

Canada West Coast Stocks

v4.495 (Apr-17-2021)

Not present Present Preferred

Stock	B/Bmsy	Time Series Types			
		U/Umsy	B/Bmgt	U/Umgt	
1. BIGSKA3CD [Big skate West Coast of Vancouver Island]	TB SSB	ER F	TB SSB	ER F	
2. BIGSKA4B [Big skate Strait of Georgia]	TB SSB	ER F	TB SSB	ER F	
3. BIGSKA5AB [Big skate Queen Charlotte Sound]	TB SSB	ER F	TB SSB	ER F	
4. BIGSKA5CDE [Big skate Hecate Strait]	TB SSB	ER F	TB SSB	ER F	
5. BOCACBCW [Bocaccio British Columbia Waters]	TB SSB	ER F	TB SSB	ER F	
6. CROCKWCVANISOGQCI [Canary rockfish West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands]	TB SSB	ER F	TB SSB	ER F	
7. ESOLEHS [English sole Hecate Strait]	TB SSB	ER F	TB SSB	ER F	
8. EULAPCOASTCCDU [Eulachon Pacific Coast of Canada Central Coast Designatable Unit]	TB SSB	ER F	TB SSB	ER F	
9. EULAPCOASTFRDU [Eulachon Pacific Coast of Canada Fraser River Designatable Unit]	TB SSB	ER F	TB SSB	ER F	
10. EULAPCOASTNSDU [Eulachon Pacific Coast of Canada Nass / Skeena Designatable Unit]	TB SSB	ER F	TB SSB	ER F	
11. HERRCC [Pacific herring Central Coast]	TB SSB	ER F	TB SSB	ER F	
12. HERRPRD [Pacific herring Prince Rupert District]	TB SSB	ER F	TB SSB	ER F	
13. HERRQCI [Pacific herring Queen Charlotte Islands]	TB SSB	ER F	TB SSB	ER F	
14. HERRSOG [Pacific herring Strait of Georgia]	TB SSB	ER F	TB SSB	ER F	
15. HERRWCVANI [Pacific herring West Coast of Vancouver Island]	TB SSB	ER F	TB SSB	ER F	
16. LINGCODSOG [Lingcod Strait of Georgia]	TB SSB	ER F	TB SSB	ER F	
17. LNOSESKA3CD [Longnose skate West Coast of Vancouver Island]	TB SSB	ER F	TB SSB	ER F	
18. LNOSESKA4B [Longnose skate Strait of Georgia]	TB SSB	ER F	TB SSB	ER F	
19. LNOSESKA5AB [Longnose skate Queen Charlotte Sound]	TB SSB	ER F	TB SSB	ER F	
20. LNOSESKA5CDE [Longnose skate Hecate Strait]	TB SSB	ER F	TB SSB	ER F	
21. PANDALSMA14 [Ocean shrimp Shrimp Management Area 14]	TB SSB	ER F	TB SSB	ER F	
22. PANDALSMA16 [Ocean shrimp Shrimp Management Area 16]	TB SSB	ER F	TB SSB	ER F	
23. PANDALSMA18-19 [Ocean shrimp Shrimp Management Areas 18 and 19]	TB SSB	ER F	TB SSB	ER F	
24. PANDALSMAFR [Ocean shrimp Shrimp Management Area FR]	TB SSB	ER F	TB SSB	ER F	
25. PANDALSMAGTSE [Ocean shrimp Shrimp Management Area GTSE]	TB SSB	ER F	TB SSB	ER F	
26. PANDALSMAPRD [Ocean shrimp Shrimp Management Area PRD]	TB SSB	ER F	TB SSB	ER F	
27. PCOD5ABCD [Pacific cod British Columbia Waters Area 5ABCD]	TB SSB	ER F	TB SSB	ER F	
28. PCODWCVANI [Pacific cod West Coast of Vancouver Island]	TB SSB	ER F	TB SSB	ER F	
29. PERCHQCI [Pacific Ocean perch Queen Charlotte Islands]	TB SSB	ER F	TB SSB	ER F	
30. PERCHWCVANI [Pacific ocean perch West Coast of Vancouver Island]	TB SSB	ER F	TB SSB	ER F	
31. QROCKPCOASTIN [Quillback rockfish Pacific Coast of Canada (In-side)]	TB SSB	ER F	TB SSB	ER F	

32. QROCKPCOASTOUT [Quillback rockfish Pacific Coast of Canada (Outside)]	TB SSB	ER F	TB SSB	ER F
33. RSOLE5AB [Rock sole Queen Charlotte Sound]	TB SSB	ER F	TB SSB	ER F
34. RSOLEHSTR [Rock sole Hecate Strait]	TB SSB	ER F	TB SSB	ER F
35. RSROCKBCWN [Redstripe rockfish British Columbia Waters North]	TB SSB	ER F	TB SSB	ER F
36. RSROCKBCWS [Redstripe rockfish British Columbia Waters South]	TB SSB	ER F	TB SSB	ER F
37. SABLEFPCAN [Sablefish Pacific Coast of Canada]	TB SSB	ER F	TB SSB	ER F
38. SARDBC [Pacific sardine Pacific Coast of Canada]	TB SSB	ER F	TB SSB	ER F
39. SSHRIMPSMAGTSE [Sidestripe shrimp Shrimp Management Area GTSE]	TB SSB	ER F	TB SSB	ER F
40. SSHRIMPSMAPRD [Sidestripe shrimp Shrimp Management Area PRD]	TB SSB	ER F	TB SSB	ER F
41. SSSHRIMPSMA14 [Sidestripe shrimp Shrimp Management Area 14]	TB SSB	ER F	TB SSB	ER F
42. SSSHRIMPSMA16 [Sidestripe shrimp Shrimp Management Area 16]	TB SSB	ER F	TB SSB	ER F
43. SSSHRIMPSMA18-19 [Sidestripe shrimp Shrimp Management Areas 18 and 19]	TB SSB	ER F	TB SSB	ER F
44. SSSHRIMPSMAFR [Sidestripe shrimp Shrimp Management Area FR]	TB SSB	ER F	TB SSB	ER F
45. WPOLLBCWN [Walleye pollock British Columbia Waters North]	TB SSB	ER F	TB SSB	ER F
46. WPOLLBCWS [Walleye pollock British Columbia Waters South]	TB SSB	ER F	TB SSB	ER F
47. WROCKBCW [Widow rockfish British Columbia Waters]	TB SSB	ER F	TB SSB	ER F
48. YEYEROCKPCOASTIN [Yelloweye rockfish Pacific Coast of Canada (Inside)]	TB SSB	ER F	TB SSB	ER F

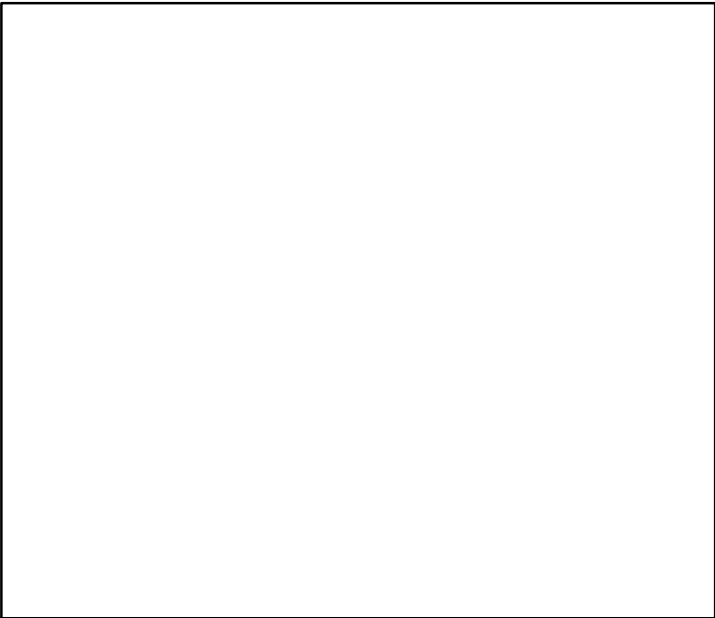
Big skate West Coast of Vancouver Island [BIGSKA3CD]

Metadata	
Scientific Name	Raja binoculata
Current Assess ID	DFO-PAC-BIGSKA3CD-1954-2011-OSGOOD
Area	West Coast of Vancouver Island
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2011

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	2011	37		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

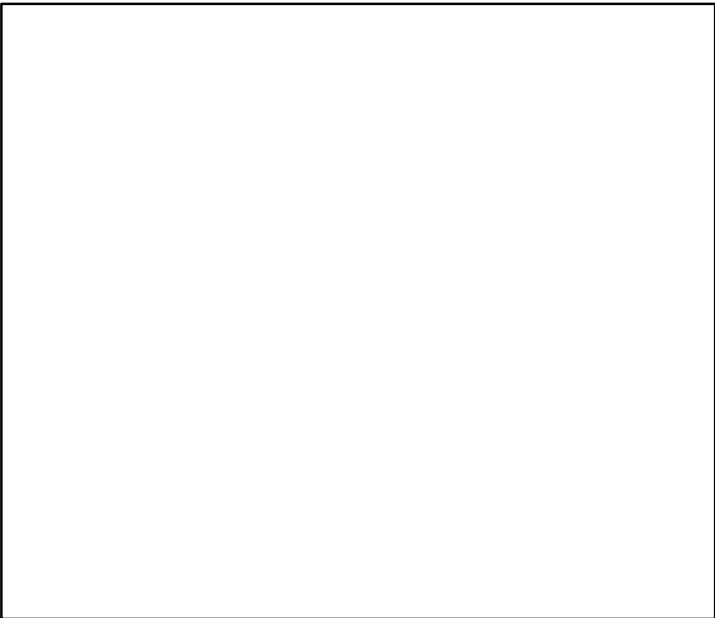
Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

Big skate West Coast of Vancouver Island [BIGSKA3CD]

TB*



SSB*



TN *



F*



ER*

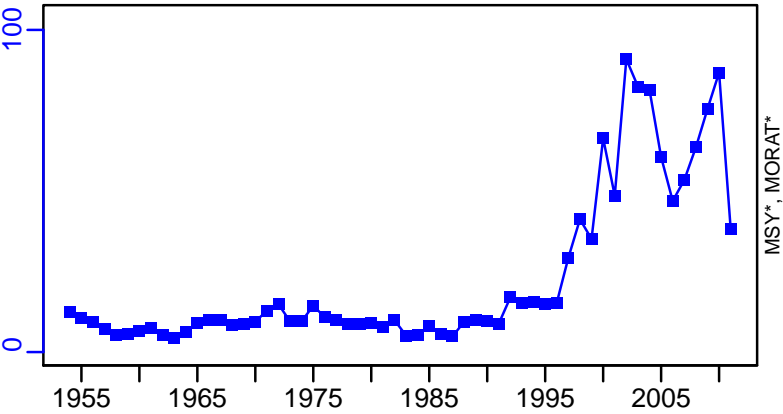


Recruits*



Big skate West Coast of Vancouver Island [BIGSKA3CD]

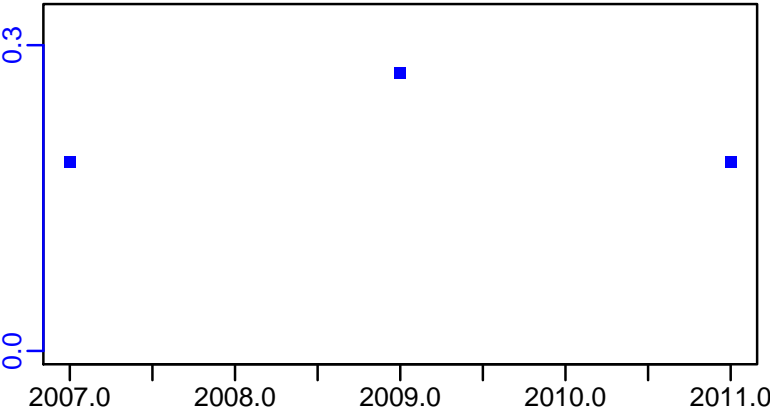
TC-MT, TL*, RecC* (1954-2011-OSGOOD)



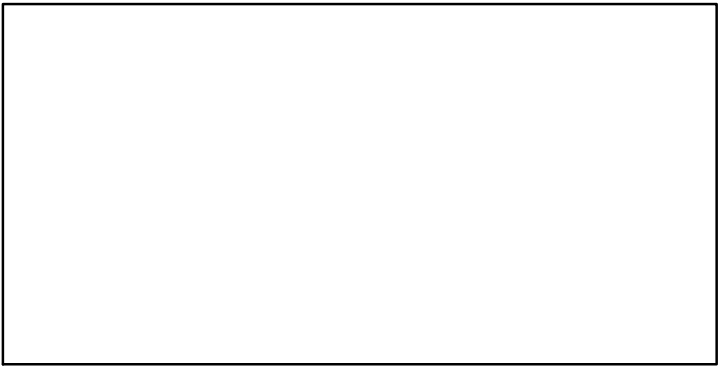
TAC*, Cpair*, Cadv*



survB-fishperE02hooks (1954-2011-OSGOOD)



CPUE*



CdivMSY*



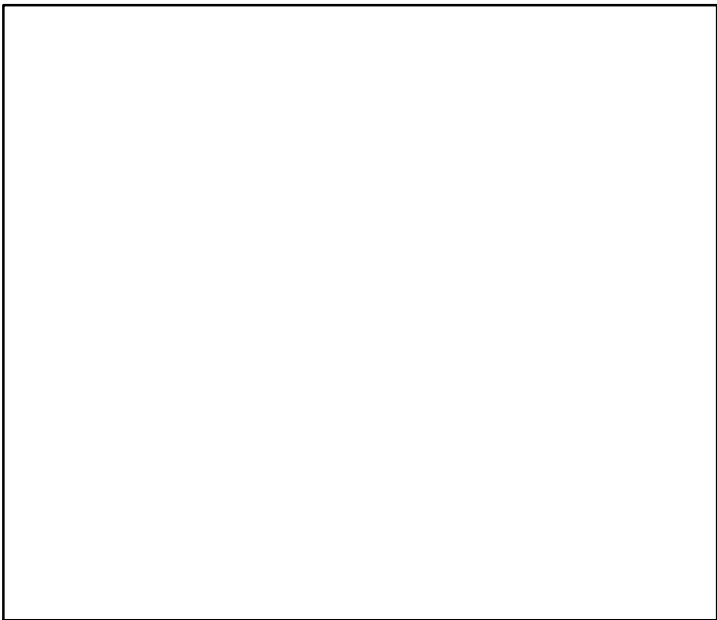
Big skate Strait of Georgia [BIGSKA4B]

Metadata	
Scientific Name	Raja binoculata
Current Assess ID	DFO-PAC-BIGSKA4B-1996-2011-OSGOOD
Area	Strait of Georgia
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2011

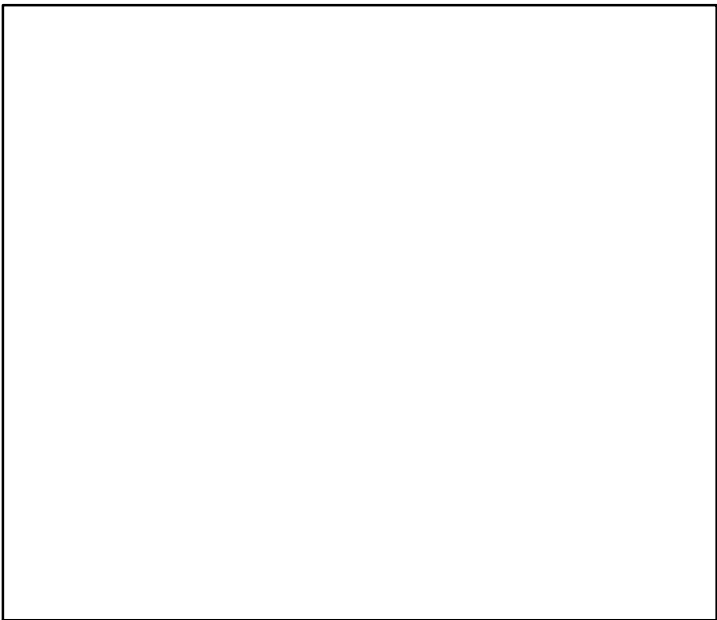
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2011	10		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*



Recruits*



■ Listed time series

--- MSY-based BRP

--- Target BRP

--- Lim BRP

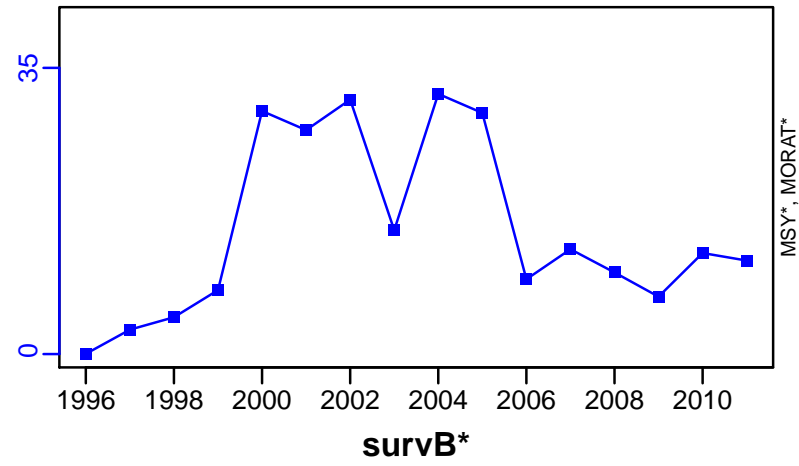
— Rec-Est

* No Data

Big skate Strait of Georgia [BIGSKA4B]

TC-MT, TL*, RecC* (1996-2011-OSGOOD)

TAC*, Cpair*, Cadv*



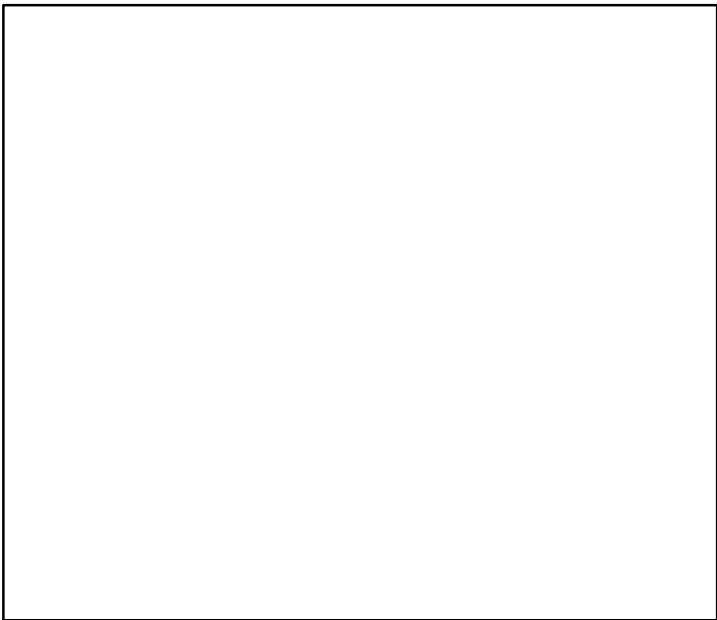
Big skate Queen Charlotte Sound [BIGSKA5AB]

Metadata	
Scientific Name	Raja binoculata
Current Assess ID	DFO-PAC-BIGSKA5AB-1954-2011-OSGOOD
Area	Queen Charlotte Sound
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2011

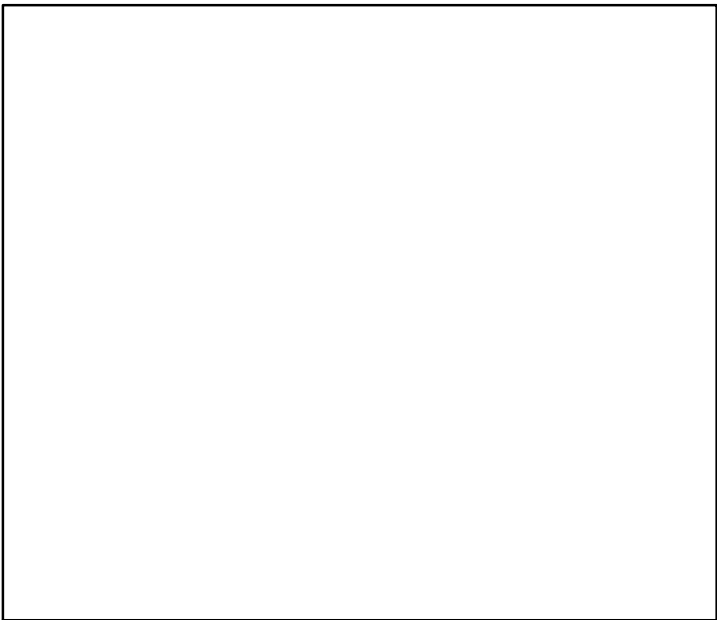
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2011	299		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

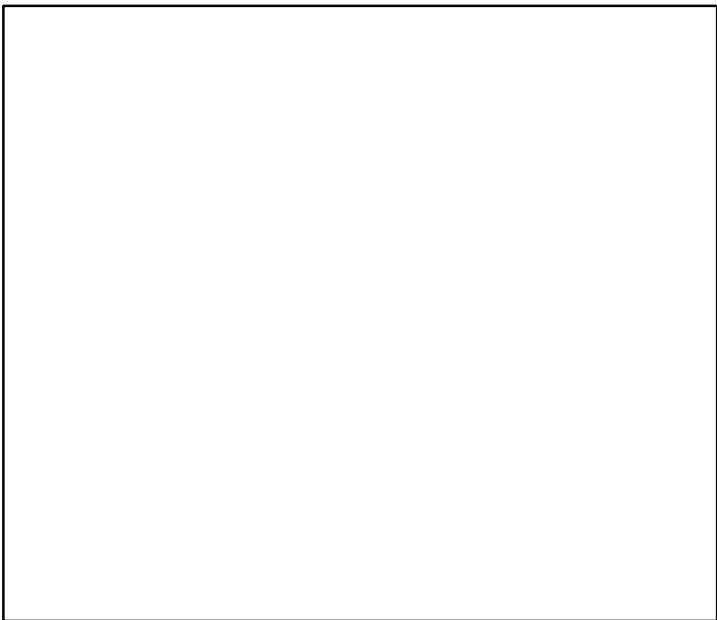
Kobe MSY*



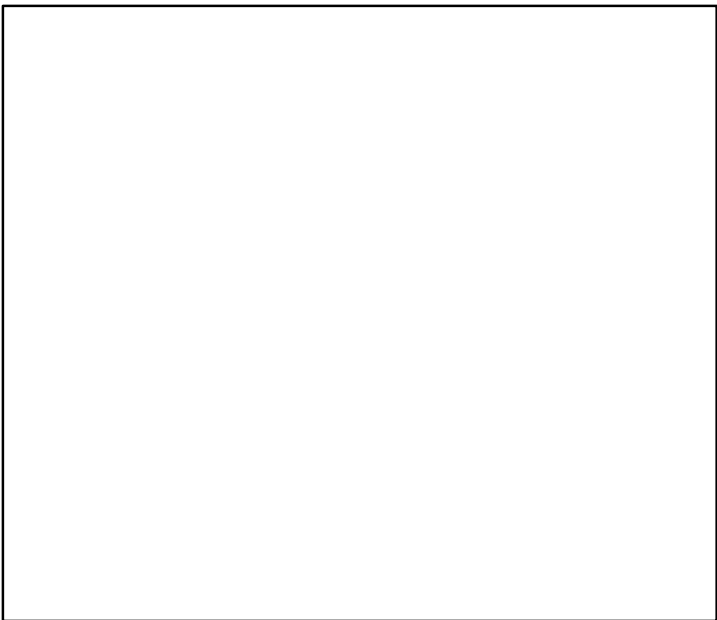
Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

Big skate Queen Charlotte Sound [BIGSKA5AB]

TB*



SSB*



TN *



F*









ER*



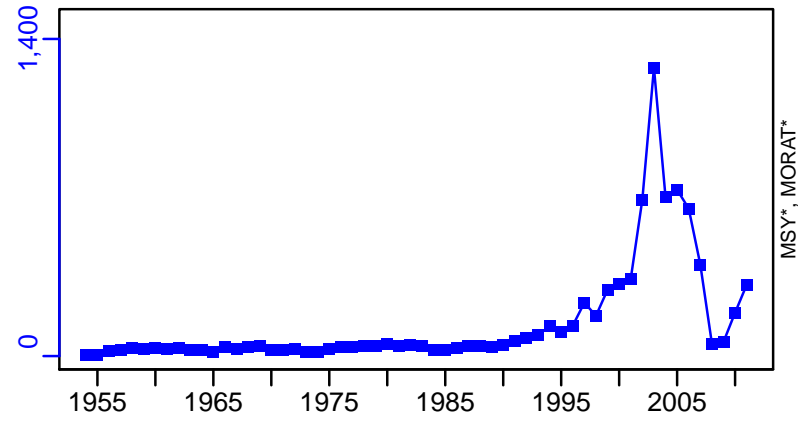
Recruits*



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

Big skate Queen Charlotte Sound [BIGSKA5AB]

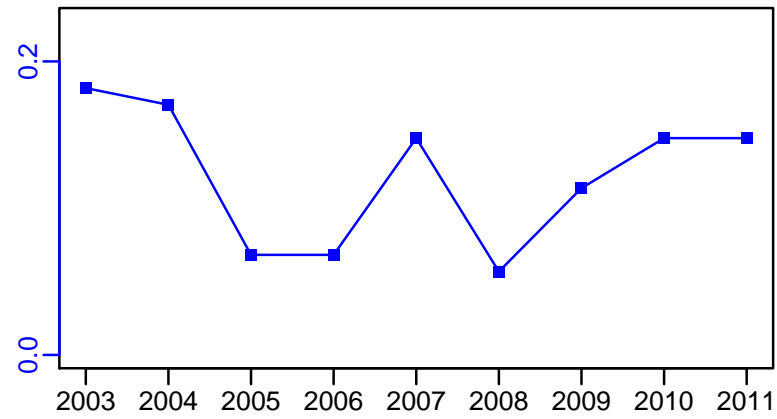
TC-MT, TL*, RecC* (1954-2011-OSGOOD)



TAC*, Cpair*, Cadv*



survB-fishperE02hooks (1954-2011-OSGOOD)



CPUE*



EFFORT*



CdivMSY*



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

Big skate Hecate Strait [BIGSKA5CDE]

Metadata	
Scientific Name	Raja binoculata
Current Assess ID	DFO-PAC-BIGSKA5CDE-1954-2011-OSGOOD
Area	Hecate Strait
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2011	351
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2011	628		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

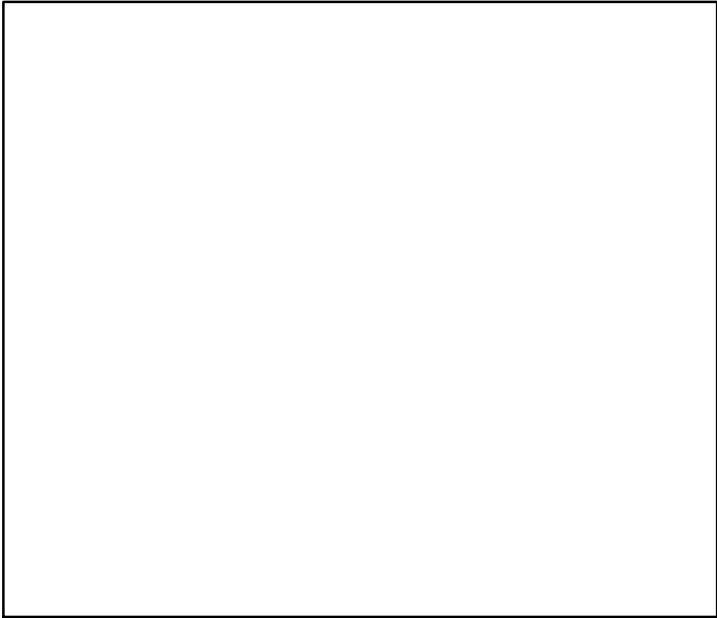
Kobe MSY*



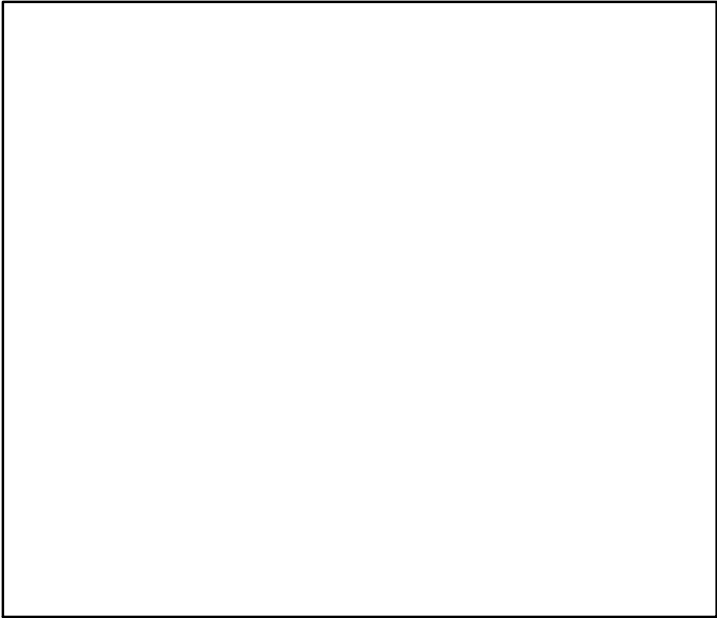
Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

Big skate Hecate Strait [BIGSKA5CDE]

TB*



SSB*



TN *



F*



ER*



Recruits*



■ Listed time series

--- MSY-based BRP

--- Target BRP

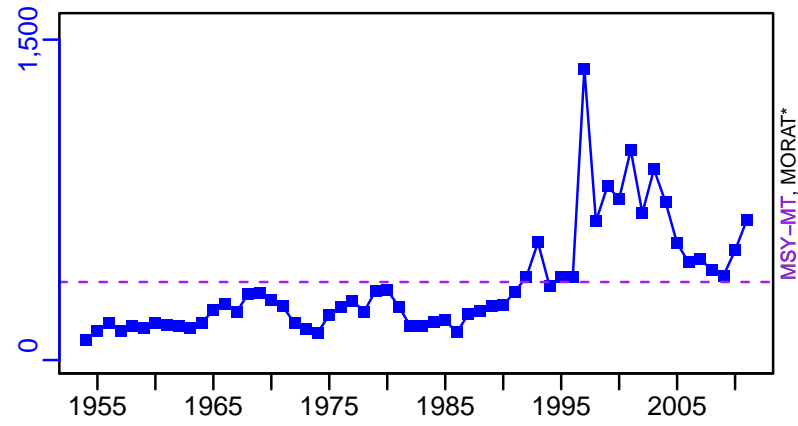
--- Lim BRP

— Rec-Est

* No Data

Big skate Hecate Strait [BIGSKA5CDE]

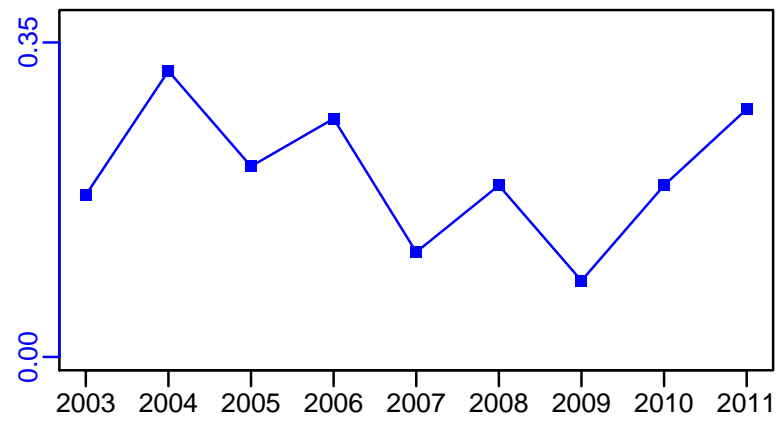
TC-MT, TL*, RecC* (1954-2011-OSGOOD)



TAC*, Cpair*, Cadv*



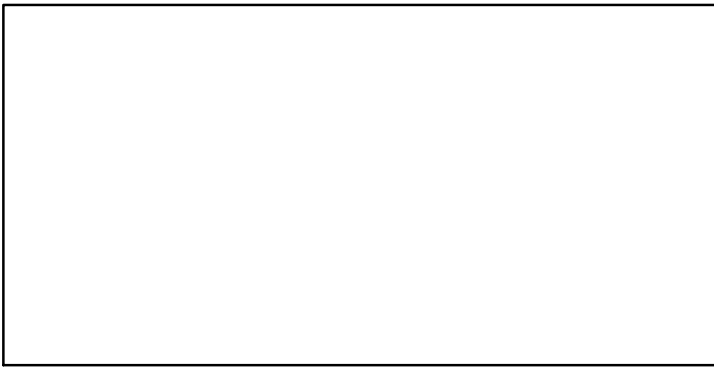
survB-fishperE02hooks (1954-2011-OSGOOD)



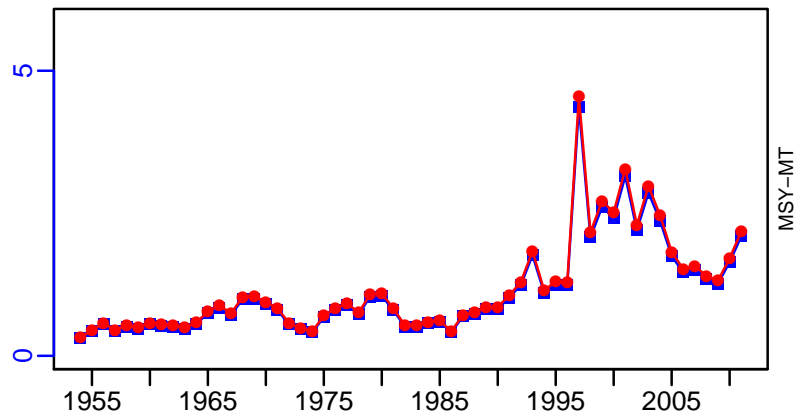
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1954-2011-OSGOOD)



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

Bocaccio British Columbia Waters [BOCACCBW]

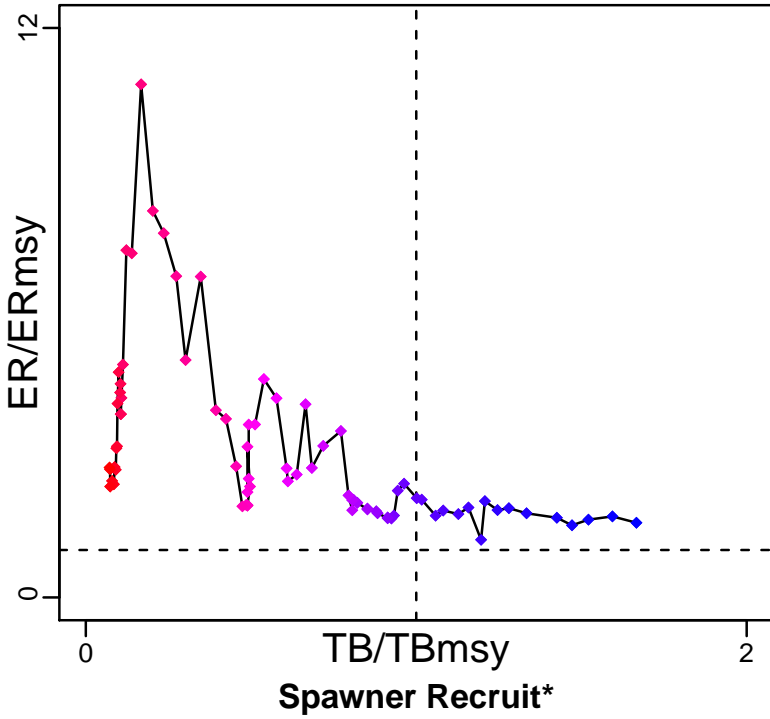
Metadata	
Scientific Name	Sebastes paucispinis
Current Assess ID	DFO-PAC-BOCACCBW-1935-2012-CHING
Area	British Columbia Waters
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2012

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2012	26,165
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2012	0.027
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2012	702
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

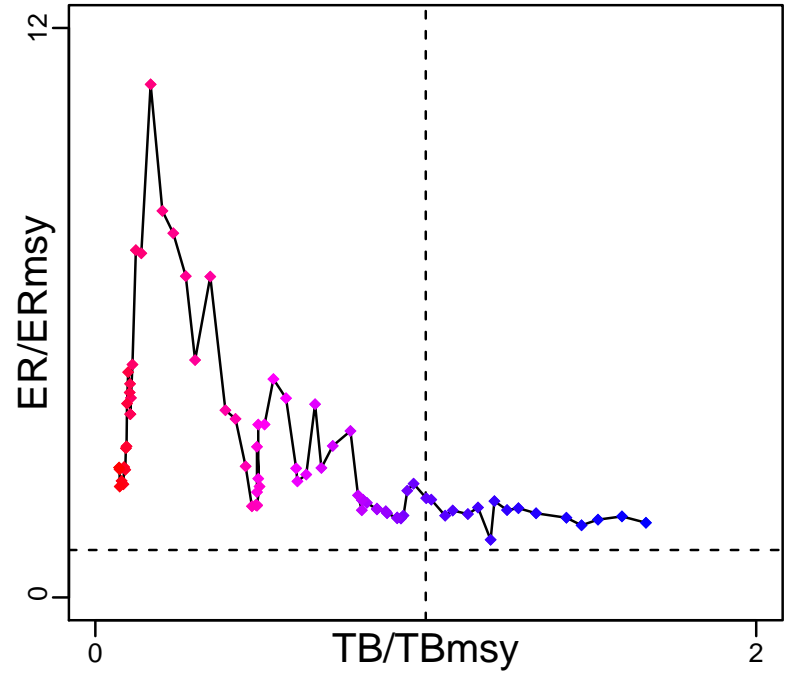
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	1880	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2012	0.073	-	-
TC	TC-MT	2012	138		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-MT	2012	0.072		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2012	2.737		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Bocaccio British Columbia Waters [BOCACCBCW]

Kobe MSYpref (1935–2012–CHING)



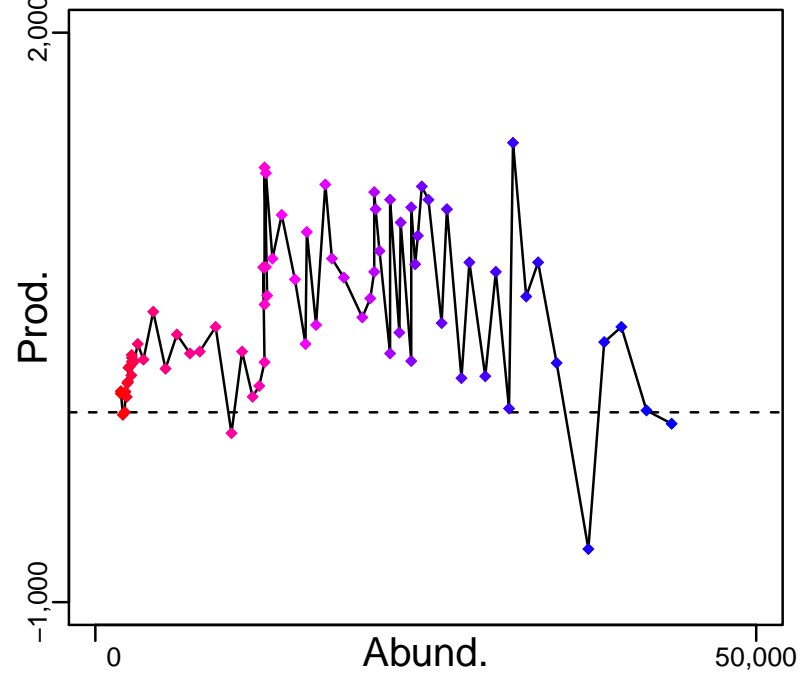
Kobe MGTpref (1935–2012–CHING)



Spawner Recruit*



Production (1935–2012–CHING)

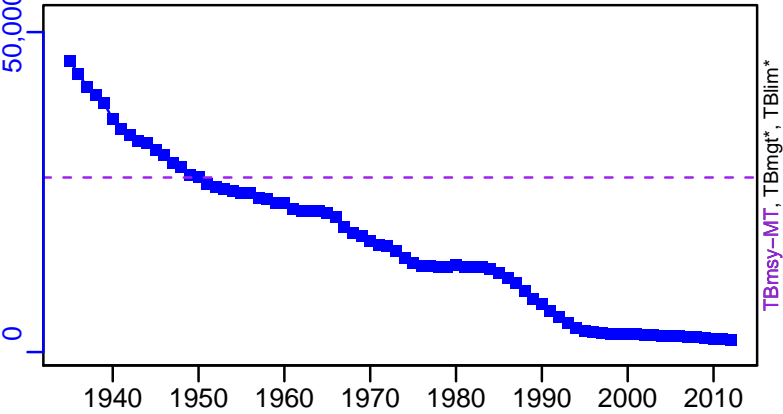


◆ Start Year ◆ End Year * No Data

Bocaccio British Columbia Waters [BOCACCBCW]

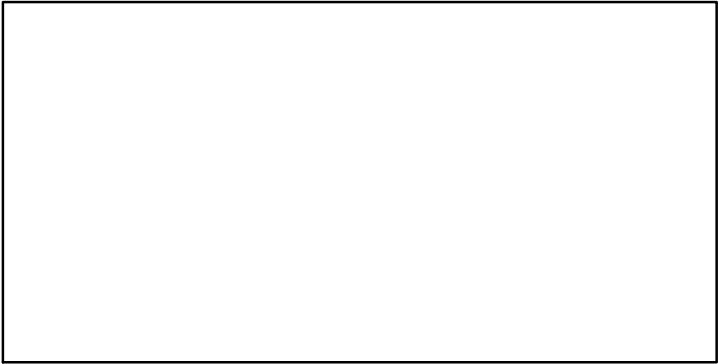
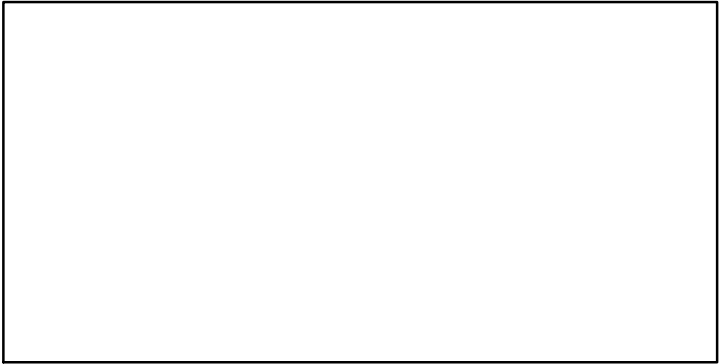
TB-MT (1935-2012-CHING)

SSB*



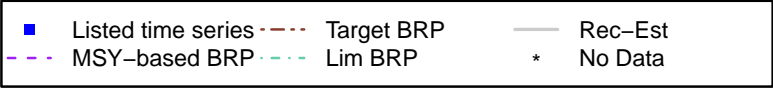
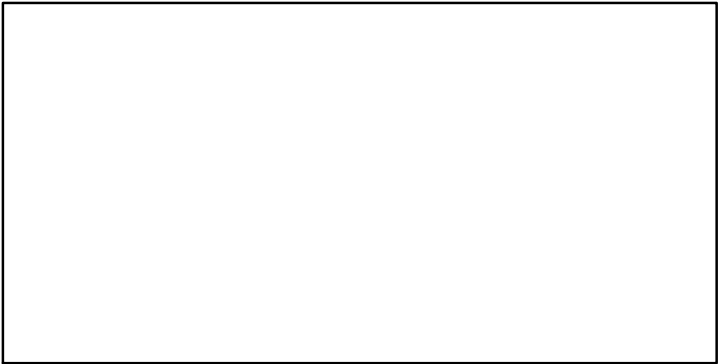
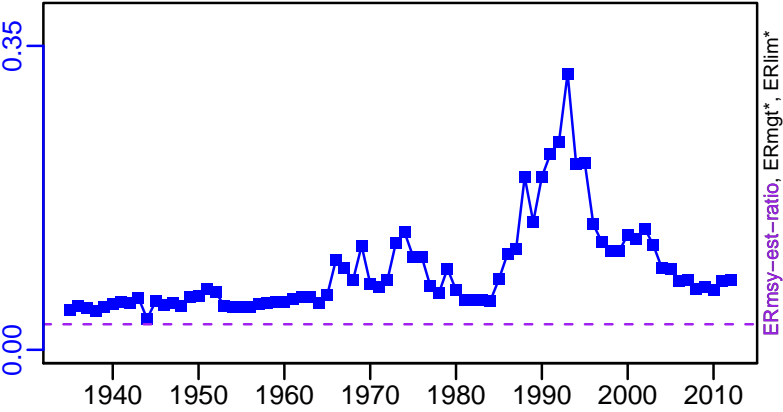
TN *

F*



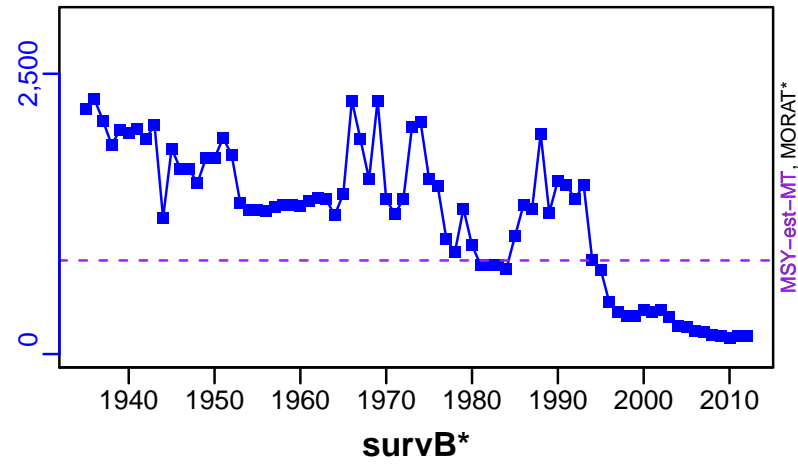
ER-calc-ratio (1935-2012-CHING)

Recruits*



Bocaccio British Columbia Waters [BOCACCBCW]

TC-MT, TL*, RecC* (1935–2012–CHING)



TAC*, Cpair*, Cadv*



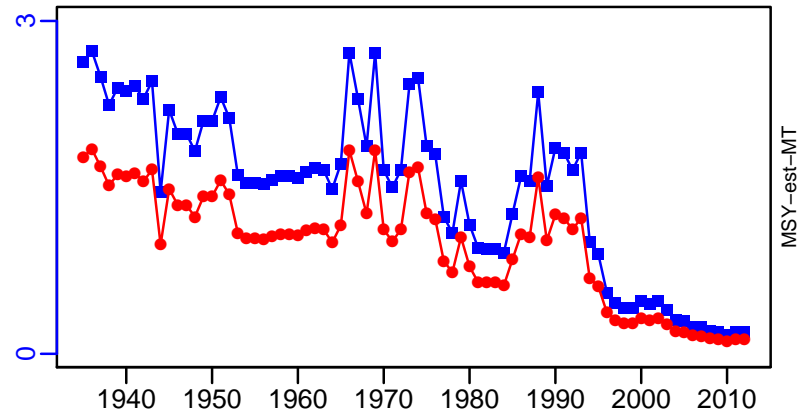
CPUE*



EFFORT*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1935–2012–CHING)



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

Canary rockfish West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands [CROCKWCVANISOGQCI]

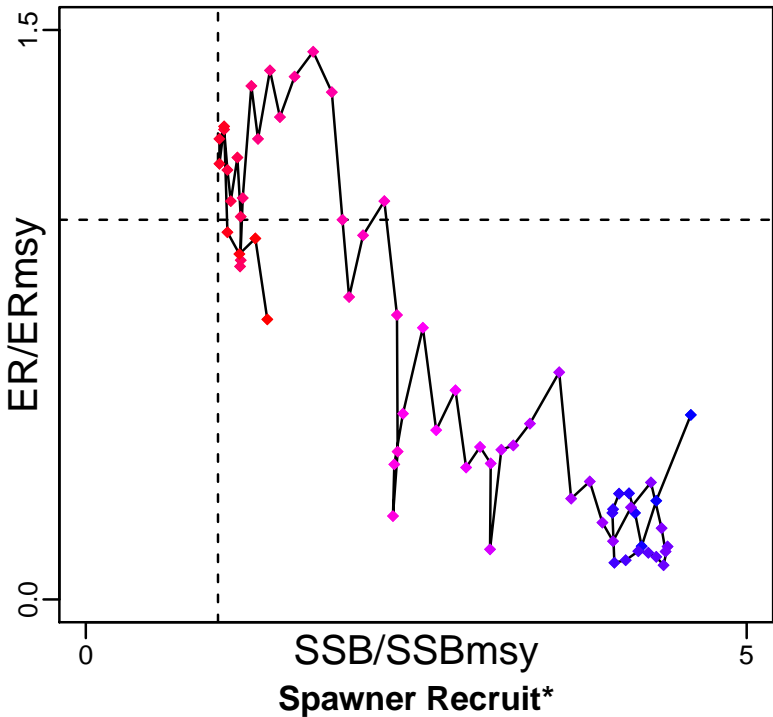
Metadata	
Scientific Name	Sebastes pinniger
Current Assess ID	DFO-CROCKWCVANISOGQCI-1945-2009-STANTON
Area	West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2009

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-calc-MT	2009	5851
SSBmsy	SSBmsy-MT	2009	1988
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2009	0.122
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2009	714
M	M-1/yr	2009	0.06
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

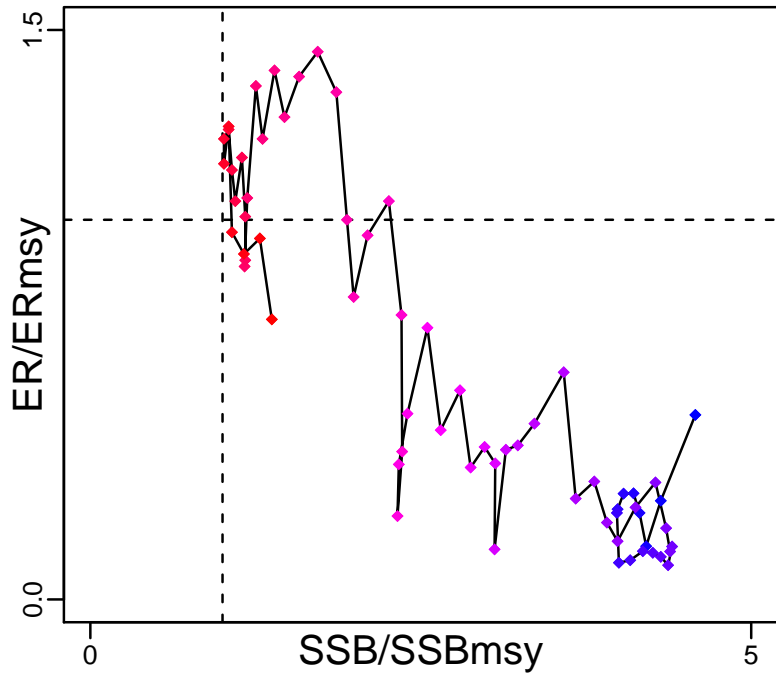
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2009	8890	-	14
SSB	SSB-MT	2009	2730	Females	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-ratio	2009	0.09	-	-
TC	TC-MT	2009	800		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-calc-MT	2009	1.519		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2009	1.373		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2009	0.738		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Canary rockfish West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands [CROCKWCVANISOGQCI]

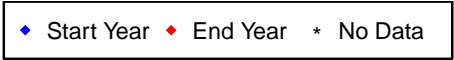
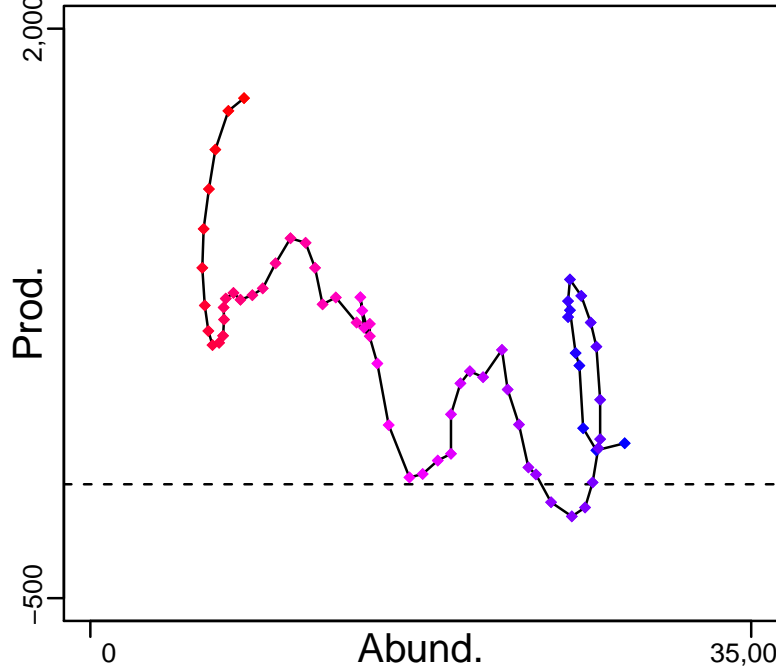
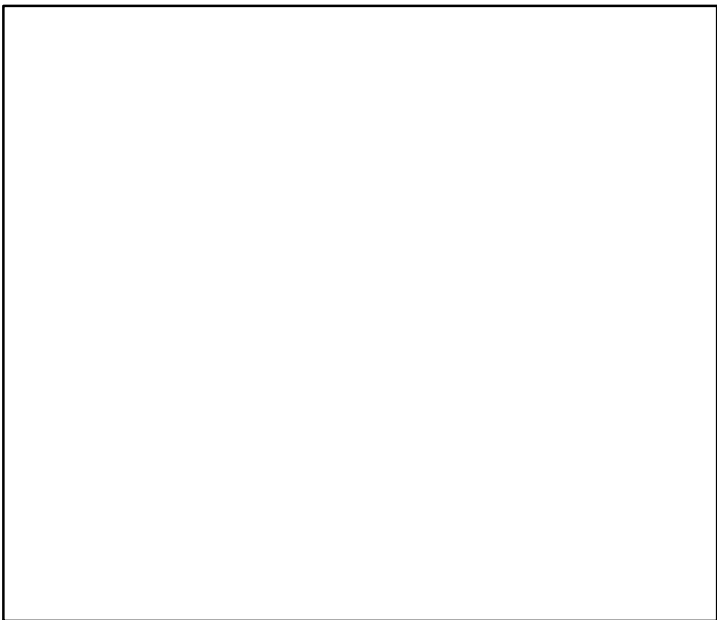
Kobe MSYpref (1945–2009–STANTON)



Kobe MGTpref (1945–2009–STANTON)

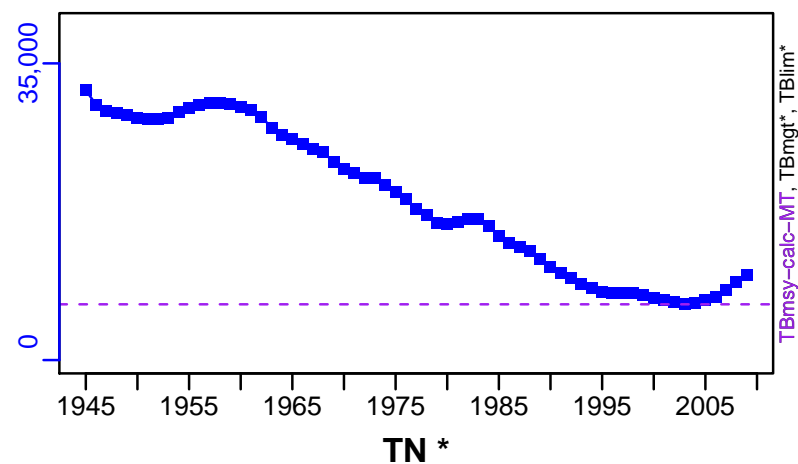


Production (1945–2009–STANTON)

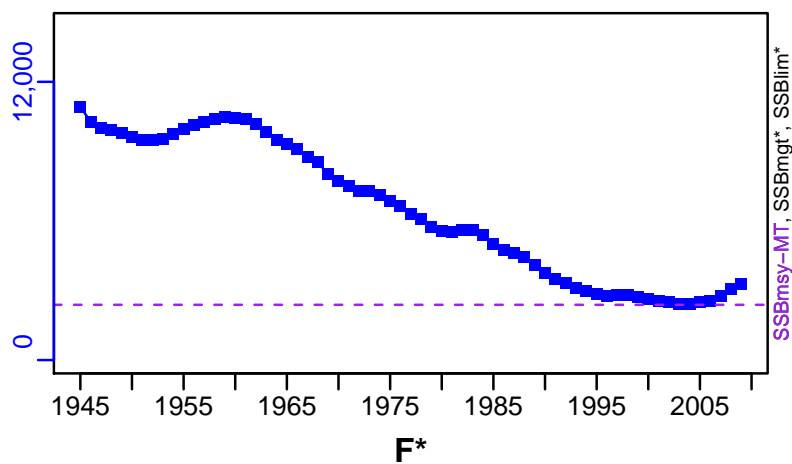


Canary rockfish West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands [CROCKWCVANISOGQCI]

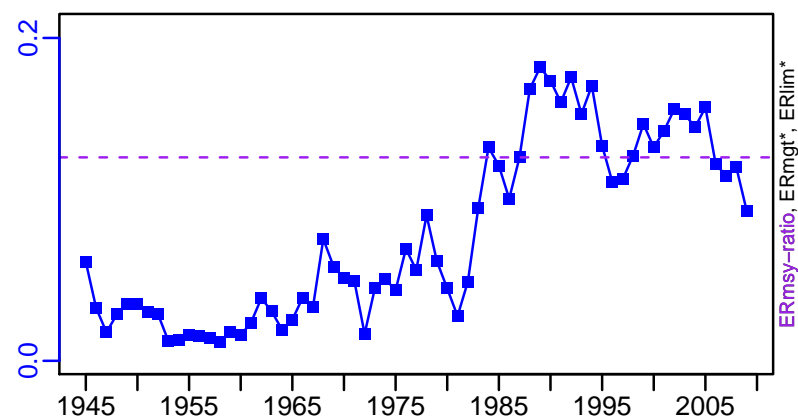
TB-MT (1945-2009-STANTON)



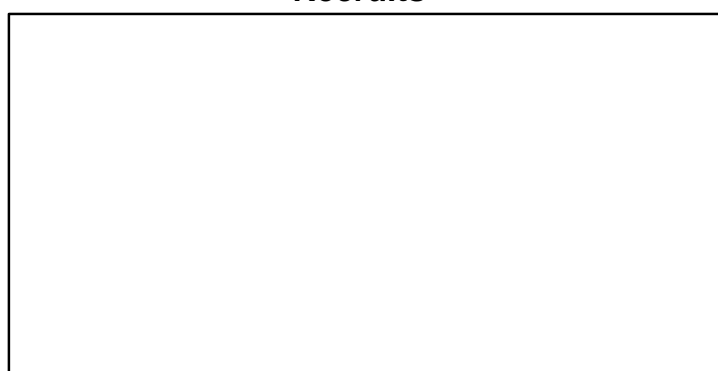
SSB-MT (1945-2009-STANTON)



ER-ratio (1945-2009-STANTON)

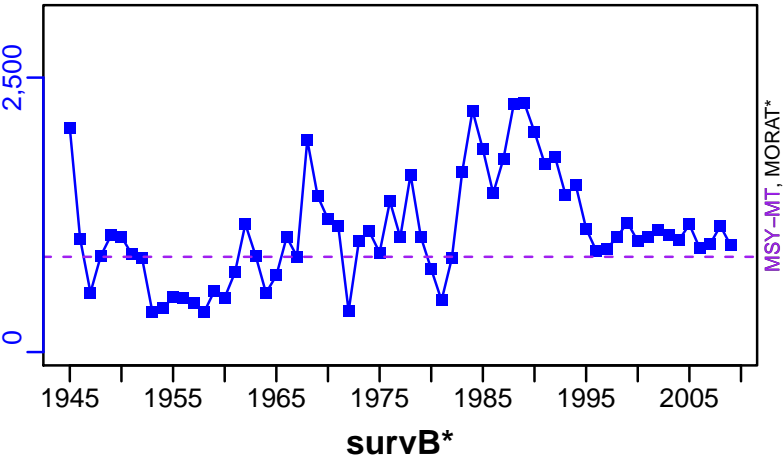


Recruits*



Canary rockfish West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands [CROCKWCVANISOGQCI]

TC-MT, TL*, RecC* (1945-2009-STANTON)



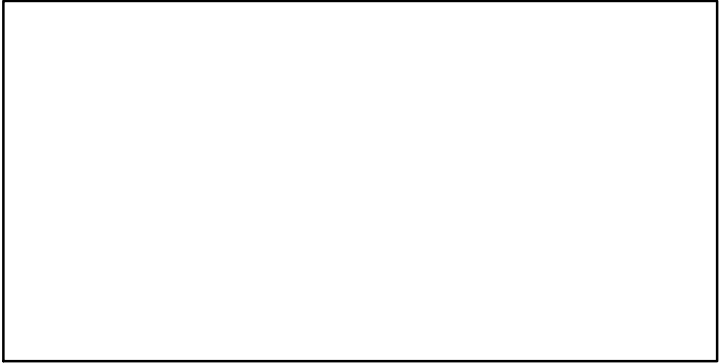
TAC*, Cpair*, Cadv*



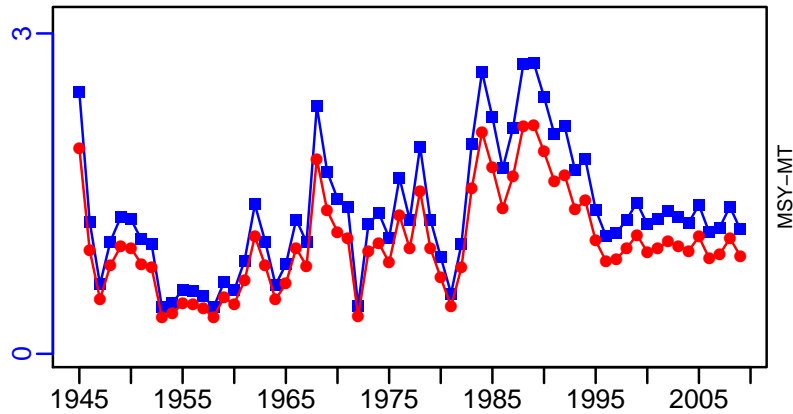
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1945-2009-STANTON)



English sole Hecate Strait [ESOLEHS]

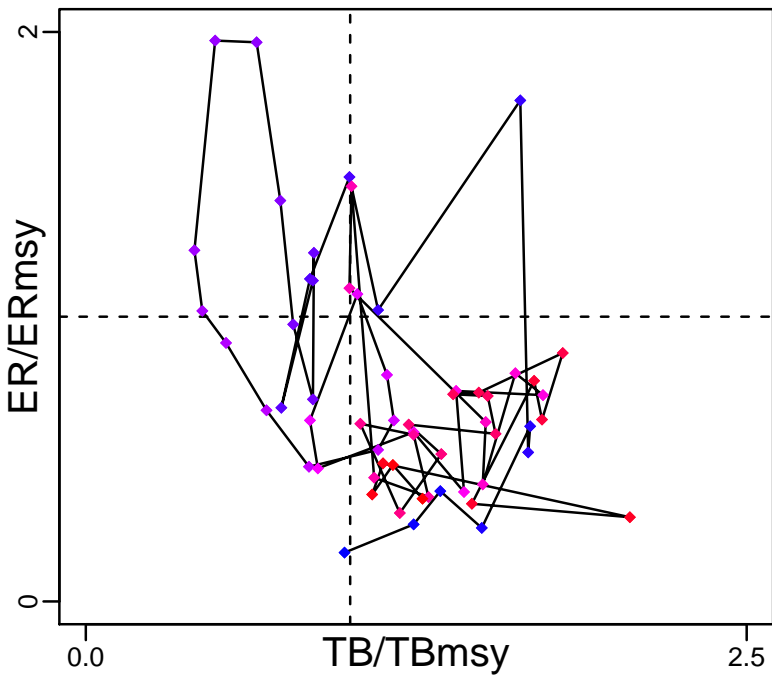
Metadata	
Scientific Name	Parophrys vetulus
Current Assess ID	DFO-PAC-ESOLEHS-1944-2001-COLLIE
Area	Hecate Strait
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2001

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2001	2677
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2001	0.338
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2001	905
M	M-1/yr	2001	0.2
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

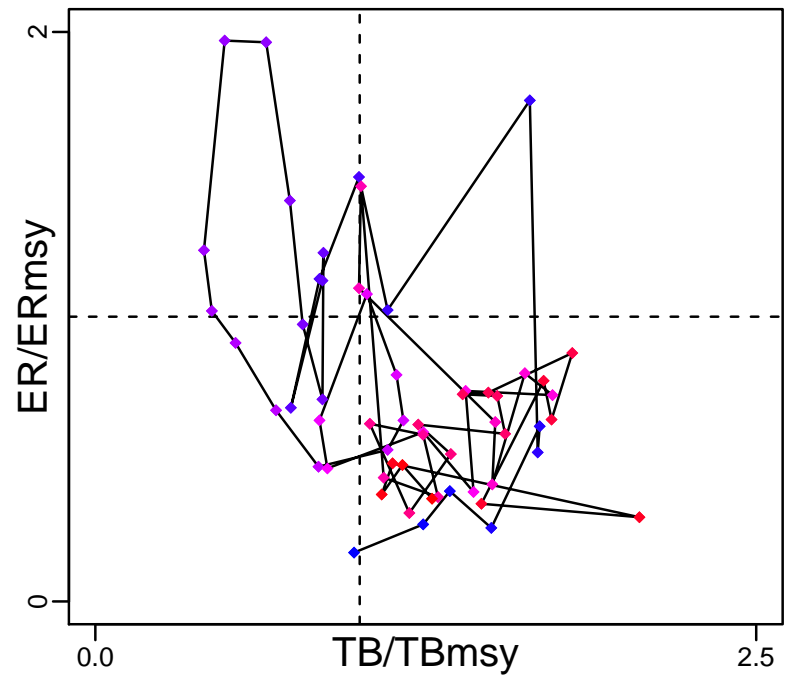
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2001	3410	-	4+
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	R-E00	2001	2,040,000	-	4
F	F-1/yr	2001	0.16	-	-
ER	ER-ratio	2001	0.122	-	-
TC	-	-	-		
TL	TL-MT	2001	414		
TB/TBmsy	TB-MT/TBmsy-est-MT	2001	1.274		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-est-ratio	2001	0.361		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

English sole Hecate Strait [ESOLEHS]

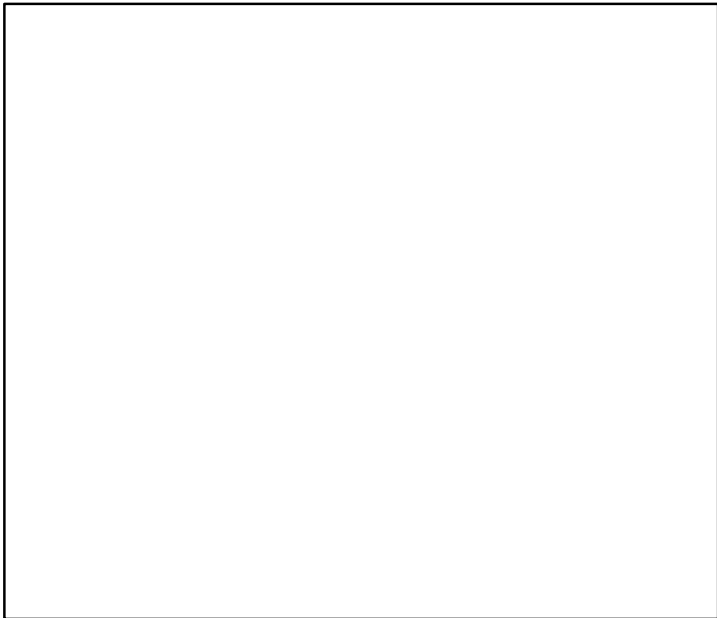
Kobe MSYpref (1944–2001–COLLIE)



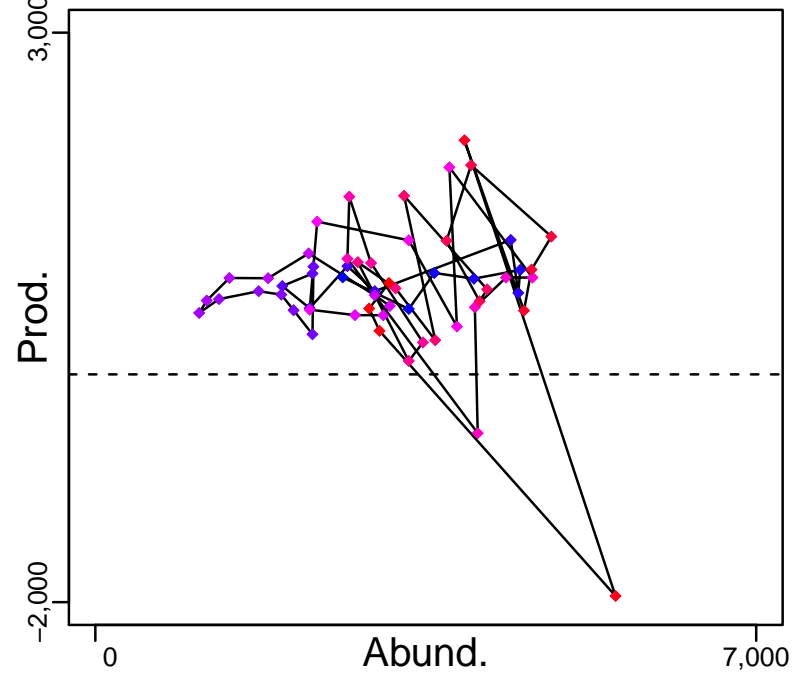
Kobe MGTpref (1944–2001–COLLIE)



Spawner Recruit*



Production (1944–2001–COLLIE)

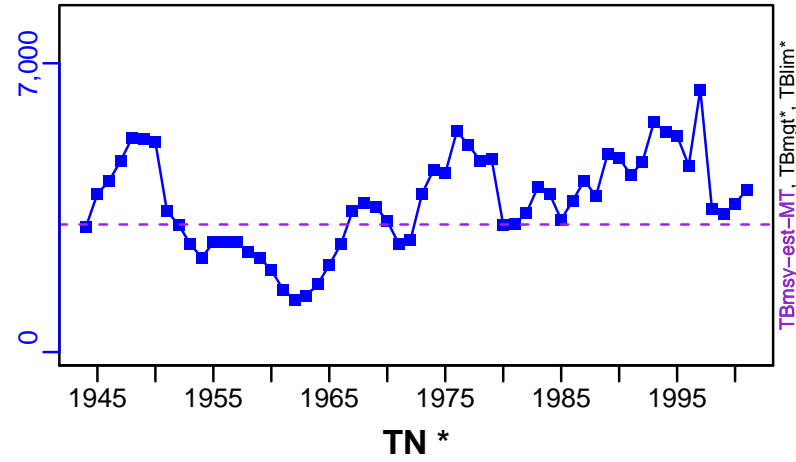


◆ Start Year ◆ End Year * No Data

English sole Hecate Strait [ESOLEHS]

TB-MT (1944-2001-COLLIE)

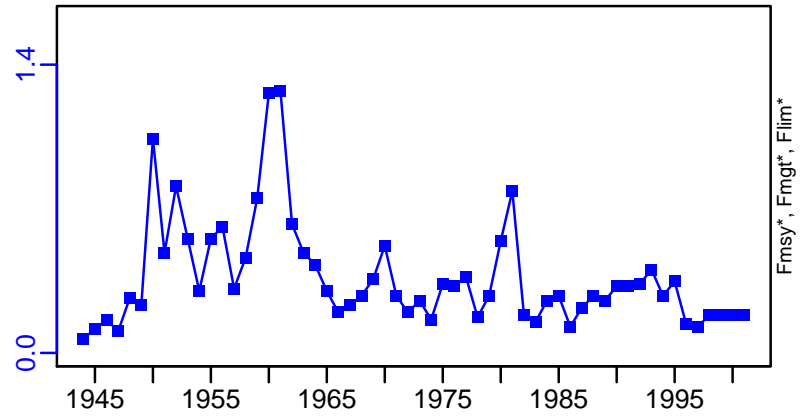
SSB*



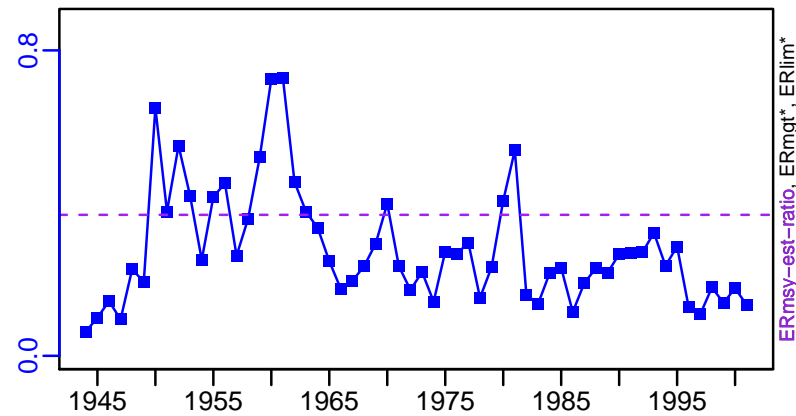
TN *



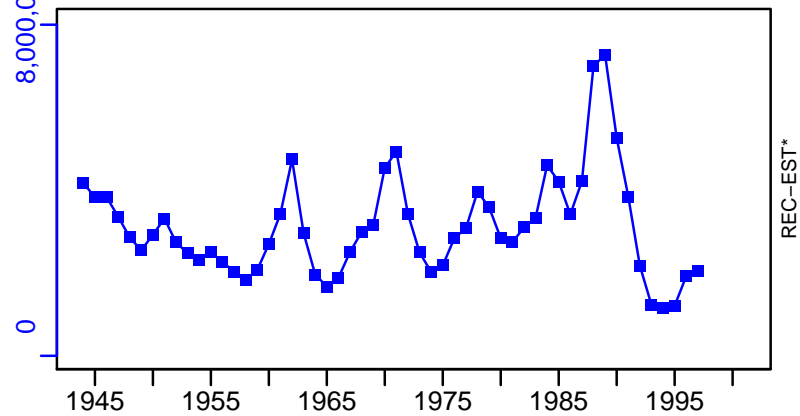
F-1/yr (1944-2001-COLLIE)



ER-ratio (1944-2001-COLLIE)

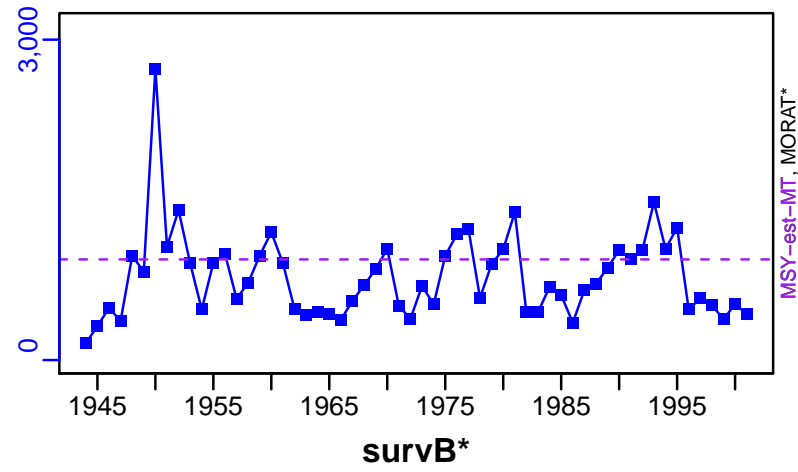


R-E00 (1944-2001-COLLIE)



English sole Hecate Strait [ESOLEHS]

TL-MT, TC*, RecC* (1944–2001–COLLIE)



TAC*, Cpair*, Cadv*



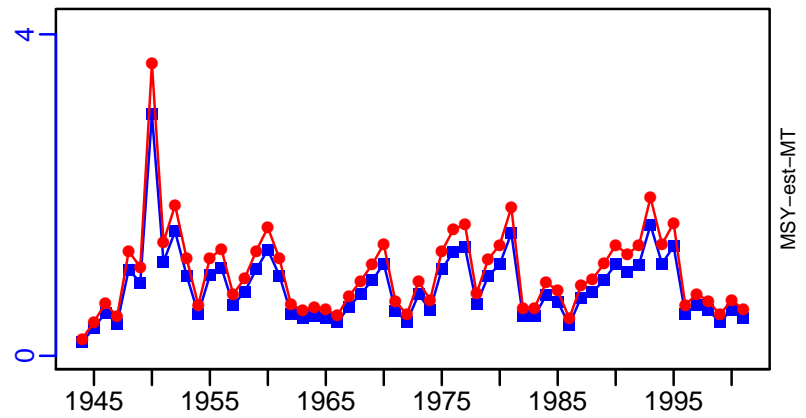
CPUE*



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1944–2001–COLLIE)



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

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

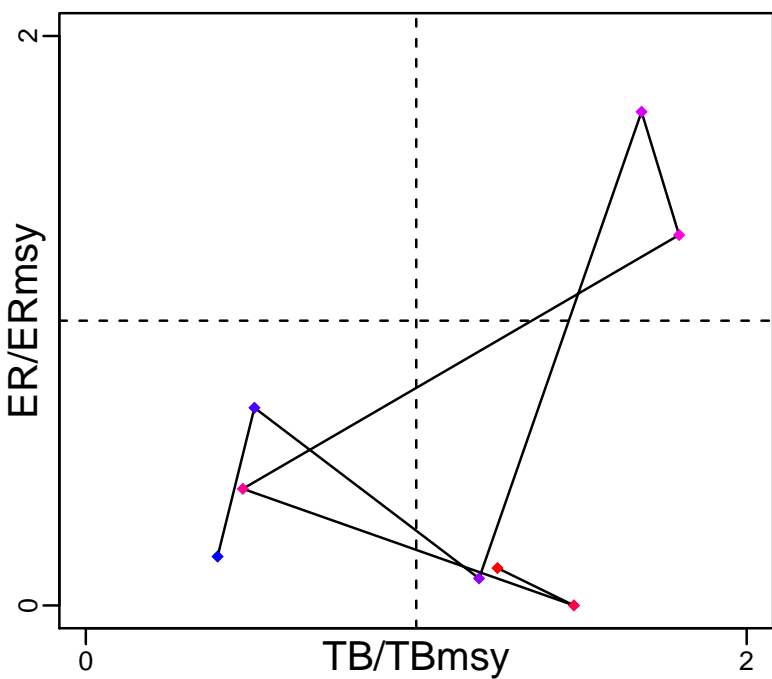
Metadata	
Scientific Name	Thaleichthys pacificus
Current Assess ID	DFO-EULAPCOASTCCDU-1951-2012-WATSON
Area	Pacific Coast of Canada Central Coast Designatable Unit
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in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

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2012	48
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2012	0.531
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2012	26
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

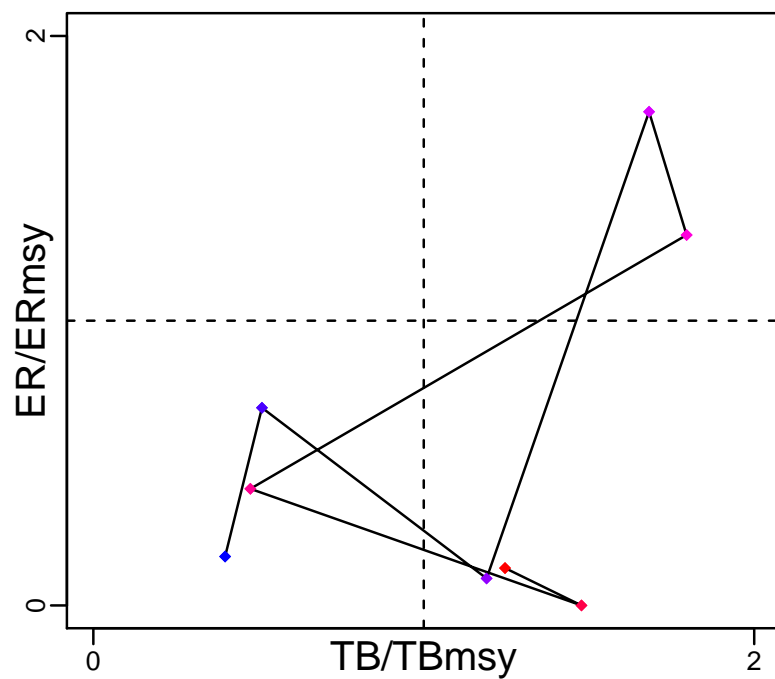
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	76	-	-
SSB	-	-	-	-	-
TN	TN-index	2012	14	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2012	0.07	-	-
TC	TC-MT	2012	4.2		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-est-MT	2012	1.562		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2012	0.131		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

