

# South America Stocks

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

Not present Present Preferred

Stock	B/Bmsy	Time Series Types			
		U/Umsy	B/Bmgt	U/Umgt	
1. ACMACKSARG [Argentine chub mackerel Southern Argentina]	TB SSB	ER F	TB SSB	ER F	
2. AFLONCH [Alfonsino Chile]	TB SSB	ER F	TB SSB	ER F	
3. ARGANCHONARG [Argentine anchoita Northern Argentina]	TB SSB	ER F	TB SSB	ER F	
4. ARGANCHOSARG [Argentine anchoita Southern Argentina]	TB SSB	ER F	TB SSB	ER F	
5. ARGHAKENARG [Argentine hake Northern Argentina]	TB SSB	ER F	TB SSB	ER F	
6. ARGHAKESARG [Argentine hake Southern Argentina]	TB SSB	ER F	TB SSB	ER F	
7. BSQLOBSTERCSCH [Yellow squat lobster Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
8. BSQLOBSTERNCH [Yellow squat lobster Northern Chile]	TB SSB	ER F	TB SSB	ER F	
9. CHERRCHVX [Chilean herring Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
10. CHTRACCH [Chilean jack mackerel Chilean EEZ and offshore]	TB SSB	ER F	TB SSB	ER F	
11. CSARDCSCH [Chilean sardine Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
12. NSHRIMPCSCH [Nylon shrimp Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
13. NSHRIMPNC [Nylon shrimp Northern Chile]	TB SSB	ER F	TB SSB	ER F	
14. OROUGHYCH [Orange roughy Chile]	TB SSB	ER F	TB SSB	ER F	
15. PANCHCCH [Peruvian anchoveta Central Chile]	TB SSB	ER F	TB SSB	ER F	
16. PANCHCSCH [Peruvian anchoveta Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
17. PANCHNCHSP [Peruvian anchoveta Northern Chile Southern Peru]	TB SSB	ER F	TB SSB	ER F	
18. PANCHPERUNC [Peruvian anchoveta North-Central Peruvian coast]	TB SSB	ER F	TB SSB	ER F	
19. PATCODARGS [Patagonian cod Southern Argentina]	TB SSB	ER F	TB SSB	ER F	
20. PATGRENADIERCH [Patagonian grenadier Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
21. PATGRENADIERSARG [Patagonian grenadier Southern Argentina]	TB SSB	ER F	TB SSB	ER F	
22. PCEELARGS [Pink cusk eel Southern Argentina]	TB SSB	ER F	TB SSB	ER F	
23. PCEELCSCH [Pink cusk eel Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
24. PCEELSCH [Pink cusk eel Southern Chile]	TB SSB	ER F	TB SSB	ER F	
25. PTOOTHFISHCH [Patagonian toothfish South Chile Argentina]	TB SSB	ER F	TB SSB	ER F	
26. RSQLOBSTERCSCH [Red squat lobster Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
27. RSQLOBSTERNCH [Red squat lobster Northern Chile]	TB SSB	ER F	TB SSB	ER F	
28. SBREAMCH [Deepwater cardinalfish Chile]	TB SSB	ER F	TB SSB	ER F	
29. SBWHITARGS [Southern blue whiting Southern Argentina]	TB SSB	ER F	TB SSB	ER F	
30. SBWHITCH [Southern blue whiting Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
31. SOUTHHAKECH [Southern hake Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
32. SPHAKECH [South Pacific hake Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
33. SSARDCH [Southern sardine Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
34. YNOSESKACSCH [Yellownose skate Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
35. YNOSESKASCH [Yellownose skate Southern Chile]	TB SSB	ER F	TB SSB	ER F	

## Argentine chub mackerel Southern Argentina [ACMACKSARG]

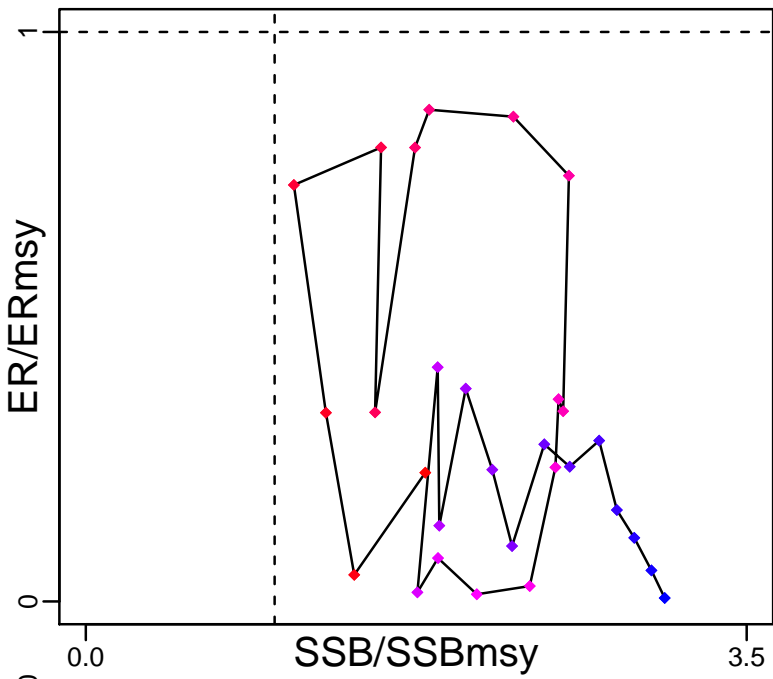
Metadata	
<b>Scientific Name</b>	Scomber colias
<b>Current Assess ID</b>	INIDEP-ACMACKSARG-1989-2020-PARMA
<b>Area</b>	Southern Argentina
<b>Management Authority</b>	Consejo Federal Pesquero, Argentina national management
<b>Assessor</b>	Instituto Nacional de Investigacion y Desarrollo Pesquero
<b>Asmts in RAM</b>	2016, 2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2020	72,658
<b>SSBmsy</b>	SSBmsy-MT	2020	57,455
<b>Fmsy</b>	Fmsy-1/yr	2020	0.475
<b>ERmsy</b>	ERmsy-calc-ratio	2020	0.209
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2020	76,800
<b>Fmgt</b>	Fmgt-1/yr	2020	0.31
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2020	15,200
<b>M</b>	M-1/yr	2020	0.38
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2016	59,000
<b>Flim</b>	Flim-1/yr	2016	0.81
<b>ERlim</b>	-	-	-

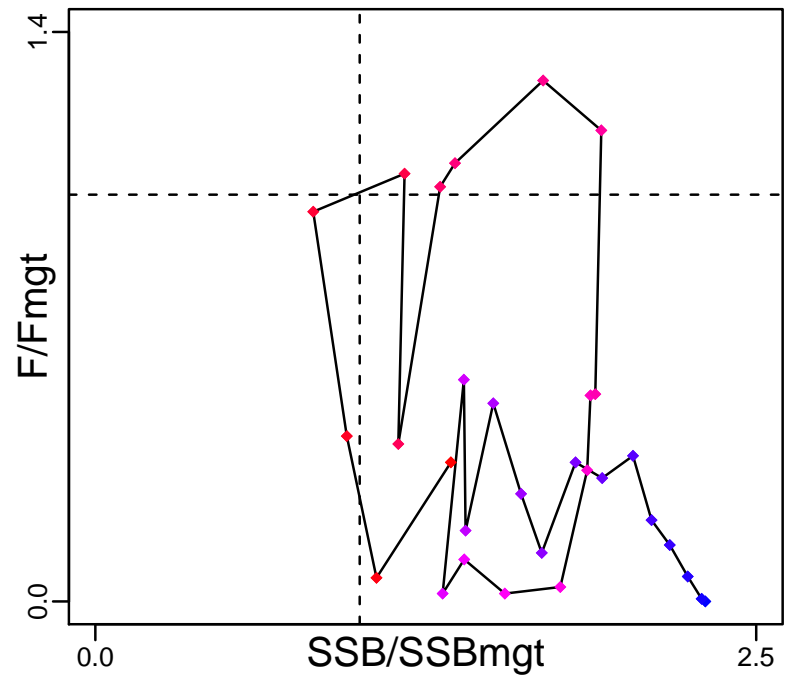
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	116,131	Both	10-Jan
<b>SSB</b>	SSB-MT	2020	103,295	Both	10-Jan
<b>TN</b>	TN-E00	2020	646,680,519	Both	10-Jan
<b>R</b>	R-E00	2020	211,084,354	Both	1
<b>F</b>	F-1/yr	2020	0.106	Both	10-Jul
<b>ER</b>	ER-calc-ratio	2020	0.047	-	-
<b>TC</b>	TC-MT	2020	5494		
<b>TL</b>	TL-MT	2020	5494		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2020	1.598		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2020	1.798		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2020	0.223		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-calc-ratio	2020	0.226		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2020	1.345		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2020	0.342		
<b>ER/ERmgt</b>	-	-	-		

# Argentine chub mackerel Southern Argentina [ACMACKSARG]

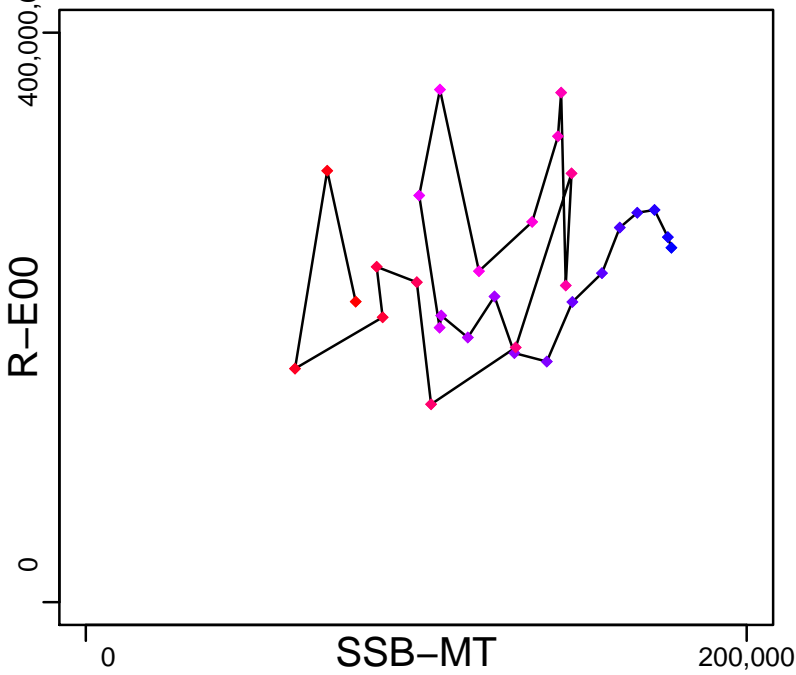
Kobe MSYpref (1989–2020–PARMA)



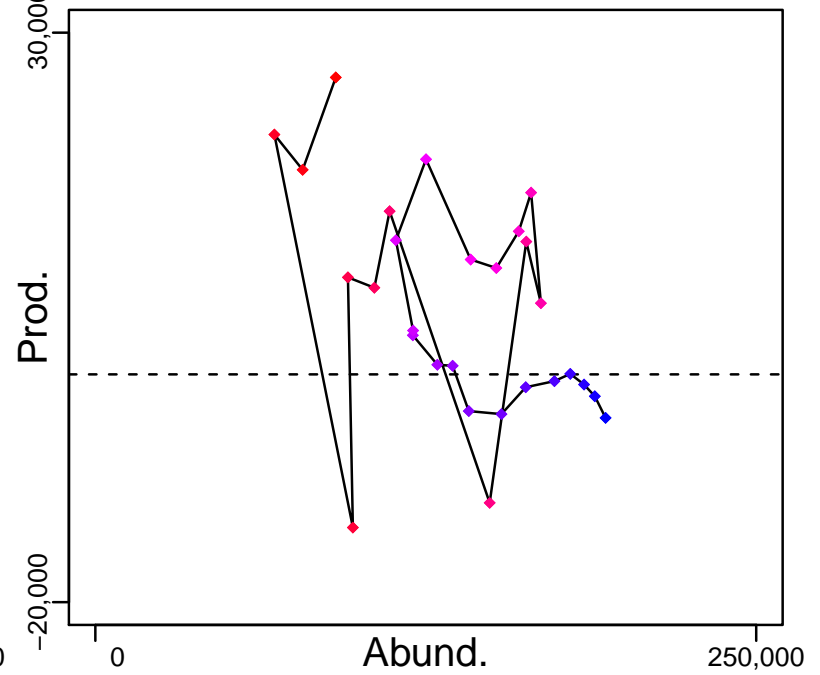
Kobe MGTpref (1989–2020–PARMA)



Spawner Recruit (1989–2020–PARMA)

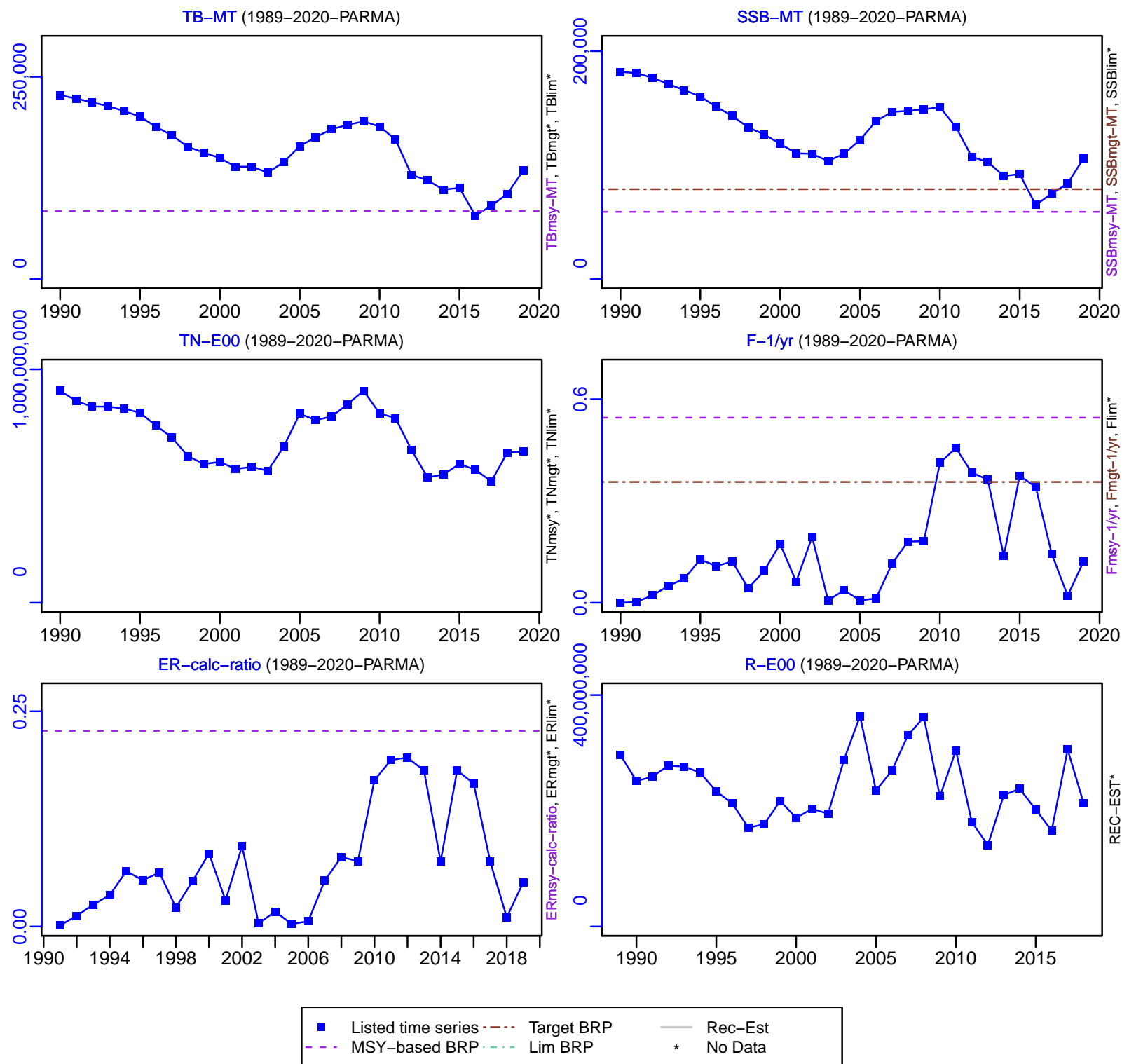


Production (1989–2020–PARMA)



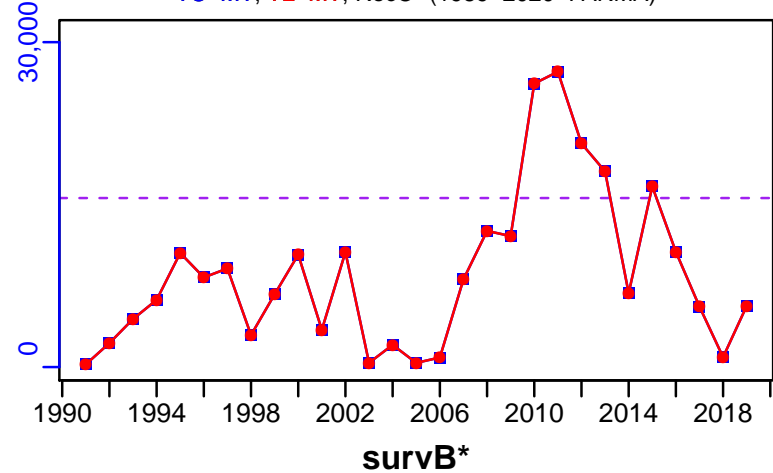
◆ Start Year ◆ End Year \* No Data

# Argentine chub mackerel Southern Argentina [ACMACKSARG]

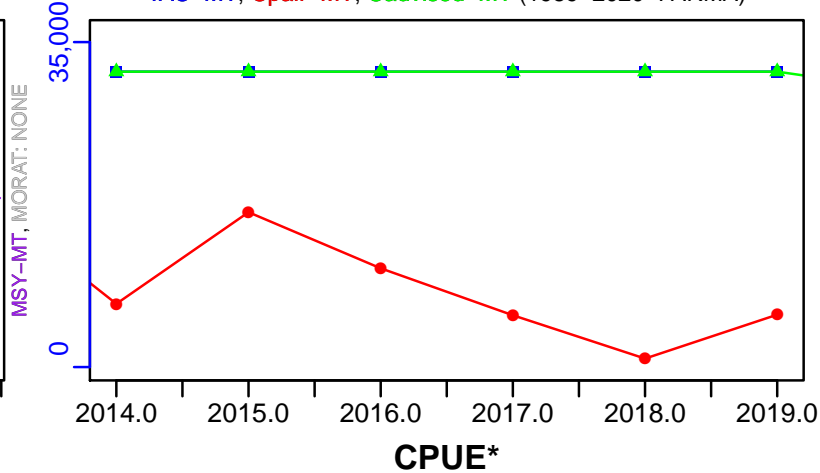


# Argentine chub mackerel Southern Argentina [ACMACKSARG]

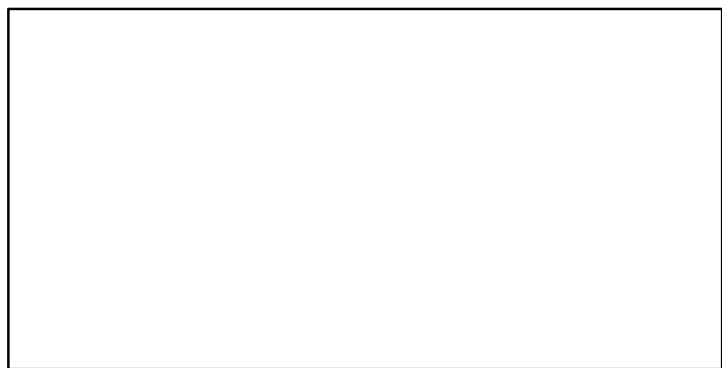
TC-MT, TL-MT, RecC\* (1989–2020–PARMA)



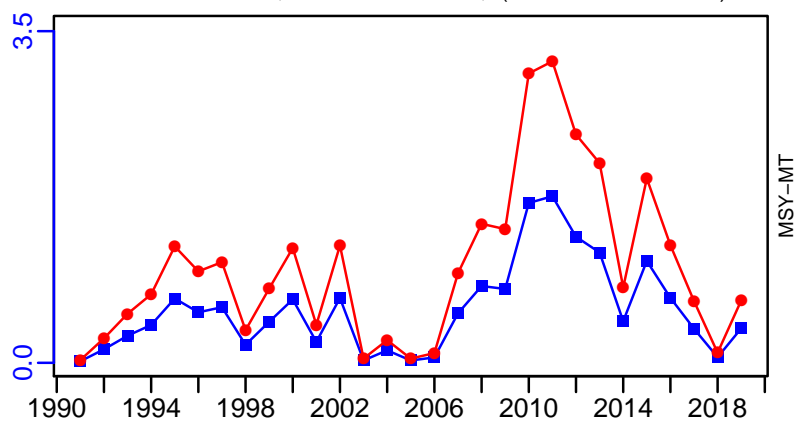
TAC-MT, Cpair-MT, Cadvised-MT (1989–2020–PARMA)



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1989–2020–PARMA)



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

## Alfonsino Chile [AFLONCH]

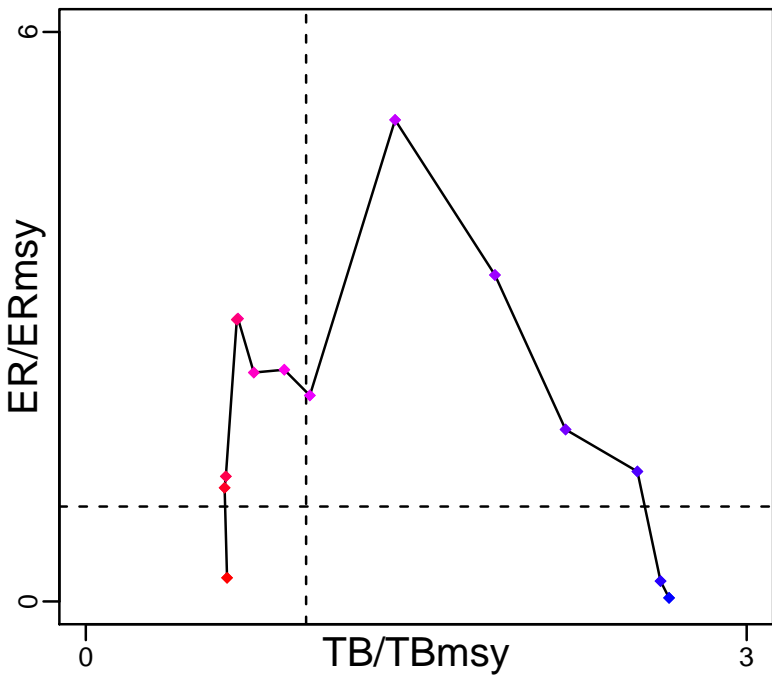
Metadata	
<b>Scientific Name</b>	Beryx splendens
<b>Current Assess ID</b>	SPRFMO-AFLONCH-1998-2011-CHING
<b>Area</b>	Chile
<b>Management Authority</b>	South Pacific Regional Fisheries Management Organization
<b>Assessor</b>	South Pacific Regional Fisheries Management Organization
<b>Asmts in RAM</b>	2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2011	18,091
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2011	0.071
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	1278
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

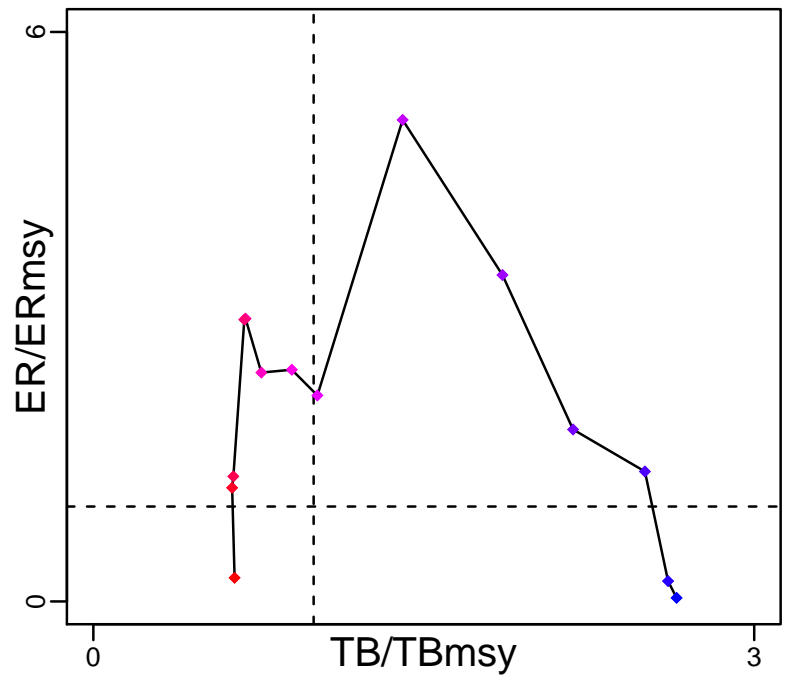
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2011	11,600	-	-
<b>SSB</b>	SSB-MT	2011	944	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2011	4370	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2011	0.018	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2011	204		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	0.641		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2011	0.249		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Alfonsino Chile [AFLONCH]

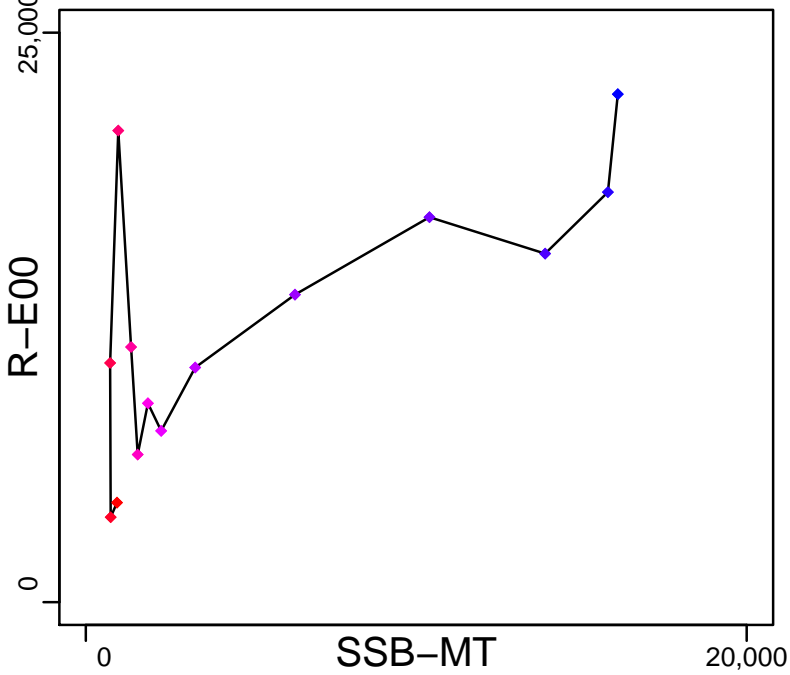
Kobe MSYpref (1998–2011–CHING)



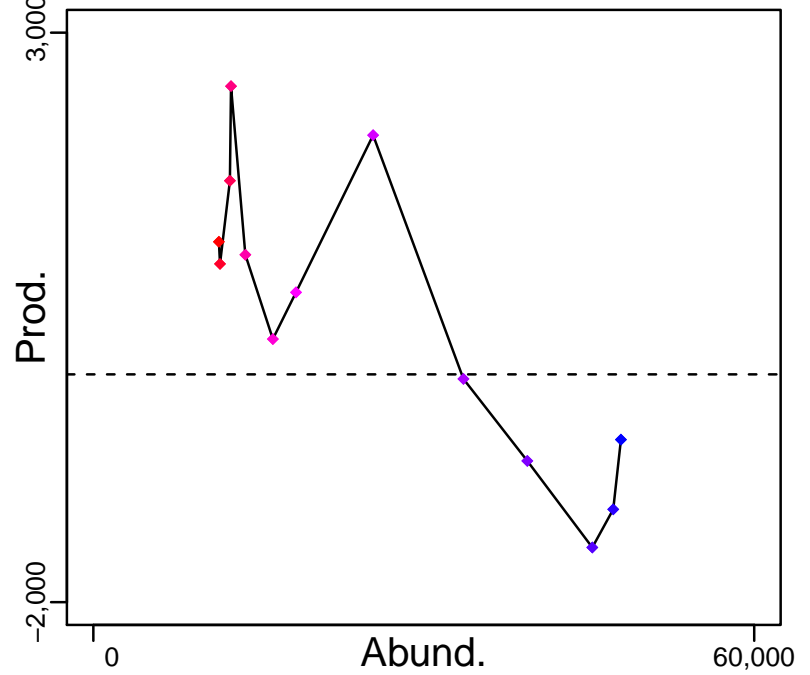
Kobe MGTpref (1998–2011–CHING)



Spawner Recruit (1998–2011–CHING)



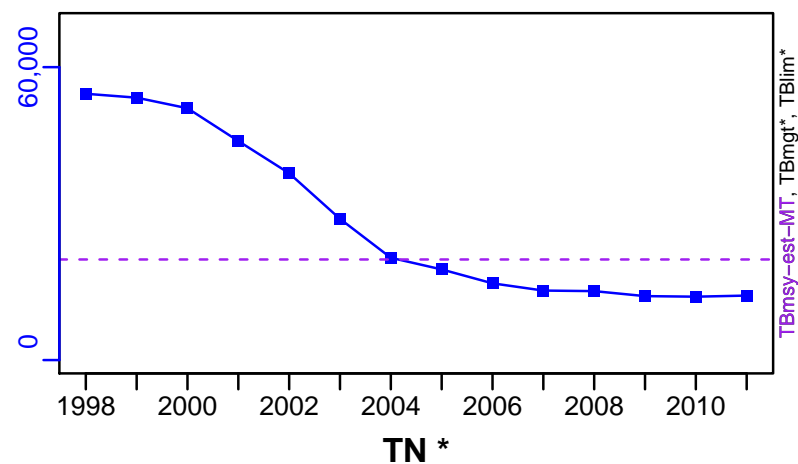
Production (1998–2011–CHING)



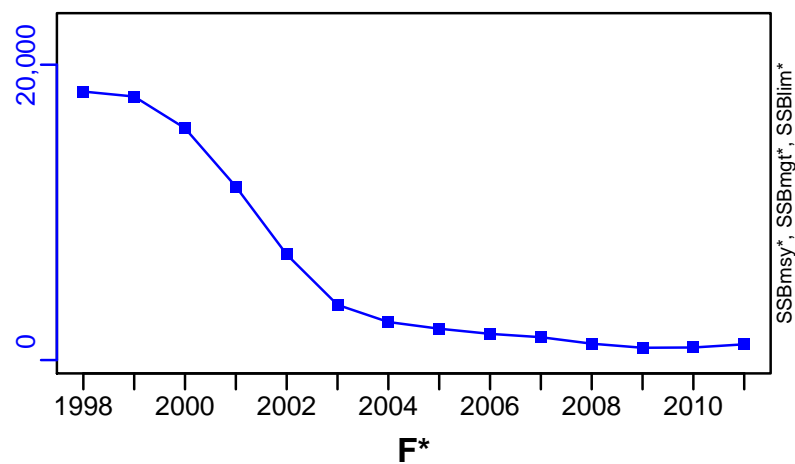
◆ Start Year ◆ End Year \* No Data

# Alfonsino Chile [AFLONCH]

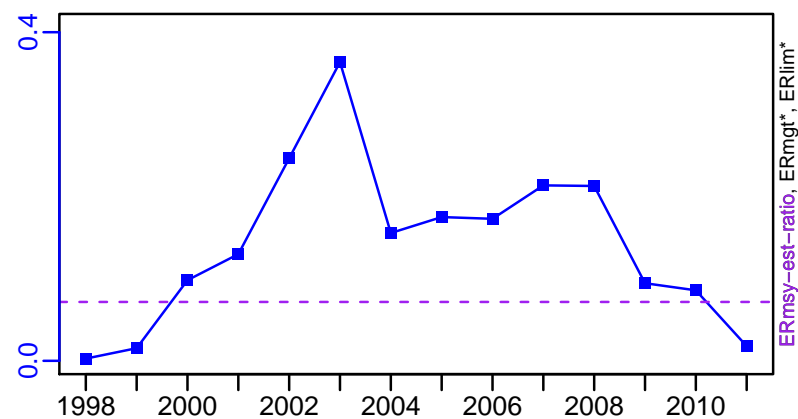
TB-MT (1998–2011–CHING)



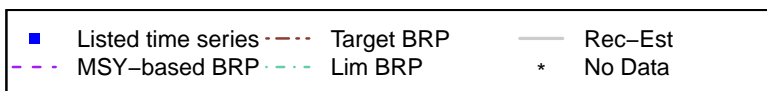
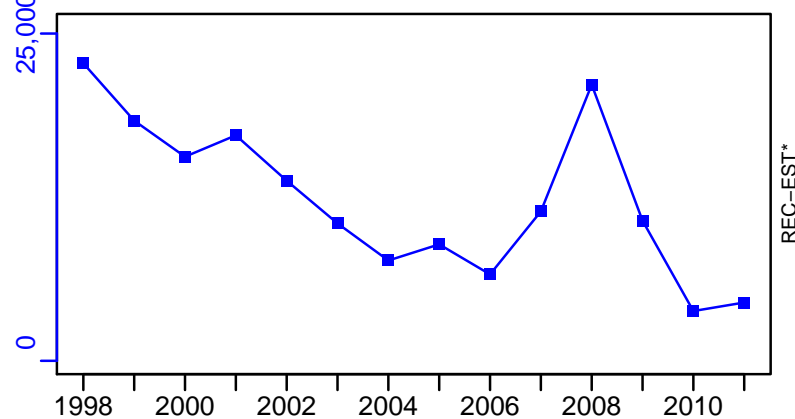
SSB-MT (1998–2011–CHING)



ER-calc-ratio (1998–2011–CHING)



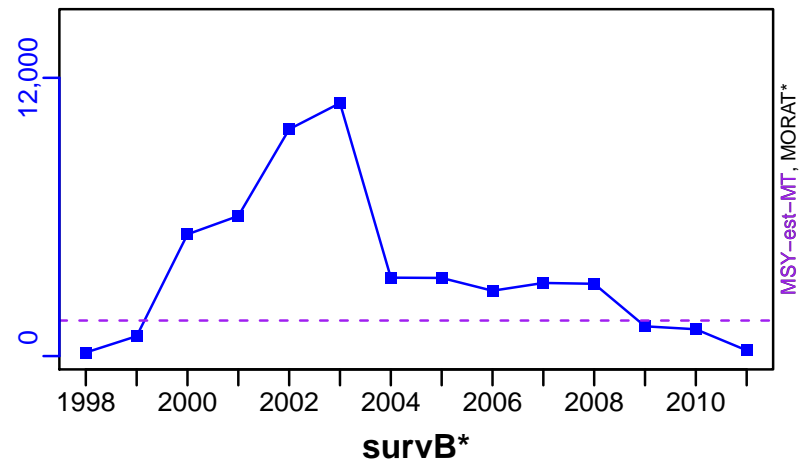
R-E00 (1998–2011–CHING)





# Alfonsino Chile [AFLONCH]

TL-MT, TC\*, RecC\* (1998-2011-CHING)



TAC\*, Cpair\*, Cadv\*



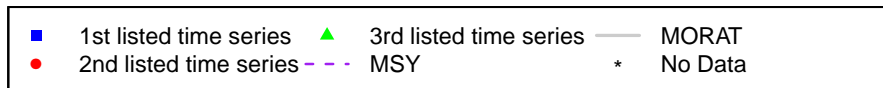
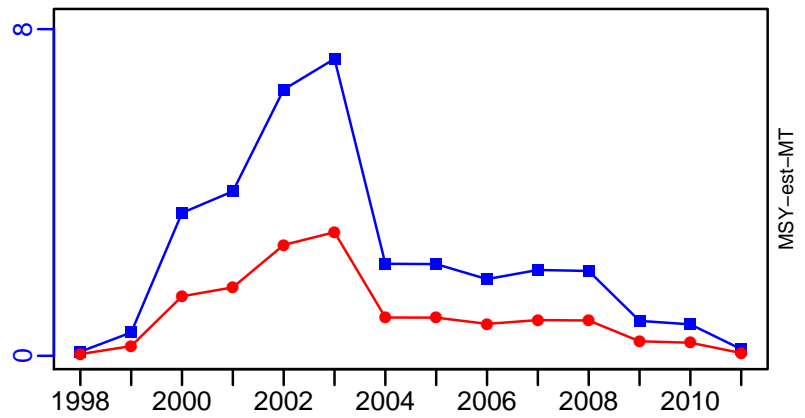
CPUE\*



EFFORT\*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1998-2011-CHING)



## Argentine anchoita Northern Argentina [ARGANCHONARG]

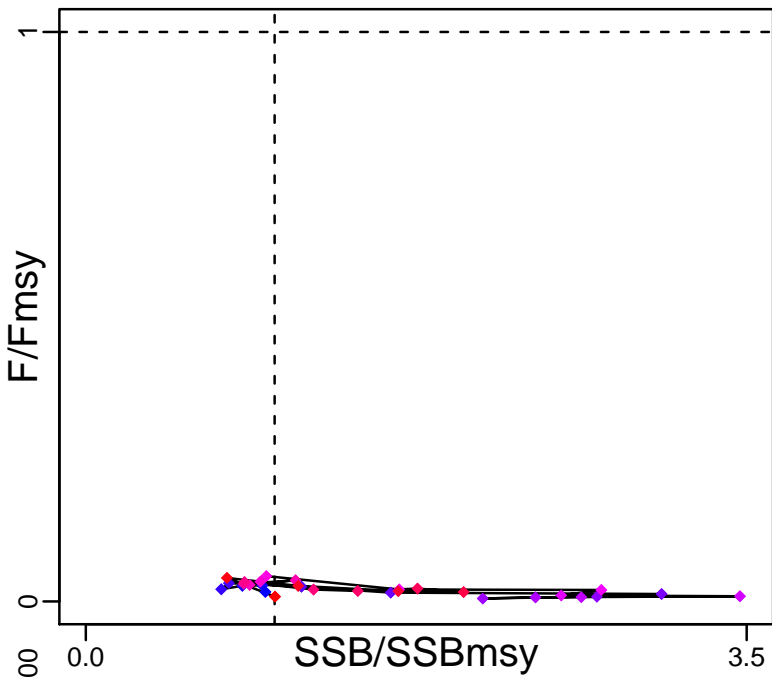
Metadata	
<b>Scientific Name</b>	Engraulis anchoita
<b>Current Assess ID</b>	INIDEP-ARGANCHONARG-1989-2019-PARMA
<b>Area</b>	Northern Argentina
<b>Management Authority</b>	Consejo Federal Pesquero, Argentina national management
<b>Assessor</b>	Instituto Nacional de Investigacion y Desarrollo Pesquero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

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

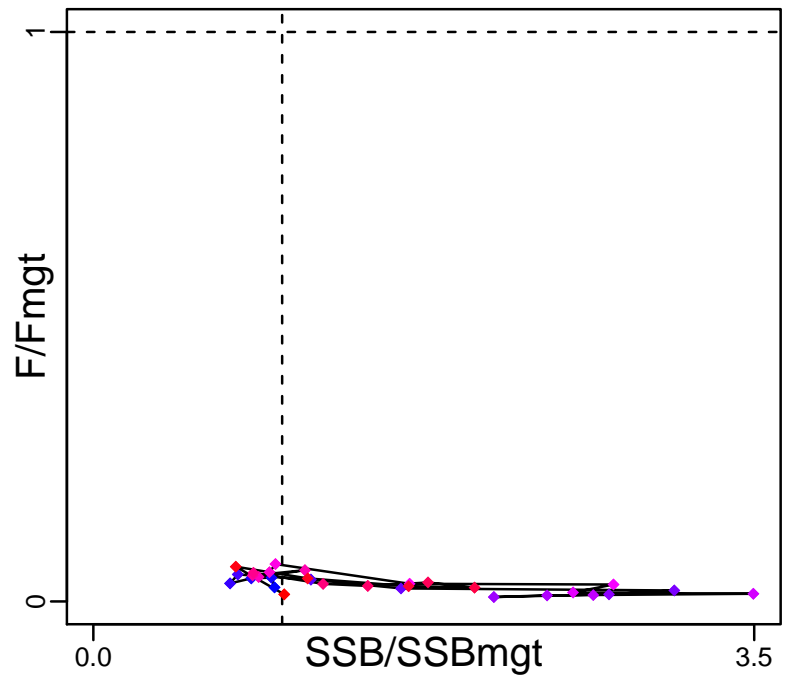
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	1,679,482	Both	1+
<b>SSB</b>	SSB-MT	2019	797,357	Both	2+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	167,483,492,126	Both	1
<b>F</b>	F-1/yr	2019	0.014	Both	6
<b>ER</b>	ER-calc-ratio	2019	0.001	-	-
<b>TC</b>	TC-MT	2019	1815		
<b>TL</b>	TL-MT	2019	12,130		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2019	0.9		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2019	1.002		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.008		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2007	0.053		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.011		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.012		
<b>ER/ERmgt</b>	-	-	-		

# Argentine anchoita Northern Argentina [ARGANCHONARG]

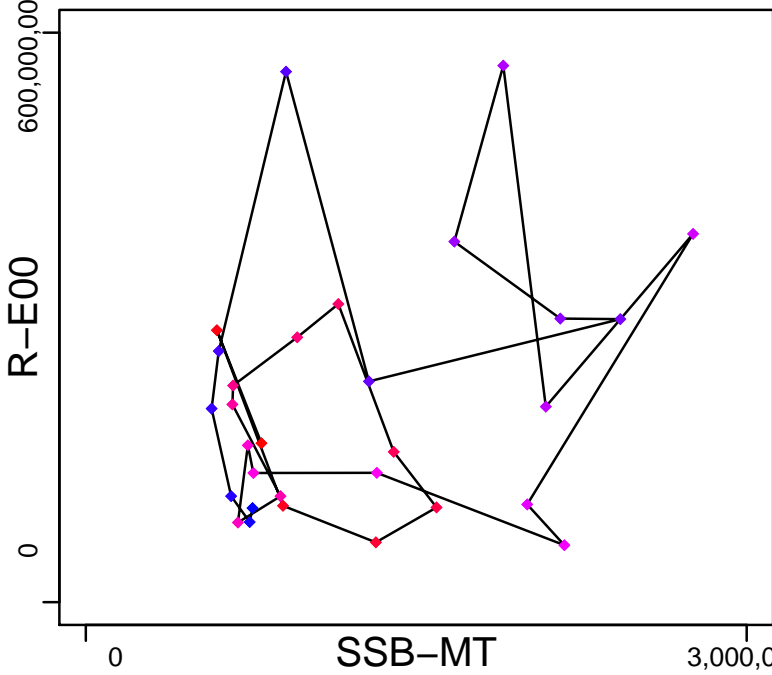
Kobe MSYpref (1989–2019–PARMA)



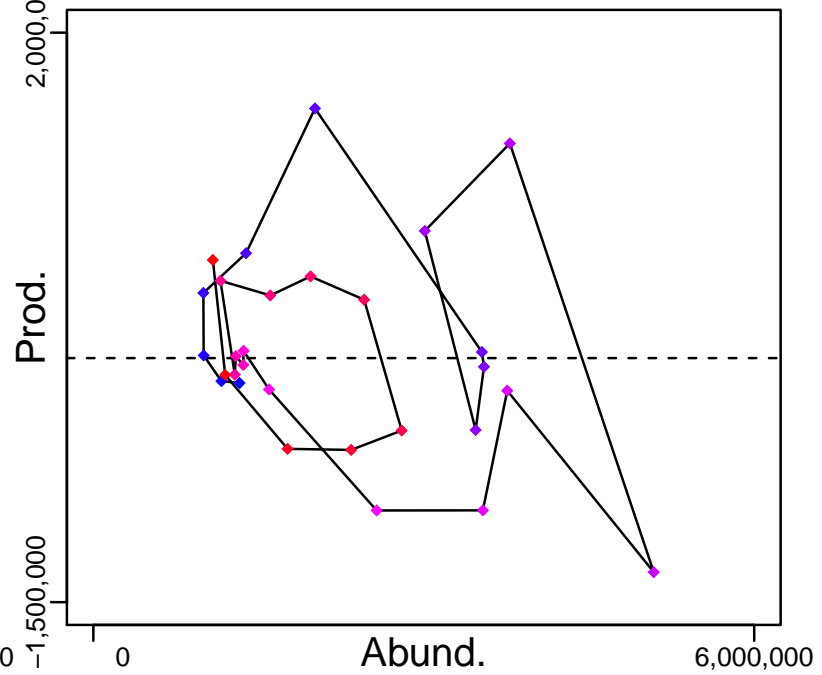
Kobe MGTpref (1989–2019–PARMA)



Spawner Recruit (1989–2019–PARMA)

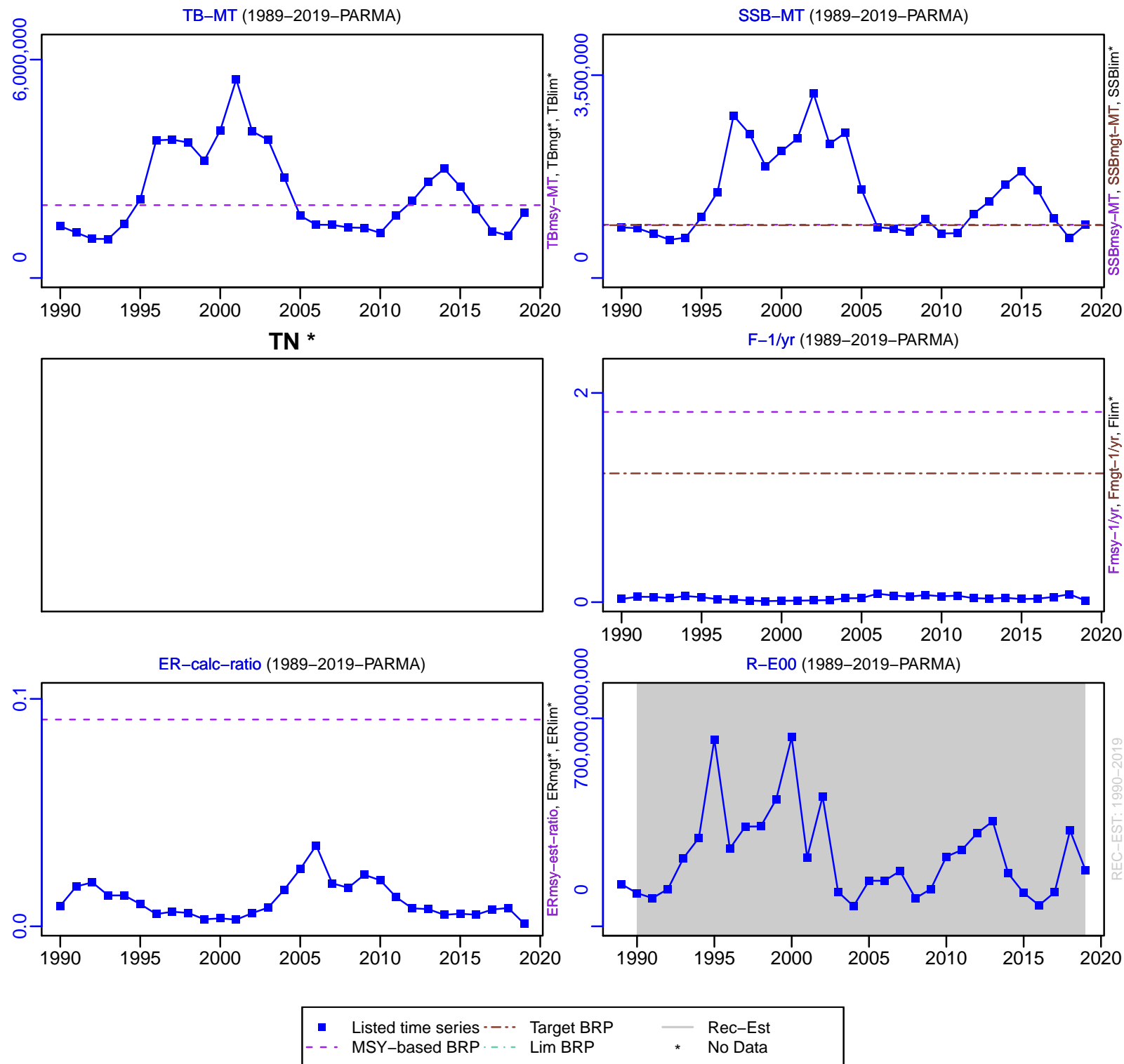


Production (1989–2019–PARMA)



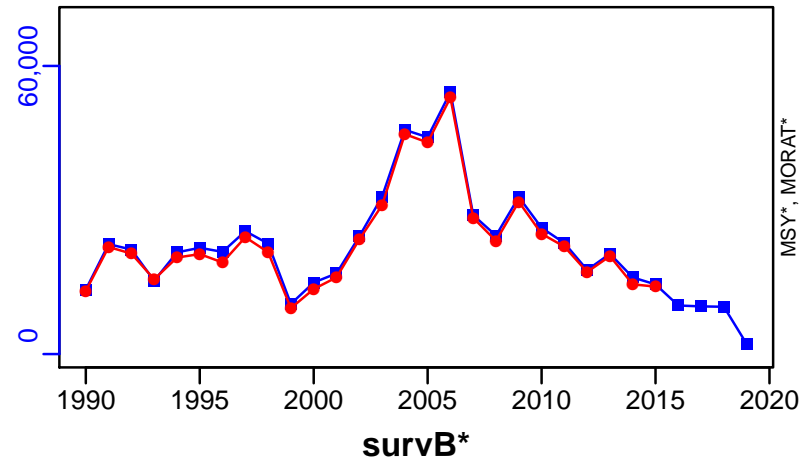
◆ Start Year ◆ End Year \* No Data

# Argentine anchoita Northern Argentina [ARGANCHONARG]

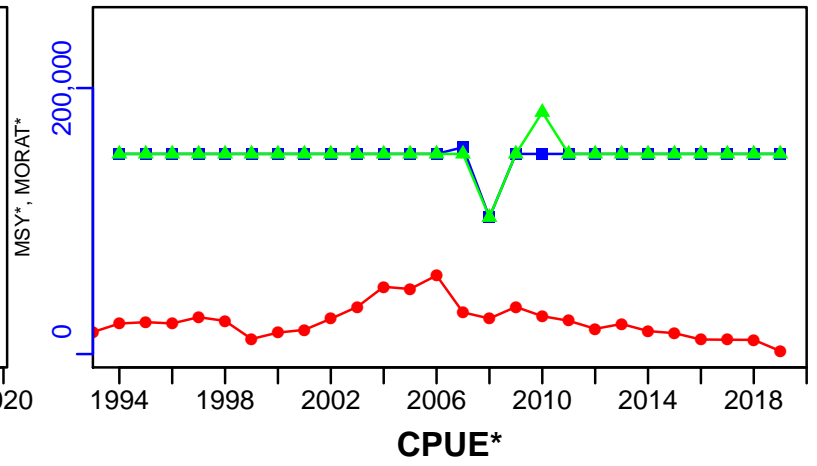


# Argentine anchoita Northern Argentina [ARGANCHONARG]

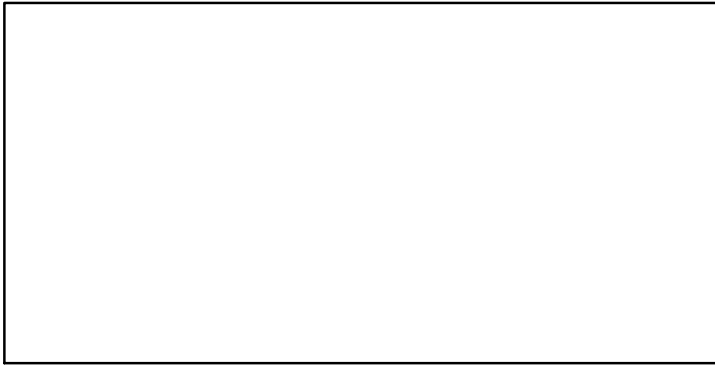
TC-MT, TL-MT, RecC\* (1989–2019–PARMA)



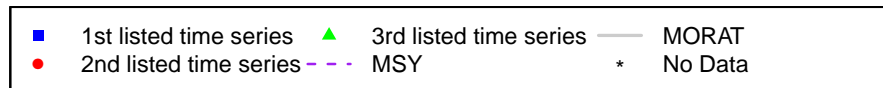
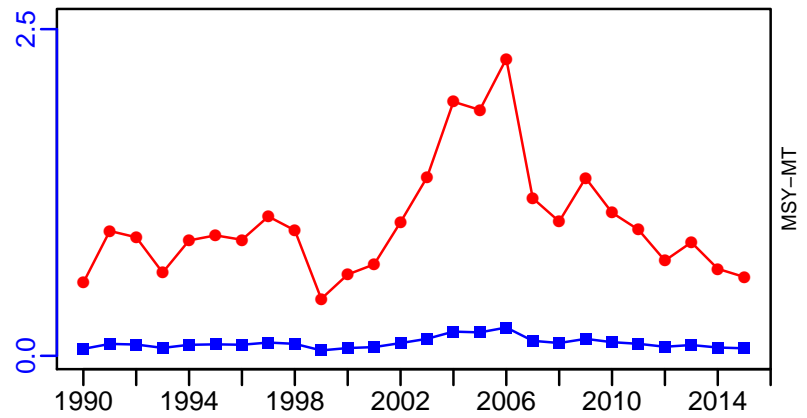
TAC-MT, Cpair-MT, Cadvised-MT (1989–2019–PARMA)



EFFORT\*



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



## Argentine anchoita Southern Argentina [ARGANCHOSARG]

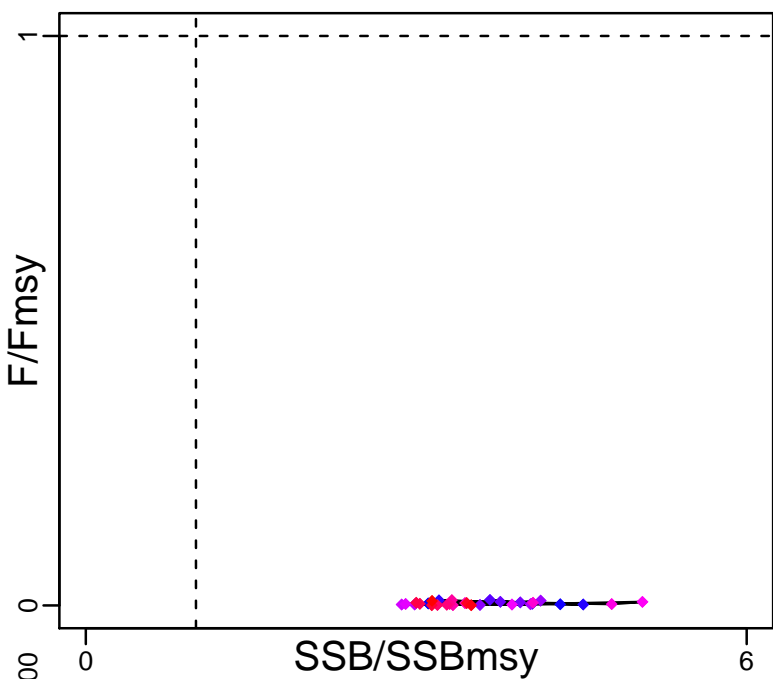
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<b>Scientific Name</b>	Engraulis anchoita
<b>Current Assess ID</b>	INIDEP-ARGANCHOSARG-1989-2020-PARMA
<b>Area</b>	Southern Argentina
<b>Management Authority</b>	Consejo Federal Pesquero, Argentina national management
<b>Assessor</b>	Instituto Nacional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

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

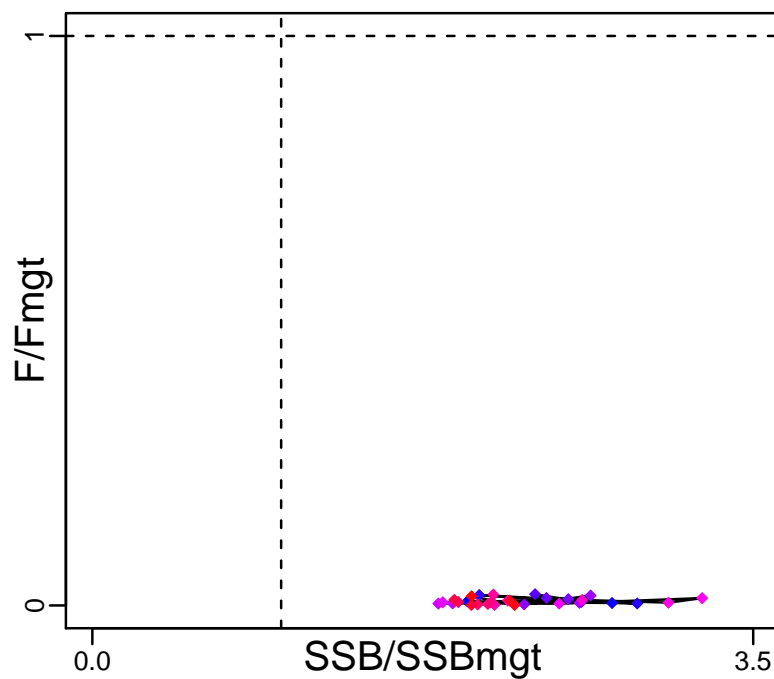
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	1,245,613	Both	1+
<b>SSB</b>	SSB-MT	2020	974,089	Both	1+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	130,555,866,339	Both	1
<b>F</b>	F-1/yr	2020	0.011	Both	6
<b>ER</b>	ER-calc-ratio	2020	0.003	-	-
<b>TC</b>	TC-MT	2020	4146		
<b>TL</b>	TL-MT	2015	2280		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2020	1.695		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2020	3.143		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2020	0.008		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2007	0.005		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2020	2.009		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2020	0.016		
<b>ER/ERmgt</b>	-	-	-		

# Argentine anchoita Southern Argentina [ARGANCHOSARG]

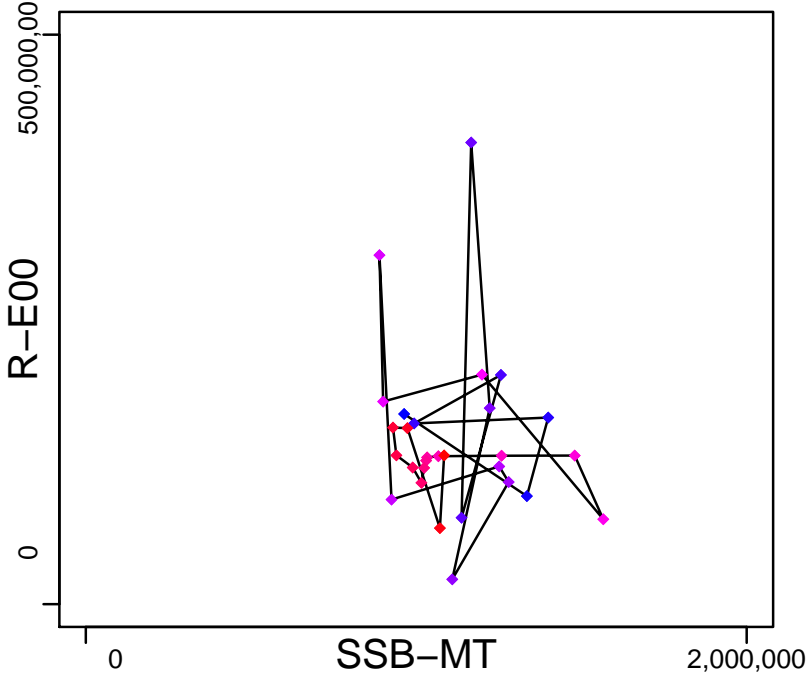
Kobe MSYpref (1989–2020–PARMA)



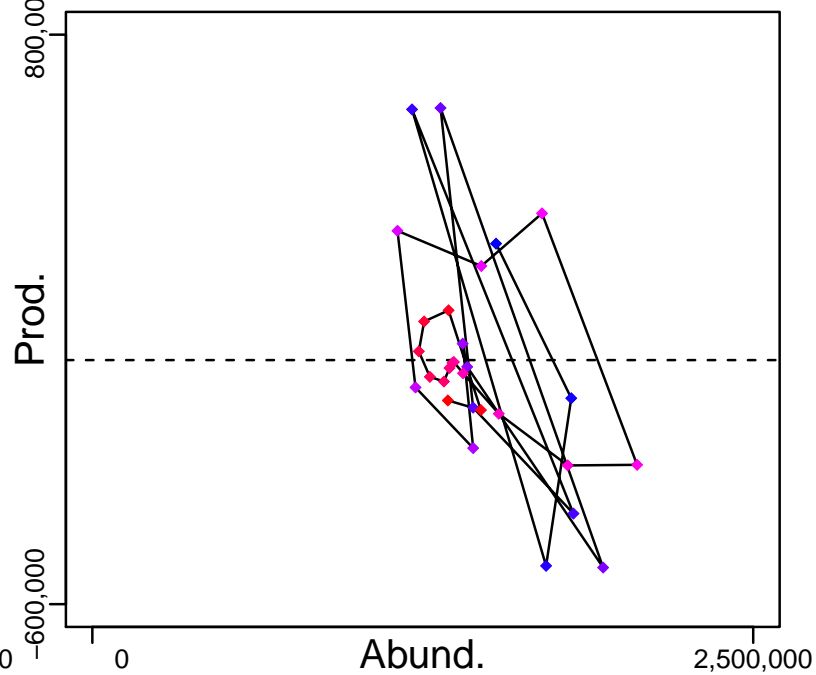
Kobe MGTpref (1989–2020–PARMA)



Spawner Recruit (1989–2020–PARMA)



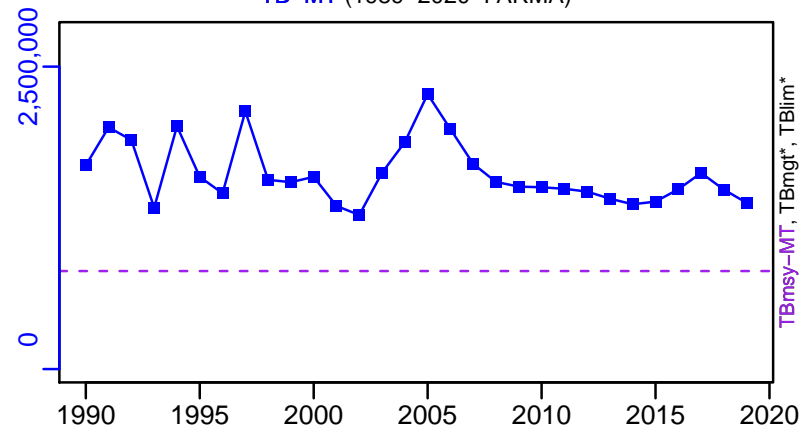
Production (1989–2020–PARMA)



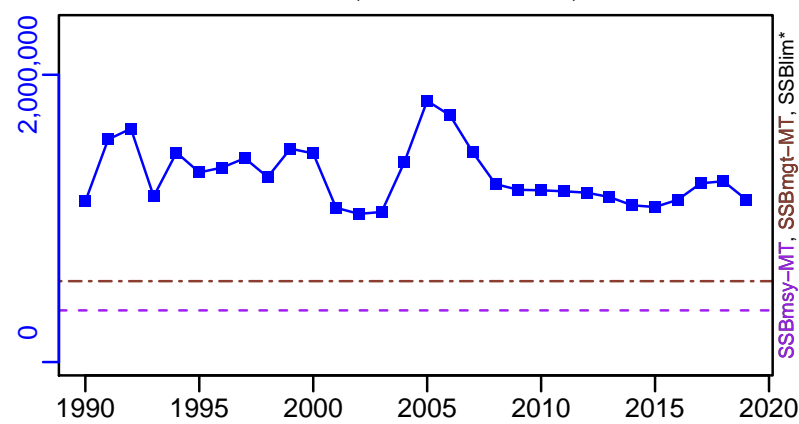
◆ Start Year ◆ End Year \* No Data

# Argentine anchoita Southern Argentina [ARGANCHOSARG]

TB-MT (1989-2020-PARMA)



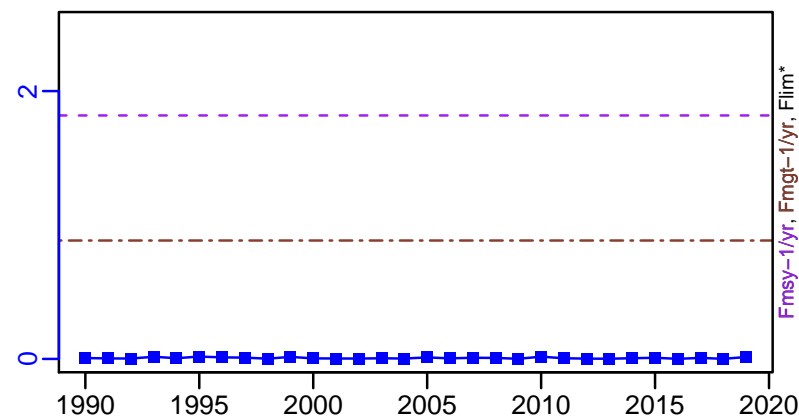
SSB-MT (1989-2020-PARMA)



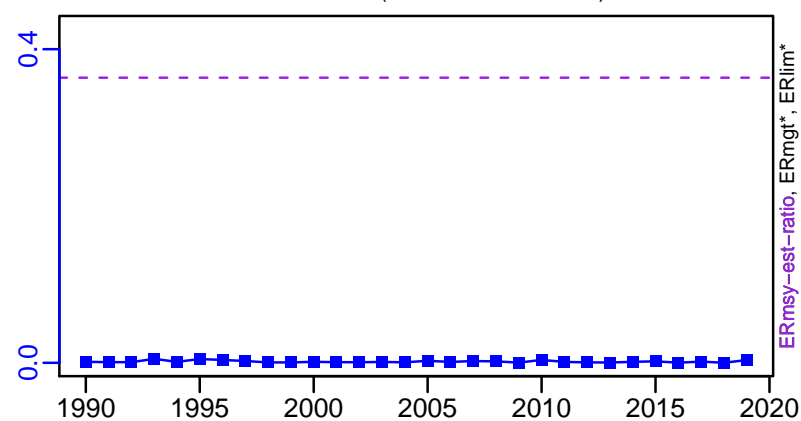
TN \*



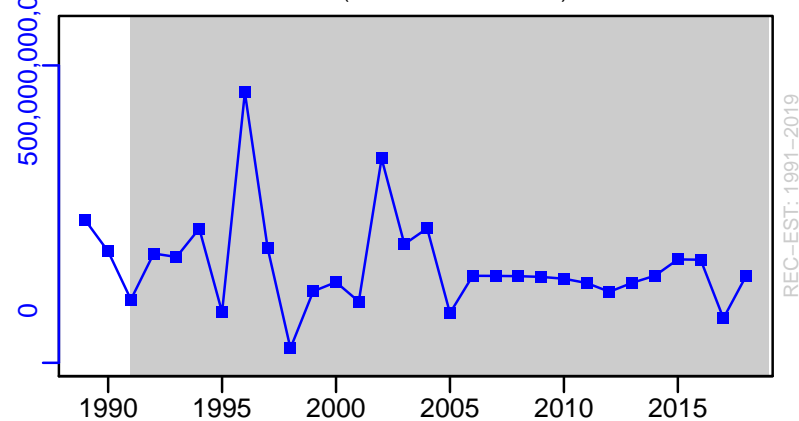
F-1/yr (1989-2020-PARMA)



ER-calc-ratio (1989-2020-PARMA)



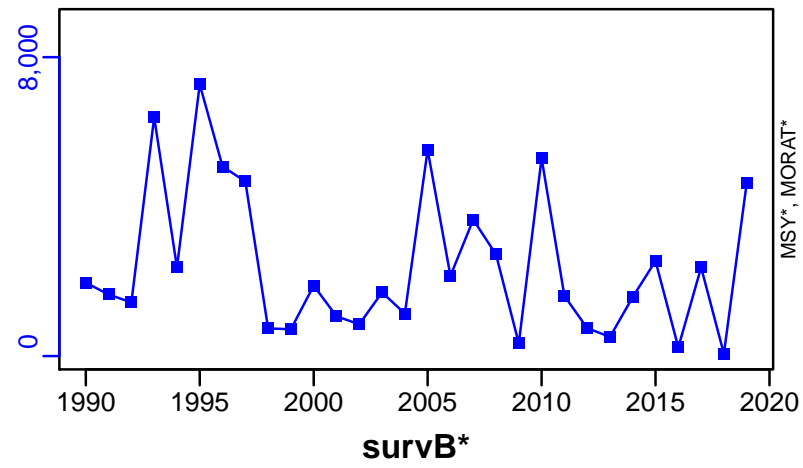
R-E00 (1989-2020-PARMA)



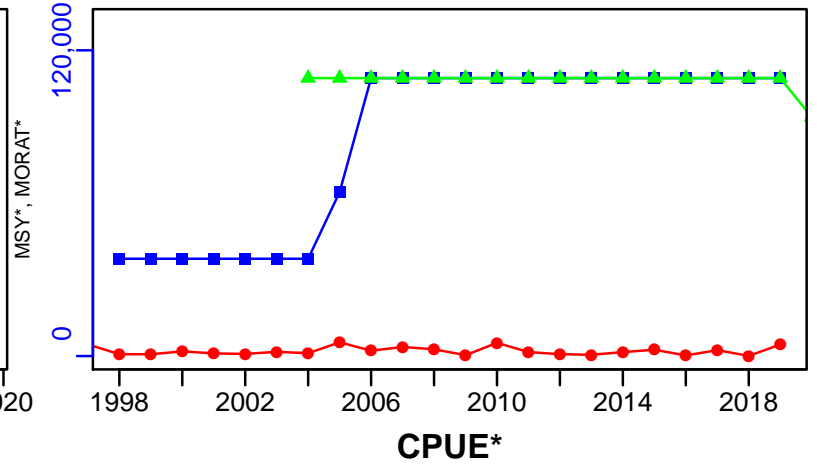


# Argentine anchoita Southern Argentina [ARGANCHOSARG]

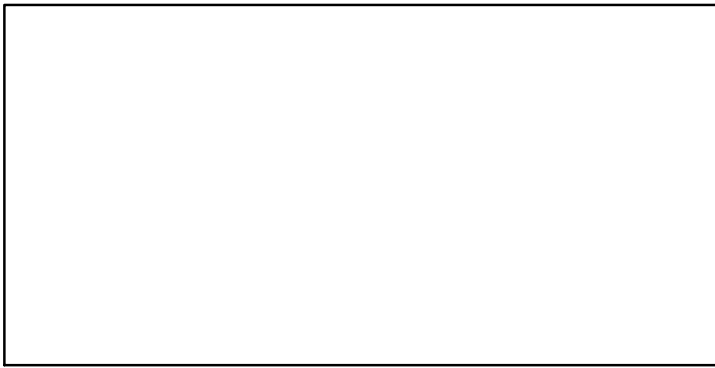
TC-MT, TL\*, RecC\* (1989–2020–PARMA)



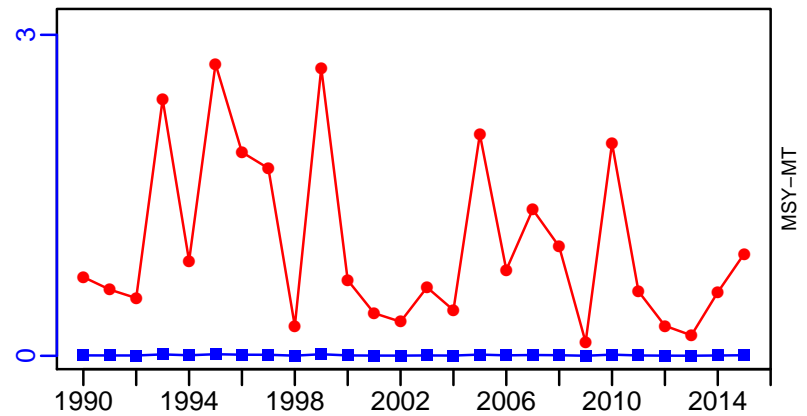
TAC-MT, Cpair-MT, Cadvised-MT (1989–2020–PARMA)



EFFORT\*



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



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

## Argentine hake Northern Argentina [ARGHAKENARG]

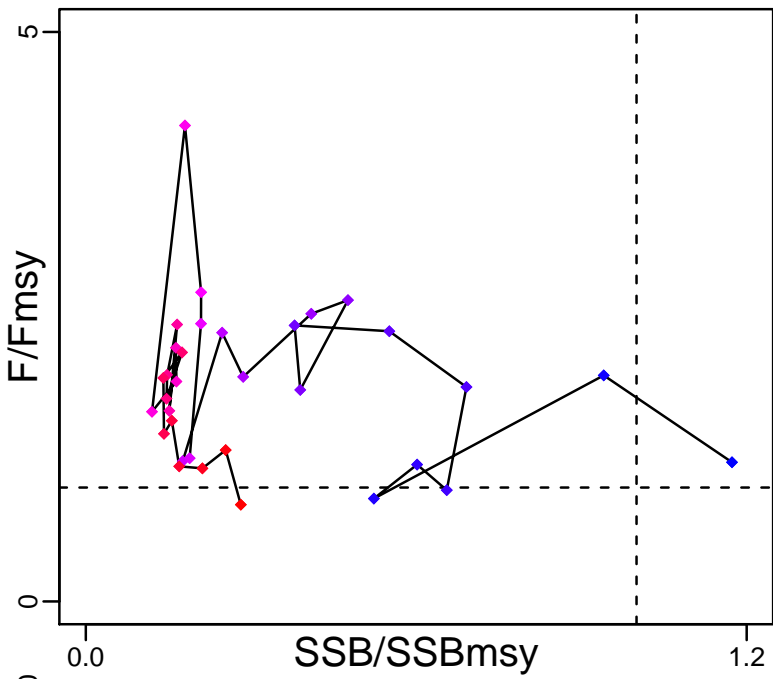
Metadata	
<b>Scientific Name</b>	Merluccius hubbsi
<b>Current Assess ID</b>	INIDEP-ARGHAKENARG-1985-2018-PARMA
<b>Area</b>	Northern Argentina
<b>Management Authority</b>	Consejo Federal Pesquero, Argentina national management
<b>Assessor</b>	Instituto Nacional de Investigacion y Desarrollo Pesquero
<b>Asmts in RAM</b>	2014, 2018, 2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2011	336,439
<b>SSBmsy</b>	SSBmsy-MT	2018	423,330
<b>Fmsy</b>	Fmsy-1/yr	2018	0.392
<b>ERmsy</b>	ERmsy-conv-ratio	2018	0.194
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2018	138,112
<b>M</b>	M-1/yr	2018	0.3
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2014	230,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

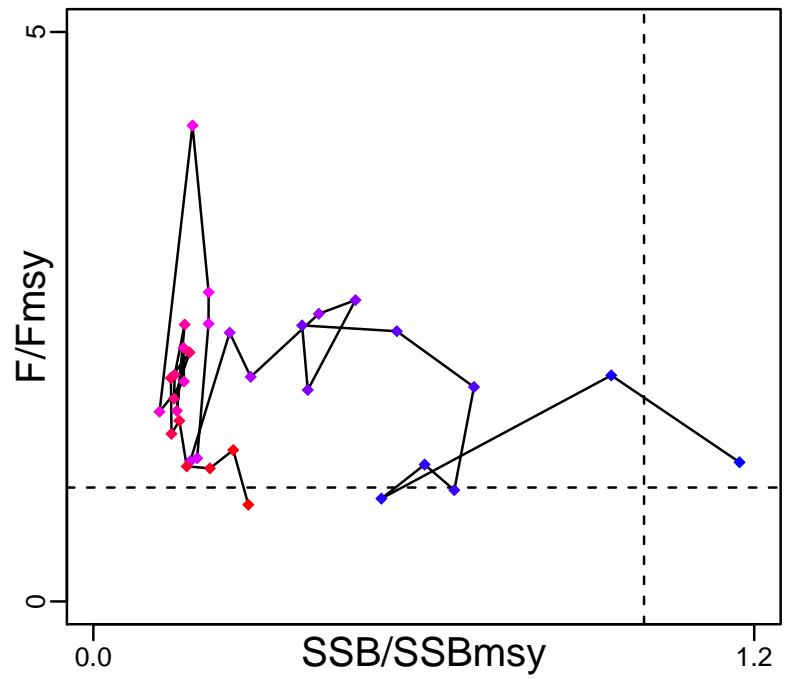
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	170,125	Both	-
<b>SSB</b>	SSB-MT	2018	119,165	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	300,085,000	-	-
<b>F</b>	F-1/yr	2018	0.333	Both	6-Mar
<b>ER</b>	ER-calc-ratio	2018	0.3	-	-
<b>TC</b>	TC-MT	2018	51,099		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	0.395		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2018	0.281		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2018	0.849		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-conv-ratio	2018	1.552		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Argentine hake Northern Argentina [ARGHAKENARG]

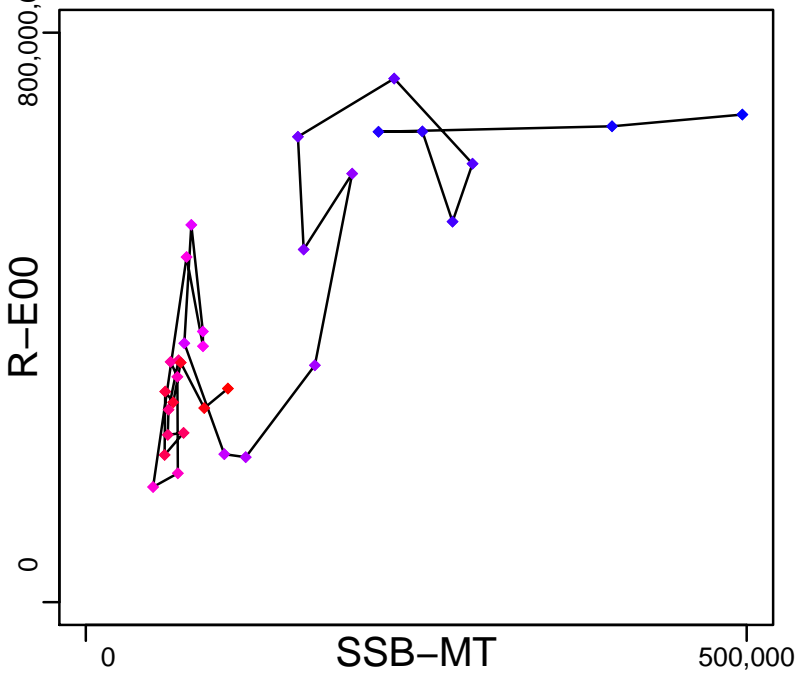
Kobe MSYpref (1985–2018–PARMA)



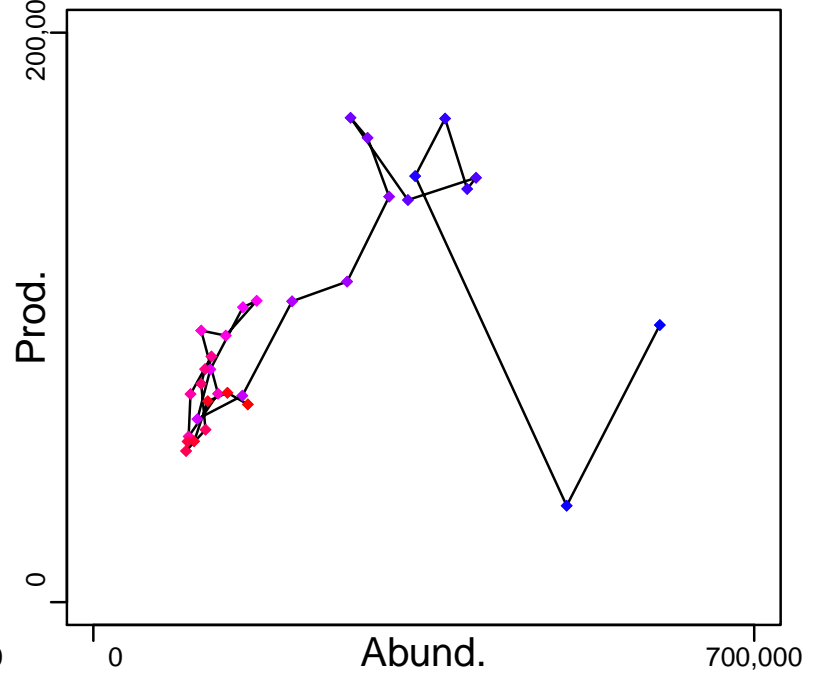
Kobe MGTpref (1985–2018–PARMA)



