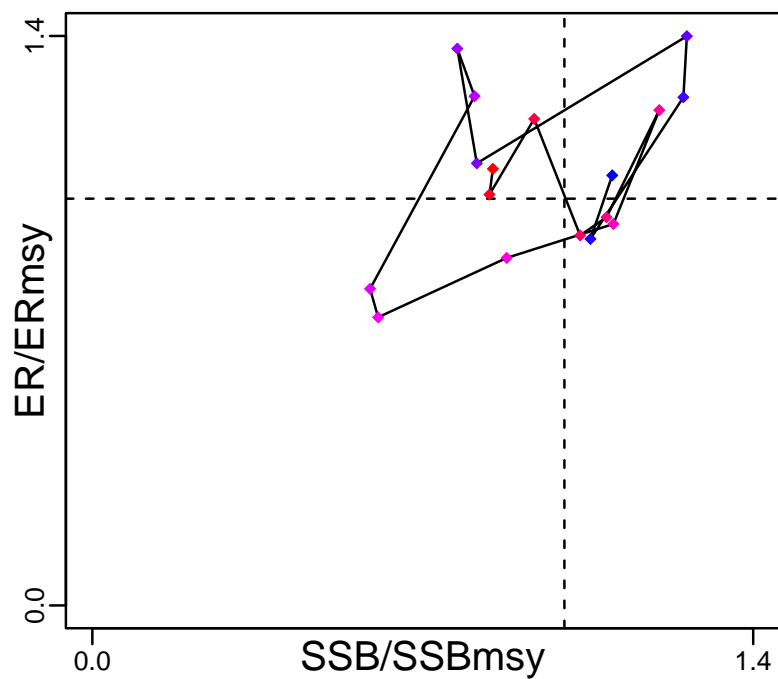
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	8850	-	1
<b>SSB</b>	SSB-MT	2013	3490	Both	3
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	$4.1 \times 10^7$	-	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.342	-	-
<b>TC</b>	TC-MT	2013	3030		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.953		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.849		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	1.073		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Pointhead flounder Sea of Japan [PHFLOUNSOJ]

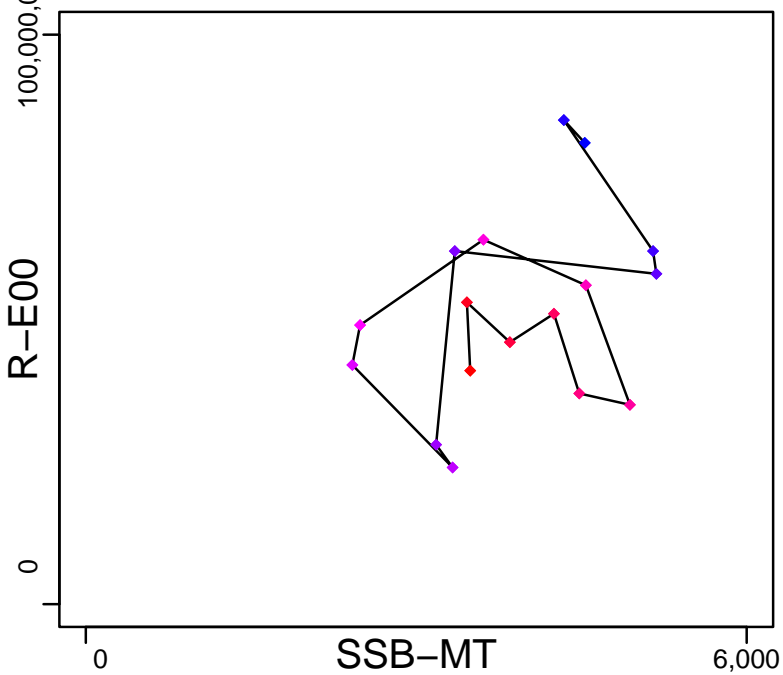
Kobe MSYpref (1966–2013–JPNIMP2016)



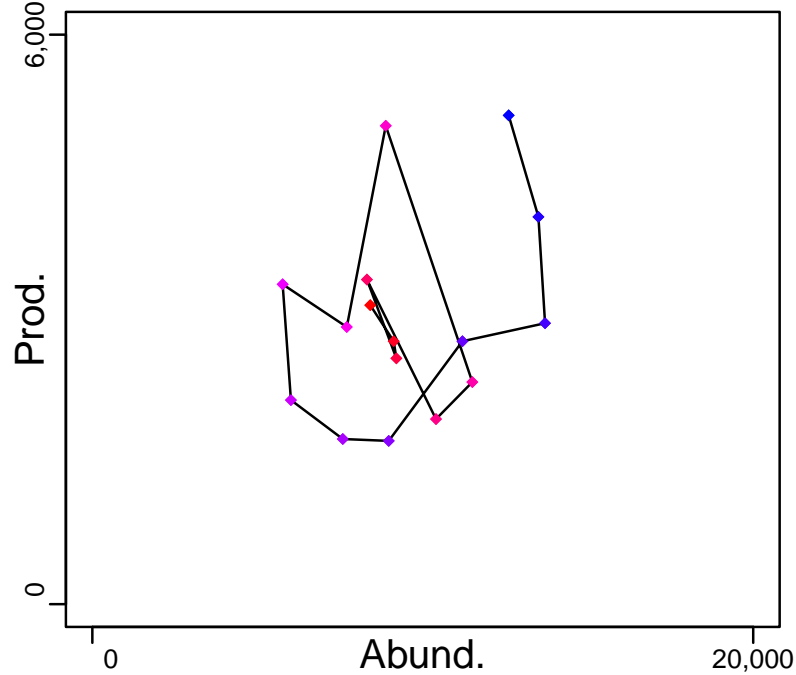
Kobe MGTpref (1966–2013–JPNIMP2016)



Spawner Recruit (1966–2013–JPNIMP2016)



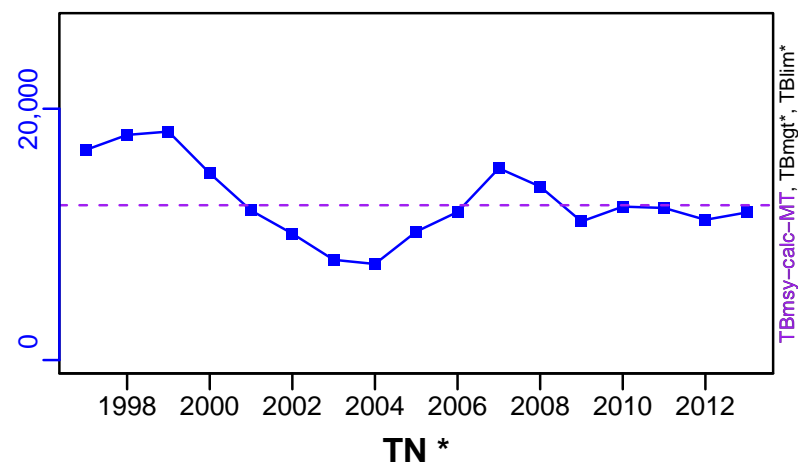
Production (1966–2013–JPNIMP2016)



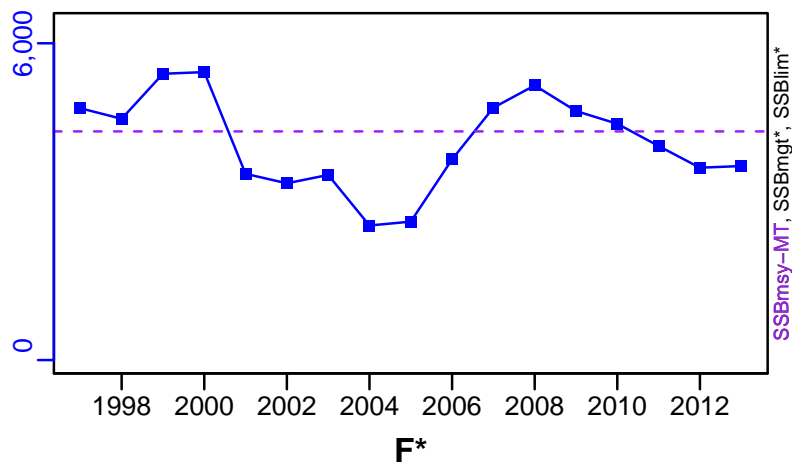
◆ Start Year ◆ End Year \* No Data

# Pointhead flounder Sea of Japan [PHFLOUNSOJ]

TB-MT (1966–2013–JPNIMP2016)



SSB-MT (1966–2013–JPNIMP2016)



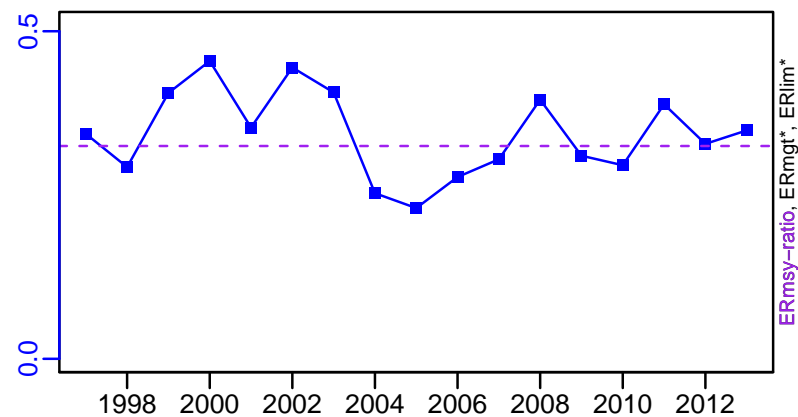
TN \*



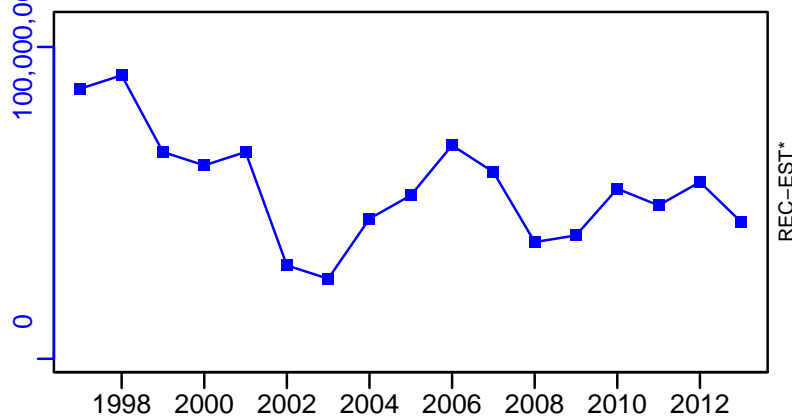
F\*



ER-calc-ratio (1966–2013–JPNIMP2016)

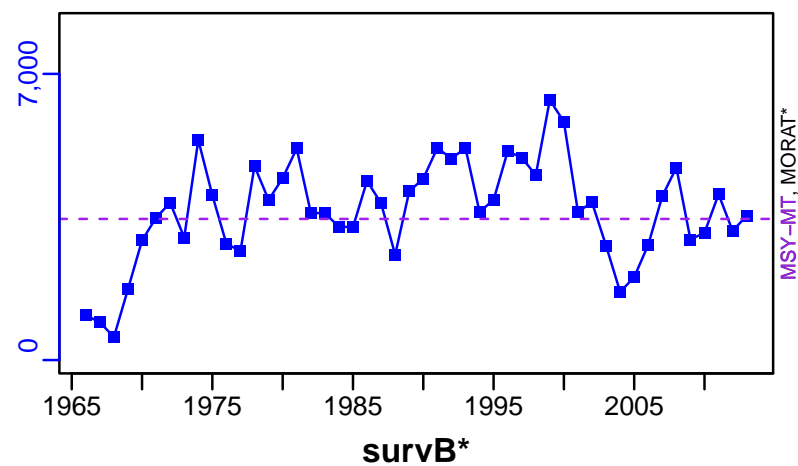


R-E00 (1966–2013–JPNIMP2016)



# Pointhead flounder Sea of Japan [PHFLOUNSOJ]

TC-MT, TL\*, RecC\* (1966–2013–JPNIMP2016)



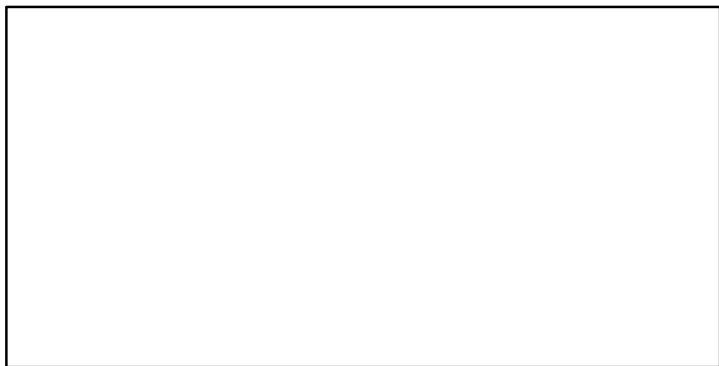
TAC\*, Cpair\*, Cadv\*



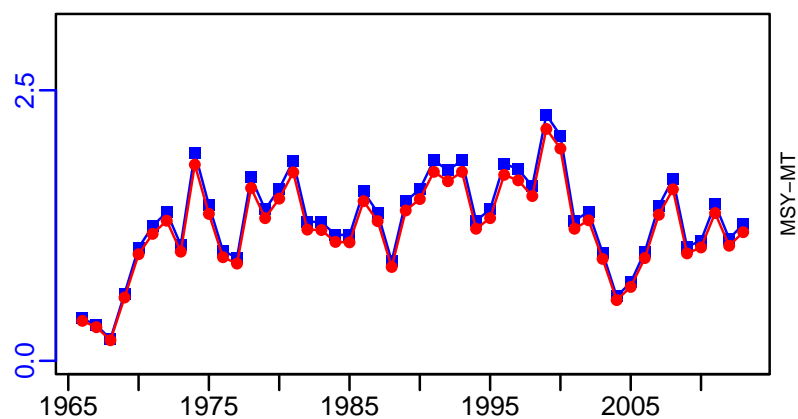
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1966–2013–JPNIMP2016)



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

## Japanese sardine Pacific Coast of Japan [PILCHPJPN]

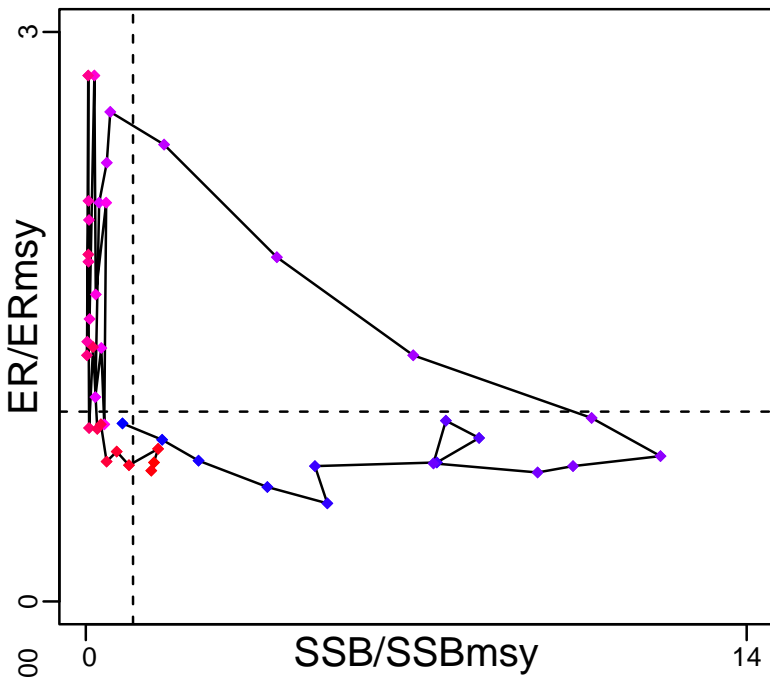
Metadata	
<b>Scientific Name</b>	Sardinops melanostictus
<b>Current Assess ID</b>	FAFRFJ-PILCHPJPN-1975-2019-KUROTA
<b>Area</b>	Pacific Coast of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013,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

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

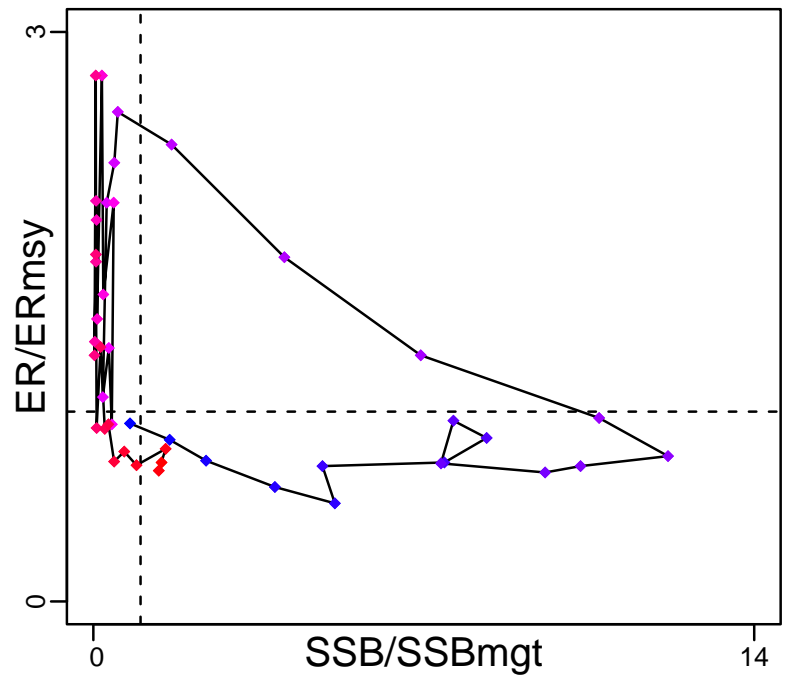
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	3,415,000	-	0
<b>SSB</b>	SSB-MT	2019	1,585,000	-	1
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	$3.91 \times 10^{10}$	-	0
<b>F</b>	F-1/yr	2009	0.41	Both	0 to 4
<b>ER</b>	ER-ratio	2019	0.153	-	-
<b>TC</b>	TC-MT	2019	521,000		
<b>TL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

# Japanese sardine Pacific Coast of Japan [PILCHPJPN]

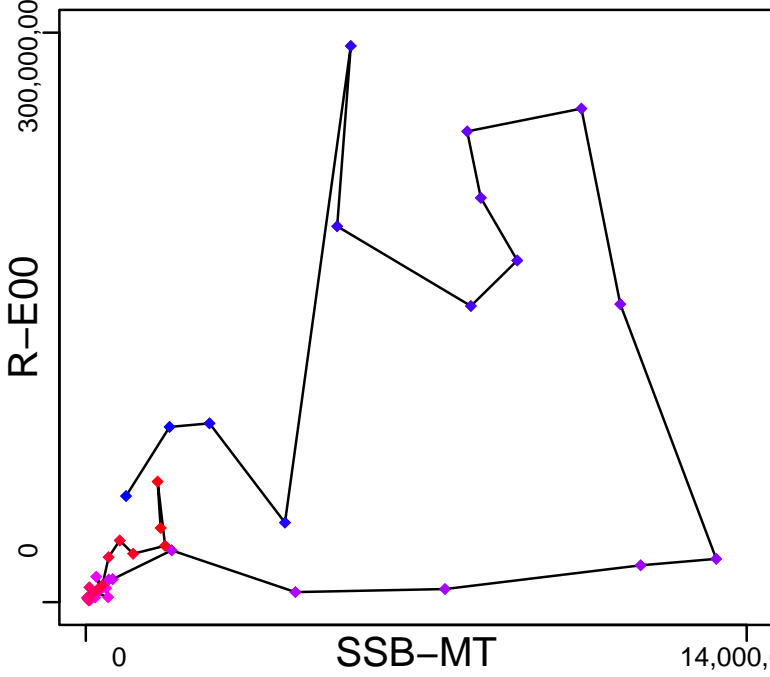
Kobe MSYpref (1975–2019–KUROTA)



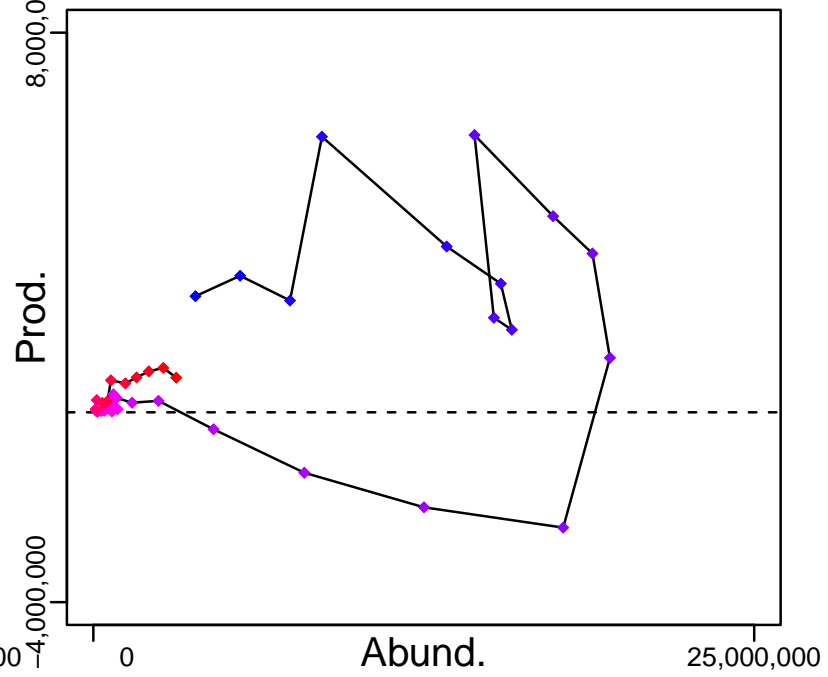
Kobe MGTpref (1975–2019–KUROTA)



Spawner Recruit (1975–2019–KUROTA)



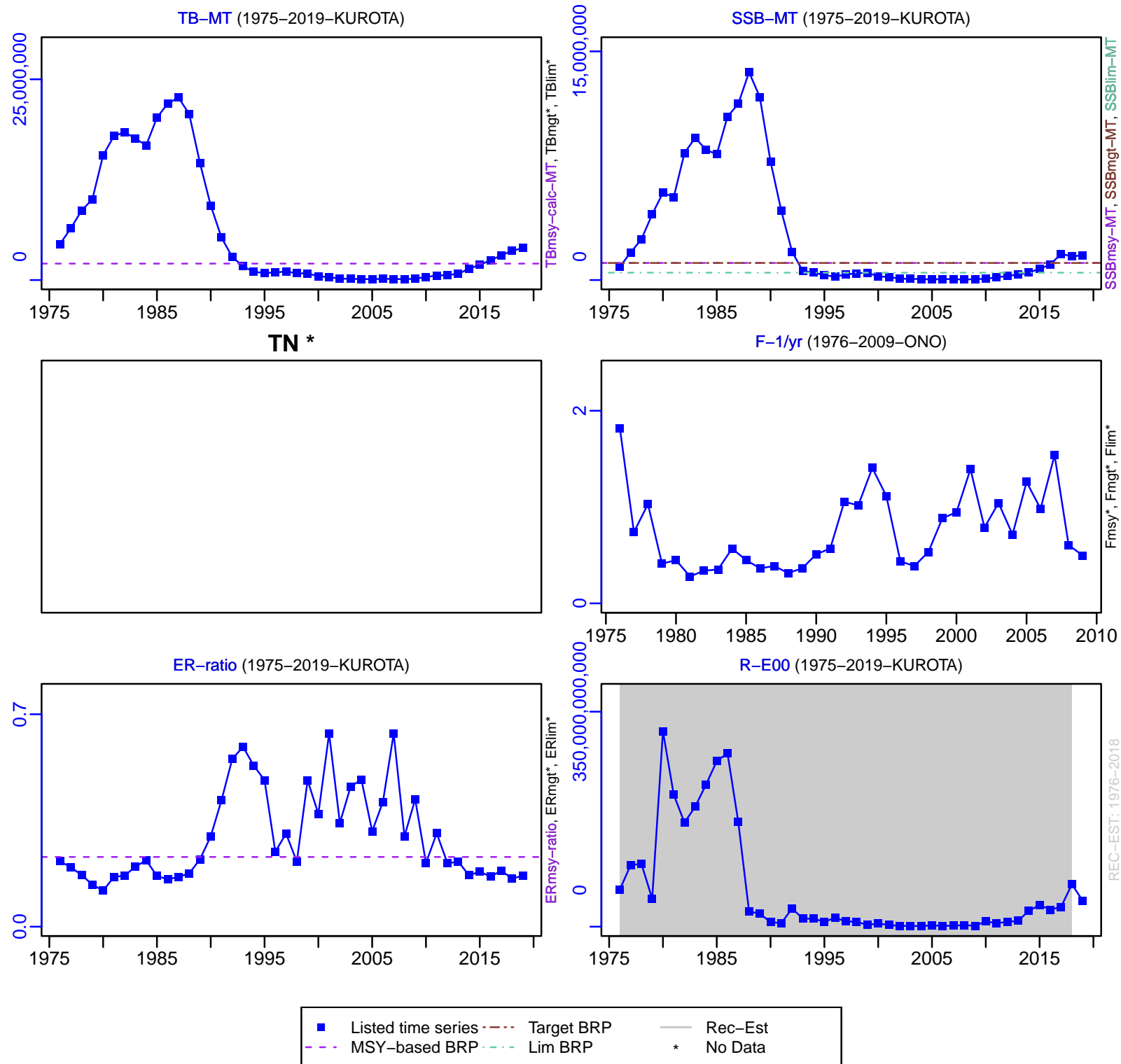
Production (1975–2019–KUROTA)



◆ Start Year ◆ End Year \* No Data



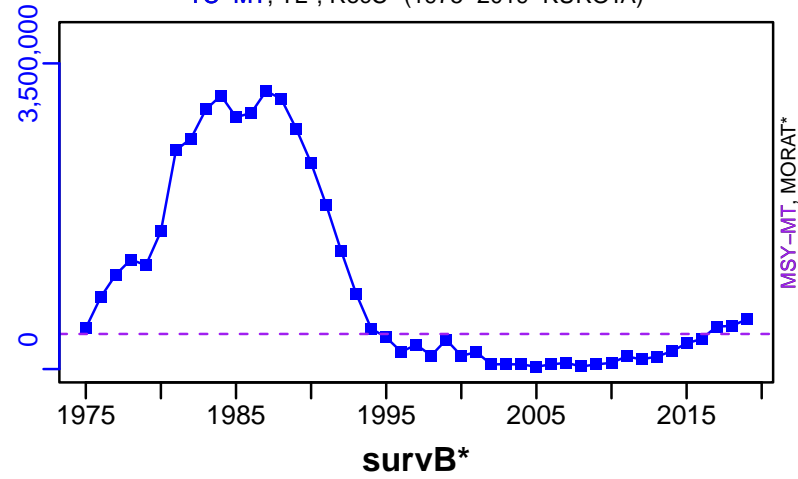
# Japanese sardine Pacific Coast of Japan [PILCHPJPN]



# Japanese sardine Pacific Coast of Japan [PILCHPJPN]

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

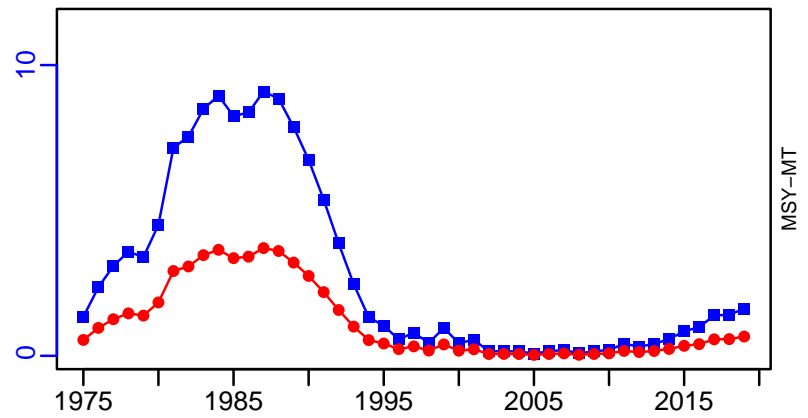
TAC\*, Cpair\*, Cadv\*



EFFORT\*



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



## Japanese sardine Tsushima Strait [PILCHTSST]

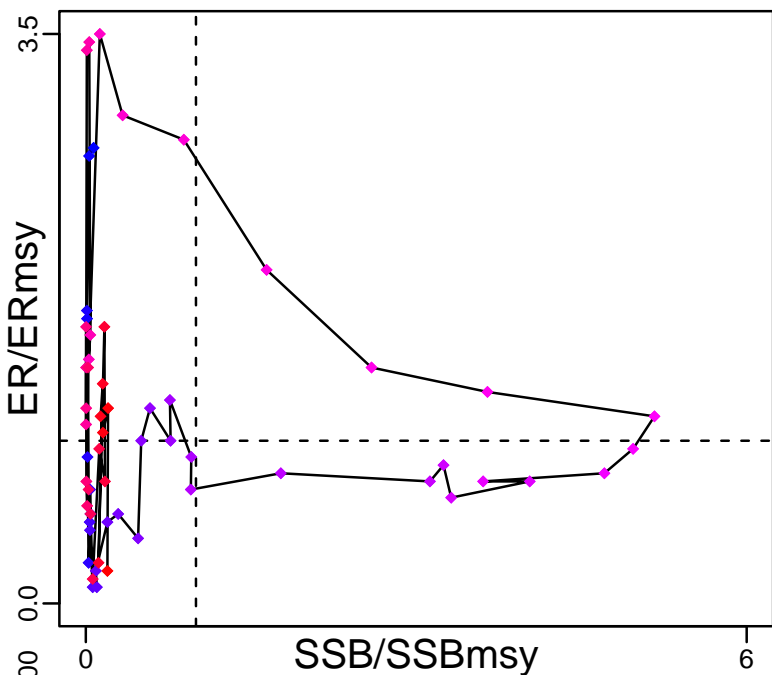
Metadata	
<b>Scientific Name</b>	Sardinops melanostictus
<b>Current Assess ID</b>	FAFRFJ-PILCHTSST-1960-2019-KUROTA
<b>Area</b>	Tsushima Strait
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2010, 2013,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

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

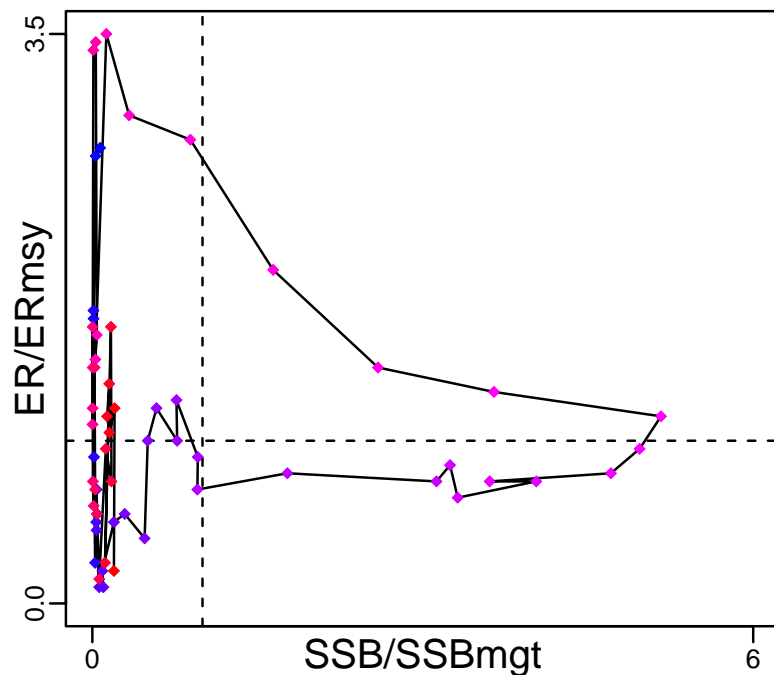
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	329,000	-	0
<b>SSB</b>	SSB-MT	2019	194,000	-	1
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	$5.374 \times 10^9$	-	0.00E+00
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2019	0.04	-	-
<b>TC</b>	TC-MT	2019	14,000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy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

# Japanese sardine Tsushima Strait [PILCHTSST]

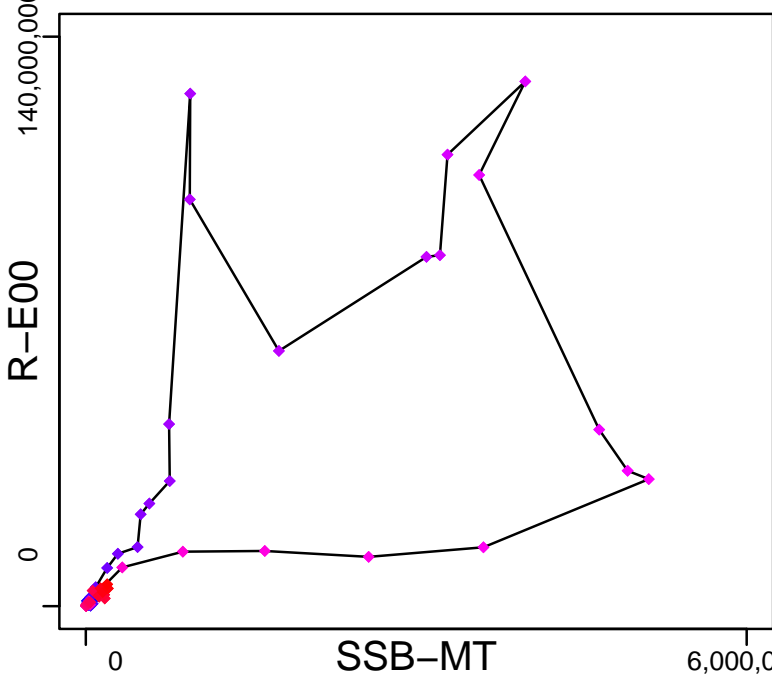
Kobe MSYpref (1960–2019–KUROTA)



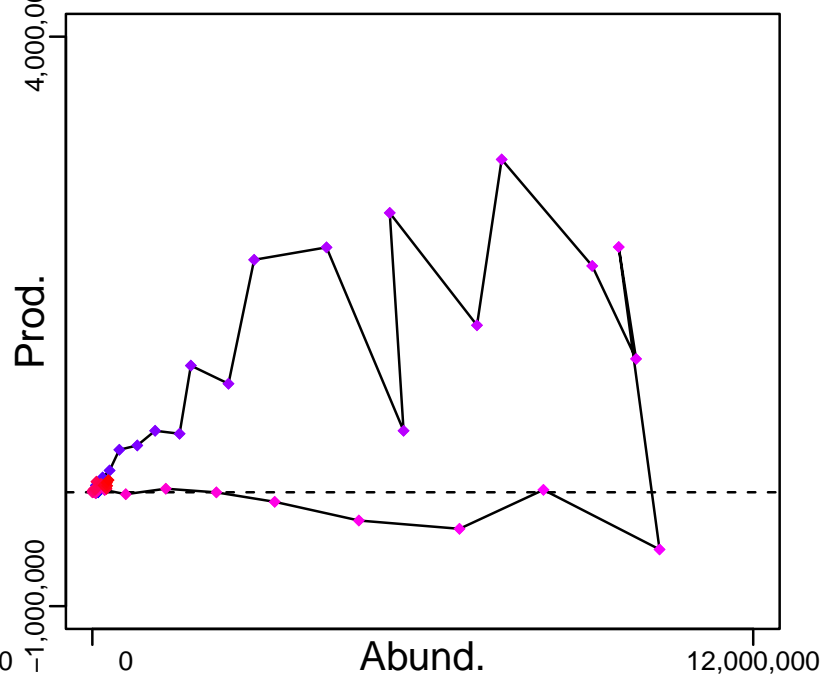
Kobe MGTpref (1960–2019–KUROTA)



Spawner Recruit (1960–2019–KUROTA)

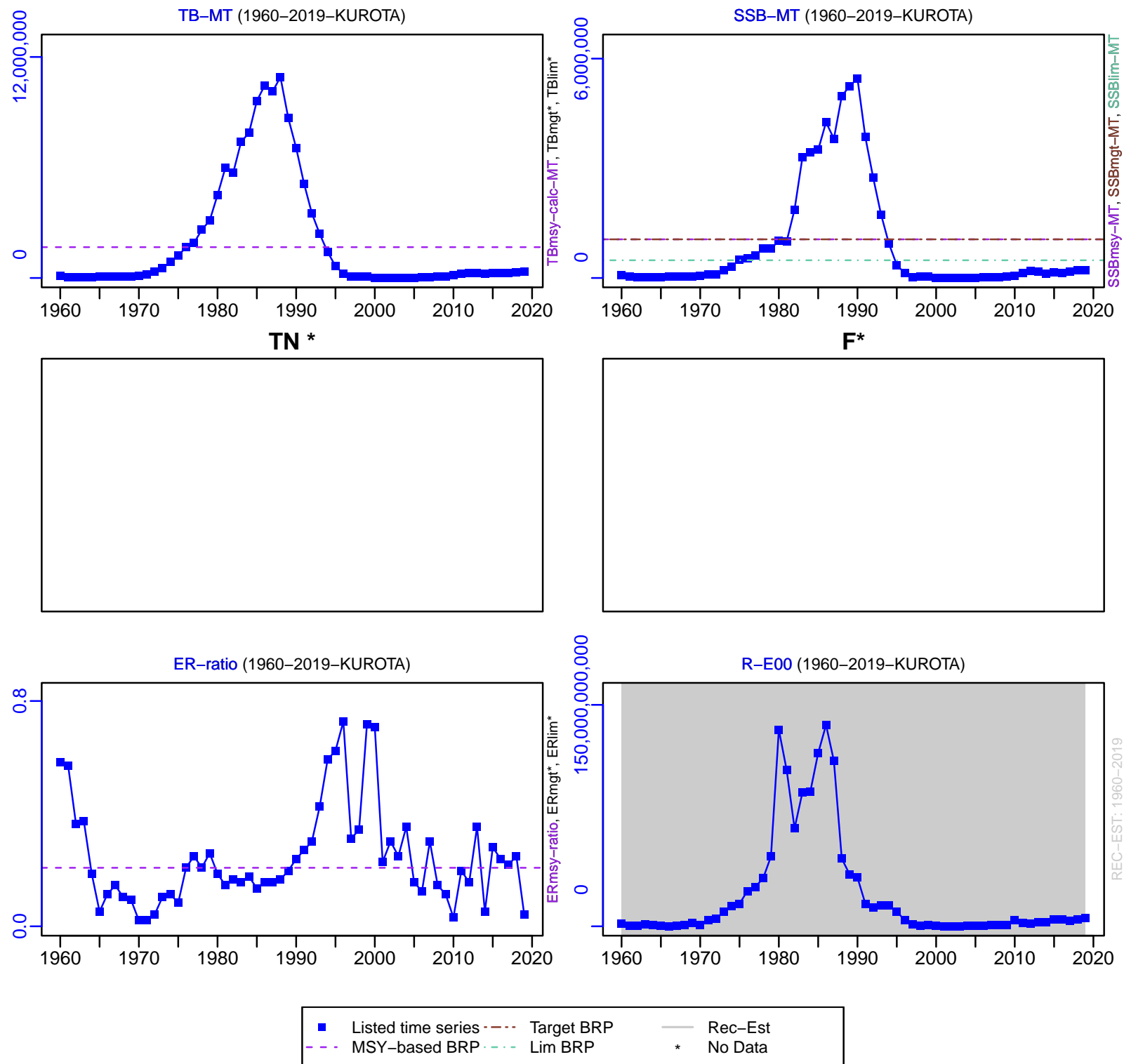


Production (1960–2019–KUROTA)



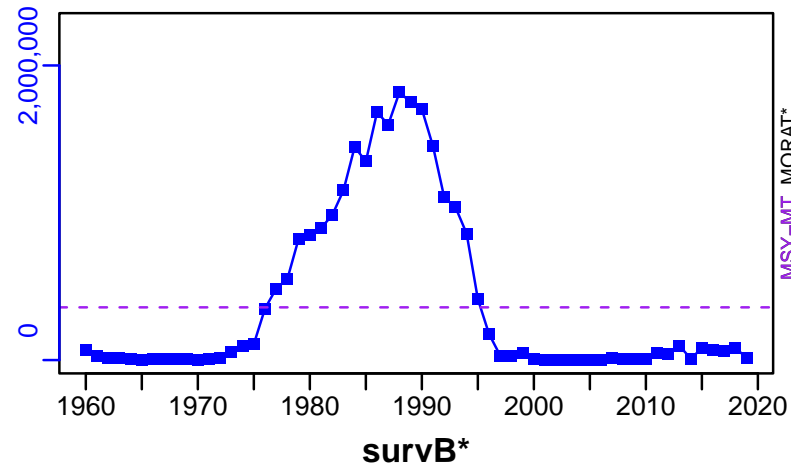
◆ Start Year ◆ End Year \* No Data

# Japanese sardine Tsushima Strait [PILCHTSST]



# Japanese sardine Tsushima Strait [PILCHTSST]

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



TAC\*, Cpair\*, Cadv\*



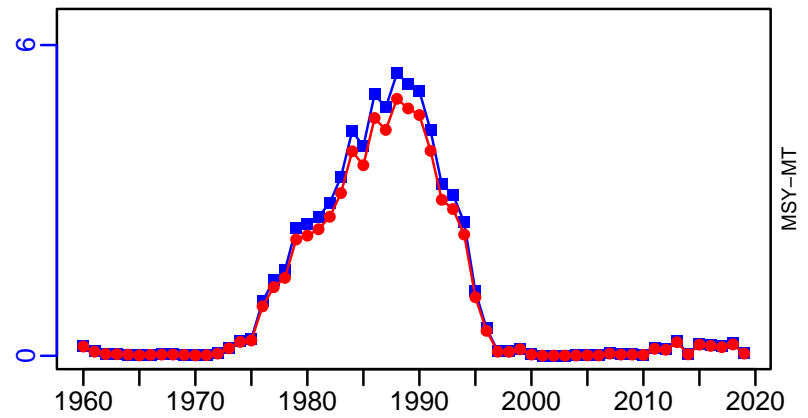
CPUE\*



EFFORT\*



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



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

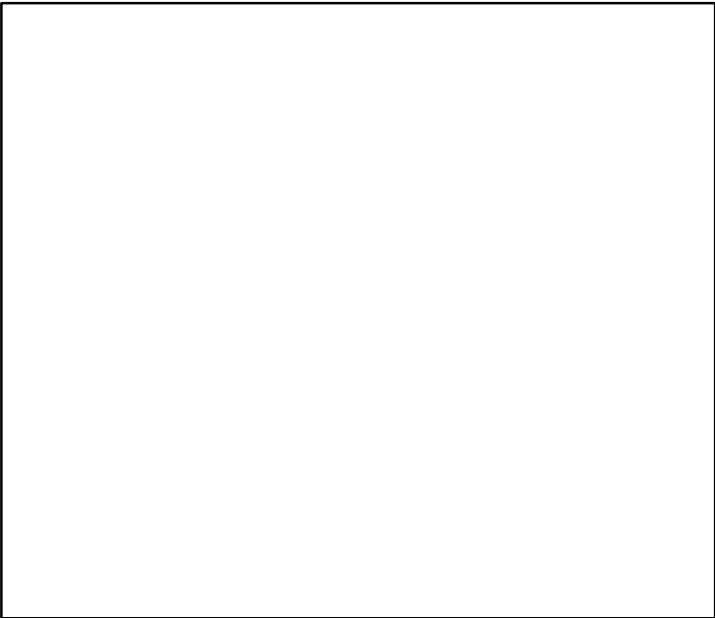
## Pacific sandlance Ise and Mikawa Bay [PSANDLIMKB]

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

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

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

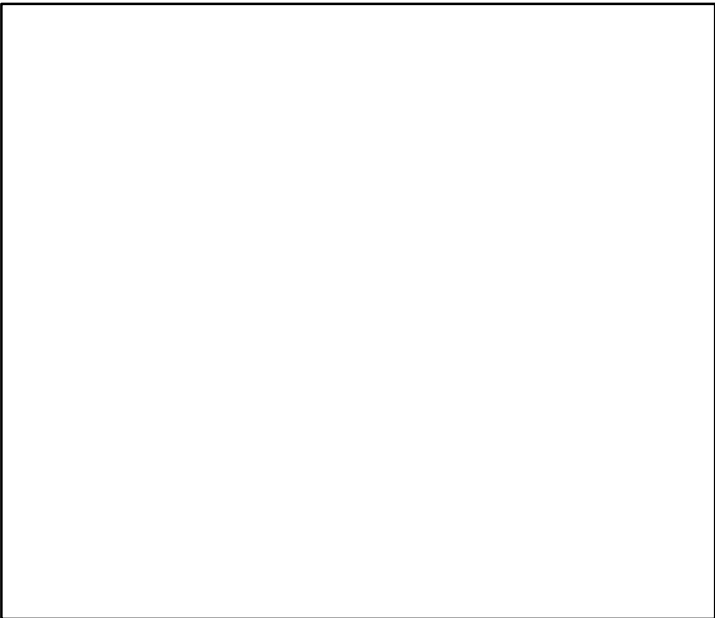
Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

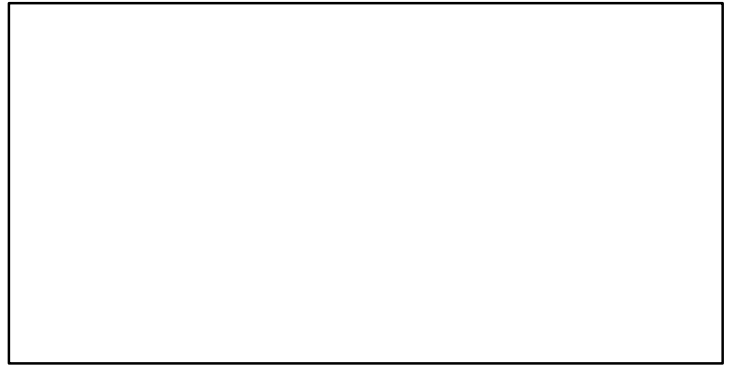


Pacific sandlance Ise and Mikawa Bay [PSANDLIMKB]