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

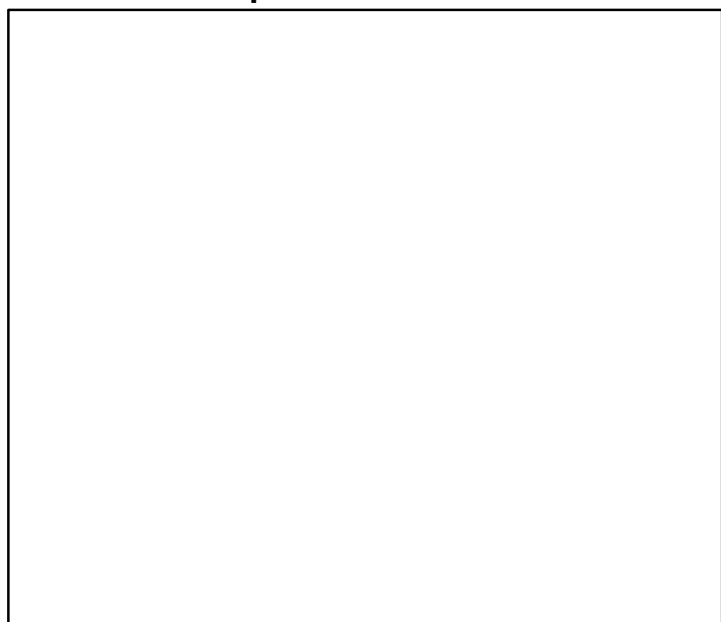
Kobe MSY_{pref} (1951–2012–WATSON)



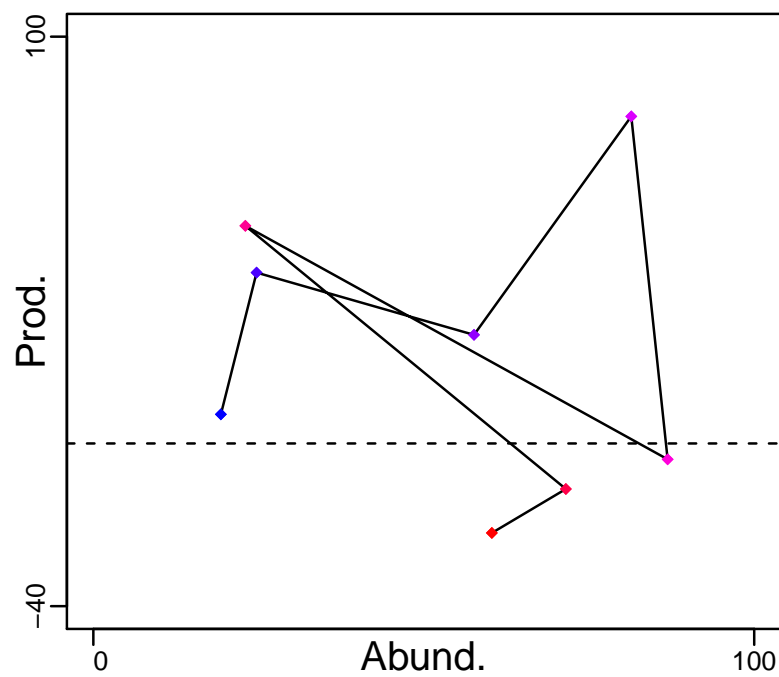
Kobe MGT_{pref} (1951–2012–WATSON)



Spawner Recruit*



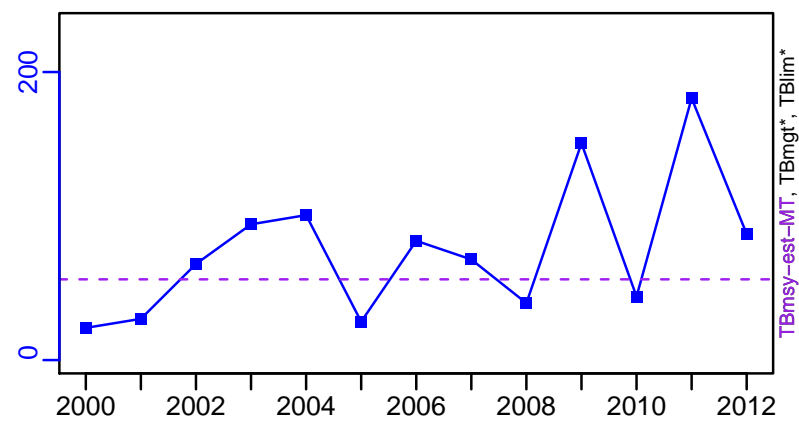
Production (1951–2012–WATSON)



◆ Start Year ◆ End Year * No Data

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

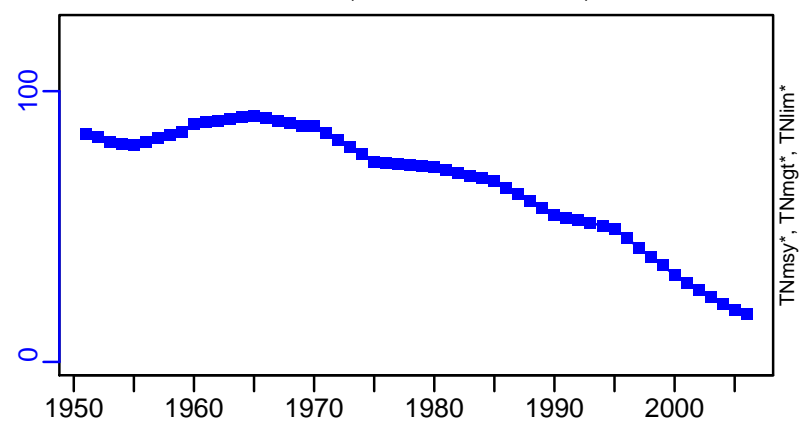
TB-MT (1951-2012-WATSON)



SSB*



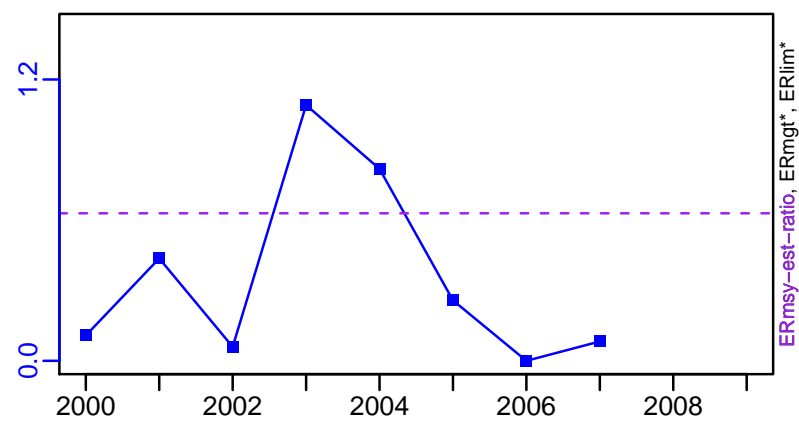
TN-index (1951-2012-WATSON)



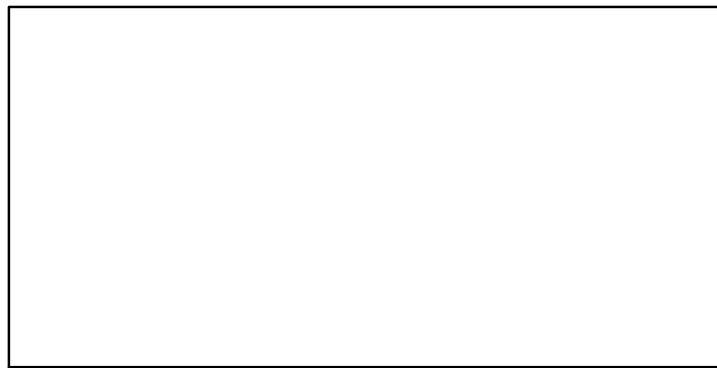
F*



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



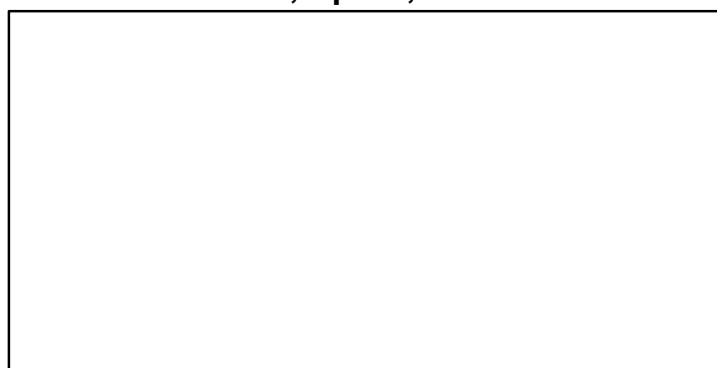
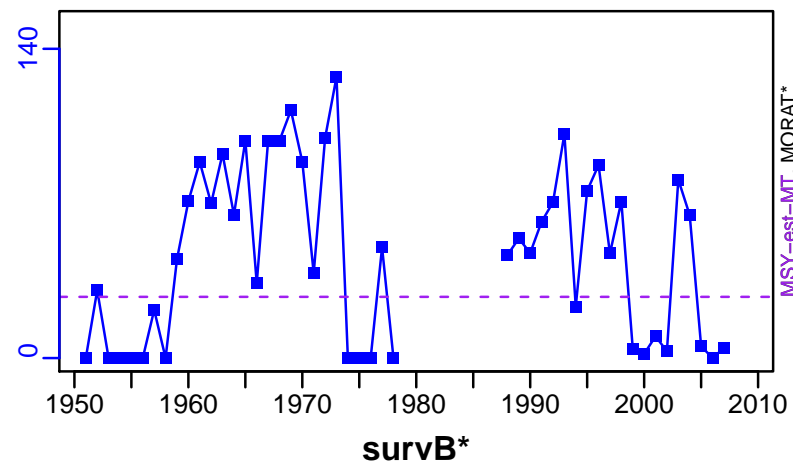
Recruits*



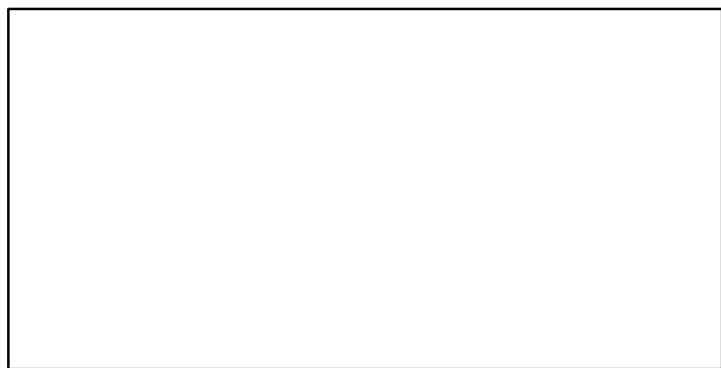
Eulachon Pacific Coast of Canada Central Coast Designatable Unit [EULAPCOASTCCDU]

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

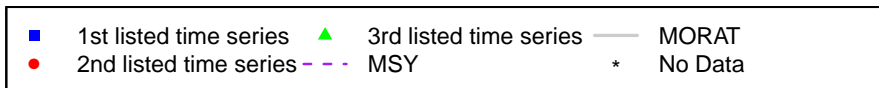
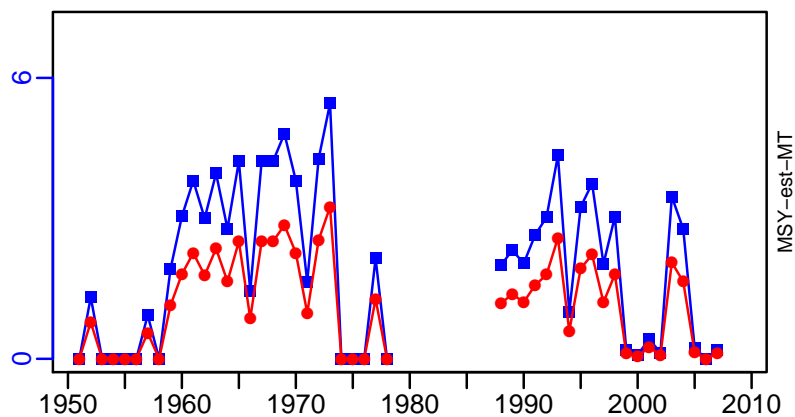
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1951-2012-WATSON)



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

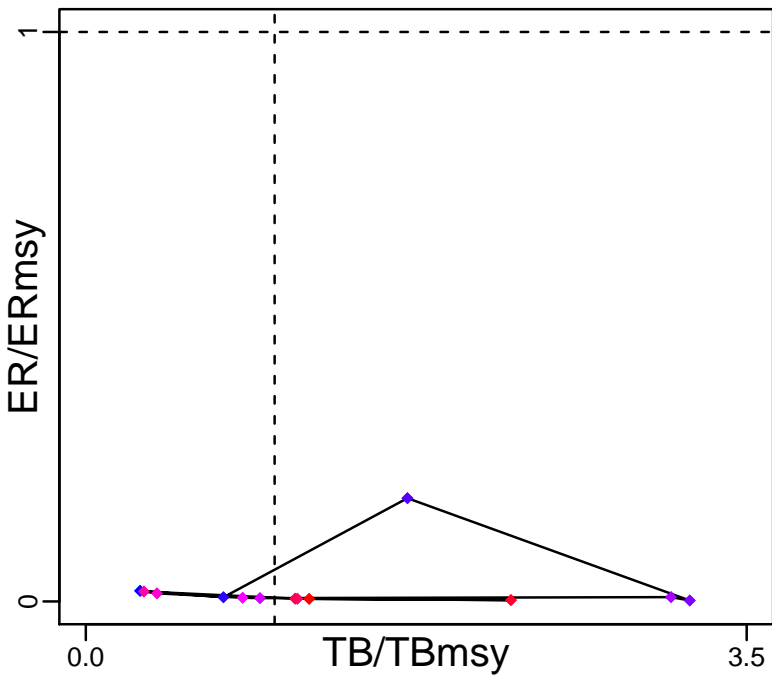
Metadata	
Scientific Name	Thaleichthys pacificus
Current Assess ID	DFO-EULAPCOASTFRDU-1900-2012-WATSON
Area	Pacific Coast of Canada Fraser River Designatable Unit
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM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

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2012	40
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2012	0.462
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2012	112
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

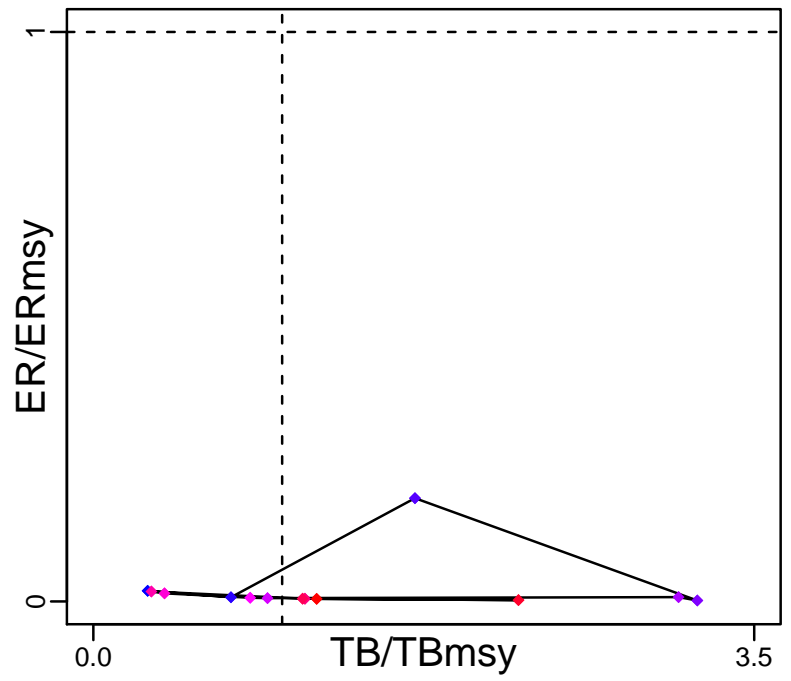
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	48	-	-
SSB	-	-	-	-	-
TN	TN-index	2012	6	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2012	0.002	-	-
TC	TC-MT	2012	0.1		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-est-MT	2012	1.183		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2012	0.005		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

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

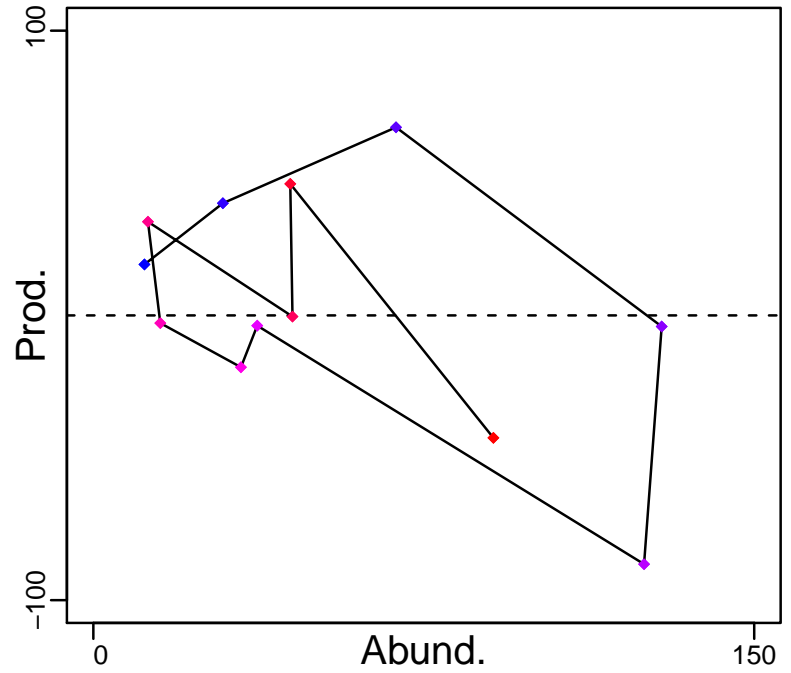
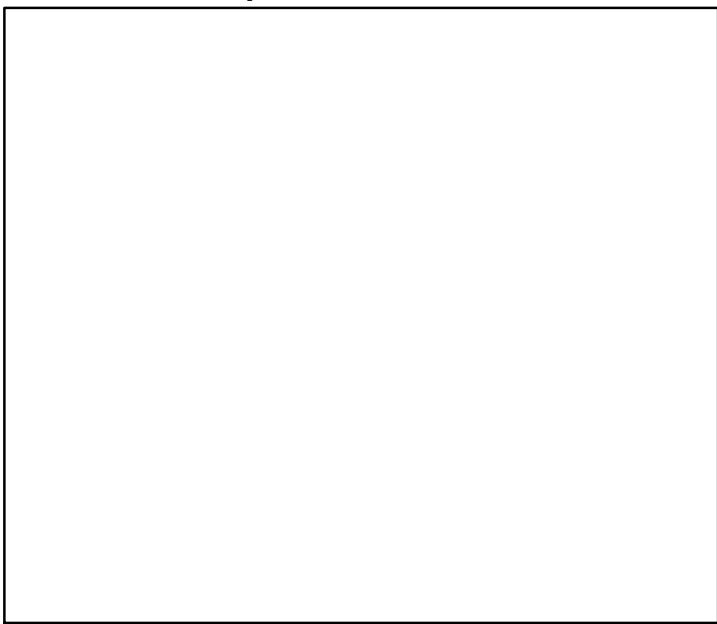
Kobe MSY_{pref} (1900–2012–WATSON)



Kobe MGT_{pref} (1900–2012–WATSON)



Production (1900–2012–WATSON)

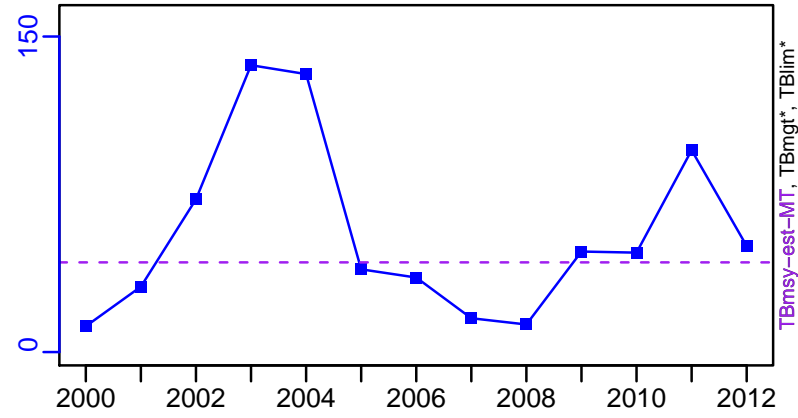


◆ Start Year ◆ End Year * No Data

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

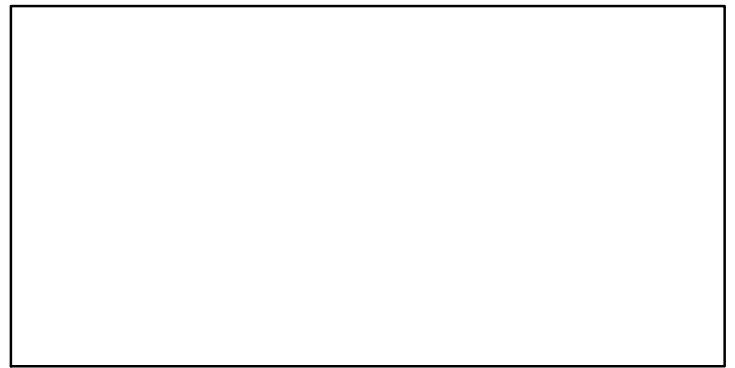
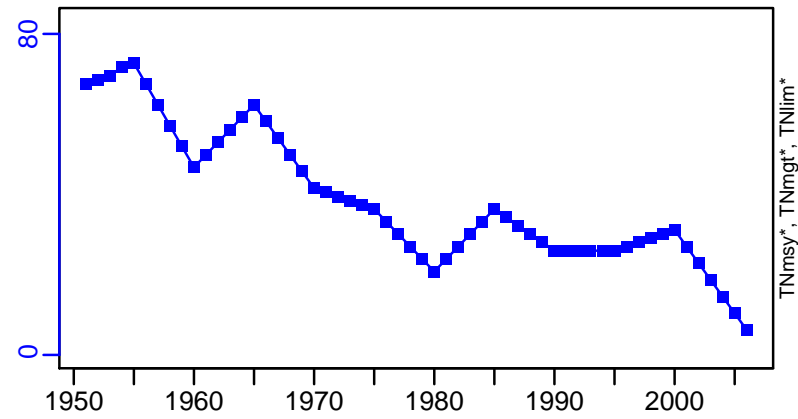
TB-MT (1900-2012-WATSON)

SSB*



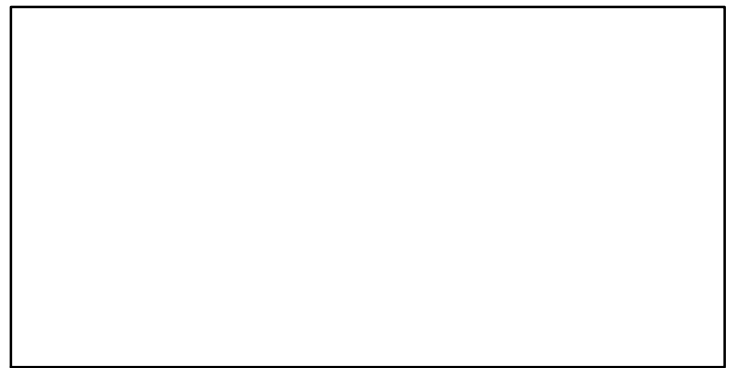
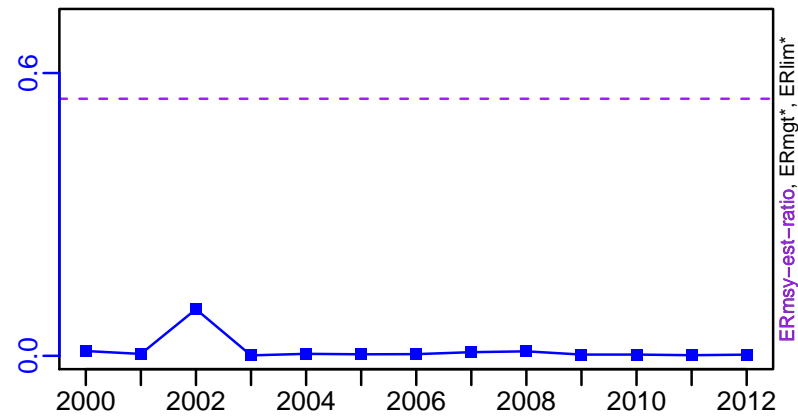
TN-index (1900-2012-WATSON)

F*



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

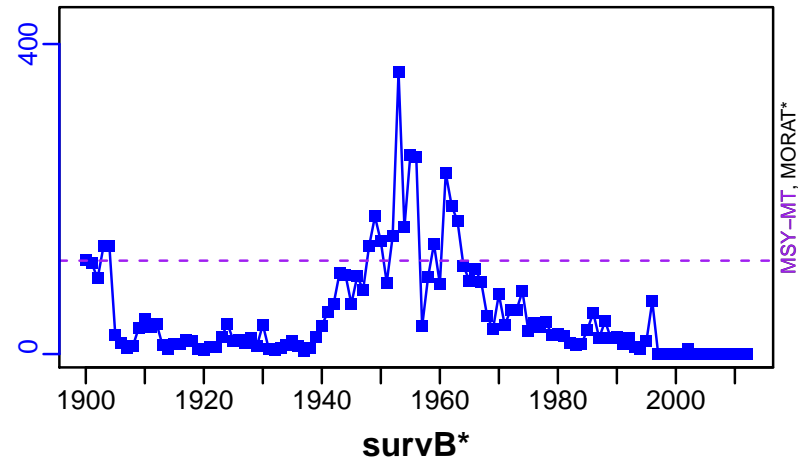
Recruits*



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

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

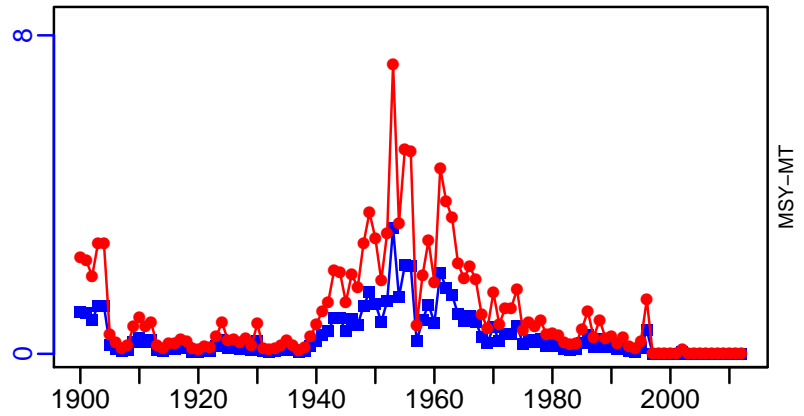
TAC*, Cpair*, Cadv*



EFFORT*



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



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

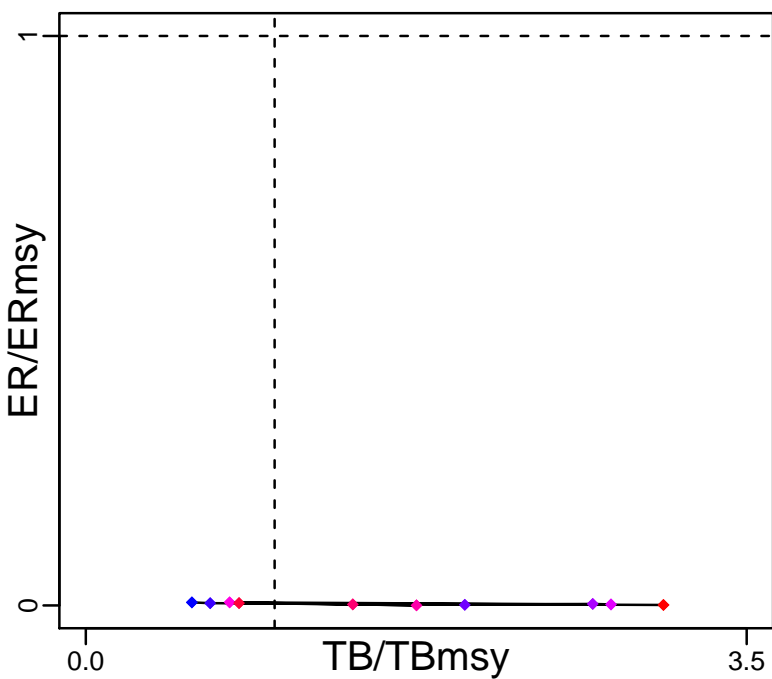
Metadata	
Scientific Name	Thaleichthys pacificus
Current Assess ID	DFO-EULAPCOASTNSDU-1951-2012-WATSON
Area	Pacific Coast of Canada Nass / Skeena Designatable Unit
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in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

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2012	32
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2012	0.835
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2012	27
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	71	-	-
SSB	-	-	-	-	-
TN	TN-index	2012	36	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2012	0.001	-	-
TC	TC-MT	2012	0.07		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-est-MT	2012	2.204		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2012	0.001		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

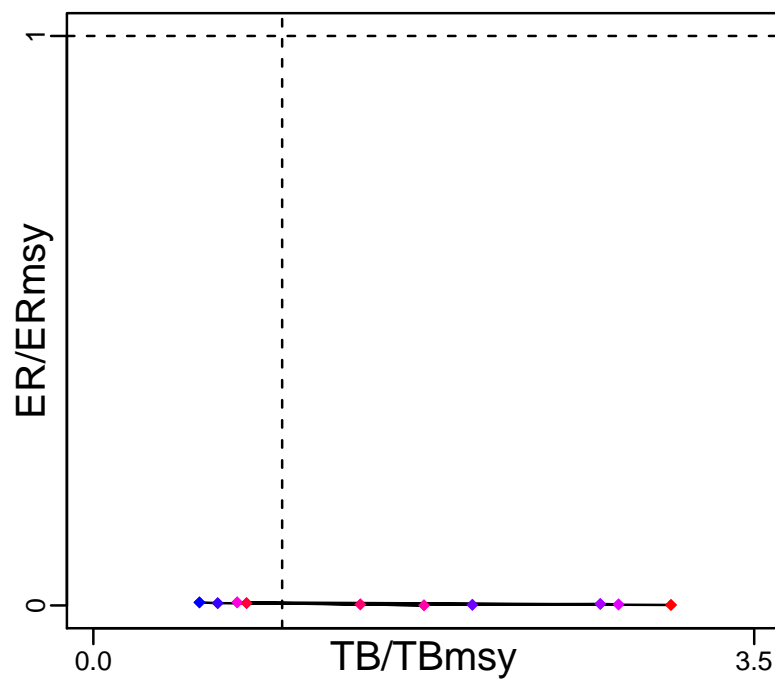
Eulachon Pacific Coast of Canada Nass / Skeena Designatable Unit [EULAPCOASTNSDU]

Kobe MSY_{pref} (1951–2012–WATSON)

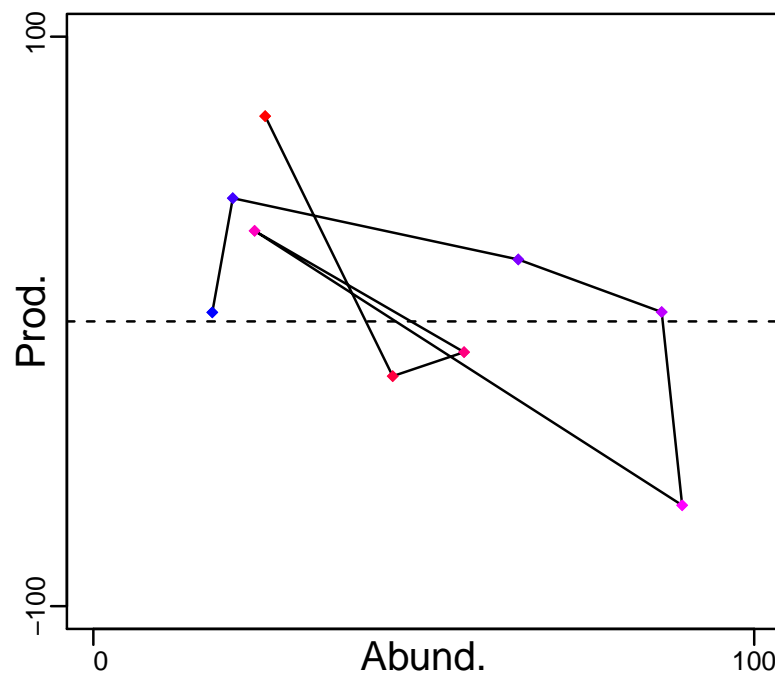


Spawner Recruit*

Kobe MGT_{pref} (1951–2012–WATSON)



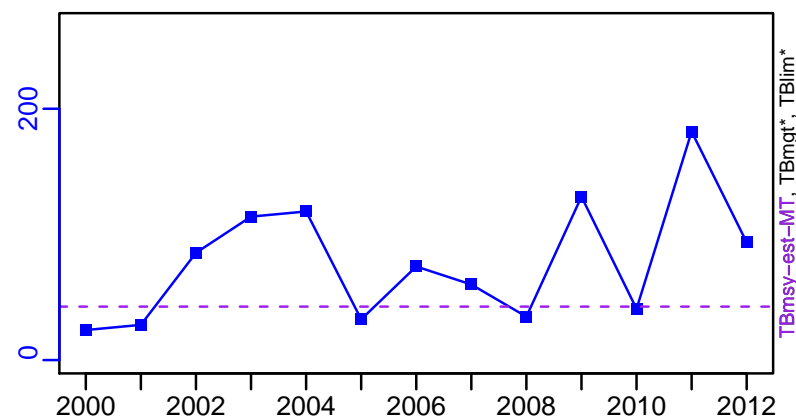
Production (1951–2012–WATSON)



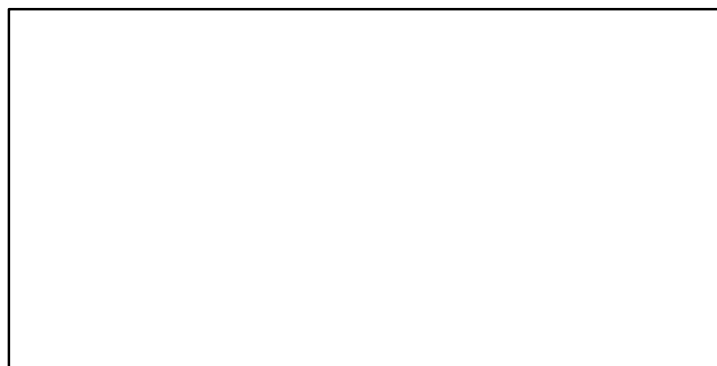
◆ Start Year ◆ End Year * No Data

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

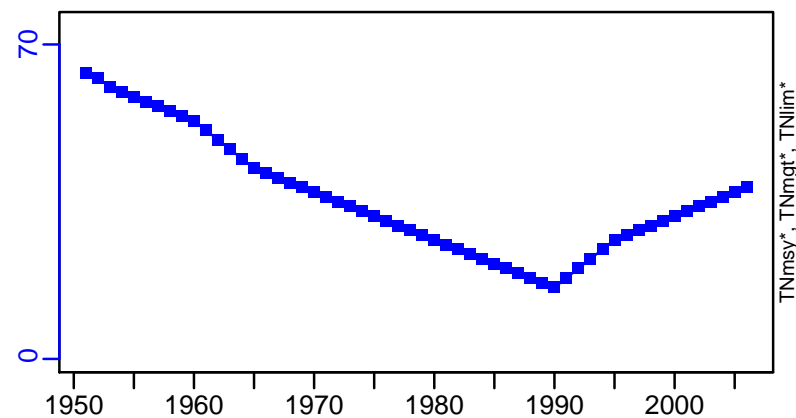
TB-MT (1951-2012-WATSON)



SSB*



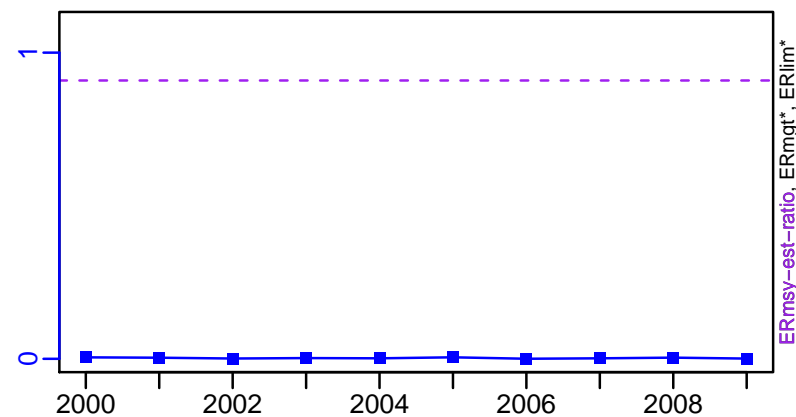
TN-index (1951-2012-WATSON)



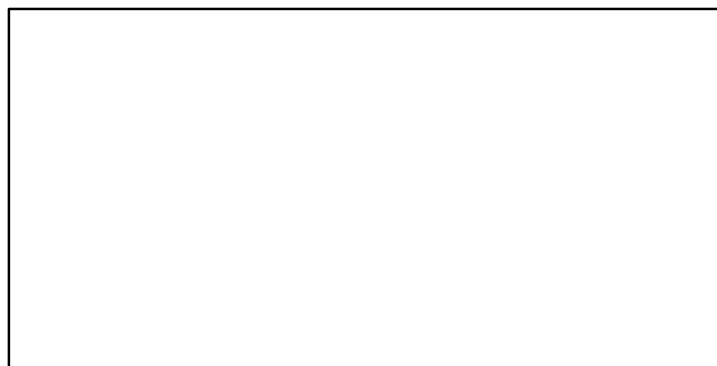
F*



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



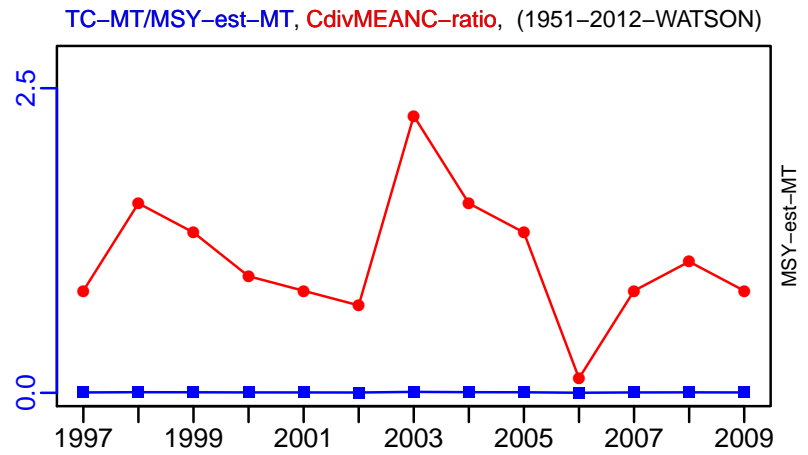
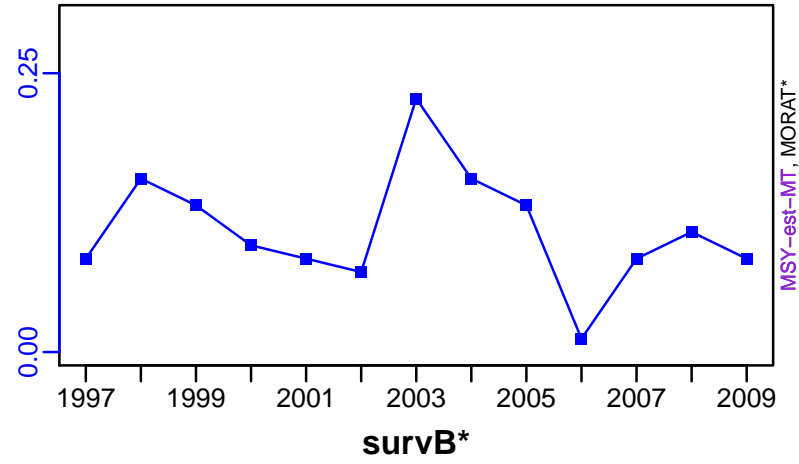
Recruits*



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

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

TAC*, Cpair*, Cadv*



Pacific herring Central Coast [HERRCC]

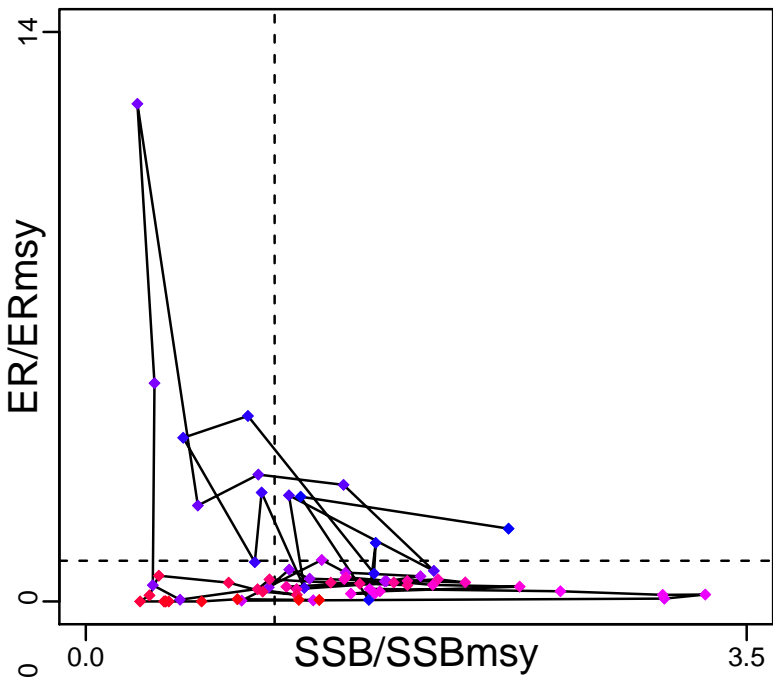
Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	DFO-PAC-HERRCC-1949-2018-ASHBROOK
Area	Central Coast
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2015, 2018, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2015	50,821
SSBmsy	SSBmsy-est-MT	2018	22,712
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2018	0.256
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	55,347
MSY	MSY-est-MT	2018	12,654
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

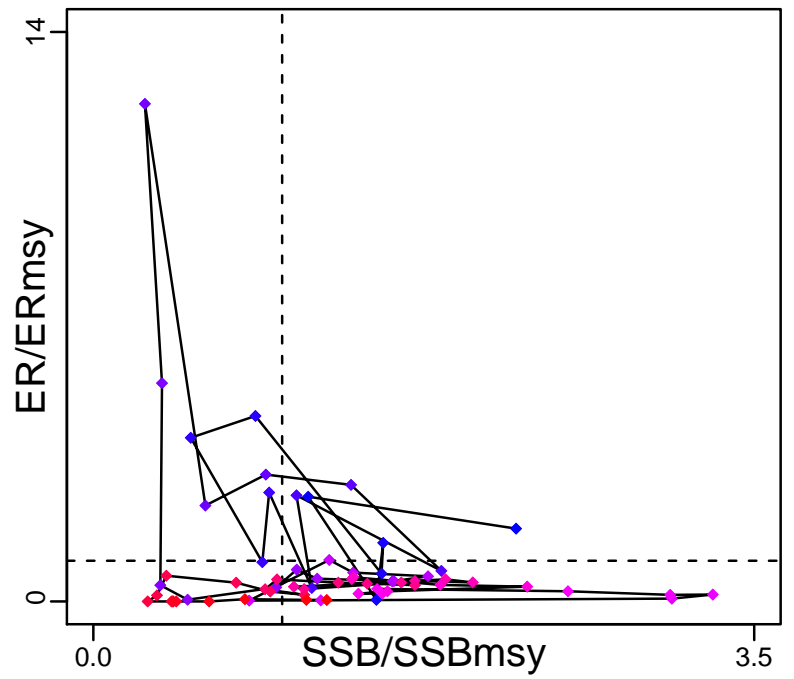
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	48,900	-	-
SSB	SSB-MT	2018	32,724	-	3+
TN	-	-	-	-	-
R	R-E00	2018	217,029,110	-	2
F	F-1/yr	2007	0.033	-	-
ER	ER-calc-ratio	2018	0.009	-	-
TC	TC-MT	2015	626		
TL	TL-MT	2018	500		
TB/TBmsy	TB-MT/TBmsy-est-MT	2015	0.962		
SSB/SSBmsy	SSB-MT/(SSB0-MT*0.368)	2018	1.607		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2018	0.036		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific herring Central Coast [HERRCC]

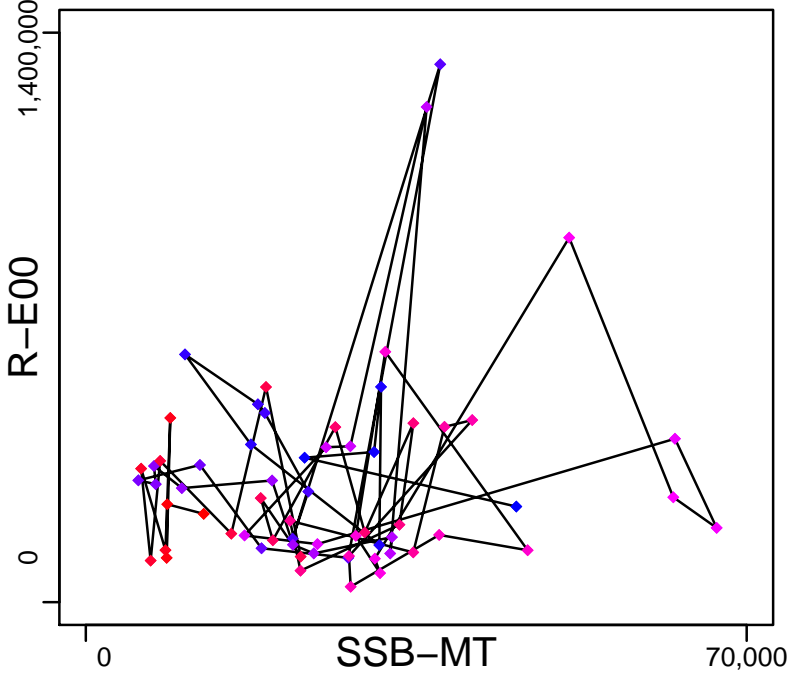
Kobe MSY_{pref} (1949–2018–ASHBROOK)



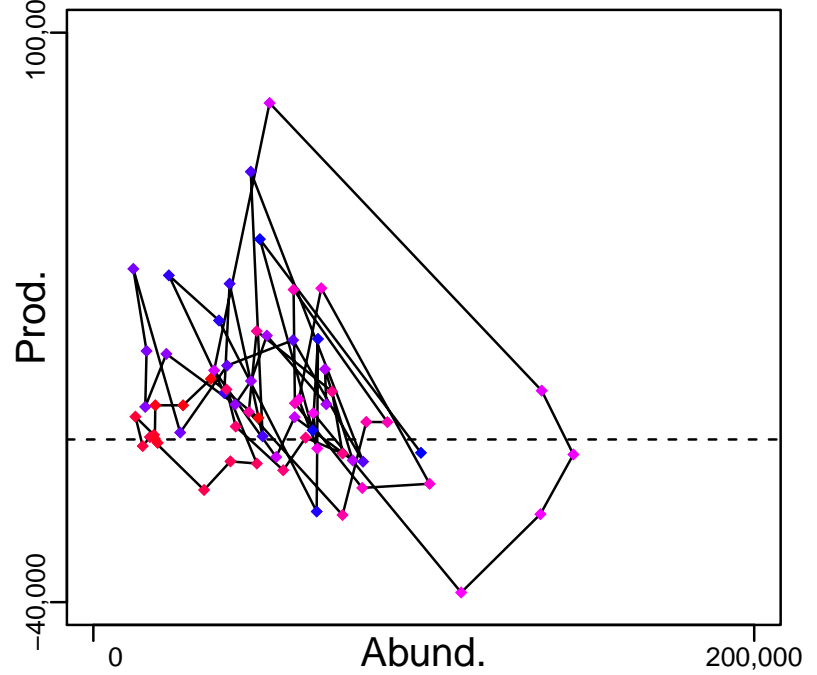
Kobe MGT_{pref} (1949–2018–ASHBROOK)



Spawner Recruit (1949–2018–ASHBROOK)



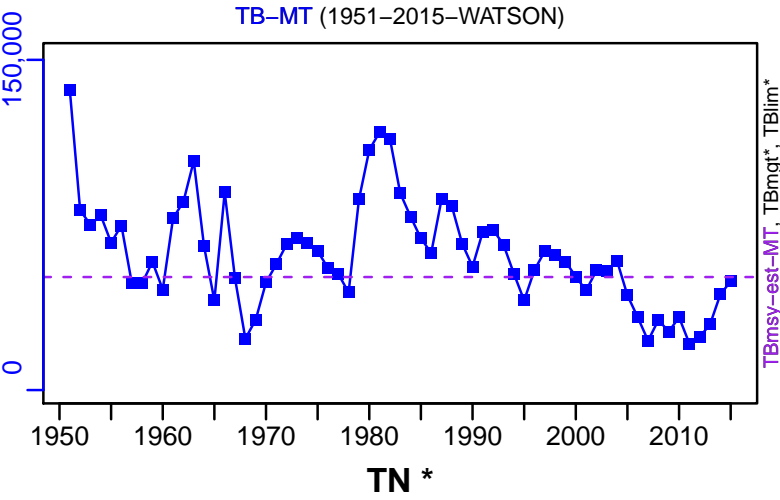
Production (1949–2018–ASHBROOK)



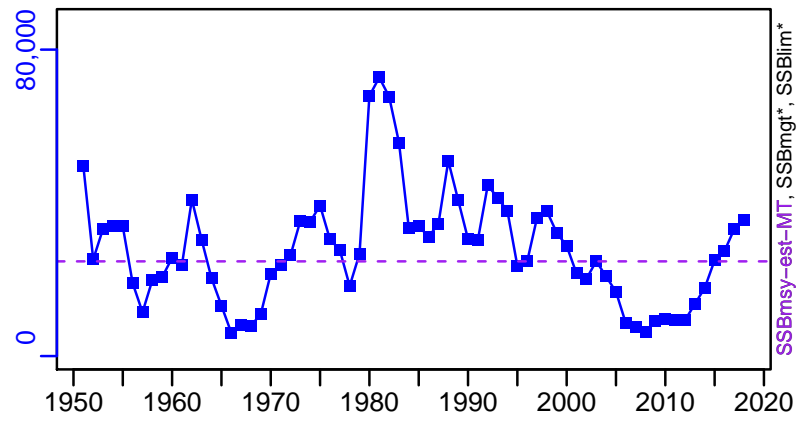
◆ Start Year ◆ End Year * No Data

Pacific herring Central Coast [HERRCC]

TB-MT (1951-2015-WATSON)



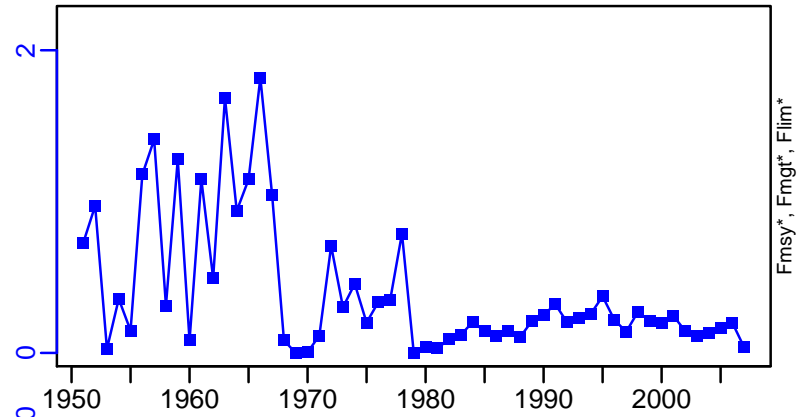
SSB-MT (1949-2018-ASHBROOK)



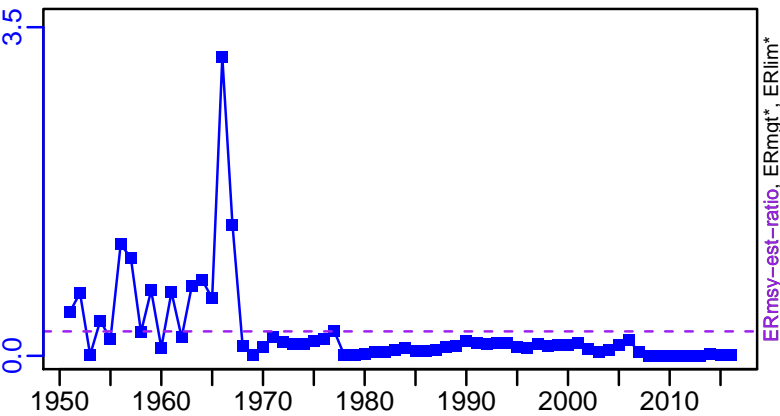
TN *



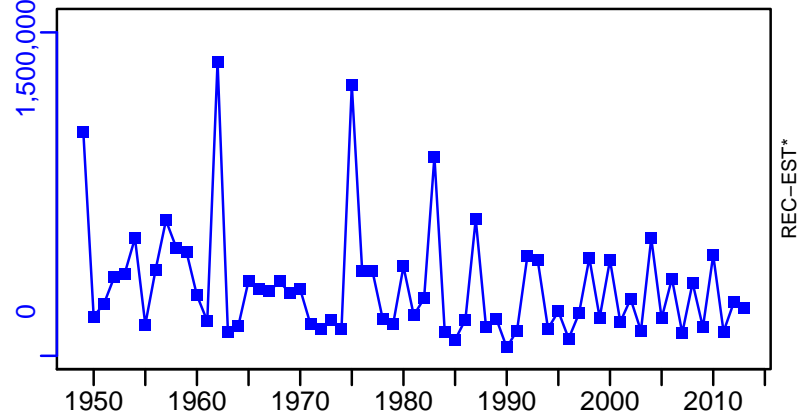
F-1/yr (1951-2007-COLLIE)



ER-calc-ratio (1949-2018-ASHBROOK)

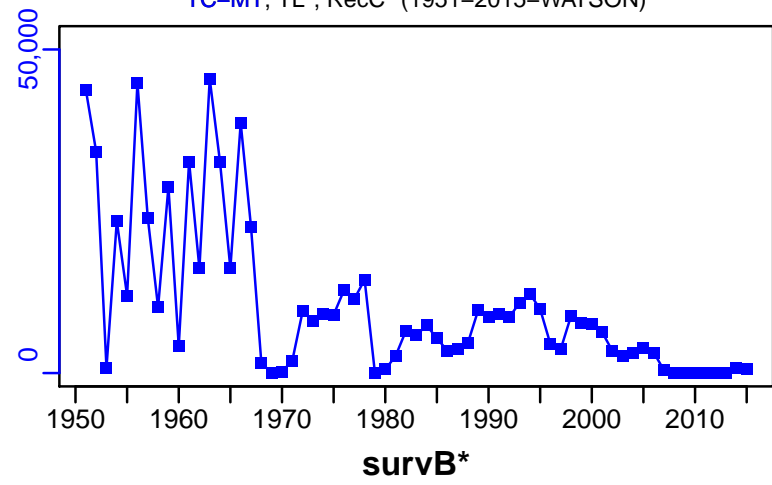


R-E00 (1949-2018-ASHBROOK)

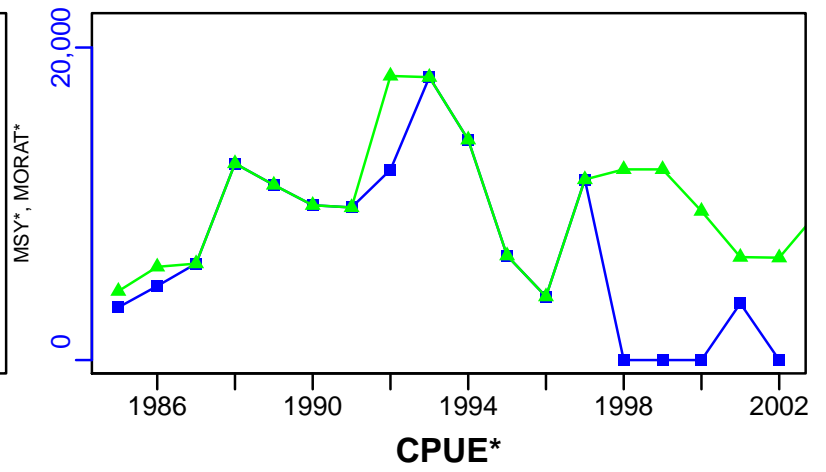


Pacific herring Central Coast [HERRCC]

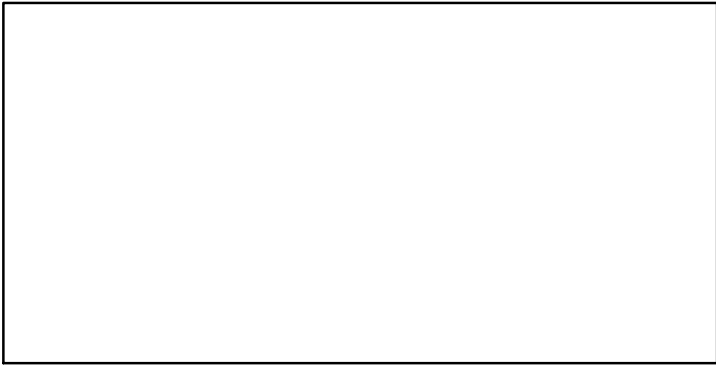
TC-MT, TL*, RecC* (1951-2015-WATSON)



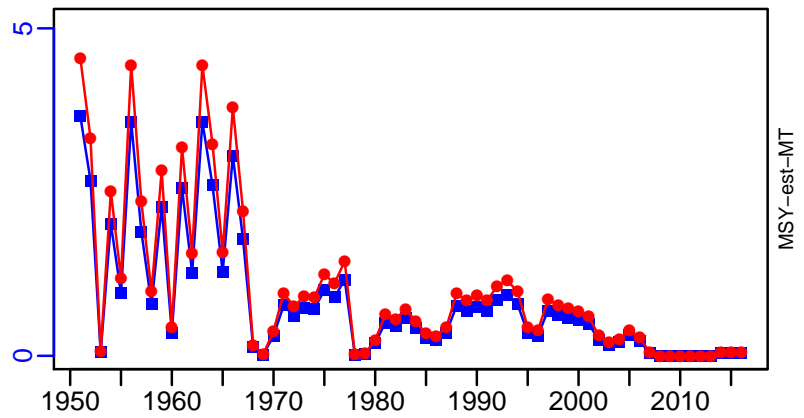
TAC-MT, Cpair*, Cadvised-MT (1951-2015-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1949-2018-ASHBROOK)



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

Pacific herring Prince Rupert District [HERRPRD]

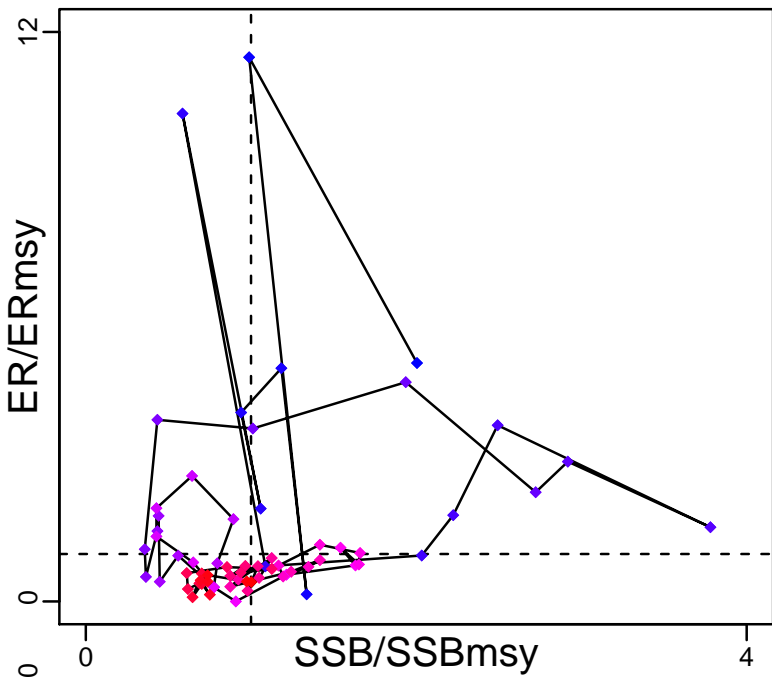
Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	DFO-PAC-HERRPRD-1949-2018-ASHBROOK
Area	Prince Rupert District
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2015, 2018, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-est-MT	2018	65,454
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2018	0.096
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	61,097
MSY	MSY-est-MT	2018	13,598
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

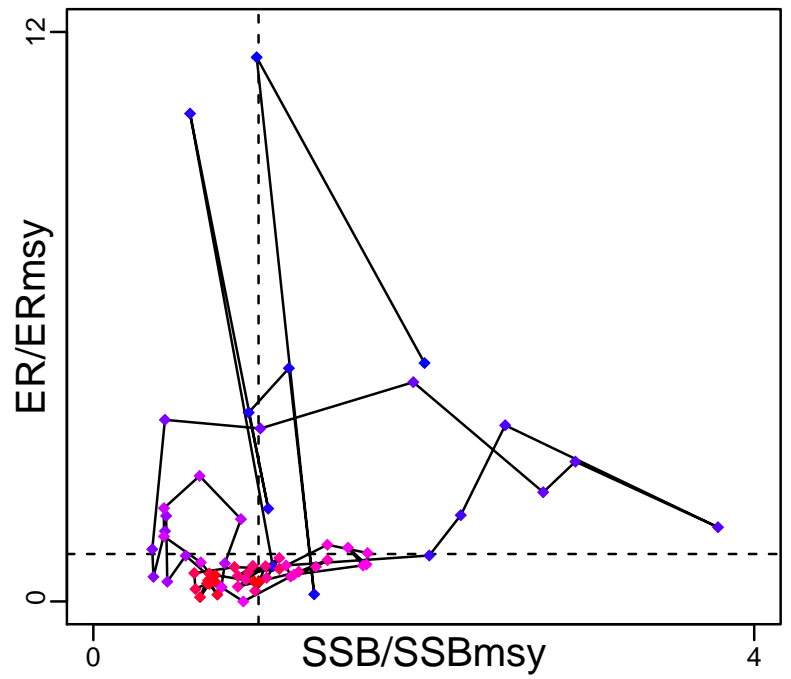
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	56,300	-	-
SSB	SSB-MT	2018	25,000	-	3+
TN	-	-	-	-	-
R	R-E00	2018	164,215,680	-	2
F	F-1/yr	2007	0.04	-	-
ER	ER-calc-ratio	2018	0.039	-	-
TC	TC-MT	2015	2160		
TL	TL-MT	2018	1910		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/(SSB0-MT*0.368)	2018	1.112		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2018	0.408		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific herring Prince Rupert District [HERRPRD]

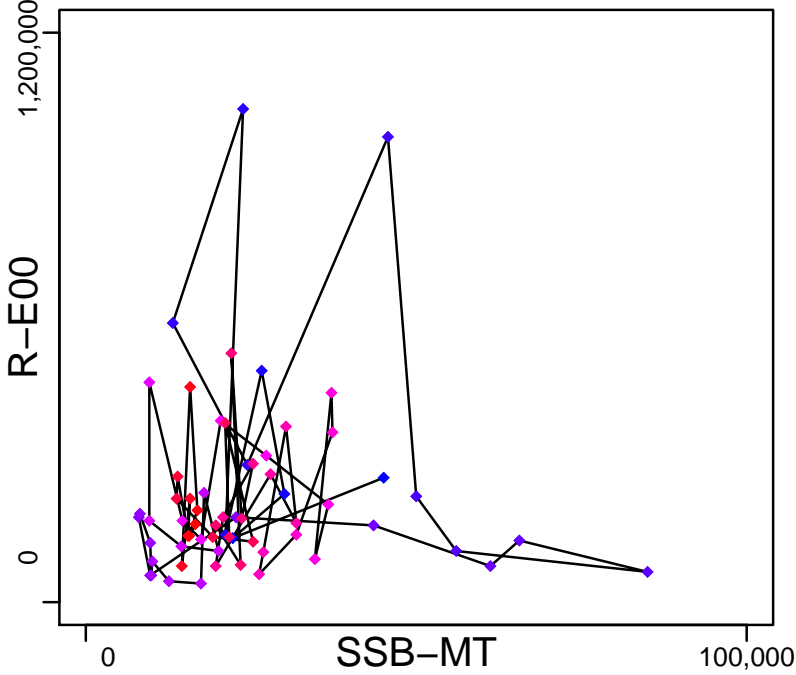
Kobe MSYpref (1949–2018–ASHBROOK)



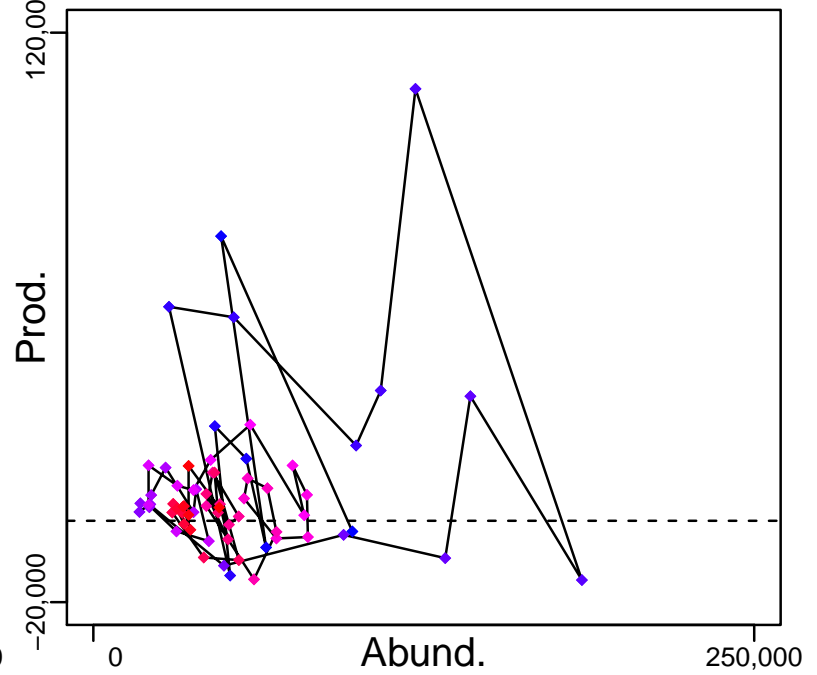
Kobe MGTpref (1949–2018–ASHBROOK)



Spawner Recruit (1949–2018–ASHBROOK)



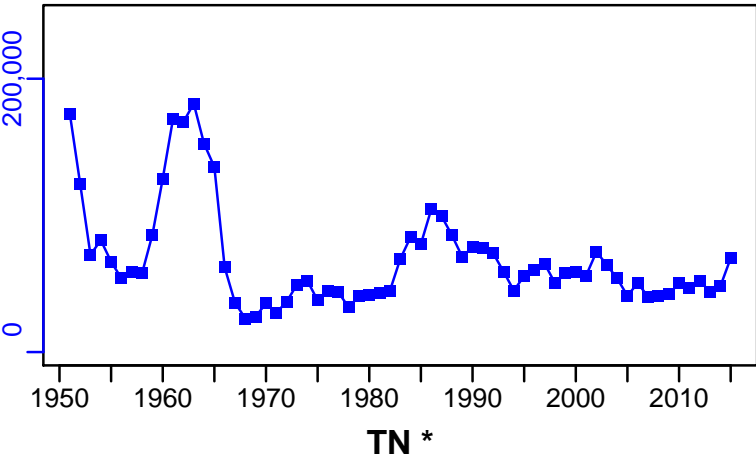
Production (1949–2018–ASHBROOK)



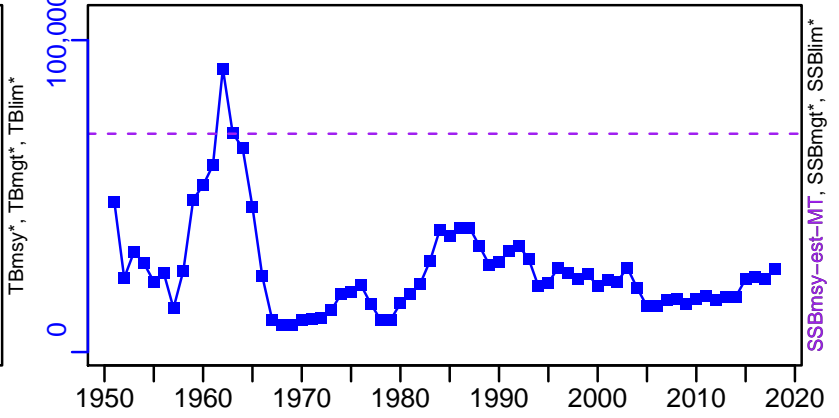
◆ Start Year ◆ End Year * No Data

Pacific herring Prince Rupert District [HERRPRD]

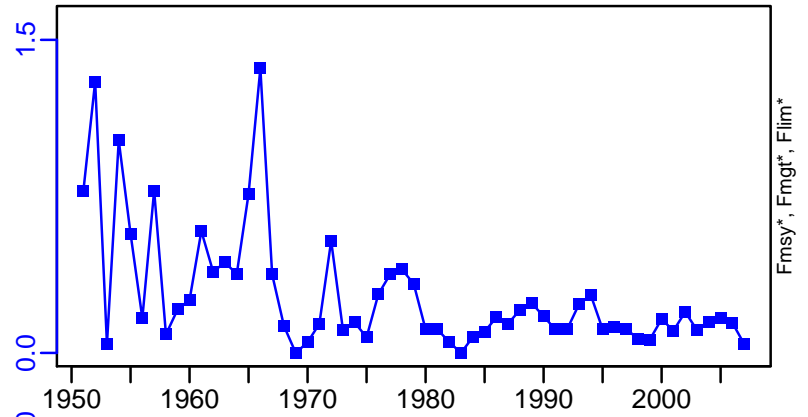
TB-MT (1951-2015-WATSON)



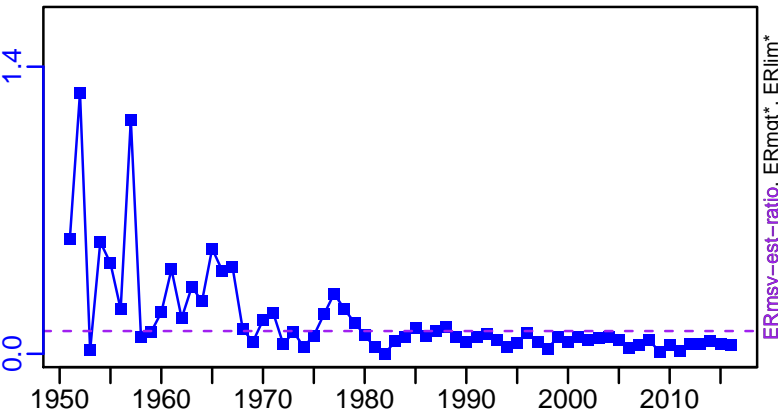
SSB-MT (1949-2018-ASHBROOK)



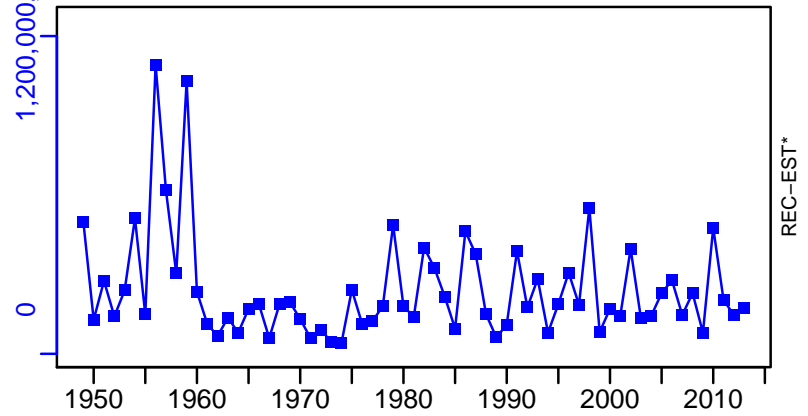
F-1/yr (1951-2007-COLLIE)



ER-calc-ratio (1949-2018-ASHBROOK)

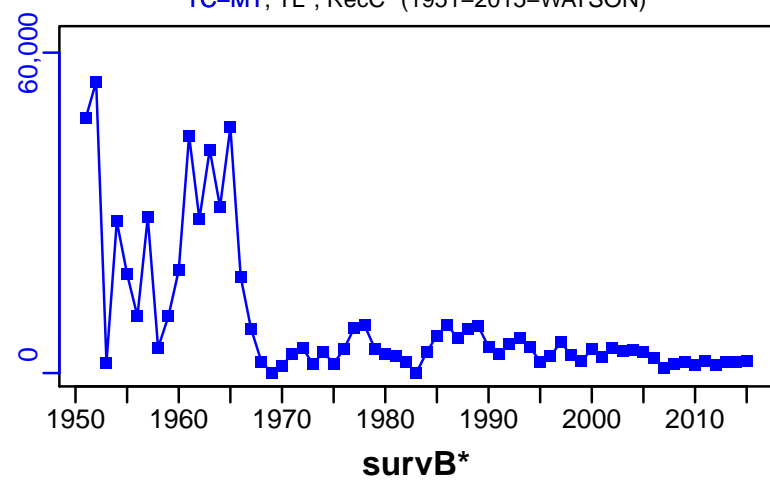


R-E00 (1949-2018-ASHBROOK)

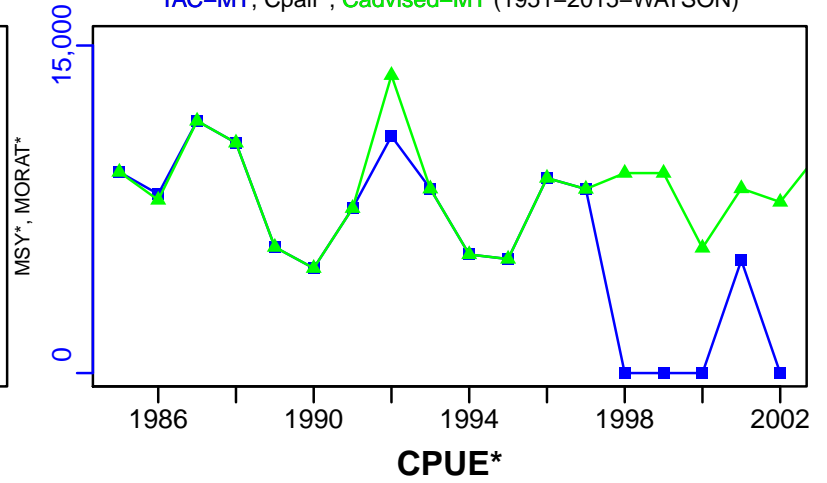


Pacific herring Prince Rupert District [HERRPRD]

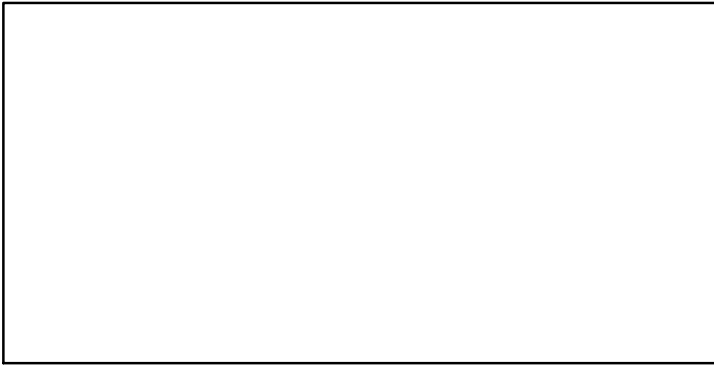
TC-MT, TL*, RecC* (1951-2015-WATSON)



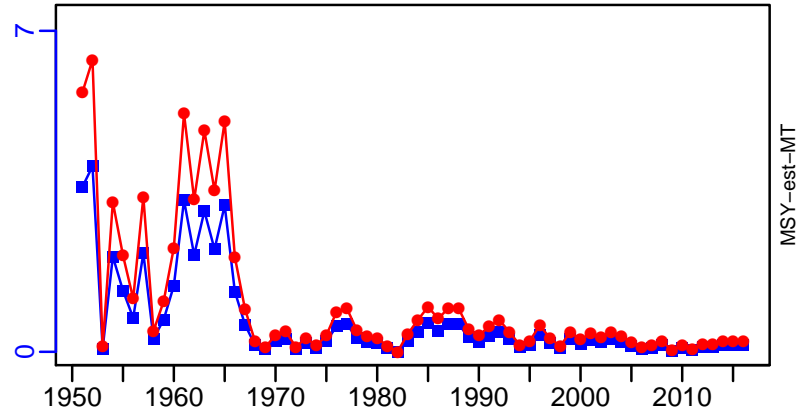
TAC-MT, Cpair*, Cadvised-MT (1951-2015-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1949-2018-ASHBROOK)



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

Pacific herring Queen Charlotte Islands [HERRQCI]

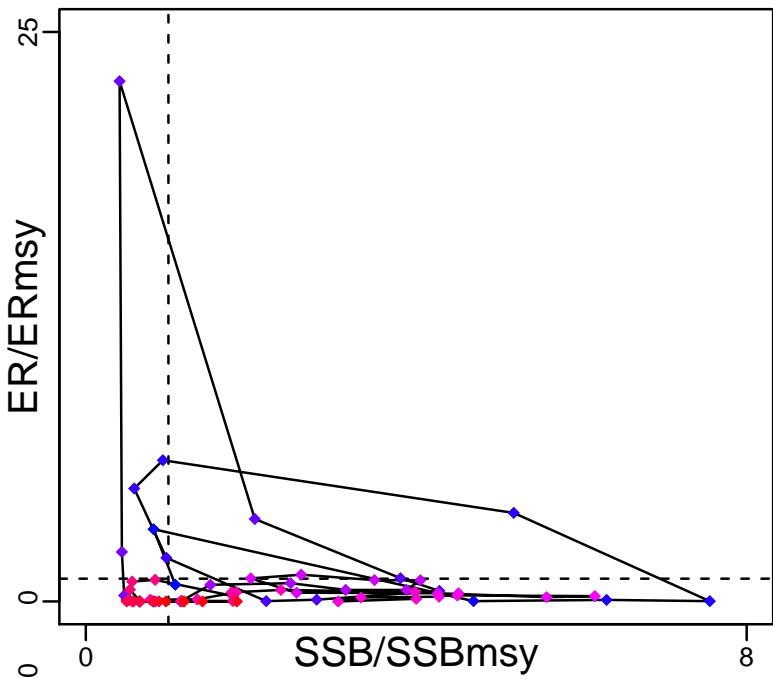
Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	DFO-PAC-HERRQCI-1949-2018-ASHBROOK
Area	Queen Charlotte Islands
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2015, 2018, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2015	43,856
SSBmsy	SSBmsy-est-MT	2018	20,296
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2018	0.208
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	23,098
MSY	MSY-est-MT	2018	9195
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

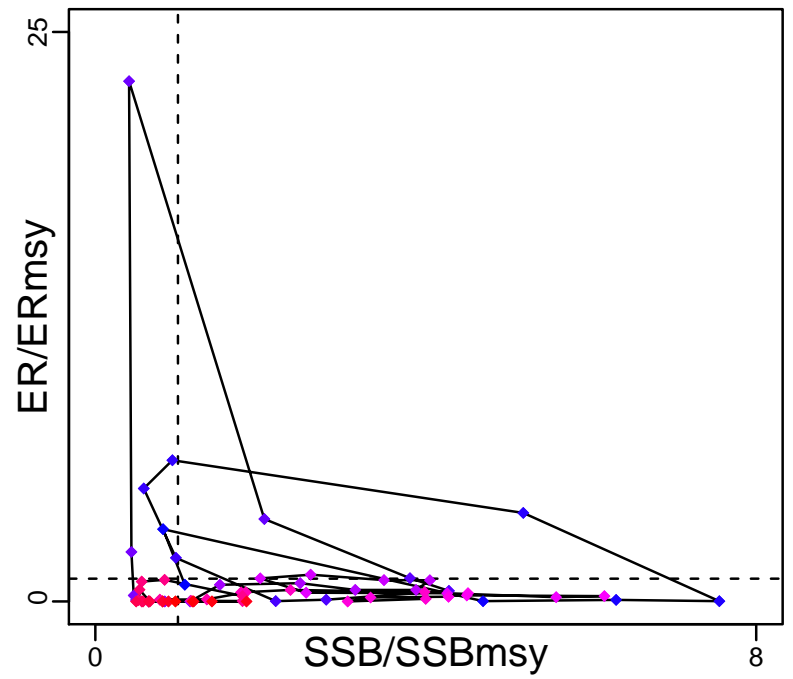
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	27,200	-	-
SSB	SSB-MT	2018	4477	-	3+
TN	-	-	-	-	-
R	R-E00	2018	147,346,390	-	2
F	F-1/yr	2007	0	-	-
ER	ER-calc-ratio	2018	0	-	-
TC	TC-MT	2015	0		
TL	TL-MT	2018	0		
TB/TBmsy	TB-MT/TBmsy-est-MT	2015	0.62		
SSB/SSBmsy	SSB-MT/(SSB0-MT*0.368)	2018	0.527		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2018	0		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific herring Queen Charlotte Islands [HERRQCI]