Spawner Recruit (1985–2018–PARMA)



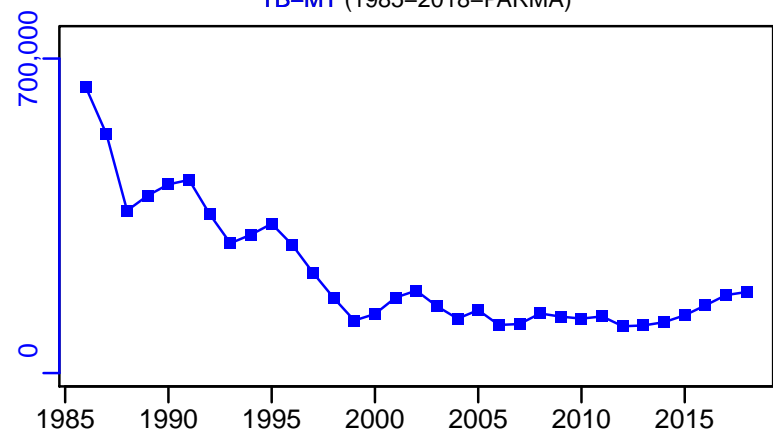
Production (1985–2018–PARMA)



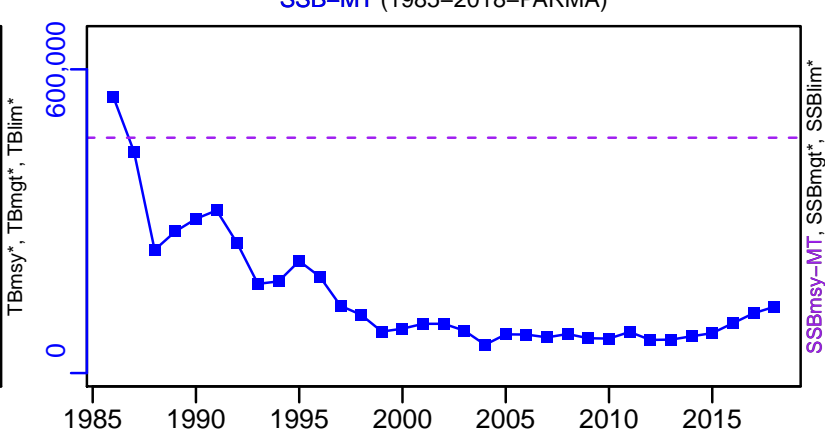
◆ Start Year ◆ End Year \* No Data

# Argentine hake Northern Argentina [ARGHAKENARG]

TB-MT (1985-2018-PARMA)



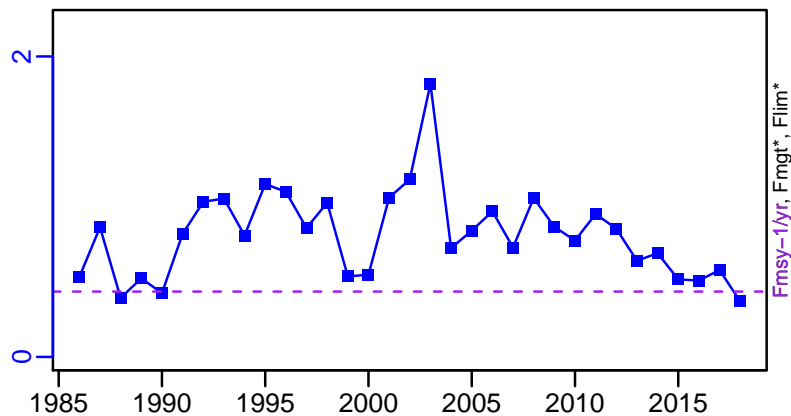
SSB-MT (1985-2018-PARMA)



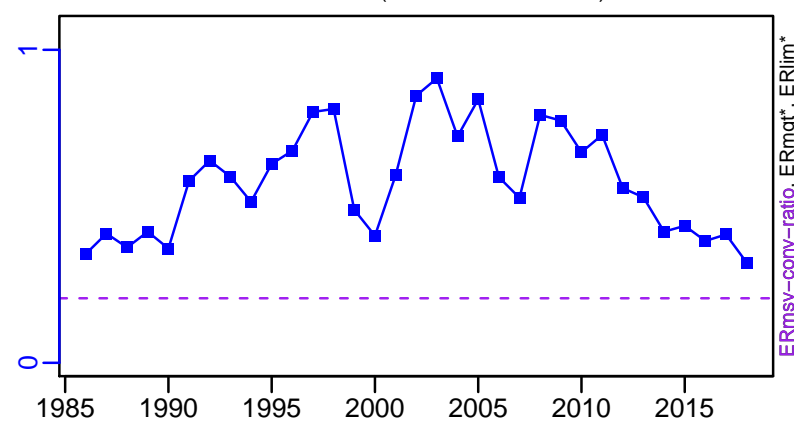
TN \*



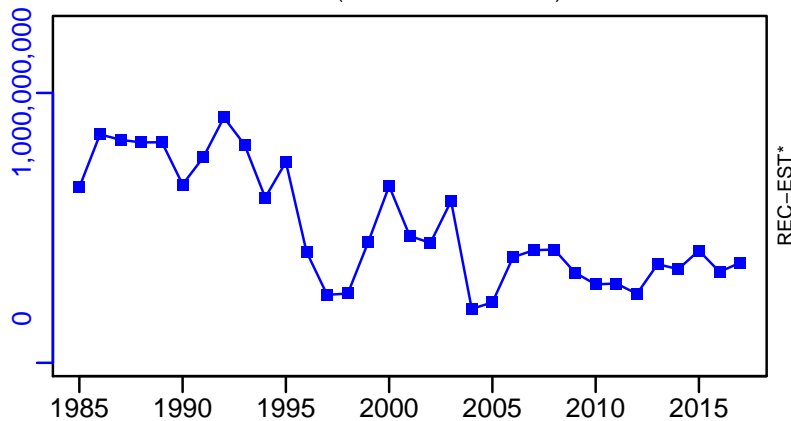
F-1/yr (1985-2018-PARMA)



ER-calc-ratio (1985-2018-PARMA)

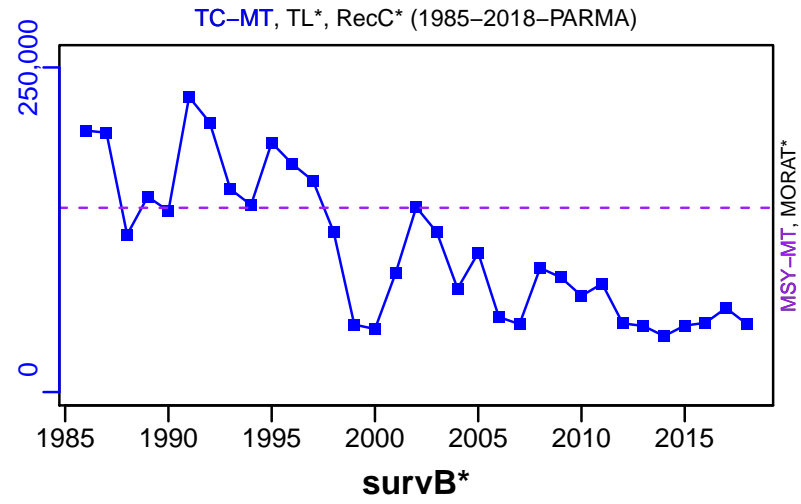


R-E00 (1985-2018-PARMA)

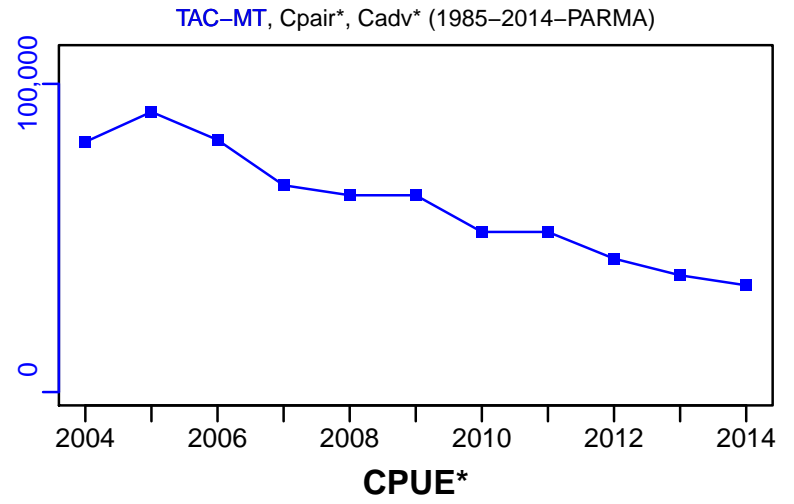


# Argentine hake Northern Argentina [ARGHAKENARG]

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



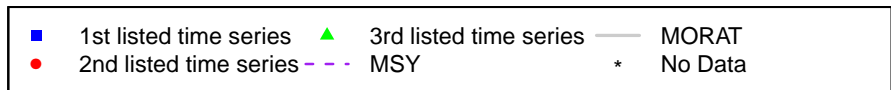
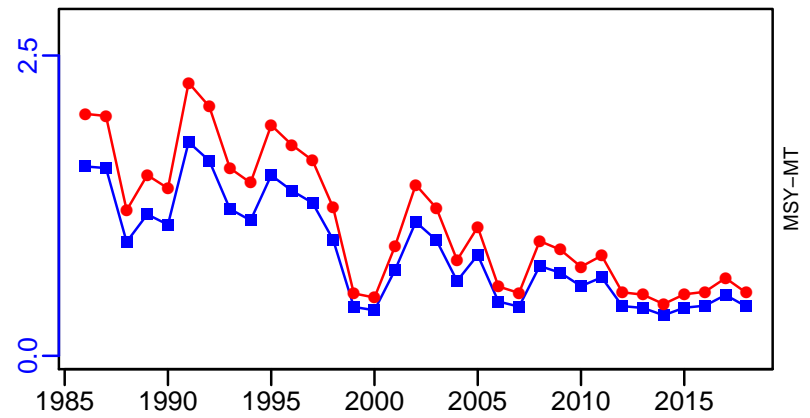
TAC-MT, Cpair\*, Cadv\* (1985-2014-PARMA)



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1985-2018-PARMA)



## Argentine hake Southern Argentina [ARGHAKESARG]

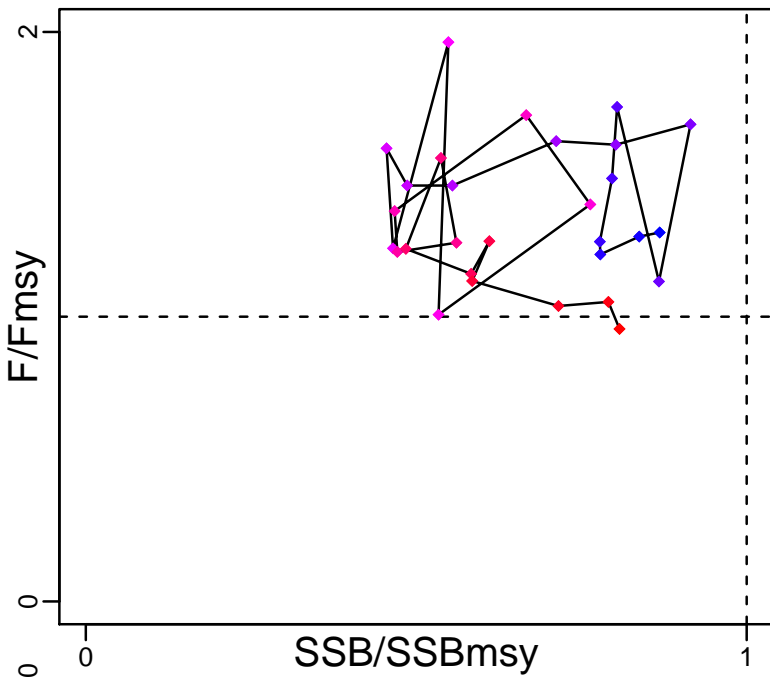
Metadata	
<b>Scientific Name</b>	Merluccius hubbsi
<b>Current Assess ID</b>	INIDEP-ARGHAKESARG-1989-2019-Parma
<b>Area</b>	Southern Argentina
<b>Management Authority</b>	Consejo Federal Pesquero, Argentina national management
<b>Assessor</b>	Instituto Nacional de Investigacion y Desarrollo Pesquero
<b>Asmts in RAM</b>	2015, 2019, 2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2019	668,386
<b>Fmsy</b>	Fmsy-1/yr	2019	0.558
<b>ERmsy</b>	ERmsy-conv-ratio	2019	0.441
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	$6 \times 10^5$
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2019	527,521
<b>M</b>	M-1/yr	2019	0.3
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

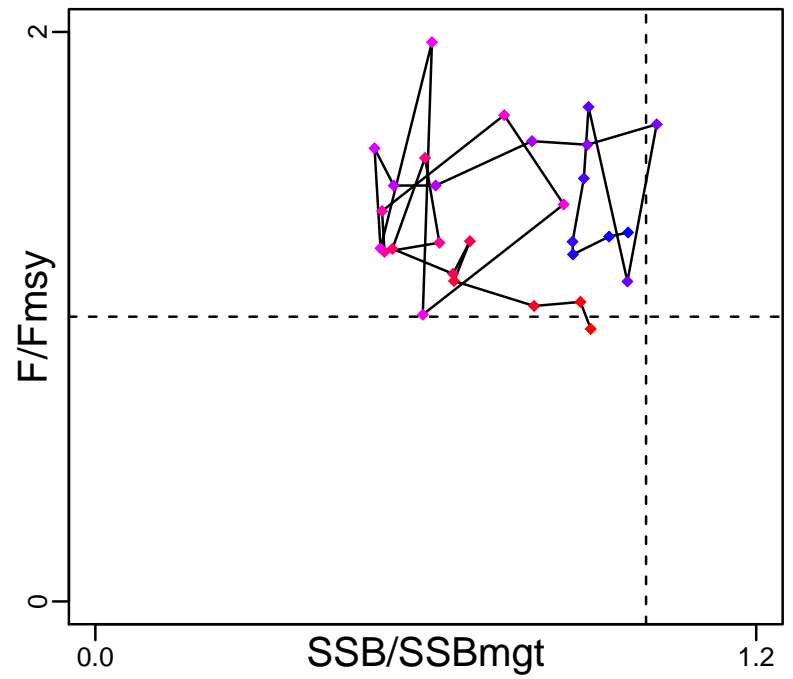
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	885,210	-	-
<b>SSB</b>	SSB-MT	2019	539,759	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	1,909,620,000	-	1
<b>F</b>	F-1/yr	2019	0.534	Both	6-Mar
<b>ER</b>	ER-ratio	2019	0.779	Both	-
<b>TC</b>	TC-MT	2019	420,278		
<b>TL</b>	TL-MT	2019	309,862		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2019	0.808		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.957		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-conv-ratio	2019	1.765		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	0.9		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Argentine hake Southern Argentina [ARGHAKESARG]

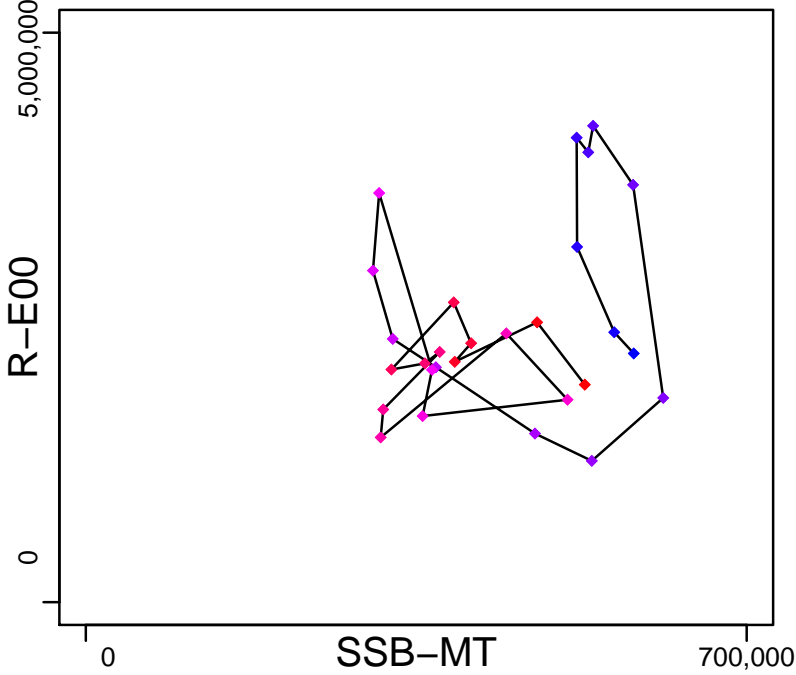
Kobe MSYpref (1989–2019–Parma)



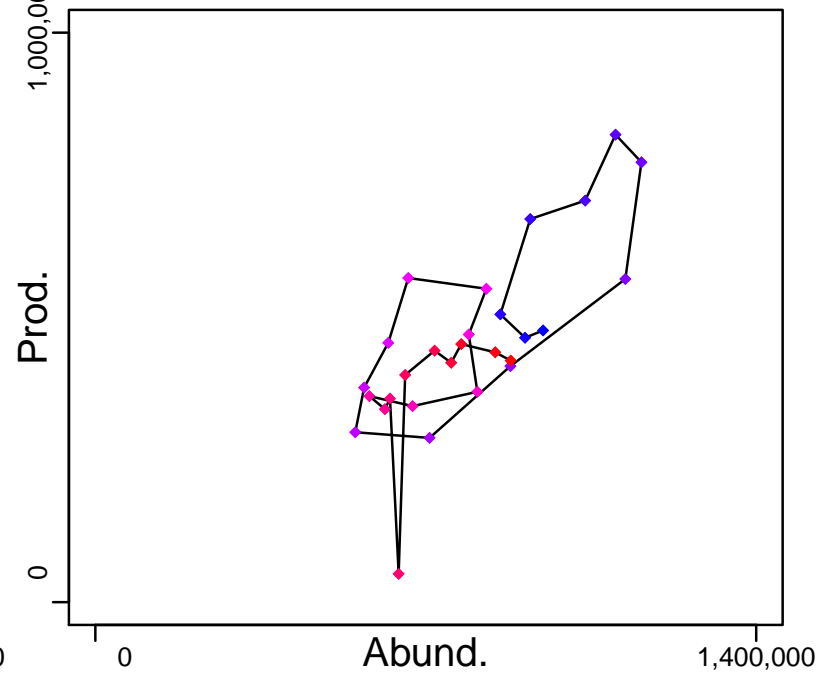
Kobe MGTpref (1989–2019–Parma)



Spawner Recruit (1989–2019–Parma)



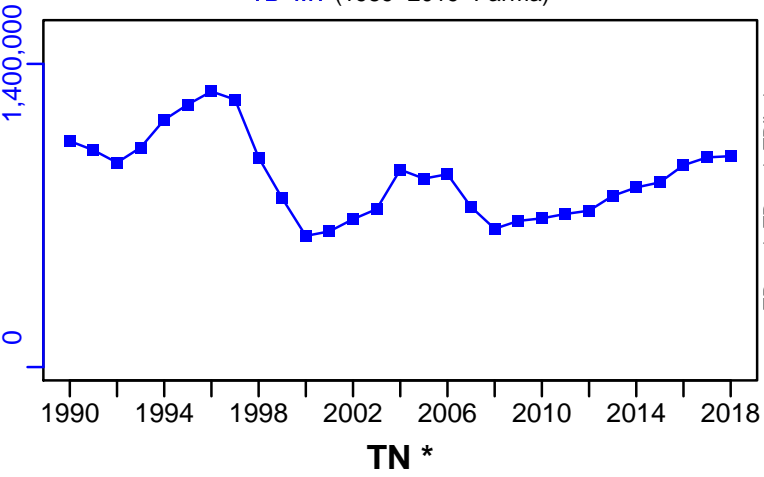
Production (1989–2019–Parma)



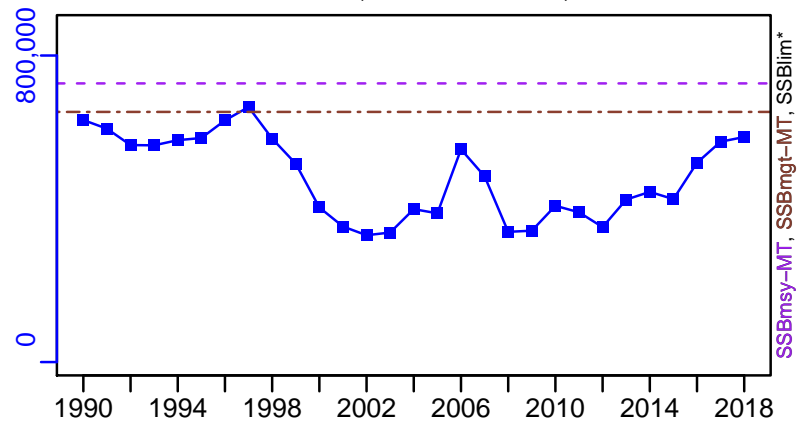
◆ Start Year ◆ End Year \* No Data

# Argentine hake Southern Argentina [ARGHAKESARG]

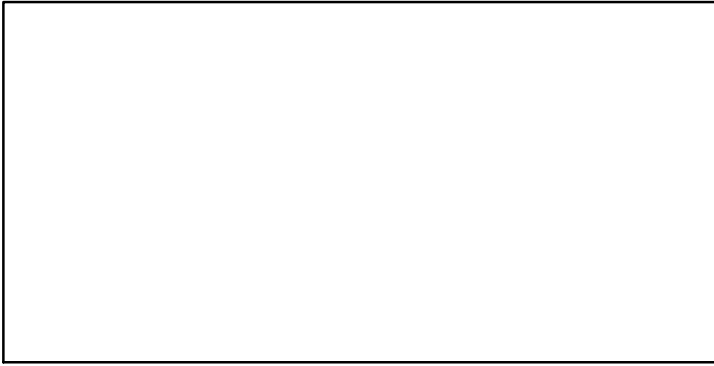
TB-MT (1989–2019–Parma)



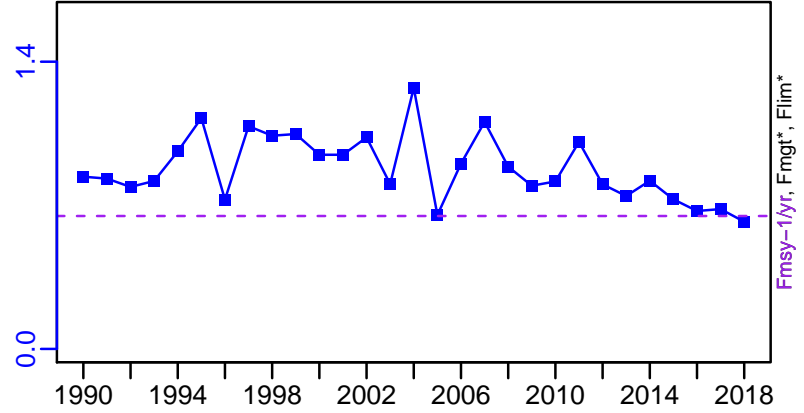
SSB-MT (1989–2019–Parma)



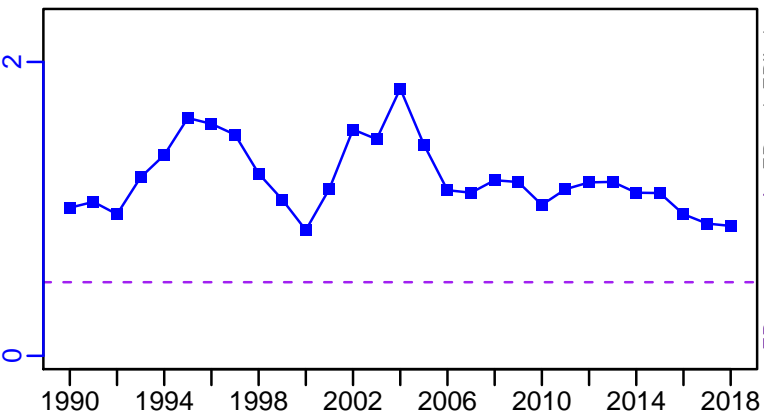
TN \*



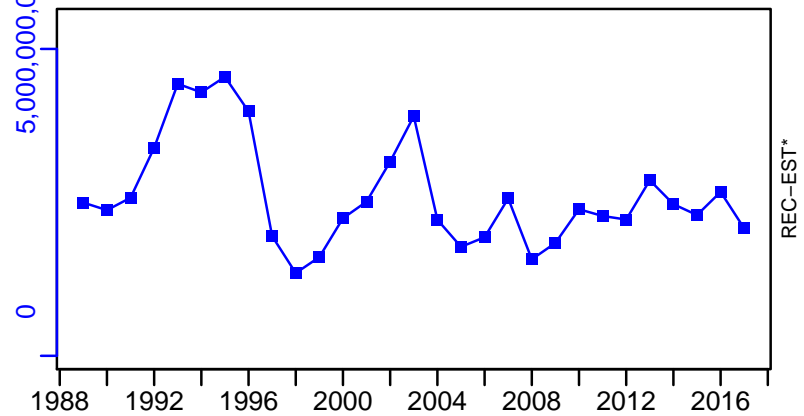
F-1/yr (1989–2019–Parma)



ER-ratio (1989–2019–Parma)



R-E00 (1989–2019–Parma)

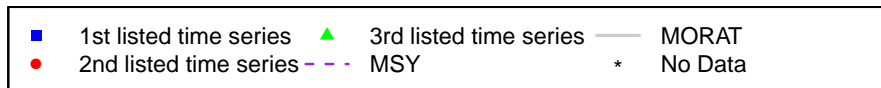
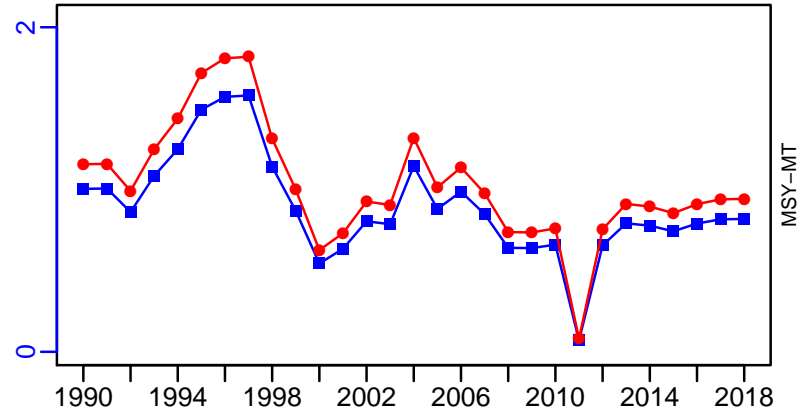
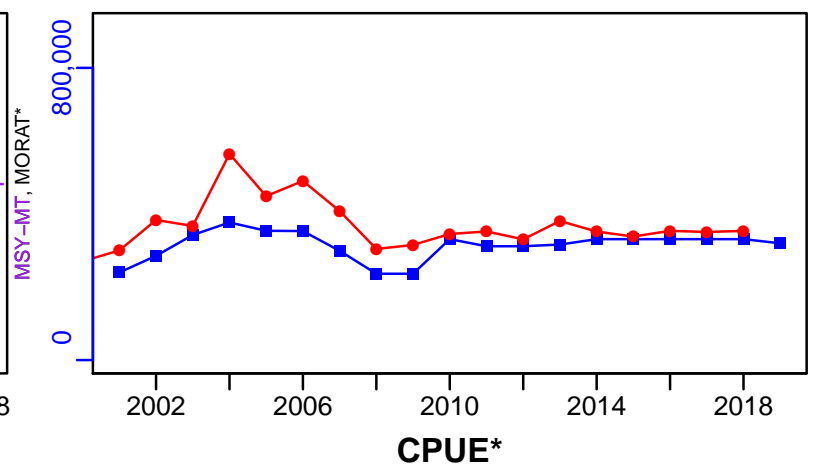
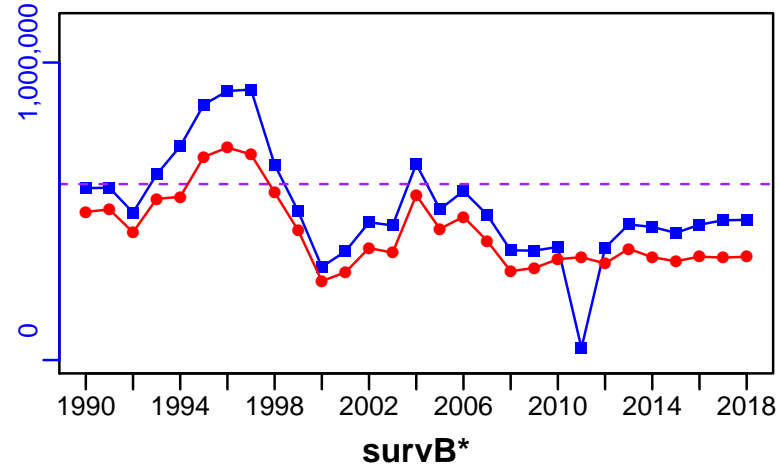




# Argentine hake Southern Argentina [ARGHAKESARG]

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

TAC-MT, Cpair-MT, Cadv\* (1989-2019-Parma)



## Yellow squat lobster Central-Southern Chile [BSQLOBSTERCSCH]

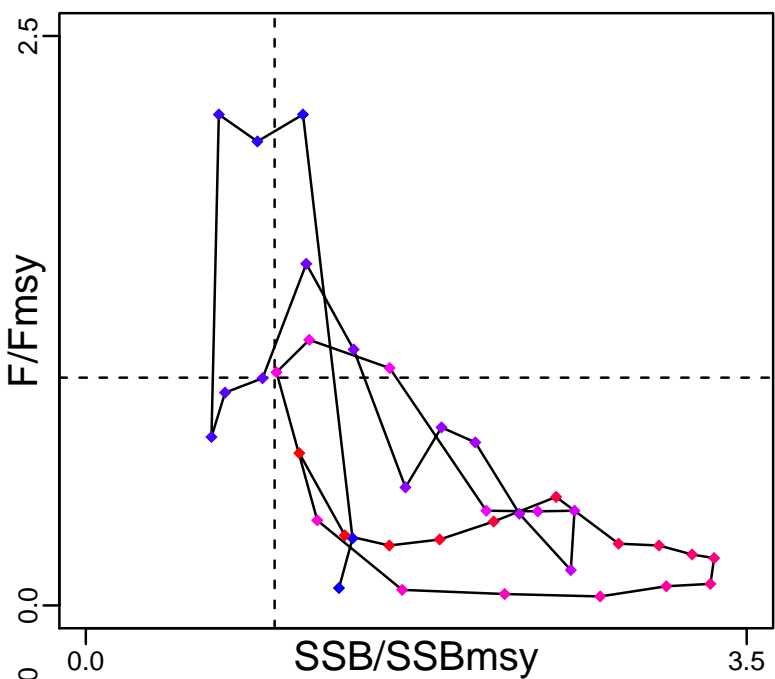
Metadata	
<b>Scientific Name</b>	Cervimunida johni
<b>Current Assess ID</b>	IFOPCH-BSQLOBSTERCSCH-1976-2015-PARMA
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2015	5139
<b>Fmsy</b>	Fmsy-pr-1/yr	2015	0.38
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2015	5139
<b>Fmgt</b>	Fmgt-1/yr	2015	0.38
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2015	0.3
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

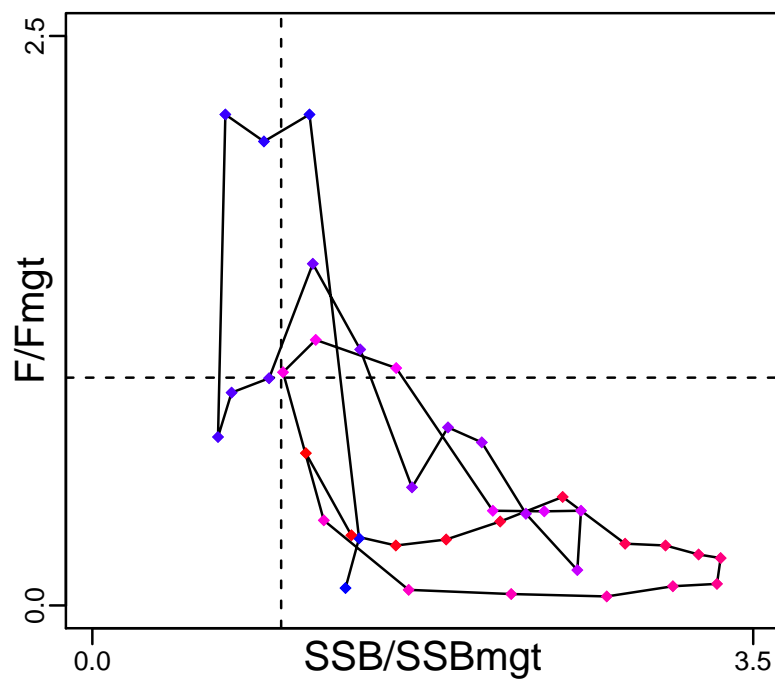
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	23,300	-	-
<b>SSB</b>	SSB-MT	2015	5810	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	$2.74 \times 10^8$	-	3
<b>F</b>	F-1/yr	2015	0.254	-	-
<b>ER</b>	ER-calc-ratio	2015	0.139	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	3250		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2015	1.131		
<b>F/Fmsy</b>	F-1/yr/Fmsy-pr-1/yr	2015	0.668		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2015	1.131		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2015	0.668		
<b>ER/ERmgt</b>	-	-	-		

# Yellow squat lobster Central–Southern Chile [BSQLOBSTERCSCH]

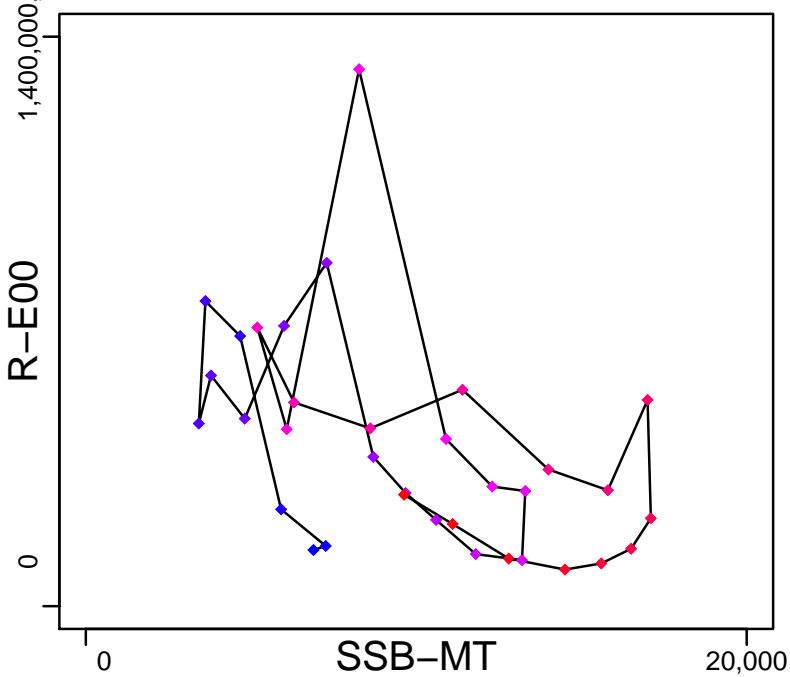
Kobe MSYpref (1976–2015–PARMA)



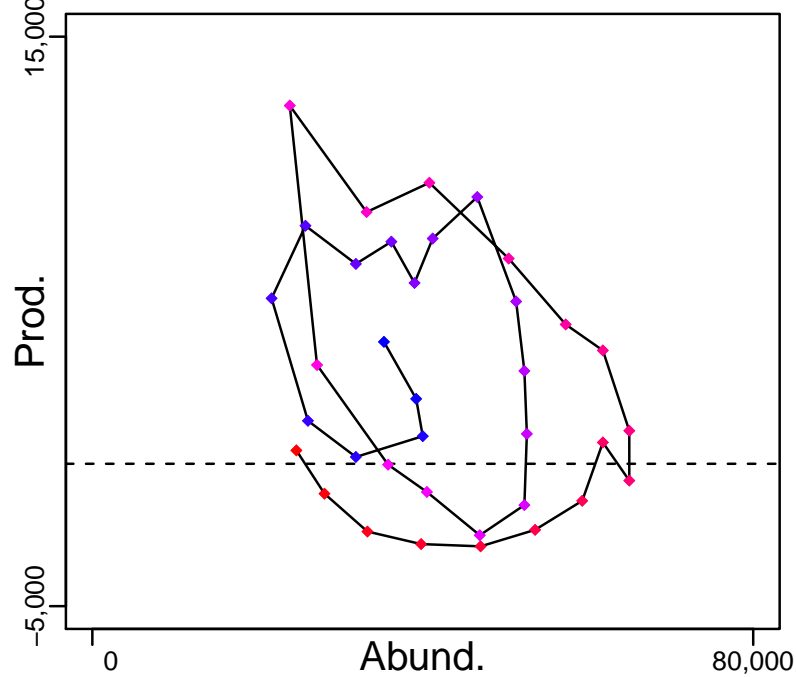
Kobe MGTpref (1976–2015–PARMA)



Spawner Recruit (1976–2015–PARMA)



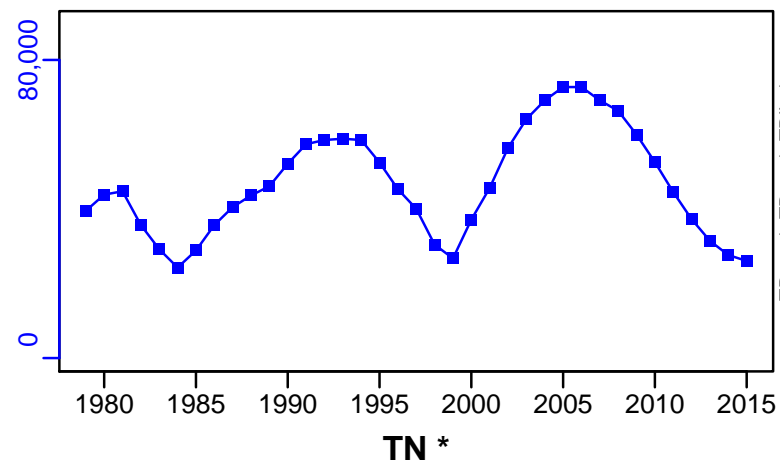
Production (1976–2015–PARMA)



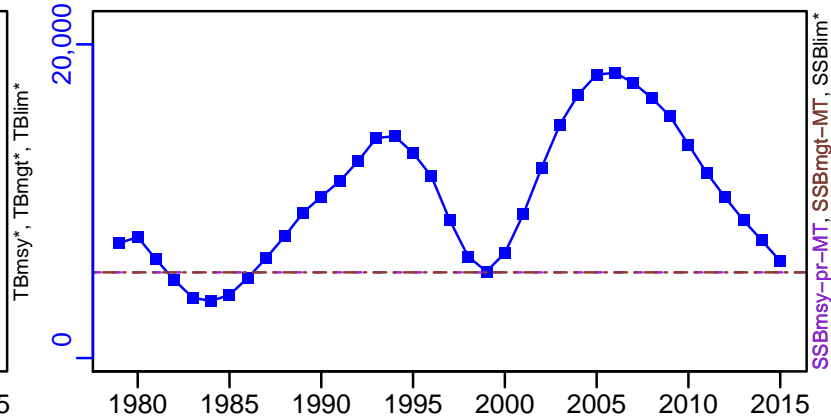
◆ Start Year ◆ End Year \* No Data

# Yellow squat lobster Central–Southern Chile [BSQLOBSTERCSCH]

TB–MT (1976–2015–PARMA)



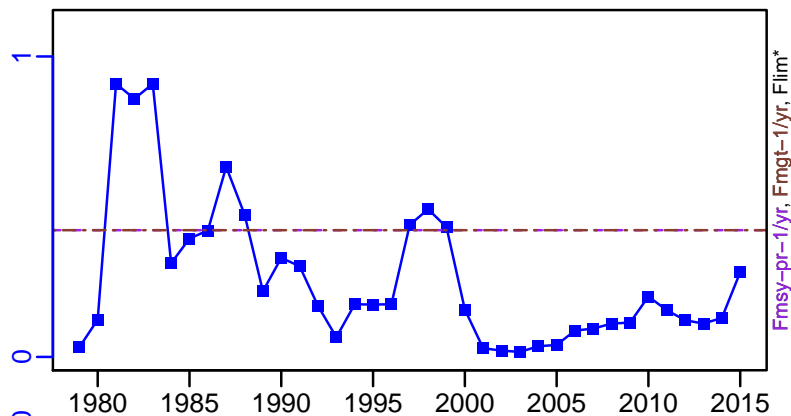
SSB–MT (1976–2015–PARMA)



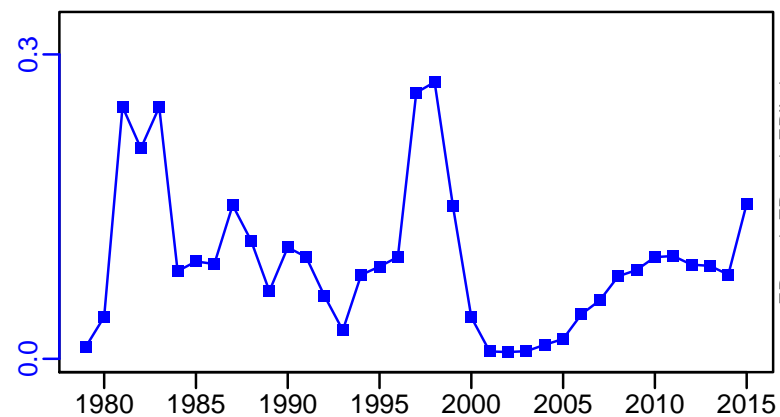
TN \*



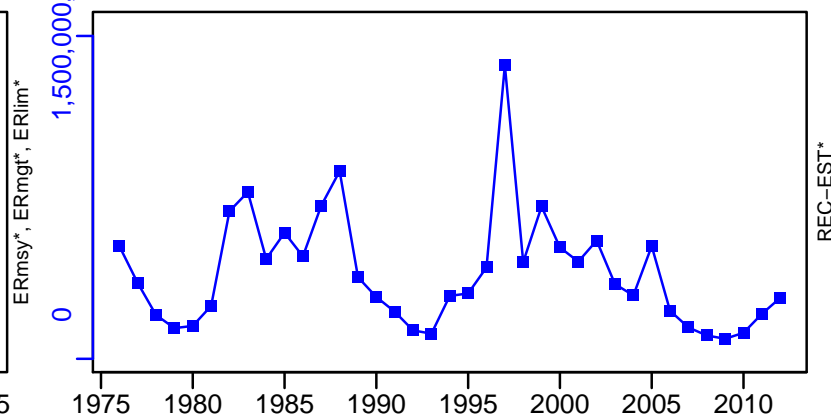
F–1/yr (1976–2015–PARMA)



ER–calc–ratio (1976–2015–PARMA)



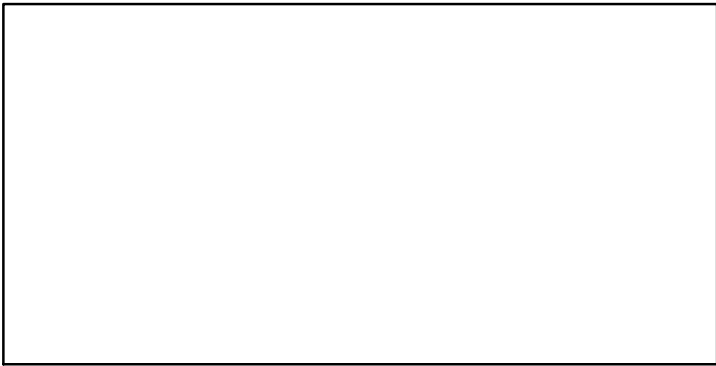
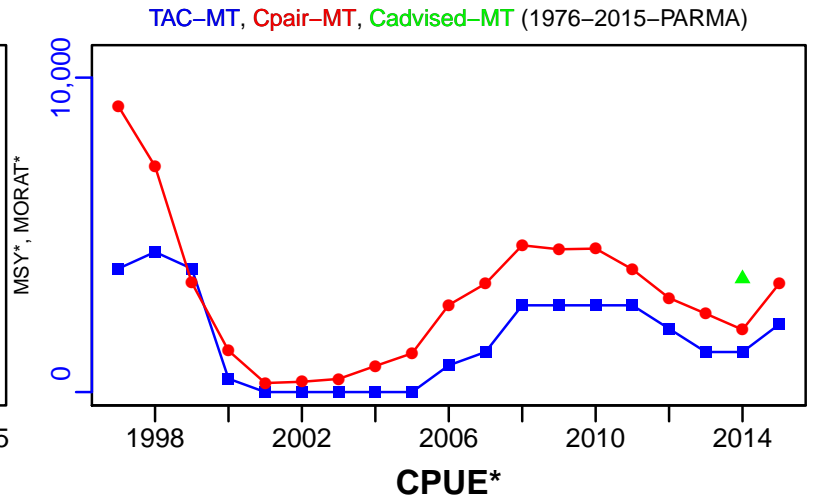
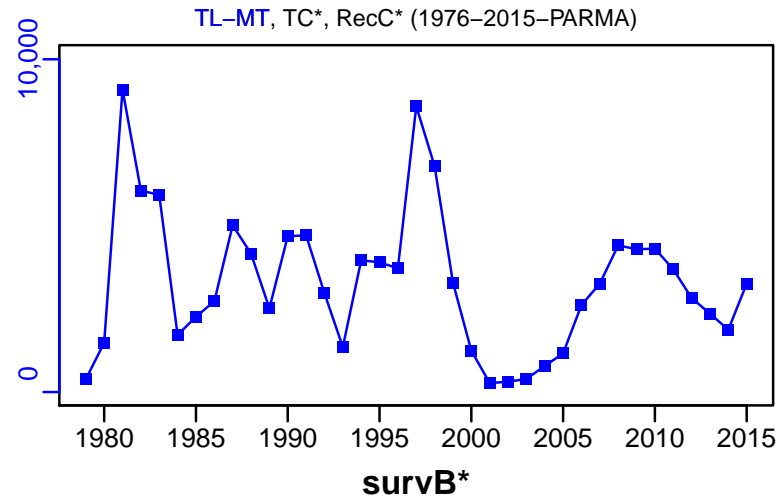
R–E00 (1976–2015–PARMA)



# Yellow squat lobster Central–Southern Chile [BSQLOBSTERCSCH]

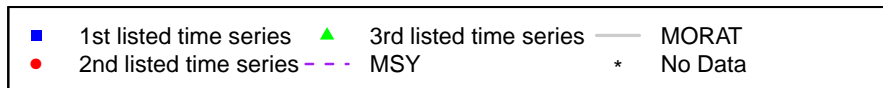
TL–MT, TC\*, RecC\* (1976–2015–PARMA)

TAC–MT, Cpair–MT, Cadvised–MT (1976–2015–PARMA)



EFFORT\*

CdivMSY\*



## Yellow squat lobster Northern Chile [BSQLOBSTERNCH]

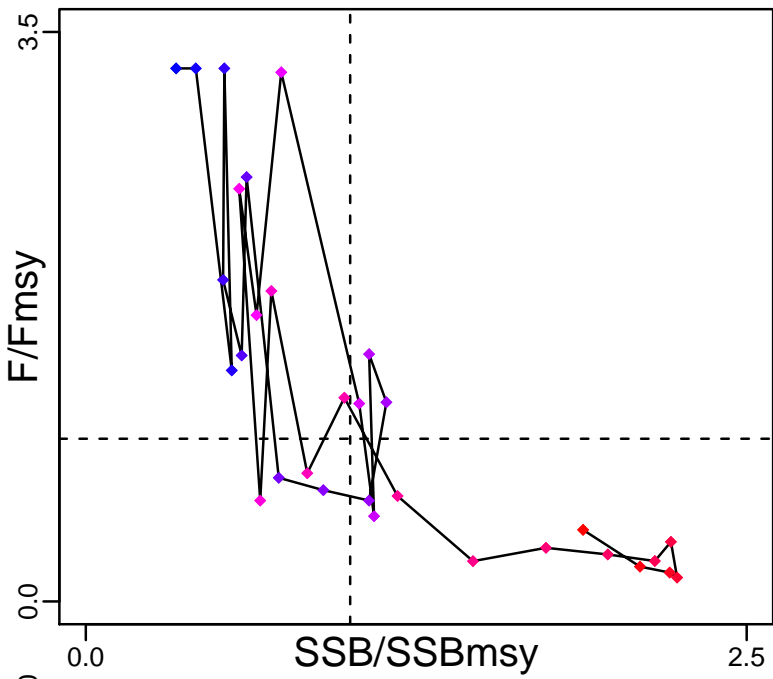
Metadata	
<b>Scientific Name</b>	Cervimunida johni
<b>Current Assess ID</b>	IFOPCH-BSQLOBSTERNCH-1982-2015-PARMA
<b>Area</b>	Northern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2015	2137
<b>Fmsy</b>	Fmsy-pr-1/yr	2015	0.25
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2015	2137
<b>Fmgt</b>	Fmgt-1/yr	2015	0.25
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2015	0.3
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

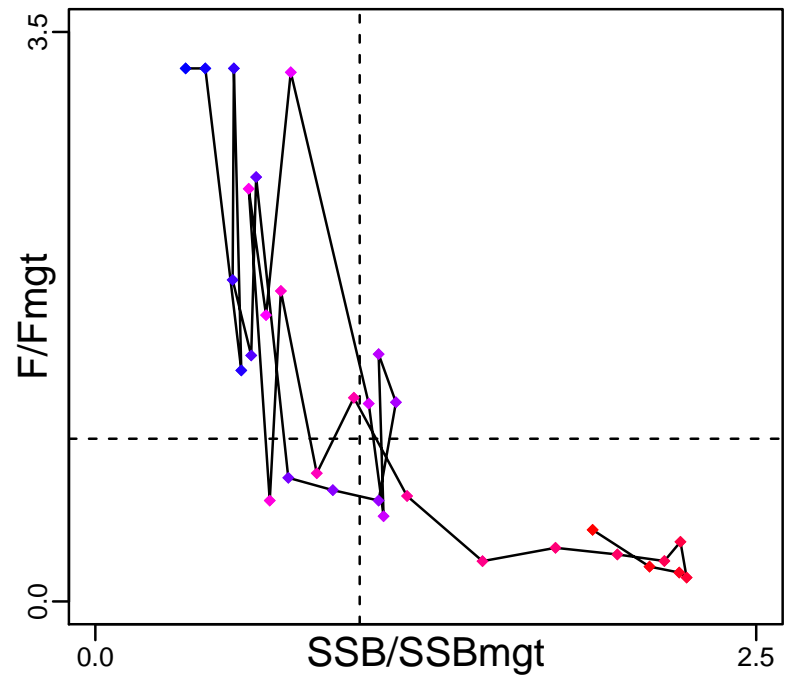
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	19,100	-	-
<b>SSB</b>	SSB-MT	2015	4020	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	$1.65 \times 10^8$	-	3
<b>F</b>	F-1/yr	2015	0.11	-	-
<b>ER</b>	ER-calc-ratio	2015	0.066	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	1260		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2015	1.881		
<b>F/Fmsy</b>	F-1/yr/Fmsy-pr-1/yr	2015	0.44		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2015	1.881		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2015	0.44		
<b>ER/ERmgt</b>	-	-	-		

# Yellow squat lobster Northern Chile [BSQLOBSTERNCH]

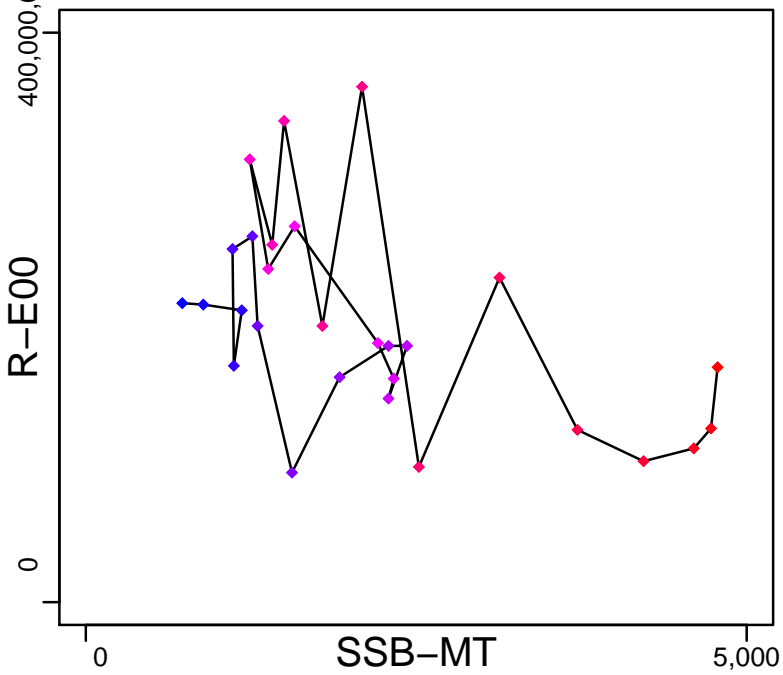
Kobe MSYpref (1982–2015–PARMA)



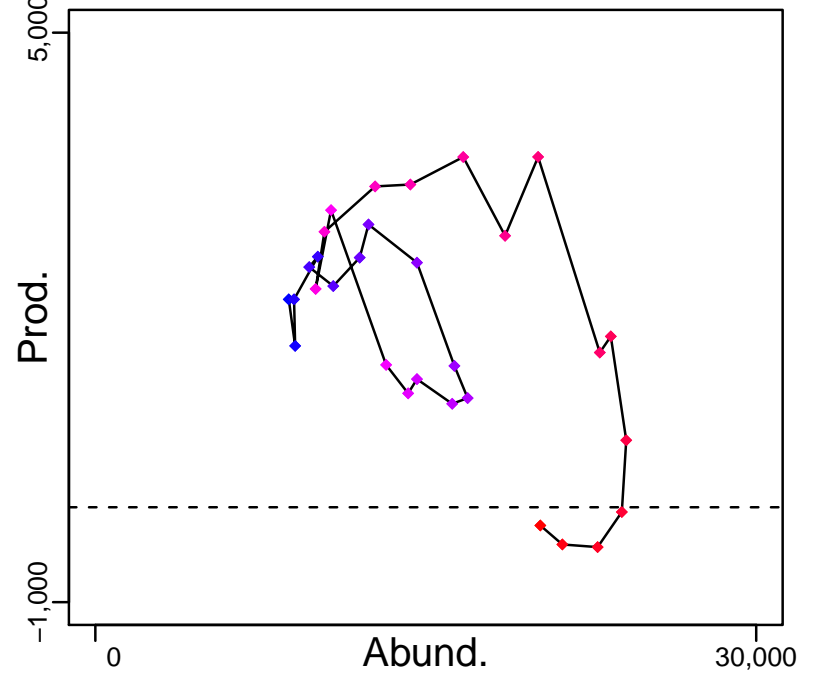
Kobe MGTpref (1982–2015–PARMA)



Spawner Recruit (1982–2015–PARMA)



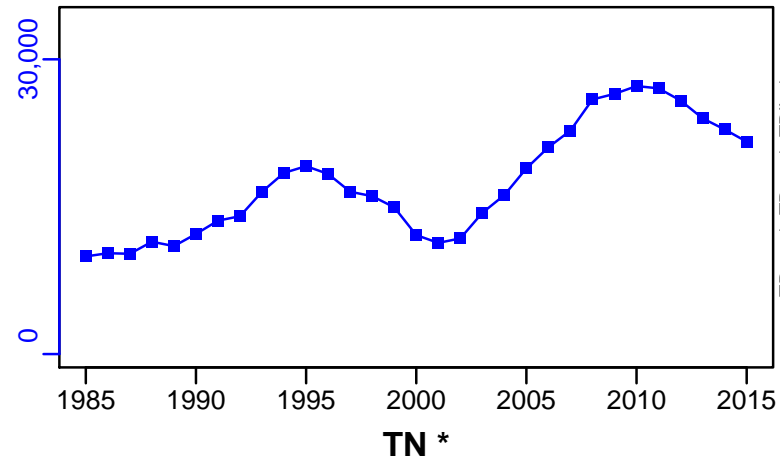
Production (1982–2015–PARMA)



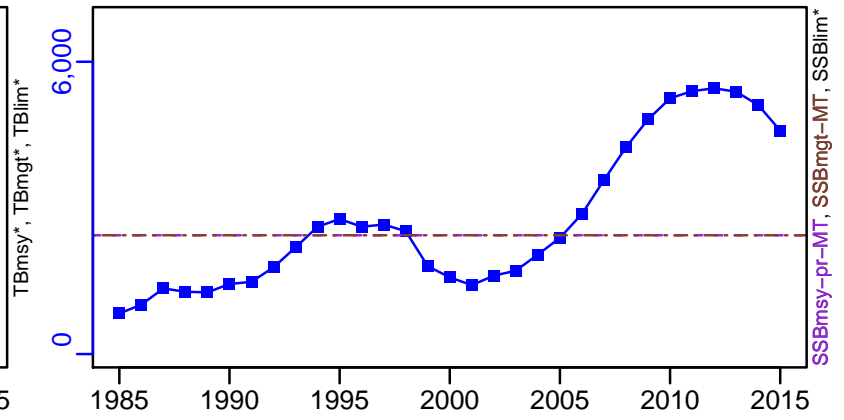
◆ Start Year ◆ End Year \* No Data

# Yellow squat lobster Northern Chile [BSQLOBSTERNCH]

TB-MT (1982-2015-PARMA)



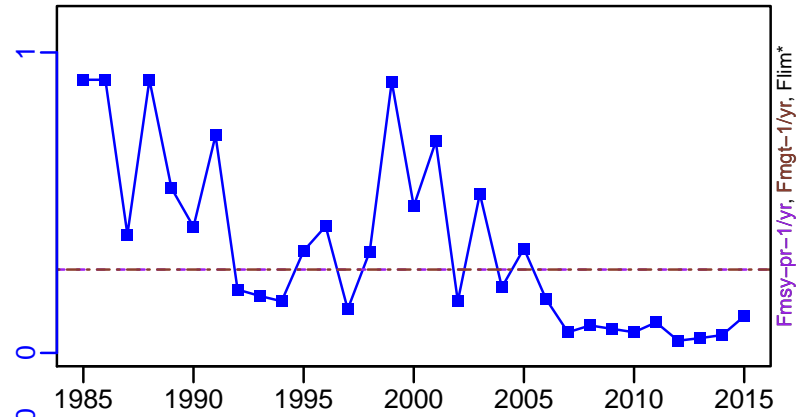
SSB-MT (1982-2015-PARMA)



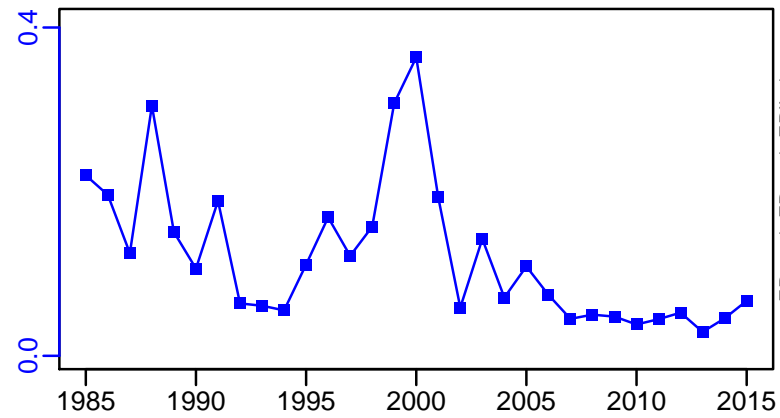
TN \*



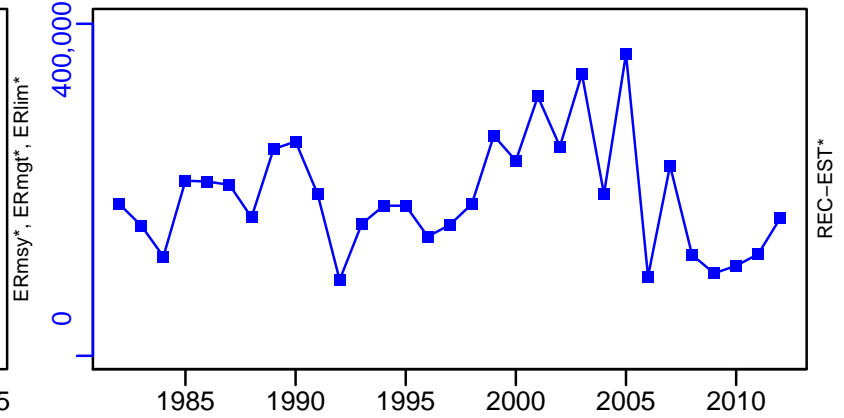
F-1/yr (1982-2015-PARMA)



ER-calc-ratio (1982-2015-PARMA)



R-E00 (1982-2015-PARMA)

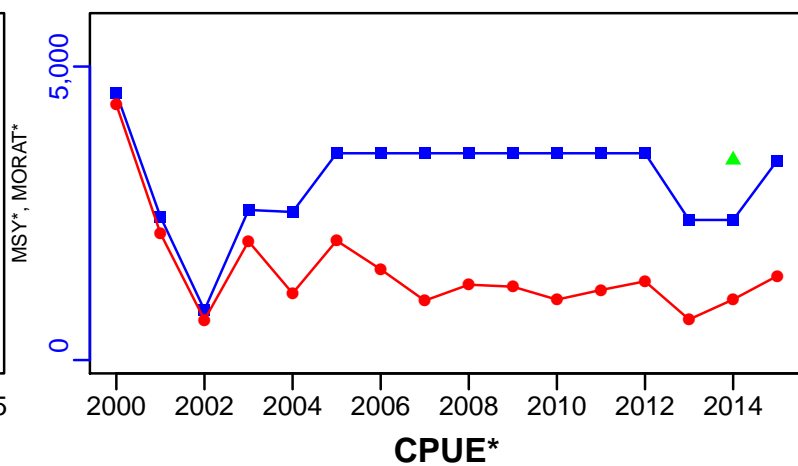
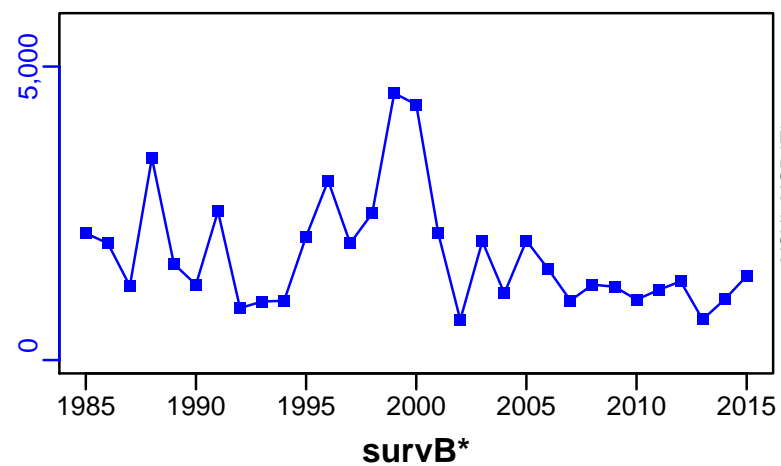




# Yellow squat lobster Northern Chile [BSQLOBSTERNCH]

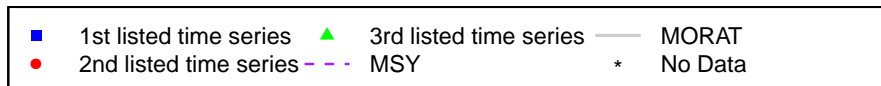
TL-MT, TC\*, RecC\* (1982-2015-PARMA)

TAC-MT, Cpair-MT, Cadvised-MT (1982-2015-PARMA)



EFFORT\*

CdivMSY\*



## Chilean herring Central-Southern Chile [CHERRCHVX]

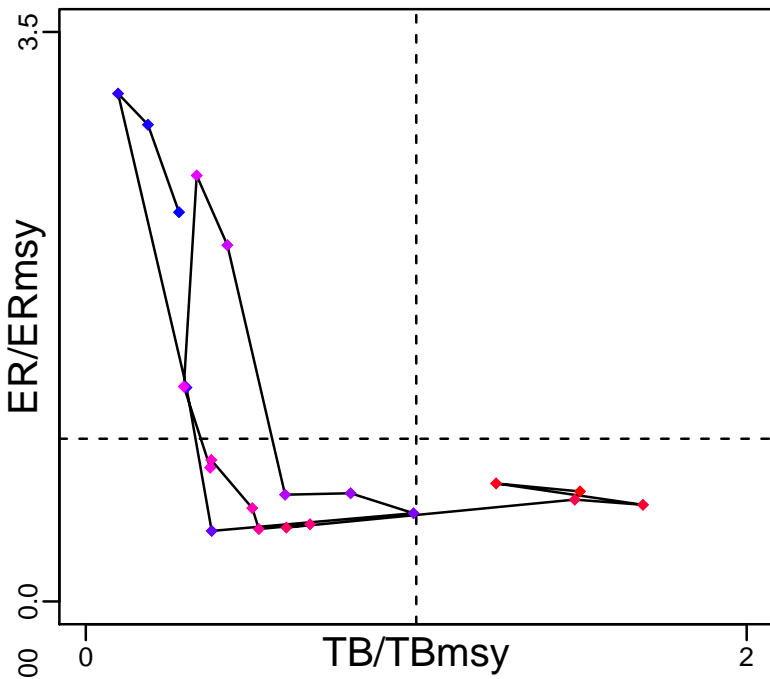
Metadata	
<b>Scientific Name</b>	Clupea bentincki
<b>Current Assess ID</b>	IFOPCH-CHERRCHVX-1960-2012-CHING
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2012	2,520,608
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2012	0.327
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2012	823,979
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

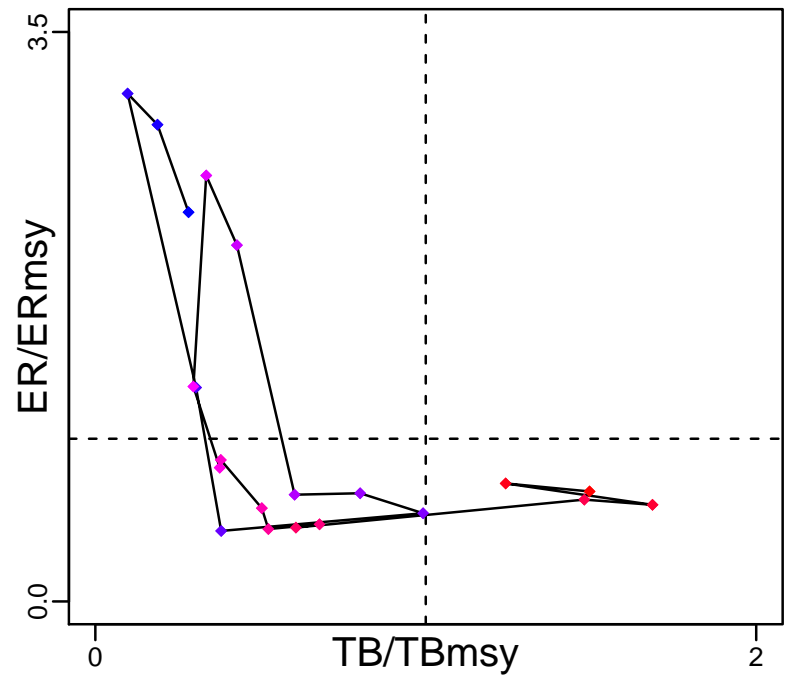
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2012	4,190,000	-	-
<b>SSB</b>	SSB-MT	2012	1,620,000	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2012	$7.41 \times 10^{10}$	-	-
<b>F</b>	F-1/yr	2012	0.262	-	-
<b>ER</b>	ER-calc-ratio	2012	0.221	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2012	833,000		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	1.662		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2012	0.676		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Chilean herring Central–Southern Chile [CHERRCHVX]

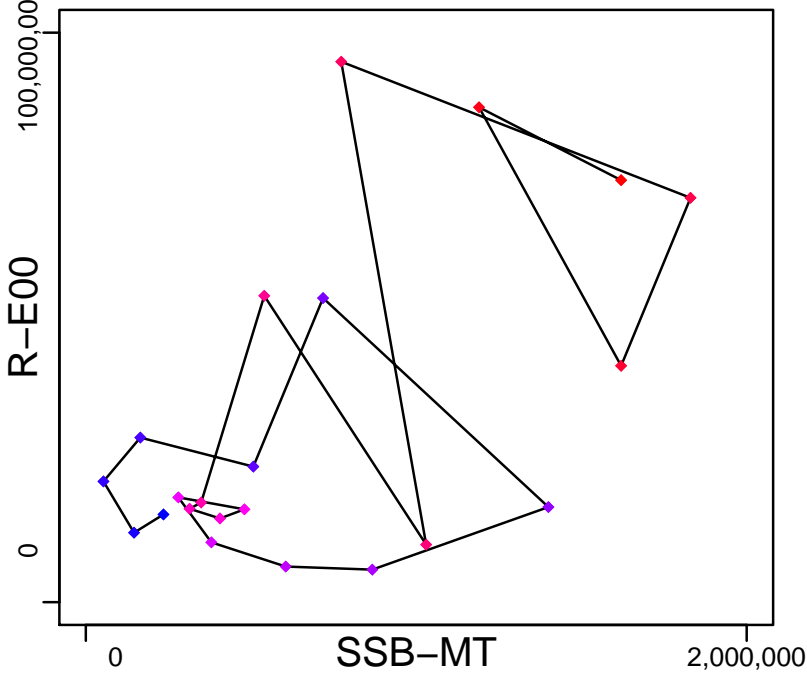
Kobe MSYpref (1960–2012–CHING)



Kobe MGTpref (1960–2012–CHING)



Spawner Recruit (1960–2012–CHING)



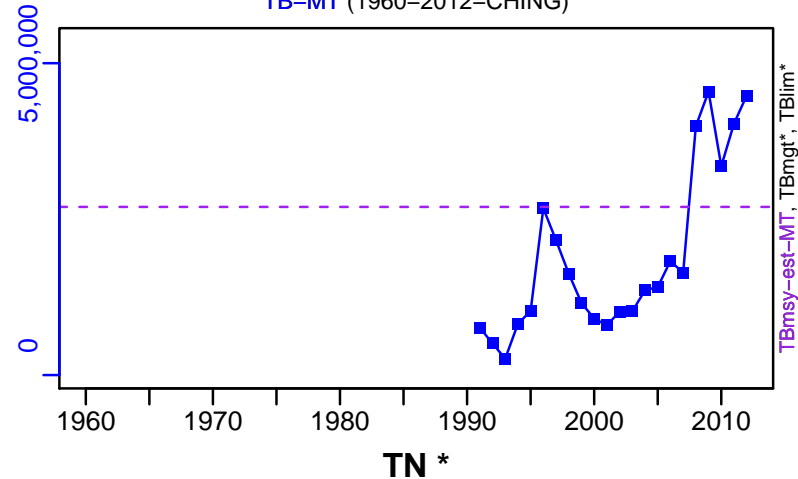
Production\*



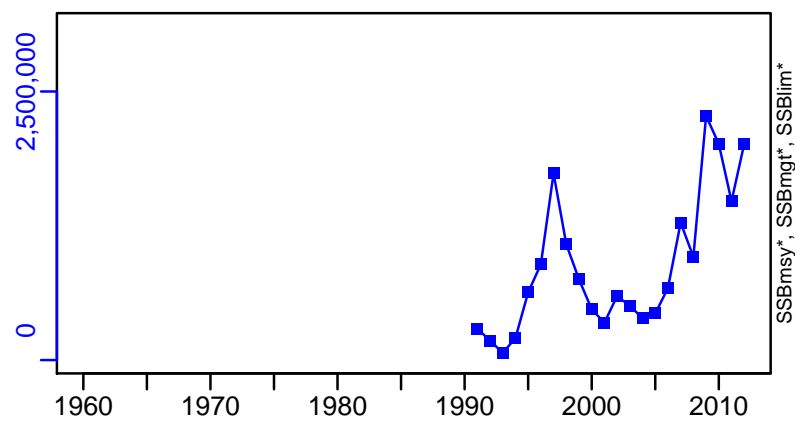
◆ Start Year ◆ End Year \* No Data

# Chilean herring Central–Southern Chile [CHERRCHVX]

TB–MT (1960–2012–CHING)



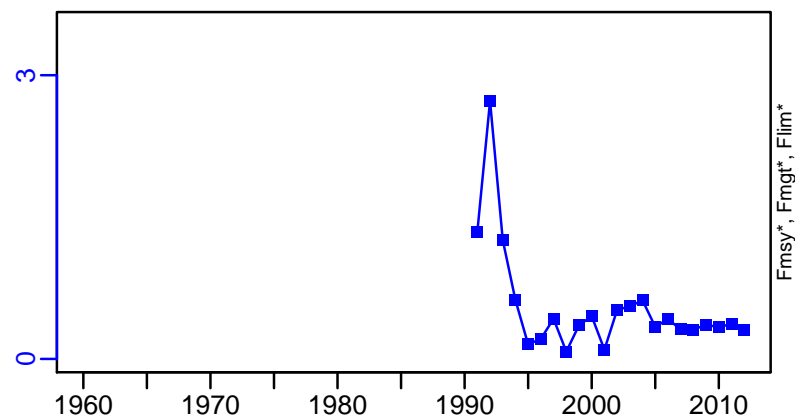
SSB–MT (1960–2012–CHING)



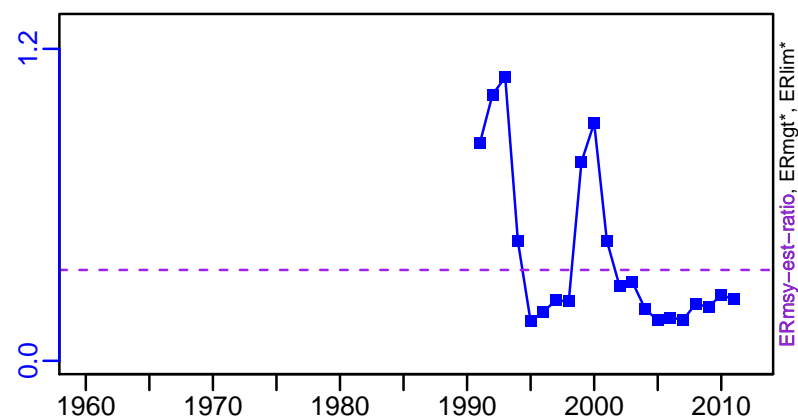
TN \*



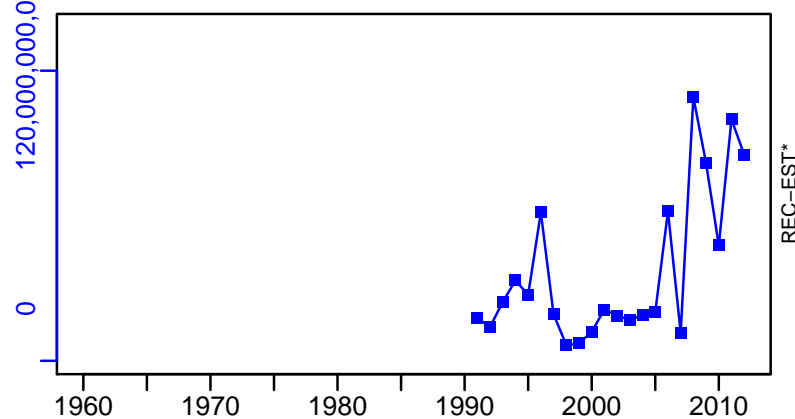
F–1/yr (1960–2012–CHING)



ER–calc–ratio (1960–2012–CHING)



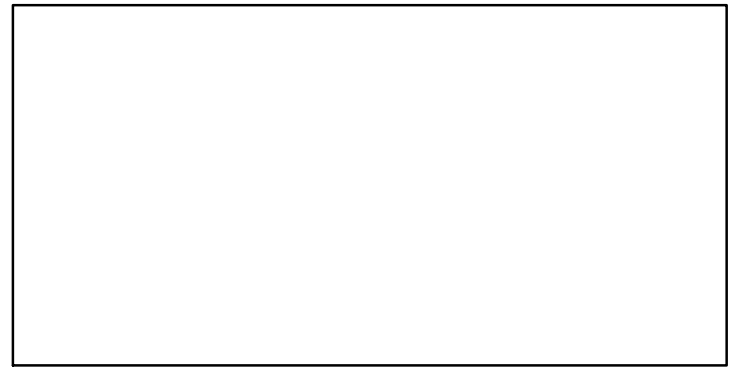
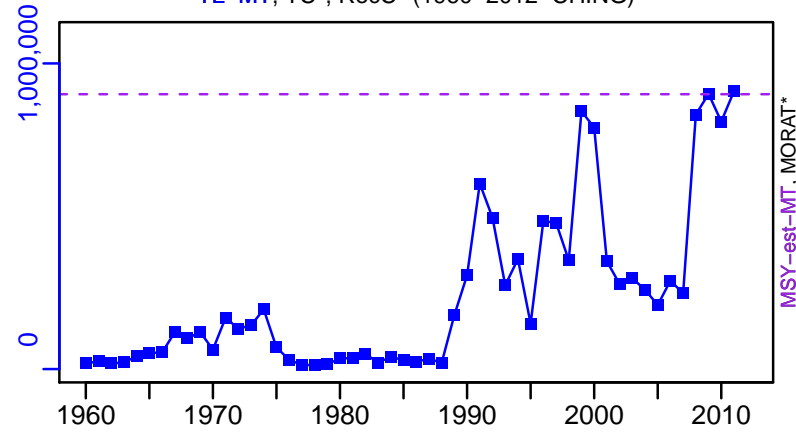
R–E00 (1960–2012–CHING)



# Chilean herring Central–Southern Chile [CHERRCHVX]

TL–MT, TC\*, RecC\* (1960–2012–CHING)

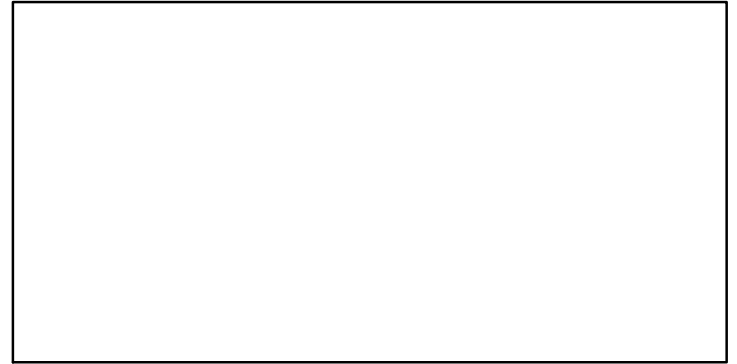
TAC\*, Cpair\*, Cadv\*



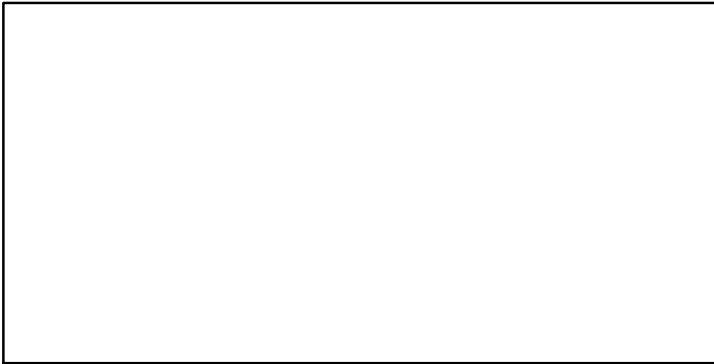
survB\*



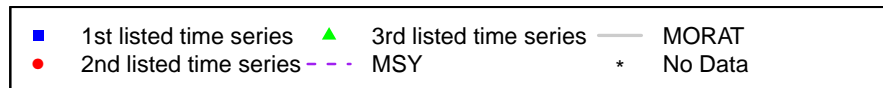
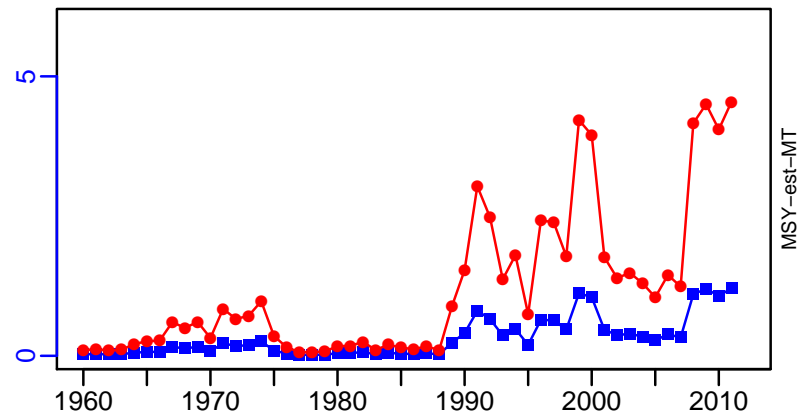
CPUE\*