TB\*



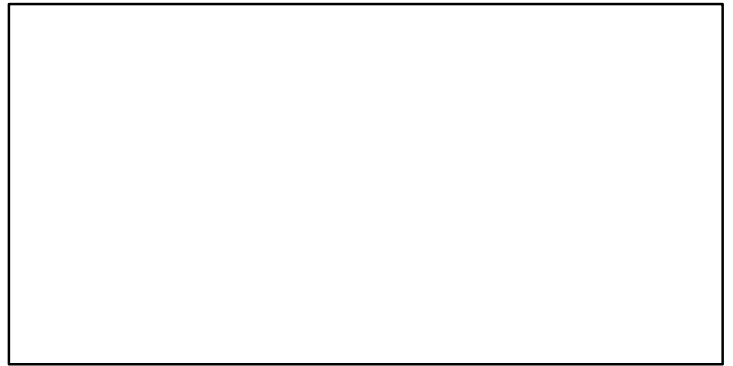
SSB\*



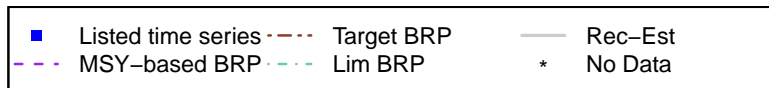
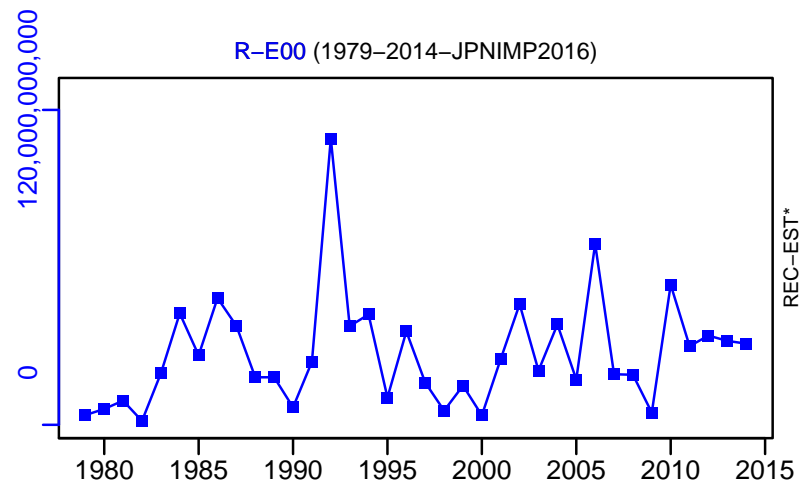
TN \*



F\*



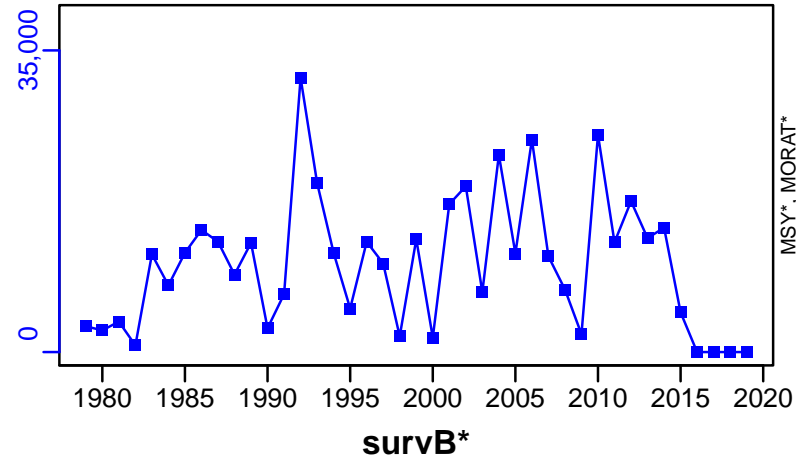
ER\*



# Pacific sand lance Ise and Mikawa Bay [PSANDLIMKB]

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

TAC\*, Cpair\*, Cadv\*



CPUE\*

EFFORT\*

CdivMSY\*

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

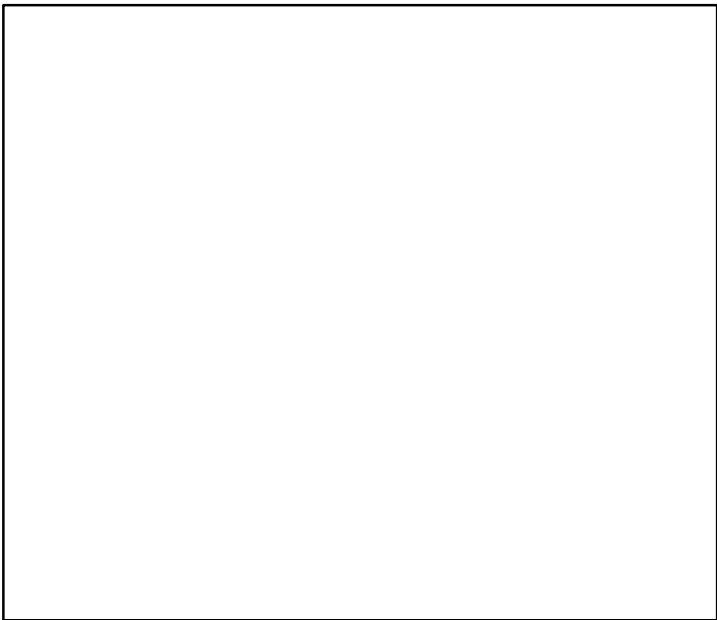
## Pacific sand lance Souya Strait [PSLANCESYS]

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

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

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

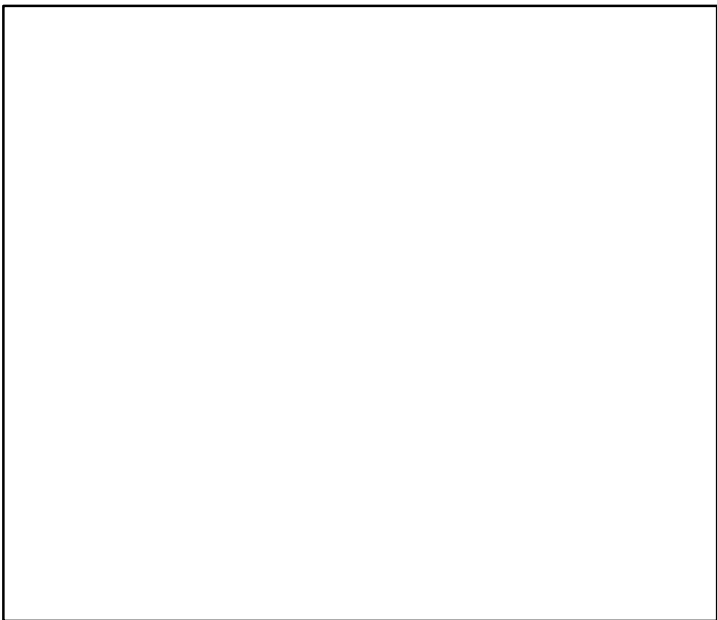
Kobe MSY\*



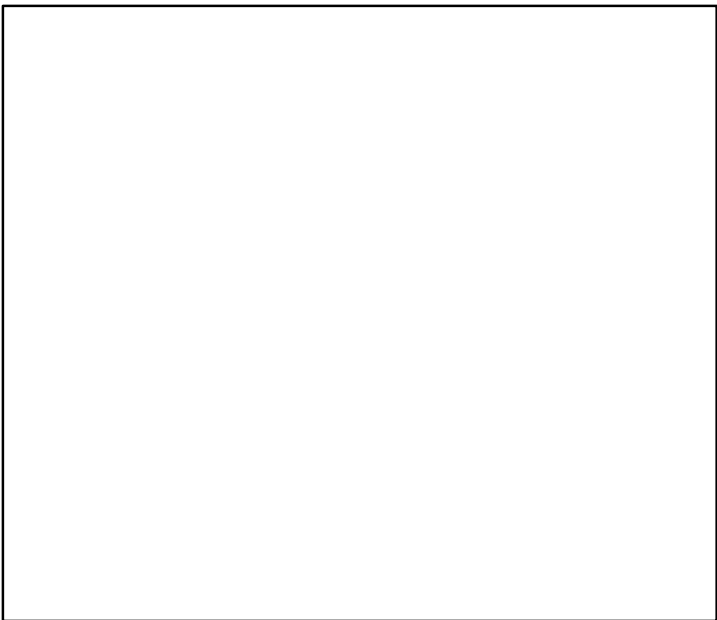
Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

Pacific sand lance Souya Strait [PSLANCESYS]

TB\*



SSB\*



TN \*



F\*



ER\*

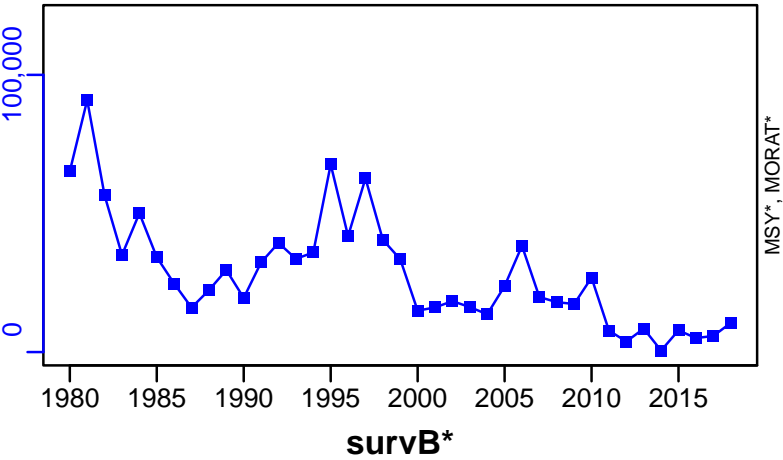


Recruits\*



Pacific sand lance Souya Strait [PSLANCESYS]

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



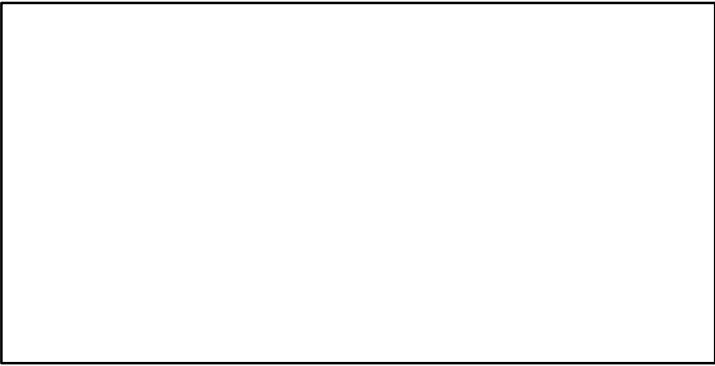
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



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

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

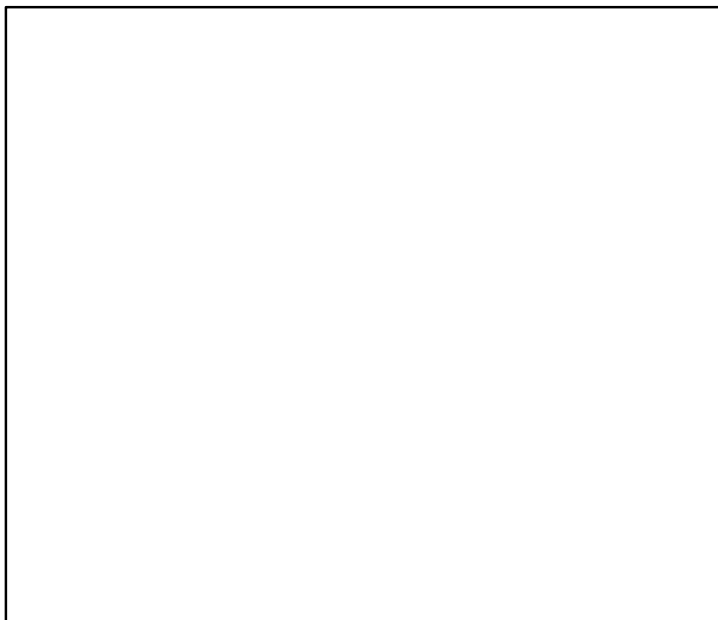
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

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

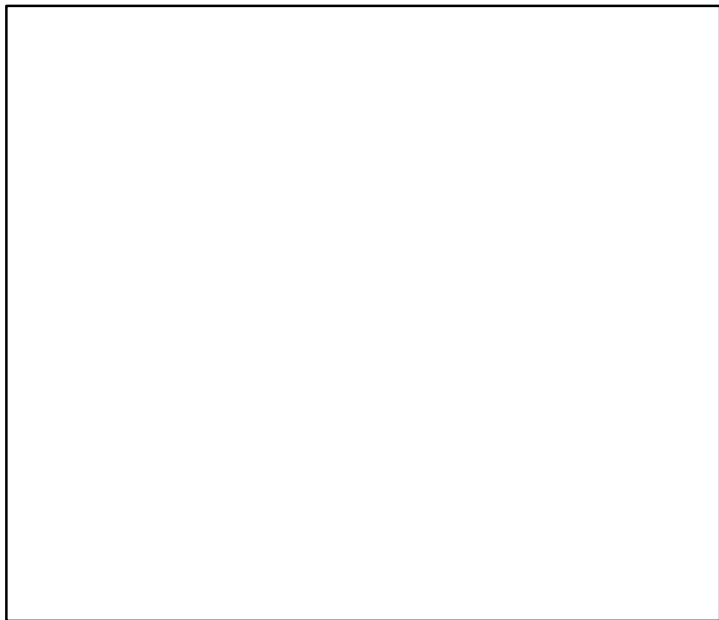
**Kobe MSY\***



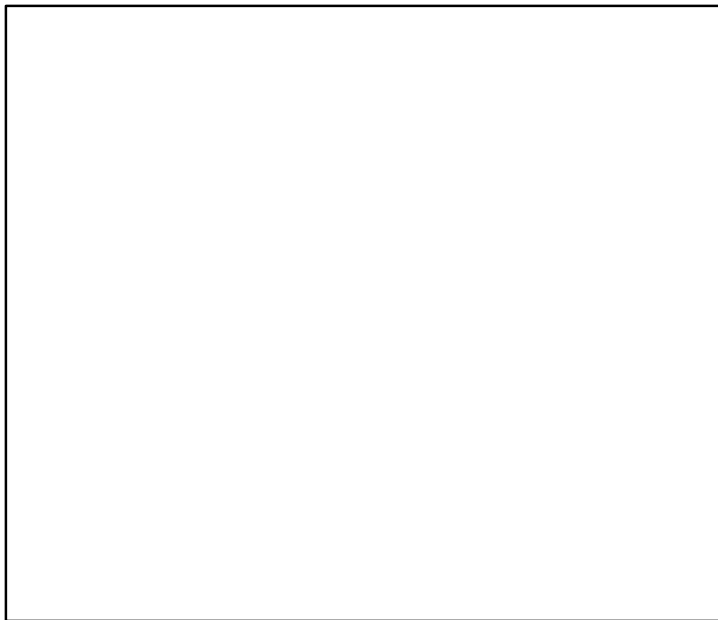
**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ◆ End Year \* No Data



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

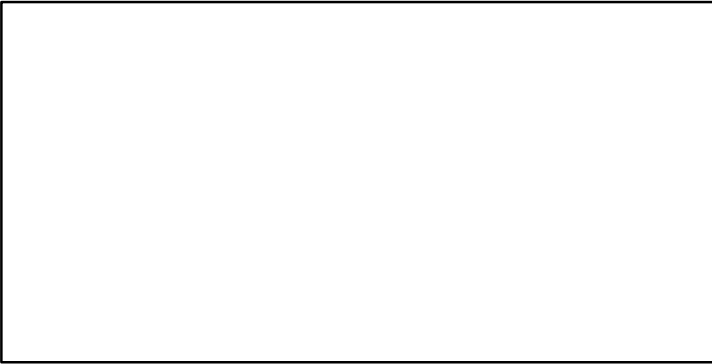
**TB\***



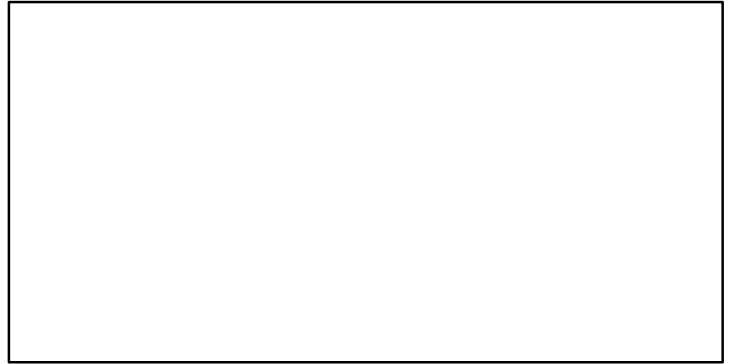
**SSB\***



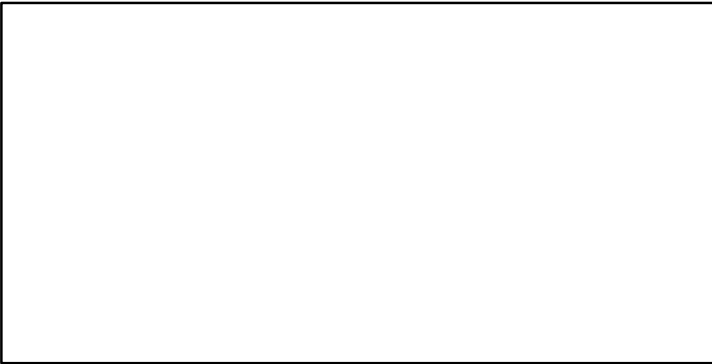
**TN \***



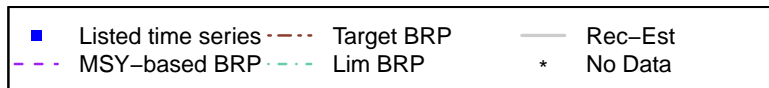
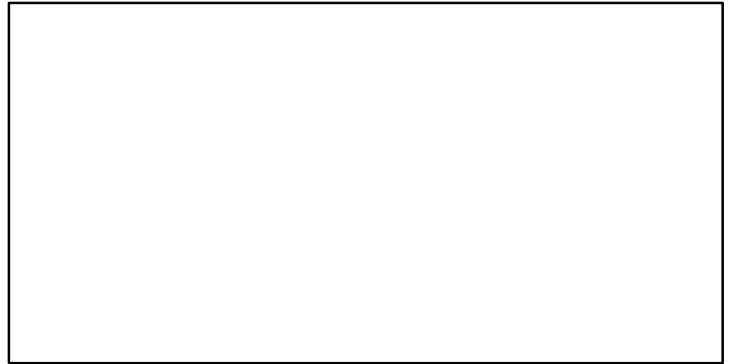
**F\***



**ER\***

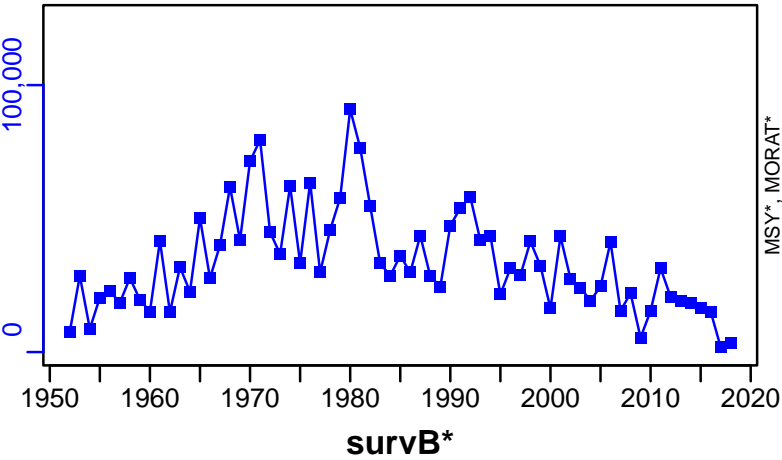


**Recruits\***



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

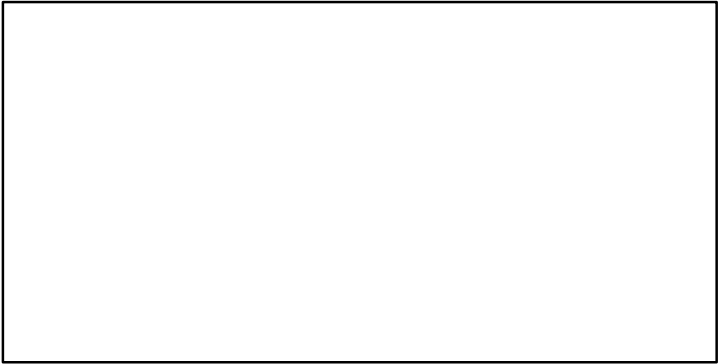
TC-MT, TL\*, RecC\* (1952-2018-KUROTA)



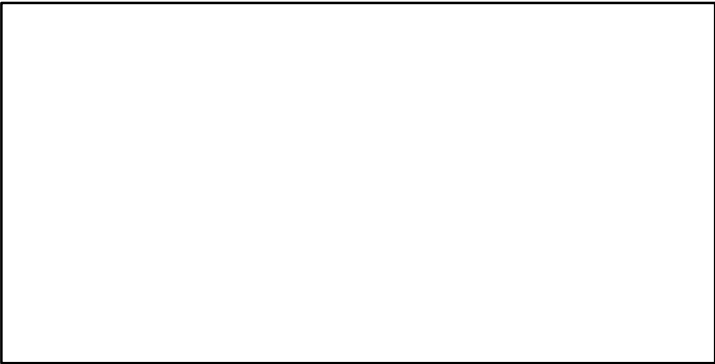
TAC\*, Cpair\*, Cadv\*



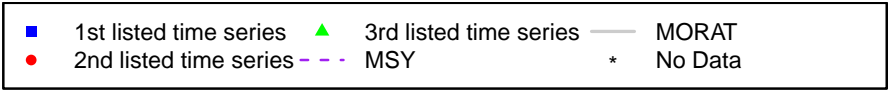
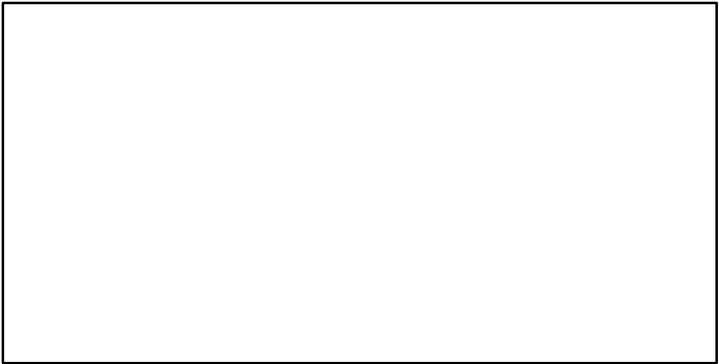
CPUE\*



EFFORT\*



CdivMSY\*



## Red seabream East China Sea [RBRMECS]

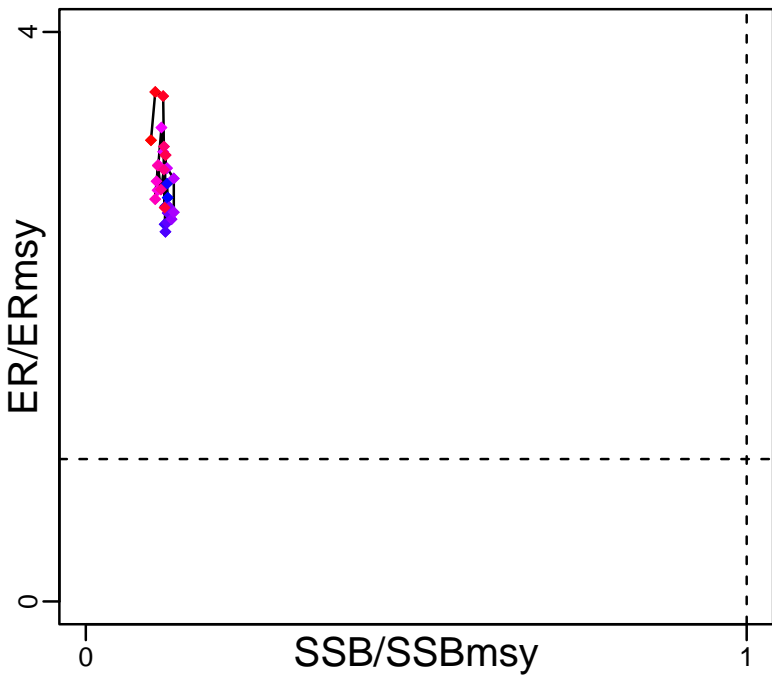
Metadata	
<b>Scientific Name</b>	Pagrus major
<b>Current Assess ID</b>	FAFRFJ-RBRMECS-1969-2013-JPNIMP2016
<b>Area</b>	East China Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2010, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	96,880
<b>SSBmsy</b>	SSBmsy-MT	2013	87,132
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.12
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	11,626
<b>M</b>	M-1/yr	2013	0.125
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2010	9900
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

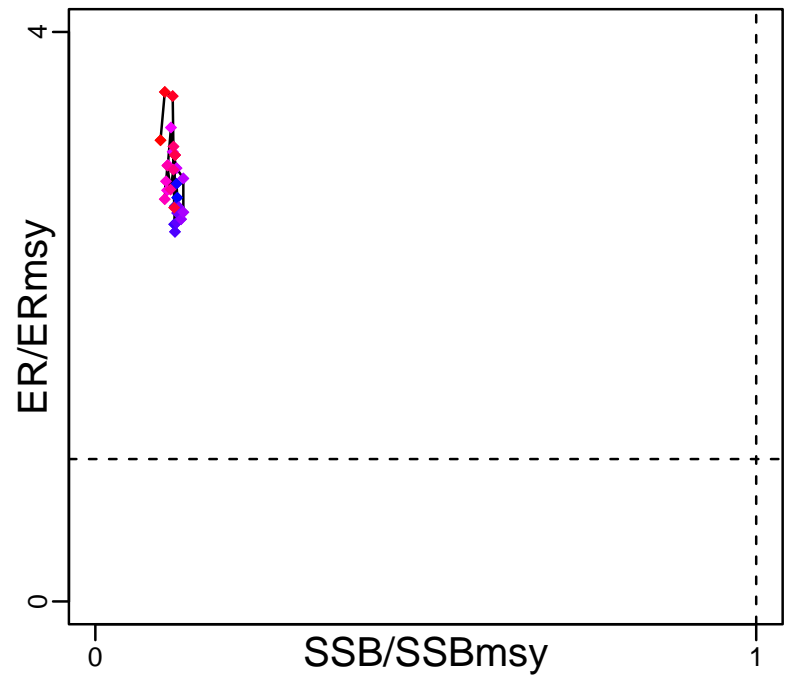
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	14,200	-	1
<b>SSB</b>	SSB-MT	2013	8590	Both	3
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	10,800,000	-	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.389	-	-
<b>TC</b>	TC-MT	2013	5520		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.147		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.099		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	3.239		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Red seabream East China Sea [RBRMECS]

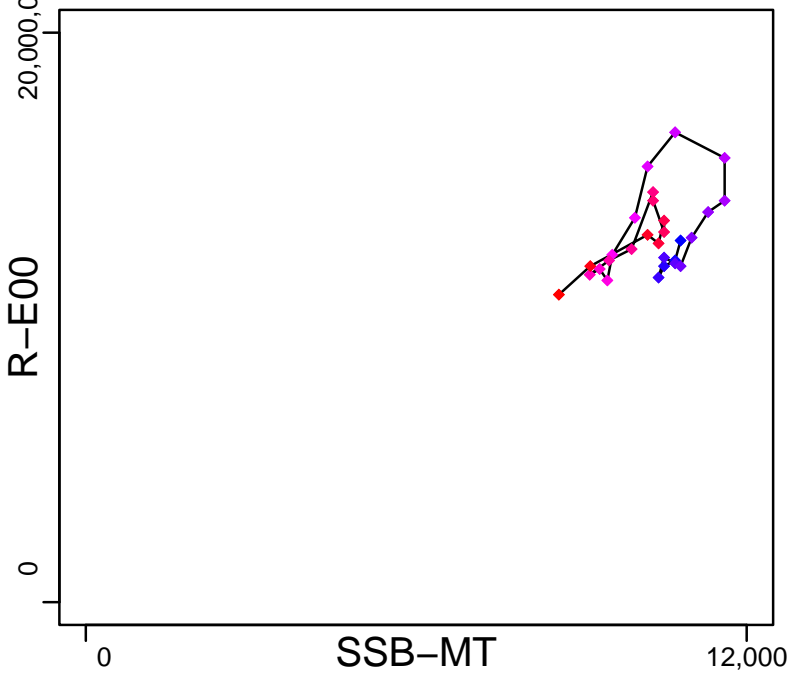
Kobe MSYpref (1969–2013–JPNIMP2016)



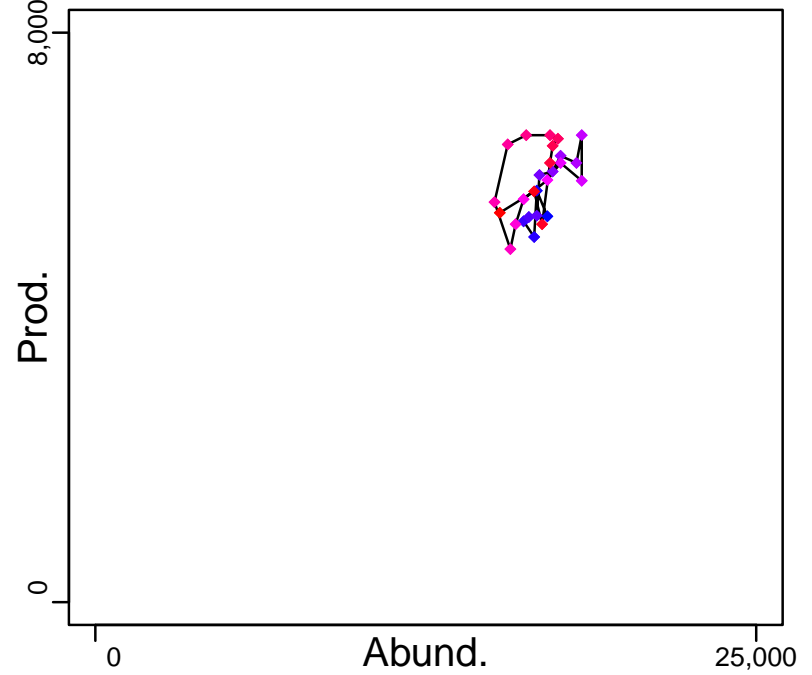
Kobe MGTpref (1969–2013–JPNIMP2016)



Spawner Recruit (1969–2013–JPNIMP2016)



Production (1969–2013–JPNIMP2016)

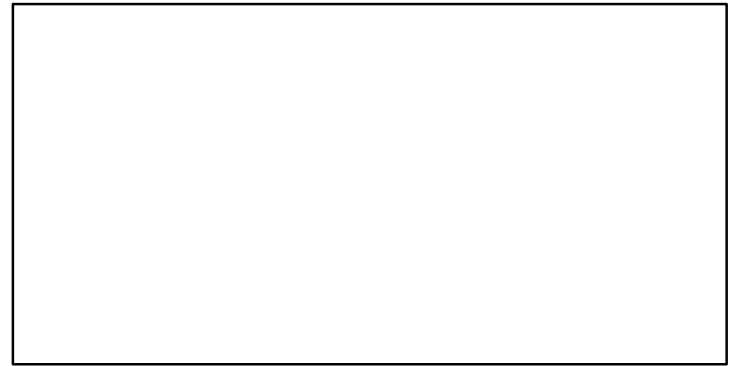
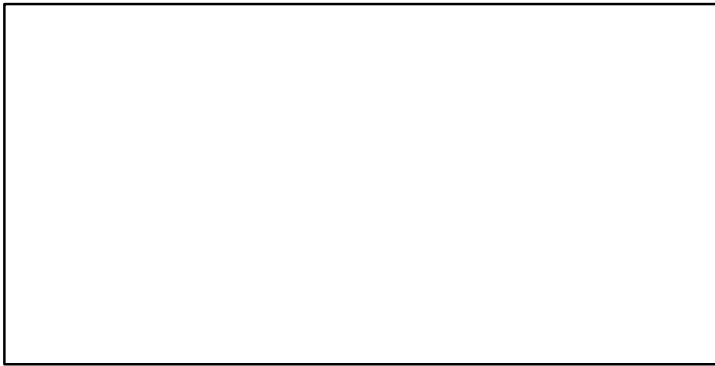
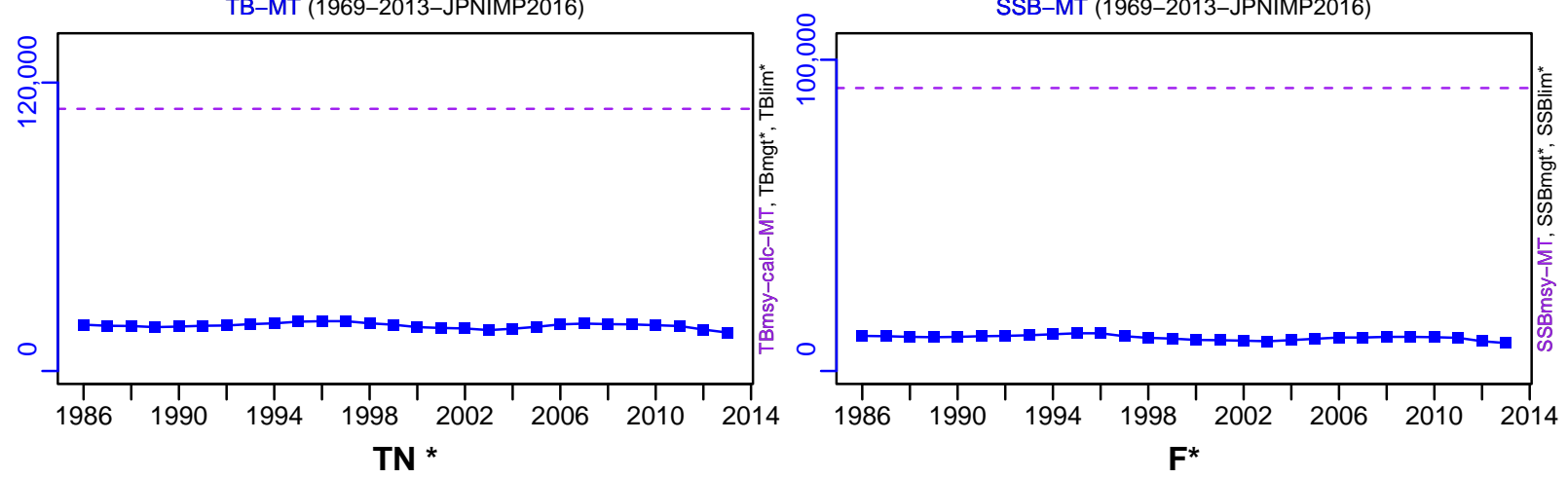


◆ Start Year ◆ End Year \* No Data

# Red seabream East China Sea [RBRMECS]

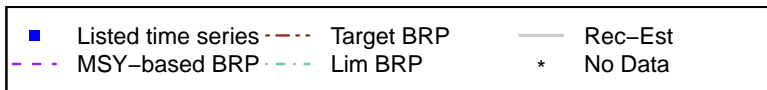
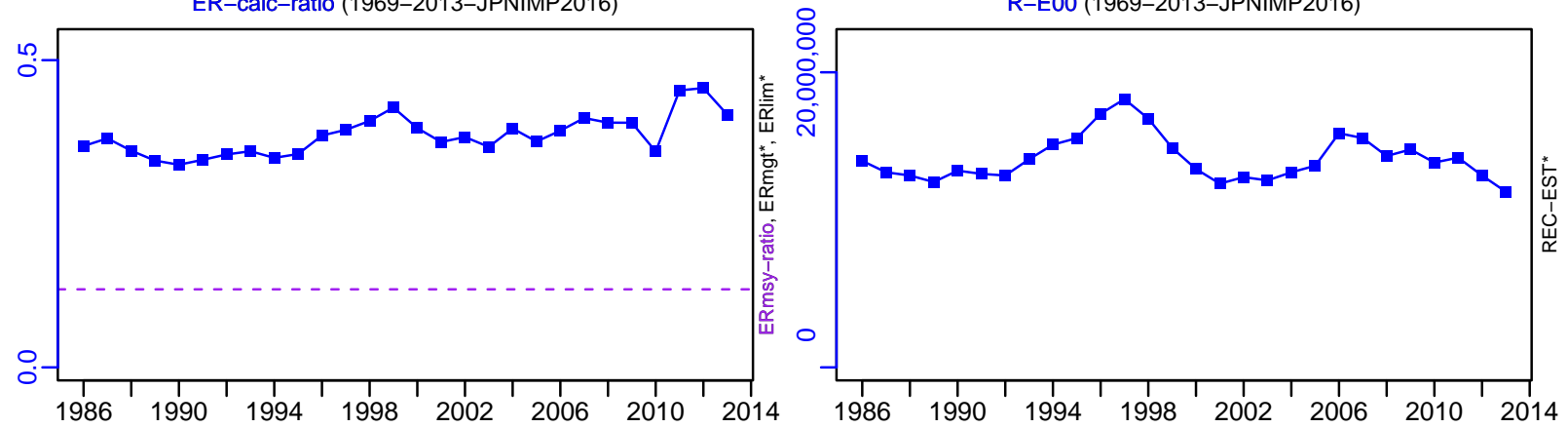
TB-MT (1969-2013-JPNIMP2016)

SSB-MT (1969-2013-JPNIMP2016)



ER-calc-ratio (1969-2013-JPNIMP2016)

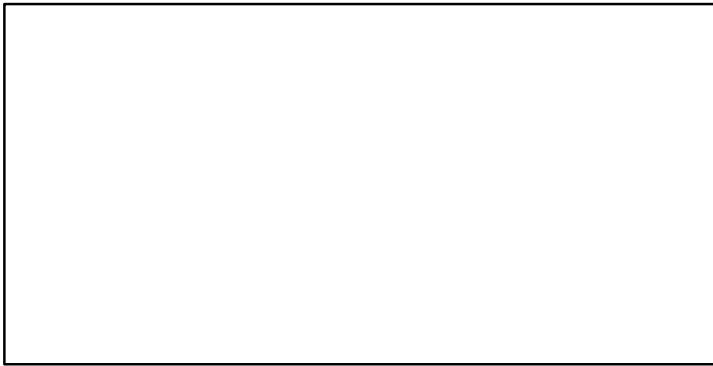
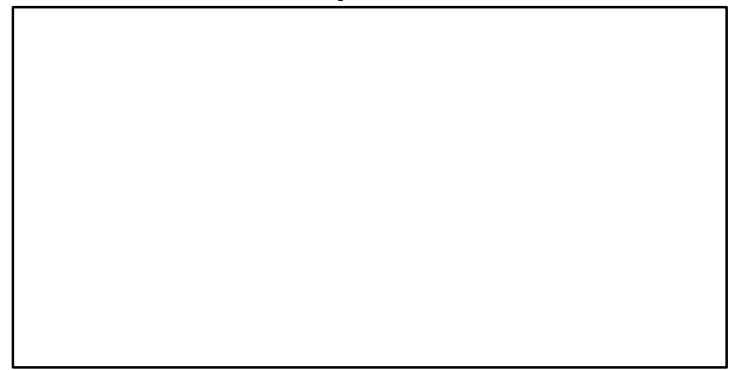
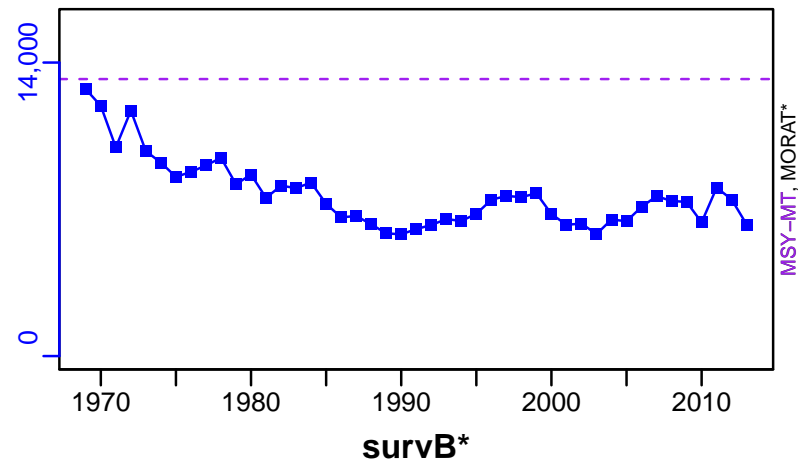
R-E00 (1969-2013-JPNIMP2016)



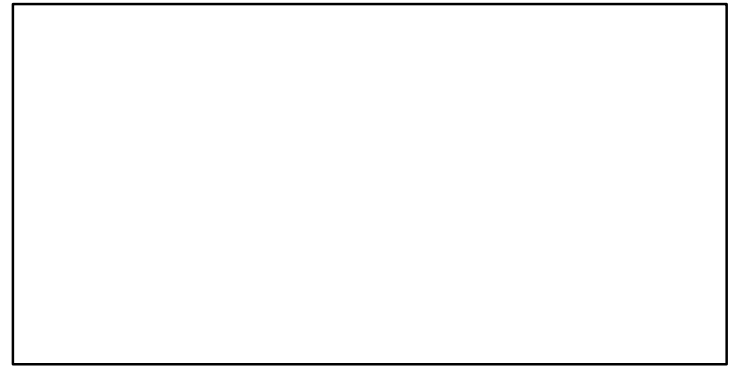
# Red seabream East China Sea [RBRMECS]

TC-MT, TL\*, RecC\* (1969–2013–JPNIMP2016)

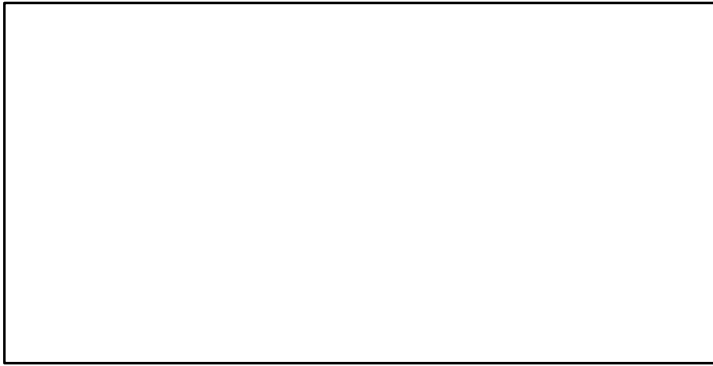
TAC\*, Cpair\*, Cadv\*



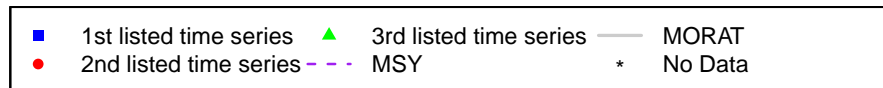
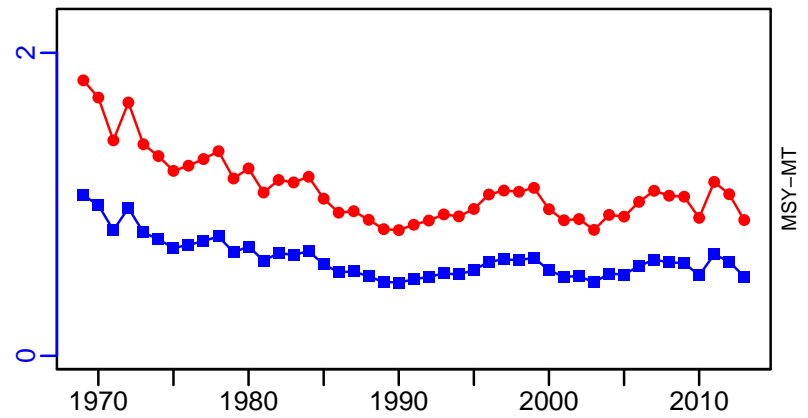
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1969–2013–JPNIMP2016)



## Red seabream Inland Sea of Japan (East) [RBRMSETOE]

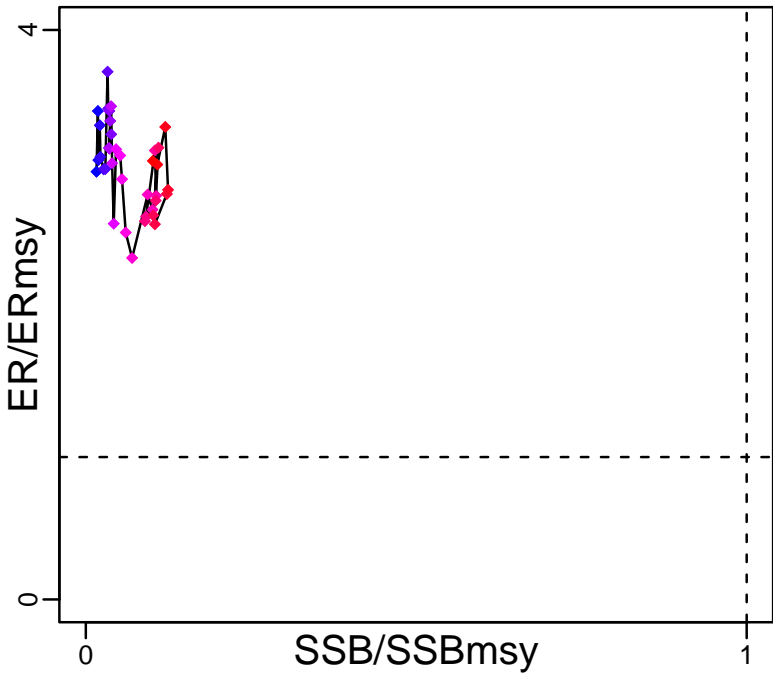
Metadata	
<b>Scientific Name</b>	Pagrus major
<b>Current Assess ID</b>	FAFRFJ-RBRMSETOE-1977-2013-JPNIMP2016
<b>Area</b>	Inland Sea of Japan (East)
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2010, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	21,417
<b>SSBmsy</b>	SSBmsy-MT	2013	16,552
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.145
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	3106
<b>M</b>	M-1/yr	2013	0.24
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2010	304
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

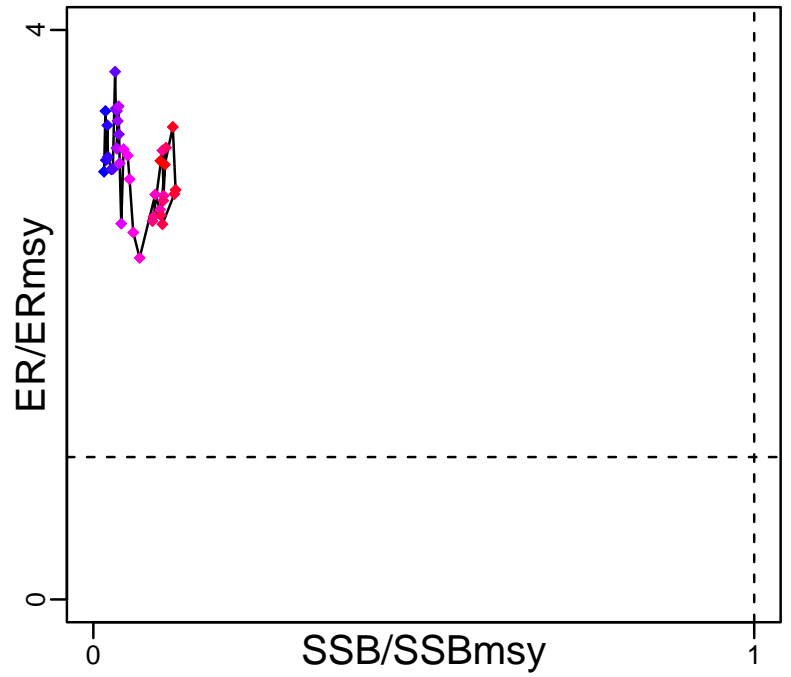
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	4030	-	0
<b>SSB</b>	SSB-MT	2013	1680	Both	3
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	8,730,000	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.447	-	-
<b>TC</b>	TC-MT	2013	1800		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.188		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.101		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	3.08		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Red seabream Inland Sea of Japan (East) [RBRMSETOE]