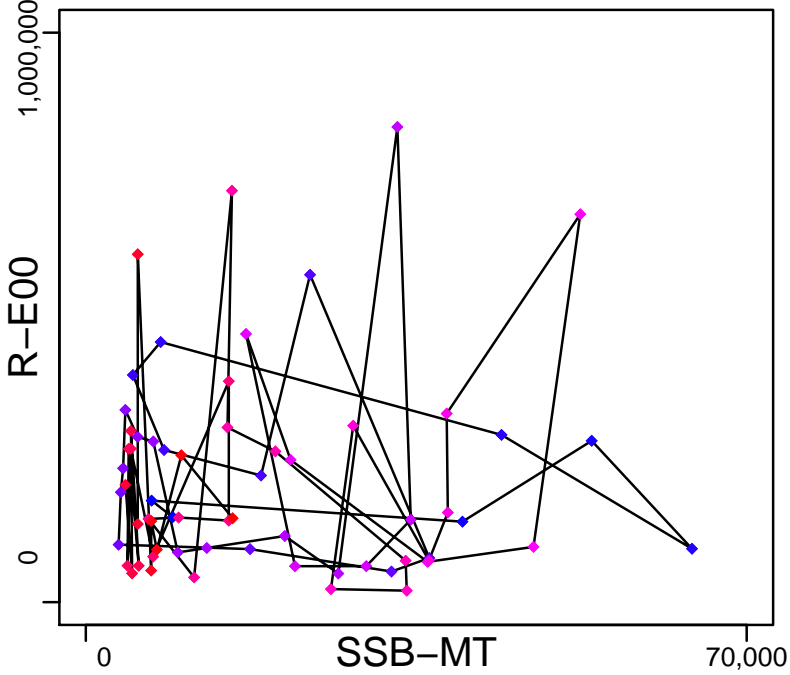
Kobe MSY_{pref} (1949–2018–ASHBROOK)



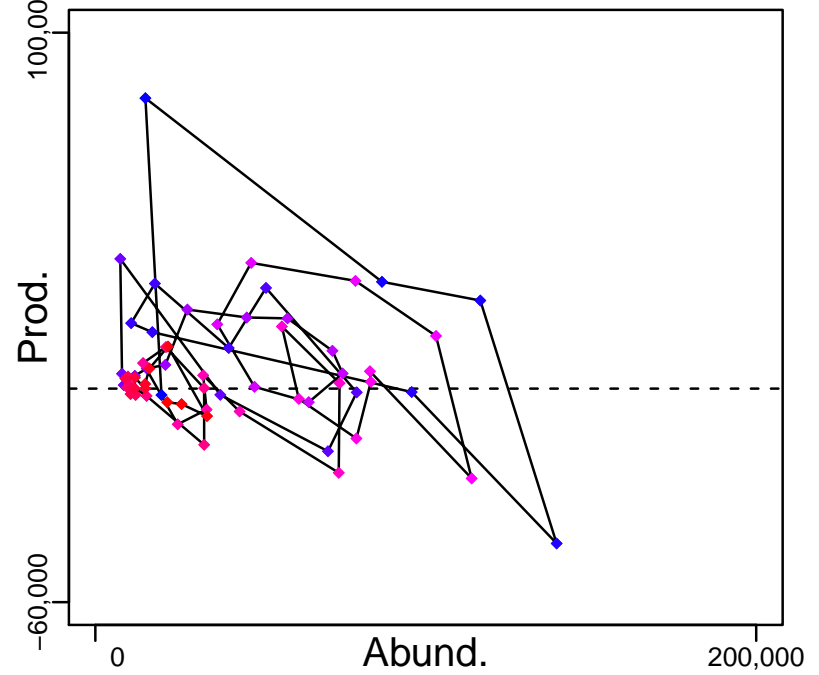
Kobe MGT_{pref} (1949–2018–ASHBROOK)



Spawner Recruit (1949–2018–ASHBROOK)



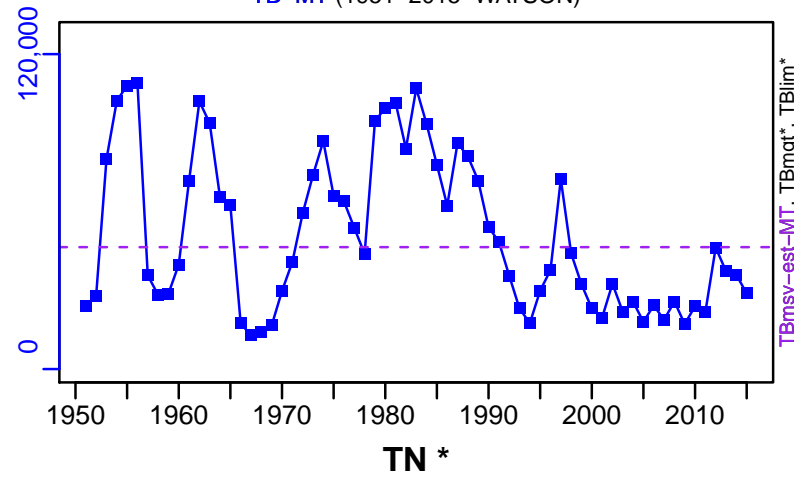
Production (1949–2018–ASHBROOK)



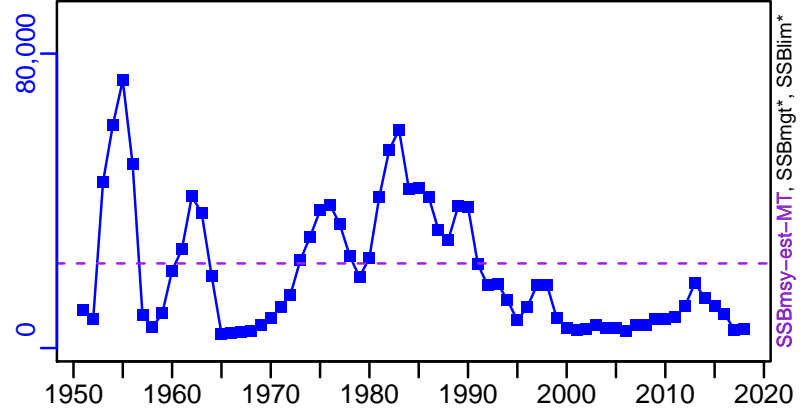
◆ Start Year ◆ End Year * No Data

Pacific herring Queen Charlotte Islands [HERRQCI]

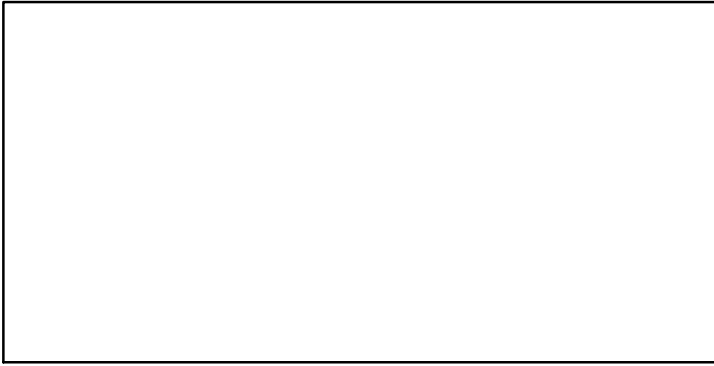
TB-MT (1951-2015-WATSON)



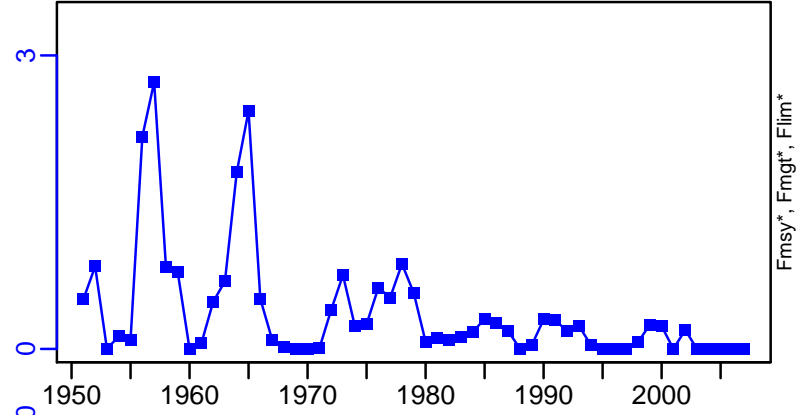
SSB-MT (1949-2018-ASHBROOK)



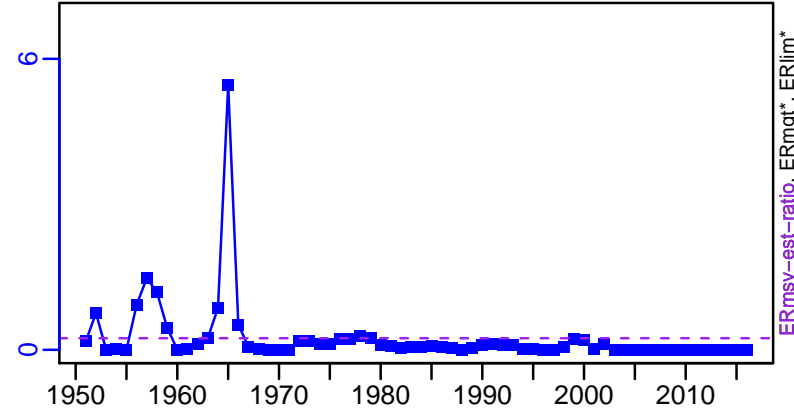
TN *



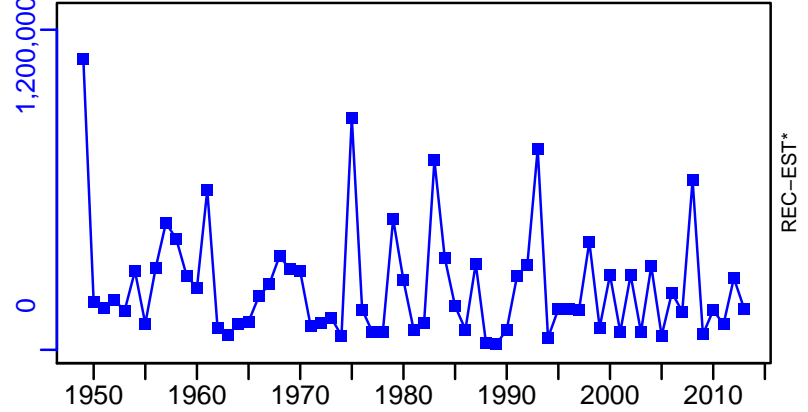
F-1/yr (1951-2007-COLLIE)



ER-calc-ratio (1949-2018-ASHBROOK)



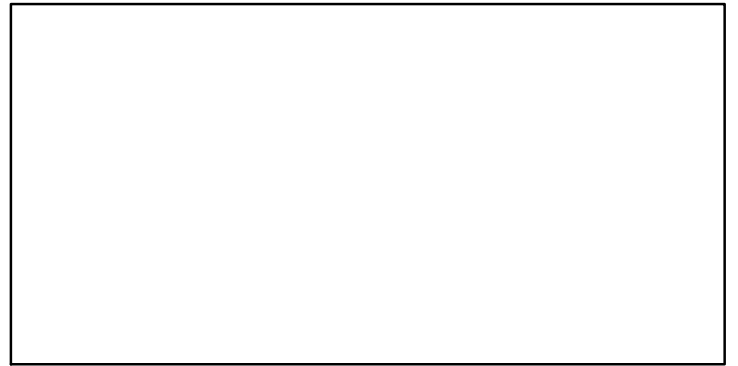
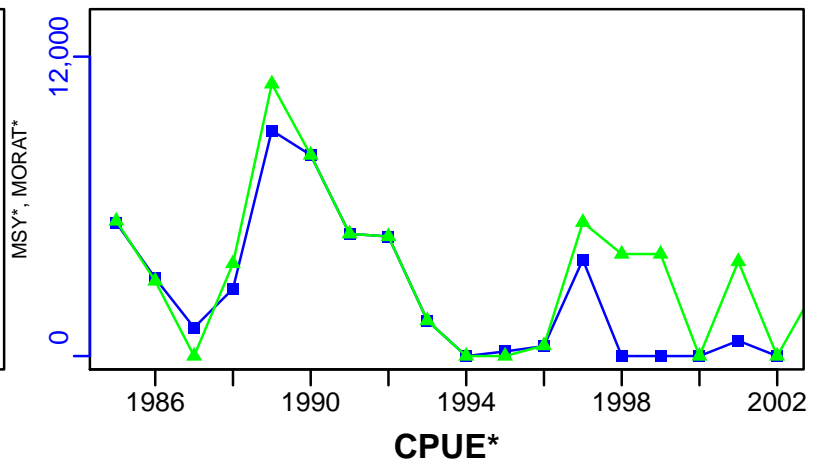
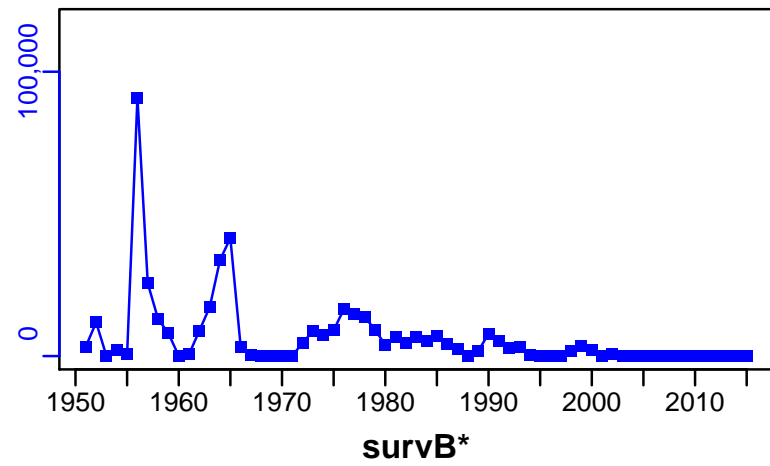
R-E00 (1949-2018-ASHBROOK)



Pacific herring Queen Charlotte Islands [HERRQCI]

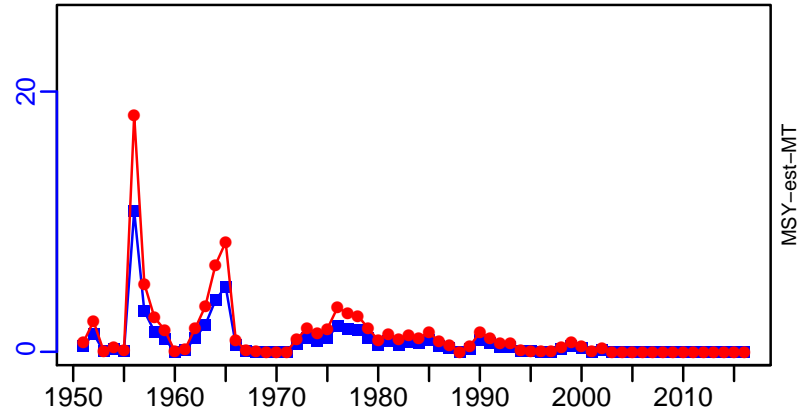
TC-MT, TL*, RecC* (1951-2015-WATSON)

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



EFFORT*

TL-MT/MSY-est-MT, CdivMEANC-ratio, (1949-2018-ASHBROOK)



Pacific herring Strait of Georgia [HERRSOG]

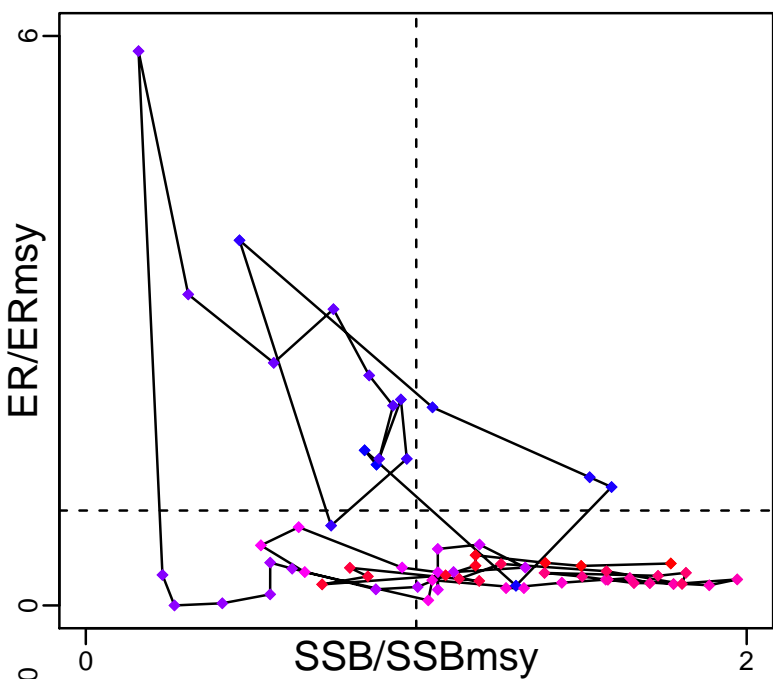
Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	DFO-PAC-HERRSOG-1949-2018-ASHBROOK
Area	Strait of Georgia
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2015, 2018, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2015	134,545
SSBmsy	SSBmsy-est-MT	2018	46,586
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2018	0.297
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	138,795
MSY	MSY-est-MT	2018	30,067
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

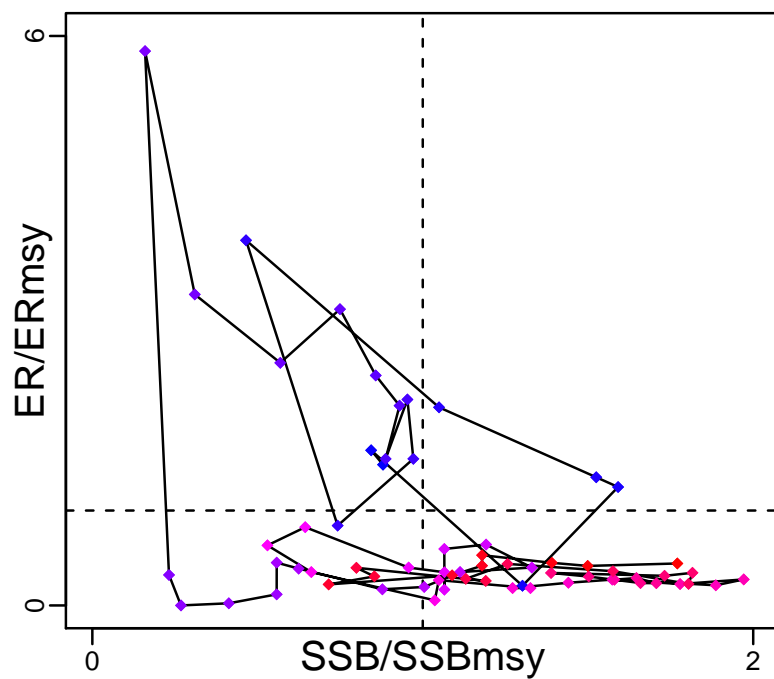
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	232,000	-	-
SSB	SSB-MT	2018	126,134	-	3+
TN	-	-	-	-	-
R	R-E00	2018	1,908,760,000	-	2
F	F-1/yr	2007	0.113	-	-
ER	ER-calc-ratio	2018	0.131	-	-
TC	TC-MT	2015	20,000		
TL	TL-MT	2018	25,806		
TB/TBmsy	TB-MT/TBmsy-est-MT	2015	1.724		
SSB/SSBmsy	SSB-MT/(SSB0-MT*0.368)	2018	2.47		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2018	0.442		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific herring Strait of Georgia [HERRSOG]

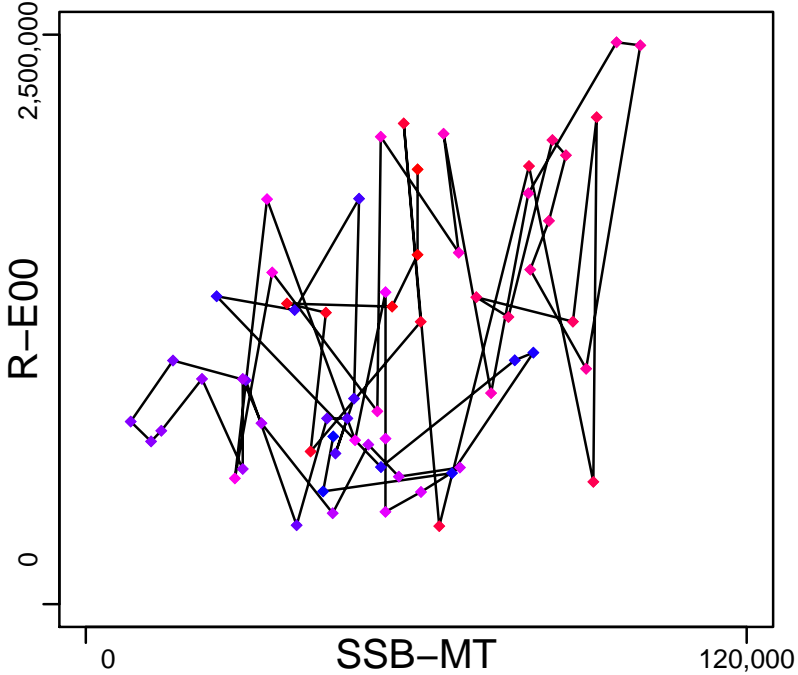
Kobe MSYpref (1949–2018–ASHBROOK)



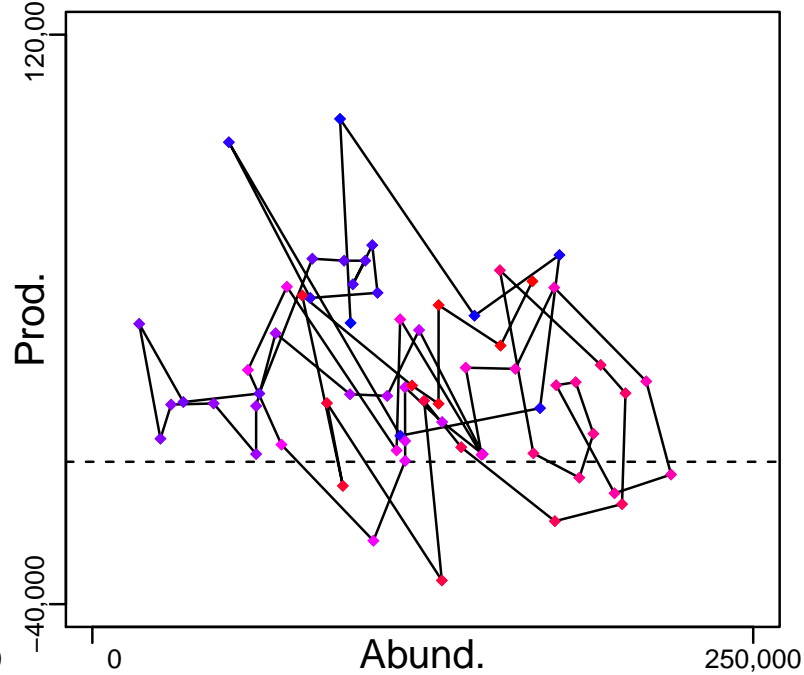
Kobe MGTpref (1949–2018–ASHBROOK)



Spawner Recruit (1949–2018–ASHBROOK)



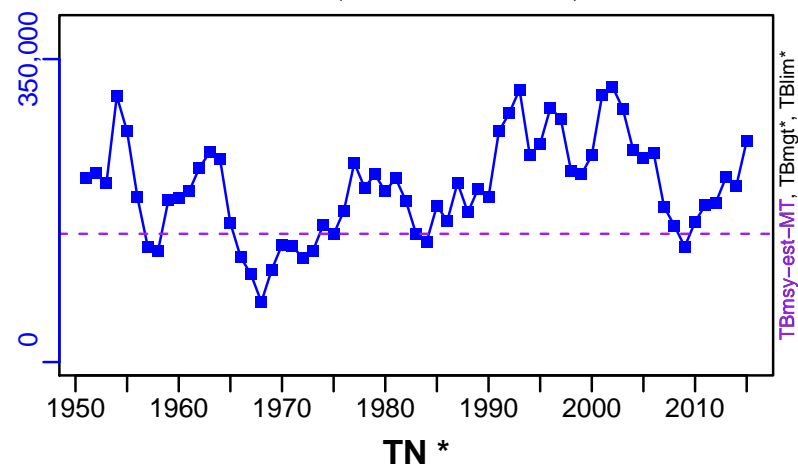
Production (1949–2018–ASHBROOK)



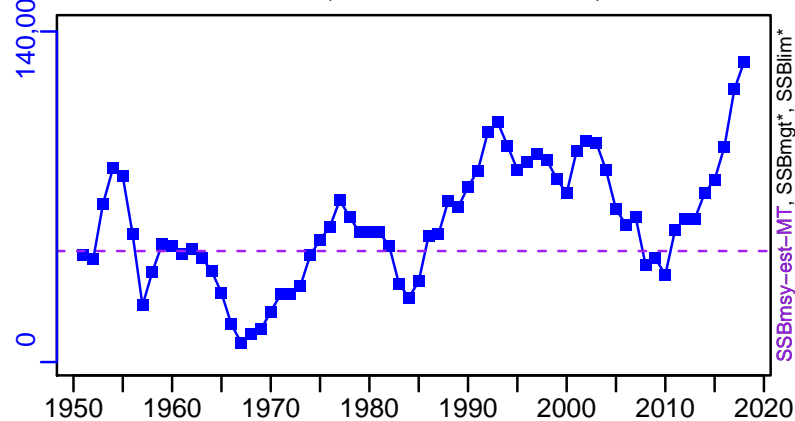
◆ Start Year ◆ End Year * No Data

Pacific herring Strait of Georgia [HERRSOG]

TB-MT (1951-2015-WATSON)



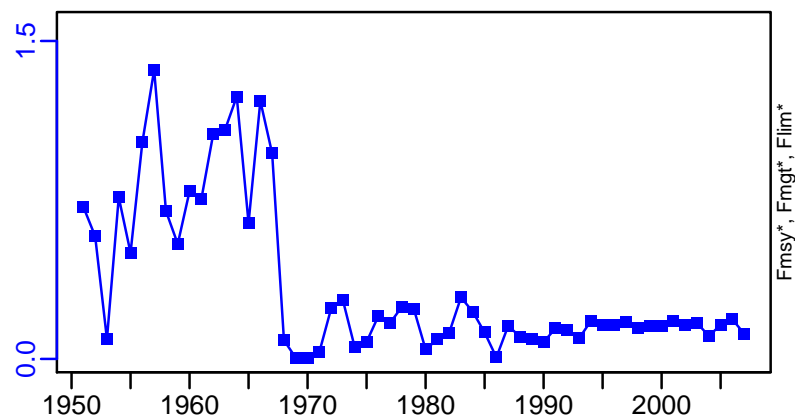
SSB-MT (1949-2018-ASHBROOK)



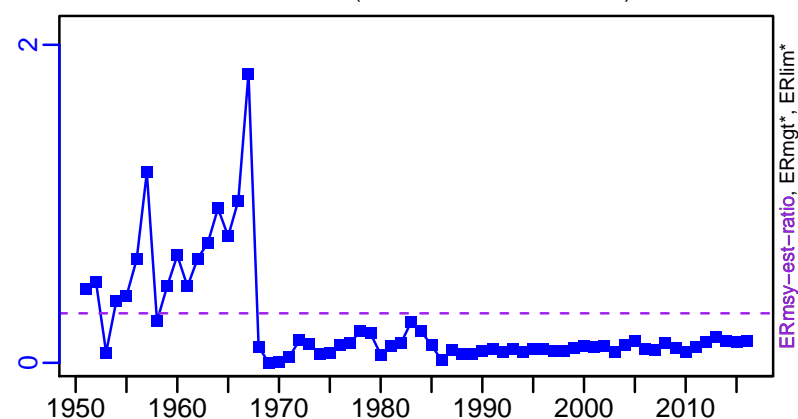
TN *



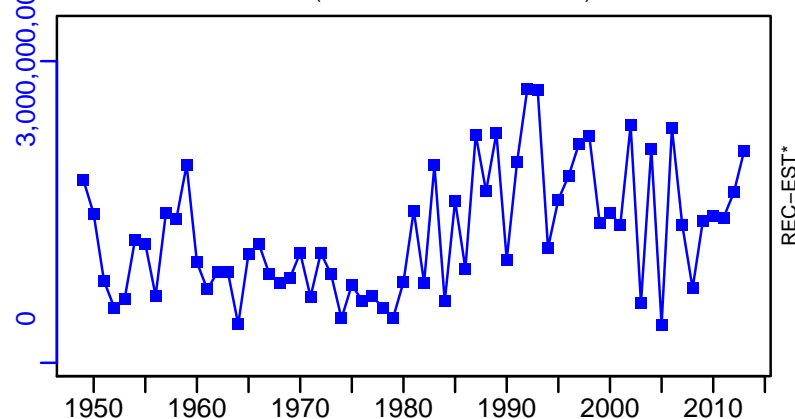
F-1/yr (1951-2007-COLLIE)



ER-calc-ratio (1949-2018-ASHBROOK)

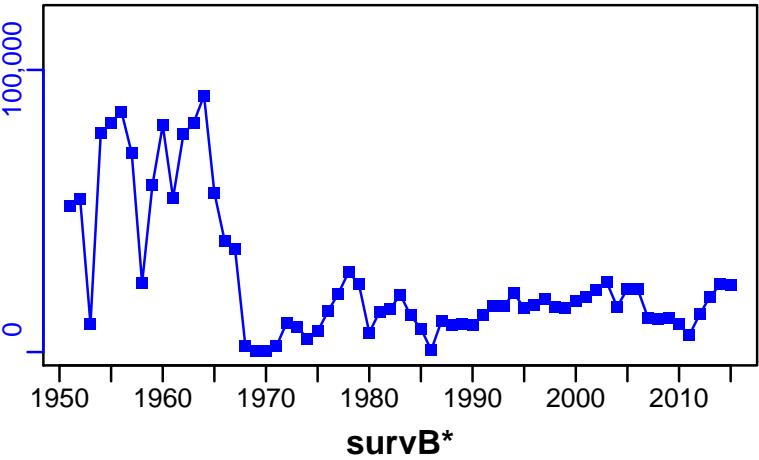


R-E00 (1949-2018-ASHBROOK)

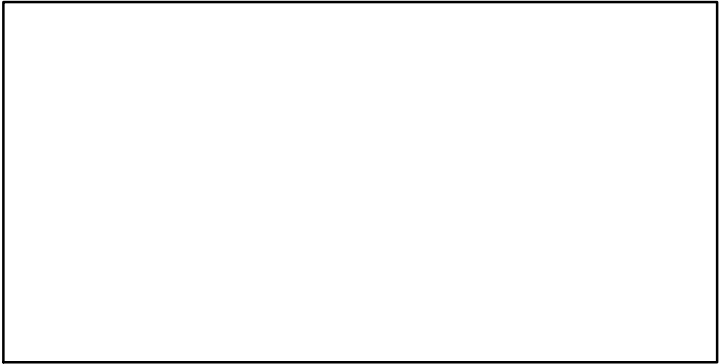
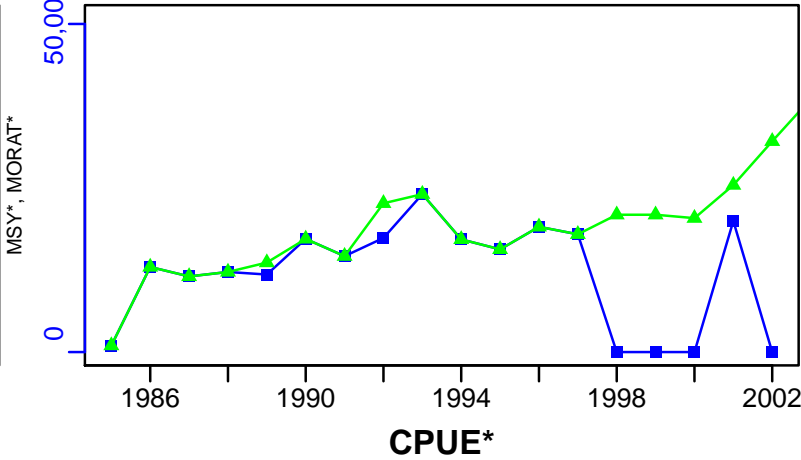


Pacific herring Strait of Georgia [HERRSOG]

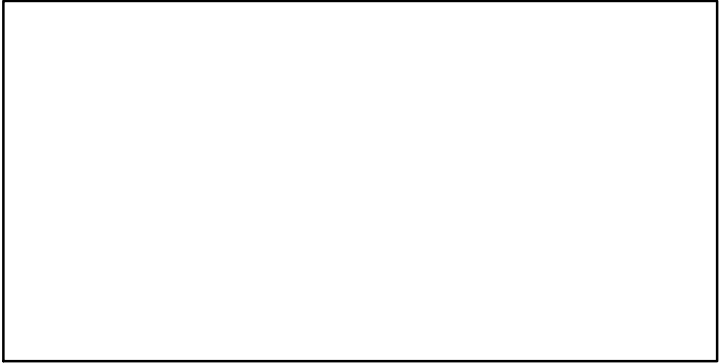
TC-MT, TL*, RecC* (1951-2015-WATSON)



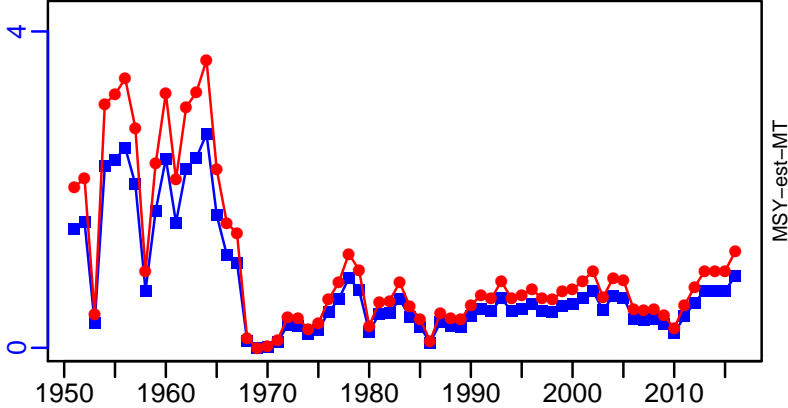
TAC-MT, Cpair*, Cadvised-MT (1951-2015-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1949-2018-ASHBROOK)



Pacific herring West Coast of Vancouver Island [HERRWCVANI]

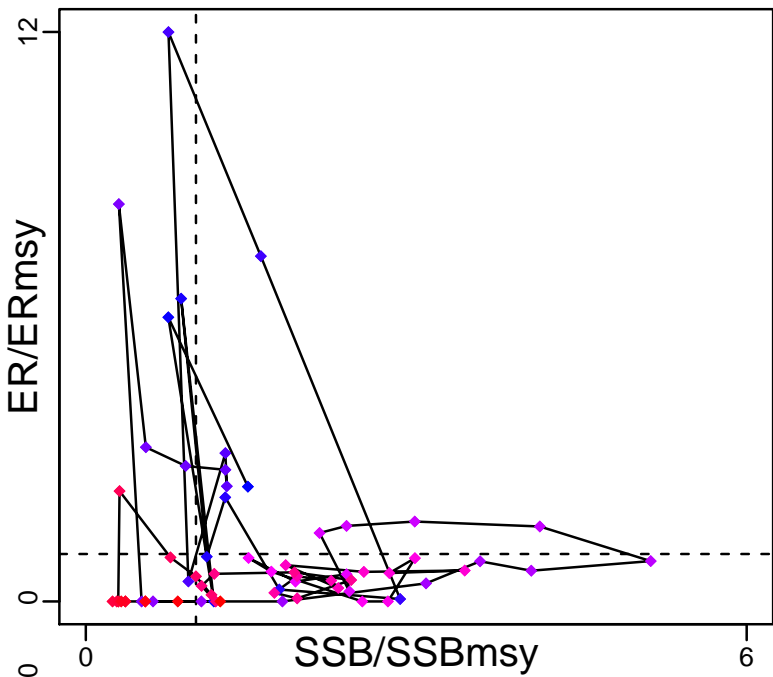
Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	DFO-PAC-HERRWCVANI-1949-2018-ASHBROOK
Area	West Coast of Vancouver Island
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2015, 2018,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

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2015	84,789
SSBmsy	SSBmsy-est-MT	2018	36,150
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2018	0.159
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	46,890
MSY	MSY-est-MT	2018	12,530
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

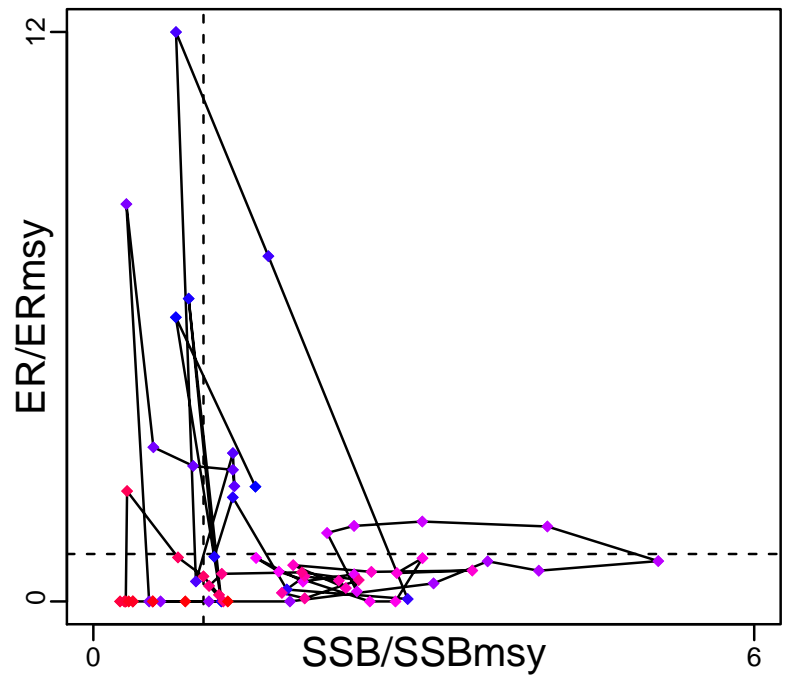
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	56,400	-	-
SSB	SSB-MT	2018	20,403	-	3+
TN	-	-	-	-	-
R	R-E00	2018	167,741,930	-	2
F	F-1/yr	2007	0	-	-
ER	ER-calc-ratio	2018	0	-	-
TC	TC-MT	2015	0		
TL	TL-MT	2018	0		
TB/TBmsy	TB-MT/TBmsy-est-MT	2015	0.665		
SSB/SSBmsy	SSB-MT/(SSB0-MT*0.368)	2018	1.182		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2018	0		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific herring West Coast of Vancouver Island [HERRWCVANI]

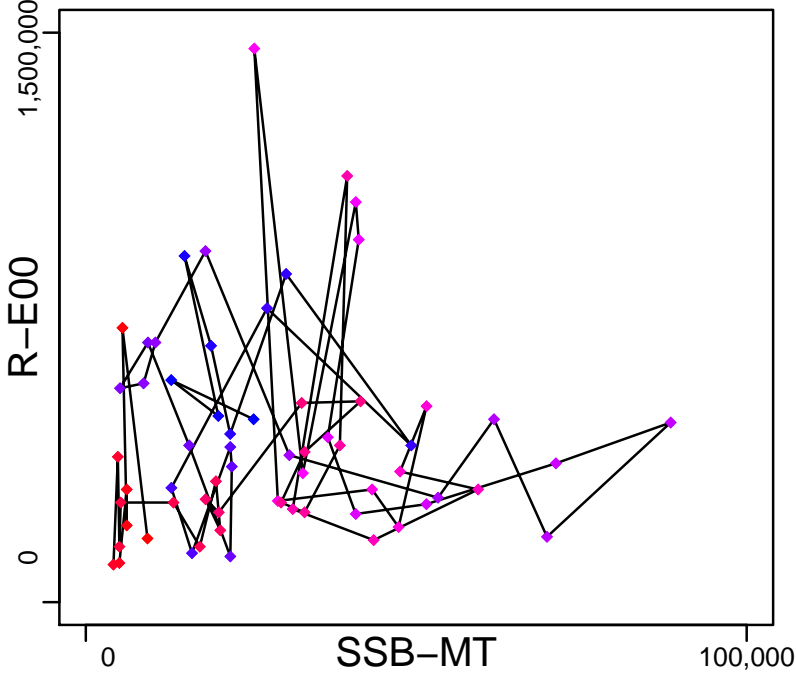
Kobe MSY_{pref} (1949–2018–ASHBROOK)



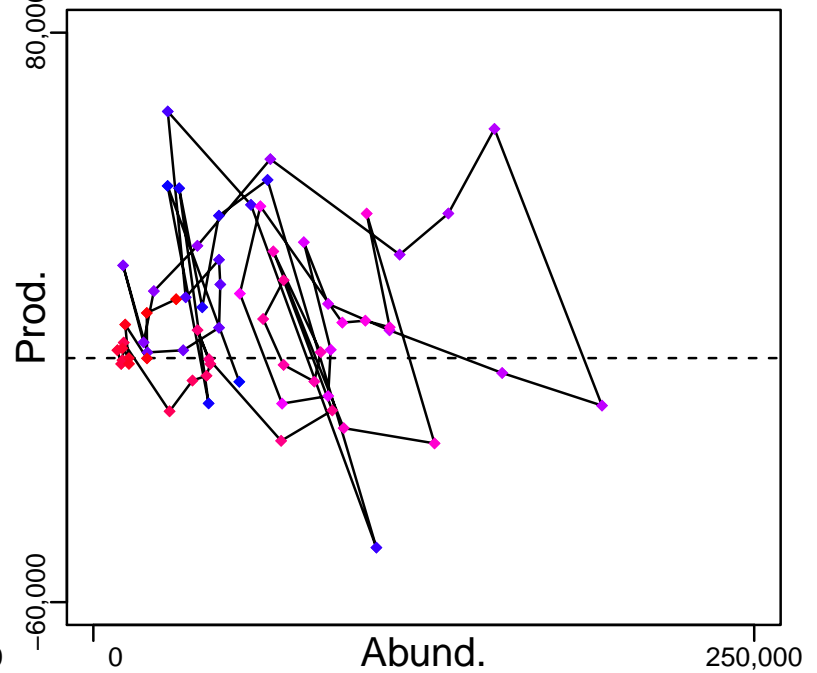
Kobe MGT_{pref} (1949–2018–ASHBROOK)



Spawner Recruit (1949–2018–ASHBROOK)



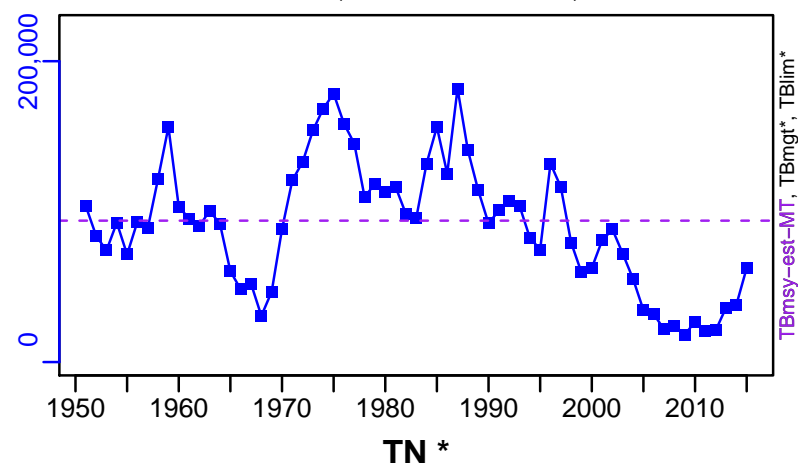
Production (1949–2018–ASHBROOK)



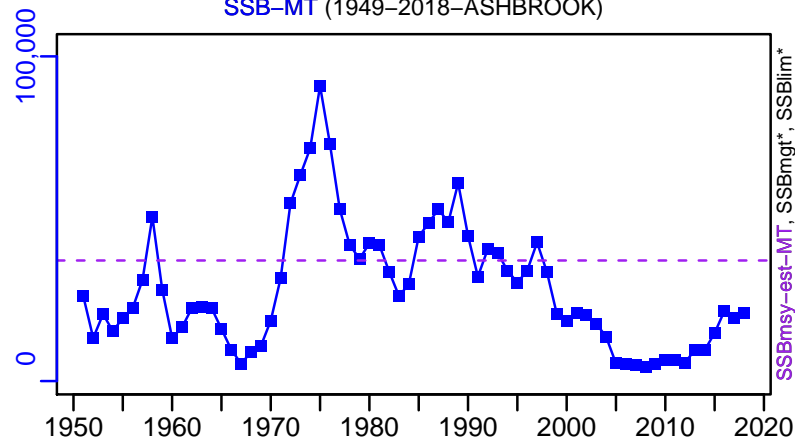
◆ Start Year ◆ End Year * No Data

Pacific herring West Coast of Vancouver Island [HERRWCVANI]

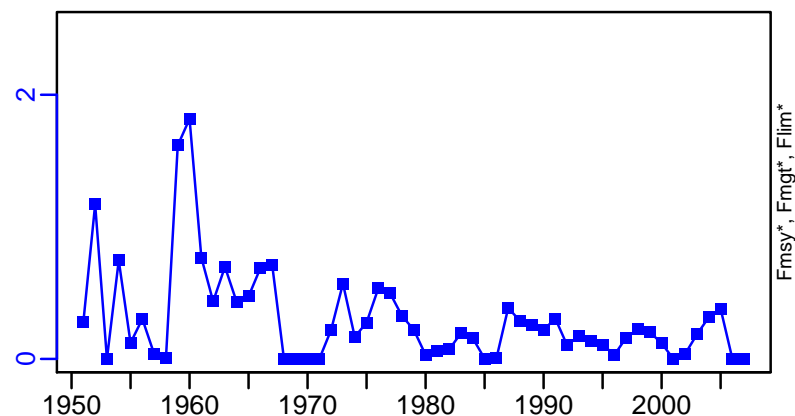
TB-MT (1951-2015-WATSON)



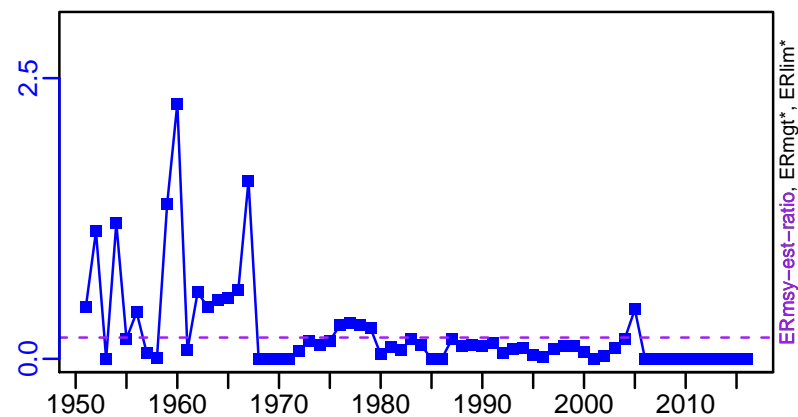
SSB-MT (1949-2018-ASHBROOK)



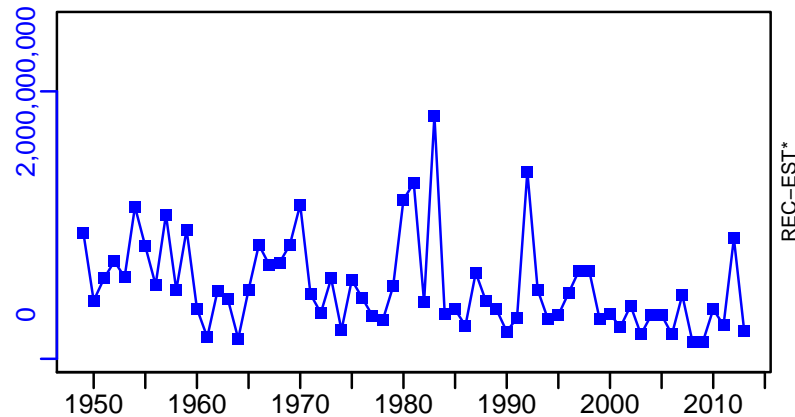
F-1/yr (1951-2007-COLLIE)



ER-calc-ratio (1949-2018-ASHBROOK)



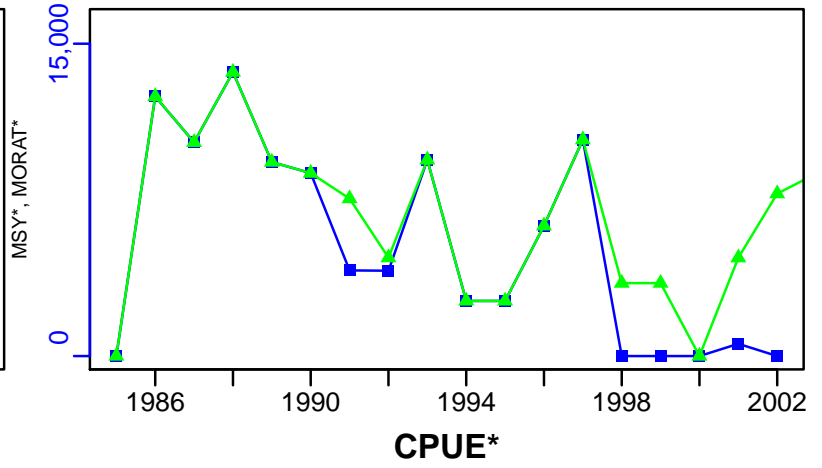
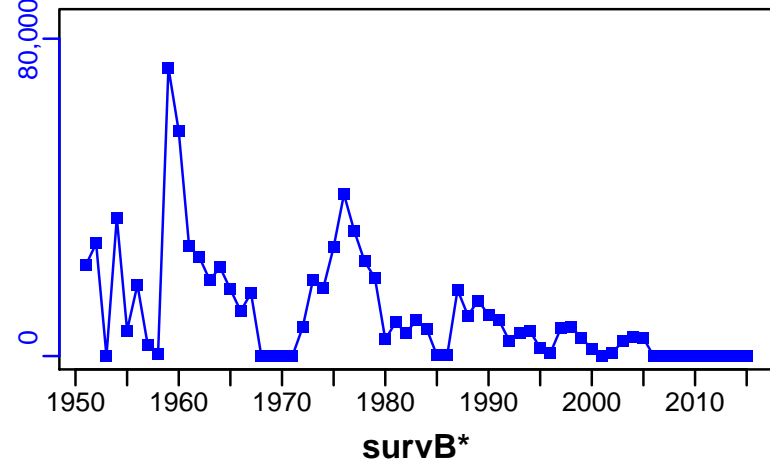
R-E00 (1949-2018-ASHBROOK)



Pacific herring West Coast of Vancouver Island [HERRWCVANI]

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

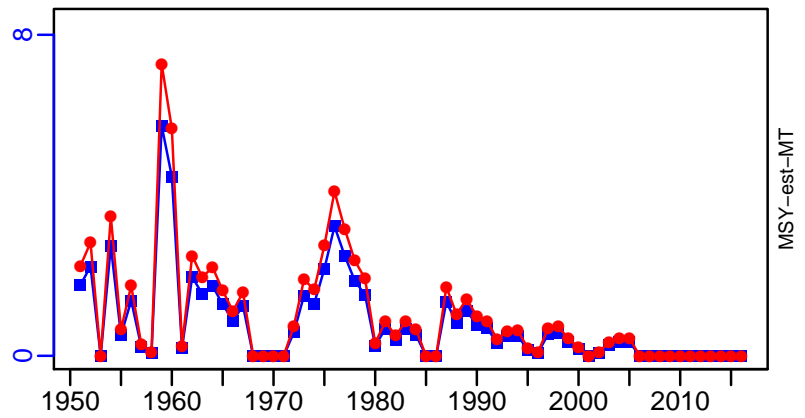
TAC-MT, Cpair*, Cadvised-MT (1951-2015-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1949-2018-ASHBROOK)



Lingcod Strait of Georgia [LINGCODSOG]

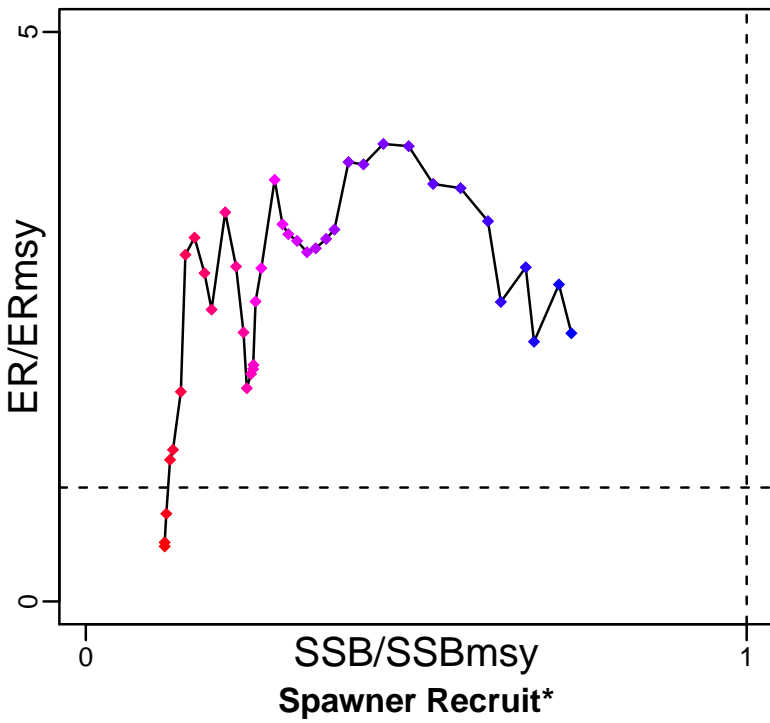
Metadata	
Scientific Name	Ophiodon elongatus
Current Assess ID	DFO-PAC-LINGCODSOG-1927-2014-OSGOOD
Area	Strait of Georgia
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2014

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-MT	2014	15,924
Fmsy	-	-	-
ERmsy	ERmsy-conv-ratio	2014	0.032
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2014	12,739
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2014	763
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

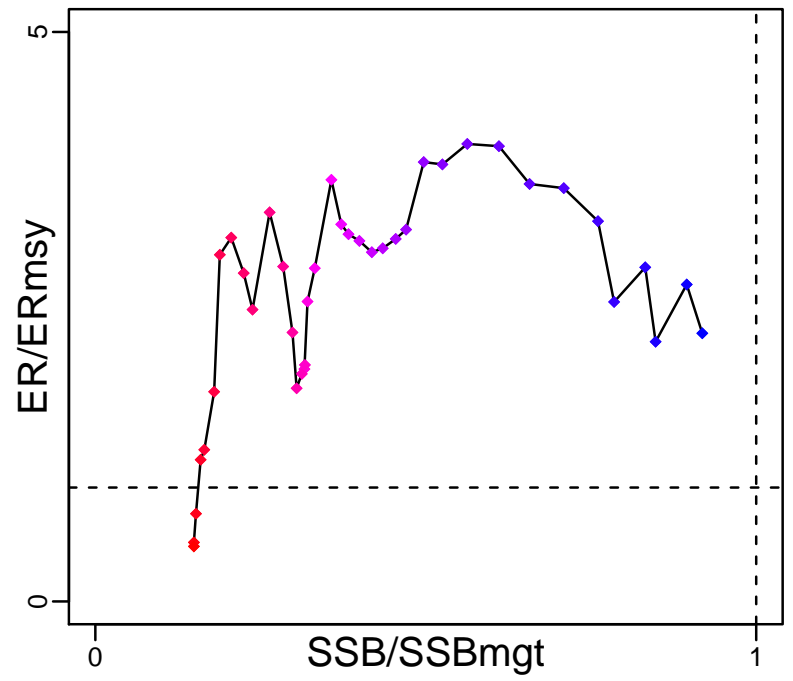
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2014	7120	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2014	0.015	-	-
TC	TC-MT	2014	44		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2014	0.447		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-conv-ratio	2014	0.483		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2014	0.559		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Lingcod Strait of Georgia [LINGCODSOG]

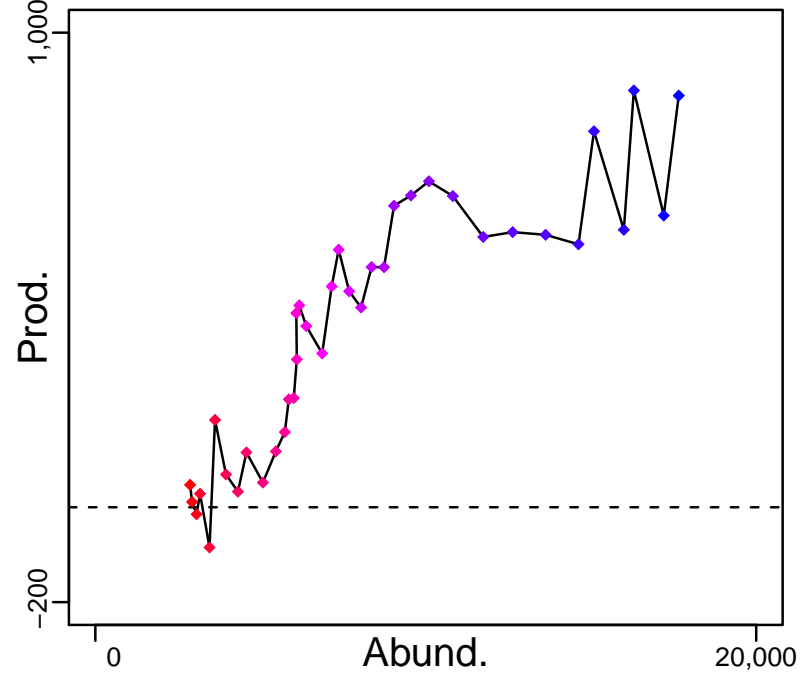
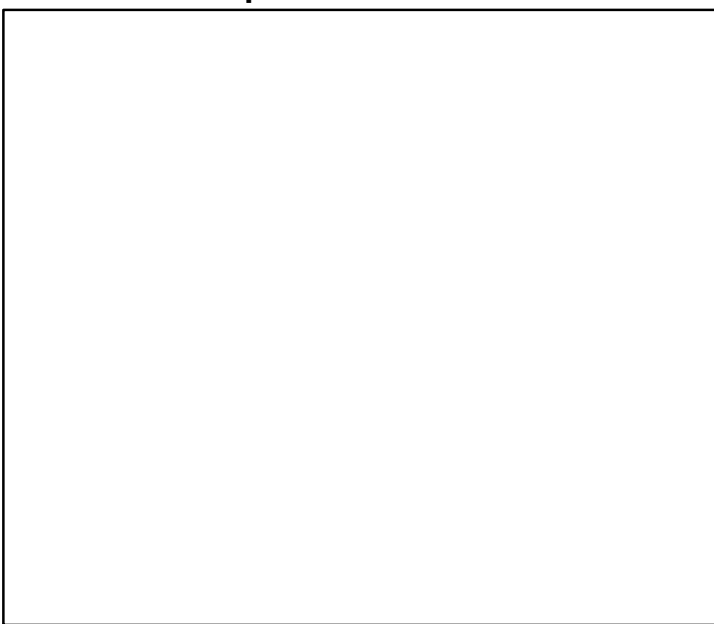
Kobe MSYpref (1927–2014–OSGOOD)



Kobe MGTpref (1927–2014–OSGOOD)



Production (1927–2014–OSGOOD)



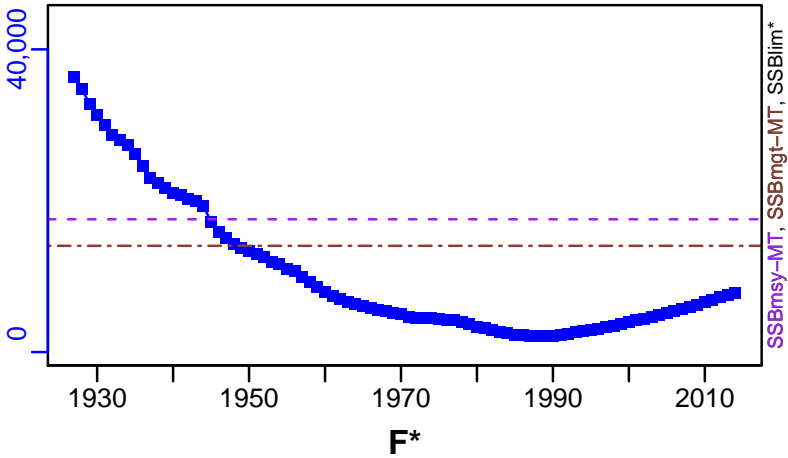
◆ Start Year ◆ End Year * No Data

Lingcod Strait of Georgia [LINGCODSOG]

TB*



SSB-MT (1927-2014-OSGOOD)



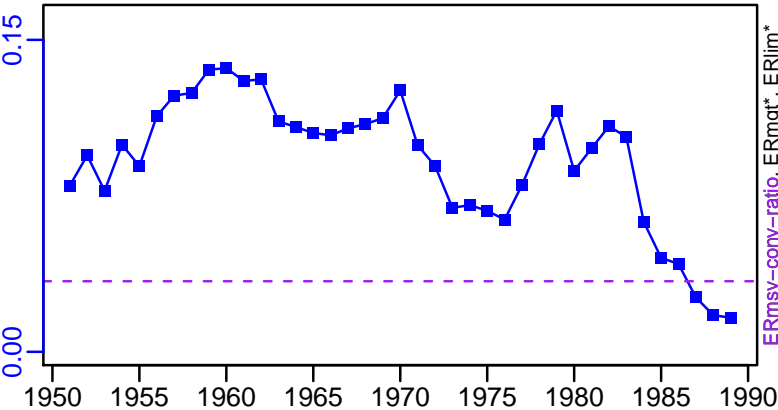
TN *



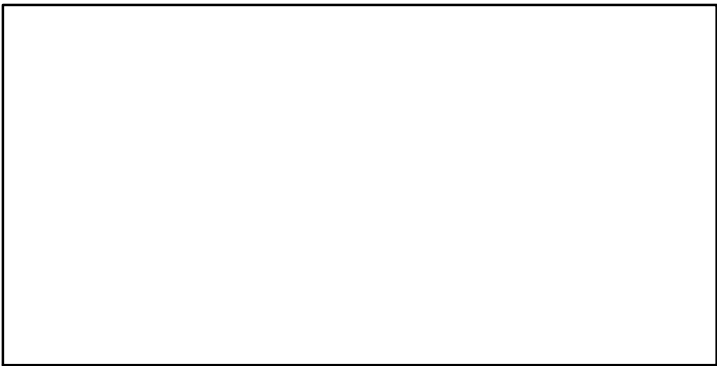
F*



ER-calc-ratio (1927-2014-OSGOOD)

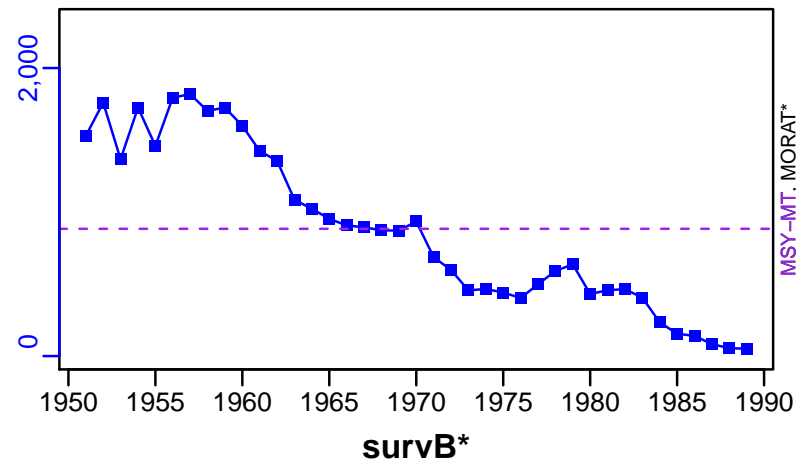


Recruits*



Lingcod Strait of Georgia [LINGCODSOG]

TC-MT, TL*, RecC* (1927-2014-OSGOOD)



TAC*, Cpair*, Cadv*



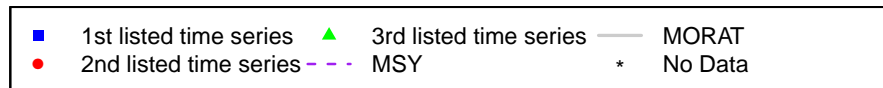
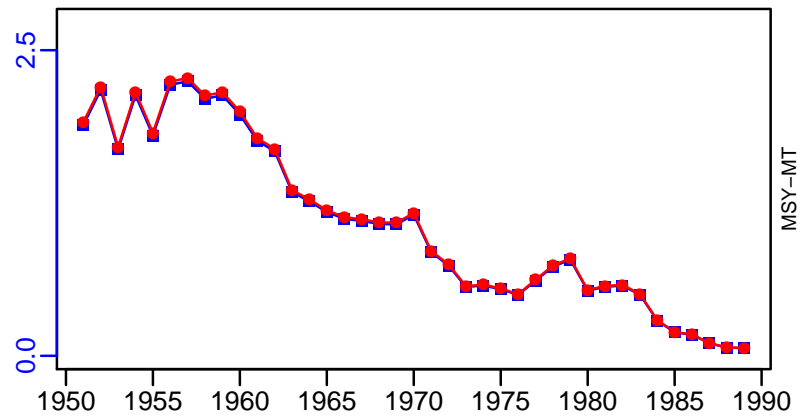
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1927-2014-OSGOOD)



Longnose skate West Coast of Vancouver Island [LNOSESKA3CD]

Metadata	
Scientific Name	Raja rhina
Current Assess ID	DFO-PAC-LNOSESKA3CD-1954-2011-OSGOOD
Area	West Coast of Vancouver Island
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2011

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	2011	286		
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

Longnose skate West Coast of Vancouver Island [LNOSESKA3CD]

TB*



SSB*



TN *



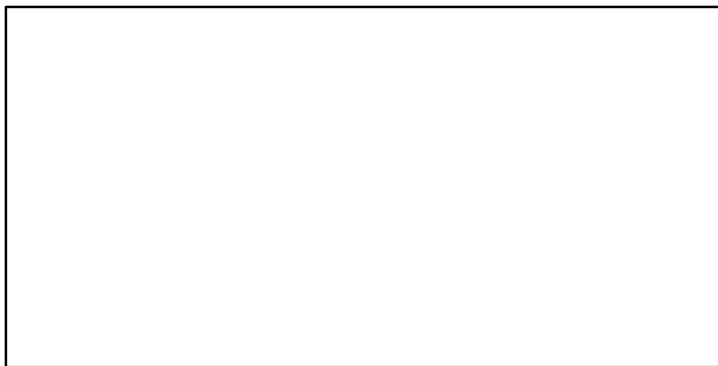
F*



ER*

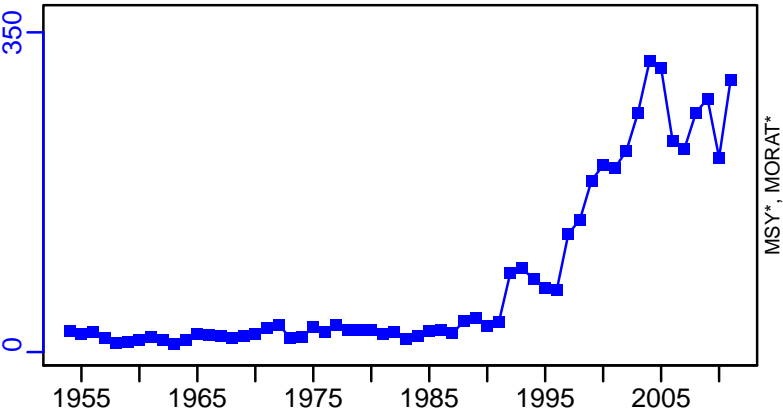


Recruits*



Longnose skate West Coast of Vancouver Island [LNOSESKA3CD]

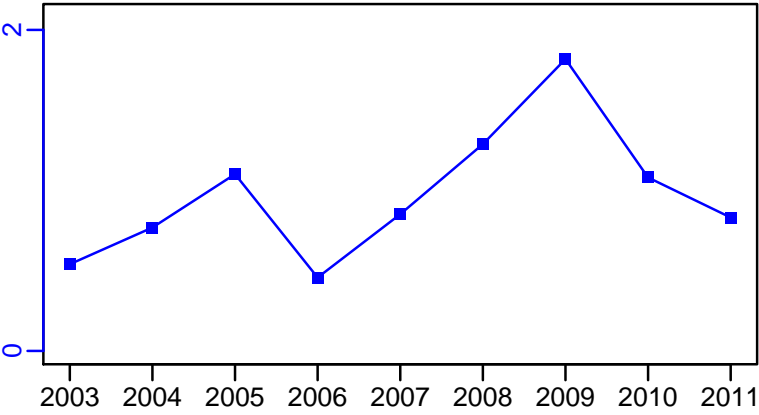
TC-MT, TL*, RecC* (1954-2011-OSGOOD)



TAC*, Cpair*, Cadv*



survB-fishperE02hooks (1954-2011-OSGOOD)



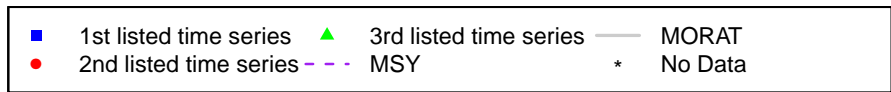
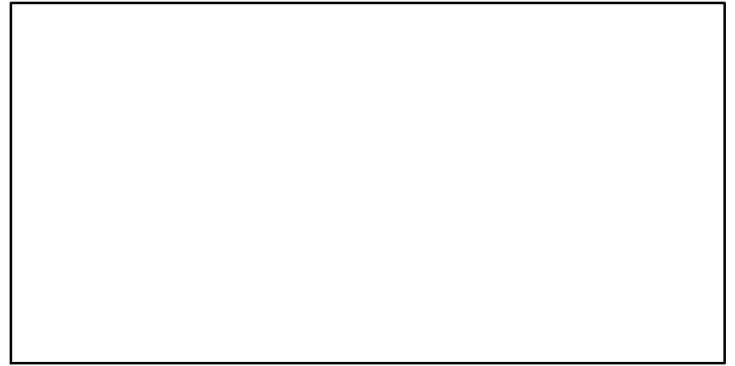
CPUE*



EFFORT*



CdivMSY*



Longnose skate Strait of Georgia [LNOSESKA4B]

Metadata	
Scientific Name	Raja rhina
Current Assess ID	DFO-PAC-LNOSESKA4B-1996-2011-OSGOOD
Area	Strait of Georgia
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2011

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	2011	1.5		
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

Longnose skate Strait of Georgia [LNOSESKA4B]

TB*



SSB*



TN *



F*



ER*



Recruits*

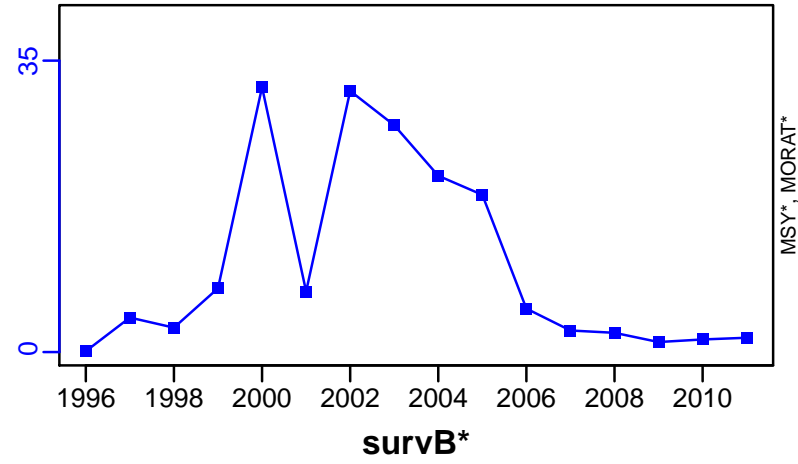


■ Listed time series	- - - Target BRP	— Rec-Est
- - - MSY-based BRP	· · · Lim BRP	* No Data

Longnose skate Strait of Georgia [LNOSESKA4B]

TC-MT, TL*, RecC* (1996-2011-OSGOOD)

TAC*, Cpair*, Cadv*



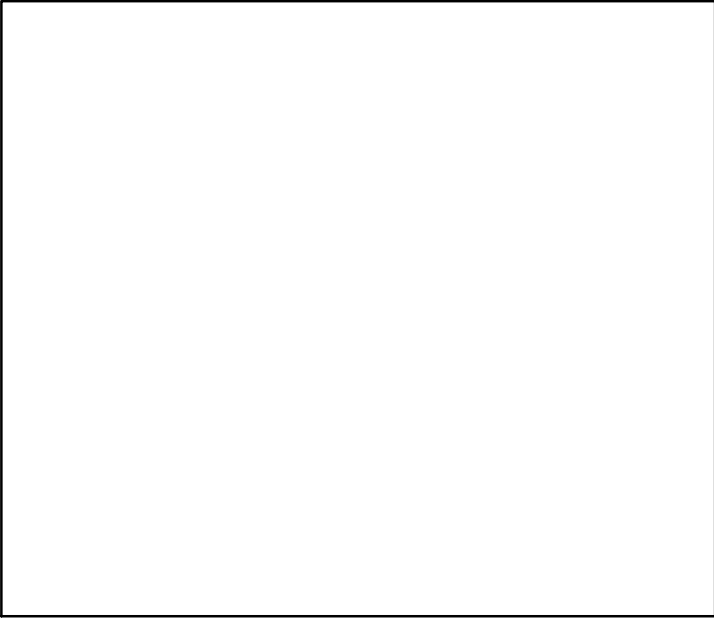
Longnose skate Queen Charlotte Sound [LNOSESKA5AB]

Metadata	
Scientific Name	Raja rhina
Current Assess ID	DFO-PAC-LNOSESKA5AB-1954-2012-OSGOOD
Area	Queen Charlotte Sound
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2012

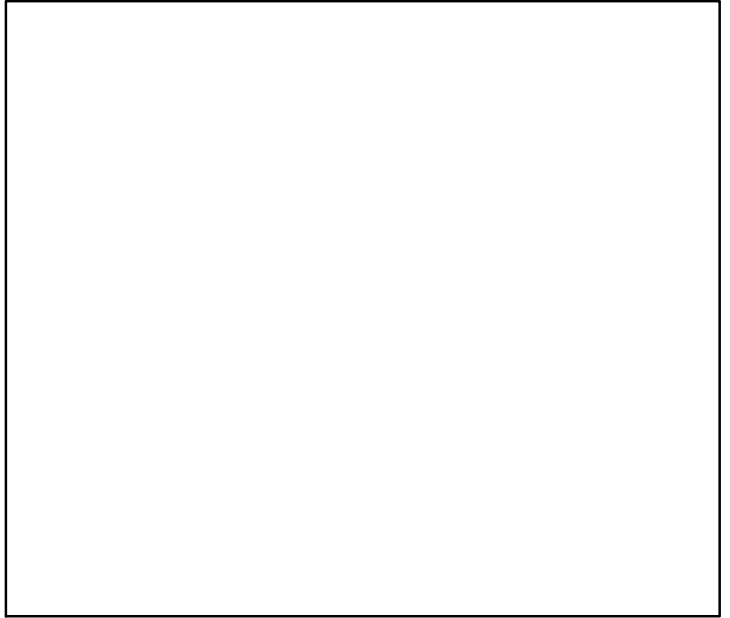
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2012	115		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

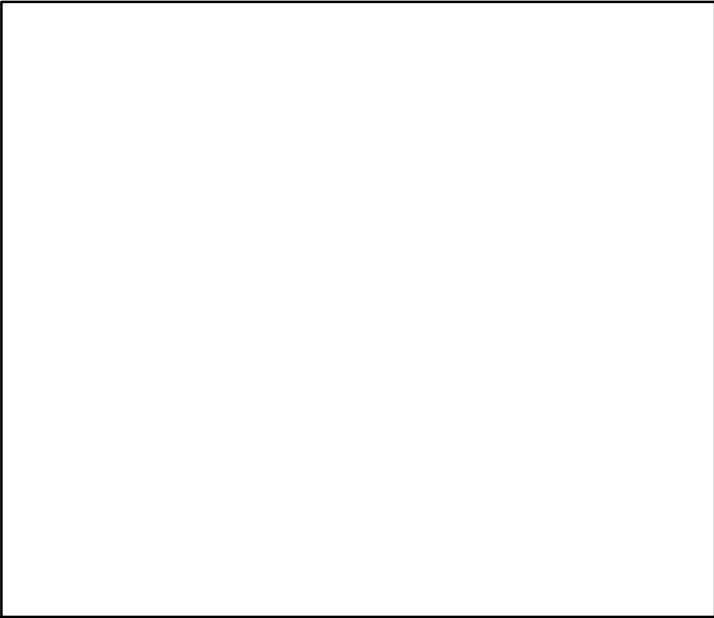
Kobe MSY*



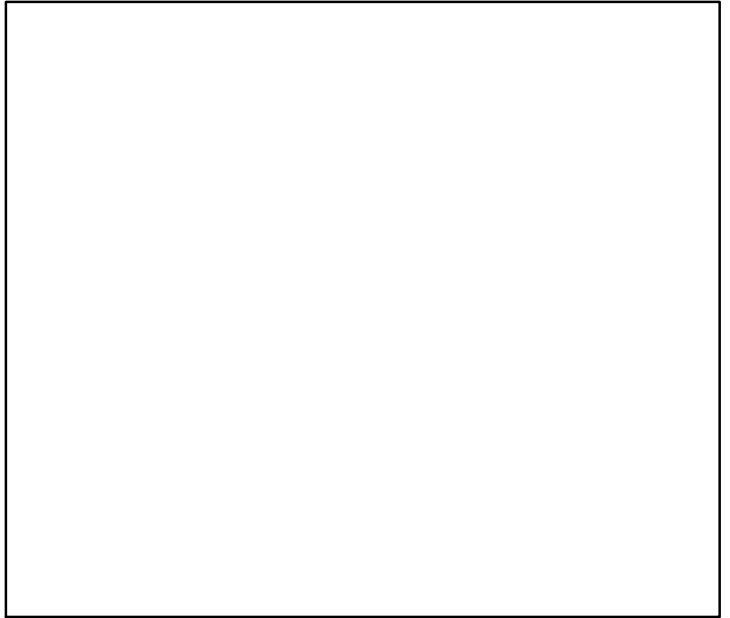
Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

Longnose skate Queen Charlotte Sound [LNOSESKA5AB]

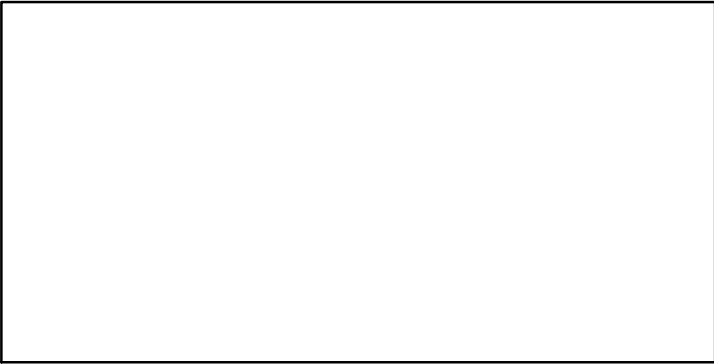
TB*



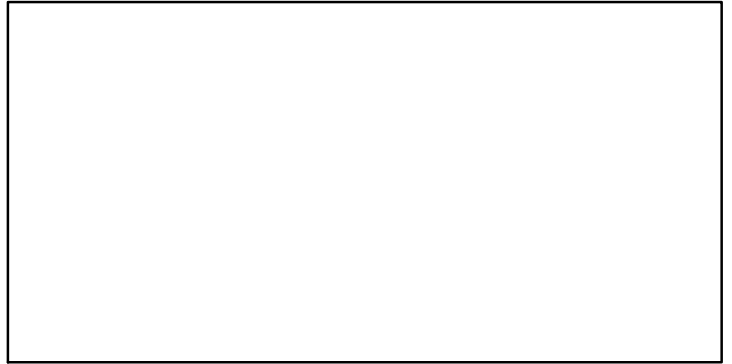
SSB*



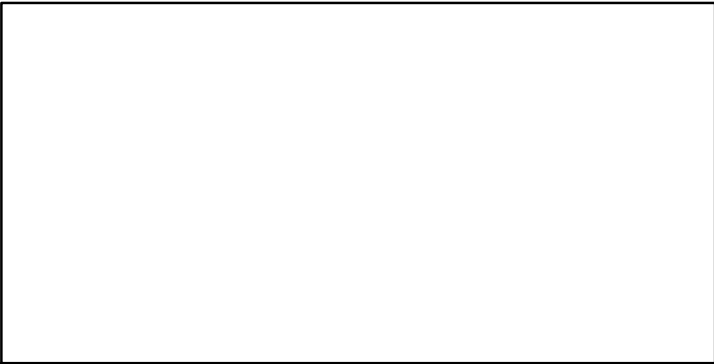
TN *



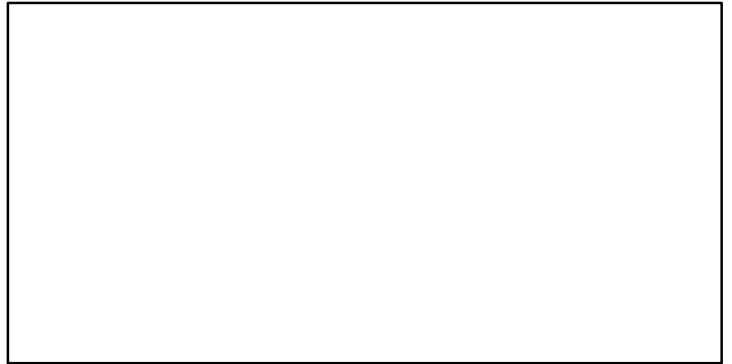
F*



ER*

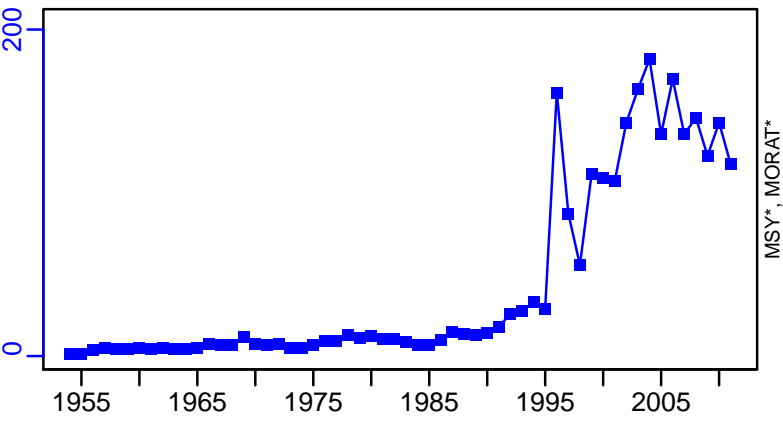


Recruits*



Longnose skate Queen Charlotte Sound [LNOSEKA5AB]