EFFORT\*



TL–MT/MSY–est–MT, CdivMEANC–ratio, (1960–2012–CHING)



## Chilean jack mackerel Chilean EEZ and offshore [CHTRACCH]

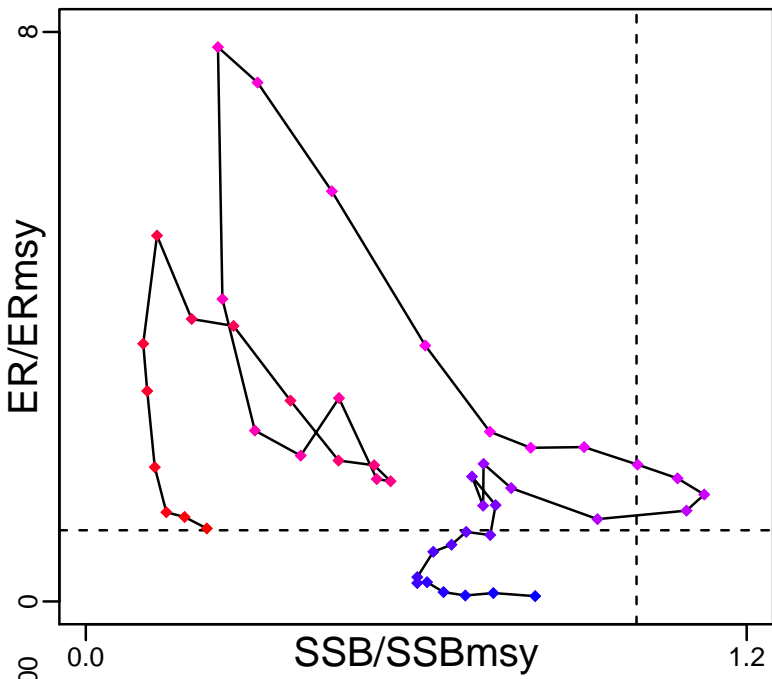
Metadata	
<b>Scientific Name</b>	Trachurus murphyi
<b>Current Assess ID</b>	SPRFMO-CHTRACCH-1969-2015-PARMA
<b>Area</b>	Chilean EEZ and offshore
<b>Management Authority</b>	South Pacific Regional Fisheries Management Organization
<b>Assessor</b>	South Pacific Regional Fisheries Management Organization
<b>Asmts in RAM</b>	2010, 2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2010	40,225,574
<b>SSBmsy</b>	SSBmsy-est-MT	2015	12,378,026
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2015	0.08
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2015	1,926,804
<b>M</b>	M-1/yr	2015	0.23
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

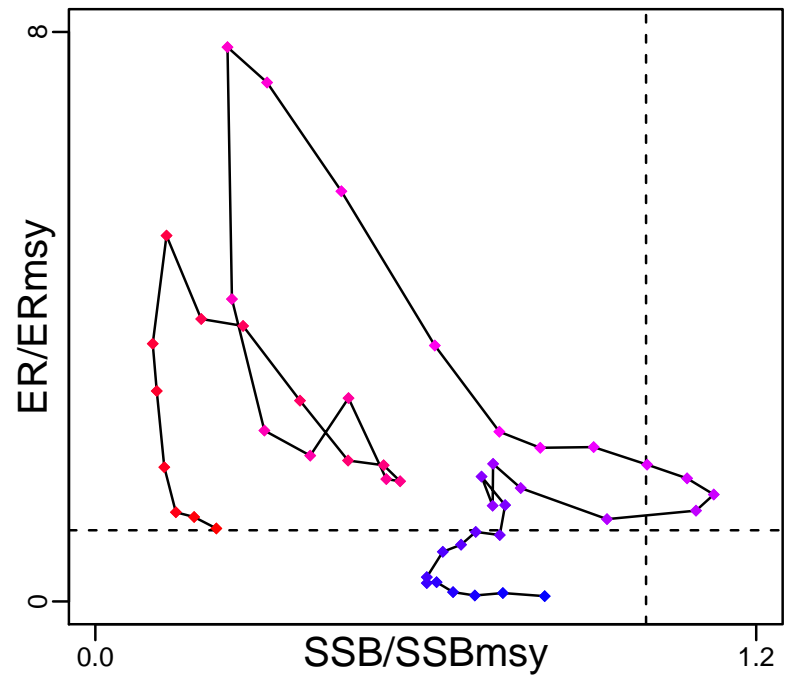
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2010	2,360,000	-	-
<b>SSB</b>	SSB-MT	2015	2,720,000	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	$1.25 \times 10^{10}$	-	1
<b>F</b>	F-1/yr	2015	0.18	-	1 to 12
<b>ER</b>	ER-calc-ratio	2015	0.082	-	-
<b>TC</b>	TC-MT	2015	434,000		
<b>TL</b>	TL-MT	2015	434,000		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2010	0.059		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-est-MT	2015	0.22		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2015	1.025		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Chilean jack mackerel Chilean EEZ and offshore [CHTRACCH]

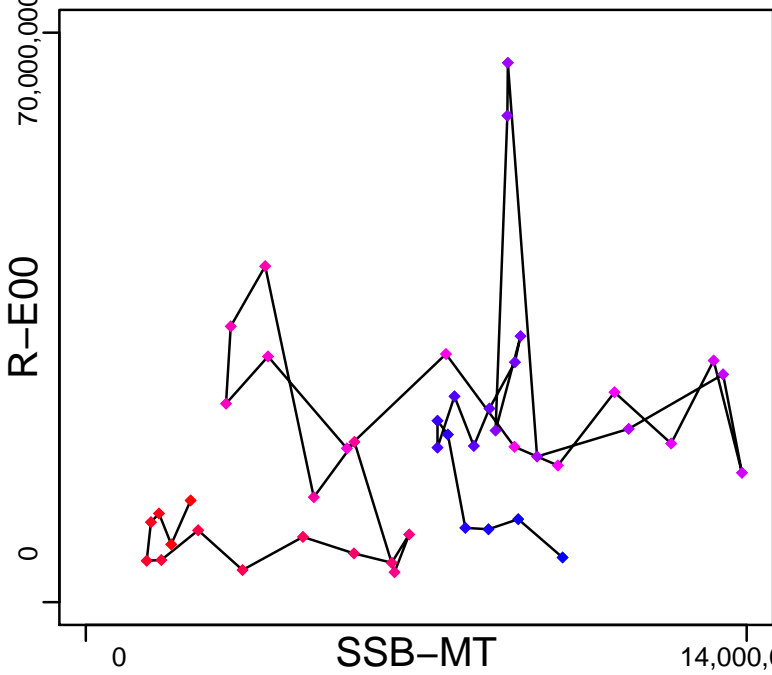
Kobe MSYpref (1969–2015–PARMA)



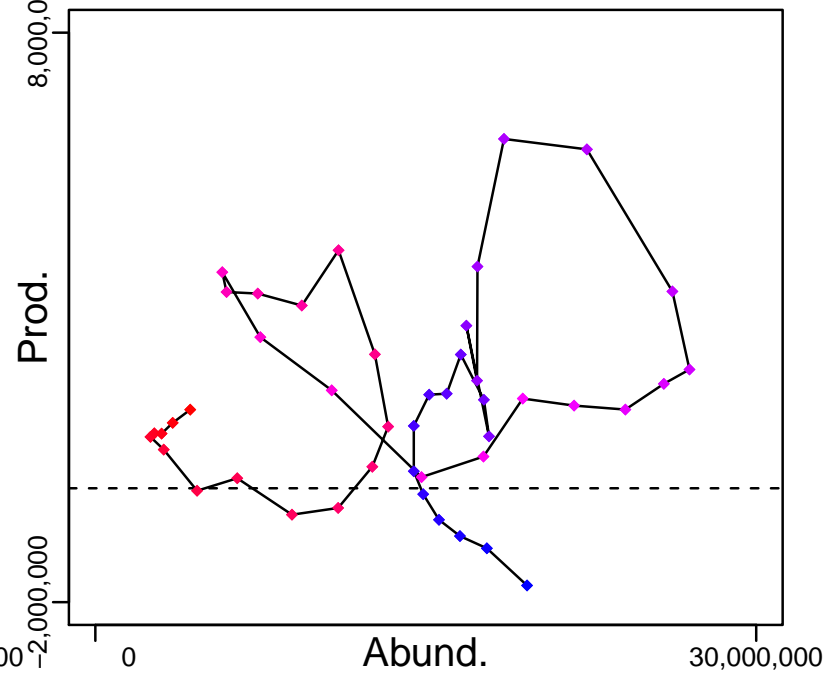
Kobe MGTpref (1969–2015–PARMA)



Spawner Recruit (1969–2015–PARMA)



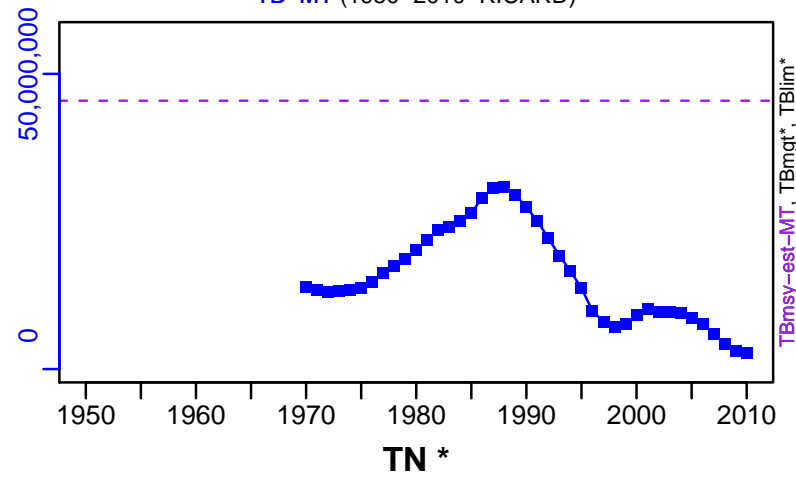
Production (1969–2015–PARMA)



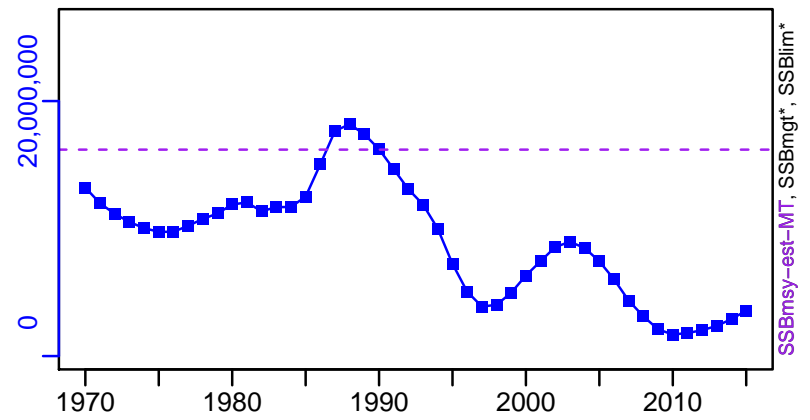
◆ Start Year ◆ End Year \* No Data

# Chilean jack mackerel Chilean EEZ and offshore [CHTRACCH]

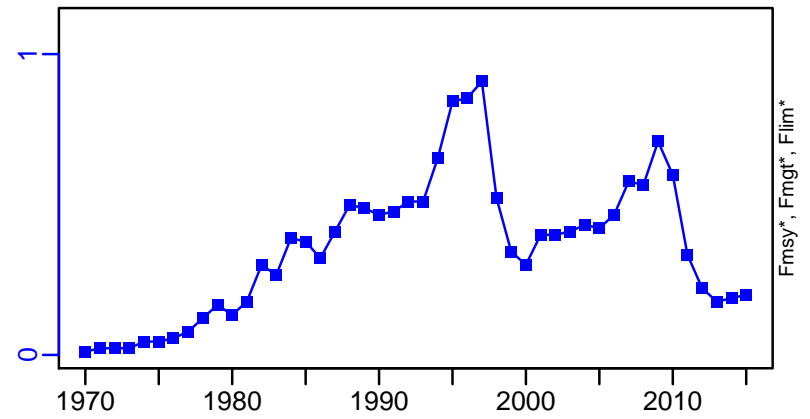
TB-MT (1950-2010-RICARD)



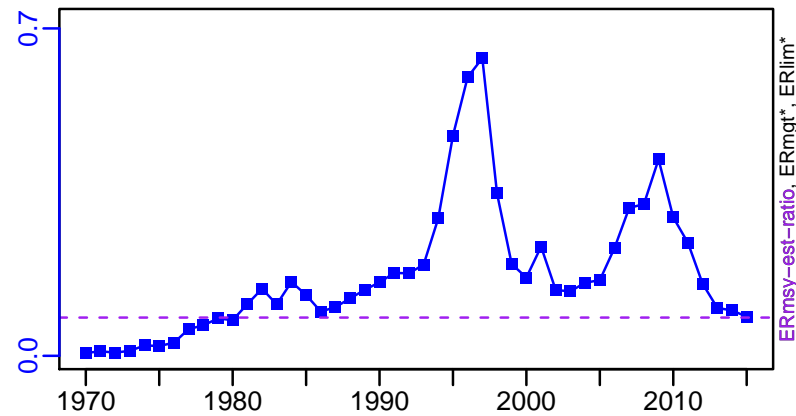
SSB-MT (1969-2015-PARMA)



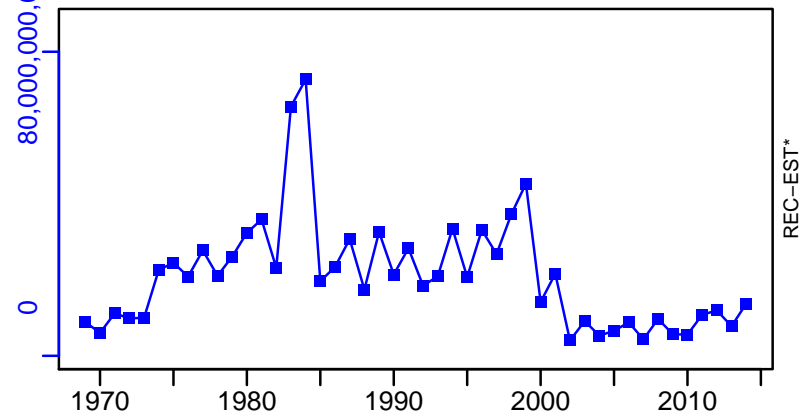
F-1/yr (1969-2015-PARMA)



ER-calc-ratio (1969-2015-PARMA)



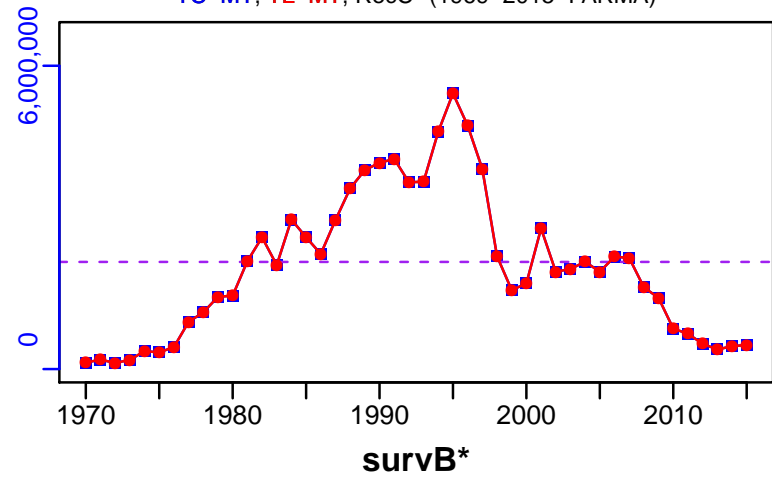
R-E00 (1969-2015-PARMA)



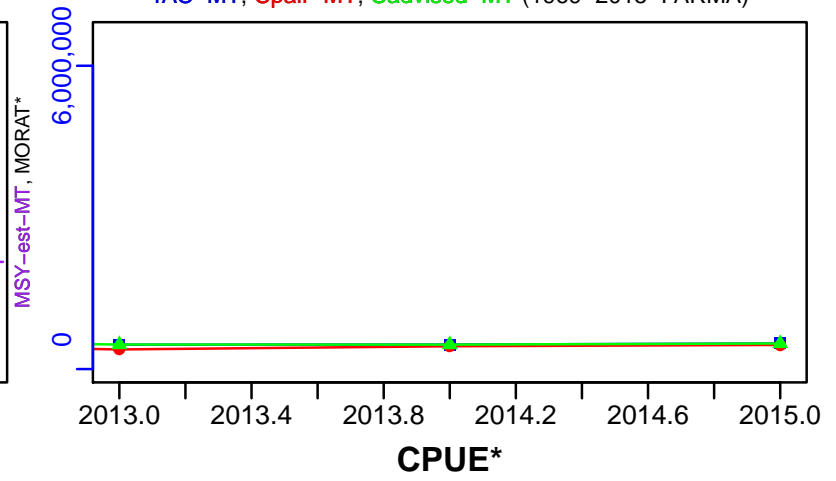


# Chilean jack mackerel Chilean EEZ and offshore [CHTRACCH]

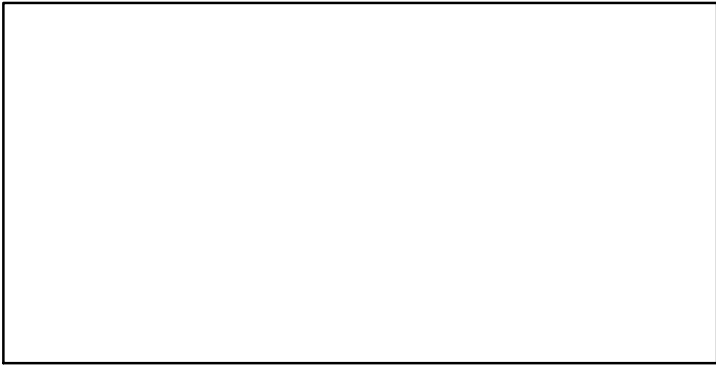
TC-MT, TL-MT, RecC\* (1969–2015–PARMA)



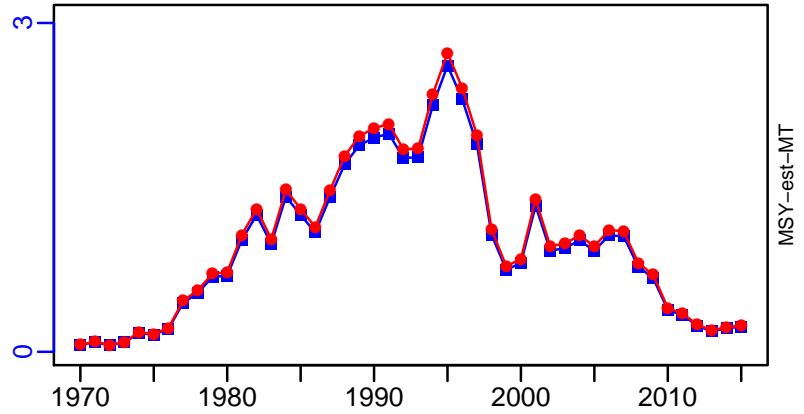
TAC-MT, Cpair-MT, Cadvised-MT (1969–2015–PARMA)



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1969–2015–PARMA)



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

## Chilean sardine Central-Southern Chile [CSARDCSCH]

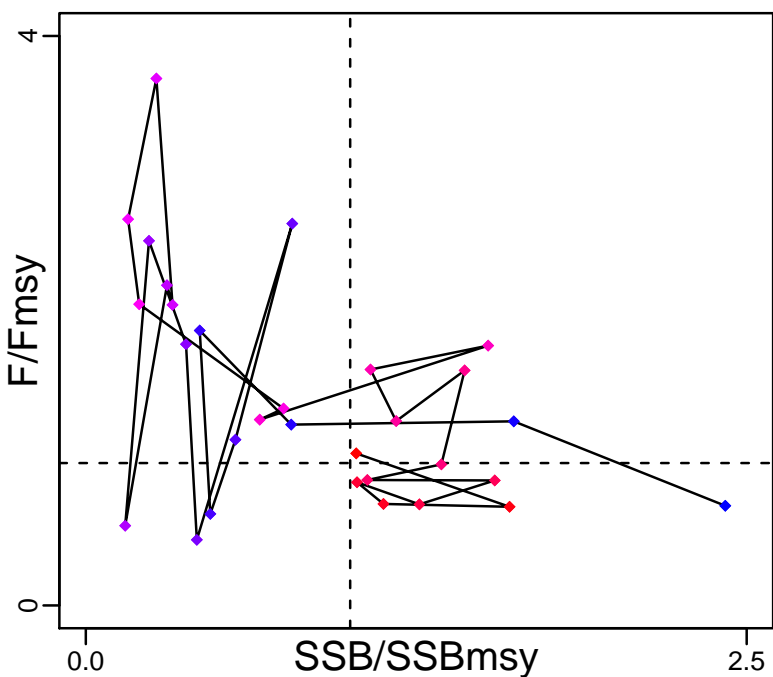
Metadata	
<b>Scientific Name</b>	Strangomera bentincki
<b>Current Assess ID</b>	IFOPCH-CSARDCSCH-1991-2020-Quiroz
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2020	830,339
<b>Fmsy</b>	Fmsy-pr-1/yr	2020	0.3
<b>ERmsy</b>	ERmsy-conv-ratio	2020	0.135
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2015	889,000
<b>Fmgt</b>	Fmgt-1/yr	2015	0.26
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2020	1,509,710
<b>MSY</b>	MSY-MT	2020	289,790
<b>M</b>	M-1/yr	2020	1
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	444,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

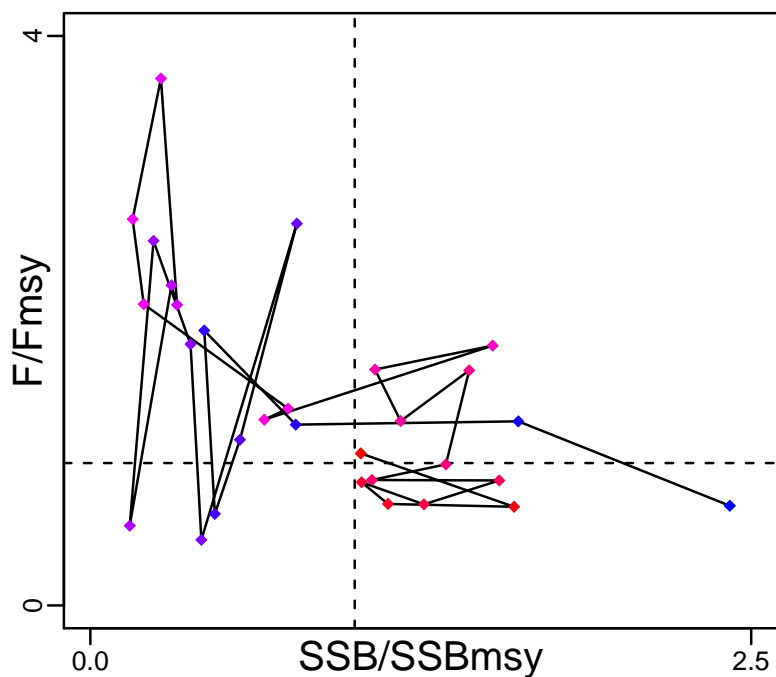
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	1,333,000	-	-
<b>SSB</b>	SSB-MT	2020	849,310	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	58,067	Both	-
<b>F</b>	F-1/yr	2020	0.21	Both	-
<b>ER</b>	ER-ratio	2020	0.217	-	-
<b>TC</b>	TC-MT	2020	289,779		
<b>TL</b>	TL-MT	2015	431,000		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2020	1.023		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2020	1.068		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-conv-ratio	2020	1.613		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2015	1.485		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2015	0.735		
<b>ER/ERmgt</b>	-	-	-		

# Chilean sardine Central–Southern Chile [CSARDCSCH]

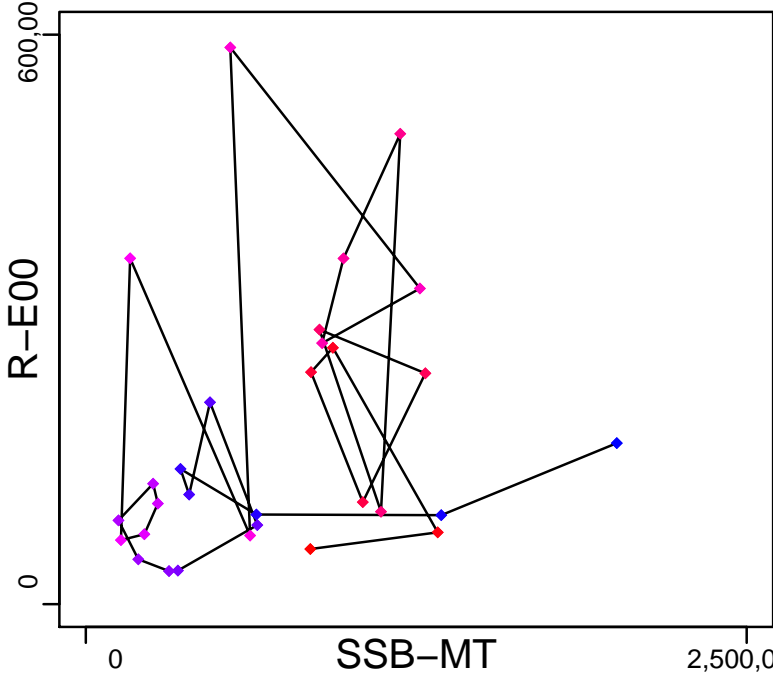
Kobe  $MSY_{pref}$  (1991–2020–Quiroz)



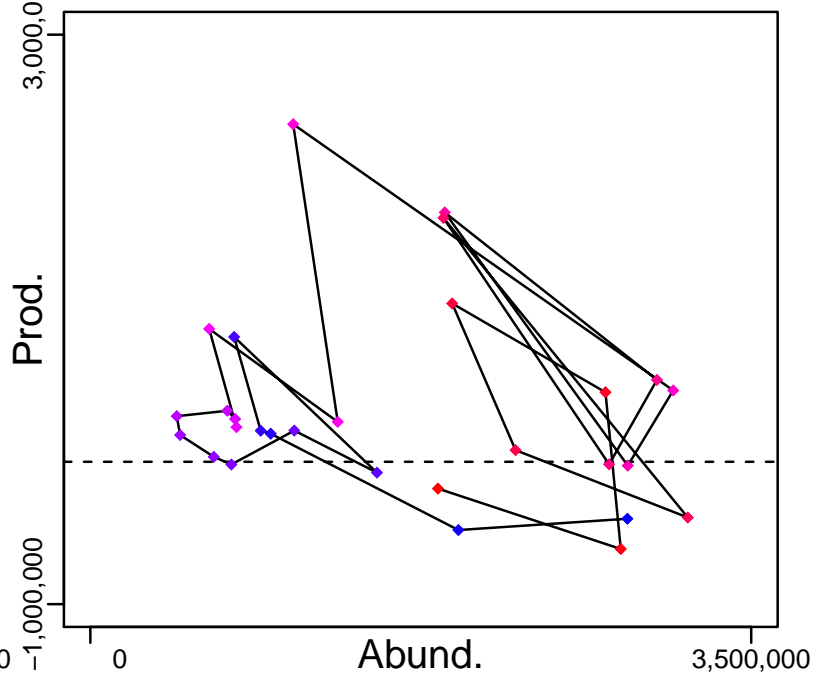
Kobe  $MGT_{pref}$  (1991–2020–Quiroz)



Spawner Recruit (1991–2020–Quiroz)

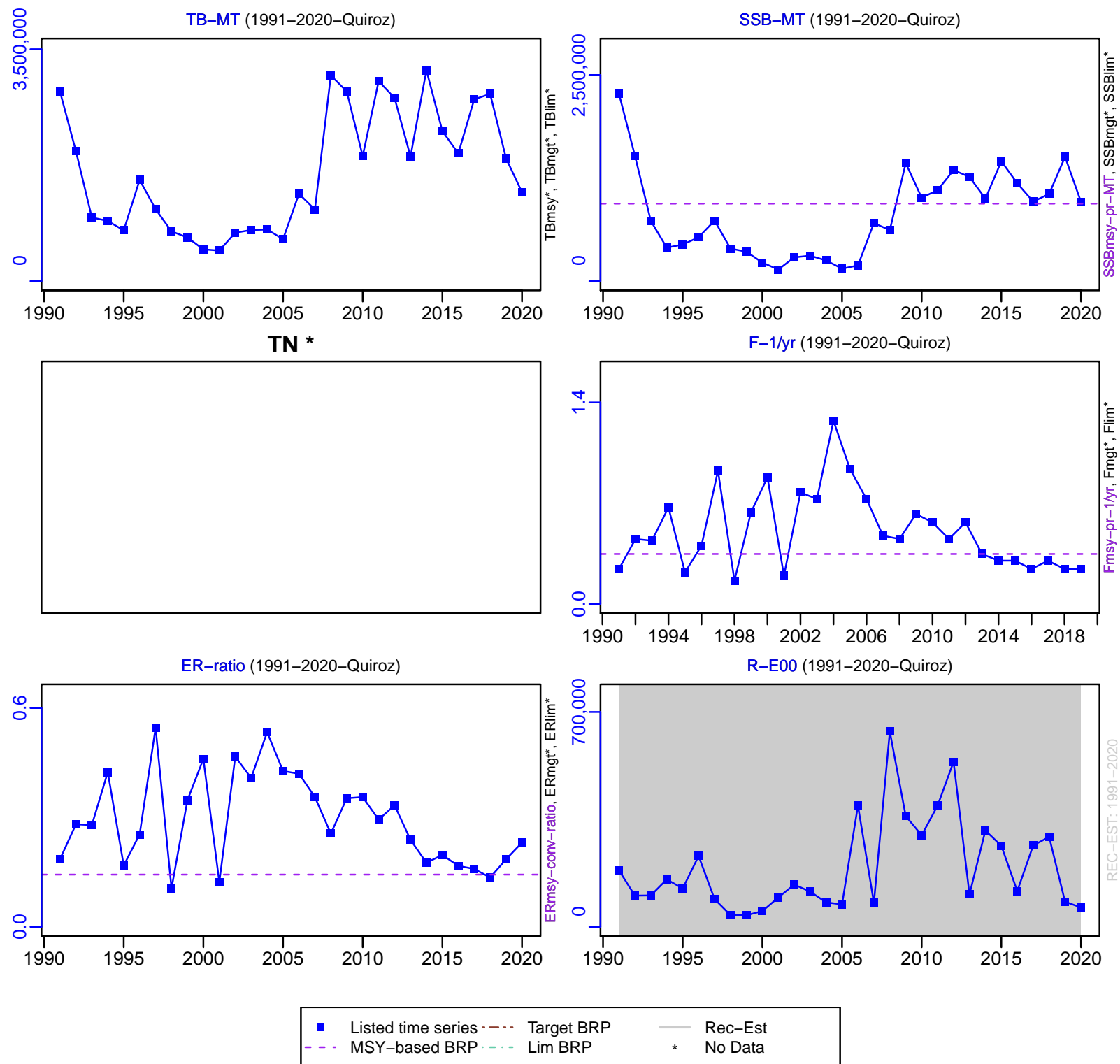


Production (1991–2020–Quiroz)



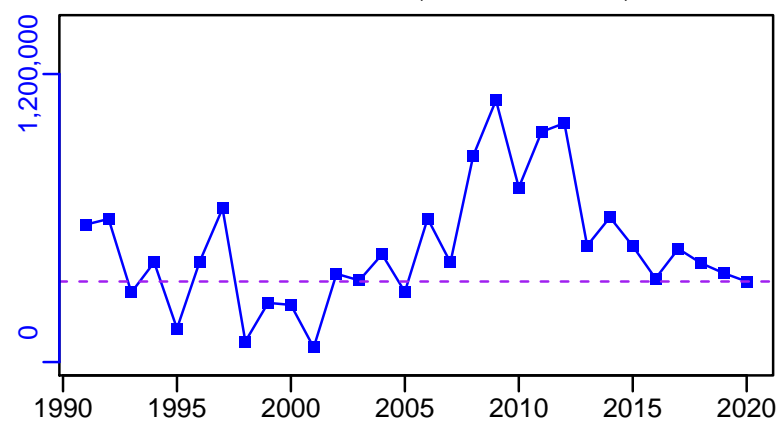
◆ Start Year ◆ End Year \* No Data

# Chilean sardine Central–Southern Chile [CSARDCSCH]

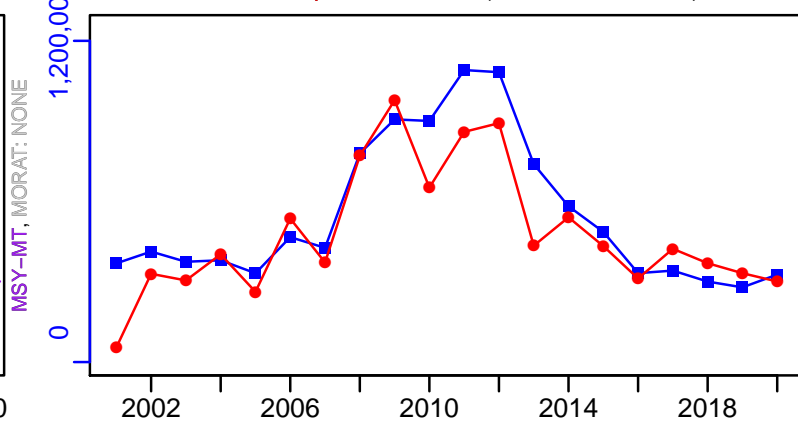


# Chilean sardine Central–Southern Chile [CSARDCSCH]

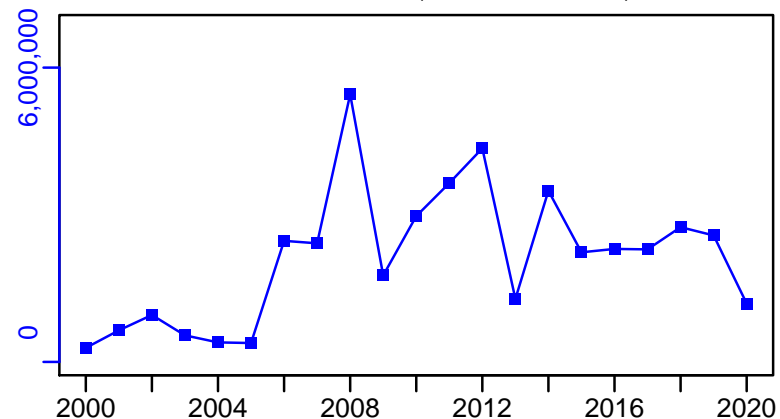
TC–MT, TL\*, RecC\* (1991–2020–Quiroz)



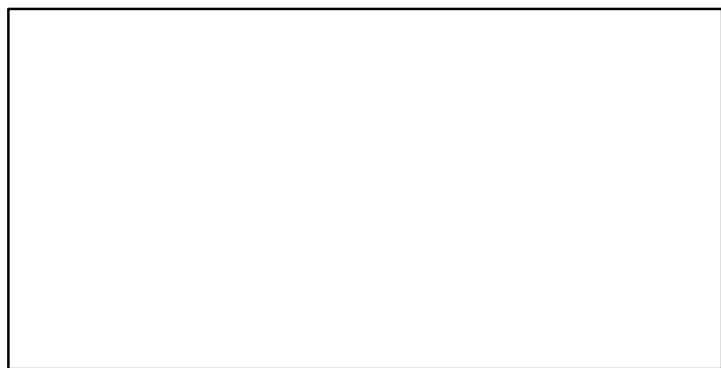
TAC–MT, Cpair–MT, Cadv\* (1991–2020–Quiroz)



survB\_absolute–MT (1991–2020–Quiroz)



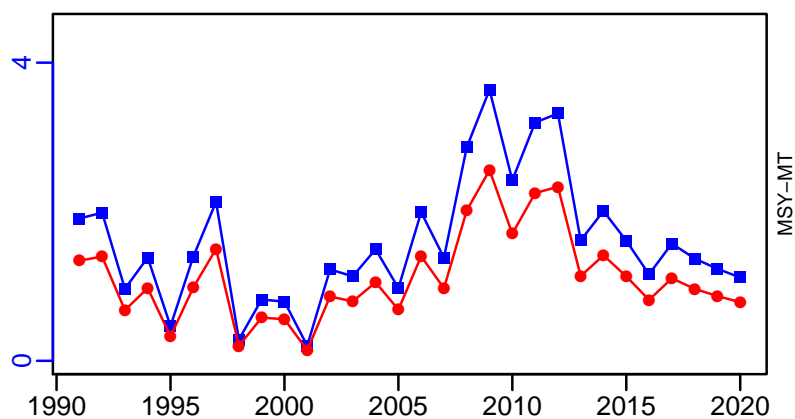
EFFORT\*



CPUE\*



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



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

## Nylon shrimp Central-Southern Chile [NSHRIMPCSCH]

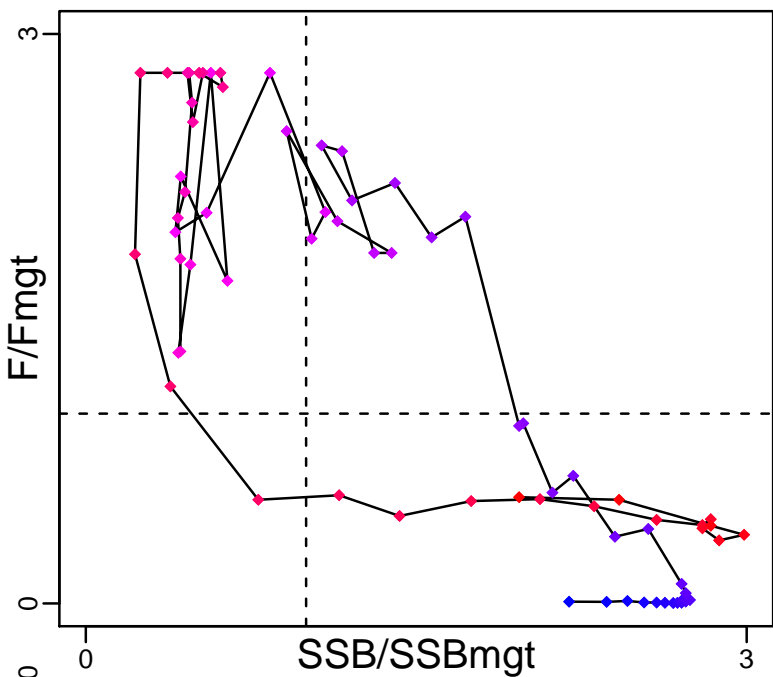
Metadata	
<b>Scientific Name</b>	Heterocarpus reedi
<b>Current Assess ID</b>	IFOPCH-NSHRIMPCSCH-1944-2016-PARMA
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2016

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2016	0.192
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2016	5287
<b>Fmgt</b>	Fmgt-1/yr	2016	0.293
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2016	11,750
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2016	0.36
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

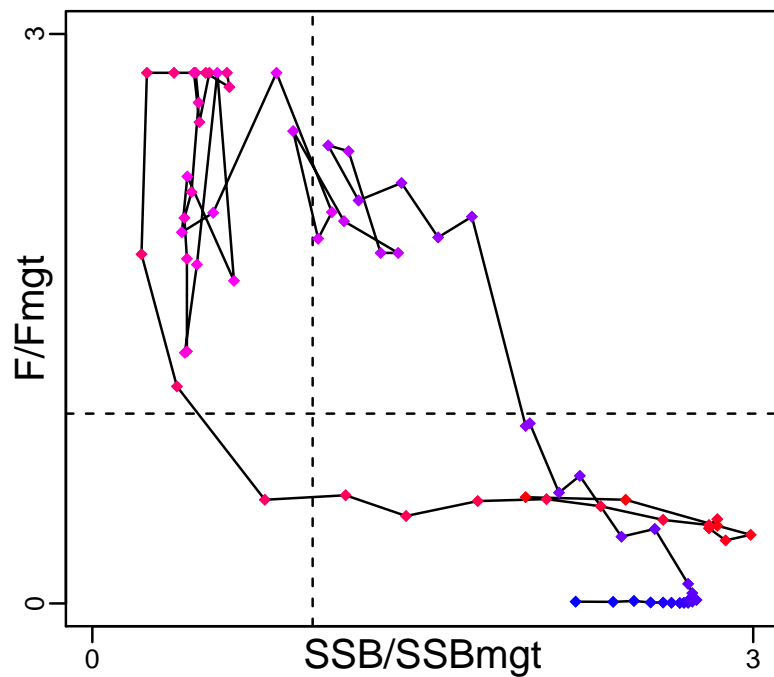
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2016	37,900	Both	-
<b>SSB</b>	SSB-MT	2016	10,400	Females	1 to 6
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2016	$1.41 \times 10^9$	Females	1
<b>F</b>	F-1/yr	2016	0.164	Females	-
<b>ER</b>	ER-calc-ratio	2016	0.08	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	3040		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/(SSB0-MT*0.368)	2016	2.405		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2016	0.417		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2016	1.967		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	0.56		
<b>ER/ERmgt</b>	-	-	-		

# Nylon shrimp Central–Southern Chile [NSHRIMPCSCH]

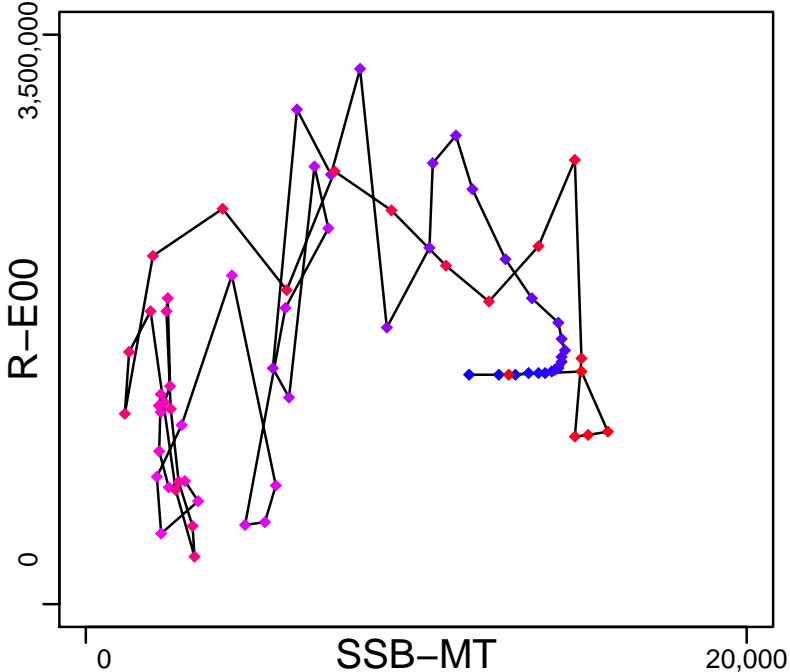
Kobe MSYpref (1944–2016–PARMA)



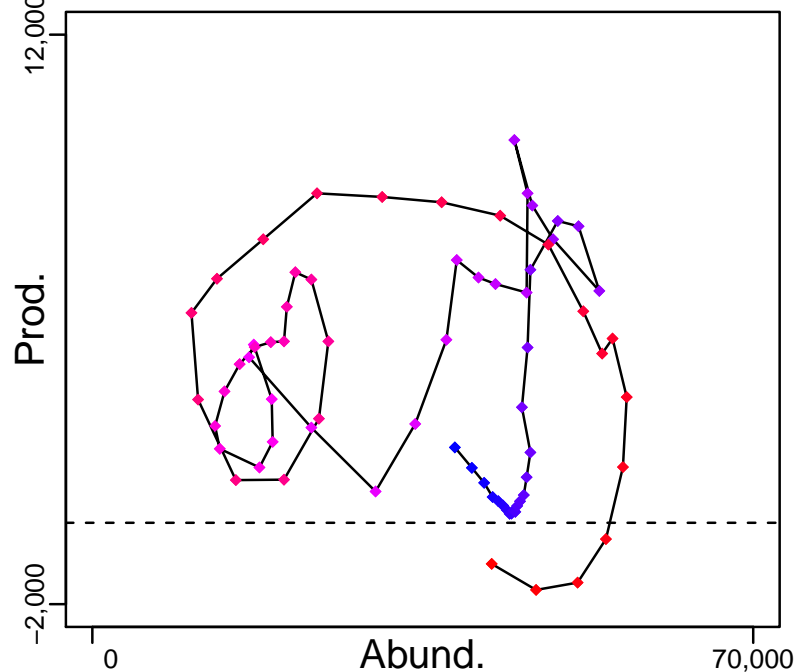
Kobe MGTpref (1944–2016–PARMA)



Spawner Recruit (1944–2016–PARMA)



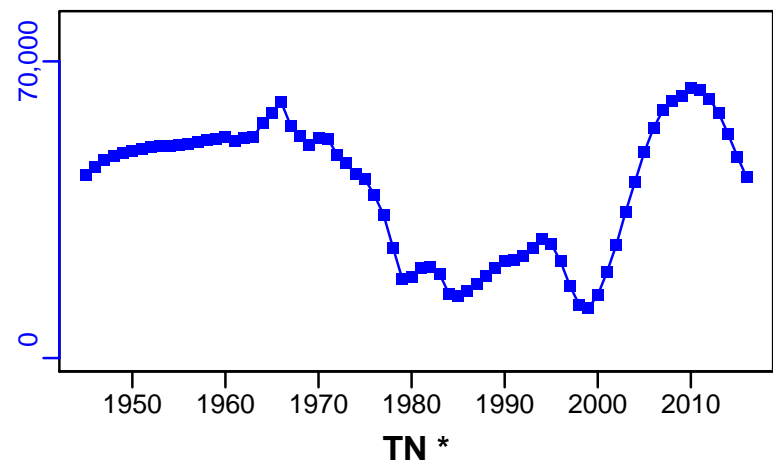
Production (1944–2016–PARMA)



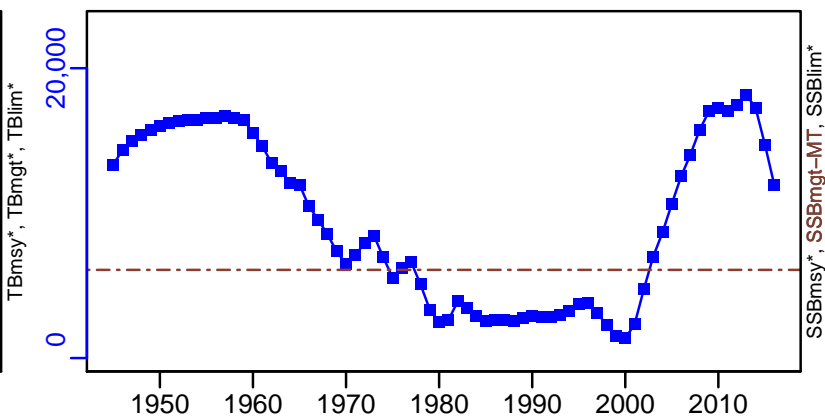
◆ Start Year ◆ End Year \* No Data

# Nylon shrimp Central–Southern Chile [NSHRIMPCSCH]

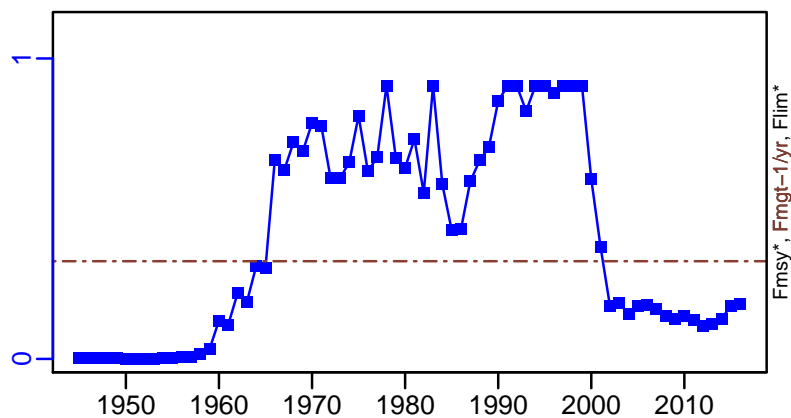
TB–MT (1944–2016–PARMA)



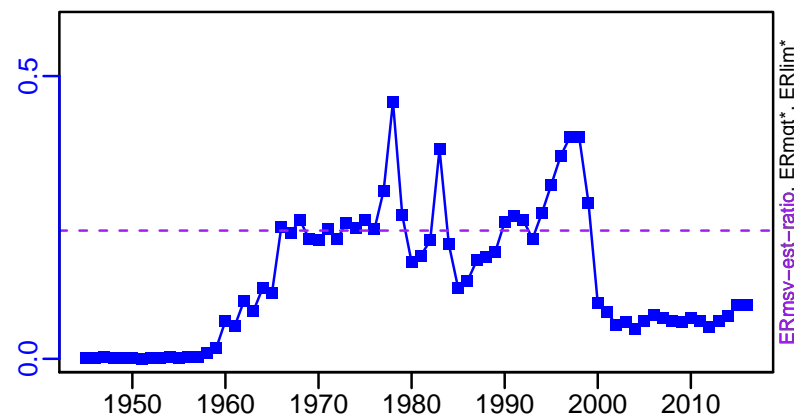
SSB–MT (1944–2016–PARMA)



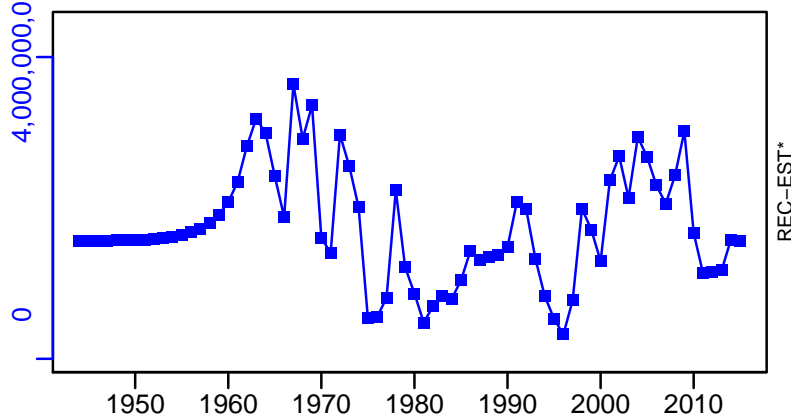
F–1/yr (1944–2016–PARMA)



ER–calc–ratio (1944–2016–PARMA)



R–E00 (1944–2016–PARMA)

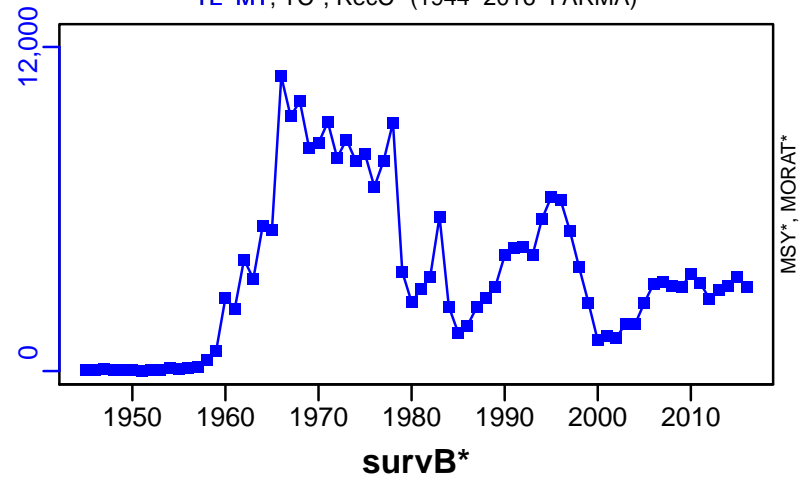




# Nylon shrimp Central–Southern Chile [NSHRIMPCSCH]

TL–MT, TC\*, RecC\* (1944–2016–PARMA)

TAC\*, Cpair\*, Cadv\*



## Nylon shrimp Northern Chile [NSHRIMPNCH]

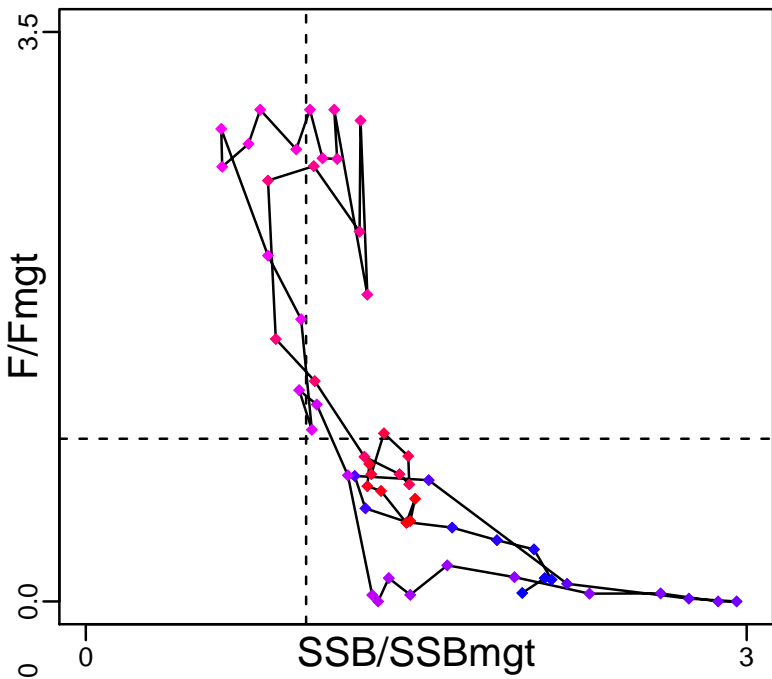
Metadata	
<b>Scientific Name</b>	Heterocarpus reedi
<b>Current Assess ID</b>	IFOPCH-NSHRIMPNCH-1960-2016-PARMA
<b>Area</b>	Northern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2016

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2016	0.153
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2016	2261
<b>Fmgt</b>	Fmgt-1/yr	2016	0.271
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2016	5025
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2016	0.36
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

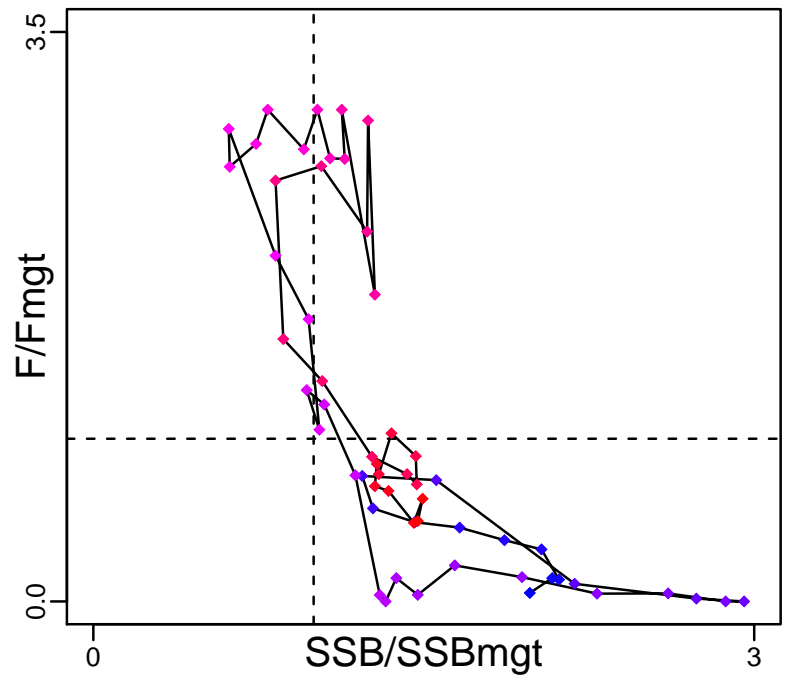
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2016	13,000	Both	-
<b>SSB</b>	SSB-MT	2016	3330	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2016	$6.26 \times 10^8$	Females	1
<b>F</b>	F-1/yr	2016	0.134	Females	-
<b>ER</b>	ER-calc-ratio	2016	0.062	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2016	803		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/(SSB0-MT*0.368)	2016	1.801		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2016	0.405		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2016	1.473		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	0.494		
<b>ER/ERmgt</b>	-	-	-		

# Nylon shrimp Northern Chile [NSHRIMPNCH]

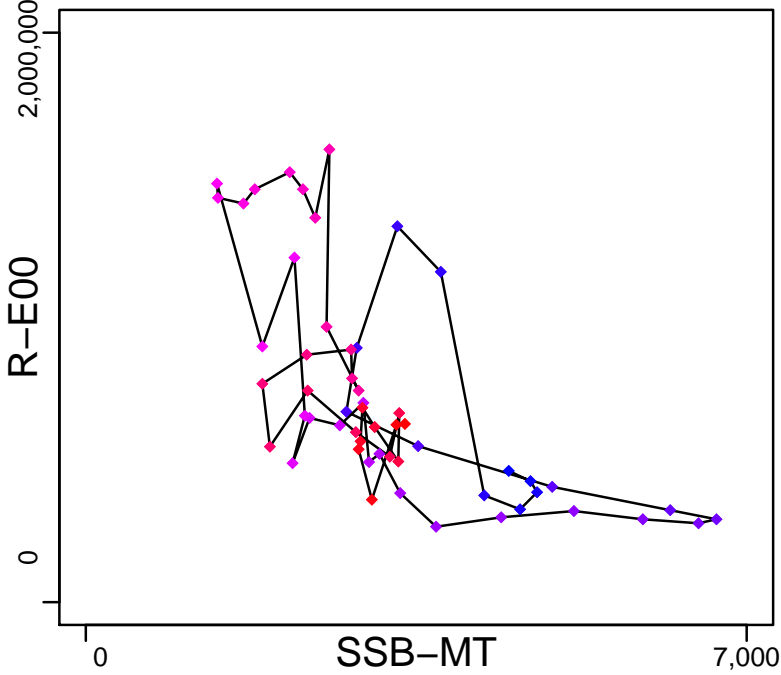
Kobe MSYpref (1960–2016–PARMA)



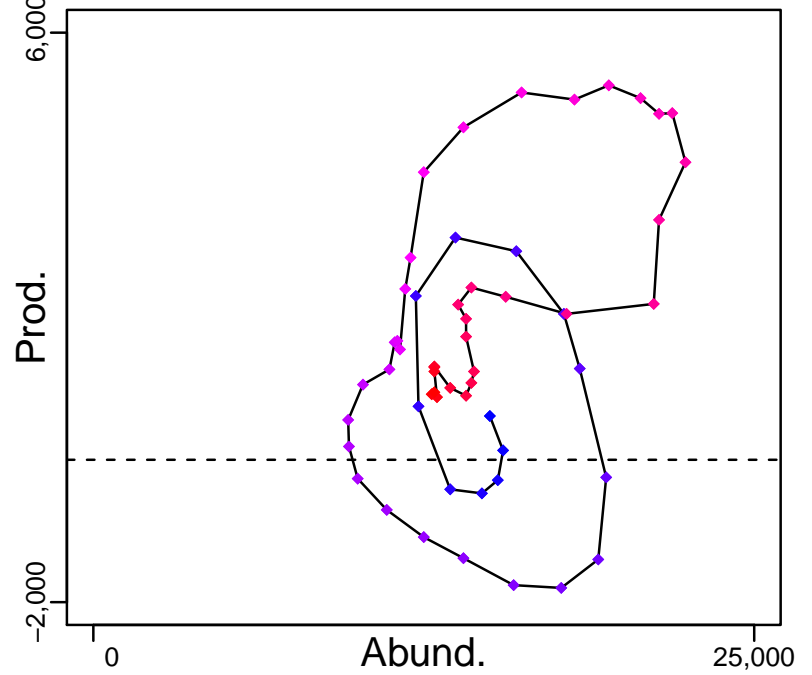
Kobe MGTpref (1960–2016–PARMA)



Spawner Recruit (1960–2016–PARMA)



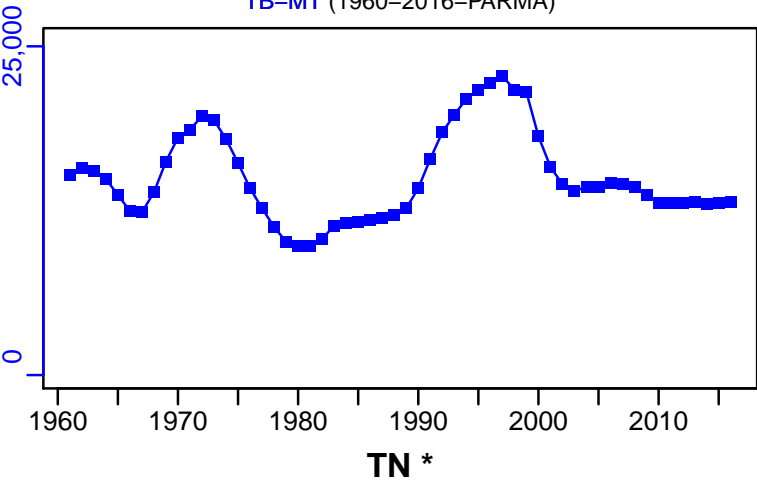
Production (1960–2016–PARMA)



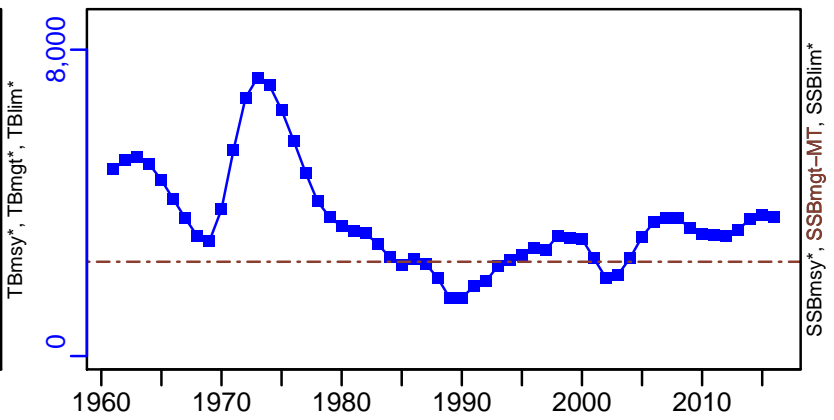
◆ Start Year ◆ End Year \* No Data

# Nylon shrimp Northern Chile [NSHRIMPNCH]

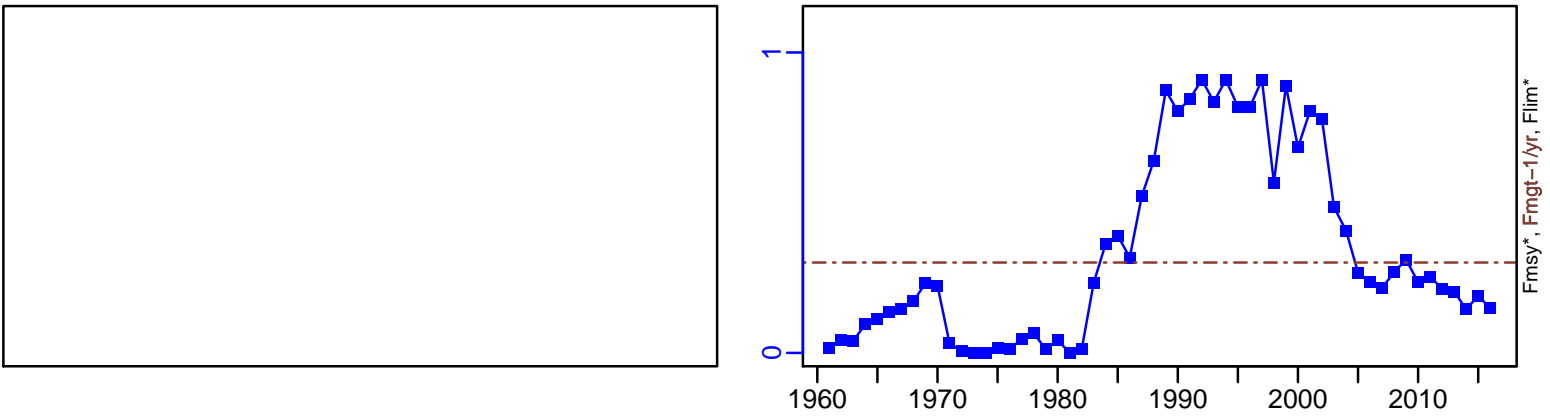
TB-MT (1960–2016–PARMA)



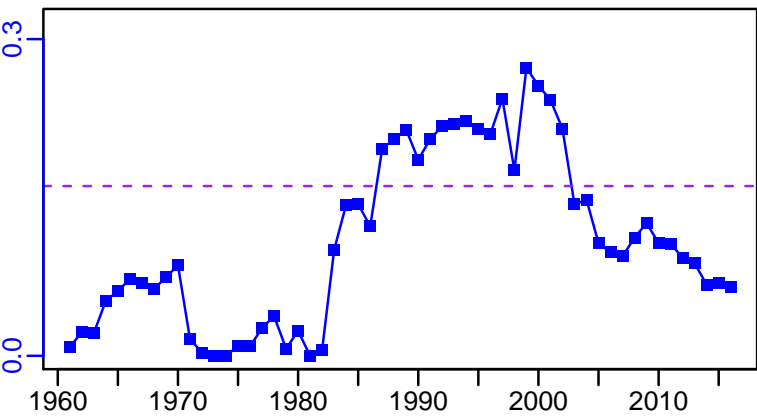
SSB-MT (1960–2016–PARMA)



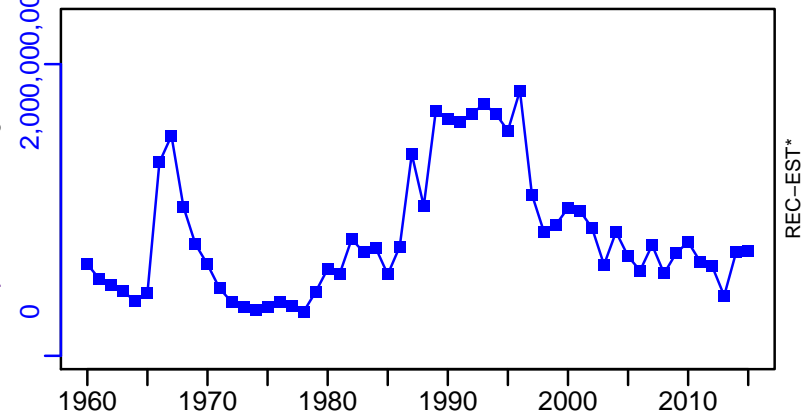
F-1/yr (1960–2016–PARMA)



ER-calc-ratio (1960–2016–PARMA)

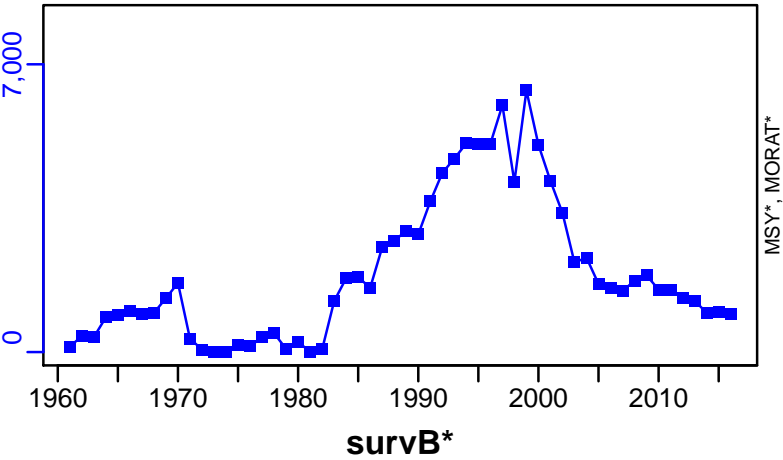


R-E00 (1960–2016–PARMA)



Nylon shrimp Northern Chile [NSHRIMPNCH]

TL-MT, TC\*, RecC\* (1960–2016–PARMA)



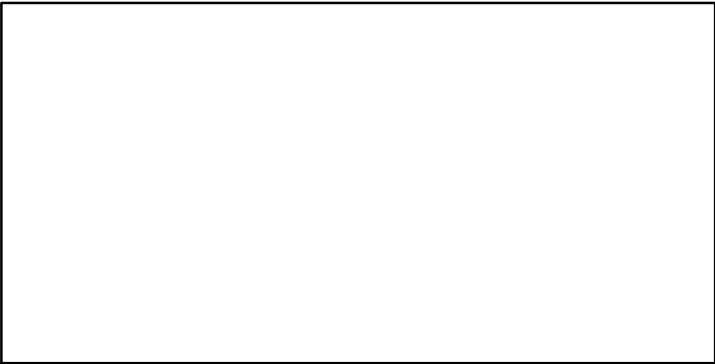
TAC\*, Cpair\*, Cadv\*



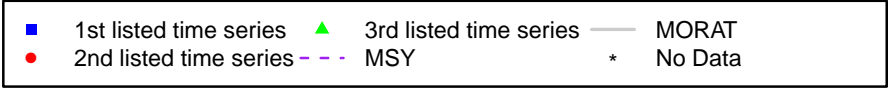
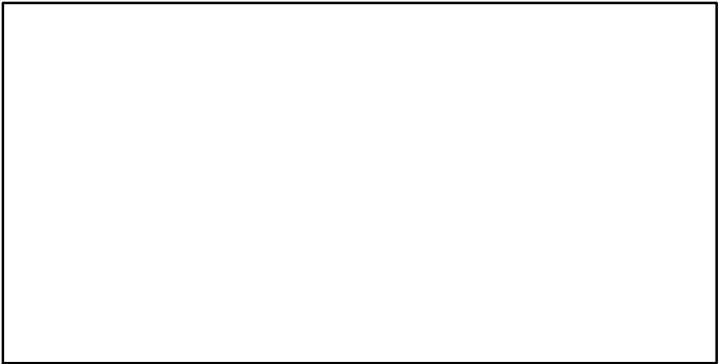
CPUE\*



EFFORT\*



CdivMSY\*



## Orange roughy Chile [OROUGHYCH]

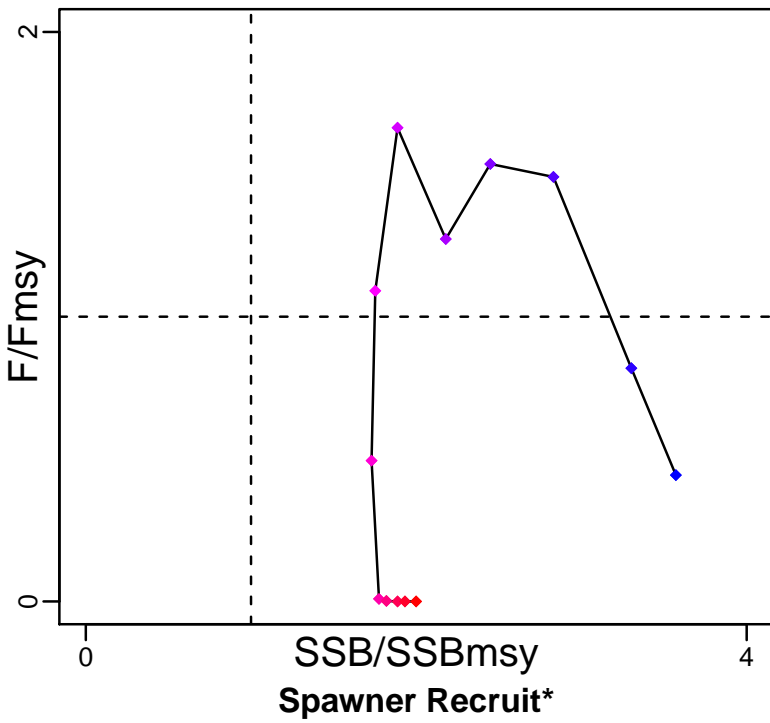
Metadata	
<b>Scientific Name</b>	Hoplostethus atlanticus
<b>Current Assess ID</b>	SPRFMO-OROUGHYCH-1999-2011-PARMA
<b>Area</b>	Chile
<b>Management Authority</b>	South Pacific Regional Fisheries Management Organization
<b>Assessor</b>	South Pacific Regional Fisheries Management Organization
<b>Asmts in RAM</b>	2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2011	4452
<b>Fmsy</b>	Fmsy-1/yr	2011	0.11
<b>ERmsy</b>	ERmsy-est-ratio	2011	0.01
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	209
<b>M</b>	M-1/yr	2011	0.045
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

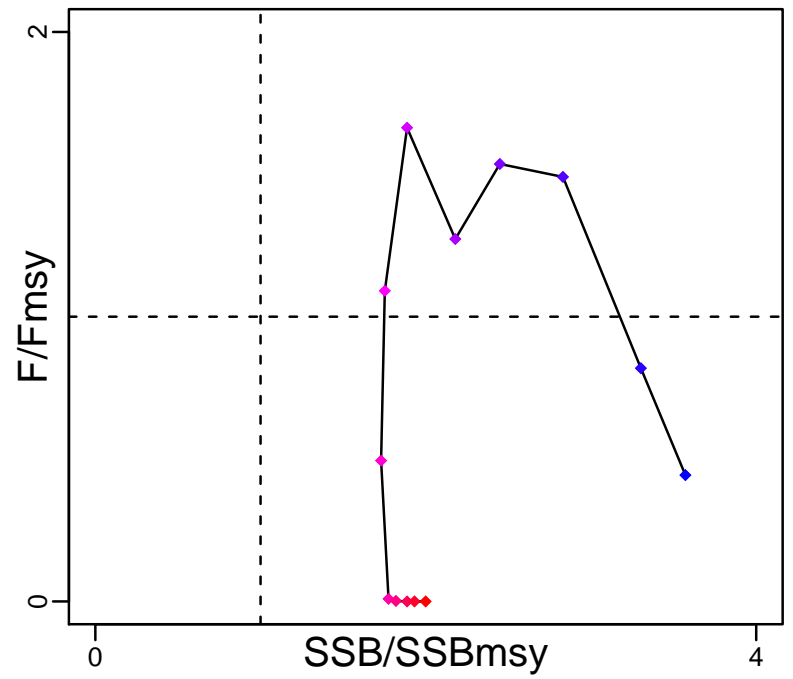
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2011	23,600	-	-
<b>SSB</b>	SSB-MT	2011	8900	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	F-1/yr	2011	0	-	-
<b>ER</b>	ER-calc-ratio	2011	0	-	-
<b>TC</b>	TC-MT	2011	0		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2011	1.999		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2011	0		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2011	0		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Orange roughy Chile [OROUGHYCH]

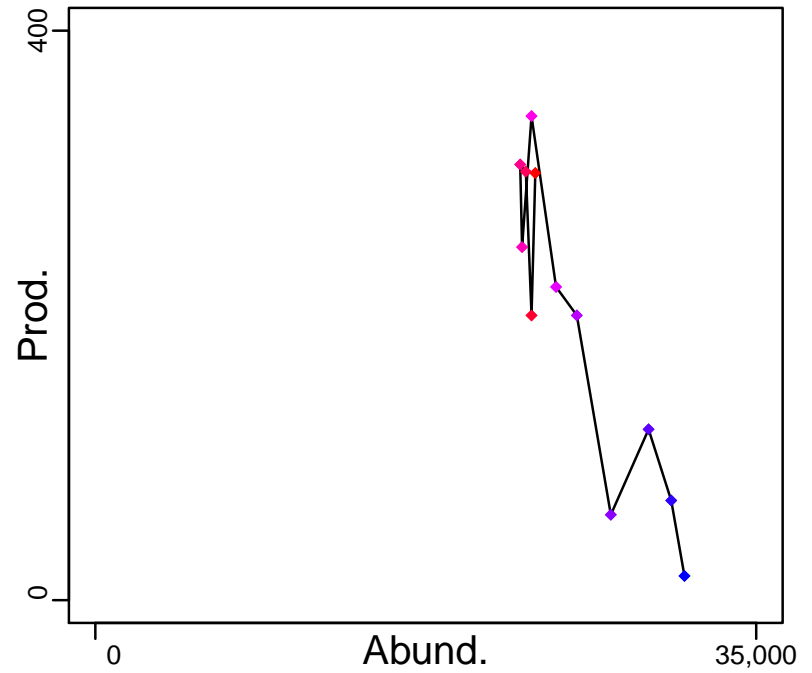
Kobe MSYpref (1999–2011–PARMA)



Kobe MGTpref (1999–2011–PARMA)



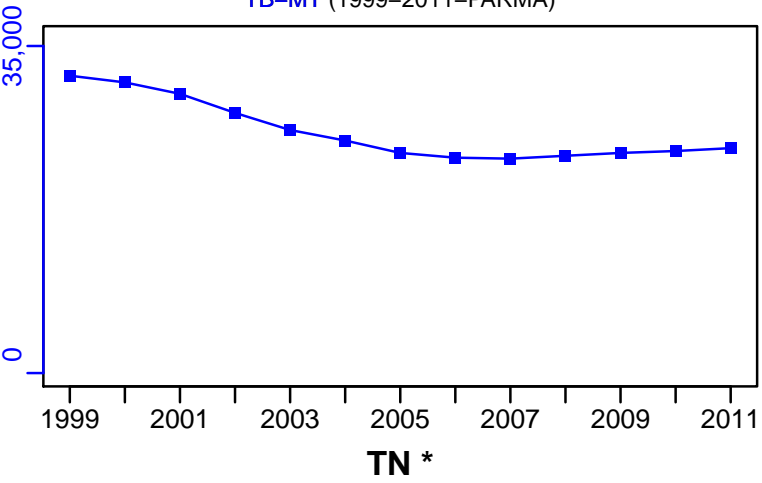
Production (1999–2011–PARMA)



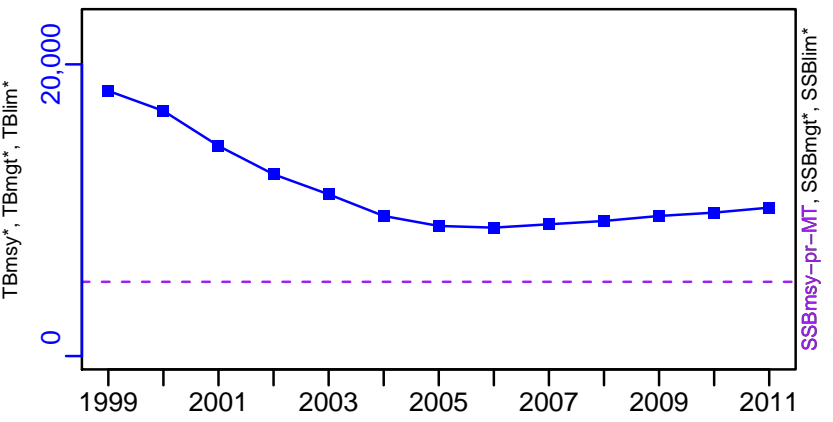
◆ Start Year ◆ End Year \* No Data

# Orange roughy Chile [OROUGHYCH]

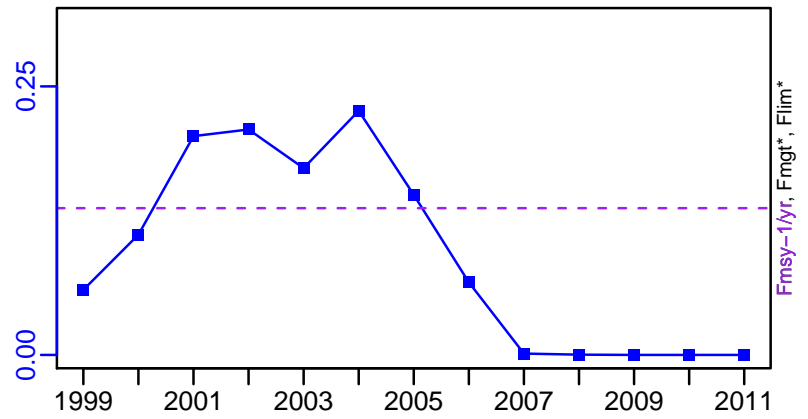
TB-MT (1999–2011–PARMA)