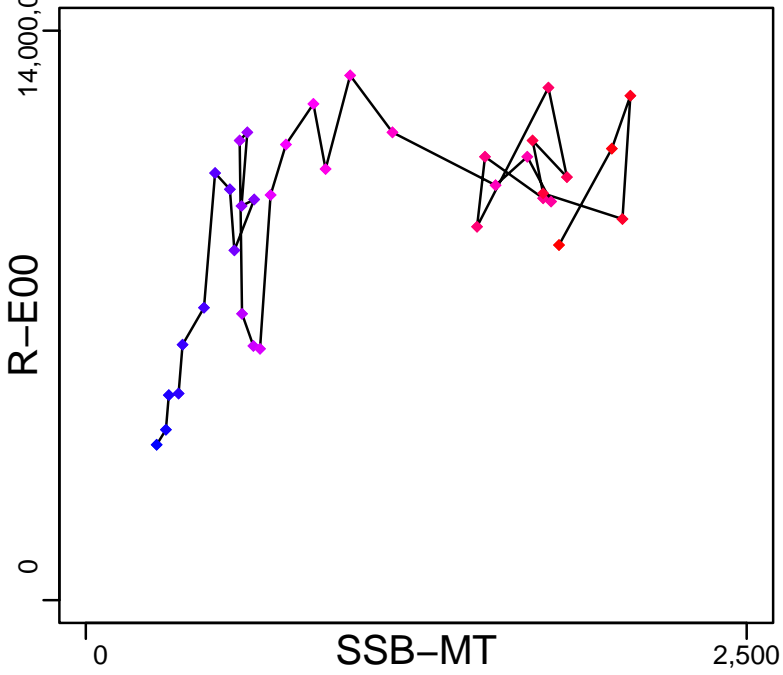
Kobe MSYpref (1977–2013–JPNIMP2016)



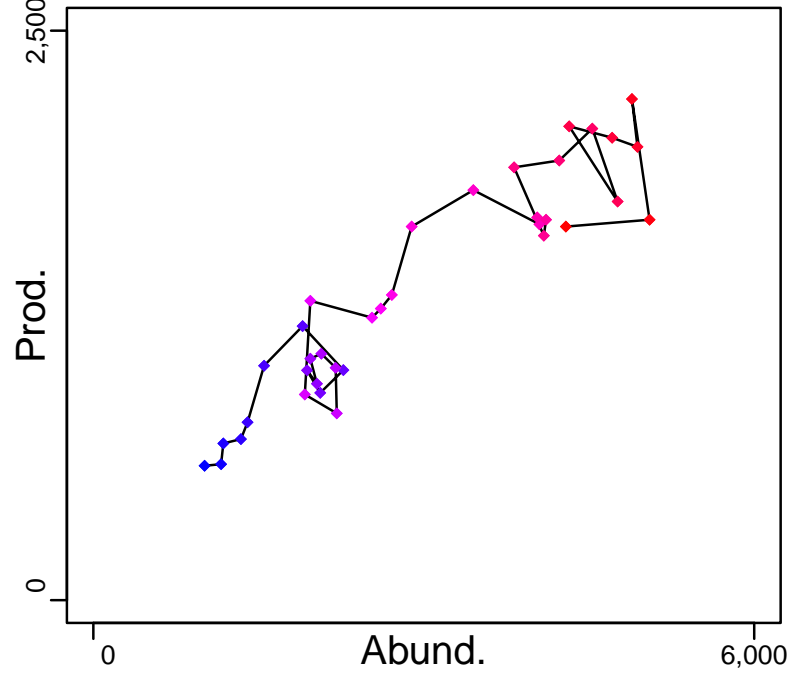
Kobe MGTpref (1977–2013–JPNIMP2016)



Spawner Recruit (1977–2013–JPNIMP2016)



Production (1977–2013–JPNIMP2016)

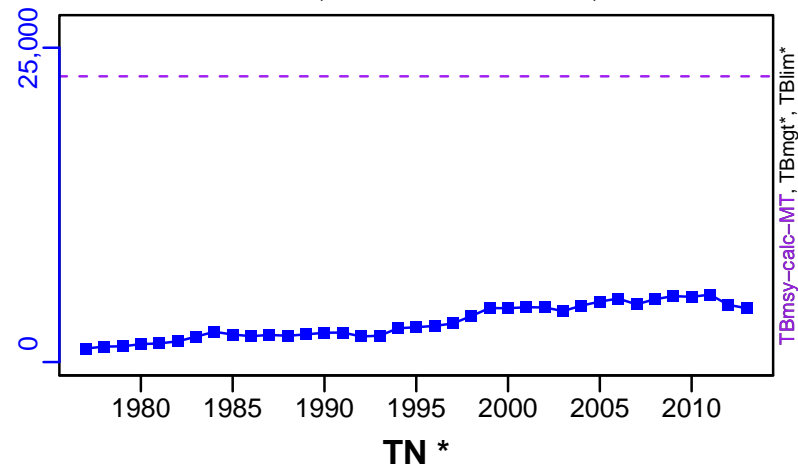


◆ Start Year ◆ End Year \* No Data

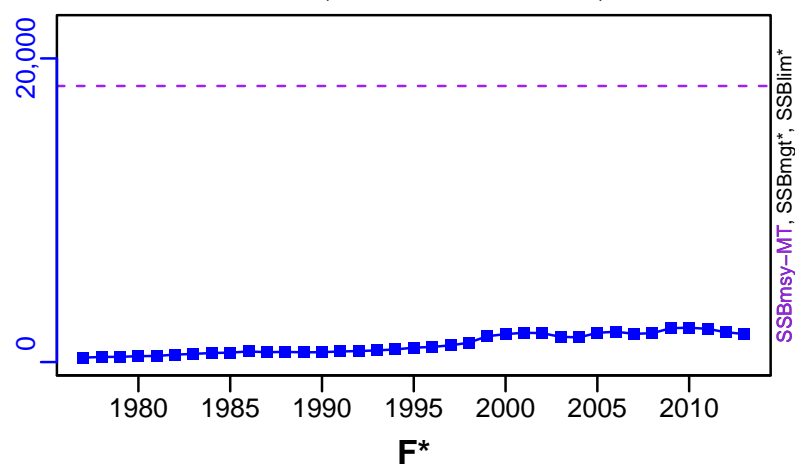


# Red seabream Inland Sea of Japan (East) [RBRMSETOE]

TB-MT (1977-2013-JPNIMP2016)



SSB-MT (1977-2013-JPNIMP2016)

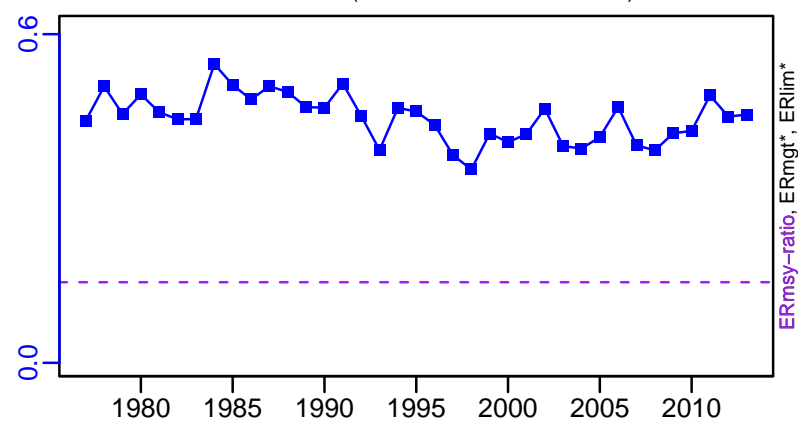


TN \*

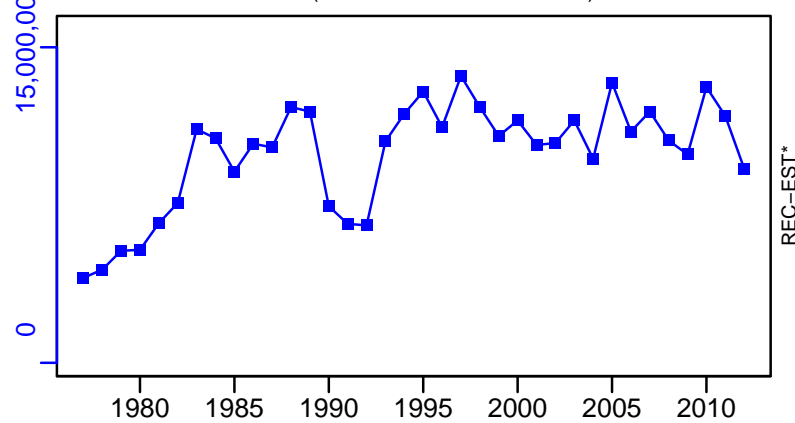
F\*



ER-calc-ratio (1977-2013-JPNIMP2016)

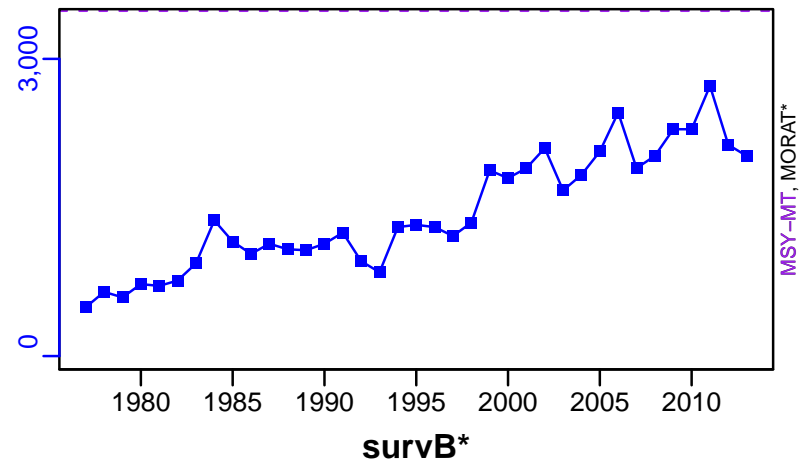


R-E00 (1977-2013-JPNIMP2016)



# Red seabream Inland Sea of Japan (East) [RBRMSETOE]

TC-MT, TL\*, RecC\* (1977–2013–JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



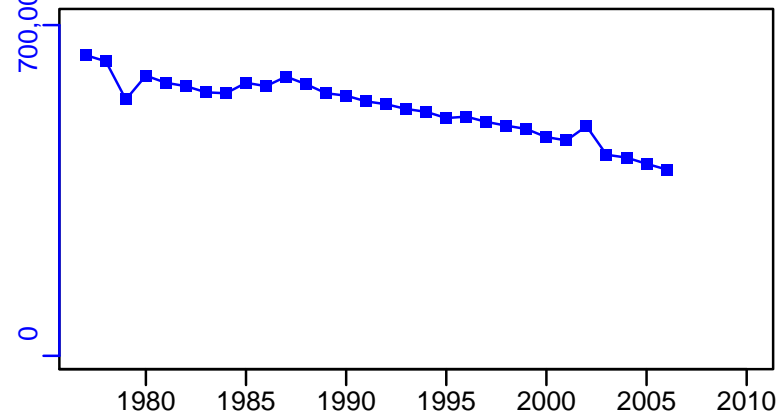
survB\*



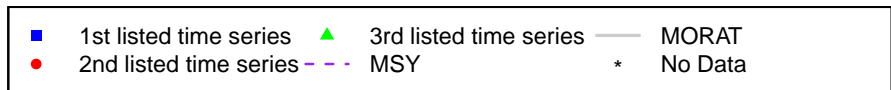
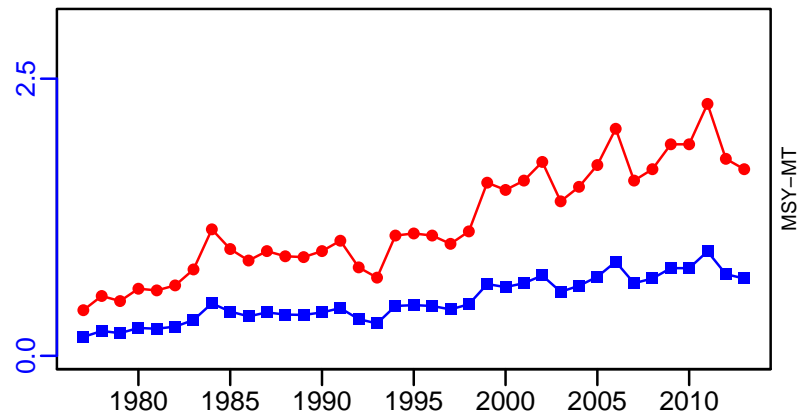
CPUE\*



EFFORT-nominal (1977–2010–ONO)



TC-MT/MSY-MT, CdivMEANC-ratio, (1977–2013–JPNIMP2016)



## Red seabream Inland Sea of Japan (West) [RBRMSETOW]

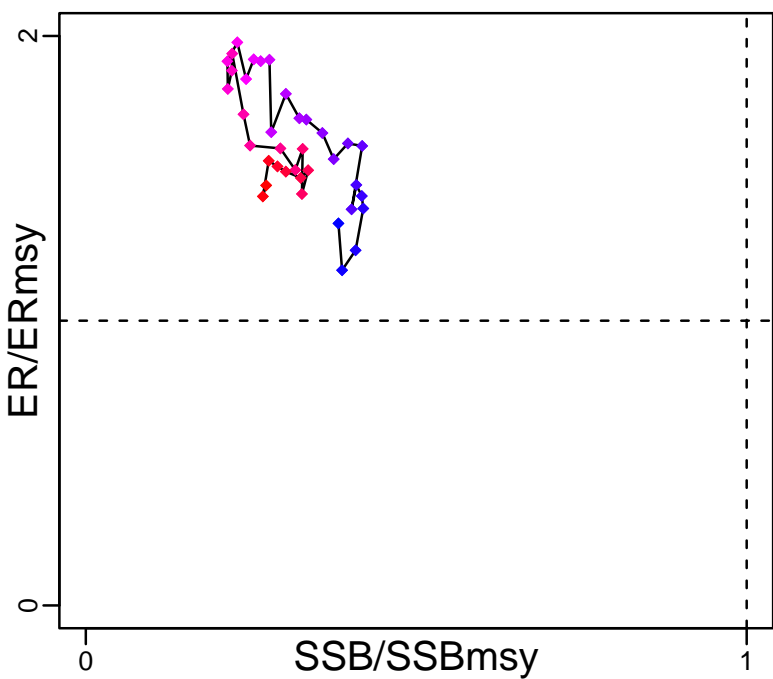
Metadata	
<b>Scientific Name</b>	Pagrus major
<b>Current Assess ID</b>	FAFRFJ-RBRMSETOW-1977-2013-JPNIMP2016
<b>Area</b>	Inland Sea of Japan (West)
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2010, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	24,122
<b>SSBmsy</b>	SSBmsy-MT	2013	18,103
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.173
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	4173
<b>M</b>	M-1/yr	2013	0.24
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2010	4212
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

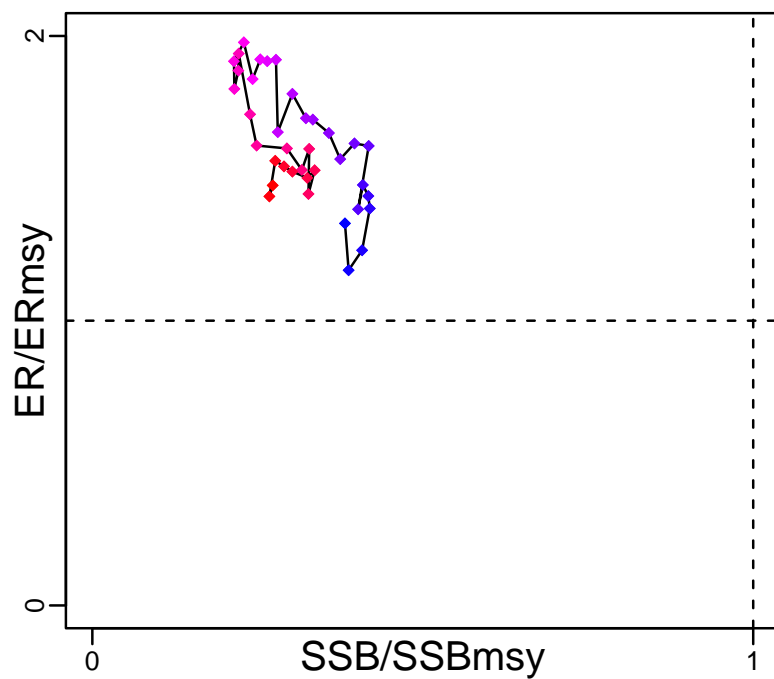
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	8620	-	0
<b>SSB</b>	SSB-MT	2013	4940	Both	3
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	8,300,000	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.255	-	-
<b>TC</b>	TC-MT	2013	2200		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.357		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.273		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	1.475		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Red seabream Inland Sea of Japan (West) [RBRMSETOW]

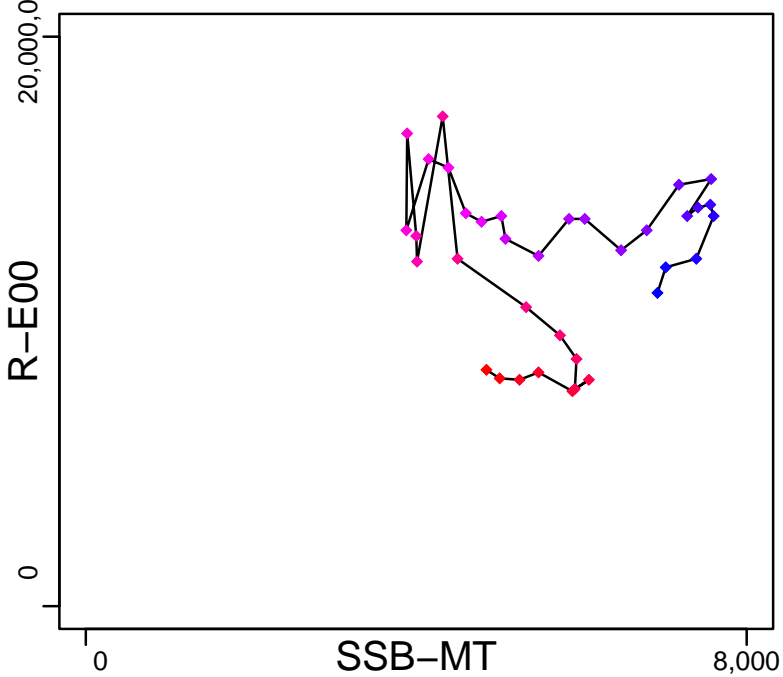
Kobe MSYpref (1977–2013–JPNIMP2016)



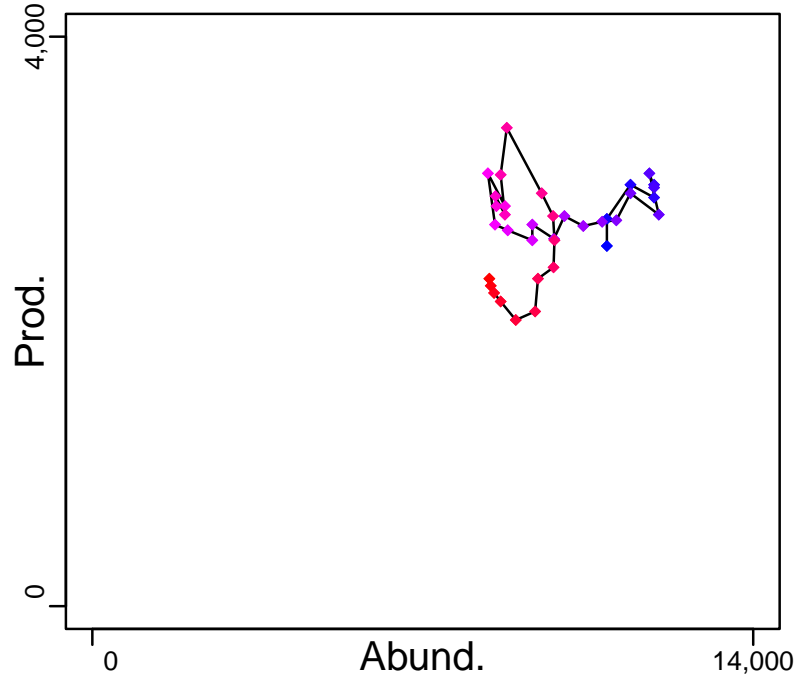
Kobe MGTpref (1977–2013–JPNIMP2016)



Spawner Recruit (1977–2013–JPNIMP2016)



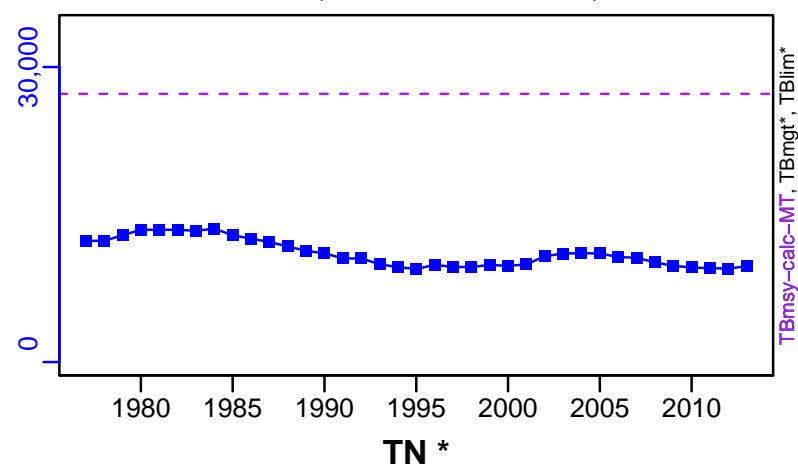
Production (1977–2013–JPNIMP2016)



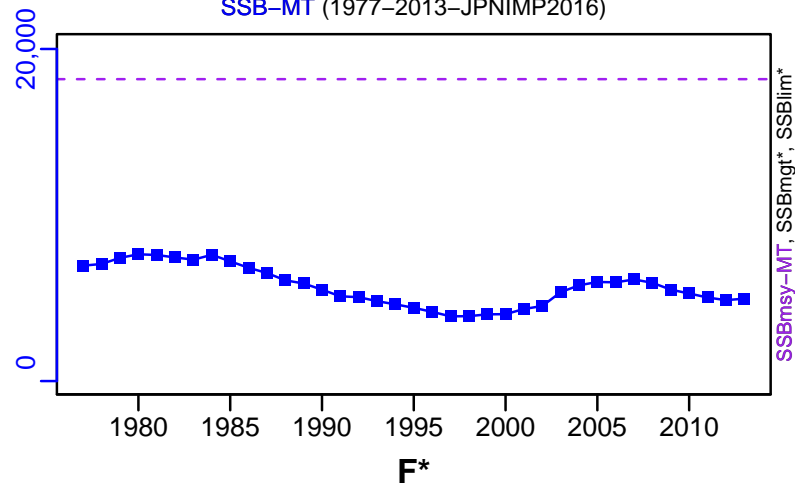
◆ Start Year ◆ End Year \* No Data

# Red seabream Inland Sea of Japan (West) [RBRMSETOW]

TB-MT (1977-2013-JPNIMP2016)



SSB-MT (1977-2013-JPNIMP2016)

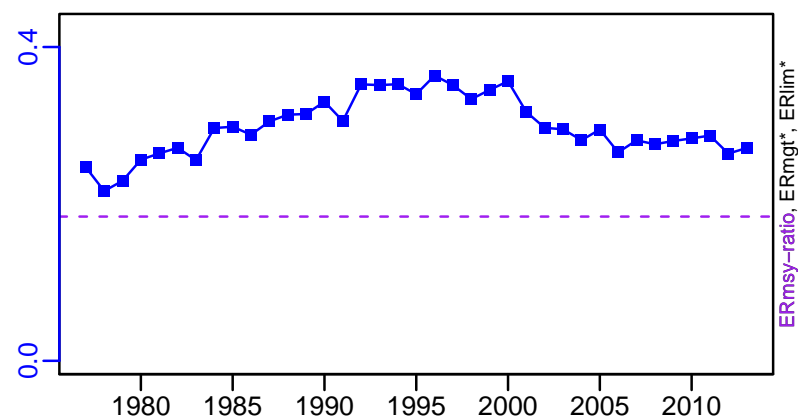


TN \*

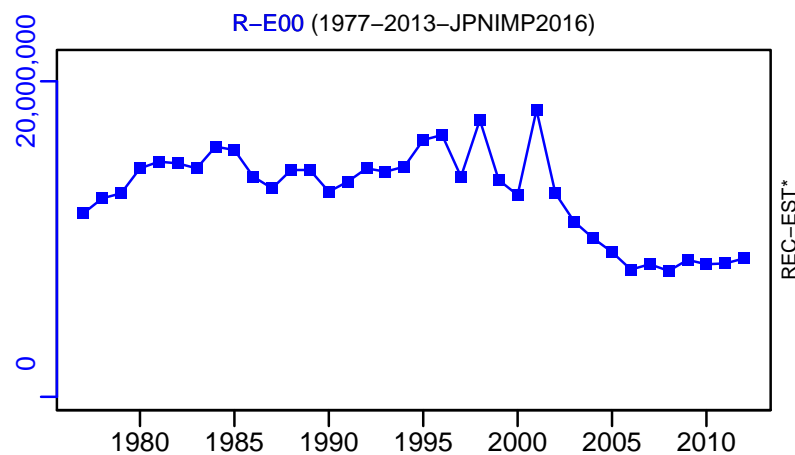
F\*



ER-calc-ratio (1977-2013-JPNIMP2016)



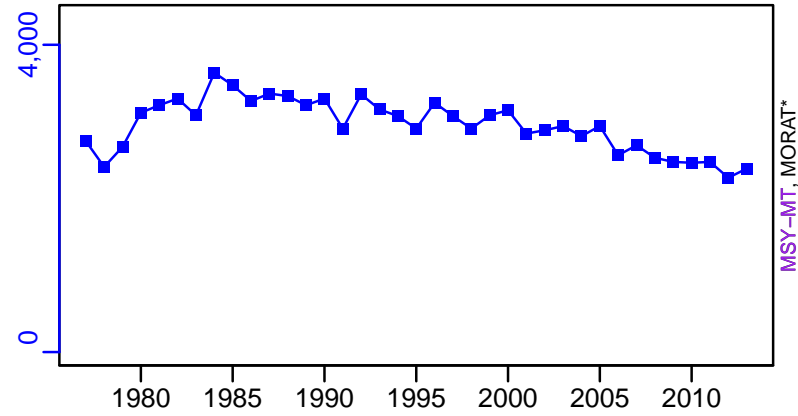
R-E00 (1977-2013-JPNIMP2016)



# Red seabream Inland Sea of Japan (West) [RBRMSETOW]

TC-MT, TL\*, RecC\* (1977–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



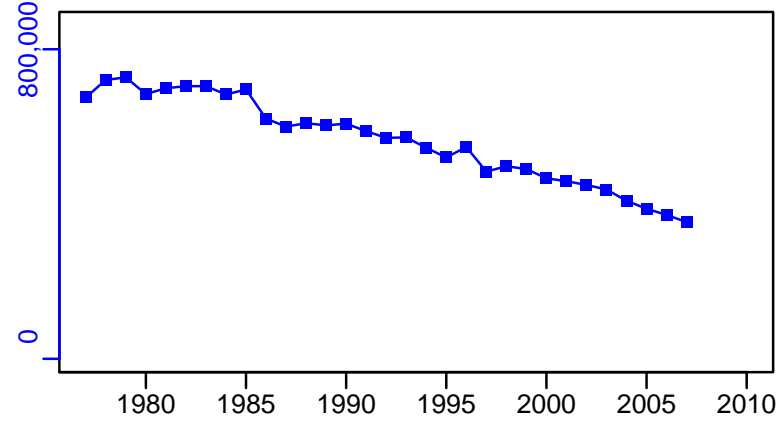
survB\*



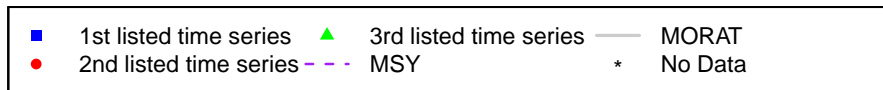
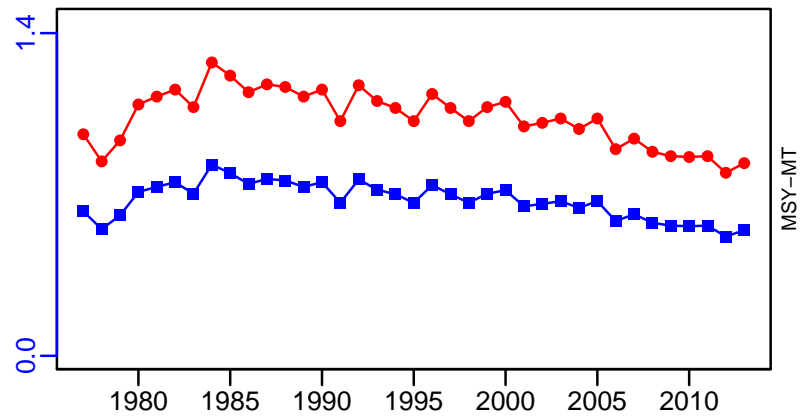
CPUE\*



EFFORT-nominal (1977–2010–ONO)



TC-MT/MSY-MT, CdivMEANC-ratio, (1977–2013–JPNIMP2016)



## Round herring Pacific Ocean [RHERRPAC]

Metadata	
<b>Scientific Name</b>	Etrumeus teres
<b>Current Assess ID</b>	FAFRFJ-RHERRPAC-1985-2018-KUROTA
<b>Area</b>	Pacific Ocean
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 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>	M-1/yr	2018	0.7
<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	24,466		
<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\***

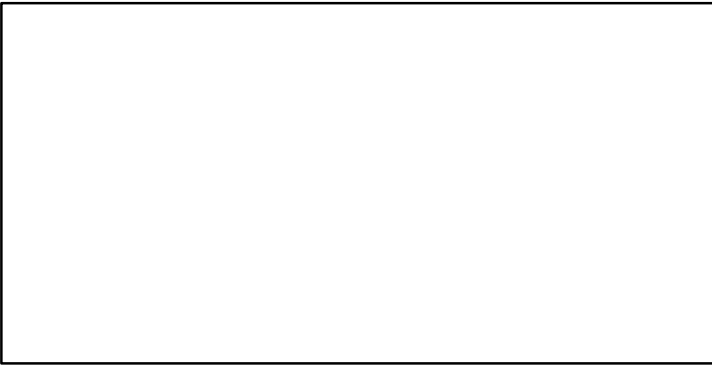


◆ Start Year   ◆ End Year   \* No Data

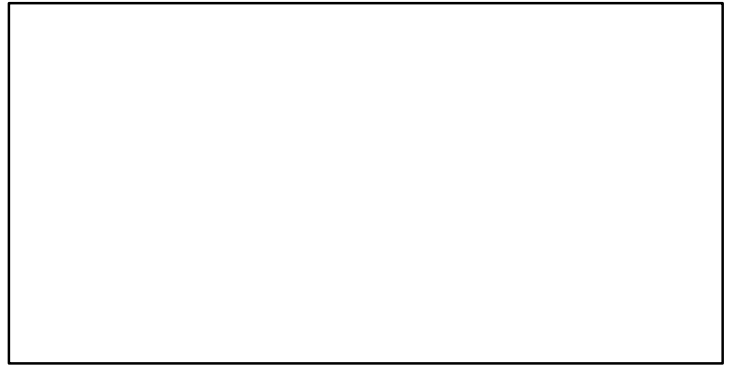


Round herring Pacific Ocean [RHERRPAC]

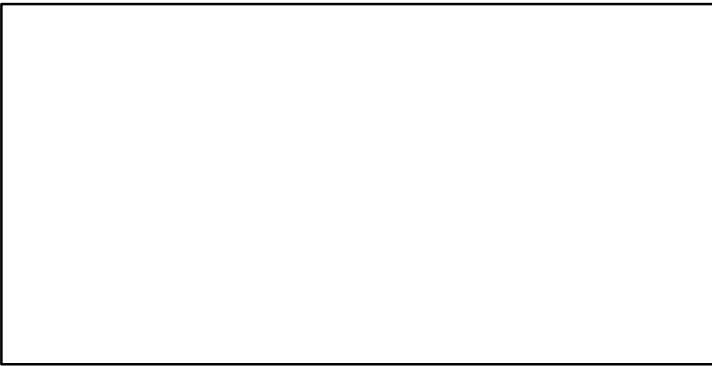
**TB\***



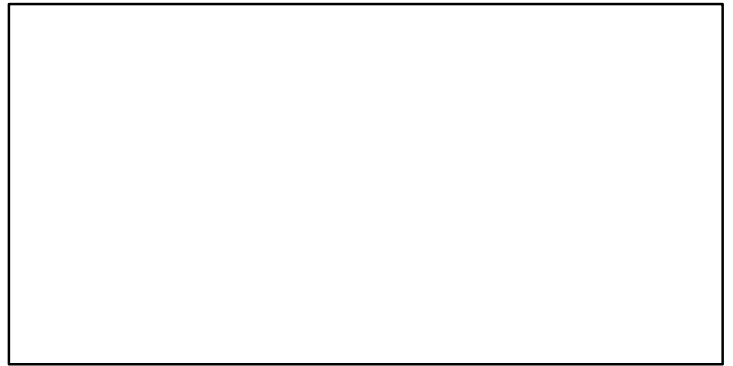
**SSB\***



**TN \***



**F\***



**ER\***



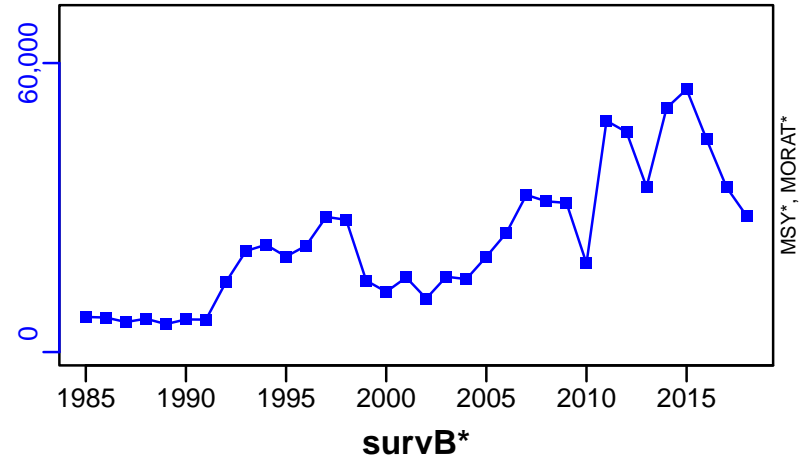
**Recruits\***



# Round herring Pacific Ocean [RHERRPAC]

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

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CdivMSY\*



## Round herring Tsushima Strait [RHERTSST]

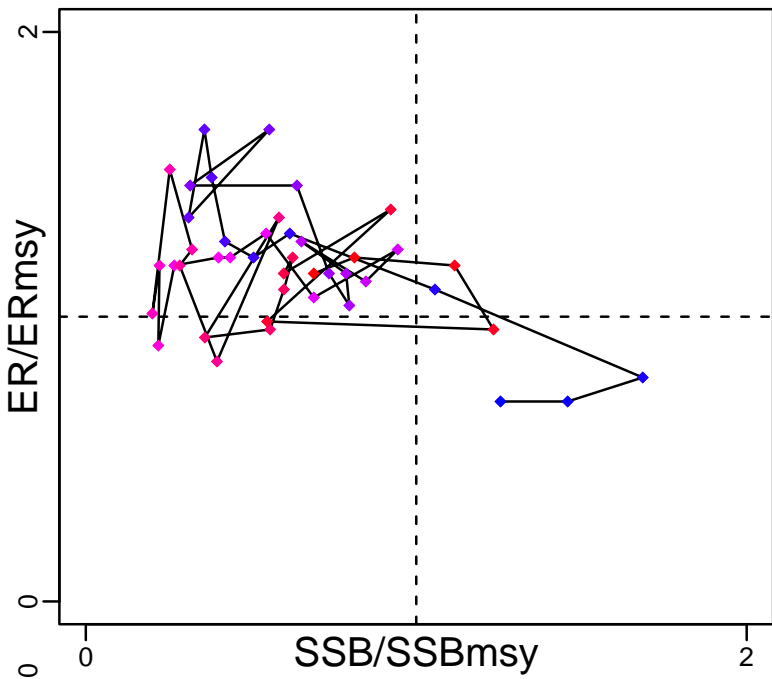
Metadata	
<b>Scientific Name</b>	Etrumeus teres
<b>Current Assess ID</b>	FAFRFJ-RHERTSST-1976-2018-KUROTA
<b>Area</b>	Tsushima Strait
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013, 2018

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

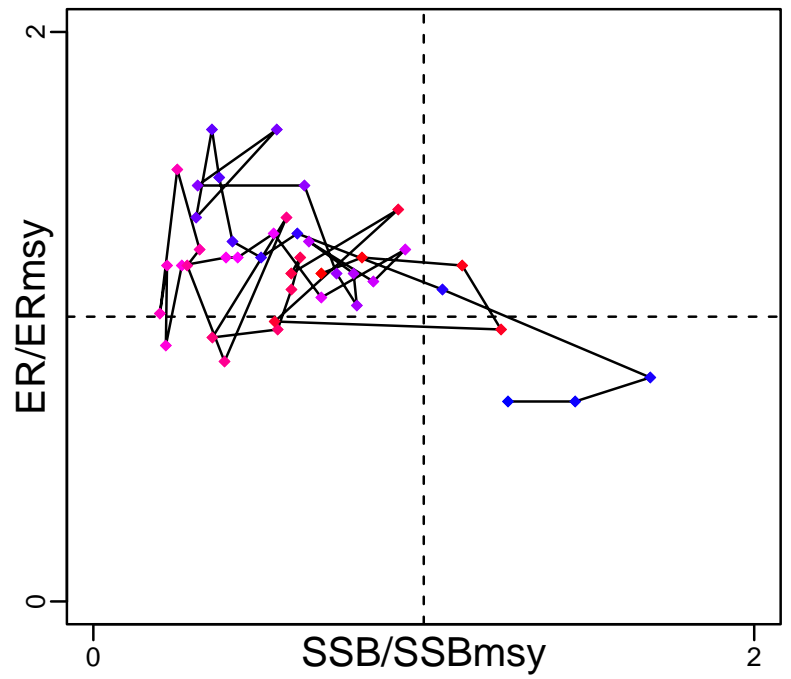
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	76,901	Both	0
<b>SSB</b>	SSB-MT	2018	51,446	Both	1
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	2,031,250,000	Both	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.41	Both	-
<b>TC</b>	TC-MT	2018	31,481		
<b>TL</b>	-	-	-		
<b>TB/TBmsy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

# Round herring Tsushima Strait [RHERTSST]

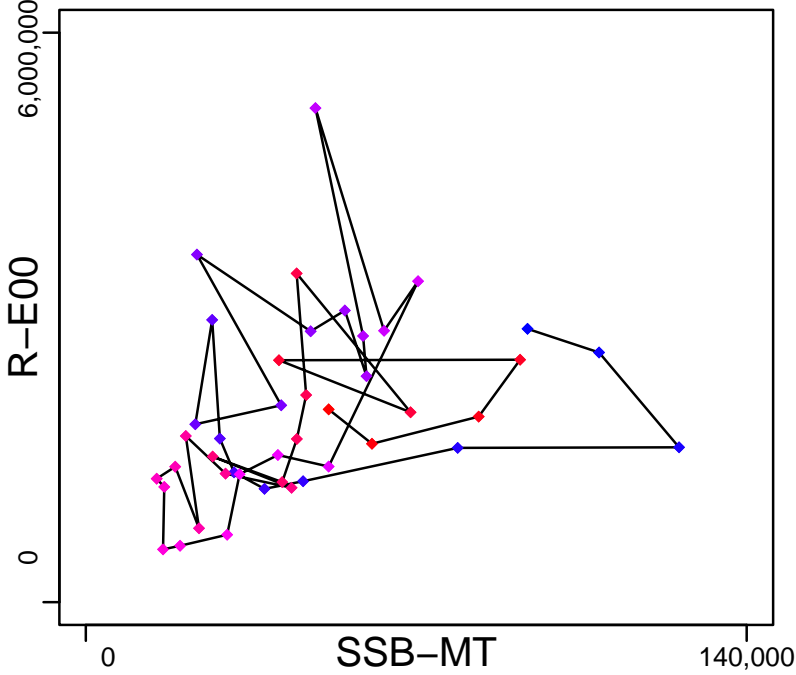
Kobe MSYpref (1976–2018–KUROTA)



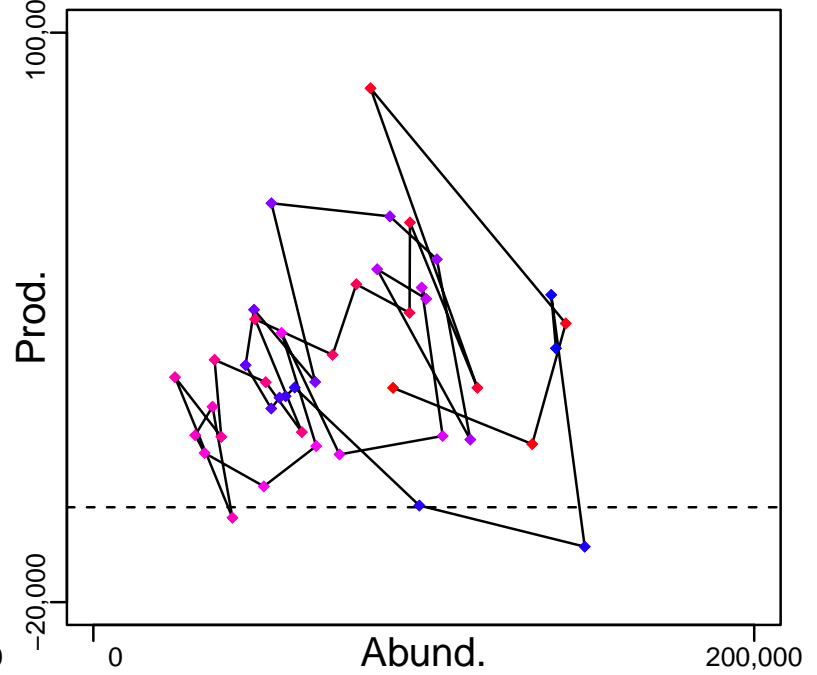
Kobe MGTpref (1976–2018–KUROTA)



Spawner Recruit (1976–2018–KUROTA)



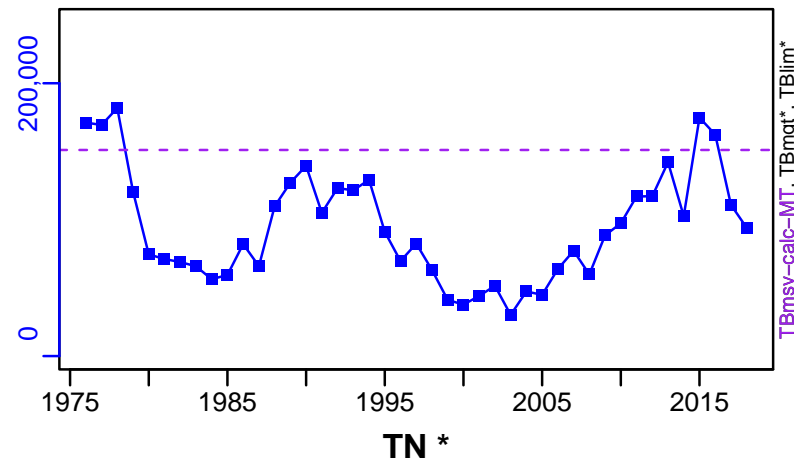
Production (1976–2018–KUROTA)



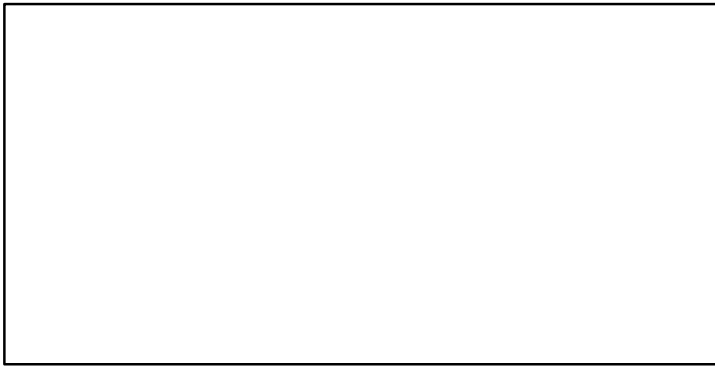
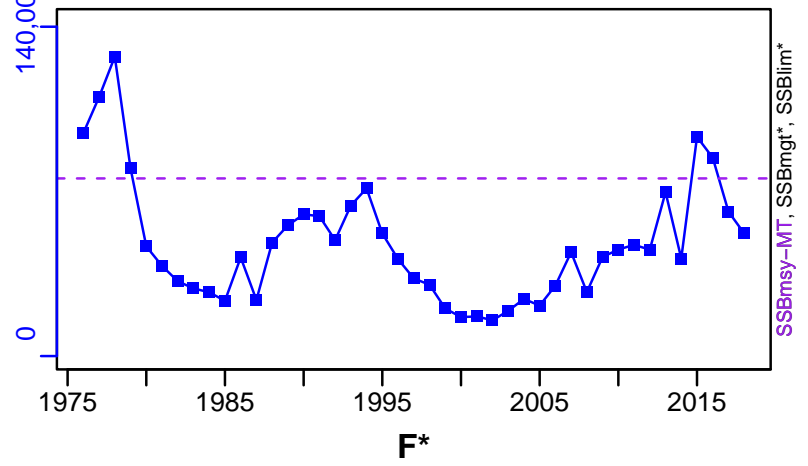
◆ Start Year ◆ End Year \* No Data