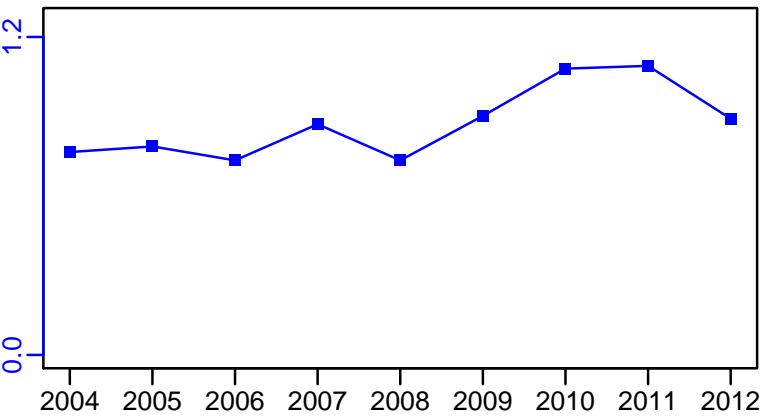
TC-MT, TL*, RecC* (1954-2012-OSGOOD)



TAC*, Cpair*, Cadv*



survB-fishperE02hooks (1954-2012-OSGOOD)



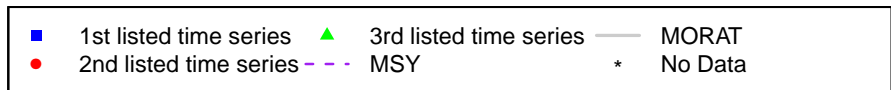
CPUE*



EFFORT*



CdivMSY*



Longnose skate Hecate Strait [LNOSESKA5CDE]

Metadata	
Scientific Name	Raja rhina
Current Assess ID	DFO-PAC-LNOSESKA5CDE-1954-2011-OSGOOD
Area	Hecate Strait
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2011

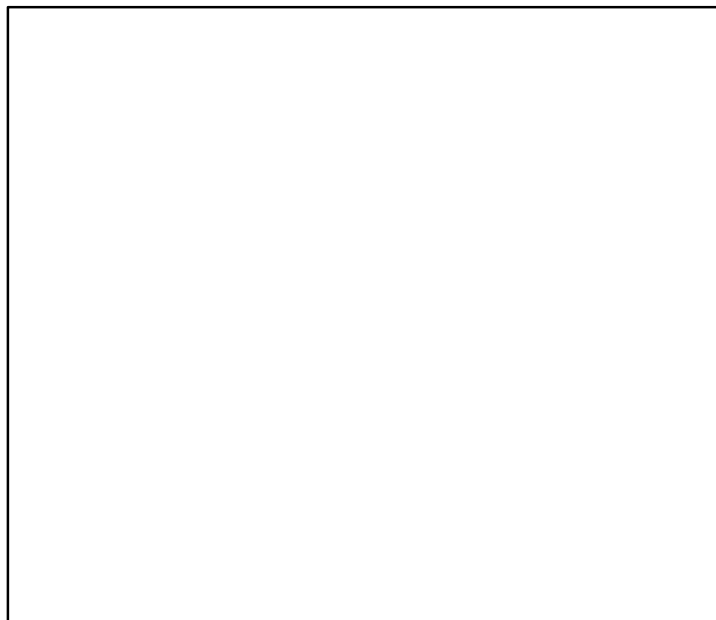
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2011	73		
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

Longnose skate Hecate Strait [LNOSESKA5CDE]

TB*



SSB*



TN *



F*



ER*



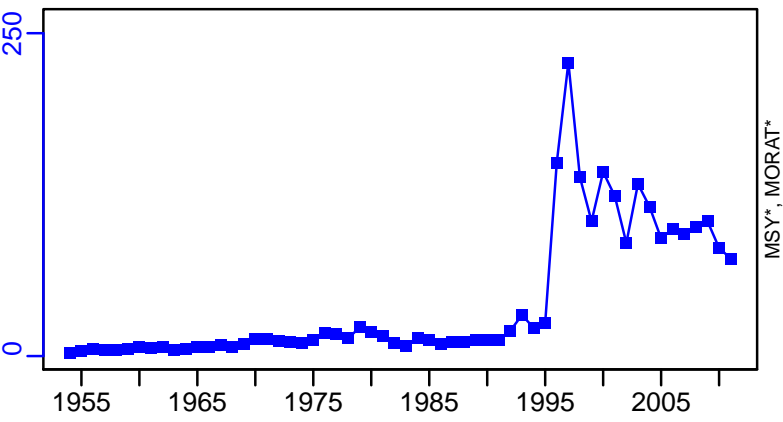
Recruits*



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

Longnose skate Hecate Strait [LNOSESKA5CDE]

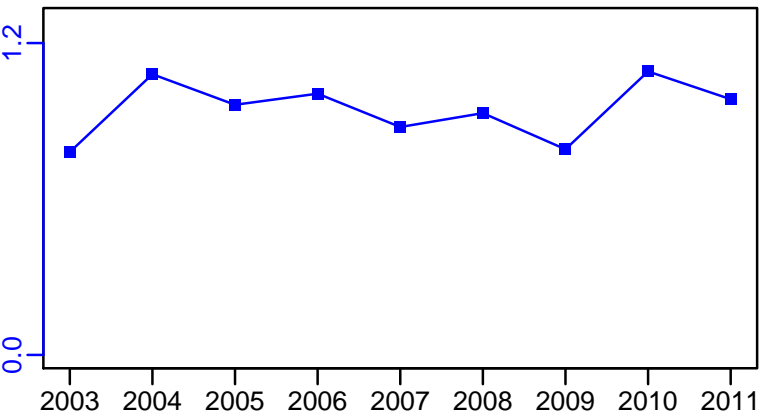
TC-MT, TL*, RecC* (1954-2011-OSGOOD)



TAC*, Cpair*, Cadv*



survB-fishperE02hooks (1954-2011-OSGOOD)



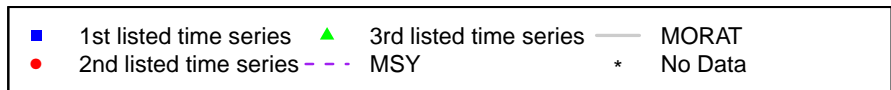
CPUE*



EFFORT*



CdivMSY*



Ocean shrimp Shrimp Management Area 14 [PANDALSMA14]

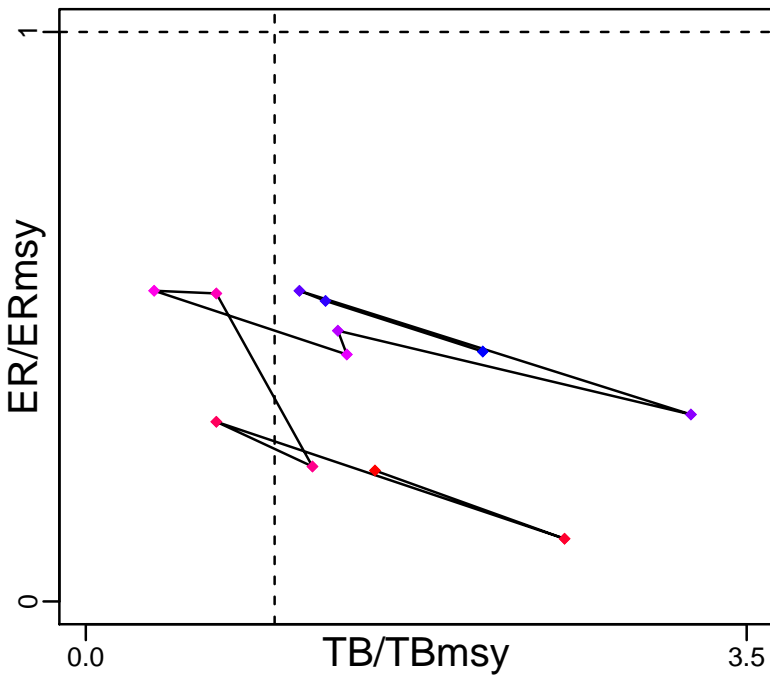
Metadata	
Scientific Name	Pandalus jordani
Current Assess ID	DFO-PANDALSMA14-1987-2011-WATSON
Area	Shrimp Management Area 14
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2011	275
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2011	0.619
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2011	170
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

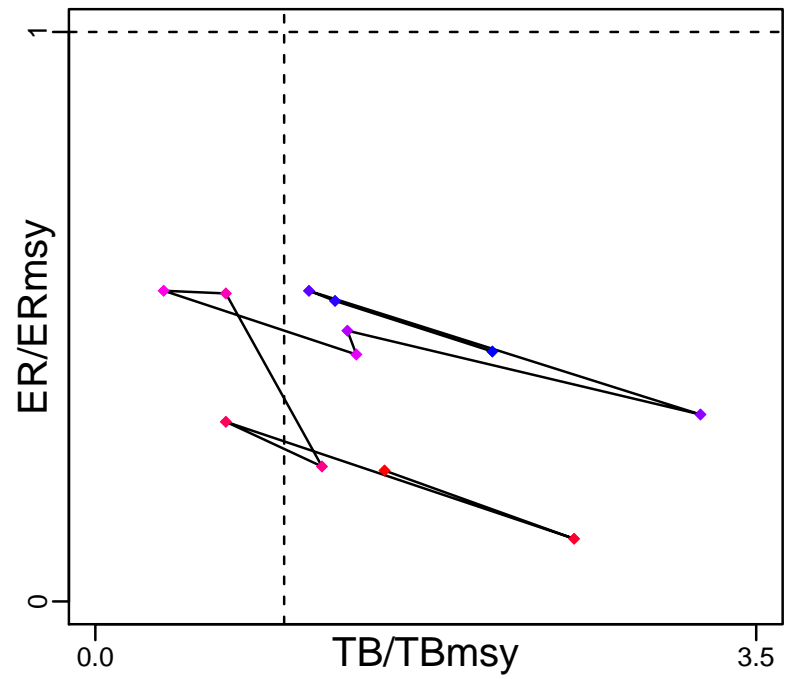
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	130	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0.142	-	-
TC	-	-	-		
TL	TL-MT	2011	60		
TB/TBmsy	TB-MT/TBmsy-est-MT	2011	0.473		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2011	0.23		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Ocean shrimp Shrimp Management Area 14 [PANDALSMA14]

Kobe MSY_{pref} (1987–2011–WATSON)



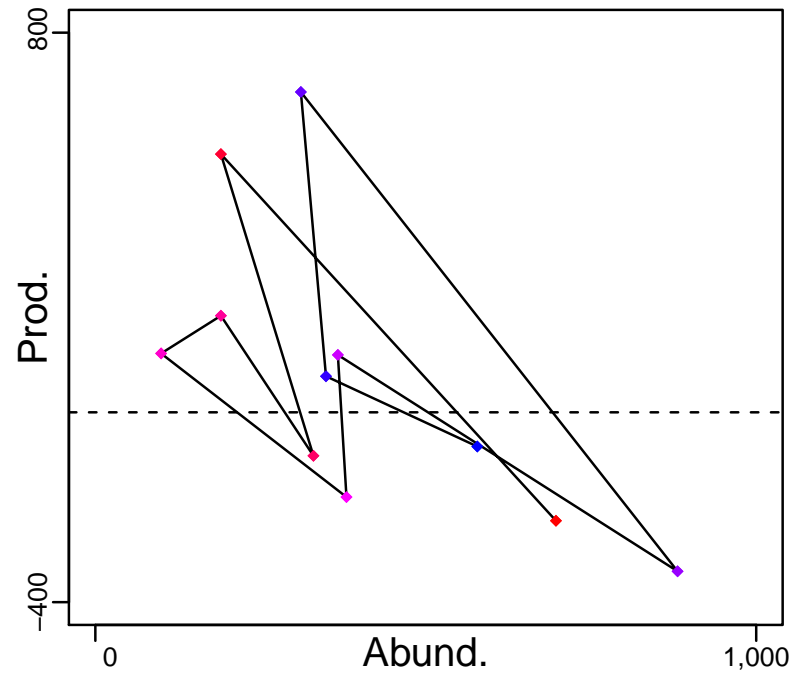
Kobe MGT_{pref} (1987–2011–WATSON)



Spawner Recruit*



Production (1987–2011–WATSON)

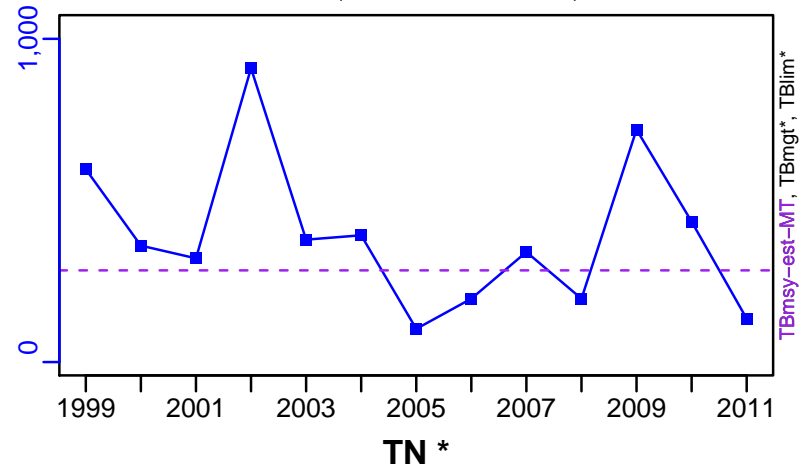


◆ Start Year ◆ End Year * No Data

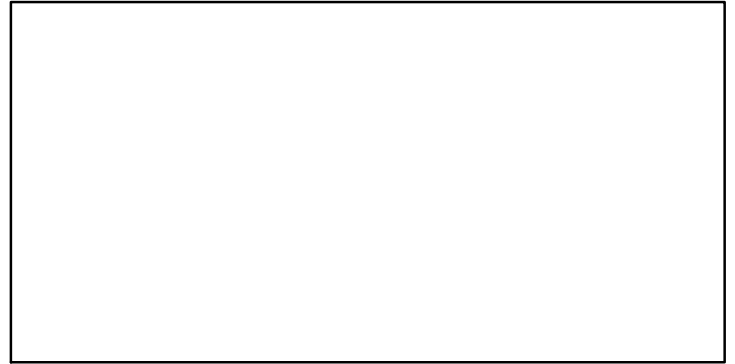
Ocean shrimp Shrimp Management Area 14 [PANDALSMA14]

TB-MT (1987-2011-WATSON)

SSB*

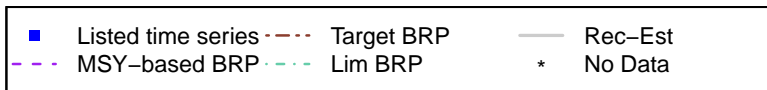
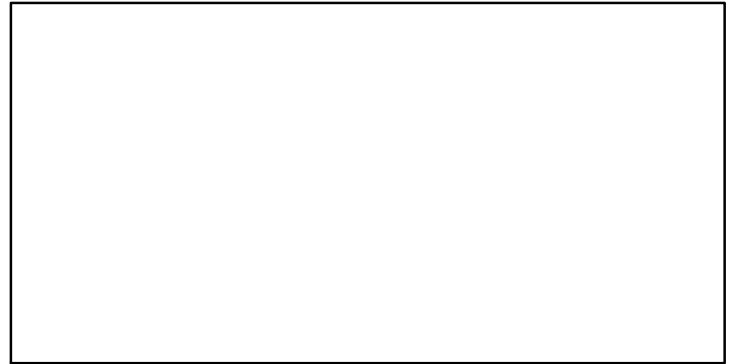
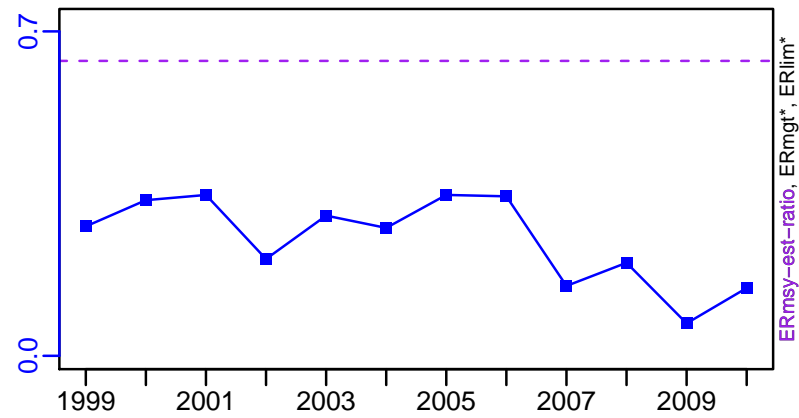


F*



ER-calc-ratio (1987-2011-WATSON)

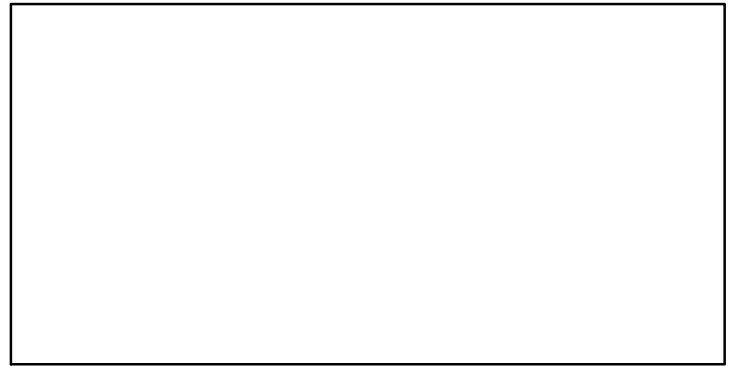
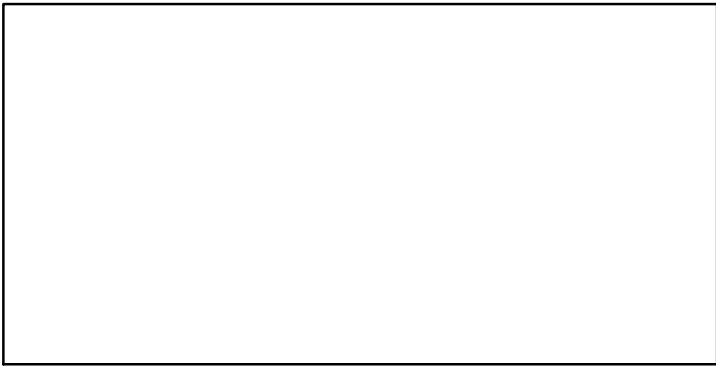
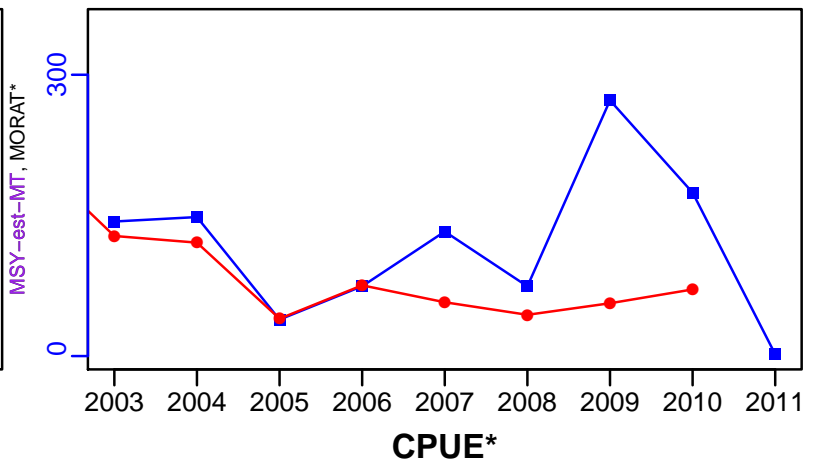
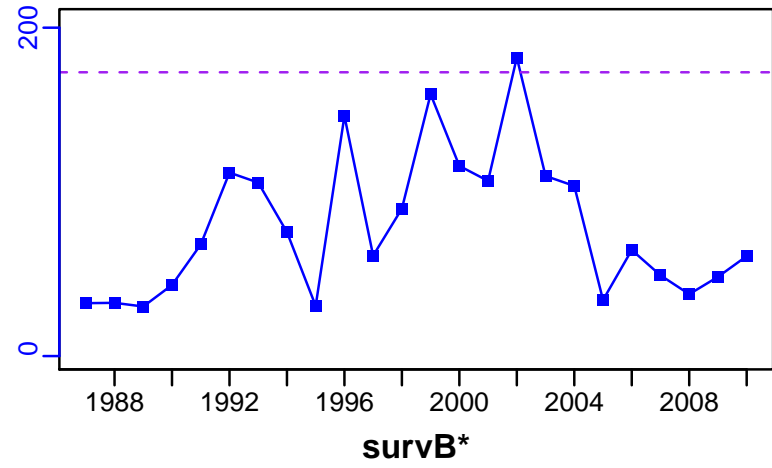
Recruits*



Ocean shrimp Shrimp Management Area 14 [PANDALSMA14]

TL-MT, TC*, RecC* (1987-2011-WATSON)

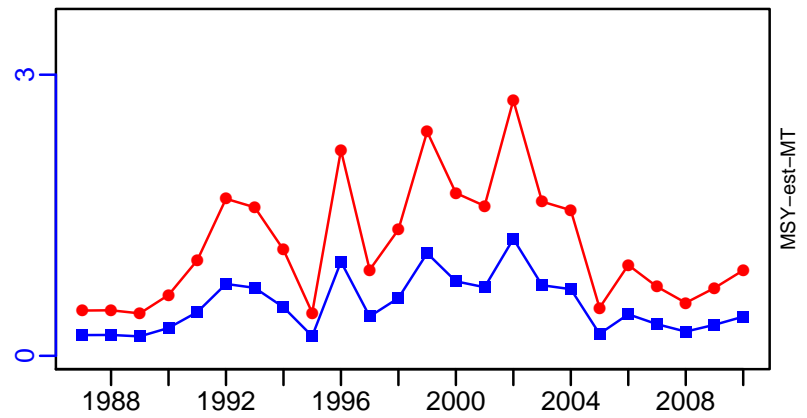
TAC-MT, Cpair-MT, Cadv* (1987-2011-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1987-2011-WATSON)



Ocean shrimp Shrimp Management Area 16 [PANDALSMA16]

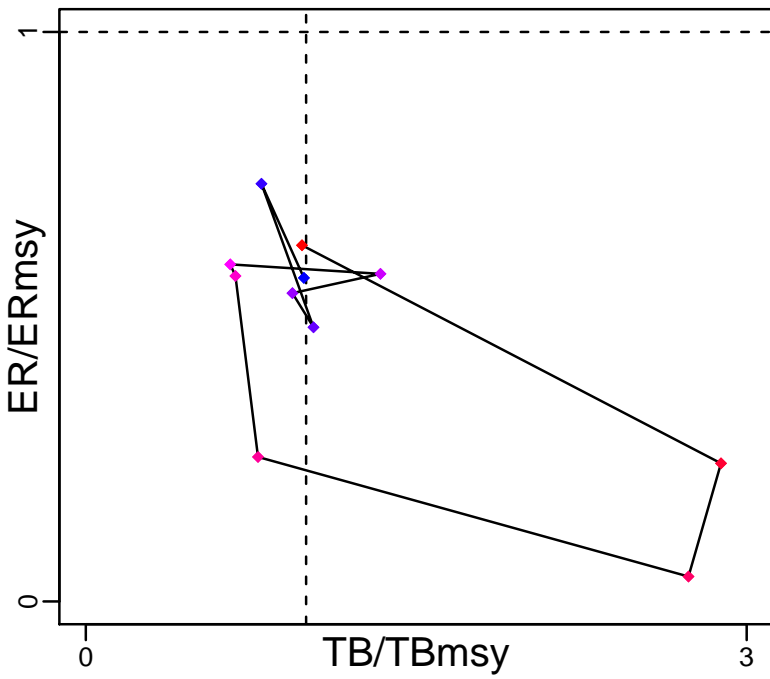
Metadata	
Scientific Name	Pandalus jordani
Current Assess ID	DFO-PANDALSMA16-1987-2011-WATSON
Area	Shrimp Management Area 16
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2011	115
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2011	0.508
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2011	58
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	94	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0.318	-	-
TC	-	-	-		
TL	TL-MT	2011	36		
TB/TBmsy	TB-MT/TBmsy-est-MT	2011	0.817		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2011	0.625		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

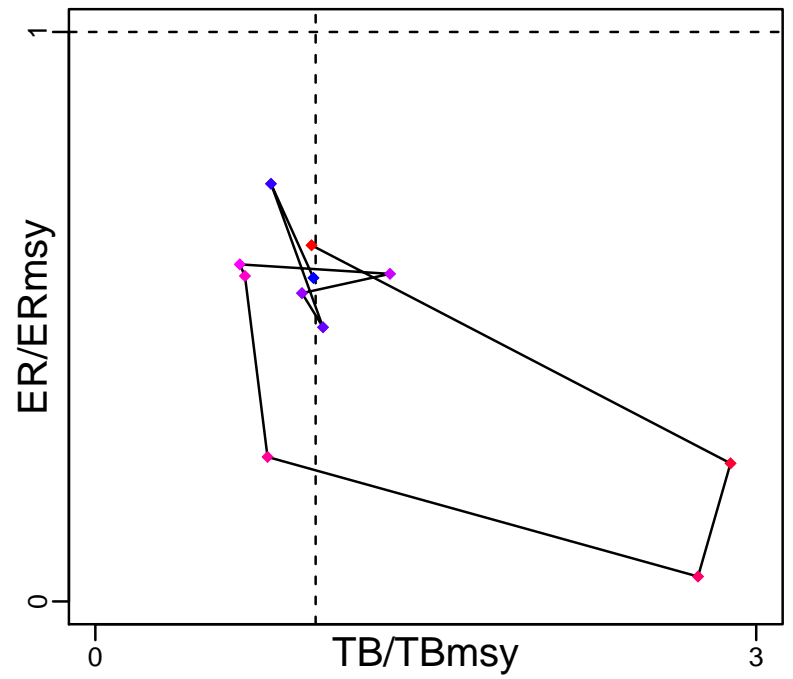
Ocean shrimp Shrimp Management Area 16 [PANDALSMA16]

Kobe MSY_{pref} (1987–2011–WATSON)



Spawner Recruit*

Kobe MGT_{pref} (1987–2011–WATSON)



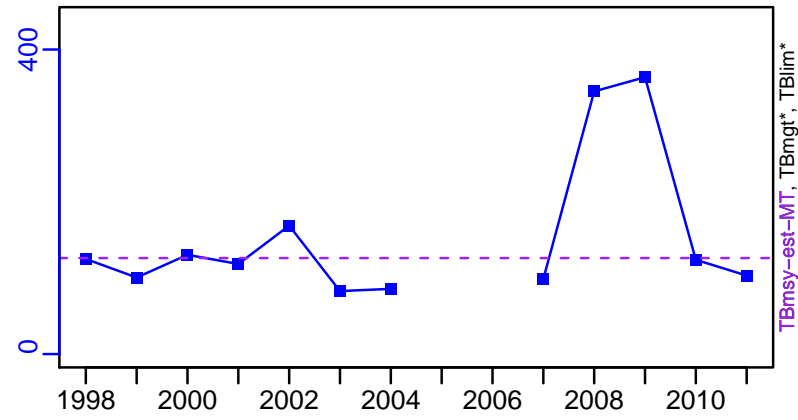
Production*

◆ Start Year ◆ End Year * No Data

Ocean shrimp Shrimp Management Area 16 [PANDALSMA16]

TB-MT (1987-2011-WATSON)

SSB*



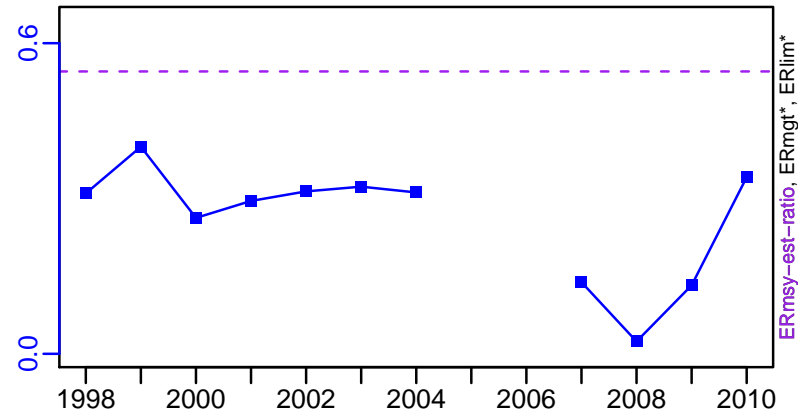
TN *

F*



ER-calc-ratio (1987-2011-WATSON)

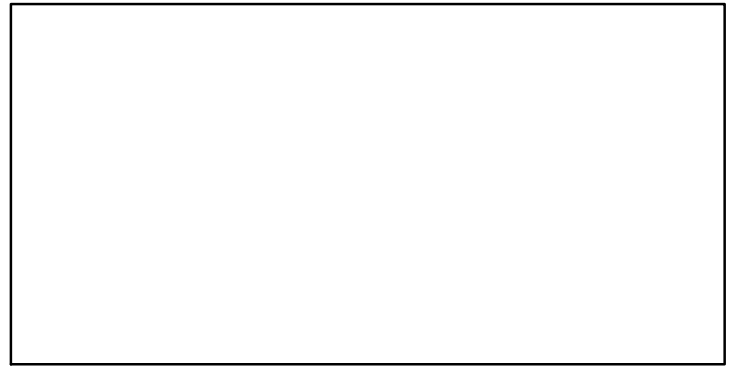
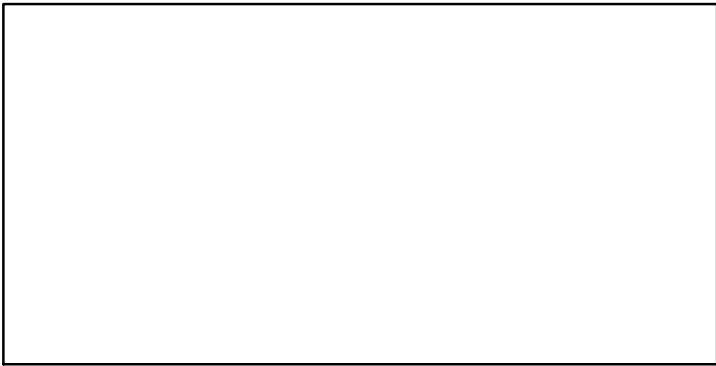
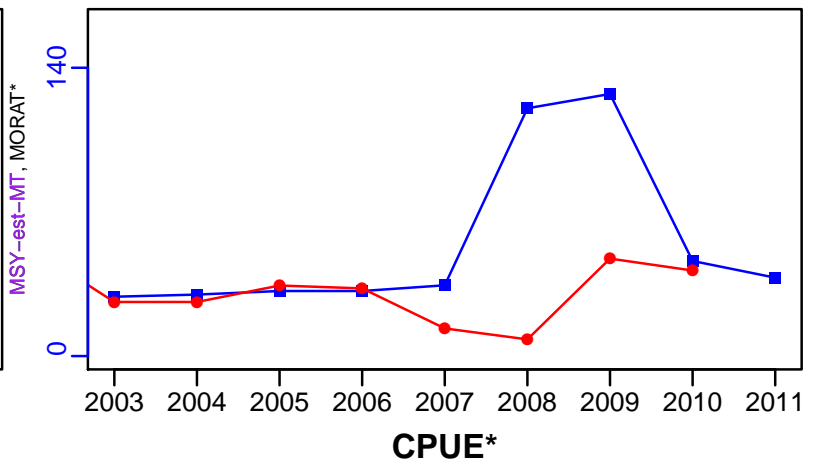
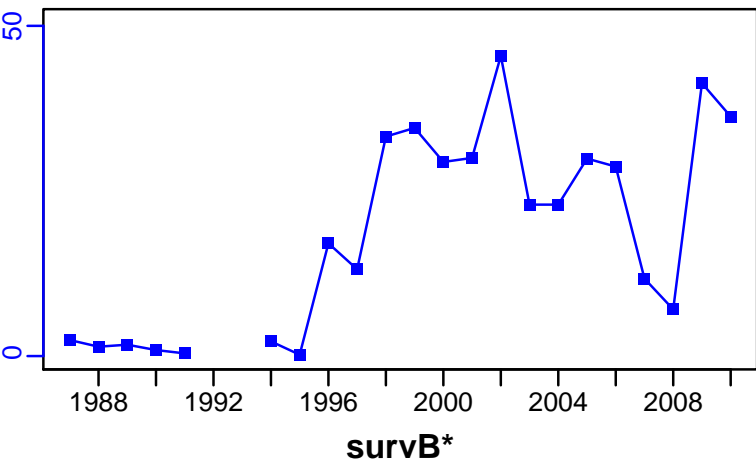
Recruits*



Ocean shrimp Shrimp Management Area 16 [PANDALSMA16]

TL-MT, TC*, RecC* (1987-2011-WATSON)

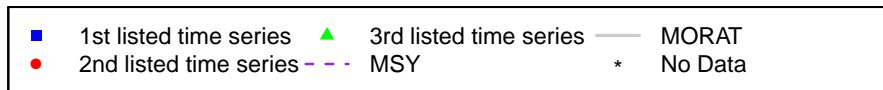
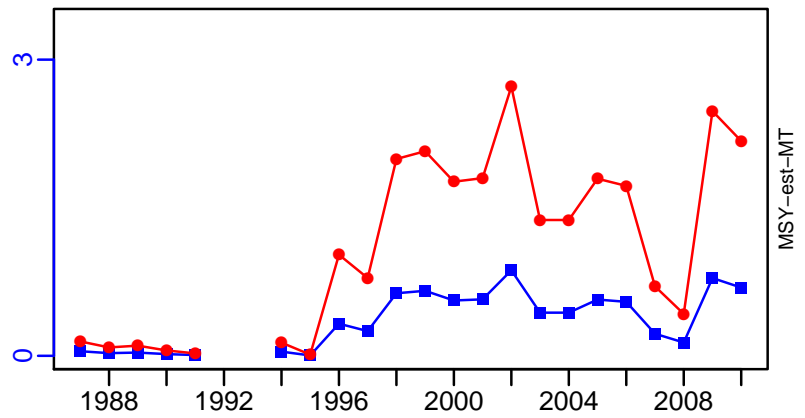
TAC-MT, Cpair-MT, Cadv* (1987-2011-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1987-2011-WATSON)



Ocean shrimp Shrimp Management Areas 18 and 19 [PANDALSMA18-19]

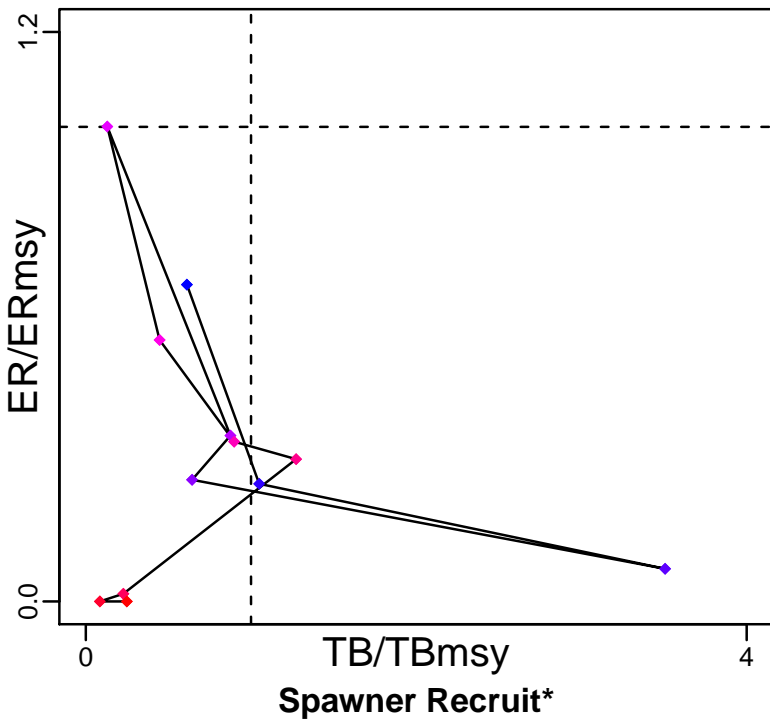
Metadata	
Scientific Name	Pandalus jordani
Current Assess ID	DFO-PANDALSMA18-19-1987-2011-WATSON
Area	Shrimp Management Areas 18 and 19
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2011	224
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2011	0.731
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2011	164
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

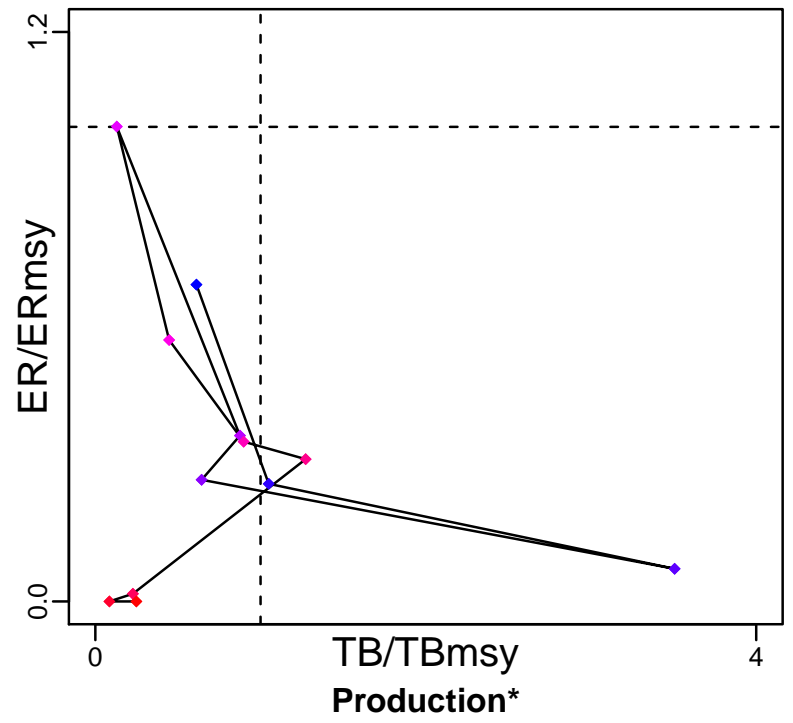
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	56	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0	-	-
TC	-	-	-		
TL	TL-MT	2011	0		
TB/TBmsy	TB-MT/TBmsy-est-MT	2011	0.248		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2011	0		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Ocean shrimp Shrimp Management Areas 18 and 19 [PANDALSMA18-19]

Kobe MSYpref (1987-2011-WATSON)



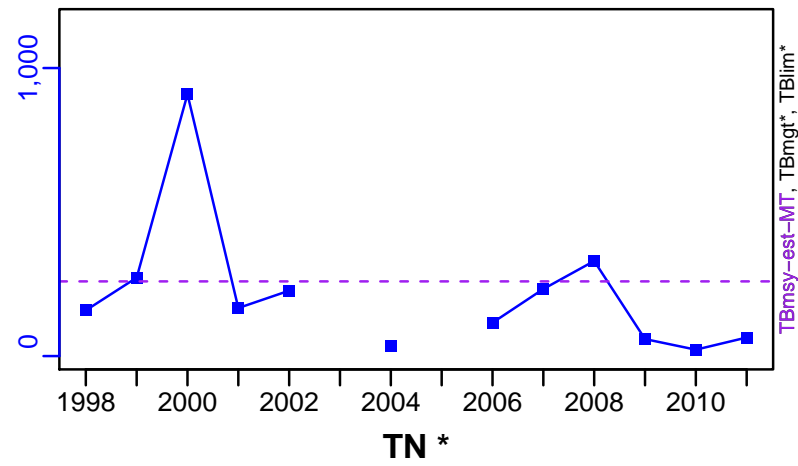
Kobe MGTpref (1987-2011-WATSON)



◆ Start Year ◆ End Year * No Data

Ocean shrimp Shrimp Management Areas 18 and 19 [PANDALSMA18-19]

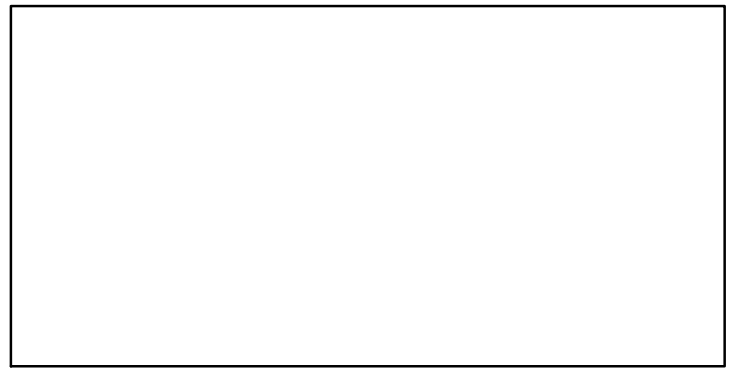
TB-MT (1987-2011-WATSON)



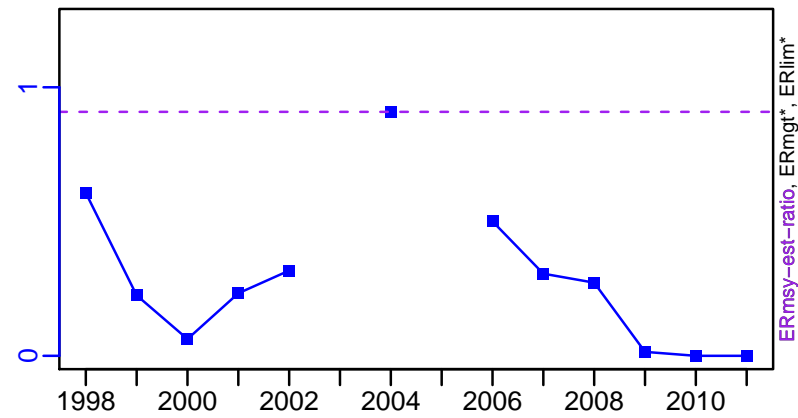
SSB*



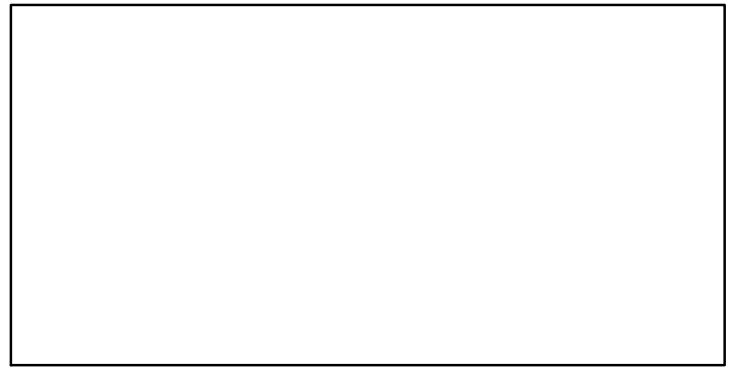
F*



ER-calc-ratio (1987-2011-WATSON)

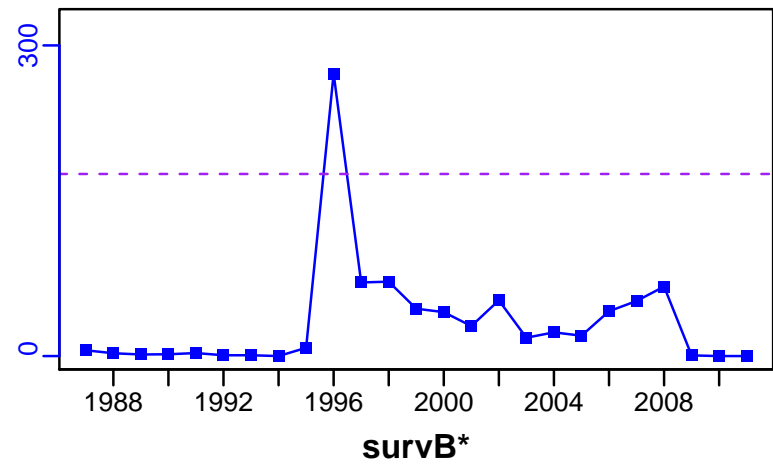


Recruits*

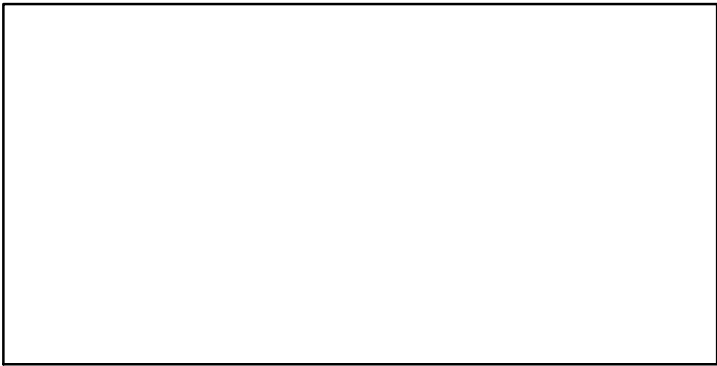
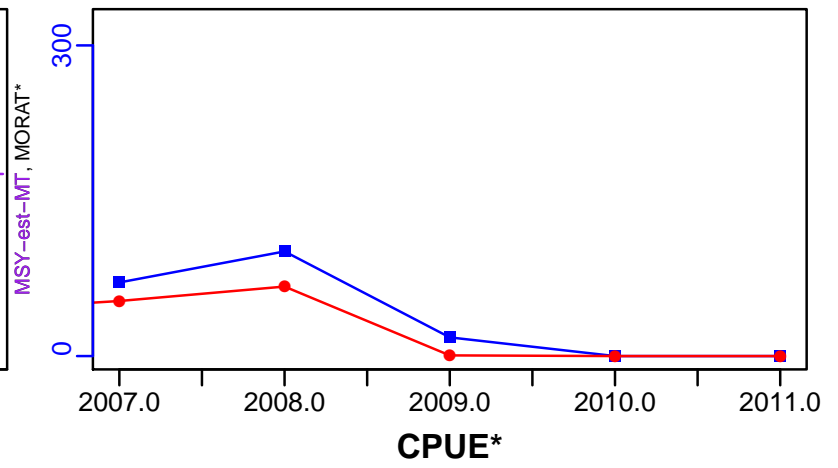


Ocean shrimp Shrimp Management Areas 18 and 19 [PANDALSMA18-19]

TL-MT, TC*, RecC* (1987-2011-WATSON)



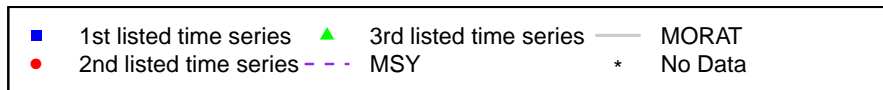
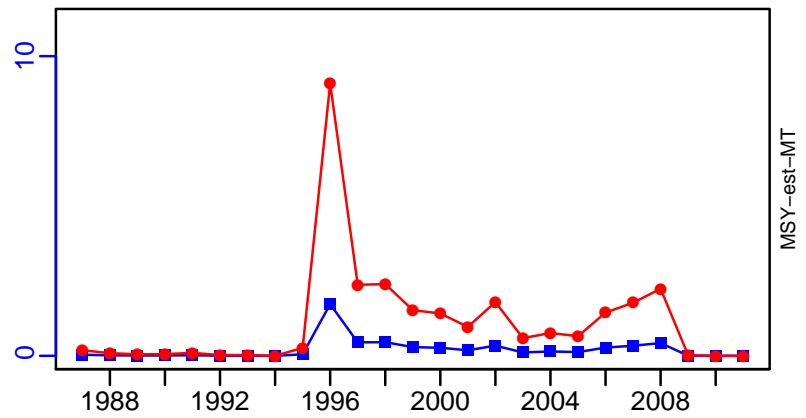
TAC-MT, Cpair-MT, Cadv* (1987-2011-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1987-2011-WATSON)



Ocean shrimp Shrimp Management Area FR [PANDALSMAFR]

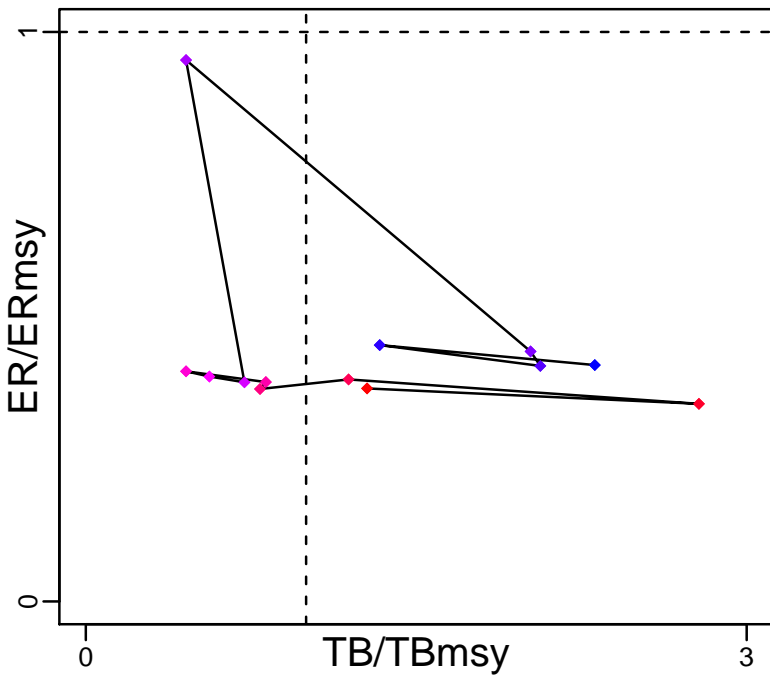
Metadata	
Scientific Name	Pandalus jordani
Current Assess ID	DFO-PANDALSMAFR-1987-2011-WATSON
Area	Shrimp Management Area FR
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2011	226
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2011	0.668
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2011	151
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	216	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0.25	-	-
TC	-	-	-		
TL	TL-MT	2011	72		
TB/TBmsy	TB-MT/TBmsy-est-MT	2011	0.954		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2011	0.374		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

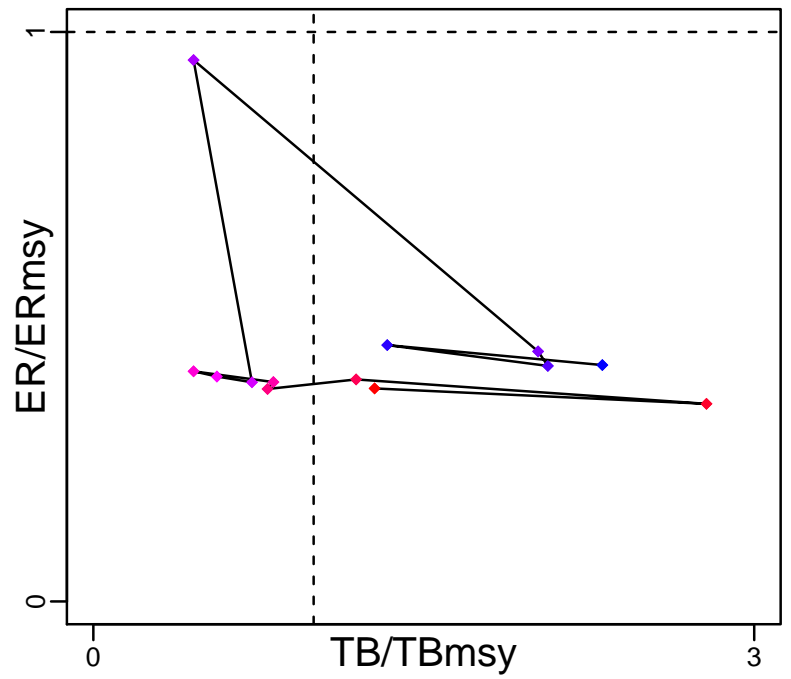
Ocean shrimp Shrimp Management Area FR [PANDALSMAFR]

Kobe MSY_{pref} (1987–2011–WATSON)

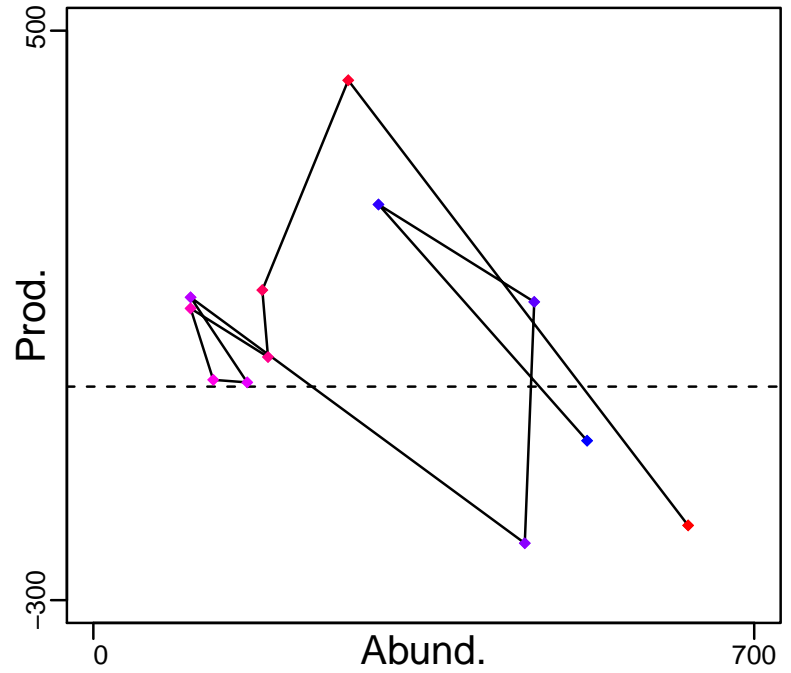


Spawner Recruit*

Kobe MGT_{pref} (1987–2011–WATSON)



Production (1987–2011–WATSON)

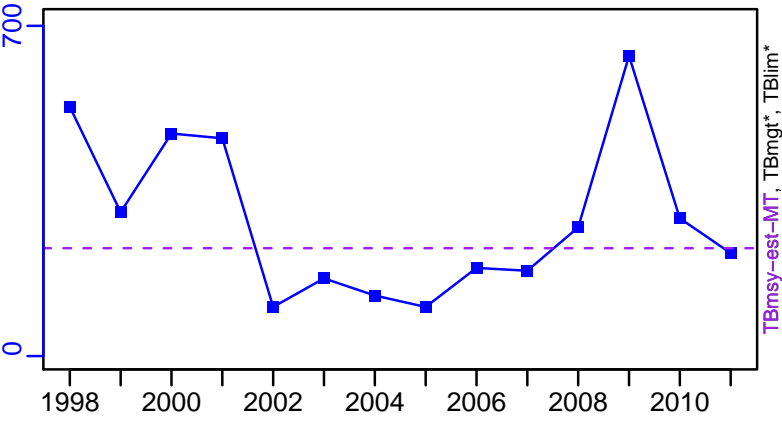


◆ Start Year ◆ End Year * No Data

Ocean shrimp Shrimp Management Area FR [PANDALSMAFR]

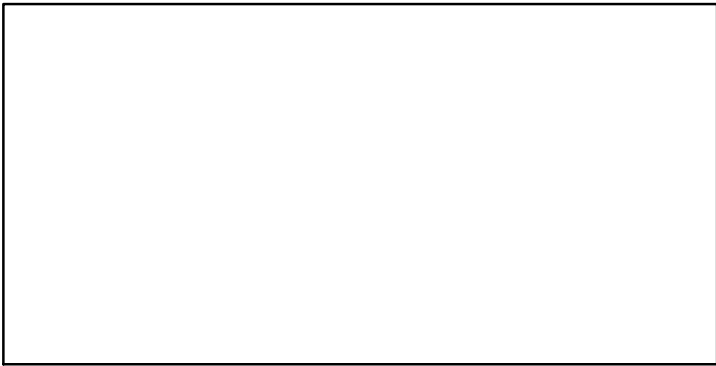
TB-MT (1987-2011-WATSON)

SSB*



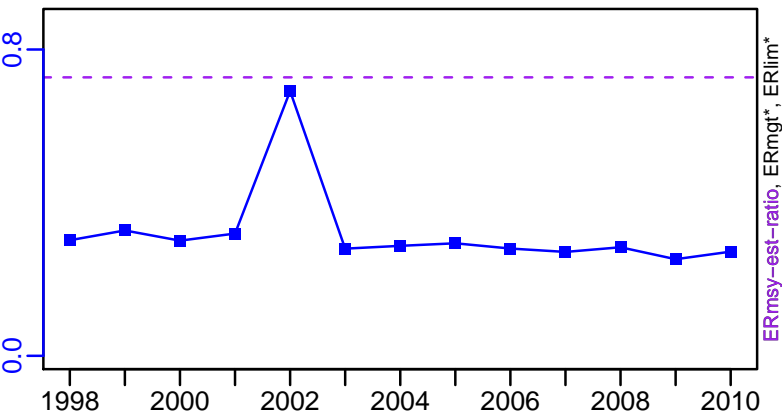
TN *

F*



ER-calc-ratio (1987-2011-WATSON)

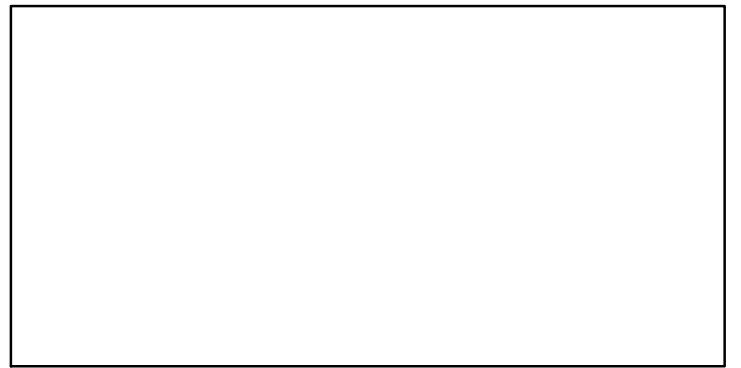
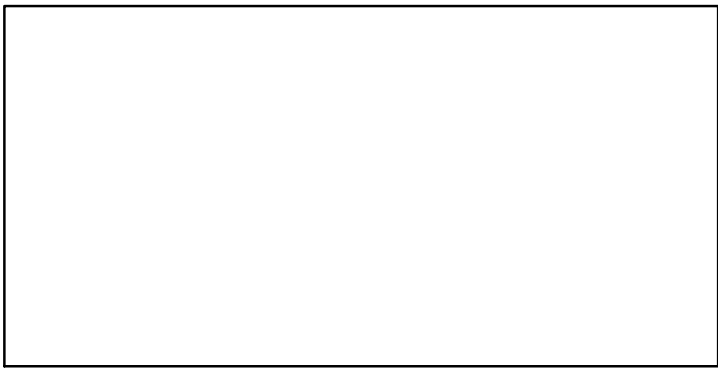
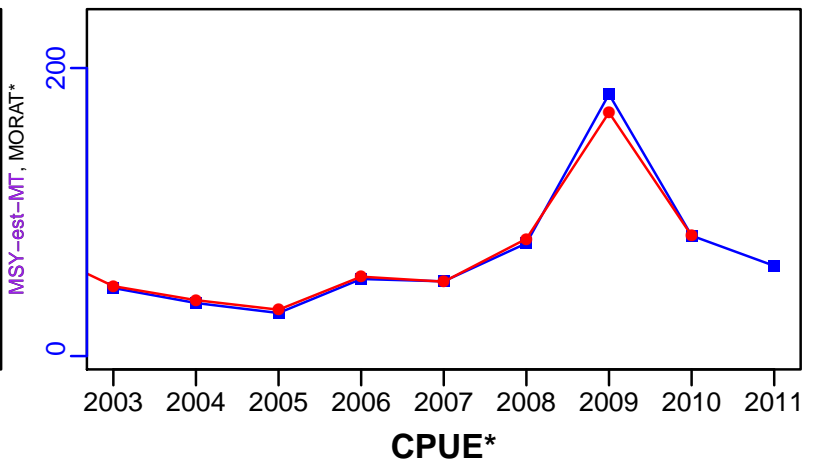
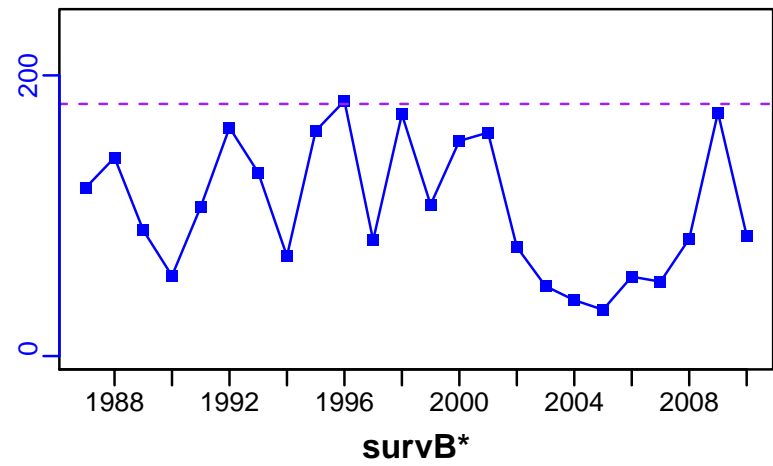
Recruits*



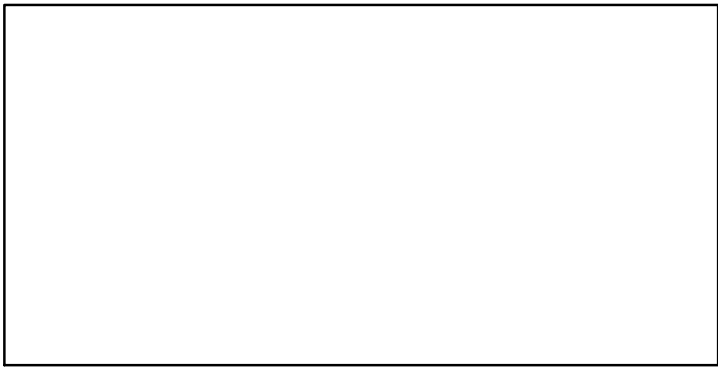
Ocean shrimp Shrimp Management Area FR [PANDALSMAFR]

TL-MT, TC*, RecC* (1987-2011-WATSON)

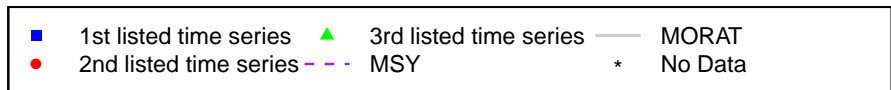
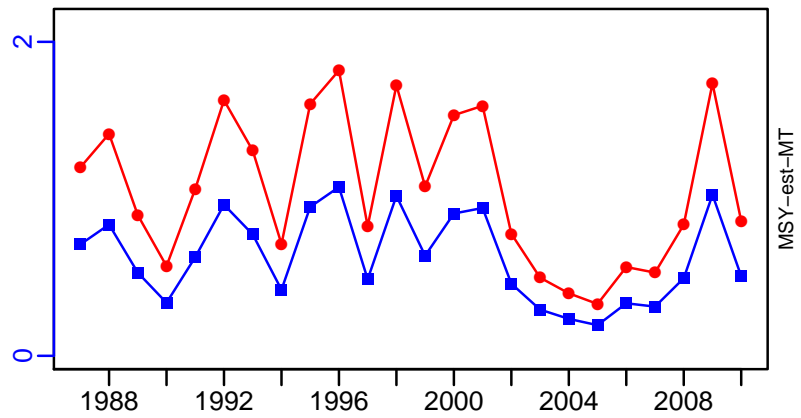
TAC-MT, Cpair-MT, Cadv* (1987-2011-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1987-2011-WATSON)



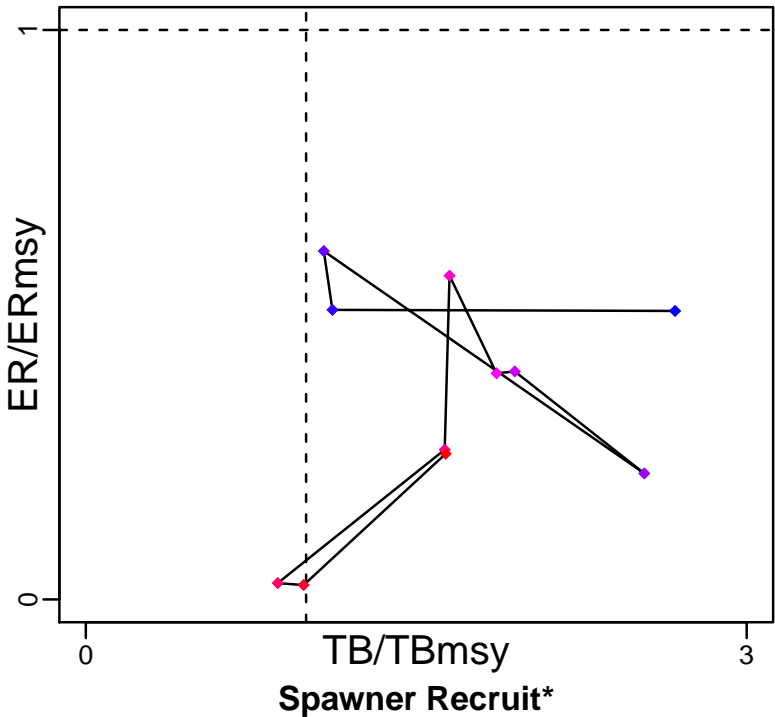
Ocean shrimp Shrimp Management Area GTSE [PANDALSMAGTSE]

Metadata	
Scientific Name	Pandalus jordani
Current Assess ID	DFO-PANDALSMAGTSE-1990-2012-WATSON
Area	Shrimp Management Area GTSE
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2012

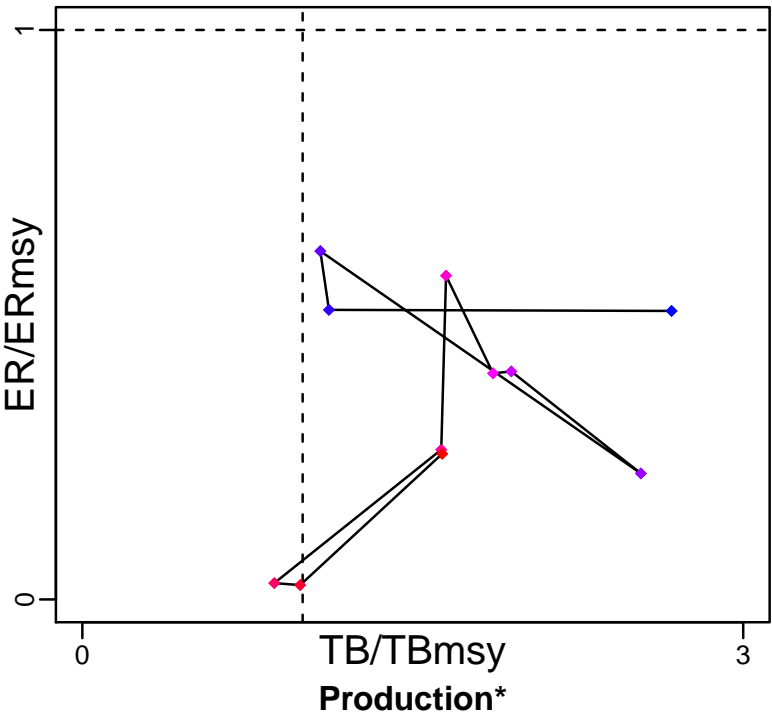
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2012	230
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2012	0.575
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2012	132
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	243	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2012	0.147	-	-
TC	-	-	-		
TL	TL-MT	2012	55		
TB/TBmsy	TB-MT/TBmsy-est-MT	2012	1.059		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2012	0.256		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSYpref (1990–2012–WATSON)



Kobe MGTpref (1990–2012–WATSON)

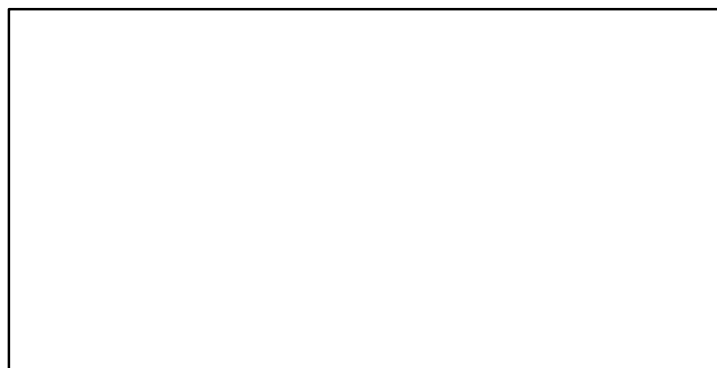
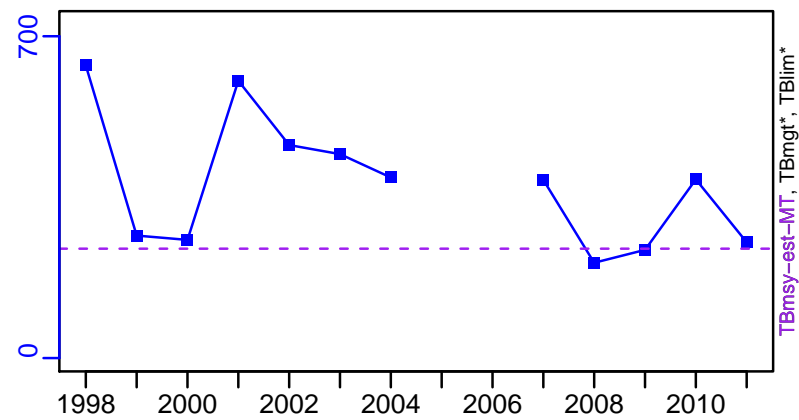


◆ Start Year ◆ End Year * No Data

Ocean shrimp Shrimp Management Area GTSE [PANDALSMAGTSE]

TB-MT (1990-2012-WATSON)

SSB*



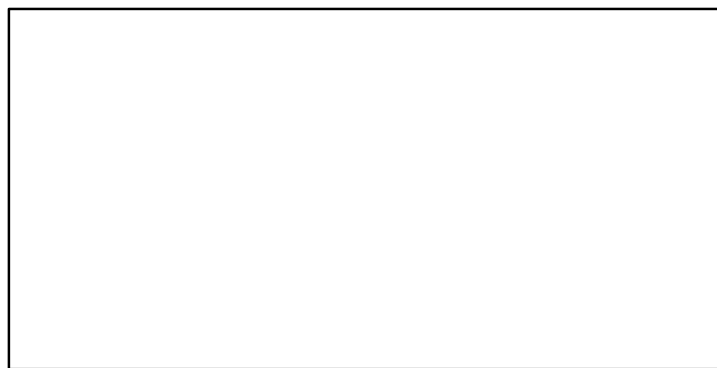
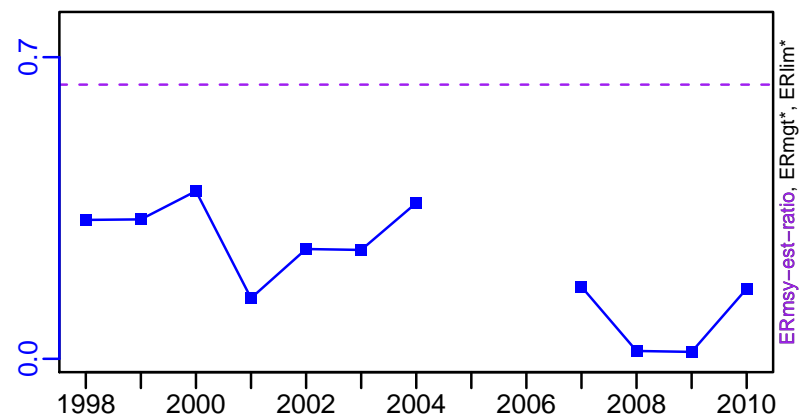
TN *

F*



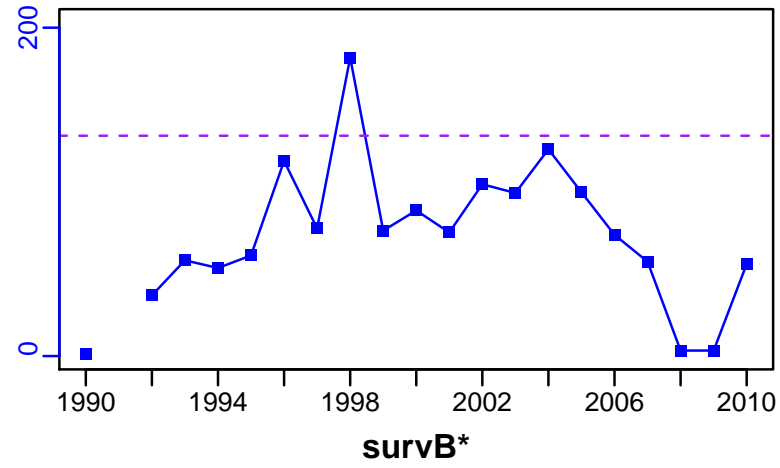
ER-calc-ratio (1990-2012-WATSON)

Recruits*

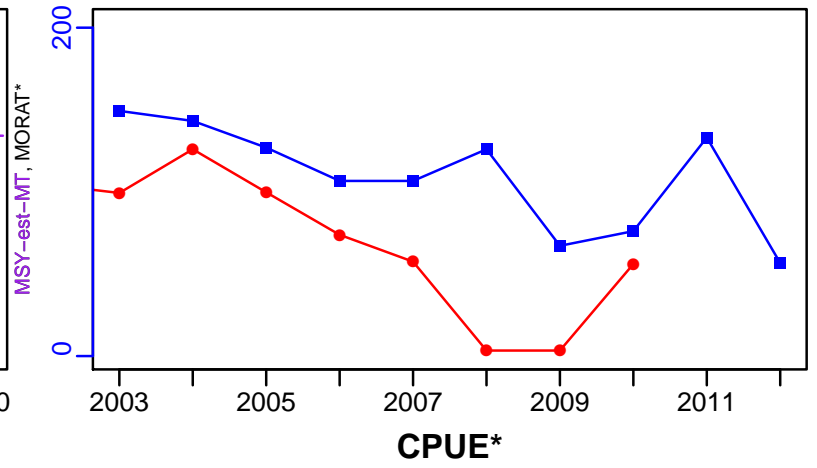


Ocean shrimp Shrimp Management Area GTSE [PANDALSMAGTSE]

TL-MT, TC*, RecC* (1990-2012-WATSON)



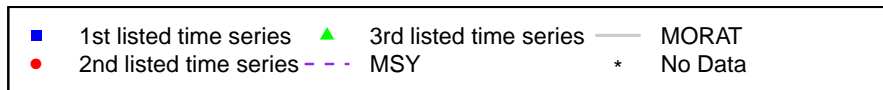
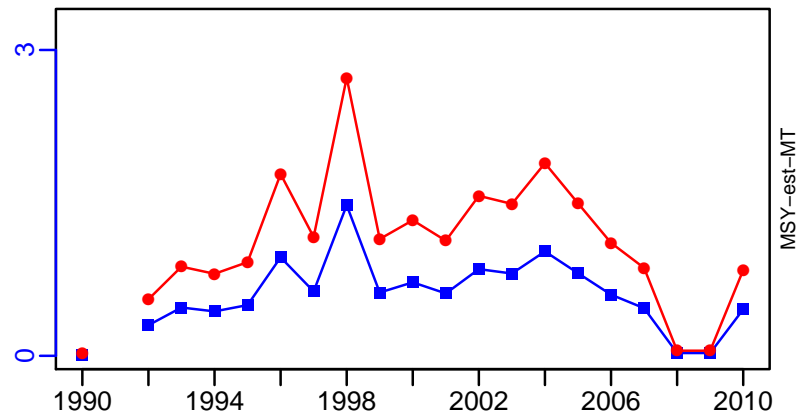
TAC-MT, Cpair-MT, Cadv* (1990-2012-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1990-2012-WATSON)



Ocean shrimp Shrimp Management Area PRD [PANDALSMAPRD]

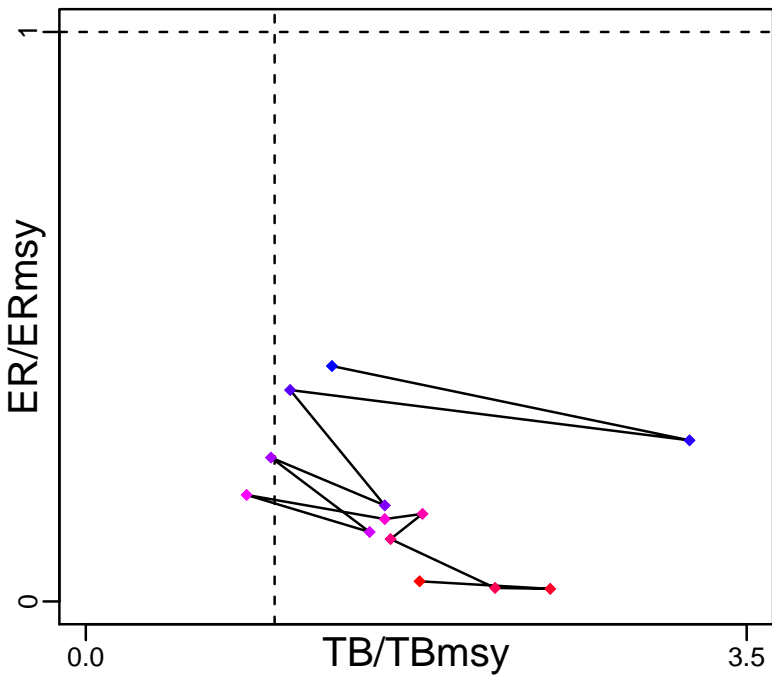
Metadata	
Scientific Name	Pandalus jordani
Current Assess ID	DFO-PANDALSMAPRD-1987-2011-WATSON
Area	Shrimp Management Area PRD
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2011	651
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2011	0.639
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2011	416
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	1210	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0.023	-	-
TC	-	-	-		
TL	TL-MT	2011	26		
TB/TBmsy	TB-MT/TBmsy-est-MT	2011	1.86		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2011	0.035		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

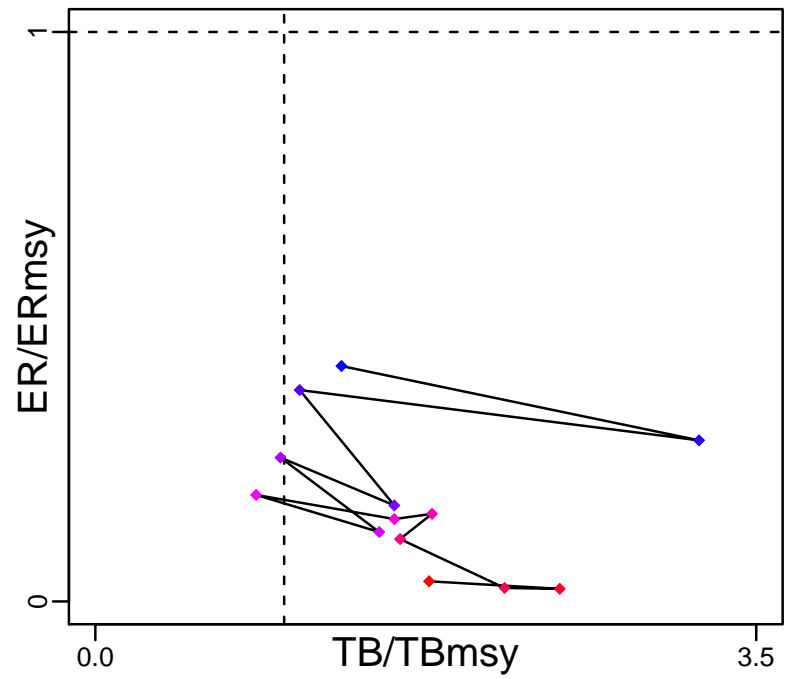
Ocean shrimp Shrimp Management Area PRD [PANDALSMAPRD]

Kobe MSY_{pref} (1987–2011–WATSON)

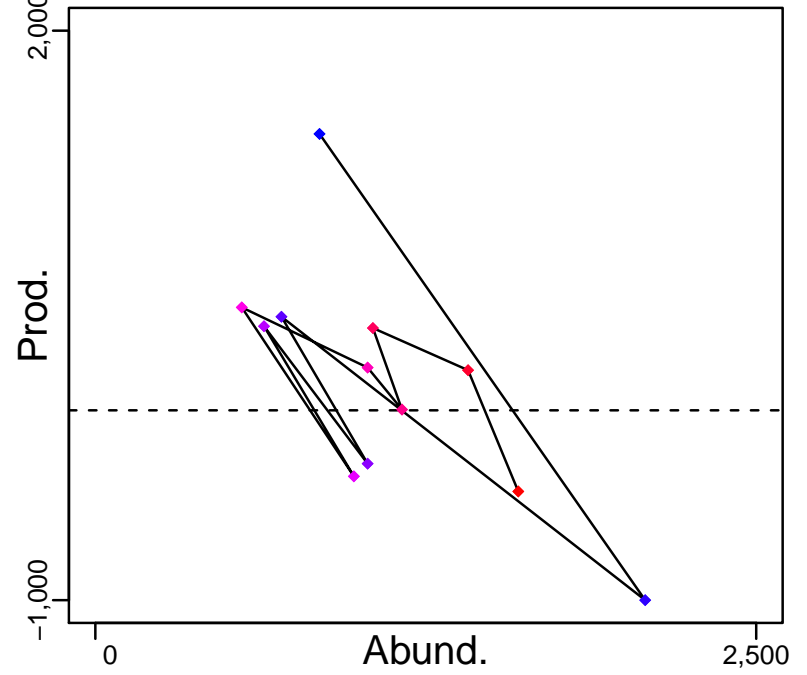


Spawner Recruit*

Kobe MGT_{pref} (1987–2011–WATSON)