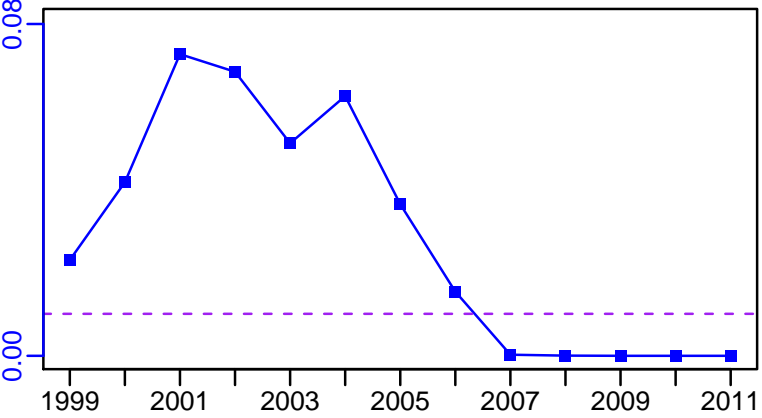
SSB-MT (1999–2011–PARMA)



F-1/yr (1999–2011–PARMA)



ER-calc-ratio (1999–2011–PARMA)



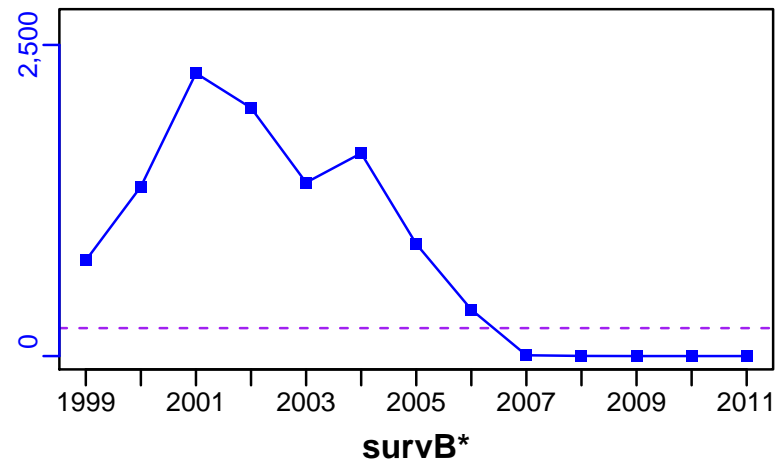
Recruits\*



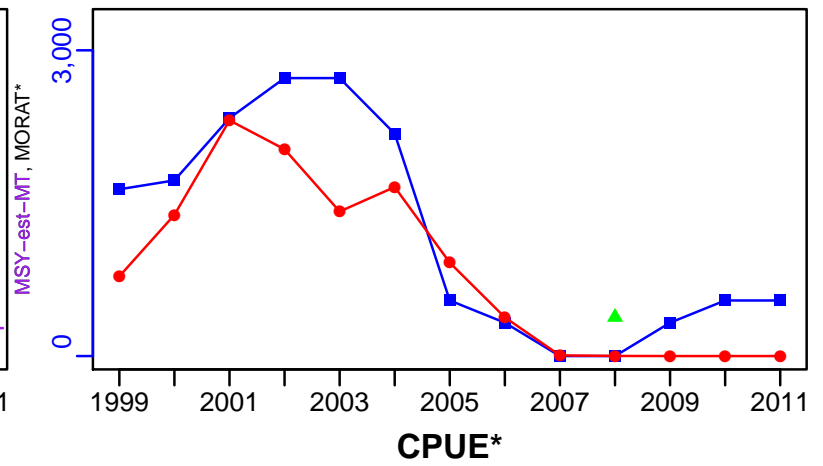


# Orange roughy Chile [OROUGHYCH]

TC-MT, TL\*, RecC\* (1999–2011–PARMA)



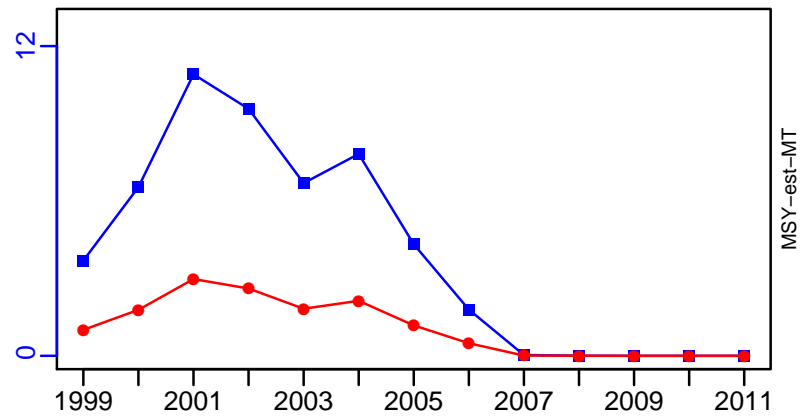
TAC-MT, Cpair-MT, Cadvised-MT (1999–2011–PARMA)



EFFORT\*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1999–2011–PARMA)



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

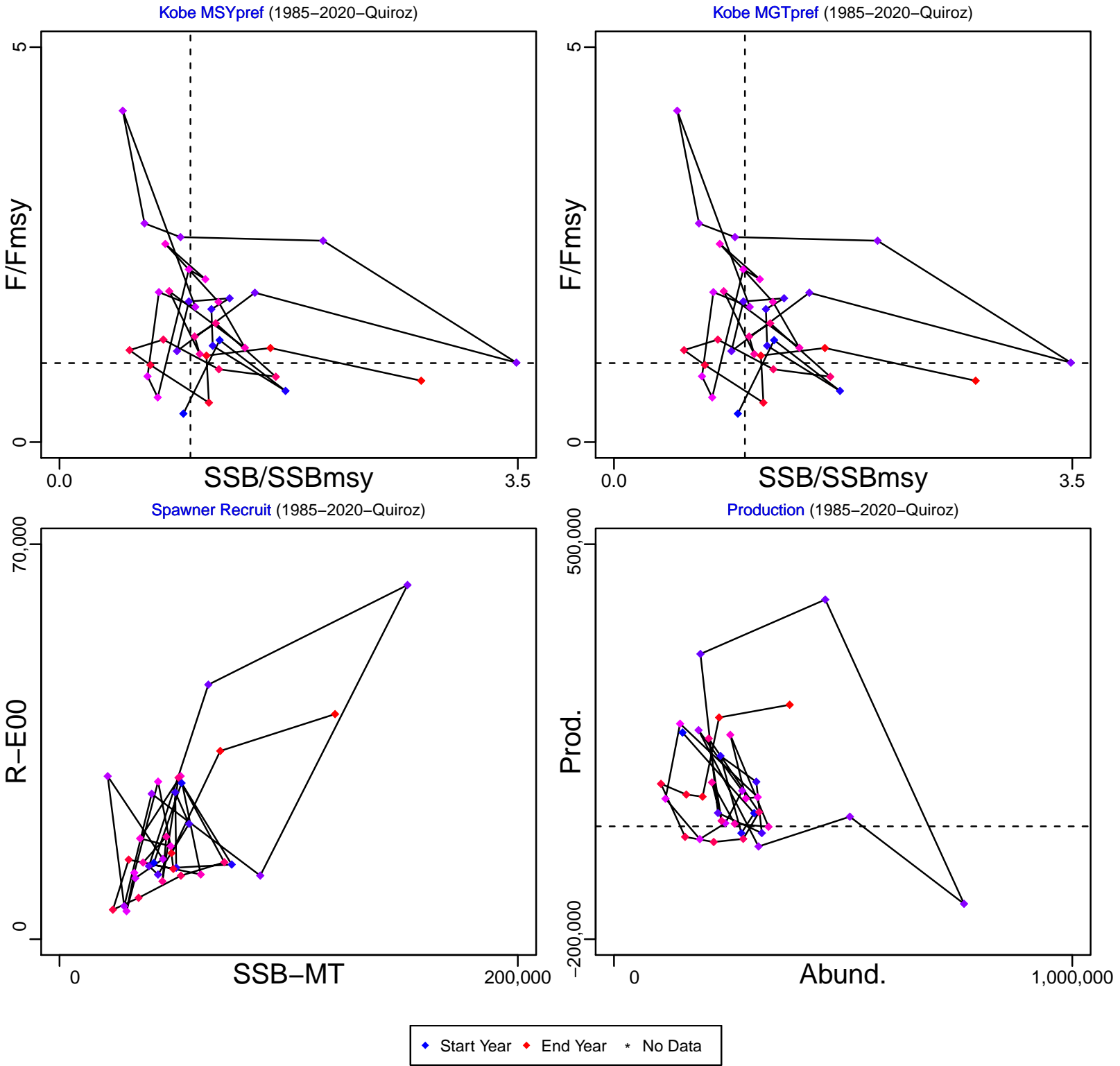
## Peruvian anchoveta Central Chile [PANCHCCH]

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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2020	43,530
<b>Fmsy</b>	Fmsy-pr-1/yr	2020	0.48
<b>ERmsy</b>	ERmsy-conv-ratio	2020	0.781
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2016	51,000
<b>Fmgt</b>	Fmgt-1/yr	2016	0.47
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2020	78,953
<b>MSY</b>	MSY-MT	2020	81,367
<b>M</b>	M-1/yr	2020	1.3
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

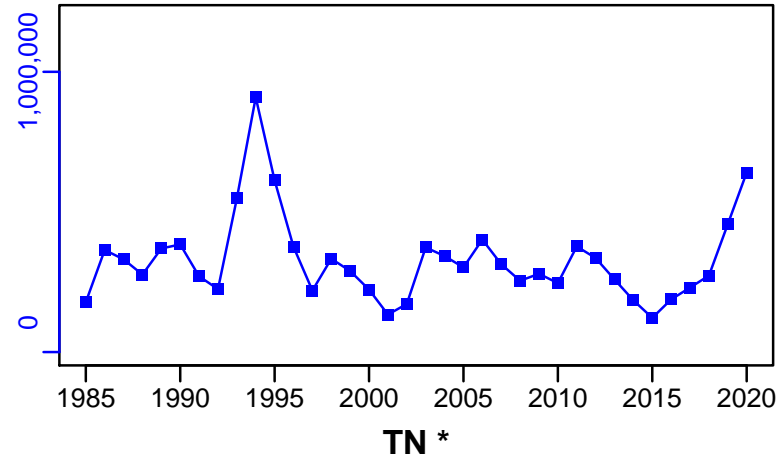
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	538,270	-	-
<b>SSB</b>	SSB-MT	2020	120,240	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	39,889	Both	-
<b>F</b>	F-1/yr	2020	0.373	Both	-
<b>ER</b>	ER-ratio	2020	0.121	-	-
<b>TC</b>	TC-MT	2020	91,927		
<b>TL</b>	TL-MT	2016	36,400		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2020	2.762		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2020	0.777		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-conv-ratio	2020	0.155		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2016	1.061		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	0.894		
<b>ER/ERmgt</b>	-	-	-		

Peruvian anchoveta Central Chile [PANCHCCH]

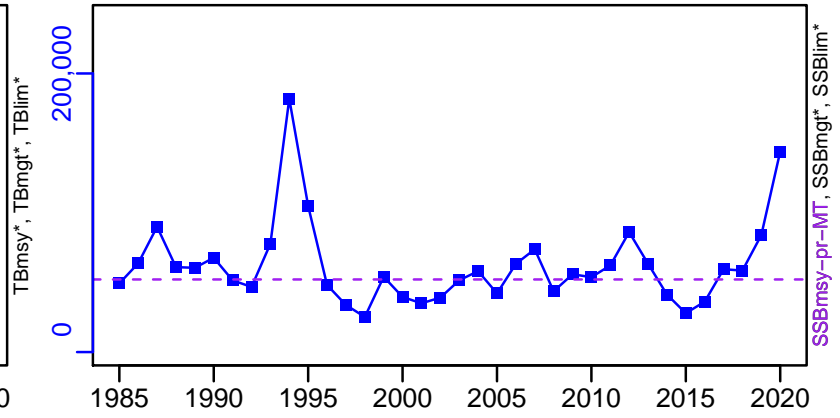


# Peruvian anchoveta Central Chile [PANCHCCH]

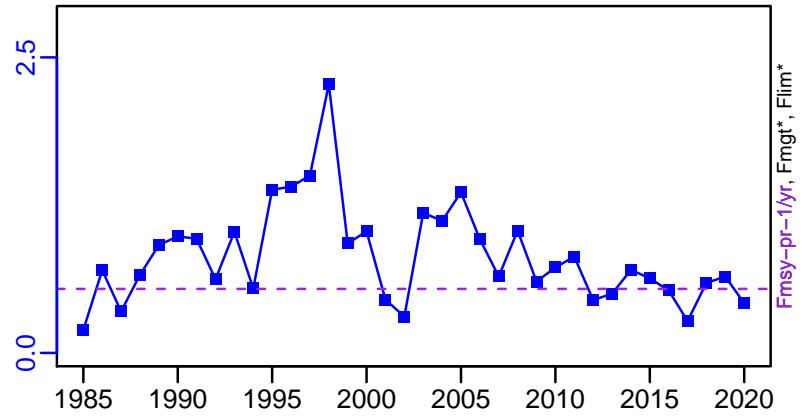
TB-MT (1985–2020–Quiroz)



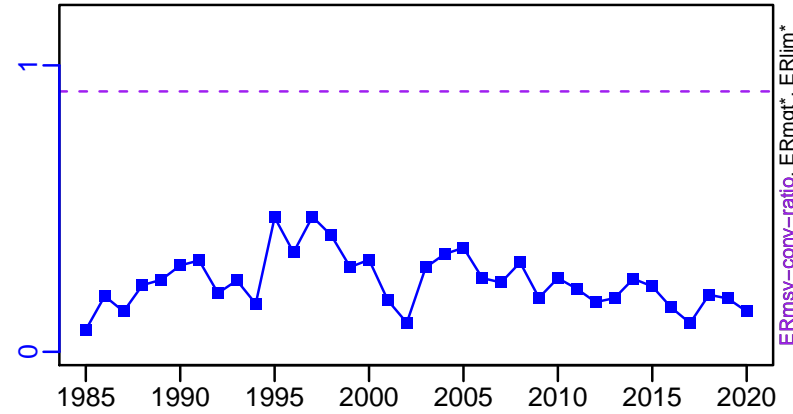
SSB-MT (1985–2020–Quiroz)



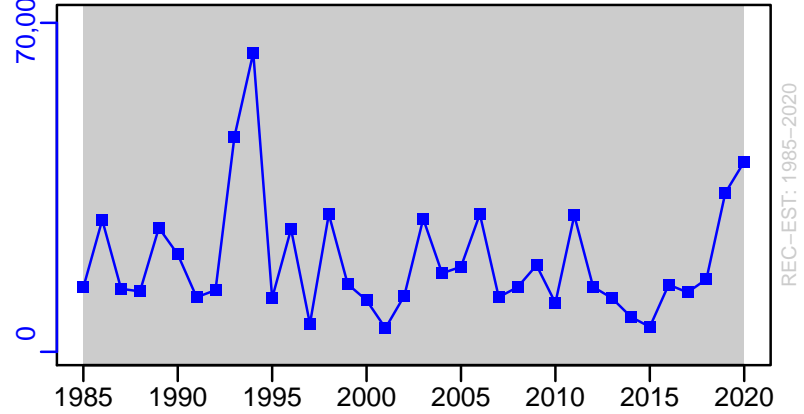
F-1/yr (1985–2020–Quiroz)



ER-ratio (1985–2020–Quiroz)

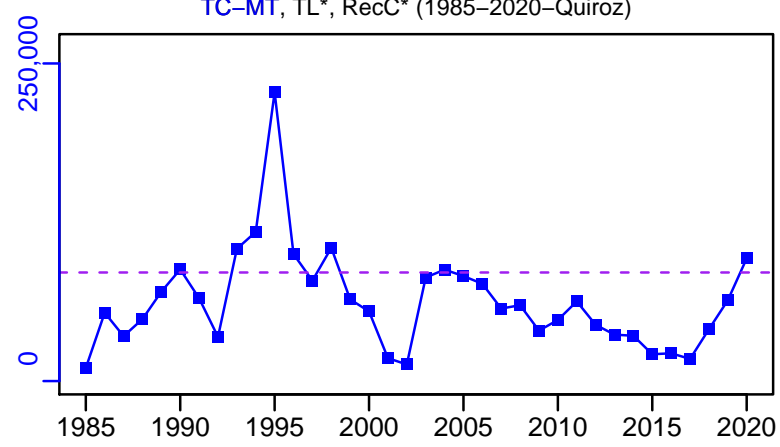


R-E00 (1985–2020–Quiroz)

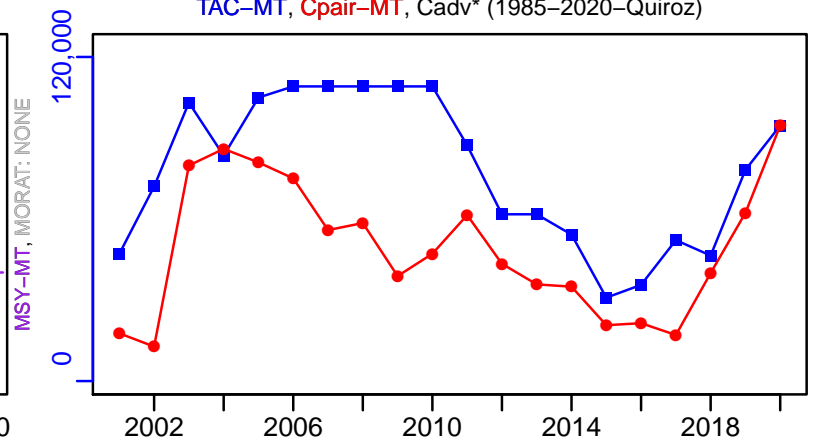


# Peruvian anchoveta Central Chile [PANCHCCH]

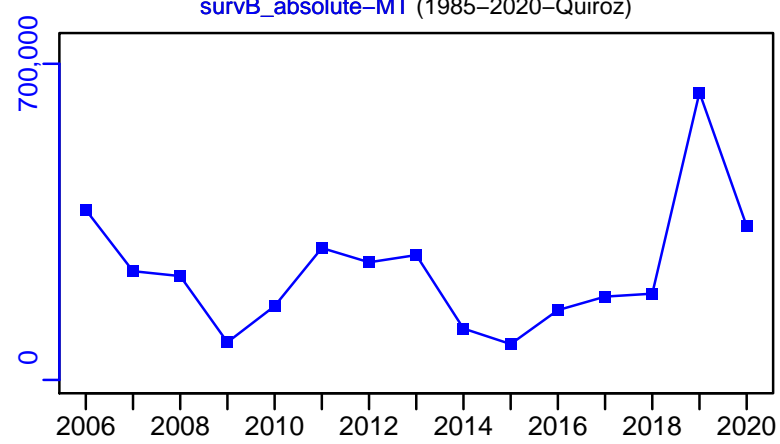
TC-MT, TL\*, RecC\* (1985–2020–Quiroz)



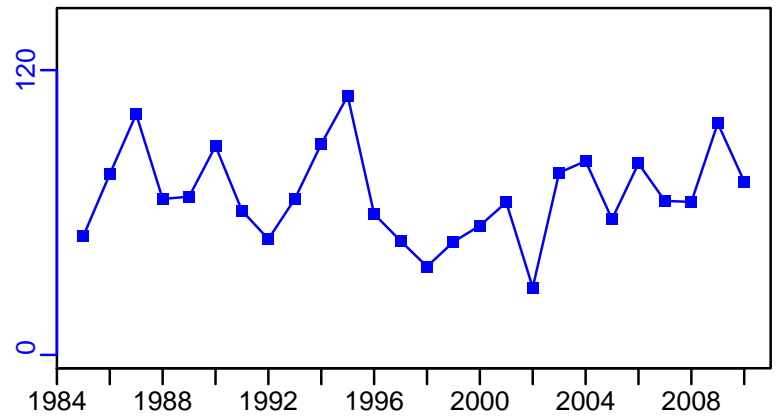
TAC-MT, Cpair-MT, Cadv\* (1985–2020–Quiroz)



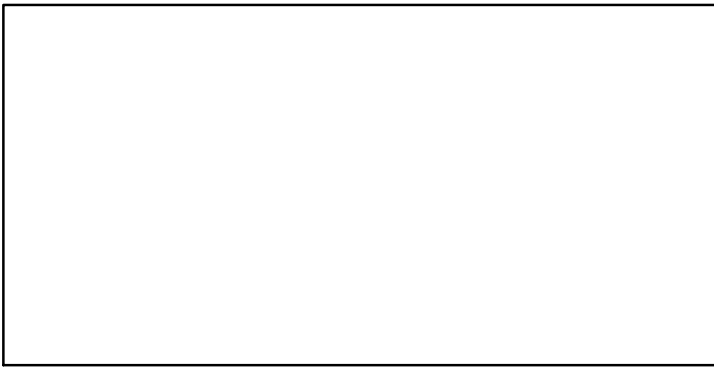
survB\_absolute-MT (1985–2020–Quiroz)



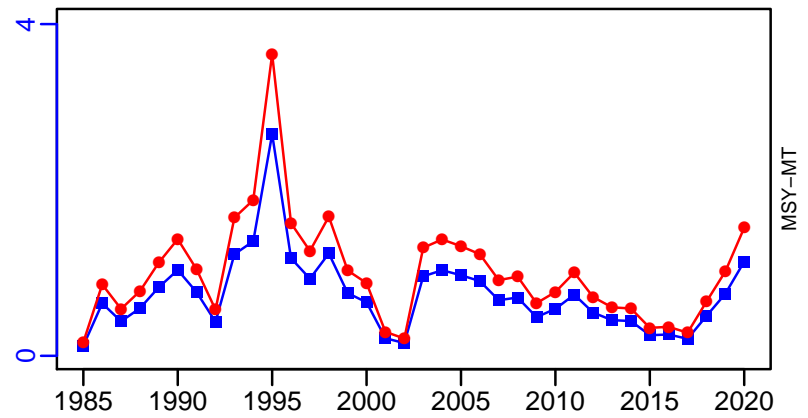
CPUE-index (1985–2020–Quiroz)



**EFFORT\***



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



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

## Peruvian anchoveta Central-Southern Chile [PANCHCSCH]

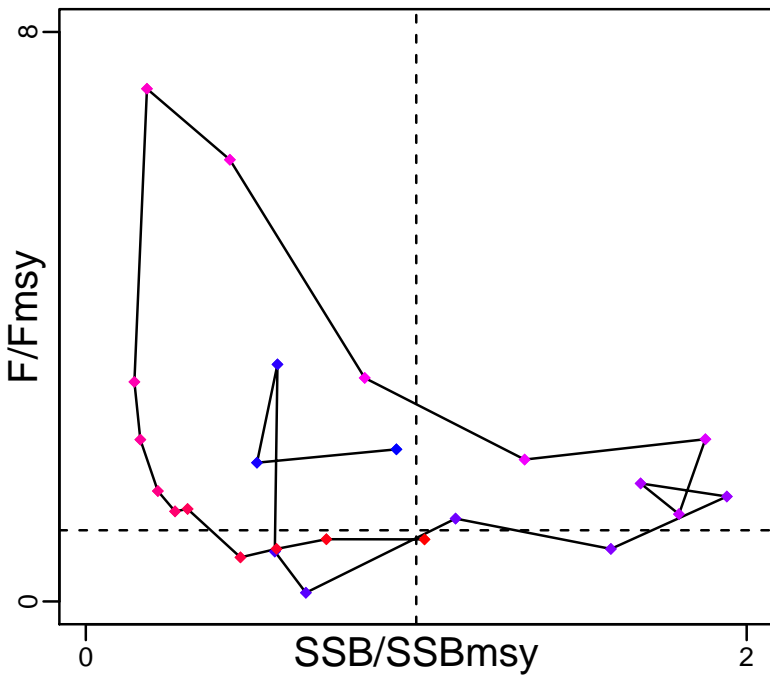
Metadata	
<b>Scientific Name</b>	Engraulis ringens
<b>Current Assess ID</b>	IFOPCH-PANCHCSCH-1997-2020-Quiroz
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2020	482,277
<b>Fmsy</b>	Fmsy-pr-1/yr	2020	0.44
<b>ERmsy</b>	ERmsy-conv-ratio	2020	0.156
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2016	562,000
<b>Fmgt</b>	Fmgt-1/yr	2016	0.396
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2020	877,959
<b>MSY</b>	MSY-MT	2020	160,810
<b>M</b>	M-1/yr	2020	0.7
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2016	281,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

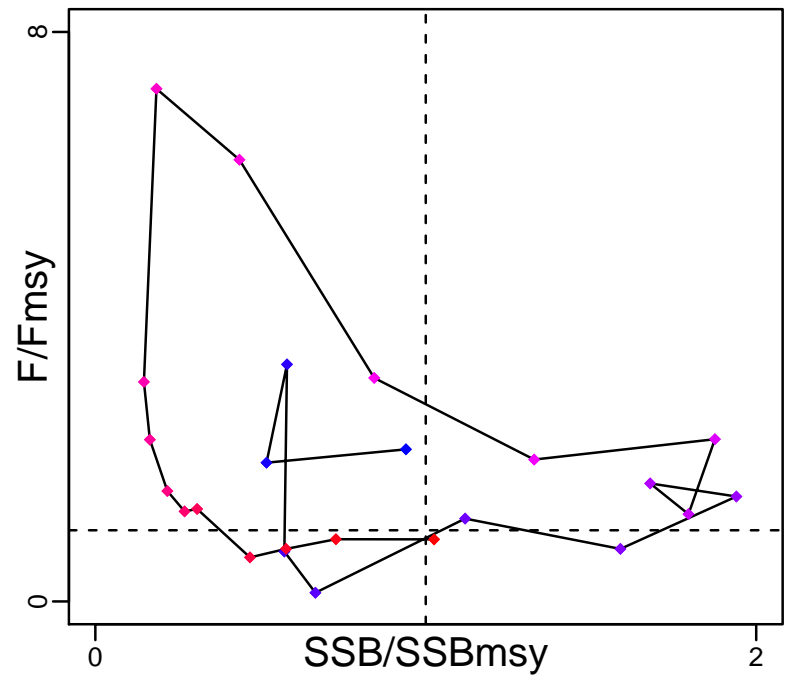
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	824,040	-	-
<b>SSB</b>	SSB-MT	2020	495,110	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	58,165	Both	-
<b>F</b>	F-1/yr	2020	0.385	Both	-
<b>ER</b>	ER-ratio	2020	0.195	-	-
<b>TC</b>	TC-MT	2020	160,799		
<b>TL</b>	TL-MT	2016	44,600		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2020	1.025		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2020	0.872		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-conv-ratio	2020	1.246		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2016	0.363		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	0.995		
<b>ER/ERmgt</b>	-	-	-		

# Peruvian anchoveta Central–Southern Chile [PANCHCSCH]

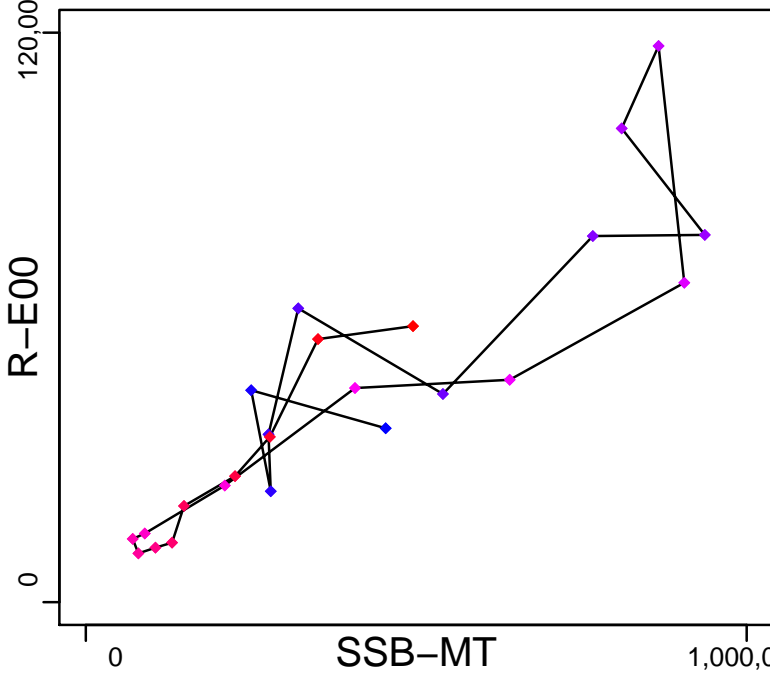
Kobe MSYpref (1997–2020–Quiroz)



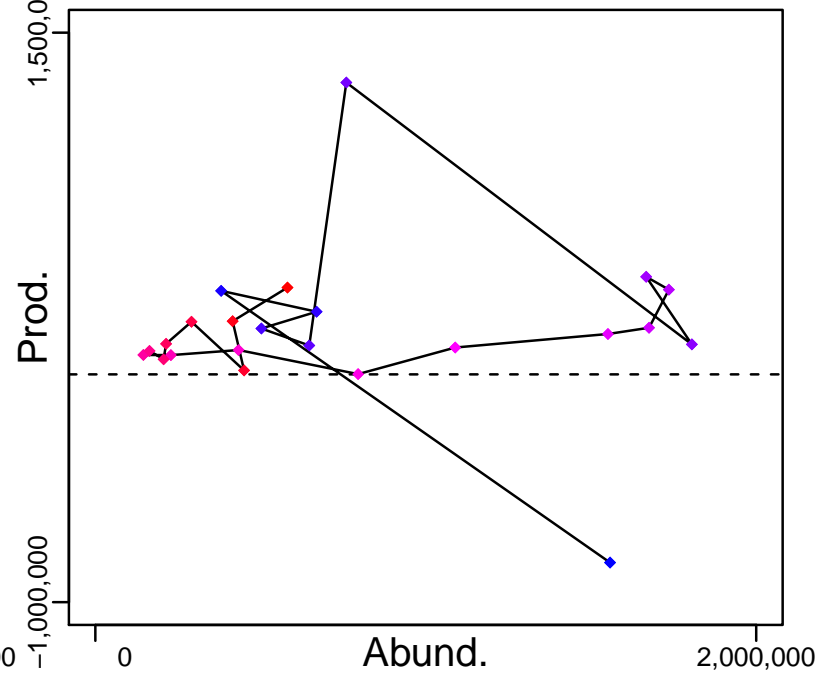
Kobe MGTpref (1997–2020–Quiroz)



Spawner Recruit (1997–2020–Quiroz)



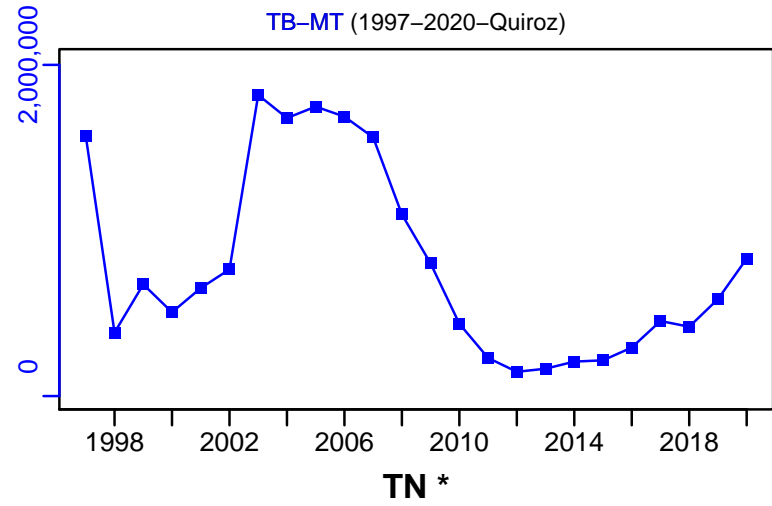
Production (1997–2020–Quiroz)



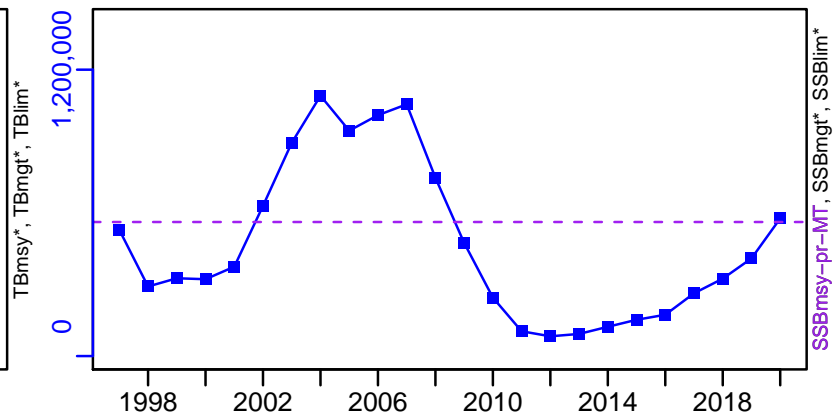
◆ Start Year ◆ End Year \* No Data

# Peruvian anchoveta Central–Southern Chile [PANCHCSCH]

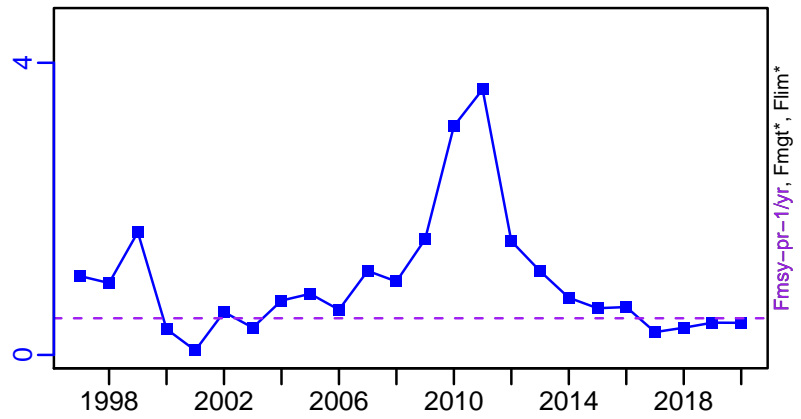
TB–MT (1997–2020–Quiroz)



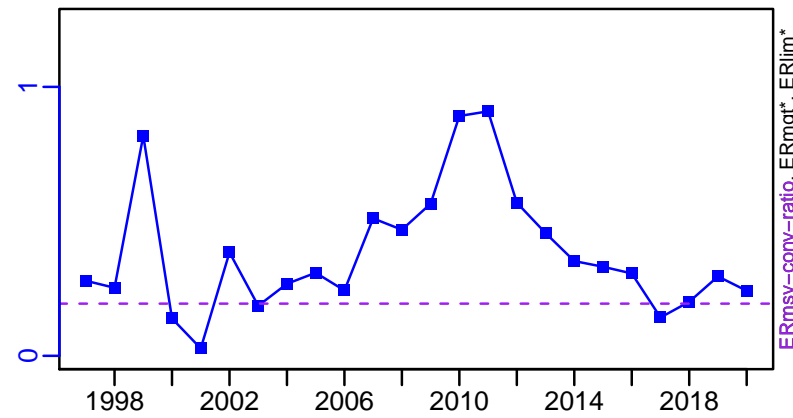
SSB–MT (1997–2020–Quiroz)



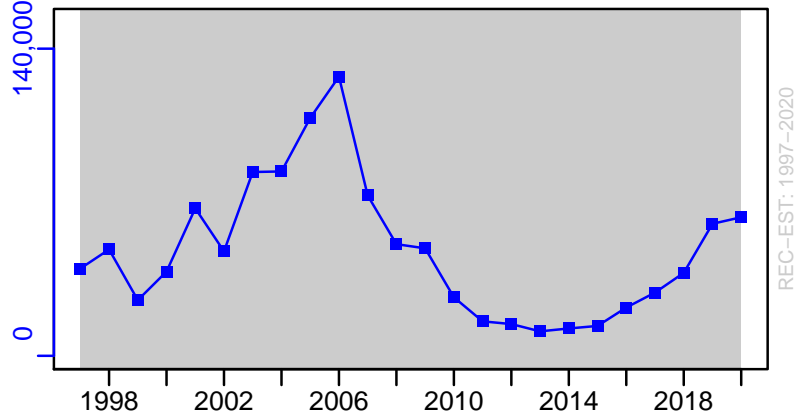
F–1/yr (1997–2020–Quiroz)



ER–ratio (1997–2020–Quiroz)



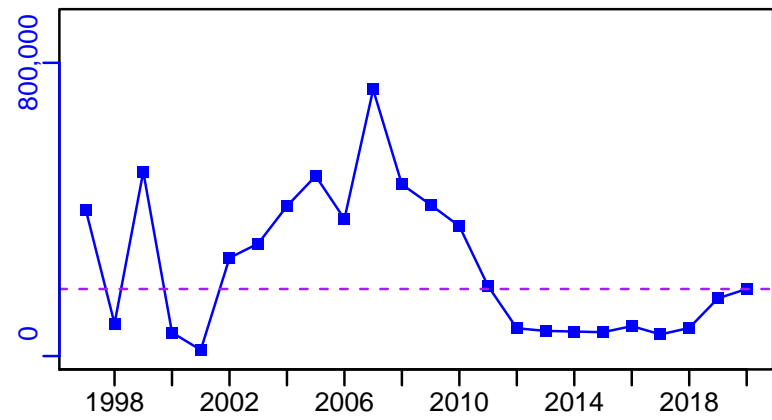
R–E00 (1997–2020–Quiroz)



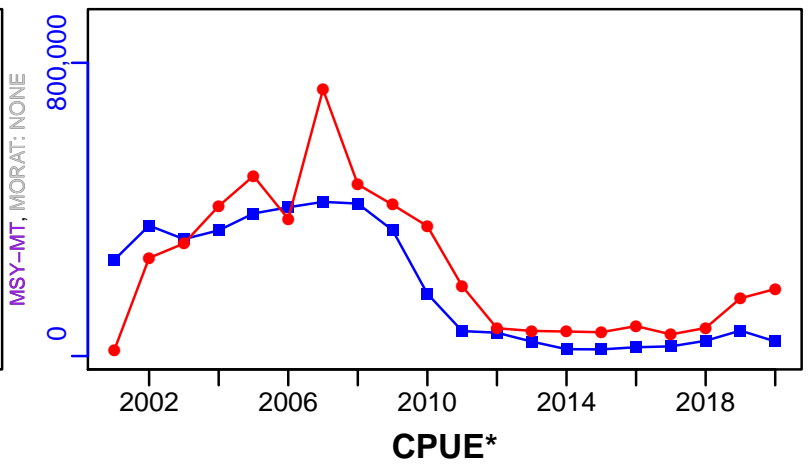


# Peruvian anchoveta Central–Southern Chile [PANCHCSCH]

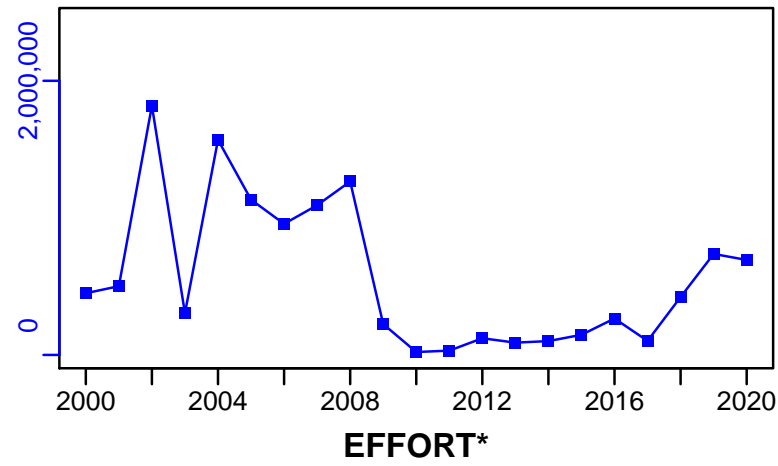
TC–MT, TL\*, RecC\* (1997–2020–Quiroz)



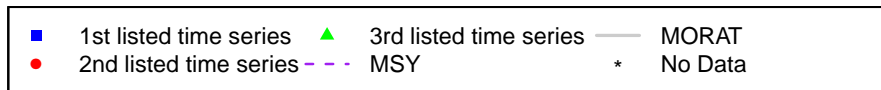
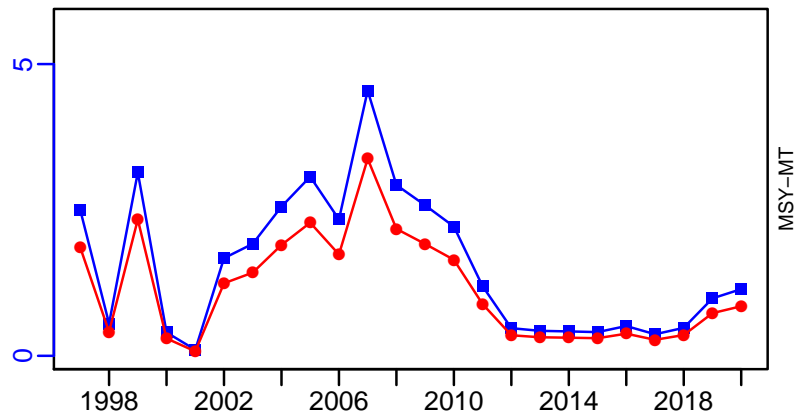
TAC–MT, Cpair–MT, Cadv\* (1997–2020–Quiroz)



survB\_absolute–MT (1997–2020–Quiroz)



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



## Peruvian anchoveta Northern Chile Southern Peru [PANCHNCHSP]

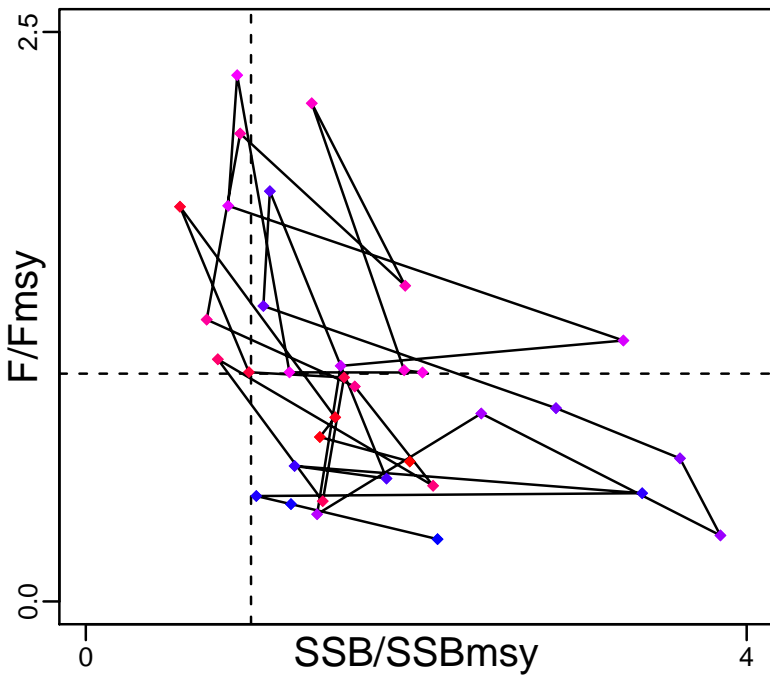
Metadata	
<b>Scientific Name</b>	Engraulis ringens
<b>Current Assess ID</b>	IFOPCH-PANCHNCHSP-1986-2019-Quiroz
<b>Area</b>	Northern Chile Southern Peru
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2019	642,260
<b>Fmsy</b>	Fmsy-pr-1/yr	2019	0.863
<b>ERmsy</b>	ERmsy-conv-ratio	2019	0.209
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2015	2,021,000
<b>Fmgt</b>	Fmgt-1/yr	2015	1.18
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2019	1,284,520
<b>MSY</b>	MSY-MT	2019	338,192
<b>M</b>	M-1/yr	2019	2.2
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

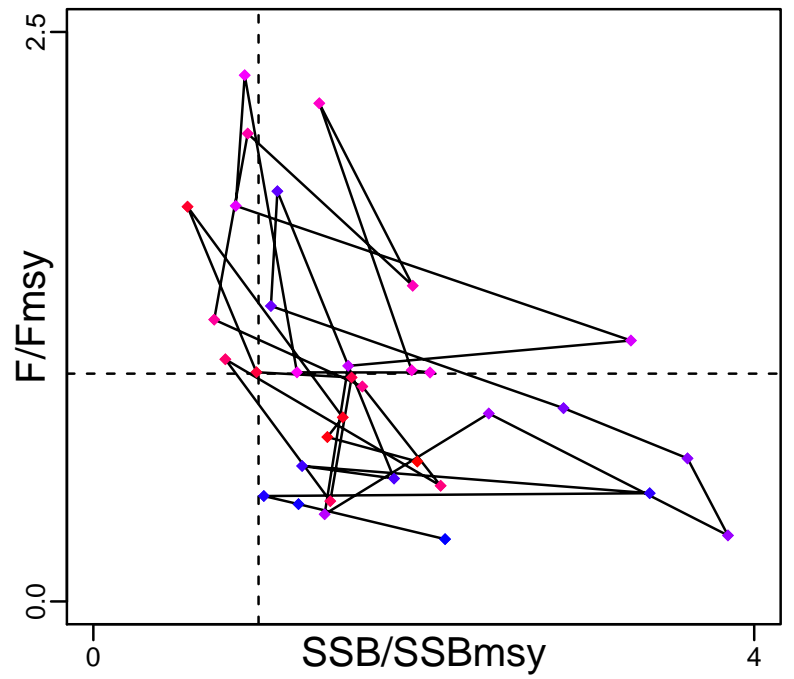
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	2,069,000	-	-
<b>SSB</b>	SSB-MT	2019	1,259,400	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	349,460	Both	-
<b>F</b>	F-1/yr	2019	0.53	Both	-
<b>ER</b>	ER-ratio	2019	0.259	-	-
<b>TC</b>	TC-MT	2019	690,083		
<b>TL</b>	TL-MT	2015	1,200,000		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2019	1.961		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2019	0.614		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-conv-ratio	2019	1.241		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2015	0.599		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2015	3.576		
<b>ER/ERmgt</b>	-	-	-		

Peruvian anchoveta Northern Chile Southern Peru [PANCHNCHSP]

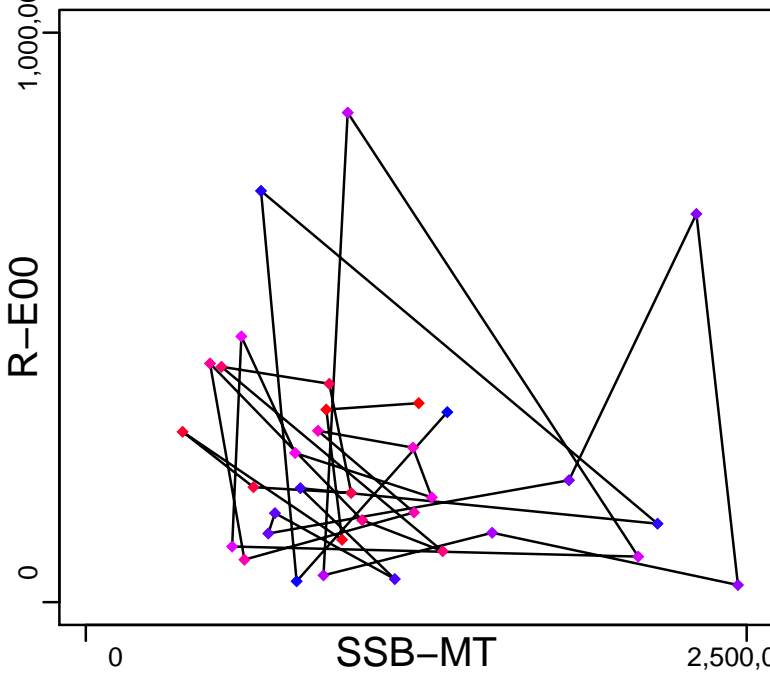
Kobe MSY<sub>pref</sub> (1986–2019–Quiroz)



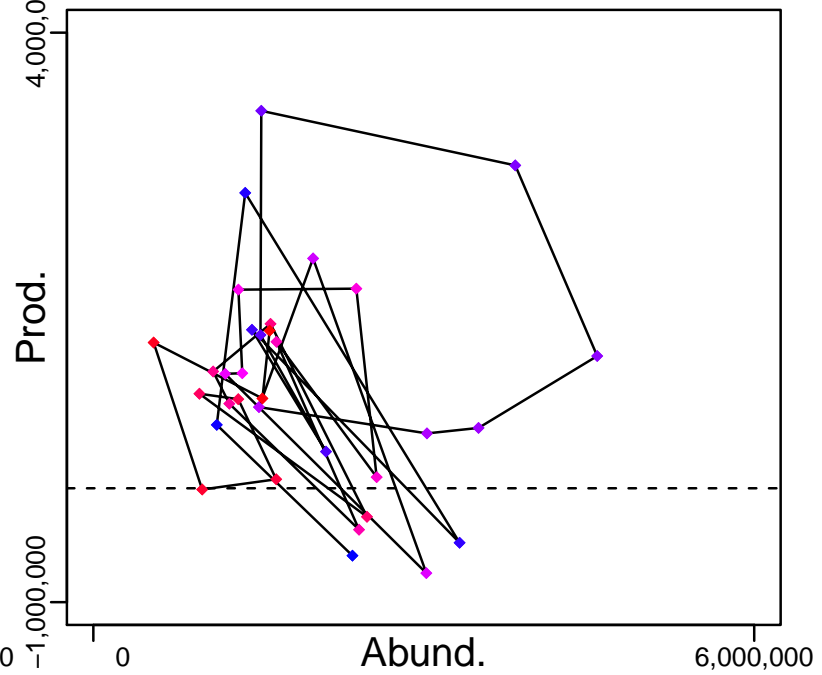
Kobe MGT<sub>pref</sub> (1986–2019–Quiroz)



Spawner Recruit (1986–2019–Quiroz)



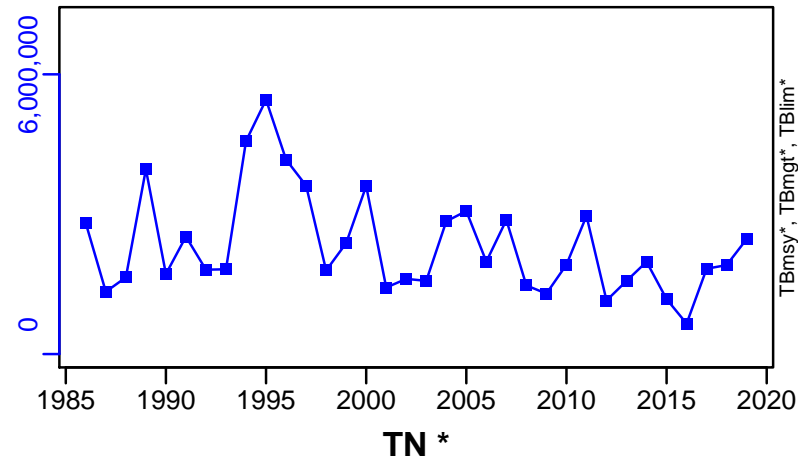
Production (1986–2019–Quiroz)



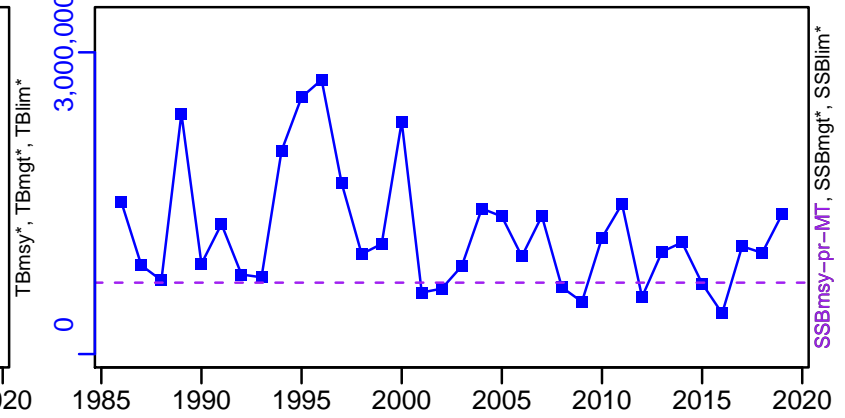
◆ Start Year ◆ End Year \* No Data

Peruvian anchoveta Northern Chile Southern Peru [PANCHNCHSP]

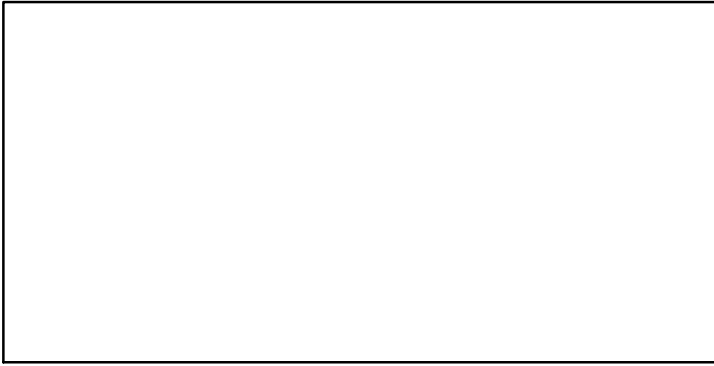
TB-MT (1986–2019–Quiroz)



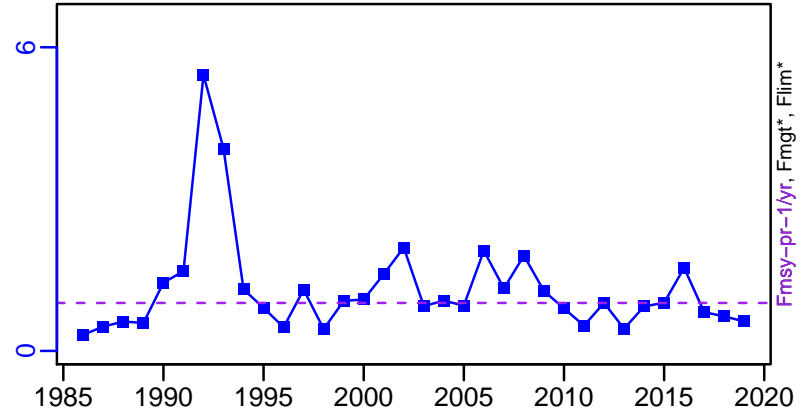
SSB-MT (1986–2019–Quiroz)



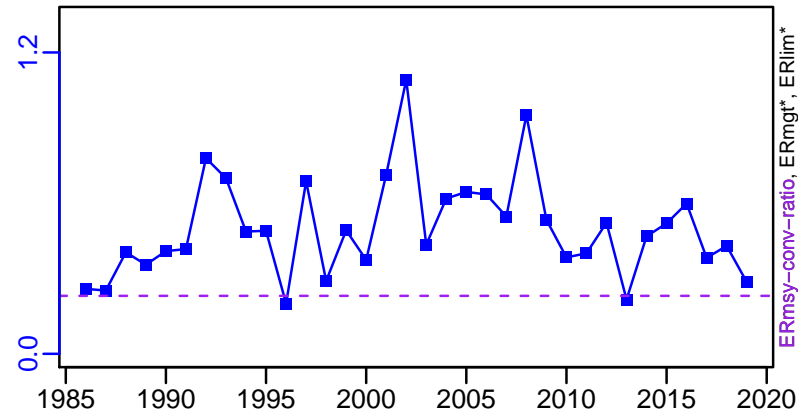
TN \*



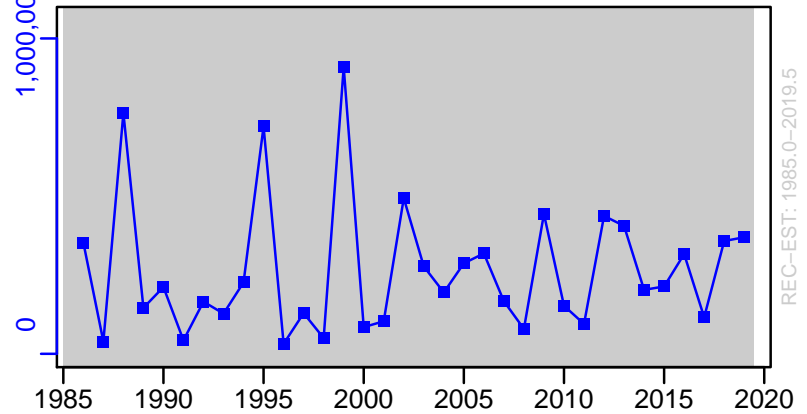
F-1/yr (1986–2019–Quiroz)



ER-ratio (1986–2019–Quiroz)

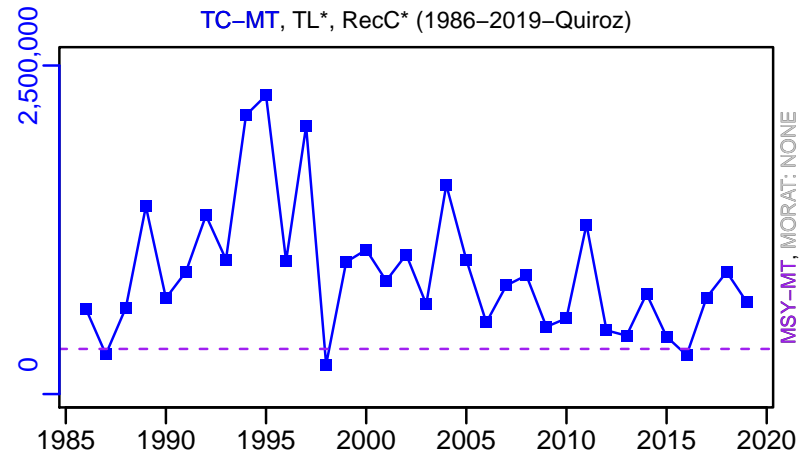


R-E00 (1986–2019–Quiroz)



Peruvian anchoveta Northern Chile Southern Peru [PANCHNCHSP]

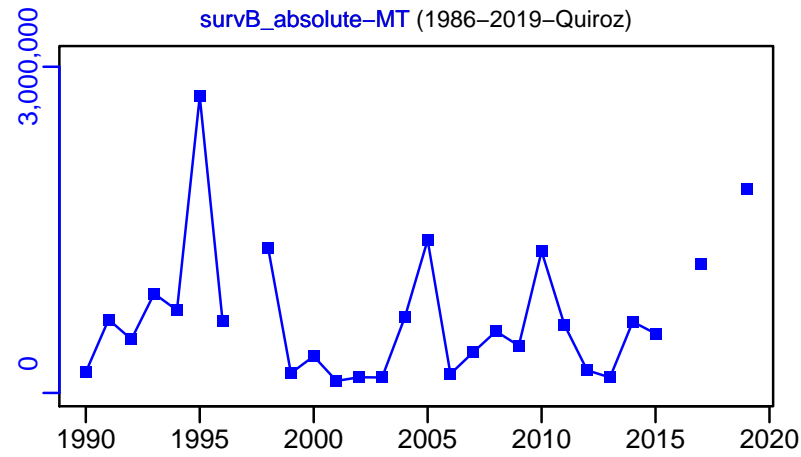
TC-MT, TL\*, RecC\* (1986–2019–Quiroz)



TAC\*, Cpair\*, Cadv\*



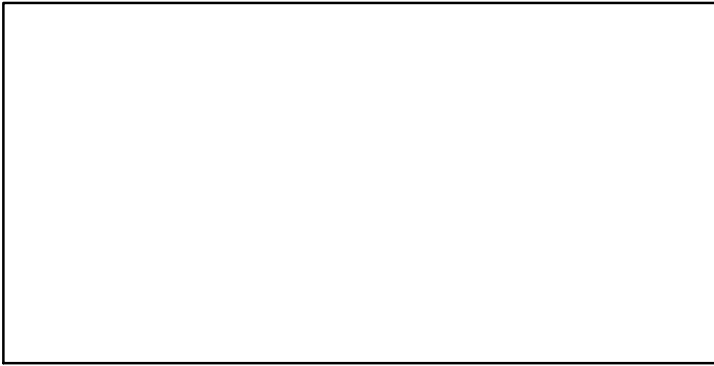
survB\_absolute-MT (1986–2019–Quiroz)



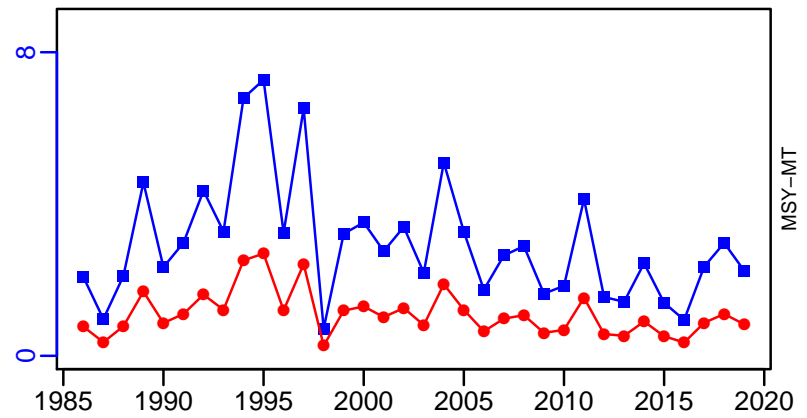
CPUE\*



EFFORT\*



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



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

## Peruvian anchoveta North-Central Peruvian coast [PANCHPERUNC]

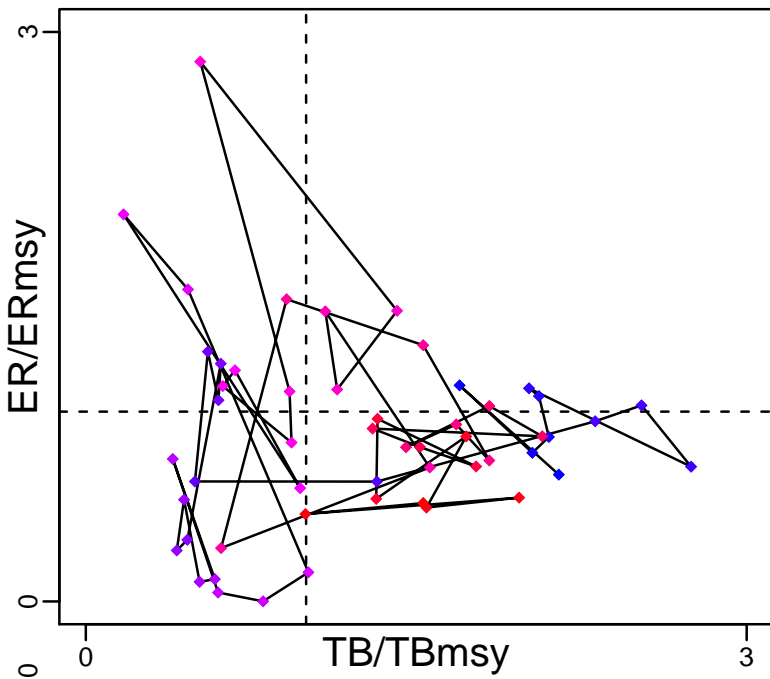
Metadata	
Scientific Name	Engraulis ringens
Current Assess ID	IMARPE-PANCHPERUNC-1953-2020-DIAZ
Area	North-Central Peruvian coast
Management Authority	Instituto del Mar del Peru, Peru national management
Assessor	Instituto del Mar del Peru
Asmts in RAM	2020, 2008, 2016

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-pr-MT	2016	6,660,000
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-est-ratio	2016	0.628
TBmgt	TBmgt-MT	2016	6,660,000
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-est-MT	2016	4,183,417
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

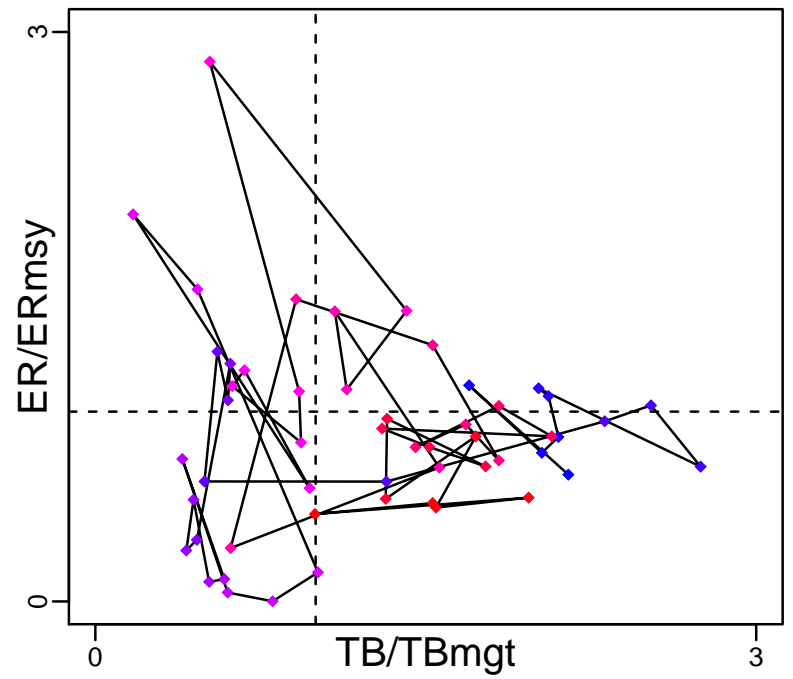
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2016	10,200,000	Both	-
SSB	SSB-MT	2008	6,590,000	-	-
TN	-	-	-	-	-
R	R-E00	2016	$1.81 \times 10^8$	Both	-
F	F-1/yr	2008	0.588	-	-
ER	ER-calc-ratio	2016	0.325	-	-
TC	-	-	-		
TL	TL-MT	2020	3,151,481		
TB/TBmsy	TB-MT/TBmsy-pr-MT	2016	1.532		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-est-ratio	2016	0.518		
TB/TBmgt	TB-MT/TBmgt-MT	2016	1.532		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Peruvian anchoveta North-Central Peruvian coast [PANCHPERUNC]

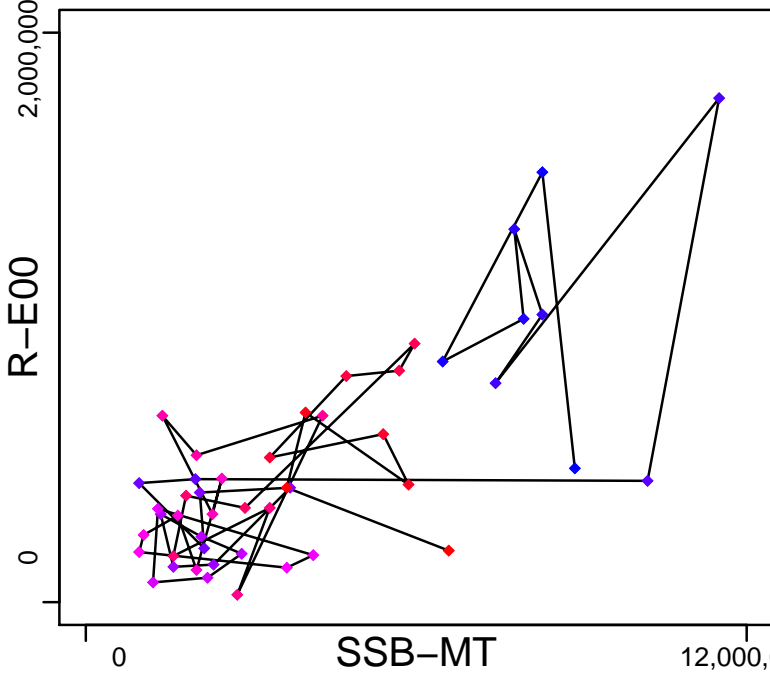
Kobe MSYpref (1959–2016–HILBORN)



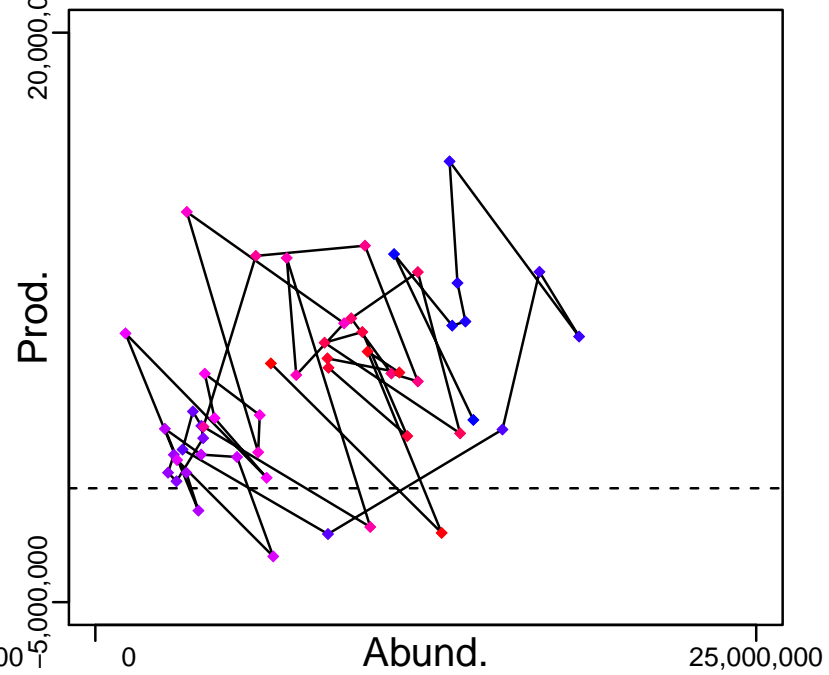
Kobe MGTpref (1959–2016–HILBORN)



Spawner Recruit (1959–2008–HIVELY)



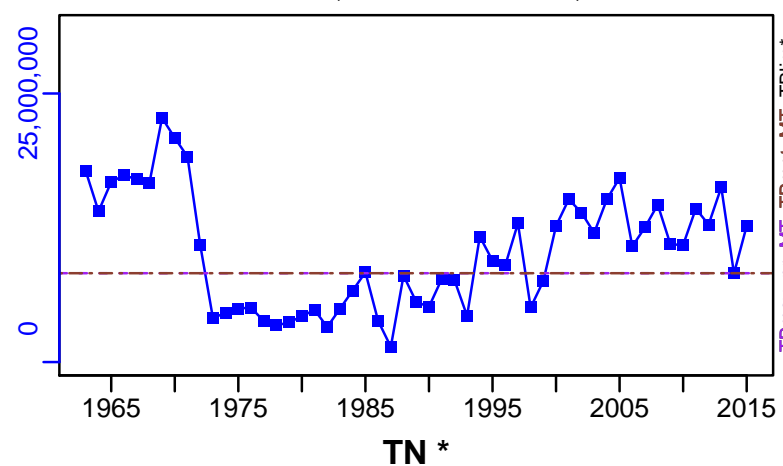
Production (1959–2016–HILBORN)



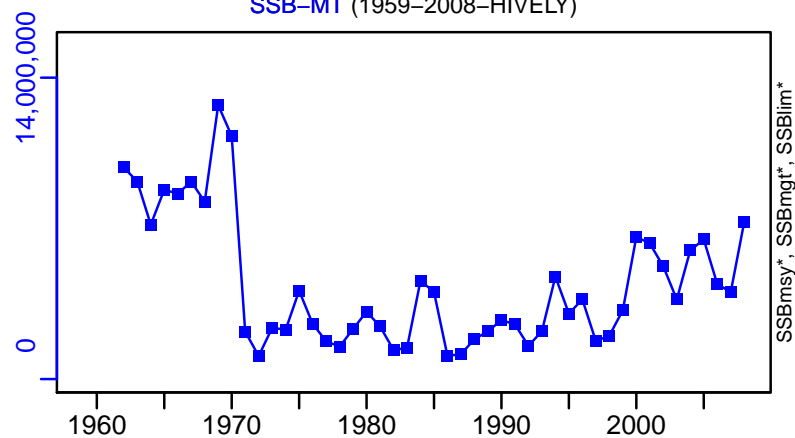
◆ Start Year ◆ End Year \* No Data

# Peruvian anchoveta North-Central Peruvian coast [PANCHPERUNC]

TB-MT (1959–2016–HILBORN)



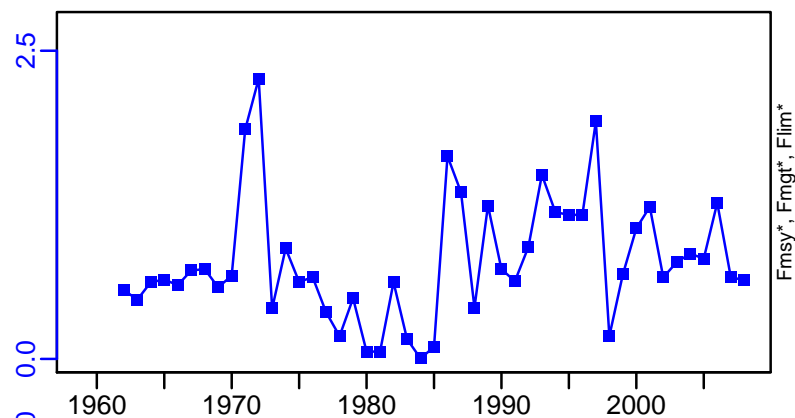
SSB-MT (1959–2008–HIVELY)



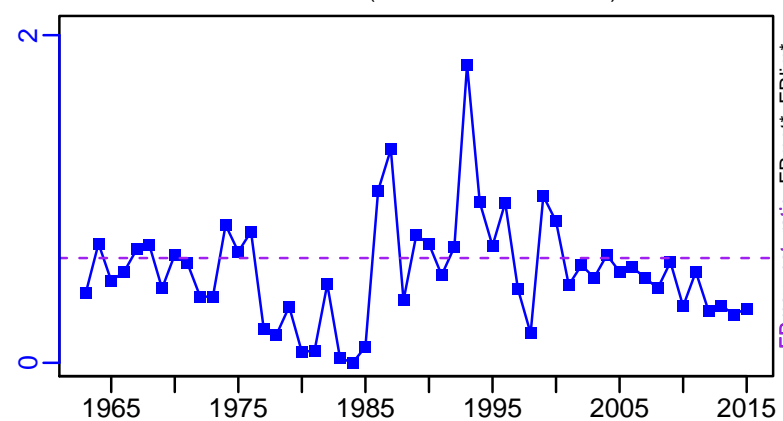
TN \*



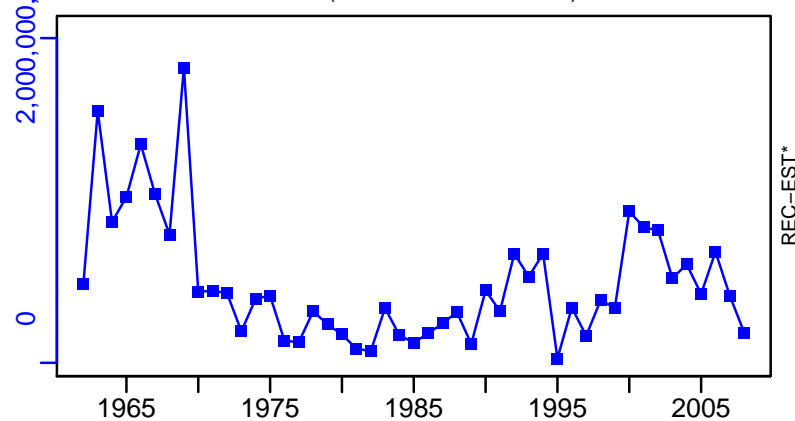
F-1/yr (1959–2008–HIVELY)



ER-calc-ratio (1959–2016–HILBORN)



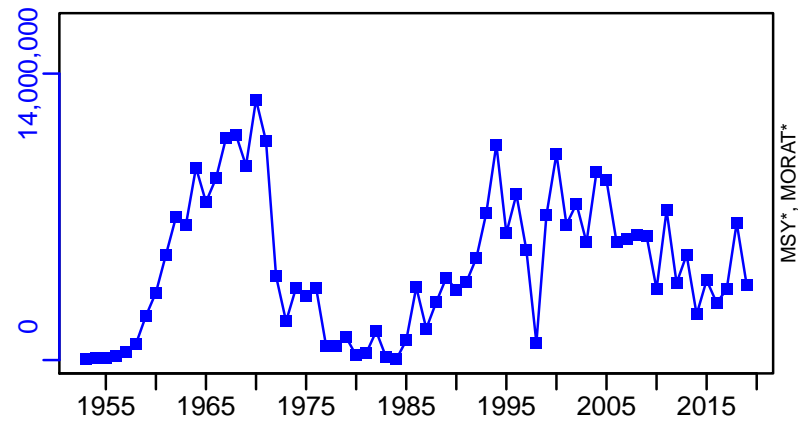
R-E00 (1959–2016–HILBORN)





# Peruvian anchoveta North-Central Peruvian coast [PANCHPERUNC]

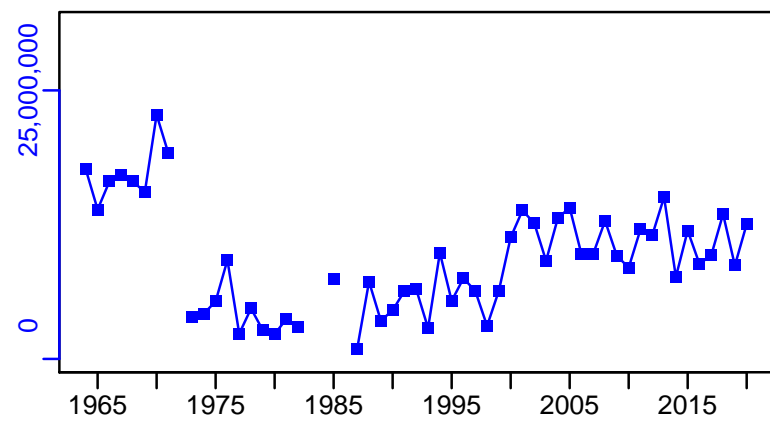
TL-MT, TC\*, RecC\* (1953-2020-DIAZ)



TAC\*, Cpair\*, Cadv\*



survB\_absolute-MT (1953-2020-DIAZ)



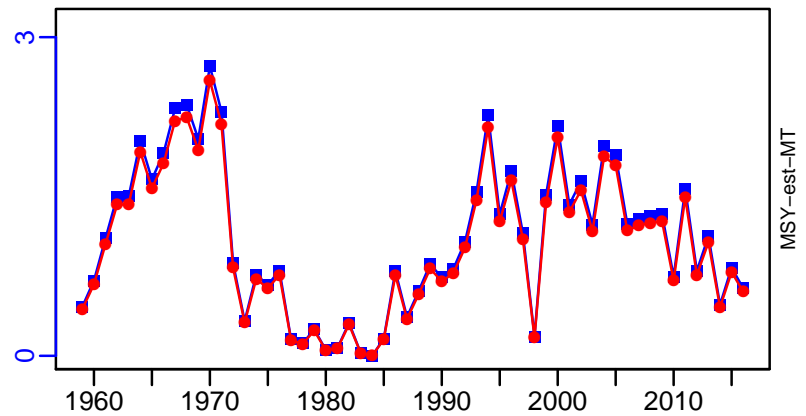
CPUE\*



EFFORT\*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1959-2016-HILBORN)



