

South Africa Stocks

v4.491 (Dec-21-2019)

Not present Present Preferred

Stock	B/Bmsy	Time Series Types			
		U/Umsy	B/Bmgt	U/Umgt	
1. ANCHOSA [Anchovy South Africa]	TB SSB	ER F	TB SSB	ER F	
2. CHAKESA [Shallow water cape hake South Africa]	TB SSB	ER F	TB SSB	ER F	
3. CHSQUIDSA [Cape Hope squid South Africa]	TB SSB	ER F	TB SSB	ER F	
4. CRLOBSTERSA12 [West coast rock lobster South Africa Areas 1-2]	TB SSB	ER F	TB SSB	ER F	
5. CRLOBSTERSA34 [West coast rock lobster South Africa Areas 3-4]	TB SSB	ER F	TB SSB	ER F	
6. CRLOBSTERSA56 [West coast rock lobster South Africa Areas 5-6]	TB SSB	ER F	TB SSB	ER F	
7. CRLOBSTERSA7 [West coast rock lobster South Africa Area 7]	TB SSB	ER F	TB SSB	ER F	
8. CRLOBSTERSA8 [West coast rock lobster South Africa Area 8]	TB SSB	ER F	TB SSB	ER F	
9. CTRACSA [Cape horse mackerel South Africa South coast]	TB SSB	ER F	TB SSB	ER F	
10. DEEPCHAKESA [Deep water cape hake South Africa]	TB SSB	ER F	TB SSB	ER F	
11. KINGKLIPSA [Kingklip South Africa]	TB SSB	ER F	TB SSB	ER F	
12. PTOOTHFISHPEI [Patagonian toothfish South Africa Subantarctic Prince Edward Islands]	TB SSB	ER F	TB SSB	ER F	
13. SAABALONESA [South African abalone South Africa]	TB SSB	ER F	TB SSB	ER F	
14. SARDSA [Sardine South Africa]	TB SSB	ER F	TB SSB	ER F	
15. SSLOBSTERSASC [Southern spiny lobster South Africa South coast]	TB SSB	ER F	TB SSB	ER F	

Anchovy South Africa [ANCHOSA]

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

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2015	5,261,270
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2015	1.2
TBlim	TBlim-MT	2015	204,441
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	3,340,000	Both	0+
SSB	SSB-MT	2015	2,020,000	Both	0+
TN	TN-E00	2015	9.94×10^{11}	Both	0+
R	R-E00	2015	6.41×10^{11}	Both	-
F	-	-	-	-	-
ER	ER-ratio	2015	0.053	Both	0+
TC	TC-MT	2015	238,000		
TL	TL-MT	2015	238,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Anchovy South Africa [ANCHOSA]

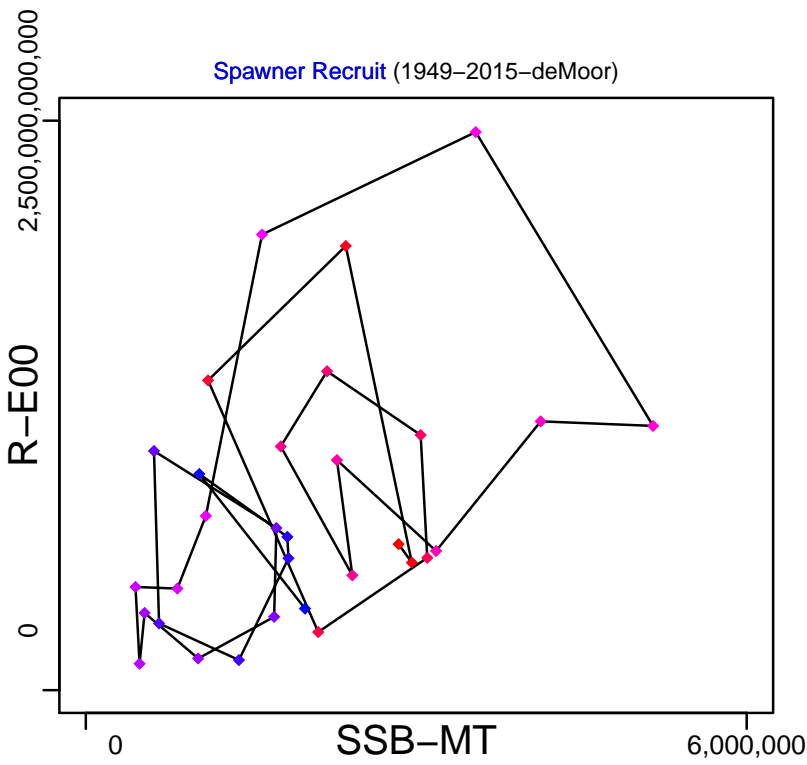
Kobe MSY*



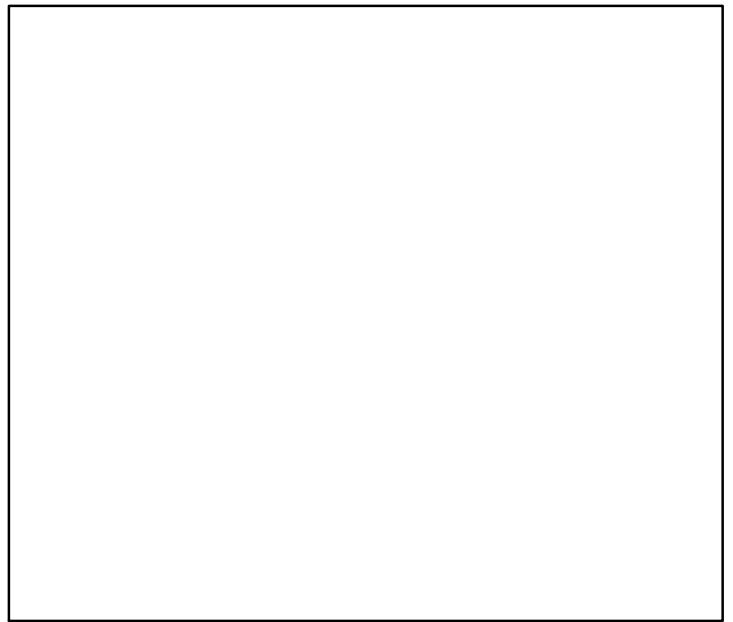
Kobe MGT*



Spawner Recruit (1949–2015–deMoor)

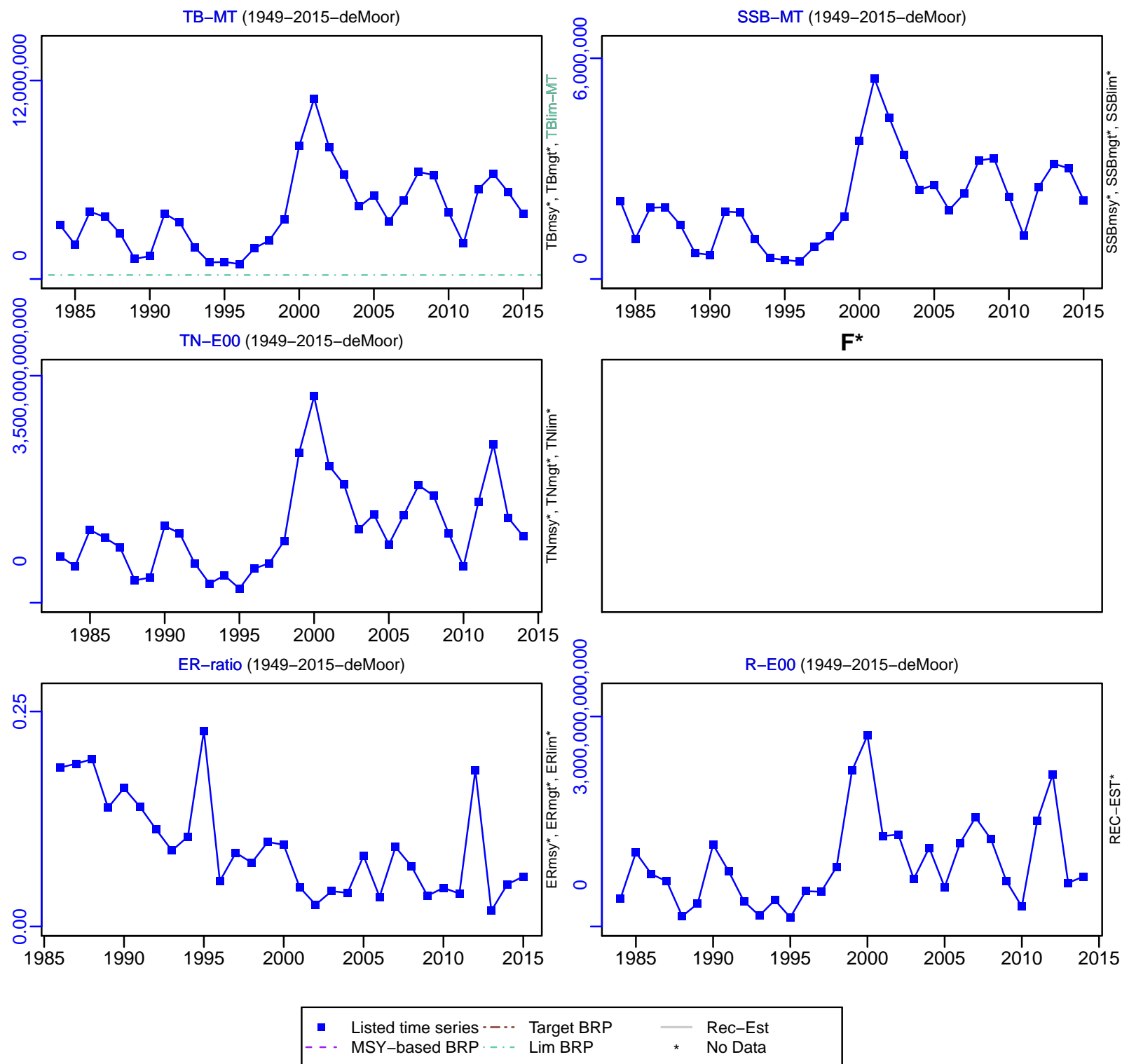


Production*



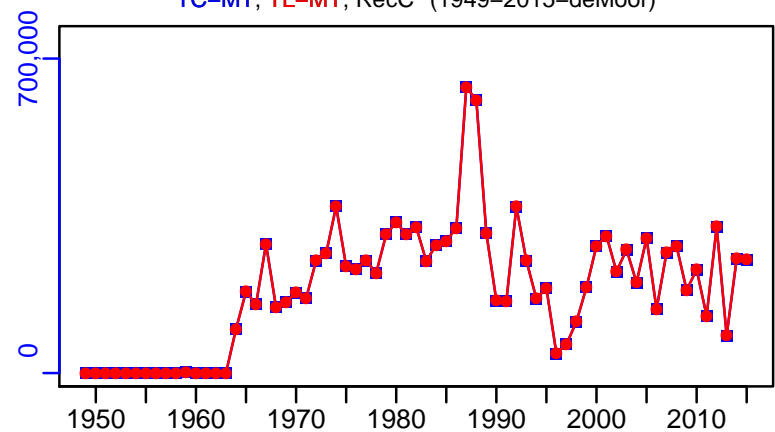
◆ Start Year ◆ End Year * No Data

Anchovy South Africa [ANCHOSA]

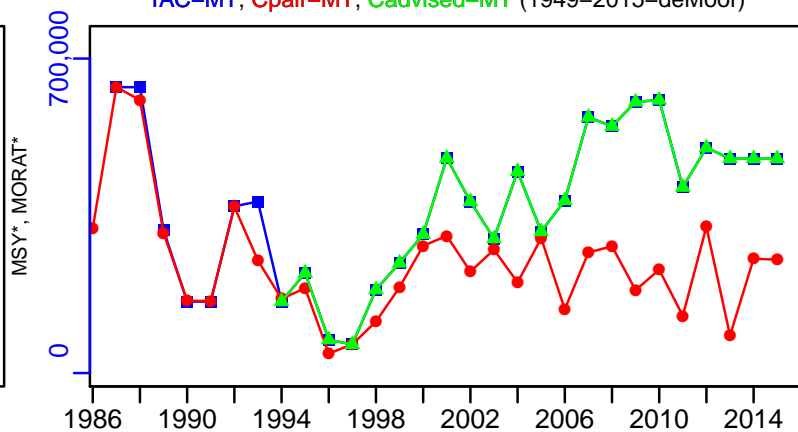


Anchovy South Africa [ANCHOSA]

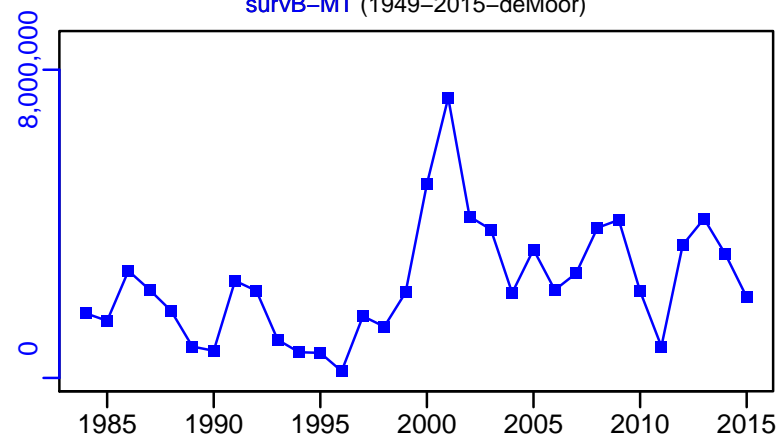
TC-MT, TL-MT, RecC* (1949–2015–deMoor)



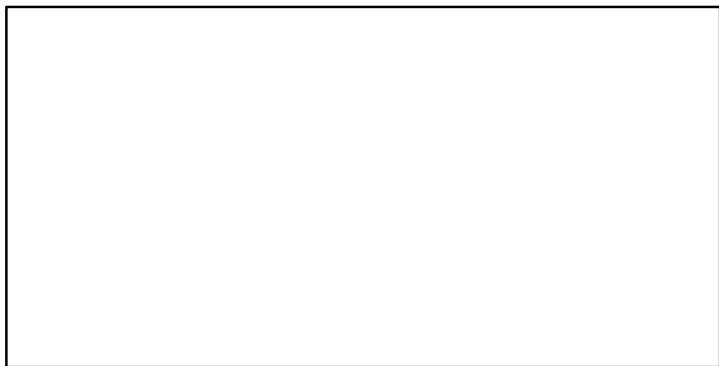
TAC-MT, Cpair-MT, Cadvised-MT (1949–2015–deMoor)



survB-MT (1949–2015–deMoor)



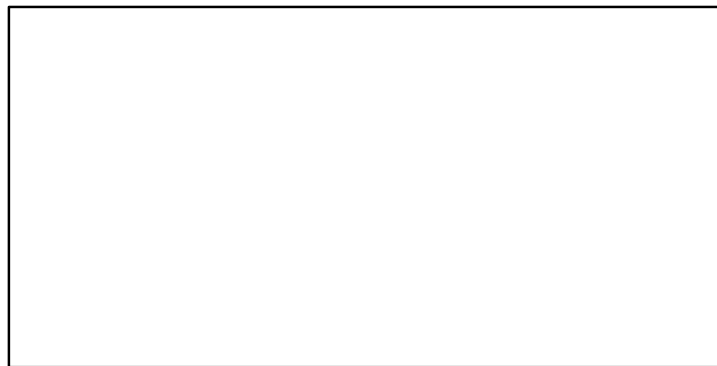
EFFORT*



CPUE*



CdivMSY*



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

Shallow water cape hake South Africa [CHAKESA]

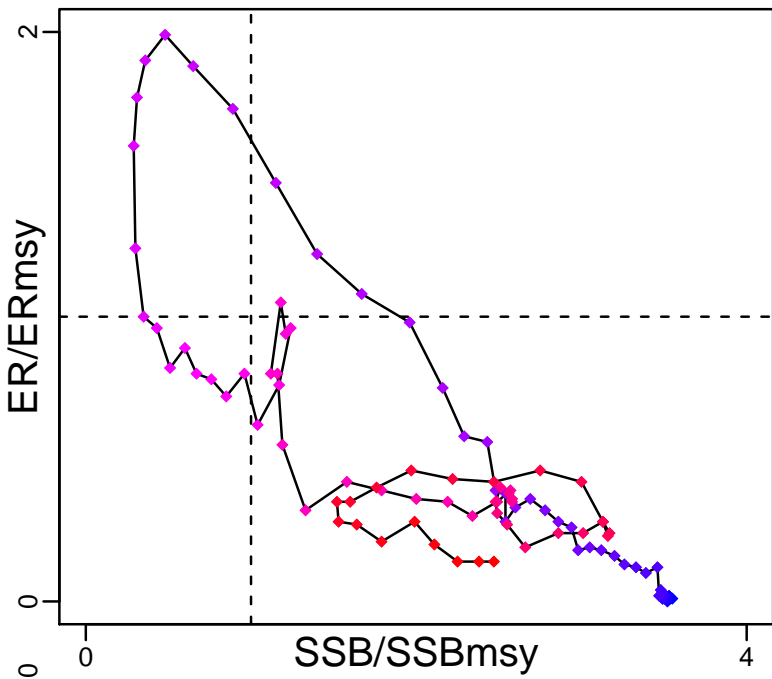
Metadata	
Scientific Name	Merluccius capensis
Current Assess ID	MARAM-CHAKESA-1917-2015-Rademeyer
Area	South Africa
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2013, 2015

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-MT	2015	63,100
Fmsy	Fmsy-1/yr	2013	0.32
ERmsy	ERmsy-ratio	2015	0.353
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2015	63,100
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2015	635,500
SSB0	SSB0-MT	2015	223,800
MSY	MSY-MT	2015	62,800
M	M-1/yr	2015	0.717
TBlim	TBlim-MT	2013	43,000
SSBlim	SSBlim-MT	2015	18,500
Flim	-	-	-
ERlim	-	-	-

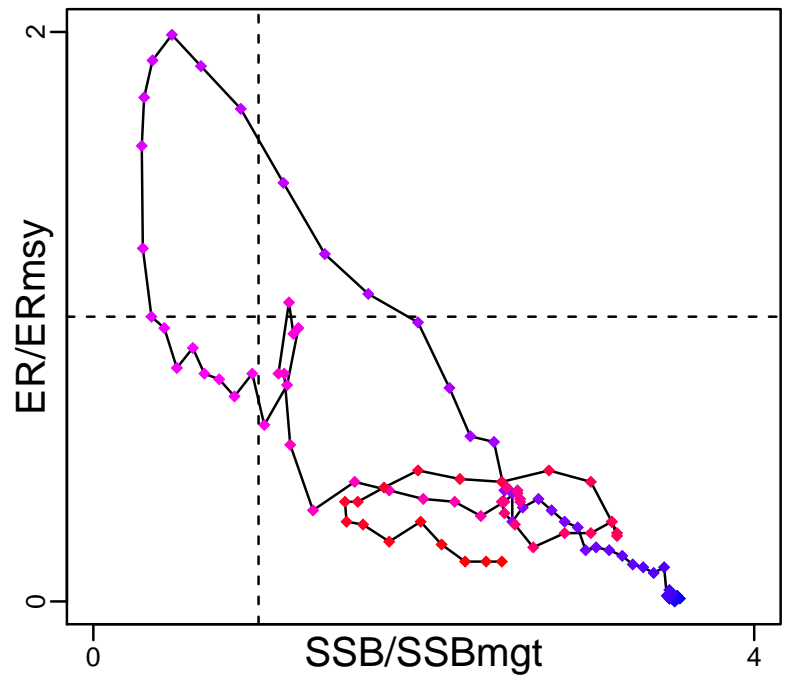
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	510,000	-	0+
SSB	SSB-MT	2015	156,000	Females	5
TN	-	-	-	-	-
R	R-E00	2015	1.33×10^9	-	0
F	-	-	-	-	-
ER	ER-ratio	2015	0.05	-	-
TC	TC-MT	2015	14,400		
TL	TL-MT	2015	14,400		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSBdivSSBmsy-dimensionless	2015	2.47		
F/Fmsy	-	-	-		
ER/ERmsy	ERdivERmsy-dimensionless	2015	0.14		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2015	2.472		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Shallow water cape hake South Africa [CHAKESA]

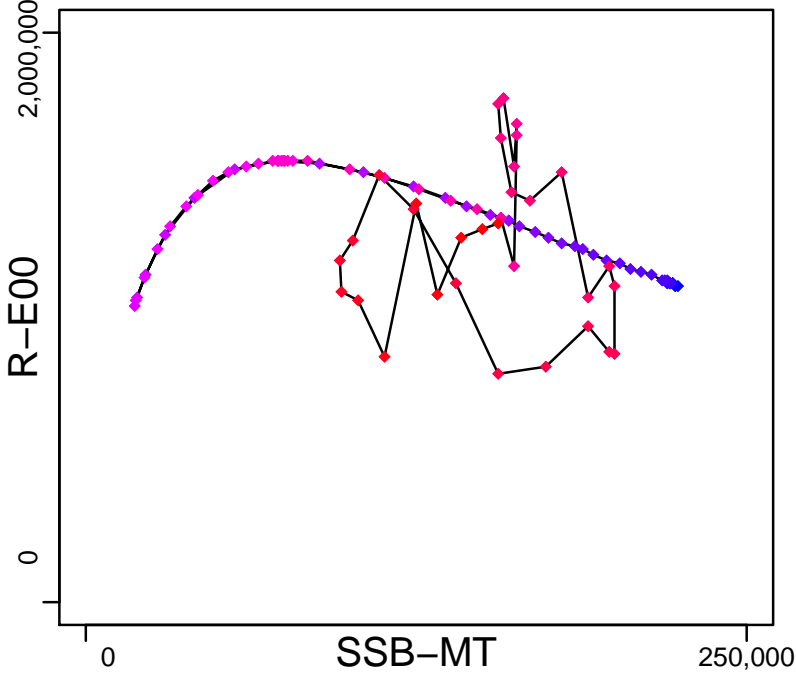
Kobe MSYpref (1917–2015–Rademeyer)



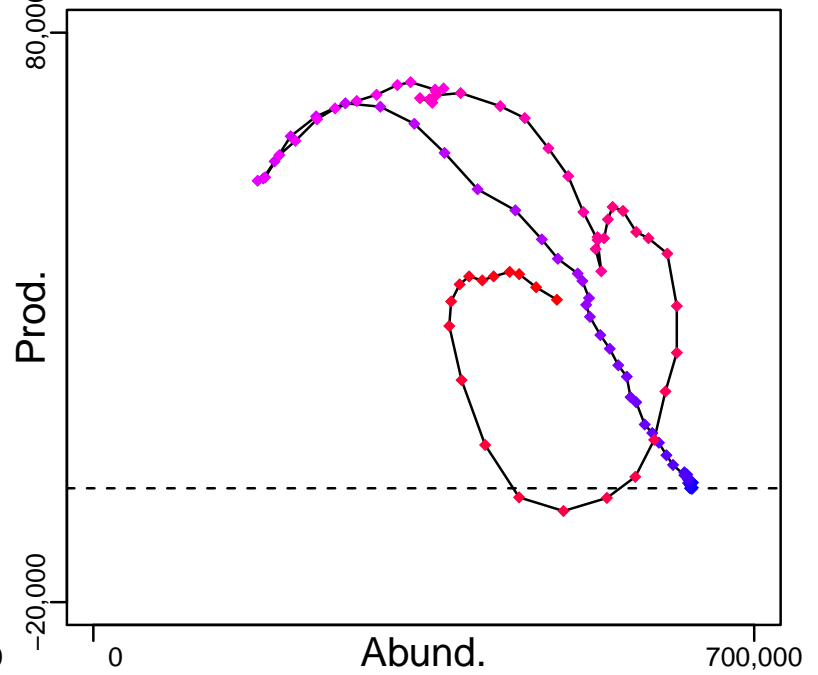
Kobe MGTpref (1917–2015–Rademeyer)



Spawner Recruit (1917–2015–Rademeyer)