# Round herring Tsushima Strait [RHERTSST]

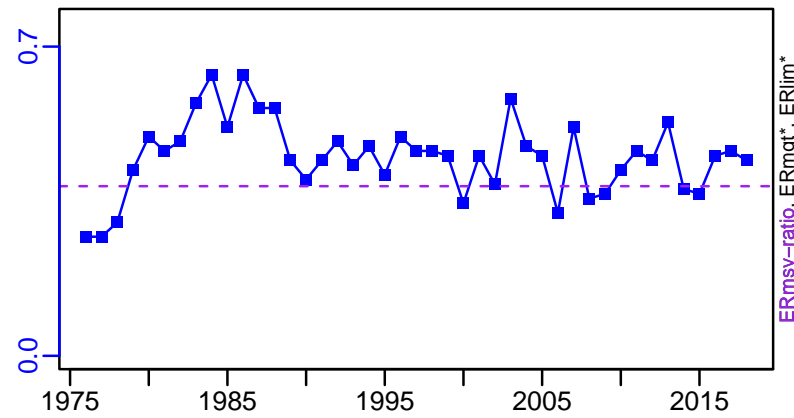
TB-MT (1976–2018–KUROTA)



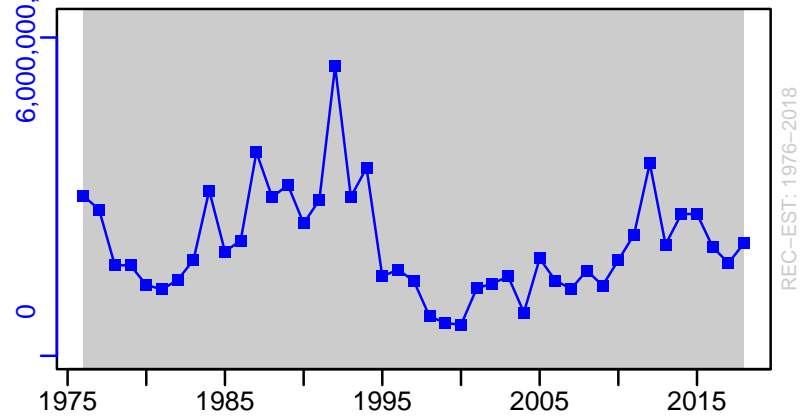
SSB-MT (1976–2018–KUROTA)



ER-ratio (1976–2018–KUROTA)

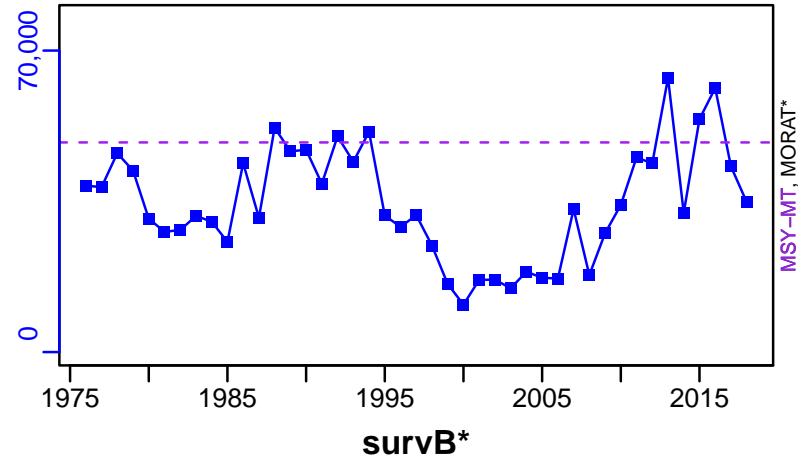


R-E00 (1976–2018–KUROTA)



# Round herring Tsushima Strait [RHERTSST]

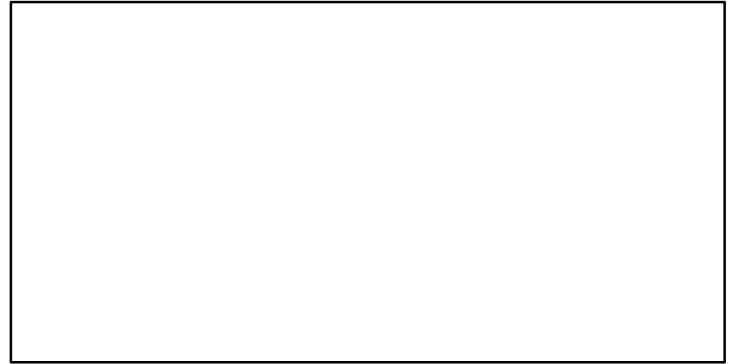
TC-MT, TL\*, RecC\* (1976-2018-KUROTA)



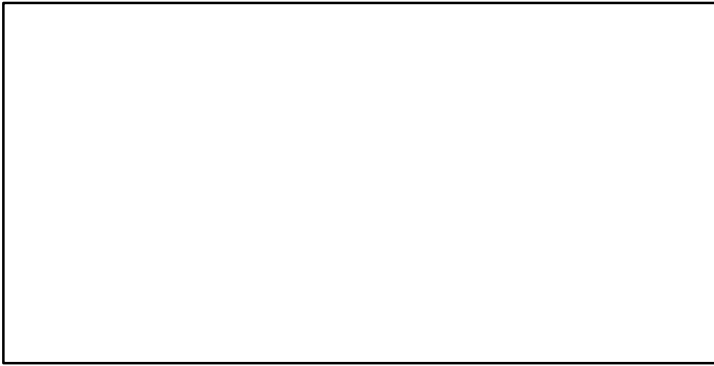
TAC\*, Cpair\*, Cadv\*



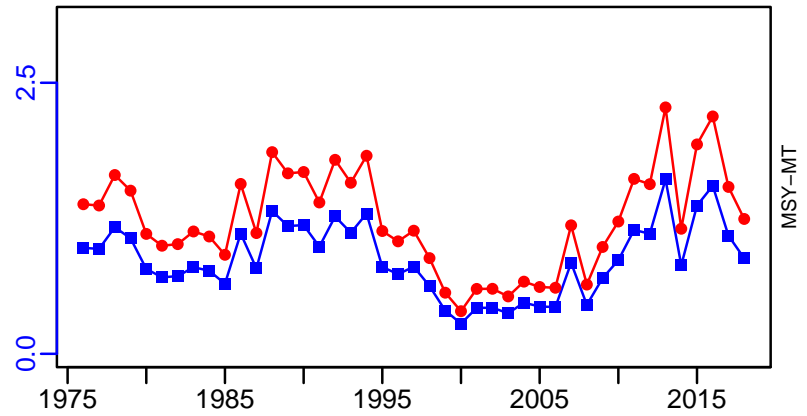
CPUE\*



EFFORT\*



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



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

## Round nose flounder Sea of Japan [RSFLOUNSOJ]

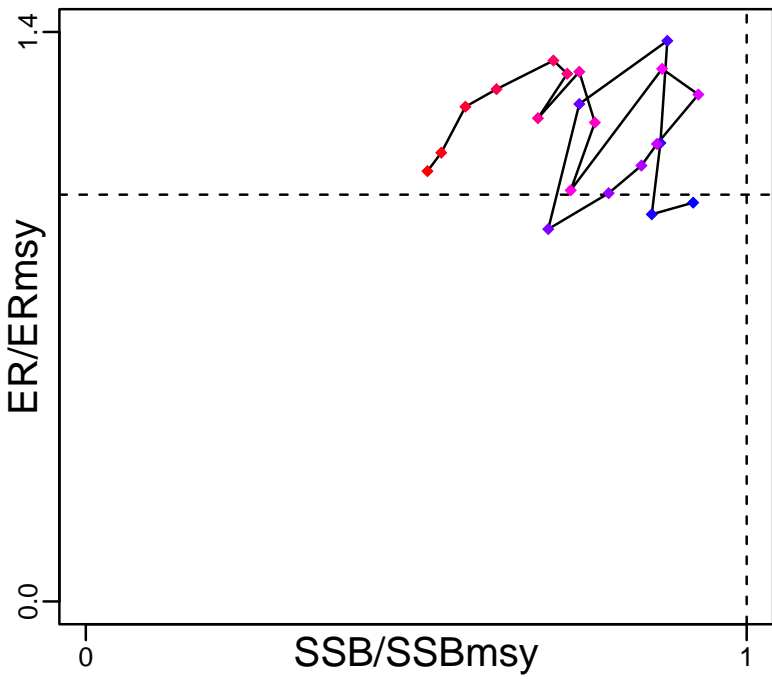
Metadata	
<b>Scientific Name</b>	Eopsetta grigorjewi
<b>Current Assess ID</b>	FAFRFJ-RSFLOUNSOJ-1966-2013-JPNIMP2016
<b>Area</b>	Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	5504
<b>SSBmsy</b>	SSBmsy-MT	2013	3830
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.285
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	1569
<b>M</b>	M-1/yr	2013	0.35
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

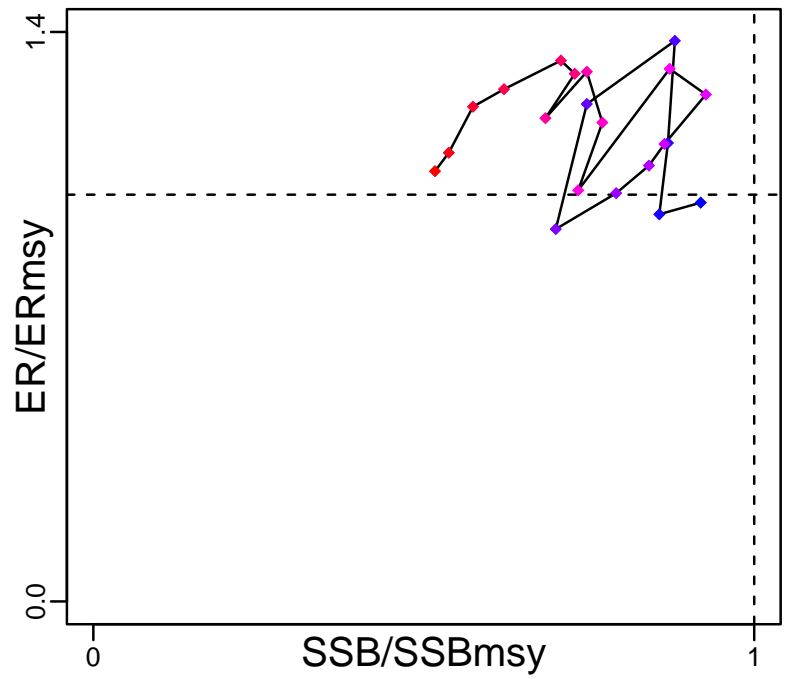
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	2740	-	1
<b>SSB</b>	SSB-MT	2013	1980	Both	3
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	15,100,000	-	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.301	-	-
<b>TC</b>	TC-MT	2013	826		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.498		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.517		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	1.058		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Round nose flounder Sea of Japan [RSFLOUNSOJ]

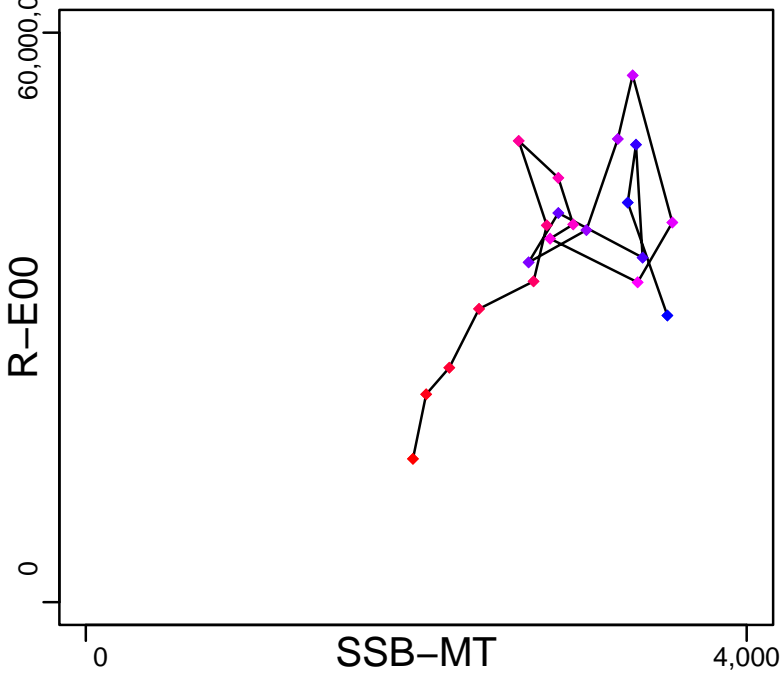
Kobe MSYpref (1966–2013–JPNIMP2016)



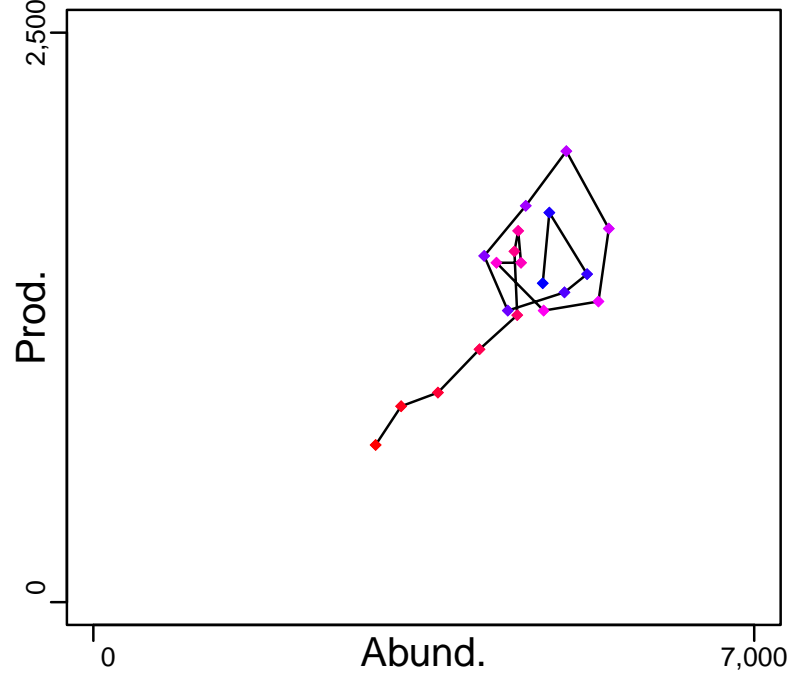
Kobe MGTpref (1966–2013–JPNIMP2016)



Spawner Recruit (1966–2013–JPNIMP2016)



Production (1966–2013–JPNIMP2016)

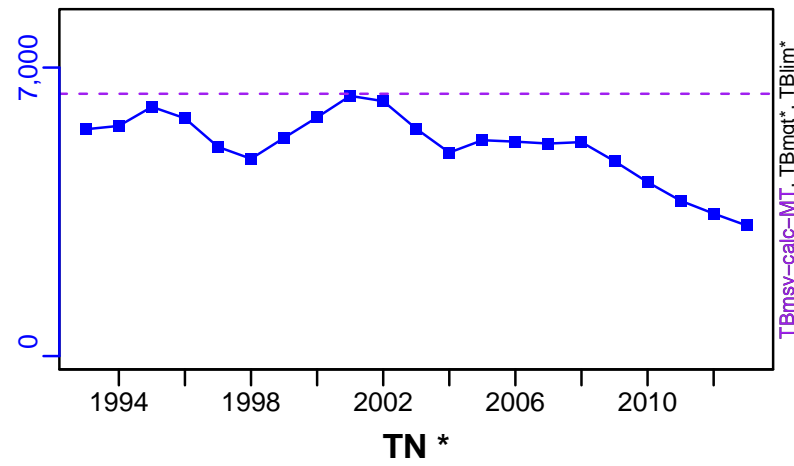


◆ Start Year ◆ End Year \* No Data

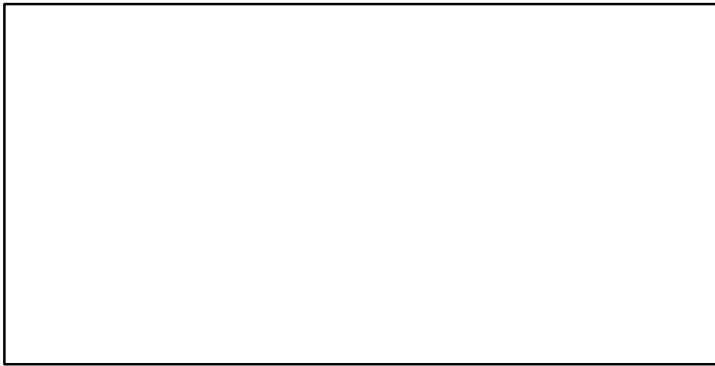
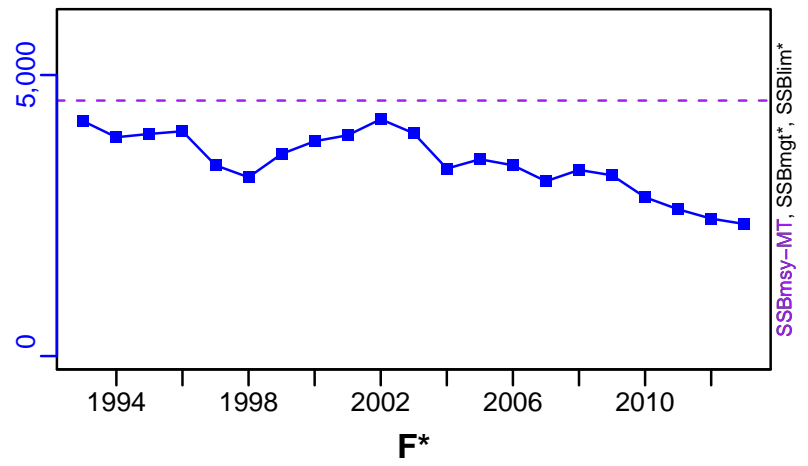


# Round nose flounder Sea of Japan [RSFLOUNSOJ]

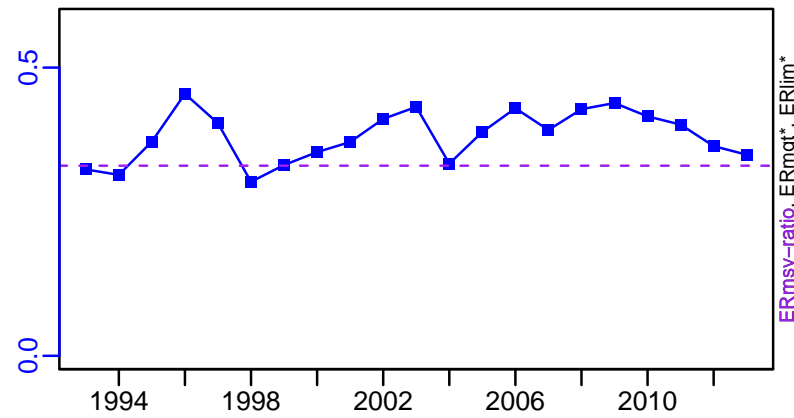
TB-MT (1966-2013-JPNIMP2016)



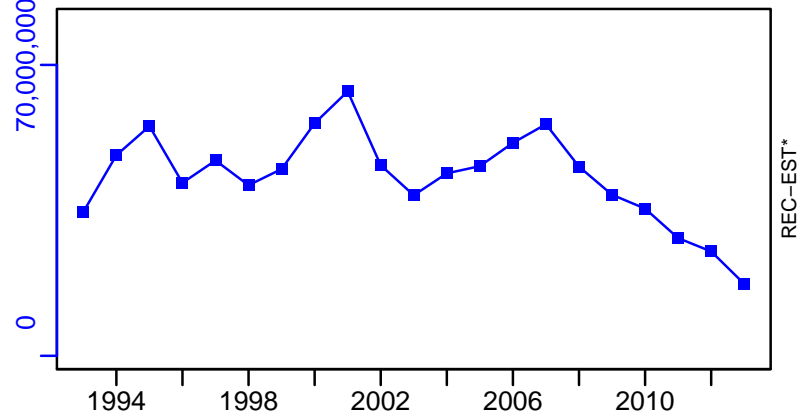
SSB-MT (1966-2013-JPNIMP2016)



ER-calc-ratio (1966-2013-JPNIMP2016)

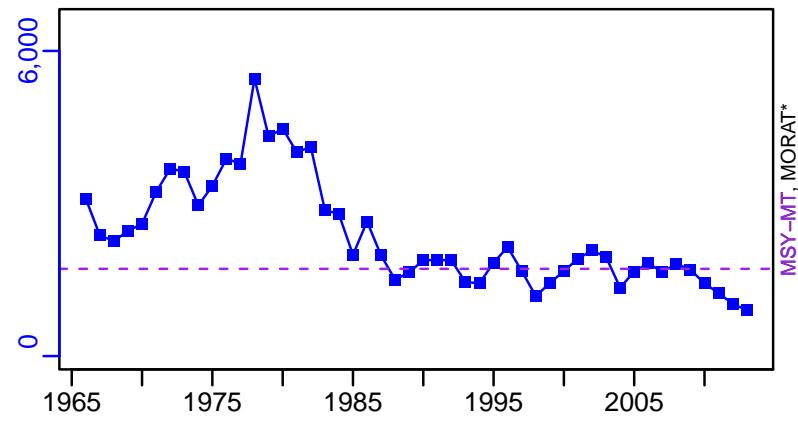


R-E00 (1966-2013-JPNIMP2016)

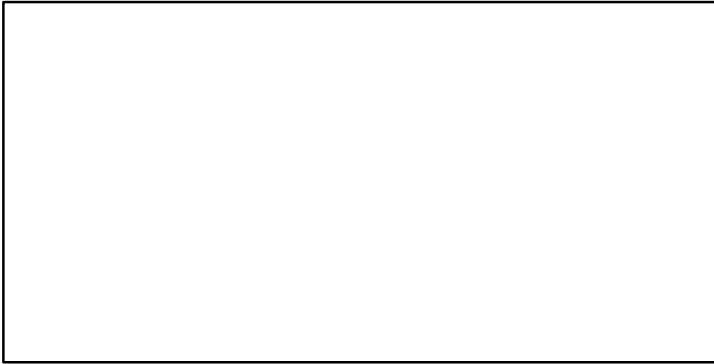


# Round nose flounder Sea of Japan [RSFLOUNSOJ]

TC-MT, TL\*, RecC\* (1966–2013–JPNIMP2016)



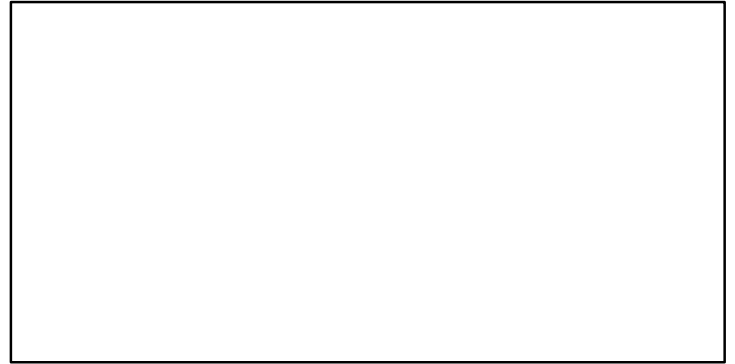
survB\*



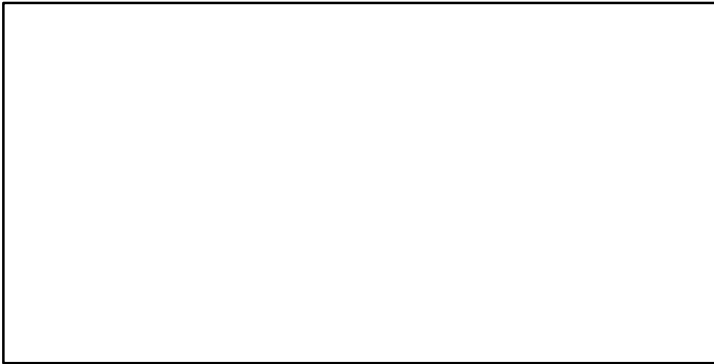
TAC\*, Cpair\*, Cadv\*



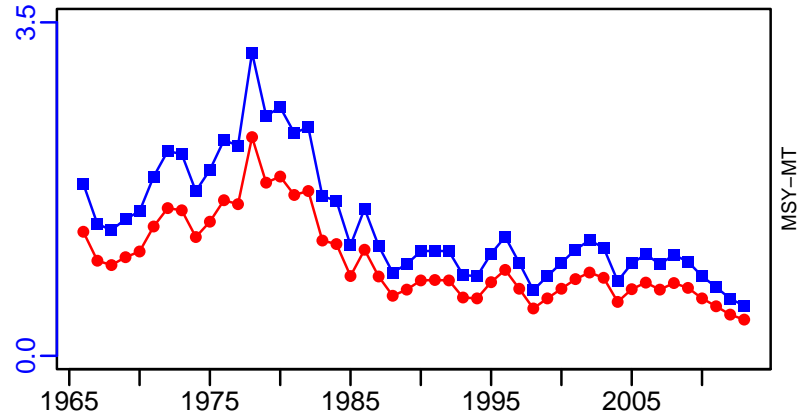
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1966–2013–JPNIMP2016)



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

## Roughscale sole North Pacific [RSSOLENPAC]

Metadata	
<b>Scientific Name</b>	Clidoderma asperrimum
<b>Current Assess ID</b>	FAFRFJ-RSSOLENPAC-1971-2013-JPNIMP2016
<b>Area</b>	North Pacific
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	197		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

Roughscale sole North Pacific [RSSOLENPAC]

TB\*



SSB\*



TN \*



F\*



ER\*



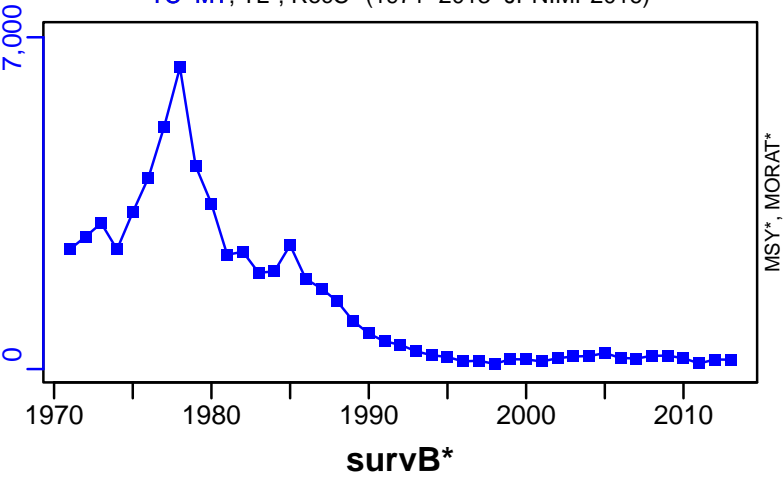
Recruits\*



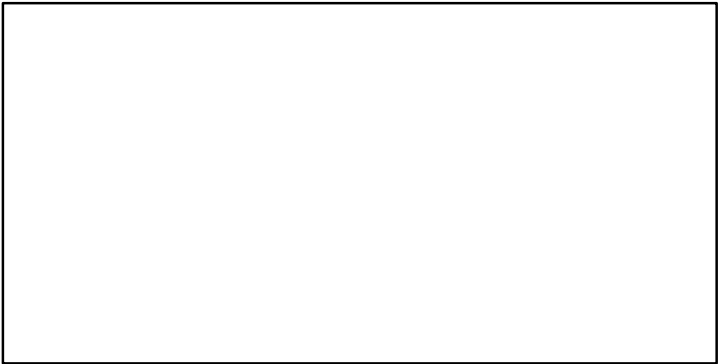
■ Listed time series	- - - Target BRP	— Rec-Est
- - - MSY-based BRP	· · · Lim BRP	* No Data

Roughscale sole North Pacific [RSSOLENPAC]

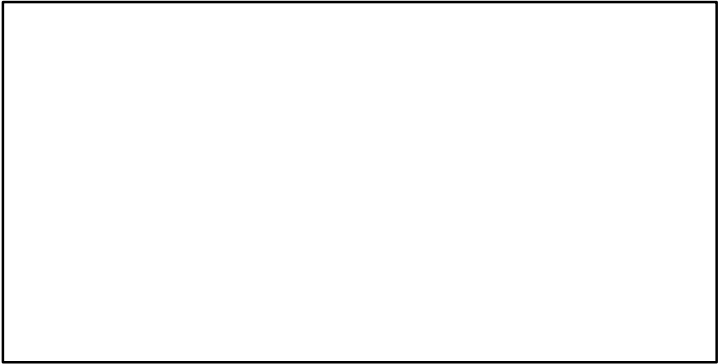
TC-MT, TL\*, RecC\* (1971-2013-JPNIMP2016)



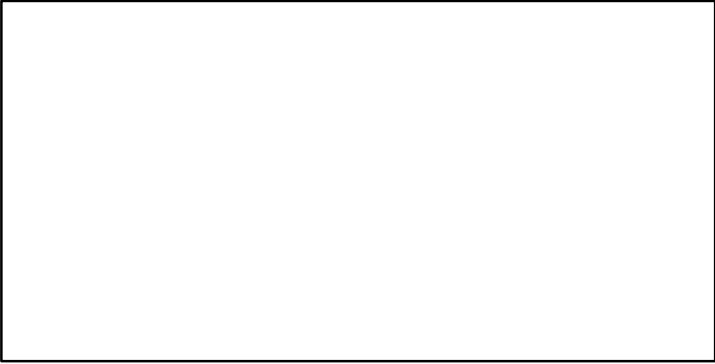
TAC\*, Cpair\*, Cadv\*



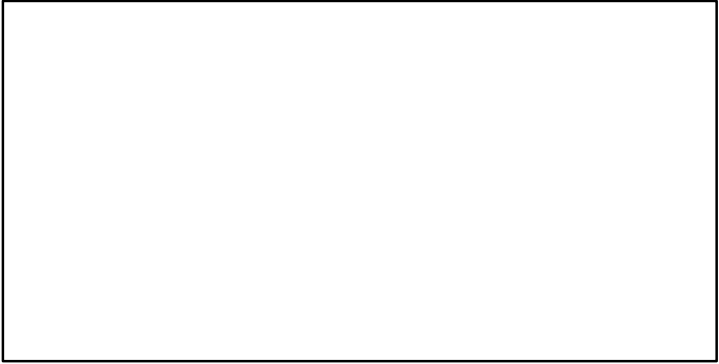
CPUE\*



EFFORT\*



CdivMSY\*



## Pacific saury Northwest Pacific [SAURNWPAC]

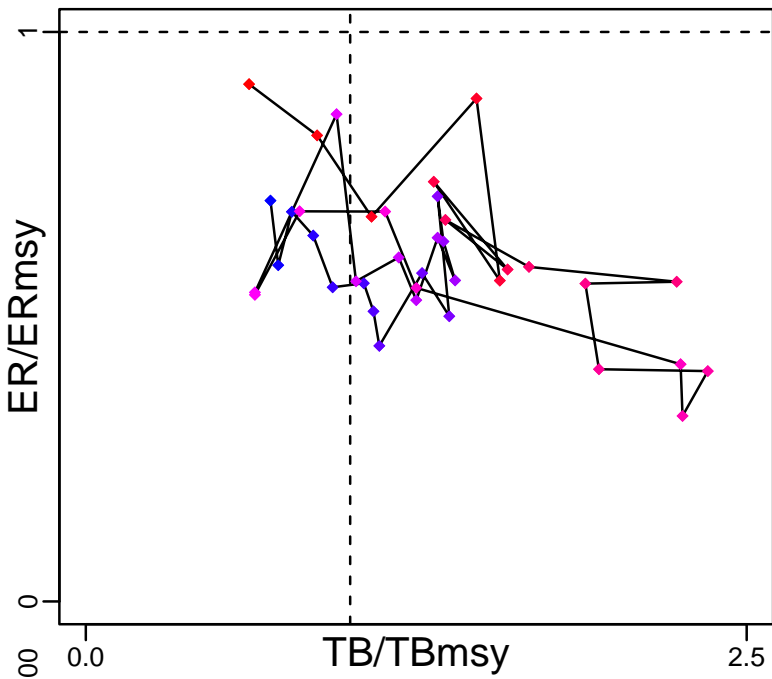
Metadata	
Scientific Name	Cololabis saira
Current Assess ID	NPFC-SAURNWPAC-1950-2018-KUROTA
Area	Northwest Pacific
Management Authority	North Pacific Fisheries Commission
Assessor	North Pacific Fisheries Commission
Asmts in RAM	2018, 2010, 2013

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

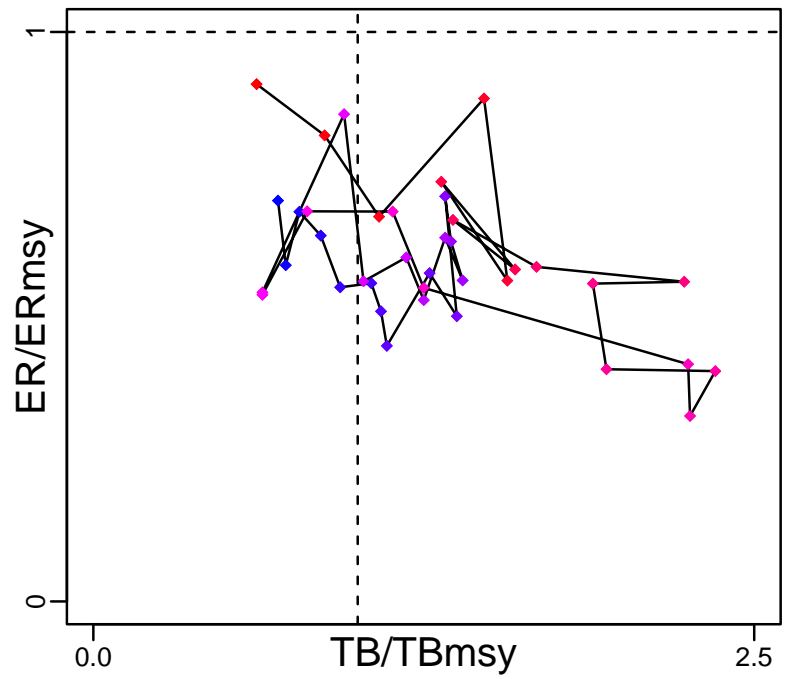
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2018	2,370,522	-	0
SSB	SSB-MT	2013	1,410,000	Both	1
TN	-	-	-	-	-
R	R-E00	2013	$5.27 \times 10^{10}$	-	0
F	F-1/yr	2010	0.264	-	0 to 1
ER	ER-ratio	2018	0.201	-	-
TC	TC-MT	2018	435,351		
TL	-	-	-		
TB/TBmsy	TBdivTBmsy-dimensionless	2018	0.985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

Pacific saury Northwest Pacific [SAURNWPAC]

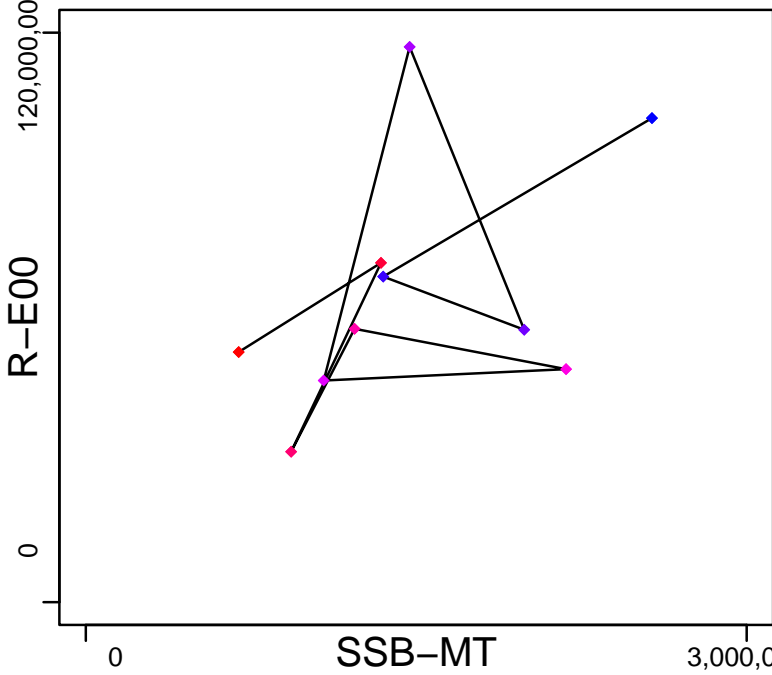
Kobe MSYpref (1950–2018–KUROTA)



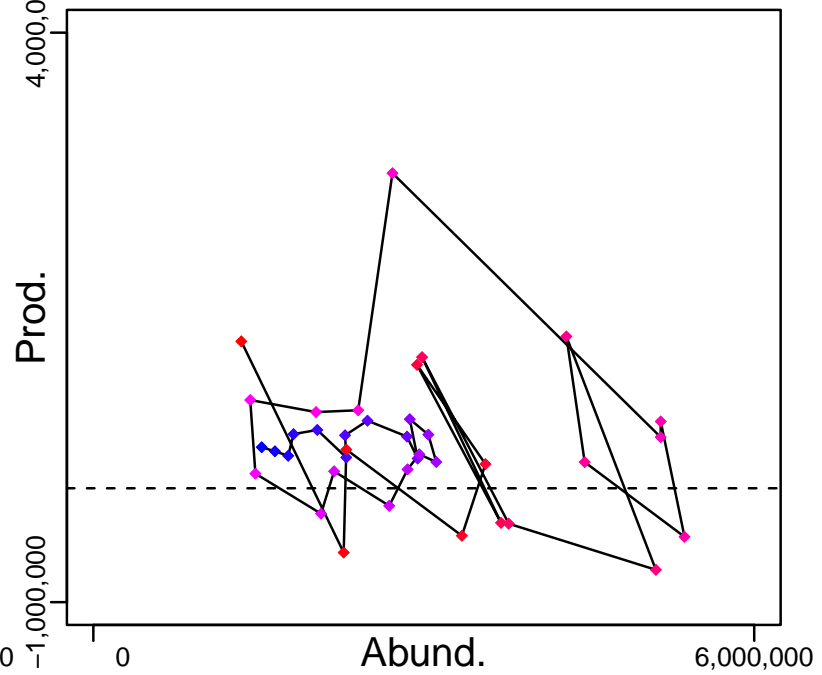
Kobe MGTpref (1950–2018–KUROTA)



Spawner Recruit (1980–2013–JPNIMP2016)



Production (1950–2018–KUROTA)

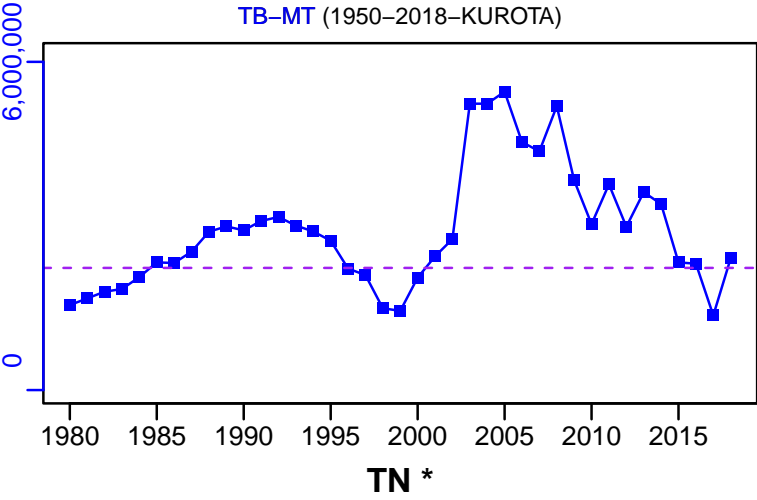


◆ Start Year ◆ End Year \* No Data

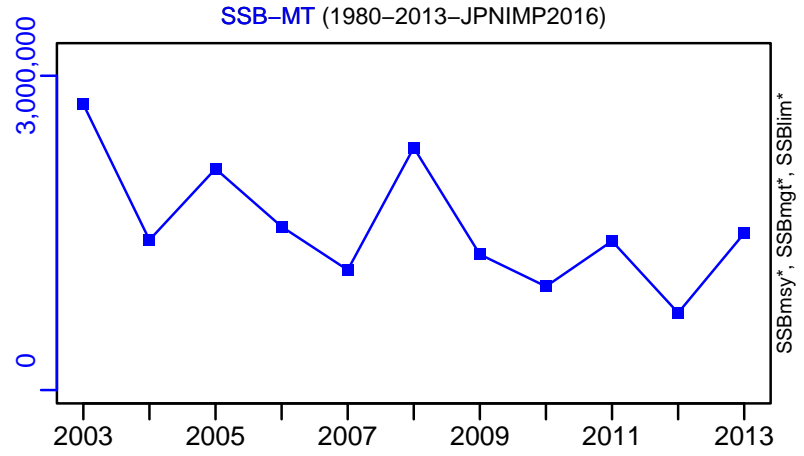


# Pacific saury Northwest Pacific [SAURNWPAC]

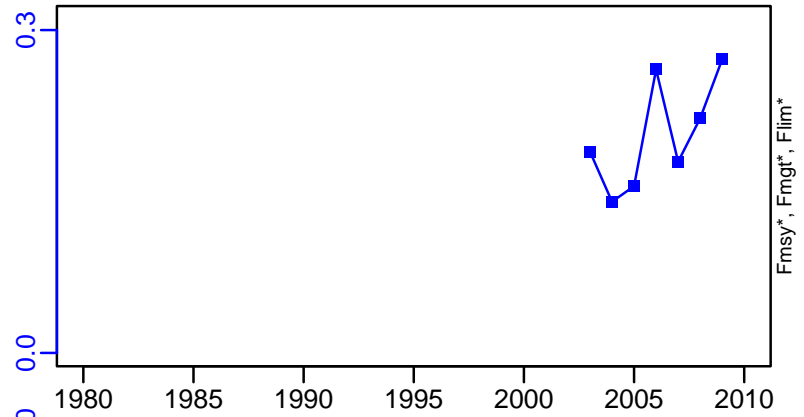
TB-MT (1950-2018-KUROTA)



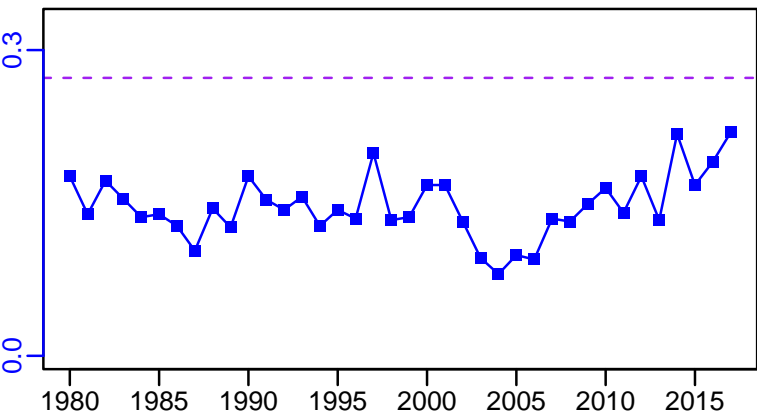
SSB-MT (1980-2013-JPNIMP2016)



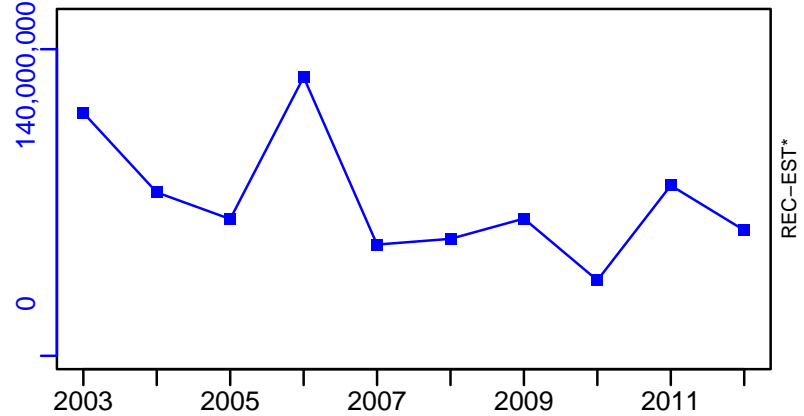
F-1/yr (1980-2010-ONO)



ER-ratio (1950-2018-KUROTA)



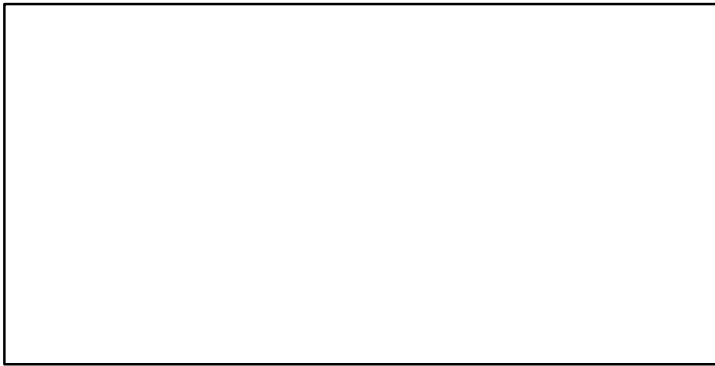
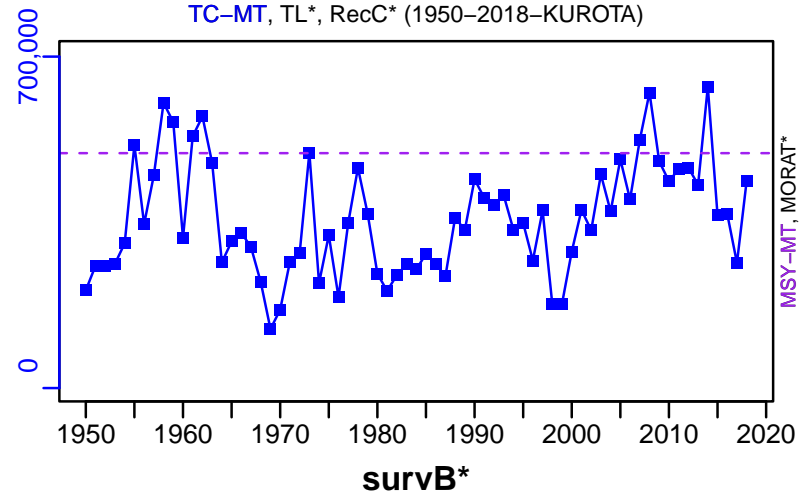
R-E00 (1980-2013-JPNIMP2016)



# Pacific saury Northwest Pacific [SAURNWPAC]

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

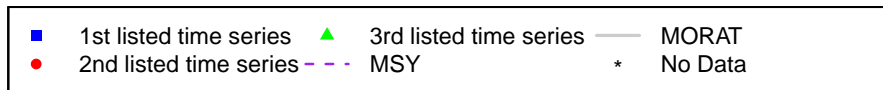
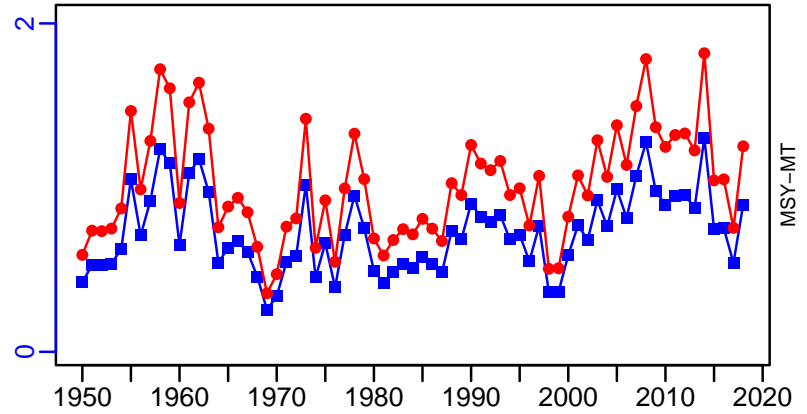
TAC\*, Cpair\*, Cadv\*