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

## Patagonian cod Southern Argentina [PATCODARGS]

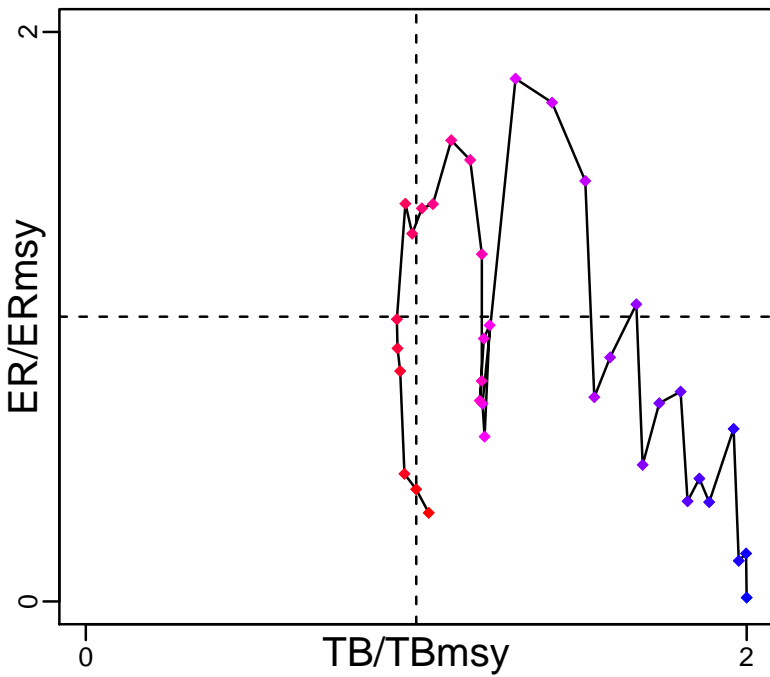
Metadata	
<b>Scientific Name</b>	Salilota australis
<b>Current Assess ID</b>	INIDEP-PATCODARGS-1984-2020-Parma
<b>Area</b>	Southern Argentina
<b>Management Authority</b>	Consejo Federal Pesquero, Argentina national management
<b>Assessor</b>	Instituto Nacional de Investigacion y Desarrollo Pesquero
<b>Asmts in RAM</b>	2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2020	100,734
<b>SSBmsy</b>	SSBmsy-conv-MT	2020	33,074
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2020	0.066
<b>TBmgt</b>	TBmgt-MT	2020	90,660
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2020	201,468
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2020	6478
<b>M</b>	-	-	-
<b>TBlim</b>	TBlim-MT	2020	60,440
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

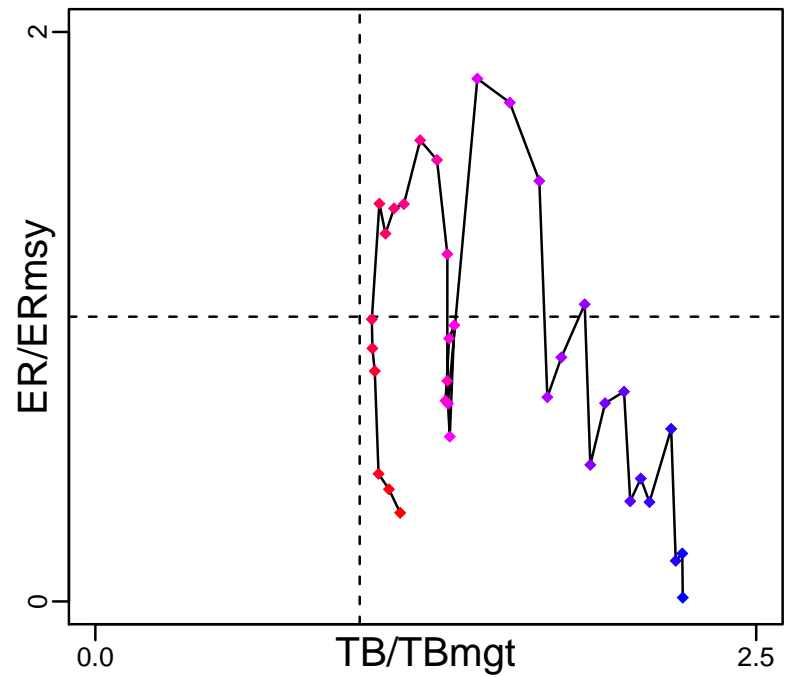
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	108,844	-	1+
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2020	0.021	Both	-
<b>TC</b>	TC-MT	2020	2164		
<b>TL</b>	TL-MT	2020	2164		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2020	1.081		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2020	0.311		
<b>TB/TBmgt</b>	TB-MT/TBmgt-MT	2020	1.201		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Patagonian cod Southern Argentina [PATCODARGS]

Kobe MSYpref (1984–2020–Parma)



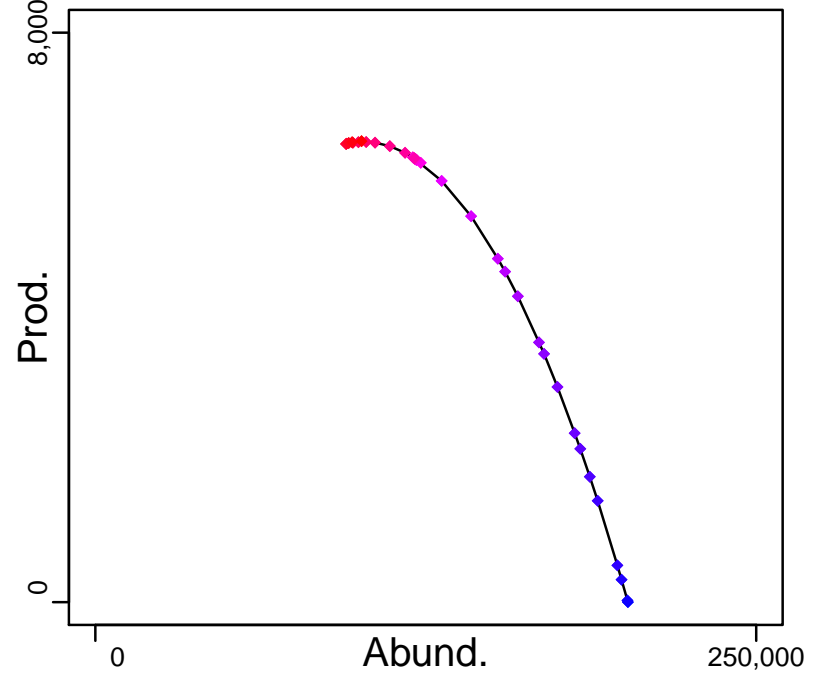
Kobe MGTpref (1984–2020–Parma)



Spawner Recruit\*



Production (1984–2020–Parma)

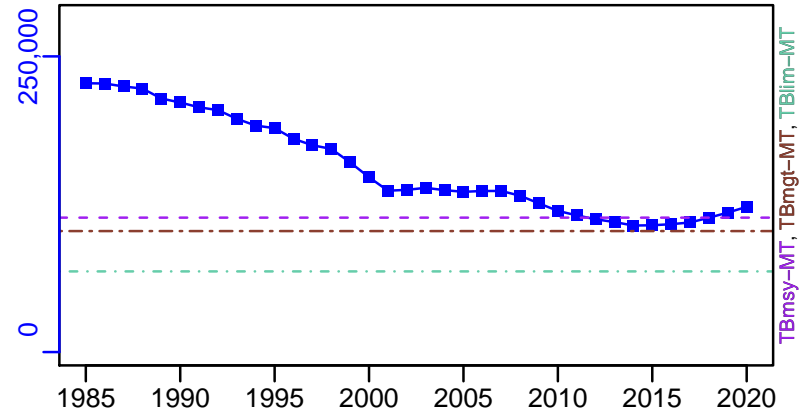


◆ Start Year ◆ End Year \* No Data

# Patagonian cod Southern Argentina [PATCODARGS]

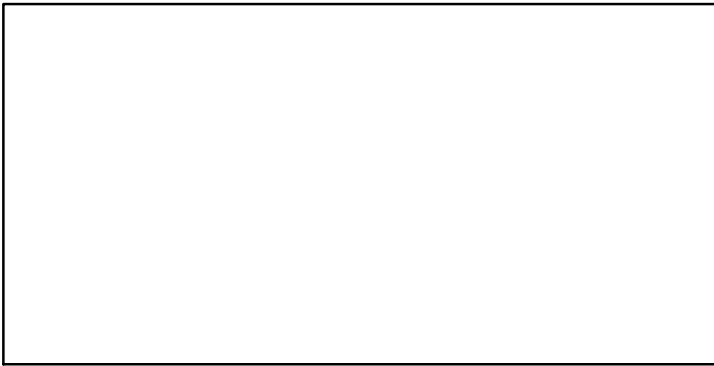
TB-MT (1984-2020-Parma)

SSB\*



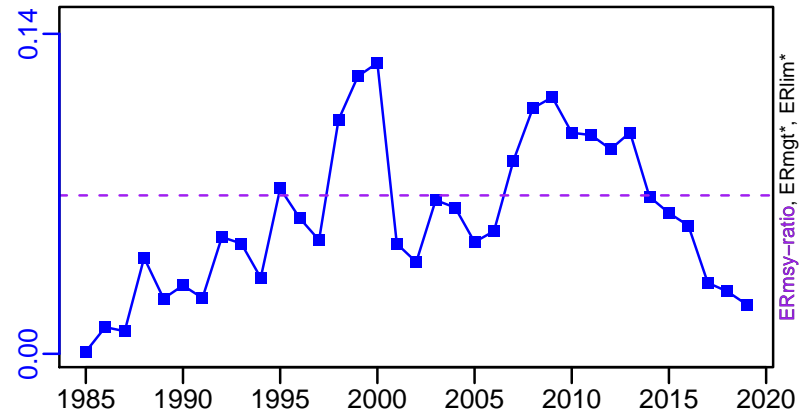
TN \*

F\*



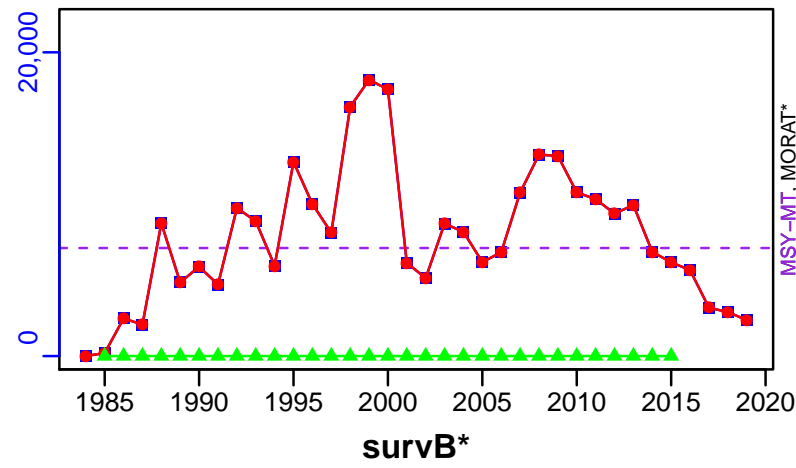
ER-ratio (1984-2020-Parma)

Recruits\*



# Patagonian cod Southern Argentina [PATCODARGS]

TC-MT, TL-MT, RecC-MT (1984–2020–Parma)



TAC\*, Cpair\*, Cadv\*



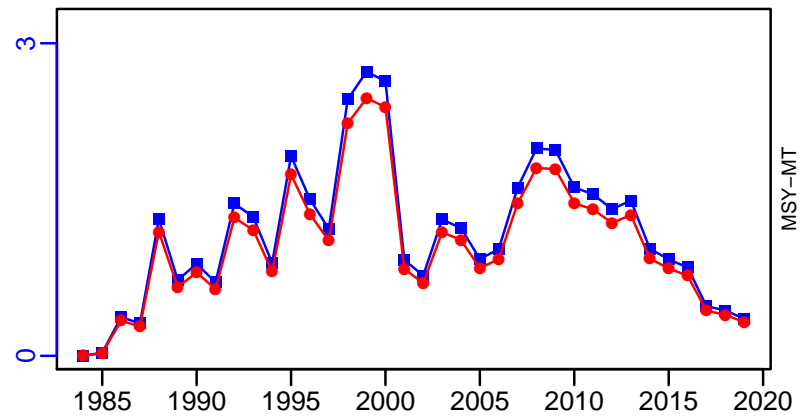
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1984–2020–Parma)



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

## Patagonian grenadier Central-Southern Chile [PATGRENADIERCH]

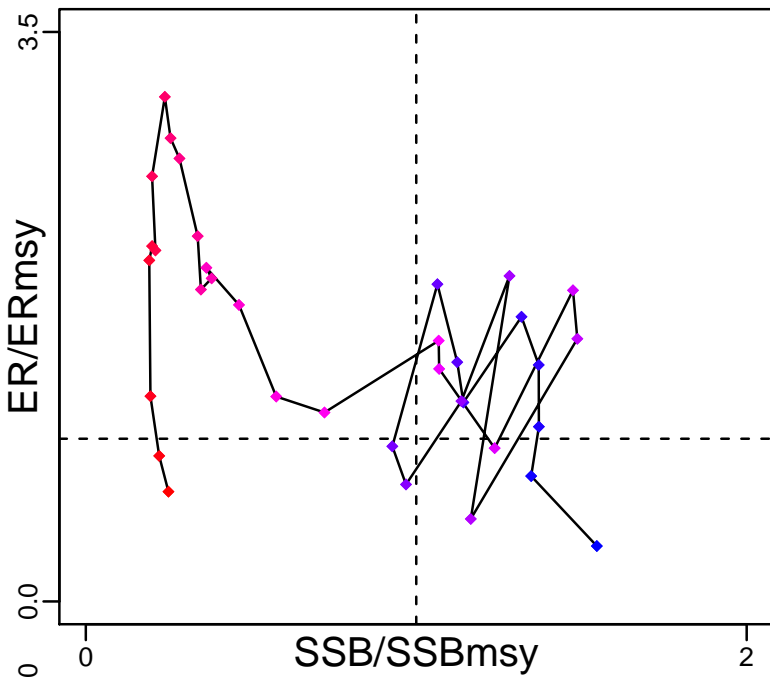
Metadata	
<b>Scientific Name</b>	Macruronus magellanicus
<b>Current Assess ID</b>	IFOPCH-PATGRENADIERCH-1985-2020-Quiroz
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2012, 2015, 2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2012	2,957,617
<b>SSBmsy</b>	SSBmsy-pr-MT	2020	490
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-extr-ratio	2020	0.173
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2015	115,820
<b>M</b>	M-1/yr	2015	0.35
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

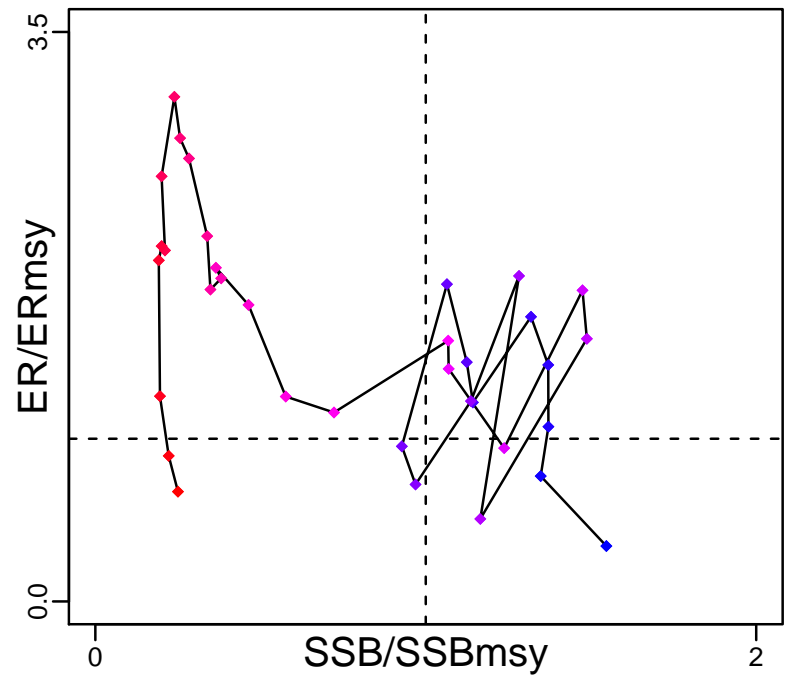
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	359	-	-
<b>SSB</b>	SSB-MT	2020	151	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	584,268,000	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2020	0.06	-	-
<b>TC</b>	TC-MT	2020	17,902		
<b>TL</b>	TL-MT	2020	17,902		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	0.134		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2020	0.25		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ERdivERmsy-dimensionless	2020	0.675		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Patagonian grenadier Central–Southern Chile [PATGRENADIERCH]

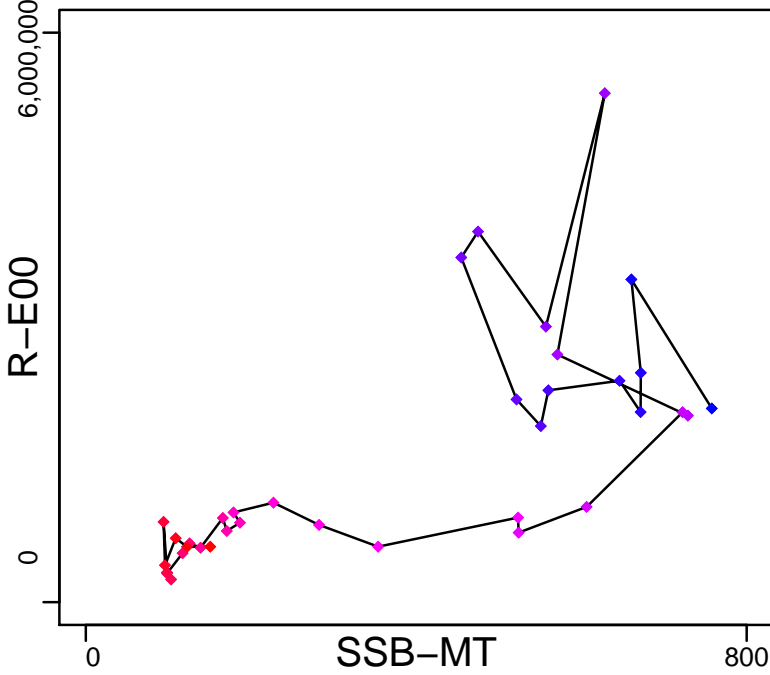
Kobe MSYpref (1985–2020–Quiroz)



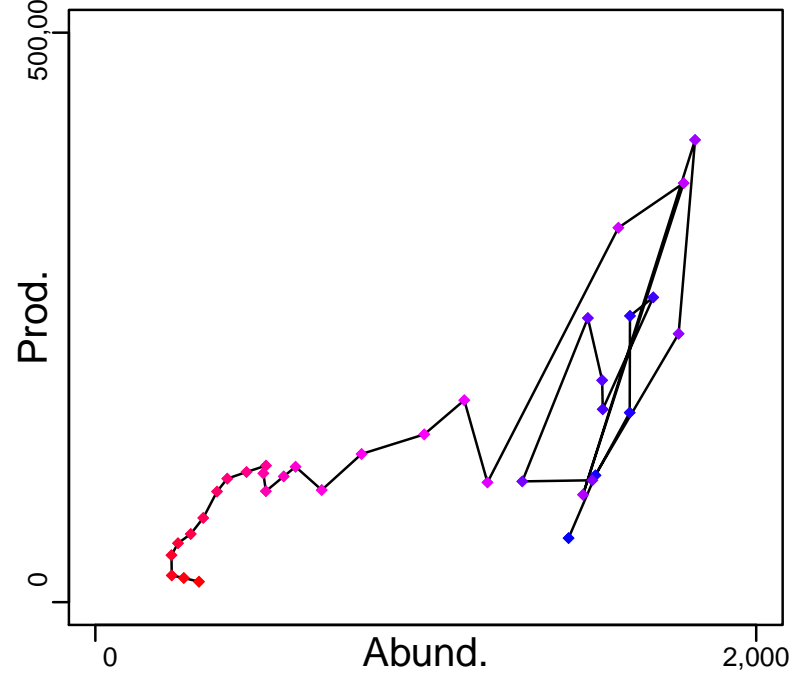
Kobe MGTpref (1985–2020–Quiroz)



Spawner Recruit (1985–2020–Quiroz)



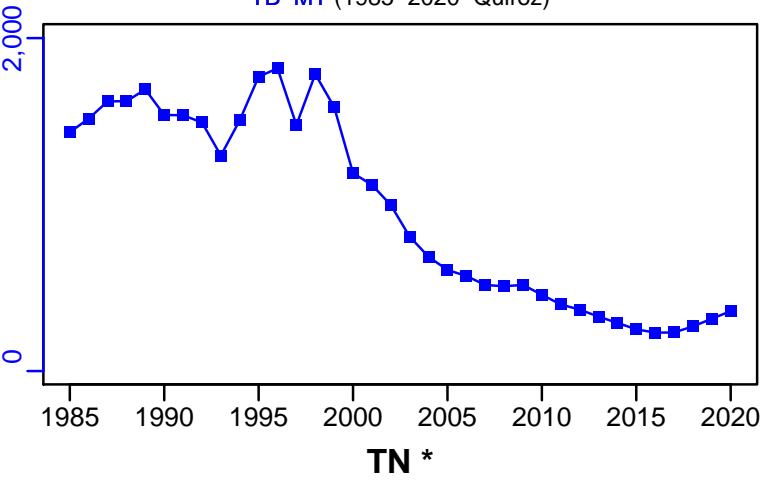
Production (1985–2020–Quiroz)



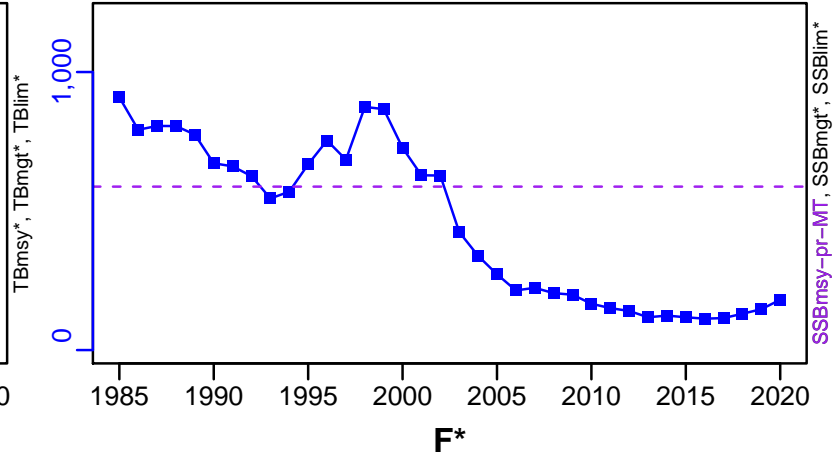
◆ Start Year ◆ End Year \* No Data

# Patagonian grenadier Central–Southern Chile [PATGRENIERCH]

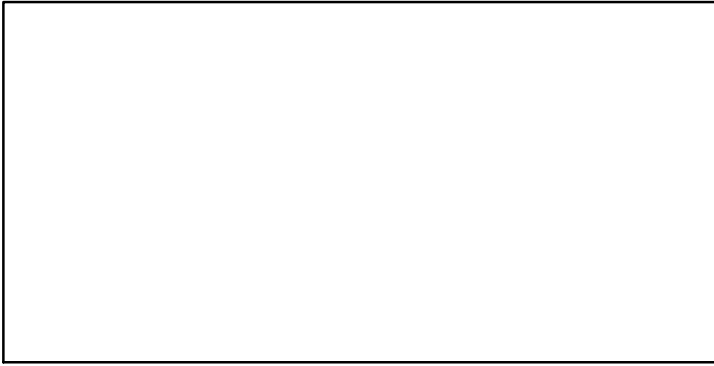
TB–MT (1985–2020–Quiroz)



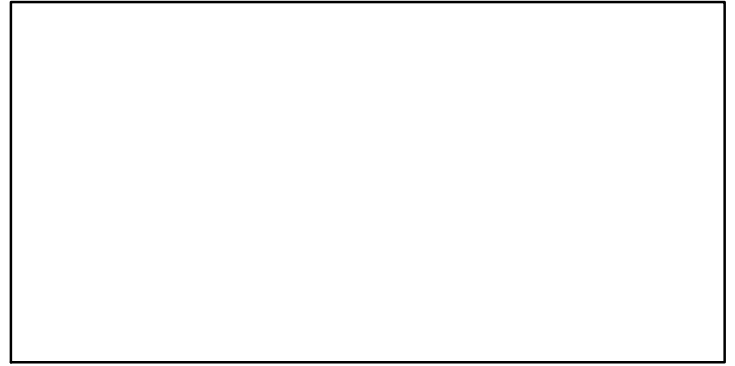
SSB–MT (1985–2020–Quiroz)



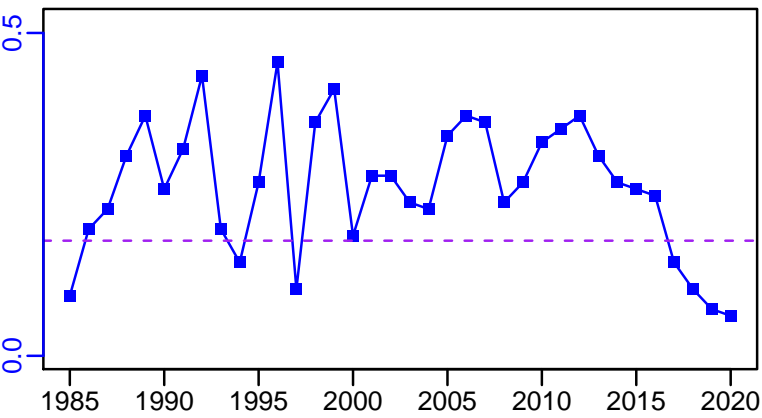
TN \*



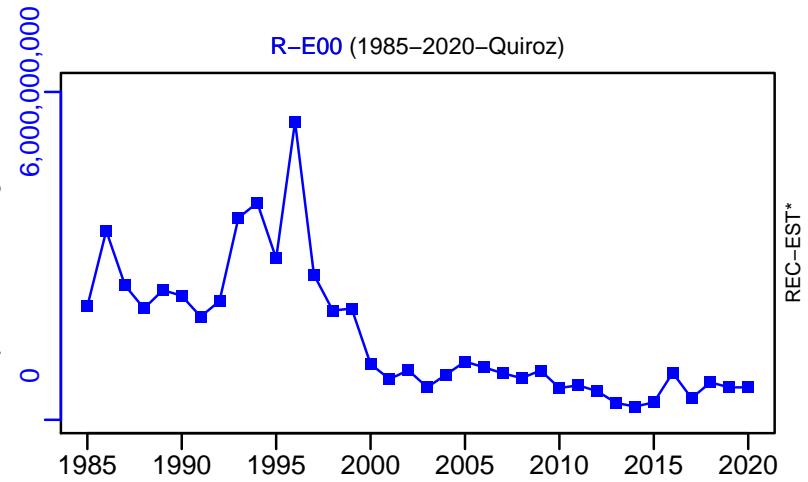
F\*



ER–ratio (1985–2020–Quiroz)



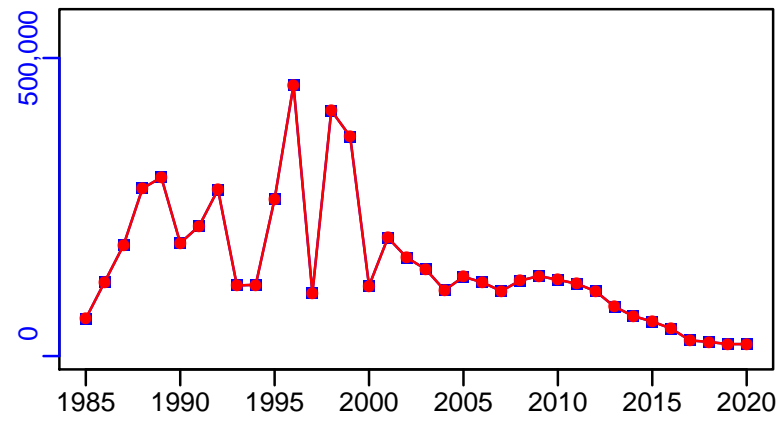
R–E00 (1985–2020–Quiroz)



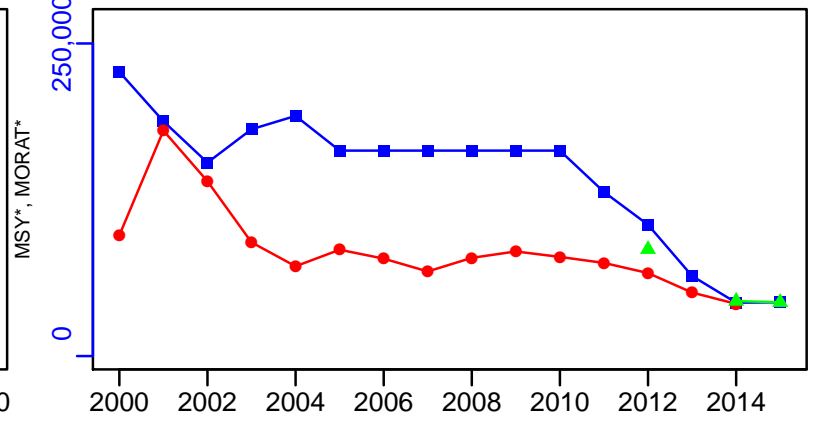


# Patagonian grenadier Central–Southern Chile [PATGRENADIERCH]

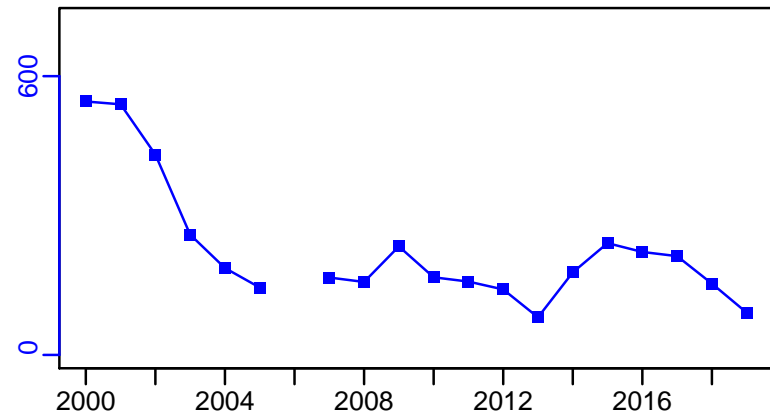
TC–MT, TL–MT, RecC\* (1985–2020–Quiroz)



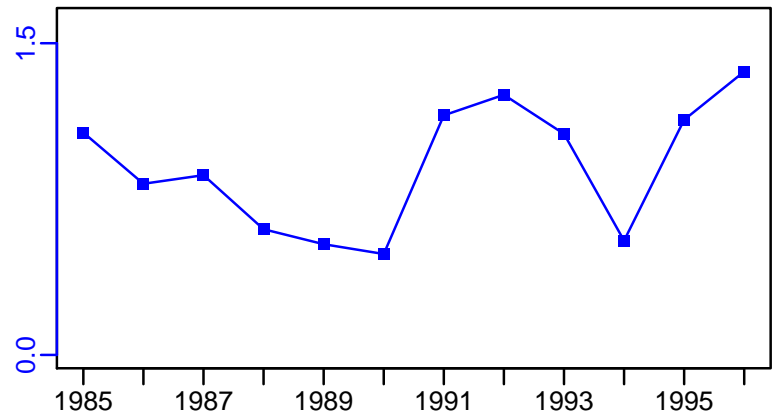
TAC–MT, Cpair–MT, Cadvised–MT (1985–2020–Quiroz)



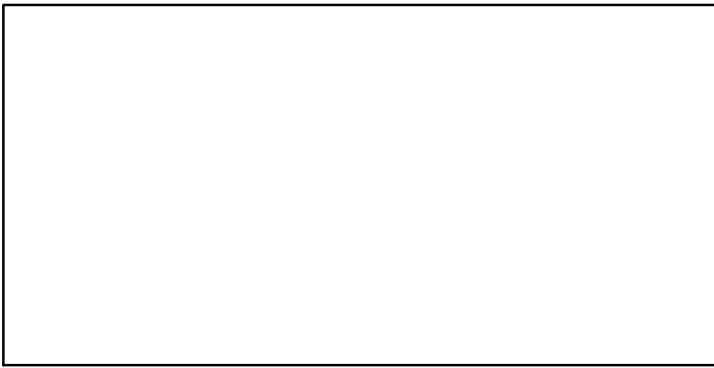
survB\_absolute–MT (1985–2020–Quiroz)



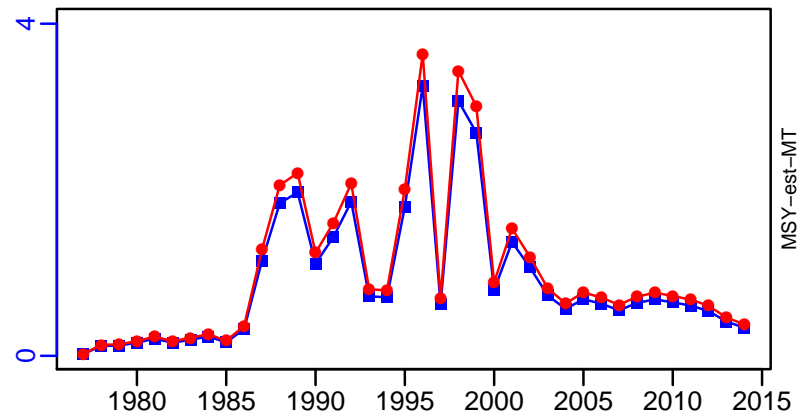
CPUE–1–index (1985–2020–Quiroz)



**EFFORT\***



TL–MT/MSY–est–MT, CdivMEANC–ratio, (1977–2015–PAYA)



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

## Patagonian grenadier Southern Argentina [PATGRENADIERSARG]

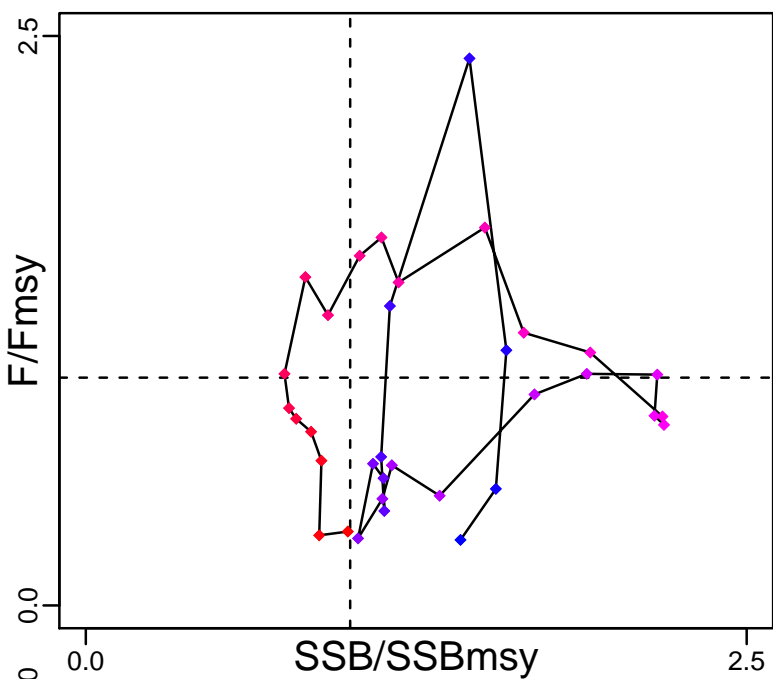
Metadata	
<b>Scientific Name</b>	Macruronus magellanicus
<b>Current Assess ID</b>	INIDEP-PATGRENADIERSARG-1983-2019-Parma
<b>Area</b>	Southern Argentina
<b>Management Authority</b>	Consejo Federal Pesquero, Argentina national management
<b>Assessor</b>	Instituto Nacional de Investigacion y Desarrollo Pesquero
<b>Asmts in RAM</b>	2006, 2015, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2006	642,031
<b>SSBmsy</b>	SSBmsy-MT	2019	278,120
<b>Fmsy</b>	Fmsy-1/yr	2019	0.299
<b>ERmsy</b>	ERmsy-ratio	2006	0.206
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2019	198,474
<b>Fmgt</b>	Fmgt-1/yr	2019	0.215
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2019	496,186
<b>MSY</b>	MSY-MT	2019	78,761
<b>M</b>	M-1/yr	2019	0.35
<b>TBlim</b>	TBlim-MT	2006	415,041
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

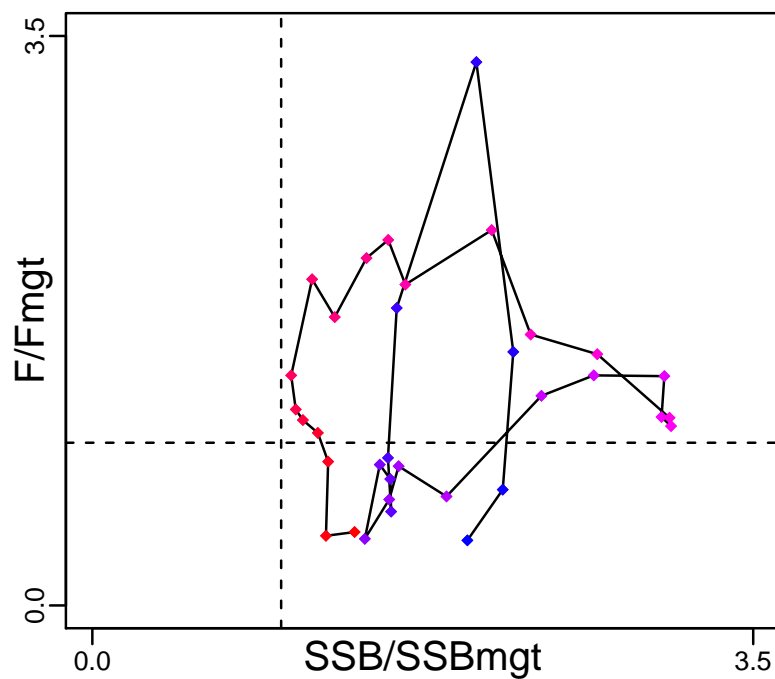
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	686,905	-	1+
<b>SSB</b>	SSB-MT	2019	275,663	-	2+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	239,478,000	-	1
<b>F</b>	F-1/yr	2019	0.097	-	3-11+
<b>ER</b>	ER-calc-ratio	2019	0.062	-	-
<b>TC</b>	TC-MT	2019	50,000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2006	2.149		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2019	0.991		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.324		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2006	0.534		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2019	1.389		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	0.451		
<b>ER/ERmgt</b>	-	-	-		

# Patagonian grenadier Southern Argentina [PATGRENADIERSARG]

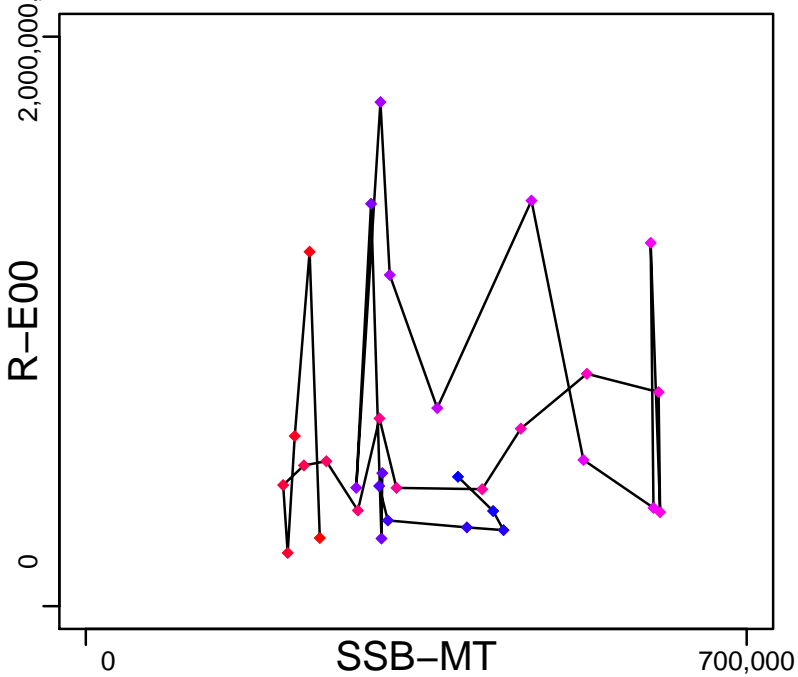
Kobe MSYpref (1983–2019–Parma)



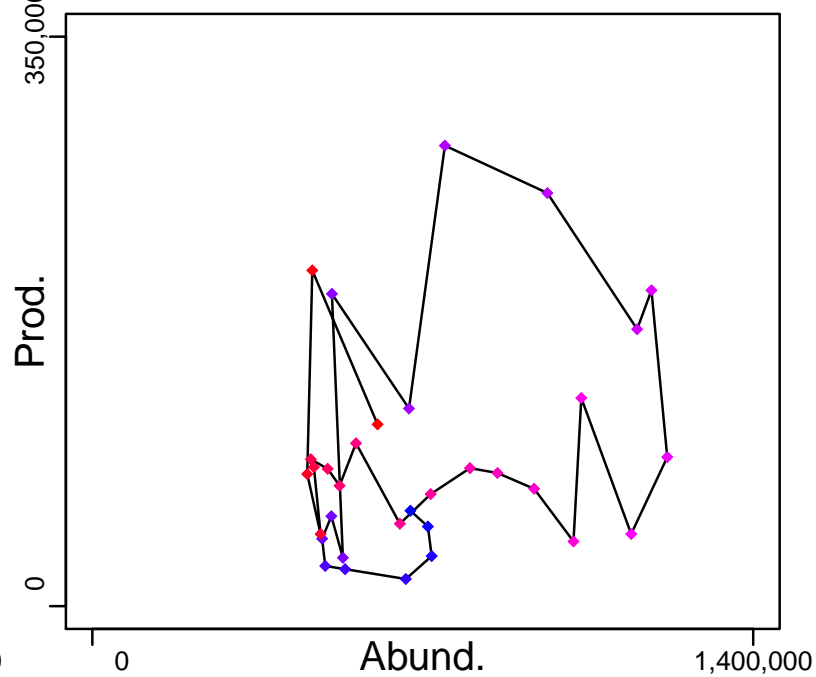
Kobe MGTpref (1983–2019–Parma)



Spawner Recruit (1983–2019–Parma)

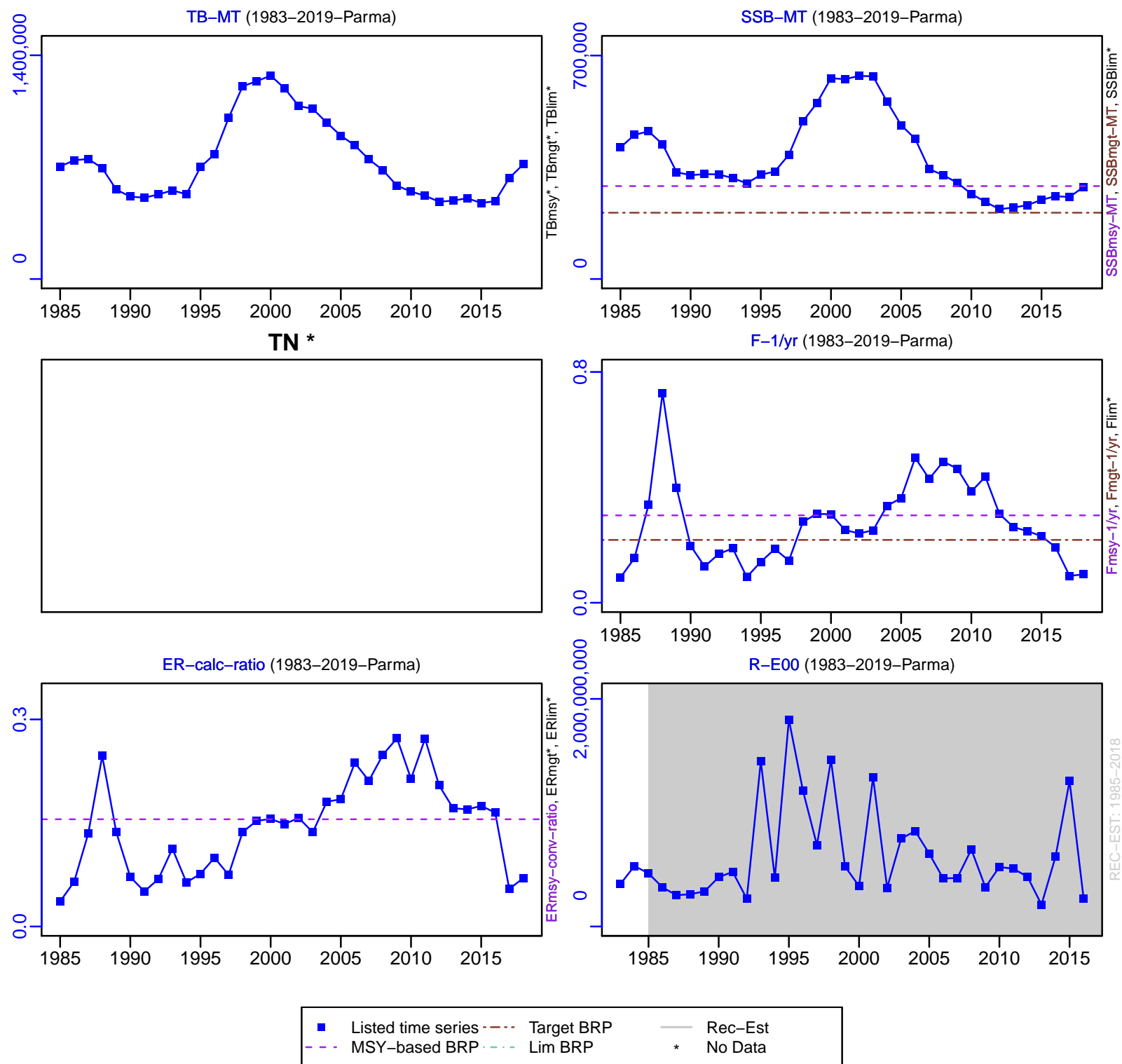


Production (1983–2019–Parma)



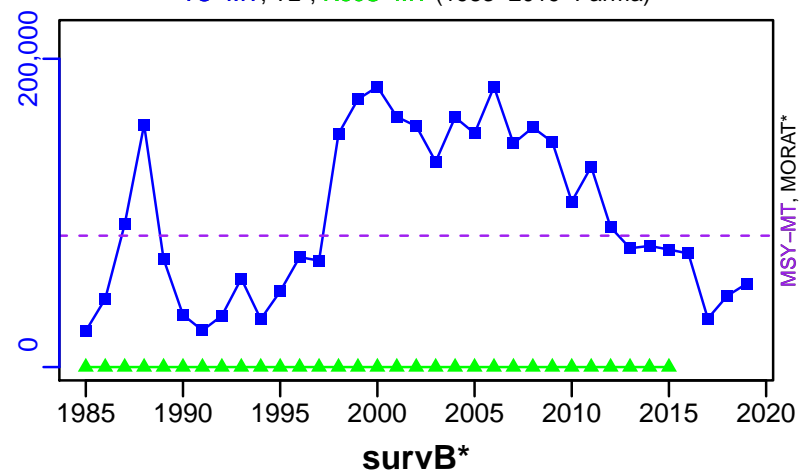
◆ Start Year ◆ End Year \* No Data

# Patagonian grenadier Southern Argentina [PATGRENADIERSARG]

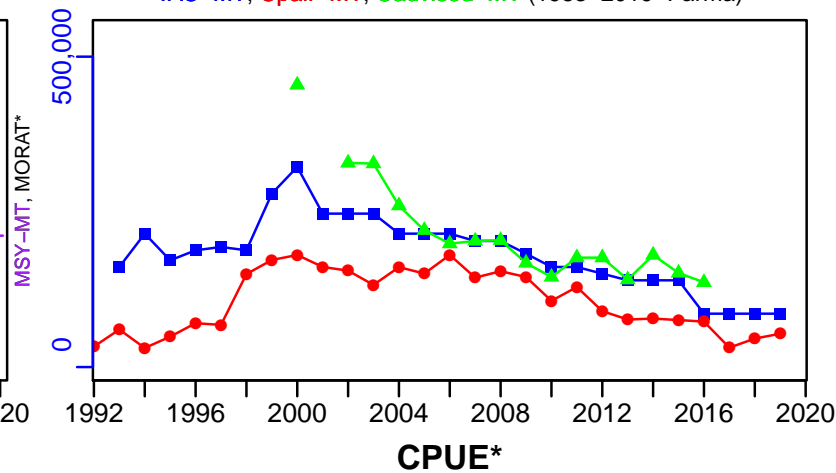


# Patagonian grenadier Southern Argentina [PATGRENADIERSARG]

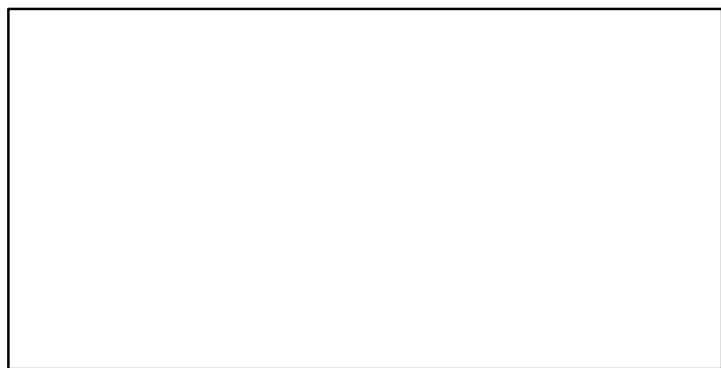
TC-MT, TL\*, RecC-MT (1983-2019-Parma)



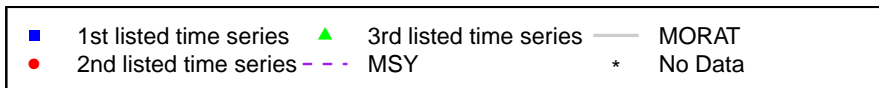
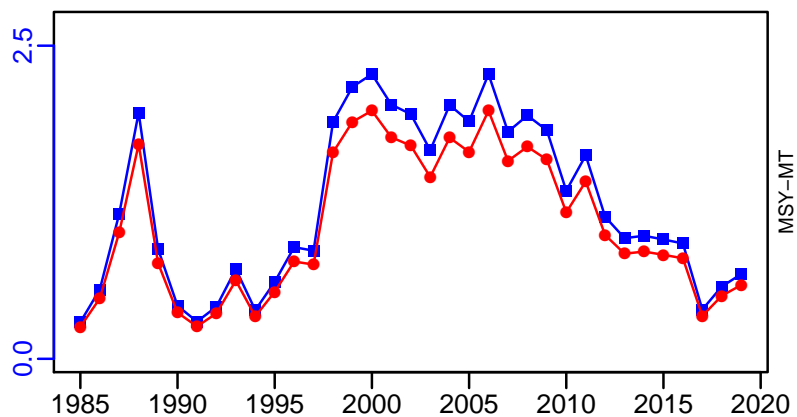
TAC-MT, Cpair-MT, Cadvised-MT (1983-2019-Parma)



**EFFORT\***



TC-MT/MSY-MT, CdivMEANC-ratio, (1983-2019-Parma)



## Pink cusk eel Southern Argentina [PCEELARGS]

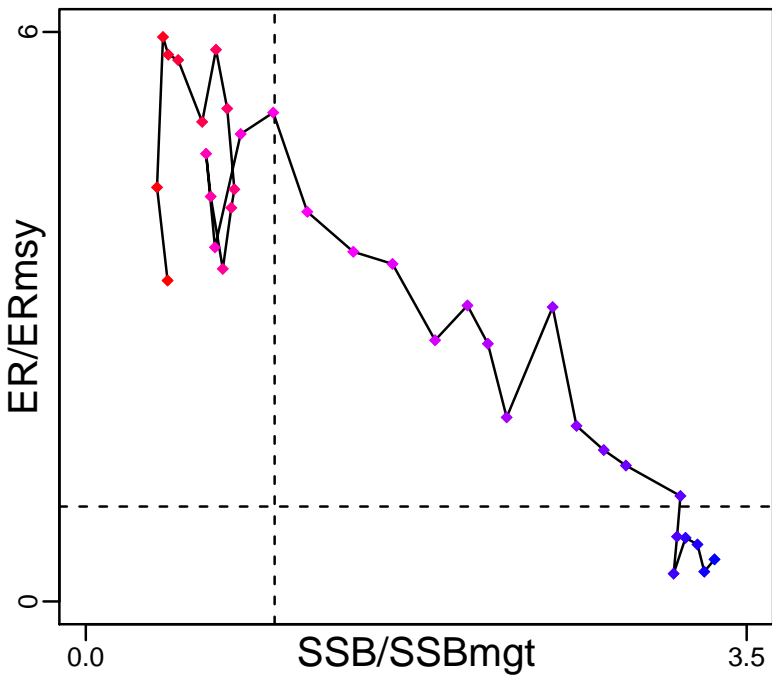
Metadata	
<b>Scientific Name</b>	Genypterus blacodes
<b>Current Assess ID</b>	INIDEP-PCEELARGS-1979-2014-CORDO
<b>Area</b>	Southern Argentina
<b>Management Authority</b>	Consejo Federal Pesquero, Argentina national management
<b>Assessor</b>	Instituto Nacional de Investigacion y Desarrollo Pesquero
<b>Asmts in RAM</b>	2014

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2014	0.035
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2014	110,823
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2014	11,700
<b>M</b>	M-1/yr	2014	0.2
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2014	73,882
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

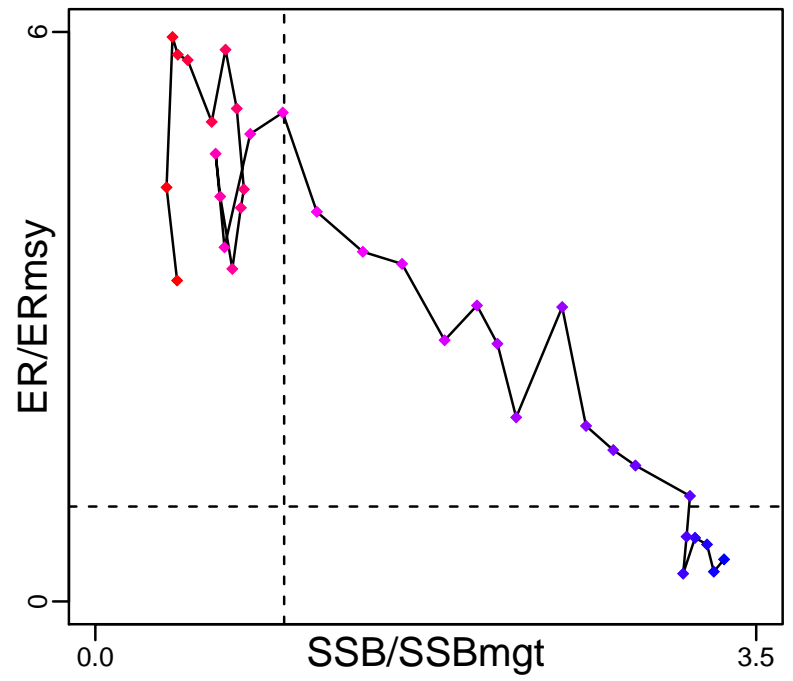
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2014	91,600	-	-
<b>SSB</b>	SSB-MT	2014	48,000	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2014	24,000	Both	1
<b>F</b>	F-1/yr	2014	0.139	-	-
<b>ER</b>	ER-calc-ratio	2014	0.117	-	-
<b>TC</b>	TC-MT	2014	9480		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2014	3.381		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2014	0.433		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Pink cusk eel Southern Argentina [PCEELARGS]

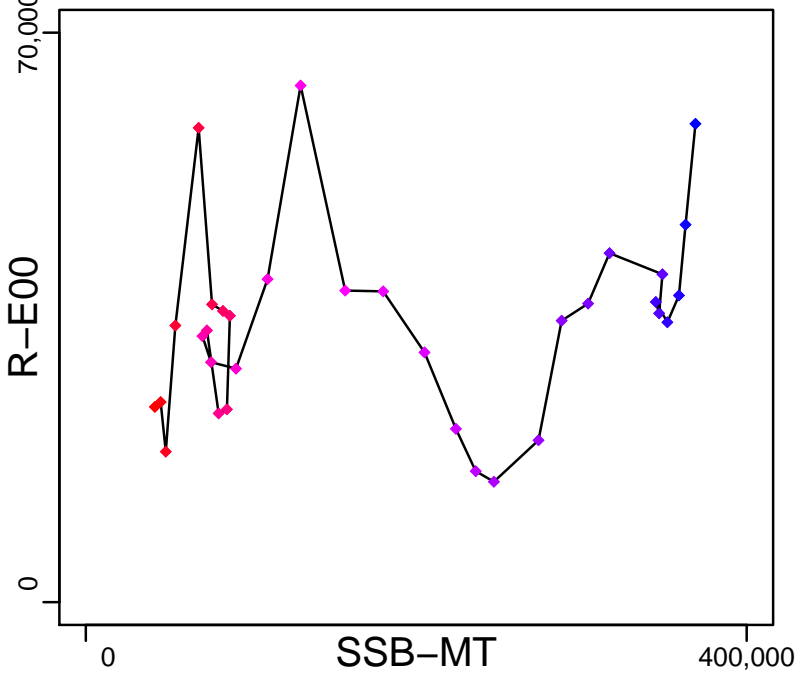
Kobe MSYpref (1979–2014–CORDO)



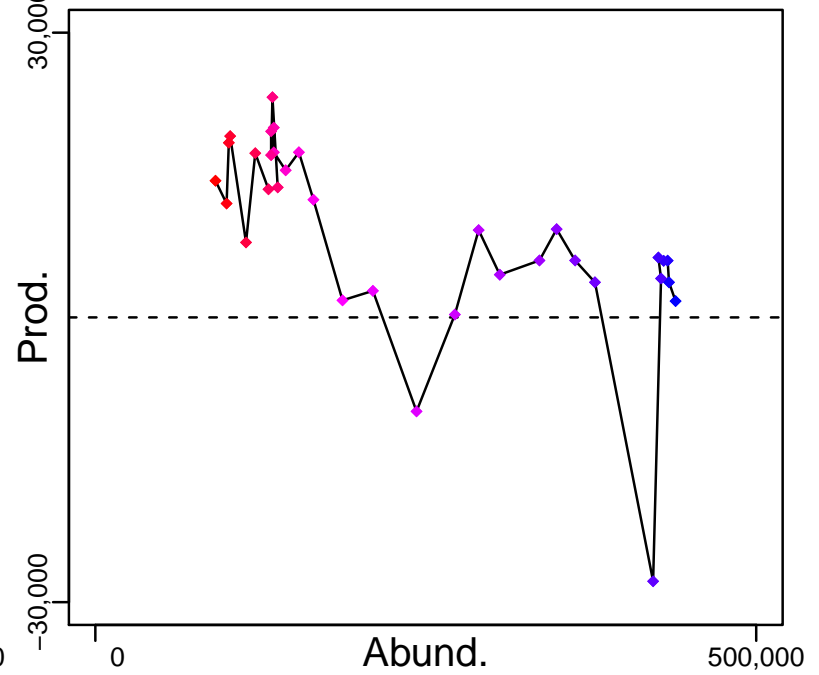
Kobe MGTpref (1979–2014–CORDO)



Spawner Recruit (1979–2014–CORDO)



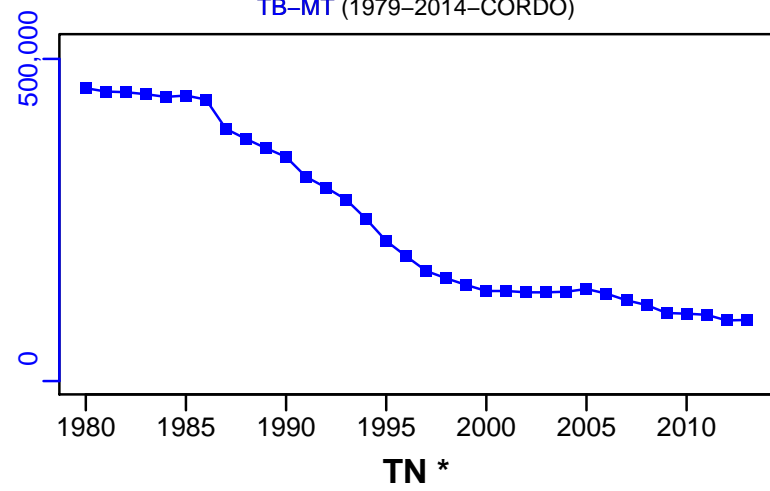
Production (1979–2014–CORDO)



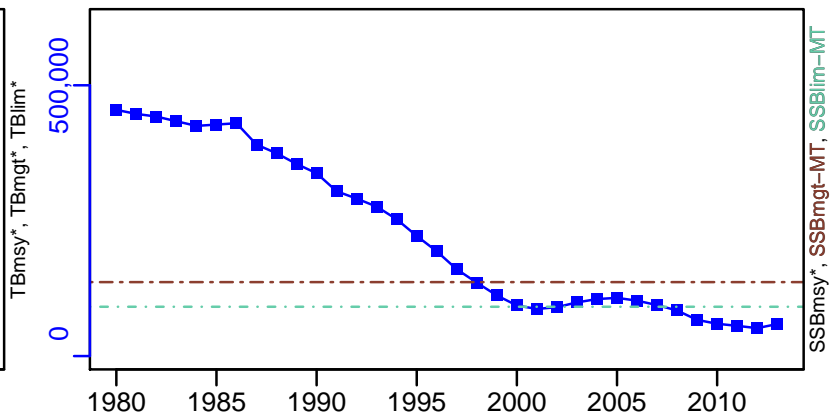
◆ Start Year ◆ End Year \* No Data

# Pink cusk eel Southern Argentina [PCEELARGS]

TB-MT (1979–2014–CORDO)



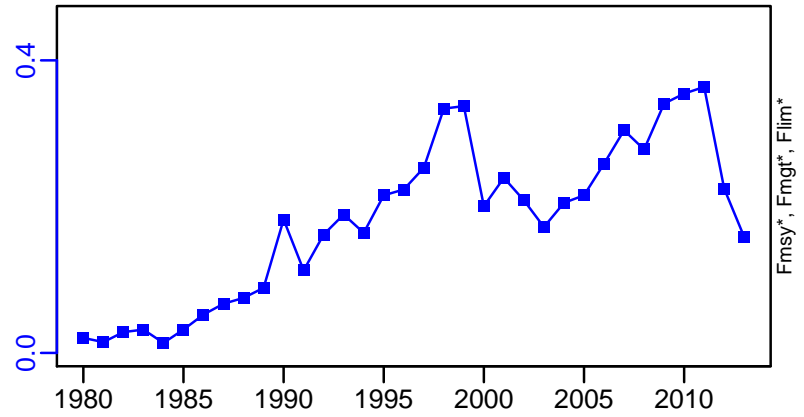
SSB-MT (1979–2014–CORDO)



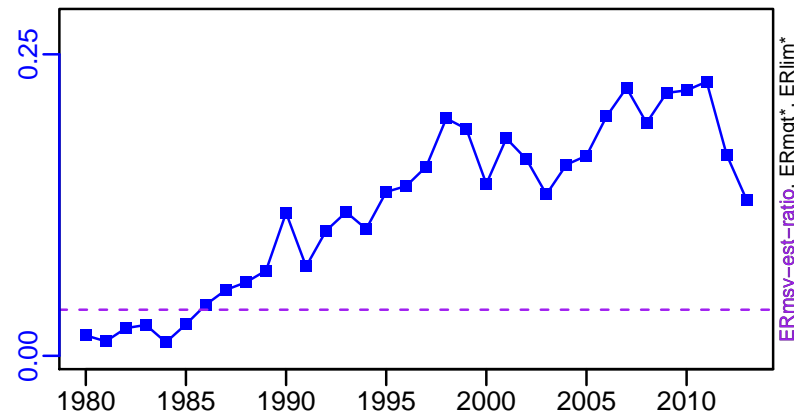
TN \*



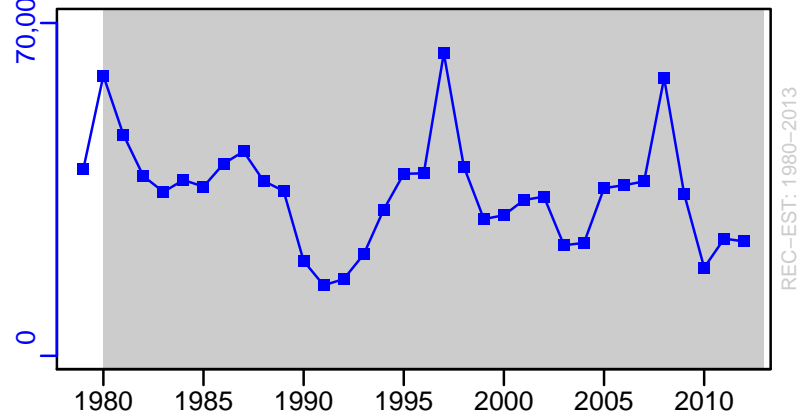
F-1/yr (1979–2014–CORDO)



ER-calc-ratio (1979–2014–CORDO)



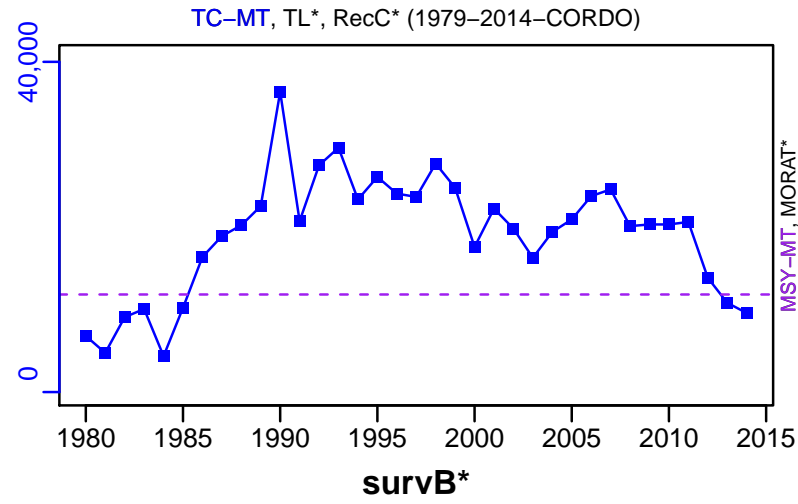
R-E00 (1979–2014–CORDO)



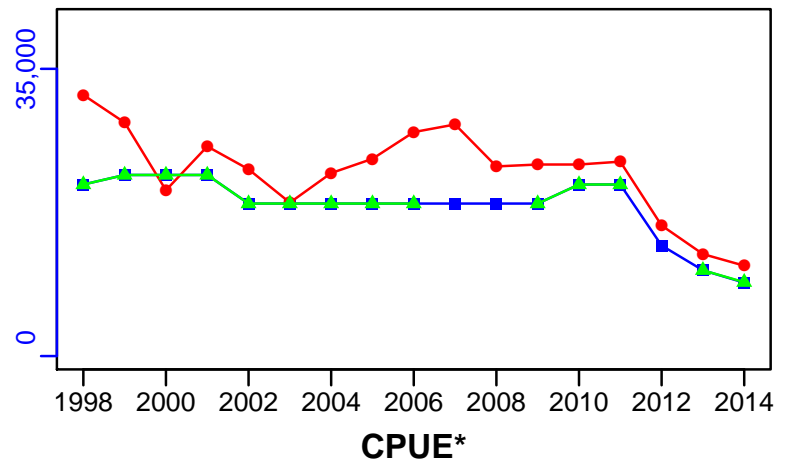


# Pink cusk eel Southern Argentina [PCEELARGS]

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



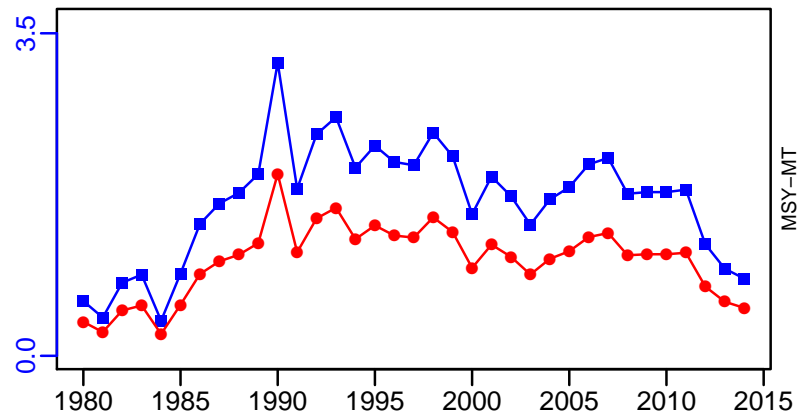
TAC-MT, Cpair-MT, Cadvised-MT (1979-2014-CORDO)



EFFORT\*



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



## Pink cusk eel Central-Southern Chile [PCEELCSCH]

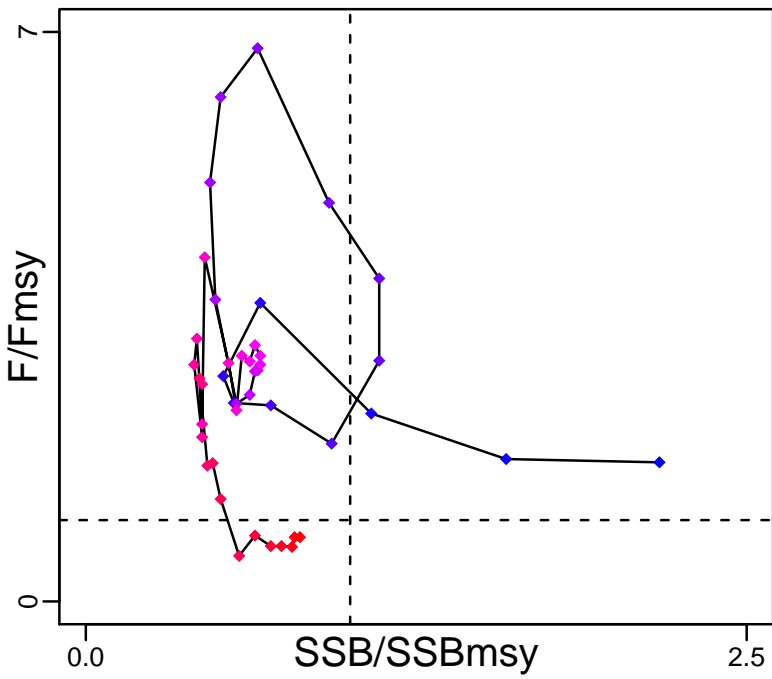
Metadata	
<b>Scientific Name</b>	Genypterus blacodes
<b>Current Assess ID</b>	IFOPCH-PCEELCSCH-1978-2020-Quiroz
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2015, 2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2020	8066
<b>Fmsy</b>	Fmsy-extr-1/yr	2020	0.157
<b>ERmsy</b>	ERmsy-est-ratio	2020	0.133
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2020	8067
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2020	20,167
<b>MSY</b>	MSY-est-MT	2020	3113
<b>M</b>	M-1/yr	2015	0.27
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	3746
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

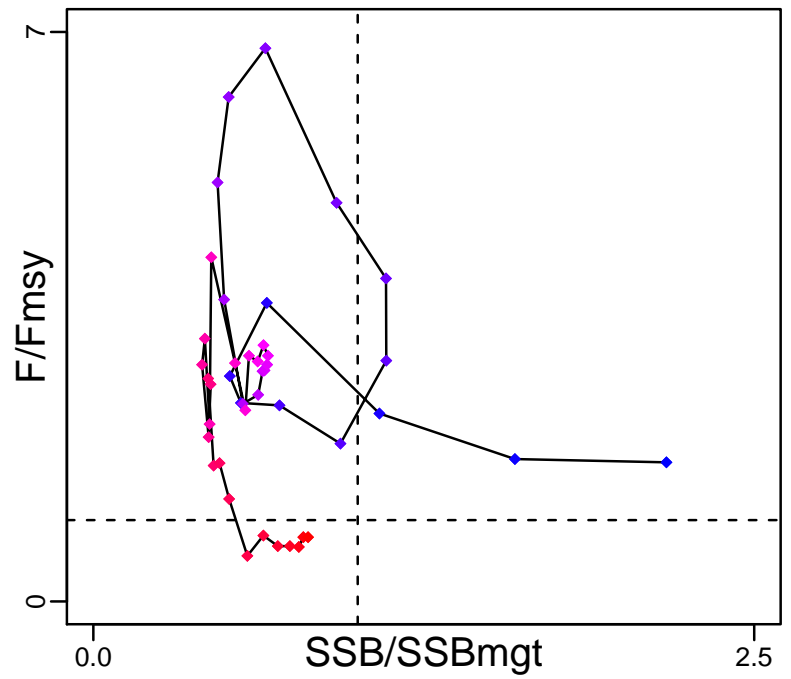
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	23,267	Both	-
<b>SSB</b>	SSB-MT	2020	6552	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	5544	Both	-
<b>F</b>	F-1/yr	2020	0.13	Both	-
<b>ER</b>	ER-calc-ratio	2020	0.043	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2020	989		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2020	0.81		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2020	0.79		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2020	0.319		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2020	0.812		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Pink cusk eel Central–Southern Chile [PCEELCSCH]

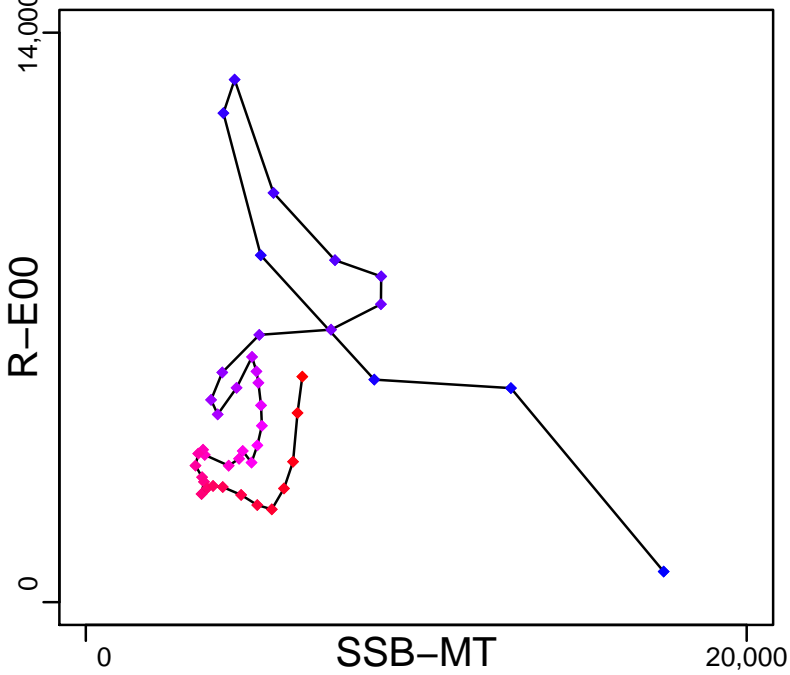
Kobe MSYpref (1978–2020–Quiroz)



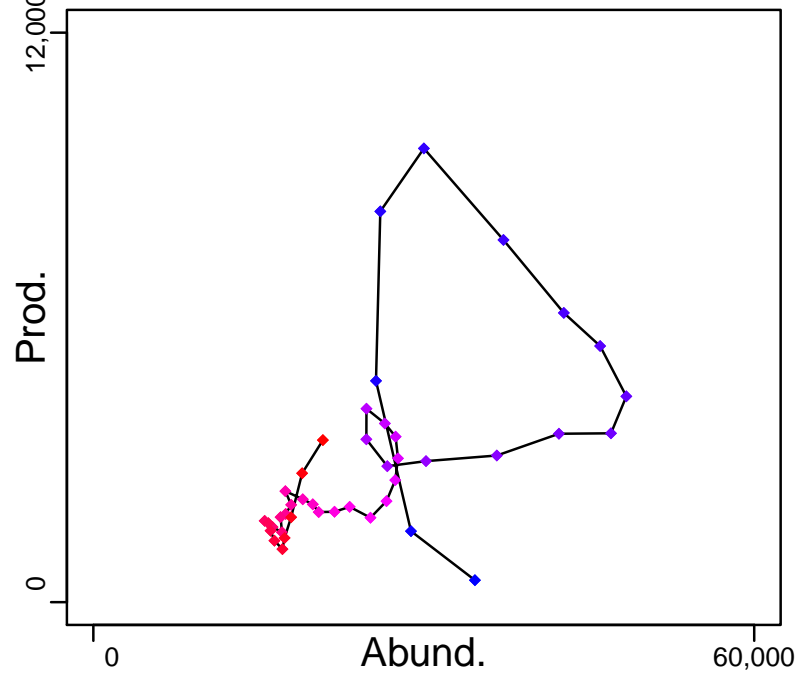
Kobe MGTpref (1978–2020–Quiroz)



Spawner Recruit (1978–2020–Quiroz)



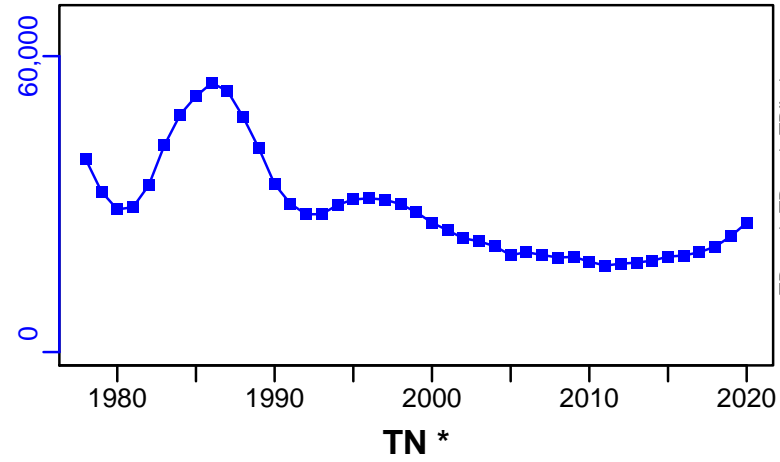
Production (1978–2020–Quiroz)



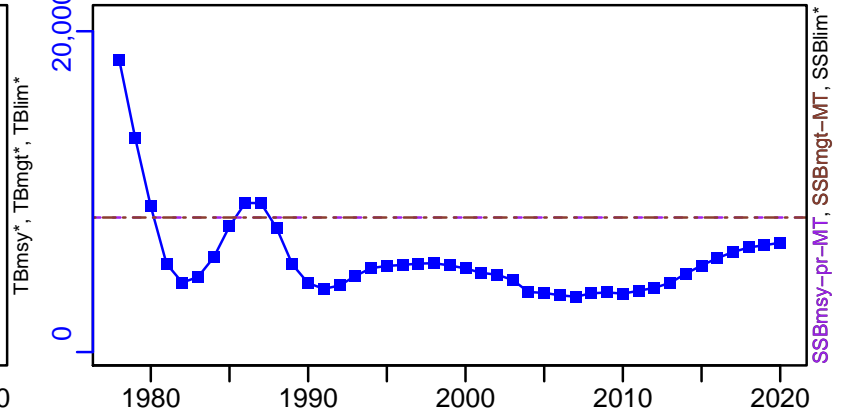
◆ Start Year ◆ End Year \* No Data

# Pink cusk eel Central–Southern Chile [PCEELCSCH]

TB–MT (1978–2020–Quiroz)