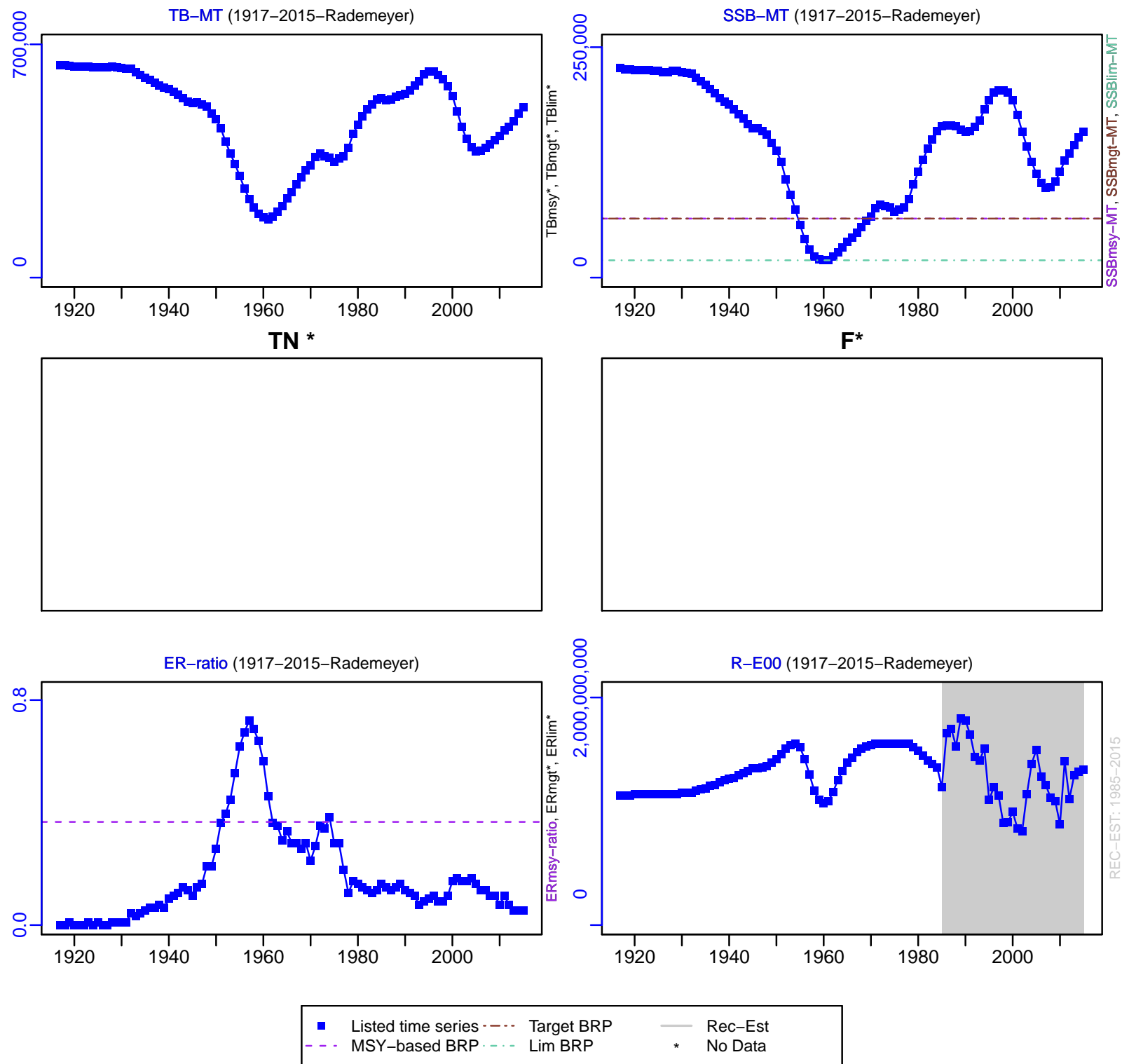


Production (1917–2015–Rademeyer)



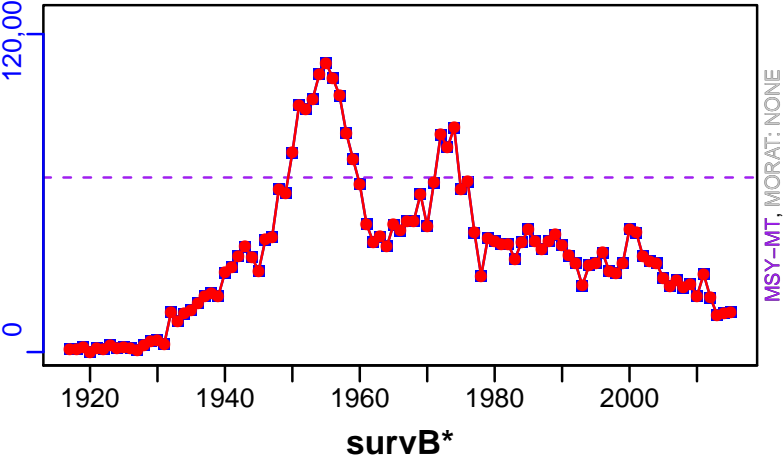
◆ Start Year ◆ End Year * No Data

Shallow water cape hake South Africa [CHAKESA]



Shallow water cape hake South Africa [CHAKESA]

TC-MT, TL-MT, RecC* (1917-2015-Rademeyer)



TAC*, Cpair*, Cadv*



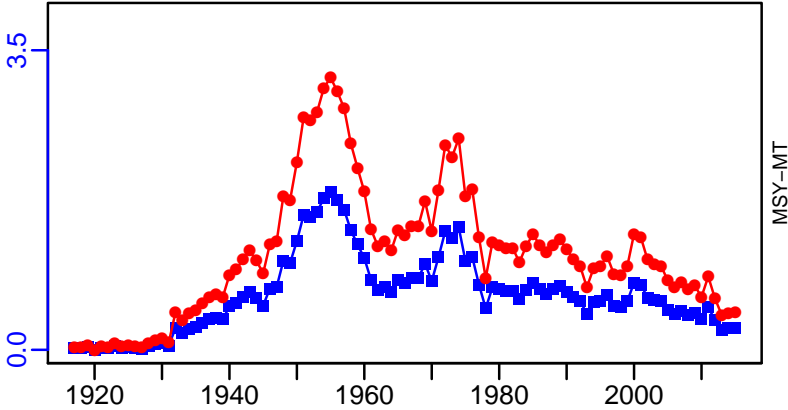
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1917-2015-Rademeyer)



Cape Hope squid South Africa [CHSQUIDSA]

Metadata	
Scientific Name	Loligo reynaudii
Current Assess ID	FBDAFF-CHSQUIDSA-1971-2013-GLAZER
Area	South Africa
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Asmts in RAM	2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-pr-MT	2013	25,703
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2013	64,258
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

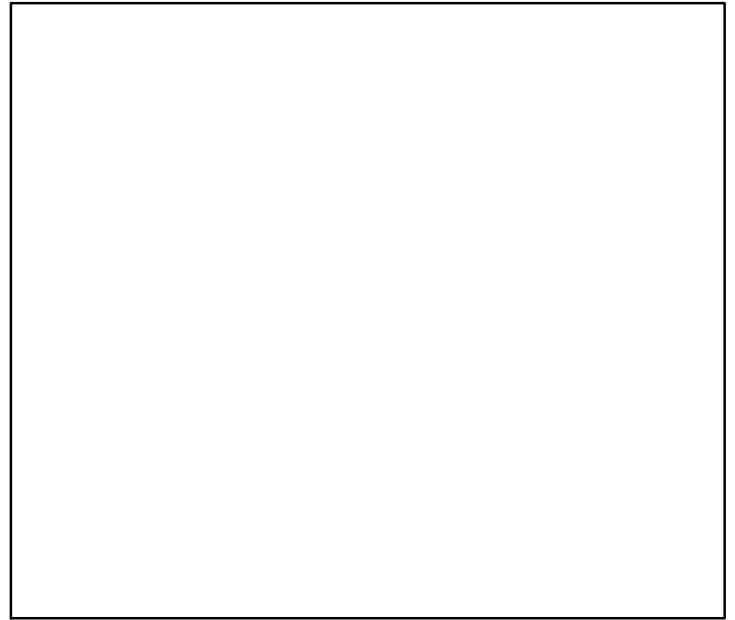
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2013	18,700	-	-
SSB	SSB-MT	2013	18,700	Both	1
TN	-	-	-	-	-
R	R-MT	2013	17,000	-	-
F	-	-	-	-	-
ER	ER-ratio	2013	0.369	-	-
TC	TC-MT	2013	6690		
TL	TL-MT	2013	6690		
TB/TBmsy	TB-MT/TBmsy-pr-MT	2013	0.728		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Cape Hope squid South Africa [CHSQUIDSA]

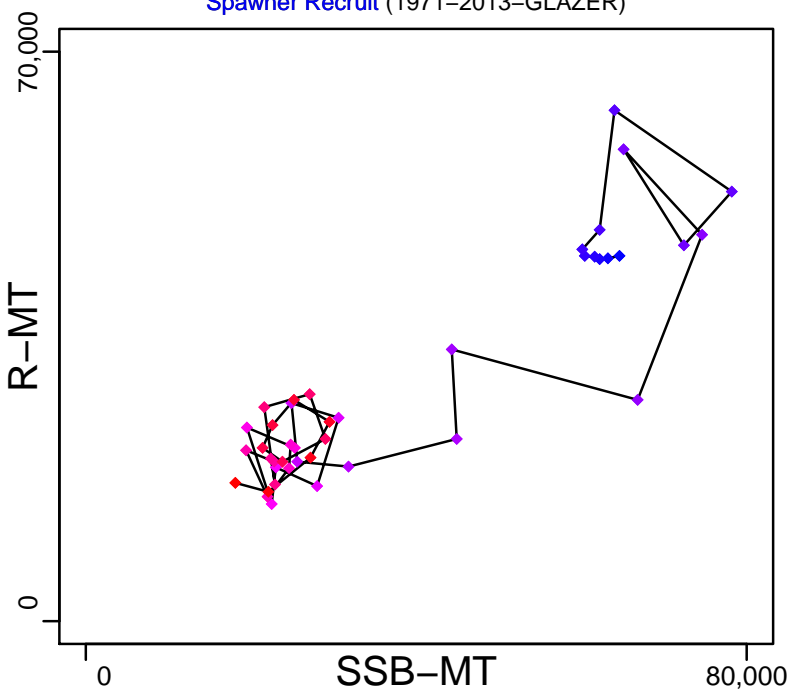
Kobe MSY*



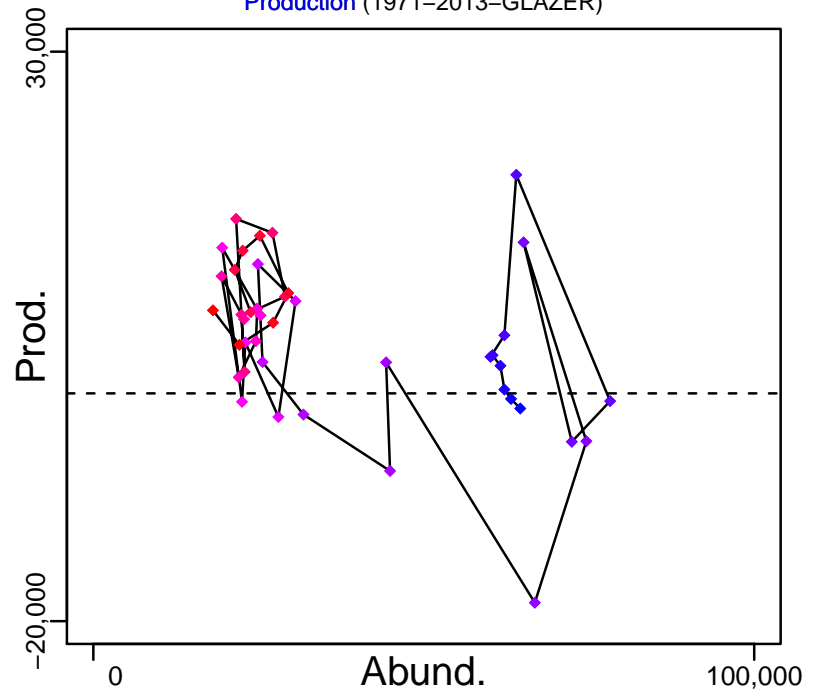
Kobe MGT*



Spawner Recruit (1971–2013–GLAZER)



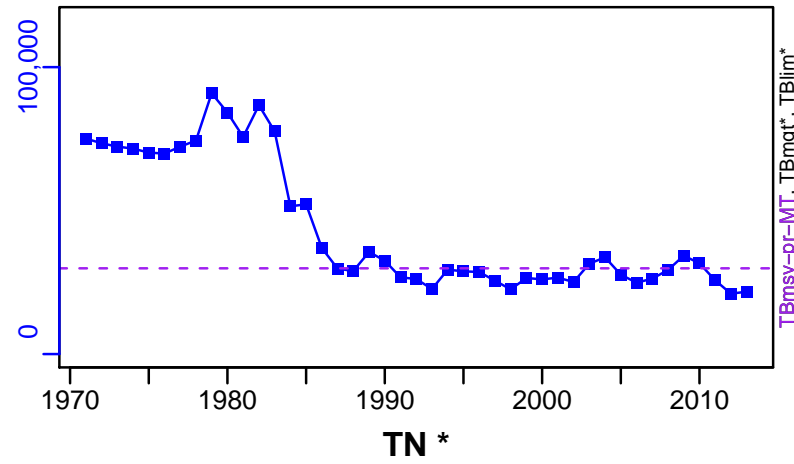
Production (1971–2013–GLAZER)



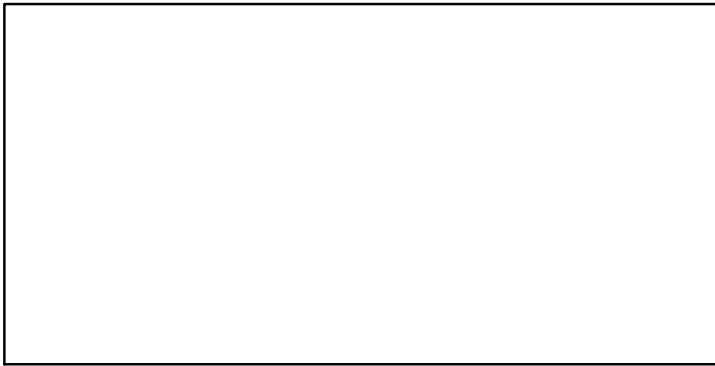
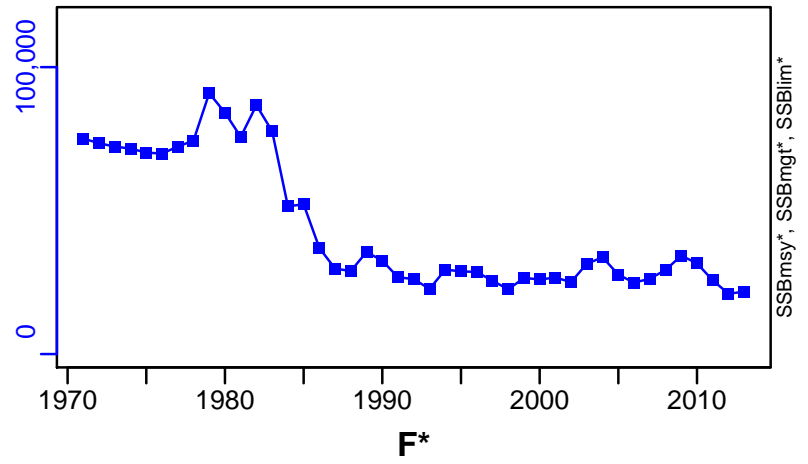
◆ Start Year ◆ End Year * No Data

Cape Hope squid South Africa [CHSQUIDSA]

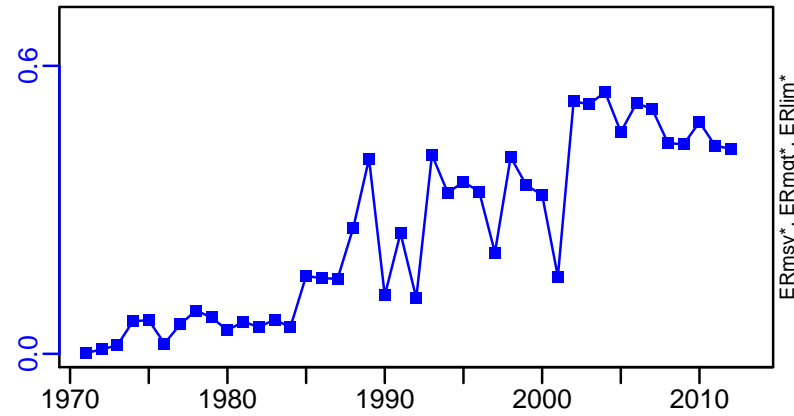
TB-MT (1971–2013–GLAZER)



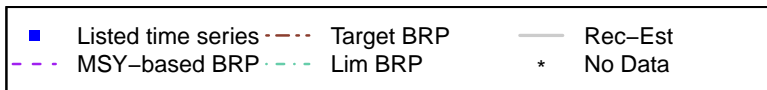
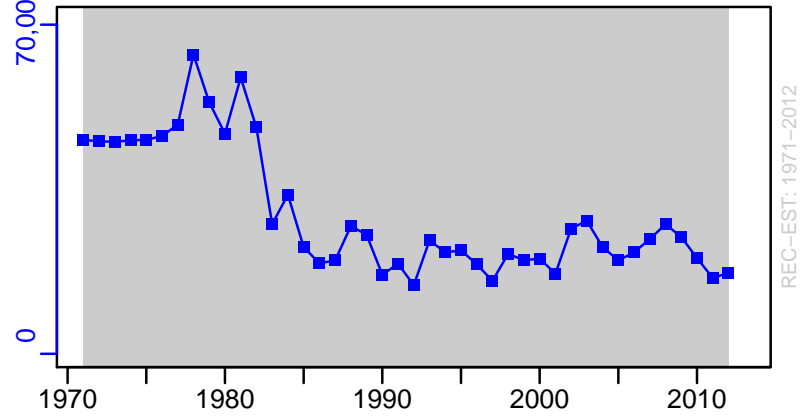
SSB-MT (1971–2013–GLAZER)



ER-ratio (1971–2013–GLAZER)

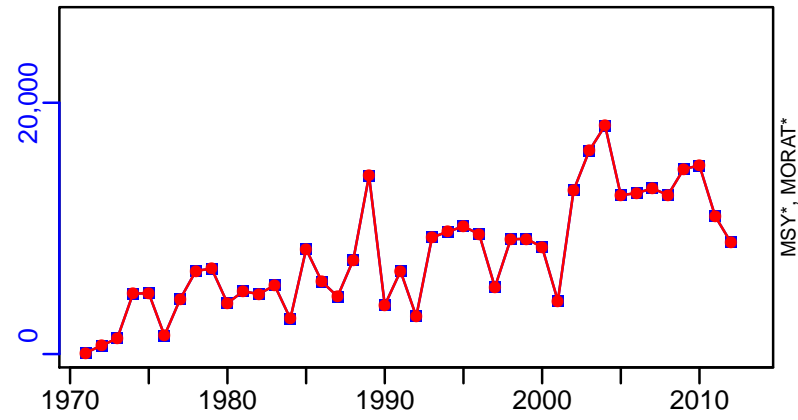


R-MT (1971–2013–GLAZER)



Cape Hope squid South Africa [CHSQUIDSA]

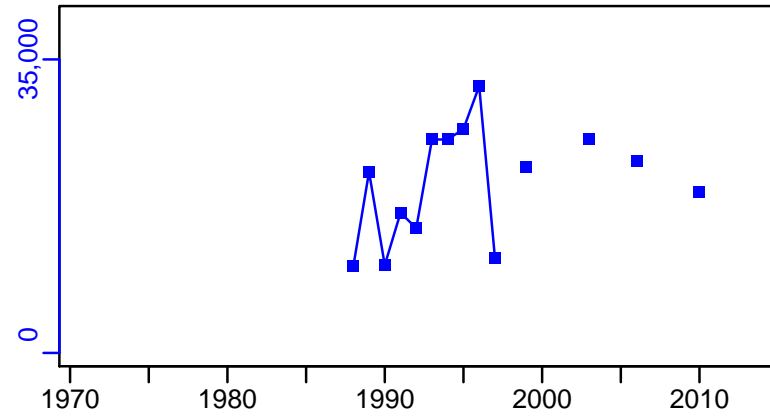
TC-MT, TL-MT, RecC* (1971-2013-GLAZER)



TAC*, Cpair*, Cadv*



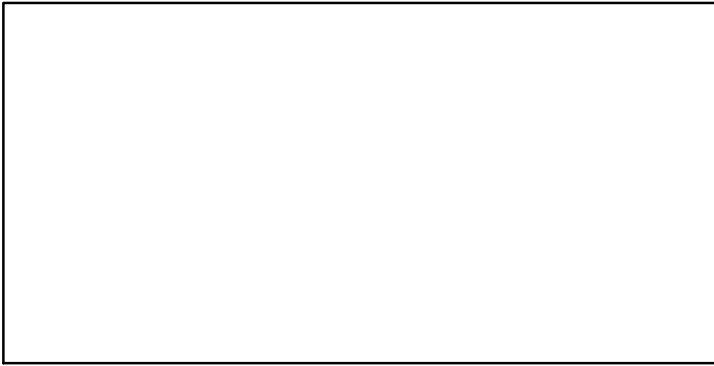
survB-1-MT (1971-2013-GLAZER)



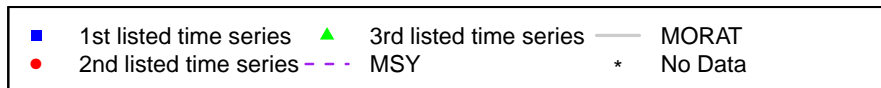
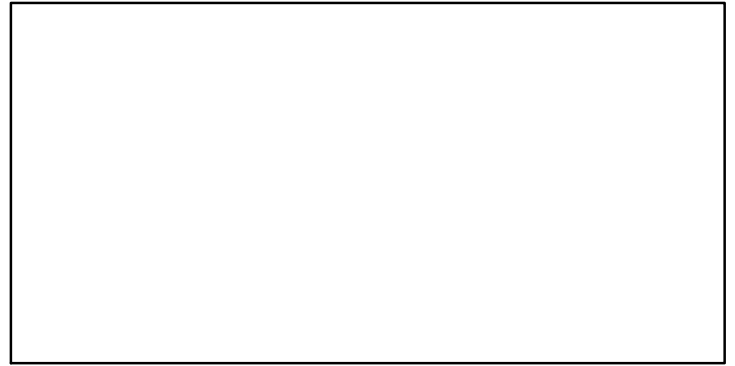
CPUE*



EFFORT*



CdivMSY*



West coast rock lobster South Africa Areas 1-2 [CRLOBSTERSA12]

Metadata	
Scientific Name	Jasus lalandii
Current Assess ID	MARAM-CRLOBSTERSA12-1910-2014-Johnston
Area	South Africa Areas 1-2
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2012, 2014

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2014	56,583
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2014	0.11
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2014	621	Males	-
SSB	SSB-relative	2014	0.015	Females	-
TN	-	-	-	-	-
R	R-E00	2014	96,000	-	-
F	-	-	-	-	-
ER	ER-ratio	2014	0.037	-	-
TC	TC-MT	2014	23		
TL	TL-MT	2014	23		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