EFFORT\*



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



## Shako Ise and Mikawa Bay [SHAKOIMKB]

Metadata	
<b>Scientific Name</b>	Oratosquilla oratoria
<b>Current Assess ID</b>	FAFRFJ-SHAKOIMKB-1970-2013-JPNIMP2016
<b>Area</b>	Ise and Mikawa Bay
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	282		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

TB\*



SSB\*



TN \*



F\*



ER\*

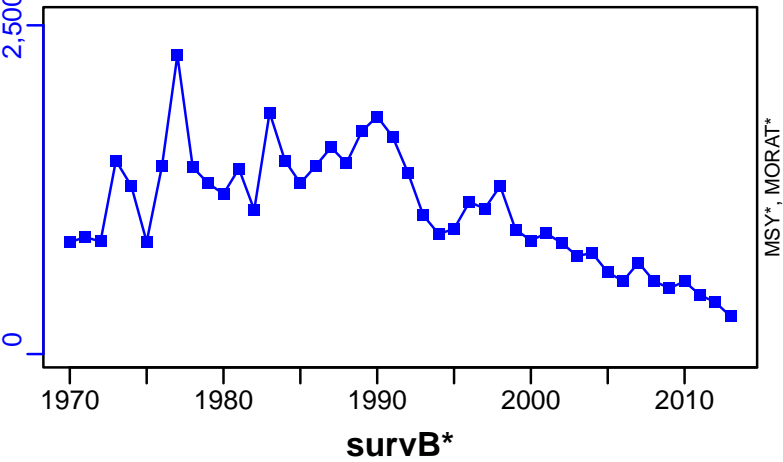


Recruits\*



Shako Ise and Mikawa Bay [SHAKOIMKB]

TC-MT, TL\*, RecC\* (1970-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Snow crab Sea of Japan East [SNOWCRABESJ]

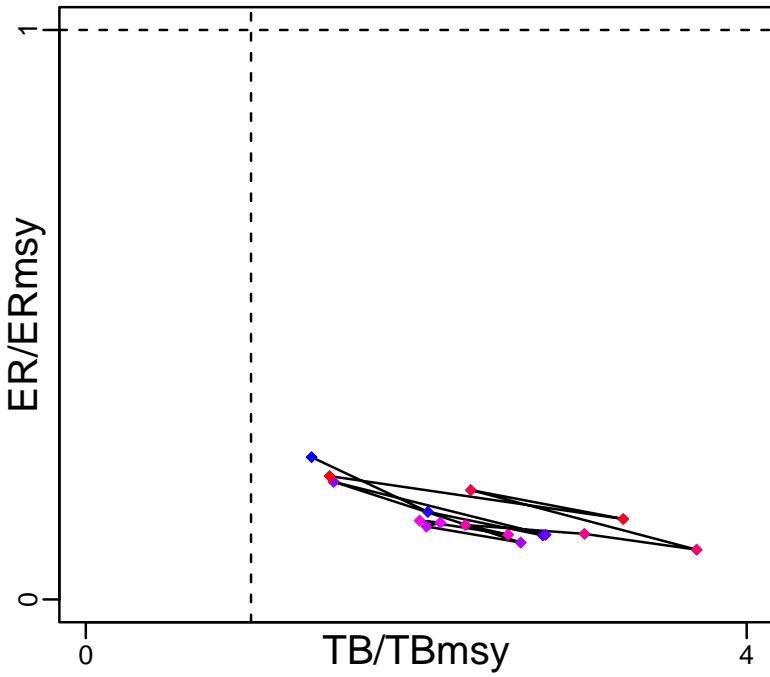
Metadata	
<b>Scientific Name</b>	Chionoecetes opilio
<b>Current Assess ID</b>	FAFRFJ-SNOWCRABESJ-1998-2014-JPNIMP2016
<b>Area</b>	Sea of Japan East
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2014

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2014	1193
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2014	0.695
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-calc-MT	2014	829
<b>M</b>	M-1/yr	2014	0.35
<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>	TB-MT	2014	3280	-	6
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2014	0.151	-	-
<b>TC</b>	TC-MT	2014	265		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2014	2.749		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2014	0.217		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

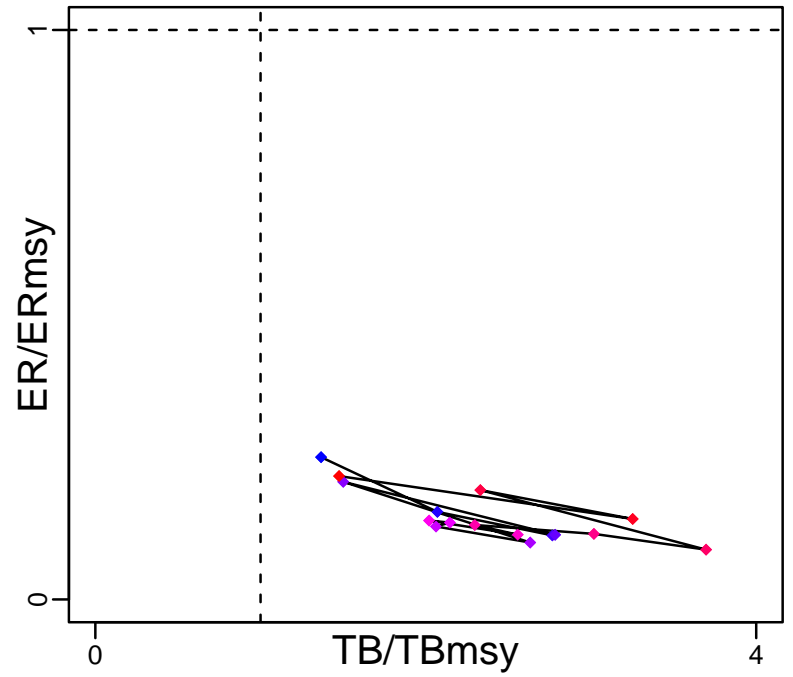
# Snow crab Sea of Japan East [SNOWCRABESJ]

Kobe MSYpref (1998–2014–JPNIMP2016)

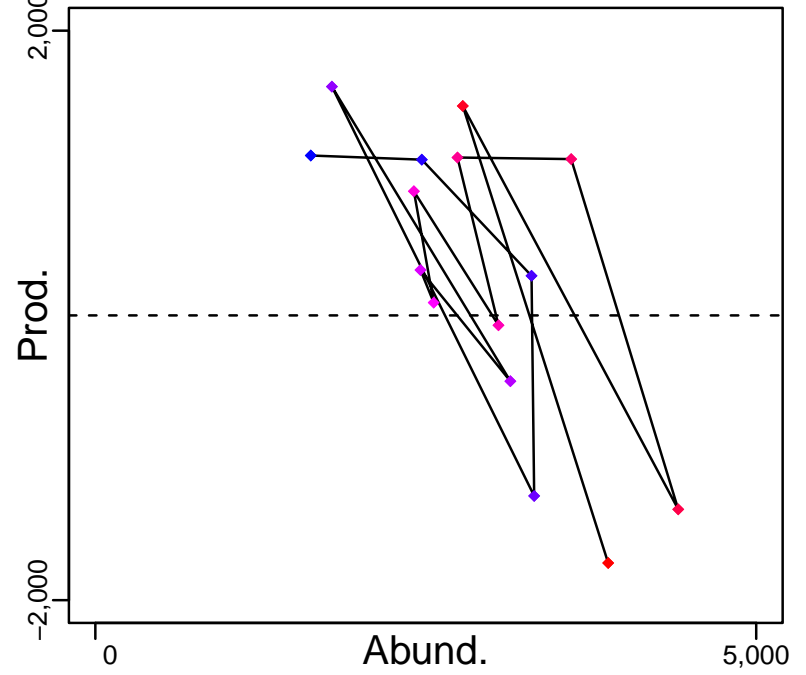


Spawner Recruit\*

Kobe MGTpref (1998–2014–JPNIMP2016)



Production (1998–2014–JPNIMP2016)



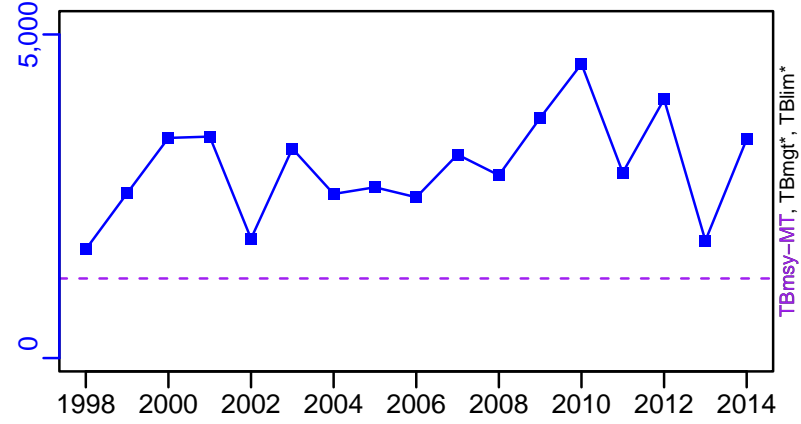
◆ Start Year ◆ End Year \* No Data



# Snow crab Sea of Japan East [SNOWCRABESJ]

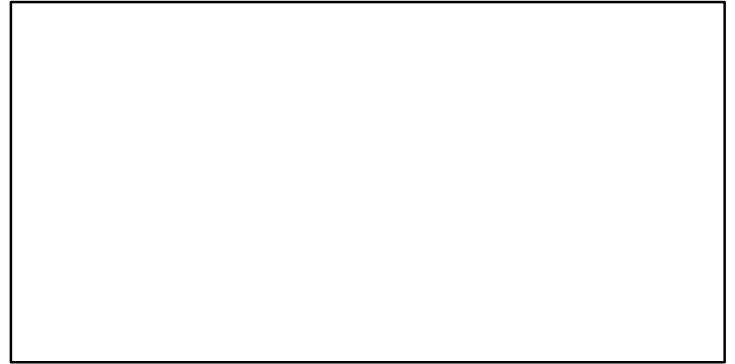
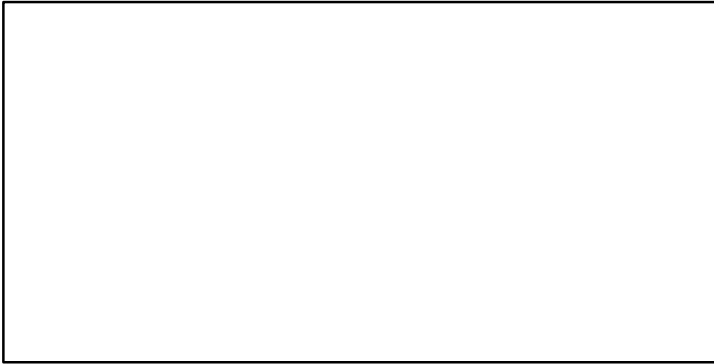
TB-MT (1998-2014-JPNIMP2016)

SSB\*



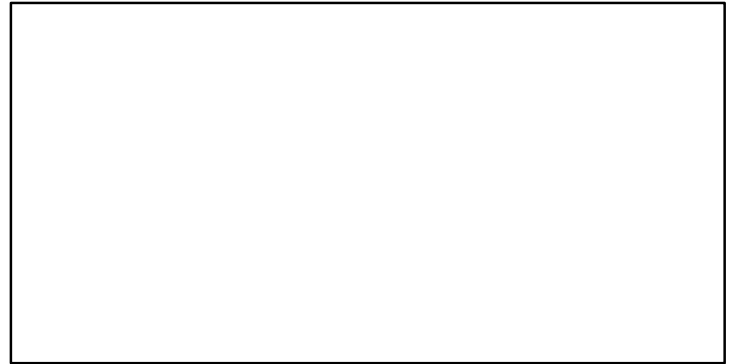
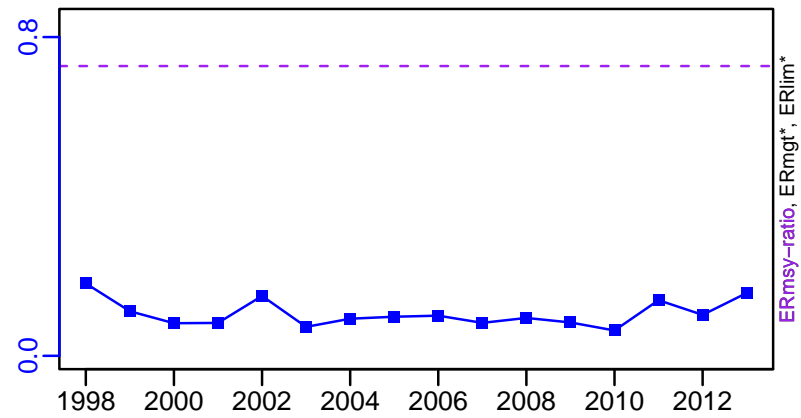
TN \*

F\*



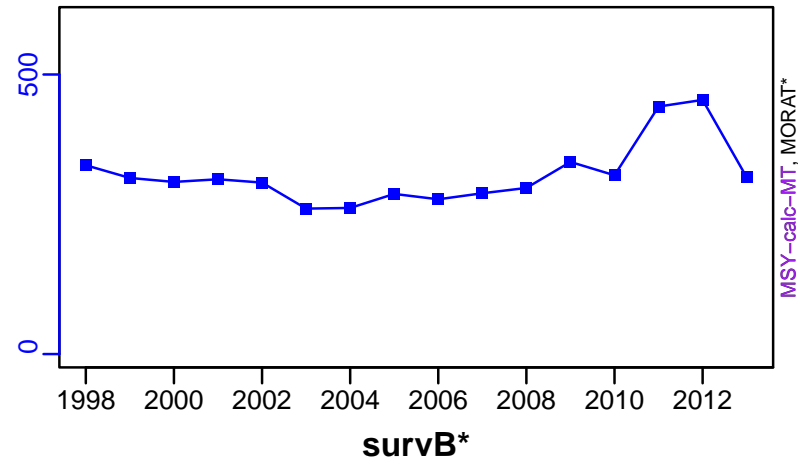
ER-calc-ratio (1998-2014-JPNIMP2016)

Recruits\*



# Snow crab Sea of Japan East [SNOWCRABESJ]

TC-MT, TL\*, RecC\* (1998–2014–JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



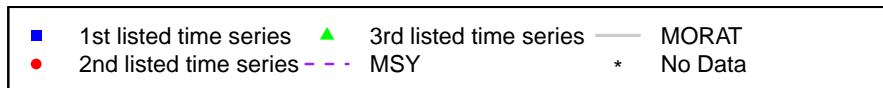
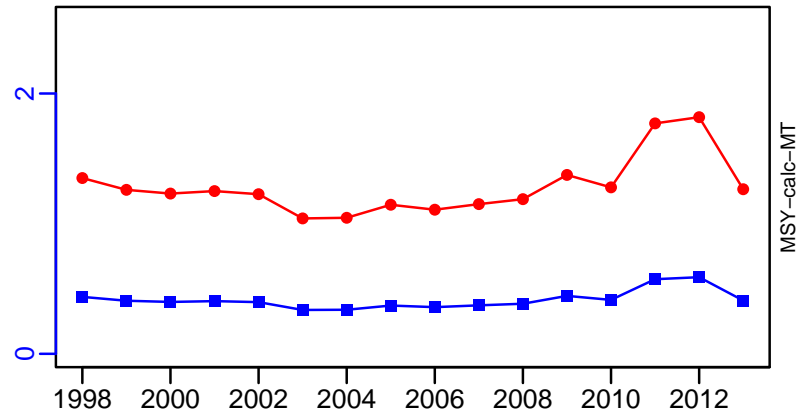
CPUE\*



EFFORT\*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1998–2014–JPNIMP2016)



## Snow crab Hokkaido [SNOWCRABHOKK]

Metadata	
<b>Scientific Name</b>	Chionoecetes opilio
<b>Current Assess ID</b>	FAFRFJ-SNOWCRABHOKK-1986-2013-JPNIMP2016
<b>Area</b>	Hokkaido
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2013	0.35
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	29		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

Snow crab Hokkaido [SNOWCRABHOKK]

TB\*



SSB\*



TN \*



F\*



ER\*



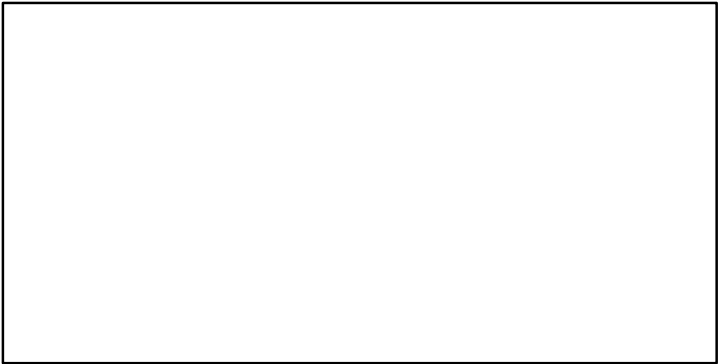
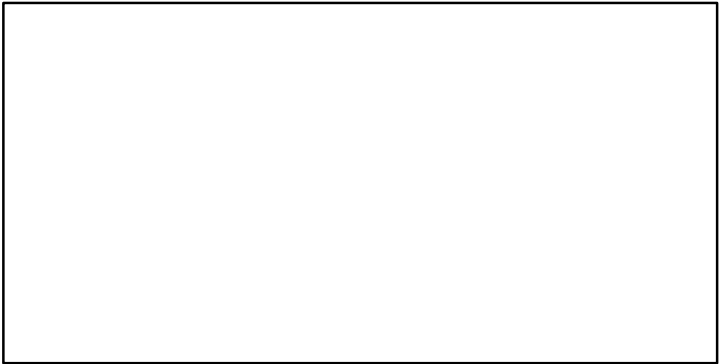
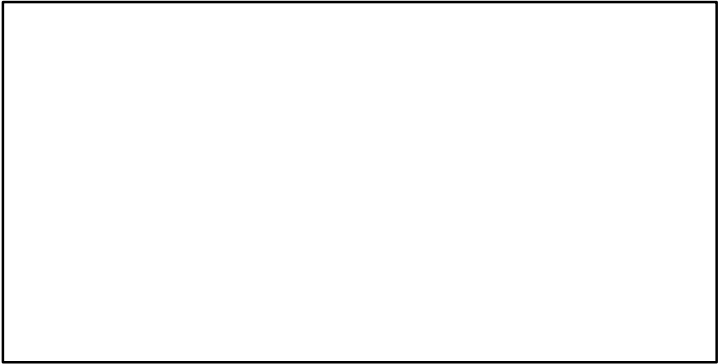
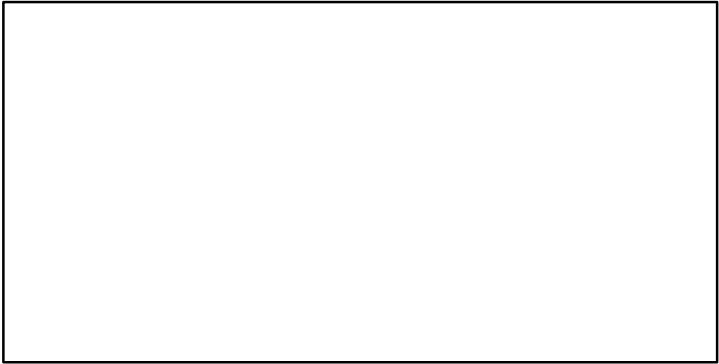
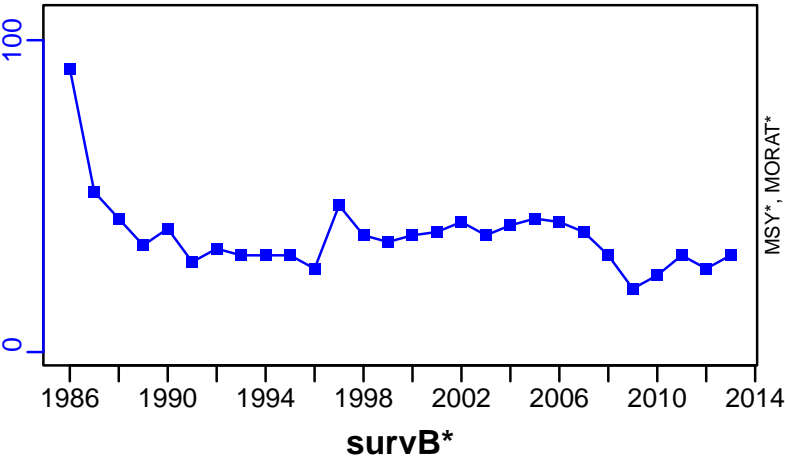
Recruits\*



Snow crab Hokkaido [SNOWCRABHOKK]

TC-MT, TL\*, RecC\* (1986-2013-JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



## Snow crab North Pacific [SNOWCRABNPAC]

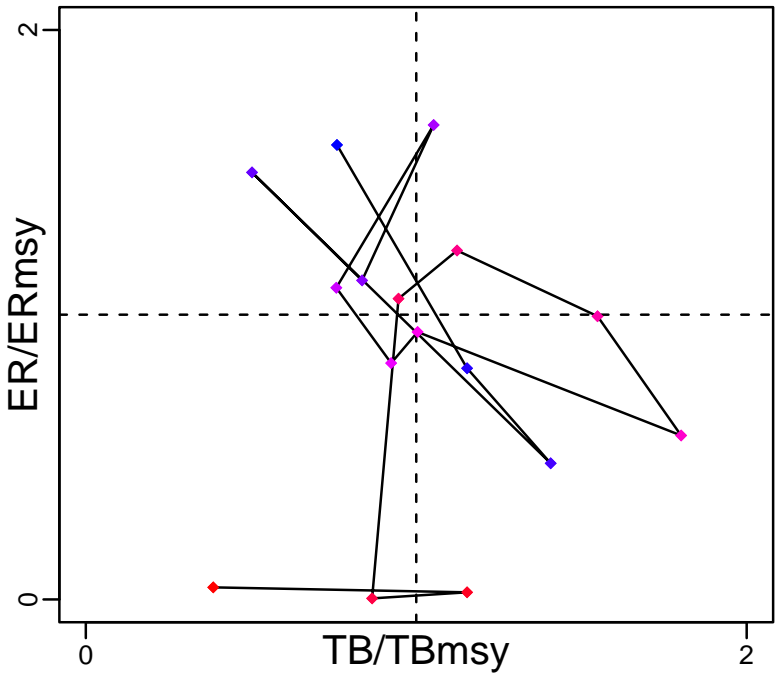
Metadata	
<b>Scientific Name</b>	Chionoecetes opilio
<b>Current Assess ID</b>	FAFRFJ-SNOWCRABNPAC-1992-2013-JPNIMP2016
<b>Area</b>	North Pacific
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2013	988
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.161
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-calc-MT	2013	159
<b>M</b>	M-1/yr	2013	0.35
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

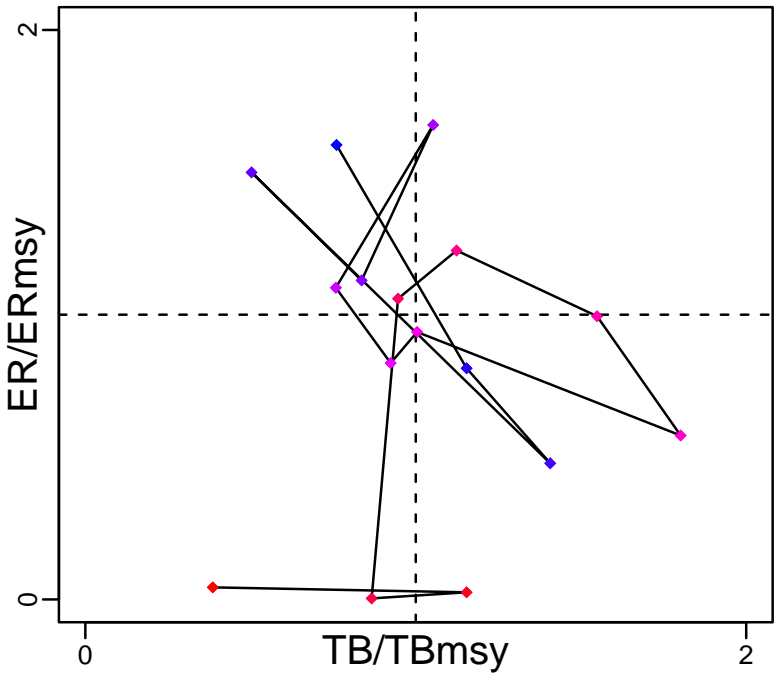
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	381	-	7
<b>SSB</b>	SSB-MT	2013	83	Females	8
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	2,620,000	-	7
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.007	-	-
<b>TC</b>	TC-MT	2013	2.6		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2013	0.386		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	0.042		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Snow crab North Pacific [SNOWCRABNPAC]

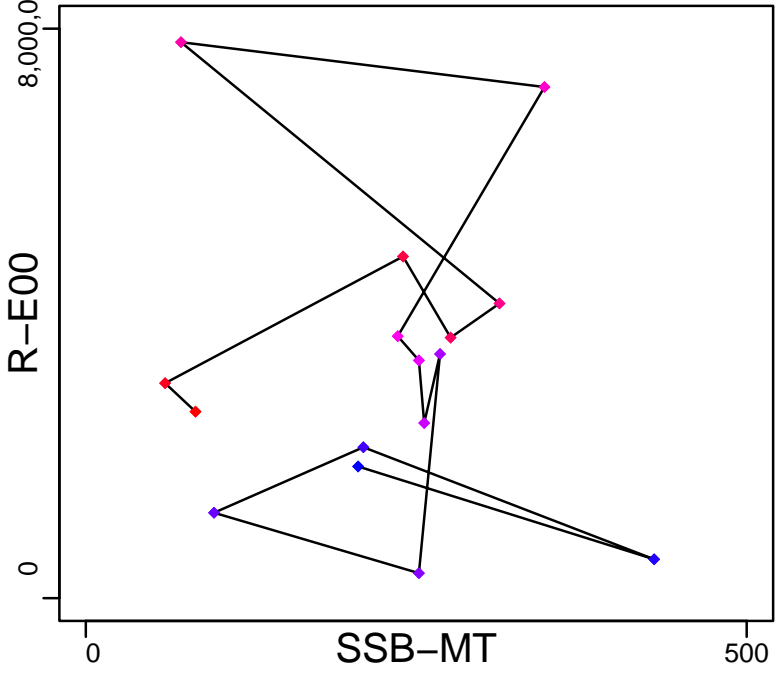
Kobe MSYpref (1992–2013–JPNIMP2016)



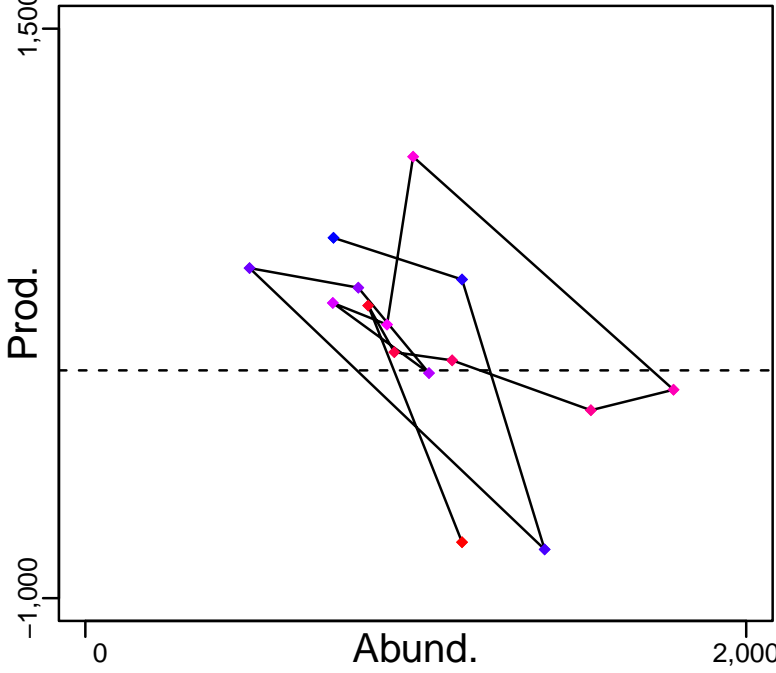
Kobe MGTpref (1992–2013–JPNIMP2016)



Spawner Recruit (1992–2013–JPNIMP2016)



Production (1992–2013–JPNIMP2016)

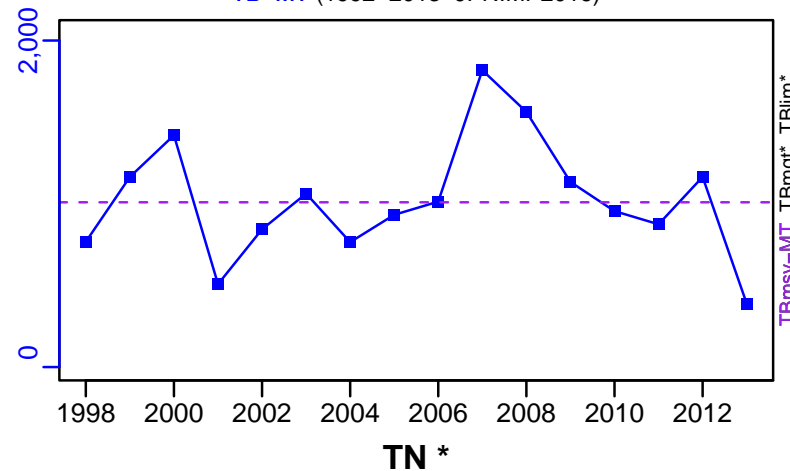


◆ Start Year ◆ End Year \* No Data

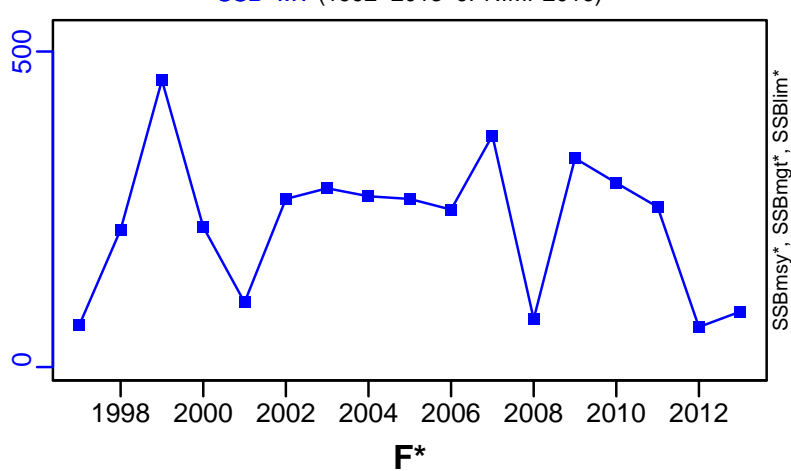


# Snow crab North Pacific [SNOWCRABNPAC]

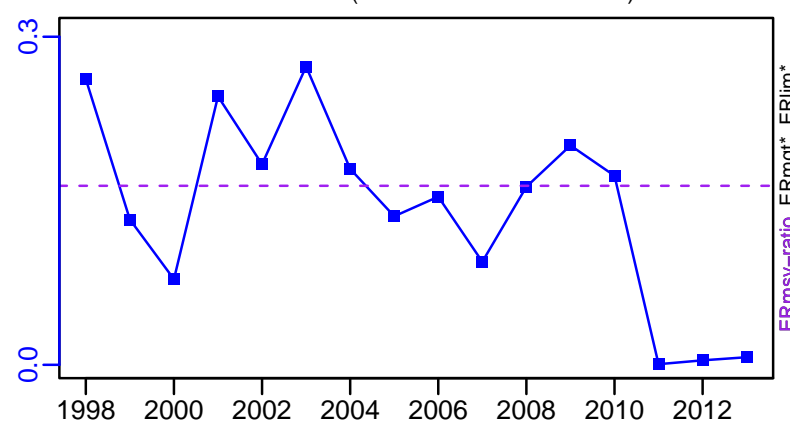
TB-MT (1992-2013-JPNIMP2016)



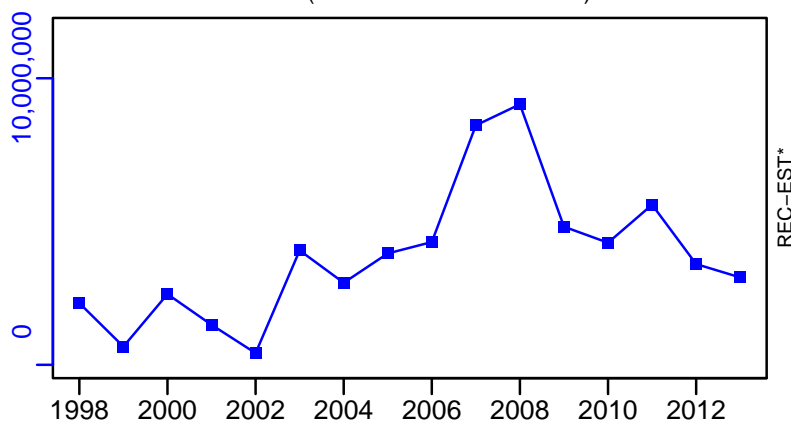
SSB-MT (1992-2013-JPNIMP2016)



ER-calc-ratio (1992-2013-JPNIMP2016)

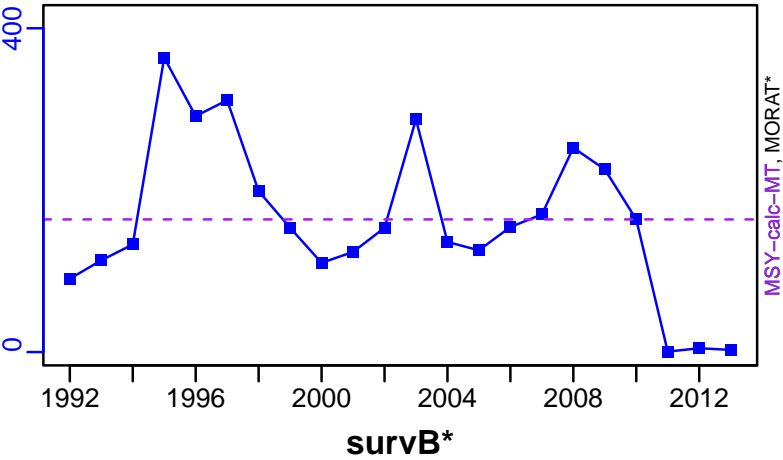


R-E00 (1992-2013-JPNIMP2016)



Snow crab North Pacific [SNOWCRABNPAC]

TC-MT, TL\*, RecC\* (1992-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



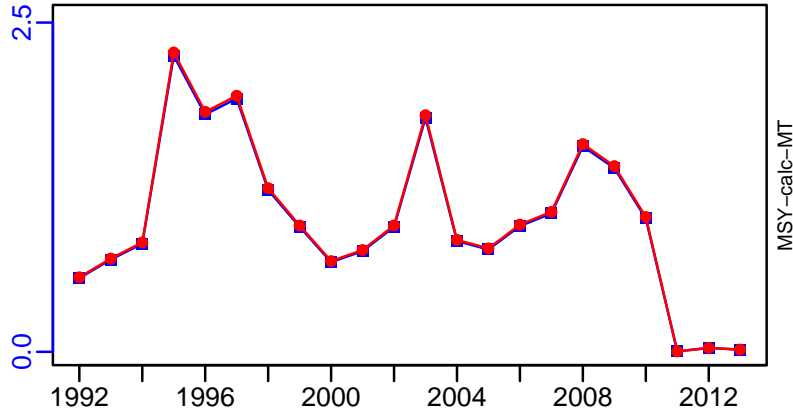
CPUE\*



EFFORT\*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1992-2013-JPNIMP2016)

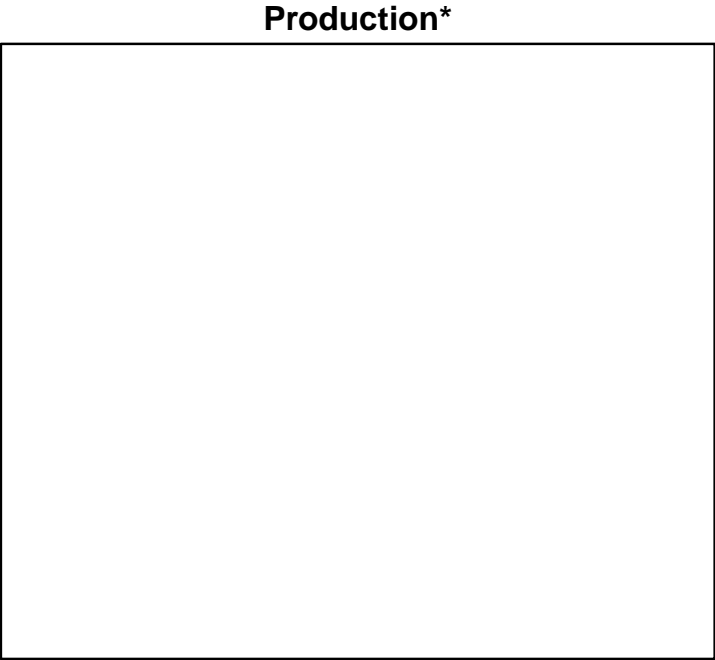
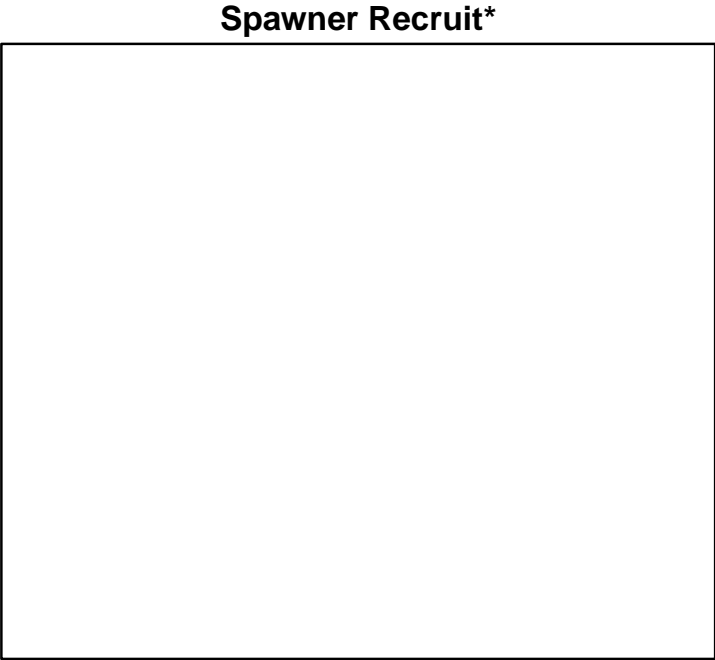
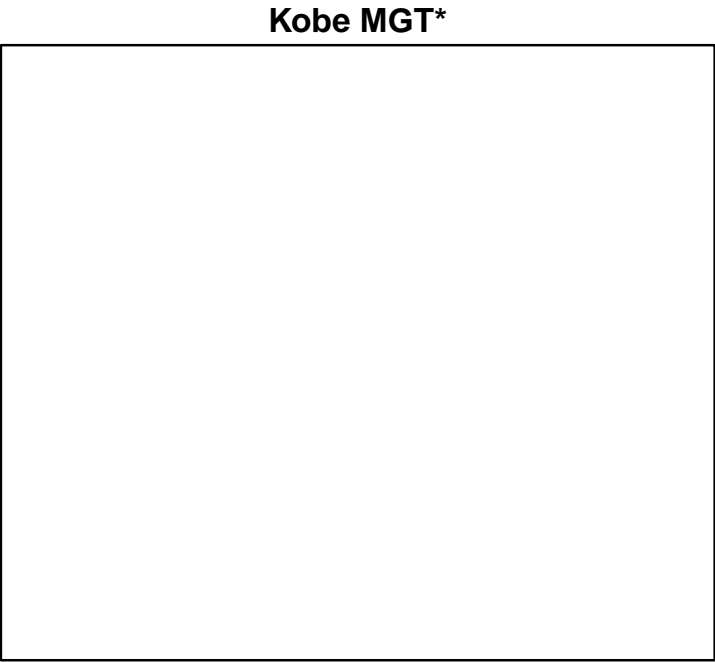
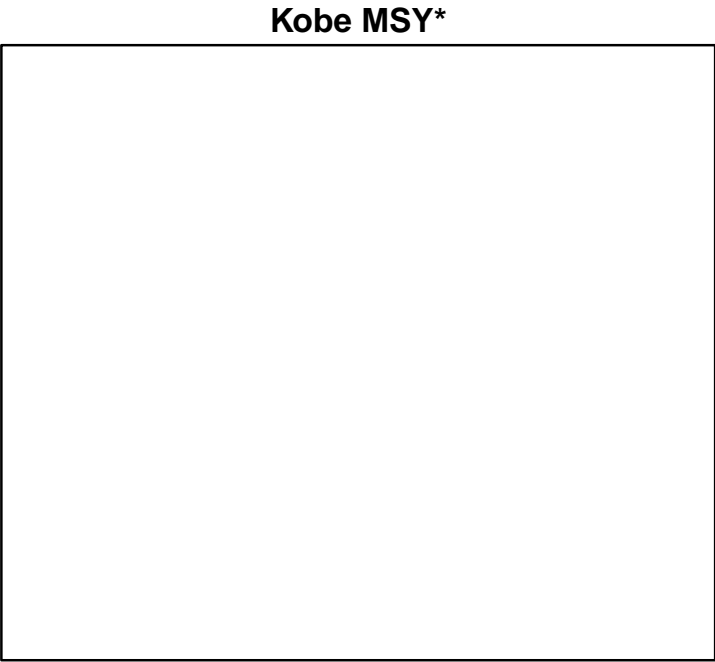


## Snow crab Okhotsk Sea [SNOWCRABOKS]

Metadata	
<b>Scientific Name</b>	Chionoecetes opilio
<b>Current Assess ID</b>	FAFRFJ-SNOWCRABOKS-1985-2013-JPNIMP2016
<b>Area</b>	Okhotsk Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2013	0.35
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	322		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



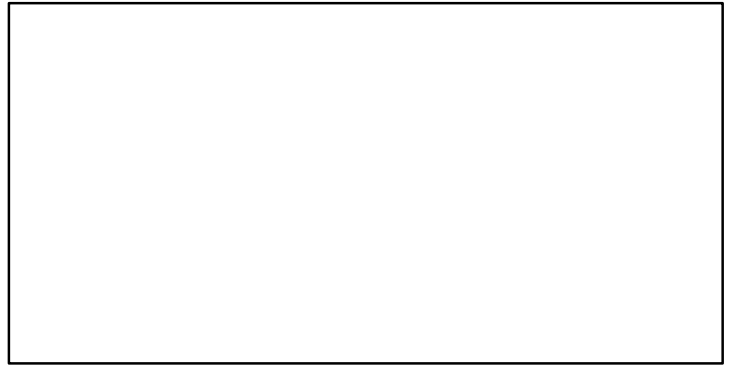
◆ Start Year   ◆ End Year   \* No Data

Snow crab Okhotsk Sea [SNOWCRABOKS]

**TB\***



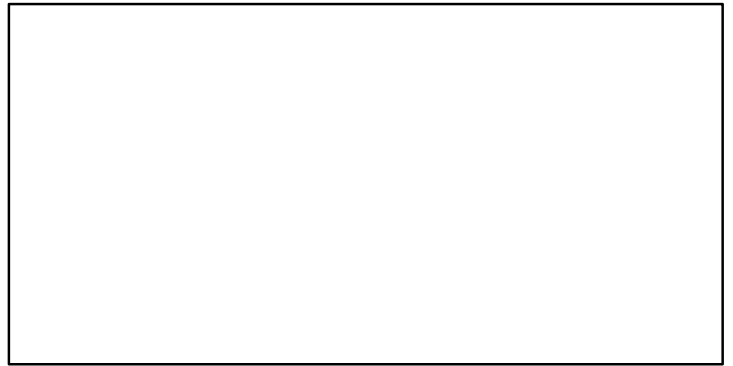
**SSB\***



**TN \***



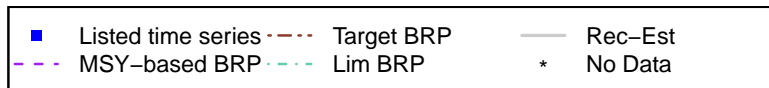
**F\***



**ER\***



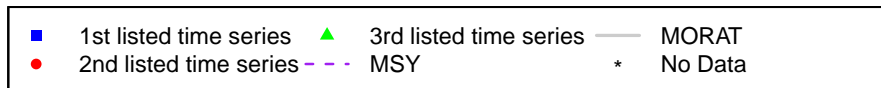
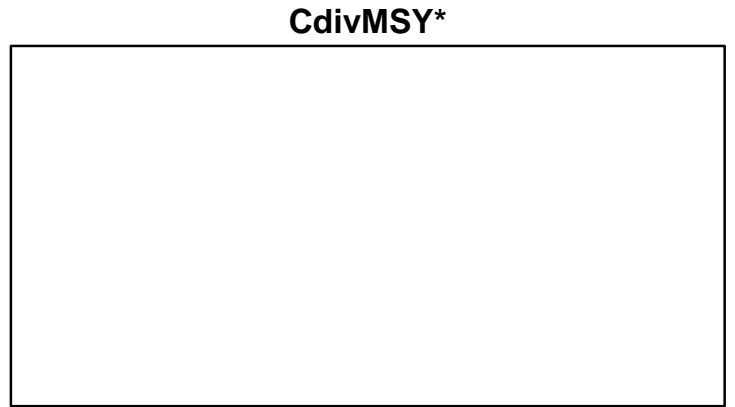
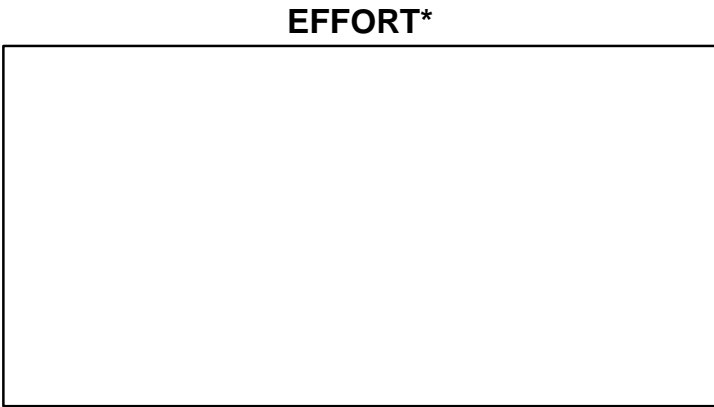
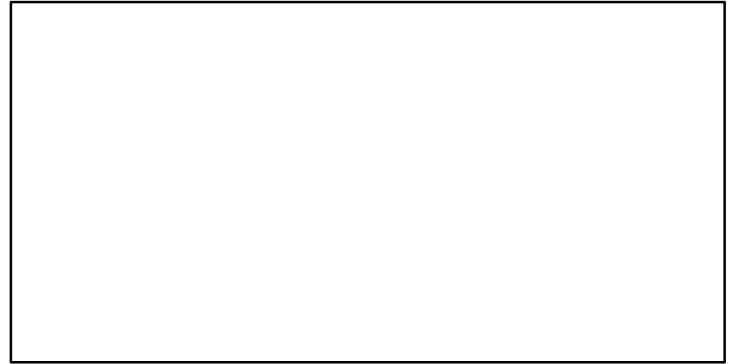
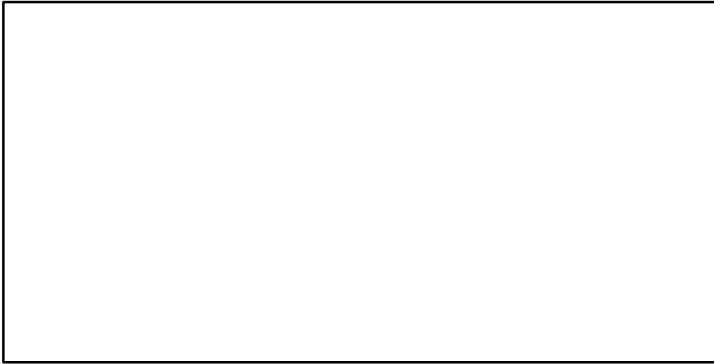
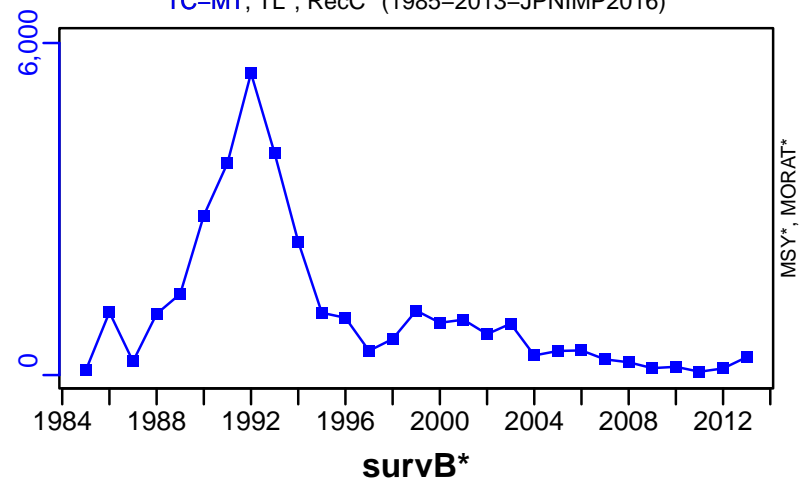
**Recruits\***