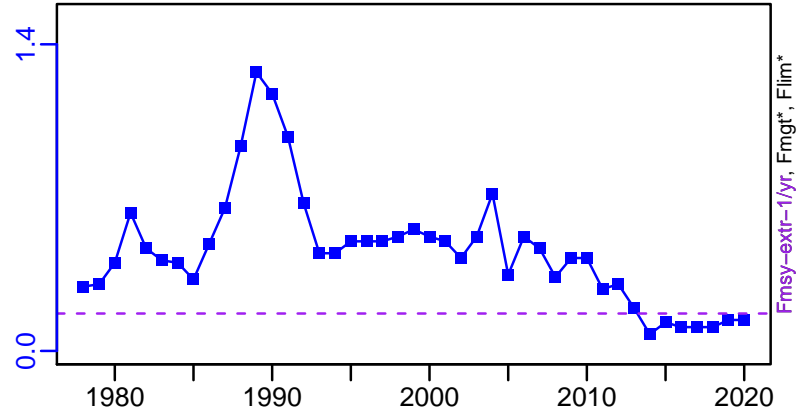
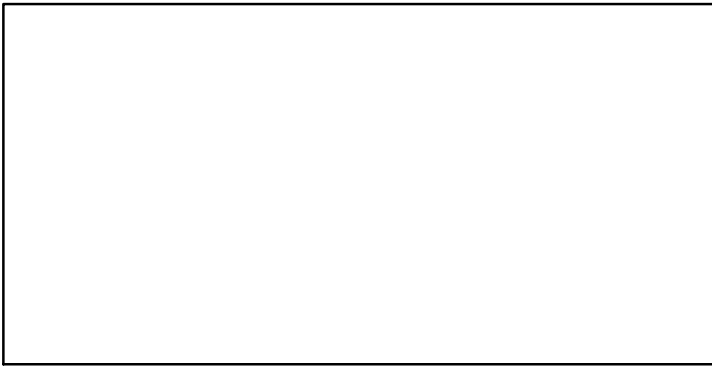


SSB–MT (1978–2020–Quiroz)

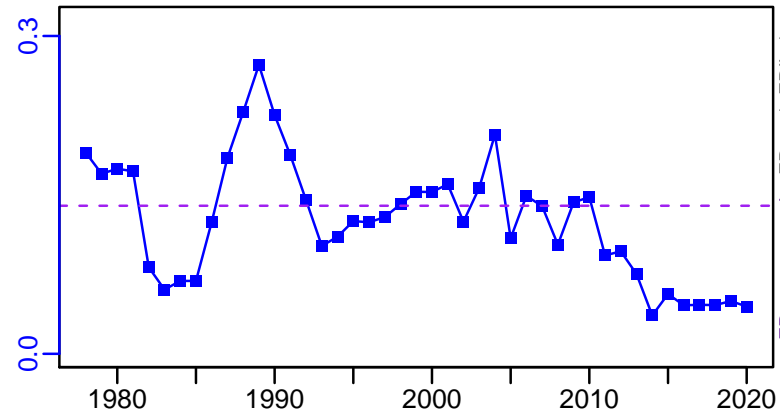


TN \*

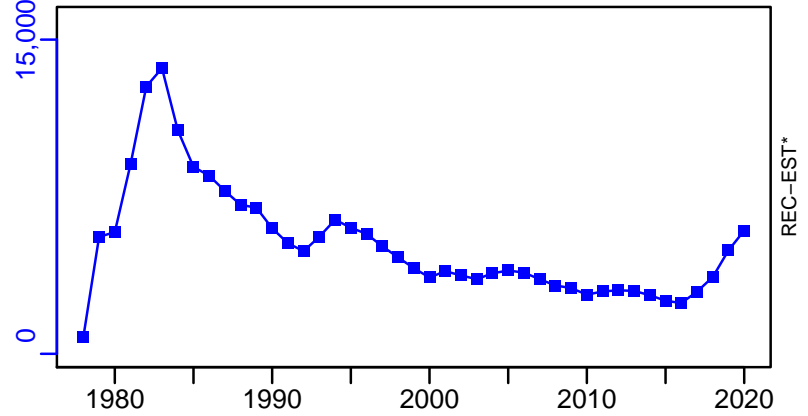
F–1/yr (1978–2020–Quiroz)



ER–calc–ratio (1978–2020–Quiroz)

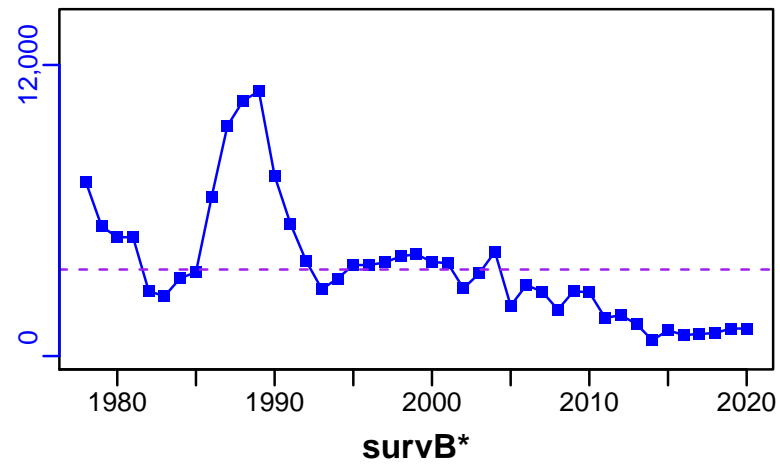


R–E00 (1978–2020–Quiroz)

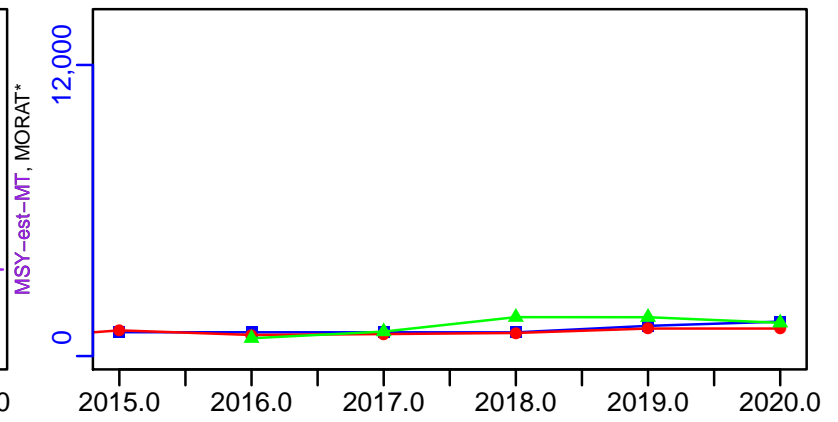


# Pink cusk eel Central–Southern Chile [PCEELCSCH]

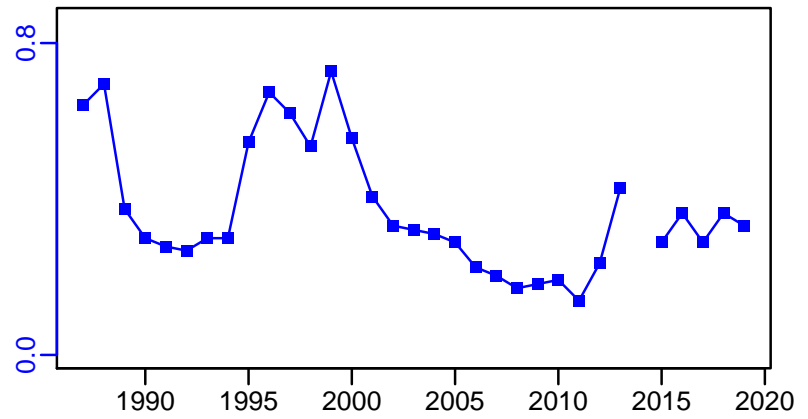
TL–MT, TC\*, RecC\* (1978–2020–Quiroz)



TAC–MT, Cpair–MT, Cadvised–MT (1978–2020–Quiroz)



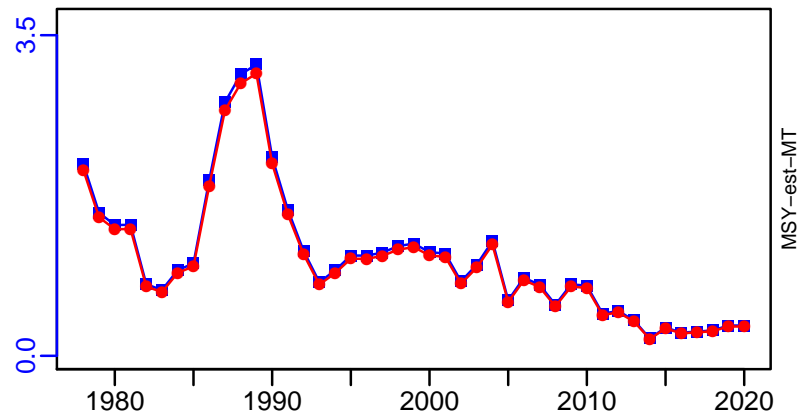
CPUE–index (1978–2020–Quiroz)



EFFORT\*



TL–MT/MSY–est–MT, CdivMEANC–ratio, (1978–2020–Quiroz)



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

## Pink cusk eel Southern Chile [PCEELSCH]

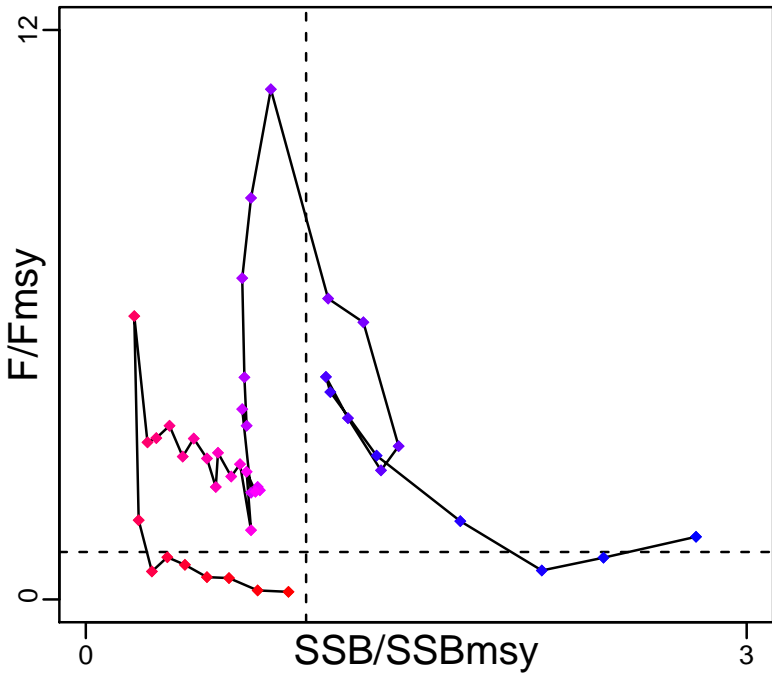
Metadata	
<b>Scientific Name</b>	Genypterus blacodes
<b>Current Assess ID</b>	IFOPCH-PCEELSCH-1978-2020-Quiroz
<b>Area</b>	Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2015, 2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2020	4450
<b>Fmsy</b>	Fmsy-extr-1/yr	2020	0.174
<b>ERmsy</b>	ERmsy-est-ratio	2020	0.141
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2020	4450
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2020	11,125
<b>MSY</b>	MSY-est-MT	2020	1817
<b>M</b>	M-1/yr	2015	0.23
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	1825
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

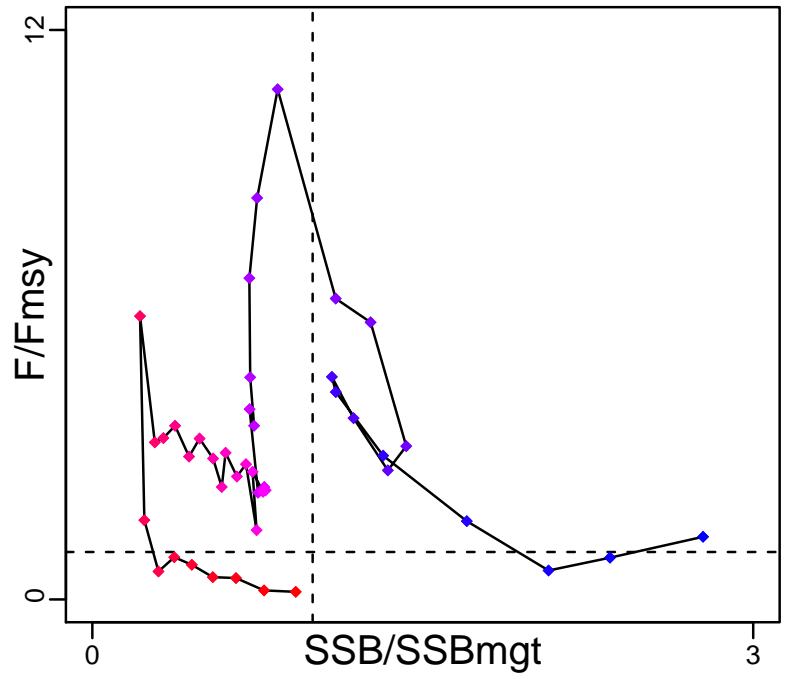
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	11,983	Both	-
<b>SSB</b>	SSB-MT	2020	4109	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	1860	Both	-
<b>F</b>	F-1/yr	2020	0.03	Both	-
<b>ER</b>	ER-calc-ratio	2020	0.01	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2020	117		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2020	0.92		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2020	0.16		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2020	0.069		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2020	0.923		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Pink cusk eel Southern Chile [PCEELSCH]

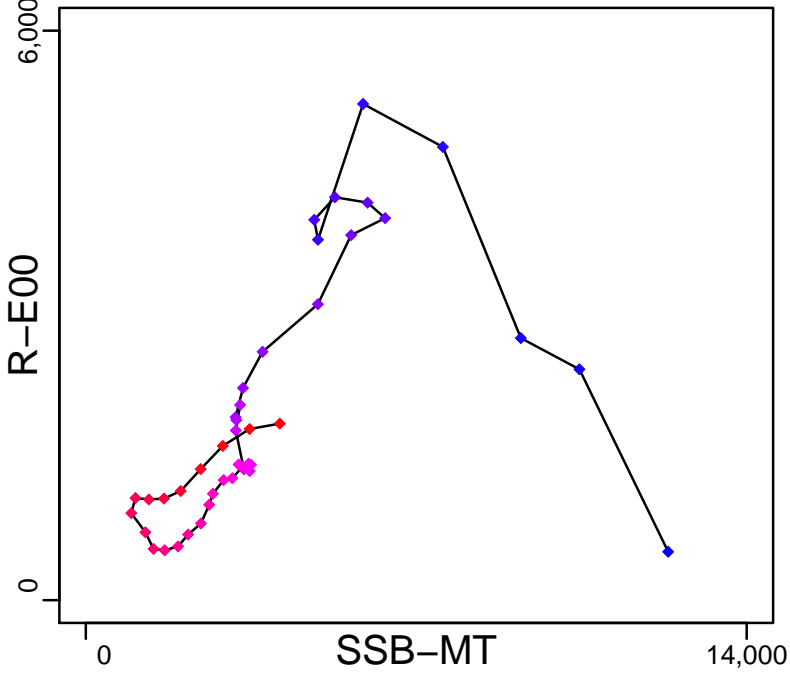
Kobe MSYpref (1978–2020–Quiroz)



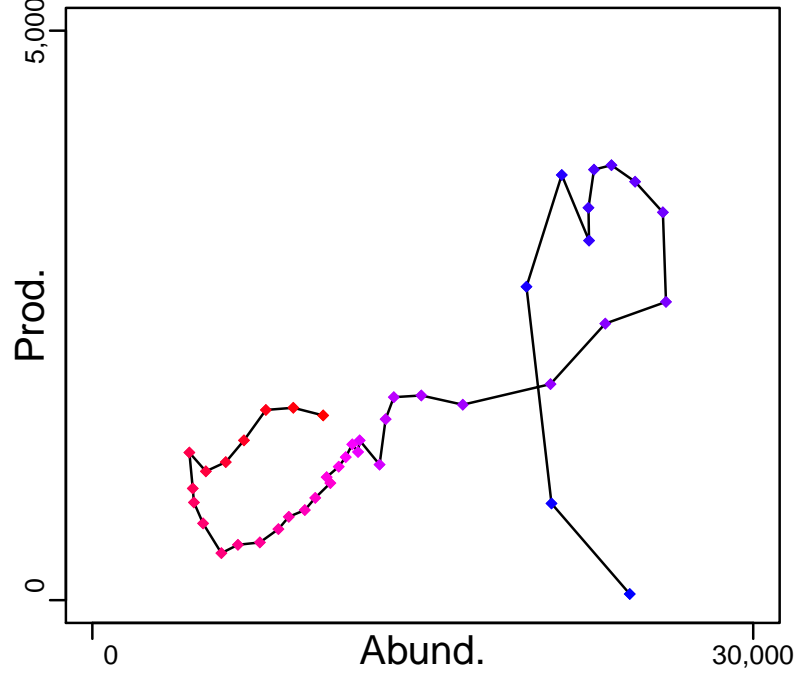
Kobe MGTpref (1978–2020–Quiroz)



Spawner Recruit (1978–2020–Quiroz)

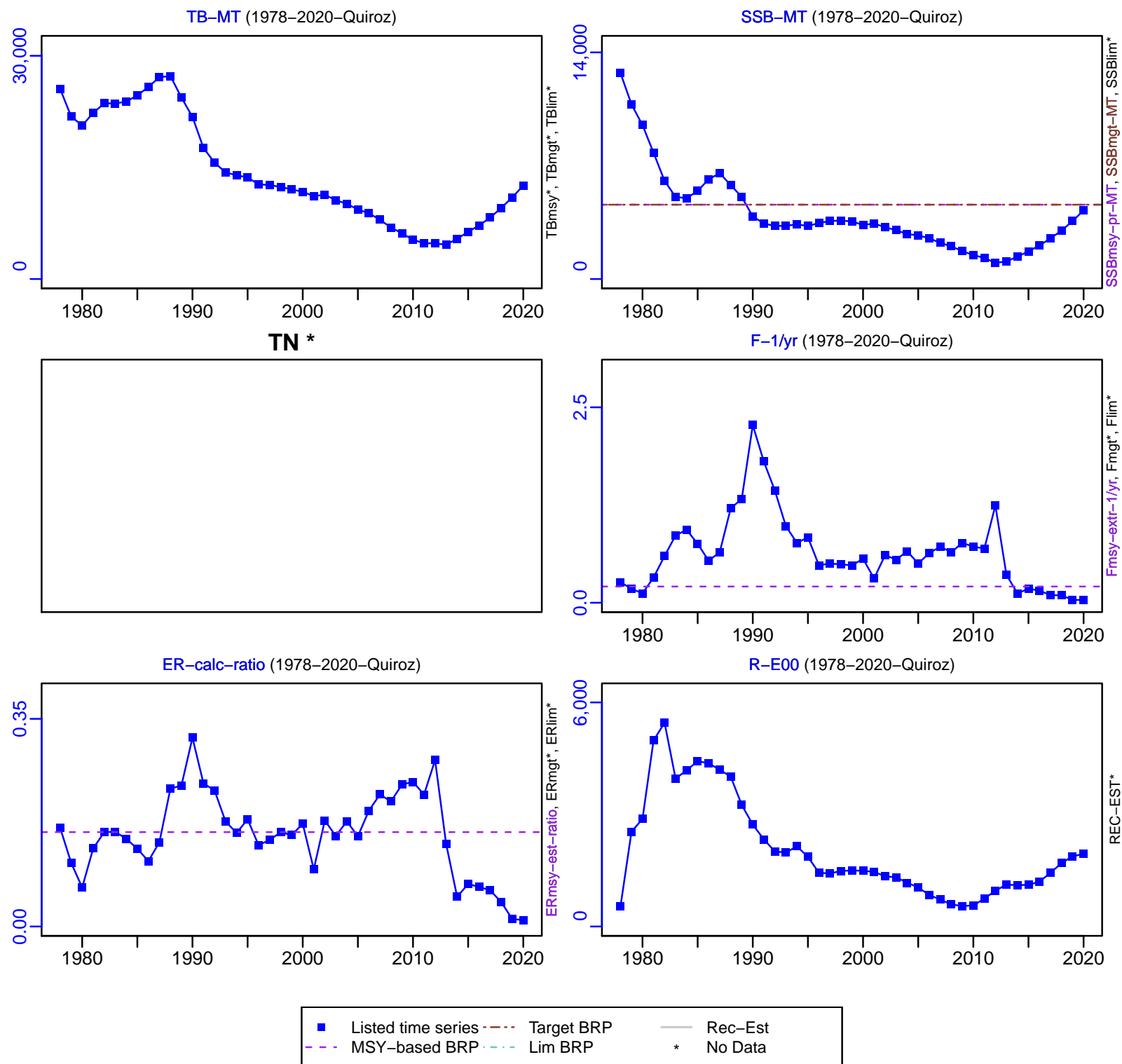


Production (1978–2020–Quiroz)



◆ Start Year ◆ End Year \* No Data

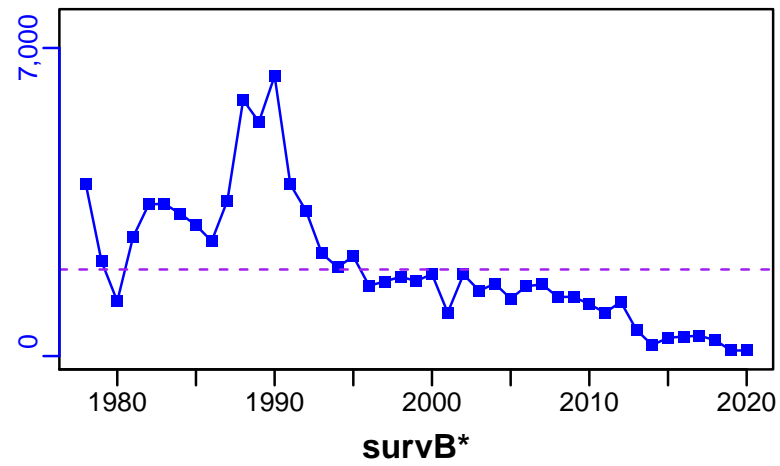
# Pink cusk eel Southern Chile [PCEELSCH]



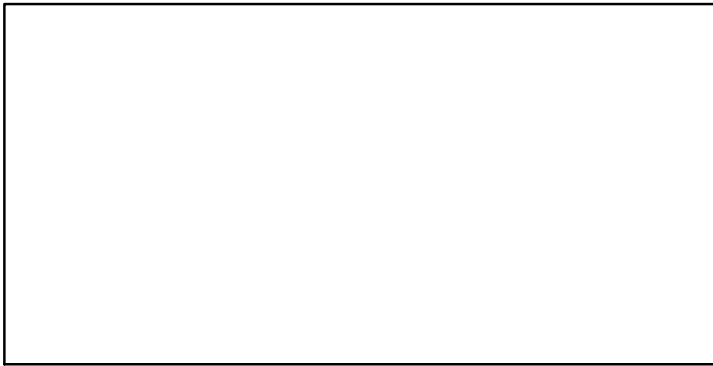
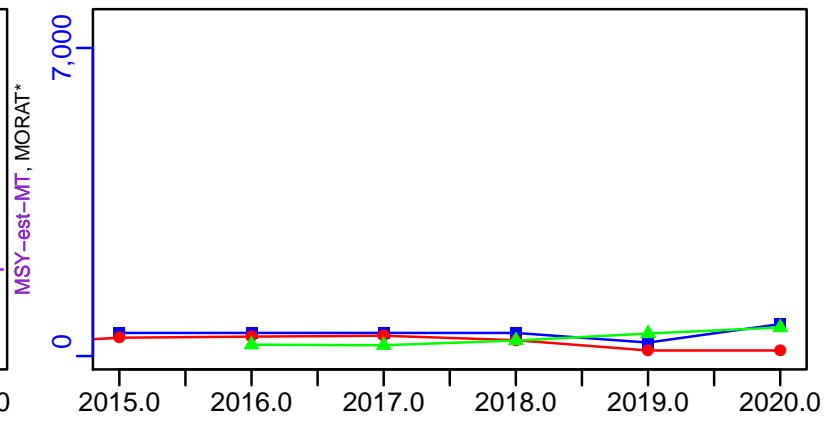


# Pink cusk eel Southern Chile [PCEELSCH]

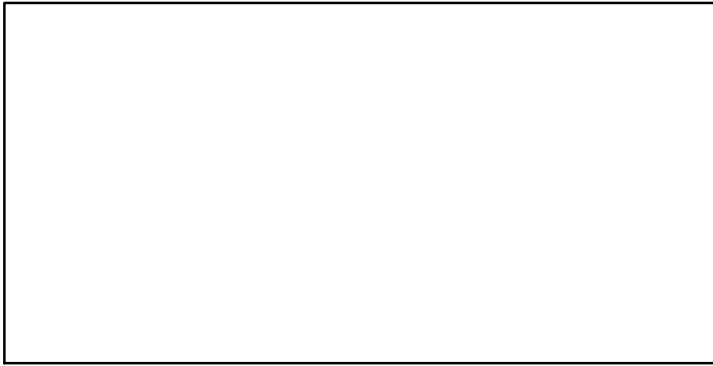
TL-MT, TC\*, RecC\* (1978–2020–Quiroz)



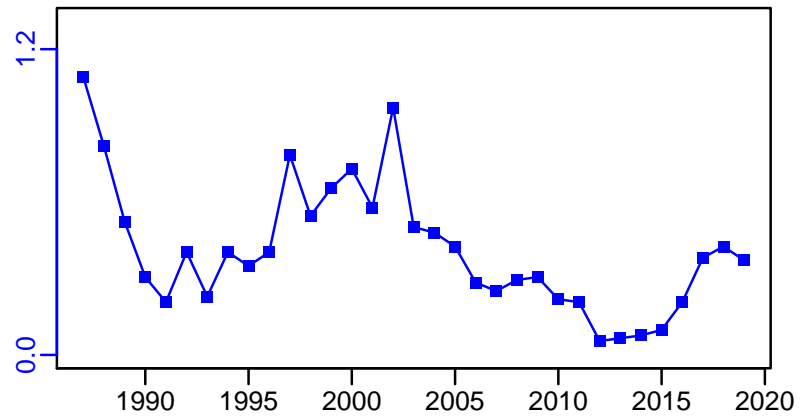
TAC-MT, Cpair-MT, Cadvised-MT (1978–2020–Quiroz)



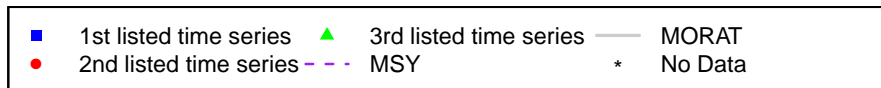
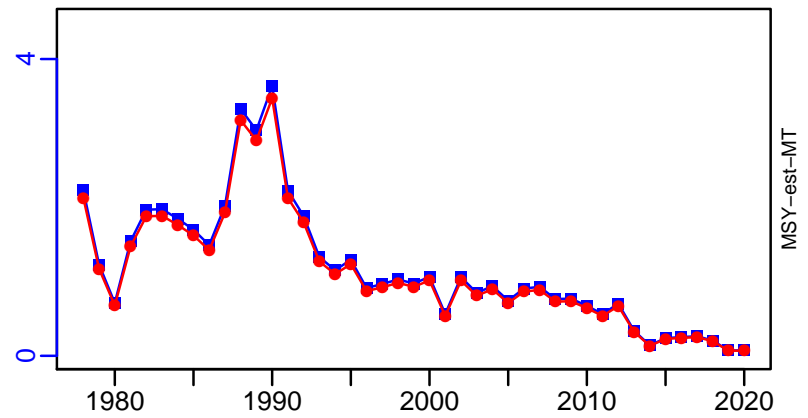
EFFORT\*



CPUE-index (1978–2020–Quiroz)



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1978–2020–Quiroz)



## Patagonian toothfish South Chile Argentina [PTOOTHFISHCH]

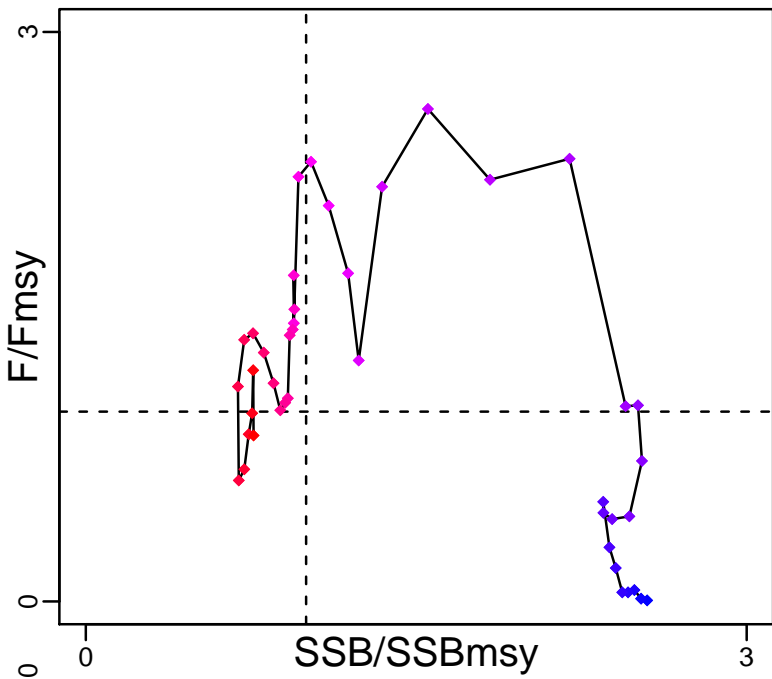
Metadata	
<b>Scientific Name</b>	Dissostichus eleginoides
<b>Current Assess ID</b>	IFP-PTOOTHFISHCH-1978-2019-Quiroz
<b>Area</b>	South Chile Argentina
<b>Management Authority</b>	Separate management by Chile (SUBPESCA) and Argentina (CFP)
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2014, 2019, 2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2011	54,440
<b>SSBmsy</b>	SSBmsy-extr-MT	2019	48,689
<b>Fmsy</b>	Fmsy-extr-1/yr	2019	0.061
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.052
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2019	3585
<b>M</b>	M-1/yr	2014	0.15
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

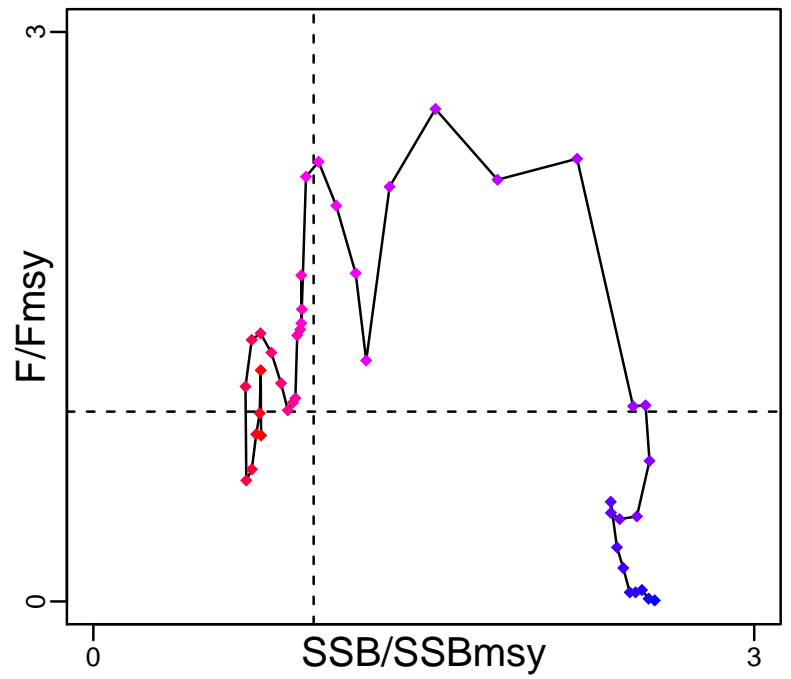
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	69,644	Both	-
<b>SSB</b>	SSB-MT	2019	36,836	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	$2.676 \times 10^9$	Both	-
<b>F</b>	F-1/yr	2019	0.07	-	-
<b>ER</b>	ER-calc-ratio	2019	0.043	-	-
<b>TC</b>	TC-MT	2019	3024		
<b>TL</b>	TL-MT	2019	3024		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	0.325		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2019	0.761		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2019	0.874		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2019	0.841		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Patagonian toothfish South Chile Argentina [PTOOTHFISHCH]

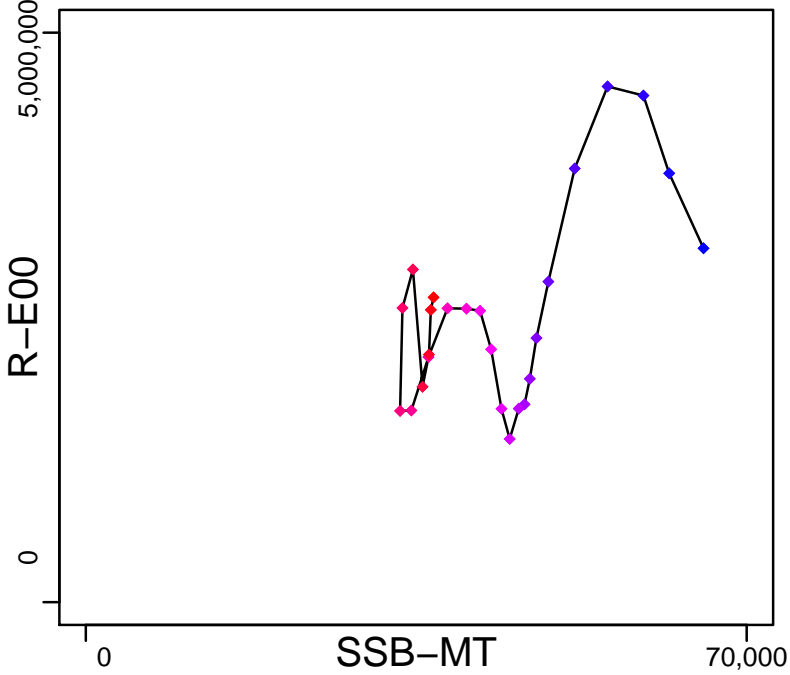
Kobe MSYpref (1978–2019–Quiroz)



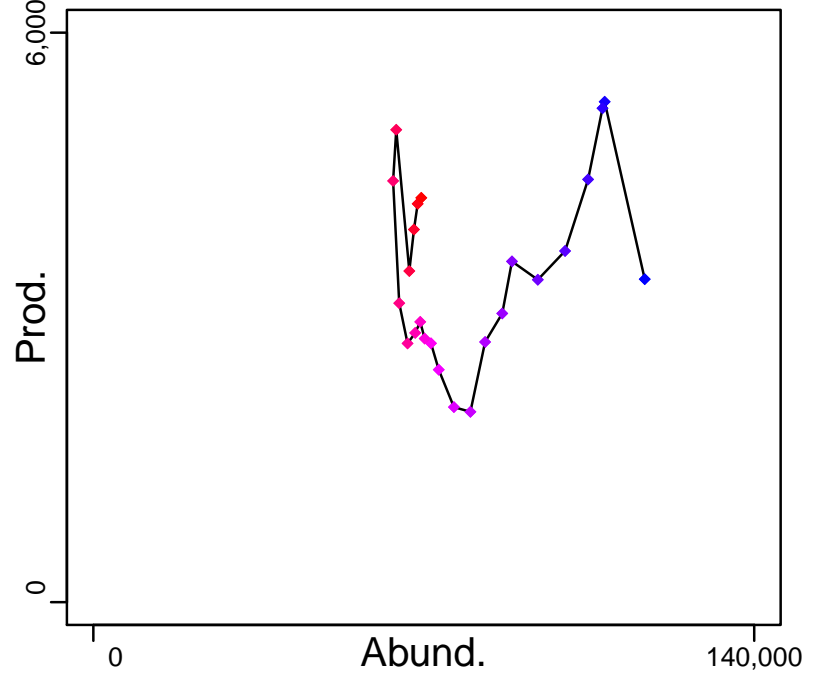
Kobe MGTpref (1978–2019–Quiroz)



Spawner Recruit (1978–2019–Quiroz)



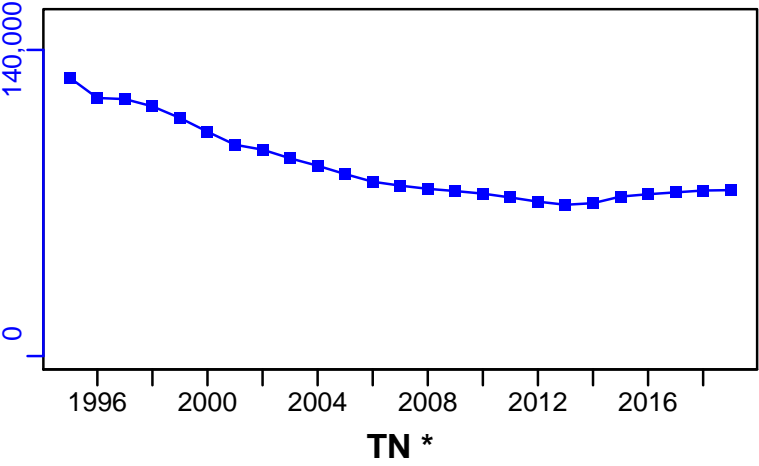
Production (1978–2019–Quiroz)



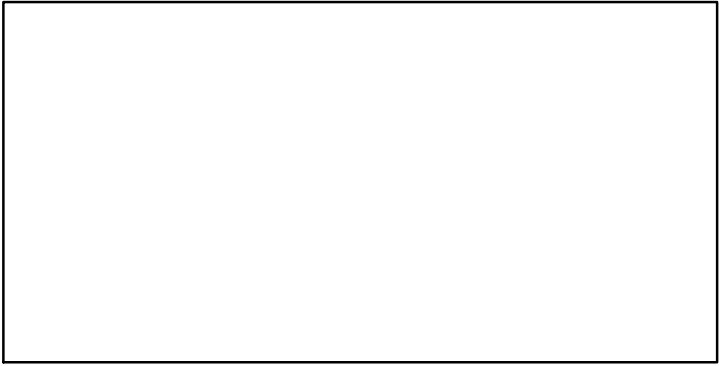
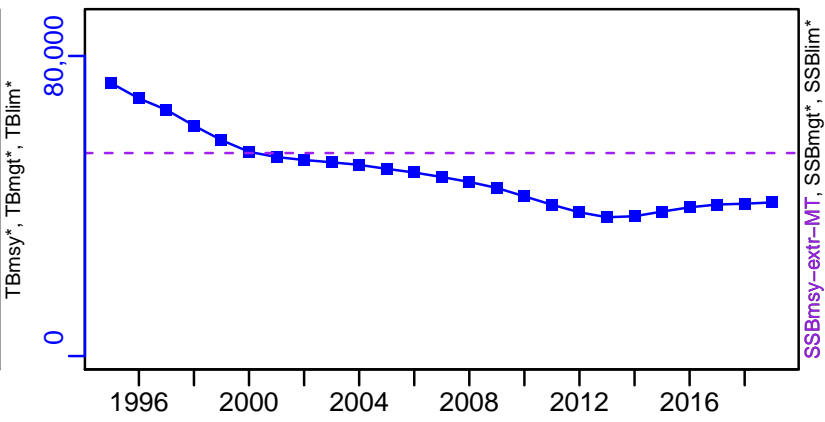
◆ Start Year ◆ End Year \* No Data

# Patagonian toothfish South Chile Argentina [PTOOTHFISHCH]

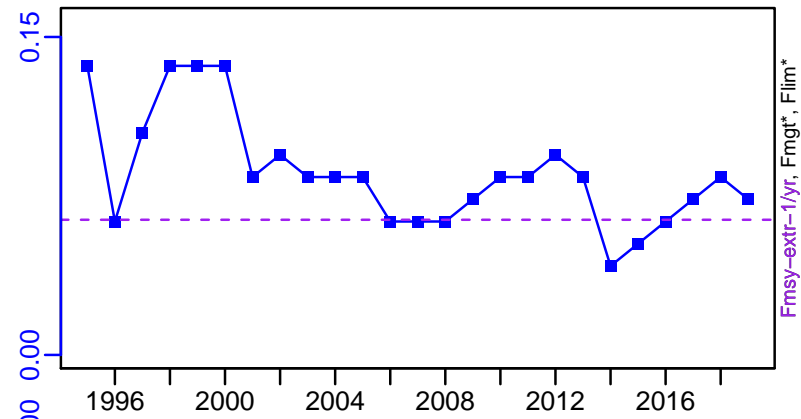
TB-MT (1978–2019–Quiroz)



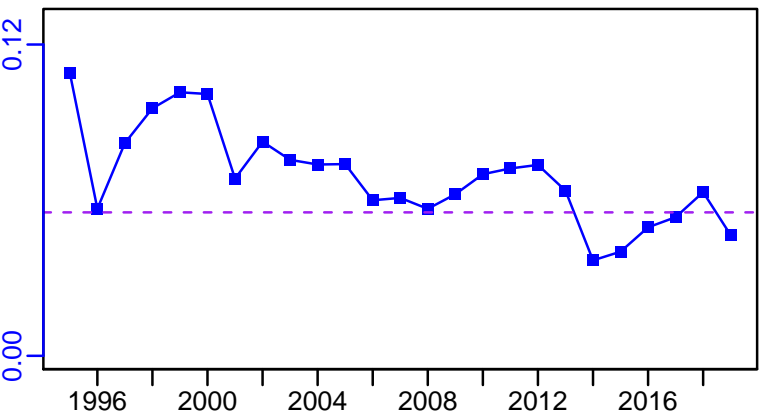
SSB-MT (1978–2019–Quiroz)



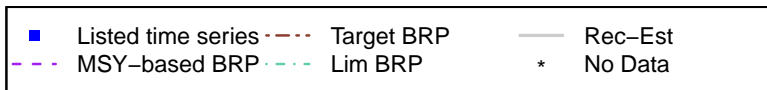
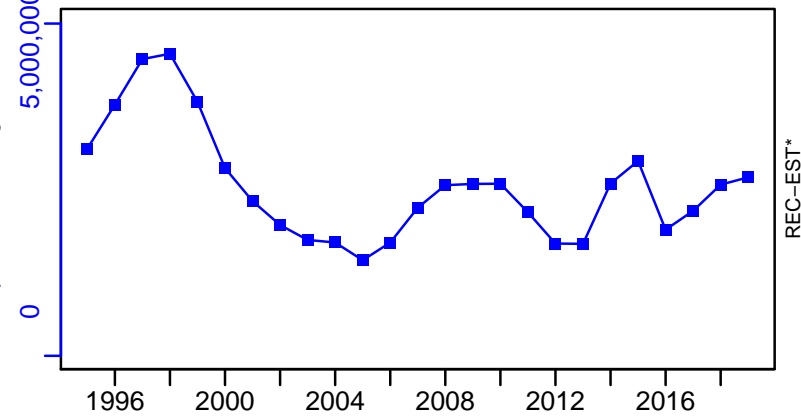
F-1/yr (1978–2019–Quiroz)



ER-calc-ratio (1978–2019–Quiroz)



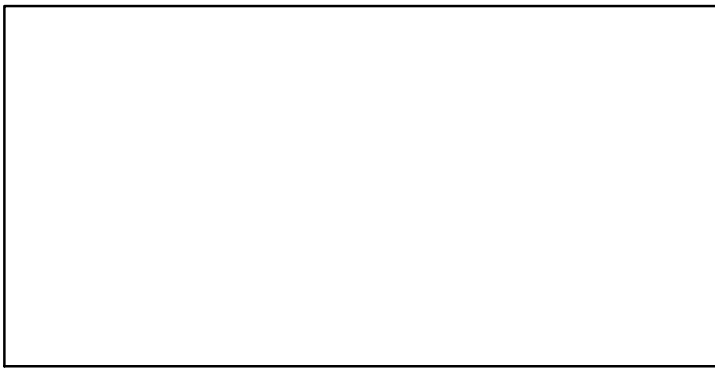
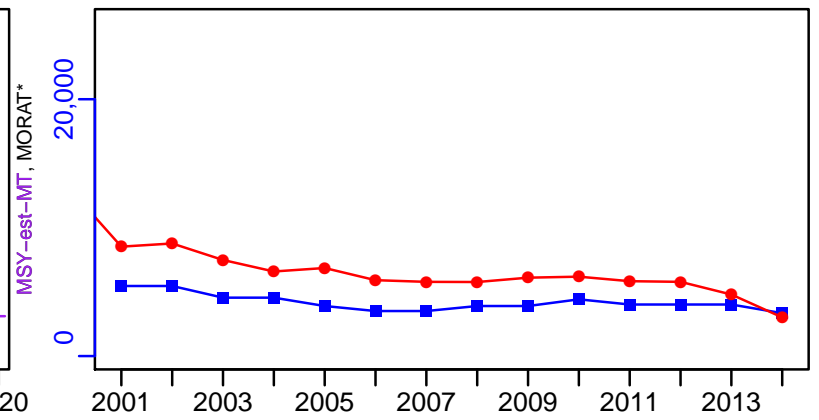
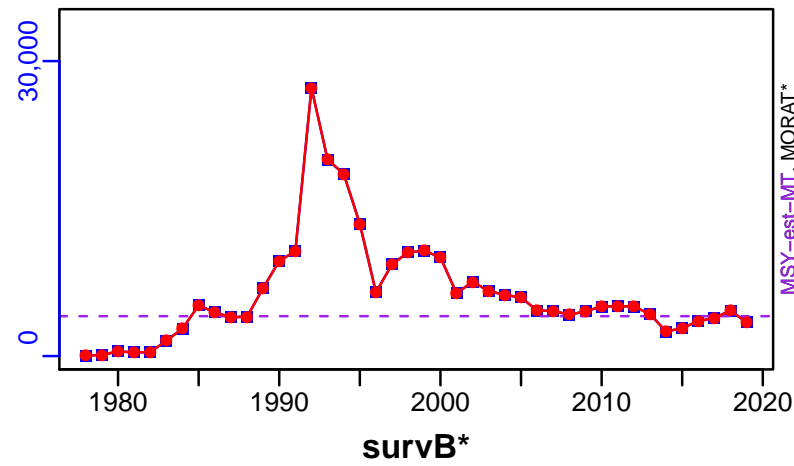
R-E00 (1978–2019–Quiroz)



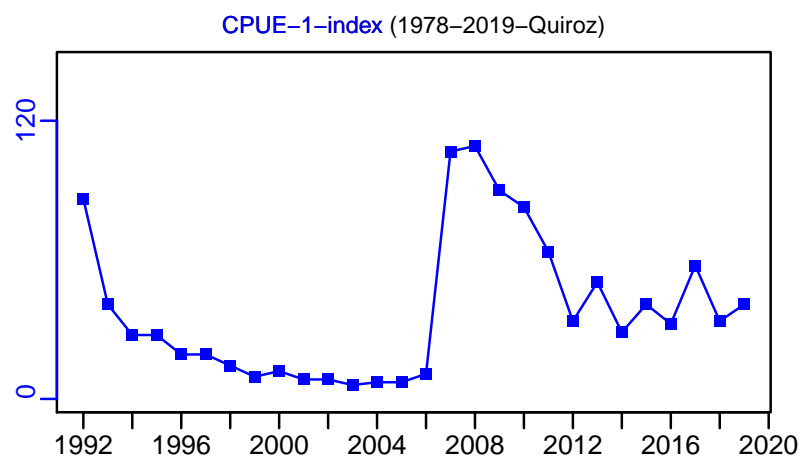
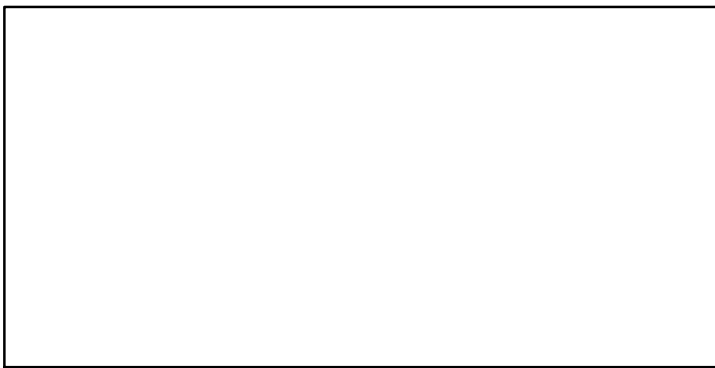
# Patagonian toothfish South Chile Argentina [PTOOTHFISHCH]

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

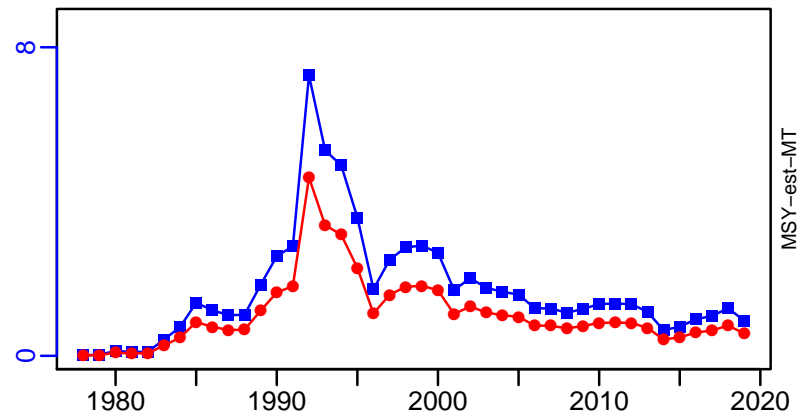
TAC-MT, Cpair-MT, Cadv\* (1975–2014–TASCHERI)



**EFFORT\***



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1978–2019–Quiroz)



## Red squat lobster Central-Southern Chile [RSQLOBSTERCSCCH]

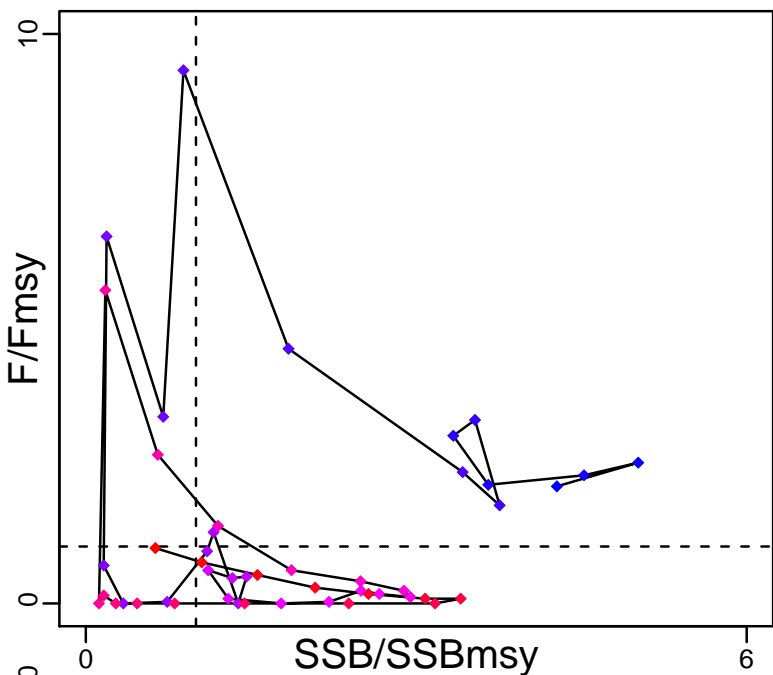
Metadata	
<b>Scientific Name</b>	Pleuroncodes monodon
<b>Current Assess ID</b>	IFOPCH-RSQLOBSTERCSCCH-1968-2015-PARMA
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2015	22,330
<b>Fmsy</b>	Fmsy-pr-1/yr	2015	0.36
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2015	22,330
<b>Fmgt</b>	Fmgt-1/yr	2015	0.36
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2015	0.35
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

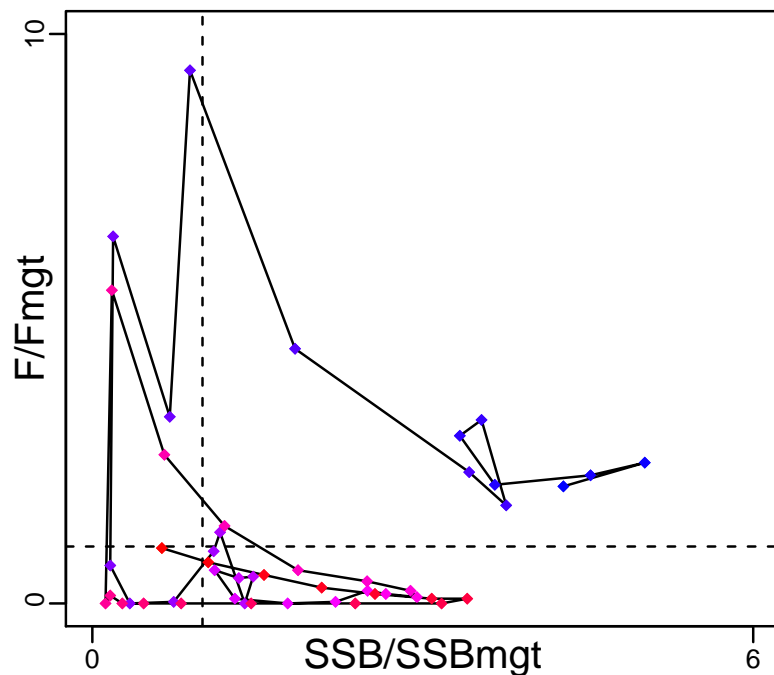
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	24,400	Both	-
<b>SSB</b>	SSB-MT	2015	14,100	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	$2.78 \times 10^8$	Both	1
<b>F</b>	F-1/yr	2015	0.35	Both	-
<b>ER</b>	ER-calc-ratio	2015	0.226	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	5520		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2015	0.631		
<b>F/Fmsy</b>	F-1/yr/Fmsy-pr-1/yr	2015	0.972		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2015	0.631		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2015	0.972		
<b>ER/ERmgt</b>	-	-	-		

# Red squat lobster Central-Southern Chile [RSQLOBSTERCSCH]

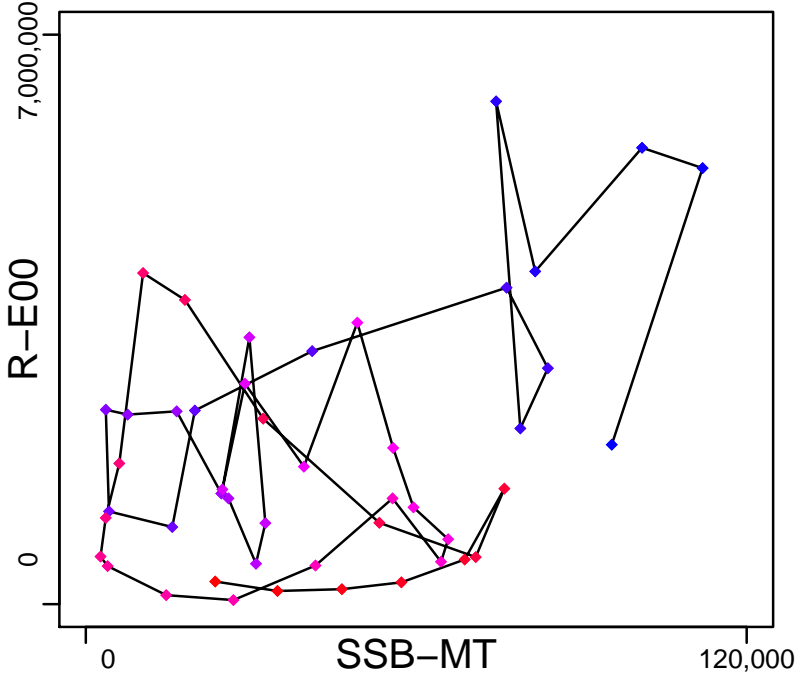
Kobe MSYpref (1968–2015–PARMA)



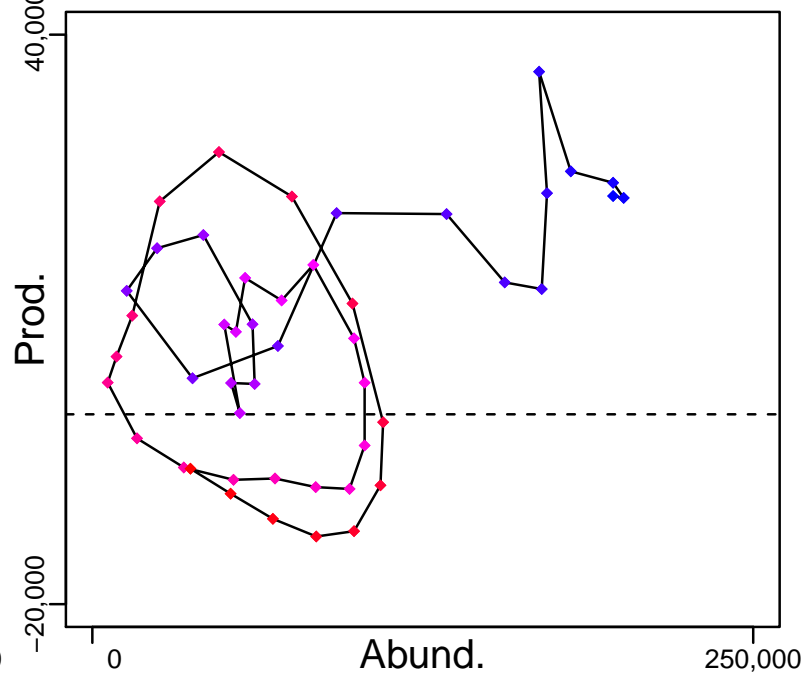
Kobe MGTpref (1968–2015–PARMA)



Spawner Recruit (1968–2015–PARMA)



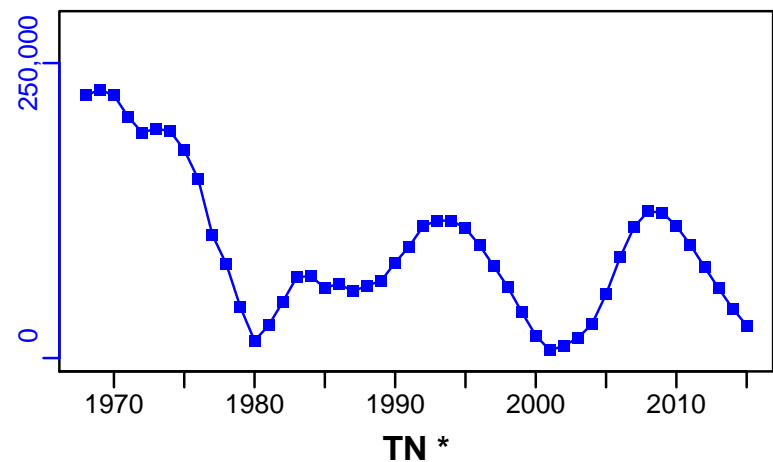
Production (1968–2015–PARMA)



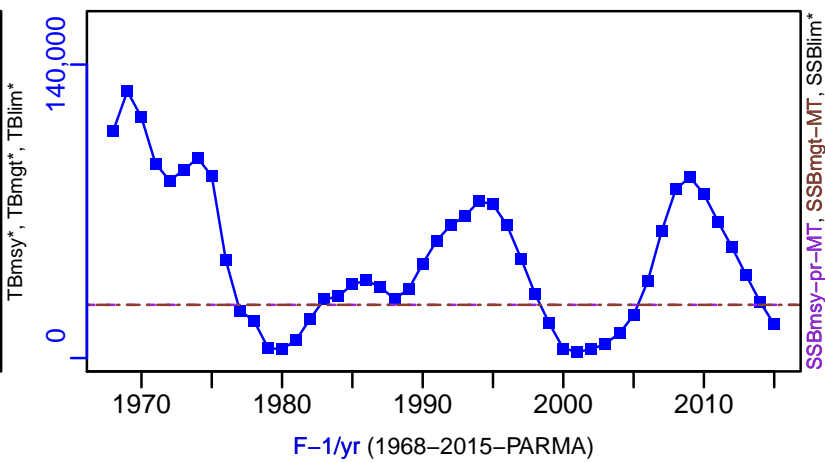
◆ Start Year ◆ End Year \* No Data

# Red squat lobster Central-Southern Chile [RSQLOBSTERCSCH]

TB-MT (1968-2015-PARMA)



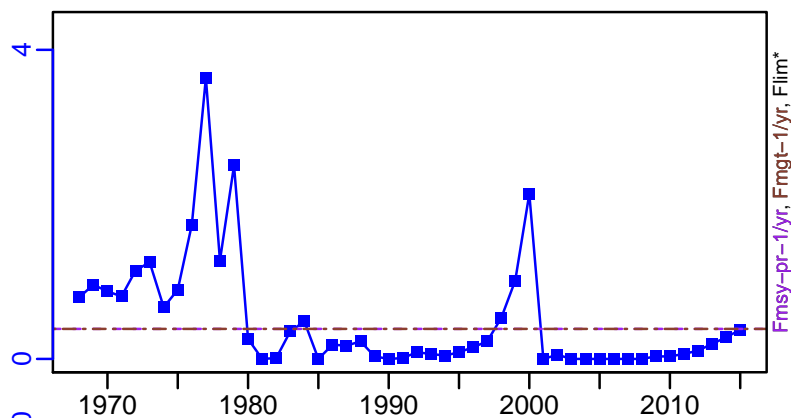
SSB-MT (1968-2015-PARMA)



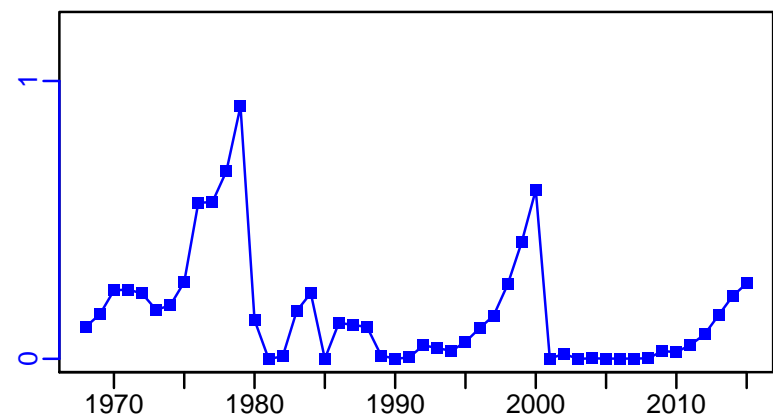
TN \*



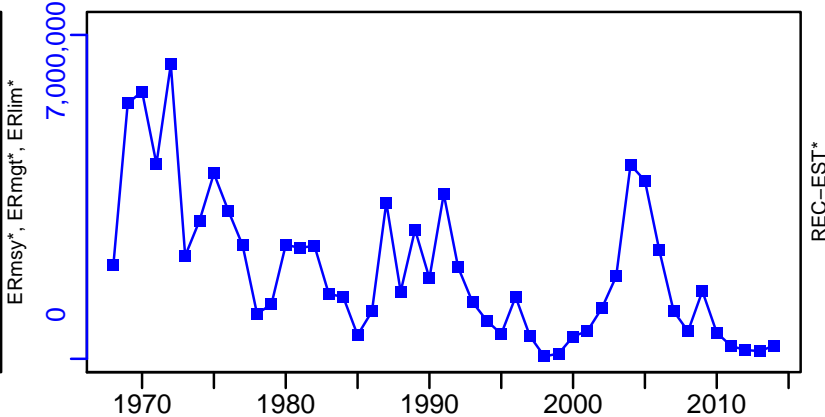
F-1/yr (1968-2015-PARMA)



ER-calc-ratio (1968-2015-PARMA)



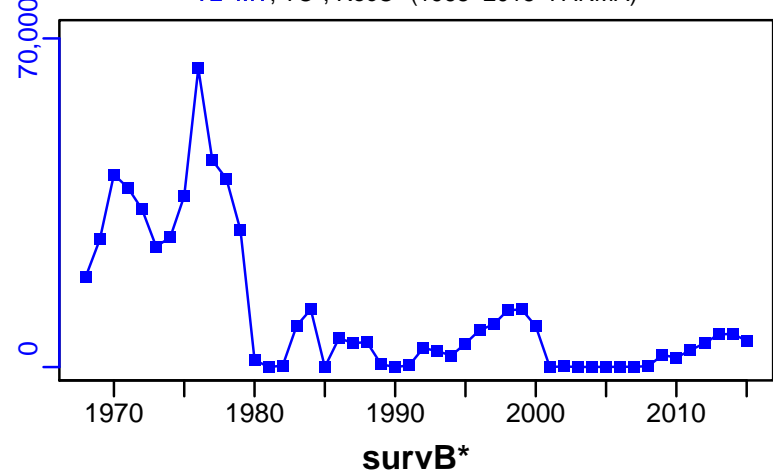
R-E00 (1968-2015-PARMA)



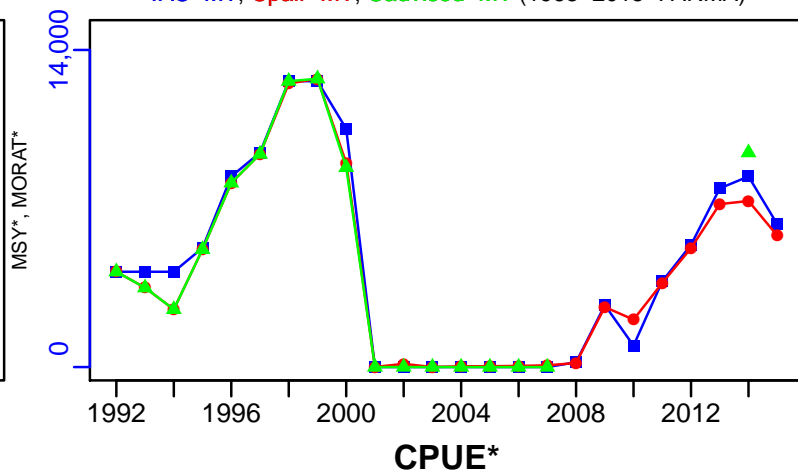


# Red squat lobster Central–Southern Chile [RSQLOBSTERCSCH]

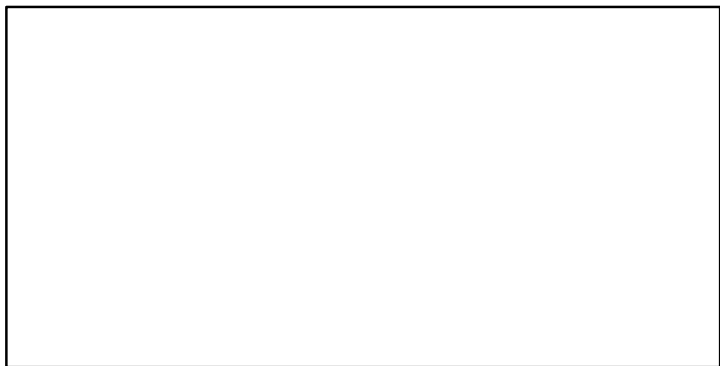
TL–MT, TC\*, RecC\* (1968–2015–PARMA)



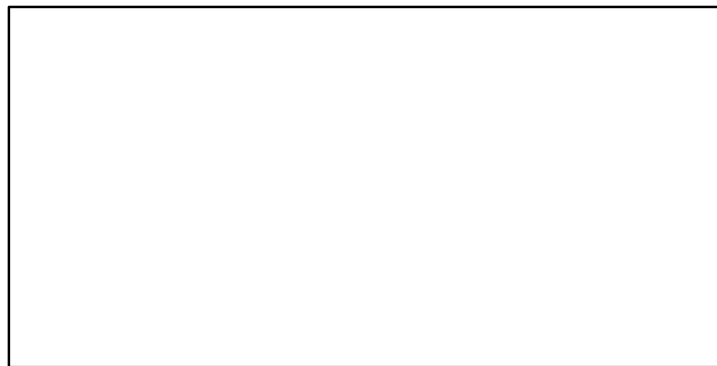
TAC–MT, Cpair–MT, Cadvised–MT (1968–2015–PARMA)



EFFORT\*



CdivMSY\*



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

## Red squat lobster Northern Chile [RSQLOBSTERNCH]

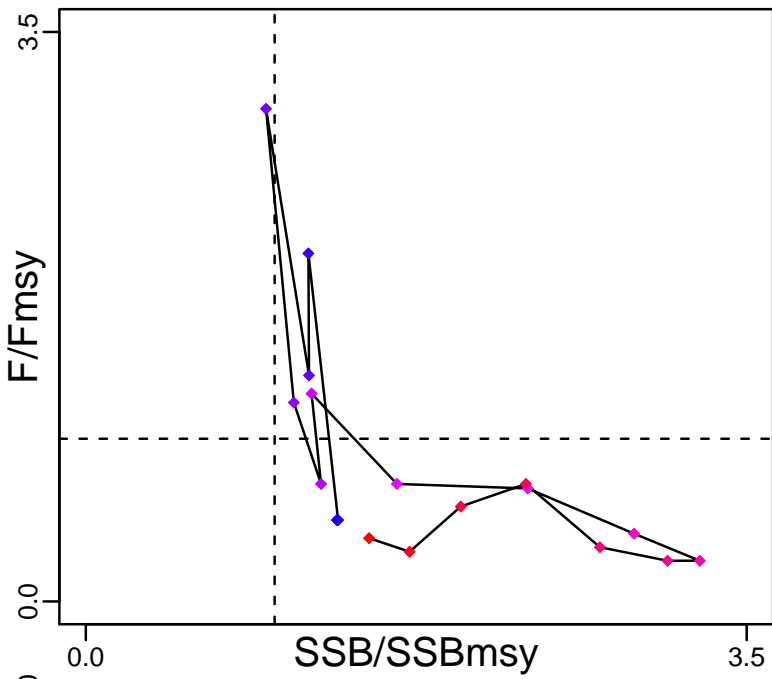
Metadata	
<b>Scientific Name</b>	Pleuroncodes monodon
<b>Current Assess ID</b>	IFOPCH-RSQLOBSTERNCH-1969-2015-PARMA
<b>Area</b>	Northern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2015	2986
<b>Fmsy</b>	Fmsy-pr-1/yr	2015	0.36
<b>ERmsy</b>	ERmsy-est-ratio	2015	0.296
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2015	2986
<b>Fmgt</b>	Fmgt-1/yr	2015	0.36
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2015	1680
<b>M</b>	M-1/yr	2015	0.35
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

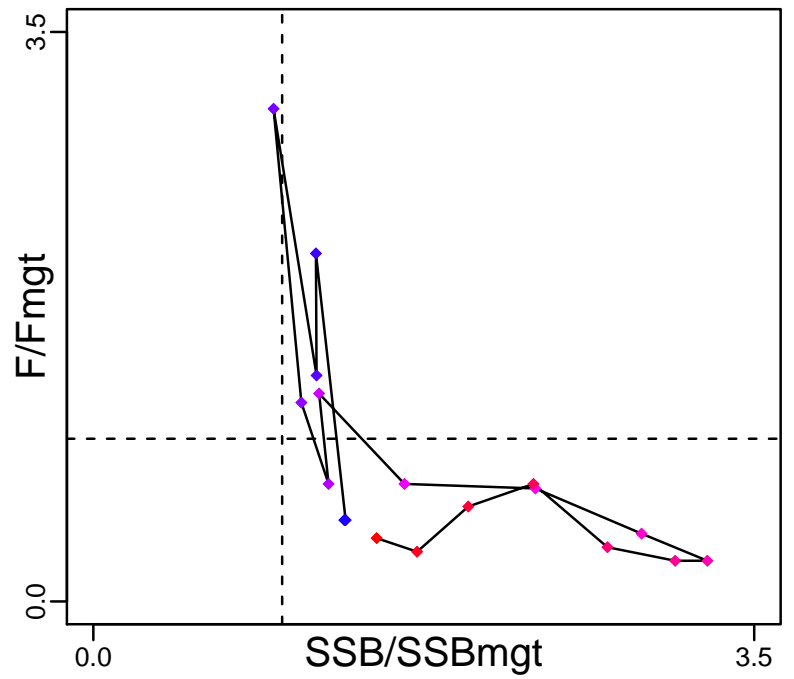
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	7010	Both	-
<b>SSB</b>	SSB-MT	2015	4480	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	$1.93 \times 10^8$	Both	1
<b>F</b>	F-1/yr	2015	0.14	Both	-
<b>ER</b>	ER-calc-ratio	2015	0.086	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2015	602		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2015	1.5		
<b>F/Fmsy</b>	F-1/yr/Fmsy-pr-1/yr	2015	0.389		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2015	0.291		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2015	1.5		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2015	0.389		
<b>ER/ERmgt</b>	-	-	-		

# Red squat lobster Northern Chile [RSQLOBSTERNCH]

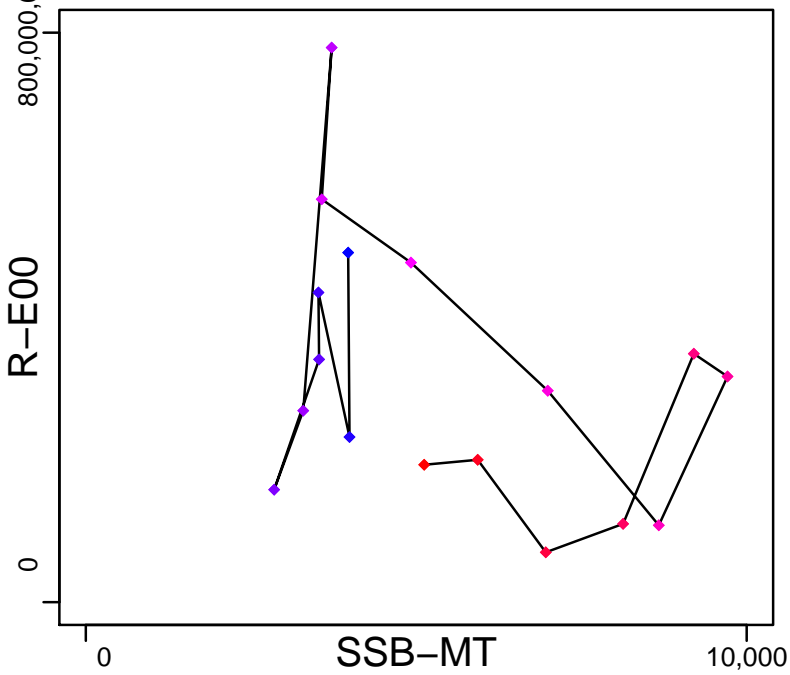
Kobe MSYpref (1969–2015–PARMA)



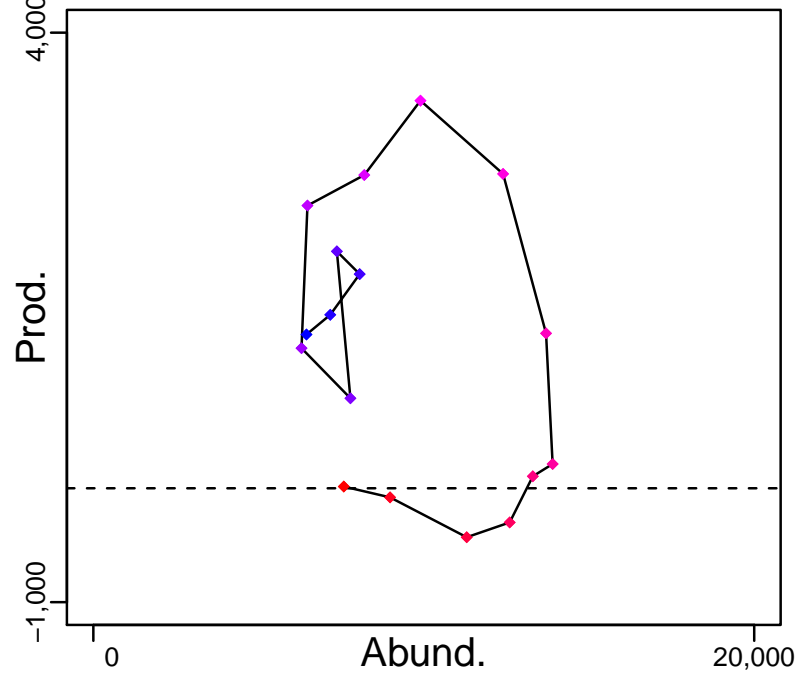
Kobe MGTpref (1969–2015–PARMA)



Spawner Recruit (1969–2015–PARMA)



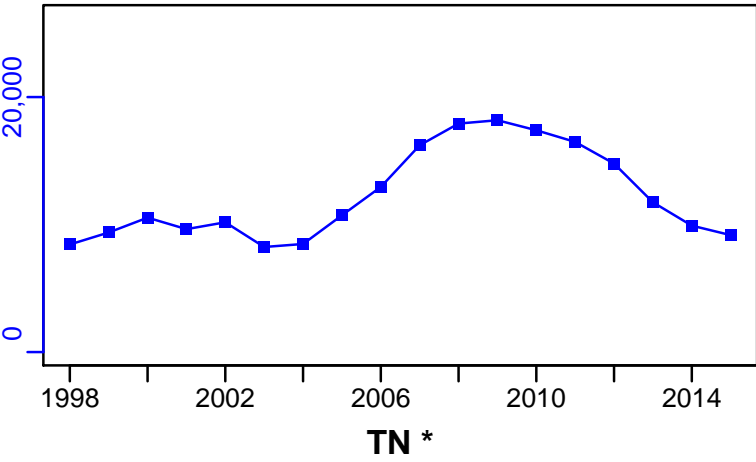
Production (1969–2015–PARMA)



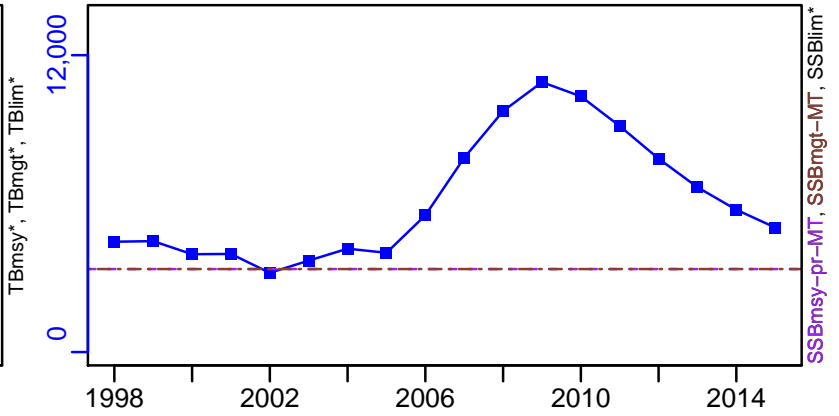
◆ Start Year ◆ End Year \* No Data

# Red squat lobster Northern Chile [RSQLOBSTERNCH]

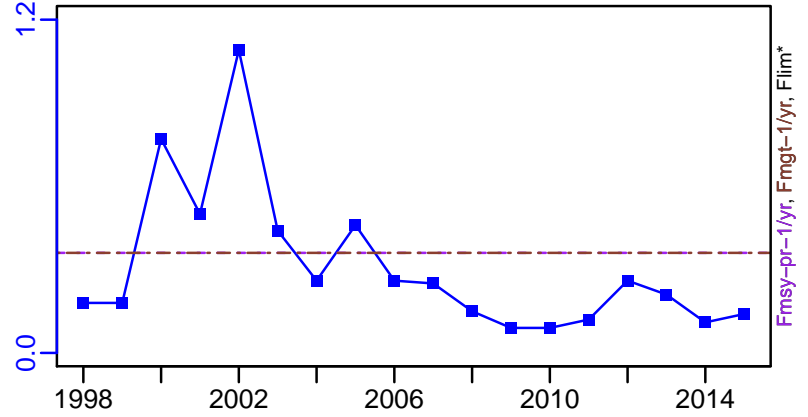
TB-MT (1969-2015-PARMA)



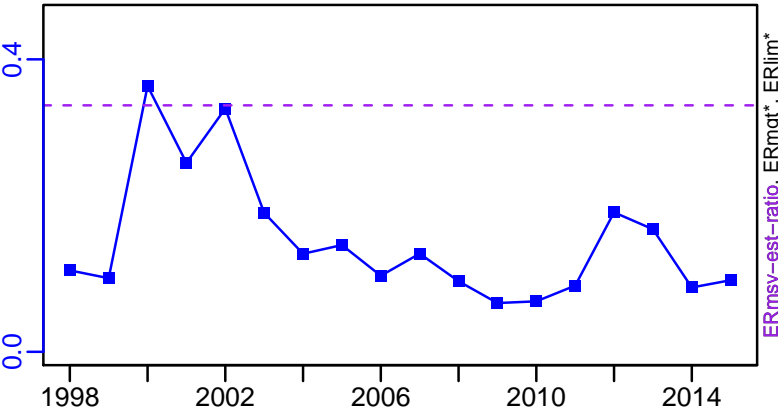
SSB-MT (1969-2015-PARMA)