Production (1987–2011–WATSON)

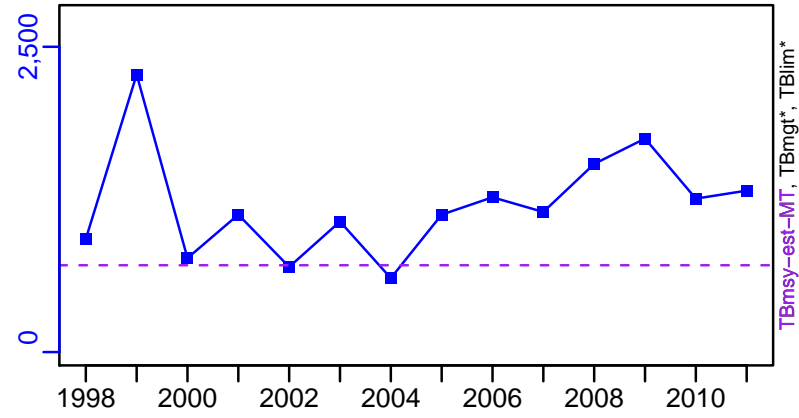


◆ Start Year ◆ End Year * No Data

Ocean shrimp Shrimp Management Area PRD [PANDALSMAPRD]

TB-MT (1987-2011-WATSON)

SSB*



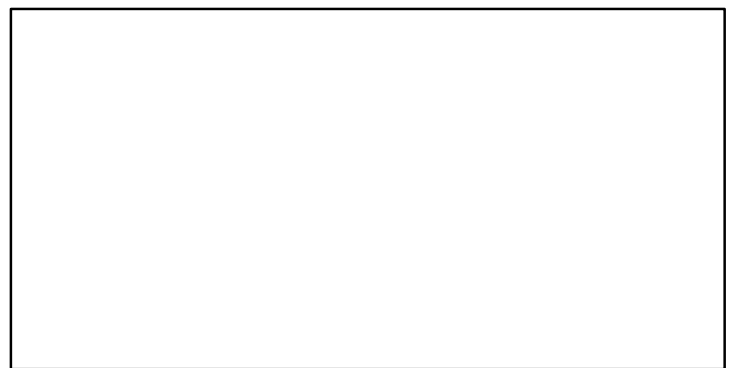
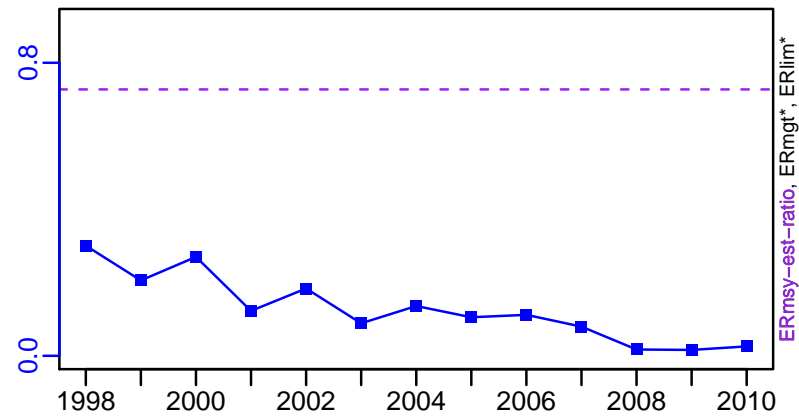
TN *

F*



ER-calc-ratio (1987-2011-WATSON)

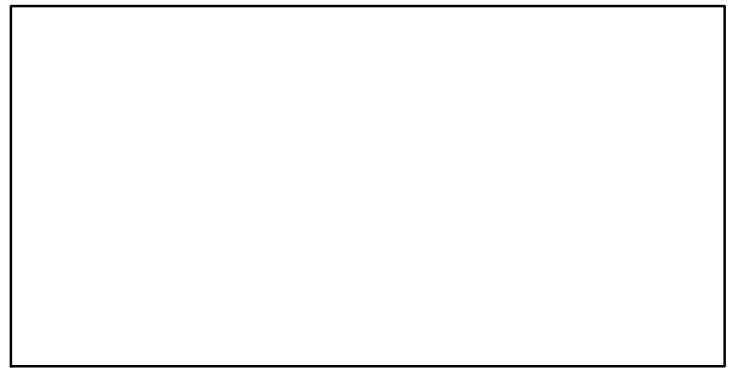
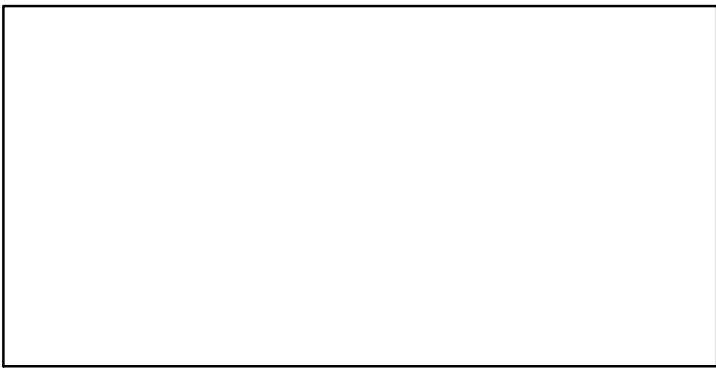
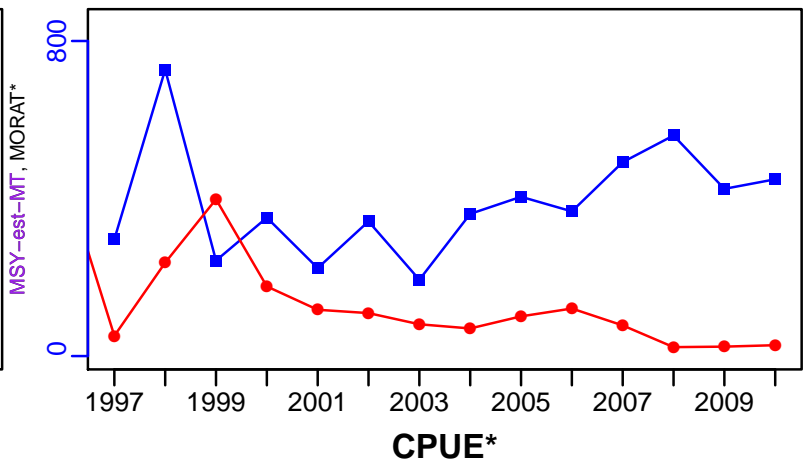
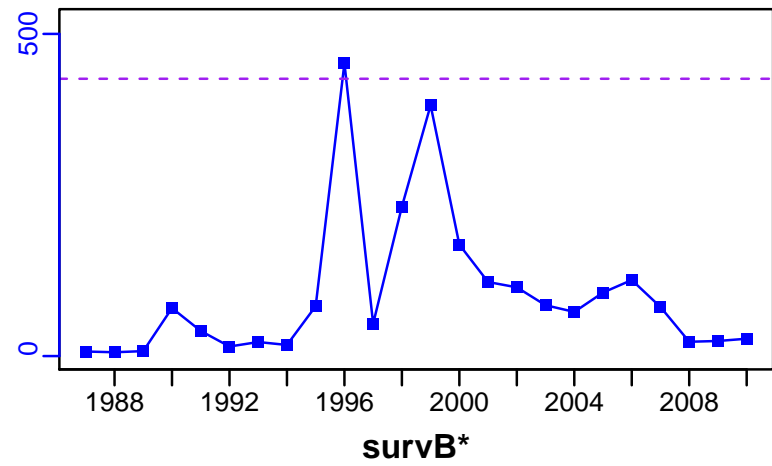
Recruits*



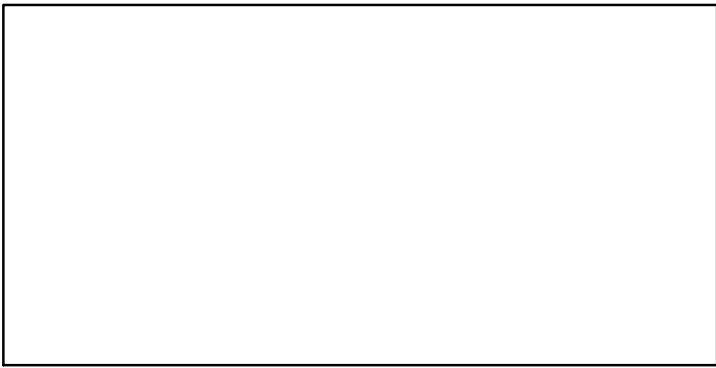
Ocean shrimp Shrimp Management Area PRD [PANDALSMAPRD]

TL-MT, TC*, RecC* (1987-2011-WATSON)

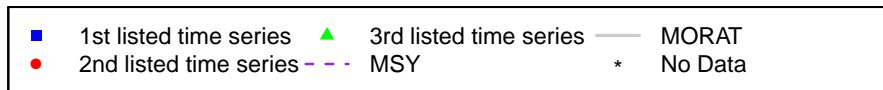
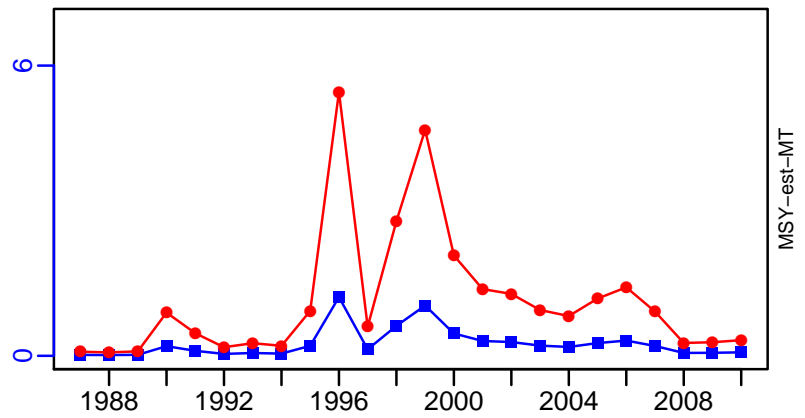
TAC-MT, Cpair-MT, Cadv* (1987-2011-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1987-2011-WATSON)



Pacific cod British Columbia Waters Area 5ABCD [PCOD5ABCD]

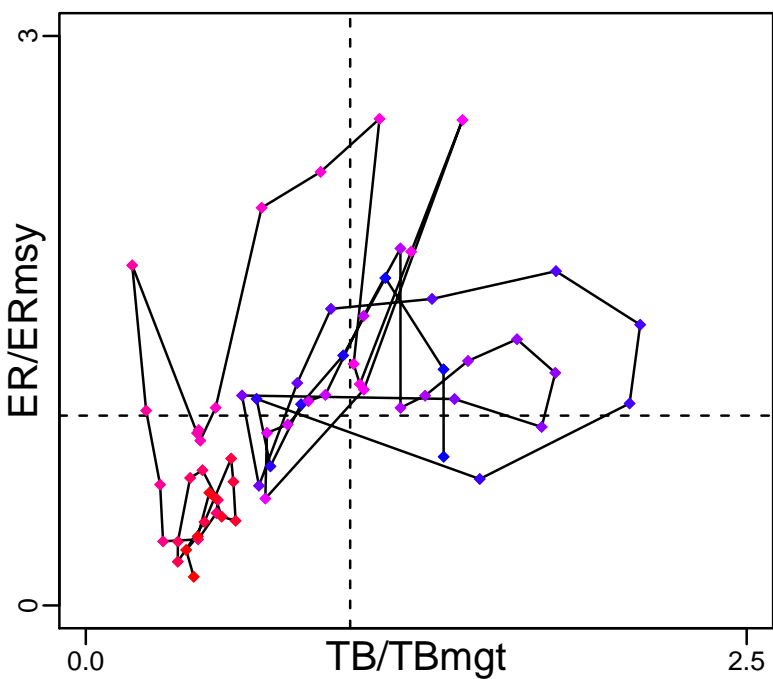
Metadata	
Scientific Name	Gadus macrocephalus
Current Assess ID	DFO-PAC-PCOD5ABCD-1953-2019-ASHBROOK
Area	British Columbia Waters Area 5ABCD
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2019

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2019	0.103
TBmgt	TBmgt-MT	2019	33,780
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2019	26,073
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	TBlim-MT	2019	9762
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

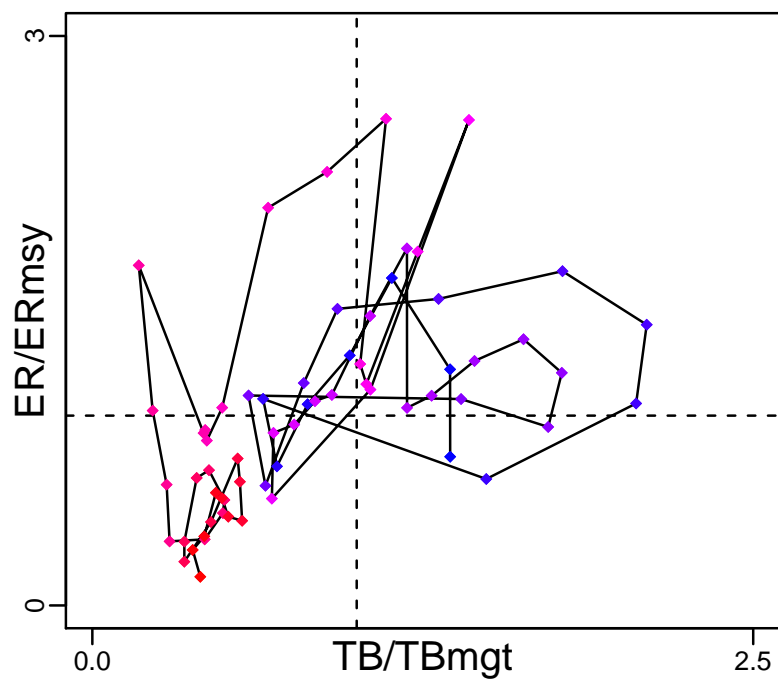
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	15,687	-	2+
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	R-E00	2019	2,875,481	-	2+
F	-	-	-	-	-
ER	ER-calc-ratio	2019	0.016	-	-
TC	-	-	-		
TL	TL-MT	2019	215		
TB/TBmsy	TB-MT/(TB0-MT*0.368)	2019	1.635		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2019	0.151		
TB/TBmgt	TB-MT/TBmgt-MT	2019	0.464		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific cod British Columbia Waters Area 5ABCD [PCOD5ABCD]

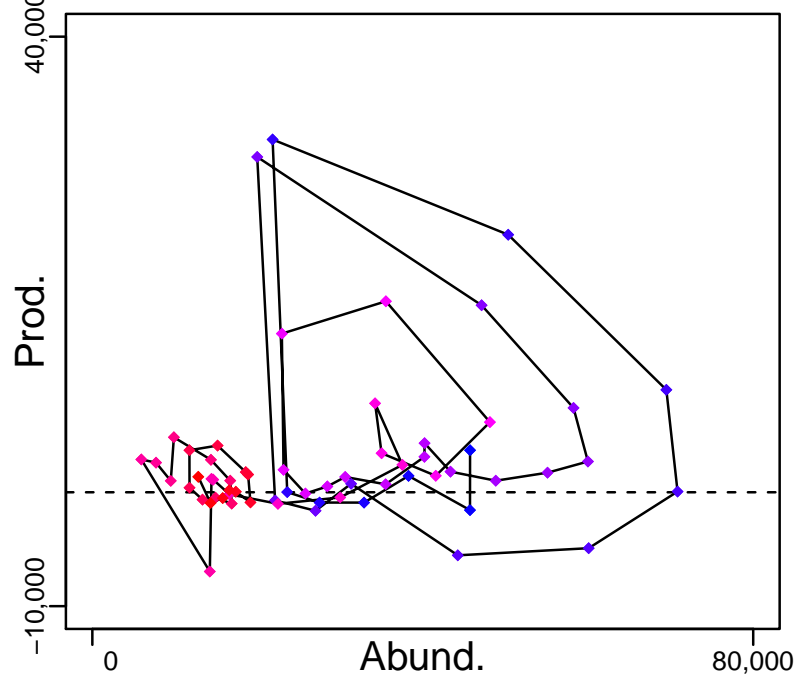
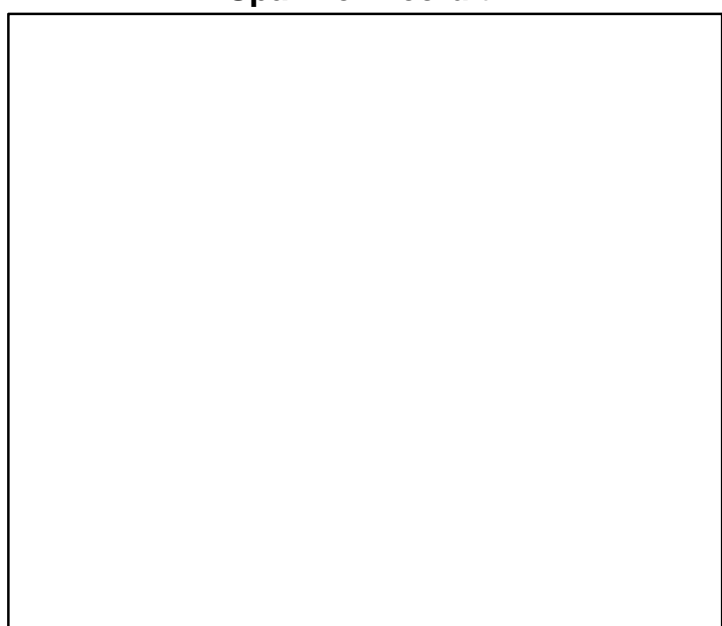
Kobe MSY_{pref} (1953–2019–ASHBROOK)



Kobe MGT_{pref} (1953–2019–ASHBROOK)



Production (1953–2019–ASHBROOK)

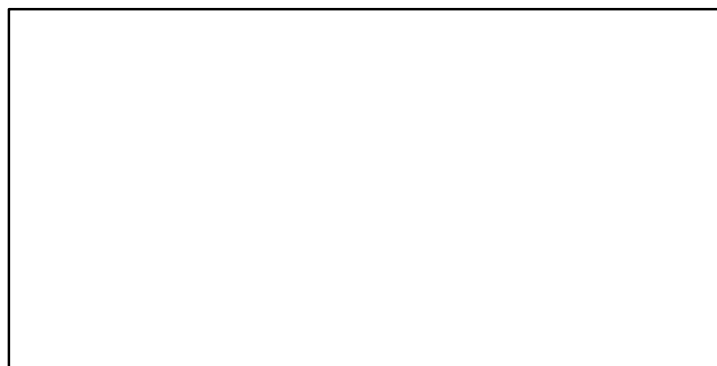
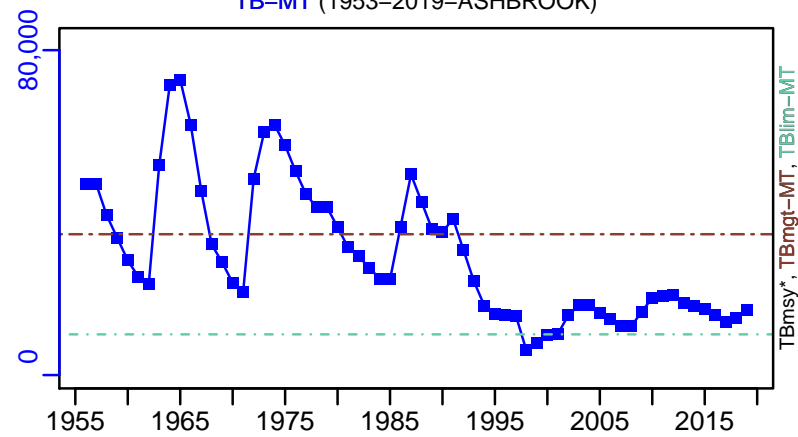


◆ Start Year ◆ End Year * No Data

Pacific cod British Columbia Waters Area 5ABCD [PCOD5ABCD]

TB-MT (1953–2019–ASHBROOK)

SSB*



TN *

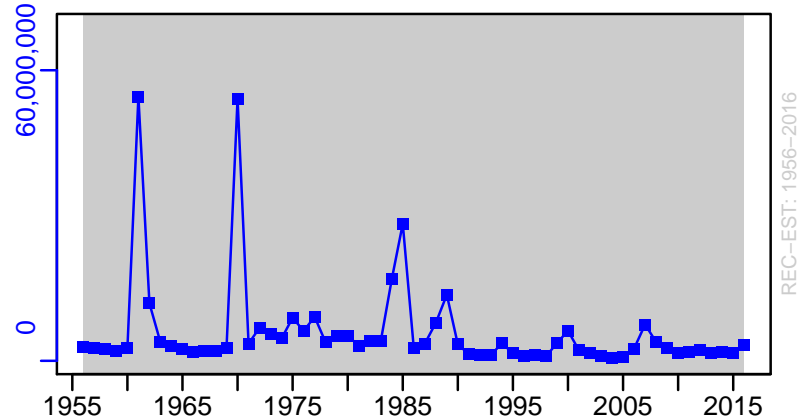
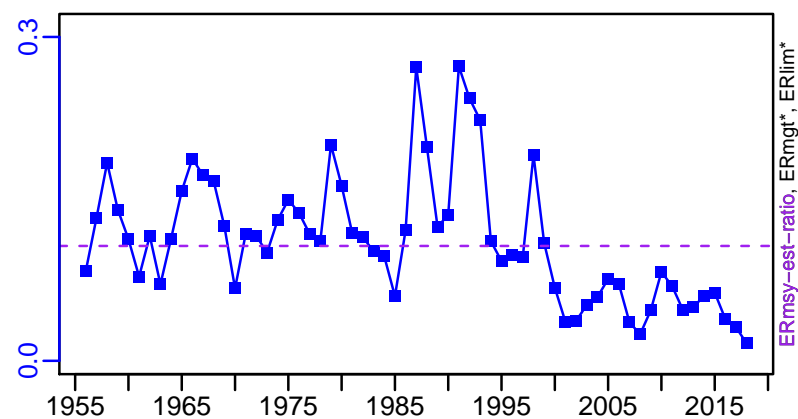


F*



ER-calc-ratio (1953–2019–ASHBROOK)

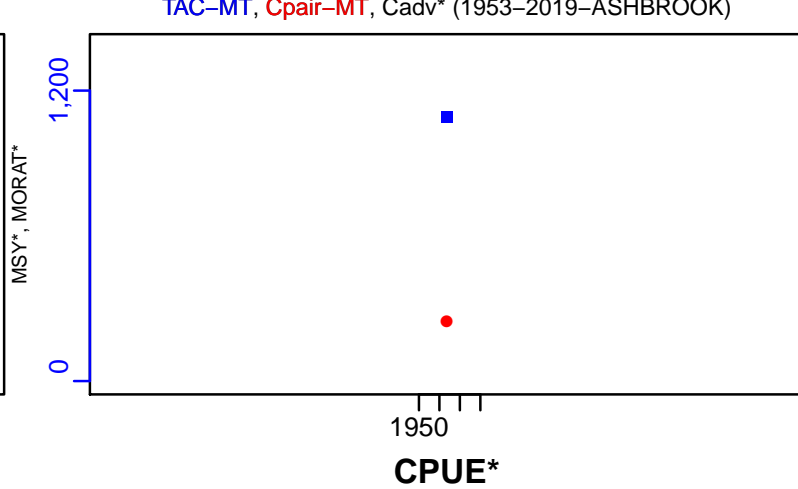
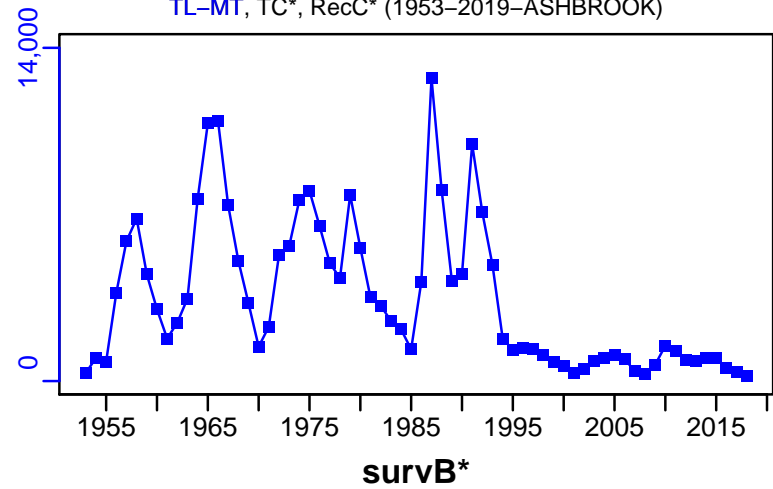
R-E00 (1953–2019–ASHBROOK)



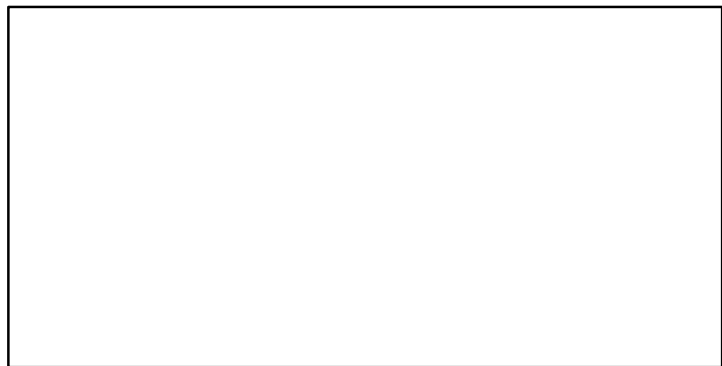
Pacific cod British Columbia Waters Area 5ABCD [PCOD5ABCD]

TL-MT, TC*, RecC* (1953-2019-ASHBROOK)

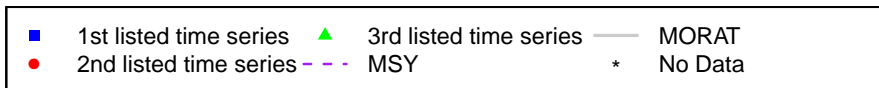
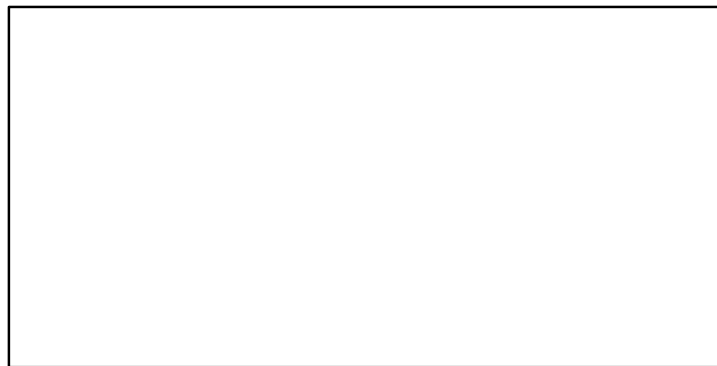
TAC-MT, Cpair-MT, Cadv* (1953-2019-ASHBROOK)



EFFORT*



CdivMSY*



Pacific cod West Coast of Vancouver Island [PCODWCVANI]

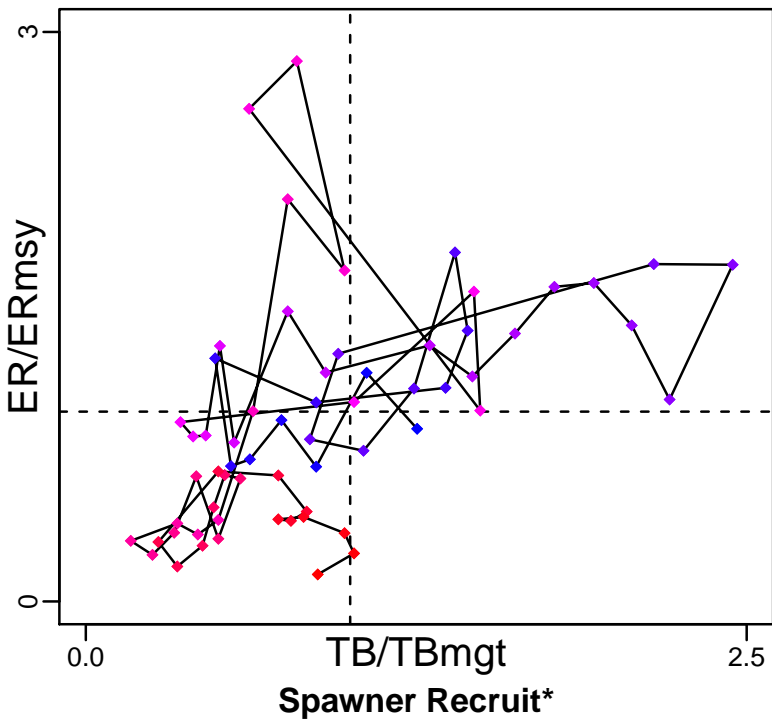
Metadata	
Scientific Name	Gadus macrocephalus
Current Assess ID	DFO-PAC-PCODWCVANI-1953-2019-ASHBROOK
Area	West Coast of Vancouver Island
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2019, 2002

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2002	6731
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2002	0.226
ERmsy	ERmsy-est-ratio	2019	0.053
TBmgt	TBmgt-MT	2019	24,982
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2019	14,549
SSB0	-	-	-
MSY	MSY-est-MT	2002	1715
M	M-1/yr	2002	0.579
TBlim	TBlim-MT	2019	8108
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

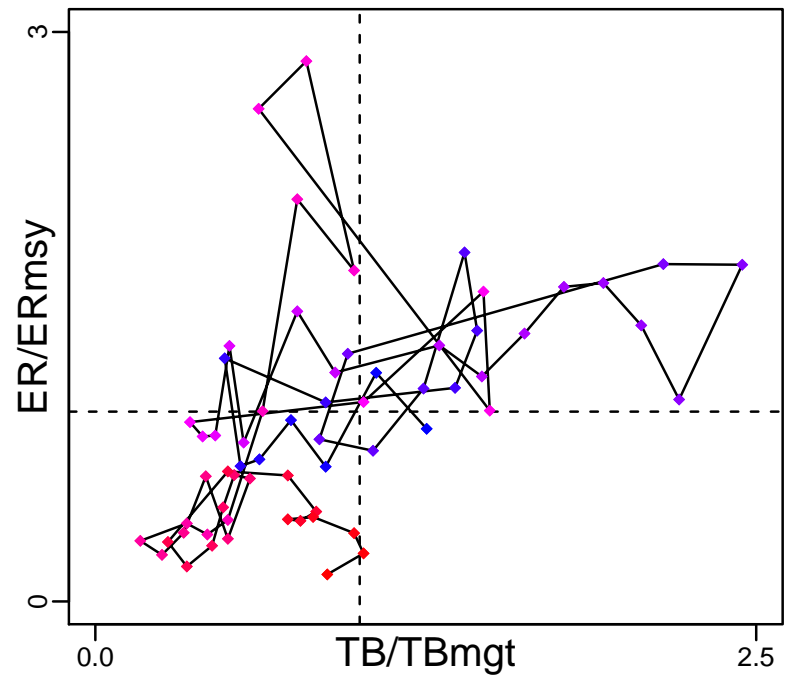
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	16,817	-	2+
SSB	-	-	-	-	-
TN	TN-E00	2002	5,140,000	-	-
R	R-E00	2019	2,875,481	-	2+
F	F-1/yr	2002	0.106	Both	2+
ER	ER-calc-ratio	2019	0.008	-	-
TC	-	-	-		
TL	TL-MT	2019	165		
TB/TBmsy	TB-MT/TBmsy-MT	2002	1.037		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2002	0.469		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2019	0.142		
TB/TBmgt	TB-MT/TBmgt-MT	2019	0.673		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific cod West Coast of Vancouver Island [PCODWCVANI]

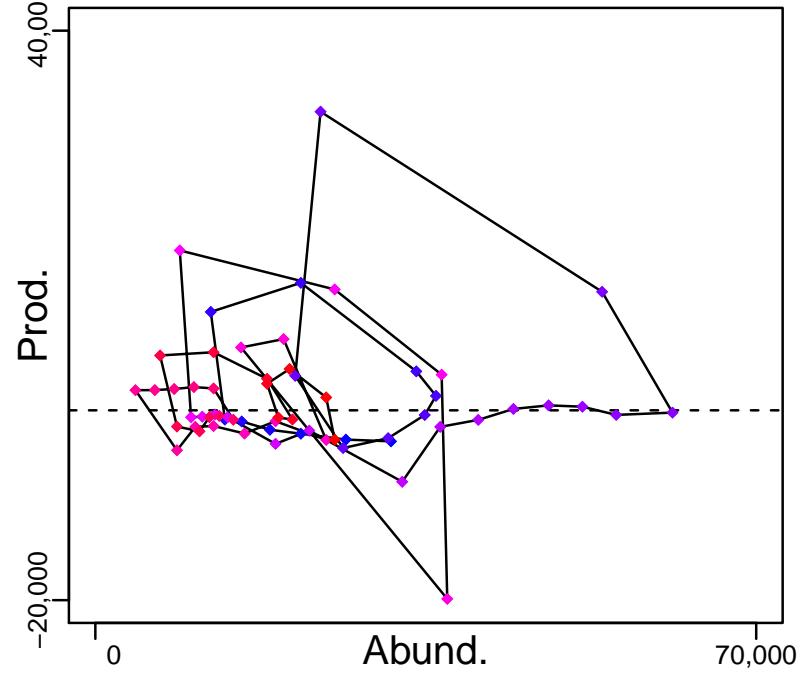
Kobe MSY_{pref} (1953–2019–ASHBROOK)



Kobe MGT_{pref} (1953–2019–ASHBROOK)



Production (1953–2019–ASHBROOK)

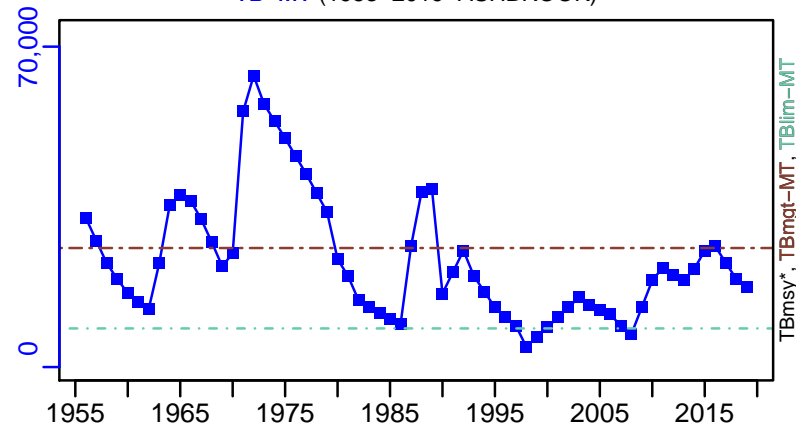


◆ Start Year ◆ End Year * No Data

Pacific cod West Coast of Vancouver Island [PCODWCVANI]

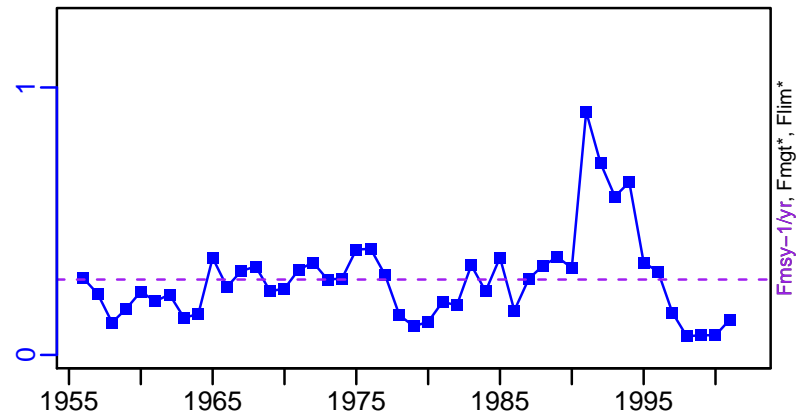
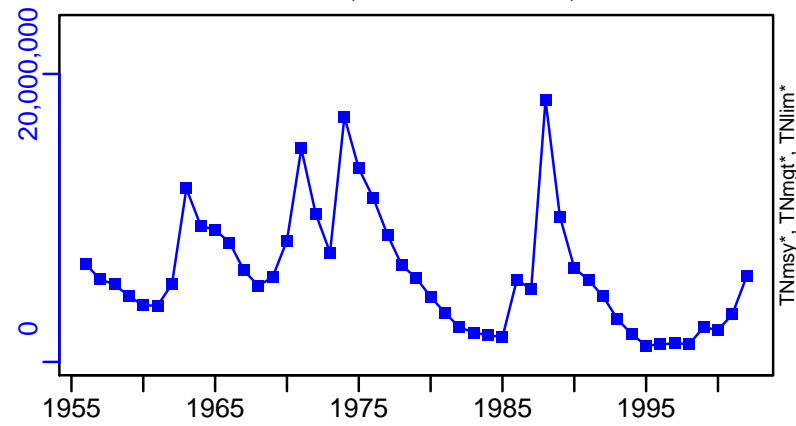
TB-MT (1953–2019–ASHBROOK)

SSB*



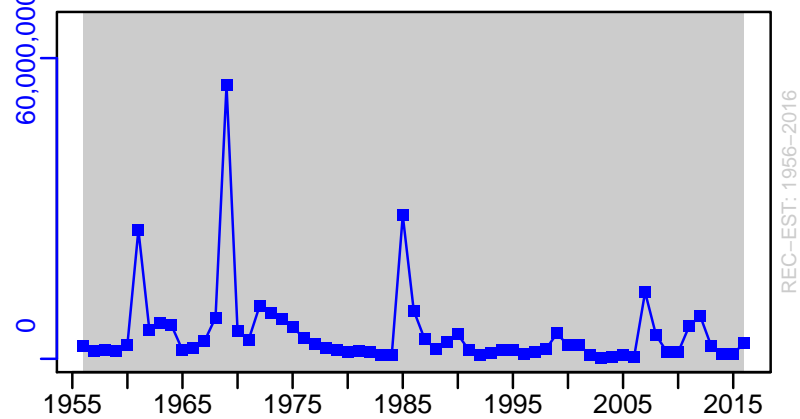
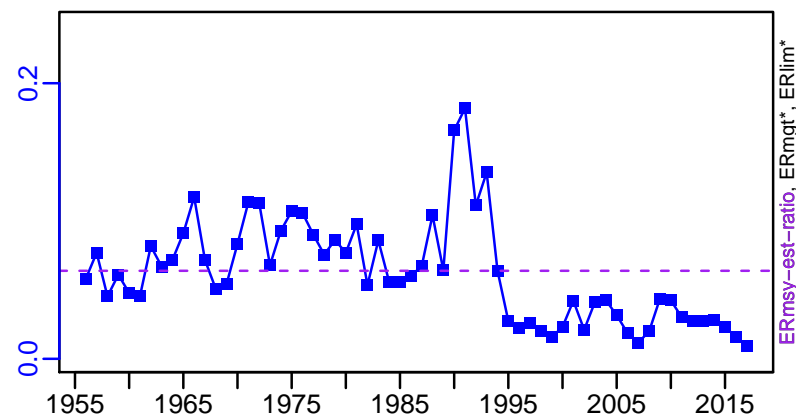
TN-E00 (1956–2002–COLLIE)

F-1/yr (1956–2002–COLLIE)



ER-calc-ratio (1953–2019–ASHBROOK)

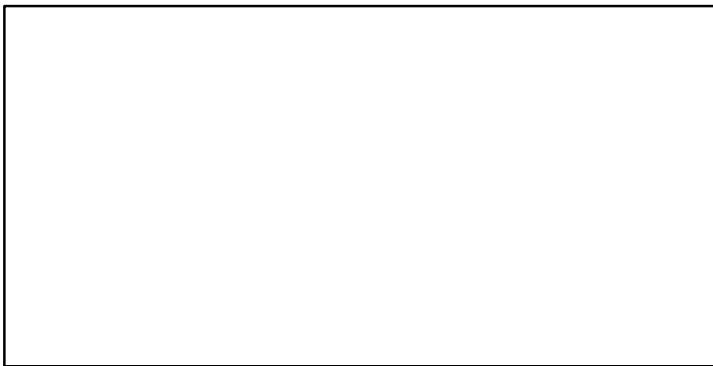
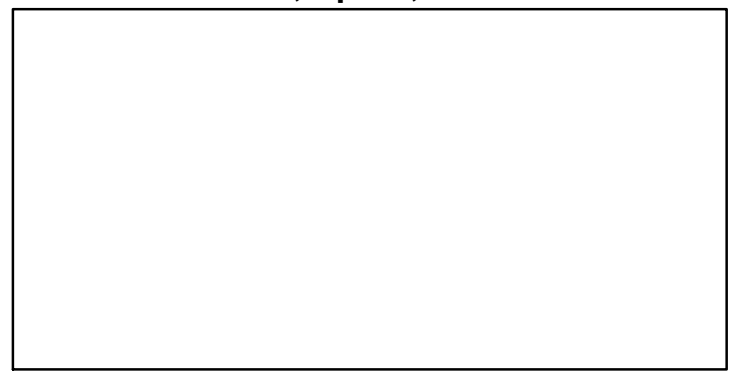
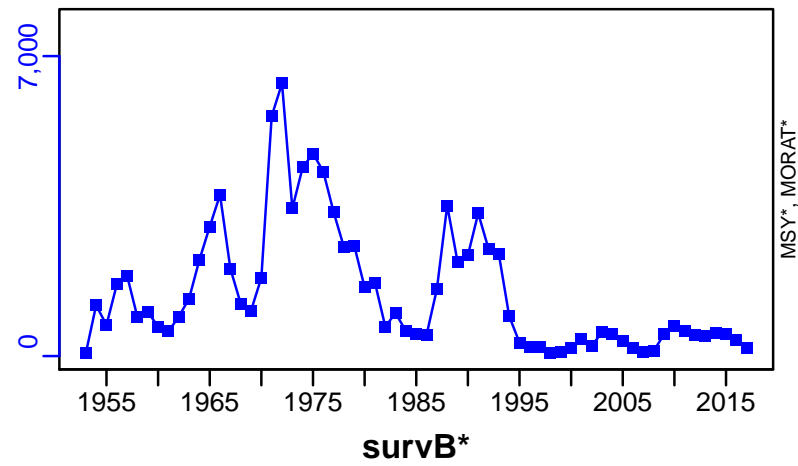
R-E00 (1953–2019–ASHBROOK)



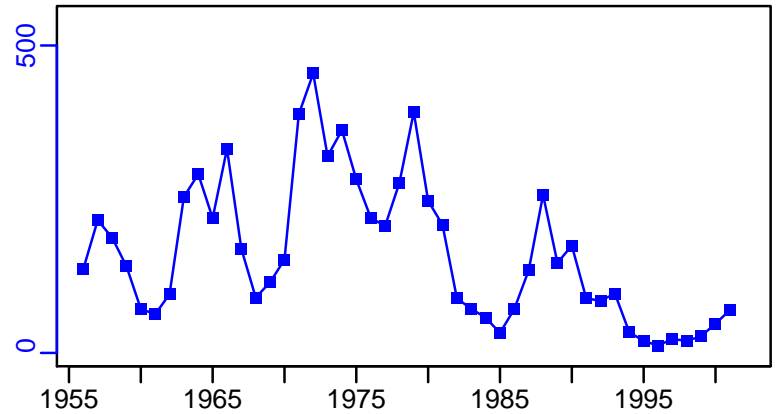
Pacific cod West Coast of Vancouver Island [PCODWCVANI]

TL-MT, TC*, RecC* (1953-2019-ASHBROOK)

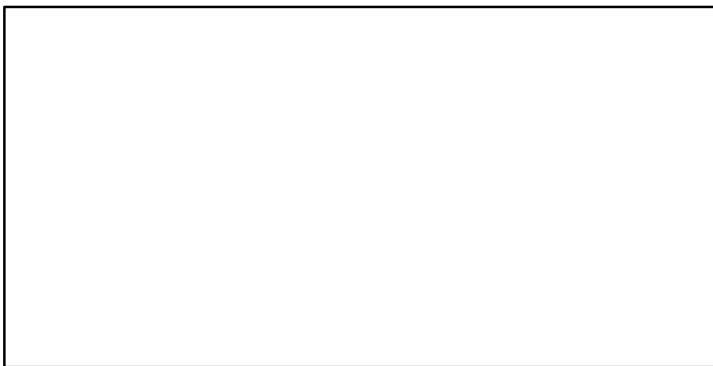
TAC*, Cpair*, Cadv*



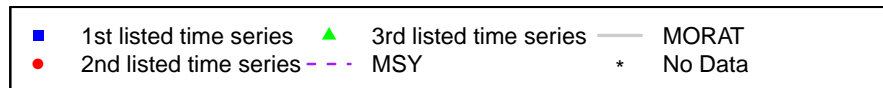
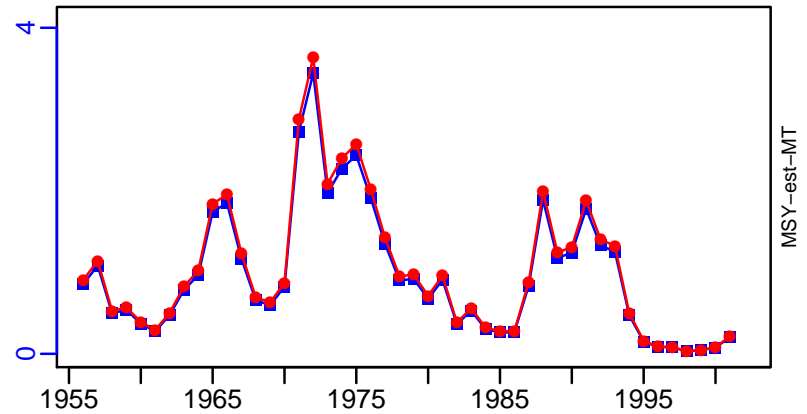
CPUE_{raw}-C/E (1956-2002-COLLIE)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1956-2002-COLLIE)



Pacific Ocean perch Queen Charlotte Islands [PERCHQCI]

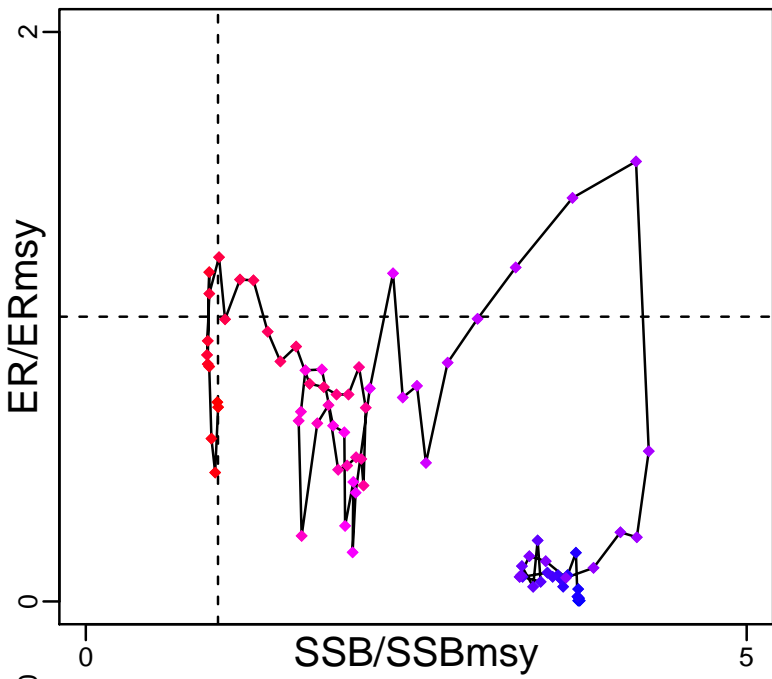
Metadata	
Scientific Name	Sebastes alutus
Current Assess ID	DFO-PAC-PERCHQCI-1939-2017-ASHBROOK
Area	Haida Gwaii
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2017, 2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2017	47,982
SSBmsy	SSBmsy-MT	2017	24,116
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2017	0.08
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2017	9647
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2017	160,337
SSB0	SSB0-MT	2017	89,993
MSY	MSY-MT	2017	3843
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2017	19,293
Flim	-	-	-
ERlim	-	-	-

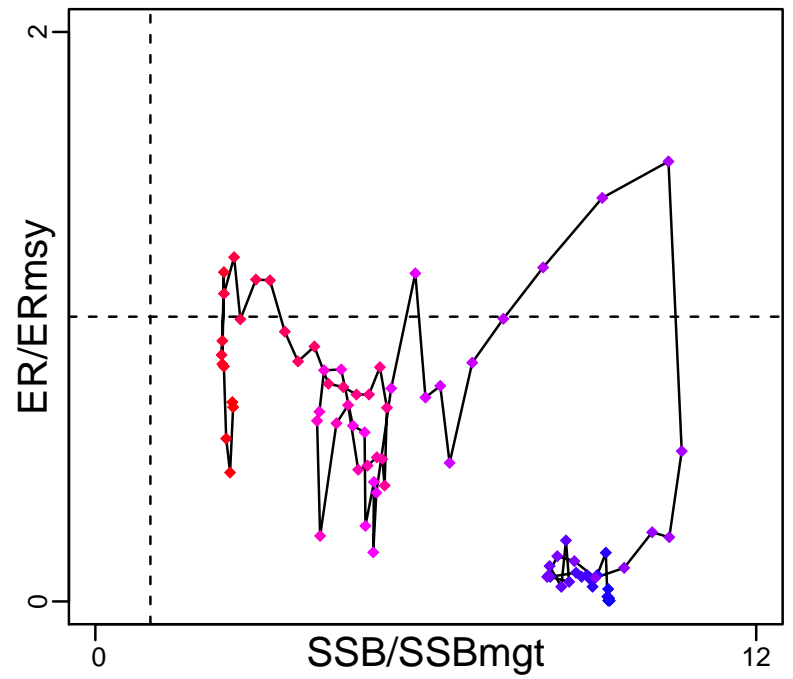
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2017	47,272	Both	-
SSB	SSB-MT	2017	24,302	Both	-
TN	-	-	-	-	-
R	R-E00	2017	8,720,469	Both	1
F	-	-	-	-	-
ER	ER-ratio	2017	0.056	Both	-
TC	TC-MT	2013	584		
TL	TL-MT	2017	2279		
TB/TBmsy	TB-MT/TBmsy-MT	2017	0.985		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2017	1.008		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2017	0.7		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2017	2.519		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific Ocean perch Queen Charlotte Islands [PERCHQCI]

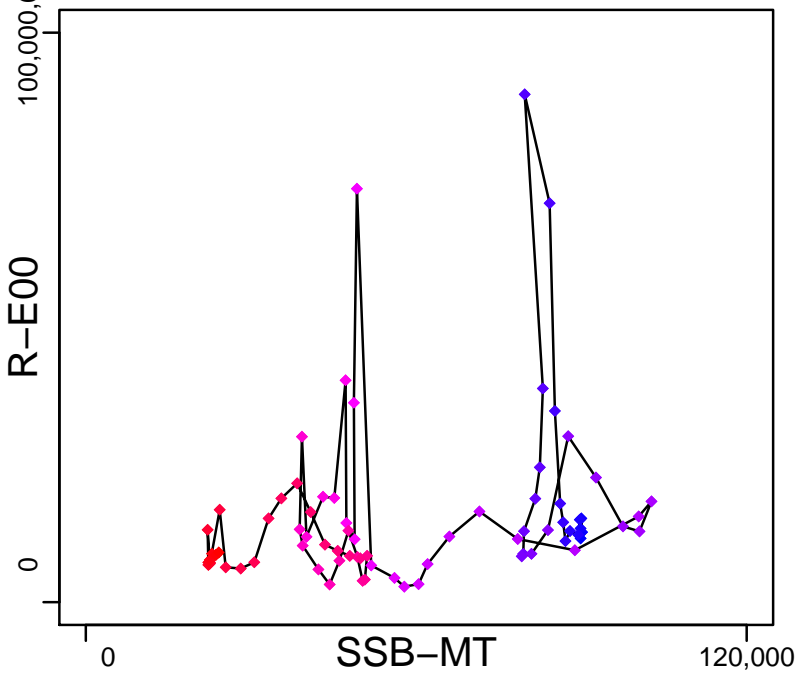
Kobe MSY_{pref} (1939–2017–ASHBROOK)



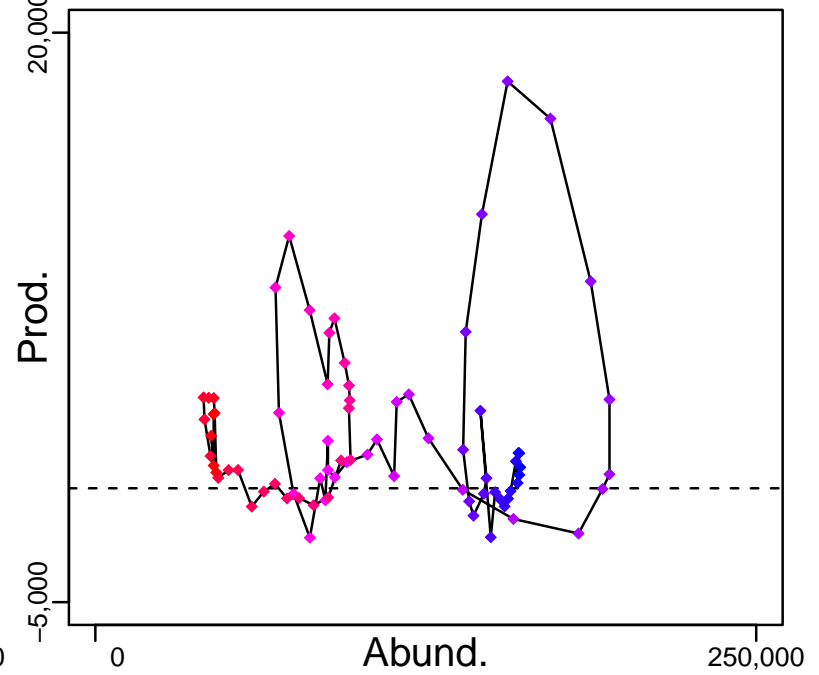
Kobe MGT_{pref} (1939–2017–ASHBROOK)



Spawner Recruit (1939–2017–ASHBROOK)



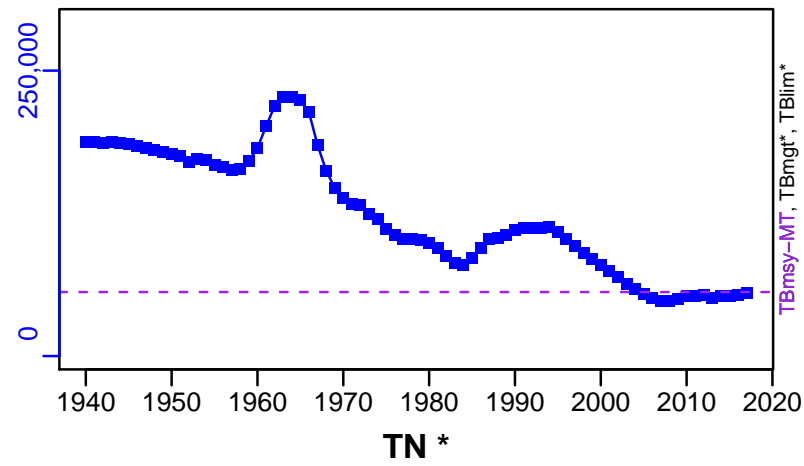
Production (1939–2017–ASHBROOK)



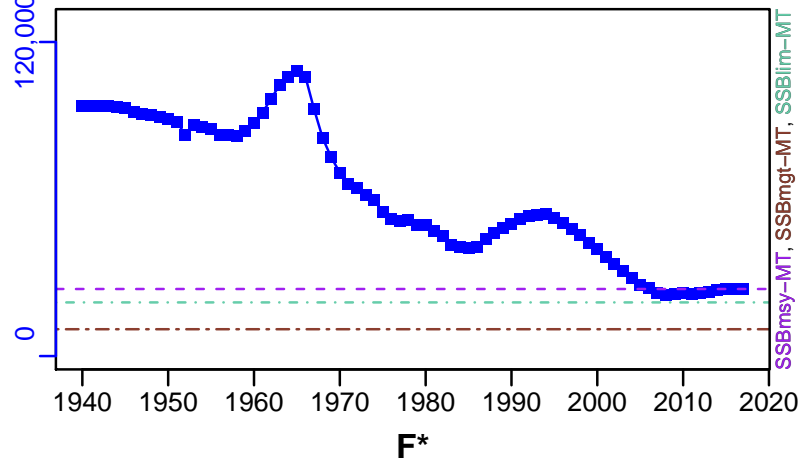
◆ Start Year ◆ End Year * No Data

Pacific Ocean perch Queen Charlotte Islands [PERCHQCI]

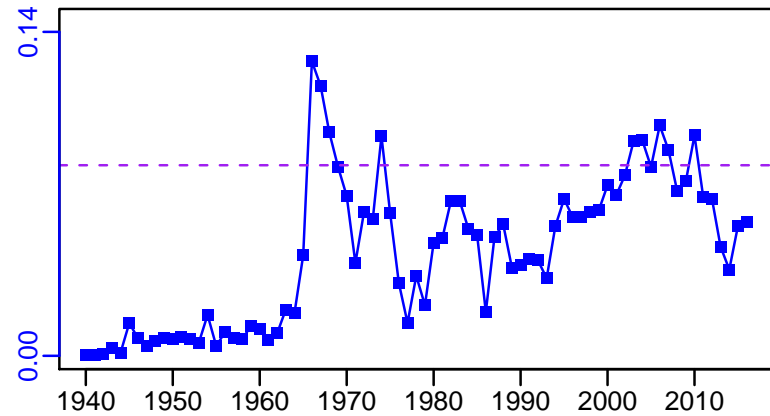
TB-MT (1939–2017–ASHBROOK)



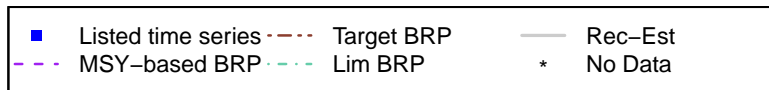
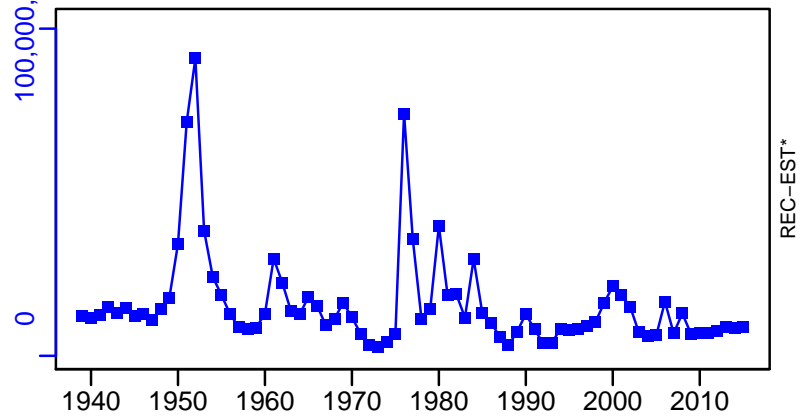
SSB-MT (1939–2017–ASHBROOK)



ER-ratio (1939–2017–ASHBROOK)



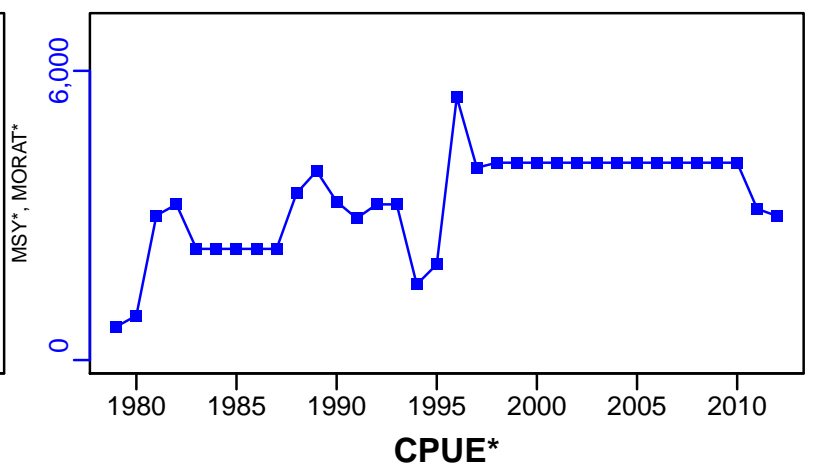
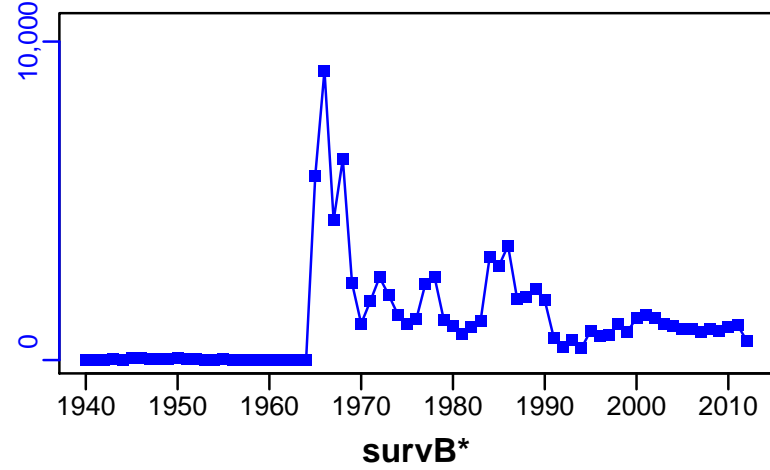
R-E00 (1939–2017–ASHBROOK)



Pacific Ocean perch Queen Charlotte Islands [PERCHQCI]

TC-MT, TL*, RecC* (1939-2013-WATSON)

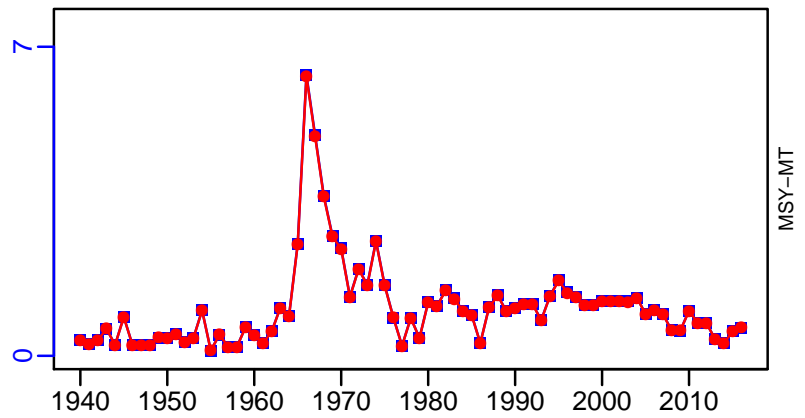
TAC-MT, Cpair*, Cadv* (1939-2013-WATSON)



EFFORT*



TL-MT/MSY-MT, CdivMEANC-ratio, (1939-2017-ASHBROOK)



Pacific ocean perch West Coast of Vancouver Island [PERCHWCVANI]

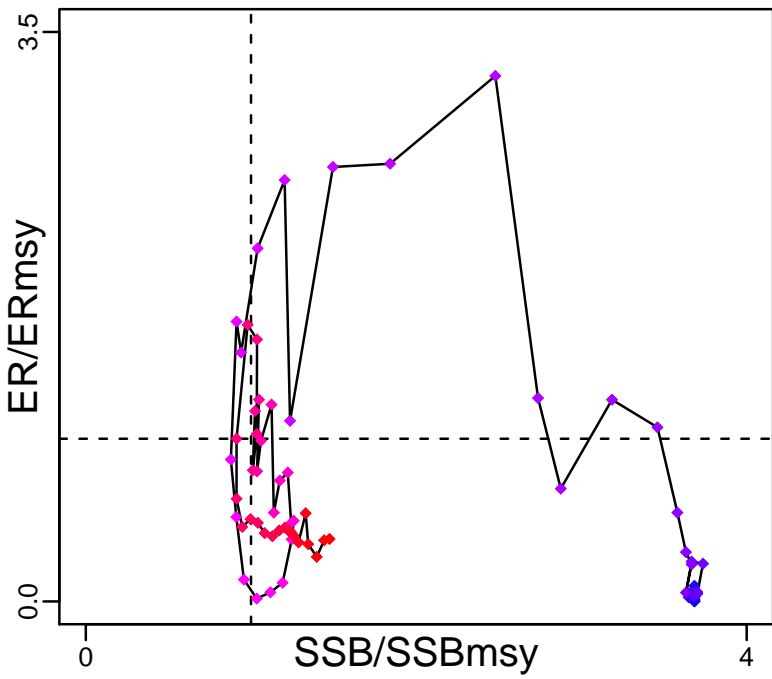
Metadata	
Scientific Name	Sebastes alutus
Current Assess ID	DFO-PERCHWCVANI-1939-2013-WATSON
Area	West Coast of Vancouver Island
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2013	11,729
SSBmsy	SSBmsy-MT	2013	5809
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2013	0.091
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2013	21,442
MSY	MSY-MT	2013	1048
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2013	2324
Flim	-	-	-
ERlim	-	-	-

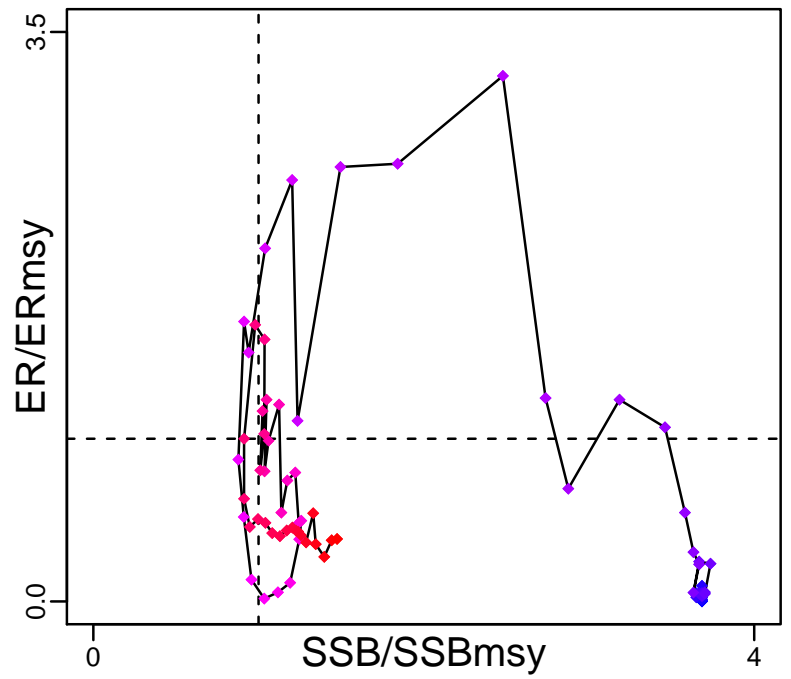
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2013	16,400	Both	-
SSB	SSB-MT	2013	8740	Females	10 to 20
TN	-	-	-	-	-
R	R-E00	2013	3,160,000	-	1
F	-	-	-	-	-
ER	ER-ratio	2013	0.035	-	-
TC	TC-MT	2013	382		
TL	-	-	-		
TB/TBmsy	TBdivTBmsy-dimensionless	2013	1.53		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2013	1.505		
F/Fmsy	-	-	-		
ER/ERmsy	ERdivERmsy-dimensionless	2013	0.384		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific ocean perch West Coast of Vancouver Island [PERCHWCVANI]

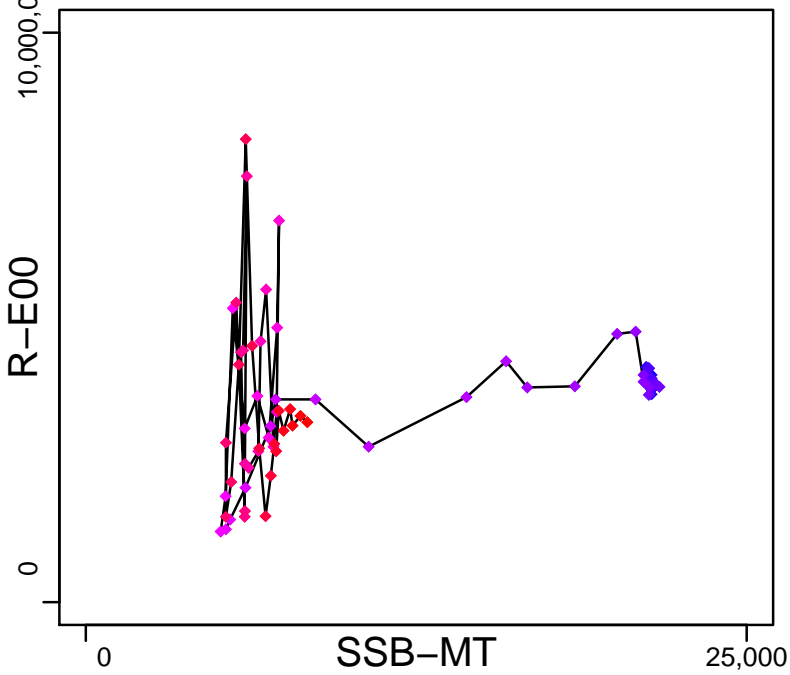
Kobe MSY_{pref} (1939–2013–WATSON)



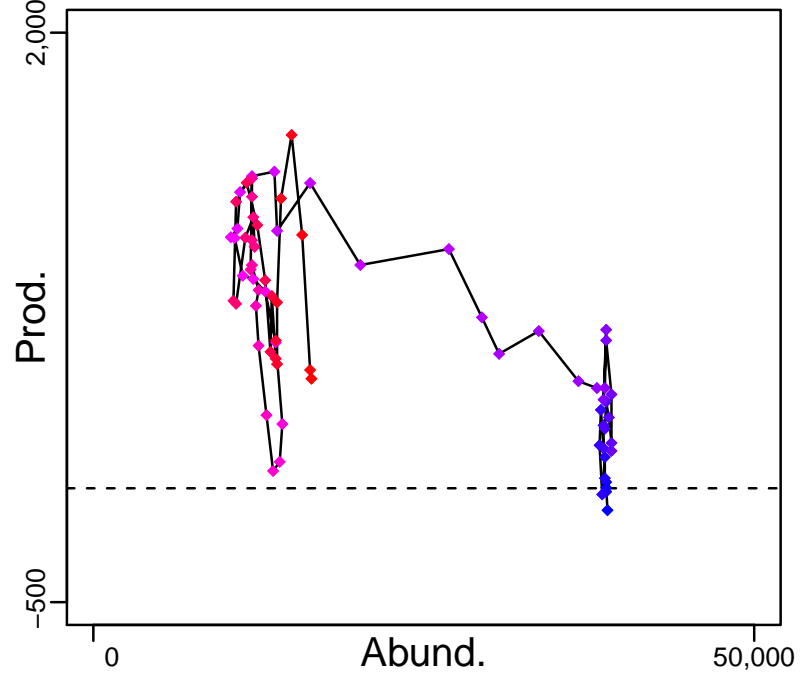
Kobe MGT_{pref} (1939–2013–WATSON)



Spawner Recruit (1939–2013–WATSON)



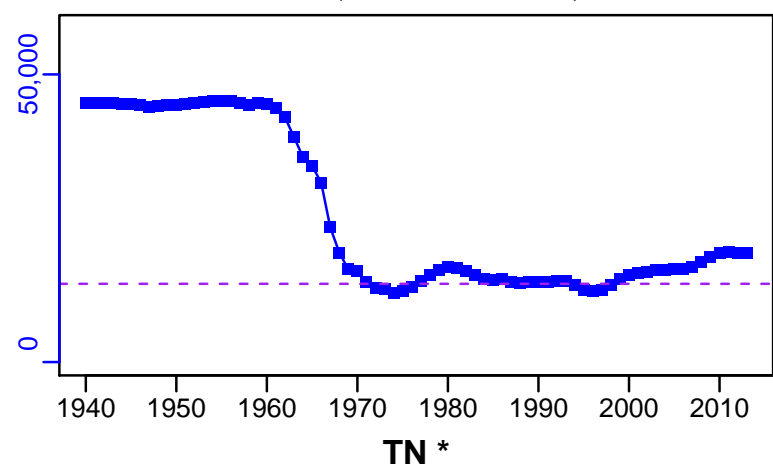
Production (1939–2013–WATSON)



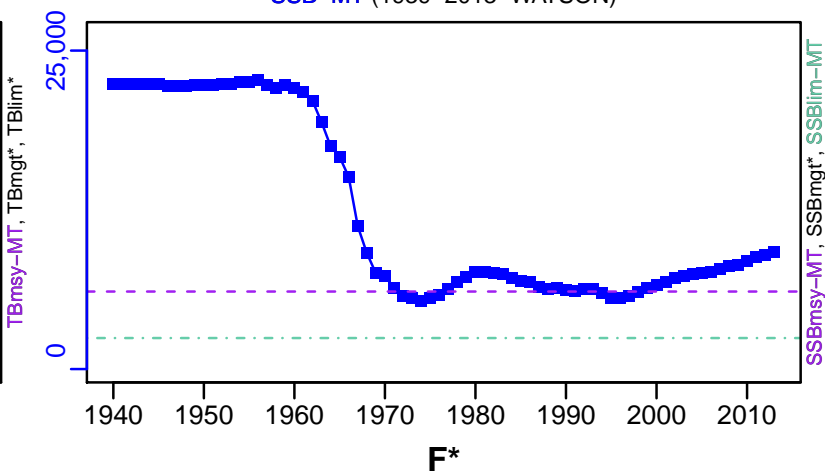
◆ Start Year ◆ End Year * No Data

Pacific ocean perch West Coast of Vancouver Island [PERCHWCVANI]

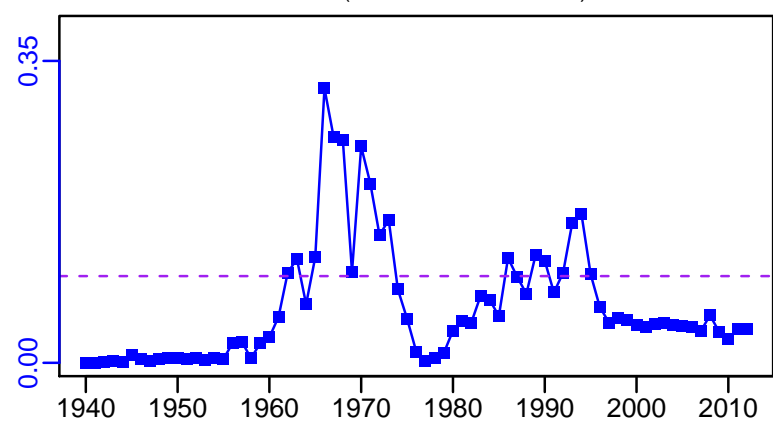
TB-MT (1939-2013-WATSON)



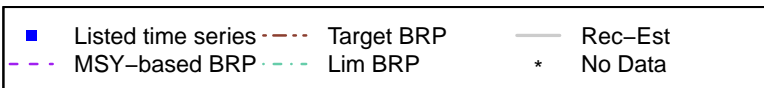
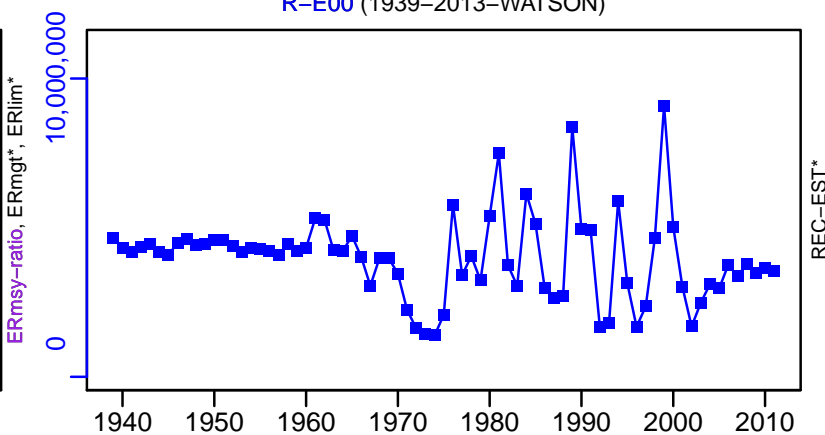
SSB-MT (1939-2013-WATSON)



ER-ratio (1939-2013-WATSON)



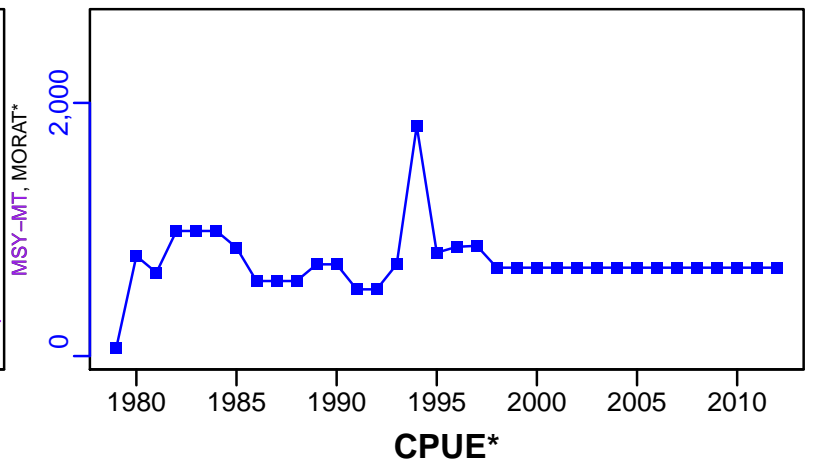
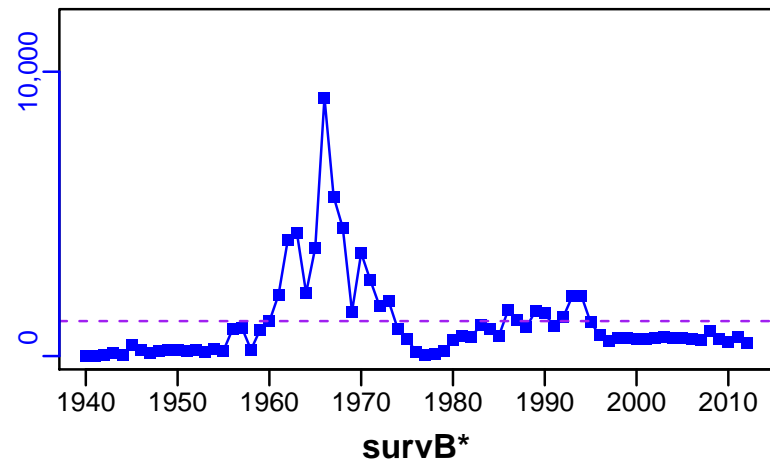
R-E00 (1939-2013-WATSON)



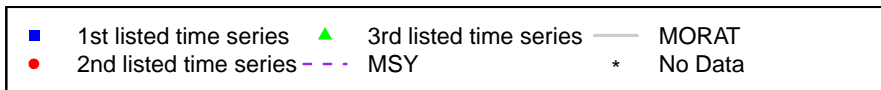
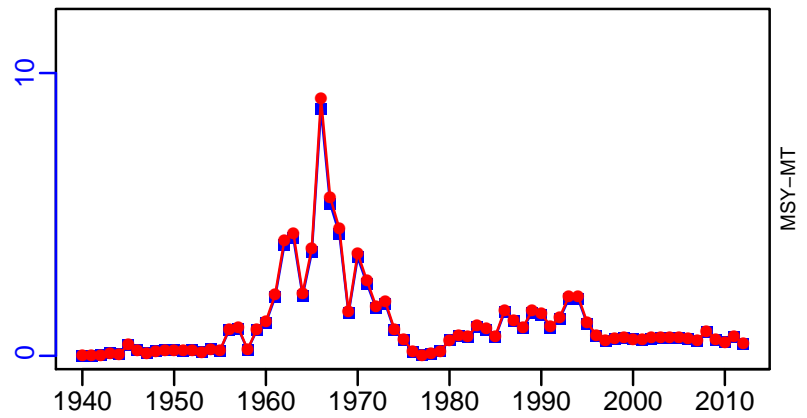
Pacific ocean perch West Coast of Vancouver Island [PERCHWCVANI]

TC-MT, TL*, RecC* (1939-2013-WATSON)

TAC-MT, Cpair*, Cadv* (1939-2013-WATSON)



TC-MT/MSY-MT, CdivMEANC-ratio, (1939-2013-WATSON)



Quillback rockfish Pacific Coast of Canada (Inside) [QROCKPCOASTIN]

Metadata	
Scientific Name	Sebastes maliger
Current Assess ID	DFO-QROCKPCOASTIN-1918-2010-WATSON
Area	Pacific Coast of Canada (Inside)
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2010

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2010	144
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2010	34		
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

Quillback rockfish Pacific Coast of Canada (Inside) [QROCKPCOASTIN]