# Snow crab Okhotsk Sea [SNOWCRABOKS]

TC-MT, TL\*, RecC\* (1985–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



## Snow crab Sea of Japan West [SNOWCRABWSJ]

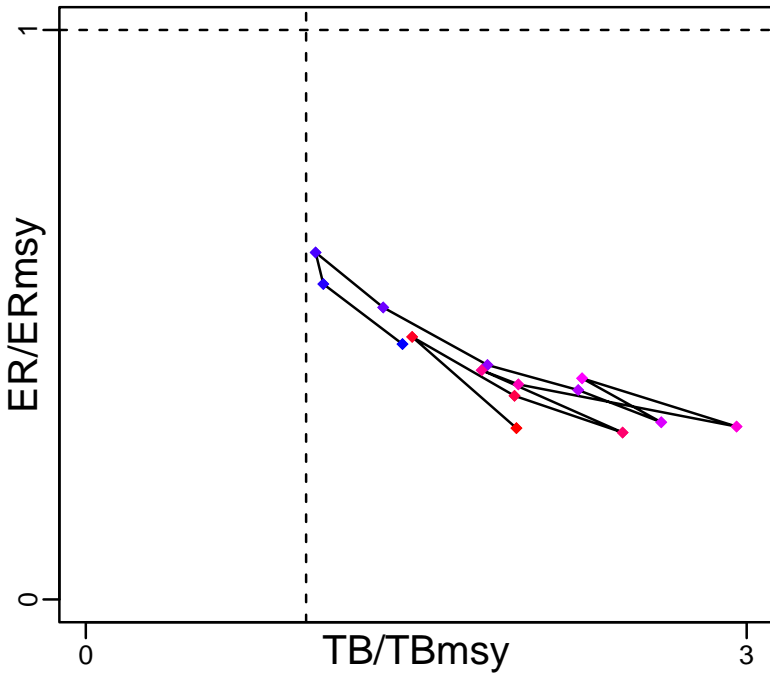
Metadata	
<b>Scientific Name</b>	Chionoecetes opilio
<b>Current Assess ID</b>	FAFRFJ-SNOWCRABWSJ-1999-2015-JPNIMP2016
<b>Area</b>	Sea of Japan West
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2015	11,408
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2015	0.48
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-calc-MT	2015	5476
<b>M</b>	M-1/yr	2015	0.35
<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>	TB-MT	2015	14,700	-	6
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2015	0.144	-	-
<b>TC</b>	TC-MT	2015	3220		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2015	1.289		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2015	0.301		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

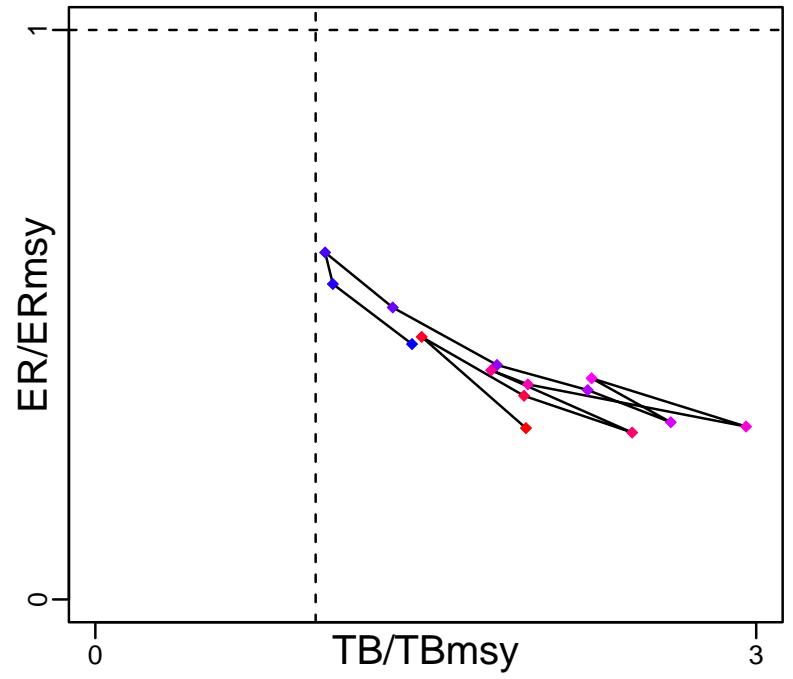
# Snow crab Sea of Japan West [SNOWCRABWSJ]

Kobe MSYpref (1999–2015–JPNIMP2016)

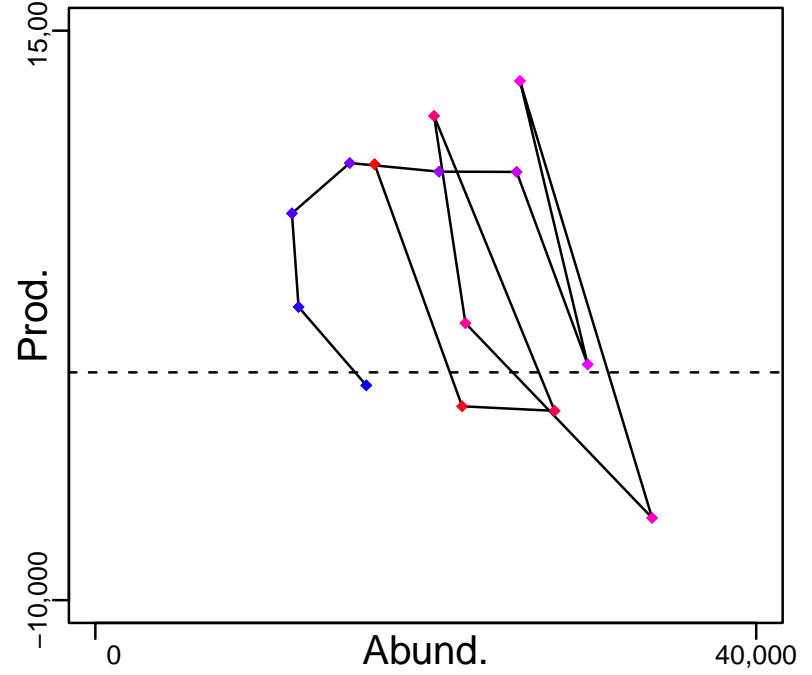


Spawner Recruit\*

Kobe MGTpref (1999–2015–JPNIMP2016)



Production (1999–2015–JPNIMP2016)



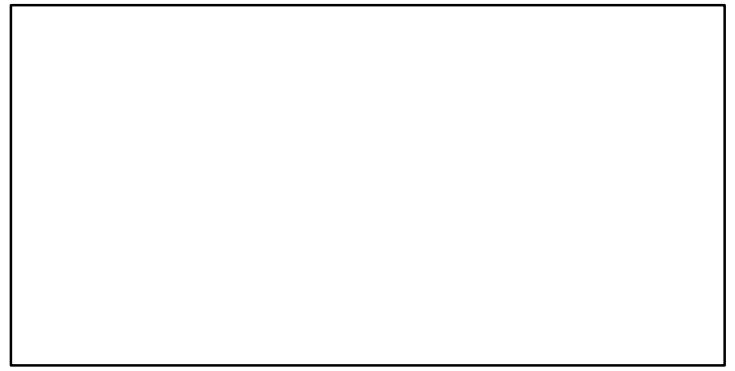
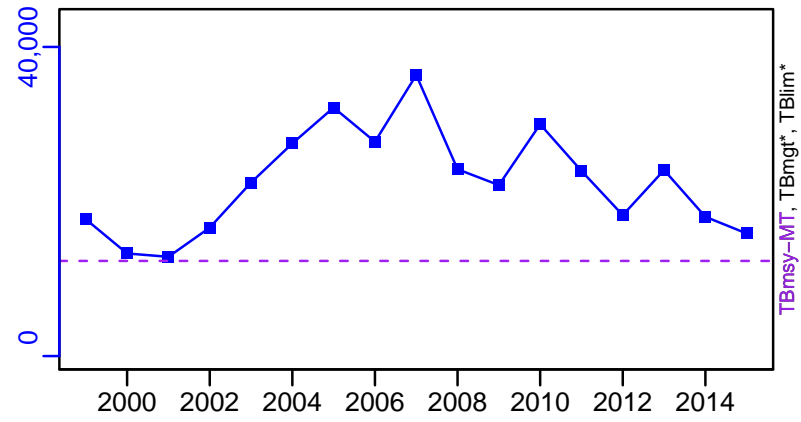
◆ Start Year ◆ End Year \* No Data



# Snow crab Sea of Japan West [SNOWCRABWSJ]

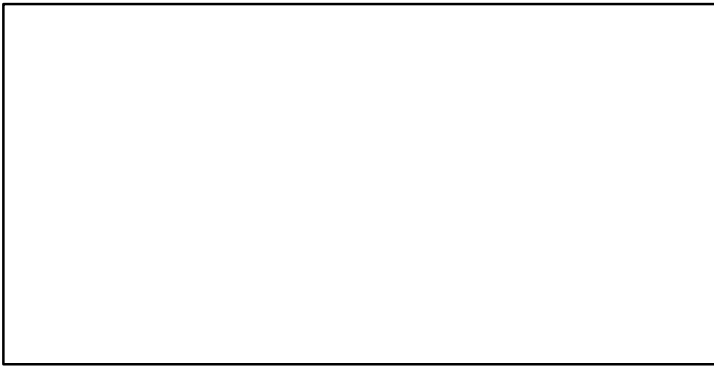
TB-MT (1999-2015-JPNIMP2016)

SSB\*



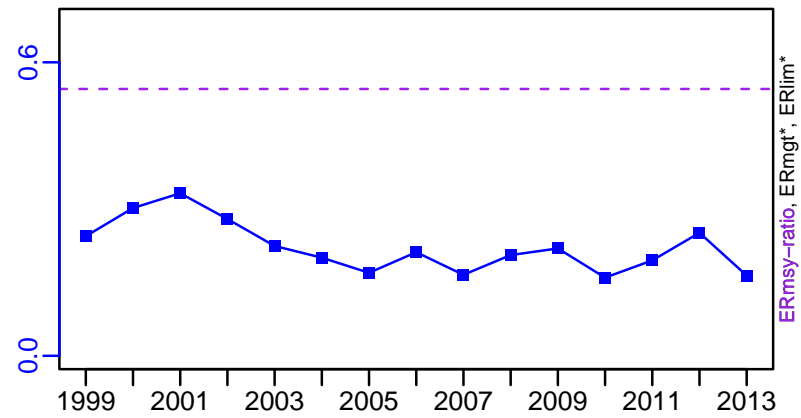
TN \*

F\*



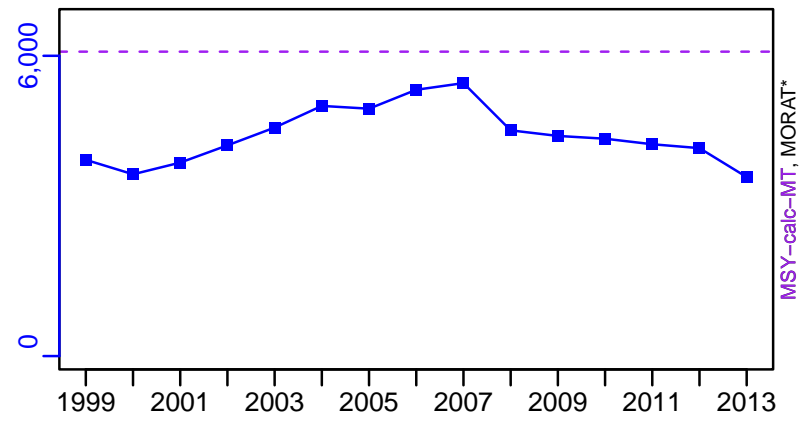
ER-calc-ratio (1999-2015-JPNIMP2016)

Recruits\*



# Snow crab Sea of Japan West [SNOWCRABWSJ]

TC-MT, TL\*, RecC\* (1999–2015–JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



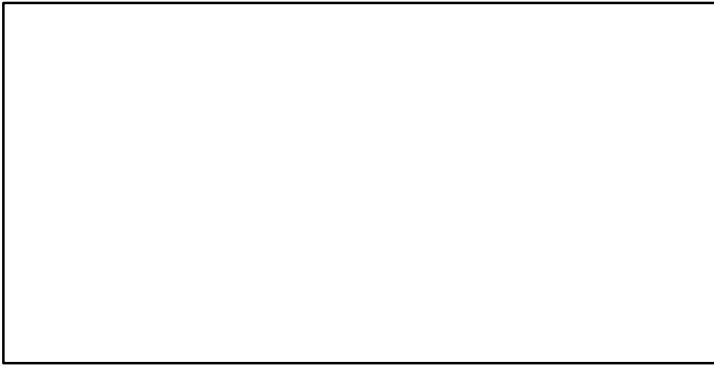
survB\*



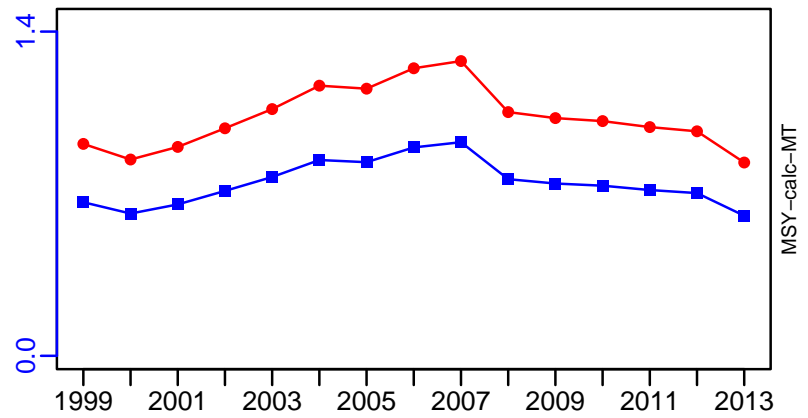
CPUE\*



EFFORT\*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1999–2015–JPNIMP2016)



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

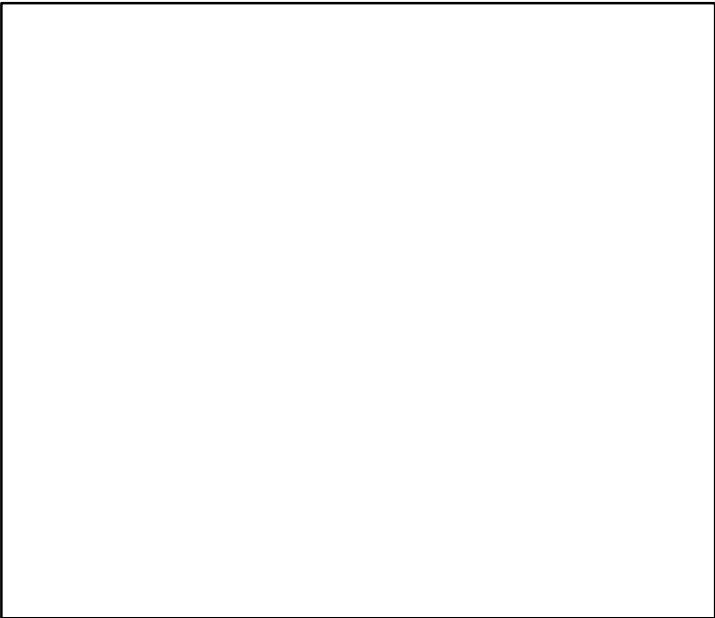
## Japanese Spanish mackerel East China Sea [SPANMACKECS]

Metadata	
<b>Scientific Name</b>	Scomberomorus niphonius
<b>Current Assess ID</b>	FAFRFJ-SPANMACKECS-1984-2013-JPNIMP2016
<b>Area</b>	East China Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	12,200		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

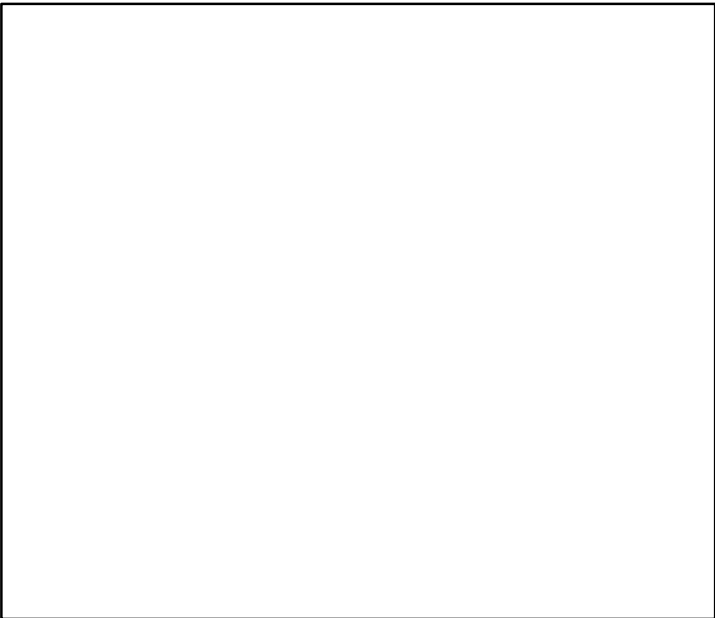
Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

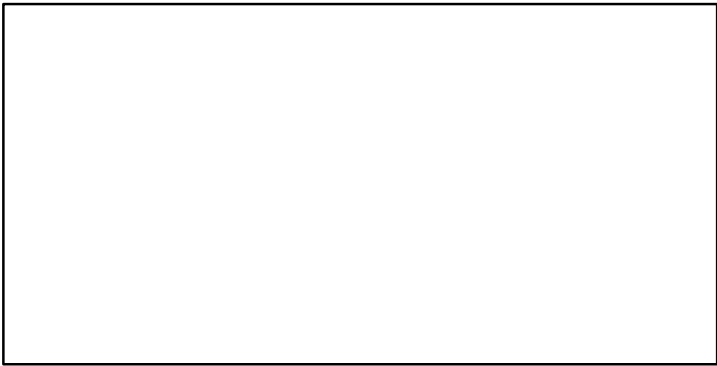
TB\*



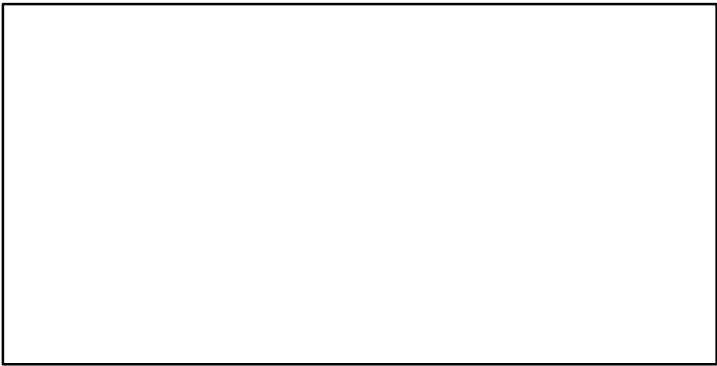
SSB\*



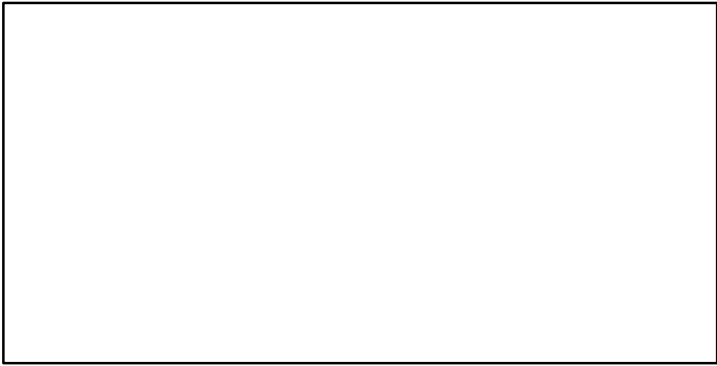
TN \*



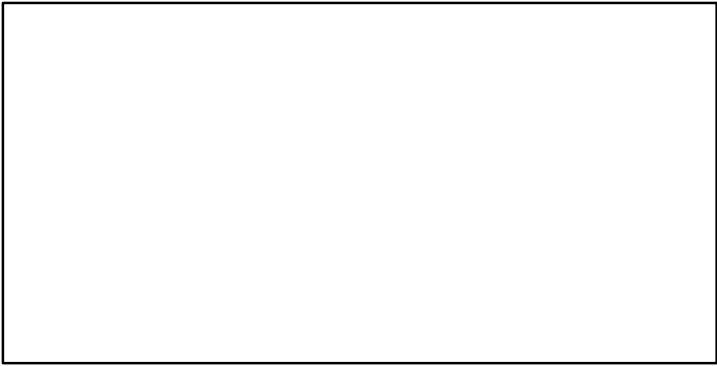
F\*



ER\*

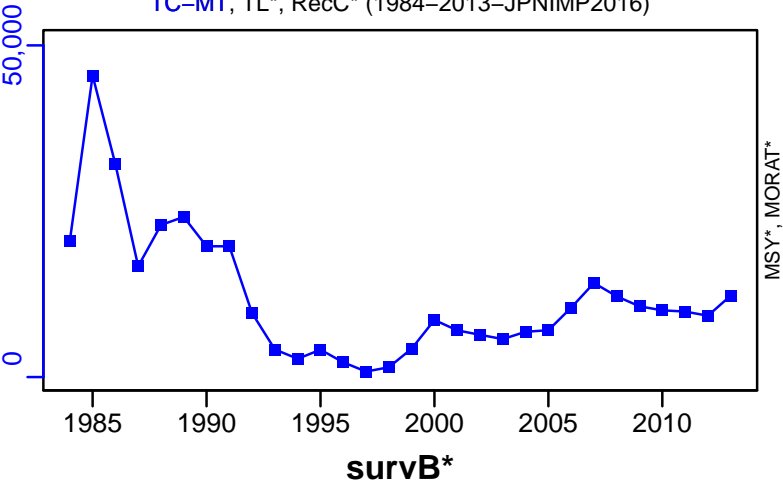


Recruits\*



Japanese Spanish mackerel East China Sea [SPANMACK ECS]

TC-MT, TL\*, RecC\* (1984-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Japanese Spanish mackerel Inland Sea of Japan [SPANMACKSETO]

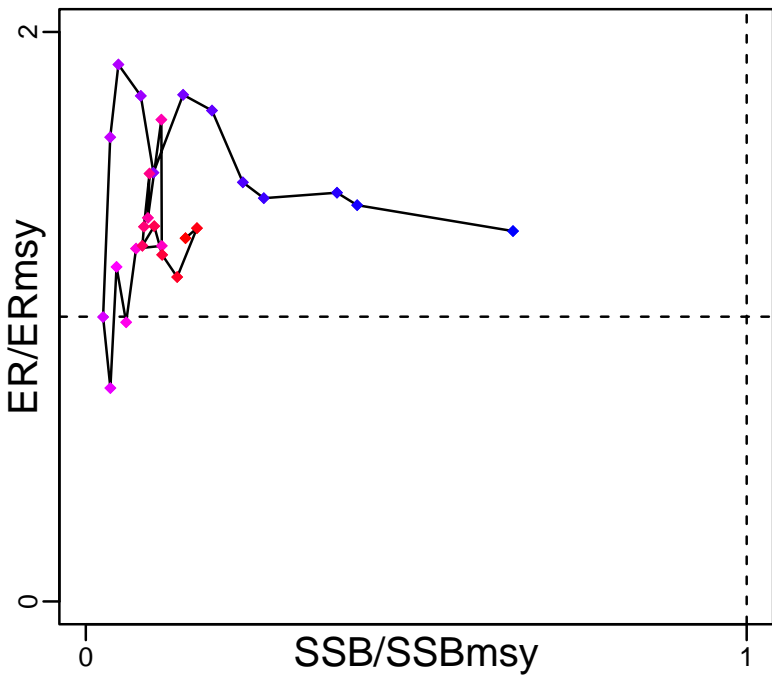
Metadata	
<b>Scientific Name</b>	Scomberomorus niphonius
<b>Current Assess ID</b>	FAFRFJ-SPANMACKSETO-1987-2013-JPNIMP2016
<b>Area</b>	Inland Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2010, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	24,474
<b>SSBmsy</b>	SSBmsy-MT	2013	16,707
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.283
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	6926
<b>M</b>	M-1/yr	2013	0.3
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2010	3979
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

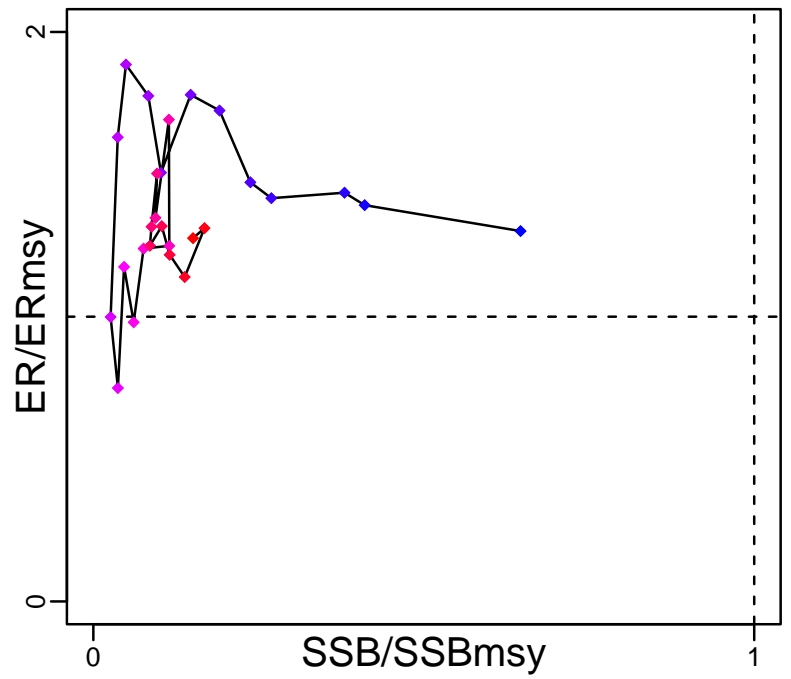
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	4930	-	0
<b>SSB</b>	SSB-MT	2013	2520	Both	1
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	1,410,000	-	0
<b>F</b>	F-1/yr	2010	0.93	-	0 to 5
<b>ER</b>	ER-calc-ratio	2013	0.361	-	-
<b>TC</b>	TC-MT	2013	1780		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.201		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	0.151		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	1.276		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Japanese Spanish mackerel Inland Sea of Japan [SPANMACKSETO]

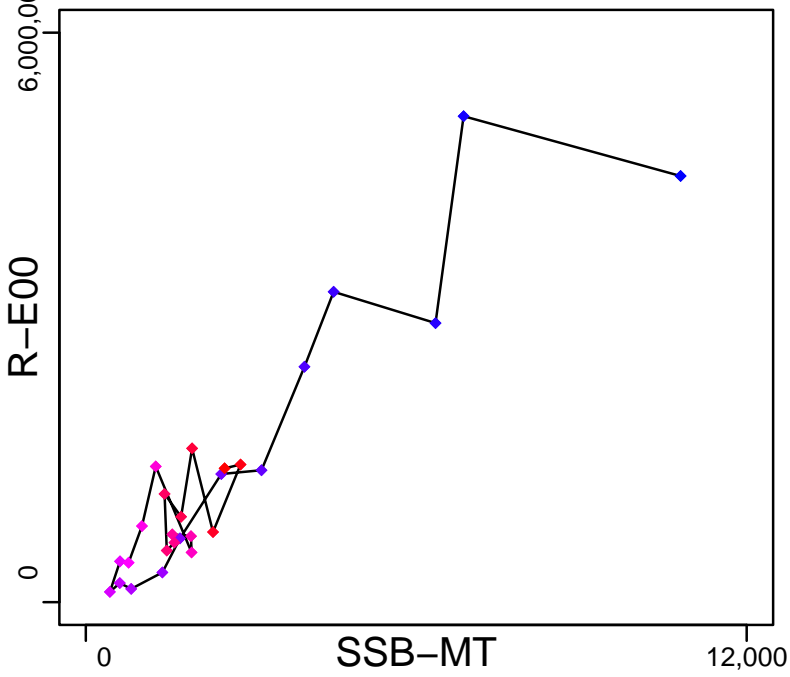
Kobe MSYpref (1987–2013–JPNIMP2016)



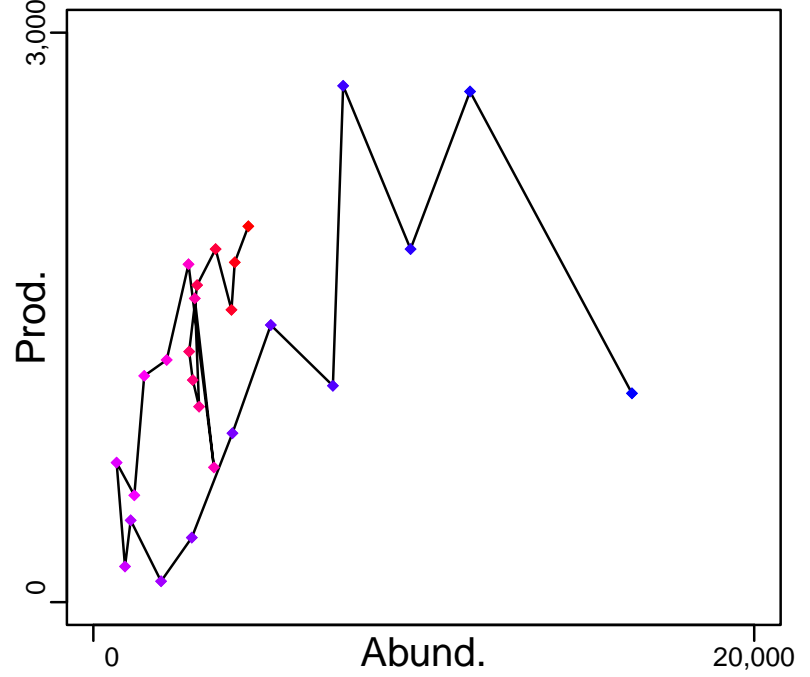
Kobe MGTpref (1987–2013–JPNIMP2016)



Spawner Recruit (1987–2013–JPNIMP2016)



Production (1987–2013–JPNIMP2016)

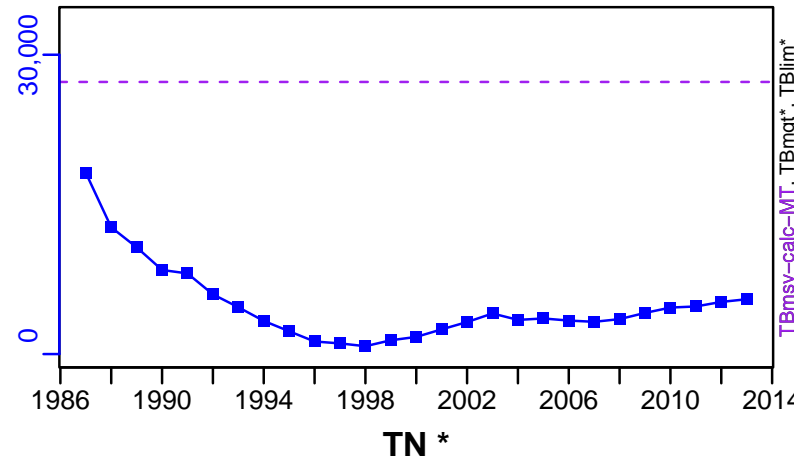


◆ Start Year ◆ End Year \* No Data

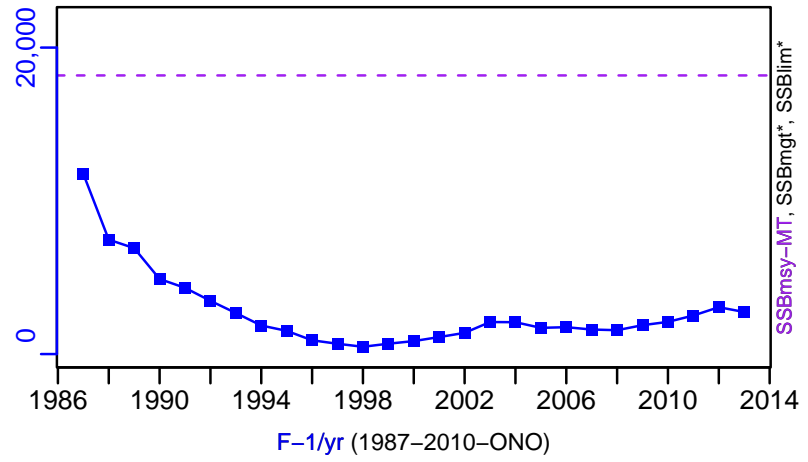


# Japanese Spanish mackerel Inland Sea of Japan [SPANMACKSETO]

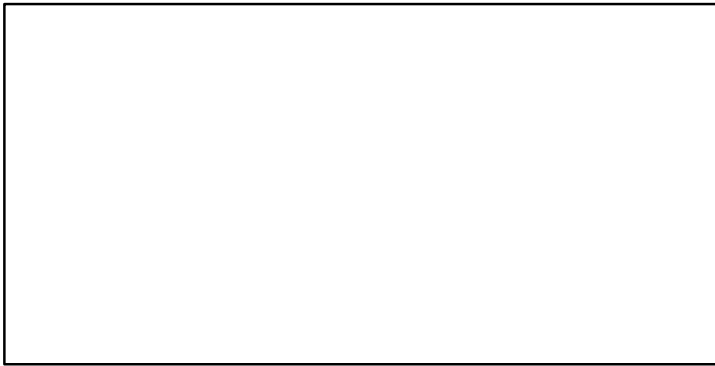
TB-MT (1987–2013–JPNIMP2016)



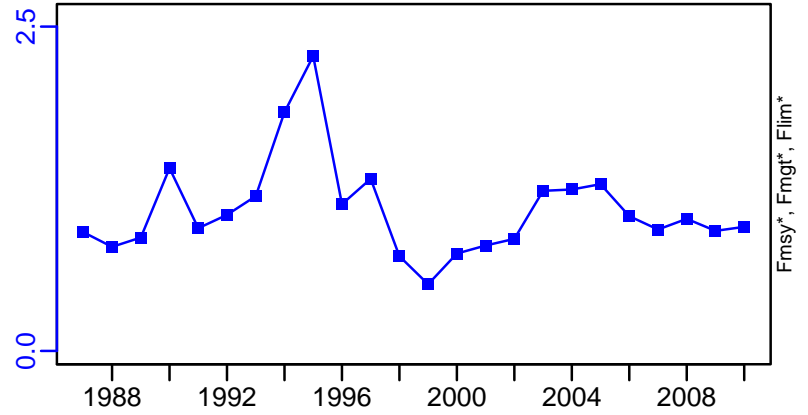
SSB-MT (1987–2013–JPNIMP2016)



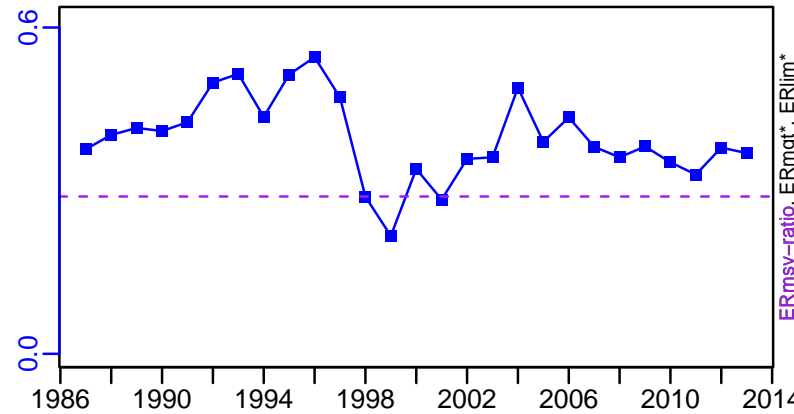
TN \*



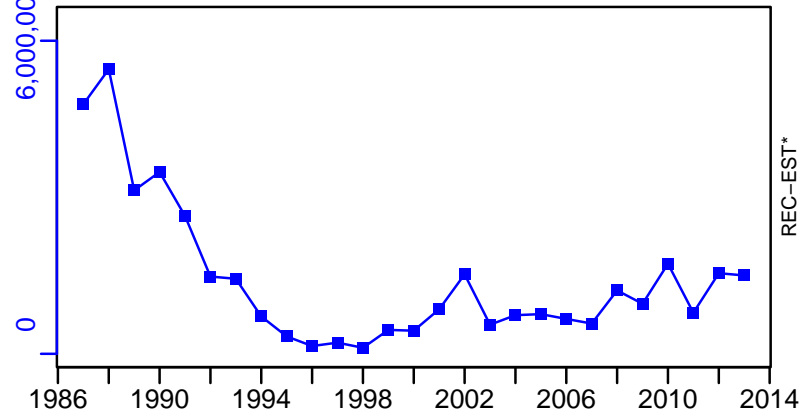
F-1/yr (1987–2010–ONO)



ER-calc-ratio (1987–2013–JPNIMP2016)



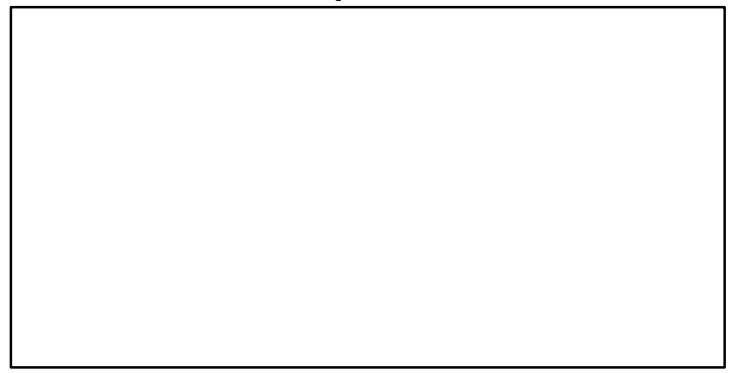
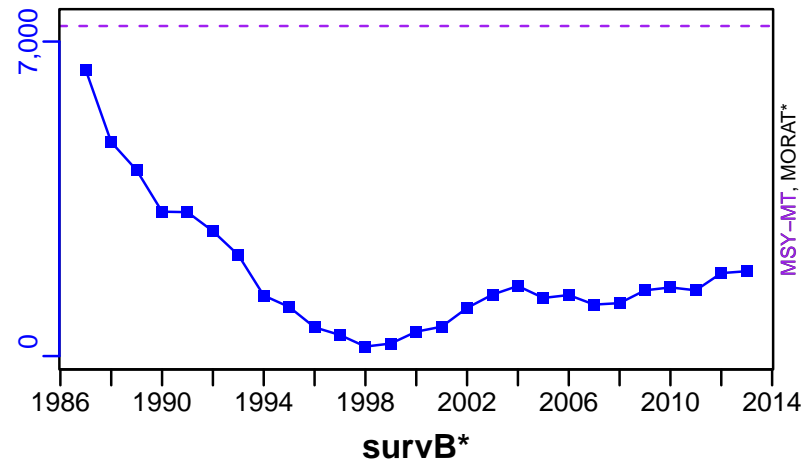
R-E00 (1987–2013–JPNIMP2016)



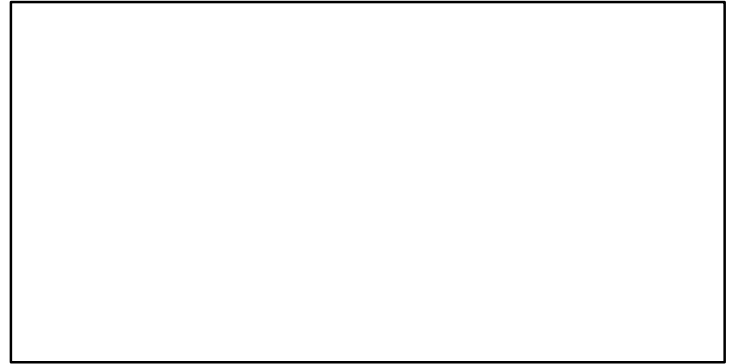
# Japanese Spanish mackerel Inland Sea of Japan [SPANMACKSETO]

TC-MT, TL\*, RecC\* (1987-2013-JPNIMP2016)

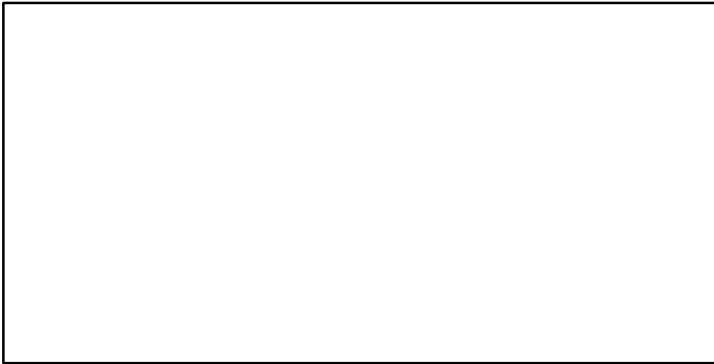
TAC\*, Cpair\*, Cadv\*



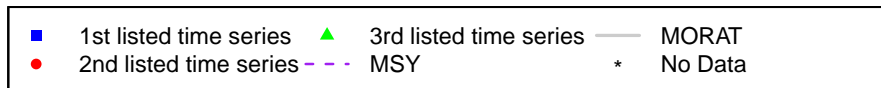
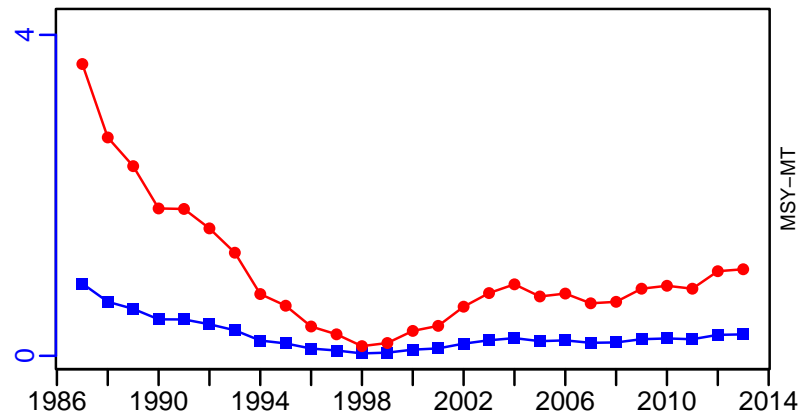
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1987-2013-JPNIMP2016)



## Spear squid Pacific Ocean [SPSQUIDPAC]

Metadata	
<b>Scientific Name</b>	Loligo bleekeri
<b>Current Assess ID</b>	FAFRFJ-SPSQUIDPAC-1978-2013-JPNIMP2016
<b>Area</b>	Pacific Ocean
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	4250		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

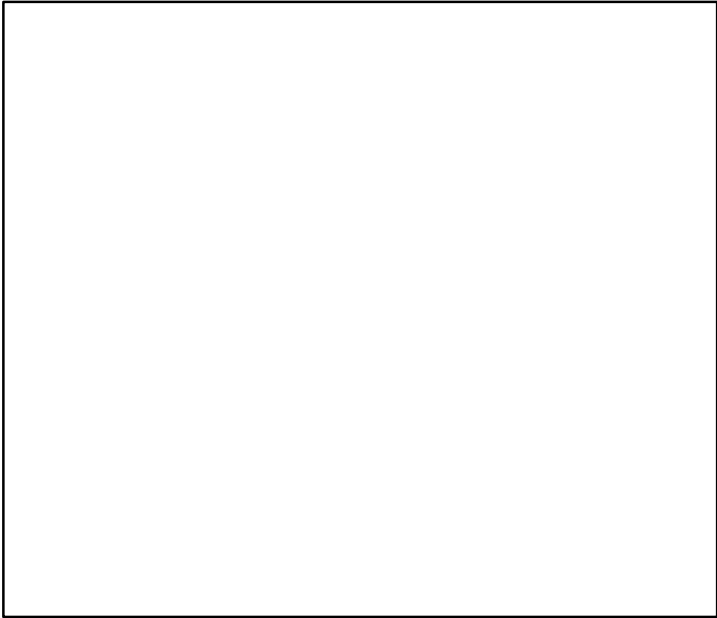
Kobe MSY\*



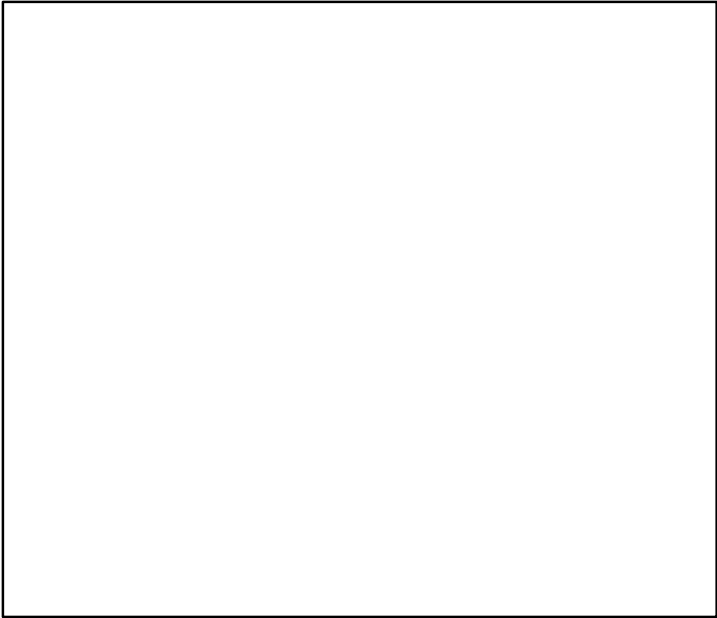
Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