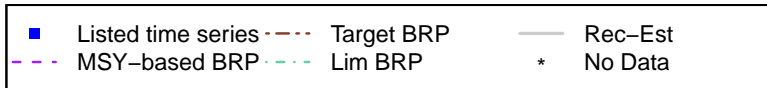
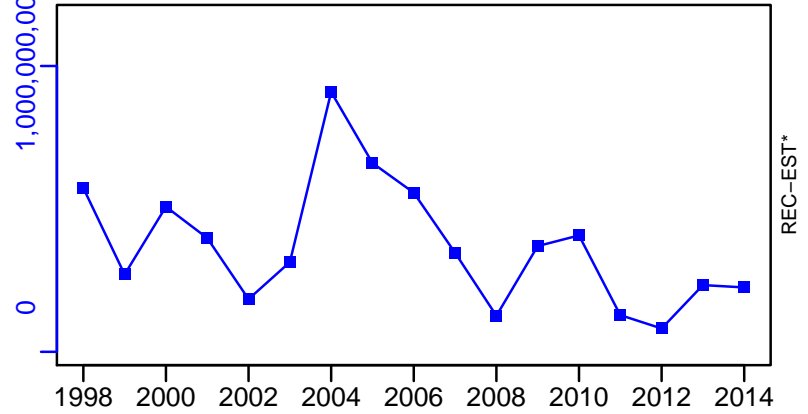
F-1/yr (1969-2015-PARMA)



ER-calc-ratio (1969-2015-PARMA)

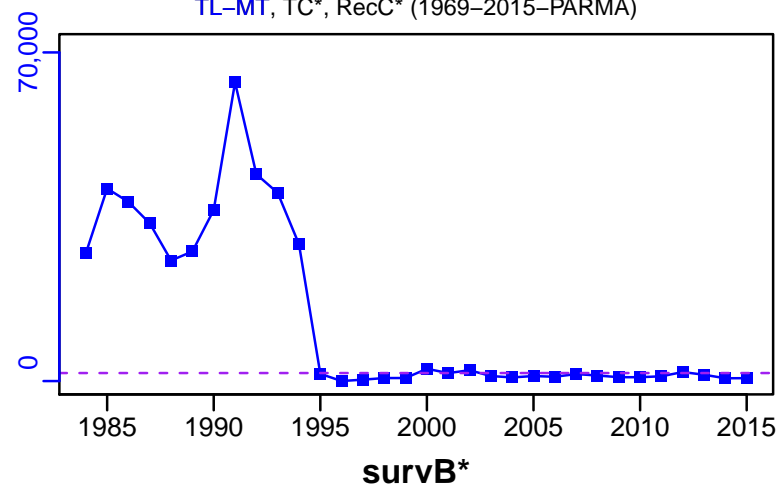


R-E00 (1969-2015-PARMA)

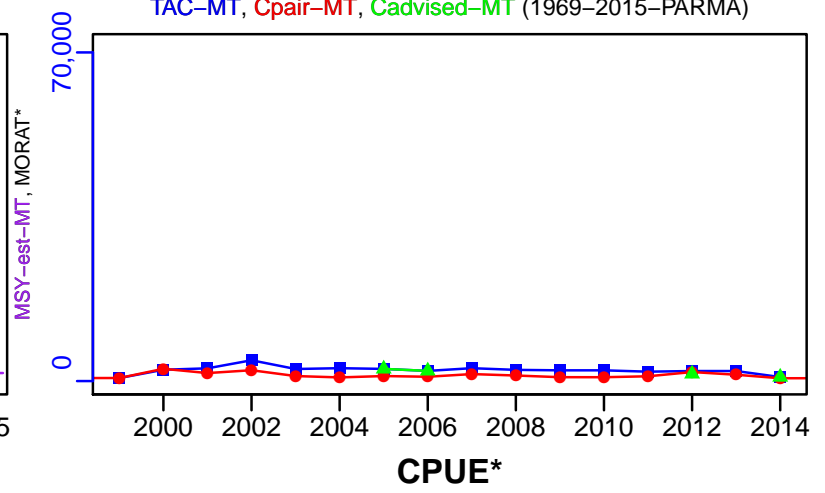


# Red squat lobster Northern Chile [RSQLOBSTERNCH]

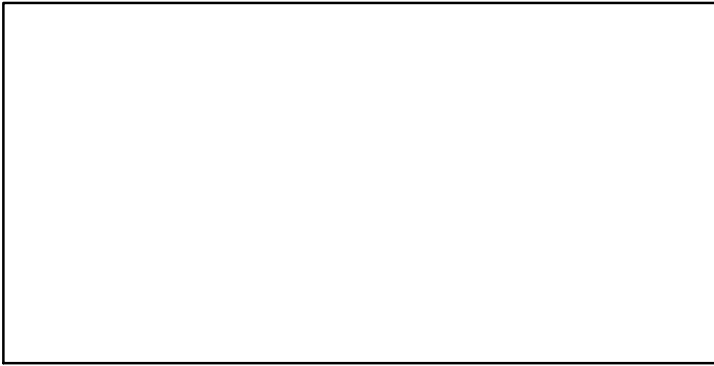
TL-MT, TC\*, RecC\* (1969-2015-PARMA)



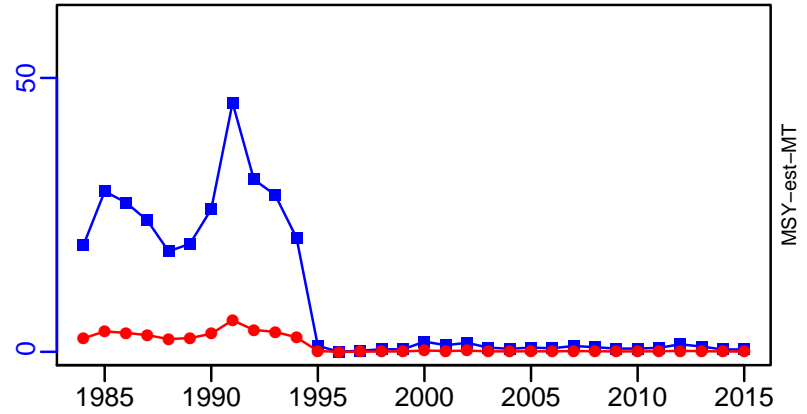
TAC-MT, Cpair-MT, Cadvised-MT (1969-2015-PARMA)



**EFFORT\***



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1969-2015-PARMA)



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

## Deepwater cardinalfish Chile [SBREAMCH]

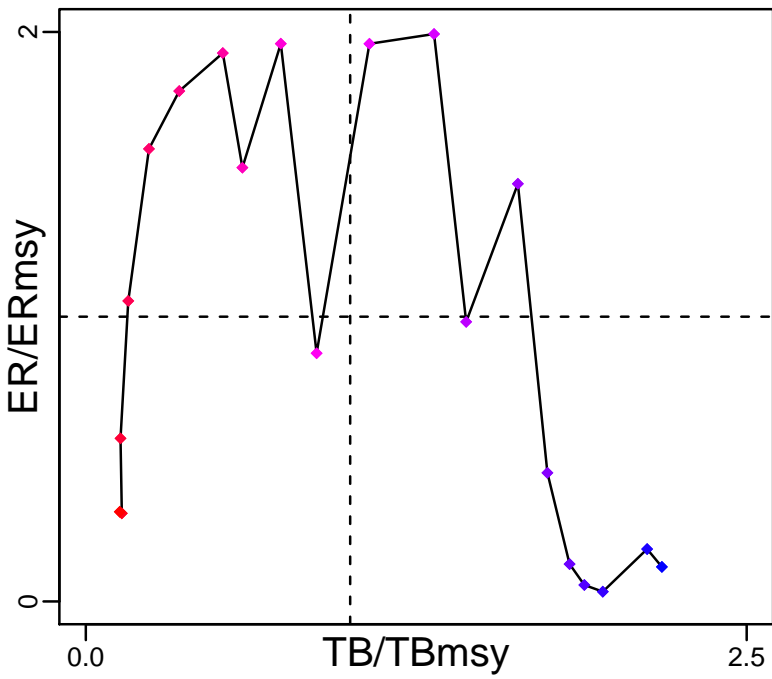
Metadata	
<b>Scientific Name</b>	Epigonus crassicaudus
<b>Current Assess ID</b>	SPRFMO-SBREAMCH-1989-2011-CHING
<b>Area</b>	Chile
<b>Management Authority</b>	South Pacific Regional Fisheries Management Organization
<b>Assessor</b>	South Pacific Regional Fisheries Management Organization
<b>Asmts in RAM</b>	2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2011	7158
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-est-ratio	2011	0.307
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-est-MT	2011	2194
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

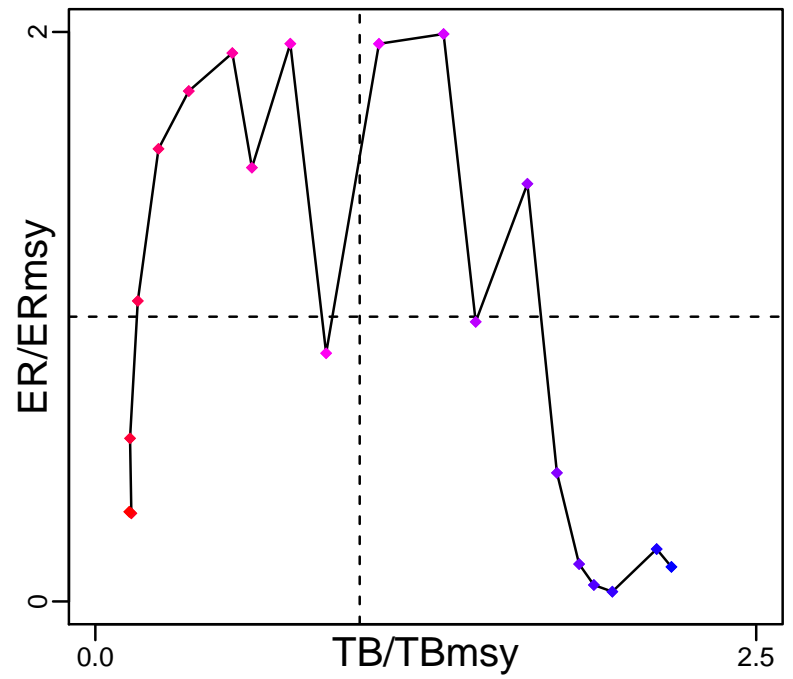
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2011	920	-	-
<b>SSB</b>	SSB-MT	2011	607	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2011	553,000	-	-
<b>F</b>	F-1/yr	2011	12.2	-	-
<b>ER</b>	ER-calc-ratio	2011	0.097	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2011	89		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2011	0.129		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2011	0.315		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Deepwater cardinalfish Chile [SBREAMCH]

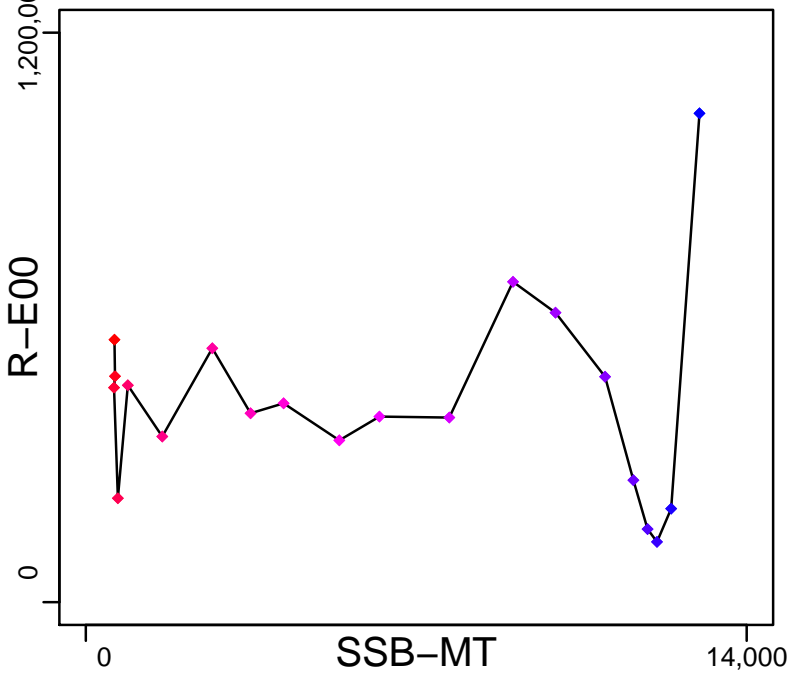
Kobe MSYpref (1989–2011–CHING)



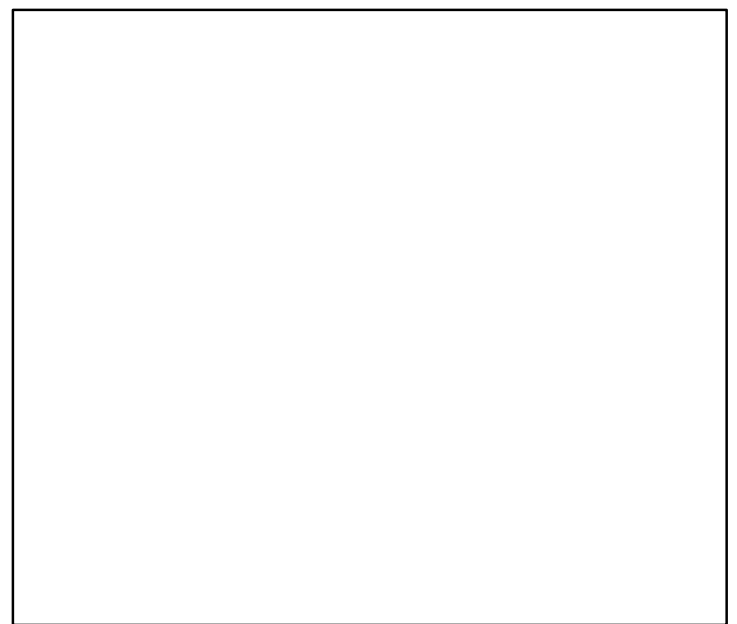
Kobe MGTpref (1989–2011–CHING)



Spawner Recruit (1989–2011–CHING)



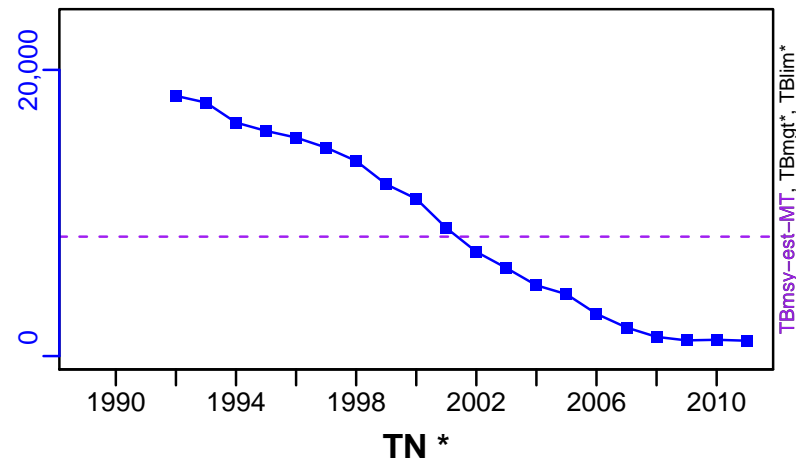
Production\*



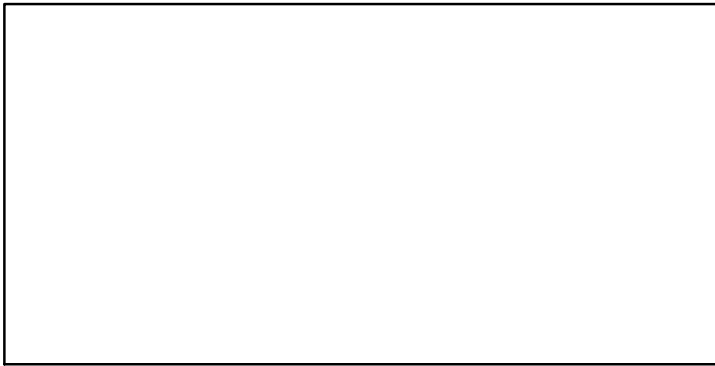
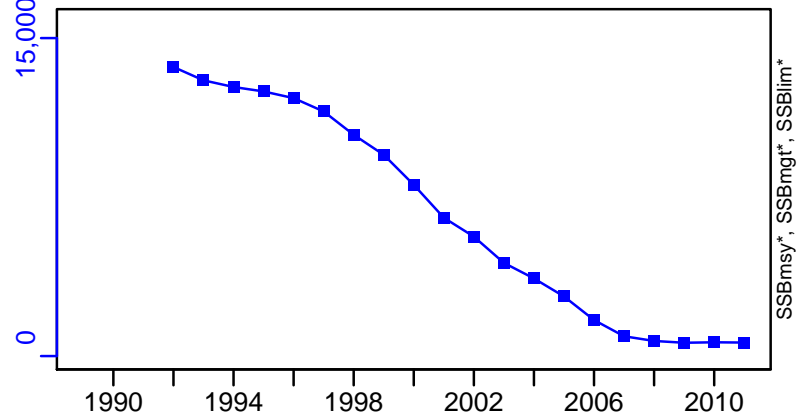
◆ Start Year ◆ End Year \* No Data

# Deepwater cardinalfish Chile [SBREAMCH]

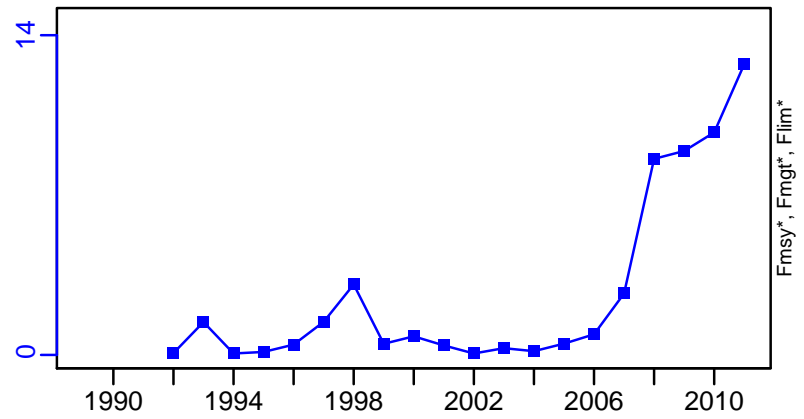
TB-MT (1989–2011–CHING)



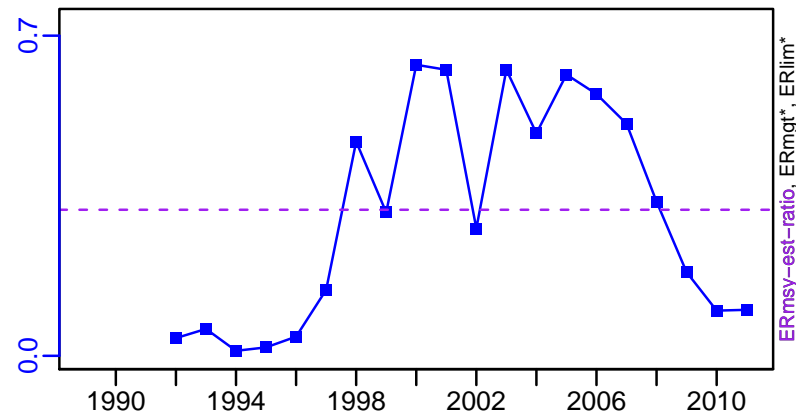
SSB-MT (1989–2011–CHING)



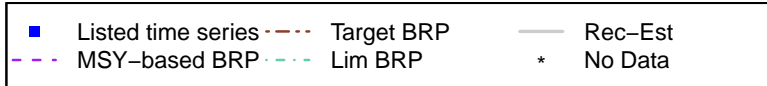
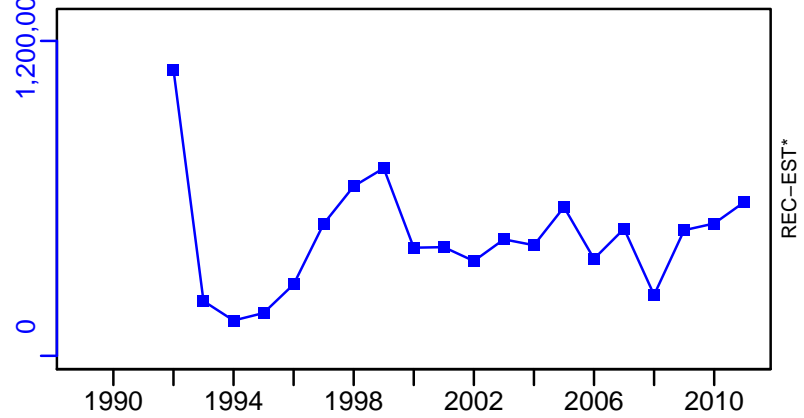
F-1/yr (1989–2011–CHING)



ER-calc-ratio (1989–2011–CHING)



R-E00 (1989–2011–CHING)

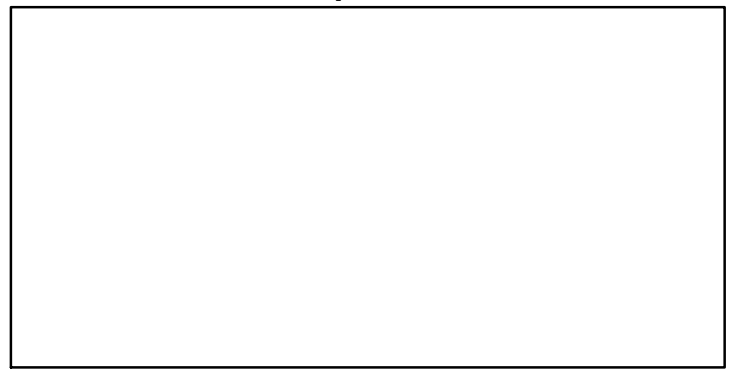
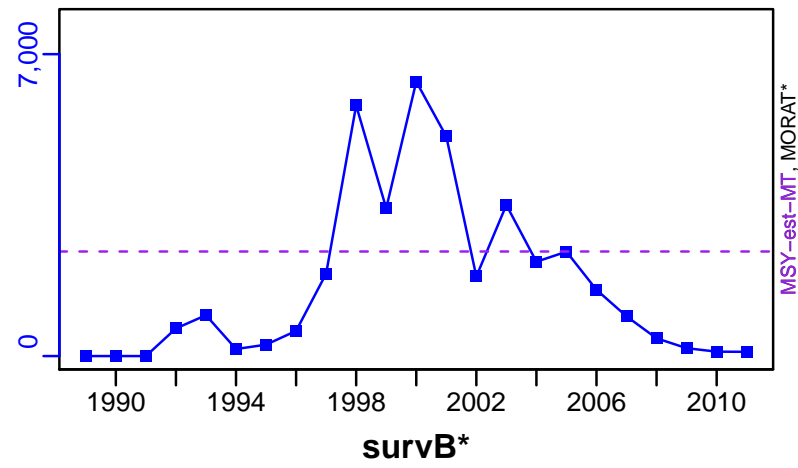




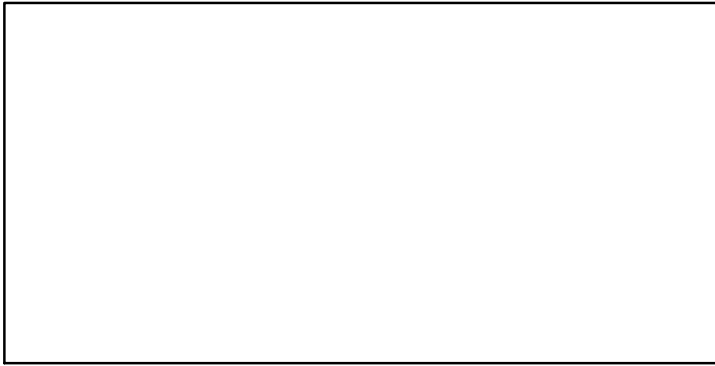
# Deepwater cardinalfish Chile [SBREAMCH]

TL-MT, TC\*, RecC\* (1989-2011-CHING)

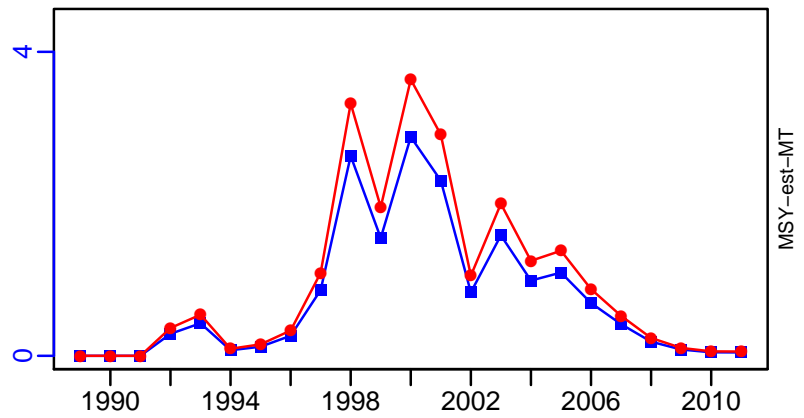
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TL-MT/MSY-est-MT, CdivMEANC-ratio, (1989-2011-CHING)



## Southern blue whiting Southern Argentina [SBWHITARGS]

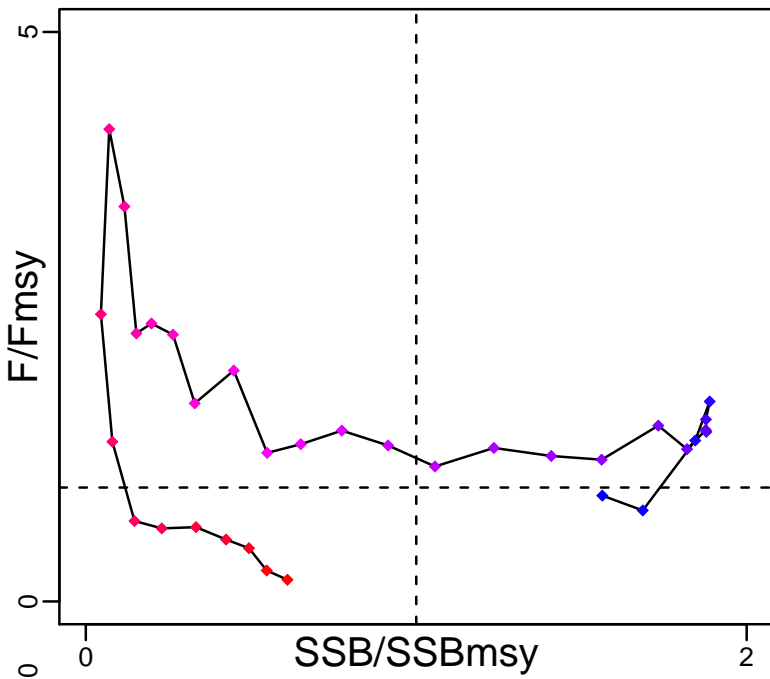
Metadata	
<b>Scientific Name</b>	Micromesistius australis
<b>Current Assess ID</b>	INIDEP-SBWHITARGS-1985-2020-PARMA
<b>Area</b>	Southern Argentina
<b>Management Authority</b>	Consejo Federal Pesquero, Argentina national management
<b>Assessor</b>	Instituto Nacional de Investigacion y Desarrollo Pesquero
<b>Asmts in RAM</b>	2007, 2015, 2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2020	565,722
<b>Fmsy</b>	Fmsy-1/yr	2020	0.184
<b>ERmsy</b>	ERmsy-conv-ratio	2020	0.124
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2020	454,500
<b>Fmgt</b>	Fmgt-1/yr	2020	0.181
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2015	1,515,000
<b>MSY</b>	MSY-MT	2020	96,296
<b>M</b>	M-1/yr	2020	0.15
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	303,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

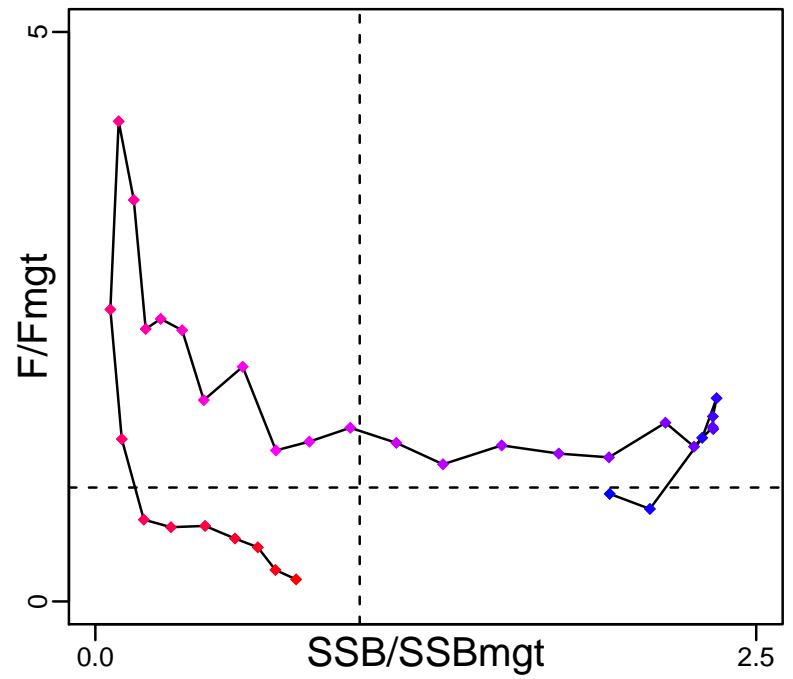
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	435,368	-	1+
<b>SSB</b>	SSB-MT	2020	345,247	Both	2+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	273,046,667	-	1
<b>F</b>	F-1/yr	2020	0.035	-	3-21+
<b>ER</b>	ER-calc-ratio	2020	0.039	-	-
<b>TC</b>	TC-MT	2020	15,050		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2020	0.61		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2020	0.19		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-conv-ratio	2020	0.312		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2020	0.76		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2020	0.193		
<b>ER/ERmgt</b>	-	-	-		

# Southern blue whiting Southern Argentina [SBWHITARGS]

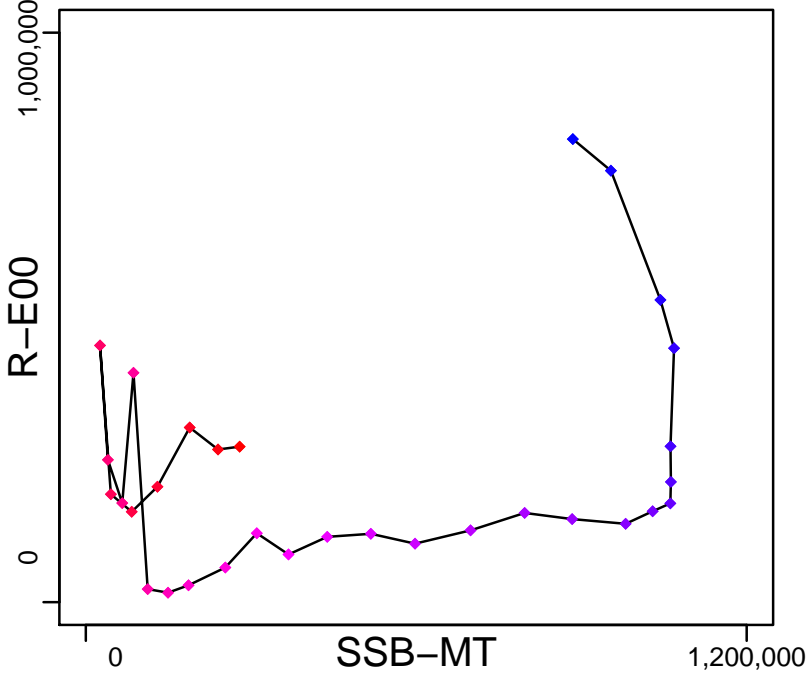
Kobe MSYpref (1985–2020–PARMA)



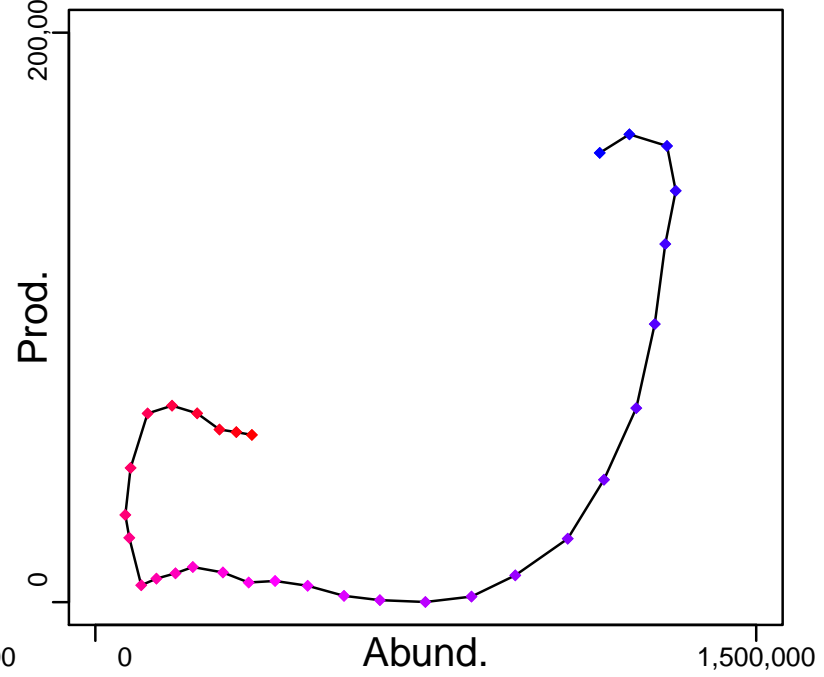
Kobe MGTpref (1985–2020–PARMA)



Spawner Recruit (1985–2020–PARMA)



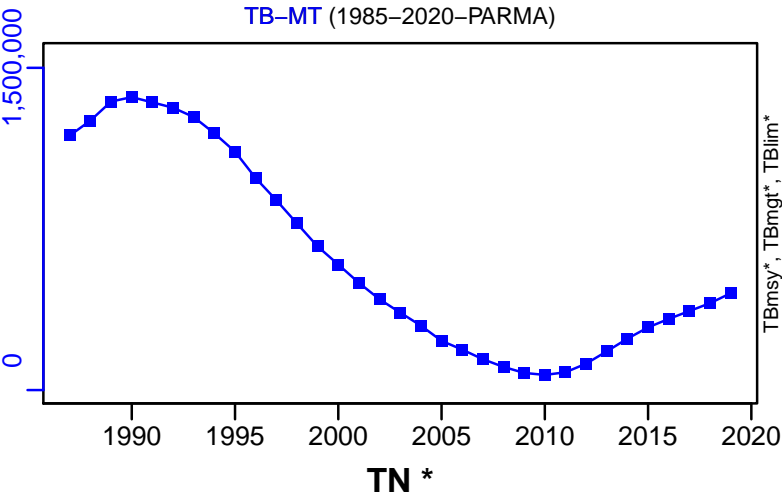
Production (1985–2020–PARMA)



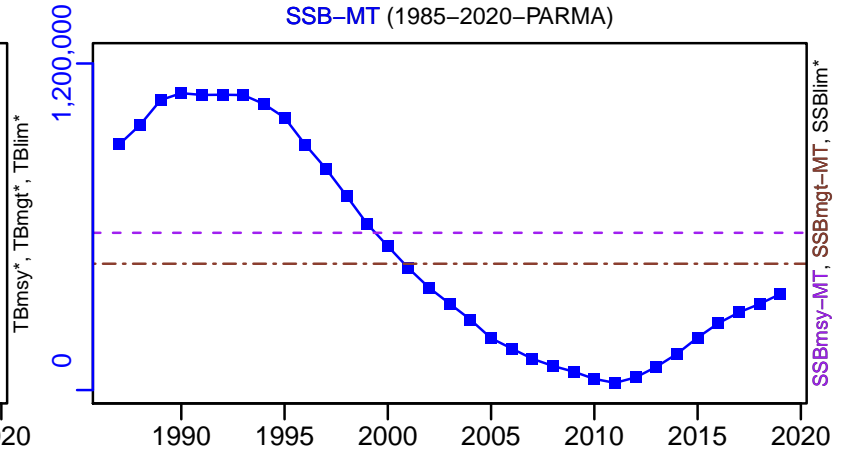
◆ Start Year ◆ End Year \* No Data

# Southern blue whiting Southern Argentina [SBWHITARGS]

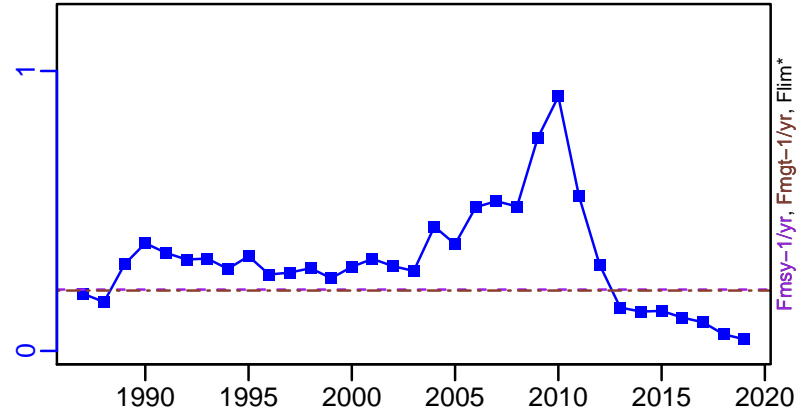
TB-MT (1985-2020-PARMA)



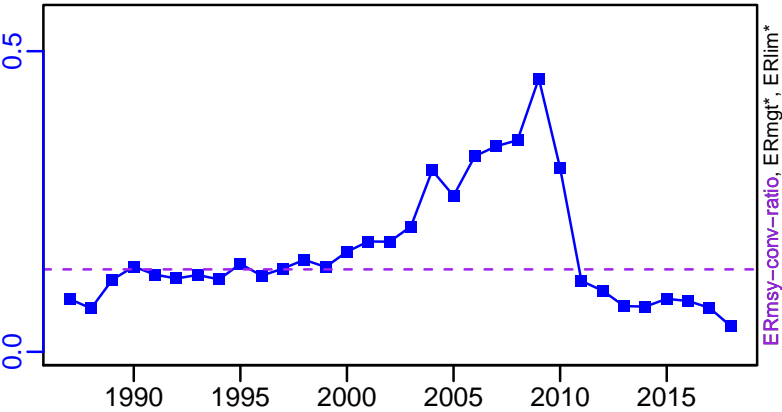
SSB-MT (1985-2020-PARMA)



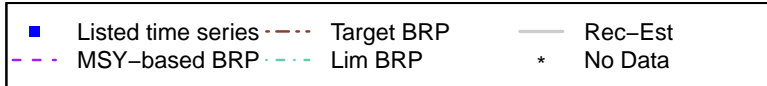
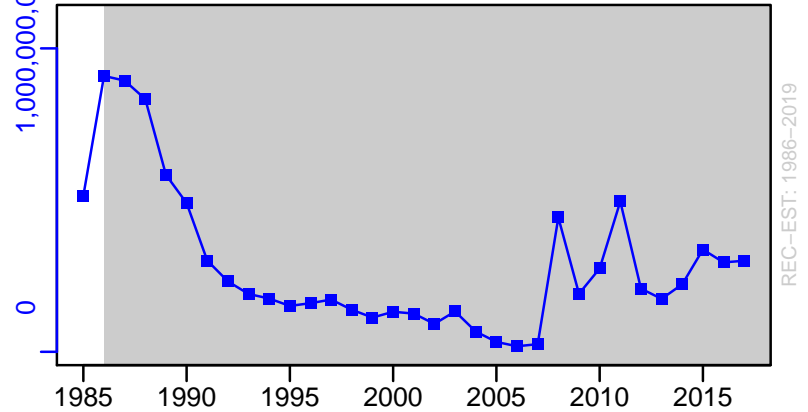
F-1/yr (1985-2020-PARMA)



ER-calc-ratio (1985-2020-PARMA)

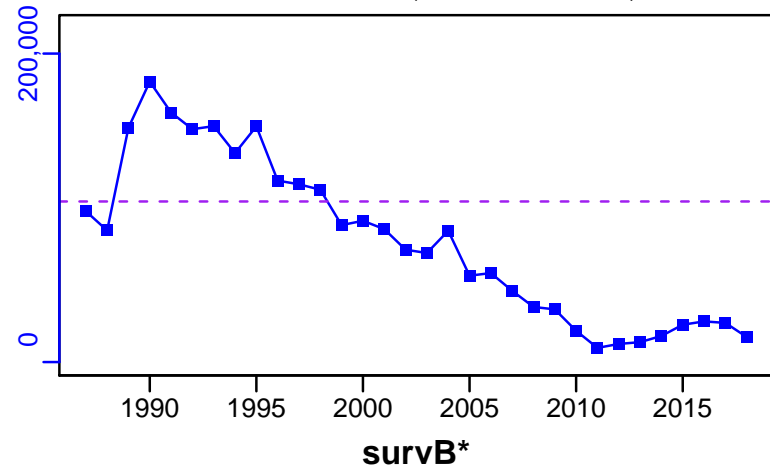


R-E00 (1985-2020-PARMA)

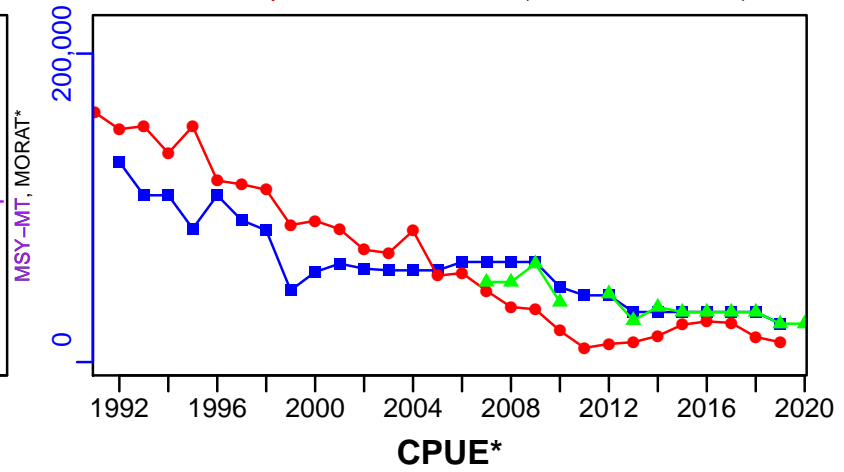


# Southern blue whiting Southern Argentina [SBWHITARGS]

TC-MT, TL\*, RecC\* (1985-2020-PARMA)



TAC-MT, Cpair-MT, Cadvised-MT (1985-2020-PARMA)



survB\*



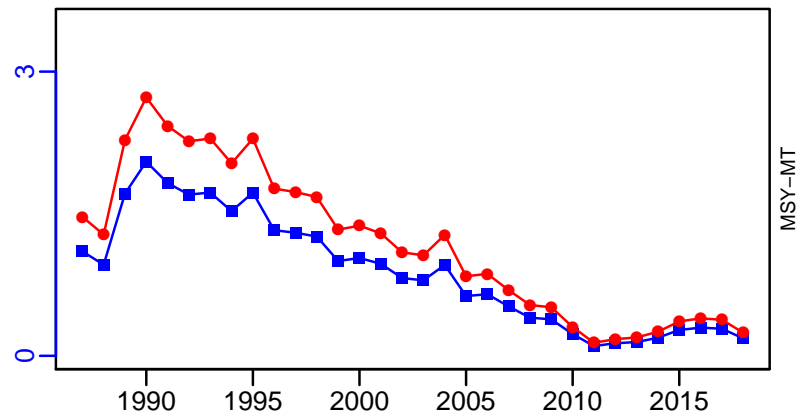
CPUE\*



EFFORT\*



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



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

## Southern blue whiting Central-Southern Chile [SBWHITCH]

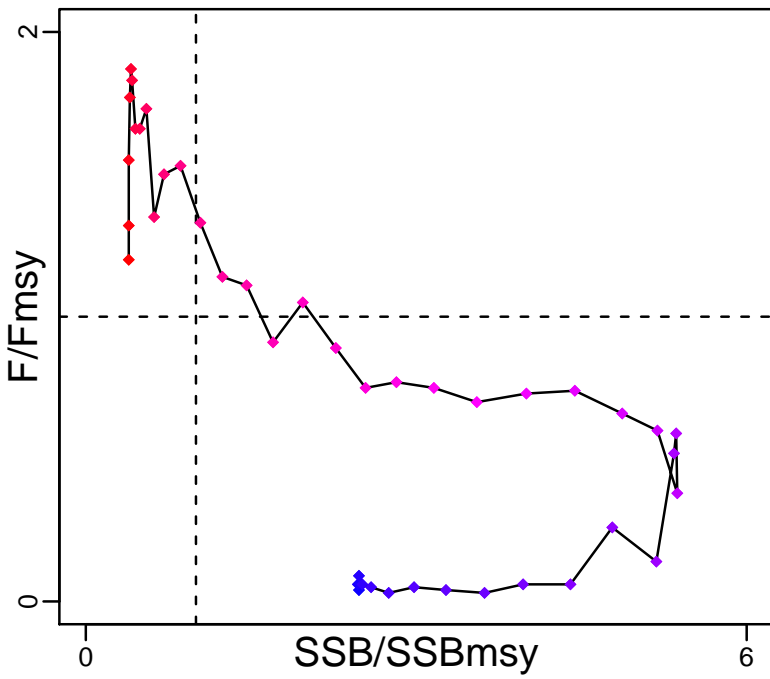
Metadata	
<b>Scientific Name</b>	Micromesistius australis
<b>Current Assess ID</b>	IFOPCH-SBWHITCH-1978-2020-Quiroz
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2015, 2016, 2020, 2012

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2012	500,079
<b>SSBmsy</b>	SSBmsy-pr-MT	2020	183,968
<b>Fmsy</b>	Fmsy-pr-1/yr	2020	0.194
<b>ERmsy</b>	ERmsy-est-ratio	2016	0.013
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2020	183,968
<b>Fmgt</b>	Fmgt-1/yr	2015	0.2
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2020	459,920
<b>MSY</b>	MSY-est-MT	2016	3083
<b>M</b>	M-1/yr	2016	0.18
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

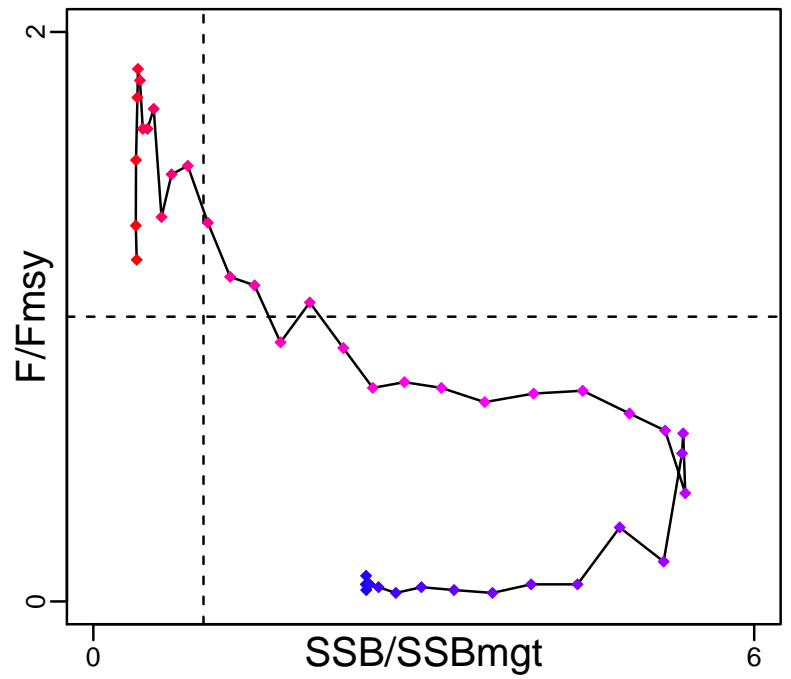
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	130,562	Both	-
<b>SSB</b>	SSB-MT	2020	72,421	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	121,775	Both	-
<b>F</b>	F-1/yr	2020	0.23	Both	-
<b>ER</b>	ER-calc-ratio	2020	0.02	-	-
<b>TC</b>	TC-MT	2020	2634		
<b>TL</b>	TL-MT	2015	16,600		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	1.238		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2020	0.39		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2020	1.2		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2016	6.364		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2020	0.394		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2015	1.02		
<b>ER/ERmgt</b>	-	-	-		

# Southern blue whiting Central–Southern Chile [SBWHITCH]

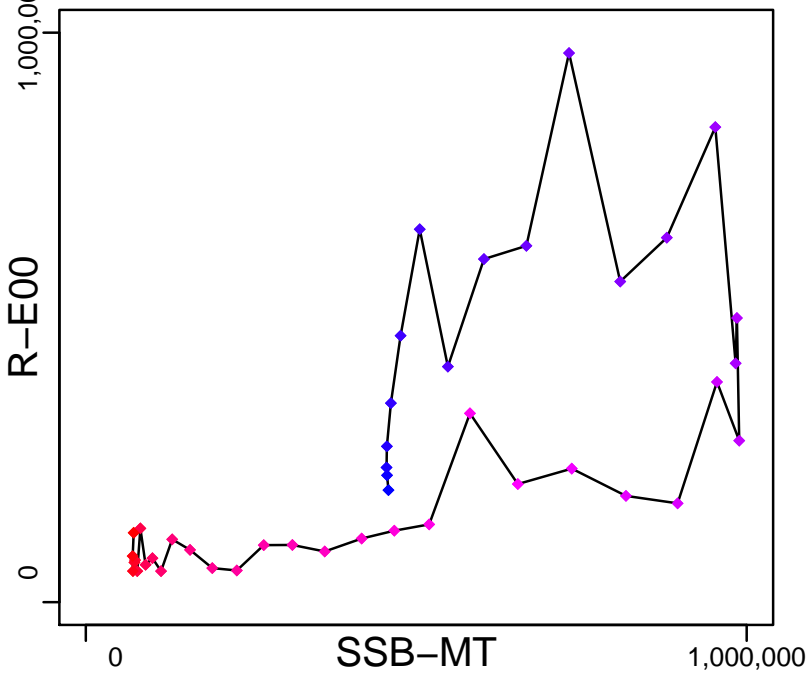
Kobe MSYpref (1978–2020–Quiroz)



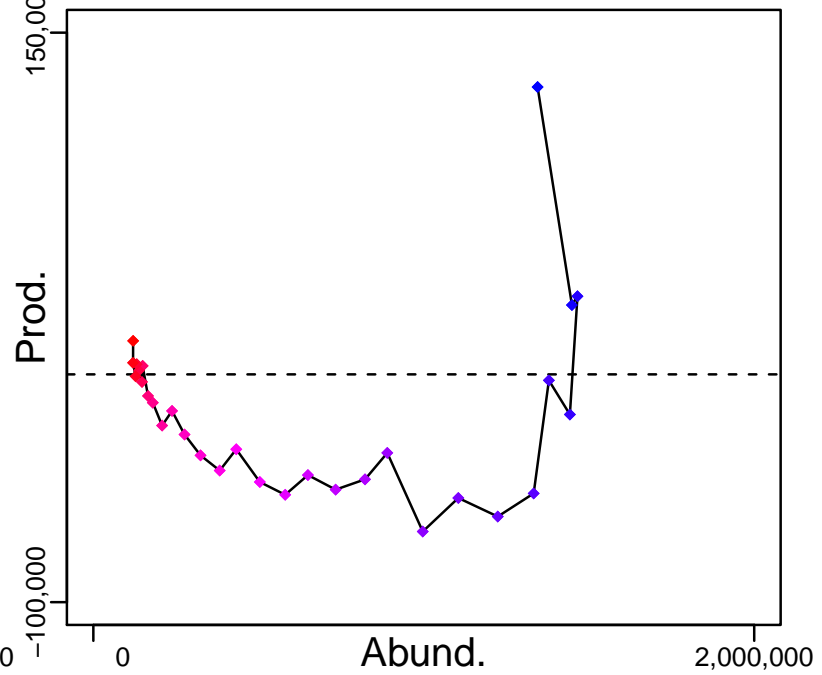
Kobe MGTpref (1978–2020–Quiroz)



Spawner Recruit (1978–2020–Quiroz)



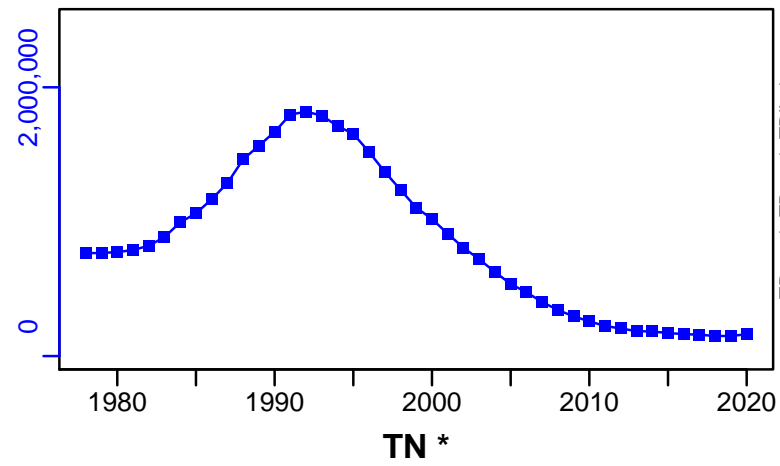
Production (1978–2020–Quiroz)



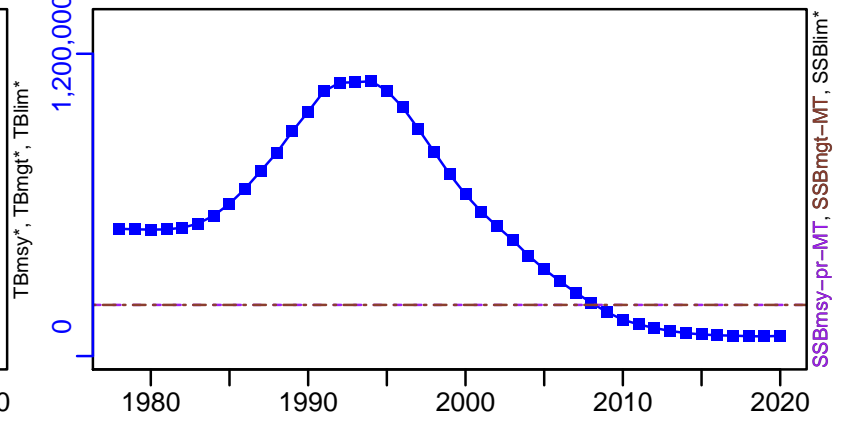
◆ Start Year ◆ End Year \* No Data

# Southern blue whiting Central–Southern Chile [SBWHITCH]

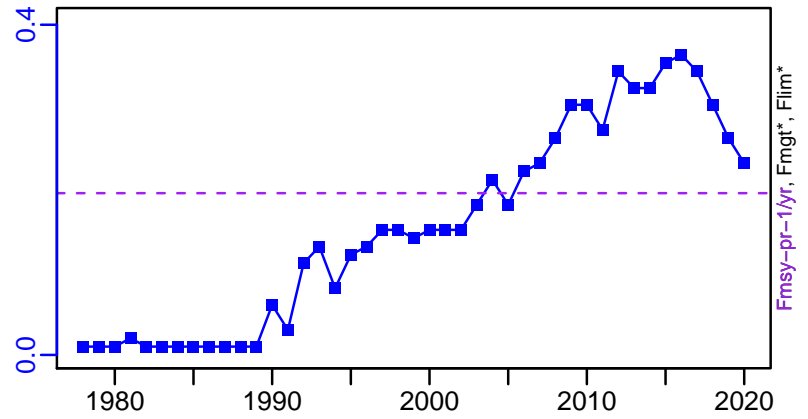
TB–MT (1978–2020–Quiroz)



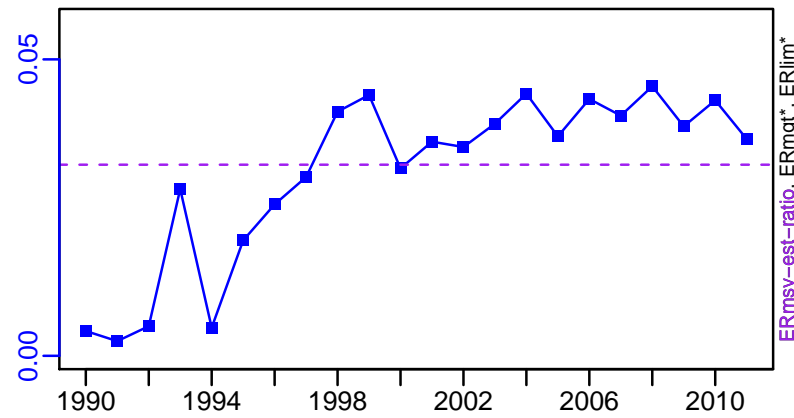
SSB–MT (1978–2020–Quiroz)



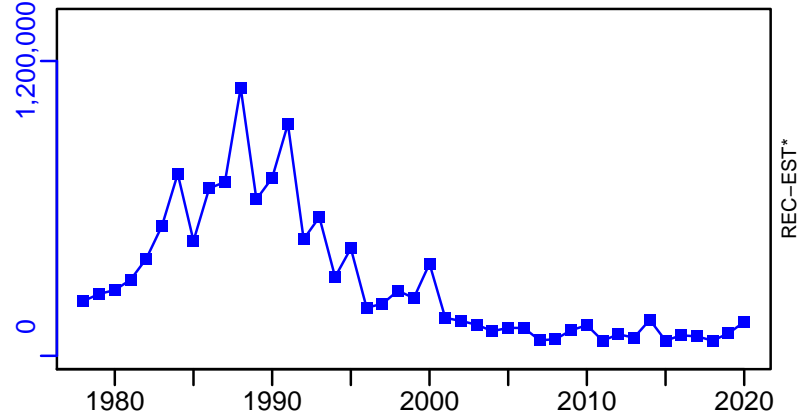
F–1/yr (1978–2020–Quiroz)



ER–ratio (1979–2012–CHING)



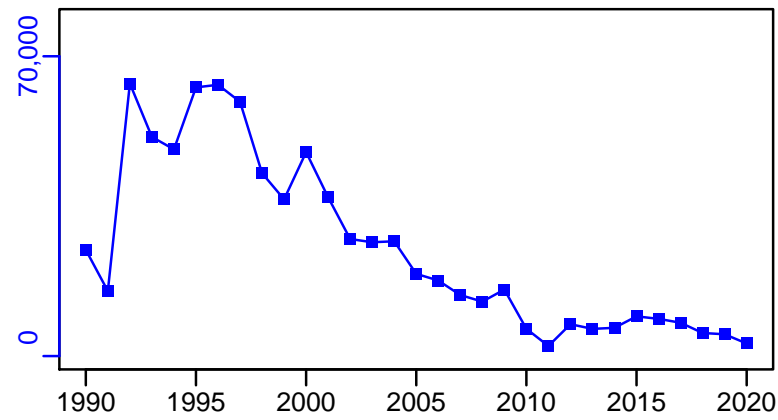
R–E00 (1978–2020–Quiroz)



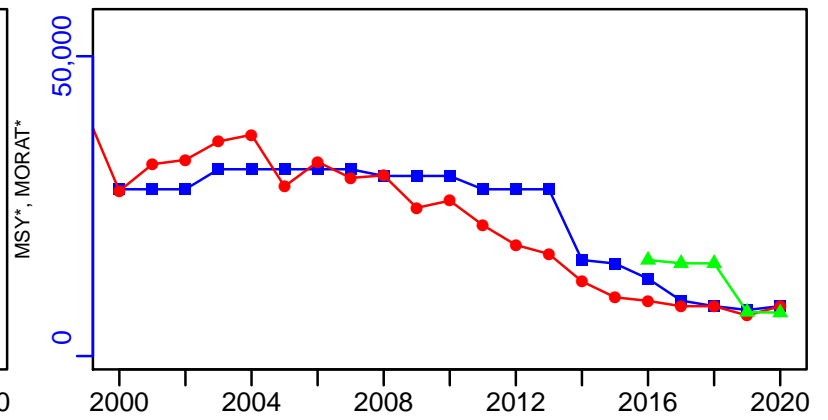


# Southern blue whiting Central–Southern Chile [SBWHITCH]

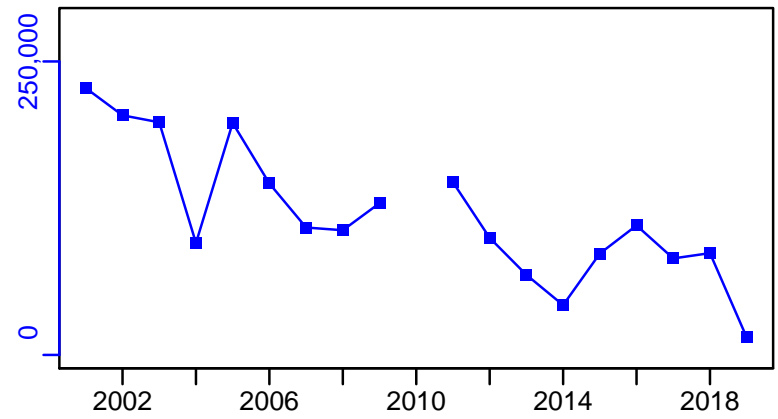
TC–MT, TL\*, RecC\* (1978–2020–Quiroz)



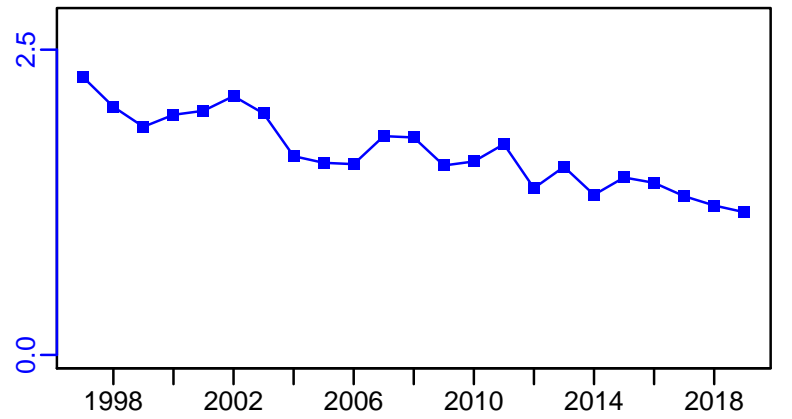
TAC–MT, Cpair–MT, Cadvised–MT (1978–2020–Quiroz)



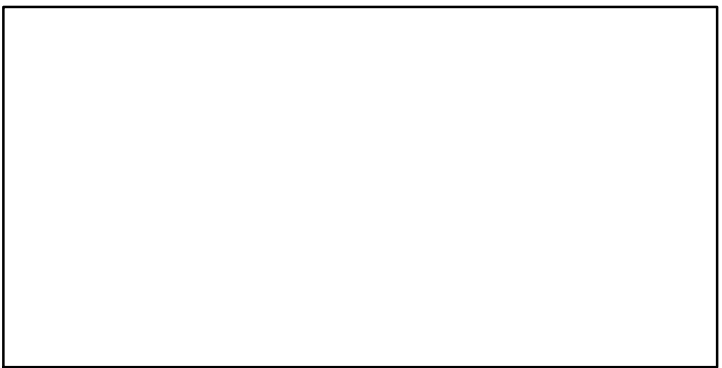
survB\_absolute–MT (1978–2020–Quiroz)



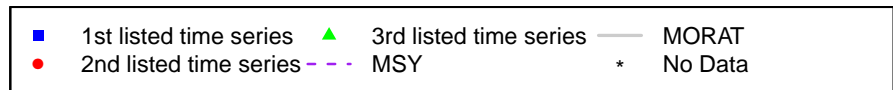
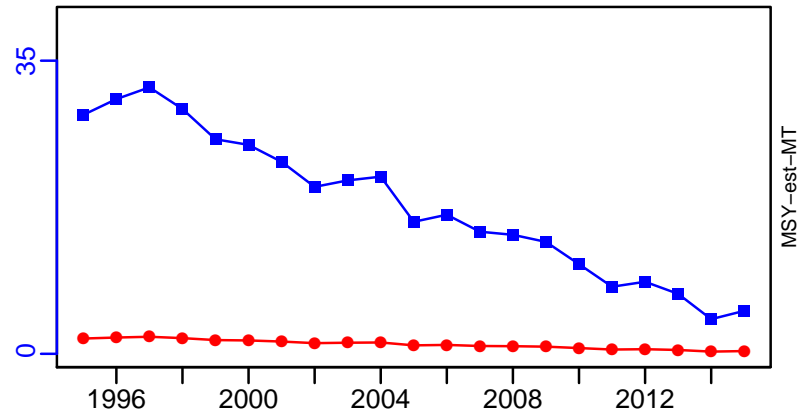
CPUE–index (1978–2020–Quiroz)



EFFORT\*



TC–MT/MSY–est–MT, CdivMEANC–ratio, (1977–2016–PARMA)



## Southern hake Central-Southern Chile [SOUTHHAKECH]

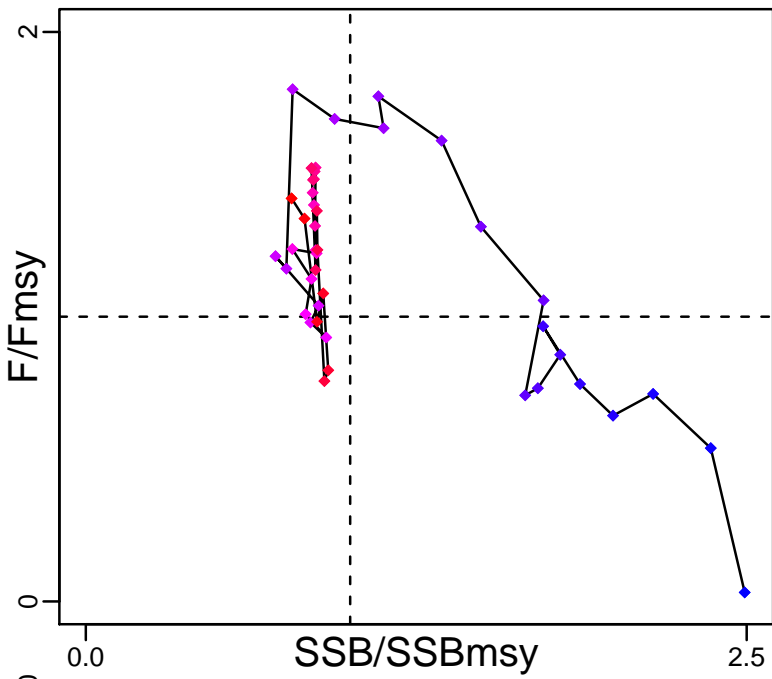
Metadata	
<b>Scientific Name</b>	Merluccius australis
<b>Current Assess ID</b>	IFOPCH-SOUTHHAKECH-1977-2019-Quiroz
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2011, 2015, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2011	453,772
<b>SSBmsy</b>	SSBmsy-pr-MT	2019	184,844
<b>Fmsy</b>	Fmsy-pr-1/yr	2019	0.257
<b>ERmsy</b>	ERmsy-est-ratio	2019	0.031
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2015	172,400
<b>Fmgt</b>	Fmgt-1/yr	2015	0.313
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2015	940,000
<b>SSB0</b>	SSB0-MT	2019	462,111
<b>MSY</b>	MSY-est-MT	2019	21,349
<b>M</b>	M-1/yr	2015	0.21
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

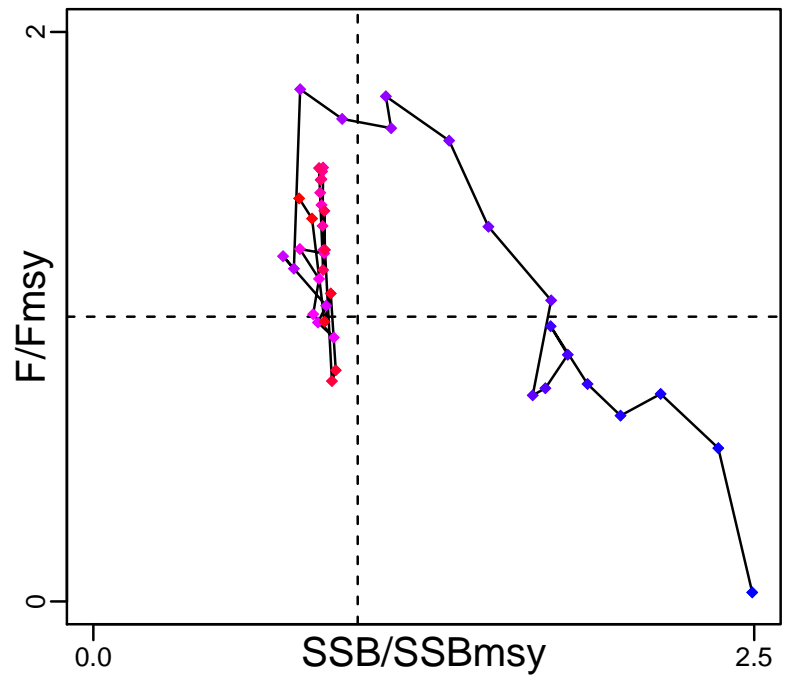
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2019	548,813	-	-
<b>SSB</b>	SSB-MT	2019	143,892	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	115,428,000	Both	-
<b>F</b>	F-1/yr	2019	0.364	Both	-
<b>ER</b>	ER-ratio	2019	1.415	-	-
<b>TC</b>	TC-MT	2019	28,214		
<b>TL</b>	TL-MT	2015	16,200		
<b>TB/TBmsy</b>	TB-MT/(TB0-MT*0.368)	2015	0.85		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2019	0.778		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2019	1.415		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-est-ratio	2019	45.164		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2015	0.539		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2015	1.086		
<b>ER/ERmgt</b>	-	-	-		

# Southern hake Central–Southern Chile [SOUTHHAKECH]

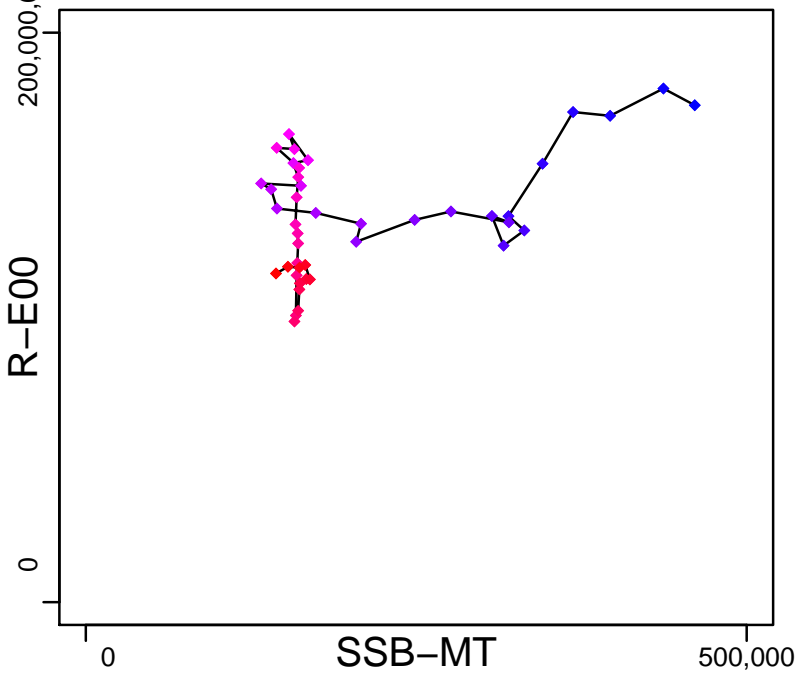
Kobe MSYpref (1977–2019–Quiroz)



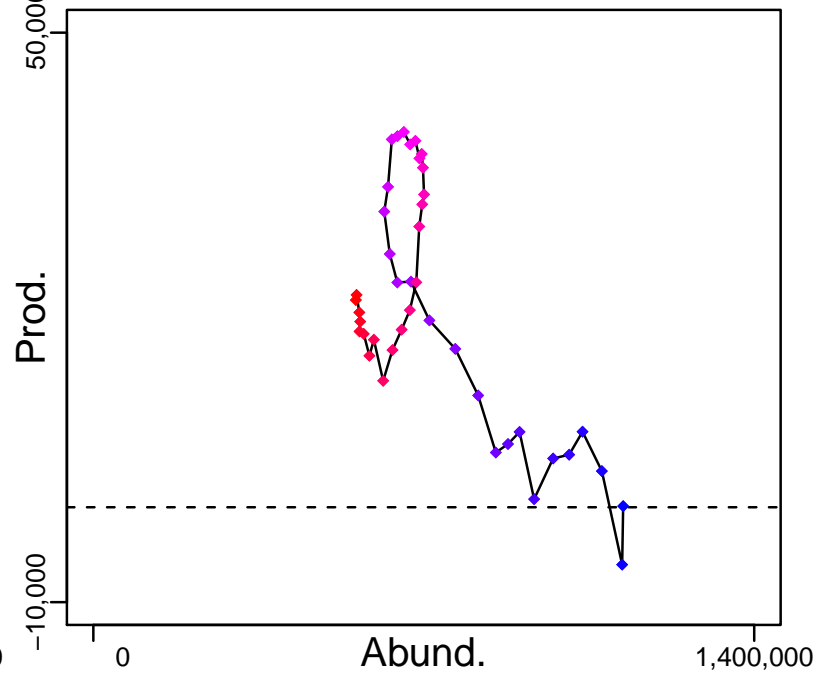
Kobe MGTpref (1977–2019–Quiroz)



Spawner Recruit (1977–2019–Quiroz)



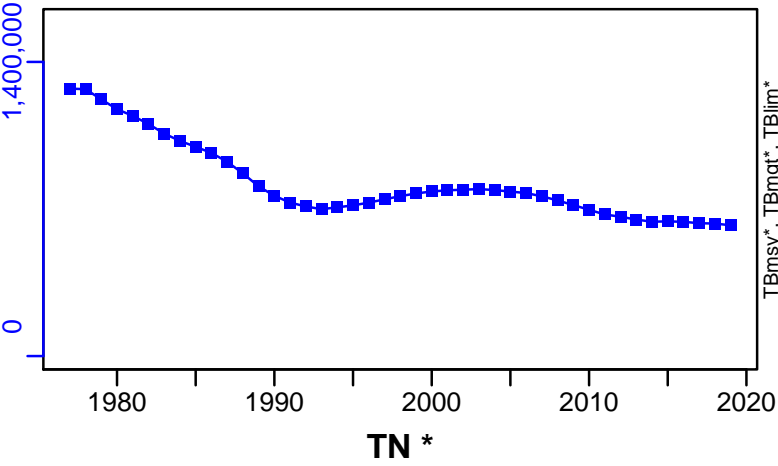
Production (1977–2019–Quiroz)



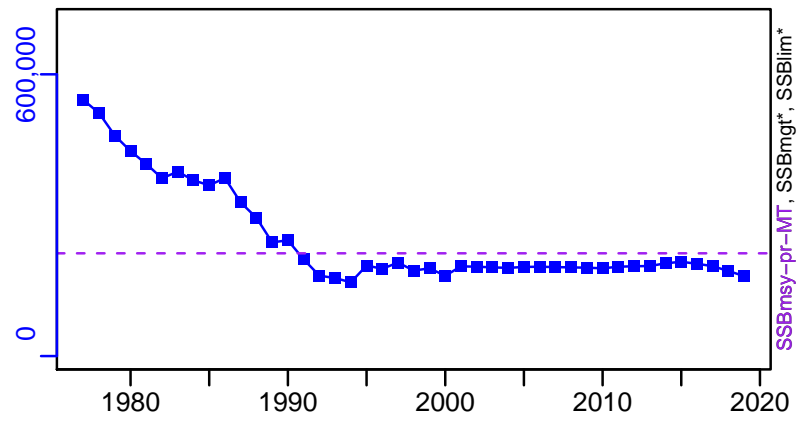
◆ Start Year ◆ End Year \* No Data

# Southern hake Central–Southern Chile [SOUTHHAKECH]

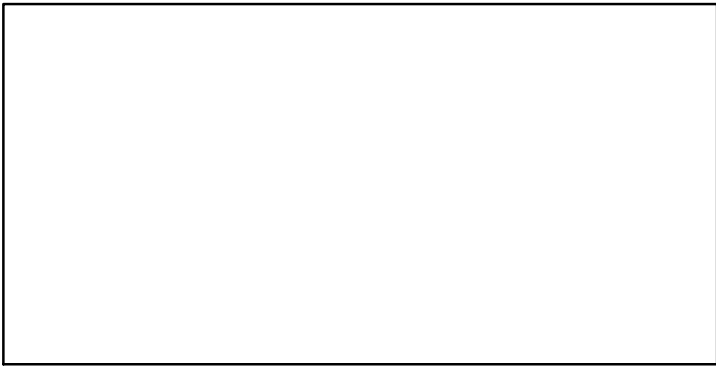
TB–MT (1977–2019–Quiroz)



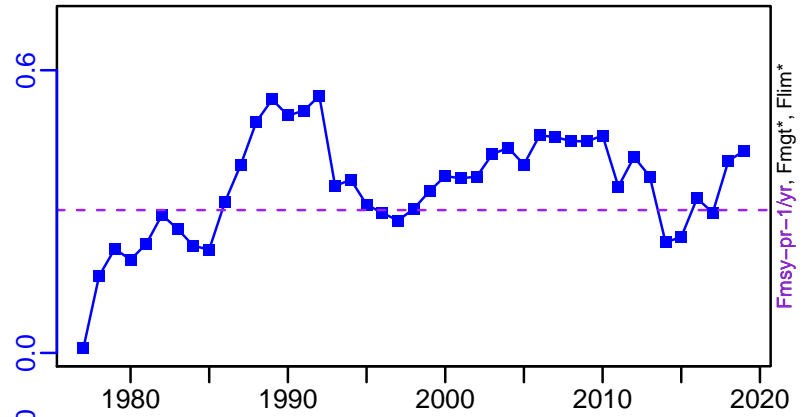
SSB–MT (1977–2019–Quiroz)



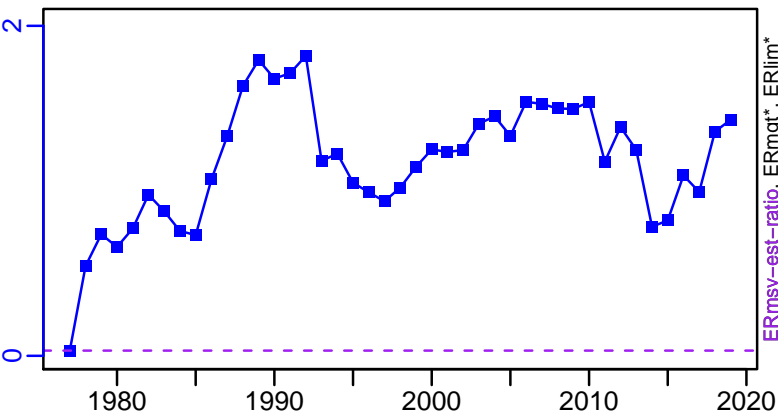
TN \*



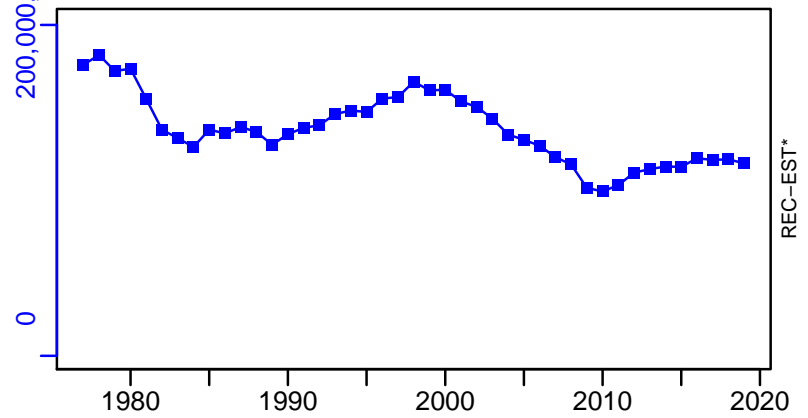
F–1/yr (1977–2019–Quiroz)