TB*



SSB*



TN *



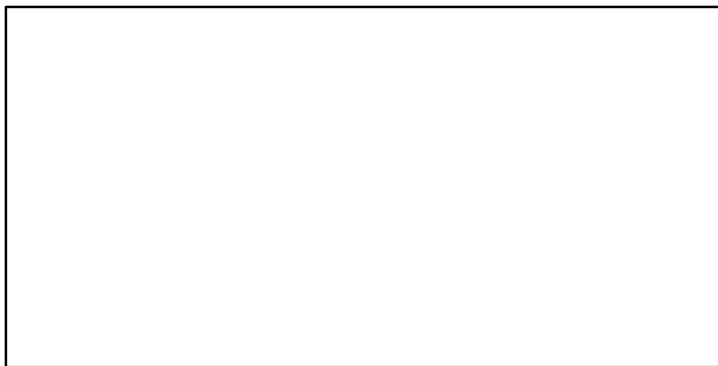
F*



ER*



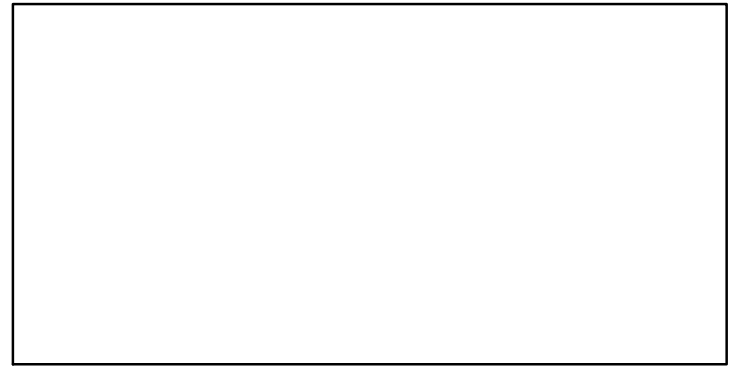
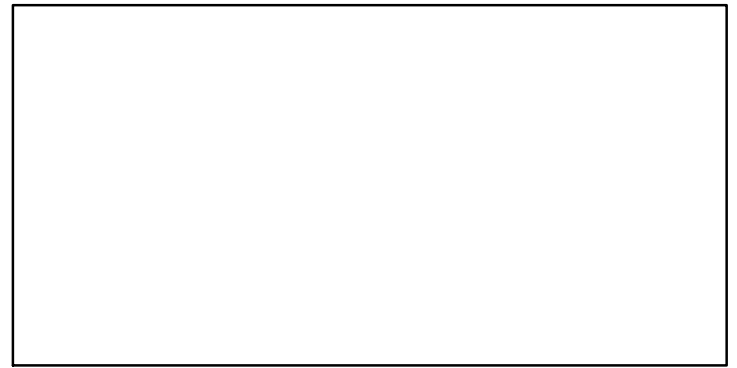
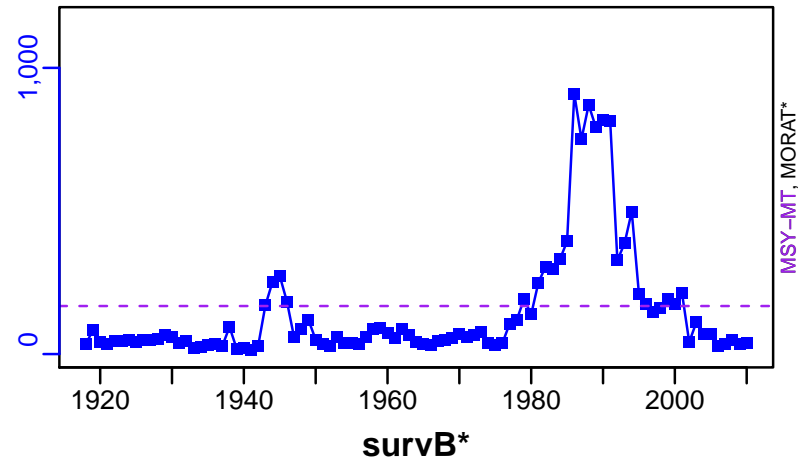
Recruits*



Quillback rockfish Pacific Coast of Canada (Inside) [QROCKPCOASTIN]

TC-MT, TL*, RecC* (1918-2010-WATSON)

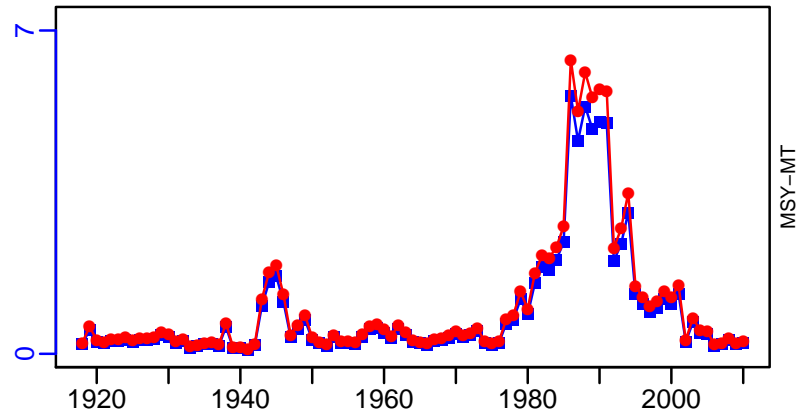
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1918-2010-WATSON)



Quillback rockfish Pacific Coast of Canada (Outside) [QROCKPCOASTOUT]

Metadata	
Scientific Name	Sebastes maliger
Current Assess ID	DFO-QROCKPCOASTOUT-1918-2010-WATSON
Area	Pacific Coast of Canada (Outside)
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2010

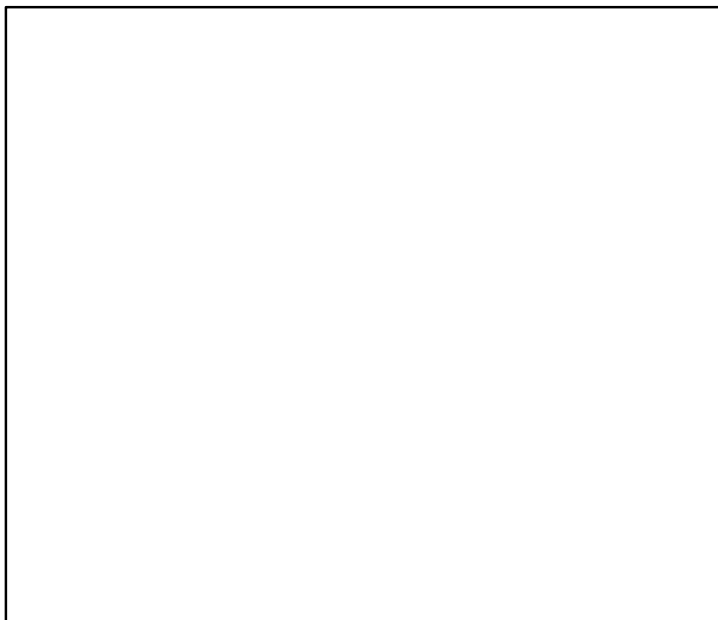
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2010	462
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2010	159		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

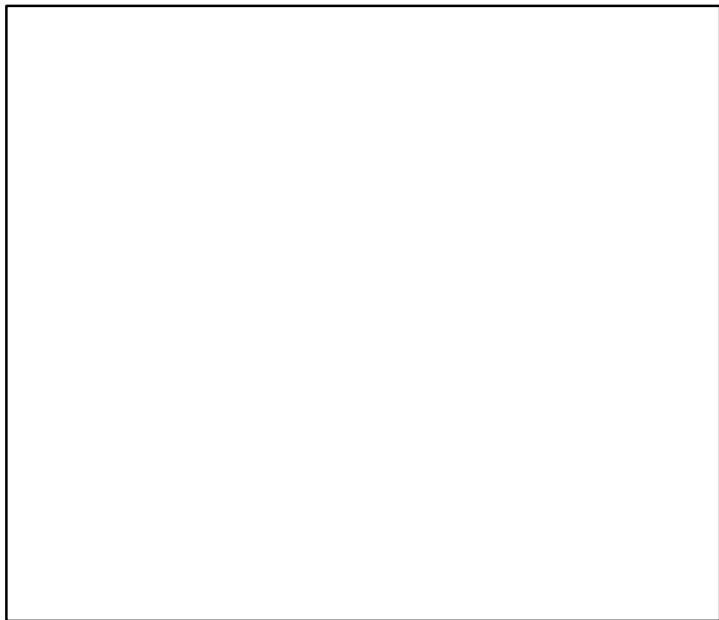
Kobe MSY*



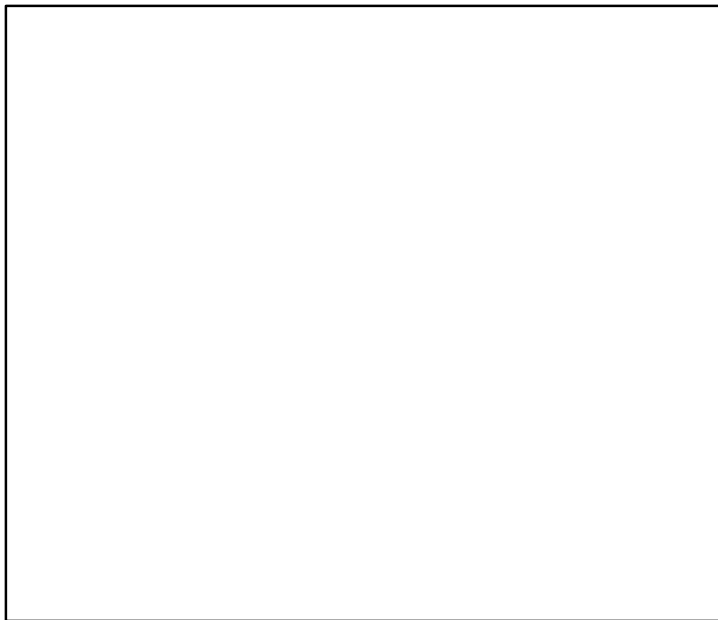
Kobe MGT*



Spawner Recruit*



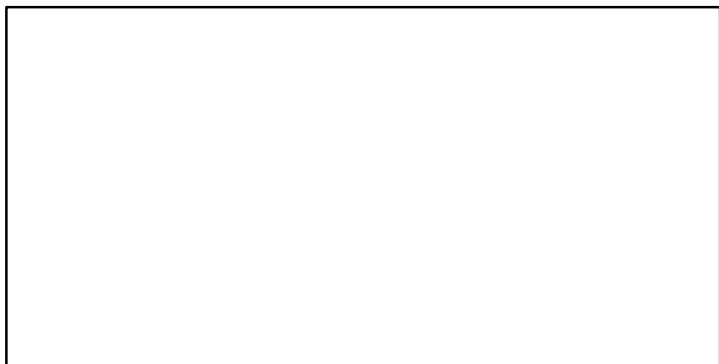
Production*



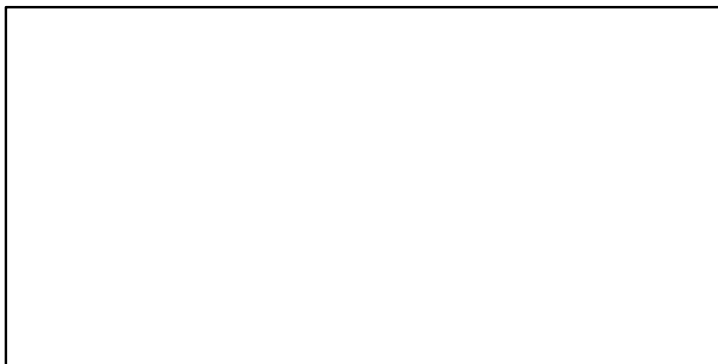
◆ Start Year ◆ End Year * No Data

Quillback rockfish Pacific Coast of Canada (Outside) [QROCKPCOASTOUT]

TB*



SSB*



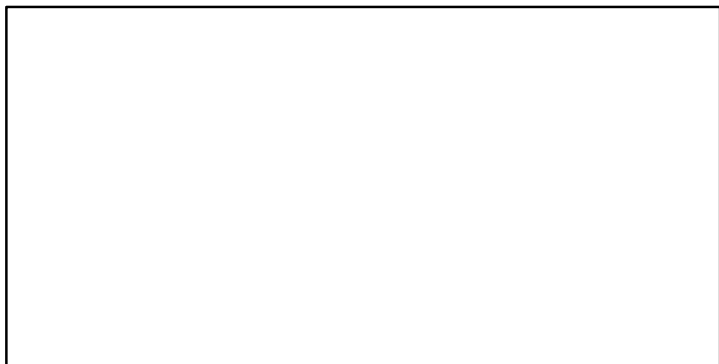
TN *



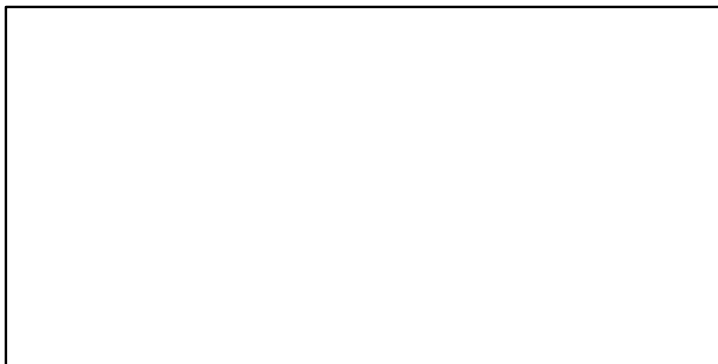
F*



ER*

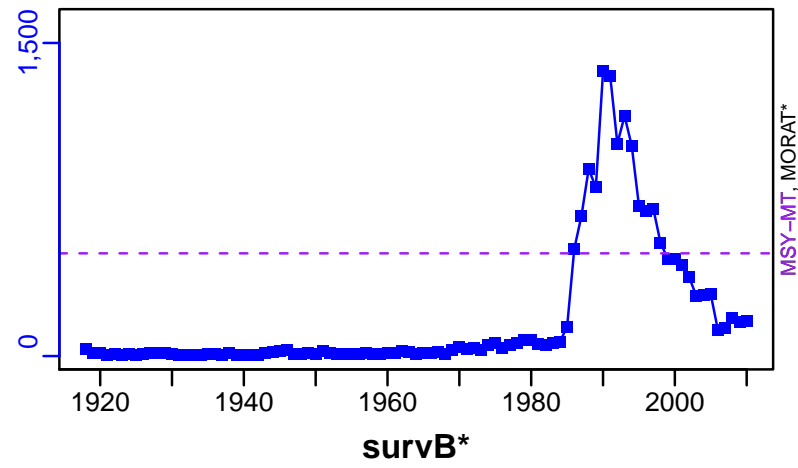


Recruits*



Quillback rockfish Pacific Coast of Canada (Outside) [QROCKPCOASTOUT]

TC-MT, TL*, RecC* (1918-2010-WATSON)



TAC*, Cpair*, Cadv*



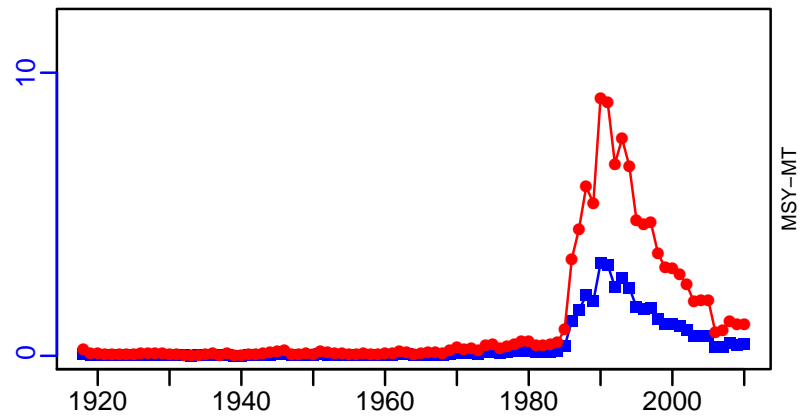
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1918-2010-WATSON)



Rock sole Queen Charlotte Sound [RSOLE5AB]

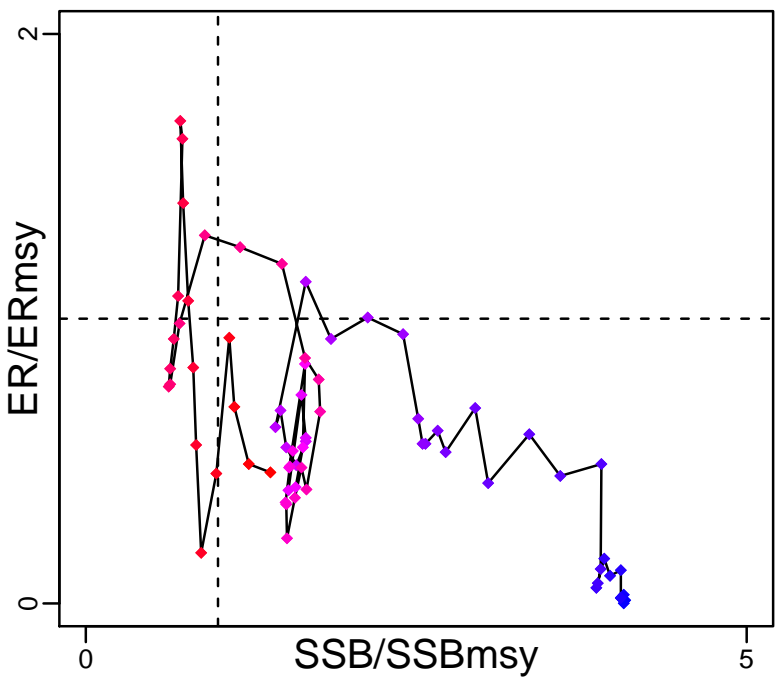
Metadata	
Scientific Name	Lepidopsetta bilineata
Current Assess ID	DFO-PAC-RSOLE5AB-1944-2014-OSGOOD
Area	Queen Charlotte Sound
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2014

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-calc-MT	2014	2192
SSBmsy	SSBmsy-MT	2014	1833
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2014	0.239
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2014	1467
Fmgt	-	-	-
ERmgt	ERmgt-ratio	2014	0.188
TB0	-	-	-
SSB0	SSB0-MT	2014	7479
MSY	MSY-MT	2014	524
M	M-1/yr	2014	0.251
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

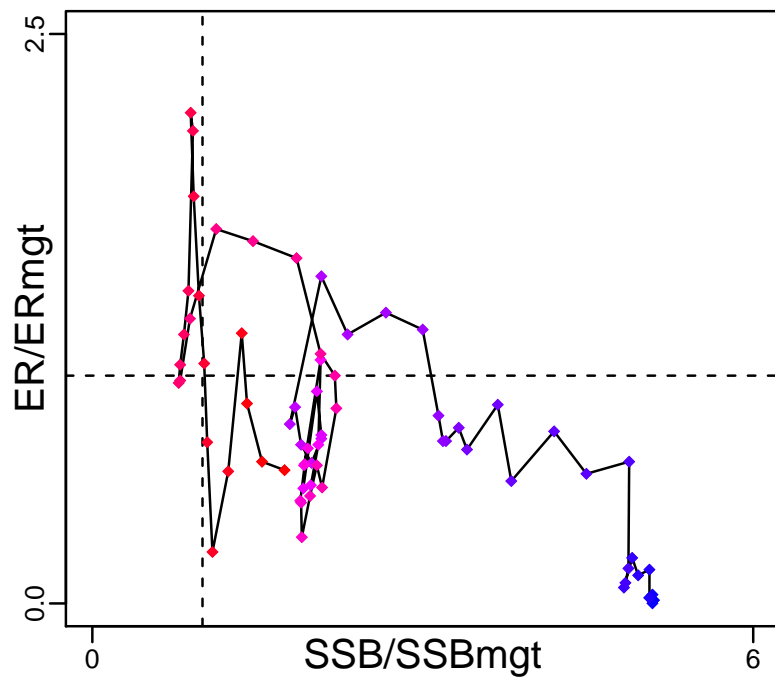
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2014	2780	Females	5.6
TN	-	-	-	-	-
R	R-E00	2014	2,630,000	Females	-
F	-	-	-	-	-
ER	ER-ratio	2014	0.11	Females	-
TC	TC-MT	2014	362		
TL	TL-MT	2014	337		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2014	1.517		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2014	0.46		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2014	1.895		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Rock sole Queen Charlotte Sound [RSOLE5AB]

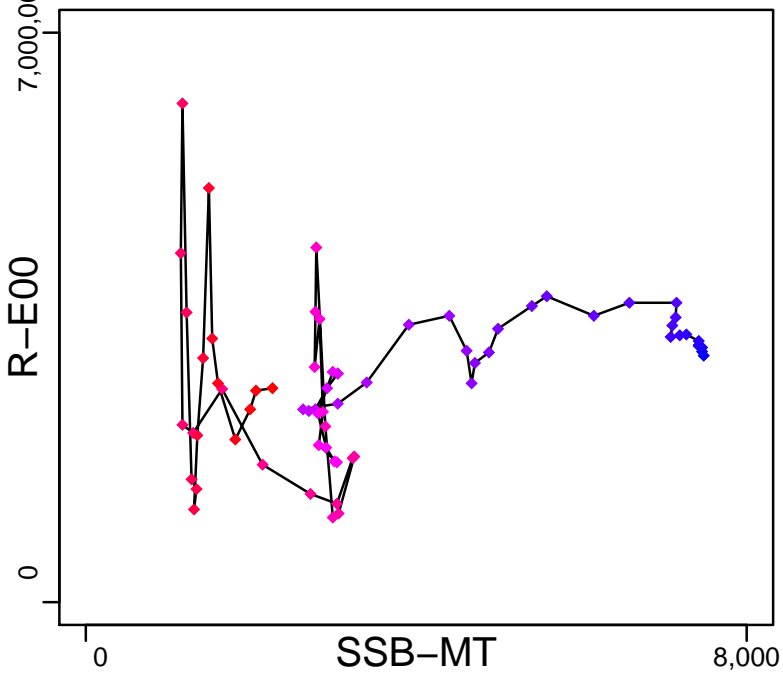
Kobe MSYpref (1944–2014–OSGOOD)



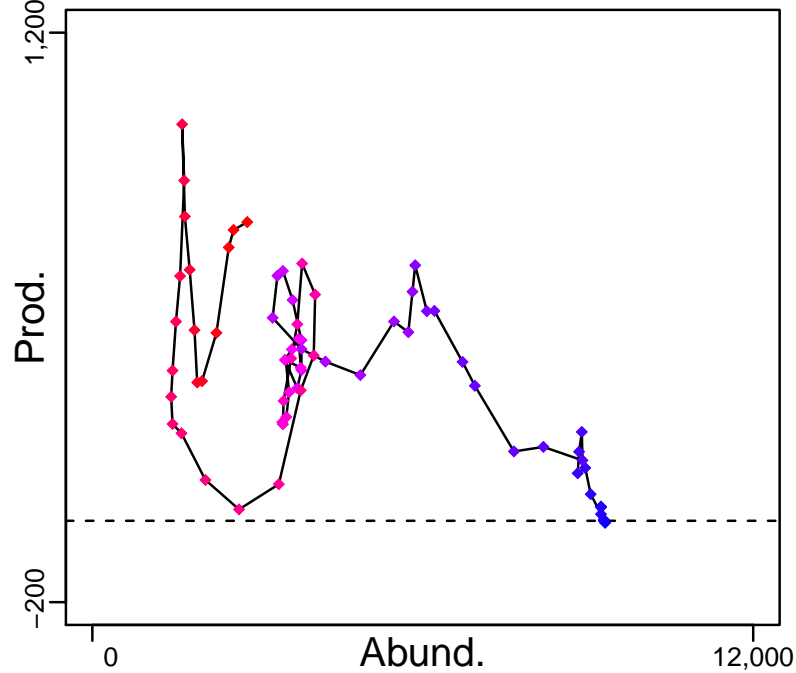
Kobe MGTpref (1944–2014–OSGOOD)



Spawner Recruit (1944–2014–OSGOOD)



Production (1944–2014–OSGOOD)



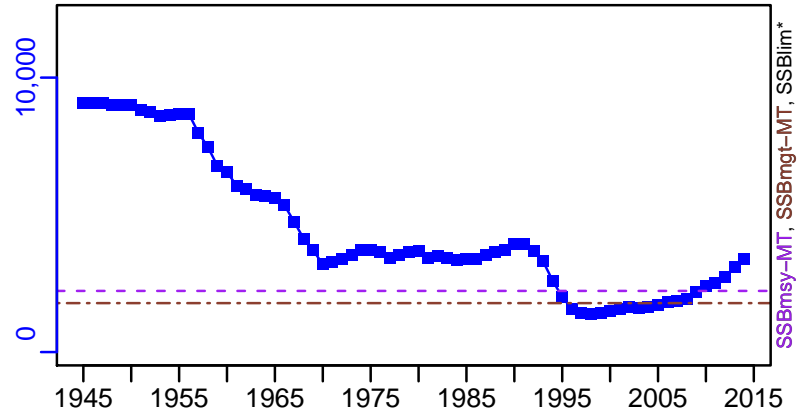
◆ Start Year ◆ End Year * No Data

Rock sole Queen Charlotte Sound [RSOLE5AB]

TB*



SSB-MT (1944–2014–OSGOOD)



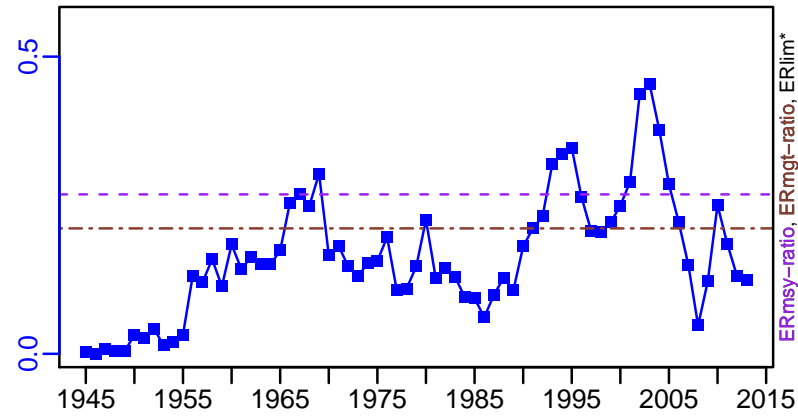
TN *



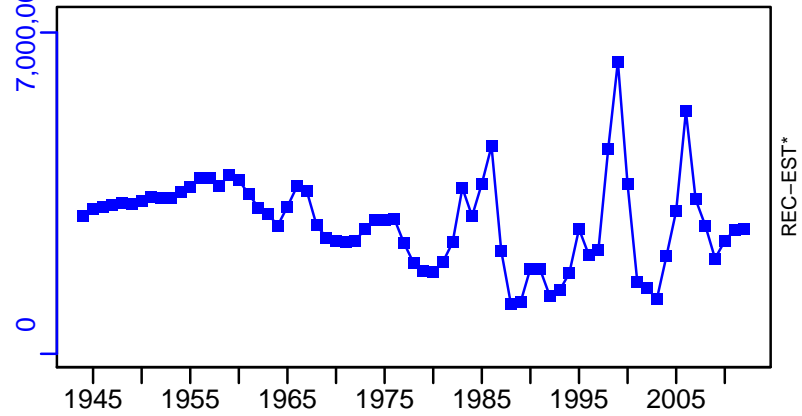
F*



ER-ratio (1944–2014–OSGOOD)



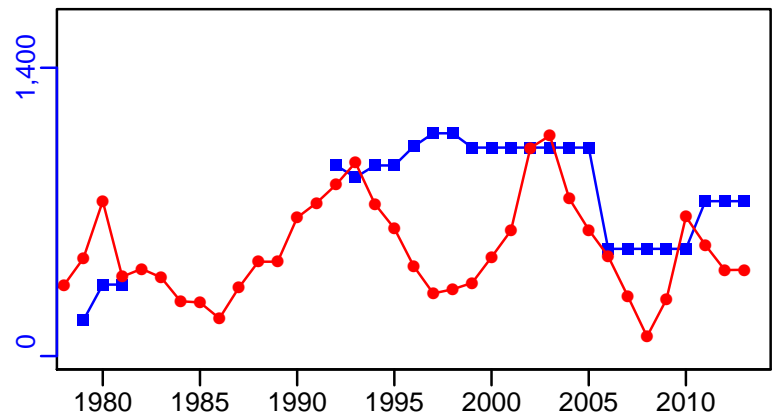
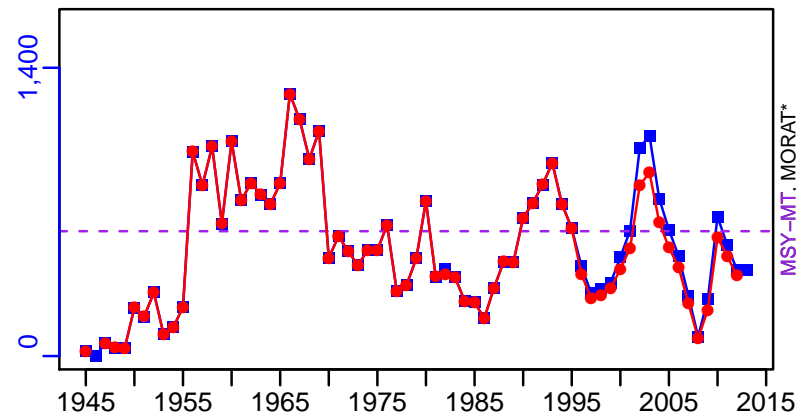
R-E00 (1944–2014–OSGOOD)



Rock sole Queen Charlotte Sound [RSOLE5AB]

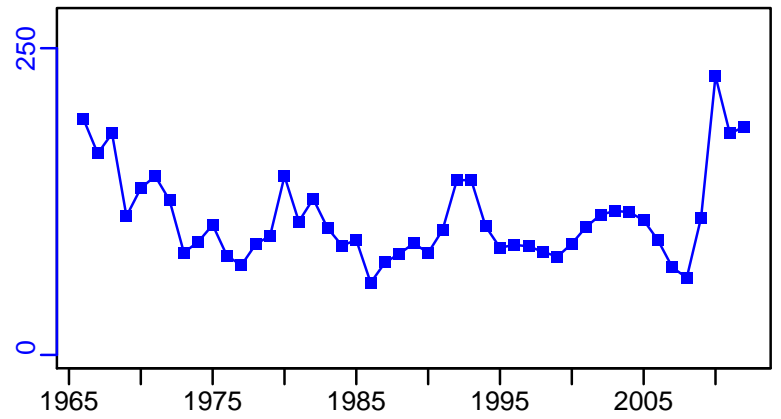
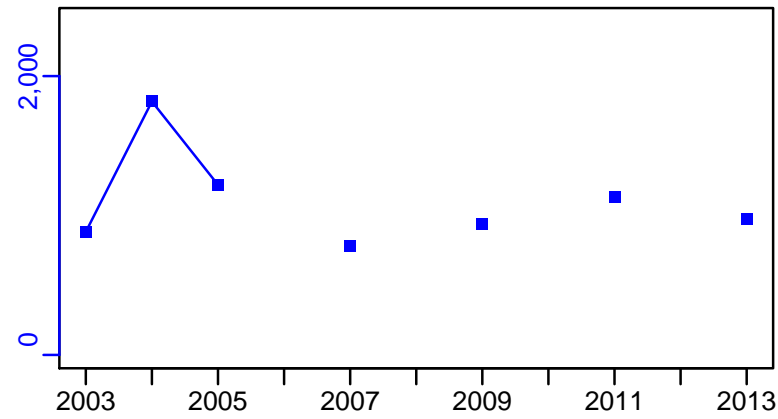
TC-MT, TL-MT, RecC* (1944–2014–OSGOOD)

TAC-MT, Cpair-MT, Cadv* (1944–2014–OSGOOD)



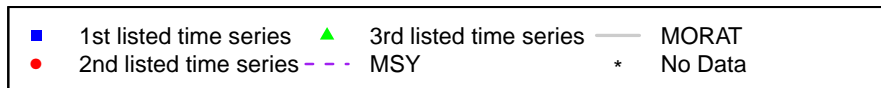
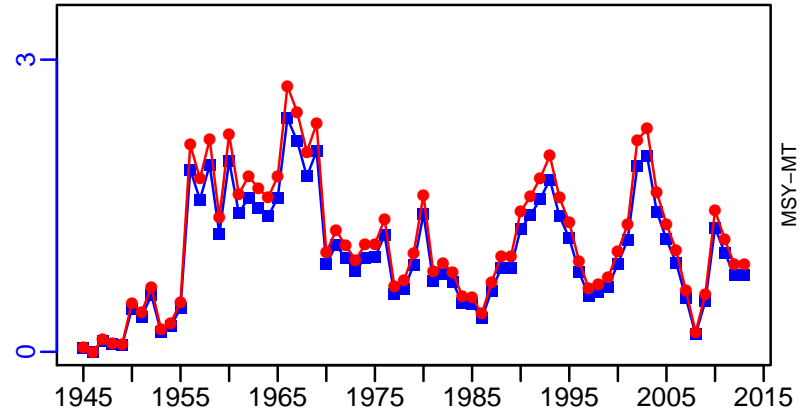
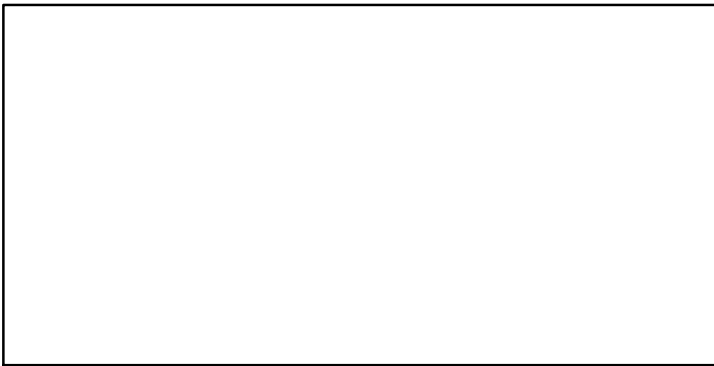
survB-MT (1944–2014–OSGOOD)

CPUE-kg/hour (1944–2014–OSGOOD)



EFFORT*

TC-MT/MSY-MT, CdivMEANC-ratio, (1944–2014–OSGOOD)



Rock sole Hecate Strait [RSOLEHSTR]

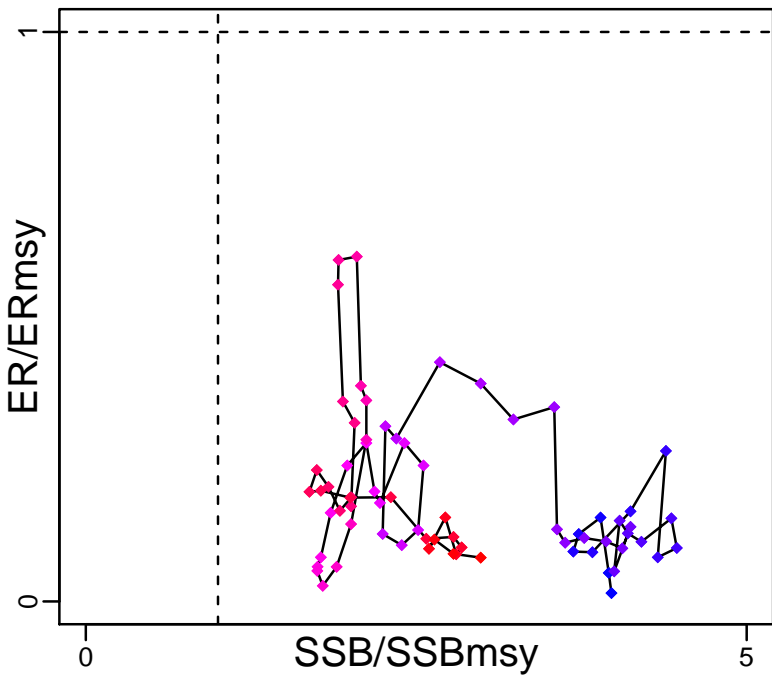
Metadata	
Scientific Name	Lepidopsetta bilineata
Current Assess ID	DFO-PAC-RSOLEHSTR-1945-2014-OSGOOD
Area	Hecate Strait
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2001, 2014

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-calc-MT	2014	3738
SSBmsy	SSBmsy-MT	2014	4853
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2014	0.507
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2014	3883
Fmgt	-	-	-
ERmgt	ERmgt-ratio	2014	0.122
TB0	-	-	-
SSB0	SSB0-MT	2014	19,329
MSY	MSY-MT	2014	1895
M	M-1/yr	2014	0.251
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

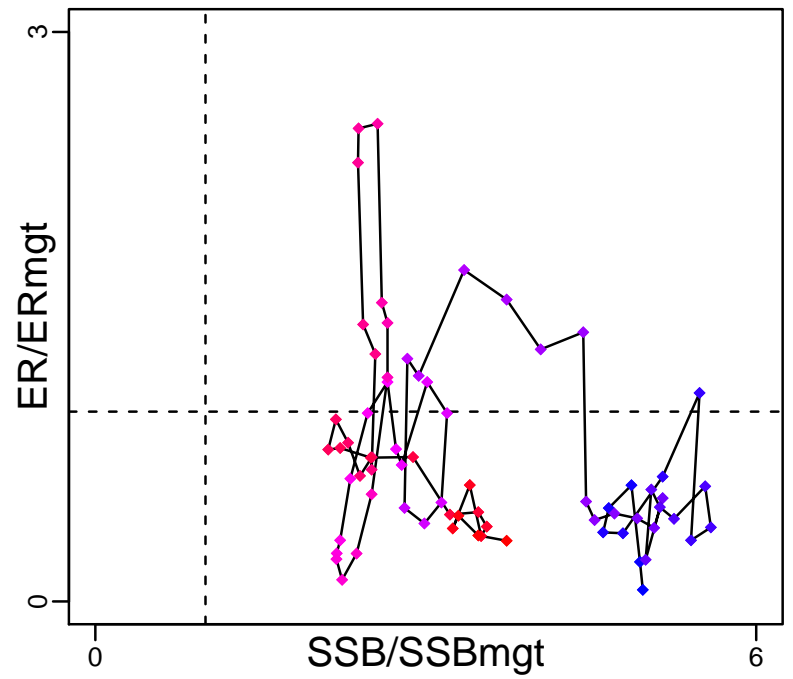
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2001	4850	-	4+
SSB	SSB-MT	2014	15,400	Females	5.6
TN	-	-	-	-	-
R	R-E00	2014	17,000	-	-
F	F-1/yr	2001	0.126	-	-
ER	ER-ratio	2014	0.039	Females	-
TC	TC-MT	2014	594		
TL	TL-MT	2014	500		
TB/TBmsy	TB-MT/TBmsy-est-MT	2001	1.048		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2014	3.173		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2014	0.077		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2014	3.966		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Rock sole Hecate Strait [RSOLEHSTR]

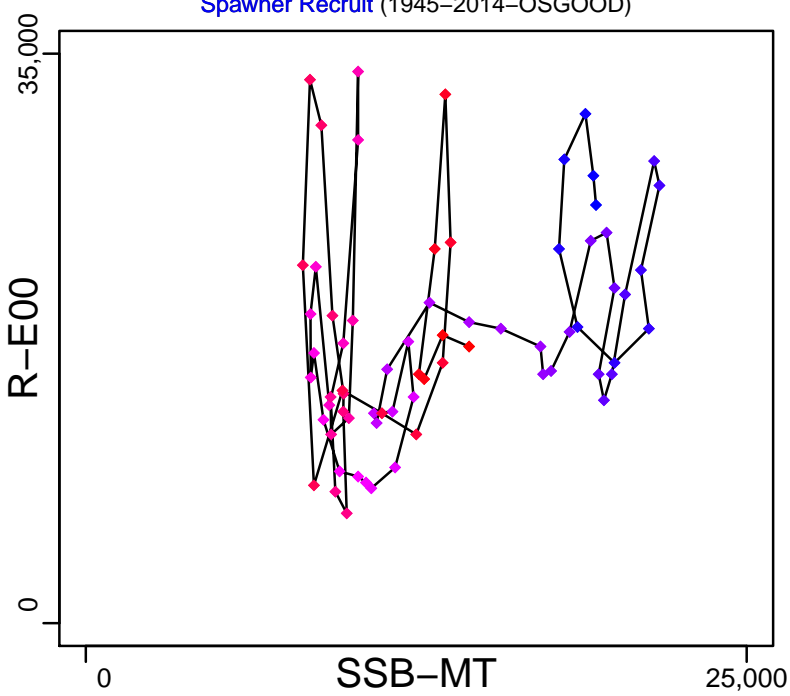
Kobe MSYpref (1945–2014–OSGOOD)



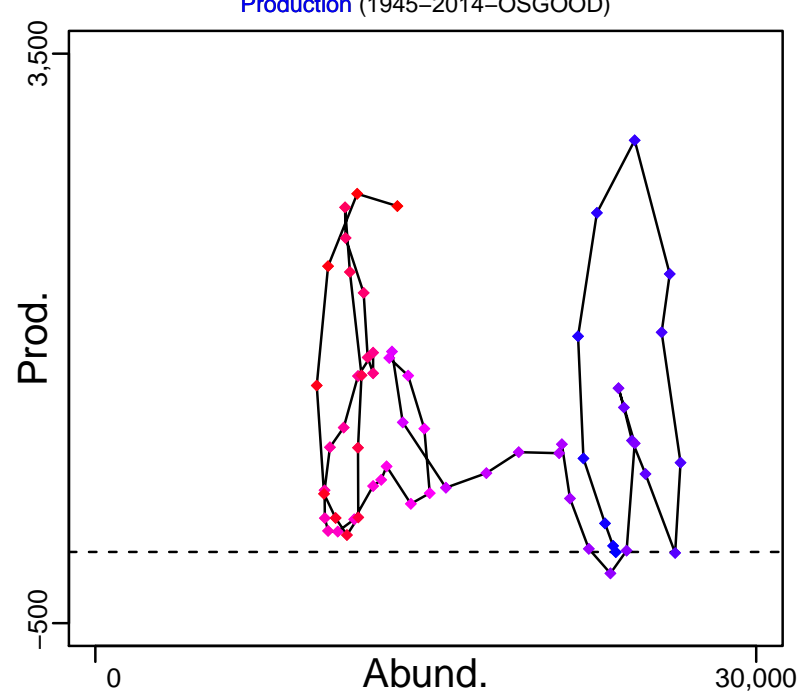
Kobe MGTpref (1945–2014–OSGOOD)



Spawner Recruit (1945–2014–OSGOOD)



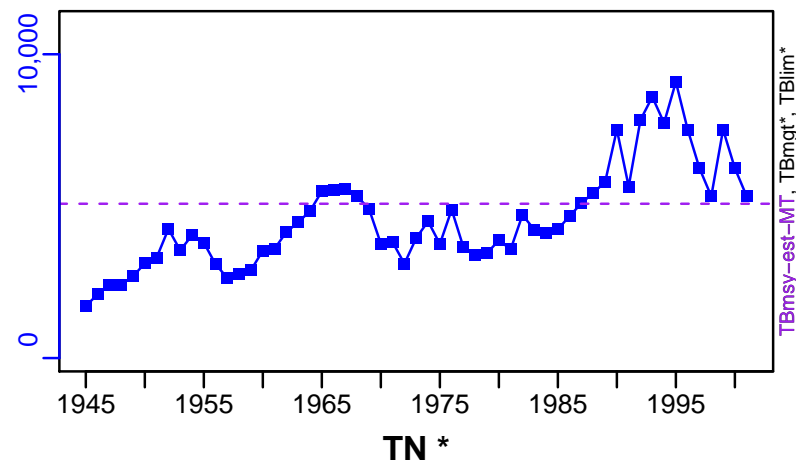
Production (1945–2014–OSGOOD)



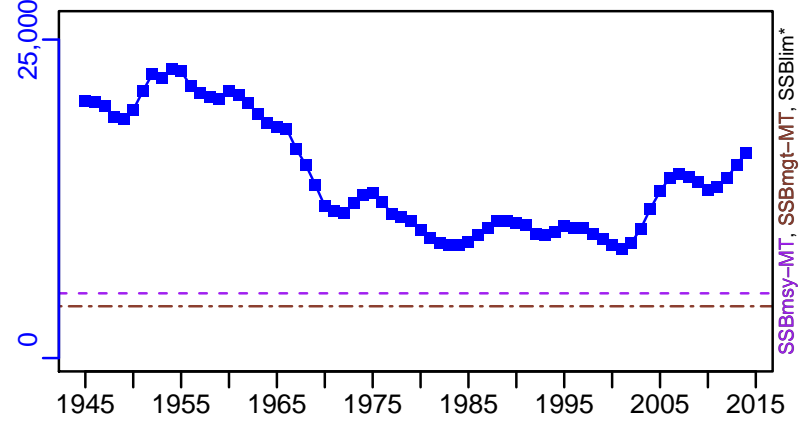
◆ Start Year ◆ End Year * No Data

Rock sole Hecate Strait [RSOLEHSTR]

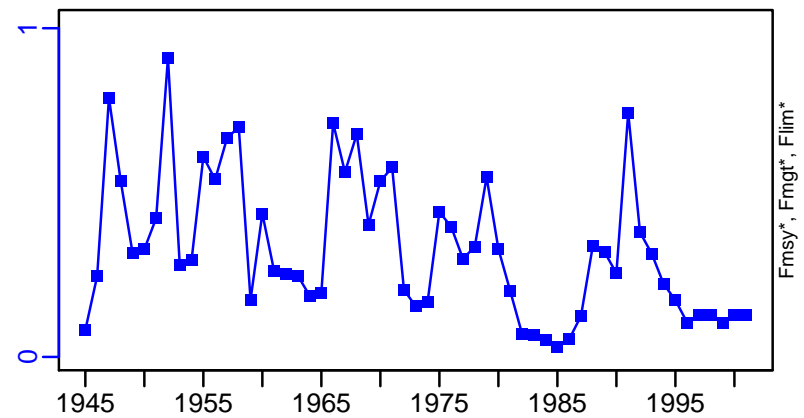
TB-MT (1945–2001–COLLIE)



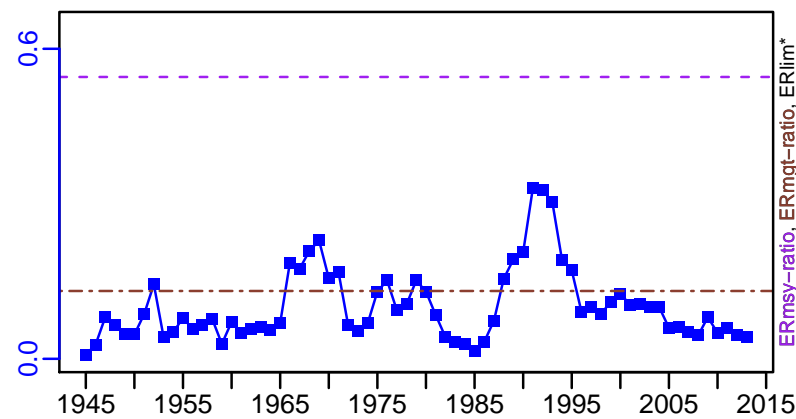
SSB-MT (1945–2014–OSGOOD)



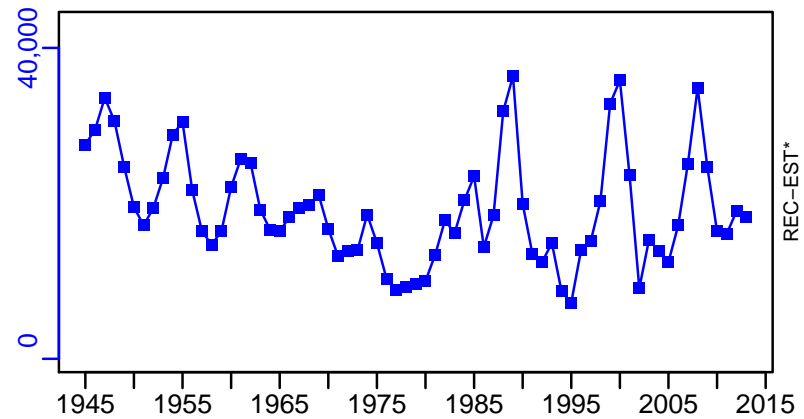
F-1/yr (1945–2001–COLLIE)



ER-ratio (1945–2014–OSGOOD)

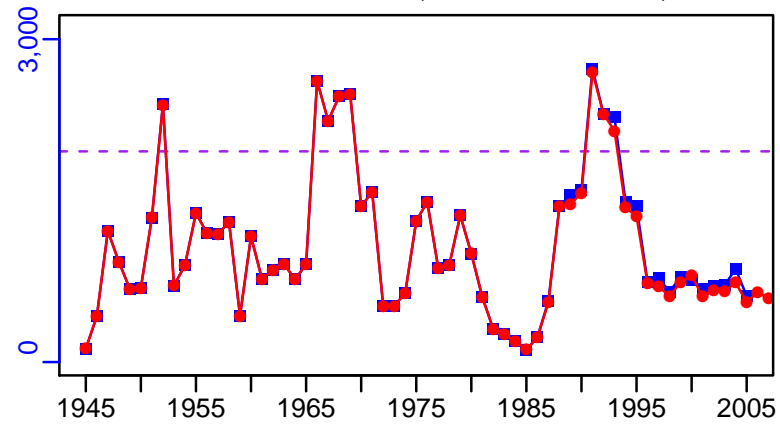


R-E00 (1945–2014–OSGOOD)

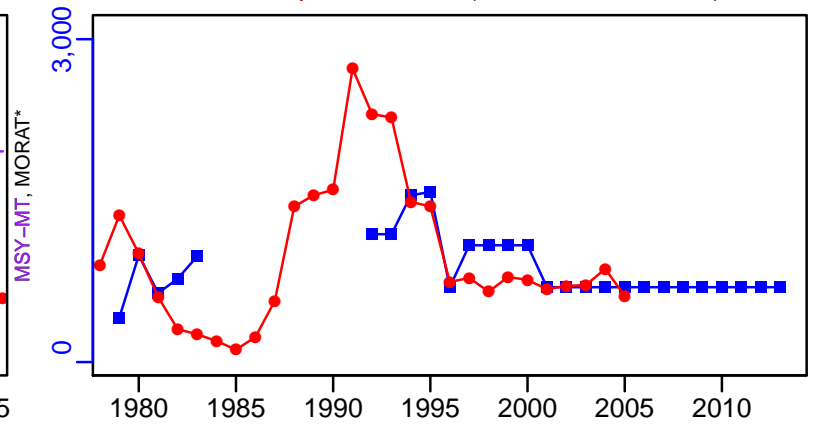


Rock sole Hecate Strait [RSOLEHSTR]

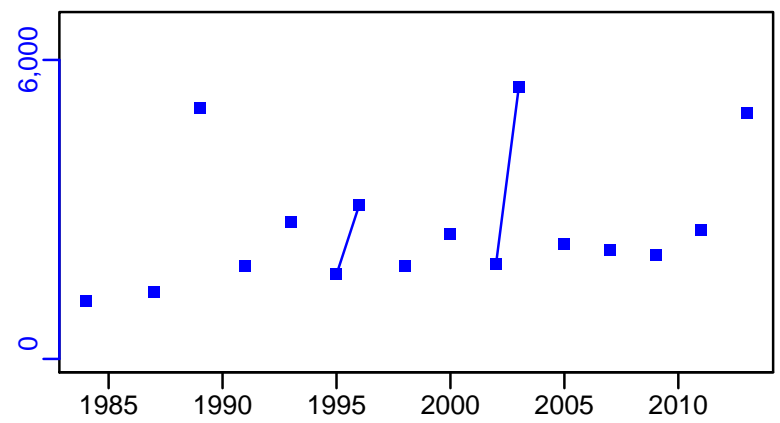
TC-MT, TL-MT, RecC* (1945-2014-OSGOOD)



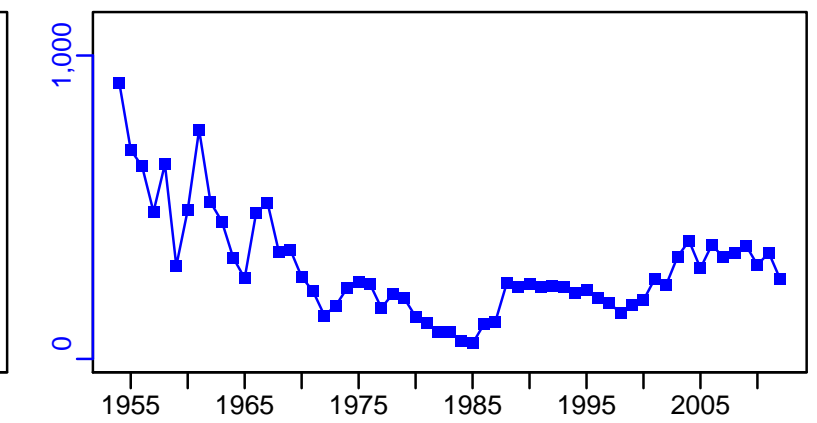
TAC-MT, Cpair-MT, Cadv* (1945-2014-OSGOOD)



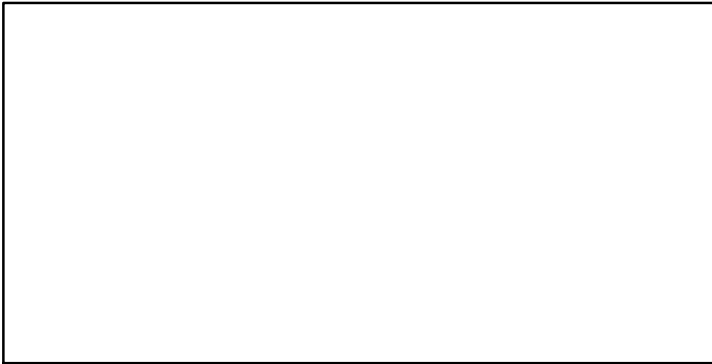
survB-MT (1945-2014-OSGOOD)



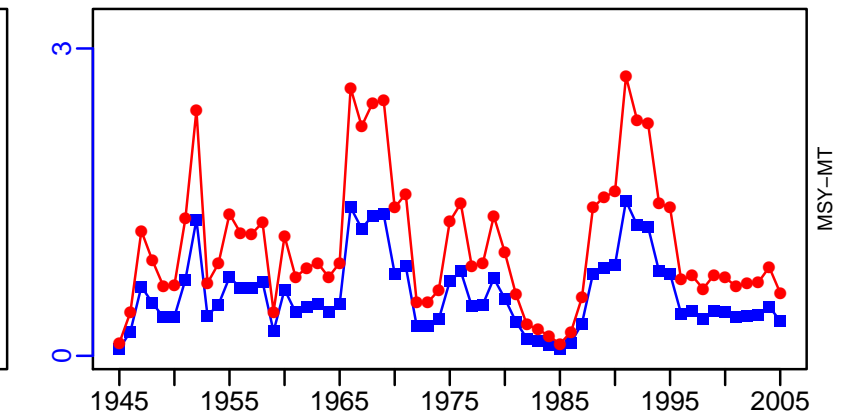
CPUE-kg/hour (1945-2014-OSGOOD)



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1945-2014-OSGOOD)



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

Redstripe rockfish British Columbia Waters North [RSROCKBCWN]

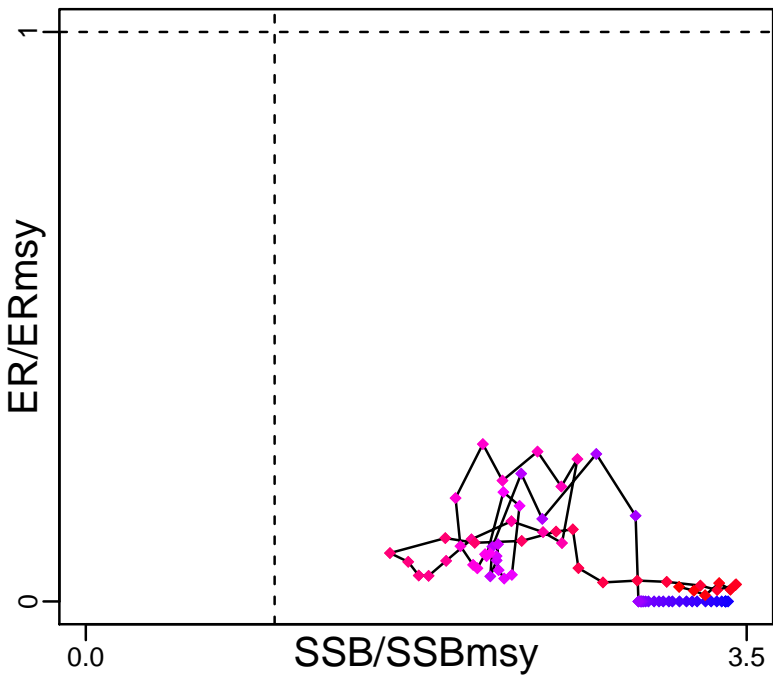
Metadata	
Scientific Name	Sebastes proriger
Current Assess ID	DFO-PAC-RSROCKBCWN-1939-2018-ASHBROOK
Area	British Columbia Waters North
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2018	848
SSBmsy	SSBmsy-MT	2018	2135
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2018	0.638
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	7216
MSY	MSY-calc-MT	2018	541
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

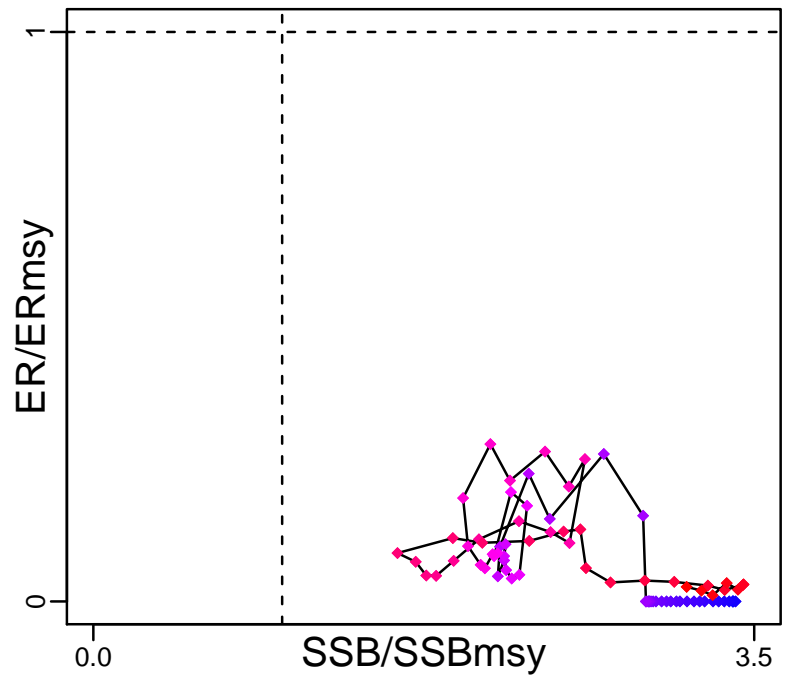
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2018	7455	Both	-
SSB	SSB-MT	2018	6500	Females	-
TN	-	-	-	-	-
R	R-E00	2018	2,608,148	-	1
F	-	-	-	-	-
ER	ER-ratio	2018	0.016	-	-
TC	-	-	-	-	-
TL	TL-MT	2018	170	-	-
TB/TBmsy	TB-MT/TBmsy-MT	2018	8.791	-	-
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2018	3.044	-	-
F/Fmsy	-	-	-	-	-
ER/ERmsy	ER-ratio/ERmsy-ratio	2018	0.026	-	-
TB/TBmgt	-	-	-	-	-
SSB/SSBmgt	-	-	-	-	-
F/Fmgt	-	-	-	-	-
ER/ERmgt	-	-	-	-	-

Redstripe rockfish British Columbia Waters North [RSROCKBCWN]

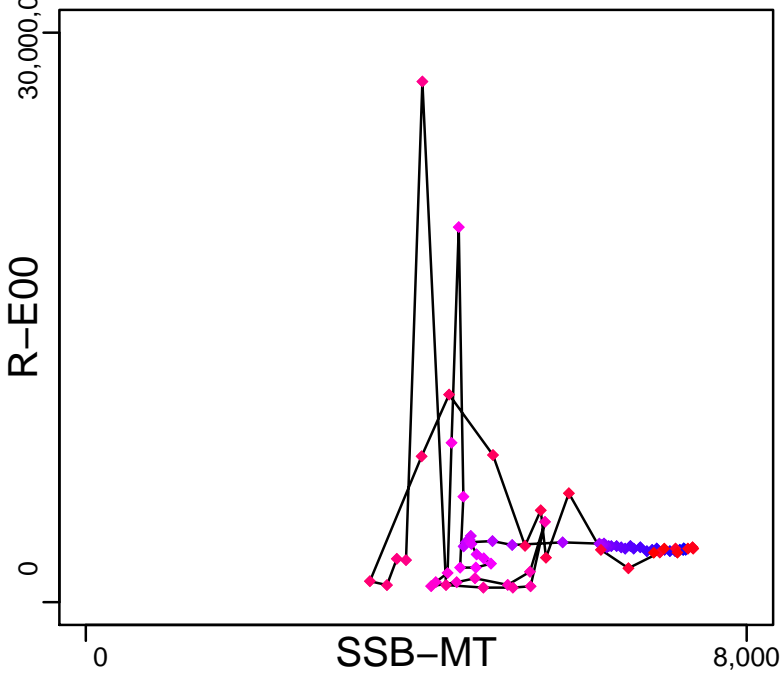
Kobe MSYpref (1939–2018–ASHBROOK)



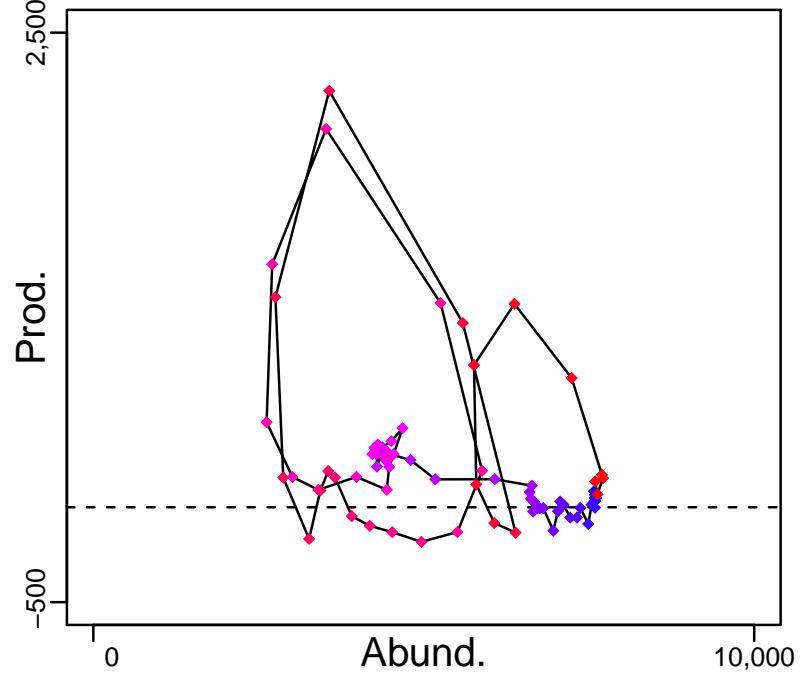
Kobe MGTpref (1939–2018–ASHBROOK)



Spawner Recruit (1939–2018–ASHBROOK)



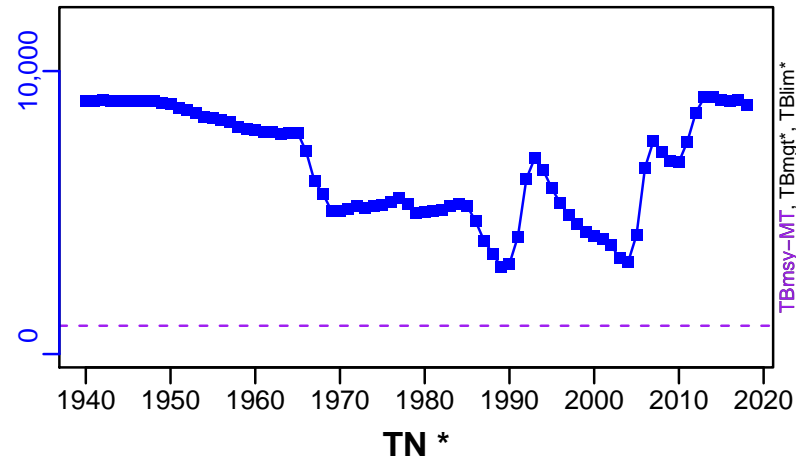
Production (1939–2018–ASHBROOK)



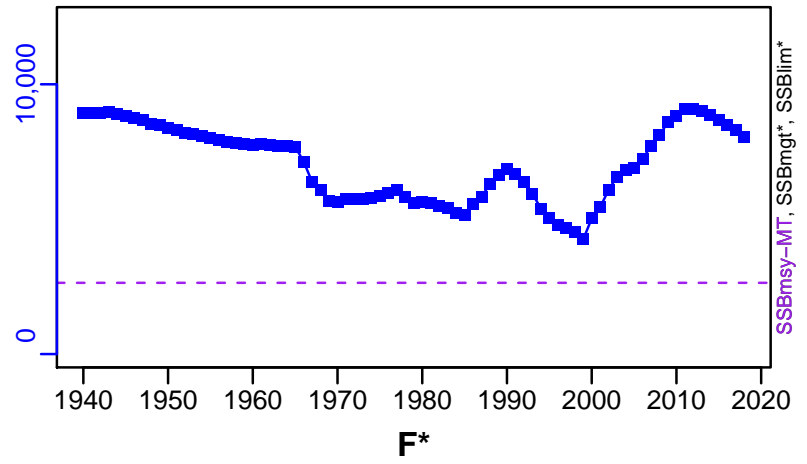
◆ Start Year ◆ End Year * No Data

Redstripe rockfish British Columbia Waters North [RSROCKBCWN]

TB-MT (1939–2018–ASHBROOK)



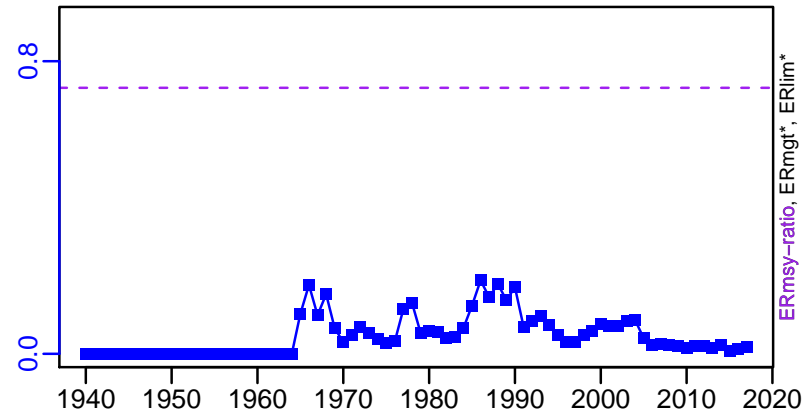
SSB-MT (1939–2018–ASHBROOK)



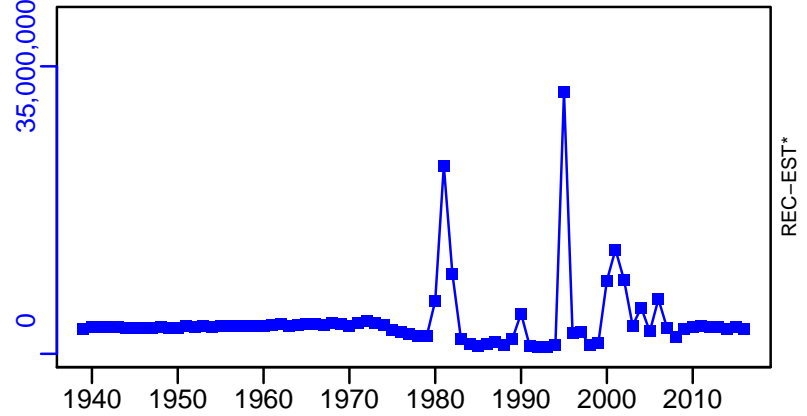
TN *

F*

ER-ratio (1939–2018–ASHBROOK)



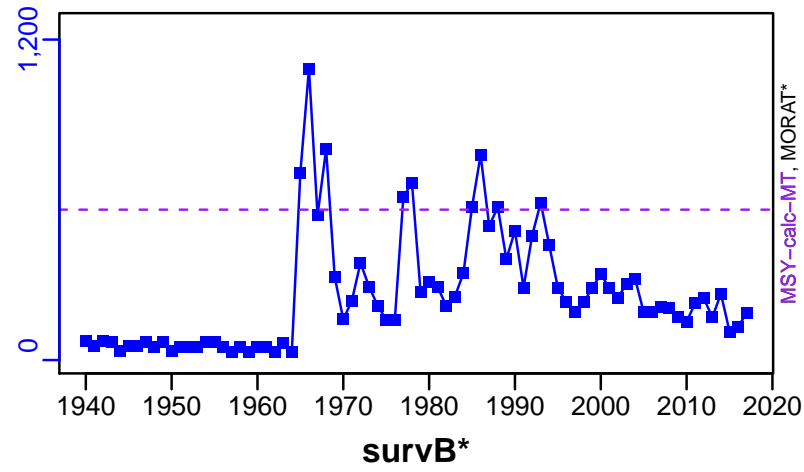
R-E00 (1939–2018–ASHBROOK)



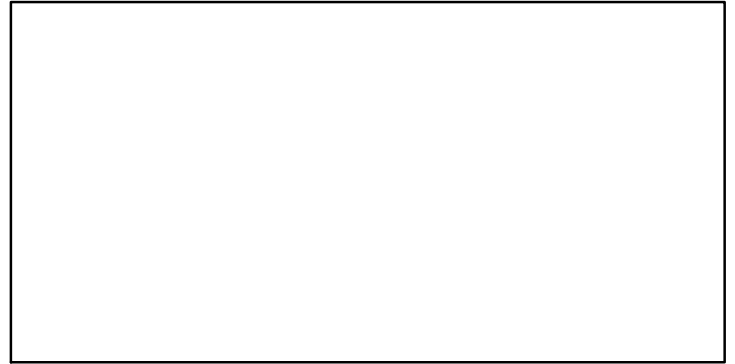
Redstripe rockfish British Columbia Waters North [RSROCKBCWN]

TL-MT, TC*, RecC* (1939-2018-ASHBROOK)

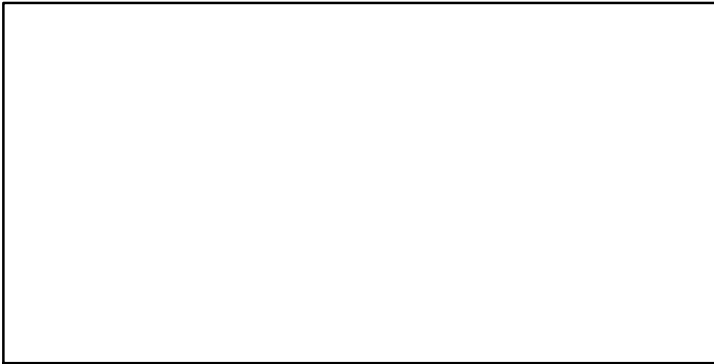
TAC*, Cpair*, Cadv*



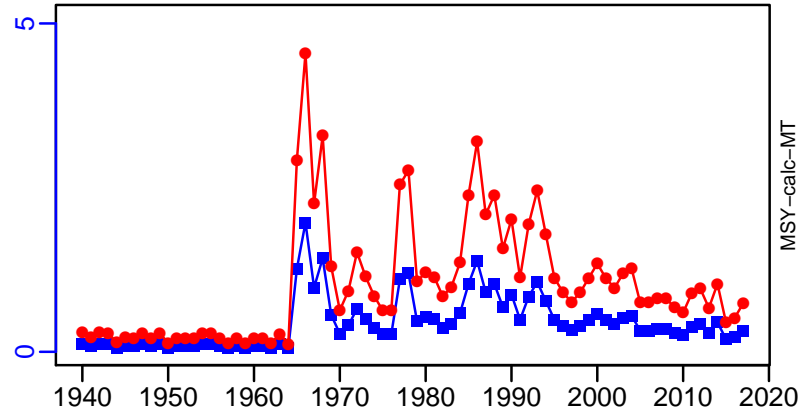
CPUE*



EFFORT*



TL-MT/MSY-calc-MT, CdivMEANC-ratio, (1939-2018-ASHBROOK)



Redstripe rockfish British Columbia Waters South [RSROCKBCWS]

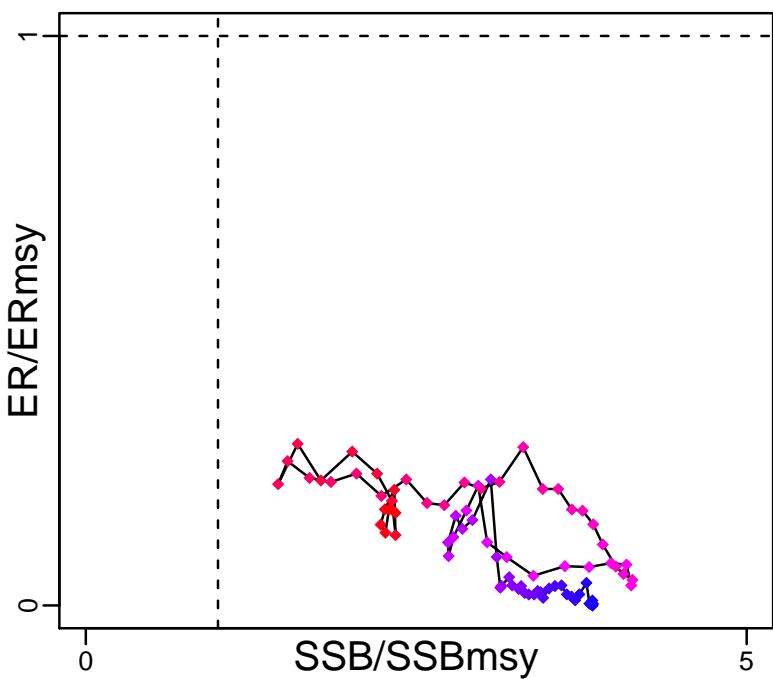
Metadata	
Scientific Name	Sebastes proriger
Current Assess ID	DFO-PAC-RSROCKBCWS-1939-2018-ASHBROOK
Area	British Columbia Waters South
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2018	5043
SSBmsy	SSBmsy-MT	2018	6830
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2018	0.3
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	26,149
MSY	MSY-calc-MT	2018	1513
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

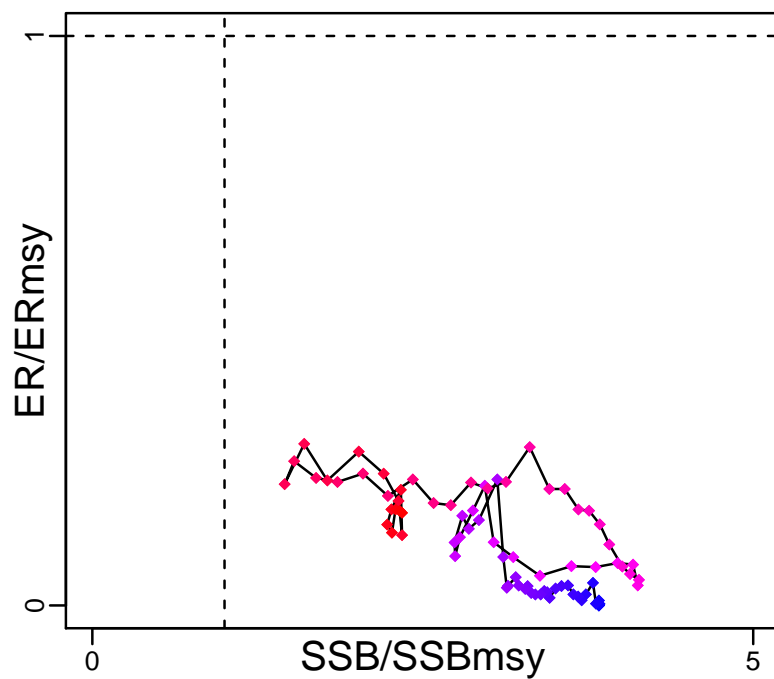
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2018	15,665	Both	-
SSB	SSB-MT	2018	16,235	Females	-
TN	-	-	-	-	-
R	R-E00	2018	10,994,945	-	-
F	-	-	-	-	-
ER	ER-ratio	2018	0.049	-	-
TC	-	-	-	-	-
TL	TL-MT	2018	1023	-	-
TB/TBmsy	TB-MT/TBmsy-MT	2018	3.106	-	-
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2018	2.377	-	-
F/Fmsy	-	-	-	-	-
ER/ERmsy	ER-ratio/ERmsy-ratio	2018	0.163	-	-
TB/TBmgt	-	-	-	-	-
SSB/SSBmgt	-	-	-	-	-
F/Fmgt	-	-	-	-	-
ER/ERmgt	-	-	-	-	-

Redstripe rockfish British Columbia Waters South [RSROCKBCWS]

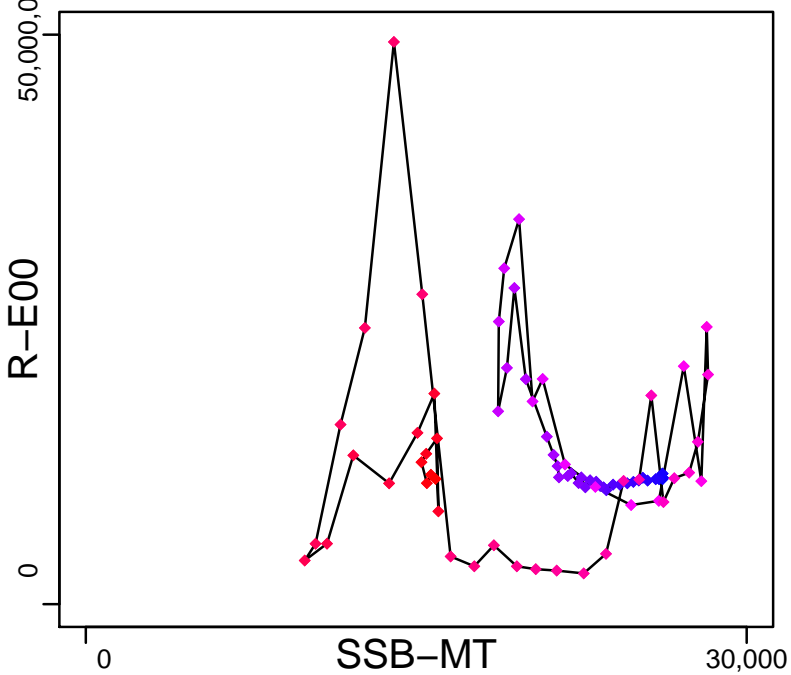
Kobe MSYpref (1939–2018–ASHBROOK)



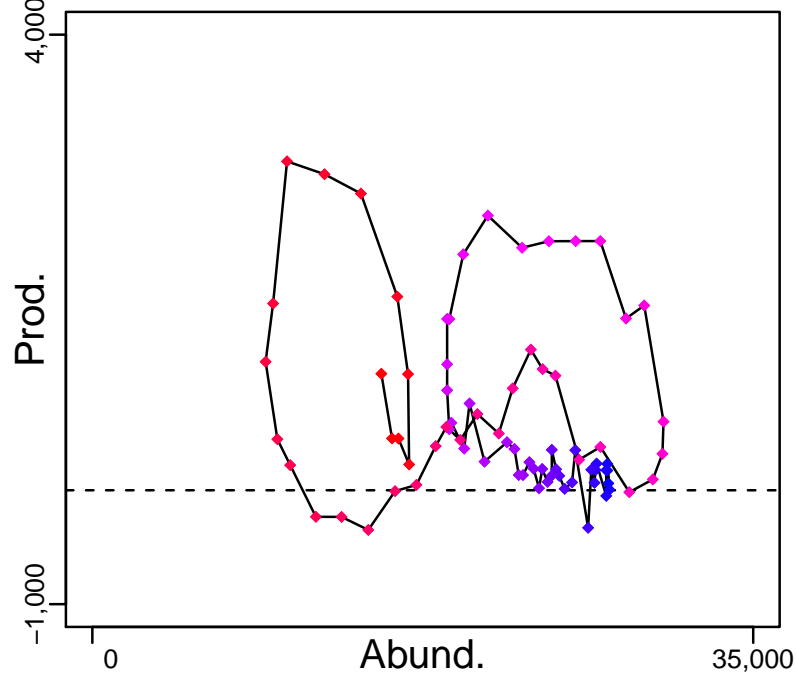
Kobe MGTpref (1939–2018–ASHBROOK)



Spawner Recruit (1939–2018–ASHBROOK)



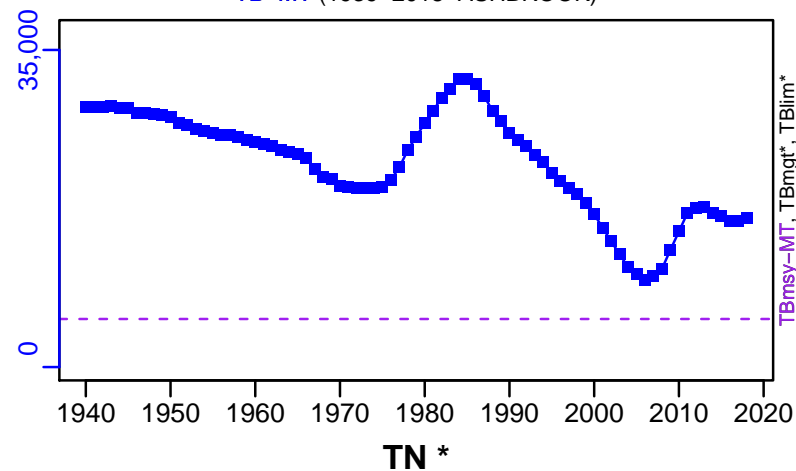
Production (1939–2018–ASHBROOK)