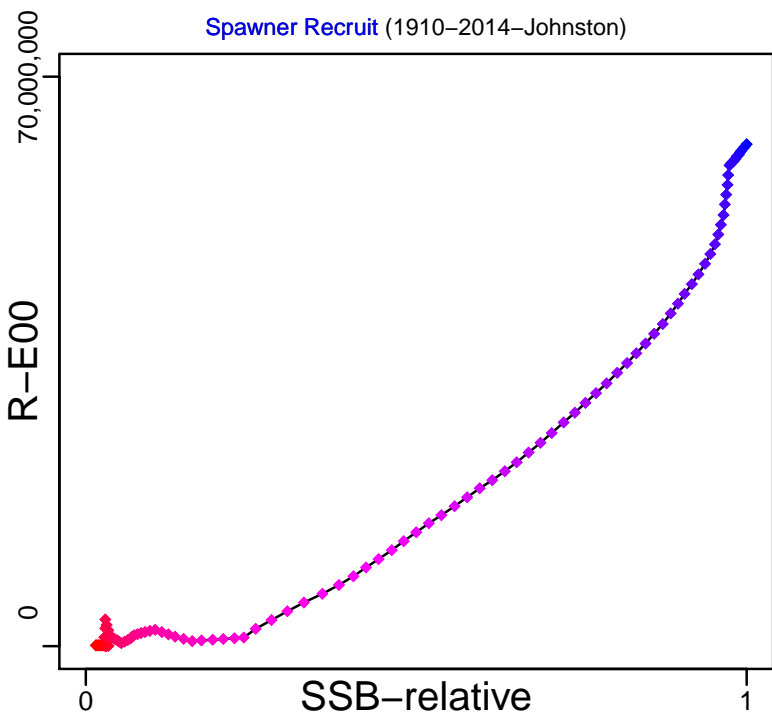
Kobe MSY*



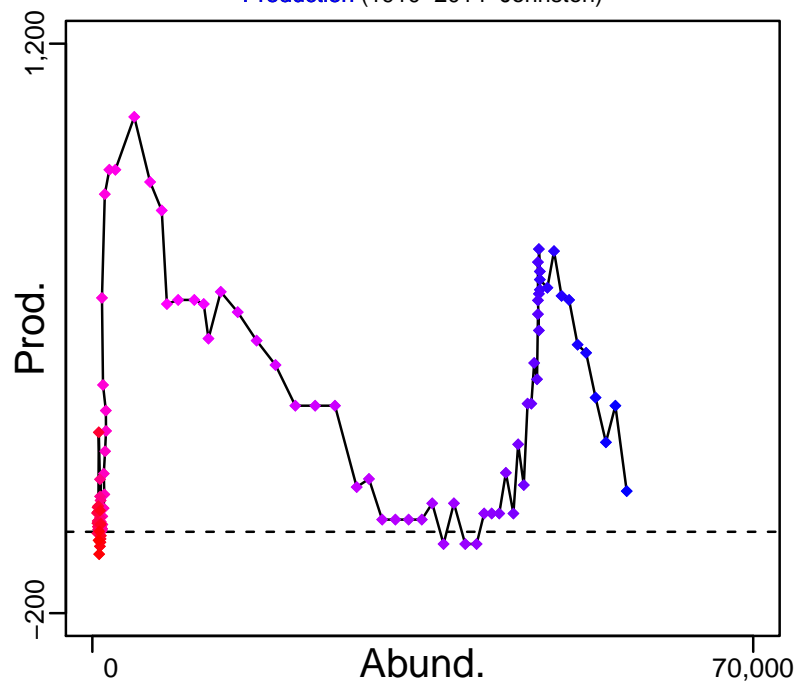
Kobe MGT*



Spawner Recruit (1910–2014–Johnston)



Production (1910–2014–Johnston)

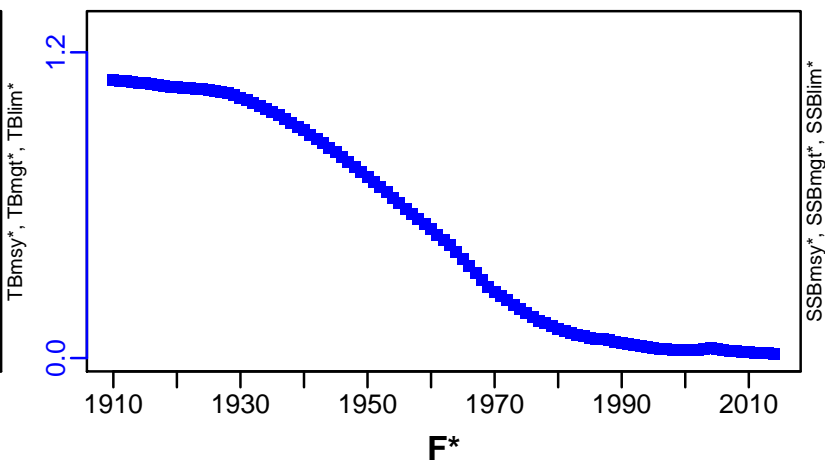
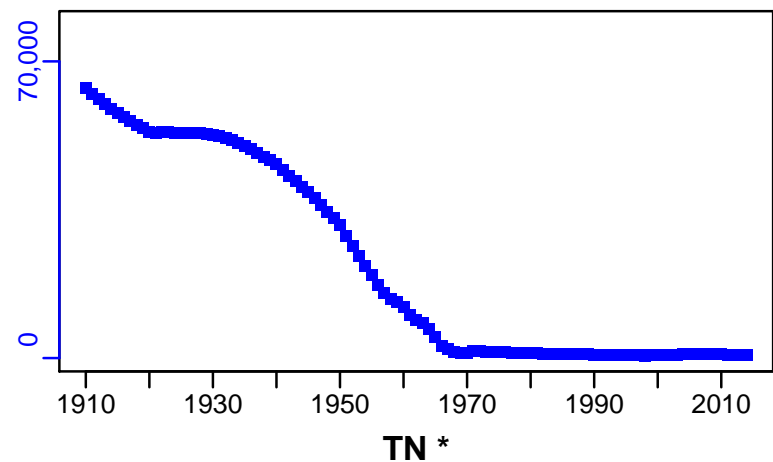


◆ Start Year ◆ End Year * No Data

West coast rock lobster South Africa Areas 1-2 [CRLOBSTERSA12]

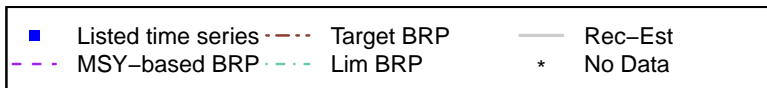
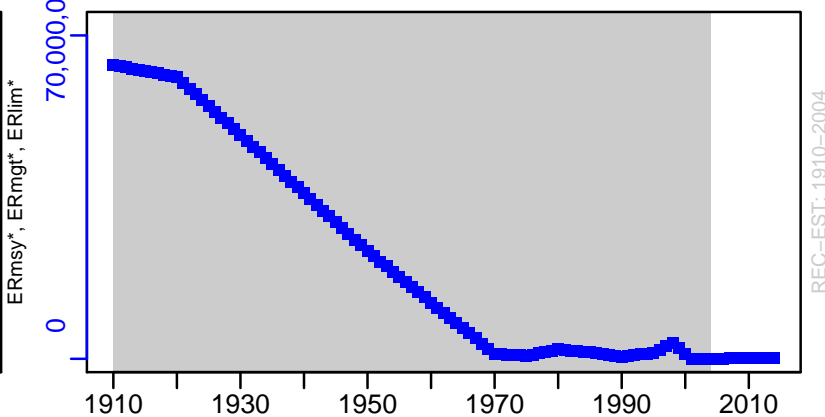
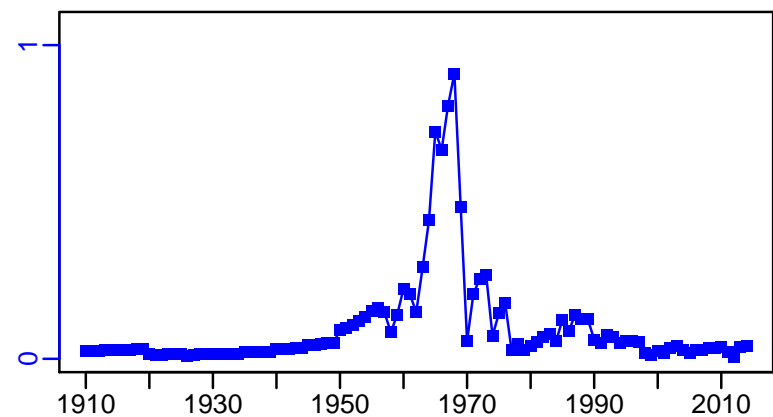
TB-MT (1910-2014-Johnston)

SSB-relative (1910-2014-Johnston)



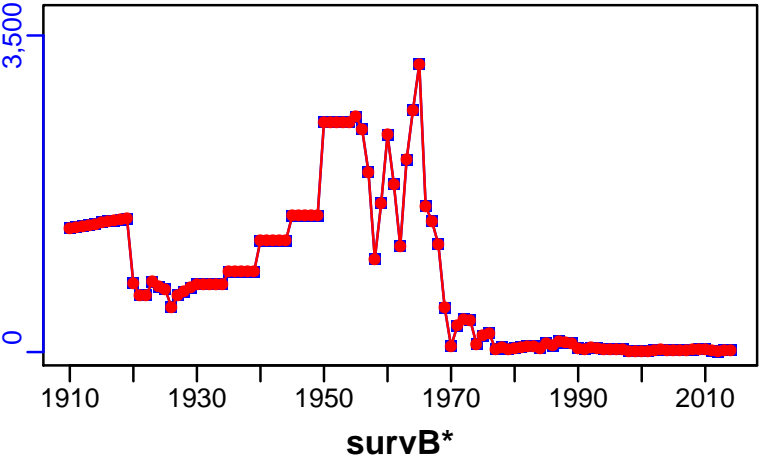
ER-ratio (1910-2014-Johnston)

R-E00 (1910-2014-Johnston)

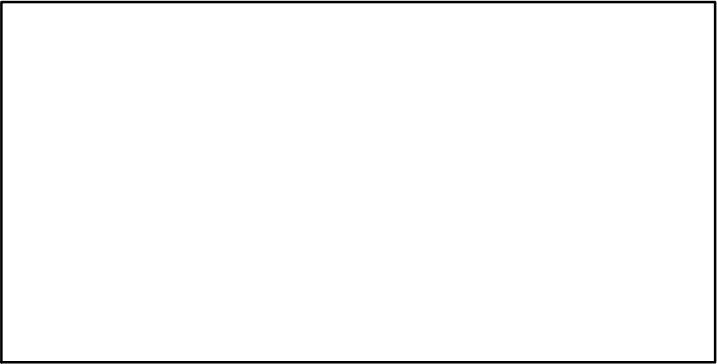
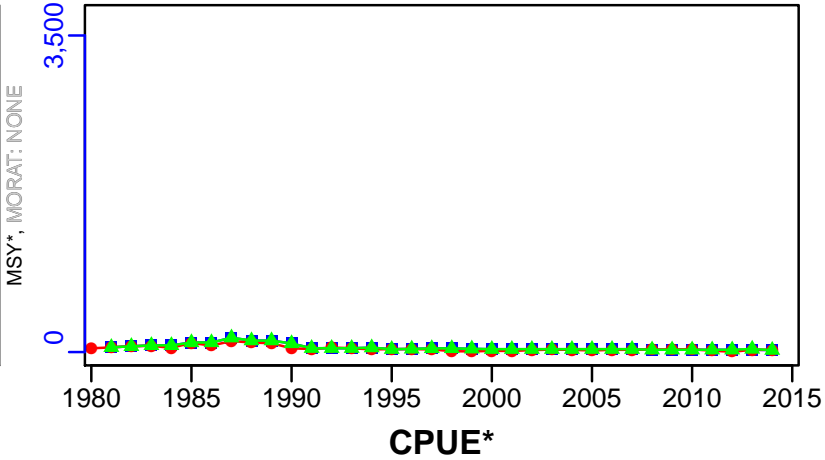


West coast rock lobster South Africa Areas 1-2 [CRLOBSTERSA12]

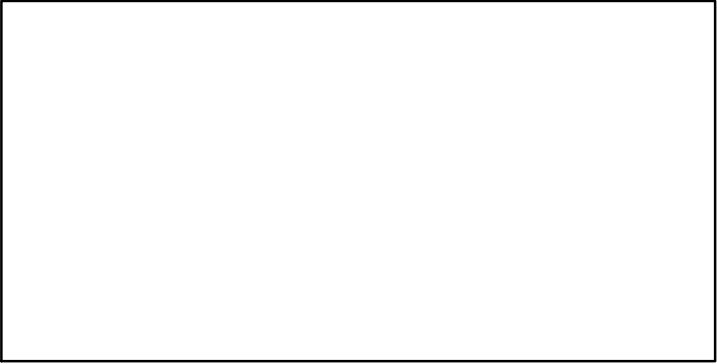
TC-MT, TL-MT, RecC* (1910-2014-Johnston)



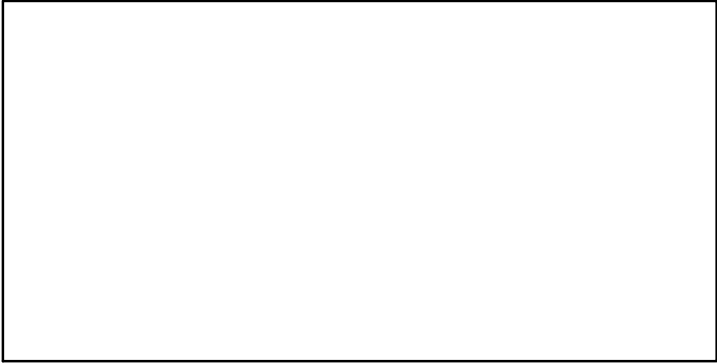
TAC-MT, Cpair-MT, Cadvised-MT (1910-2014-Johnston)



EFFORT*



CdivMSY*



West coast rock lobster South Africa Areas 3-4 [CRLOBSTERSA34]

Metadata	
Scientific Name	Jasus lalandii
Current Assess ID	MARAM-CRLOBSTERSA34-1910-2014-Johnston
Area	South Africa Areas 3-4
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2012, 2014

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2014	166,501
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2014	0.11
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2014	4860	Males	-
SSB	SSB-relative	2014	0.067	Females	-
TN	-	-	-	-	-
R	R-E00	2014	31,200,000	-	-
F	-	-	-	-	-
ER	ER-ratio	2014	0.054	-	-
TC	TC-MT	2014	262		
TL	TL-MT	2014	254		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

West coast rock lobster South Africa Areas 3–4 [CRLOBSTERSA34]

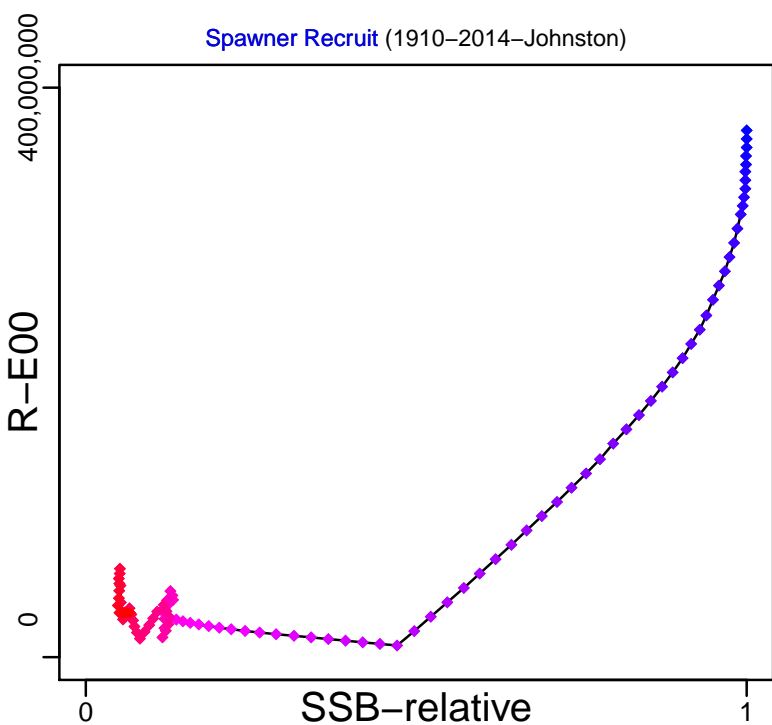
Kobe MSY*



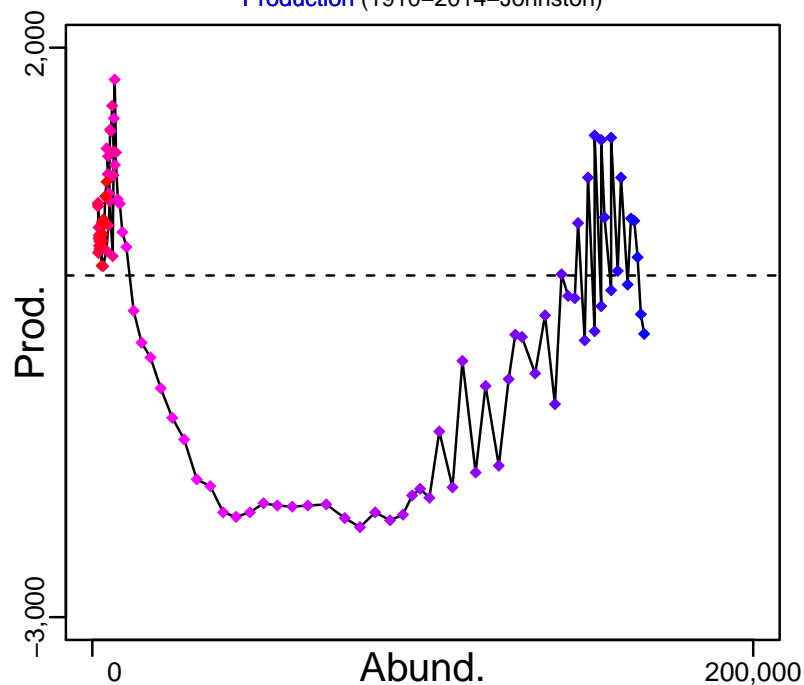
Kobe MGT*



Spawner Recruit (1910–2014–Johnston)



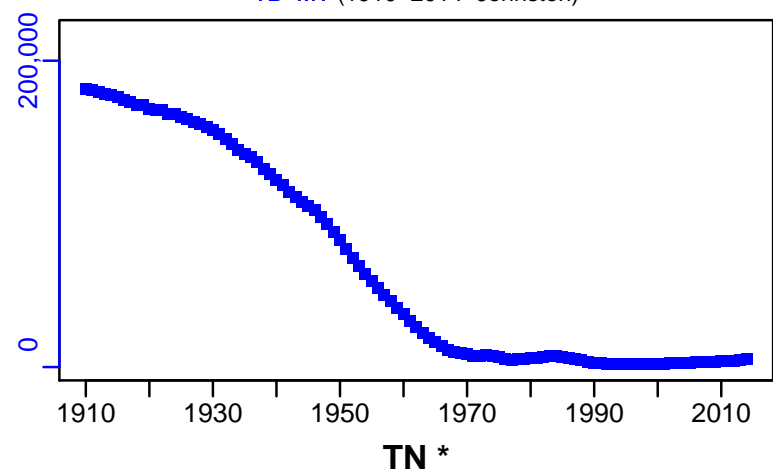
Production (1910–2014–Johnston)



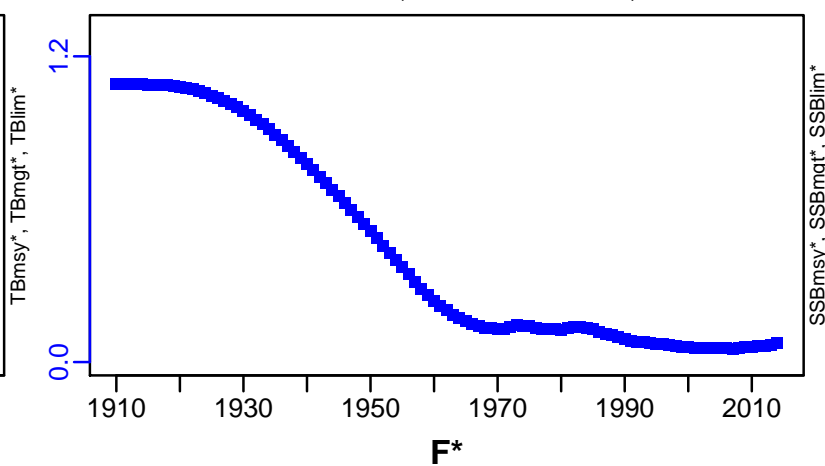
◆ Start Year ◆ End Year * No Data

West coast rock lobster South Africa Areas 3–4 [CRLOBSTERSA34]

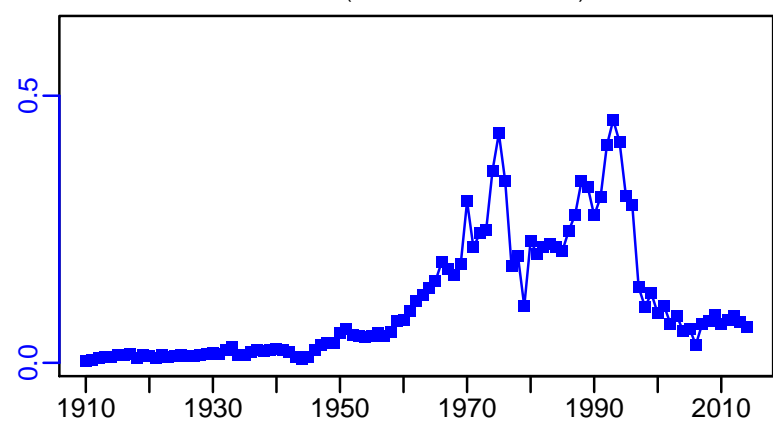
TB–MT (1910–2014–Johnston)



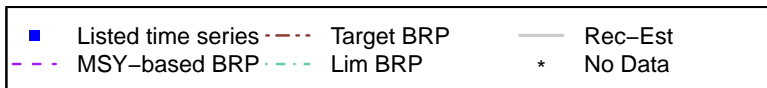
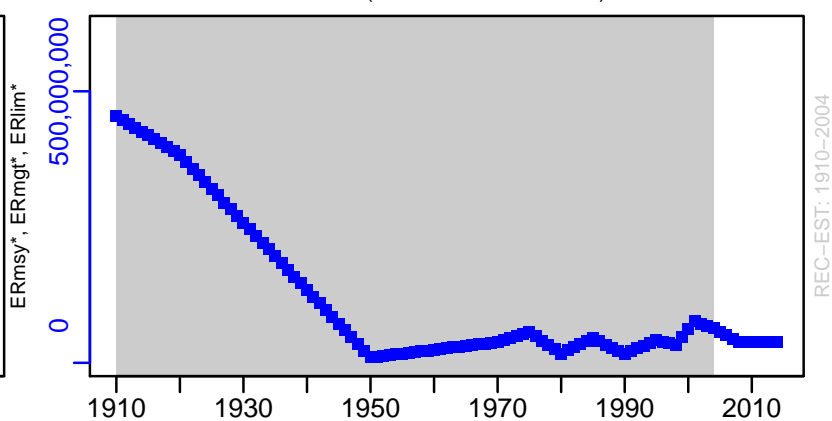
SSB–relative (1910–2014–Johnston)



ER–ratio (1910–2014–Johnston)

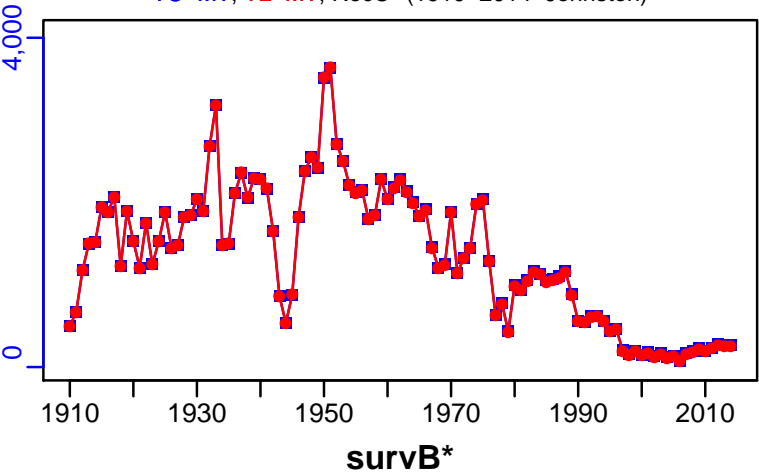


R–E00 (1910–2014–Johnston)