Spear squid Pacific Ocean [SPSQUIDPAC]

TB\*



SSB\*



TN \*



F\*



ER\*

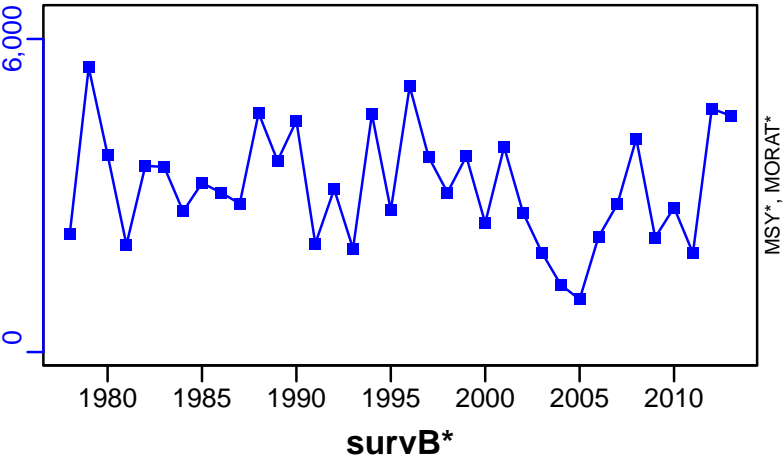


Recruits\*



Spear squid Pacific Ocean [SPSQUIDPAC]

TC-MT, TL\*, RecC\* (1978-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Spear squid Tsushima warm current [SPSQUIDTSSTWC]

Metadata	
<b>Scientific Name</b>	Loligo bleekeri
<b>Current Assess ID</b>	FAFRFJ-SPSQUIDTSSTWC-1990-2013-JPNIMP2016
<b>Area</b>	Tsushima warm current
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	2700		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

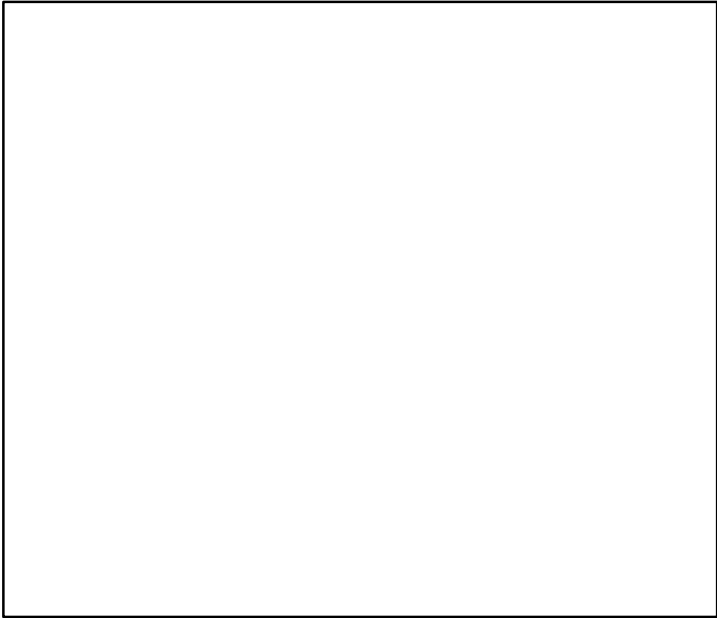
Kobe MSY\*



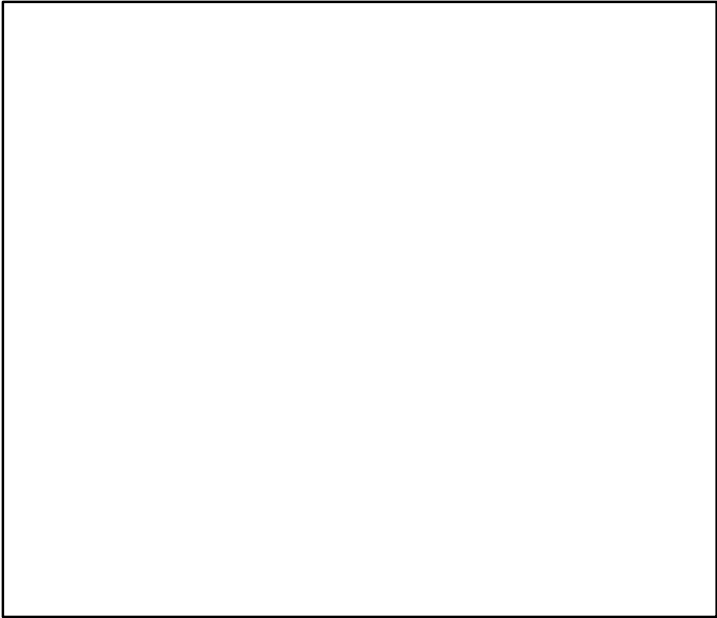
Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data



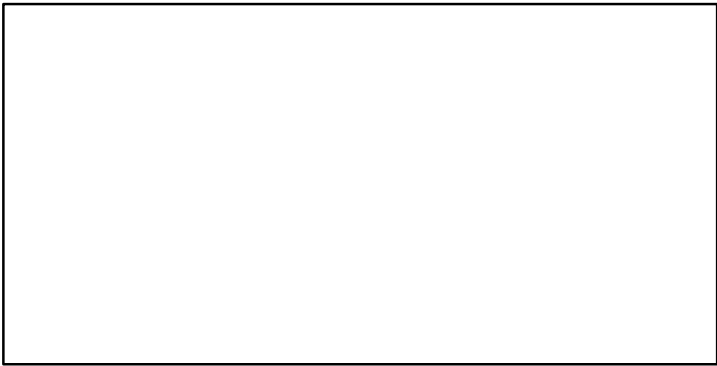
TB\*



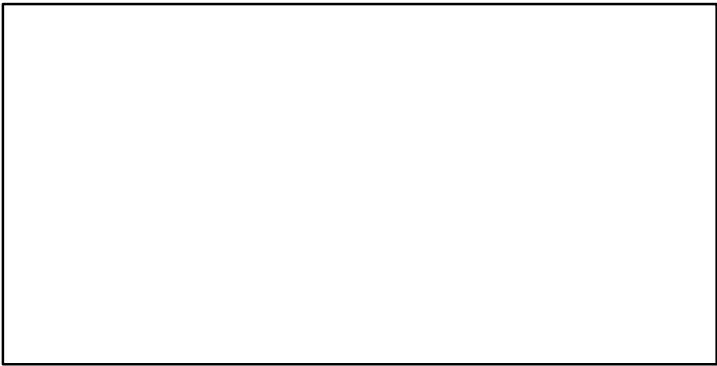
SSB\*



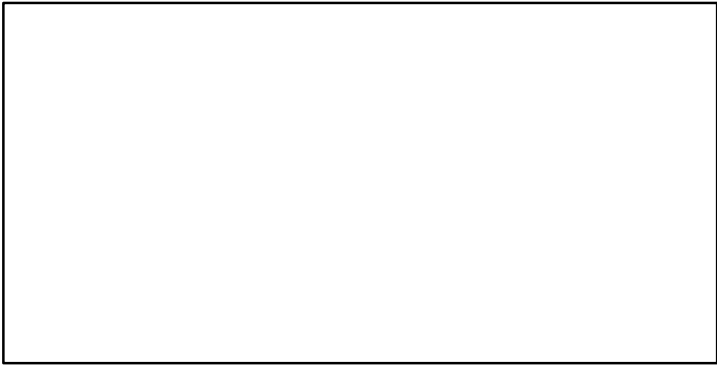
TN \*



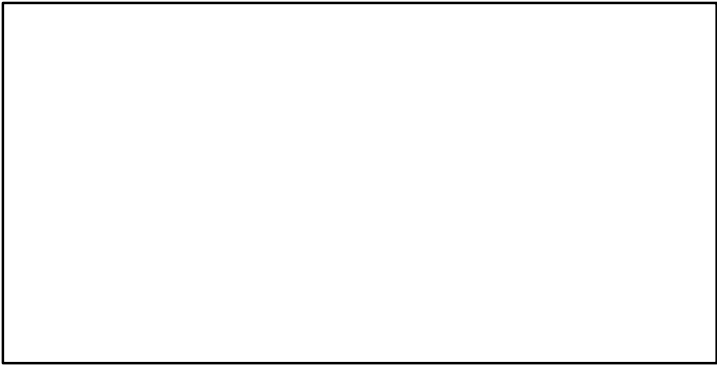
F\*



ER\*



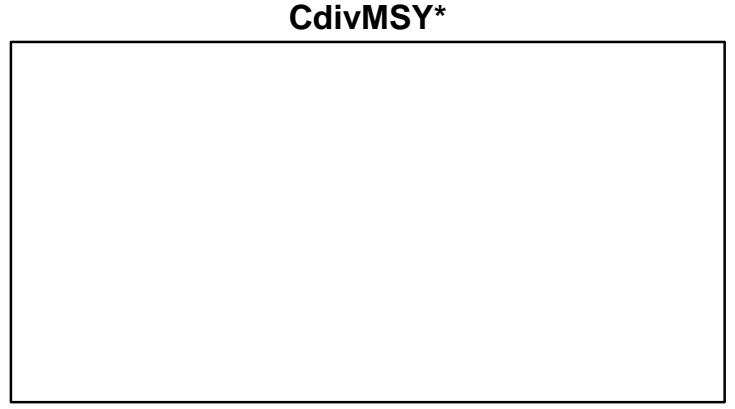
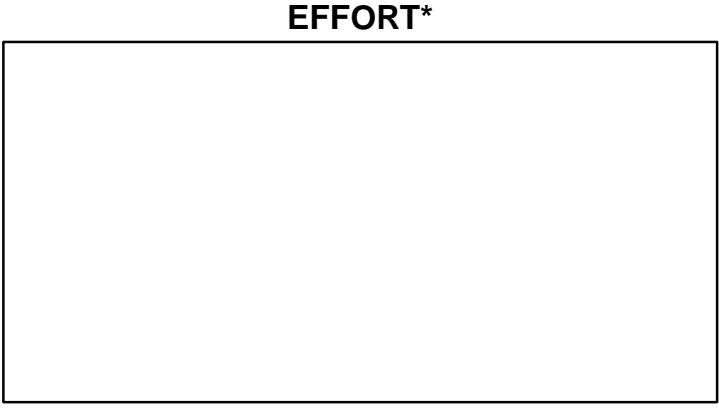
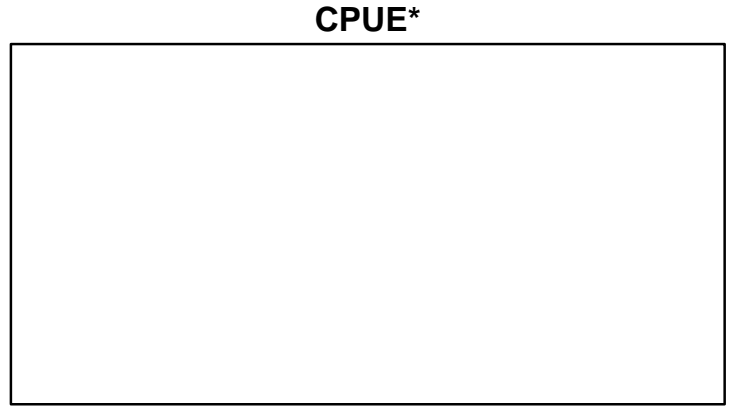
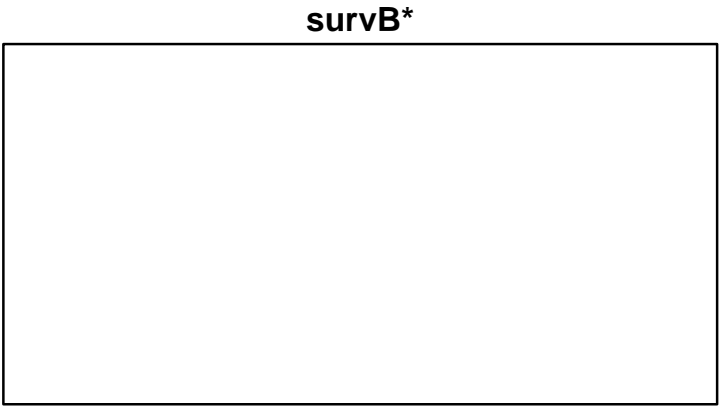
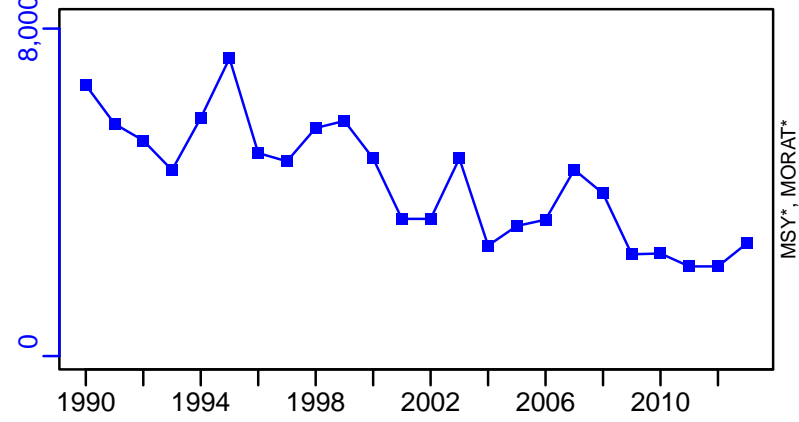
Recruits\*



# Spear squid Tsushima warm current [SPSQUIDTSSTWC]

TC-MT, TL\*, RecC\* (1990–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*

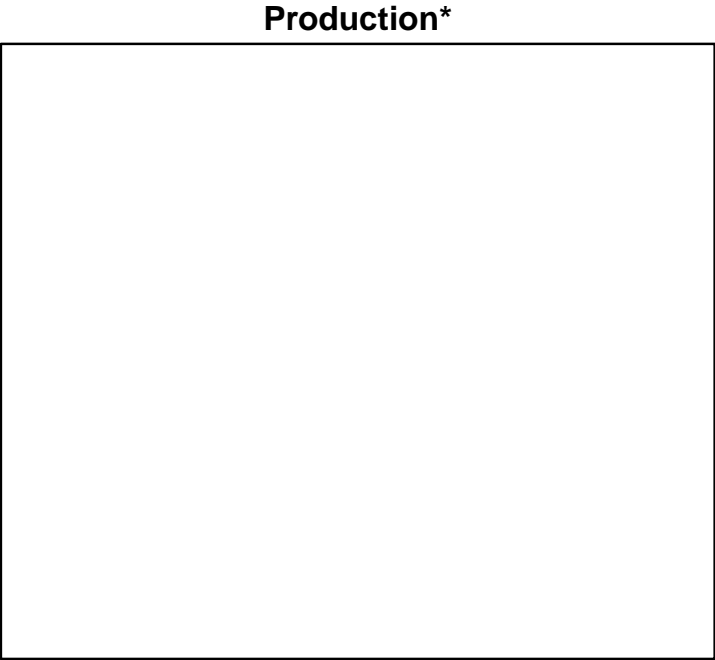
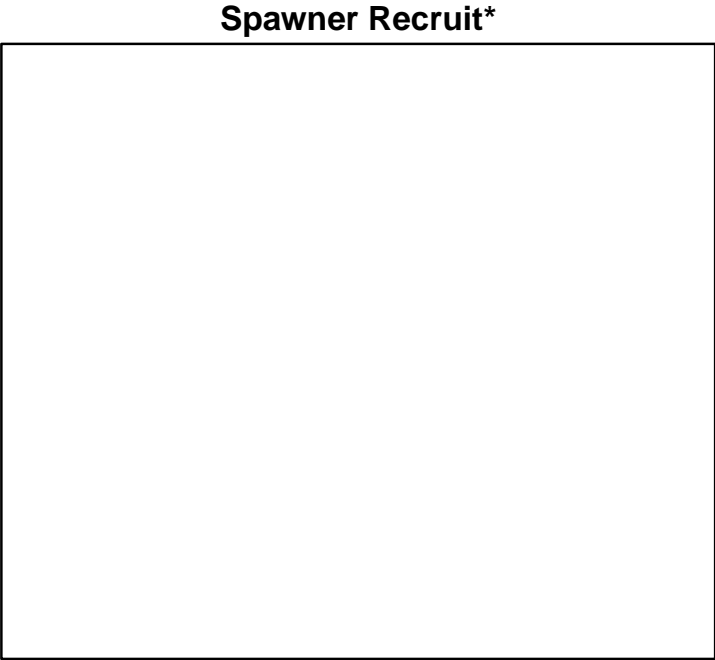
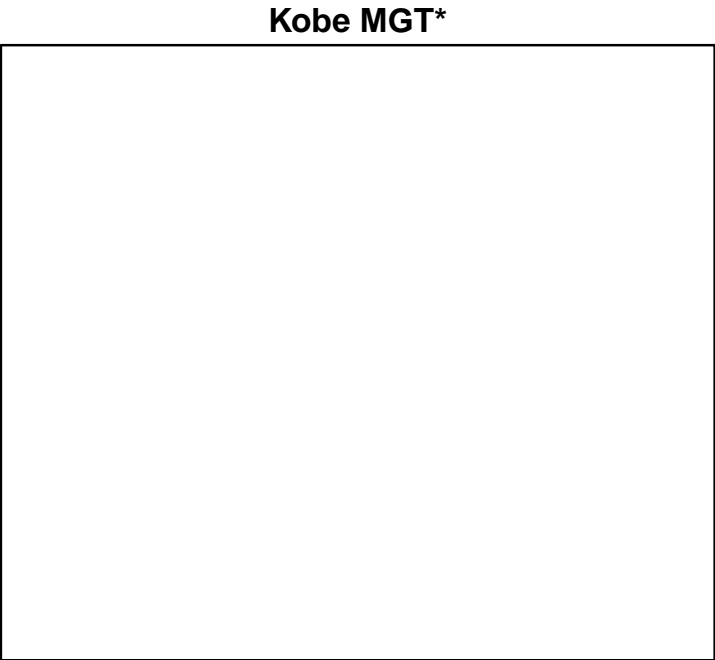
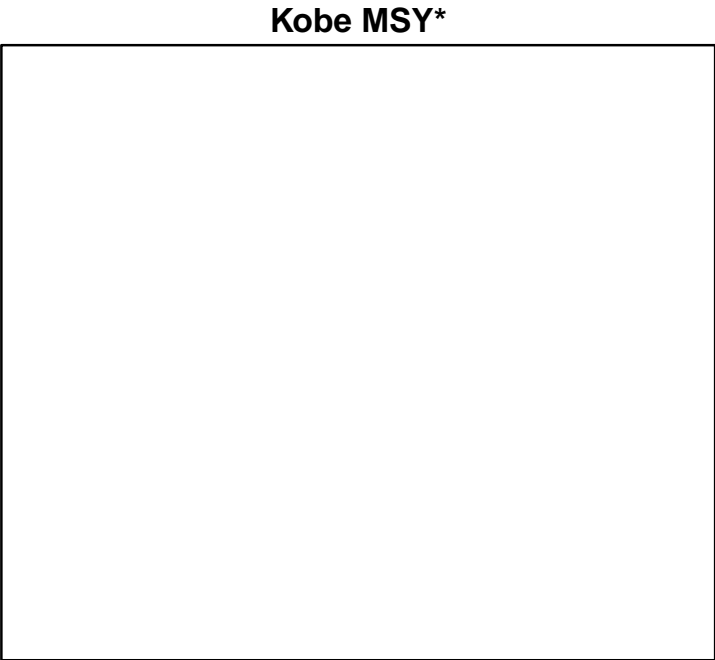


## Sailfin sandfish Sea of Japan North [SSANDNSJ]

Metadata	
<b>Scientific Name</b>	Arctoscopus japonicus
<b>Current Assess ID</b>	FAFRFJ-SSANDNSJ-1952-2013-JPNIMP2016
<b>Area</b>	Sea of Japan North
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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>	M-1/yr	2013	0.5
<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	2013	2740		
<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>	-	-	-		



◆ Start Year    ◆ End Year    \* No Data

Sailfin sandfish Sea of Japan North [SSANDNSJ]

TB\*



SSB\*



TN \*



F\*



ER\*

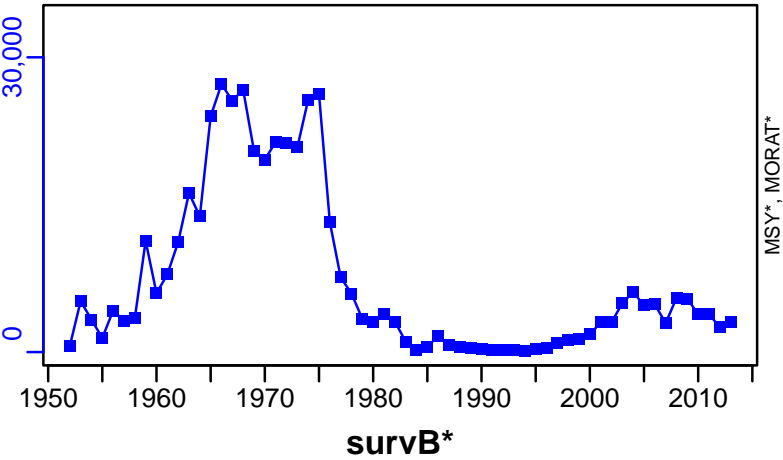


Recruits\*



Sailfin sandfish Sea of Japan North [SSANDNSJ]

TC-MT, TL\*, RecC\* (1952-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Sailfin sandfish Sea of Japan West [SSANDWSJ]

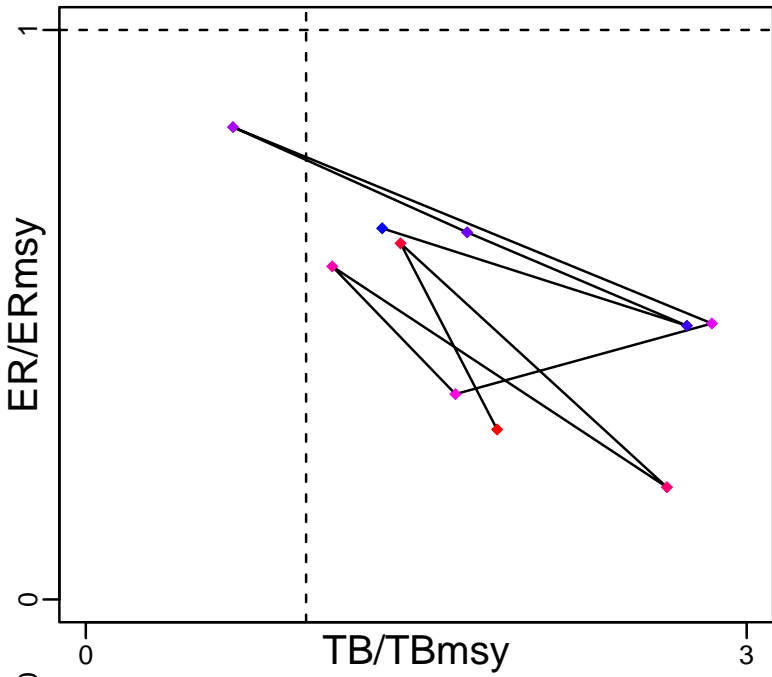
Metadata	
<b>Scientific Name</b>	Arctoscopus japonicus
<b>Current Assess ID</b>	FAFRFJ-SSANDWSJ-1970-2013-JPNIMP2016
<b>Area</b>	Sea of Japan West
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2013	13,230
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.506
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-calc-MT	2013	6694
<b>M</b>	M-1/yr	2013	0.5
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

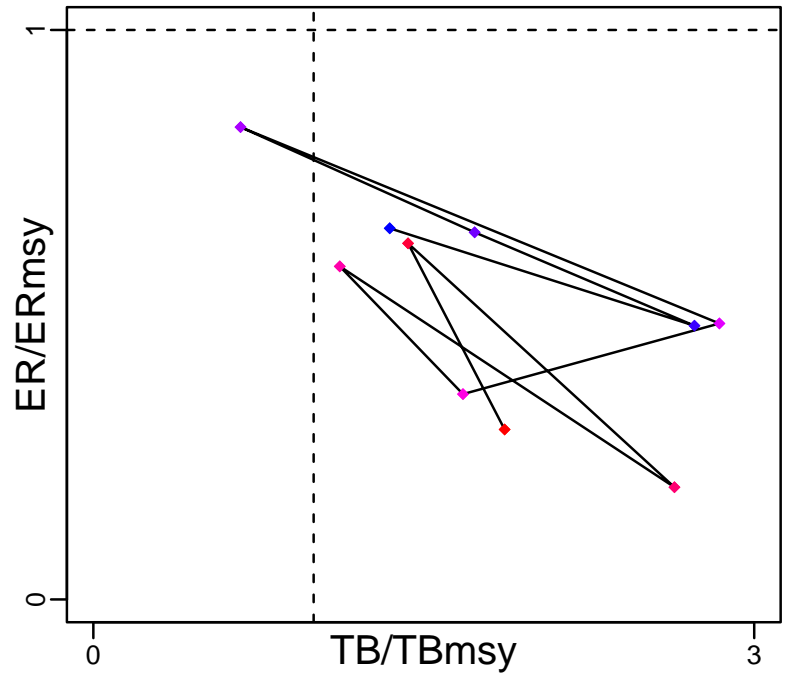
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	24,700	-	1
<b>SSB</b>	SSB-MT	2013	7850	Both	2
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	$5.76 \times 10^8$	-	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.151	-	-
<b>TC</b>	TC-MT	2013	3730		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2013	1.867		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	0.298		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Sailfin sandfish Sea of Japan West [SSANDWSJ]

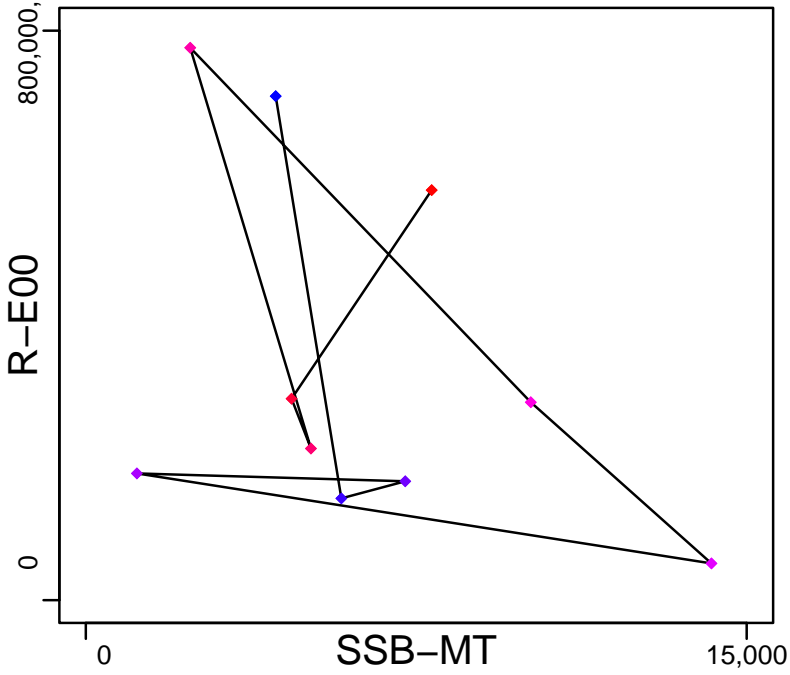
Kobe MSYpref (1970–2013–JPNIMP2016)



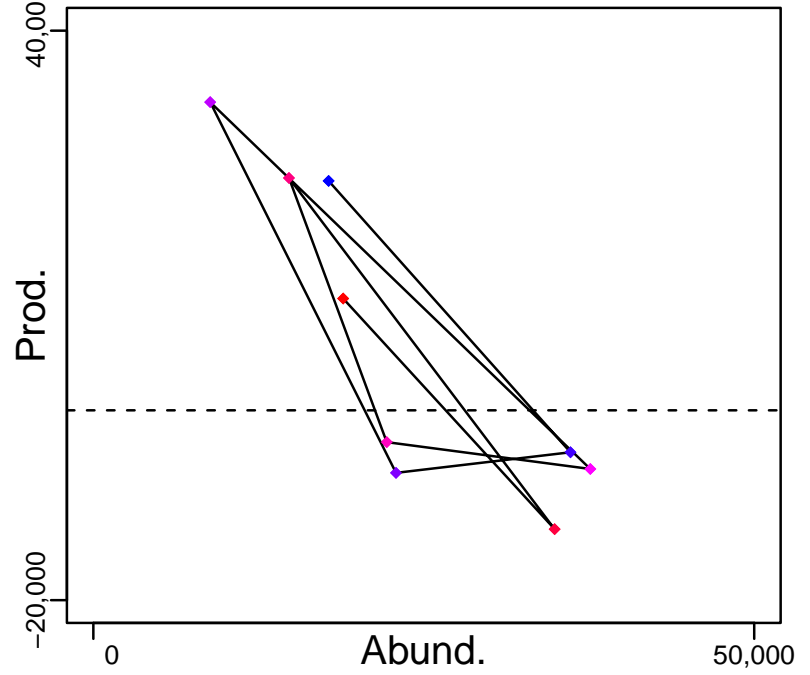
Kobe MGTpref (1970–2013–JPNIMP2016)



Spawner Recruit (1970–2013–JPNIMP2016)



Production (1970–2013–JPNIMP2016)

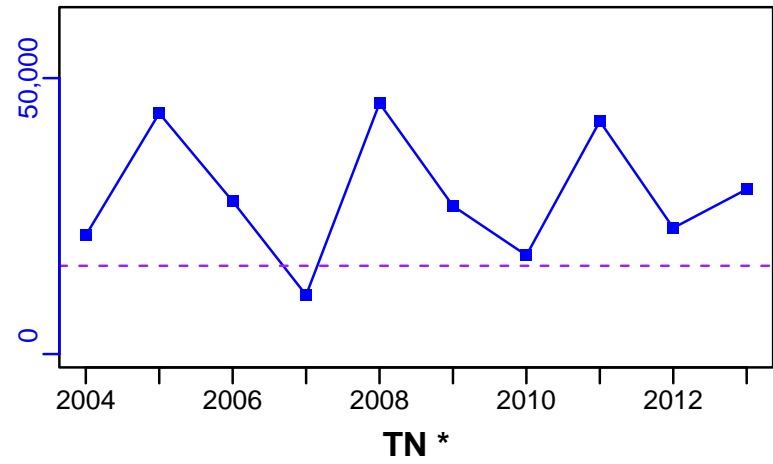


◆ Start Year ◆ End Year \* No Data

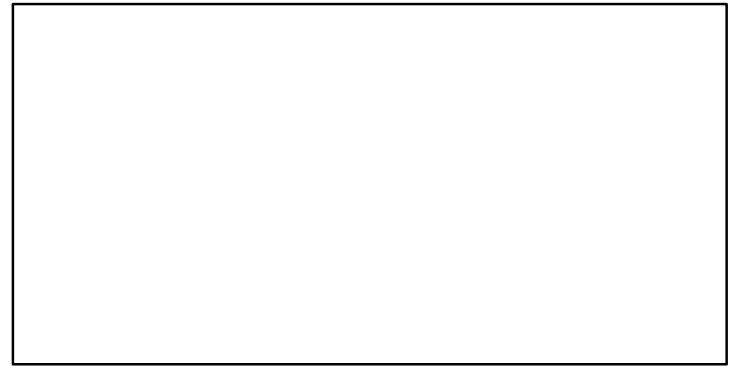
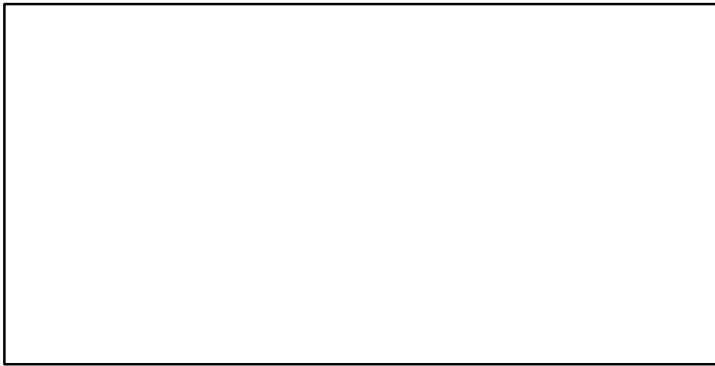
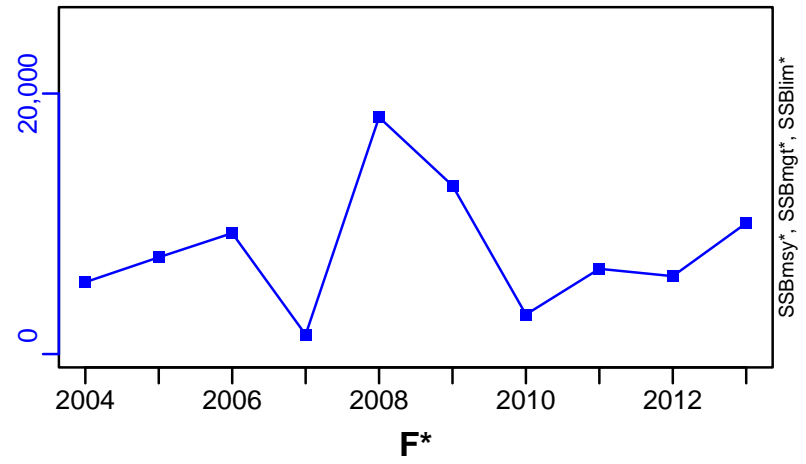


# Sailfin sandfish Sea of Japan West [SSANDWSJ]

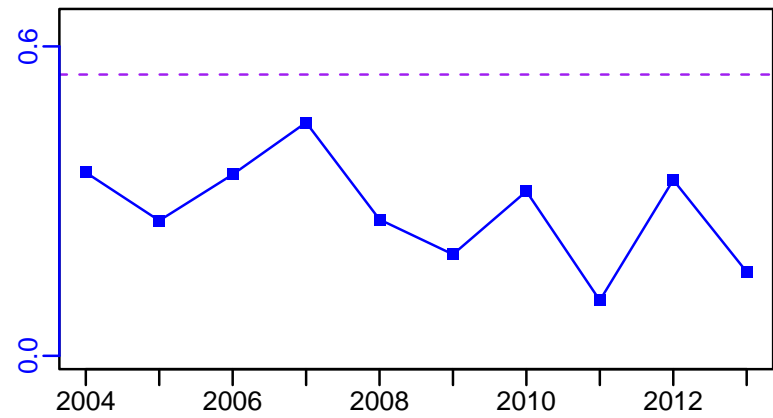
TB-MT (1970-2013-JPNIMP2016)



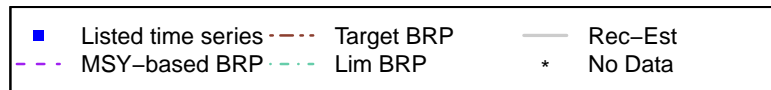
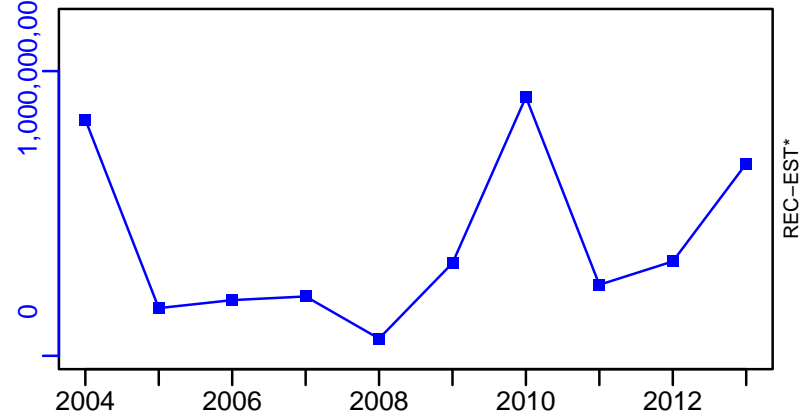
SSB-MT (1970-2013-JPNIMP2016)



ER-calc-ratio (1970-2013-JPNIMP2016)

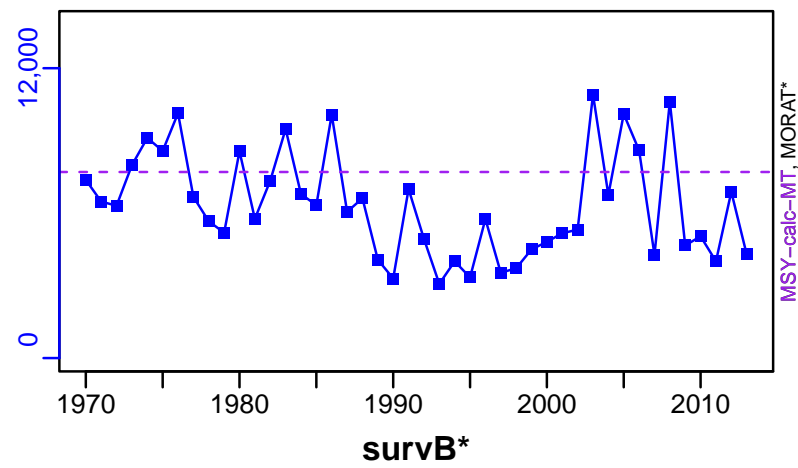


R-E00 (1970-2013-JPNIMP2016)



# Sailfin sandfish Sea of Japan West [SSANDWSJ]

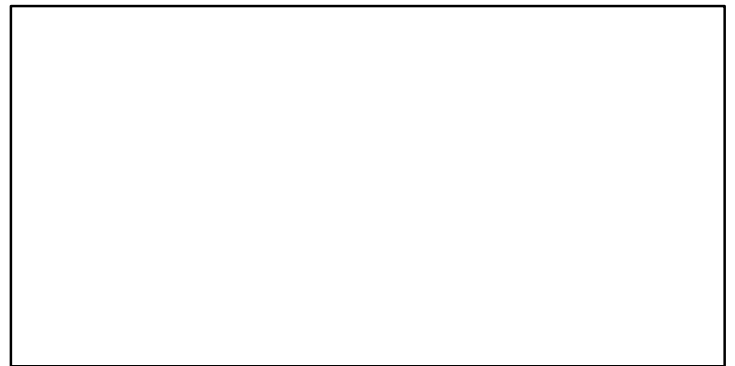
TC-MT, TL\*, RecC\* (1970-2013-JPNIMP2016)



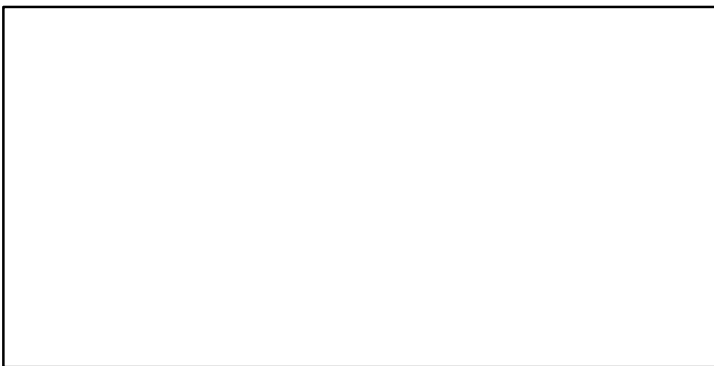
TAC\*, Cpair\*, Cadv\*



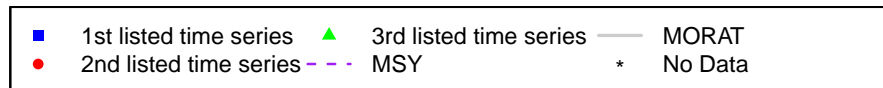
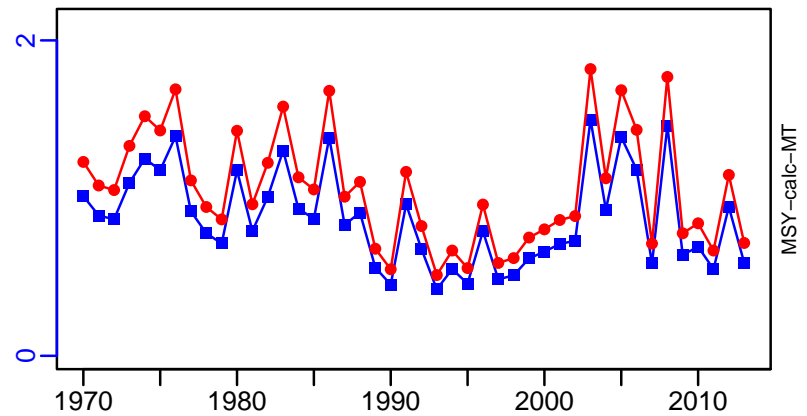
CPUE\*



EFFORT\*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1970-2013-JPNIMP2016)



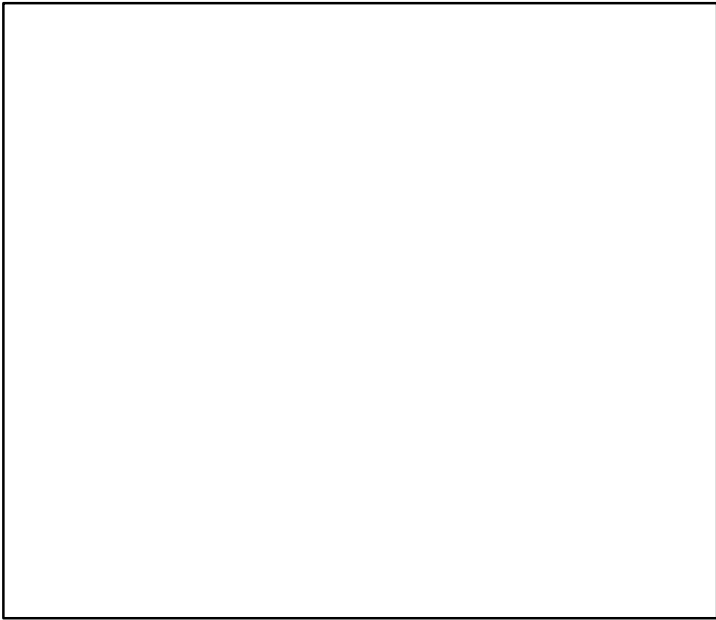
## Swordtip squid Sea of Japan and East China Sea [STSQUIDSOJECS]

Metadata	
<b>Scientific Name</b>	Uroteuthis edulis
<b>Current Assess ID</b>	FAFRFJ-STSQUIDSOJECS-1988-2013-JPNIMP2016
<b>Area</b>	Sea of Japan and East China Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

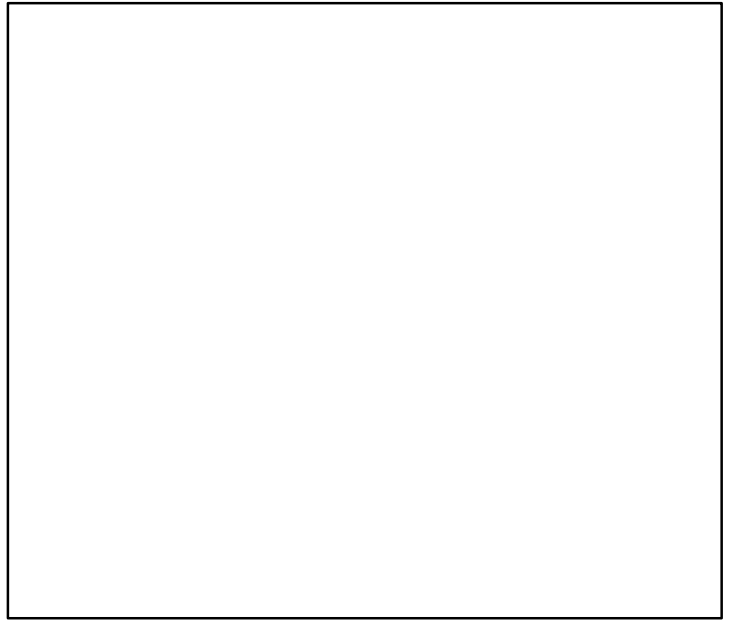
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	9220		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