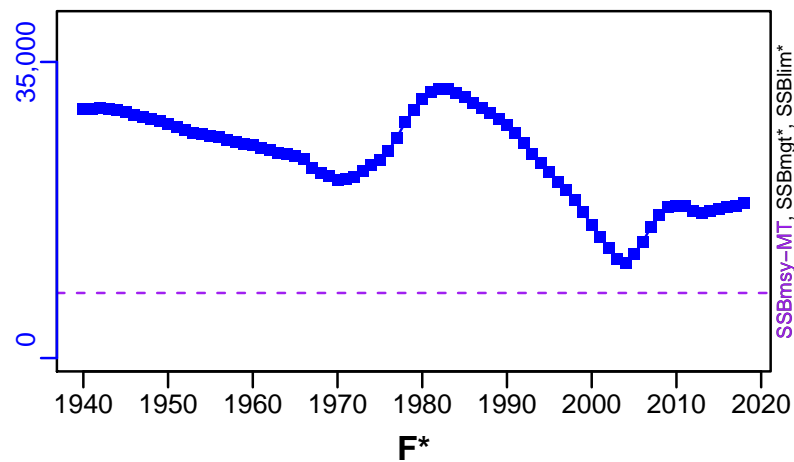
◆ Start Year ◆ End Year * No Data

Redstripe rockfish British Columbia Waters South [RSROCKBCWS]

TB-MT (1939–2018–ASHBROOK)



SSB-MT (1939–2018–ASHBROOK)



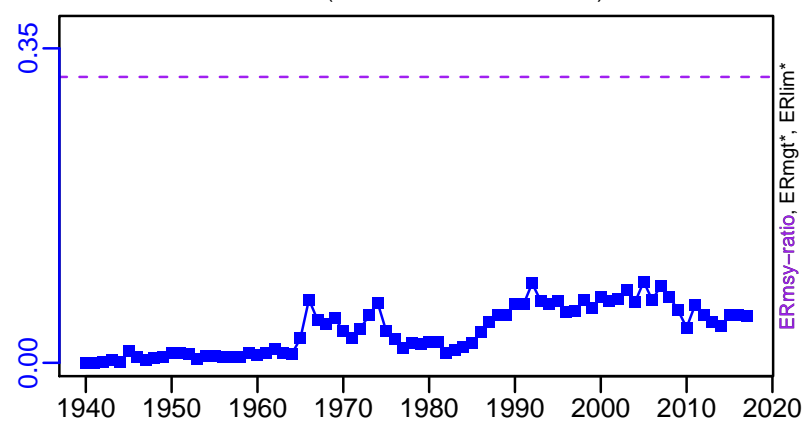
TN *



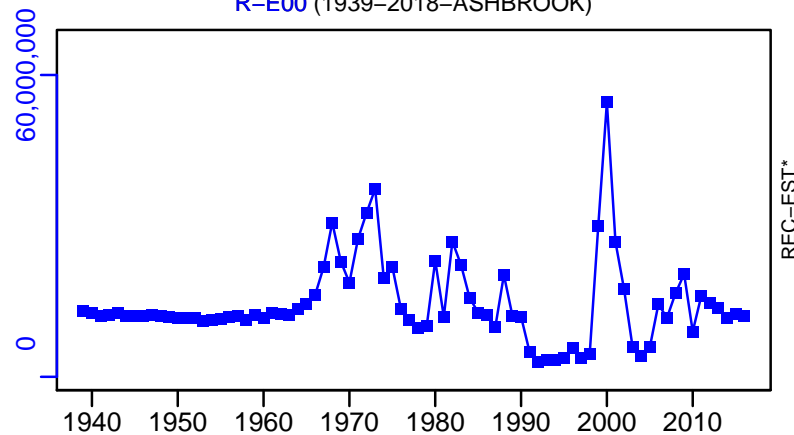
F*



ER-ratio (1939–2018–ASHBROOK)

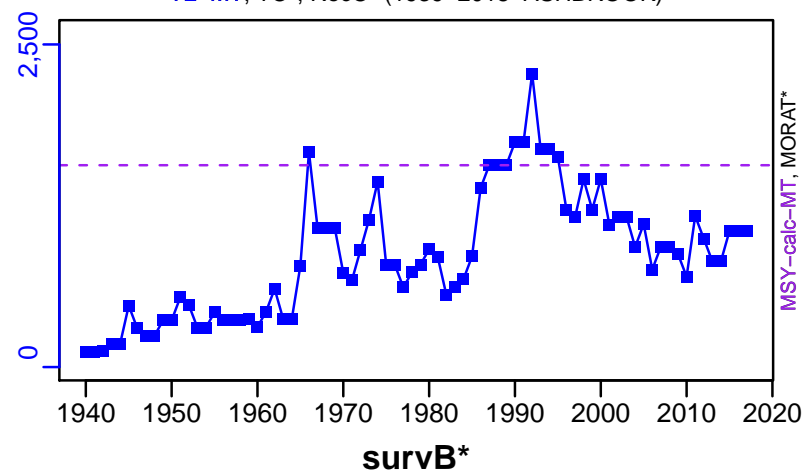


R-E00 (1939–2018–ASHBROOK)



Redstripe rockfish British Columbia Waters South [RSROCKBCWS]

TL-MT, TC*, RecC* (1939-2018-ASHBROOK)



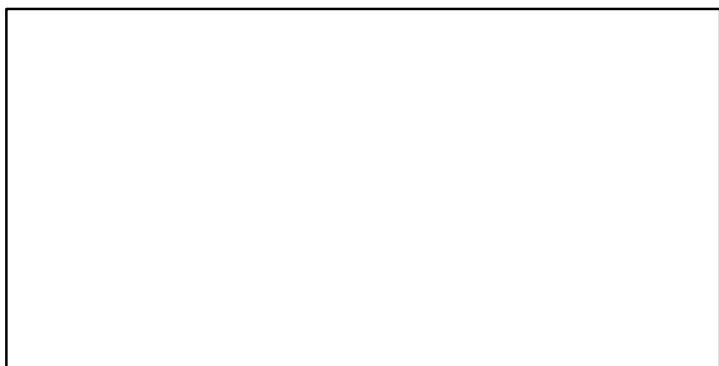
TAC*, Cpair*, Cadv*



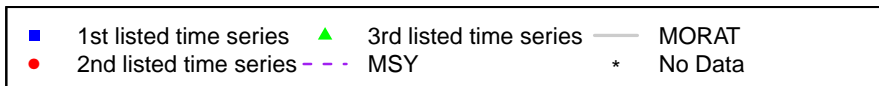
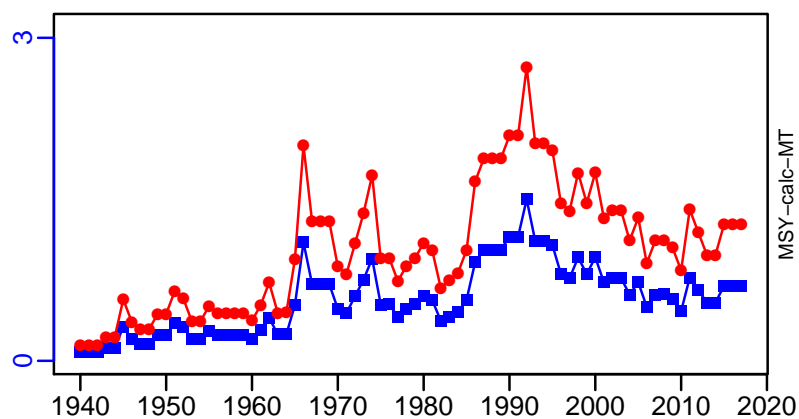
CPUE*



EFFORT*



TL-MT/MSY-calc-MT, CdivMEANC-ratio, (1939-2018-ASHBROOK)



Sablefish Pacific Coast of Canada [SABLEFPCAN]

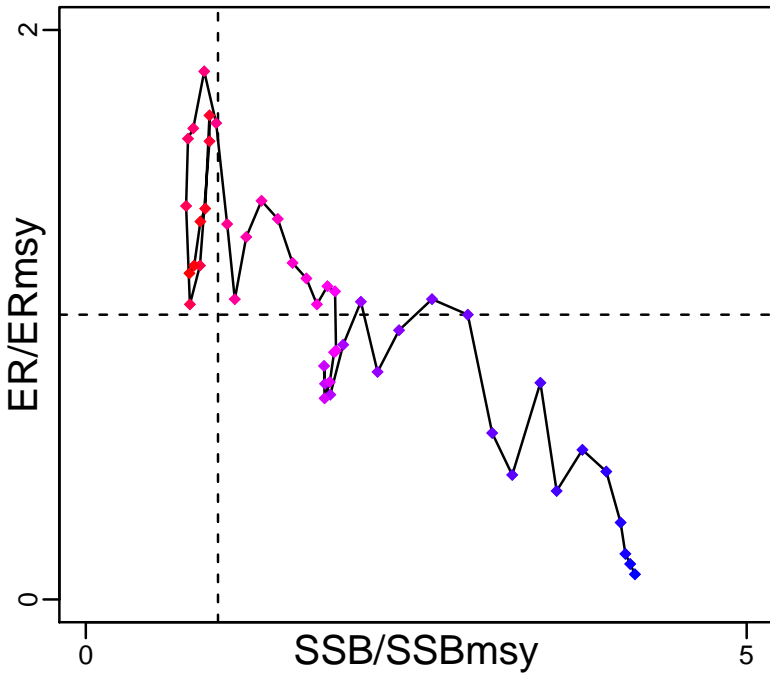
Metadata	
Scientific Name	Anoplopoma fimbria
Current Assess ID	DFO-PAC-SABLEFPCAN-1913-2010-HIVELY
Area	Pacific Coast of Canada
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2010

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-calc-MT	2010	29,364
SSBmsy	SSBmsy-MT	2010	27,680
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2010	0.11
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2010	114,770
MSY	MSY-MT	2010	3230
M	M-1/yr	2010	0.06
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

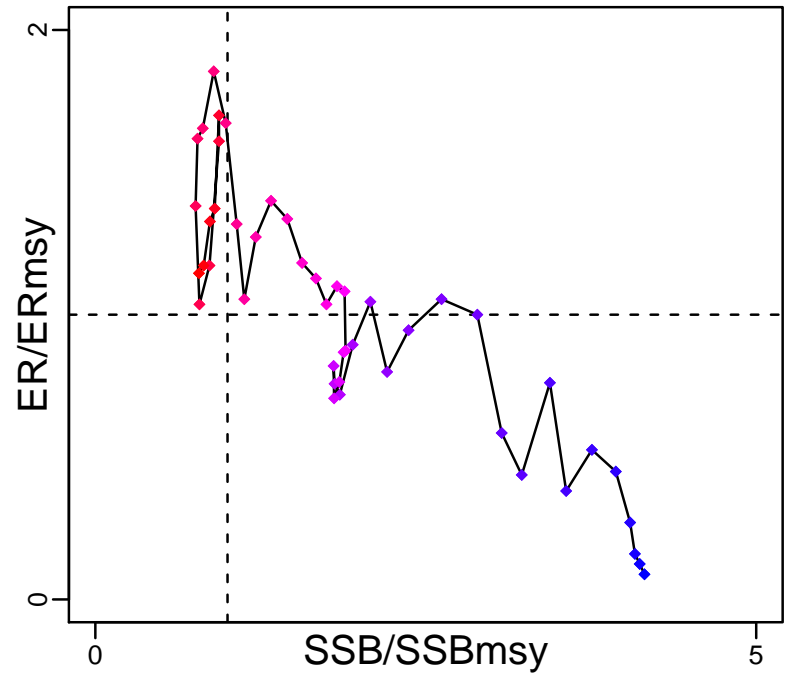
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2010	28,500	-	-
SSB	SSB-MT	2010	21,700	-	-
TN	-	-	-	-	-
R	R-E00	2010	1,770,000	-	-
F	-	-	-	-	-
ER	ER-ratio	2010	0.126	-	-
TC	-	-	-	-	-
TL	TL-MT	2010	2080	-	-
TB/TBmsy	TB-MT/TBmsy-calc-MT	2010	0.971	-	-
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2010	0.784	-	-
F/Fmsy	-	-	-	-	-
ER/ERmsy	ER-ratio/ERmsy-ratio	2010	1.145	-	-
TB/TBmgt	-	-	-	-	-
SSB/SSBmgt	-	-	-	-	-
F/Fmgt	-	-	-	-	-
ER/ERmgt	-	-	-	-	-

Sablefish Pacific Coast of Canada [SABLEFPCAN]

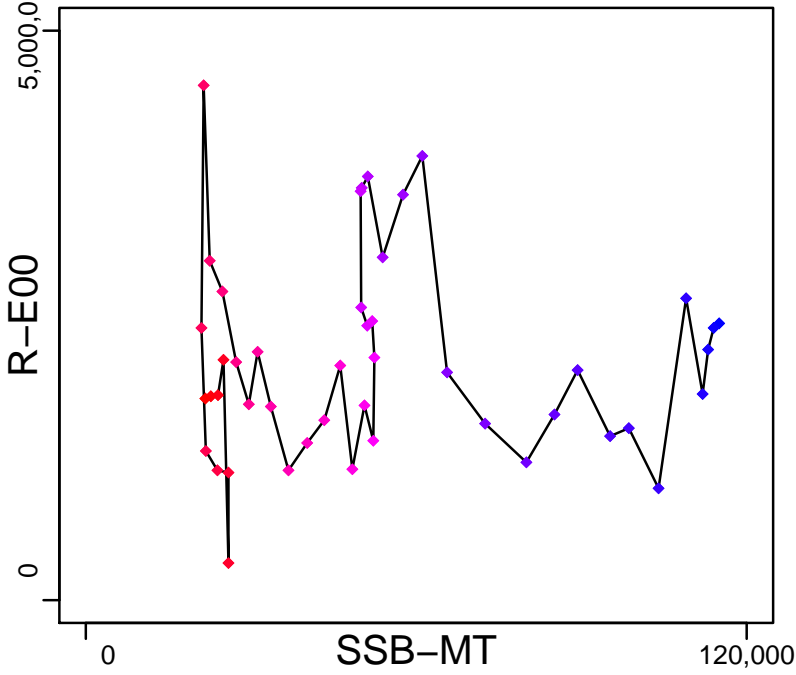
Kobe MSYpref (1913–2010–HIVELY)



Kobe MGTpref (1913–2010–HIVELY)



Spawner Recruit (1913–2010–HIVELY)



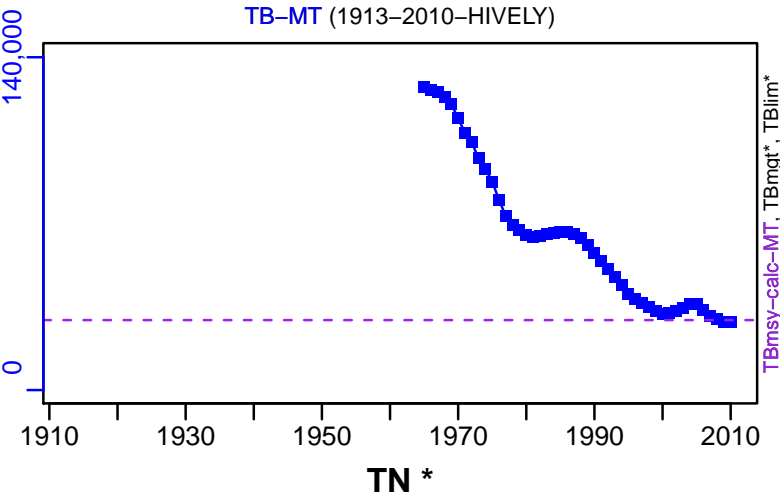
Production*



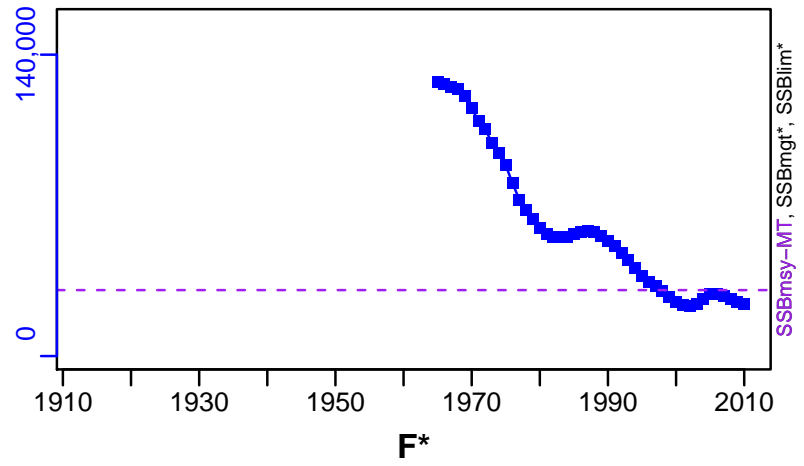
◆ Start Year ◆ End Year * No Data

Sablefish Pacific Coast of Canada [SABLEFPCAN]

TB-MT (1913-2010-HIVELY)



SSB-MT (1913-2010-HIVELY)

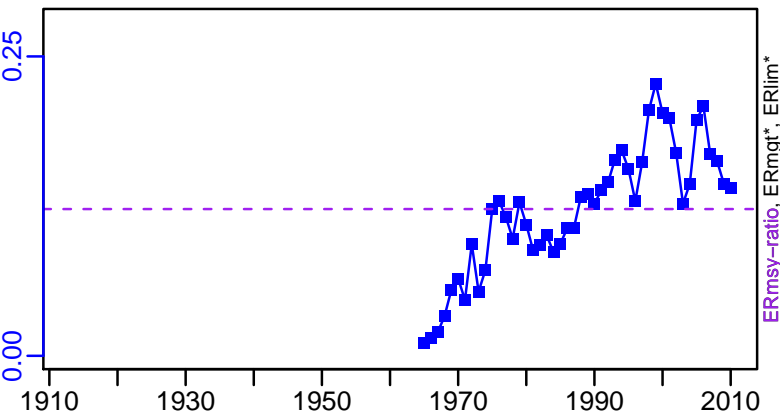


TN *

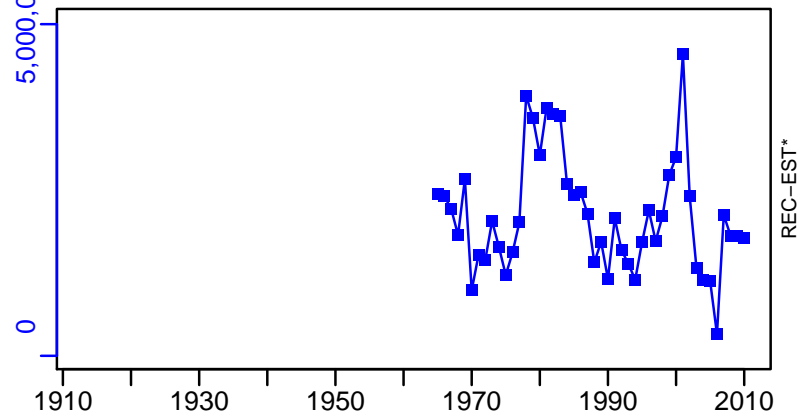
F*



ER-ratio (1913-2010-HIVELY)

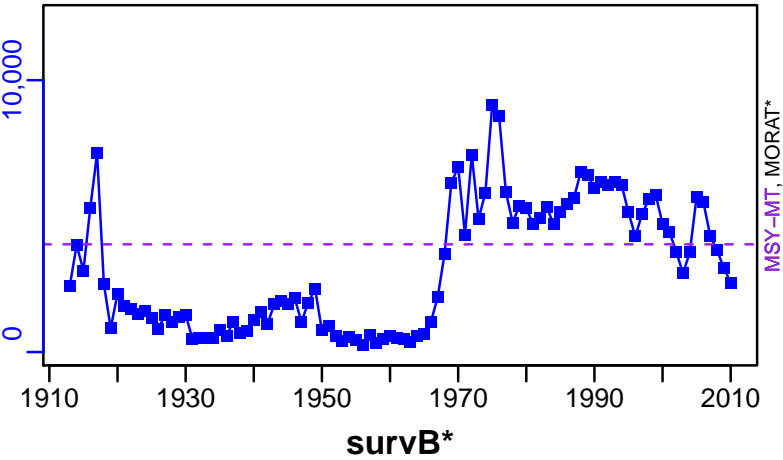


R-E00 (1913-2010-HIVELY)



Sablefish Pacific Coast of Canada [SABLEFPCAN]

TL-MT, TC*, RecC* (1913-2010-HIVELY)



TAC*, Cpair*, Cadv*



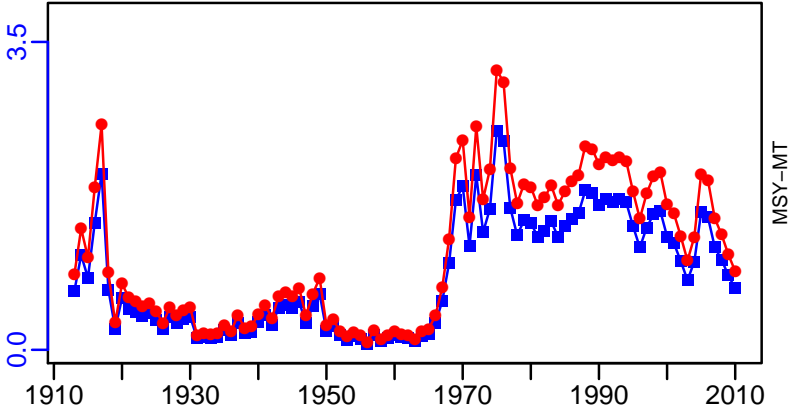
CPUE*



EFFORT*



TL-MT/MSY-MT, CdivMEANC-ratio, (1913-2010-HIVELY)



Pacific sardine Pacific Coast of Canada [SARDBC]

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

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

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

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

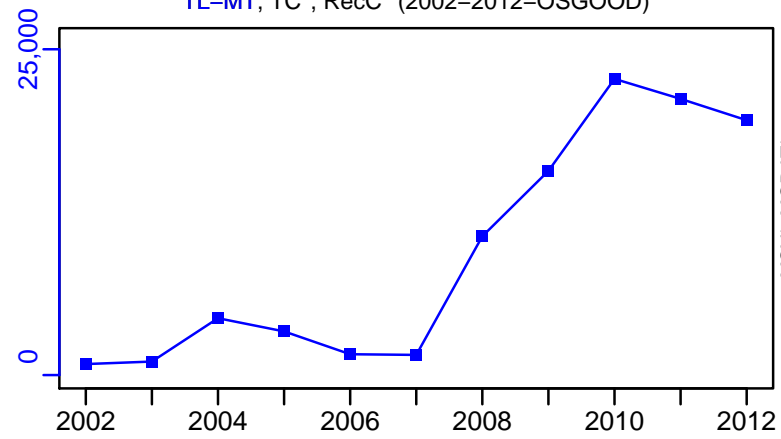


Recruits*

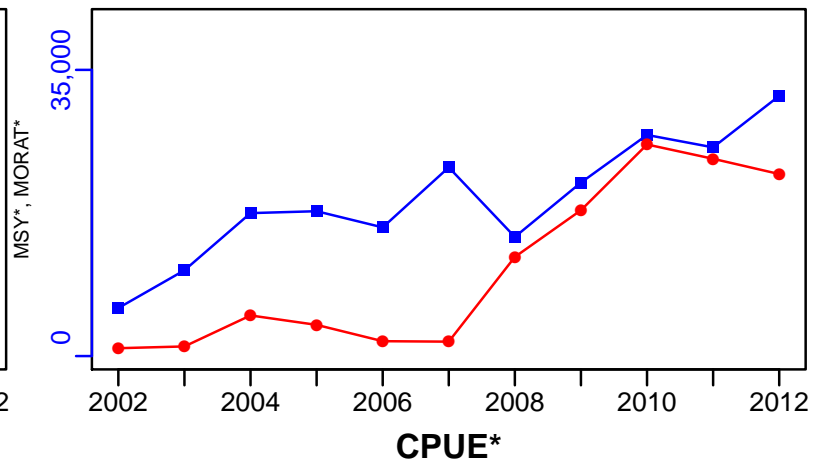


Pacific sardine Pacific Coast of Canada [SARDBC]

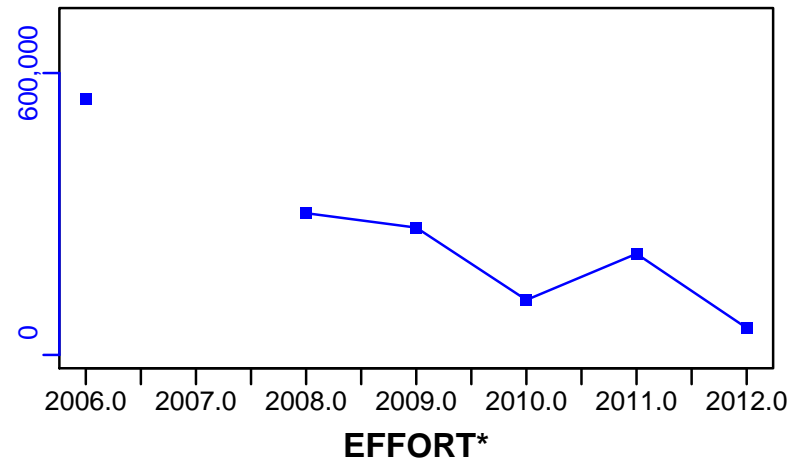
TL-MT, TC*, RecC* (2002-2012-OSGOOD)



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



survB-MT (2002-2012-OSGOOD)



CPUE*



CdivMSY*



Sidestripe shrimp Shrimp Management Area GTSE [SSHRIMPSMAGTSE]

Metadata	
Scientific Name	Pandalopsis dispar
Current Assess ID	DFO-SSHRIMPSMAGTSE-1992-2011-WATSON
Area	Shrimp Management Area GTSE
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

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

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	177	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0.051	-	-
TC	-	-	-		
TL	TL-MT	2011	16		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*

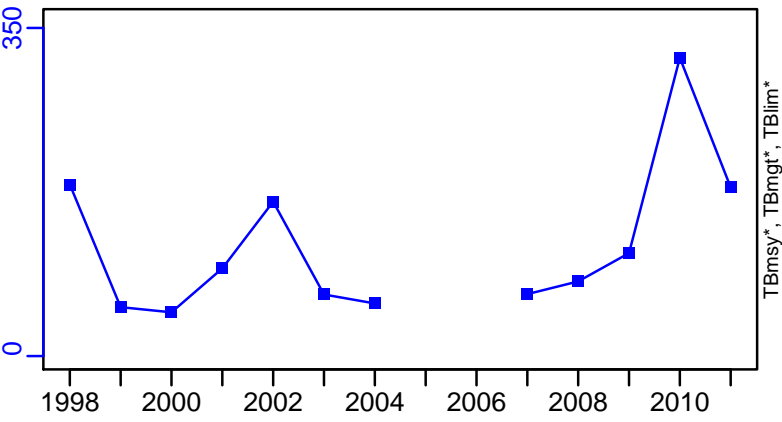


◆ Start Year ◆ End Year * No Data

Sidestripe shrimp Shrimp Management Area GTSE [SSHRIMPSMAGTSE]

TB-MT (1992-2011-WATSON)

SSB*



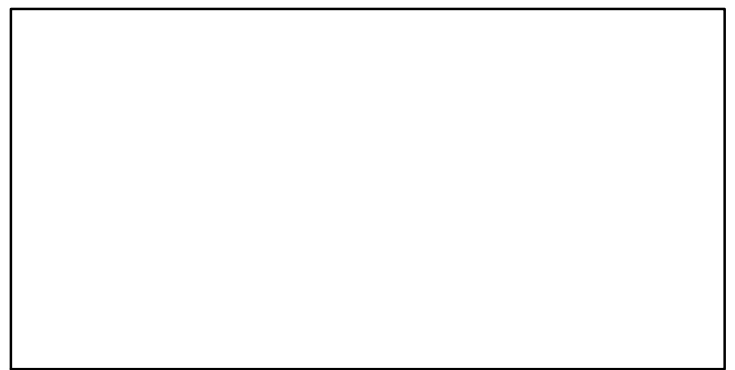
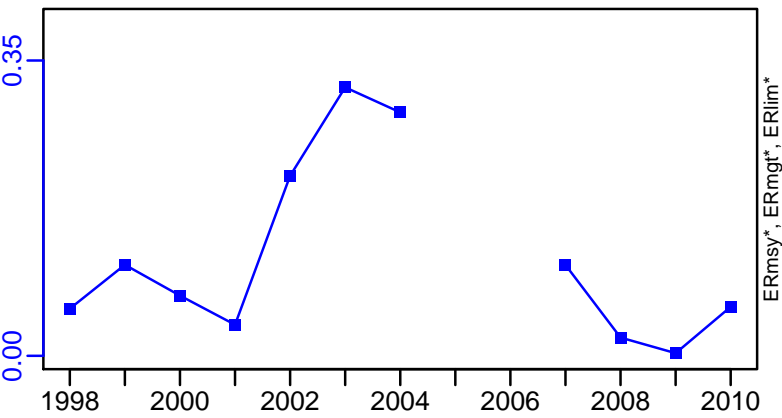
TN *

F*



ER-calc-ratio (1992-2011-WATSON)

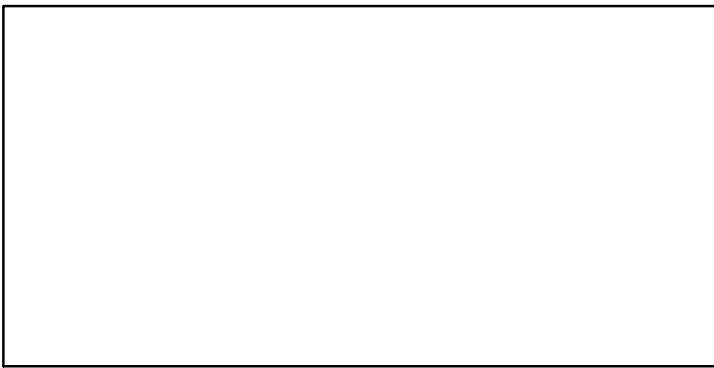
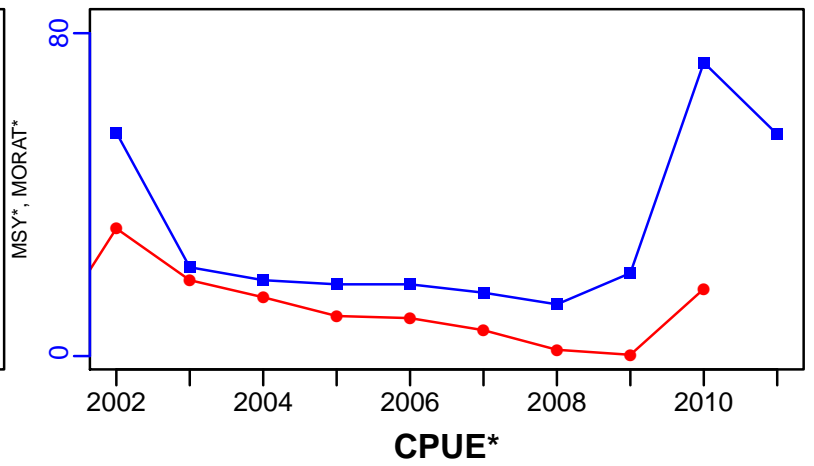
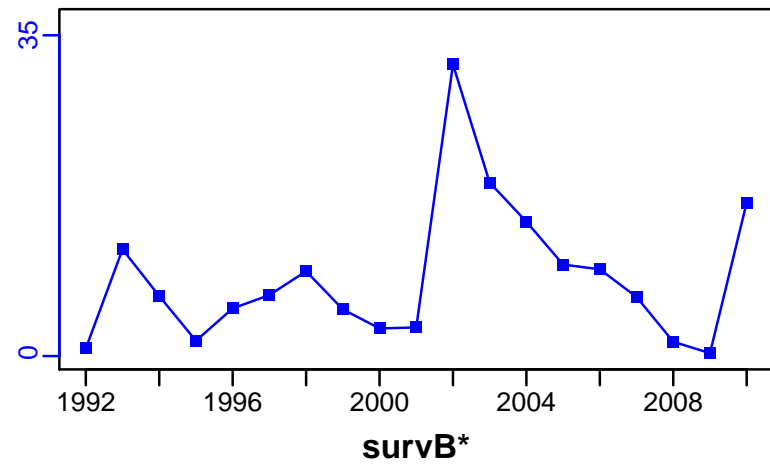
Recruits*



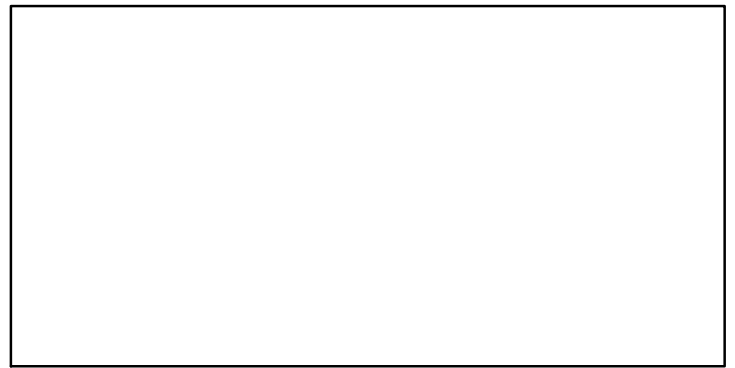
Sidestripe shrimp Shrimp Management Area GTSE [SSHRIMPSMAGTSE]

TL-MT, TC*, RecC* (1992-2011-WATSON)

TAC-MT, Cpair-MT, Cadv* (1992-2011-WATSON)



EFFORT*



CdivMSY*



Sidestripe shrimp Shrimp Management Area PRD [SSHRIMPSPMAPRD]

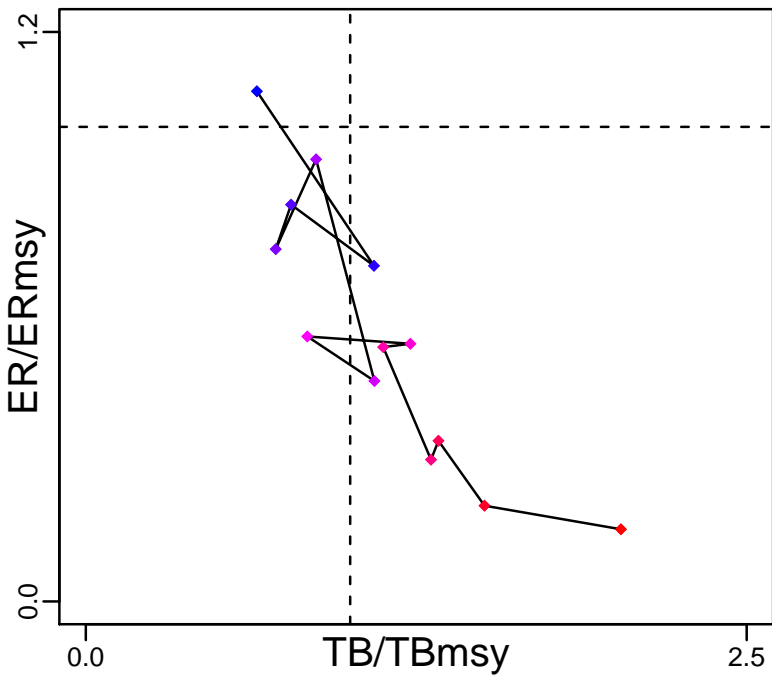
Metadata	
Scientific Name	Pandalopsis dispar
Current Assess ID	DFO-SSHRIMPSPMAPRD-1987-2011-WATSON
Area	Shrimp Management Area PRD
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2011	603
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2011	0.286
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2011	173
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

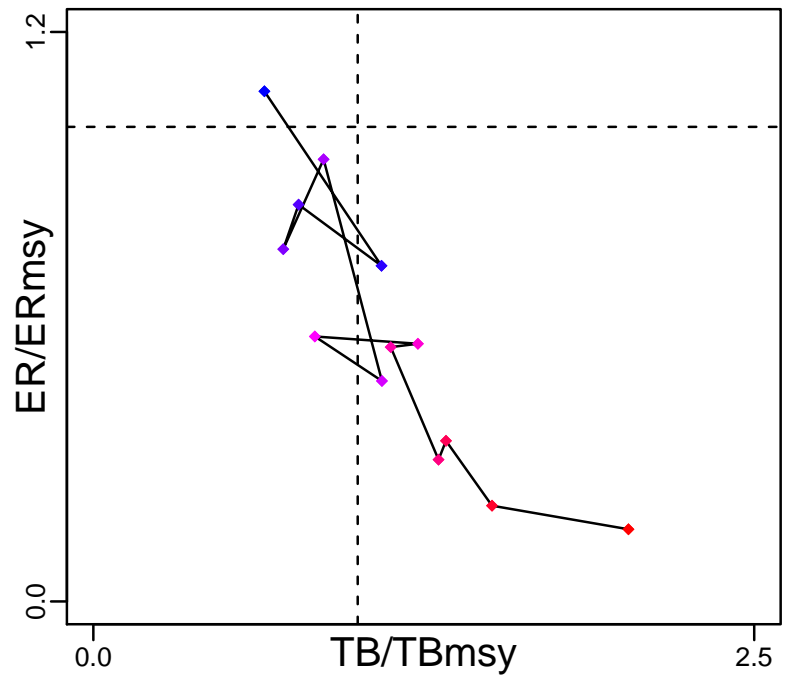
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	970	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0.044	-	-
TC	-	-	-		
TL	TL-MT	2011	53		
TB/TBmsy	TB-MT/TBmsy-est-MT	2011	1.609		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2011	0.152		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Sidestripe shrimp Shrimp Management Area PRD [SSHRIMPSMAPRD]

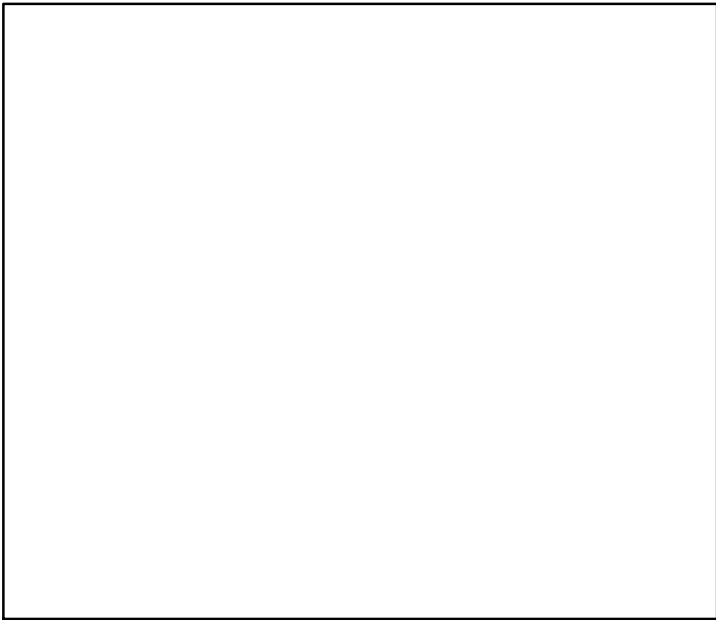
Kobe MSYpref (1987–2011–WATSON)



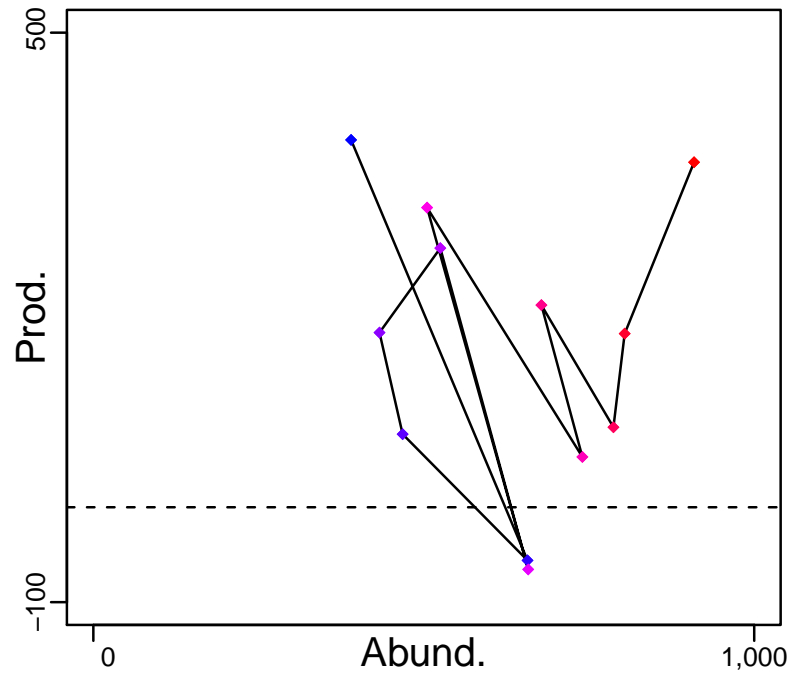
Kobe MGTpref (1987–2011–WATSON)



Spawner Recruit*



Production (1987–2011–WATSON)

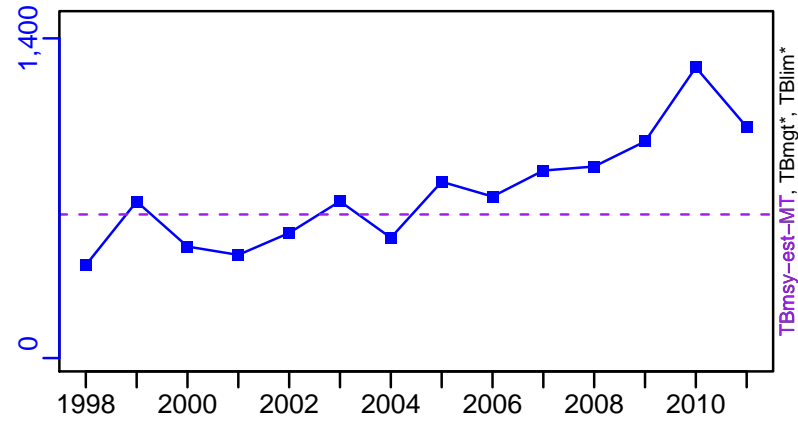


◆ Start Year ◆ End Year * No Data

Sidestripe shrimp Shrimp Management Area PRD [SSHRIMPSMAPRD]

TB-MT (1987-2011-WATSON)

SSB*



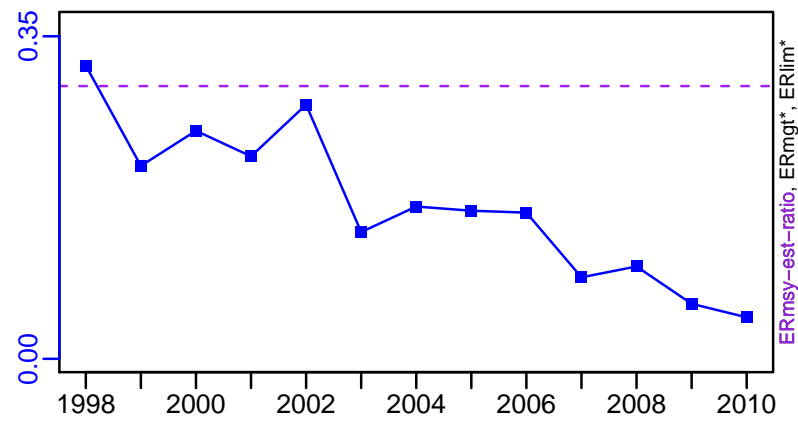
TN *

F*



ER-calc-ratio (1987-2011-WATSON)

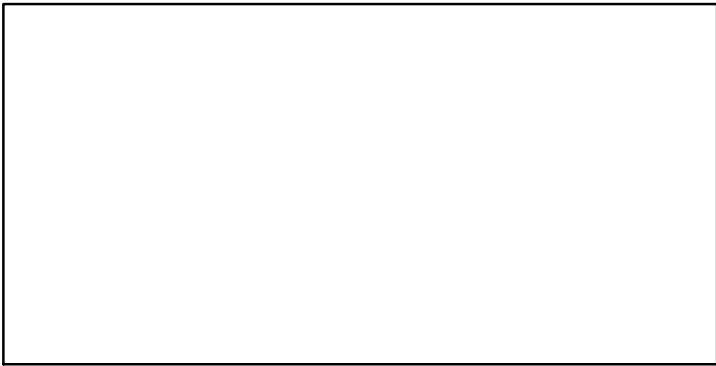
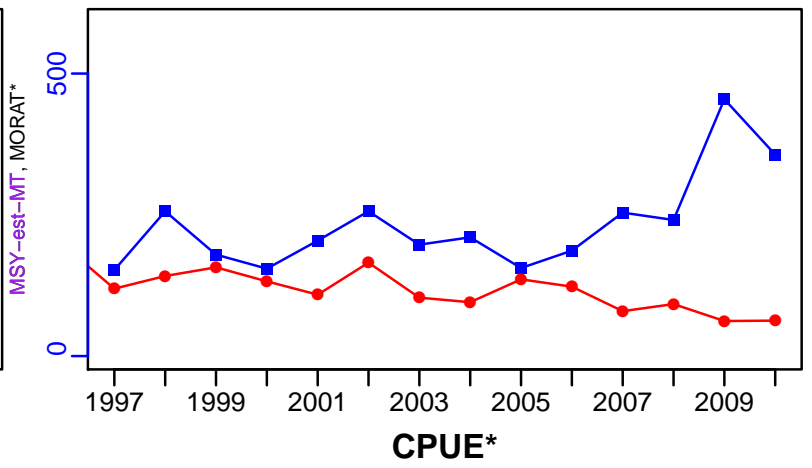
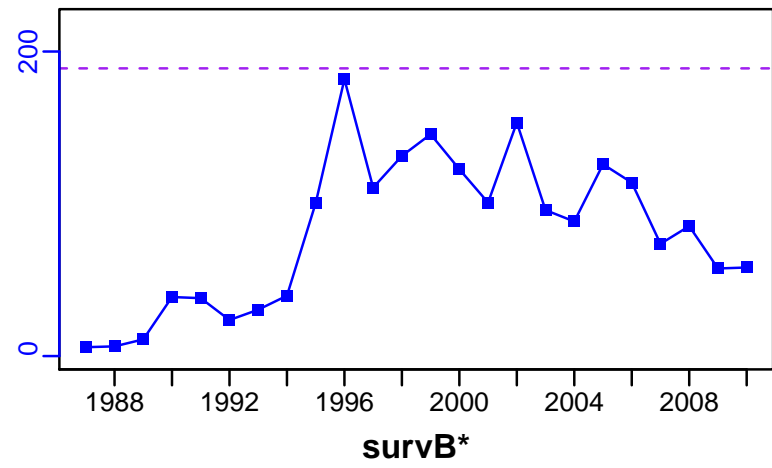
Recruits*



Sidestripe shrimp Shrimp Management Area PRD [SSHRIMPSMAPRD]

TL-MT, TC*, RecC* (1987-2011-WATSON)

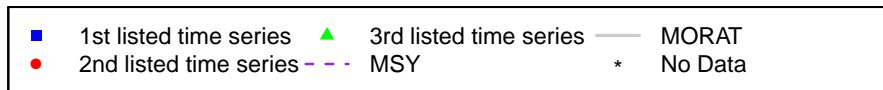
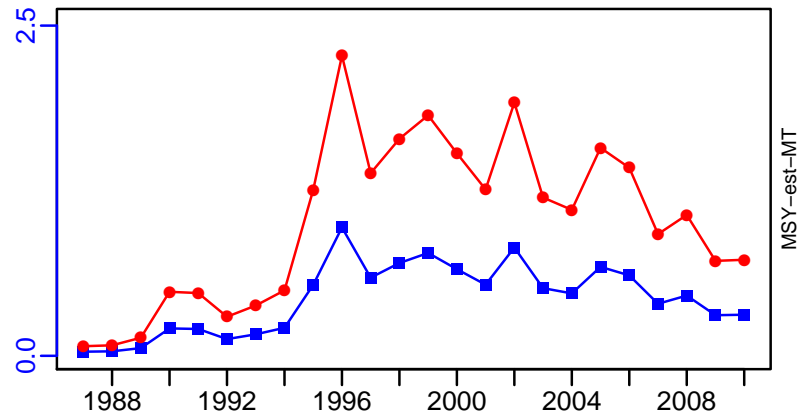
TAC-MT, Cpair-MT, Cadv* (1987-2011-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1987-2011-WATSON)



Sidestripe shrimp Shrimp Management Area 14 [SSSHRIMPSMA14]

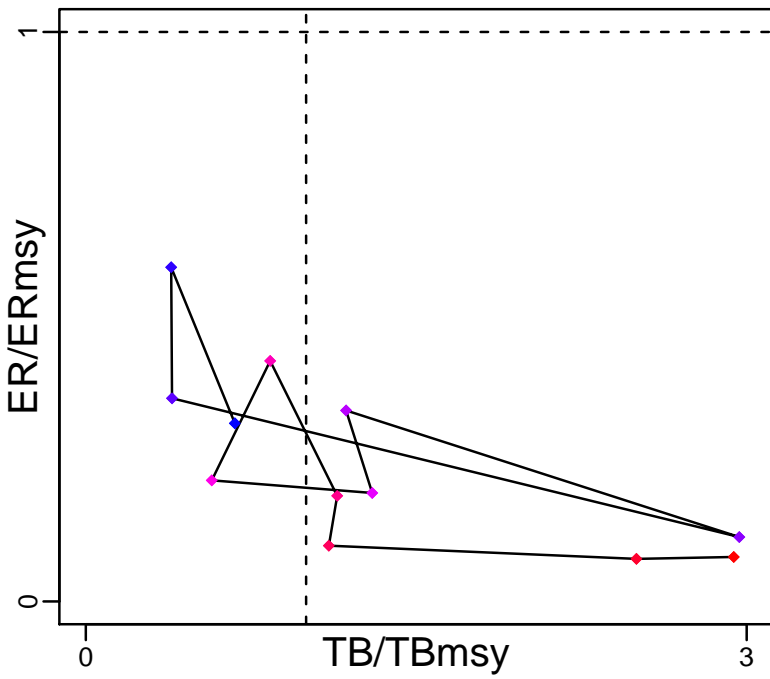
Metadata	
Scientific Name	Pandalopsis dispar
Current Assess ID	DFO-SSSHRIMPSMA14-1987-2011-WATSON
Area	Shrimp Management Area 14
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2011	79
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2011	0.561
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2011	44
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

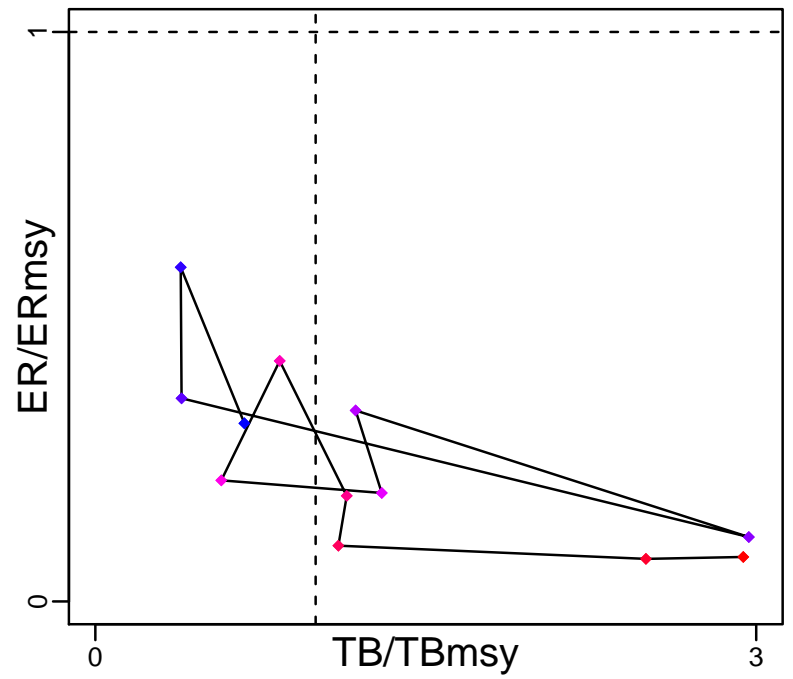
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	125	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0.044	-	-
TC	-	-	-		
TL	TL-MT	2011	10		
TB/TBmsy	TB-MT/TBmsy-est-MT	2011	1.578		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2011	0.078		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Sidestripe shrimp Shrimp Management Area 14 [SSSHRIMPSMA14]

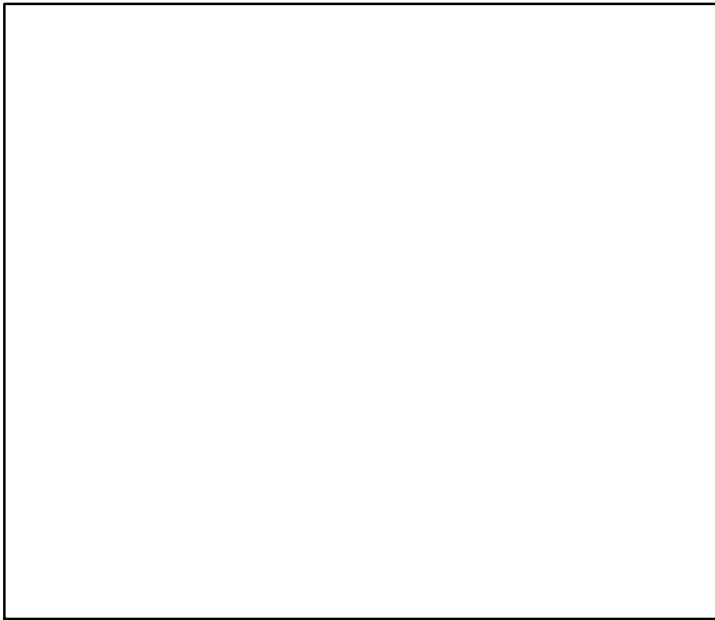
Kobe MSY_{pref} (1987–2011–WATSON)



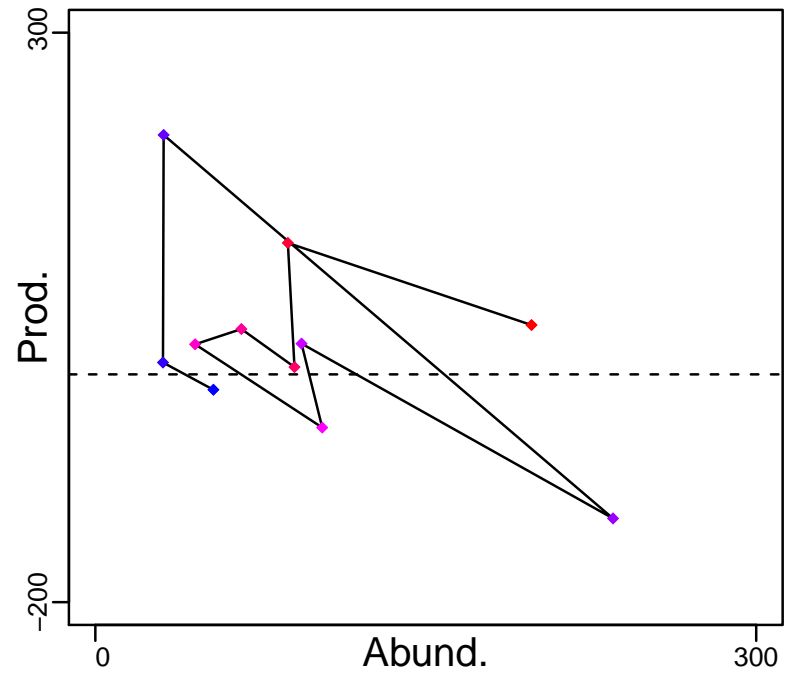
Kobe MGT_{pref} (1987–2011–WATSON)



Spawner Recruit*



Production (1987–2011–WATSON)

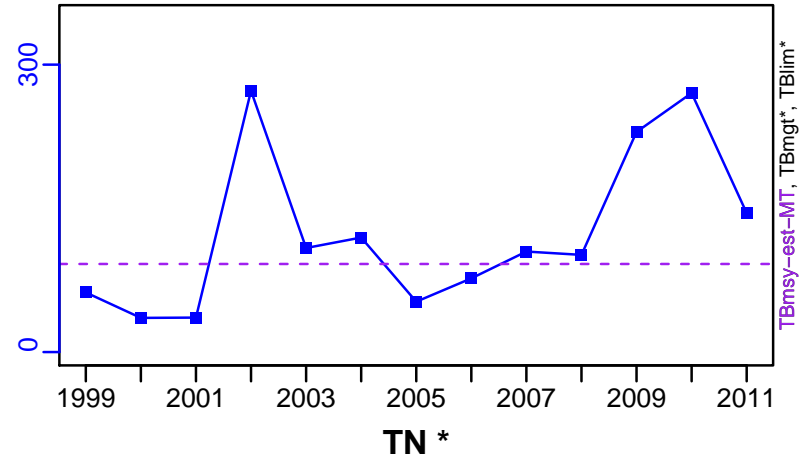


◆ Start Year ◆ End Year * No Data

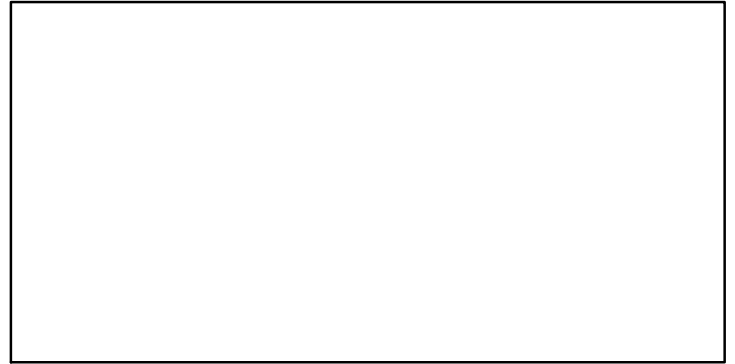
Sidestripe shrimp Shrimp Management Area 14 [SSSHRIMPSMA14]

TB-MT (1987-2011-WATSON)

SSB*

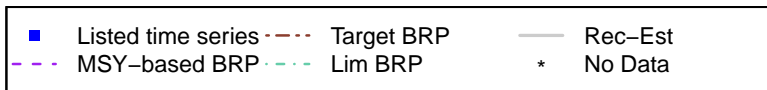
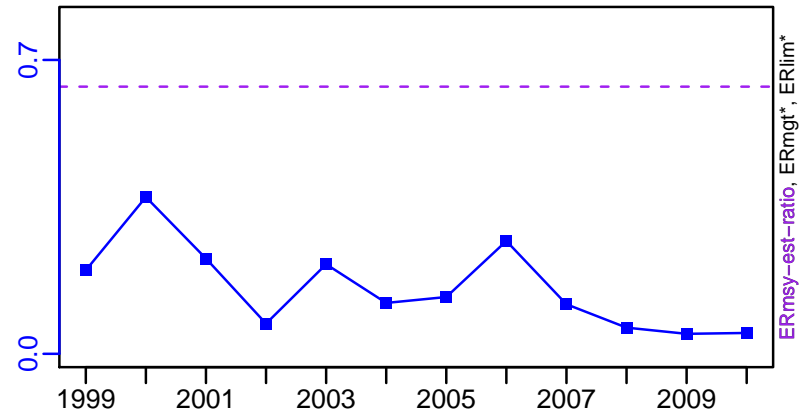


F*



ER-calc-ratio (1987-2011-WATSON)

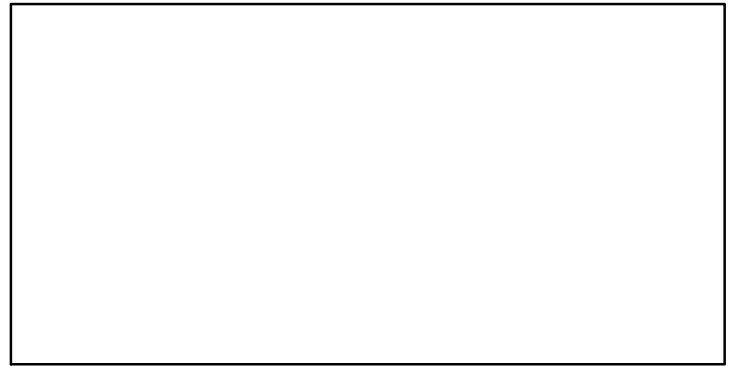
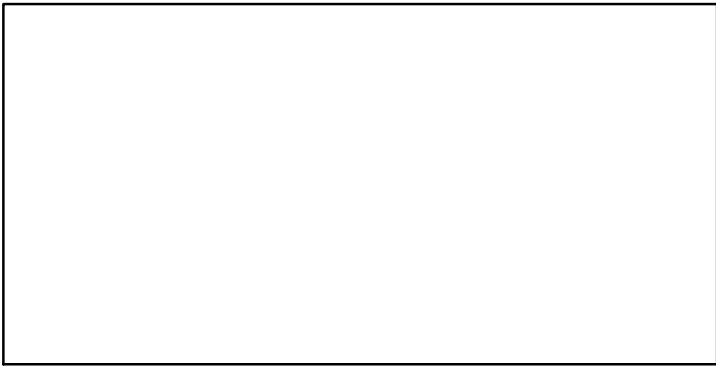
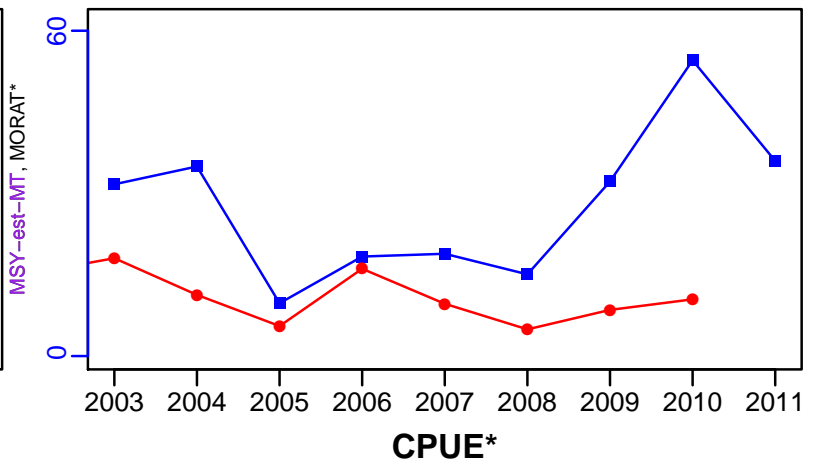
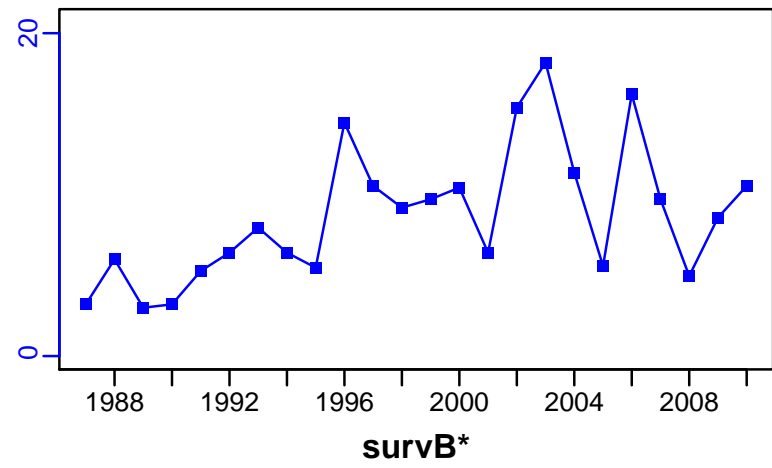
Recruits*



Sidestripe shrimp Shrimp Management Area 14 [SSSHRIMPSMA14]

TL-MT, TC*, RecC* (1987-2011-WATSON)

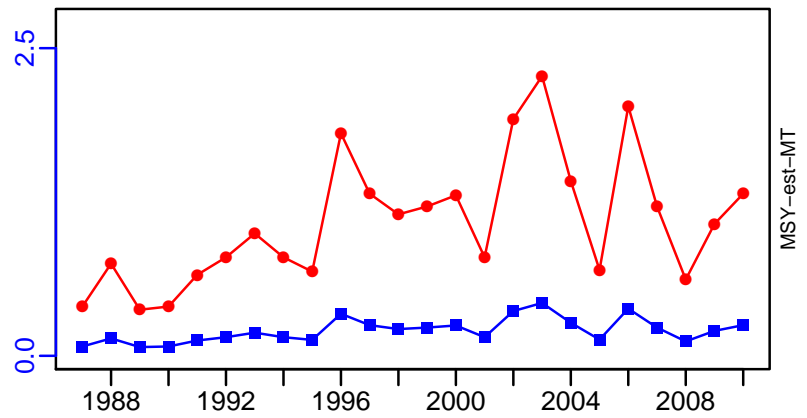
TAC-MT, Cpair-MT, Cadv* (1987-2011-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1987-2011-WATSON)



Sidestripe shrimp Shrimp Management Area 16 [SSSHRIMPSMA16]

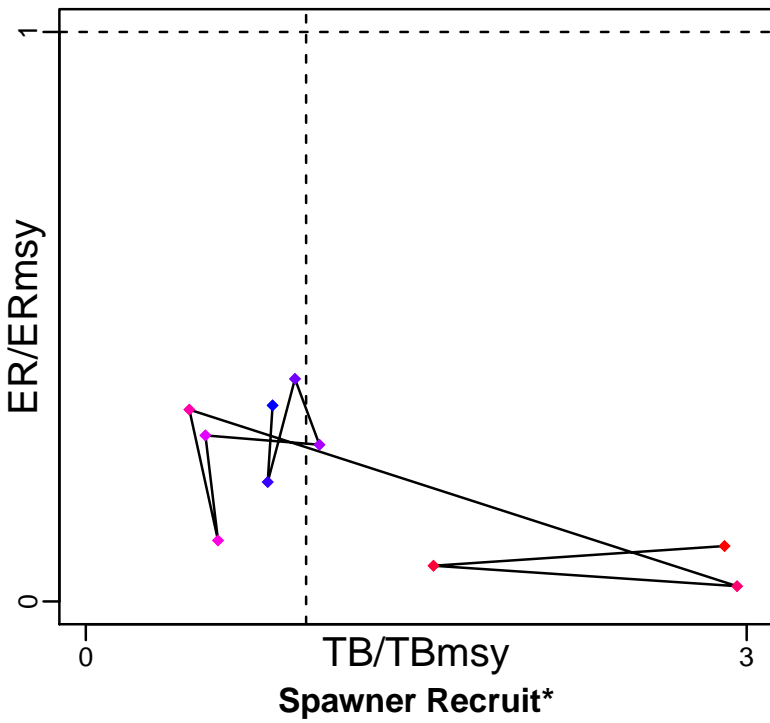
Metadata	
Scientific Name	Pandalopsis dispar
Current Assess ID	DFO-SSSHRIMPSMA16-1987-2011-WATSON
Area	Shrimp Management Area 16
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2011	31
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2011	0.642
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2011	20
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

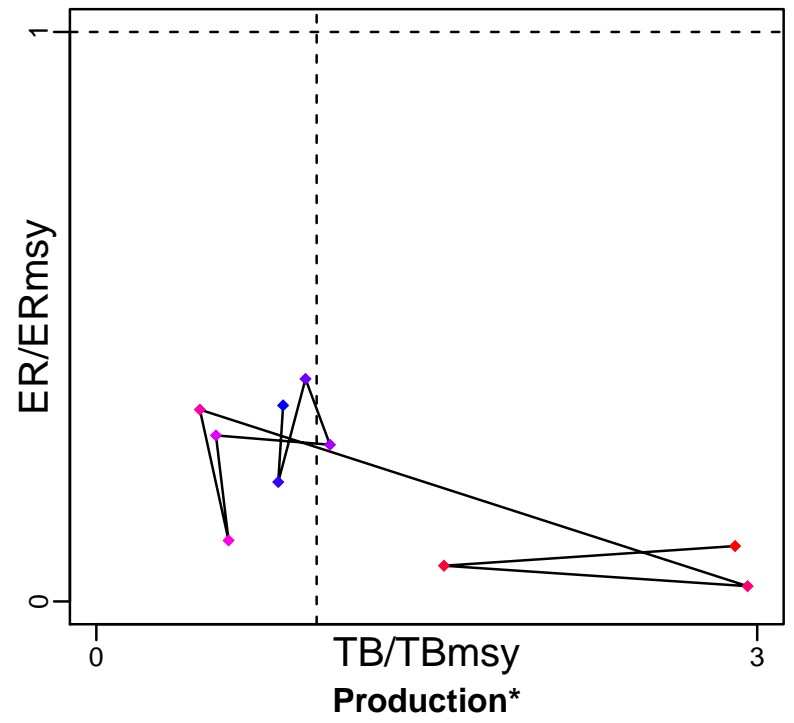
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	34	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0.062	-	-
TC	-	-	-		
TL	TL-MT	2011	6		
TB/TBmsy	TB-MT/TBmsy-est-MT	2011	1.064		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2011	0.097		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Sidestripe shrimp Shrimp Management Area 16 [SSSHRIMPSMA16]

Kobe MSYpref (1987–2011–WATSON)



Kobe MGTpref (1987–2011–WATSON)

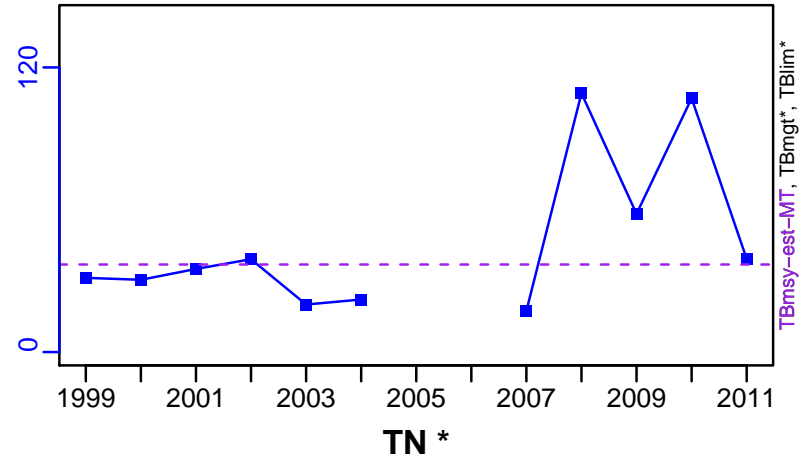


◆ Start Year ◆ End Year * No Data

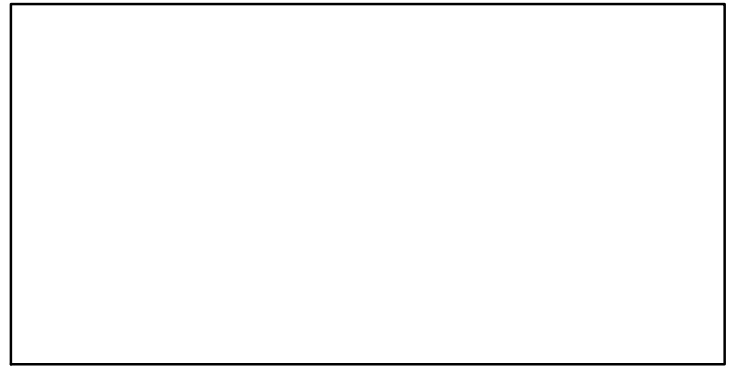
Sidestripe shrimp Shrimp Management Area 16 [SSSHRIMPSMA16]

TB-MT (1987-2011-WATSON)

SSB*

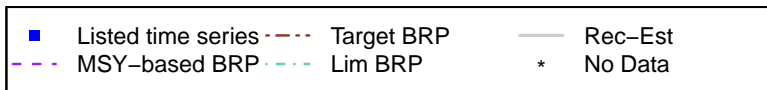
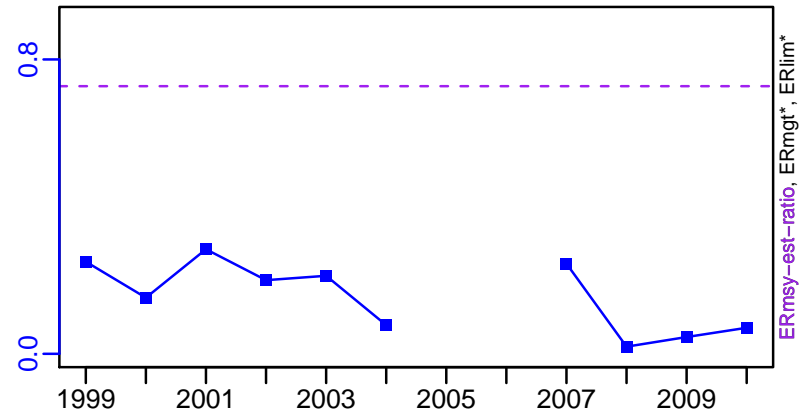


F*



ER-calc-ratio (1987-2011-WATSON)

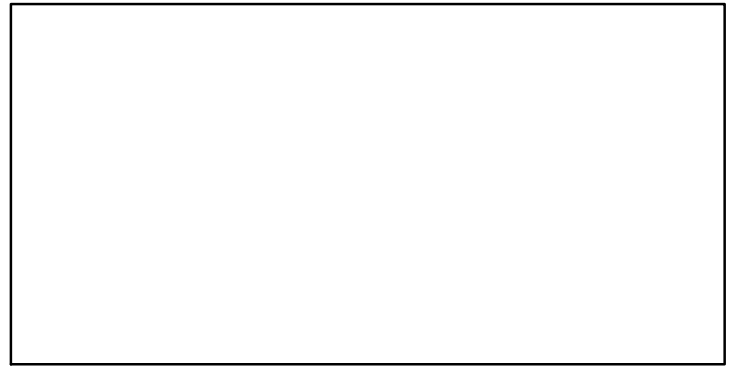
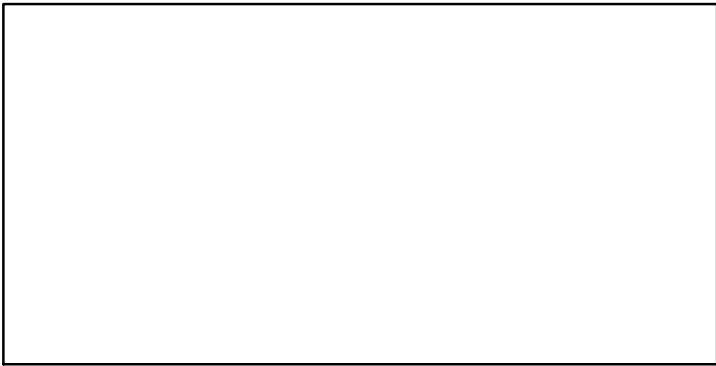
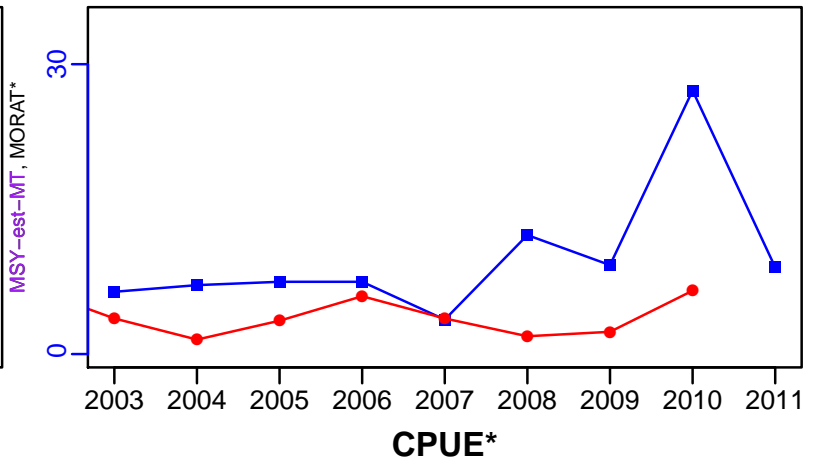
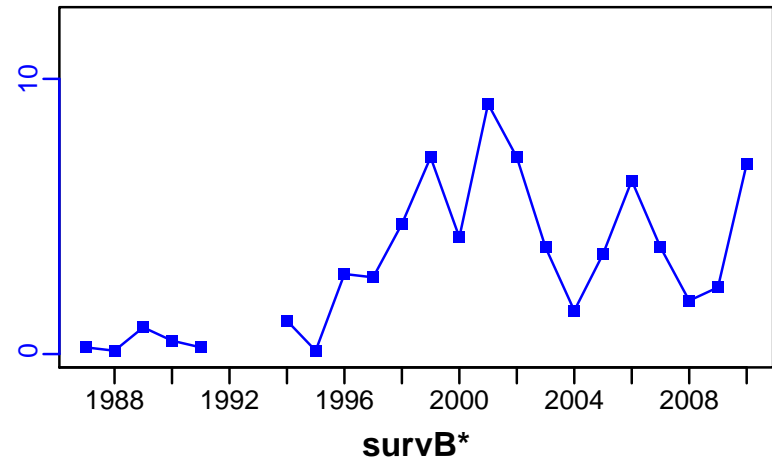
Recruits*



Sidestripe shrimp Shrimp Management Area 16 [SSSHRIMPSMA16]

TL-MT, TC*, RecC* (1987-2011-WATSON)

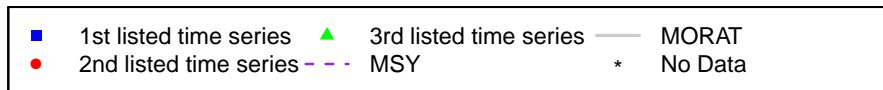
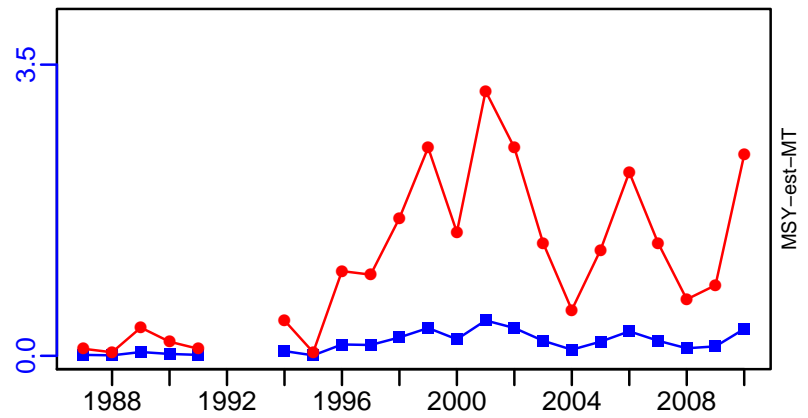
TAC-MT, Cpair-MT, Cadv* (1987-2011-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1987-2011-WATSON)



Sidestripe shrimp Shrimp Management Areas 18 and 19 [SSSHRIMPSMA18-19]

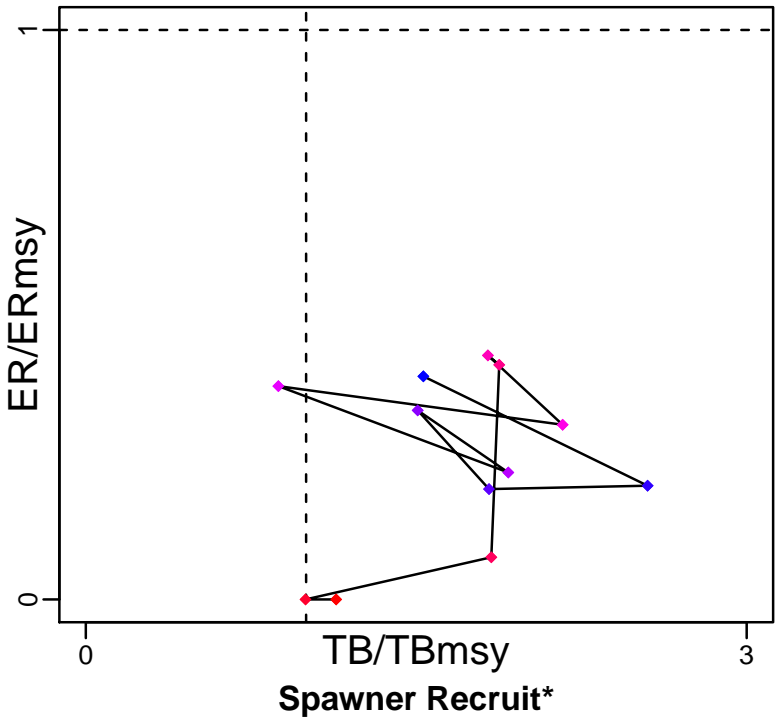
Metadata	
Scientific Name	Pandalopsis dispar
Current Assess ID	DFO-SSSHRIMPSMA18-19-1987-2011-WATSON
Area	Shrimp Management Areas 18 and 19
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2011	19
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2011	0.565
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2011	11
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

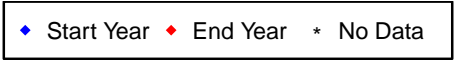
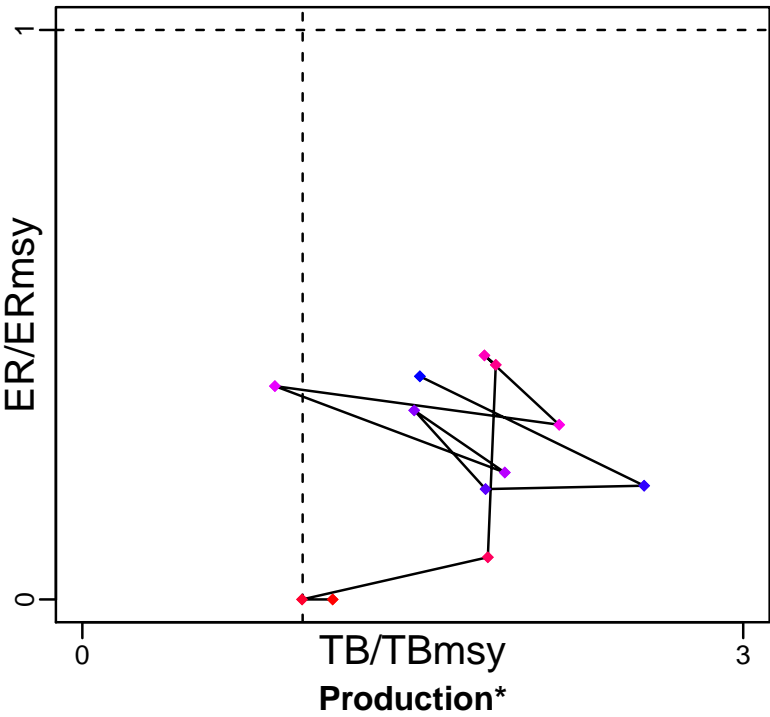
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	22	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0	-	-
TC	-	-	-		
TL	TL-MT	2011	0		
TB/TBmsy	TB-MT/TBmsy-est-MT	2011	1.136		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2011	0		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Sidestripe shrimp Shrimp Management Areas 18 and 19 [SSSHRIMPSMA18-19]