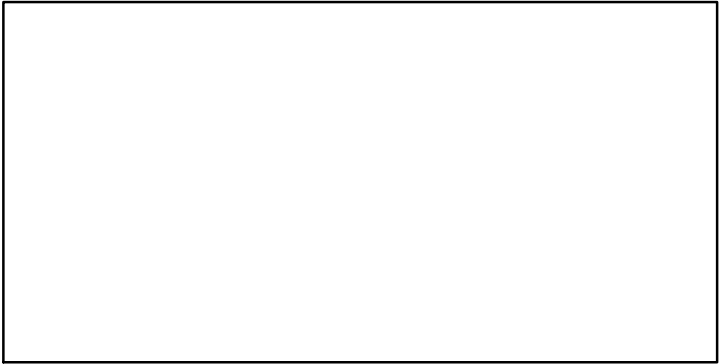
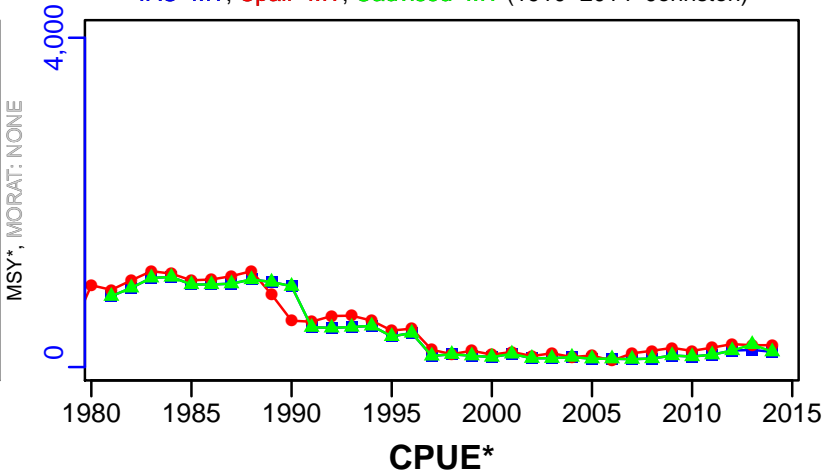


West coast rock lobster South Africa Areas 3–4 [CRLOBSTERSA34]

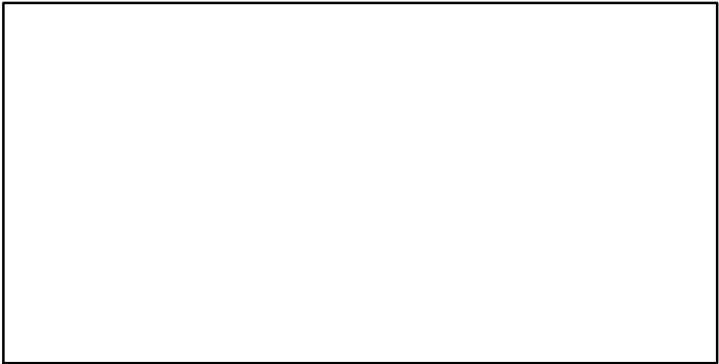
TC–MT, TL–MT, RecC* (1910–2014–Johnston)



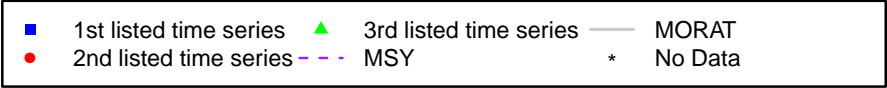
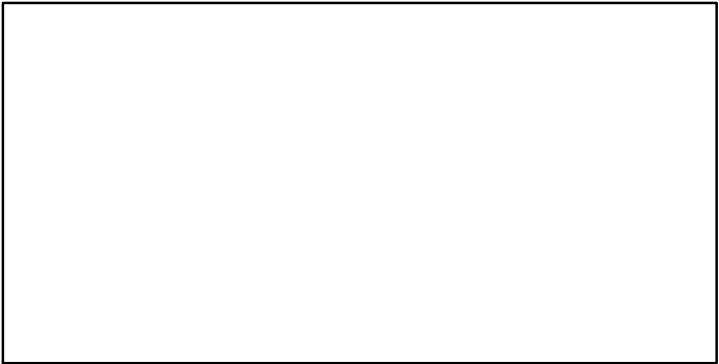
TAC–MT, Cpair–MT, Cadvised–MT (1910–2014–Johnston)



EFFORT*



CdivMSY*



West coast rock lobster South Africa Areas 5-6 [CRLOBSTERSA56]

Metadata	
Scientific Name	Jasus lalandii
Current Assess ID	MARAM-CRLOBSTERSA56-1910-2014-Johnston
Area	South Africa Areas 5-6
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2012, 2014

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2014	255,837
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2014	0.11
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2014	3590	Males	-
SSB	SSB-relative	2014	0.034	Females	-
TN	-	-	-	-	-
R	R-E00	2014	16,200,000	-	-
F	-	-	-	-	-
ER	ER-ratio	2014	0.057	-	-
TC	TC-MT	2014	206		
TL	TL-MT	2014	198		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

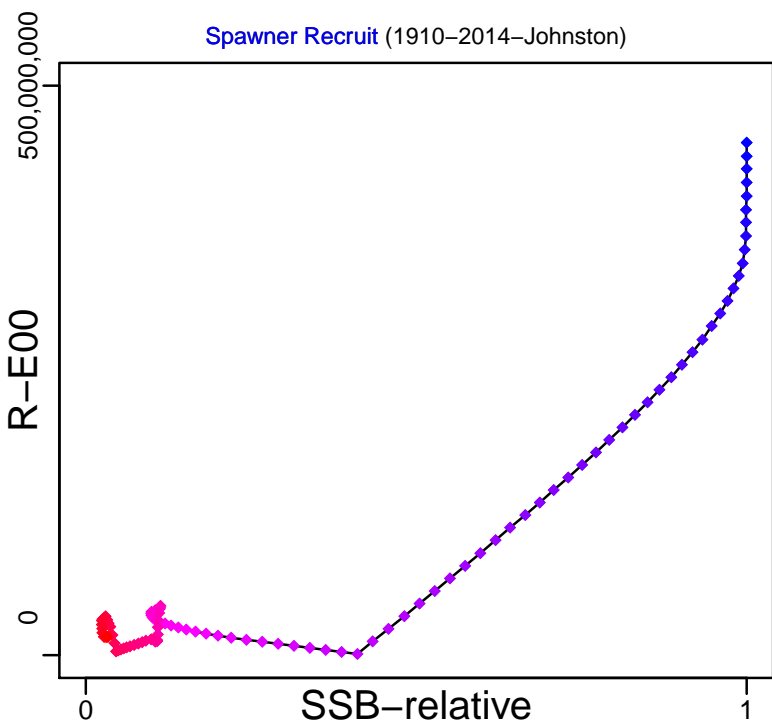
Kobe MSY*



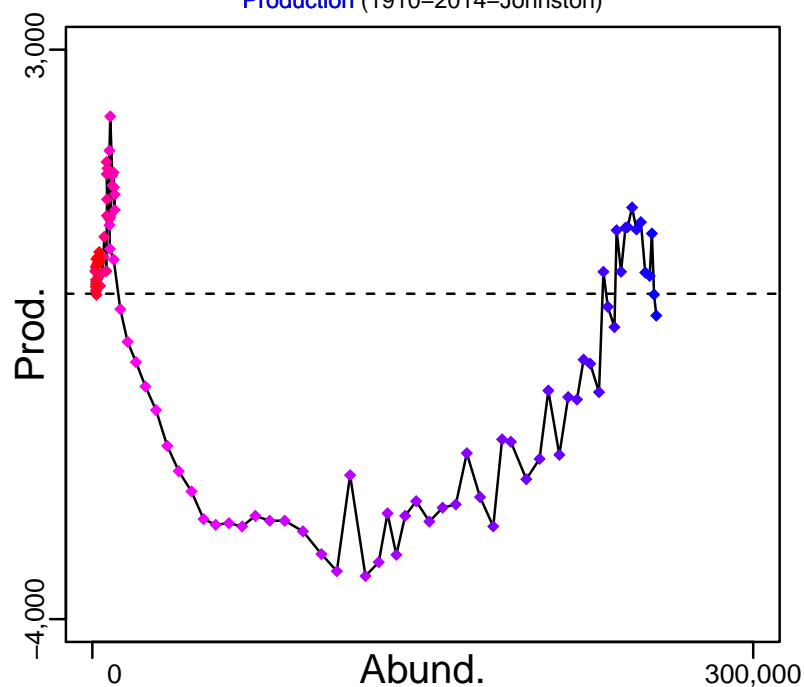
Kobe MGT*



Spawner Recruit (1910–2014–Johnston)



Production (1910–2014–Johnston)

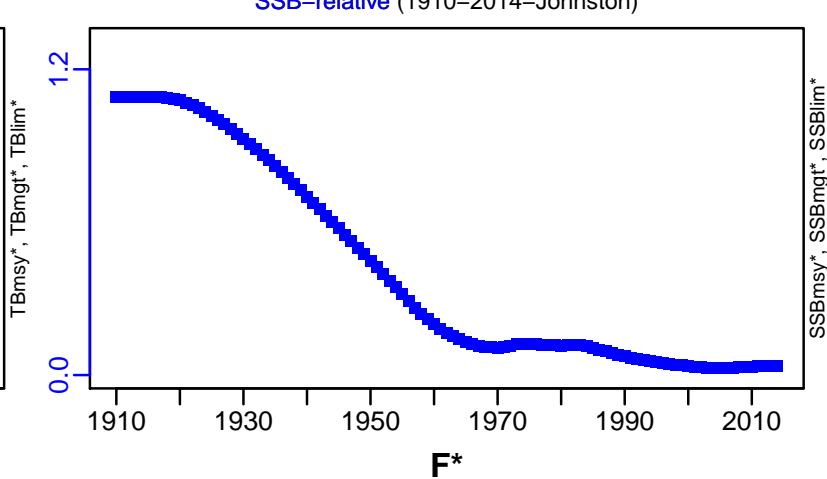
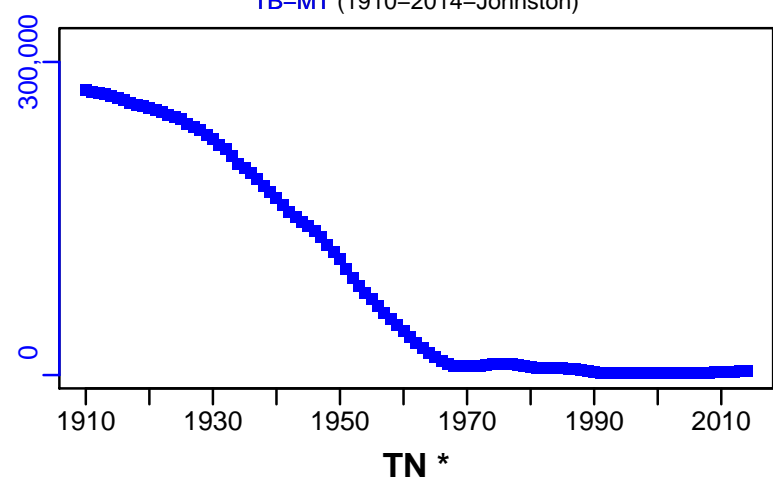


◆ Start Year ◆ End Year * No Data

West coast rock lobster South Africa Areas 5–6 [CRLOBSTERSA56]

TB–MT (1910–2014–Johnston)

SSB–relative (1910–2014–Johnston)



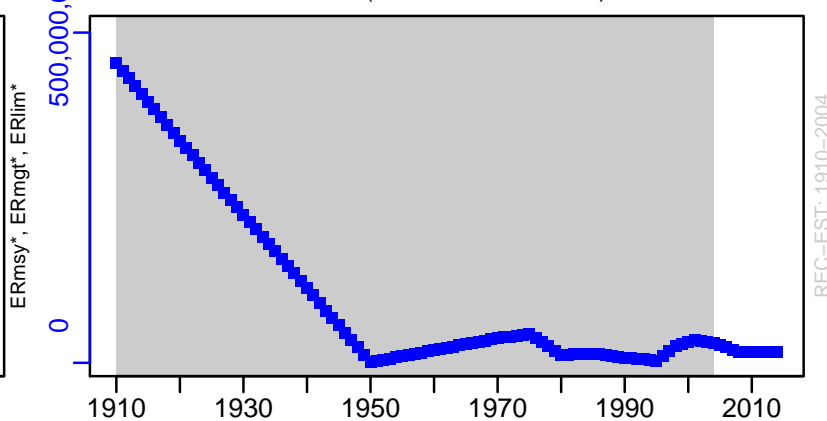
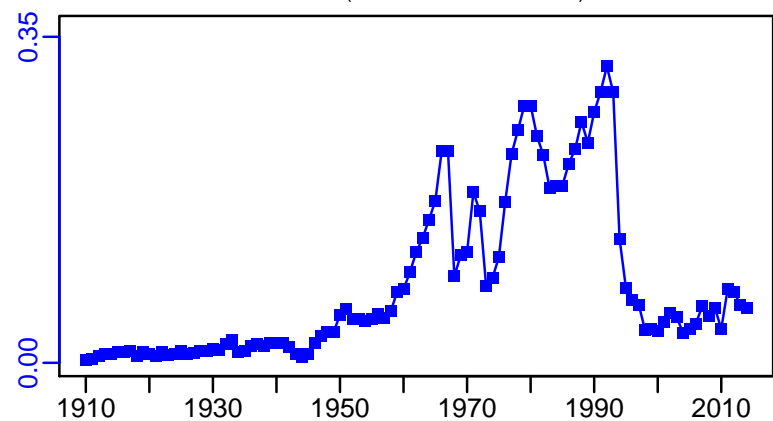
TN *

F*



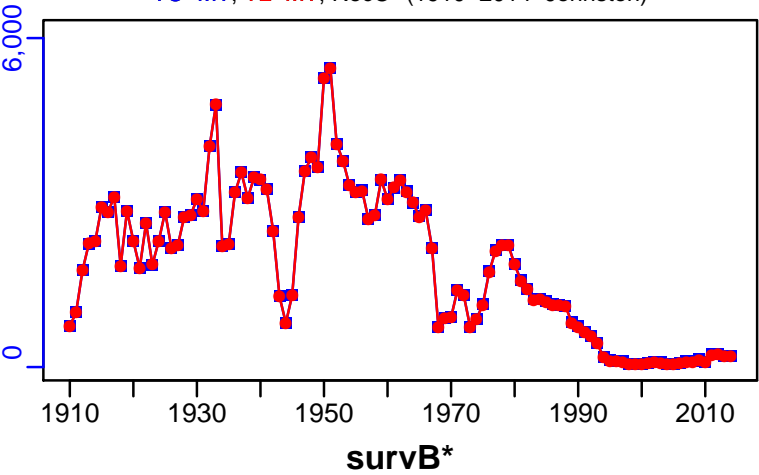
ER–ratio (1910–2014–Johnston)

R–E00 (1910–2014–Johnston)

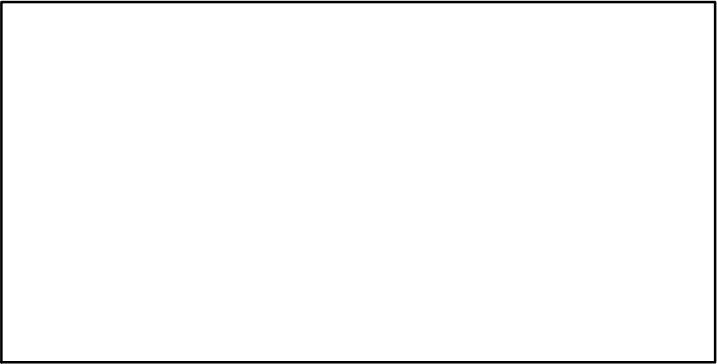
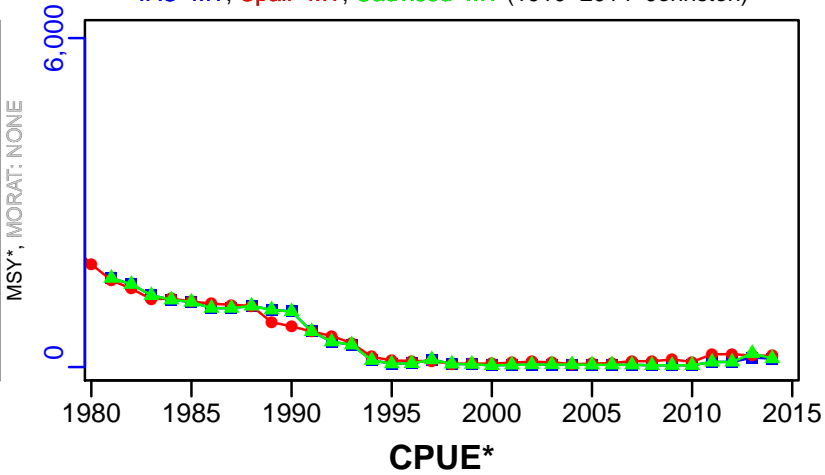


West coast rock lobster South Africa Areas 5-6 [CRLOBSTERSA56]

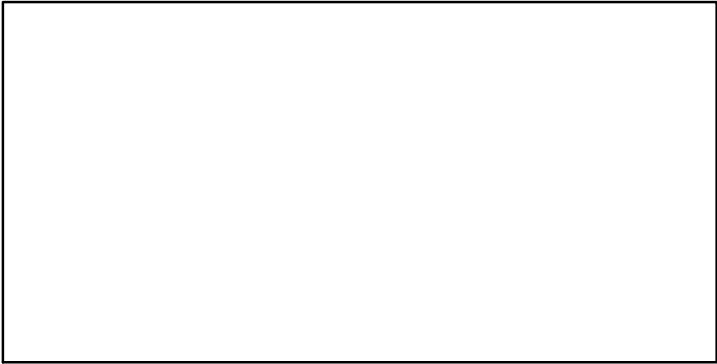
TC-MT, TL-MT, RecC* (1910-2014-Johnston)



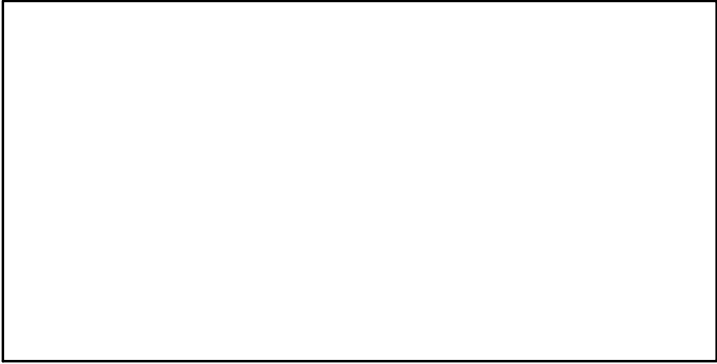
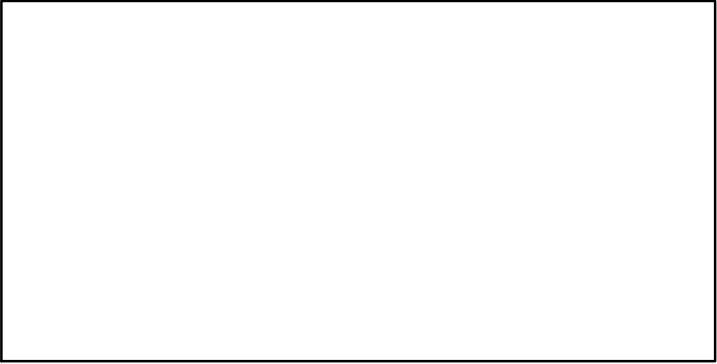
TAC-MT, Cpair-MT, Cadvised-MT (1910-2014-Johnston)



EFFORT*



CdivMSY*



West coast rock lobster South Africa Area 7 [CRLOBSTERSA7]

Metadata	
Scientific Name	Jasus lalandii
Current Assess ID	MARAM-CRLOBSTERSA7-1910-2014-Johnston
Area	South Africa Area 7
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2012, 2014

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2014	116,689
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2014	0.11
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2014	2860	Males	-
SSB	SSB-relative	2014	0.074	Females	-
TN	-	-	-	-	-
R	R-E00	2014	4,590,000	-	-
F	-	-	-	-	-
ER	ER-ratio	2014	0.045	-	-
TC	TC-MT	2014	129		
TL	TL-MT	2014	80		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

West coast rock lobster South Africa Area 7 [CRLOBSTERSA7]

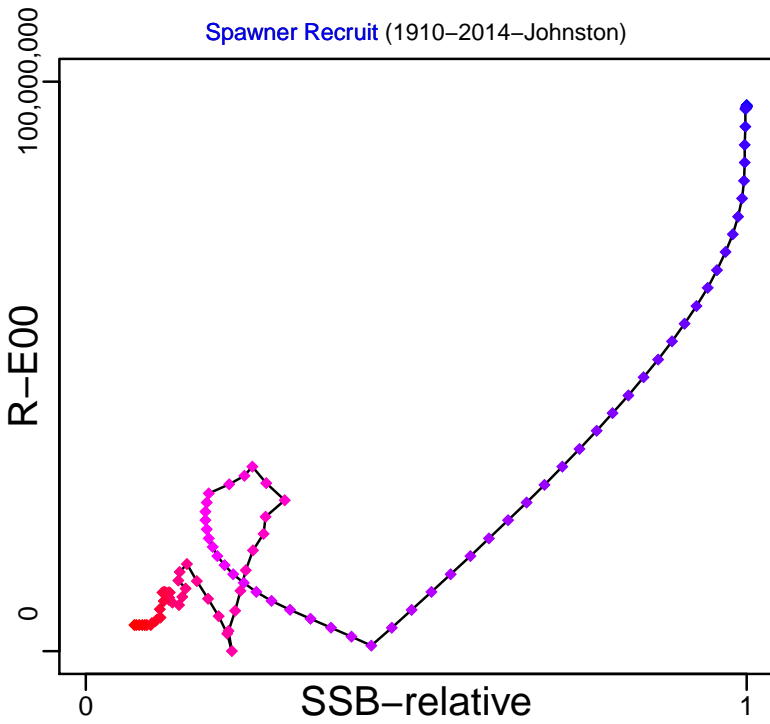
Kobe MSY*



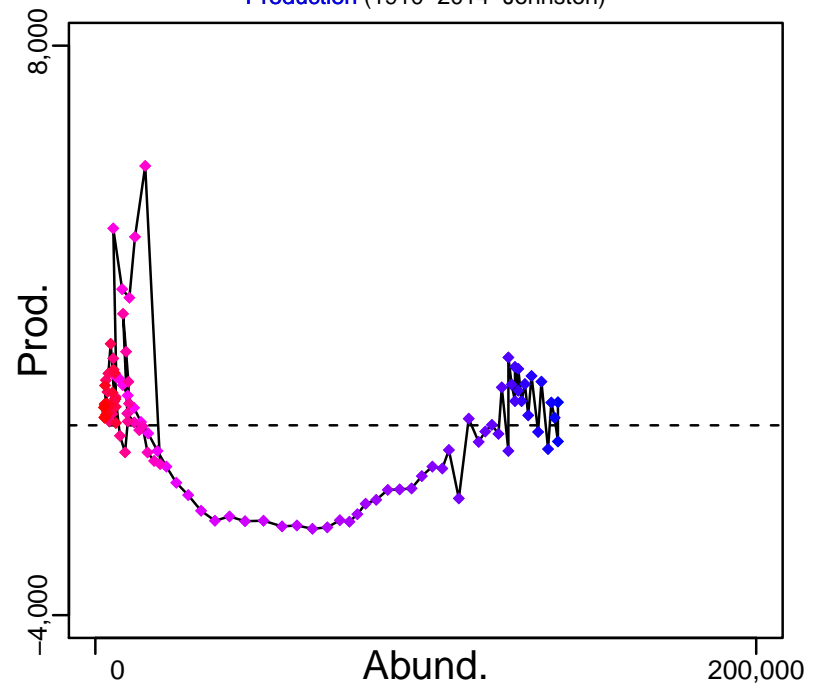
Kobe MGT*



Spawner Recruit (1910–2014–Johnston)