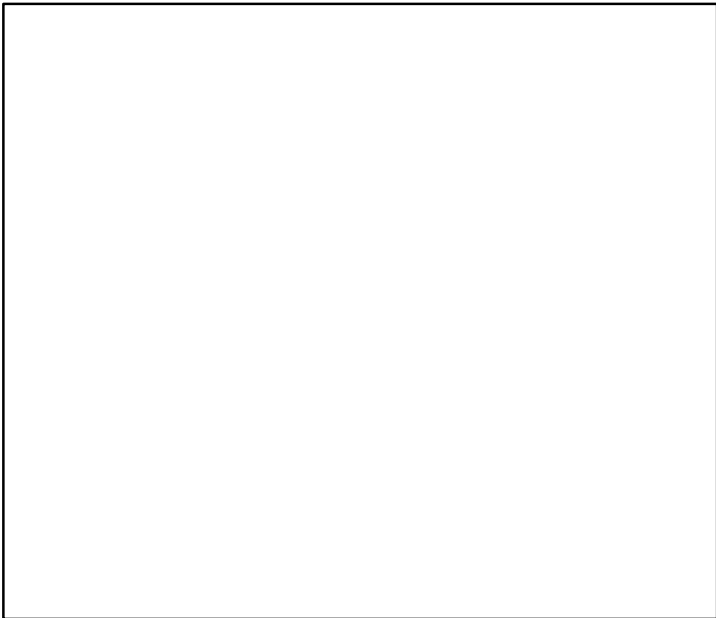
**Kobe MSY\***



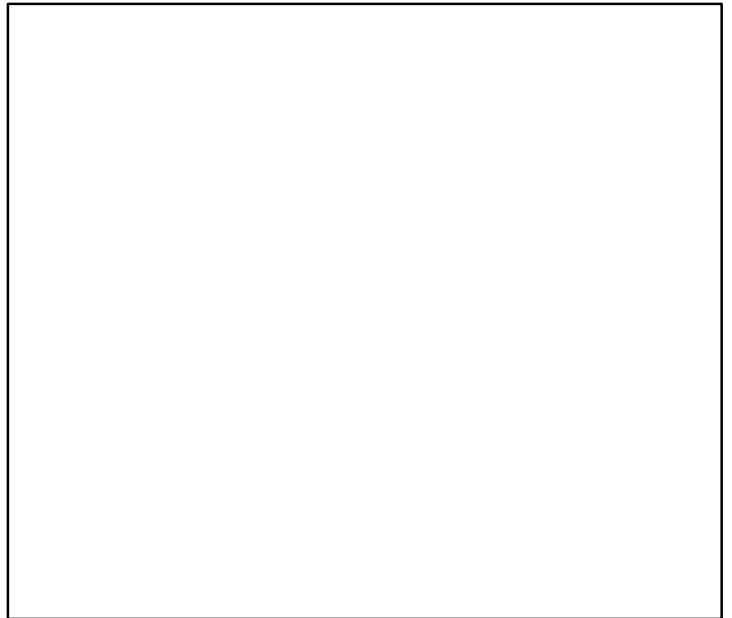
**Kobe MGT\***



**Spawner Recruit\***



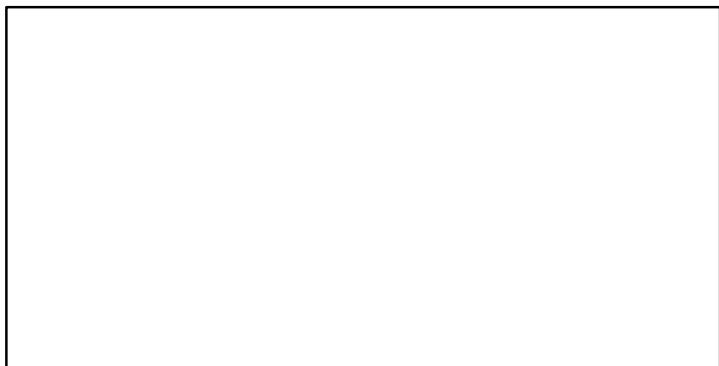
**Production\***



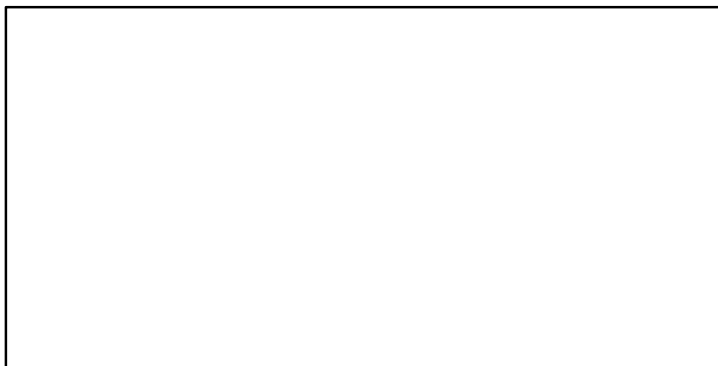
◆ Start Year ◆ End Year \* No Data

Swordtip squid Sea of Japan and East China Sea [STSQUIDSOJECS]

**TB\***



**SSB\***



**TN \***



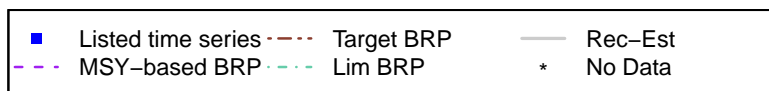
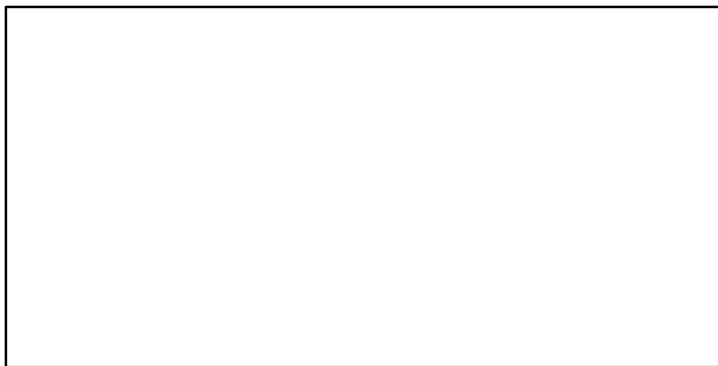
**F\***



**ER\***



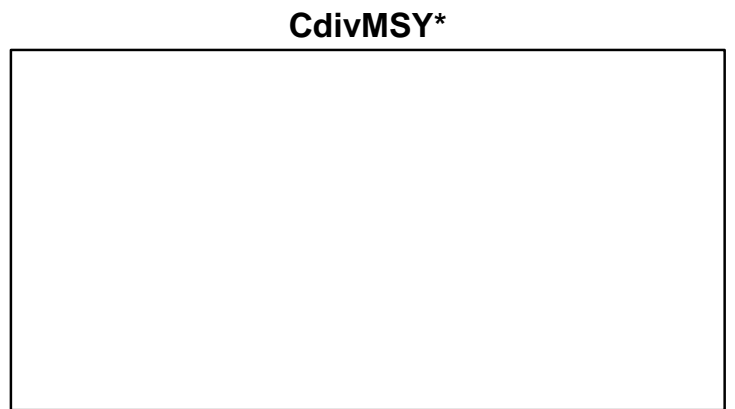
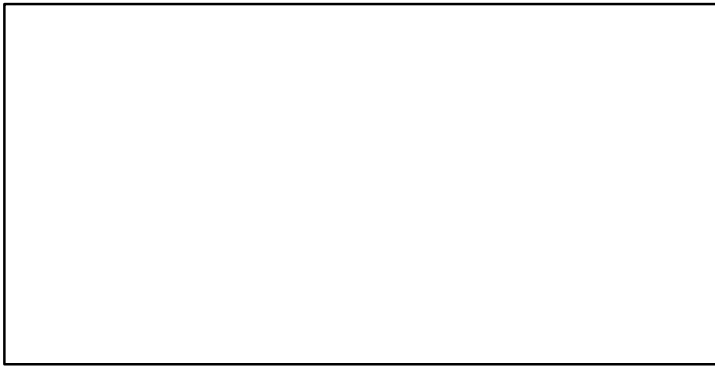
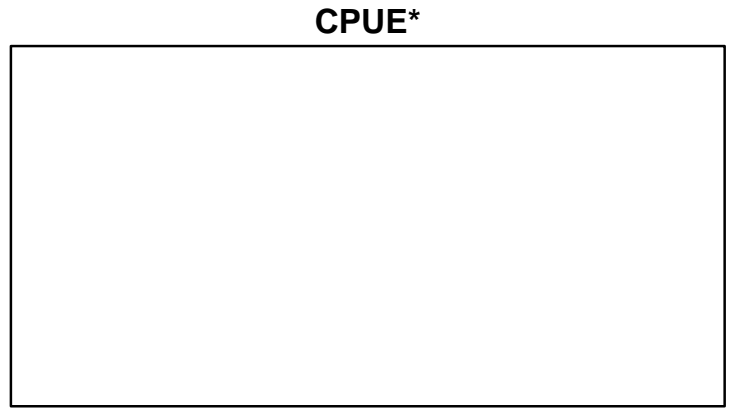
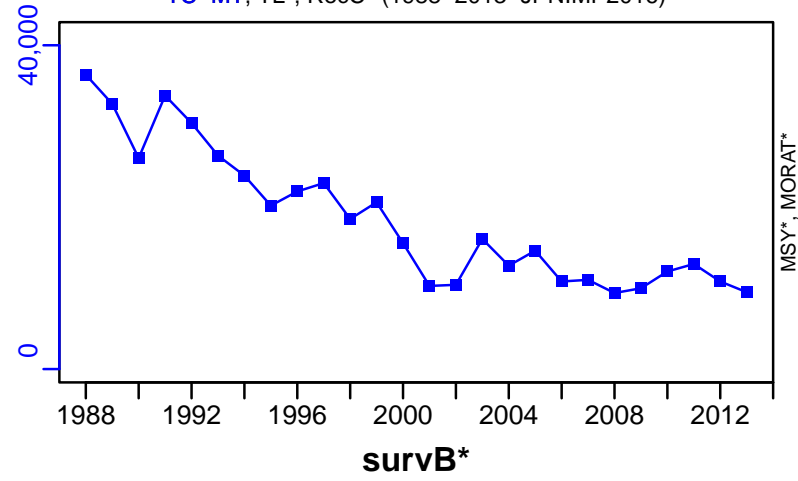
**Recruits\***



# Swordtip squid Sea of Japan and East China Sea [STSQUIDSOJECS]

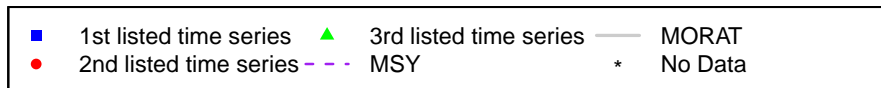
TC-MT, TL\*, RecC\* (1988–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

CdivMSY\*



## Willow flounder North Pacific [WLFLOUNNPAC]

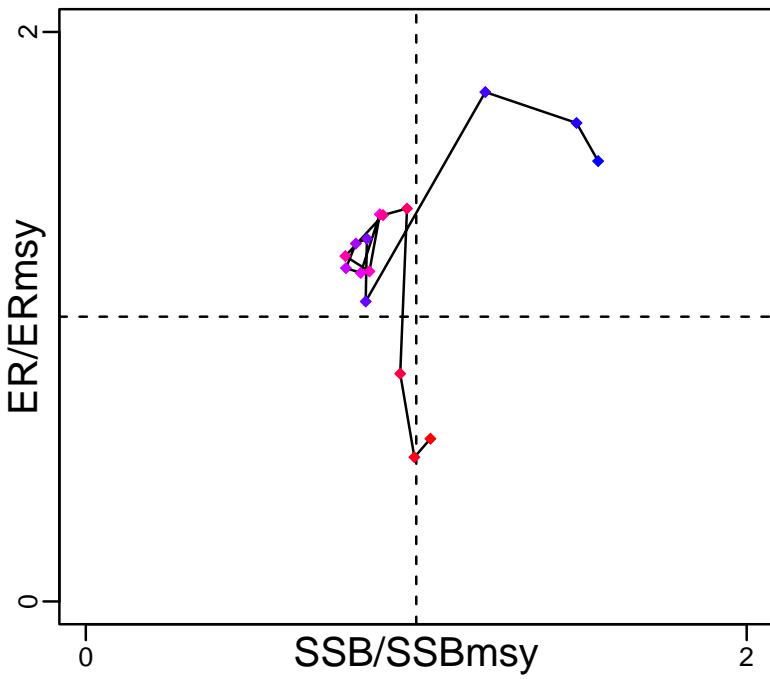
Metadata	
<b>Scientific Name</b>	Tanakius kitaharae
<b>Current Assess ID</b>	FAFRFJ-WLFLOUNNPAC-1997-2013-JPNIMP2016
<b>Area</b>	North Pacific
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2013	695
<b>SSBmsy</b>	SSBmsy-MT	2013	536
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.208
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	145
<b>M</b>	M-1/yr	2013	0.25
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

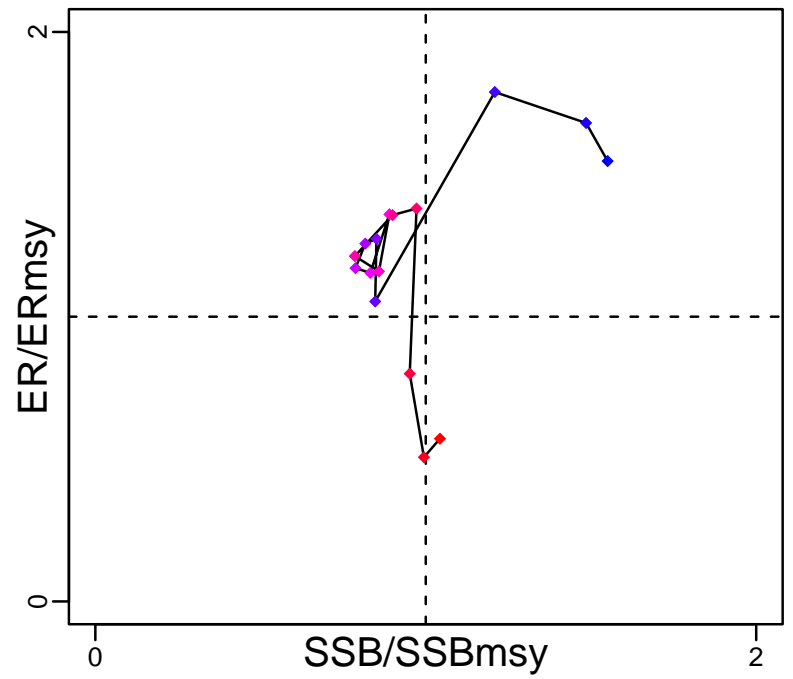
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	673	-	1
<b>SSB</b>	SSB-MT	2013	559	Both	3
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	2,270,000	-	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.119	-	-
<b>TC</b>	TC-MT	2013	80		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2013	0.968		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	1.043		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	0.571		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Willowy flounder North Pacific [WLFLOUNNPAC]

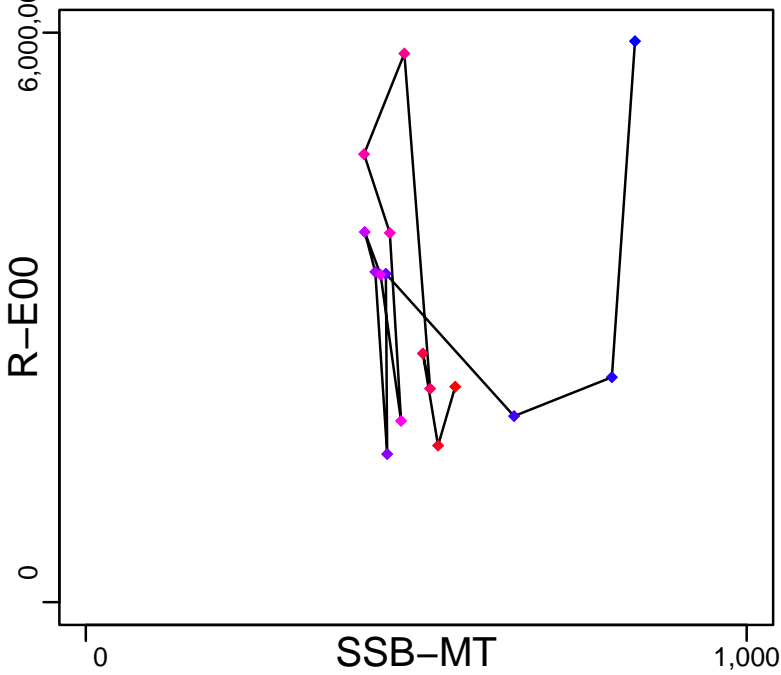
Kobe MSYpref (1997–2013–JPNIMP2016)



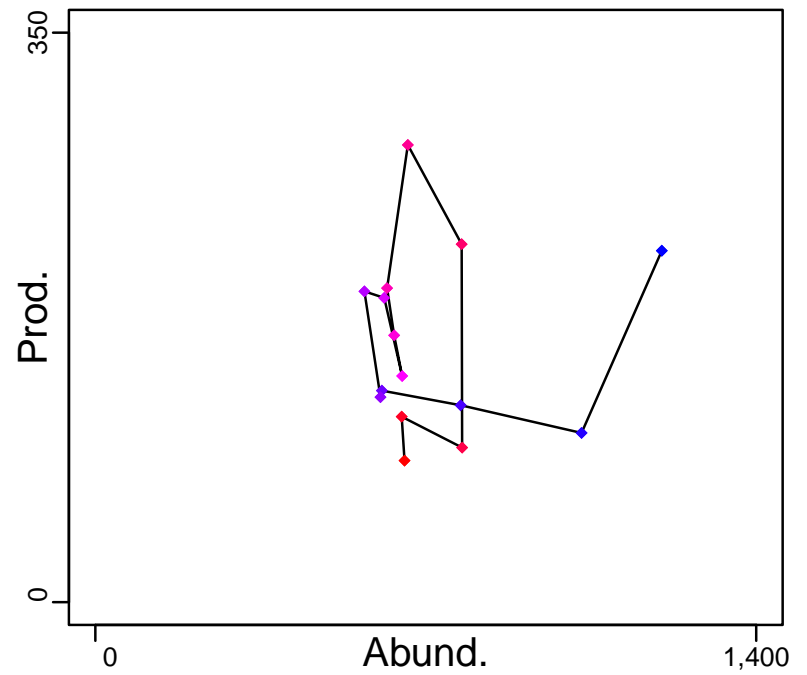
Kobe MGTpref (1997–2013–JPNIMP2016)



Spawner Recruit (1997–2013–JPNIMP2016)



Production (1997–2013–JPNIMP2016)

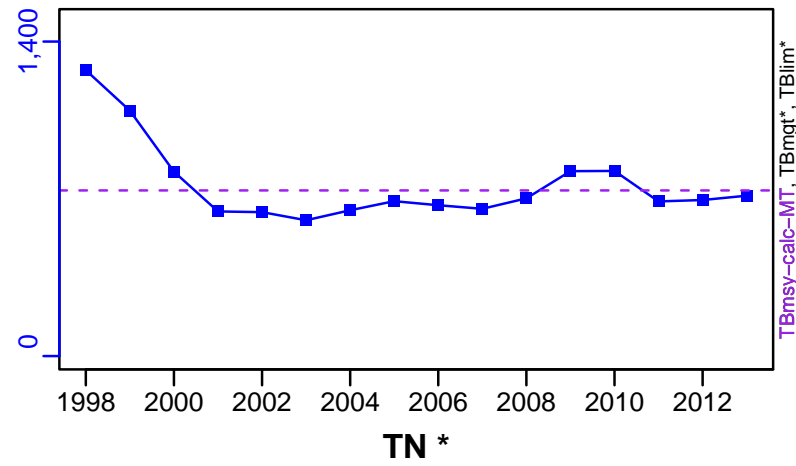


◆ Start Year ◆ End Year \* No Data

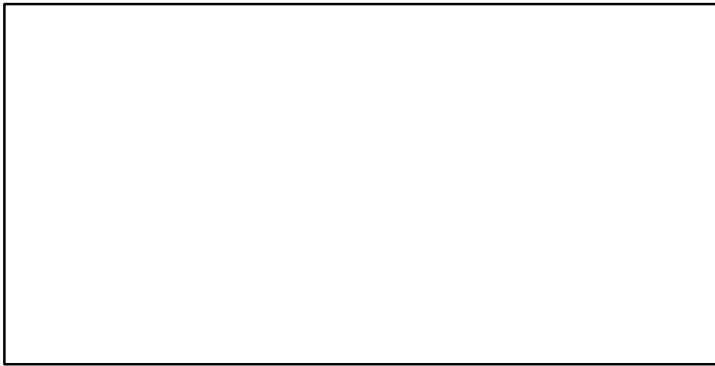
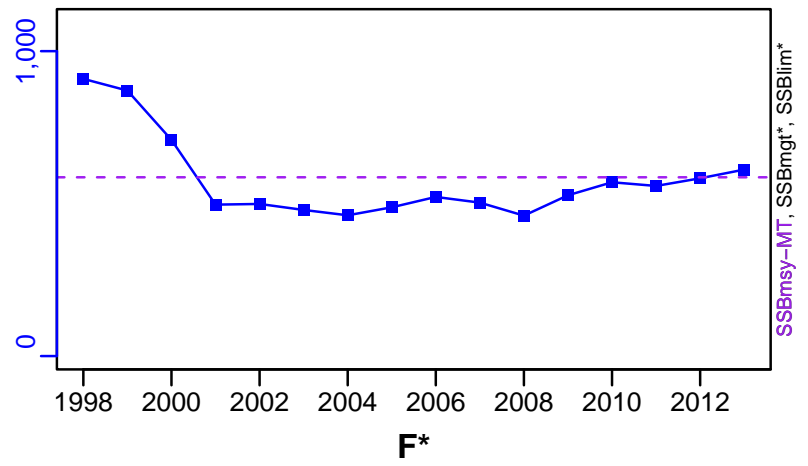


# Willow flounder North Pacific [WLFLOUNNPAC]

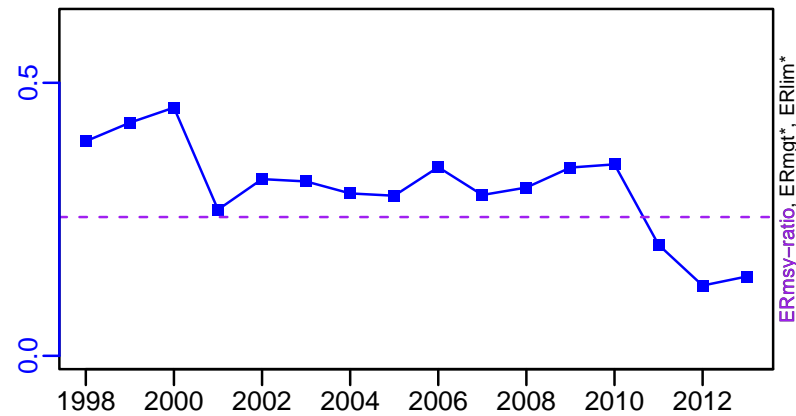
TB-MT (1997-2013-JPNIMP2016)



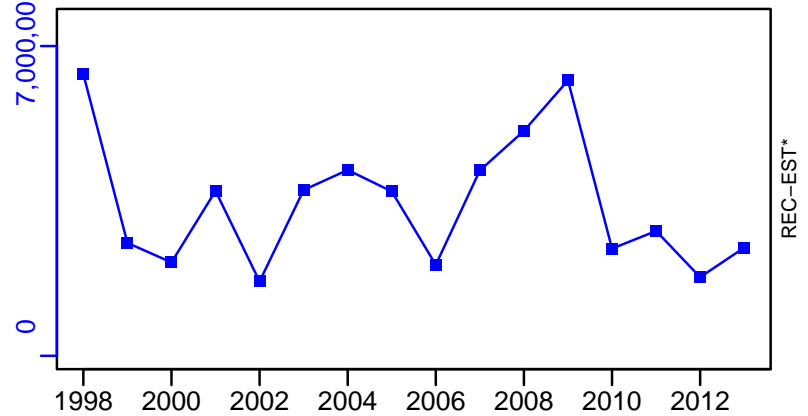
SSB-MT (1997-2013-JPNIMP2016)



ER-calc-ratio (1997-2013-JPNIMP2016)

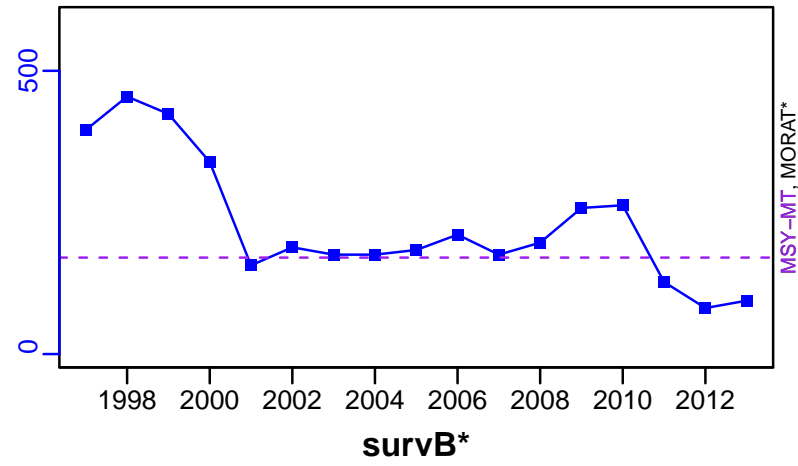


R-E00 (1997-2013-JPNIMP2016)



# Willowy flounder North Pacific [WLFLOUNNPAC]

TC-MT, TL\*, RecC\* (1997-2013-JPNIMP2016)



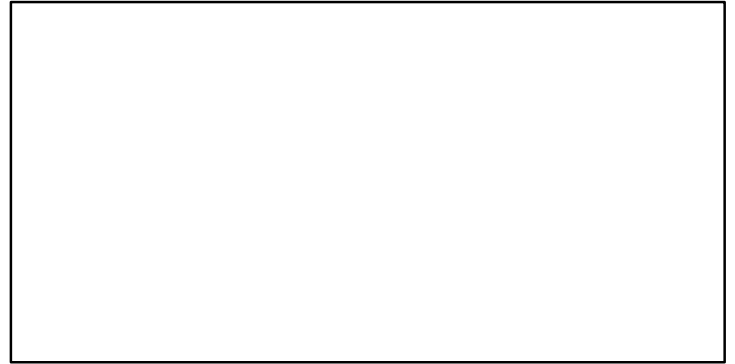
TAC\*, Cpair\*, Cadv\*



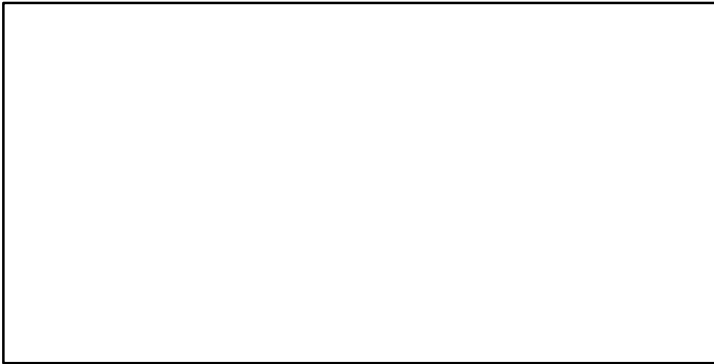
survB\*



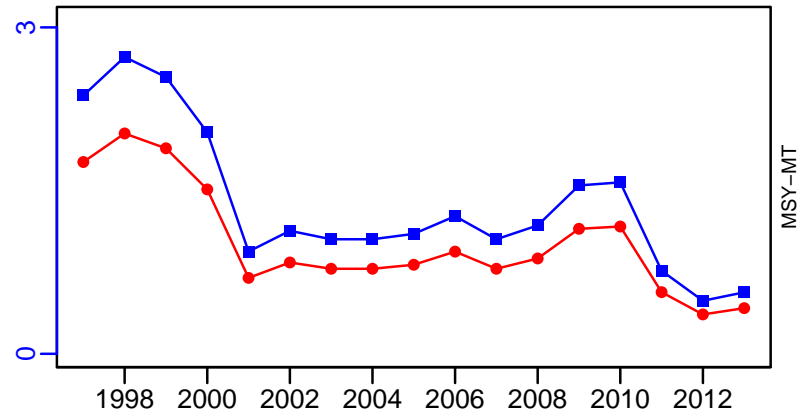
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1997-2013-JPNIMP2016)



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

## Whitespotted conger Ise and Mikawa Bay [WSCONGIMKB]

Metadata	
<b>Scientific Name</b>	Conger myriaster
<b>Current Assess ID</b>	FAFRFJ-WSCONGIMKB-1980-2013-JPNIMP2016
<b>Area</b>	Ise and Mikawa Bay
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	354		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ◆ End Year \* No Data

Whitespotted conger Ise and Mikawa Bay [WSCONGIMKB]

TB\*



SSB\*



TN \*



F\*



ER\*



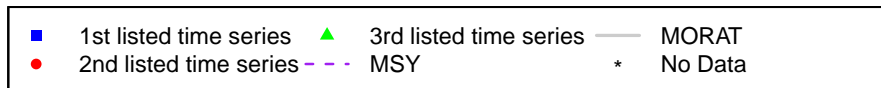
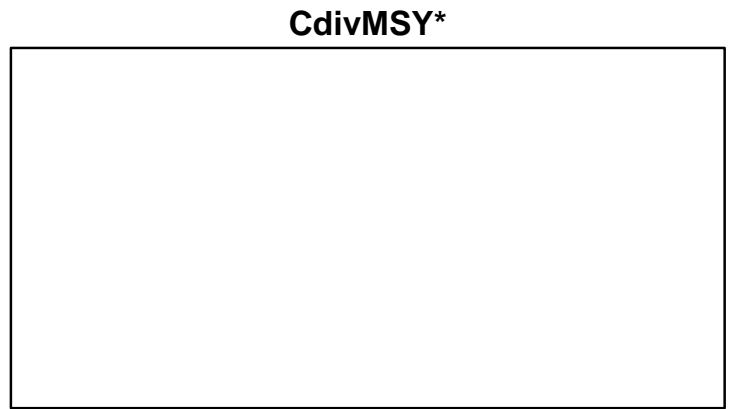
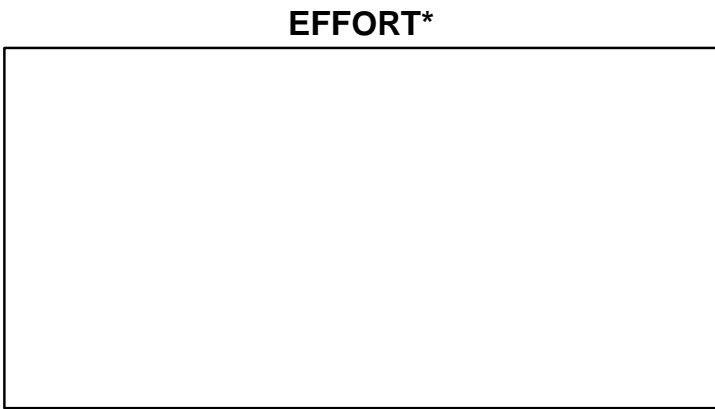
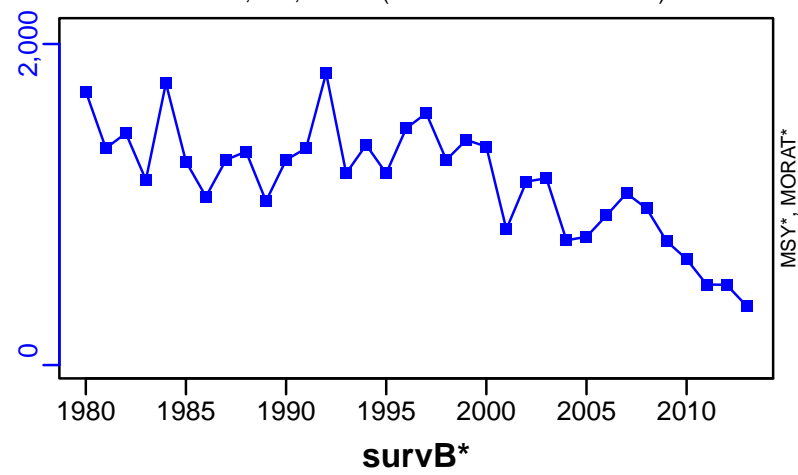
Recruits\*



# Whitespotted conger Ise and Mikawa Bay [WSCONGIMKB]

TC-MT, TL\*, RecC\* (1980–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



## Yellow goosfish North Pacific [YGSFISHNPAC]

Metadata	
<b>Scientific Name</b>	Lophius litulon
<b>Current Assess ID</b>	FAFRFJ-YGSFISHNPAC-1973-2013-JPNIMP2016
<b>Area</b>	North Pacific
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	183		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year ◆ End Year \* No Data



Yellow goosefish North Pacific [YGSFISHNPAC]

TB\*



SSB\*



TN \*



F\*



ER\*

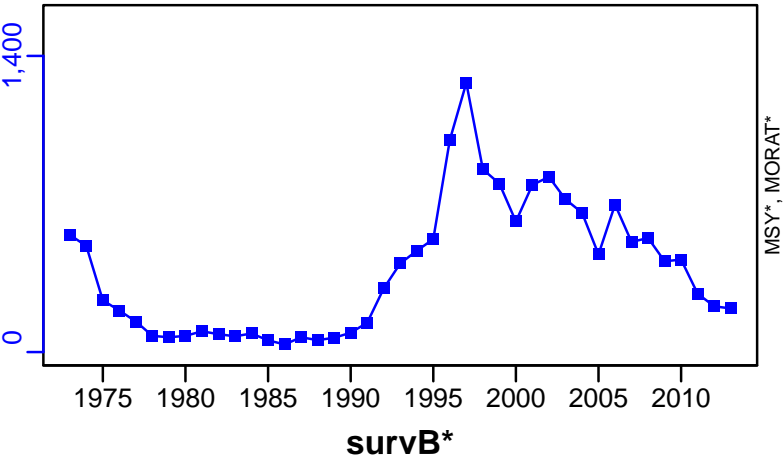


Recruits\*



Yellow goosfish North Pacific [YGSFISHNPAC]

TC-MT, TL\*, RecC\* (1973-2013-JPNIMP2016)



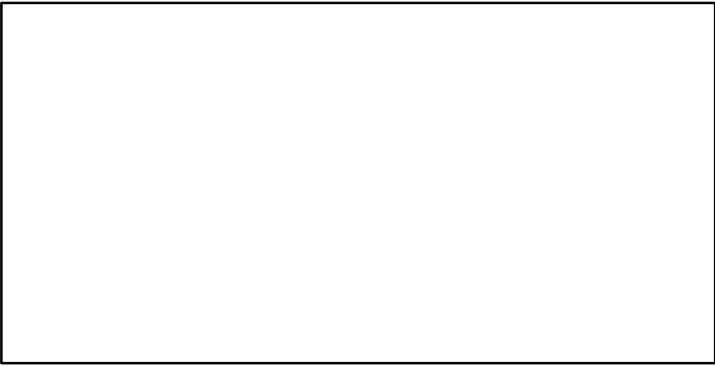
TAC\*, Cpair\*, Cadv\*



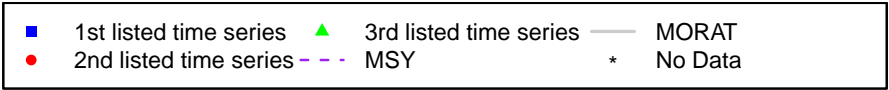
CPUE\*



EFFORT\*



CdivMSY\*



## Yellow striped flounder North coast of Hokkaido [YSFLOUNNHOKK]

Metadata	
<b>Scientific Name</b>	Pseudopleuronectes herzensteini
<b>Current Assess ID</b>	FAFRFJ-YSFLOUNNHOKK-1985-2013-JPNIMP2016
<b>Area</b>	North coast of Hokkaido
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	1550		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year ◆ End Year \* No Data

Yellow striped flounder North coast of Hokkaido [YSFLOUNNHOKK]

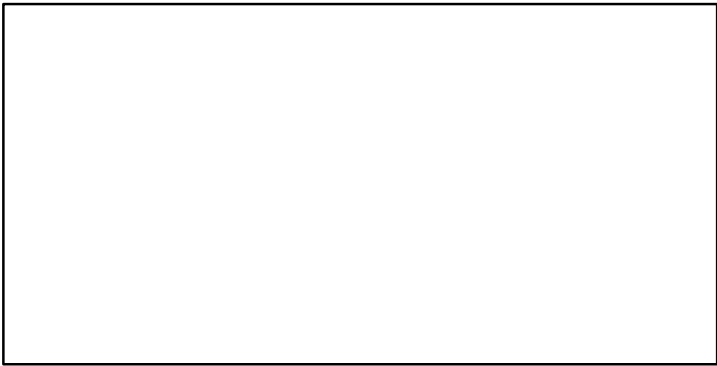
TB\*



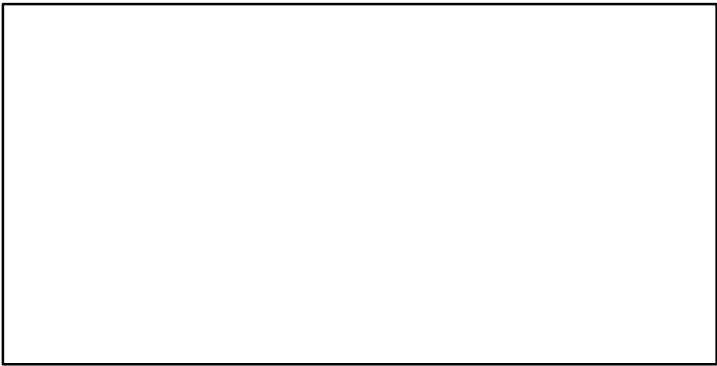
SSB\*



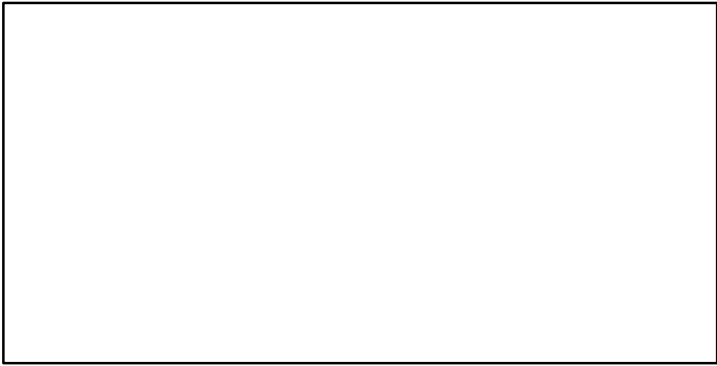
TN \*



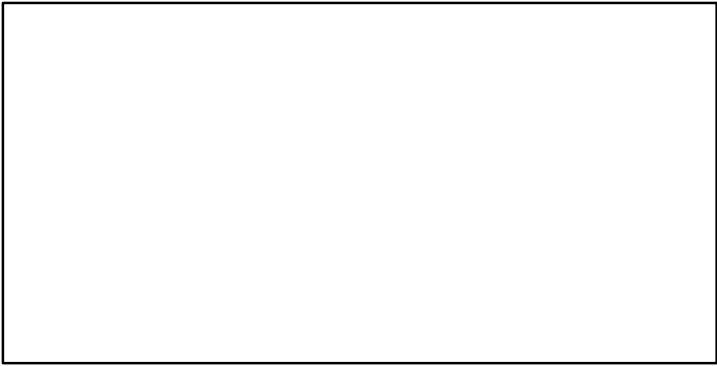
F\*



ER\*

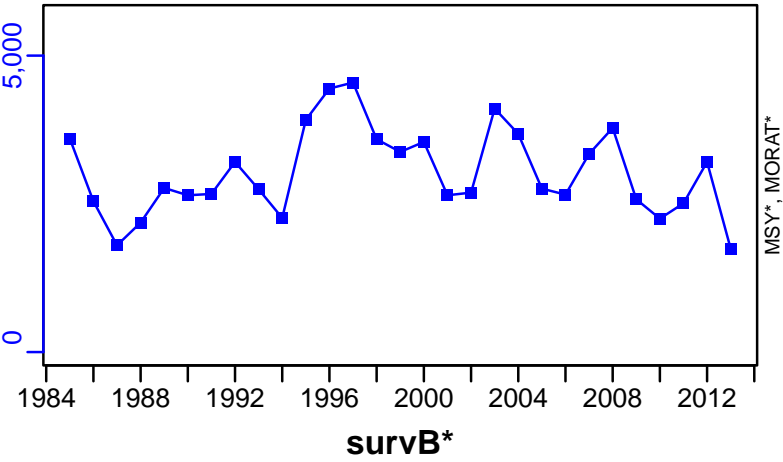


Recruits\*



Yellow striped flounder North coast of Hokkaido [YSFLOUNNHOKK]

TC-MT, TL\*, RecC\* (1985-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



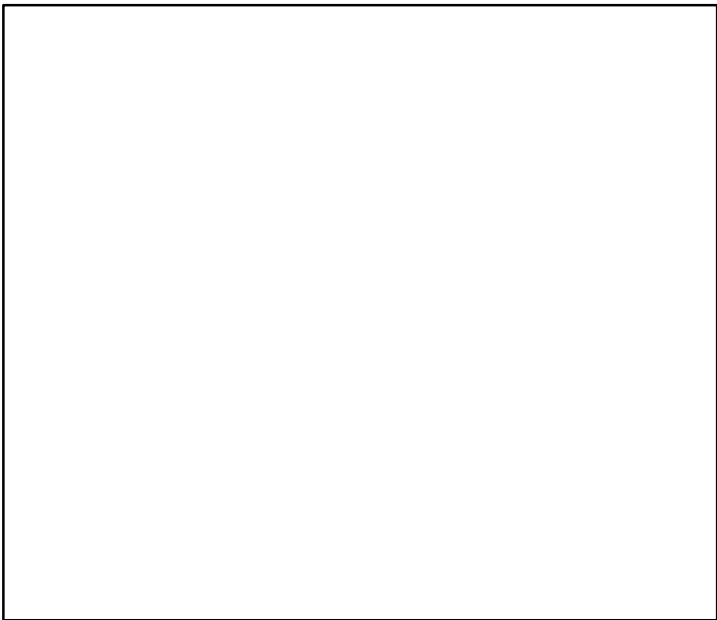
## Yellow striped flounder Sea of Japan [YSFLOUNSOJ]

Metadata	
<b>Scientific Name</b>	Pseudopleuronectes herzensteini
<b>Current Assess ID</b>	FAFRFJ-YSFLOUNSOJ-1980-2013-JPNIMP2016
<b>Area</b>	Sea of Japan
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

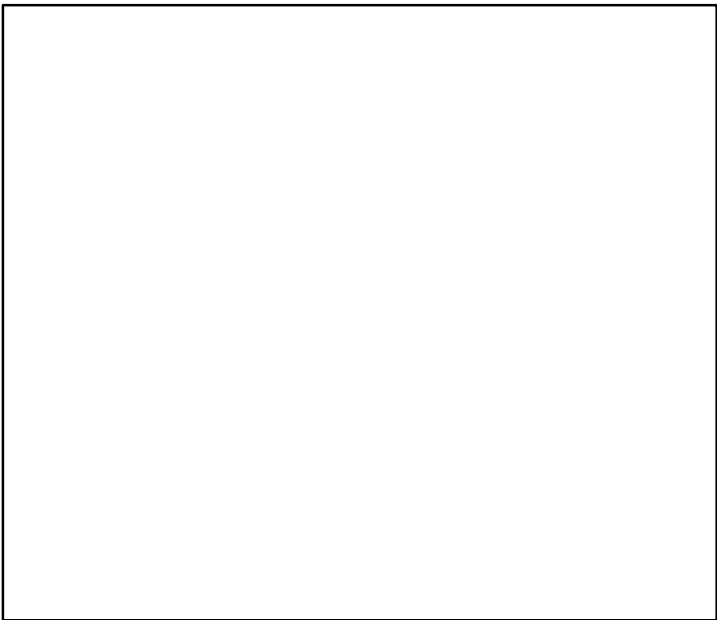
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	240		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

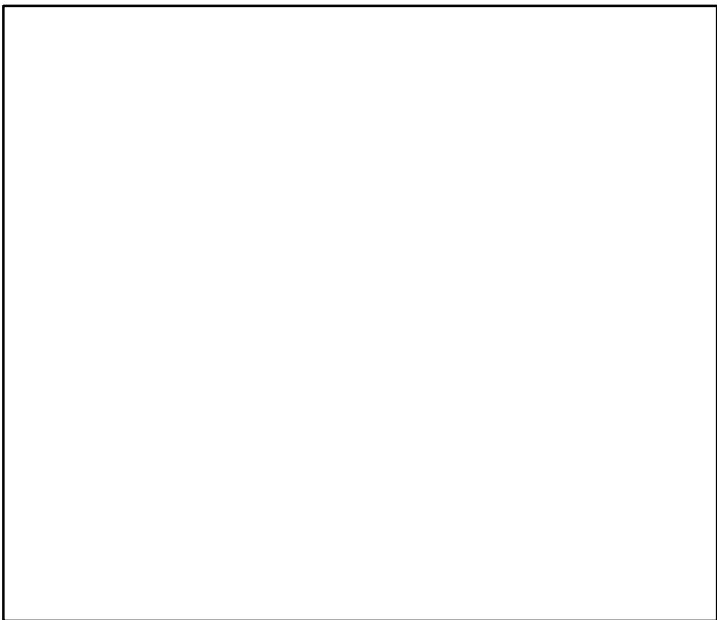
Kobe MSY\*



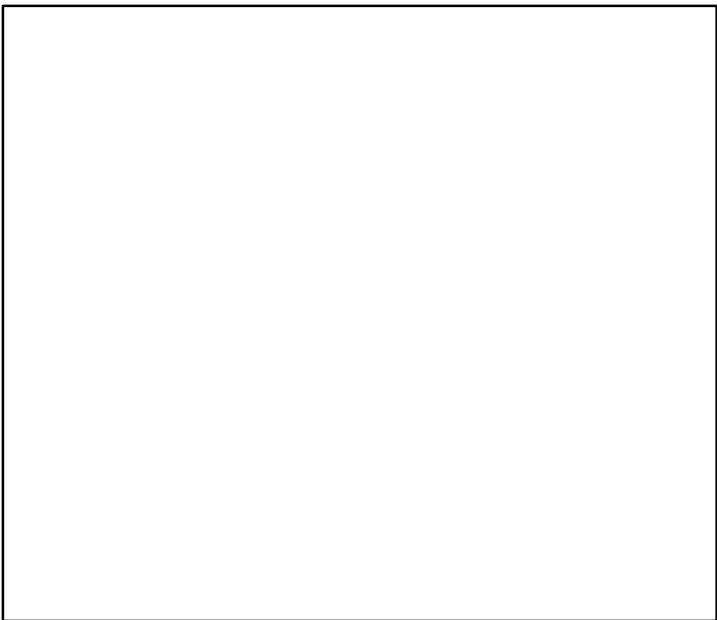
Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data



Yellow striped flounder Sea of Japan [YSFLOUNSOJ]

TB\*



SSB\*



TN \*



F\*



ER\*

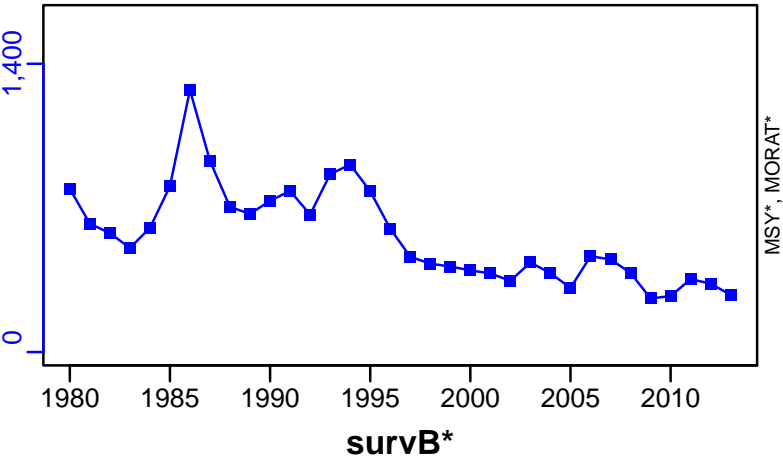


Recruits\*



Yellow striped flounder Sea of Japan [YSFLOUNSOJ]

TC-MT, TL\*, RecC\* (1980-2013-JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*