ER–ratio (1977–2019–Quiroz)

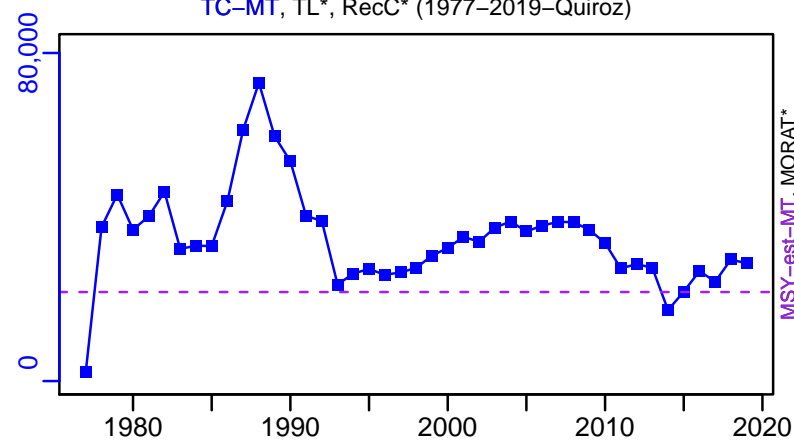


R–E00 (1977–2019–Quiroz)

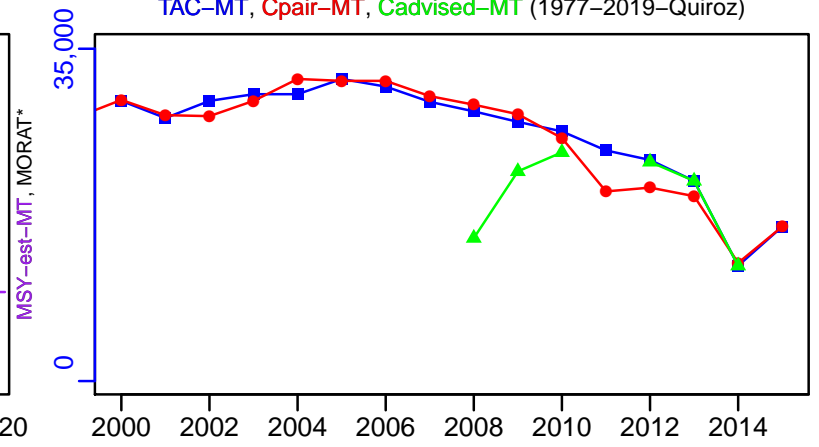


# Southern hake Central–Southern Chile [SOUTHHAKECH]

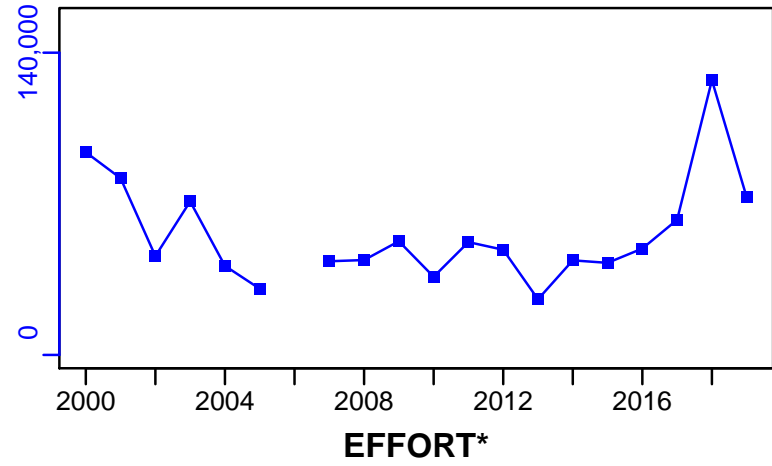
TC–MT, TL\*, RecC\* (1977–2019–Quiroz)



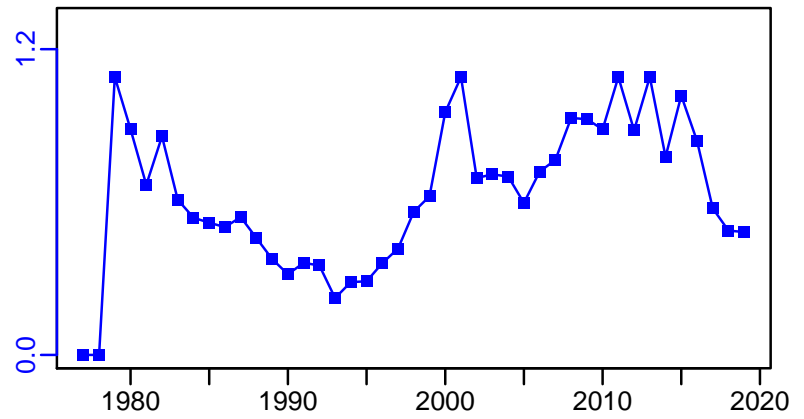
TAC–MT, Cpair–MT, Cadvised–MT (1977–2019–Quiroz)



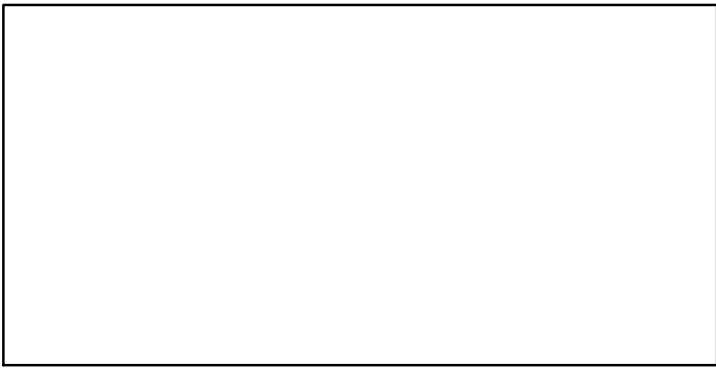
survB\_absolute–MT (1977–2019–Quiroz)



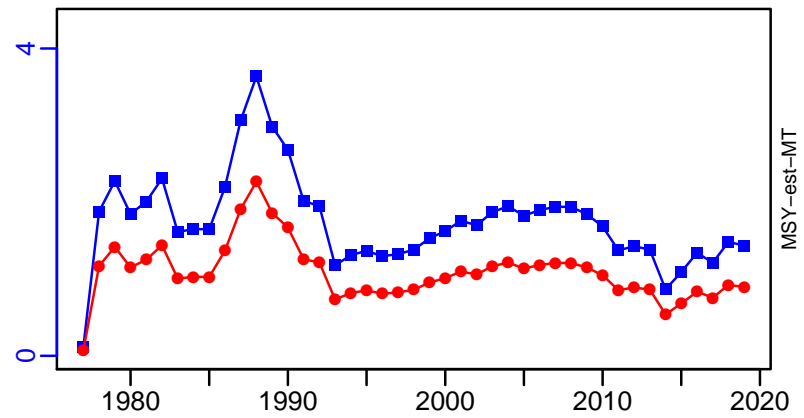
CPUE-1-index (1977–2019–Quiroz)



EFFORT\*



TC–MT/MSY–est–MT, CdivMEANC–ratio, (1977–2019–Quiroz)



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

## South Pacific hake Central-Southern Chile [SPHAKECH]

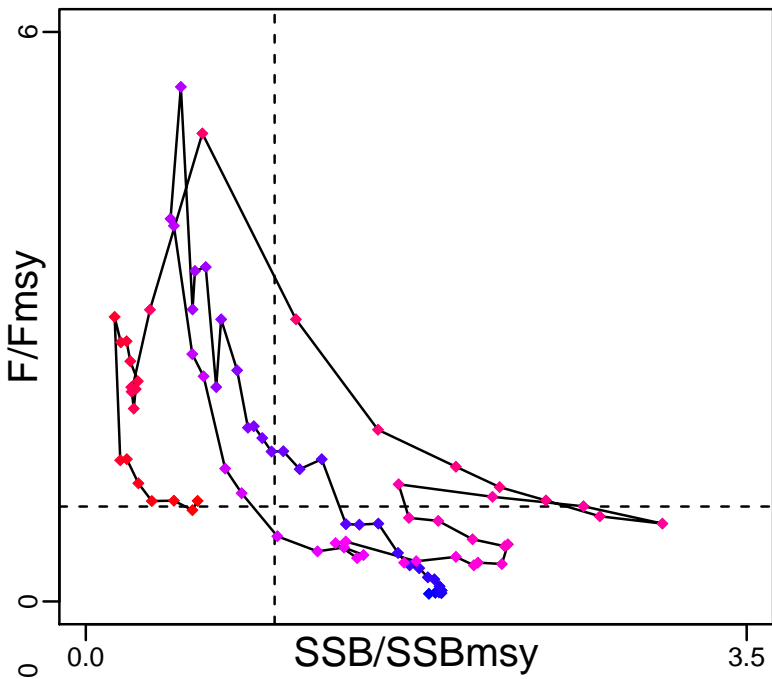
Metadata	
<b>Scientific Name</b>	Merluccius gayi
<b>Current Assess ID</b>	IFOPCH-SPHAKECH-1940-2020-Quiroz
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2015, 2020, 2012

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2012	1,061,146
<b>SSBmsy</b>	SSBmsy-pr-MT	2020	280,000
<b>Fmsy</b>	Fmsy-pr-1/yr	2020	0.2
<b>ERmsy</b>	ERmsy-est-ratio	2020	0.104
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2020	280,000
<b>Fmgt</b>	Fmgt-1/yr	2020	0.2
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2020	587,360
<b>MSY</b>	MSY-est-MT	2020	64,449
<b>M</b>	M-1/yr	2015	0.33
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

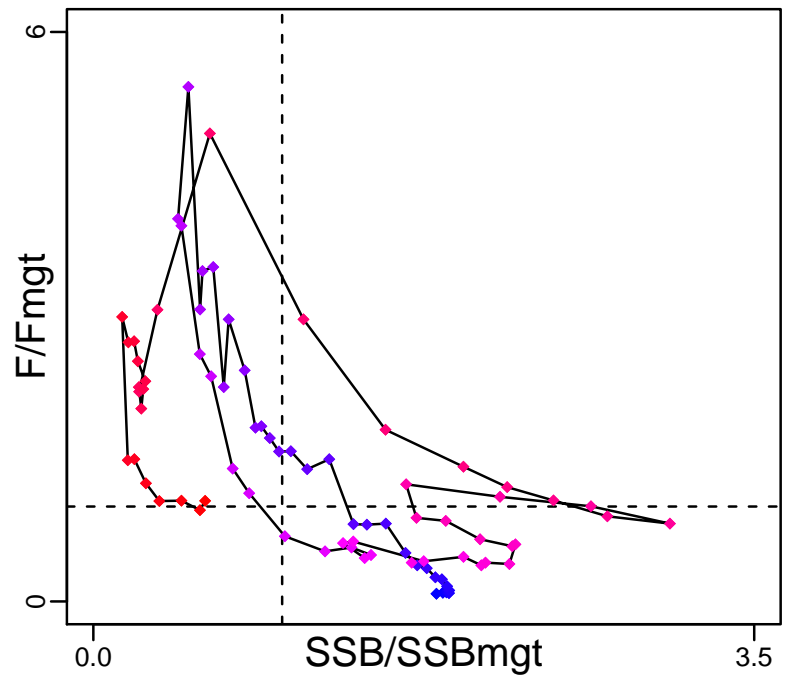
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	381,369	-	-
<b>SSB</b>	SSB-MT	2020	165,767	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	412,339,000	Both	-
<b>F</b>	F-1/yr	2020	0.212	-	-
<b>ER</b>	ER-calc-ratio	2020	0.145	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2020	55,400		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	0.326		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2020	0.592		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2020	1.06		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2020	1.401		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2020	0.592		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2020	1.06		
<b>ER/ERmgt</b>	-	-	-		

# South Pacific hake Central–Southern Chile [SPHAKECH]

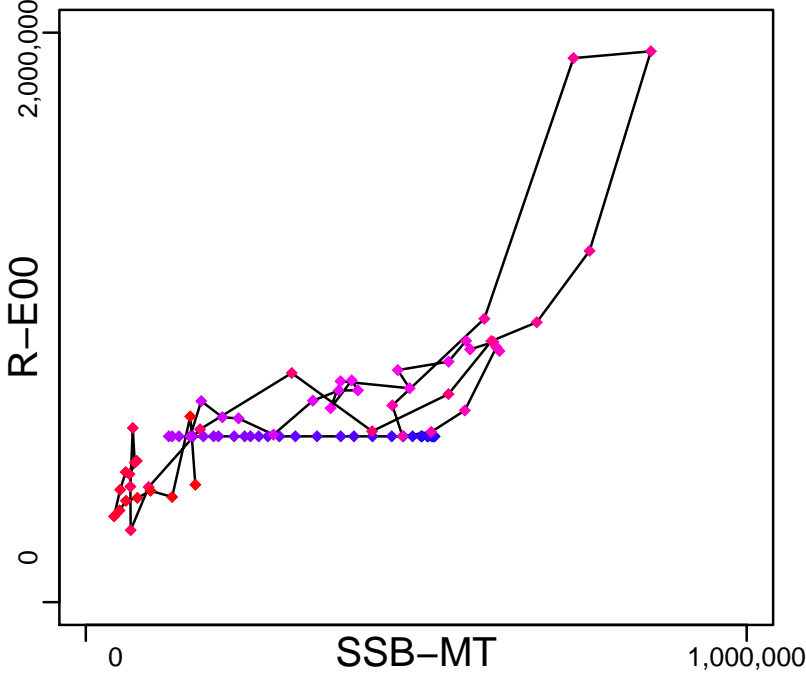
Kobe MSYpref (1940–2020–Quiroz)



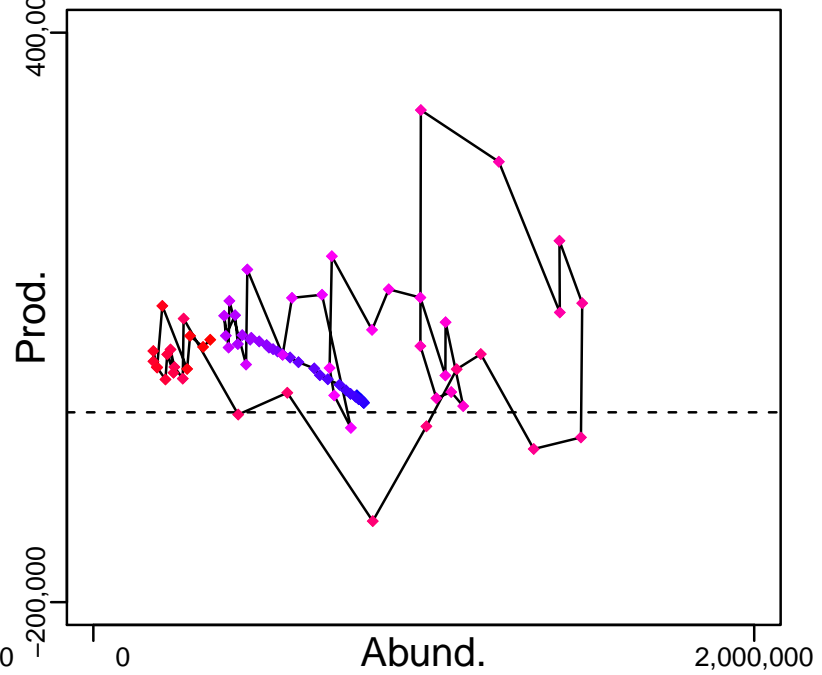
Kobe MGTpref (1940–2020–Quiroz)



Spawner Recruit (1940–2020–Quiroz)



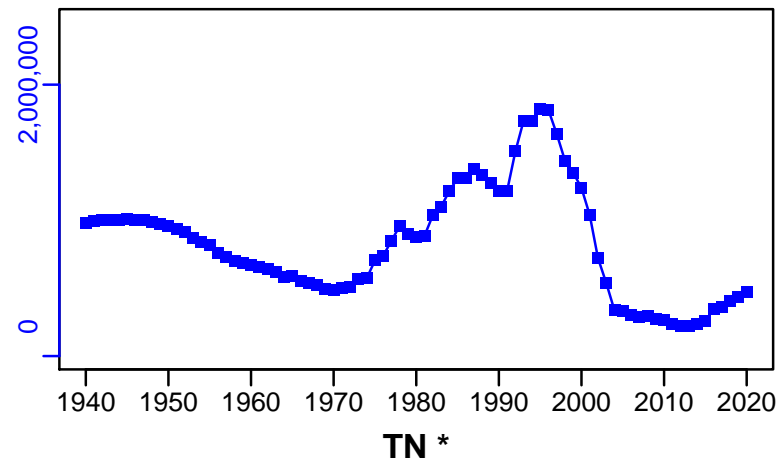
Production (1940–2020–Quiroz)



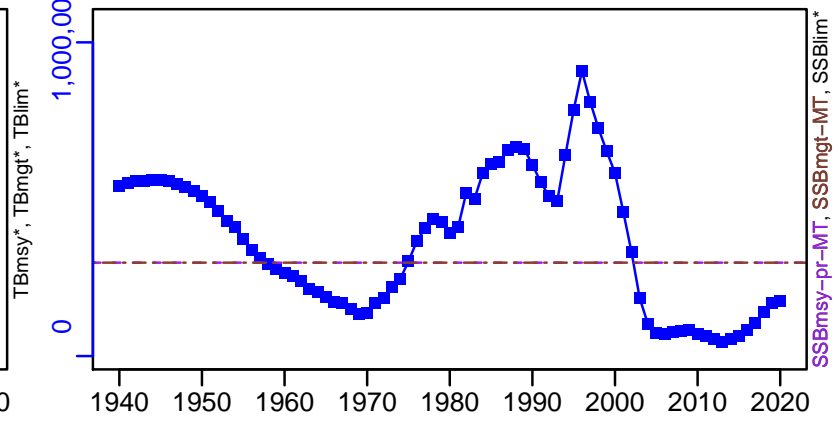
◆ Start Year ◆ End Year \* No Data

# South Pacific hake Central–Southern Chile [SPHAKECH]

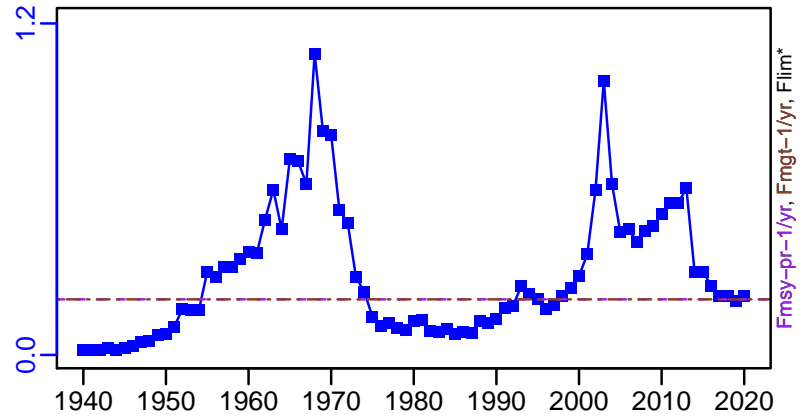
TB–MT (1940–2020–Quiroz)



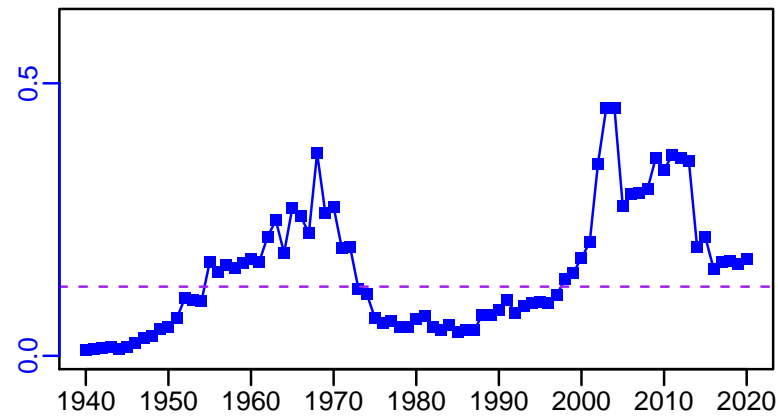
SSB–MT (1940–2020–Quiroz)



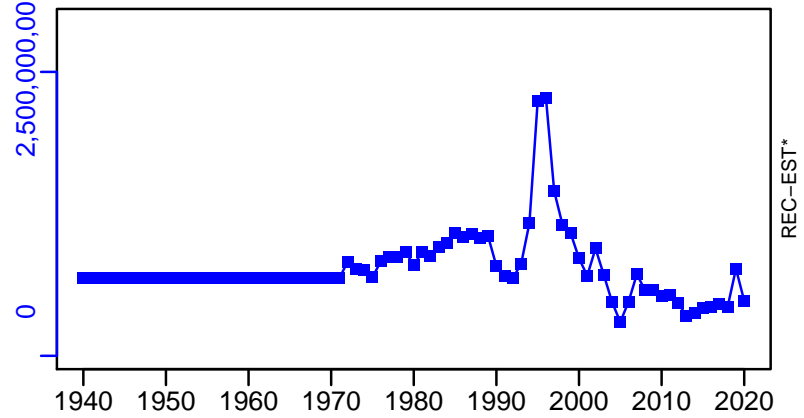
F–1/yr (1940–2020–Quiroz)



ER–calc–ratio (1940–2020–Quiroz)



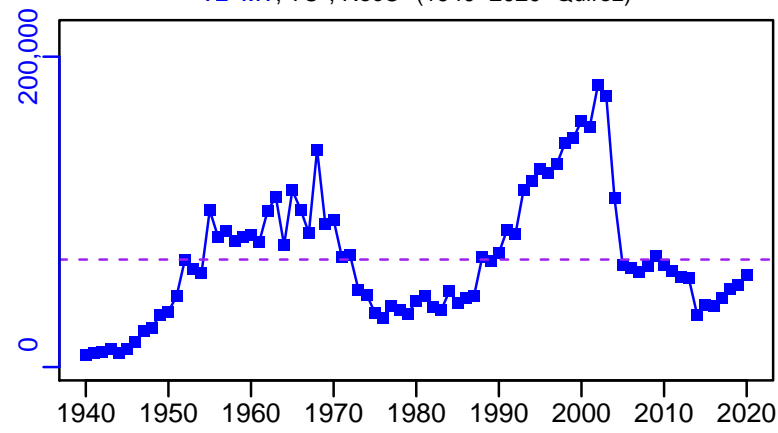
R–E00 (1940–2020–Quiroz)



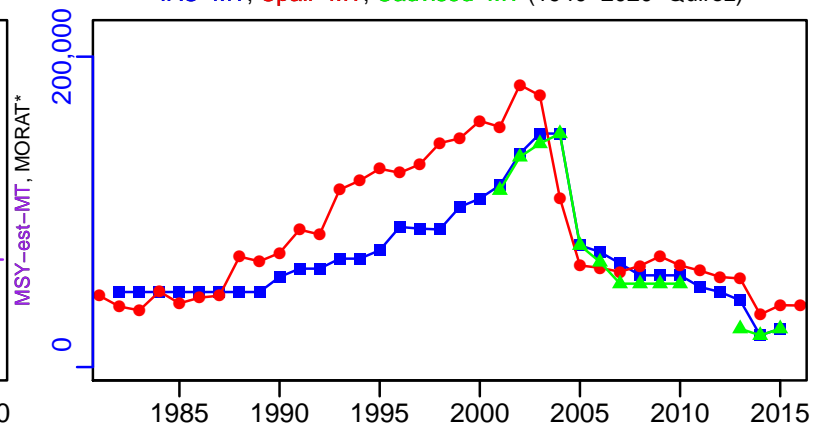


# South Pacific hake Central–Southern Chile [SPHAKECH]

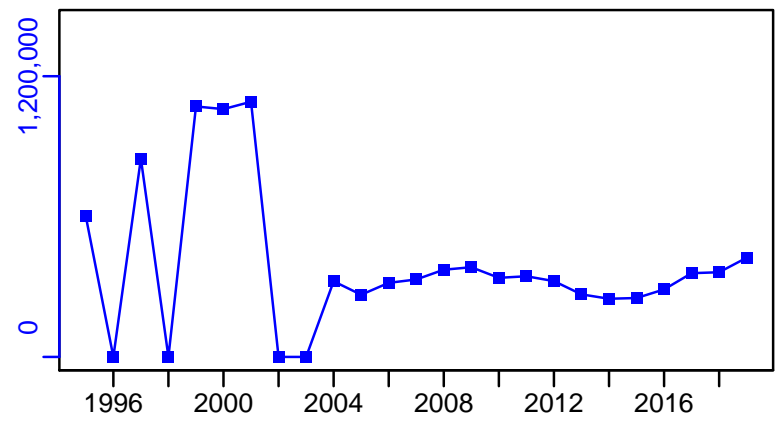
TL–MT, TC\*, RecC\* (1940–2020–Quiroz)



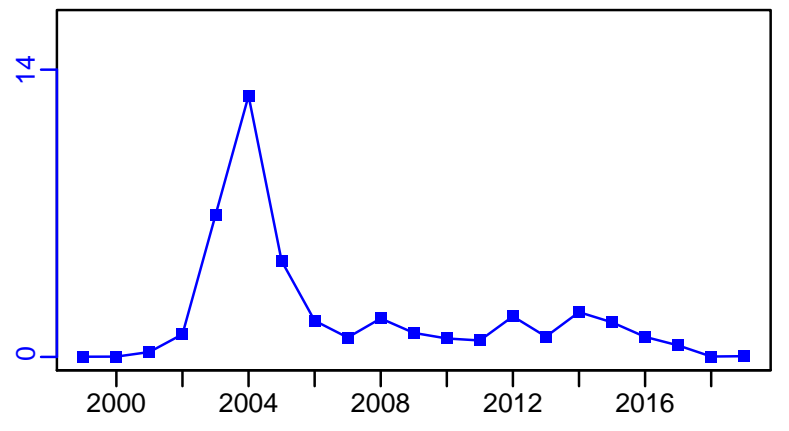
TAC–MT, Cpair–MT, Cadvised–MT (1940–2020–Quiroz)



survB\_absolute–MT (1940–2020–Quiroz)



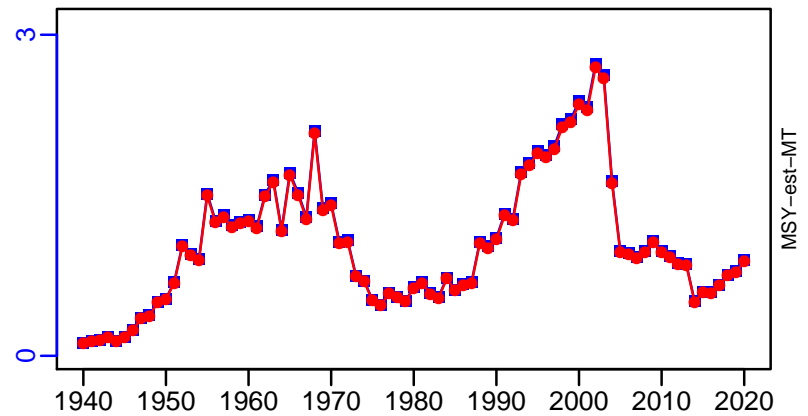
CPUE–index (1940–2020–Quiroz)



**EFFORT\***



TL–MT/MSY–est–MT, CdivMEANC–ratio, (1940–2020–Quiroz)



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

## Southern sardine Central-Southern Chile [SSARDCH]

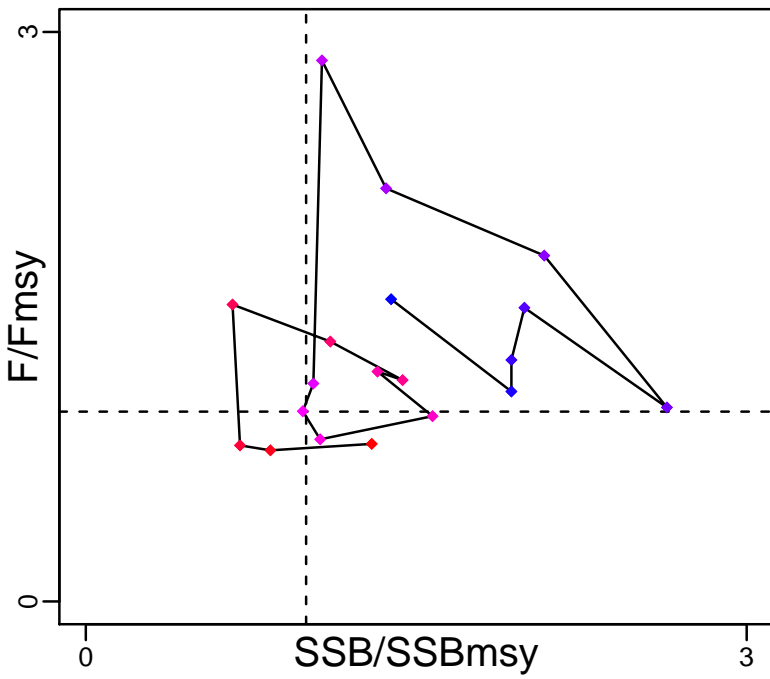
Metadata	
<b>Scientific Name</b>	Sprattus fuegensis
<b>Current Assess ID</b>	IFOPCH-SSARDCH-2002-2020-Quiroz
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-est-MT	2012	365,955
<b>SSBmsy</b>	SSBmsy-pr-MT	2020	29,549
<b>Fmsy</b>	Fmsy-pr-1/yr	2020	0.31
<b>ERmsy</b>	ERmsy-conv-ratio	2020	0.172
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2016	32,400
<b>Fmgt</b>	Fmgt-1/yr	2016	0.34
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2020	53,725
<b>MSY</b>	MSY-MT	2020	17,982
<b>M</b>	M-1/yr	2020	0.83
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2020	14,774
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

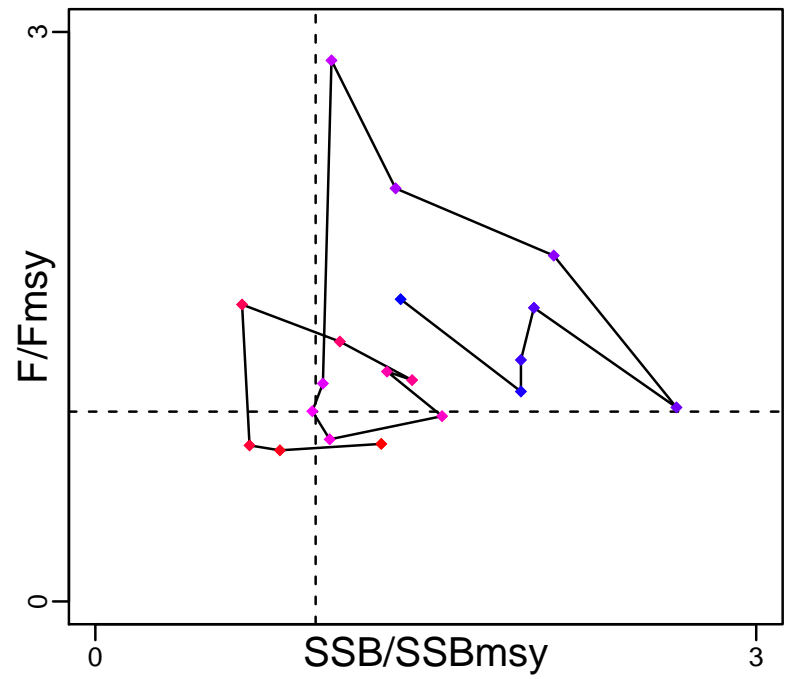
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2020	113,800	-	-
<b>SSB</b>	SSB-MT	2020	38,349	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	2378	Both	-
<b>F</b>	F-1/yr	2020	0.26	Both	-
<b>ER</b>	ER-ratio	2020	0.134	-	-
<b>TC</b>	TC-MT	2020	15,471		
<b>TL</b>	TL-MT	2016	20,000		
<b>TB/TBmsy</b>	TB-MT/TBmsy-est-MT	2012	0.336		
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2020	1.298		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2020	0.83		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-conv-ratio	2020	0.78		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2016	1.296		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	0.941		
<b>ER/ERmgt</b>	-	-	-		

# Southern sardine Central–Southern Chile [SSARDCH]

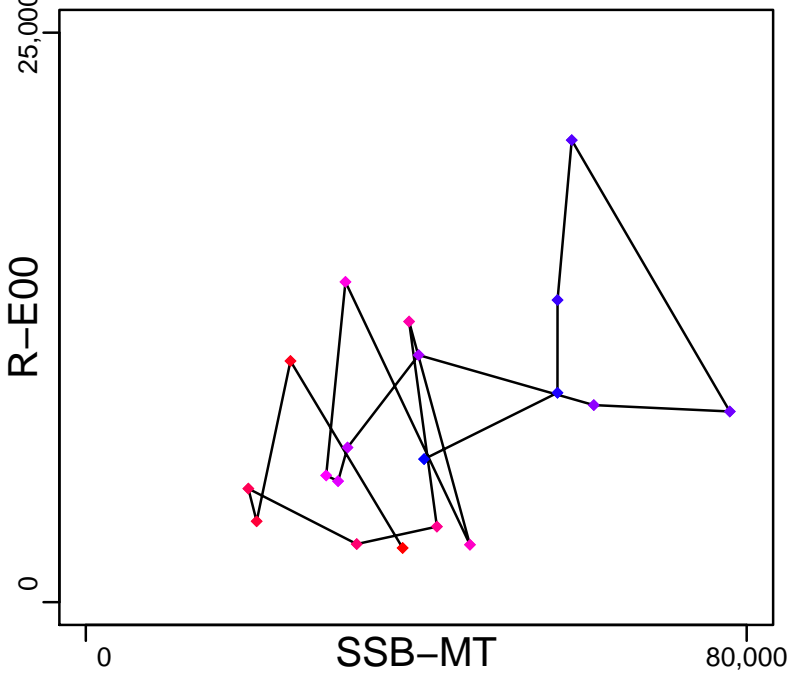
Kobe MSYpref (2002–2020–Quiroz)



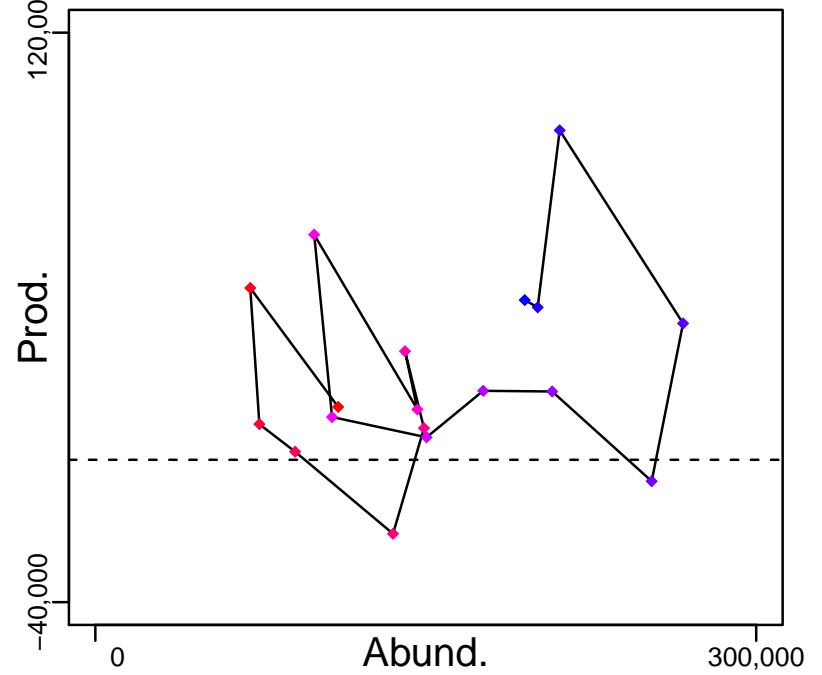
Kobe MGTpref (2002–2020–Quiroz)



Spawner Recruit (2002–2020–Quiroz)

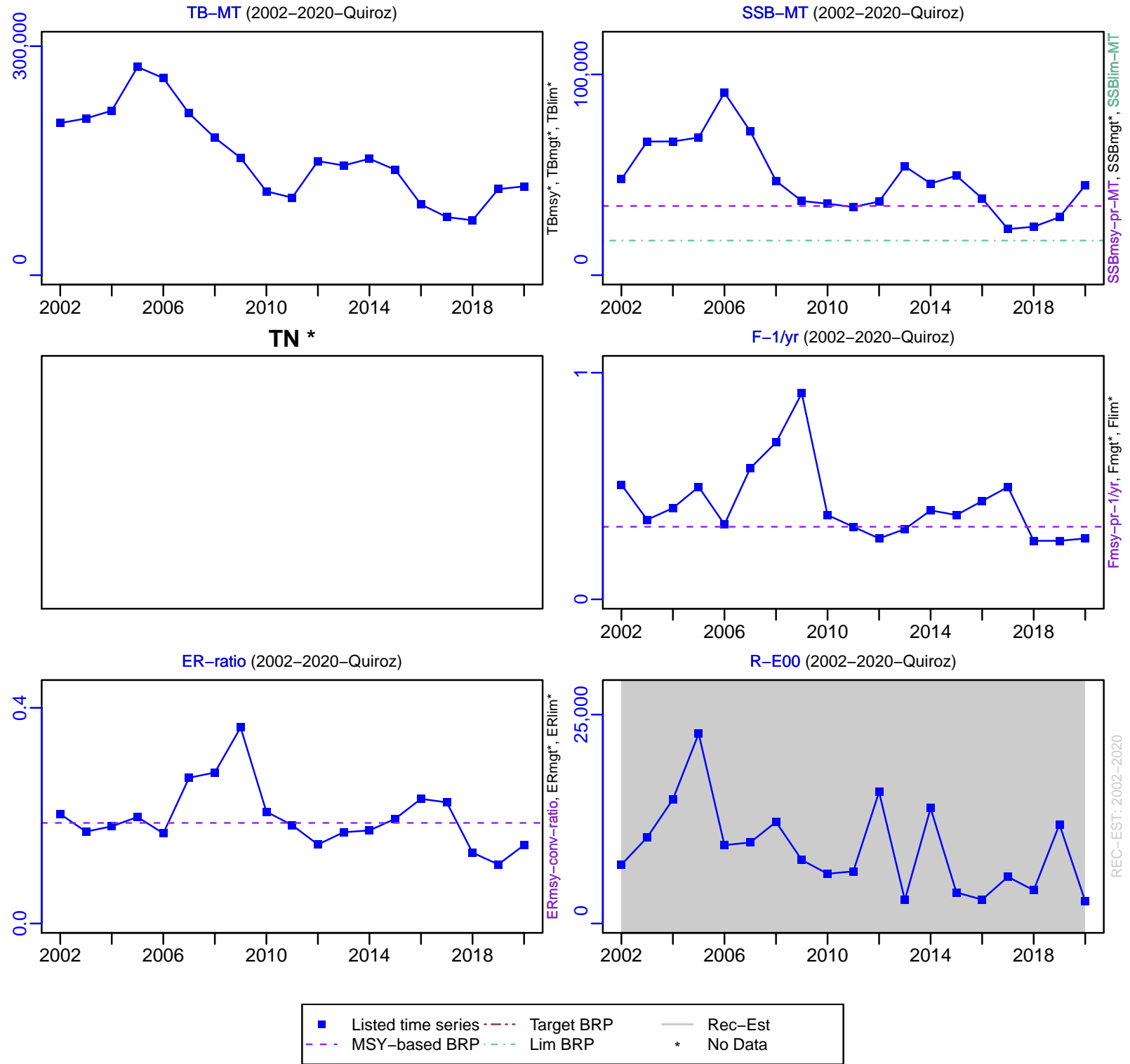


Production (2002–2020–Quiroz)



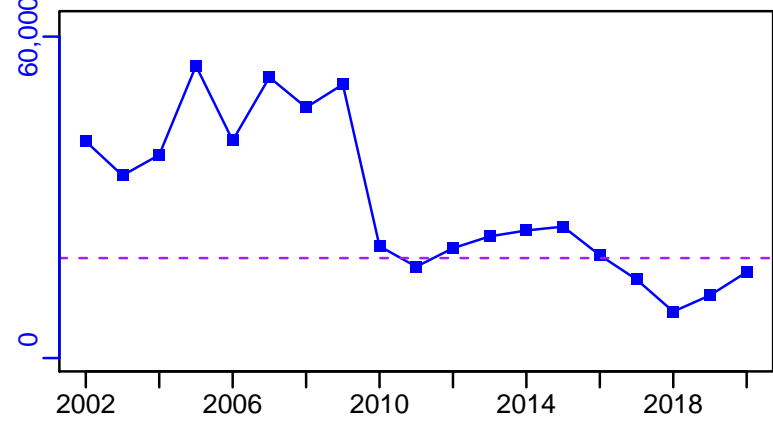
◆ Start Year ◆ End Year \* No Data

# Southern sardine Central–Southern Chile [SSARDCH]

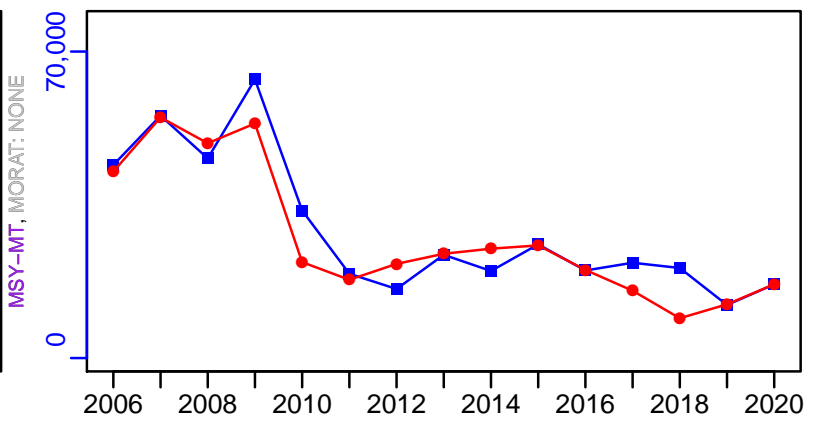


# Southern sardine Central–Southern Chile [SSARDCH]

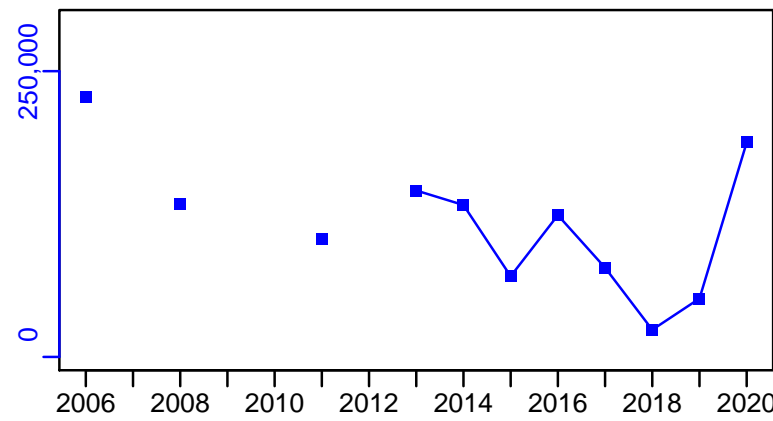
TC–MT, TL\*, RecC\* (2002–2020–Quiroz)



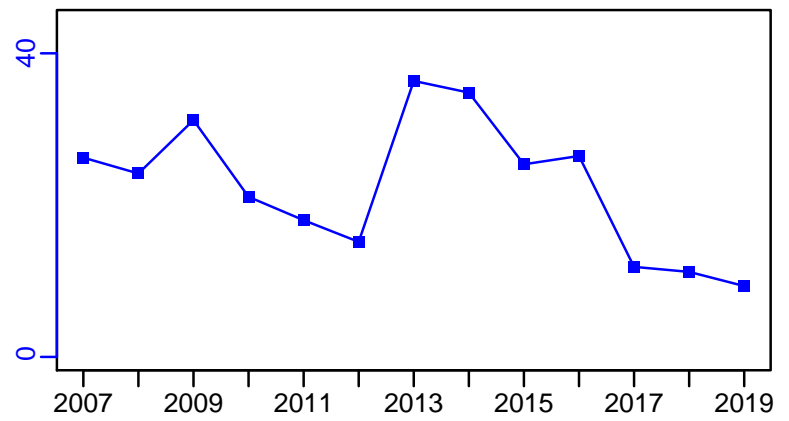
TAC–MT, Cpair–MT, Cadv\* (2002–2020–Quiroz)



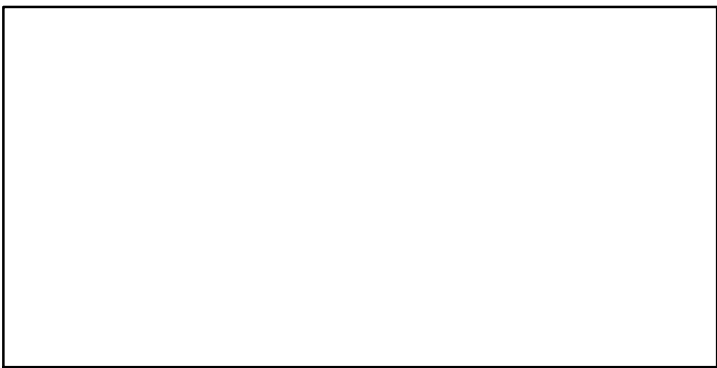
survB\_absolute–MT (2002–2020–Quiroz)



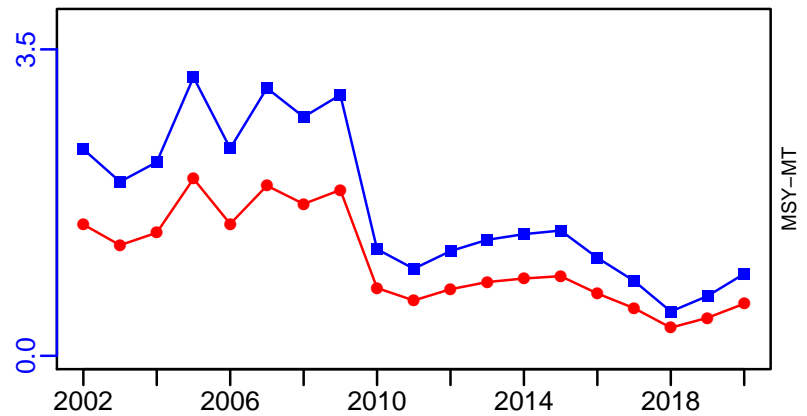
CPUE–index (2002–2020–Quiroz)



**EFFORT\***



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



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

## Yellownose skate Central-Southern Chile [YNOSESKACSCH]

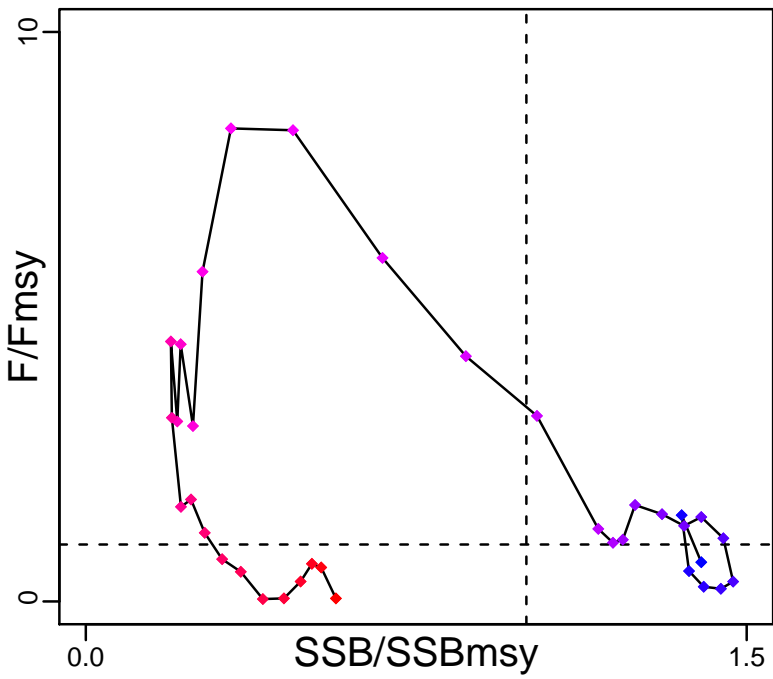
Metadata	
<b>Scientific Name</b>	Zearaja chilensis
<b>Current Assess ID</b>	IFOPCH-YNOSESKACSCH-1978-2014-PARMA
<b>Area</b>	Central-Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2014

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2014	1797
<b>Fmsy</b>	Fmsy-1/yr	2014	0.062
<b>ERmsy</b>	ERmsy-est-ratio	2014	0.029
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2014	1797
<b>Fmgt</b>	Fmgt-1/yr	2014	0.062
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2014	3993
<b>MSY</b>	MSY-est-MT	2014	413
<b>M</b>	M-1/yr	2014	0.14
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2014	898
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

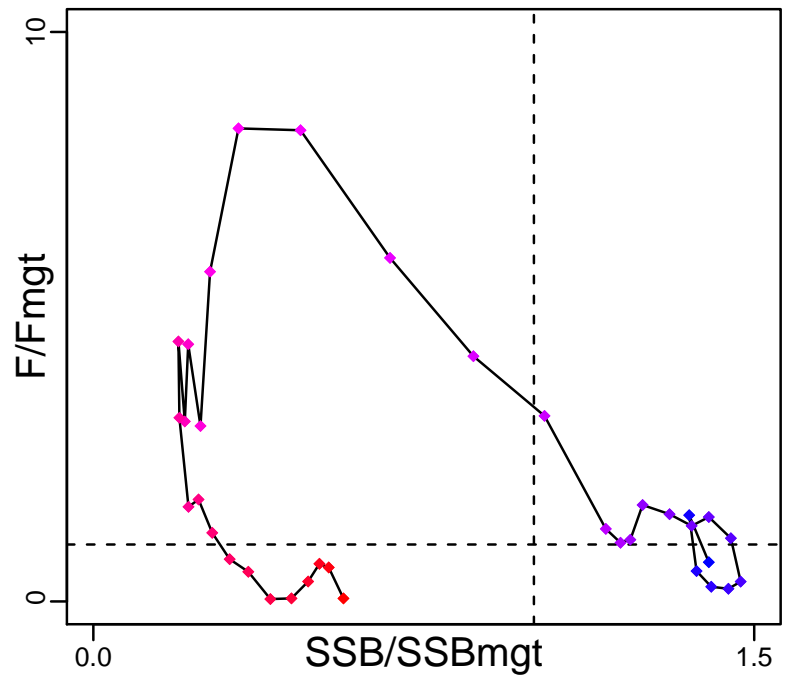
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2014	6090	-	-
<b>SSB</b>	SSB-MT	2014	1020	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2014	253,000	-	1
<b>F</b>	F-1/yr	2014	0.003	Females	-
<b>ER</b>	ER-calc-ratio	2014	0.002	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2014	15		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2014	0.568		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2014	0.053		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2014	0.086		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2014	0.568		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2014	0.053		
<b>ER/ERmgt</b>	-	-	-		

# Yellownose skate Central–Southern Chile [YNOSESKACSCH]

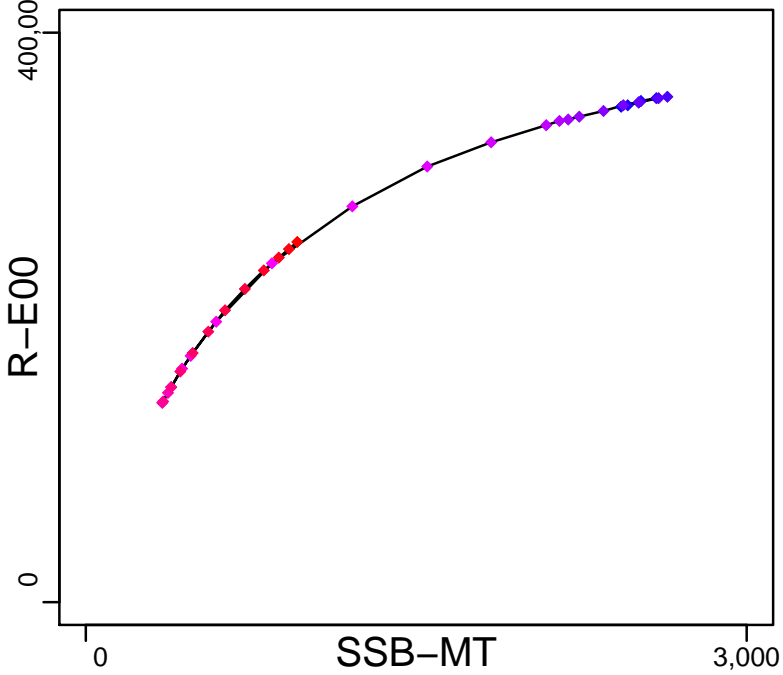
Kobe MSYpref (1978–2014–PARMA)



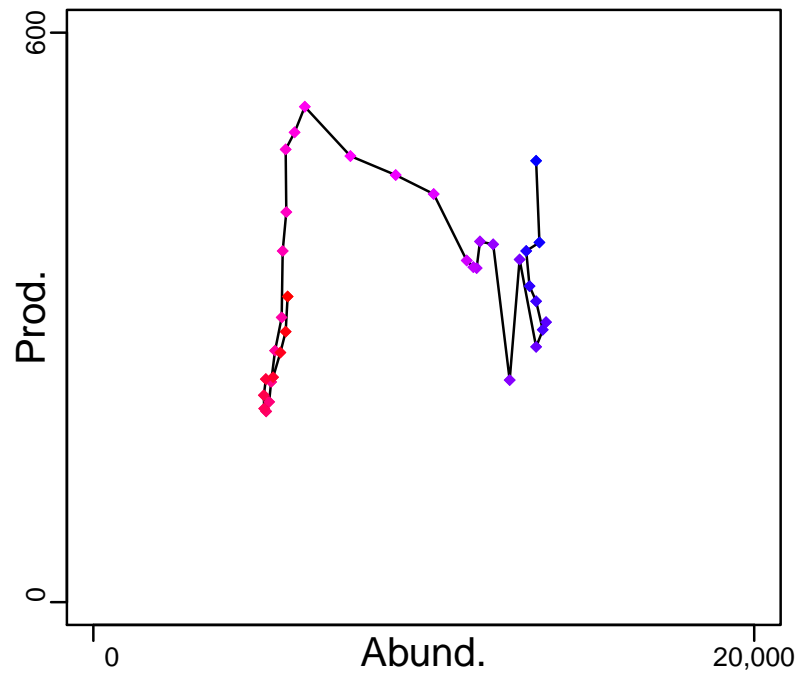
Kobe MGTpref (1978–2014–PARMA)



Spawner Recruit (1978–2014–PARMA)



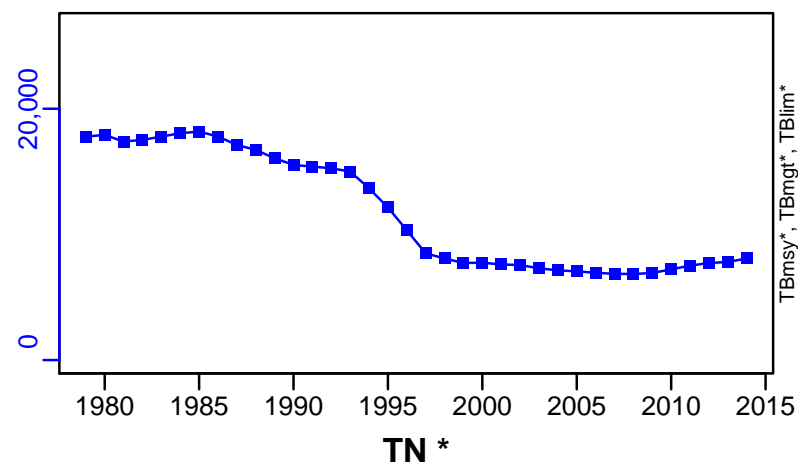
Production (1978–2014–PARMA)



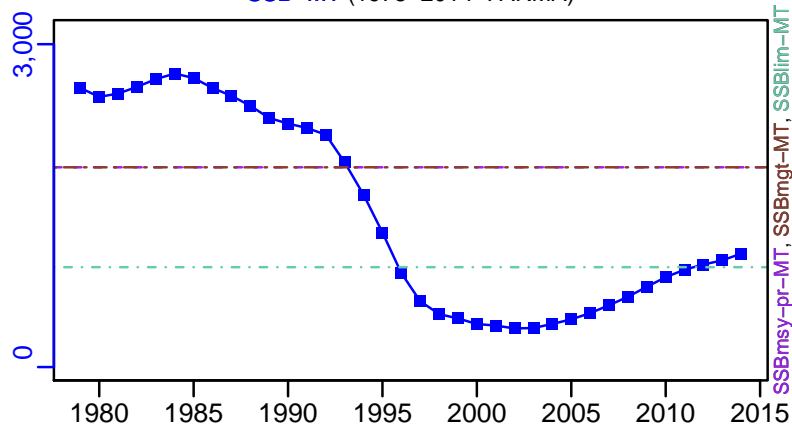
◆ Start Year ◆ End Year \* No Data

# Yellownose skate Central–Southern Chile [YNOSESKACSCH]

TB–MT (1978–2014–PARMA)



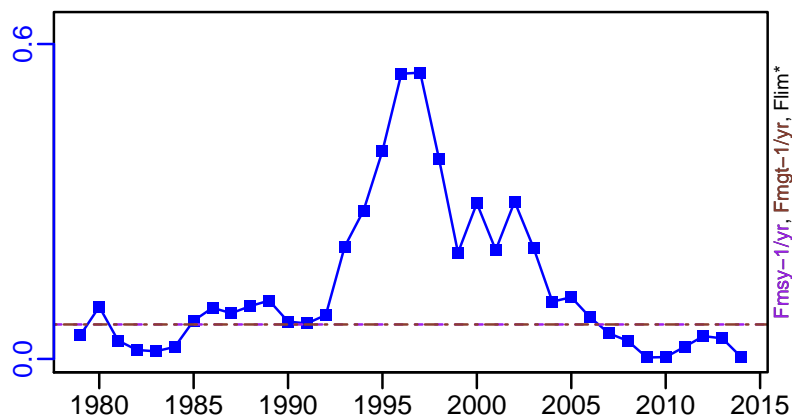
SSB–MT (1978–2014–PARMA)



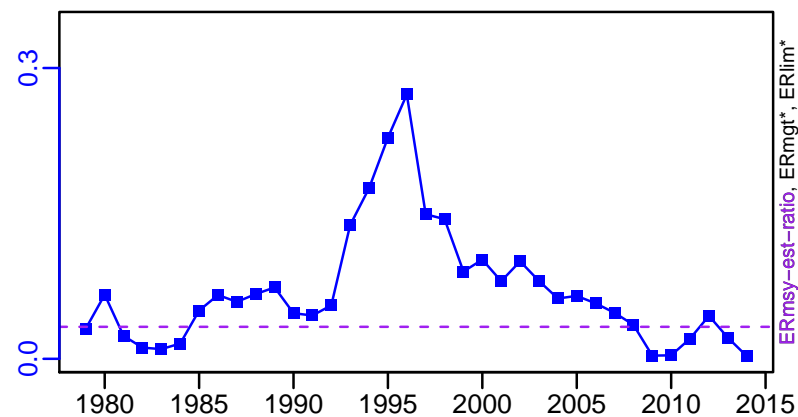
TN \*



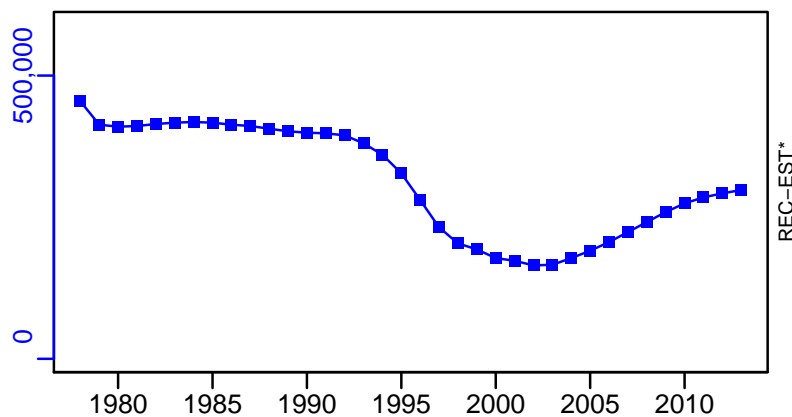
F–1/yr (1978–2014–PARMA)



ER–calc–ratio (1978–2014–PARMA)



R–E00 (1978–2014–PARMA)

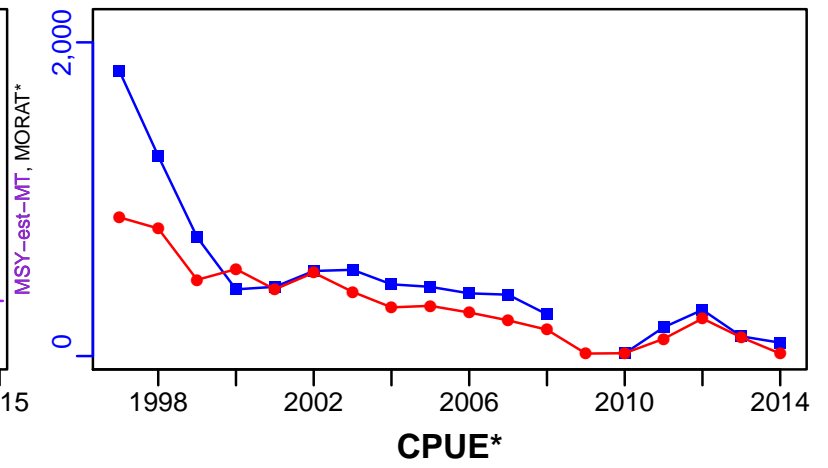
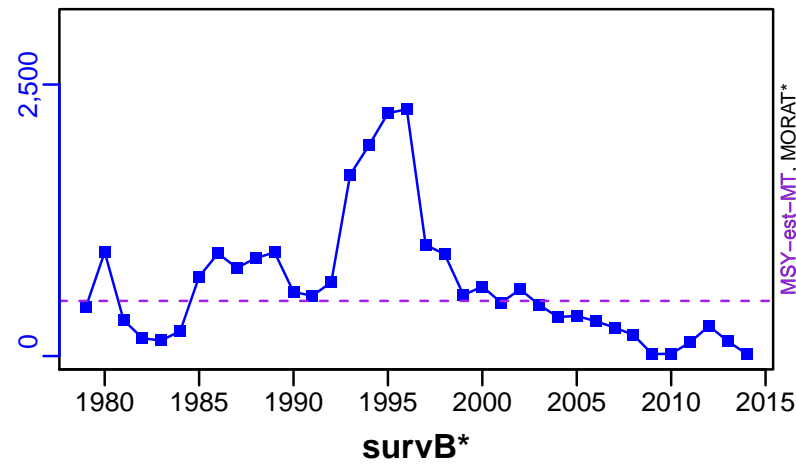




# Yellownose skate Central–Southern Chile [YNOSESKACSCH]

TL–MT, TC\*, RecC\* (1978–2014–PARMA)

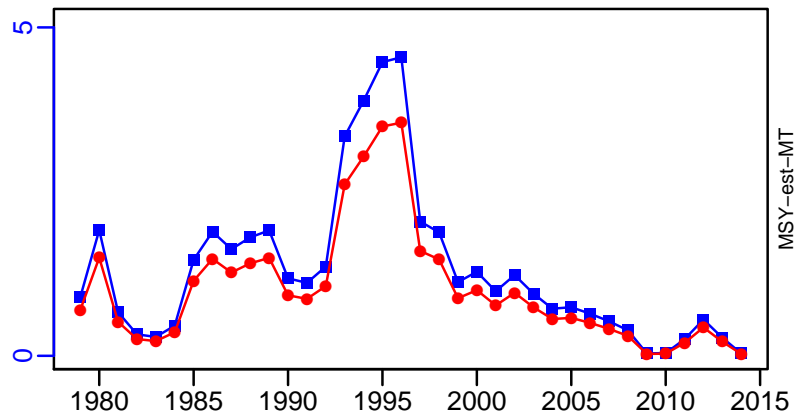
TAC–MT, Cpair–MT, Cadv\* (1978–2014–PARMA)



EFFORT\*



TL–MT/MSY–est–MT, CdivMEANC–ratio, (1978–2014–PARMA)



## Yellownose skate Southern Chile [YNOSESKASCH]

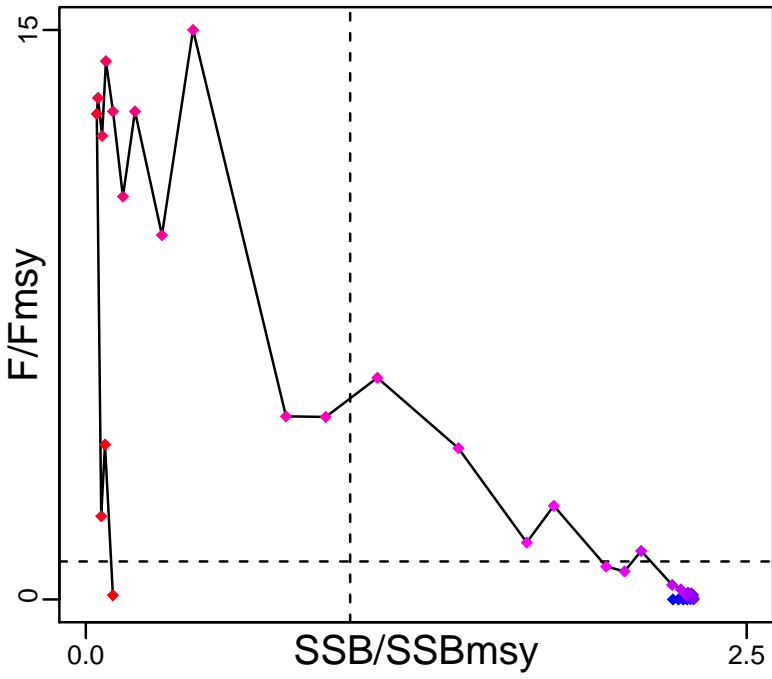
Metadata	
<b>Scientific Name</b>	Zearaja chilensis
<b>Current Assess ID</b>	IFOPCH-YNOSESKASCH-1978-2014-PARMA
<b>Area</b>	Southern Chile
<b>Management Authority</b>	Subsecretaria de Pesca
<b>Assessor</b>	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
<b>Asmts in RAM</b>	2014

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2014	3327
<b>Fmsy</b>	Fmsy-1/yr	2014	0.062
<b>ERmsy</b>	ERmsy-est-ratio	2014	0.013
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2014	3327
<b>Fmgt</b>	Fmgt-1/yr	2014	0.062
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2014	7394
<b>MSY</b>	MSY-est-MT	2014	340
<b>M</b>	M-1/yr	2014	0.14
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2014	1664
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

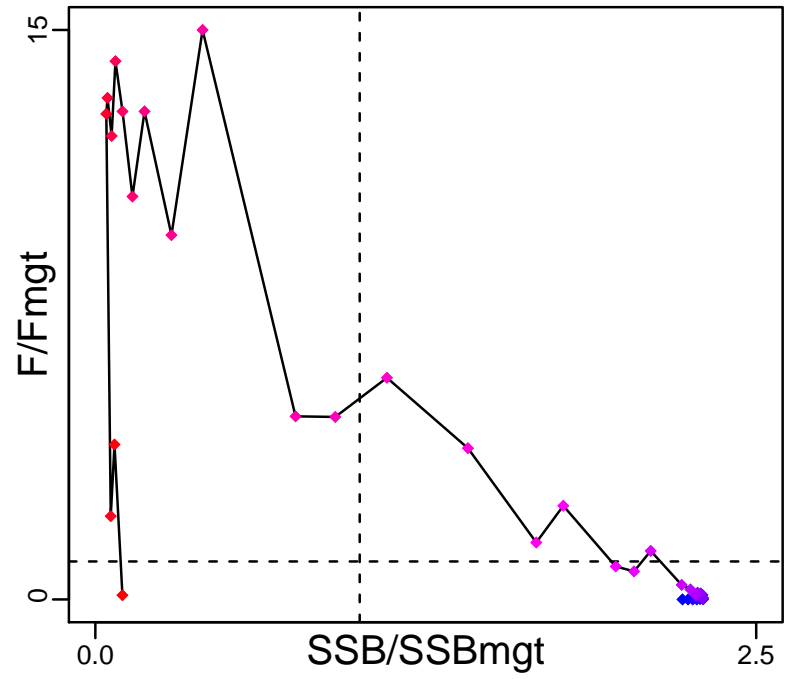
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2014	3850	-	-
<b>SSB</b>	SSB-MT	2014	341	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2014	113	-	1
<b>F</b>	F-1/yr	2014	0.007	Females	-
<b>ER</b>	ER-calc-ratio	2014	0.004	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	TL-MT	2014	16		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2014	0.102		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2014	0.112		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-est-ratio	2014	0.325		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2014	0.102		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2014	0.112		
<b>ER/ERmgt</b>	-	-	-		

# Yellownose skate Southern Chile [YNOSESKASCH]

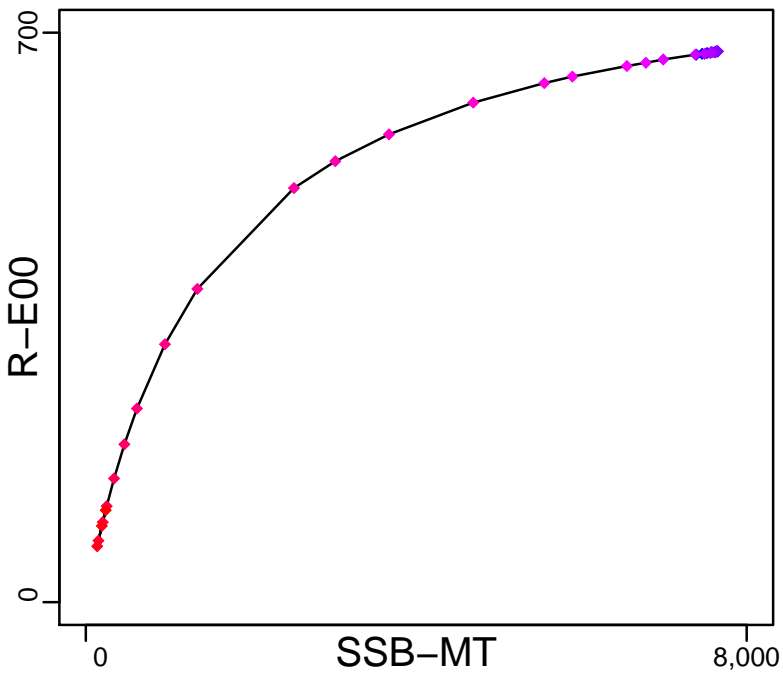
Kobe MSYpref (1978–2014–PARMA)



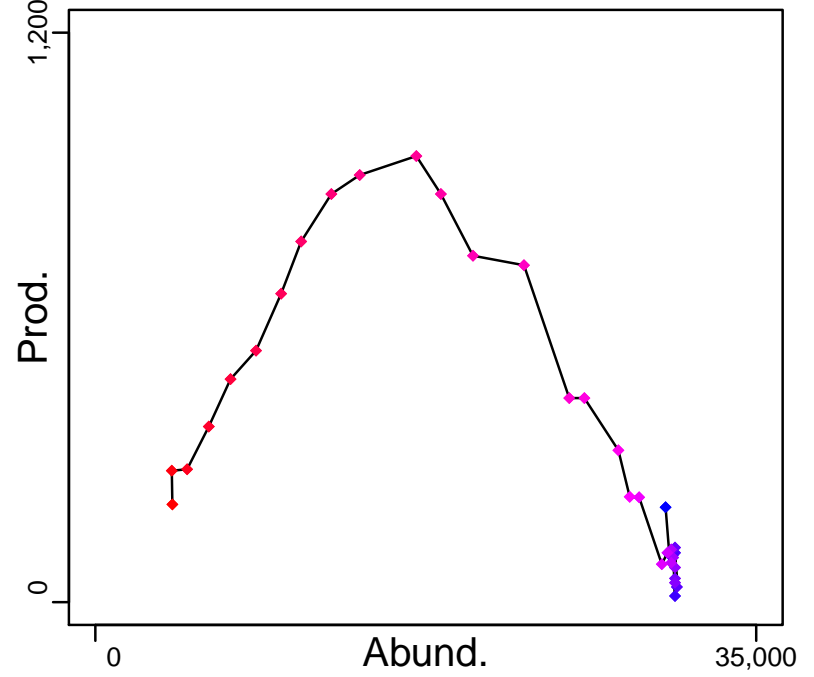
Kobe MGTpref (1978–2014–PARMA)



Spawner Recruit (1978–2014–PARMA)



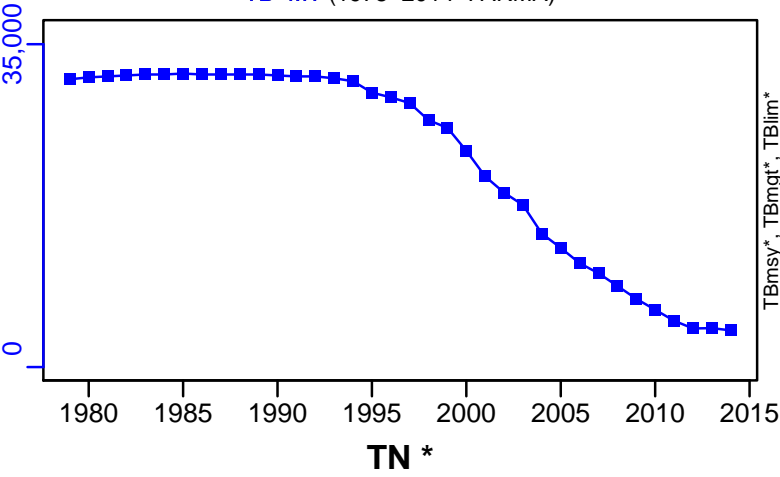
Production (1978–2014–PARMA)



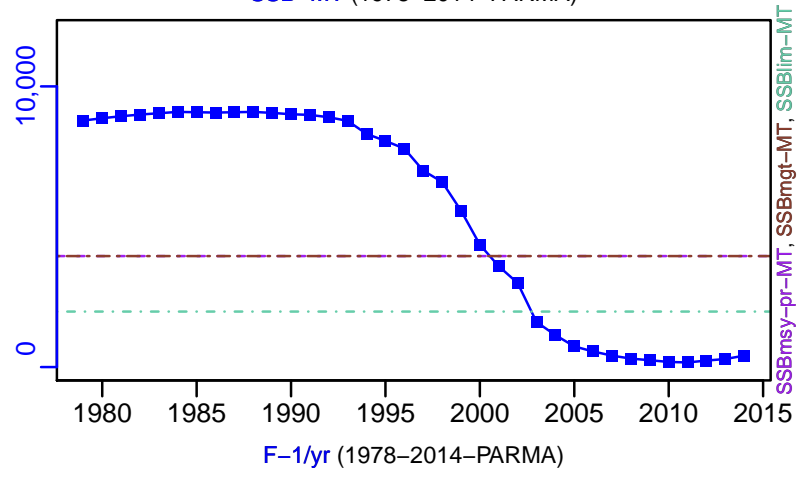
◆ Start Year ◆ End Year \* No Data

# Yellownose skate Southern Chile [YNOSESKASCH]

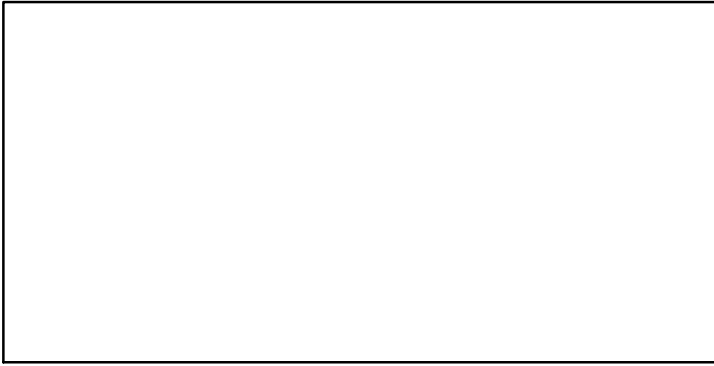
TB-MT (1978-2014-PARMA)



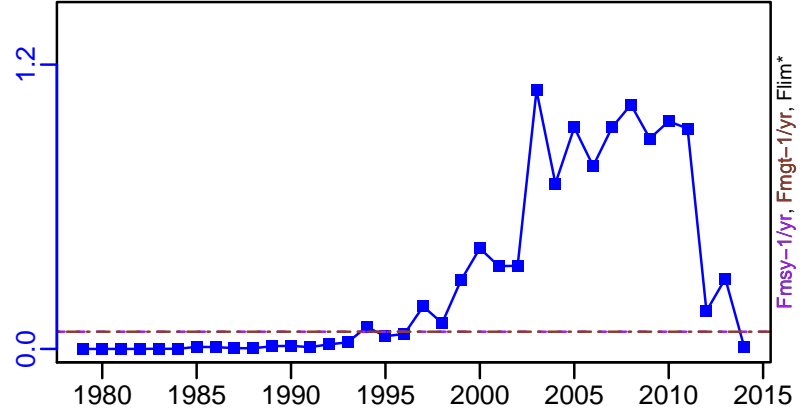
SSB-MT (1978-2014-PARMA)



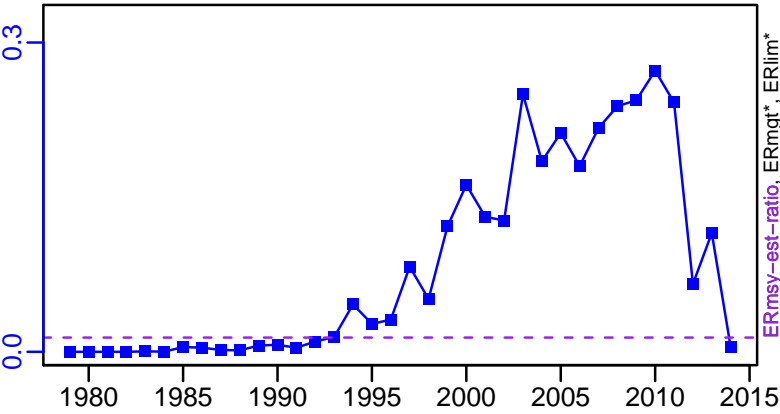
TN \*



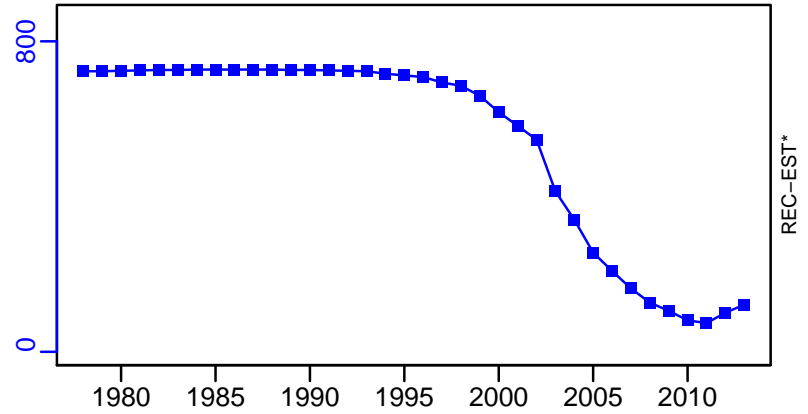
F-1/yr (1978-2014-PARMA)



ER-calc-ratio (1978-2014-PARMA)



R-E00 (1978-2014-PARMA)



# Yellownose skate Southern Chile [YNOSESKASCH]

TL-MT, TC\*, RecC\* (1978–2014–PARMA)

TAC-MT, Cpair-MT, Cadv\* (1978–2014–PARMA)