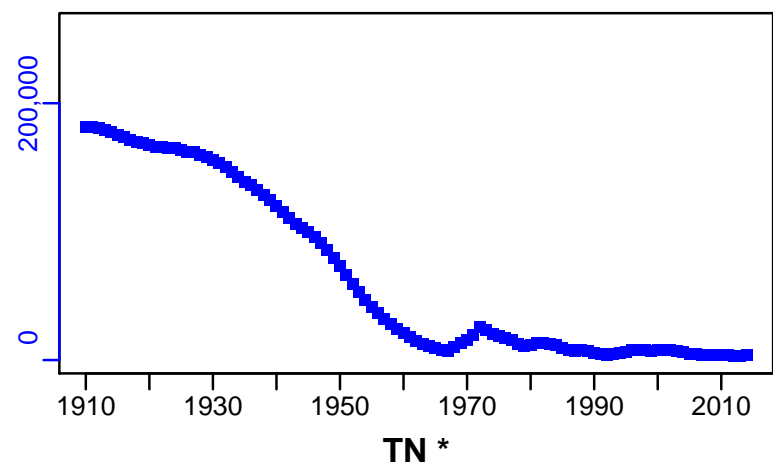
Production (1910–2014–Johnston)



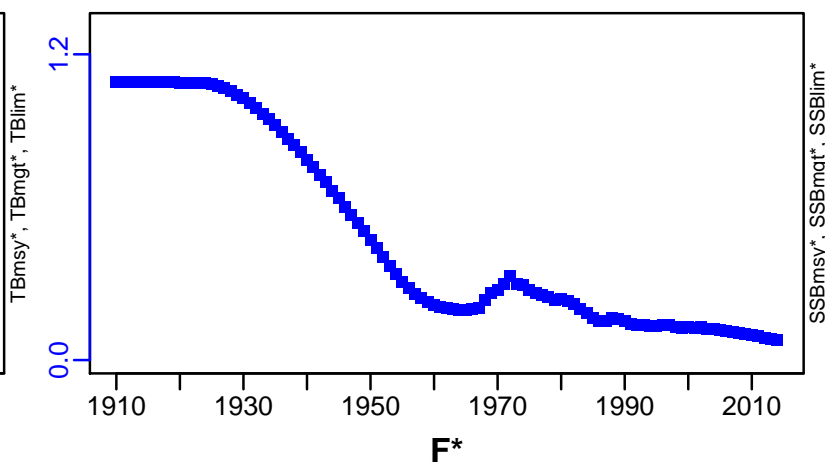
◆ Start Year ◆ End Year * No Data

West coast rock lobster South Africa Area 7 [CRLOBSTERSA7]

TB-MT (1910-2014-Johnston)



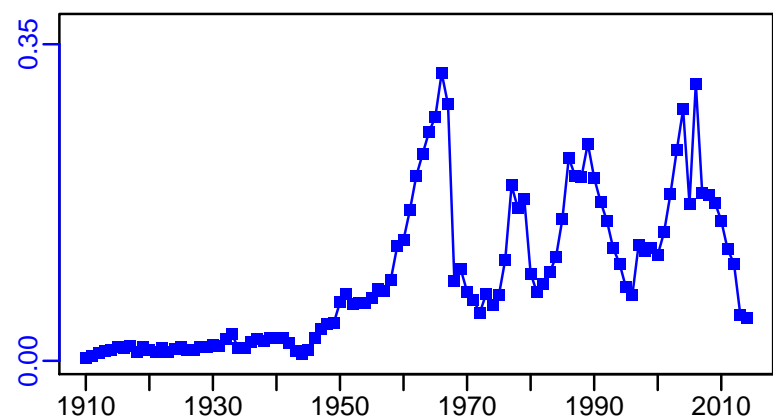
SSB-relative (1910-2014-Johnston)



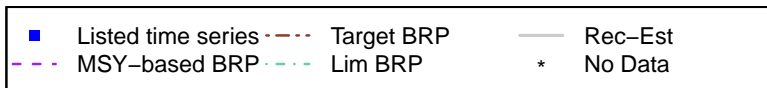
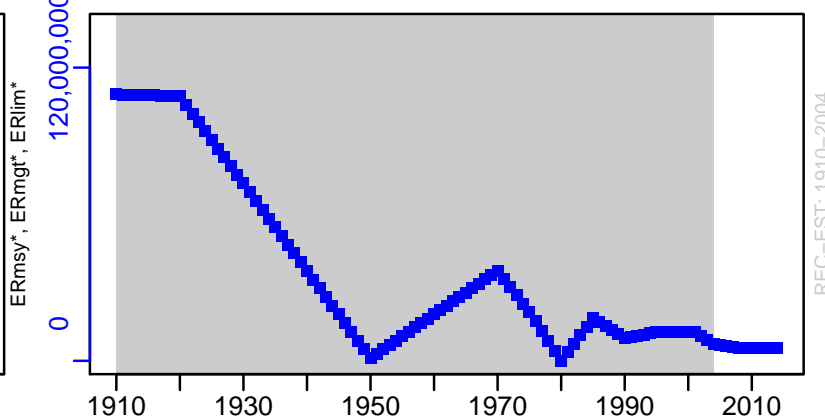
TN *

F*

ER-ratio (1910-2014-Johnston)

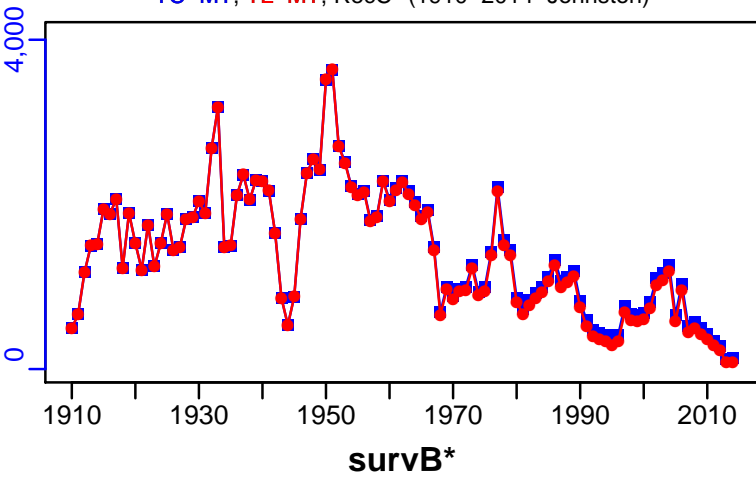


R-E00 (1910-2014-Johnston)

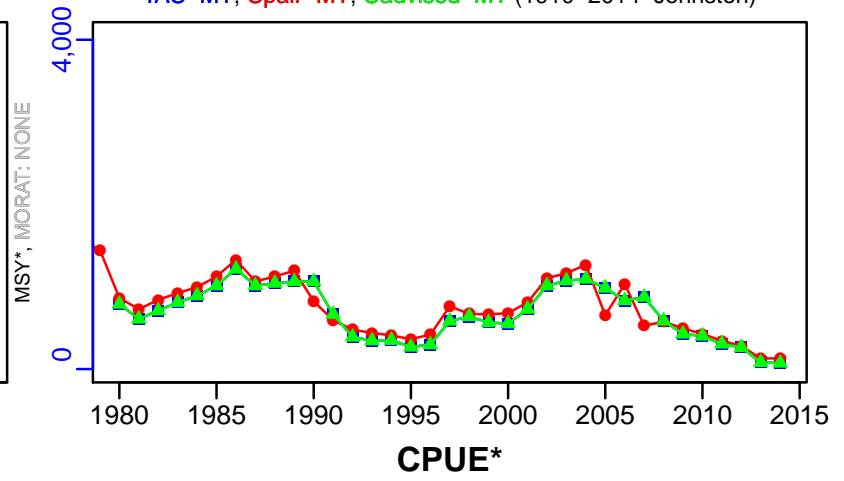


West coast rock lobster South Africa Area 7 [CRLOBSTERSA7]

TC-MT, TL-MT, RecC* (1910-2014-Johnston)



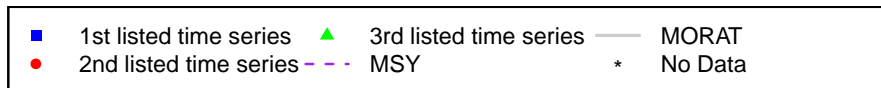
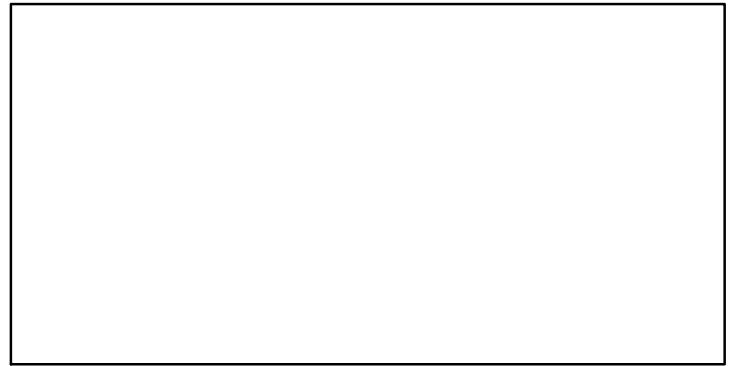
TAC-MT, Cpair-MT, Cadvised-MT (1910-2014-Johnston)



EFFORT*



CdivMSY*



West coast rock lobster South Africa Area 8 [CRLOBSTERSA8]

Metadata	
Scientific Name	Jasus lalandii
Current Assess ID	MARAM-CRLOBSTERSA8-1910-2014-Johnston
Area	South Africa Area 8
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2012, 2014

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2014	199,707
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2014	0.11
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2014	8860	Males	-
SSB	SSB-relative	2014	0.223	Females	-
TN	-	-	-	-	-
R	R-E00	2014	2.05×10^8	-	-
F	-	-	-	-	-
ER	ER-ratio	2014	0.251	-	-
TC	TC-MT	2014	2220		
TL	TL-MT	2014	1500		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

West coast rock lobster South Africa Area 8 [CROBSTERSA8]

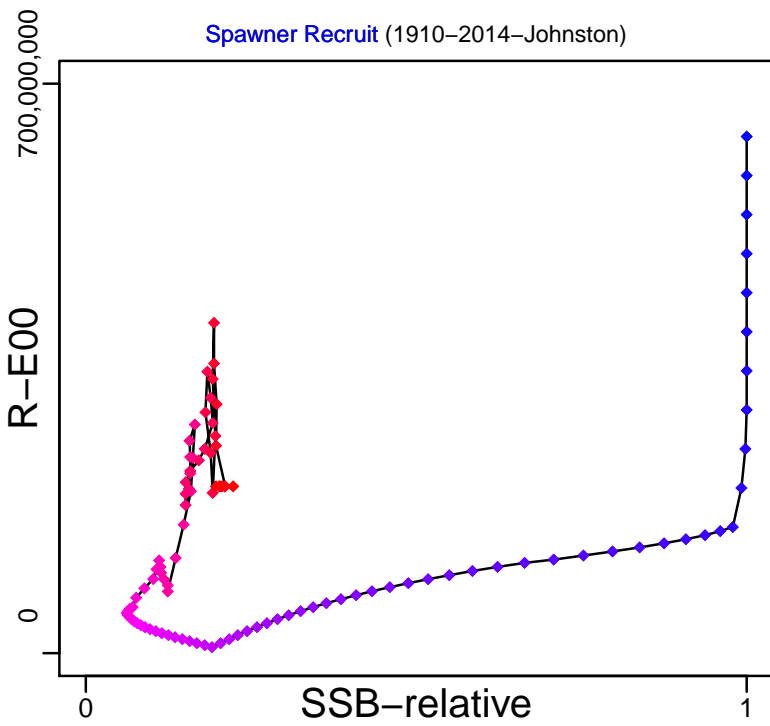
Kobe MSY*



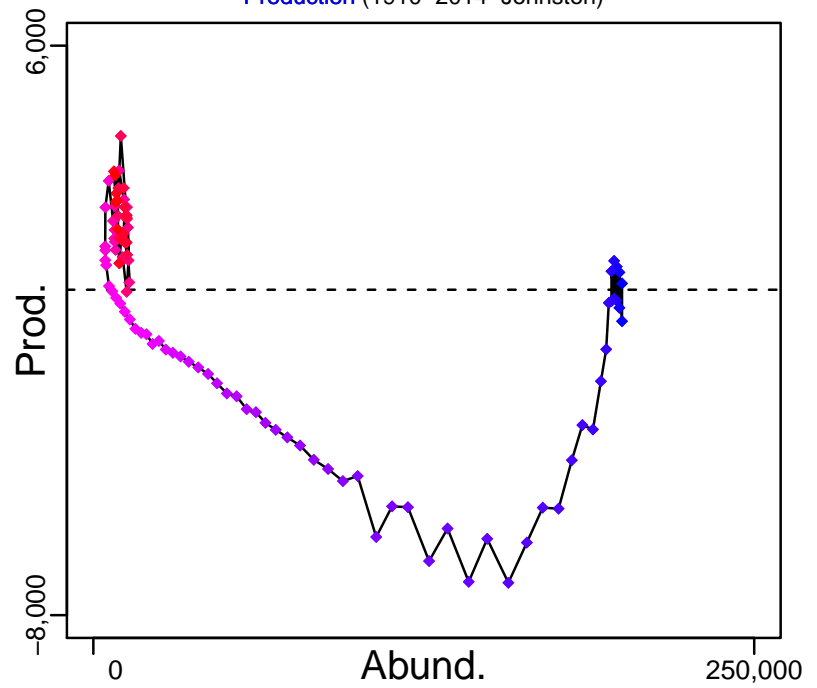
Kobe MGT*



Spawner Recruit (1910–2014–Johnston)



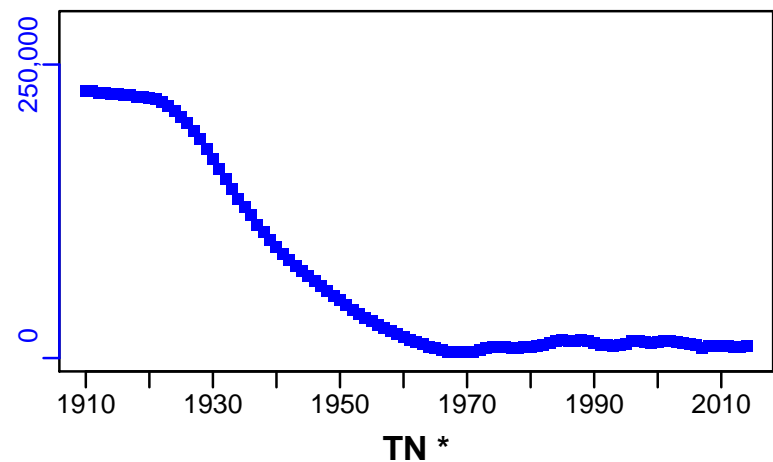
Production (1910–2014–Johnston)



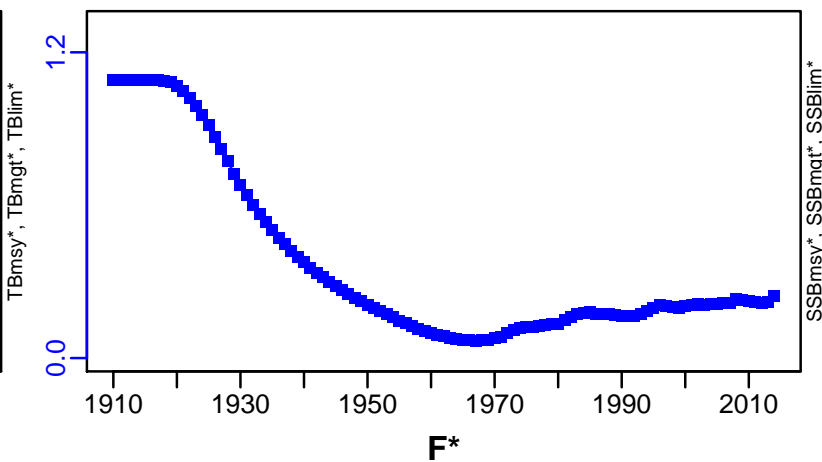
◆ Start Year ◆ End Year * No Data

West coast rock lobster South Africa Area 8 [CRLOBSTERSA8]

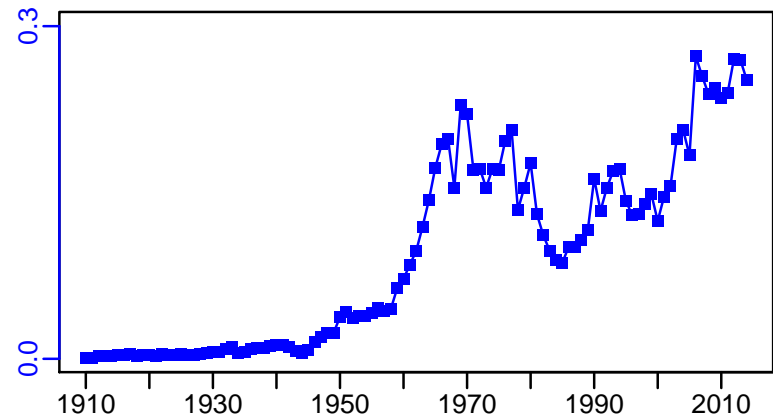
TB-MT (1910–2014–Johnston)



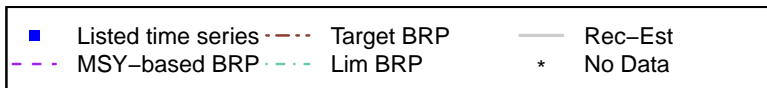
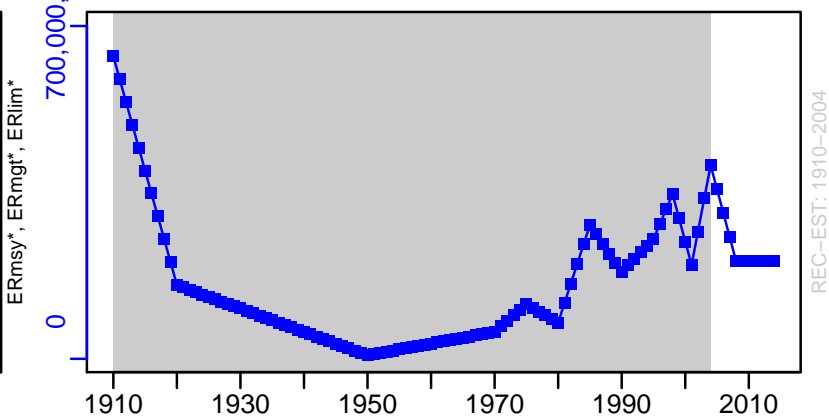
SSB-relative (1910–2014–Johnston)



ER-ratio (1910–2014–Johnston)

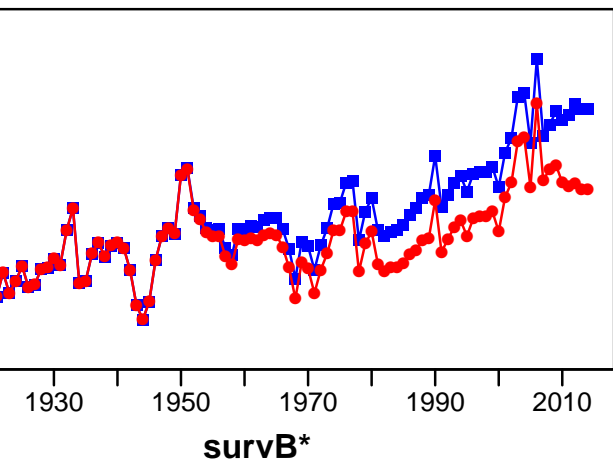


R-E00 (1910–2014–Johnston)

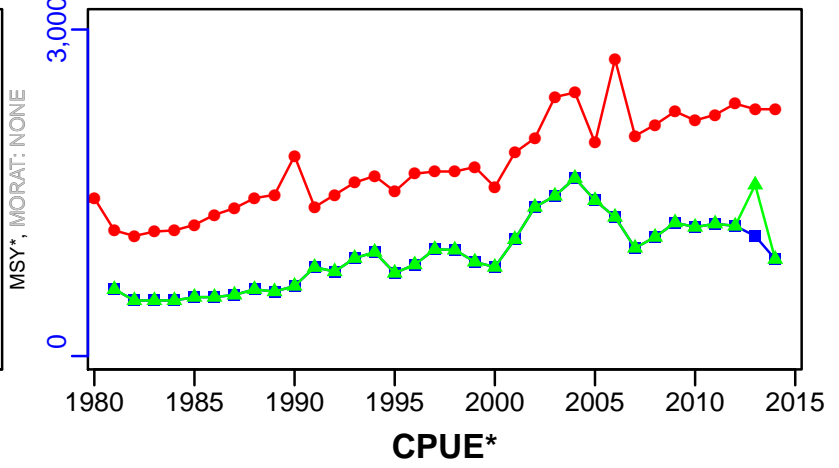


West coast rock lobster South Africa Area 8 [CRLOBSTERSA8]

TC-MT, TL-MT, RecC* (1910–2014–Johnston)



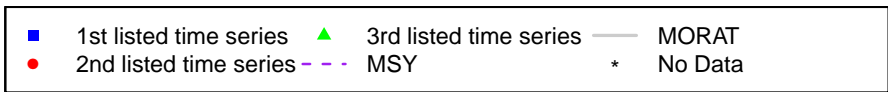
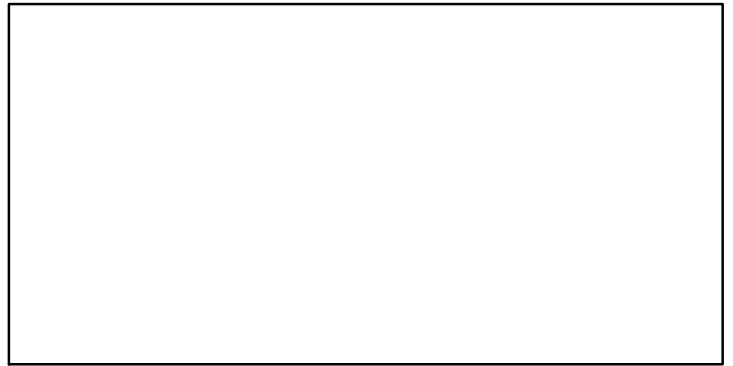
TAC-MT, Cpair-MT, Cadvised-MT (1910–2014–Johnston)



EFFORT*



CdivMSY*



Cape horse mackerel South Africa South coast [CTRACSA]

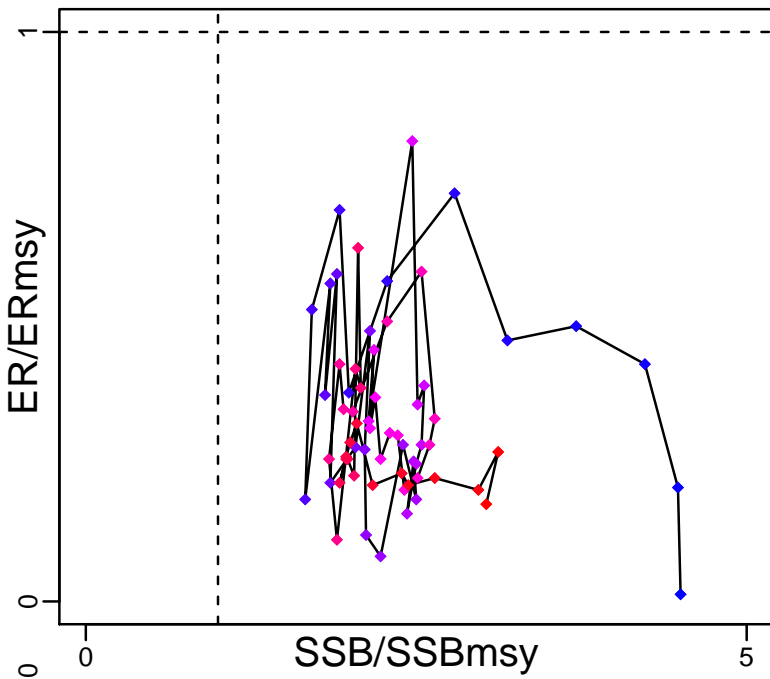
Metadata	
Scientific Name	Trachurus capensis
Current Assess ID	MARAM-CTRACSA-1949-2013-Furman
Area	South Africa South coast
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2013	307,654
SSBmsy	SSBmsy-MT	2013	234,635
Fmsy	Fmsy-1/yr	2013	0.19
ERmsy	ERmsy-ratio	2013	0.24
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2013	1,052,609
SSB0	SSB0-MT	2013	960,562
MSY	MSY-MT	2013	72,924
M	M-1/yr	2013	0.3
TBlim	TBlim-MT	2013	366,474
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