Kobe MSYpref (1987-2011-WATSON)



Kobe MGTpref (1987-2011-WATSON)



Sidestripe shrimp Shrimp Management Areas 18 and 19 [SSSHRIMPSMA18-19]

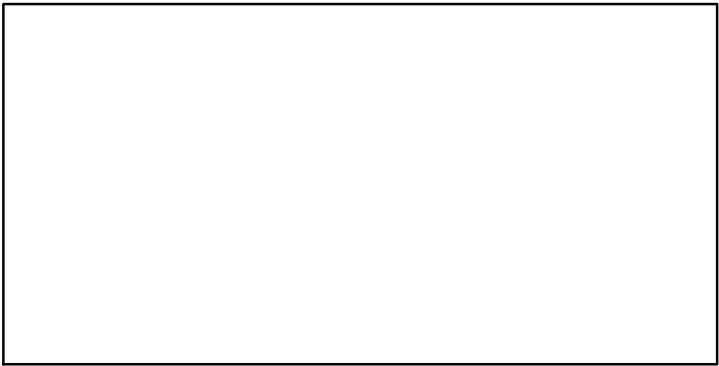
TB-MT (1987-2011-WATSON)



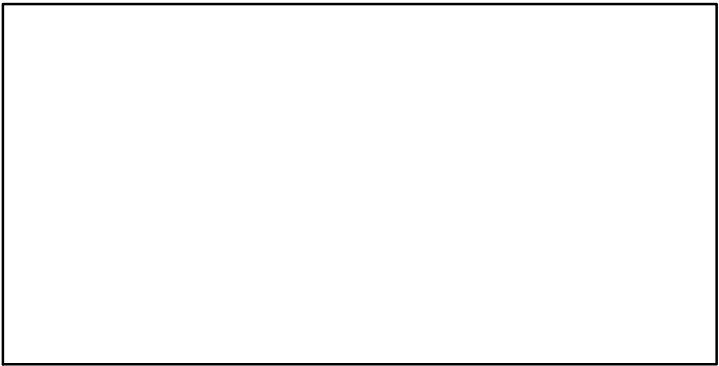
SSB*



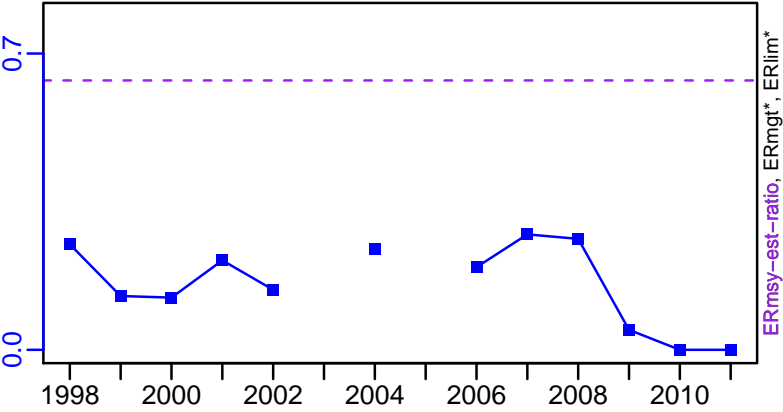
TN *



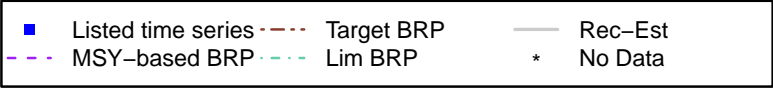
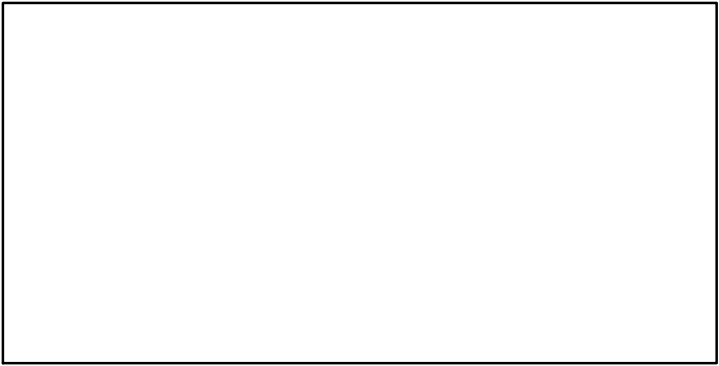
F*



ER-calc-ratio (1987-2011-WATSON)

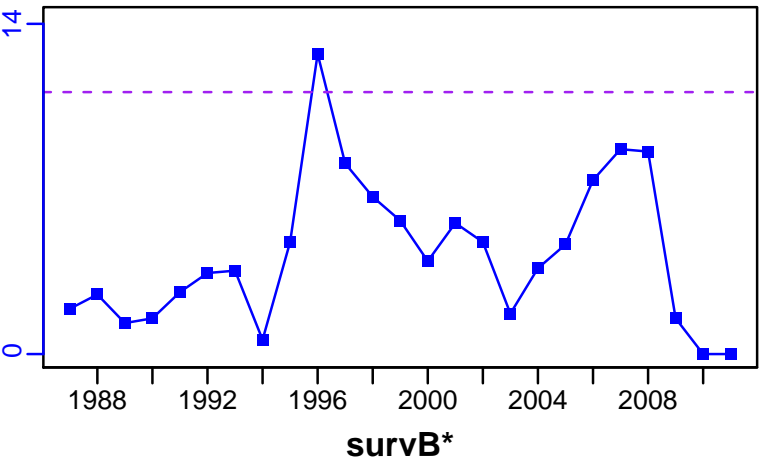


Recruits*

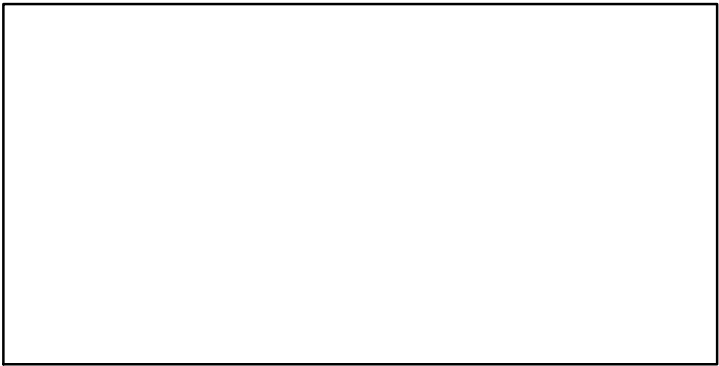
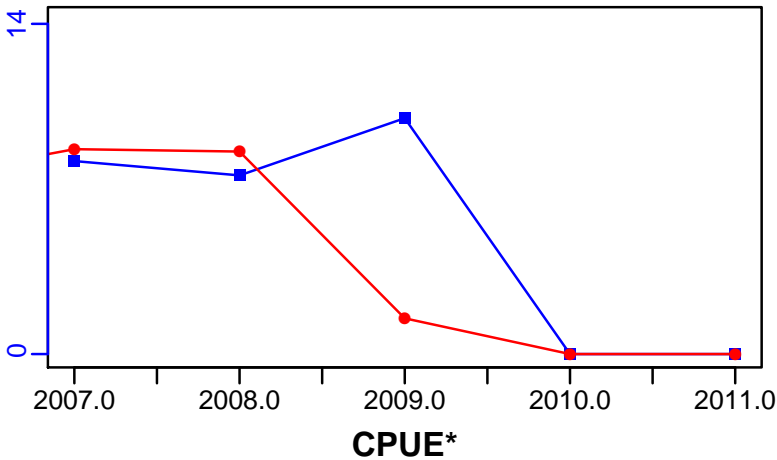


Sidestripe shrimp Shrimp Management Areas 18 and 19 [SSSHRIMPSMA18-19]

TL-MT, TC*, RecC* (1987-2011-WATSON)



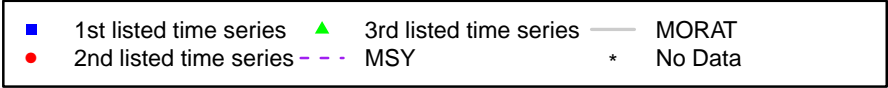
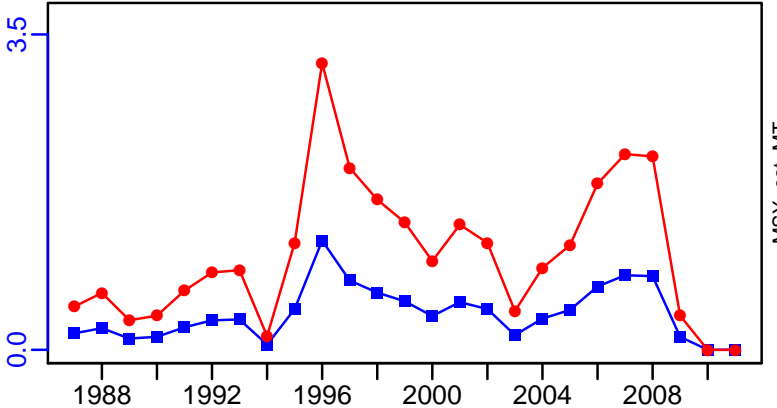
TAC-MT, Cpair-MT, Cadv* (1987-2011-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1987-2011-WATSON)



Sidestripe shrimp Shrimp Management Area FR [SSSHRIMPSMAFR]

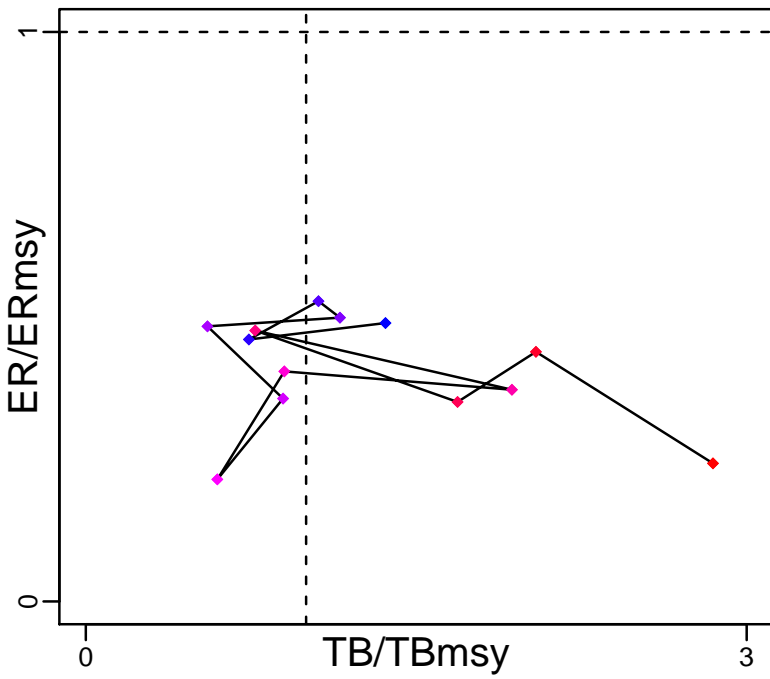
Metadata	
Scientific Name	Pandalopsis dispar
Current Assess ID	DFO-SSSHRIMPSMAFR-1987-2011-WATSON
Area	Shrimp Management Area FR
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-est-MT	2011	174
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2011	0.318
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2011	55
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

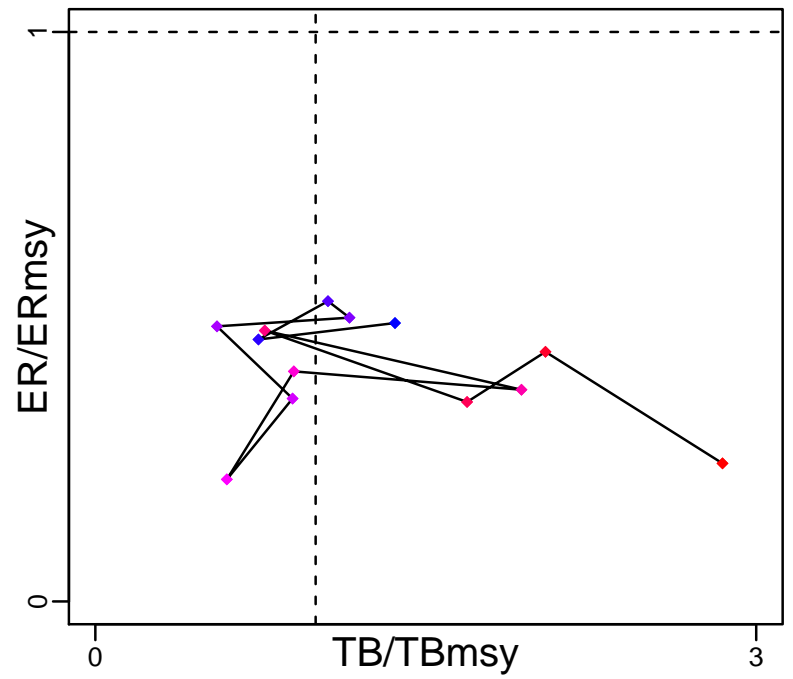
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	520	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2011	0.077	-	-
TC	-	-	-		
TL	TL-MT	2011	38		
TB/TBmsy	TB-MT/TBmsy-est-MT	2011	2.985		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2011	0.242		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Sidestripe shrimp Shrimp Management Area FR [SSSHRIMPSMAFR]

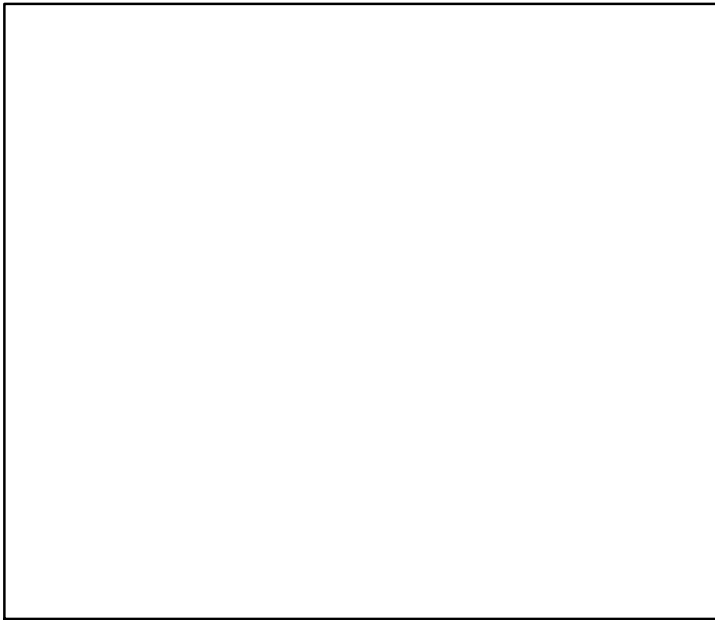
Kobe MSYpref (1987–2011–WATSON)



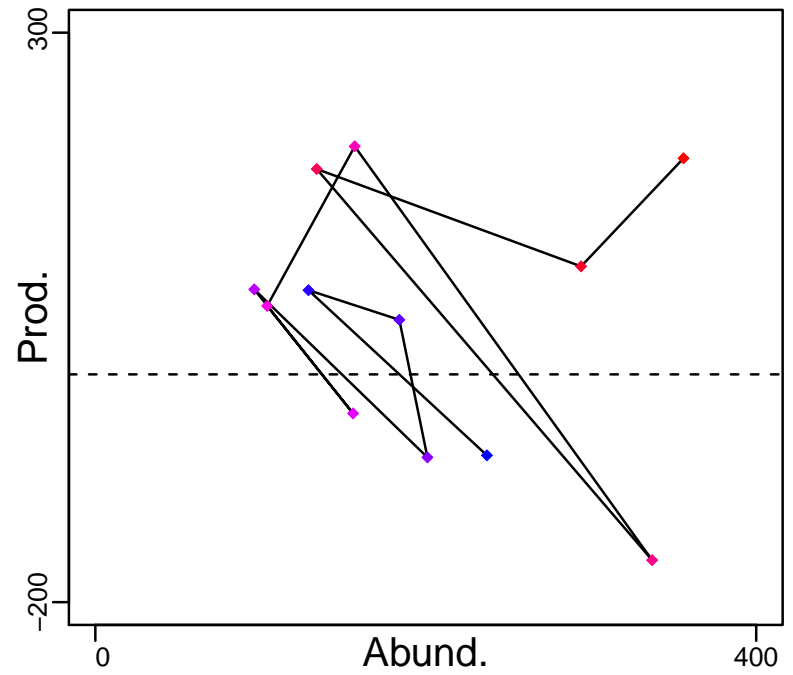
Kobe MGTpref (1987–2011–WATSON)



Spawner Recruit*



Production (1987–2011–WATSON)

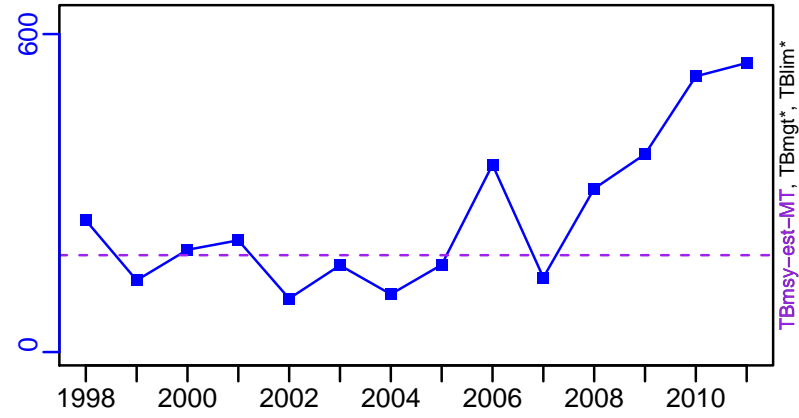


◆ Start Year ◆ End Year * No Data

Sidestripe shrimp Shrimp Management Area FR [SSSHRIMPSMAFR]

TB-MT (1987-2011-WATSON)

SSB*



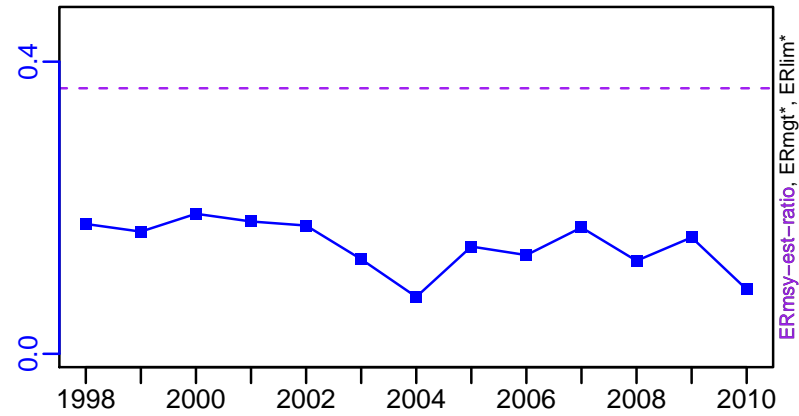
TN *

F*



ER-calc-ratio (1987-2011-WATSON)

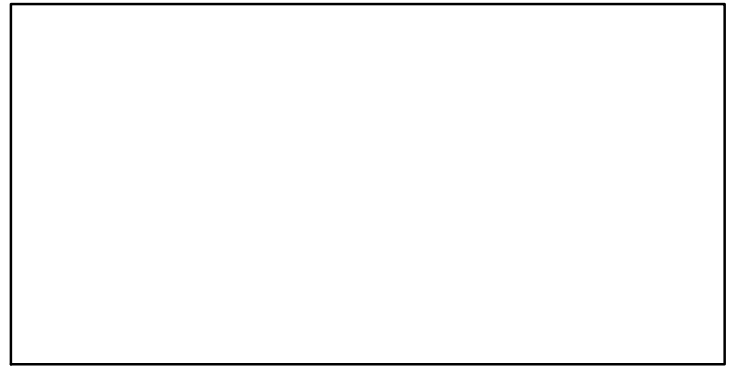
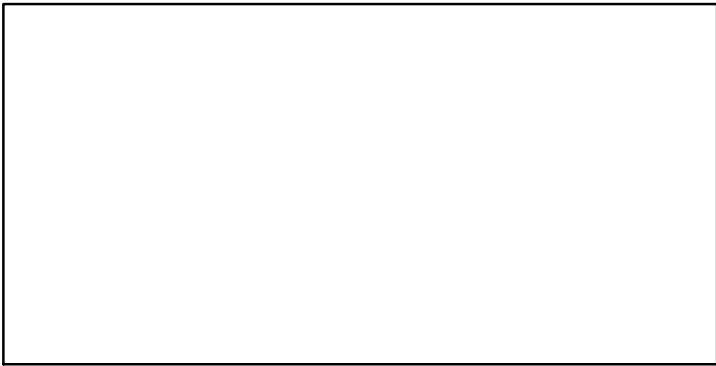
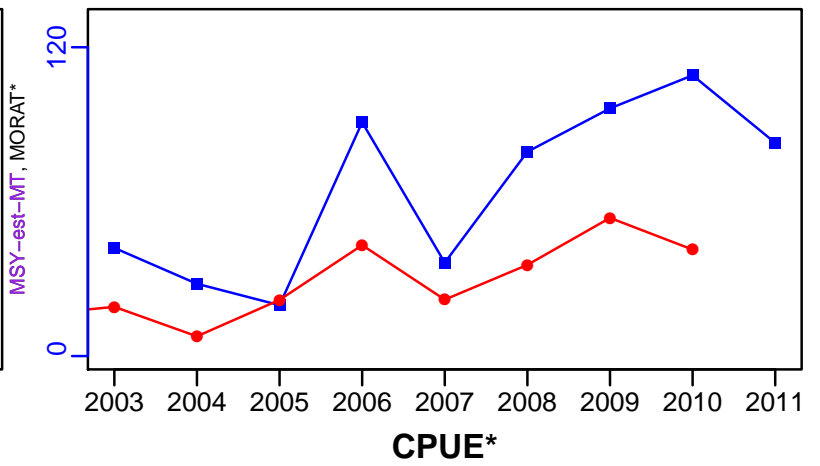
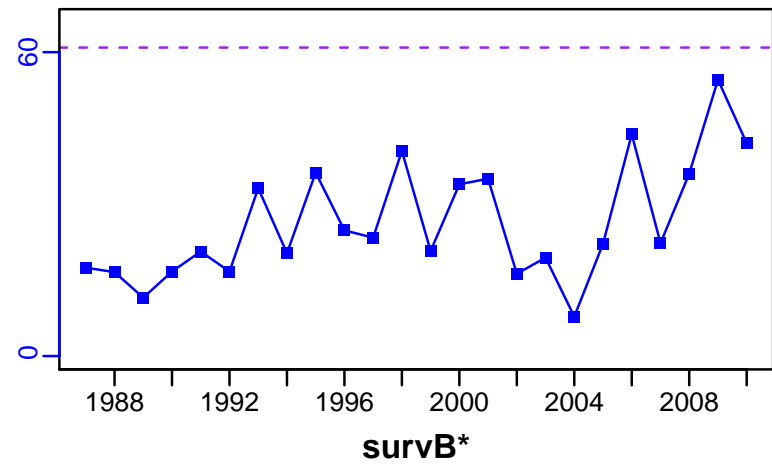
Recruits*



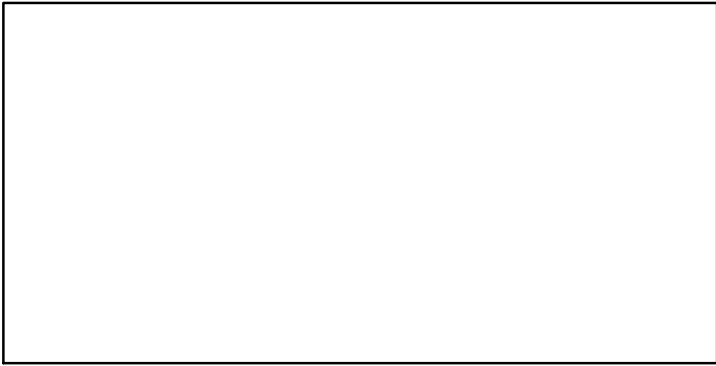
Sidestripe shrimp Shrimp Management Area FR [SSSHRIMPSMAFR]

TL-MT, TC*, RecC* (1987-2011-WATSON)

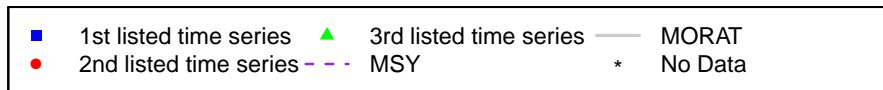
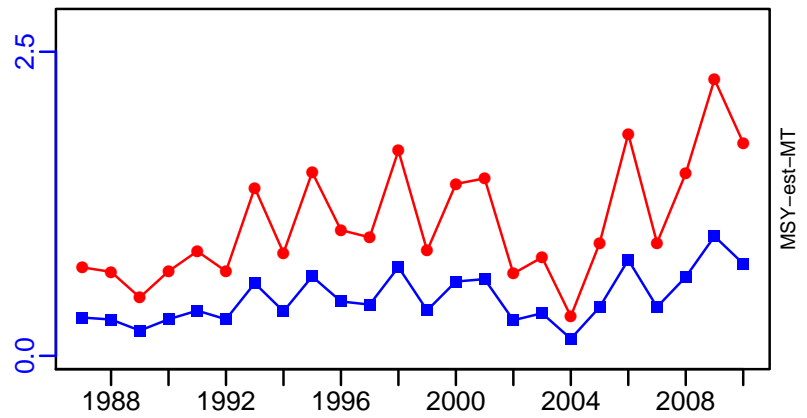
TAC-MT, Cpair-MT, Cadv* (1987-2011-WATSON)



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1987-2011-WATSON)



Walleye pollock British Columbia Waters North [WPOLLBCWN]

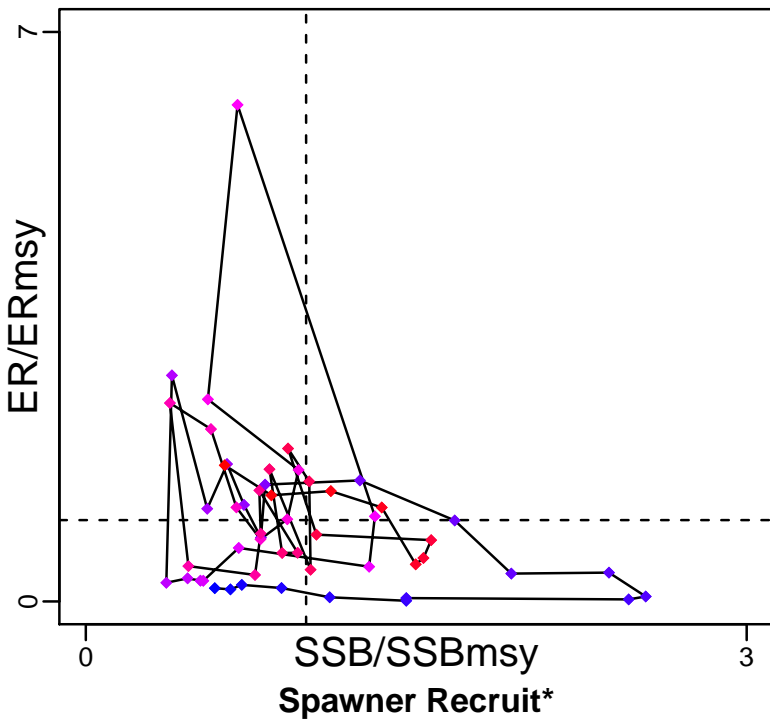
Metadata	
Scientific Name	Theragra chalcogramma
Current Assess ID	DFO-PAC-WPOLLBCWN-1966-2018-ASHBROOK
Area	British Columbia Waters North
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-MT	2018	7837
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2018	0.051
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2018	5727
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2018	1104
M	M-1/yr	2018	0.3
TBlim	-	-	-
SSBlim	SSBlim-MT	2018	2864
Flim	-	-	-
ERlim	-	-	-

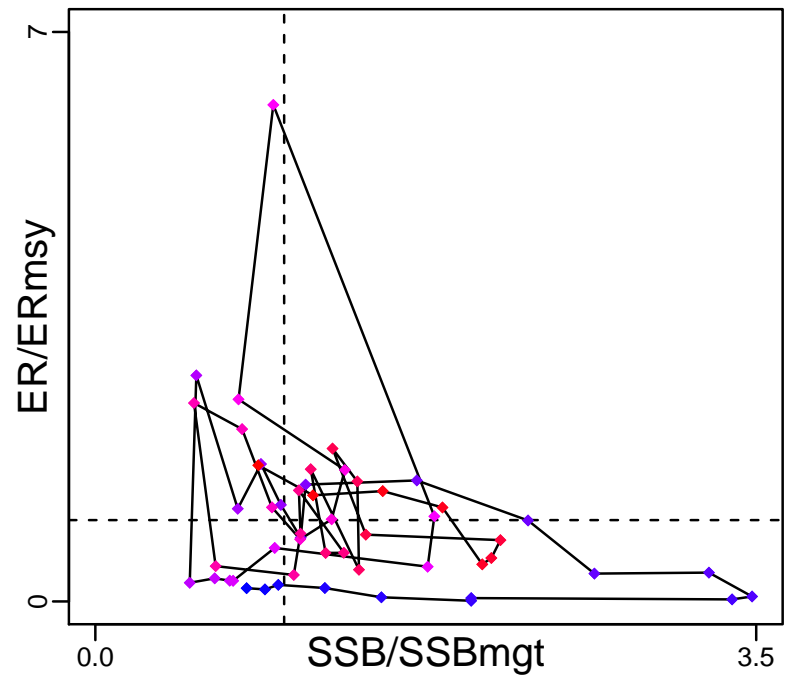
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2018	4943	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2018	0.085	-	-
TC	-	-	-		
TL	TL-MT	2018	1165		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2018	0.631		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2018	1.674		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2018	0.863		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Walleye pollock British Columbia Waters North [WPOLLBCWN]

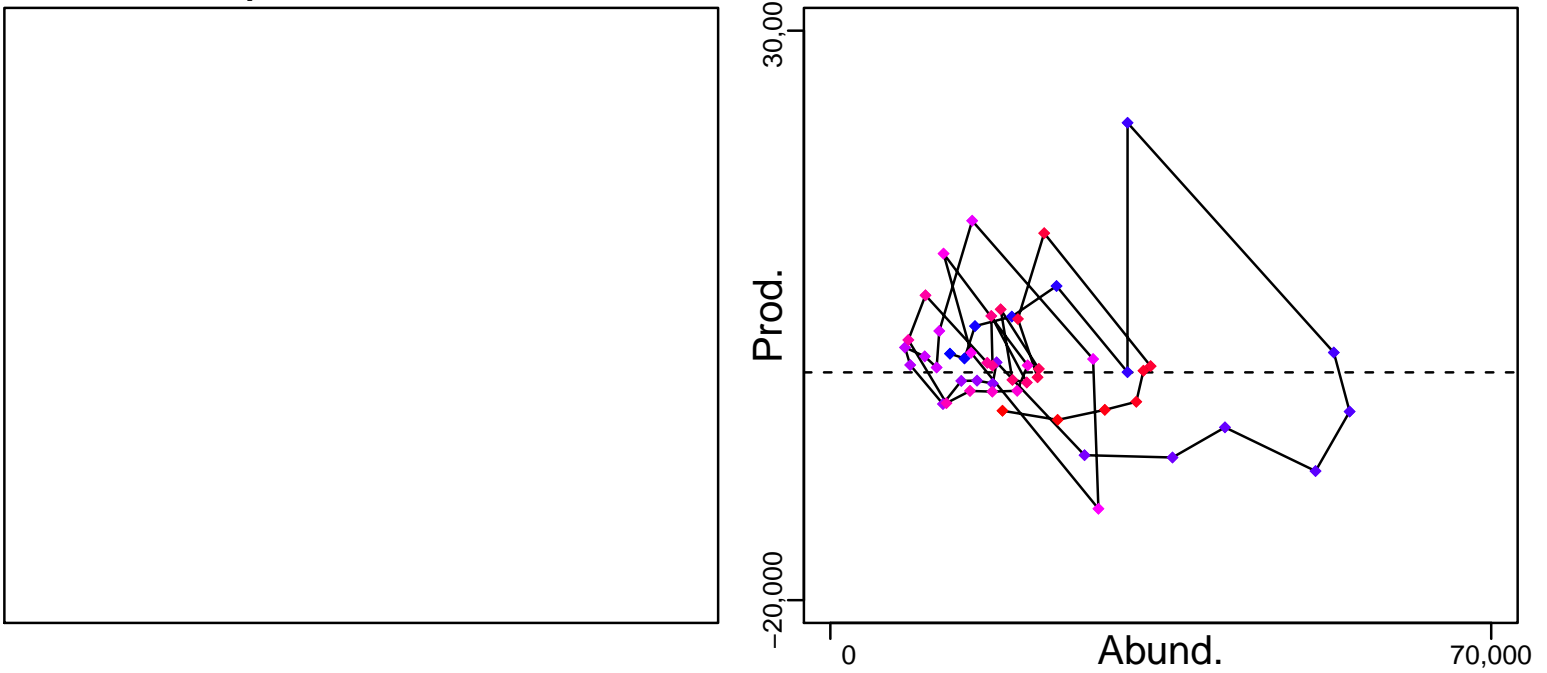
Kobe MSYpref (1966–2018–ASHBROOK)



Kobe MGTpref (1966–2018–ASHBROOK)



Production (1966–2018–ASHBROOK)



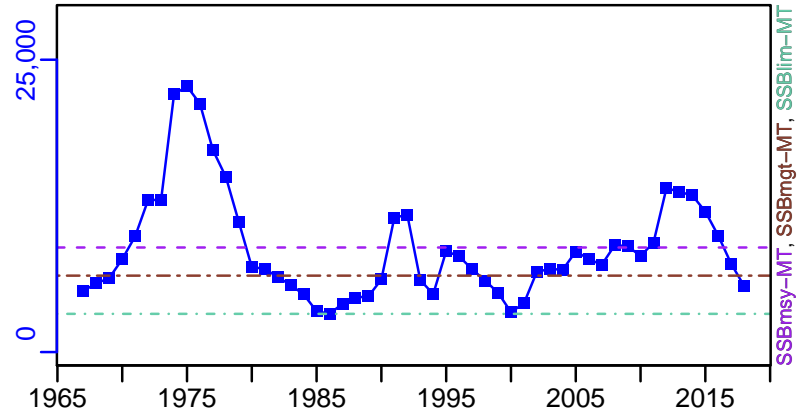
◆ Start Year ◆ End Year * No Data

Walleye pollock British Columbia Waters North [WPOLLBCWN]

TB*



SSB-MT (1966–2018–ASHBROOK)



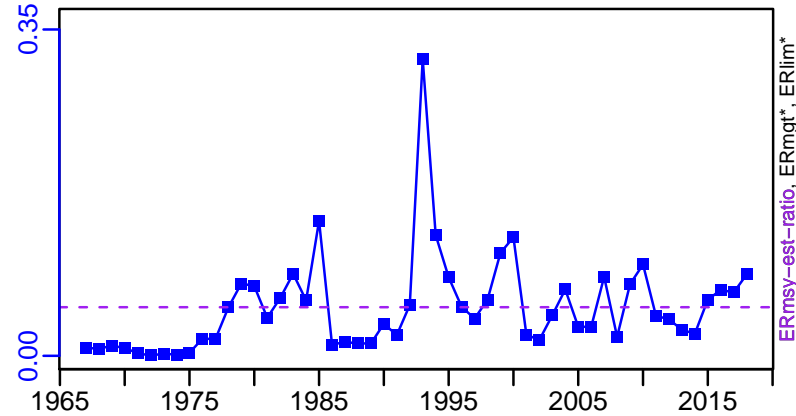
TN *



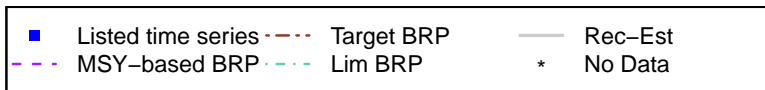
F*



ER-calc-ratio (1966–2018–ASHBROOK)



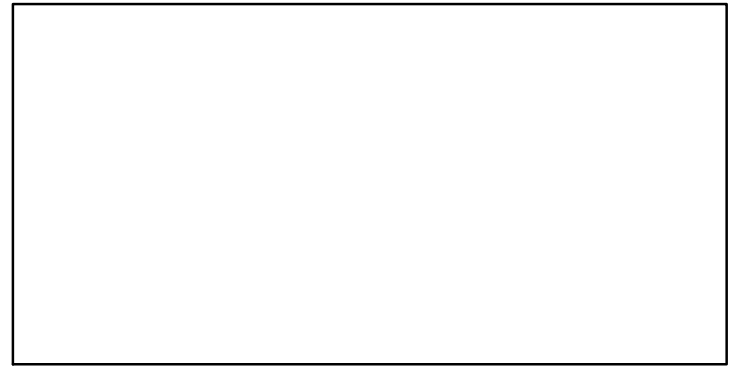
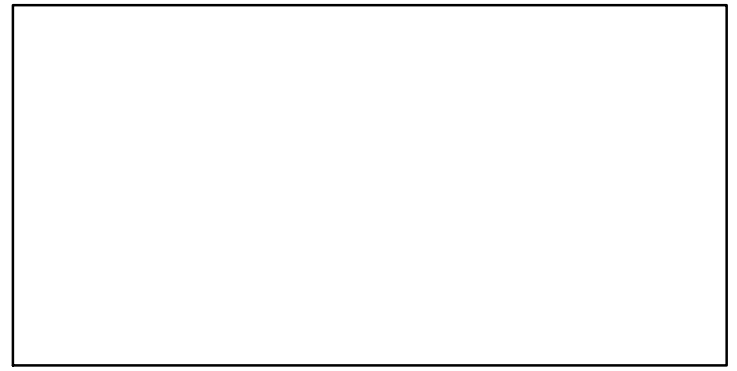
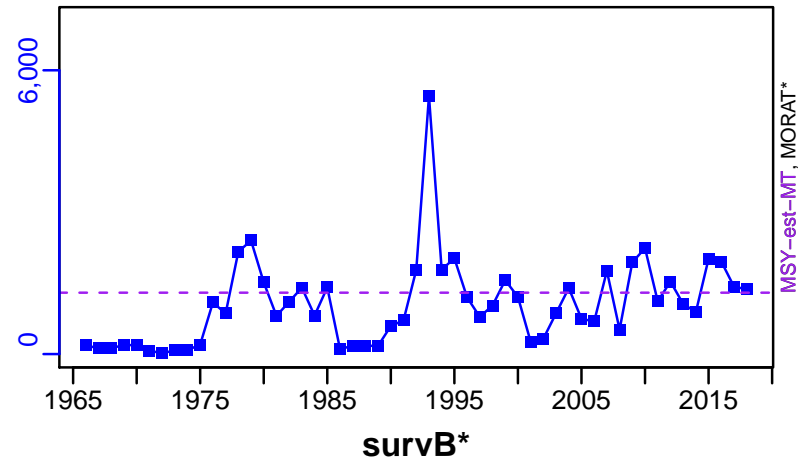
Recruits*



Walleye pollock British Columbia Waters North [WPOLLBCWN]

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

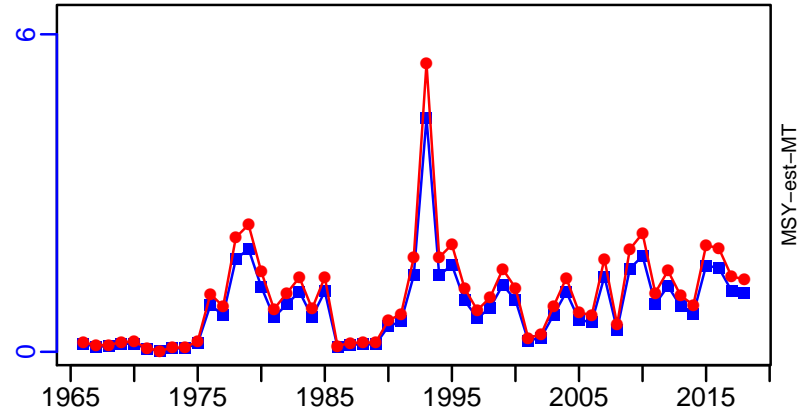
TAC*, Cpair*, Cadv*



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1966-2018-ASHBROOK)



Walleye pollock British Columbia Waters South [WPOLLBCWS]

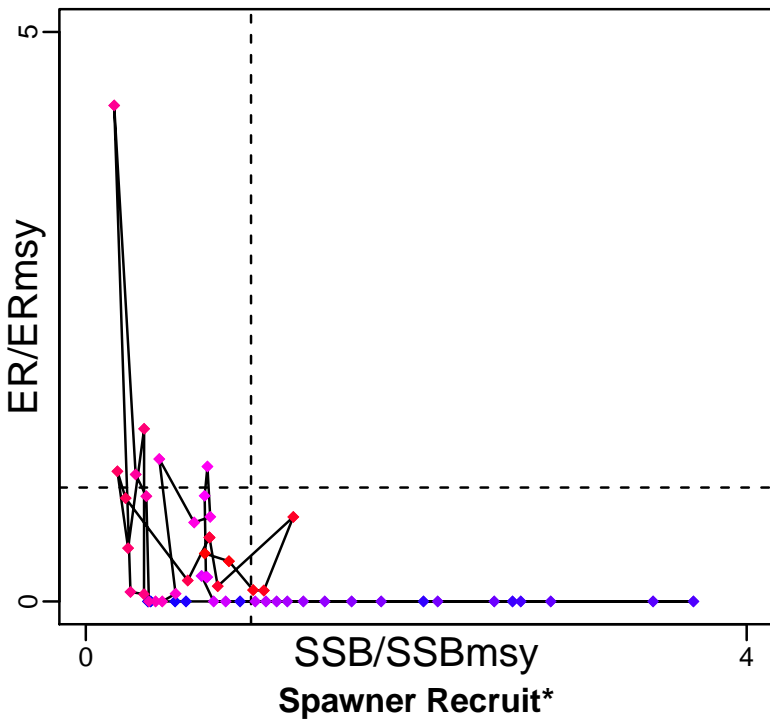
Metadata	
Scientific Name	Theragra chalcogramma
Current Assess ID	DFO-PAC-WPOLLBCWS-1966-2018-ASHBROOK
Area	British Columbia Waters South
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-MT	2018	33,487
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2018	0.057
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2018	11,504
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2018	5303
M	M-1/yr	2018	0.3
TBlim	-	-	-
SSBlim	SSBlim-MT	2018	5752
Flim	-	-	-
ERlim	-	-	-

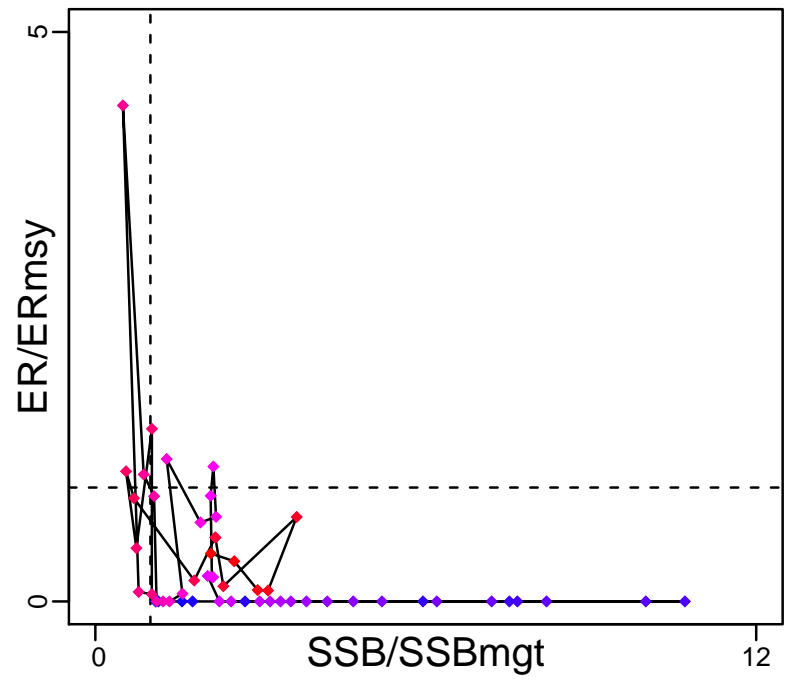
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2018	24,113	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2018	0.024	-	-
TC	-	-	-		
TL	TL-MT	2018	1608		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2018	0.72		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2018	0.421		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2018	2.096		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Walleye pollock British Columbia Waters South [WPOLLBCWS]

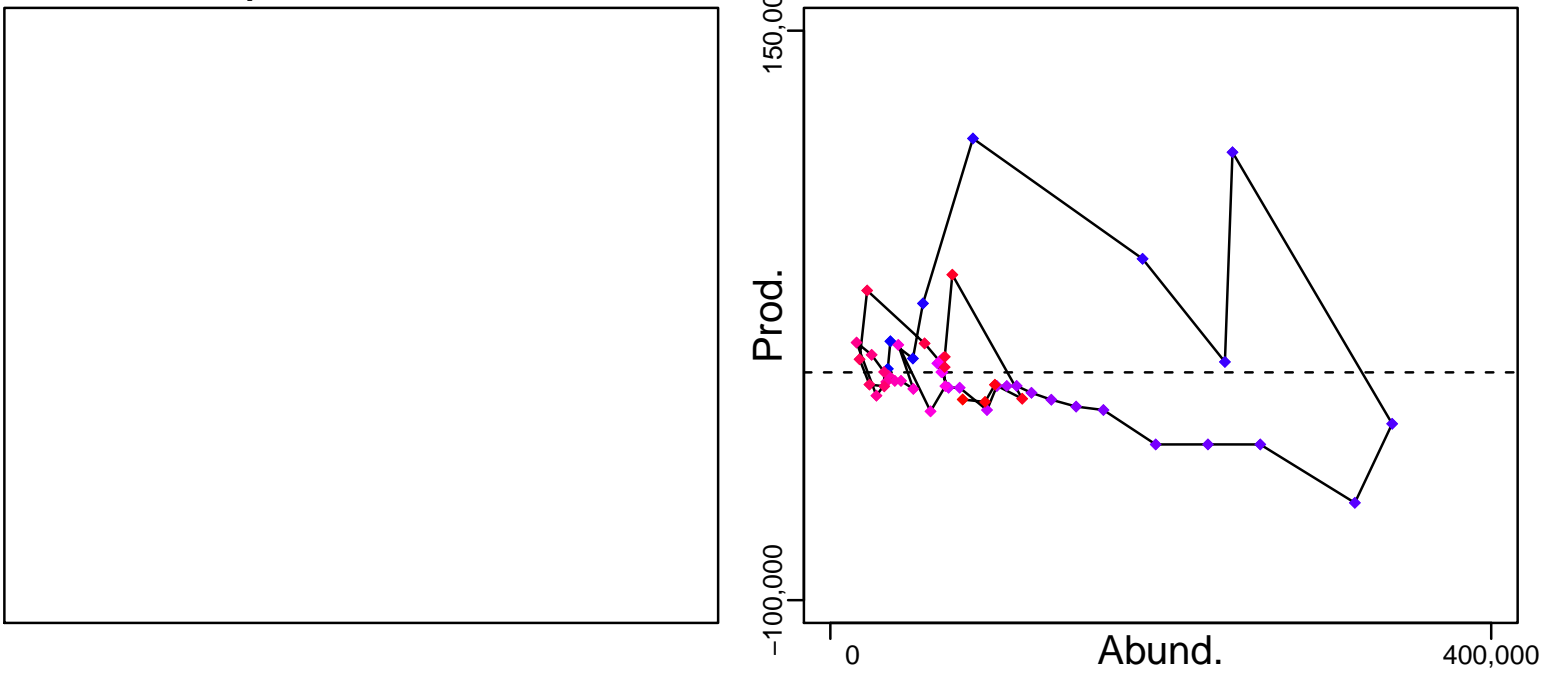
Kobe MSYpref (1966–2018–ASHBROOK)



Kobe MGTpref (1966–2018–ASHBROOK)



Production (1966–2018–ASHBROOK)



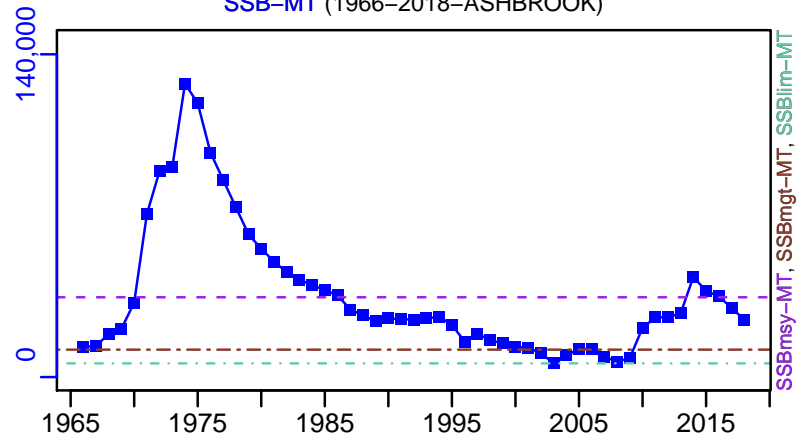
◆ Start Year ◆ End Year * No Data

Walleye pollock British Columbia Waters South [WPOLLBCWS]

TB*



SSB-MT (1966–2018–ASHBROOK)



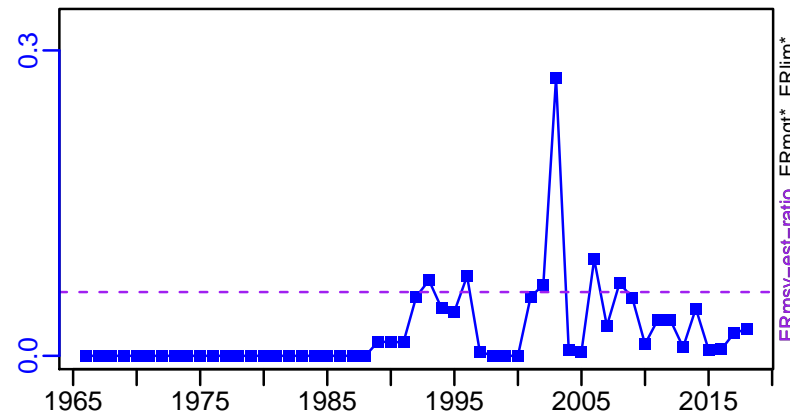
TN *



F*



ER-calc-ratio (1966–2018–ASHBROOK)



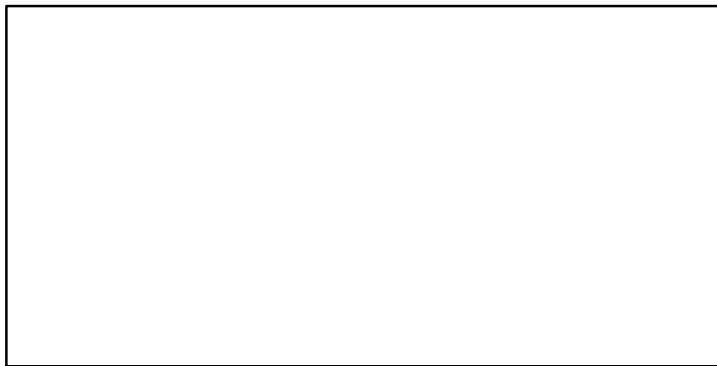
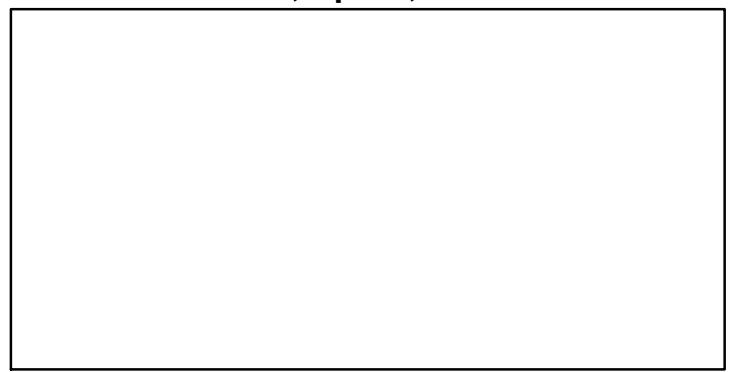
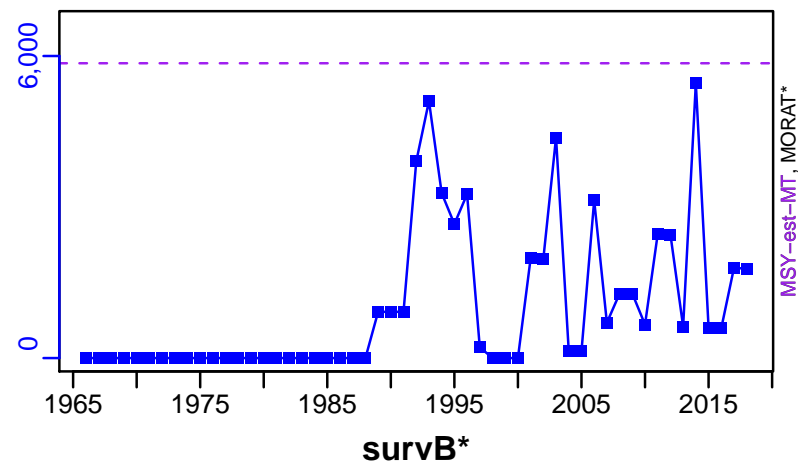
Recruits*



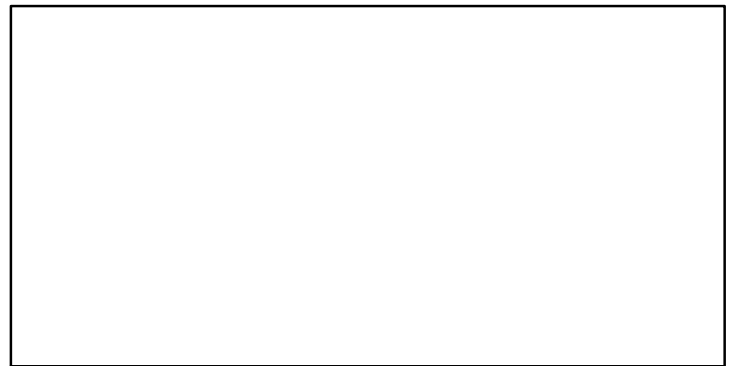
Walleye pollock British Columbia Waters South [WPOLLBCWS]

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

TAC*, Cpair*, Cadv*



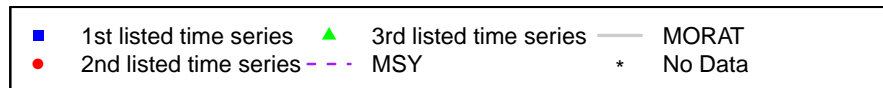
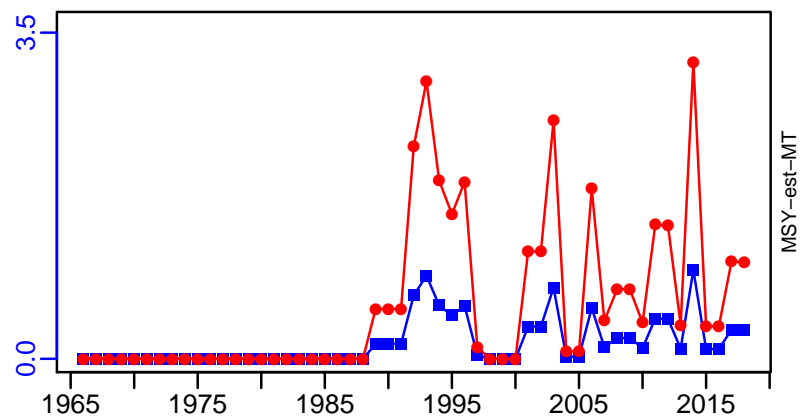
CPUE*



EFFORT*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1966-2018-ASHBROOK)



Widow rockfish British Columbia Waters [WROCKBCW]

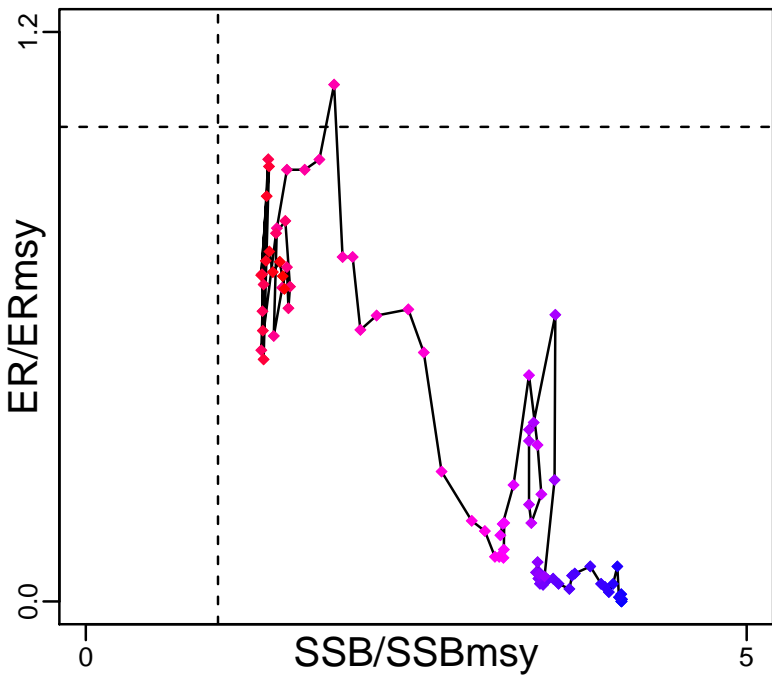
Metadata	
Scientific Name	Sebastes entomelas
Current Assess ID	DFO-PAC-WROCKBCW-1939-2024-ASHBROOK
Area	British Columbia Waters
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2024

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-calc-MT	2024	12,899
SSBmsy	SSBmsy-MT	2024	7373
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2024	0.148
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2024	29,951
MSY	MSY-MT	2024	1909
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

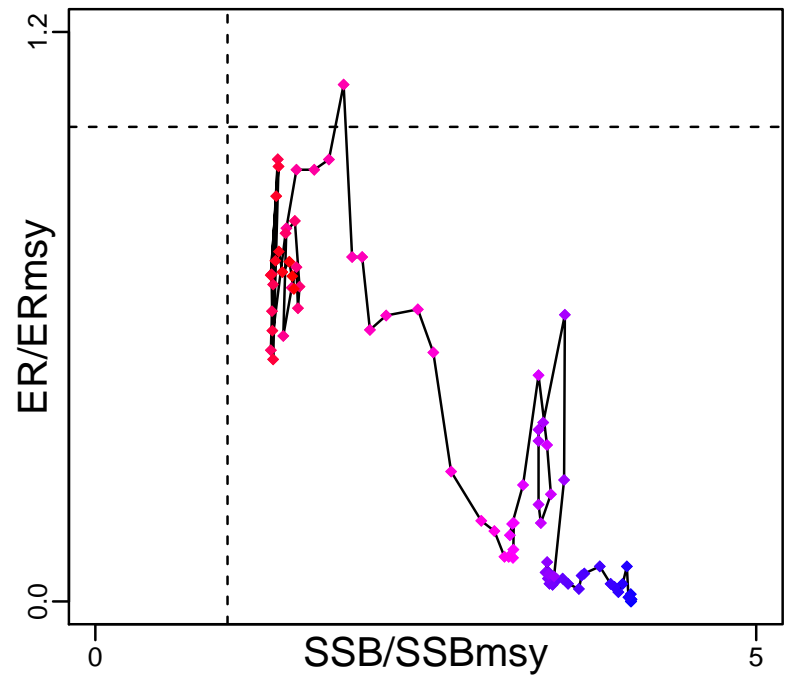
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2024	10,686	Females	-
TN	-	-	-	-	-
R	R-E00	2024	2,782,219	-	1
F	-	-	-	-	-
ER	ER-ratio	2024	0.101	-	-
TC	-	-	-		
TL	TL-MT	2024	1909		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2024	1.449		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2024	0.685		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Widow rockfish British Columbia Waters [WROCKBCW]

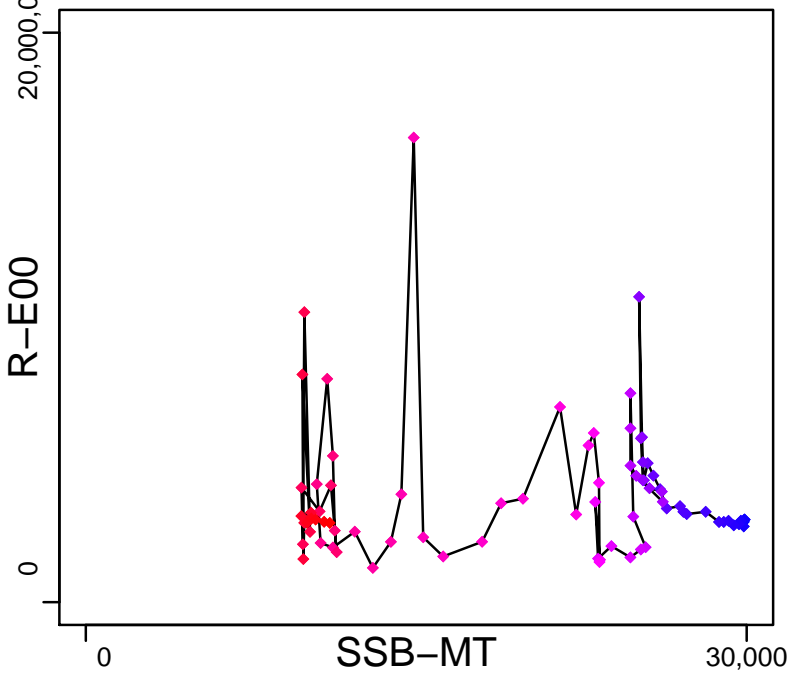
Kobe MSY_{pref} (1939–2024–ASHBROOK)



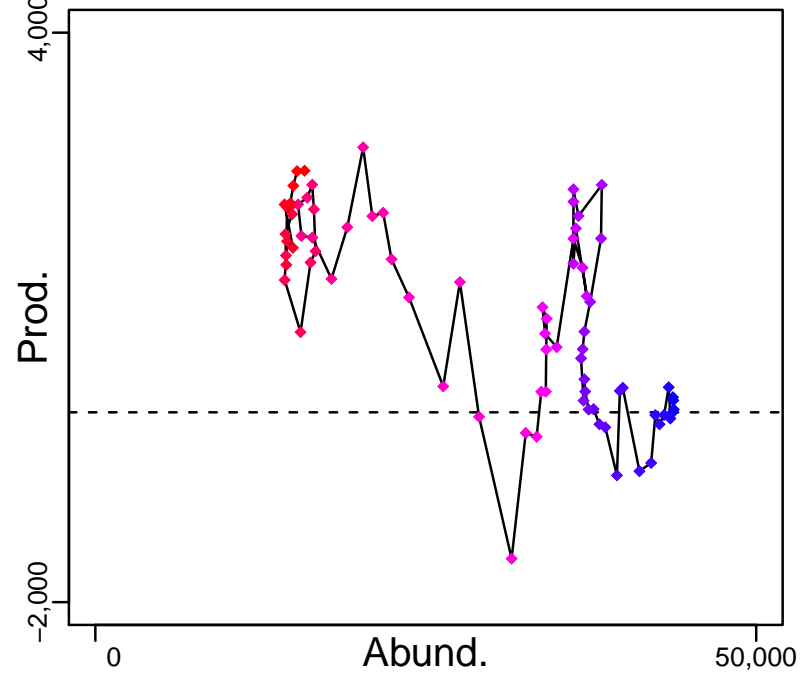
Kobe MGT_{pref} (1939–2024–ASHBROOK)



Spawner Recruit (1939–2024–ASHBROOK)



Production (1939–2024–ASHBROOK)



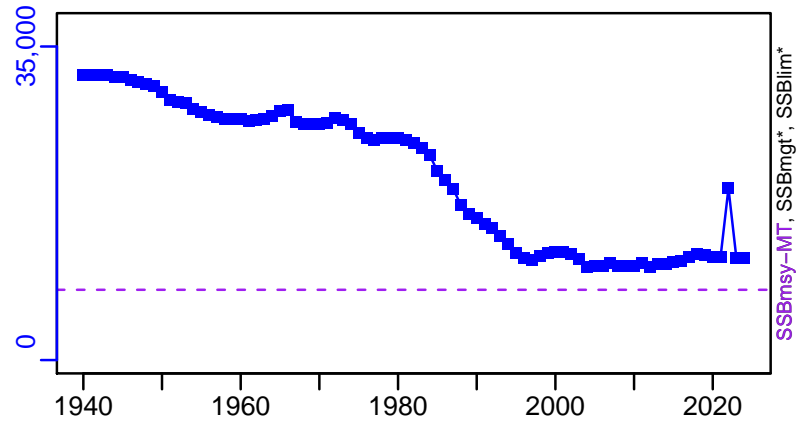
◆ Start Year ◆ End Year * No Data

Widow rockfish British Columbia Waters [WROCKBCW]

TB*



SSB-MT (1939-2024-ASHBROOK)



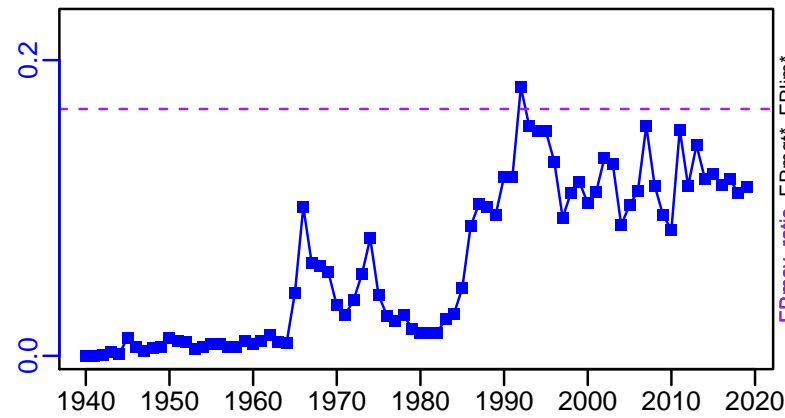
TN *



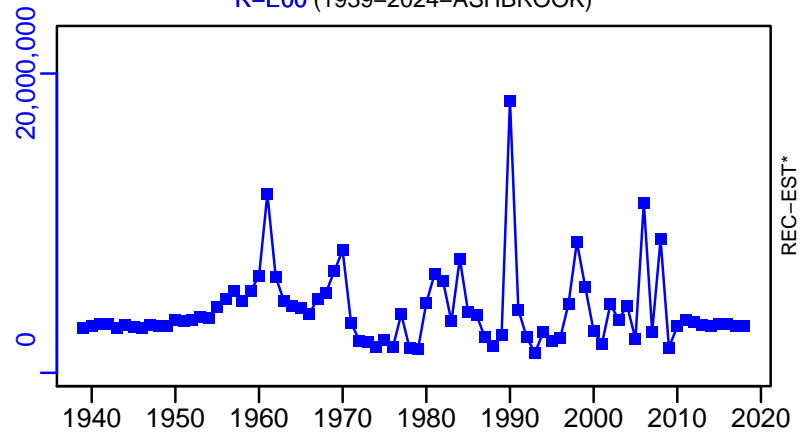
F*



ER-ratio (1939-2024-ASHBROOK)



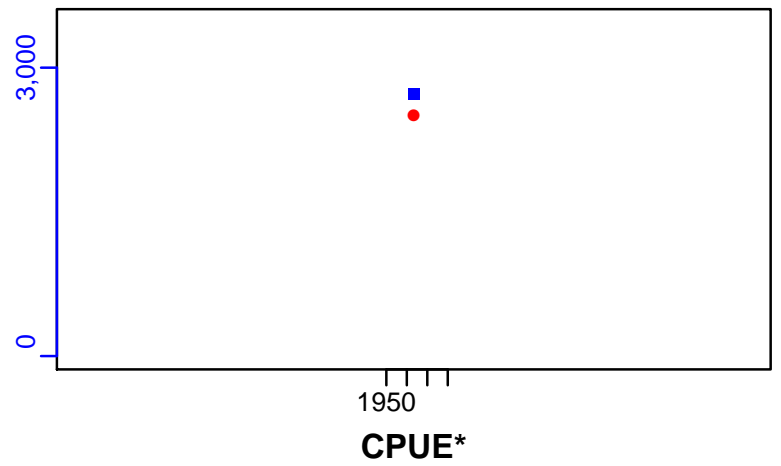
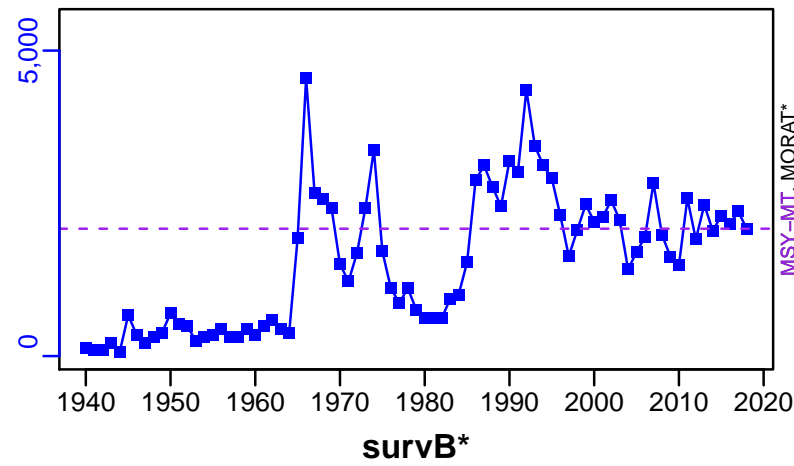
R-E00 (1939-2024-ASHBROOK)



Widow rockfish British Columbia Waters [WROCKBCW]

TL-MT, TC*, RecC* (1939-2024-ASHBROOK)

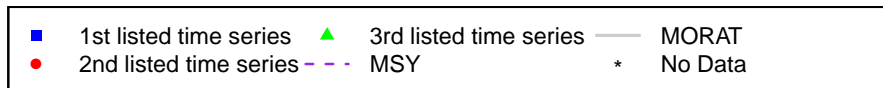
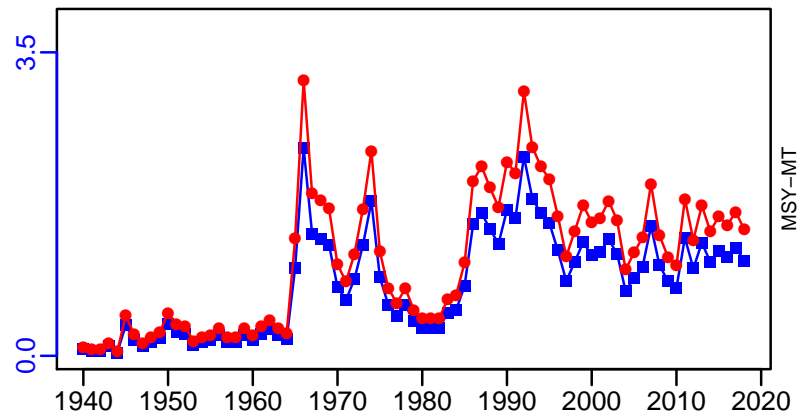
TAC-MT, Cpair-MT, Cadv* (1939-2024-ASHBROOK)



EFFORT*



TL-MT/MSY-MT, CdivMEANC-ratio, (1939-2024-ASHBROOK)



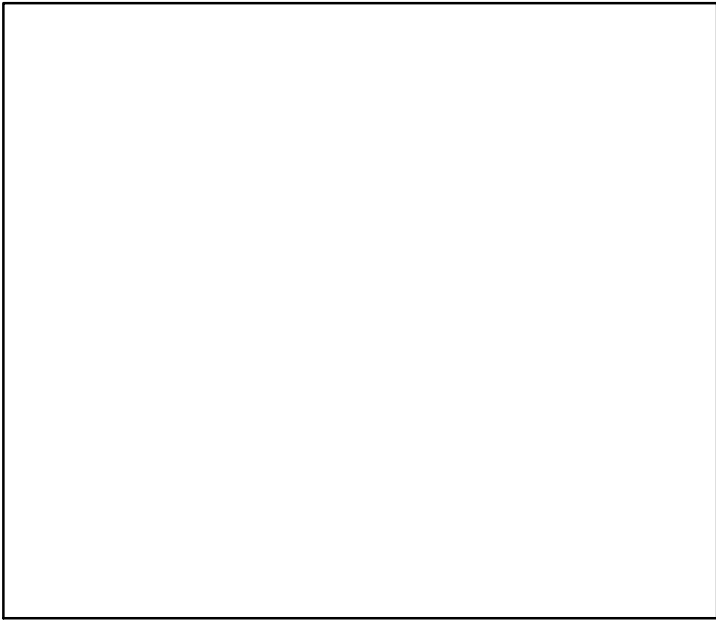
Yelloweye rockfish Pacific Coast of Canada (Inside) [YEYEROCKPCOASTIN]

Metadata	
Scientific Name	Sebastes ruberrimus
Current Assess ID	DFO-YEYEROCKPCOASTIN-1918-2009-WATSON
Area	Pacific Coast of Canada (Inside)
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2009

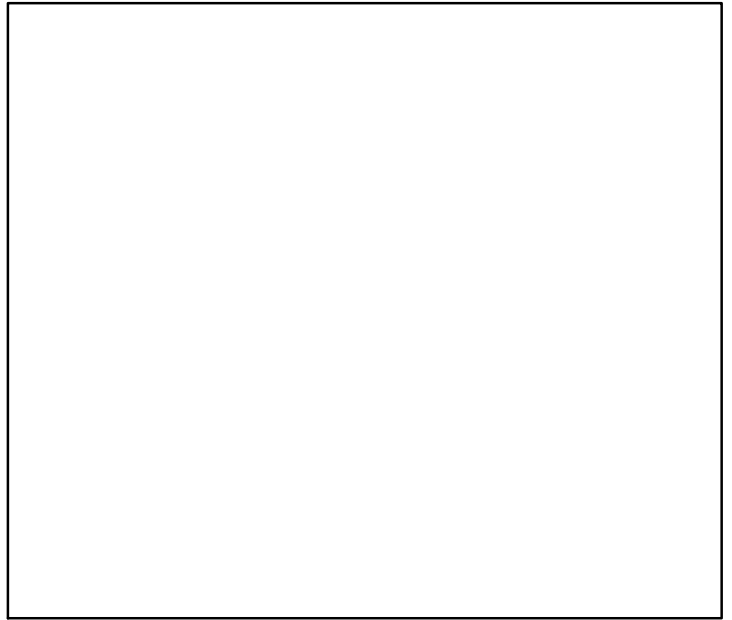
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2009	8		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

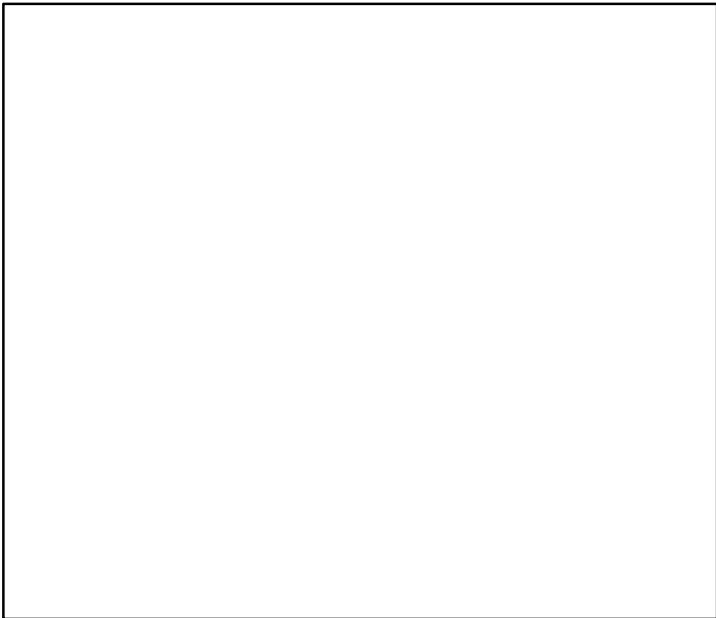
Kobe MSY*



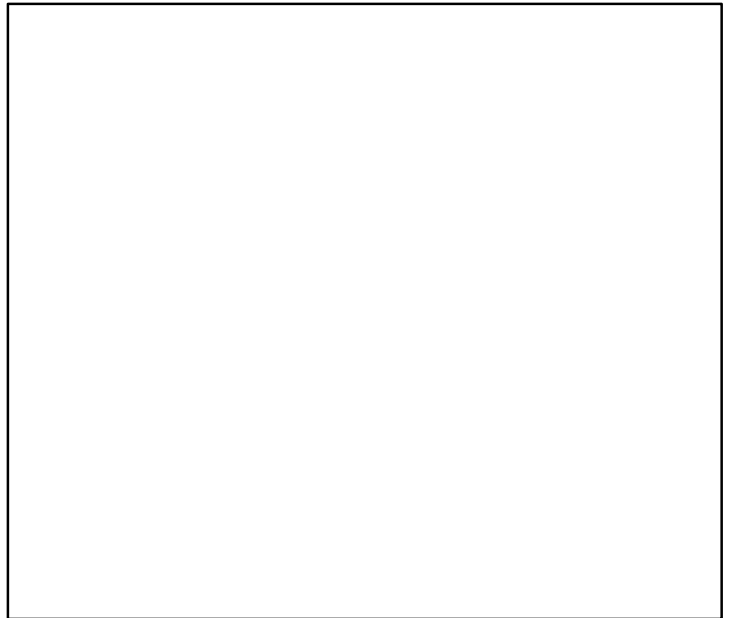
Kobe MGT*



Spawner Recruit*



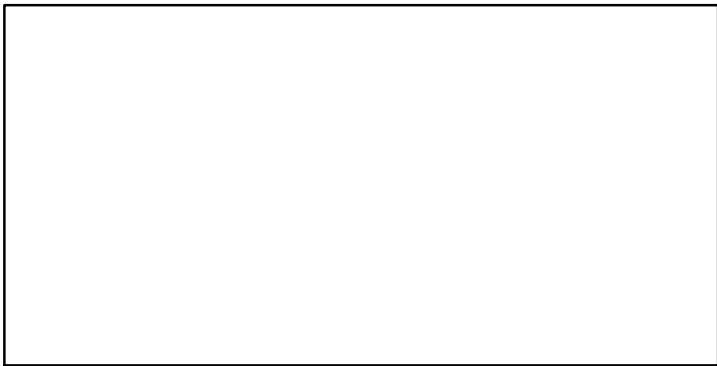
Production*



◆ Start Year ◆ End Year * No Data

Yelloweye rockfish Pacific Coast of Canada (Inside) [YEYEROCKPCOASTIN]

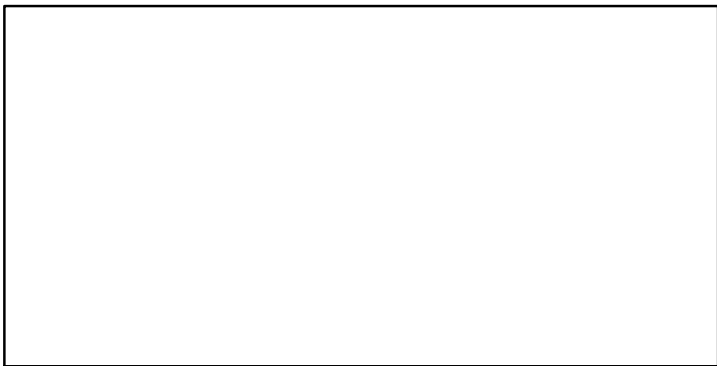
TB*



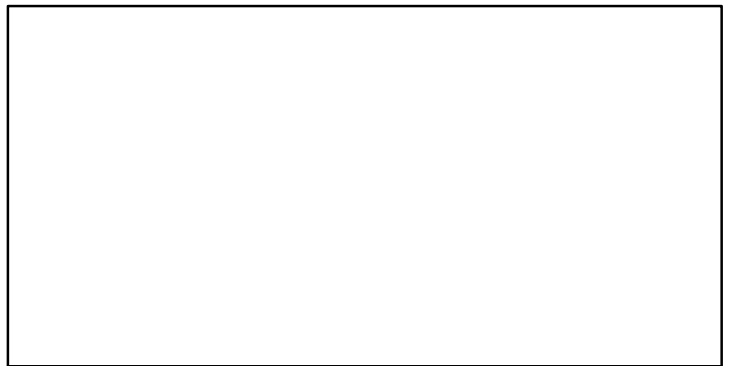
SSB*



TN *



F*



ER*



Recruits*



Yelloweye rockfish Pacific Coast of Canada (Inside) [YEYEROCKPCOASTIN]

TC-MT, TL*, RecC-MT (1918-2009-WATSON)

TAC*, Cpair*, Cadv*