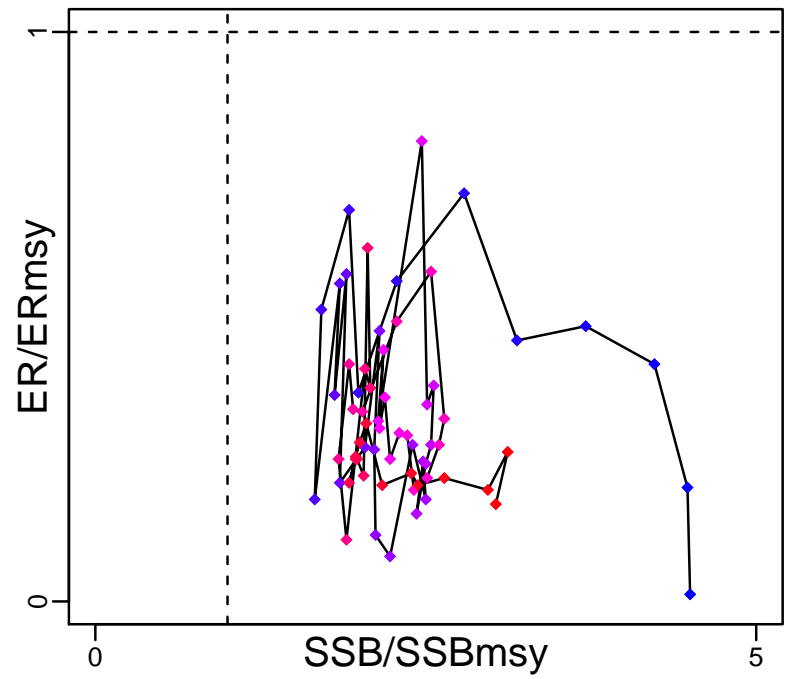
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2013	731,000	-	0+
SSB	SSB-MT	2013	606,000	Both	3+
TN	-	-	-	-	-
R	R-E00	2013	1.46×10^9	-	0
F	-	-	-	-	-
ER	ER-ratio	2013	0.041	-	-
TC	TC-MT	2013	29,700		
TL	TL-MT	2013	29,700		
TB/TBmsy	TBdivTBmsy-dimensionless	2013	2.48		
SSB/SSBmsy	SSBdivSSBmsy-dimensionless	2013	2.85		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2013	0.171		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Cape horse mackerel South Africa South coast [CTRACSA]

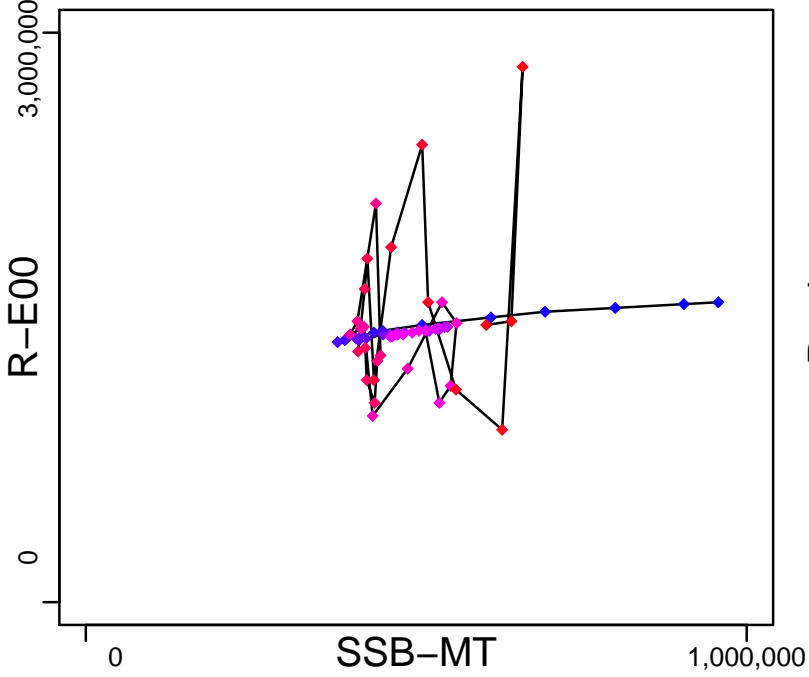
Kobe MSYpref (1949–2013–Furman)



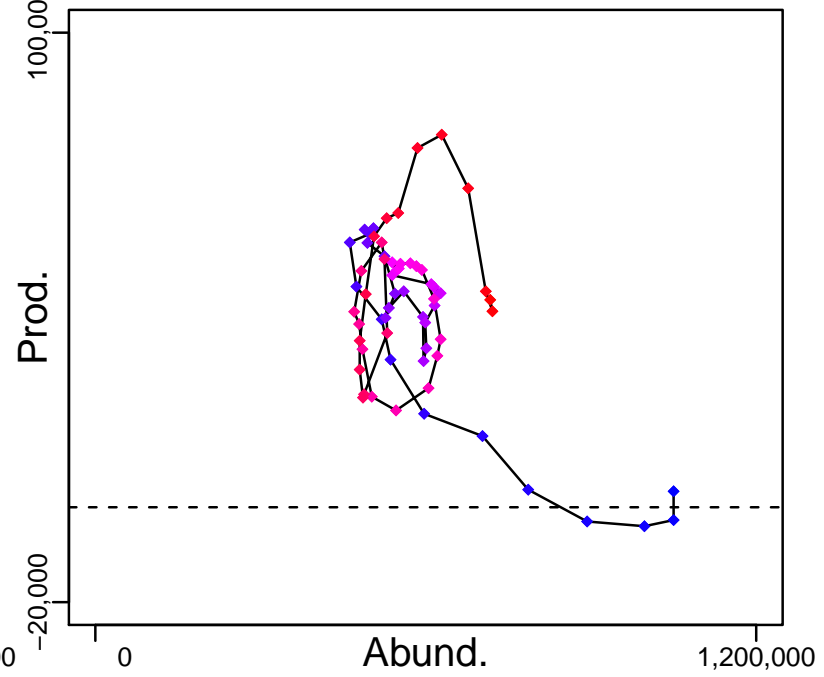
Kobe MGTpref (1949–2013–Furman)



Spawner Recruit (1949–2013–Furman)



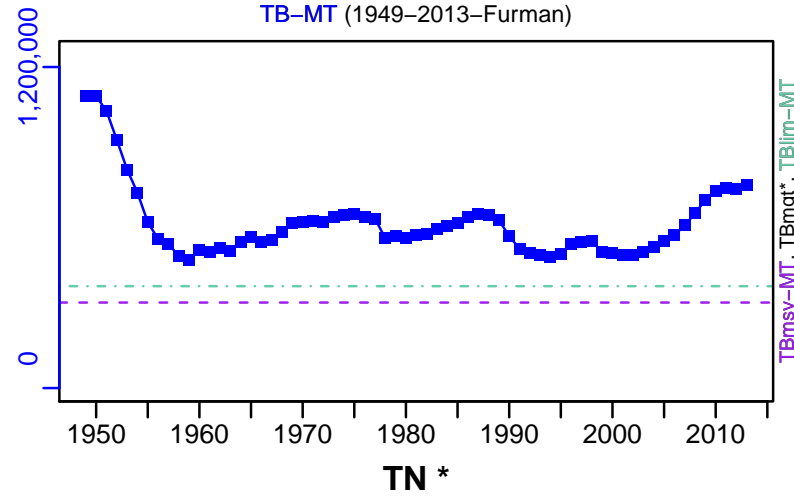
Production (1949–2013–Furman)



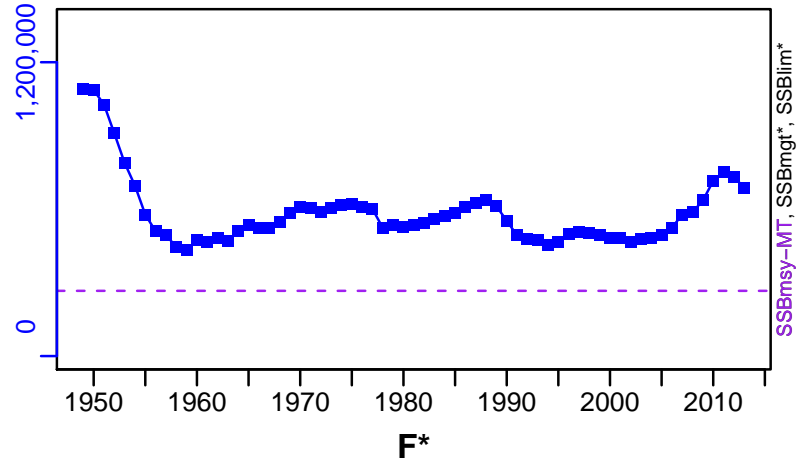
◆ Start Year ◆ End Year * No Data

Cape horse mackerel South Africa South coast [CTRACSA]

TB-MT (1949–2013–Furman)



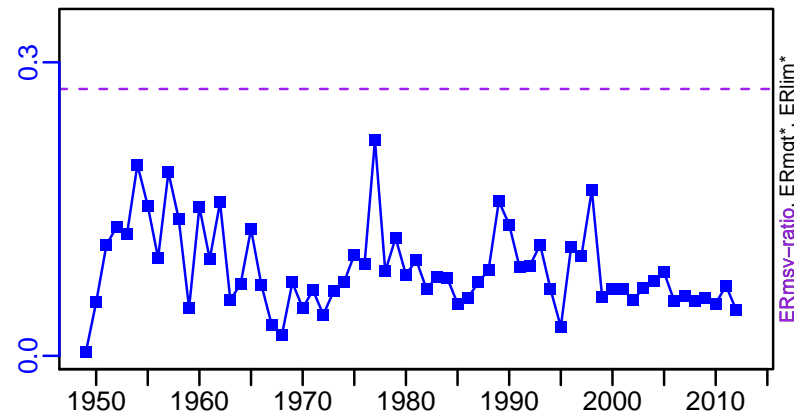
SSB-MT (1949–2013–Furman)



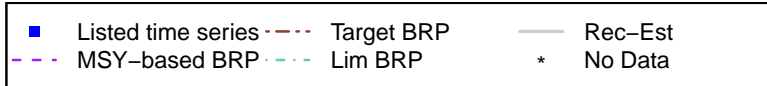
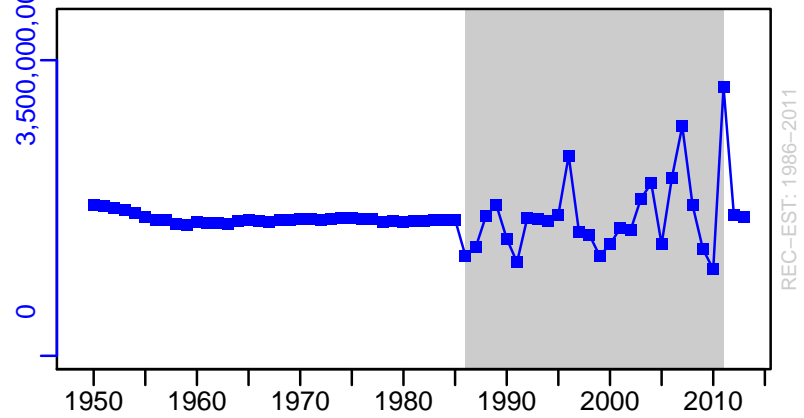
TN *

F*

ER-ratio (1949–2013–Furman)



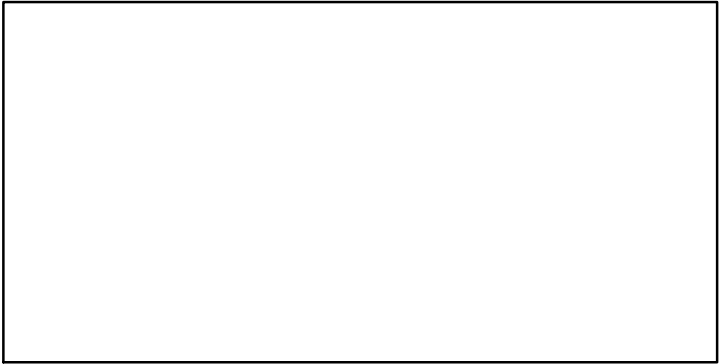
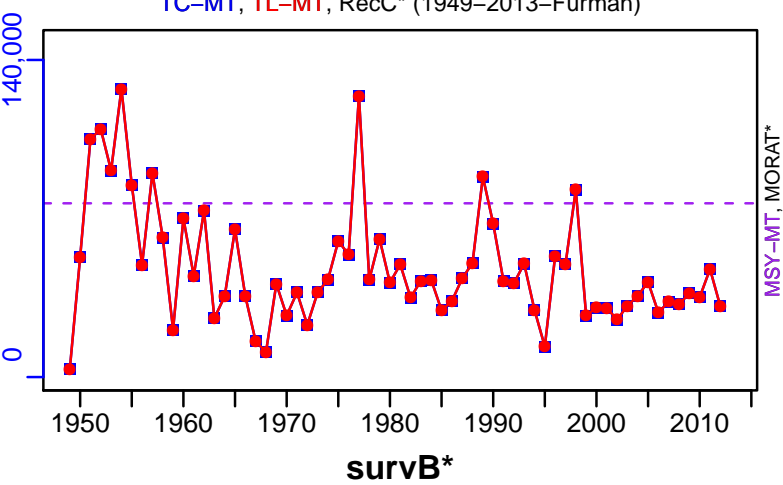
R-E00 (1949–2013–Furman)



Cape horse mackerel South Africa South coast [CTRACSA]

TC-MT, TL-MT, RecC* (1949–2013–Furman)

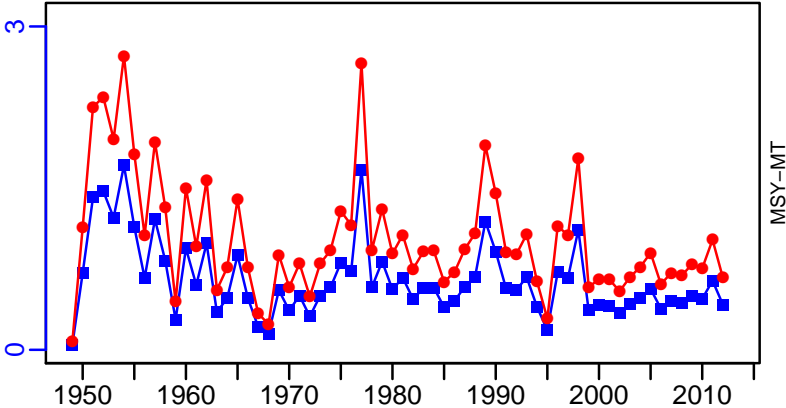
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1949–2013–Furman)



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

Deep water cape hake South Africa [DEEPCHAKESA]

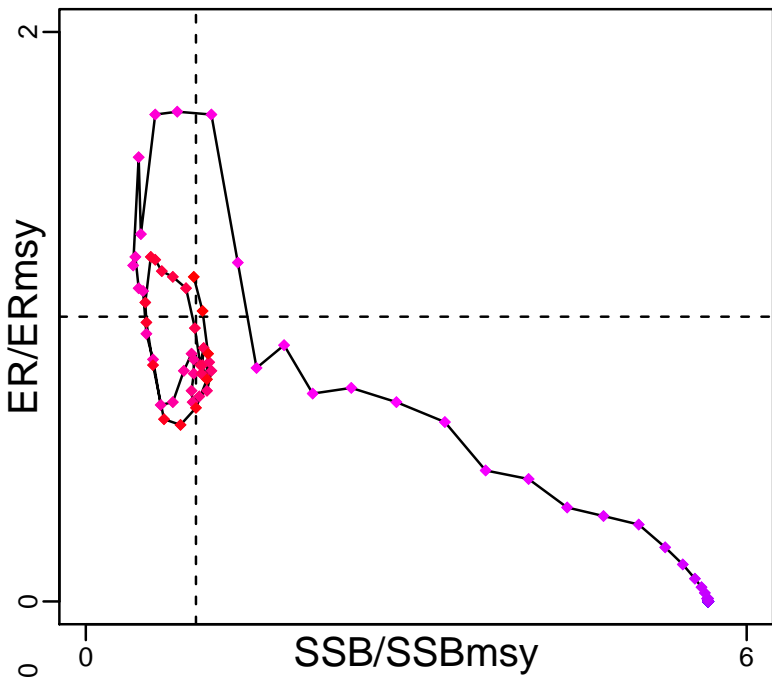
Metadata	
Scientific Name	Merluccius paradoxus
Current Assess ID	MARAM-DEEPCHAKESA-1917-2015-Rademeyer
Area	South Africa
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2013, 2015

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-MT	2015	181,000
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2015	0.41
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2015	181,000
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2015	2,256,000
SSB0	SSB0-MT	2015	1,023,000
MSY	MSY-MT	2015	118,900
M	M-1/yr	2015	0.717
TBlim	TBlim-MT	2013	60,000
SSBlim	SSBlim-MT	2015	77,200
Flim	-	-	-
ERlim	-	-	-

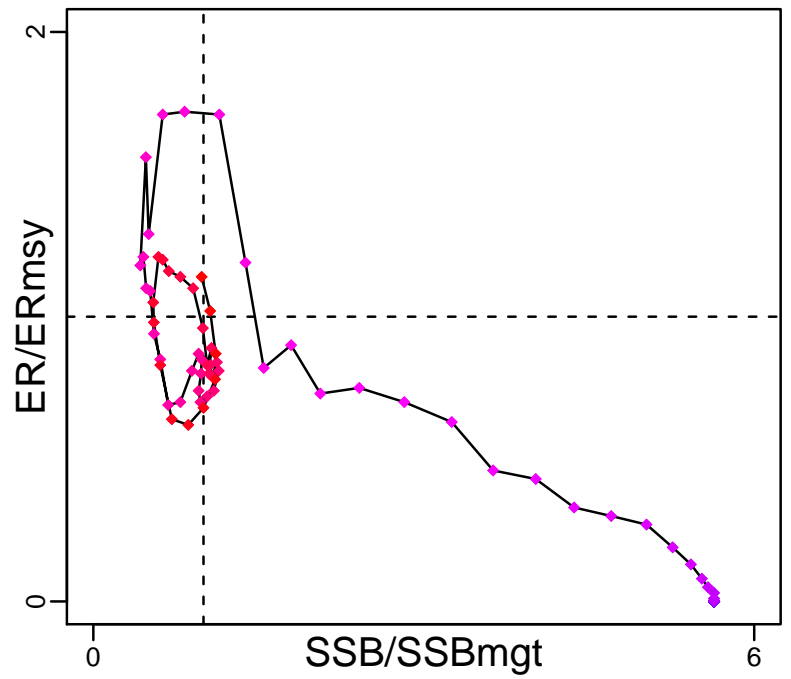
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	517,000	-	0+
SSB	SSB-MT	2015	178,000	Females	4
TN	-	-	-	-	-
R	R-E00	2015	3.86×10^9	-	0
F	-	-	-	-	-
ER	ER-ratio	2015	0.47	-	-
TC	TC-MT	2015	133,000		
TL	TL-MT	2015	133,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSBdivSSBmsy-dimensionless	2015	0.98		
F/Fmsy	-	-	-		
ER/ERmsy	ERdivERmsy-dimensionless	2015	1.14		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2015	0.983		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Deep water cape hake South Africa [DEEPCHAKESA]

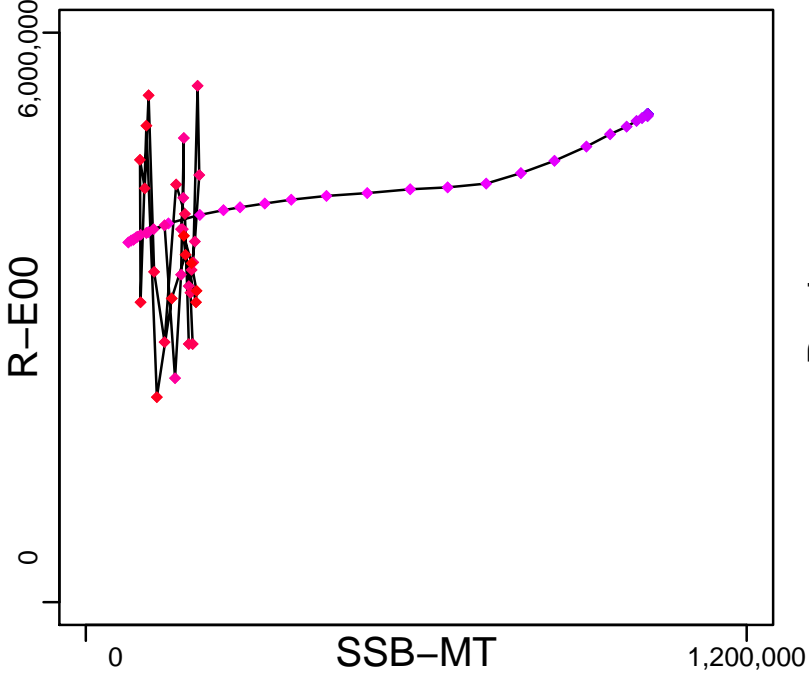
Kobe MSYpref (1917–2015–Rademeyer)



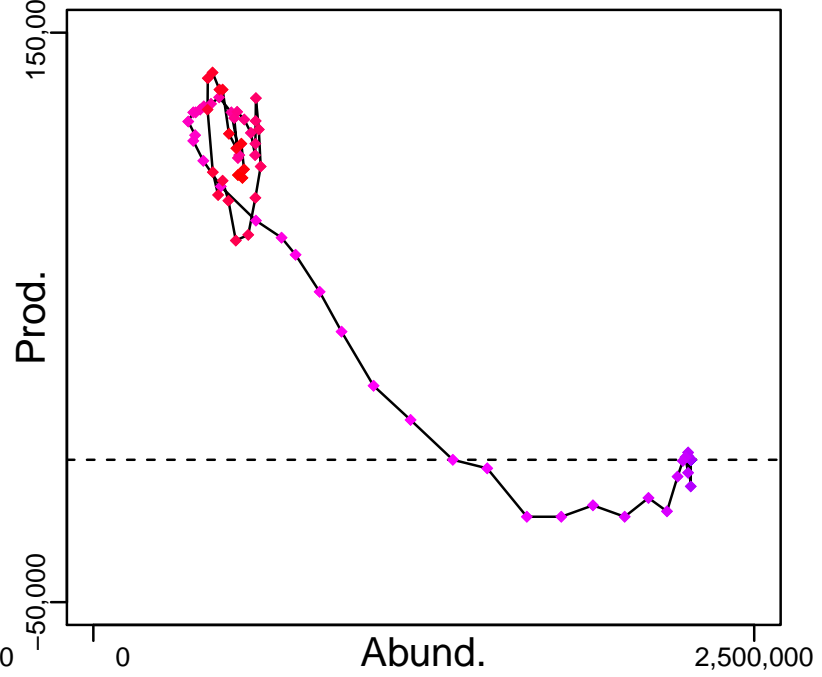
Kobe MGTpref (1917–2015–Rademeyer)



Spawner Recruit (1917–2015–Rademeyer)

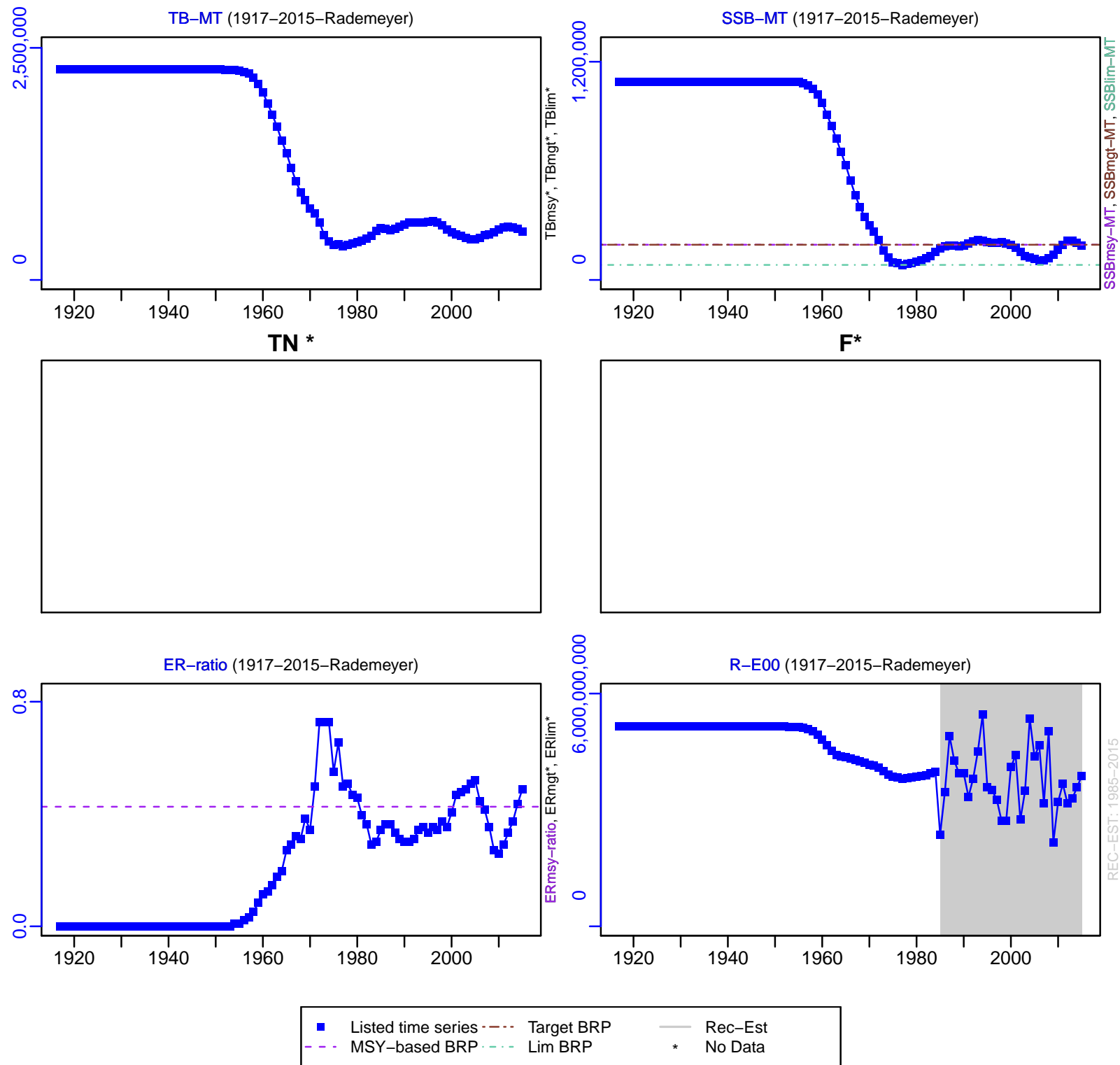


Production (1917–2015–Rademeyer)



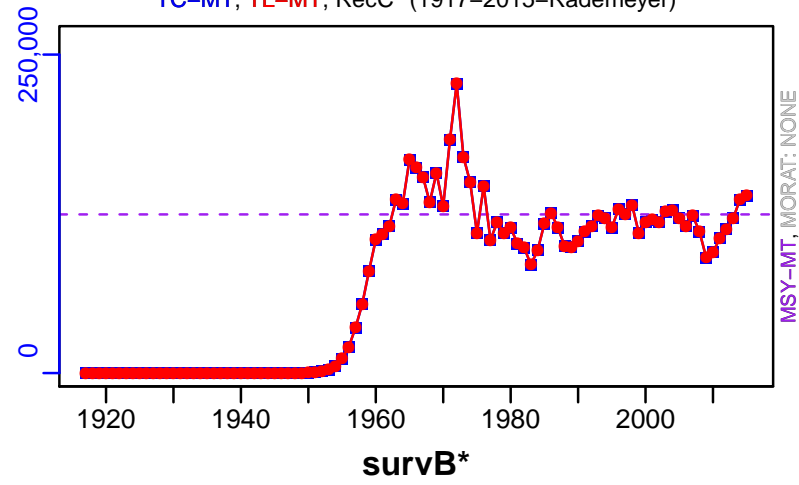
◆ Start Year ◆ End Year * No Data

Deep water cape hake South Africa [DEEPCHAKESA]



Deep water cape hake South Africa [DEEPCHAKESA]

TC-MT, TL-MT, RecC* (1917-2015-Rademeyer)



TAC*, Cpair*, Cadv*



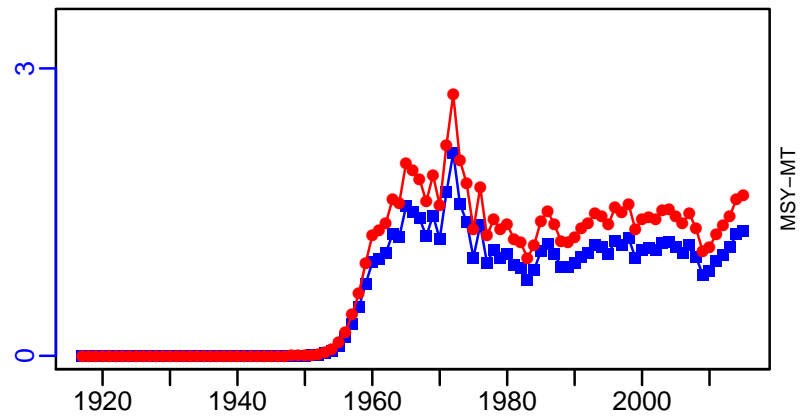
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1917-2015-Rademeyer)



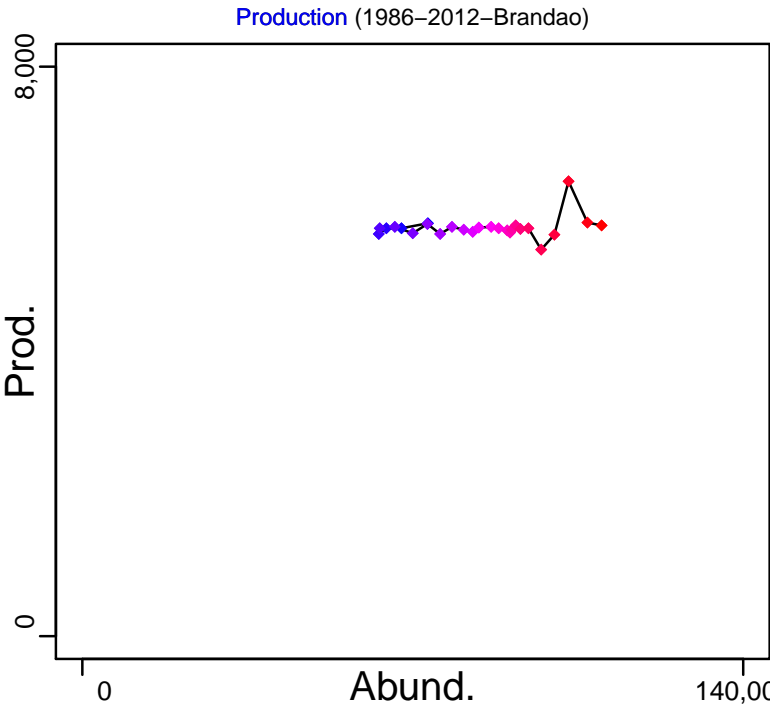
■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Kingklip South Africa [KINGKLIPSA]

Metadata	
Scientific Name	Genypterus capensis
Current Assess ID	MARAM-KINGKLIPSA-1986-2012-Brandao
Area	South Africa
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2012

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2012	85,311
SSB0	-	-	-
MSY	MSY-MT	2012	5855
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

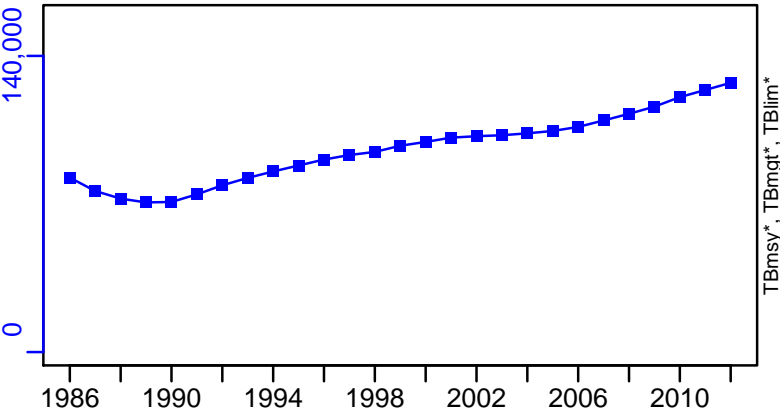
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	113,000	-	0+
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2012	0.031	-	-
TC	TC-MT	2012	3520		
TL	TL-MT	2012	3520		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



◆ Start Year ◆ End Year * No Data

Kingklip South Africa [KINGKLIPSA]

TB-MT (1986-2012-Brandao)



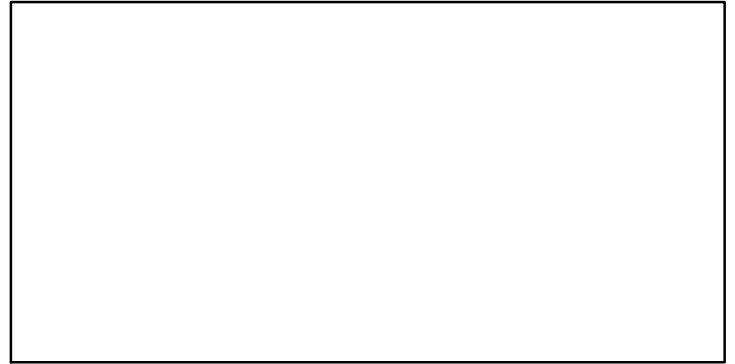
SSB*



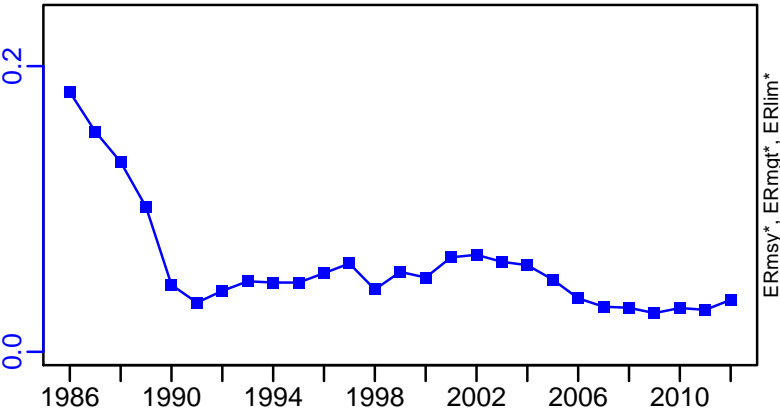
TN *



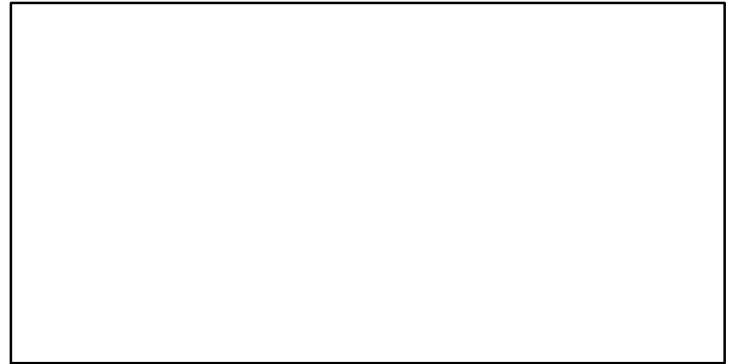
F*



ER-calc-ratio (1986-2012-Brandao)

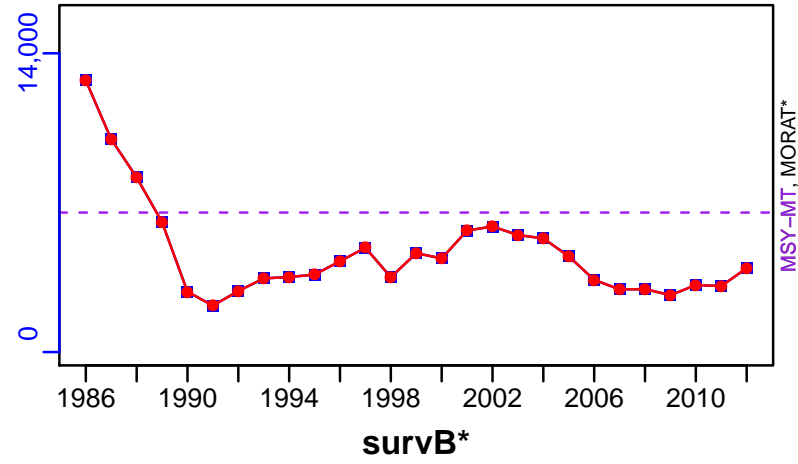


Recruits*



Kingklip South Africa [KINGKLIPSA]

TC-MT, TL-MT, RecC* (1986–2012–Brandao)



TAC*, Cpair*, Cadv*



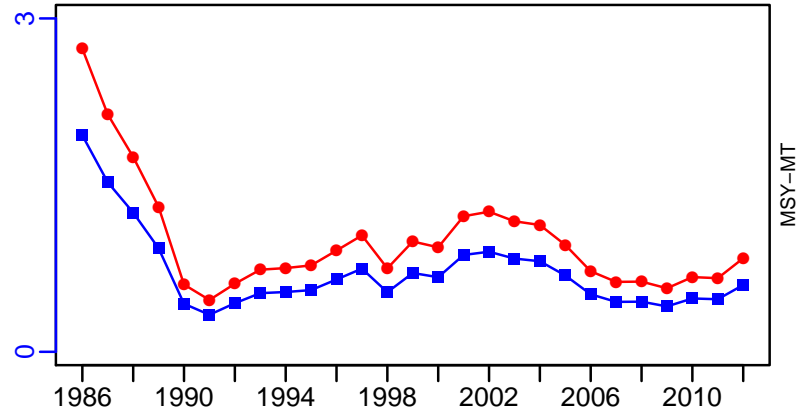
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1986–2012–Brandao)



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

Patagonian toothfish South Africa Subantarctic Prince Edward Islands [PTOOTHFISHPEI]

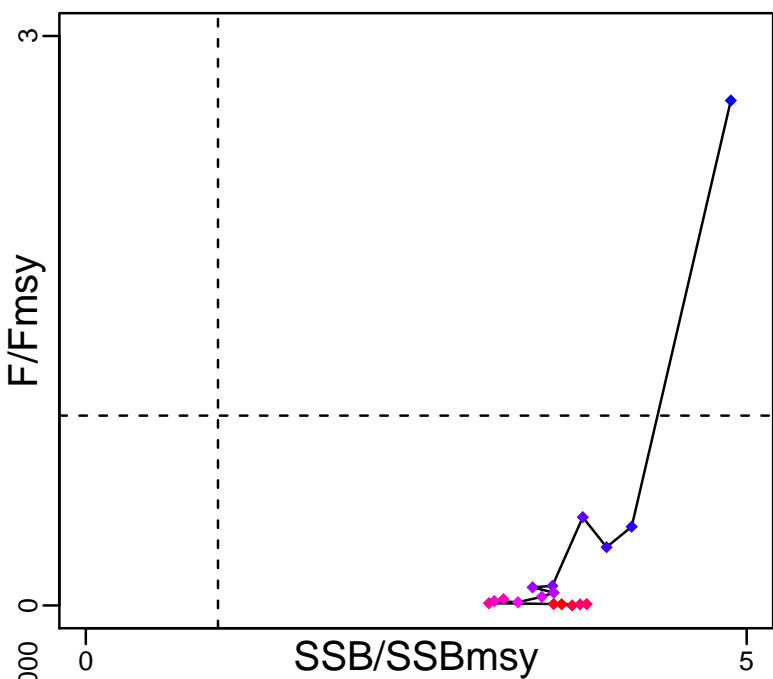
Metadata	
Scientific Name	Dissostichus eleginoides
Current Assess ID	MARAM-PTOOTHFISHPEI-1960-2015-Brandao
Area	South Africa Subantarctic Prince Edward Islands
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2013, 2015

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-MT	2015	9180
Fmsy	Fmsy-1/yr	2015	0.12
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2015	59,165
SSB0	SSB0-MT	2015	37,662
MSY	MSY-MT	2015	1514
M	M-1/yr	2015	0.13
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

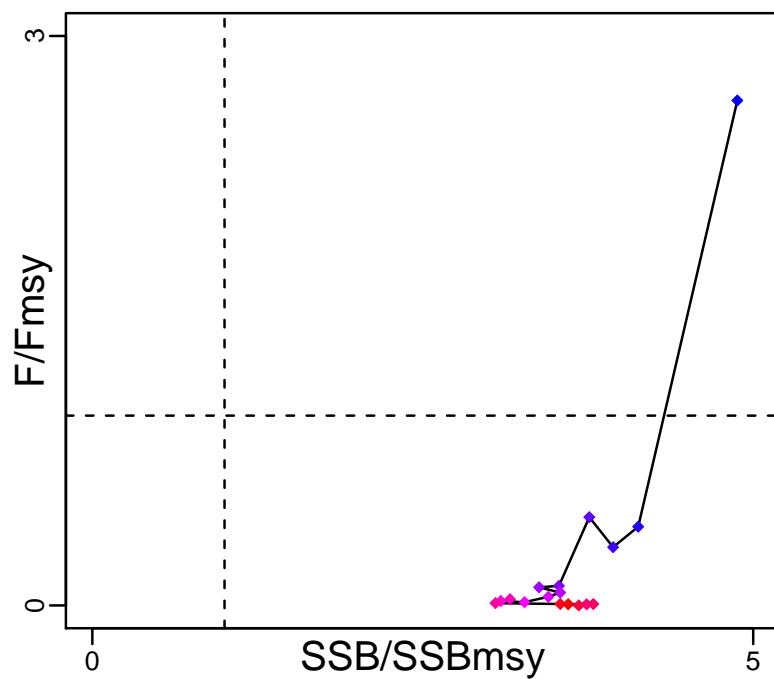
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	34,100	-	0+
SSB	SSB-MT	2015	21,700	-	13+
TN	-	-	-	-	-
R	R-E00	2015	1.41×10^{12}	-	6
F	-	-	-	-	-
ER	ER-calc-ratio	2015	0.017	-	-
TC	TC-MT	2015	575		
TL	TL-MT	2015	575		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSBdivSSBmsy-dimensionless	2015	2.36		
F/Fmsy	FdivFmsy-dimensionless	2013	0.006		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Patagonian toothfish South Africa Subantarctic Prince Edward Islands [PTOOTHFISHPEI]

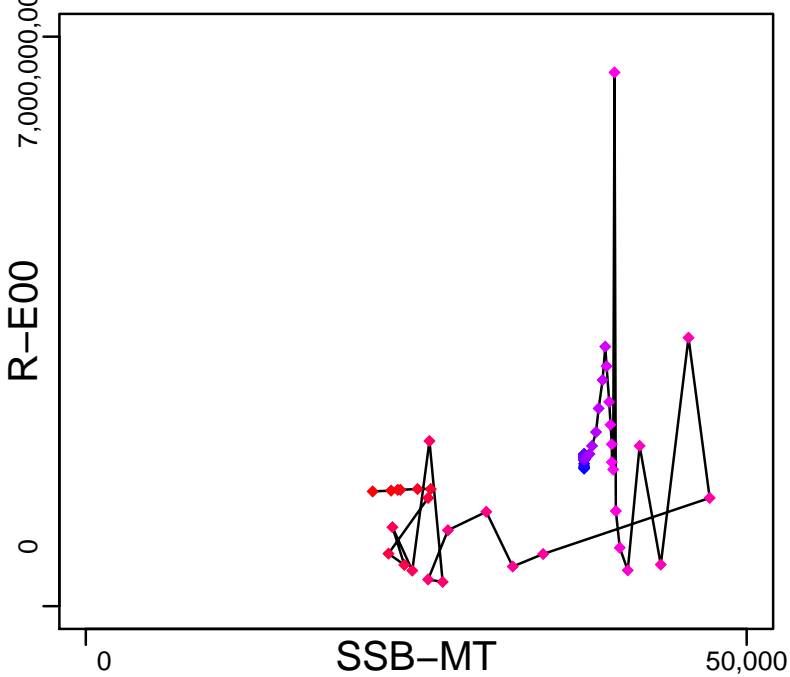
Kobe MSYpref (1960–2013–Brandao)



Kobe MGTpref (1960–2013–Brandao)



Spawner Recruit (1960–2015–Brandao)



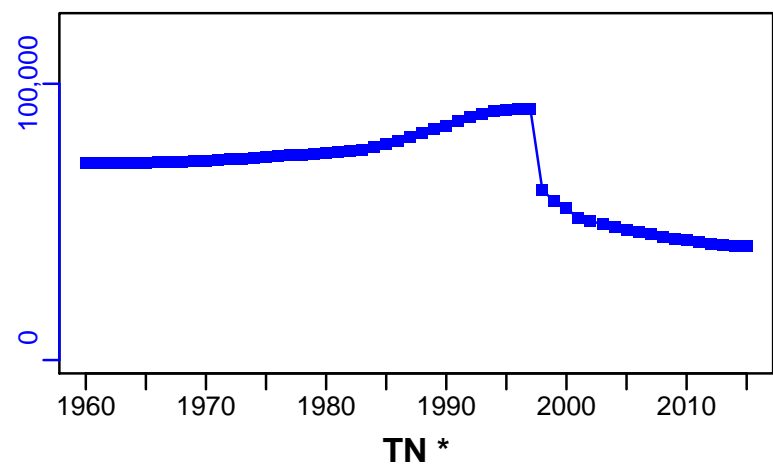
Production*



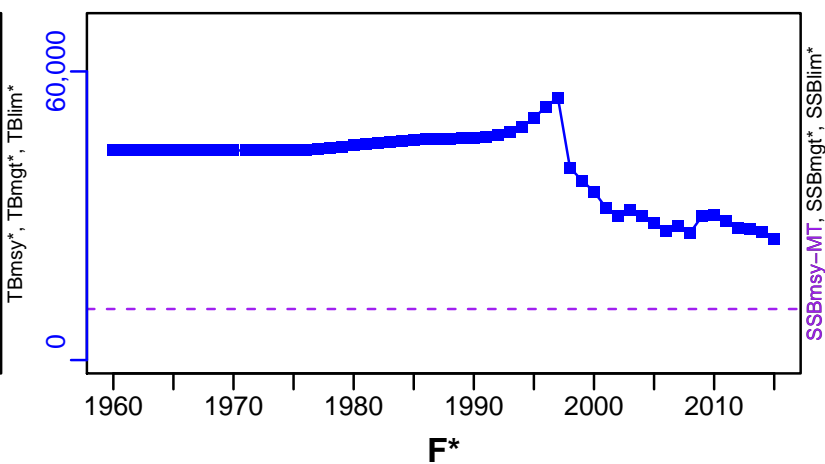
◆ Start Year ◆ End Year * No Data

Patagonian toothfish South Africa Subantarctic Prince Edward Islands [PTOOTHFISHPEI]

TB-MT (1960–2015–Brandao)



SSB-MT (1960–2015–Brandao)

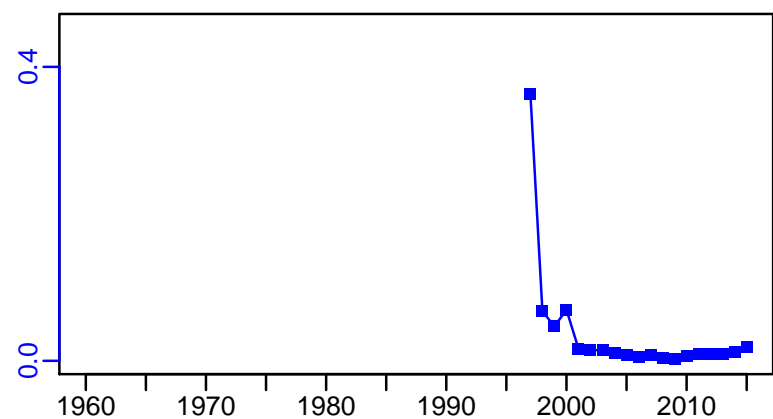


TN *

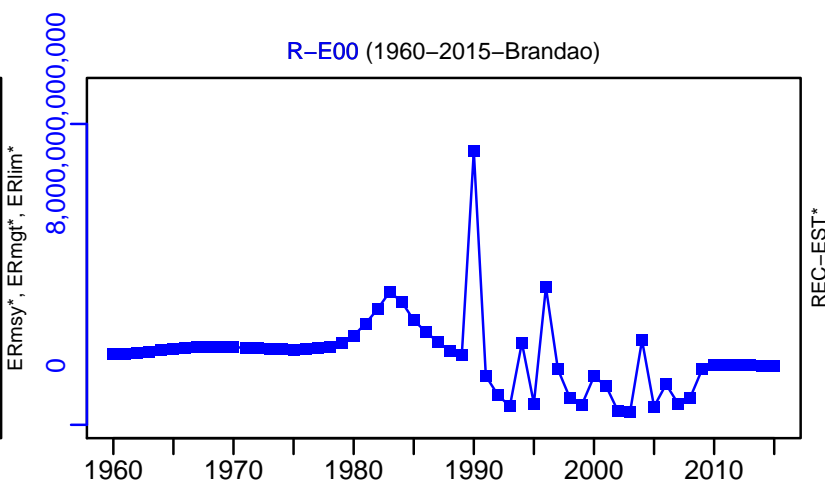
F*



ER-calc-ratio (1960–2015–Brandao)

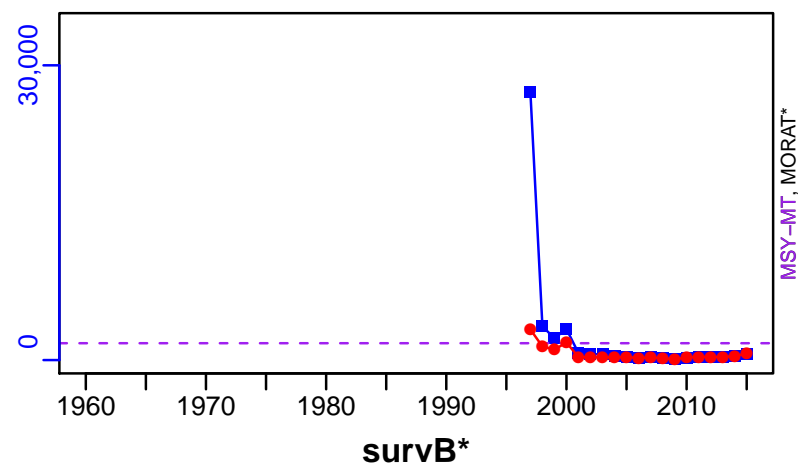


R-E00 (1960–2015–Brandao)



Patagonian toothfish South Africa Subantarctic Prince Edward Islands [PTOOTHFISHPEI]

TC-MT, TL-MT, RecC* (1960–2015–Brandao)



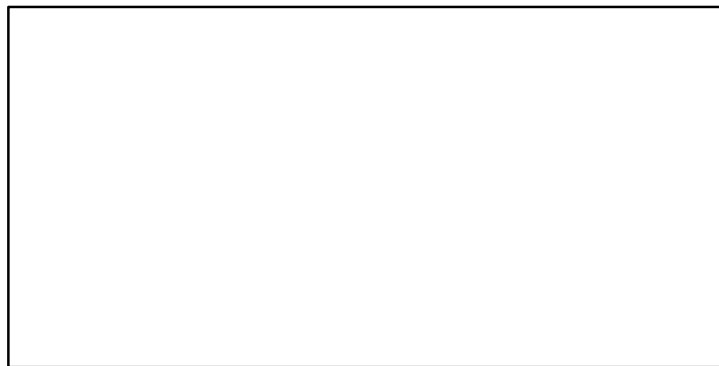
TAC*, Cpair*, Cadv*



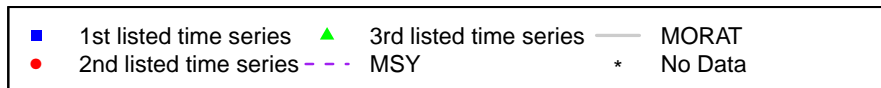
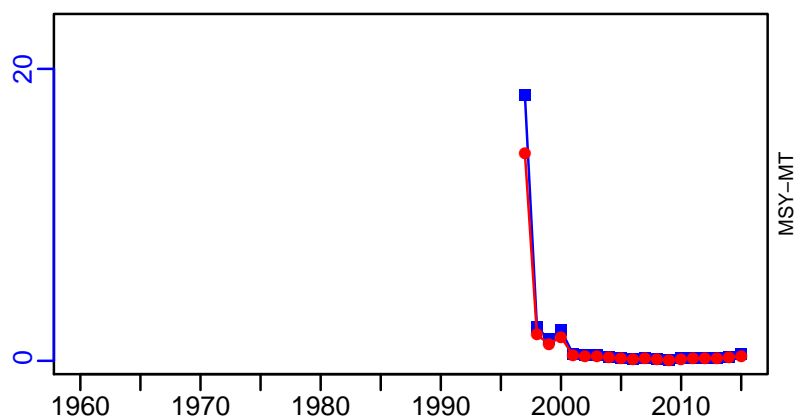
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1960–2015–Brandao)



South African abalone South Africa [SAABALONESA]

Metadata	
Scientific Name	Haliotis midae
Current Assess ID	MARAM-SAABALONESA-1951-2015-Brandao
Area	South Africa
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2013, 2015

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-pr-MT	2015	11,575
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2015	31,391
SSB0	SSB0-MT	2015	28,937
MSY	-	-	-
M	M-1/yr	2015	0.15
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

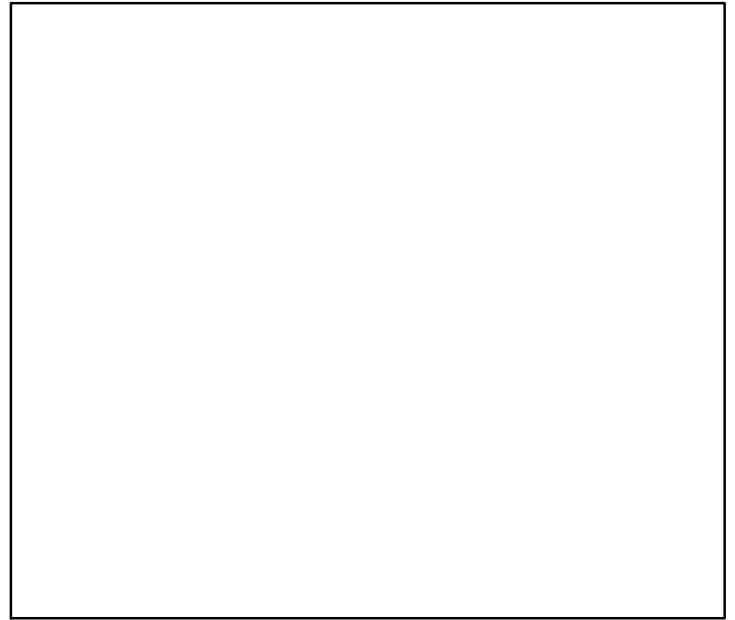
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	6210	-	1+
SSB	SSB-MT	2015	5080	-	7+
TN	-	-	-	-	-
R	R-E00	2015	9,070,000	-	8
F	F-1/yr	2015	0.035	-	-
ER	ER-ratio	2015	0.16	-	-
TC	TC-MT	2015	985		
TL	TL-MT	2015	50		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/SSBmsy-pr-MT	2015	0.439		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

South African abalone South Africa [SAABALONESA]

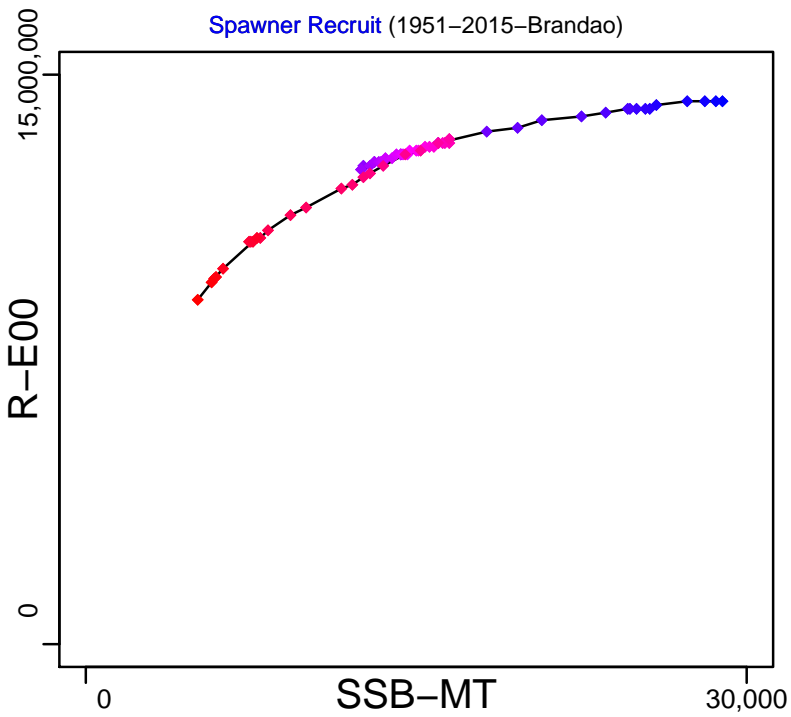
Kobe MSY*



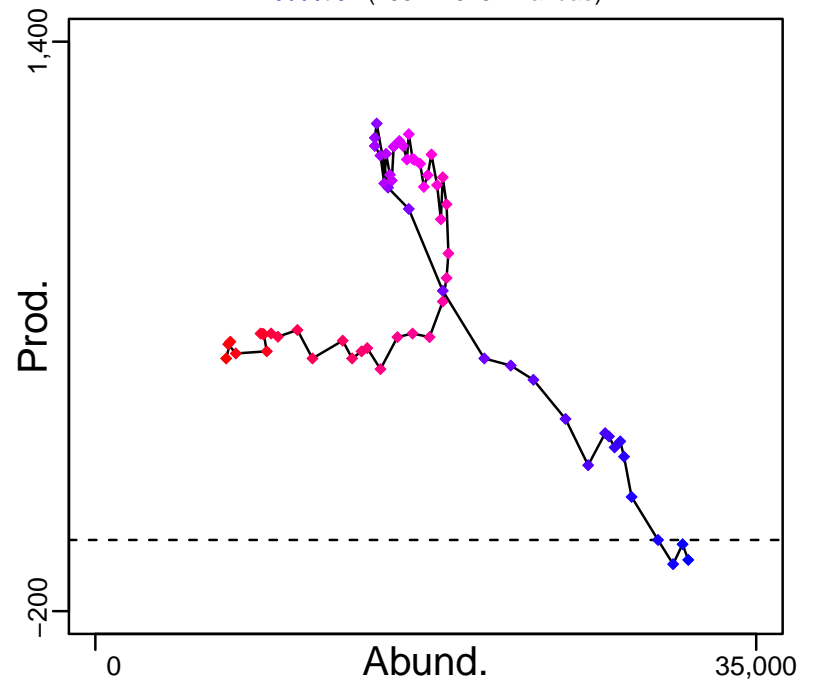
Kobe MGT*



Spawner Recruit (1951–2015–Brandao)



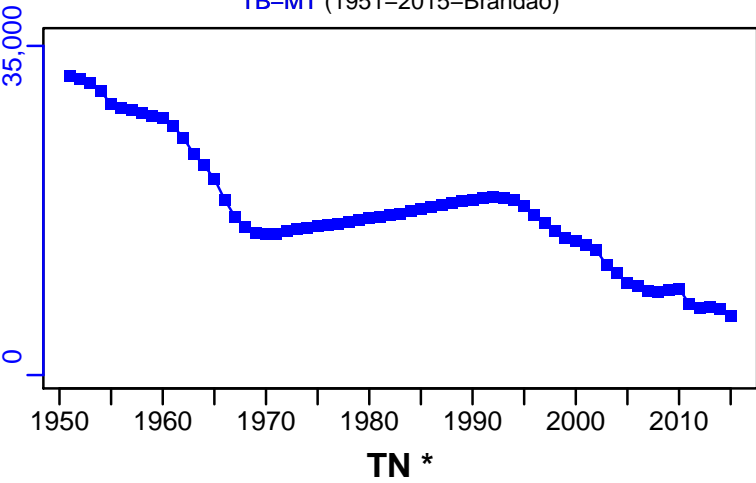
Production (1951–2015–Brandao)



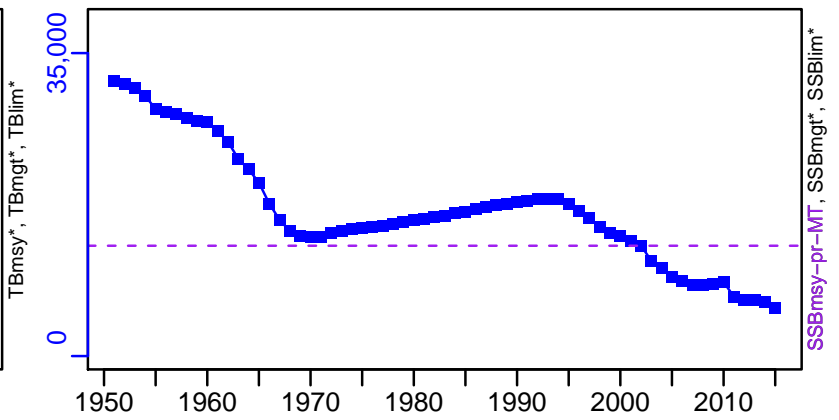
◆ Start Year ◆ End Year * No Data

South African abalone South Africa [SAABALONESA]

TB-MT (1951–2015–Brandao)



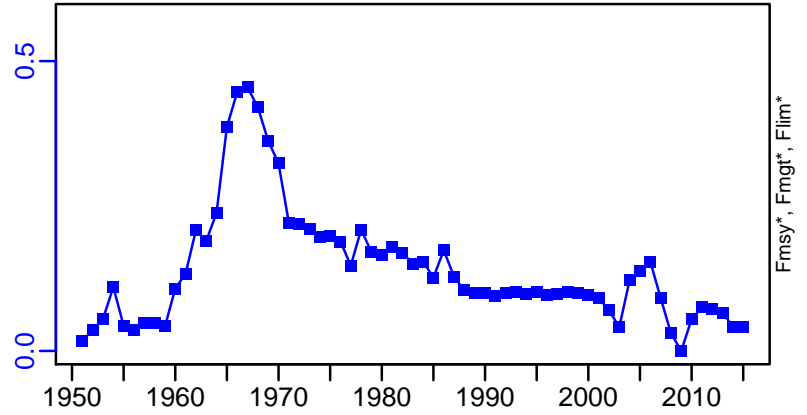
SSB-MT (1951–2015–Brandao)



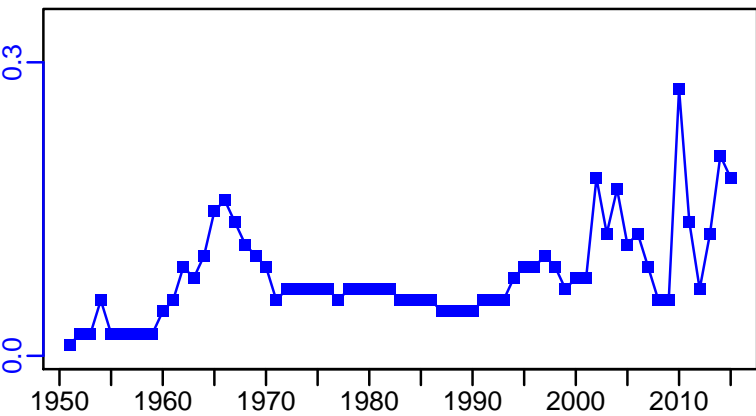
TN *



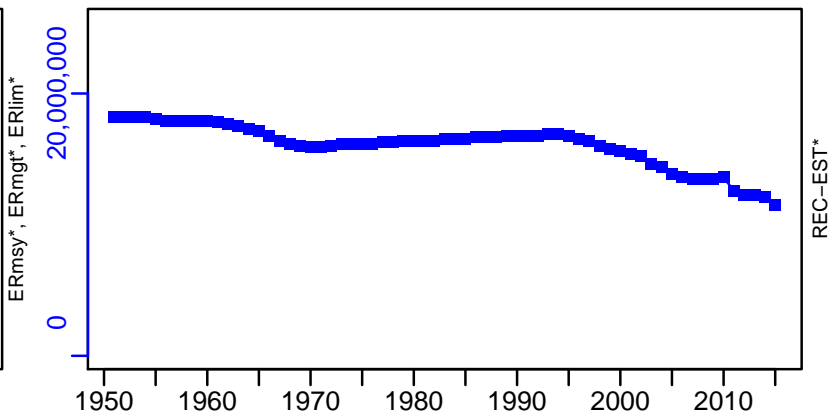
F-1/yr (1951–2015–Brandao)



ER-ratio (1951–2015–Brandao)

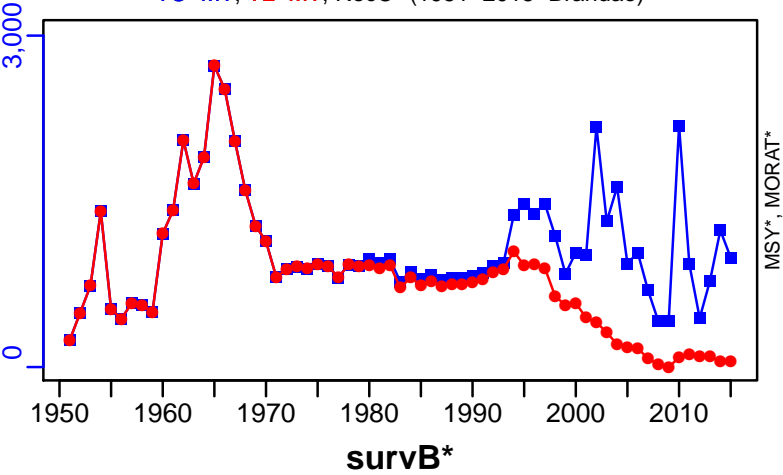


R-E00 (1951–2015–Brandao)



South African abalone South Africa [SAABALONESA]

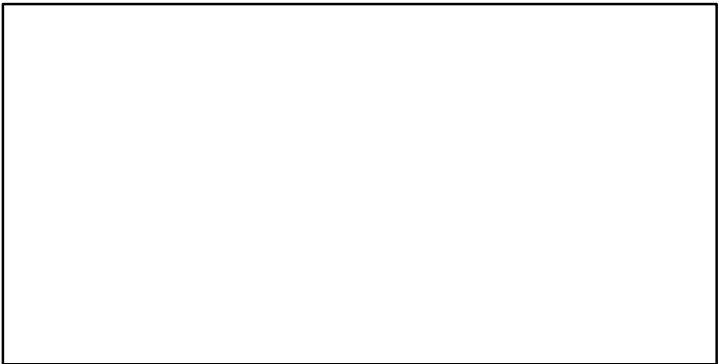
TC-MT, TL-MT, RecC* (1951-2015-Brandao)



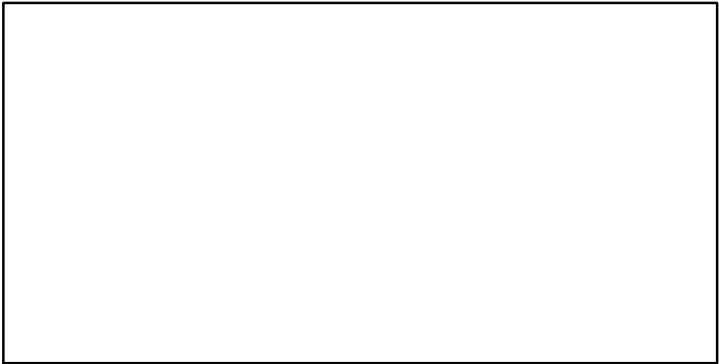
TAC*, Cpair*, Cadv*



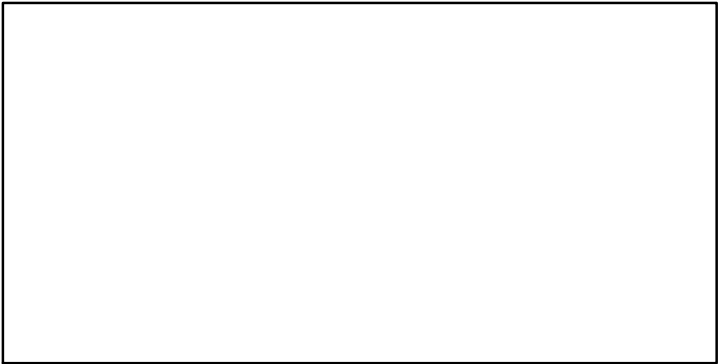
CPUE*



EFFORT*



CdivMSY*



Sardine South Africa [SARDSA]

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

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2015	1,122,314
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2015	0.9
TBlim	TBlim-MT	2015	361,990
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	688,000	Both	0+
SSB	SSB-MT	2015	339,000	Both	0+
TN	TN-E00	2015	4.47×10^{10}	Both	0+
R	R-E00	2015	3.13×10^{10}	Both	-
F	-	-	-	-	-
ER	ER-ratio	2015	0.12	Both	0+
TC	TC-MT	2015	96,300		
TL	TL-MT	2015	96,300		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Sardine South Africa [SARDSA]

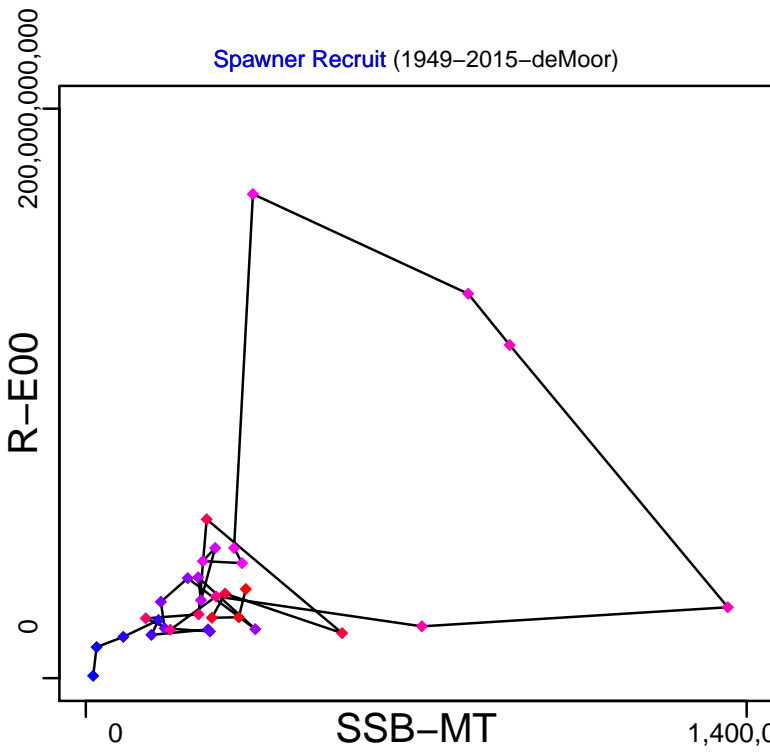
Kobe MSY*



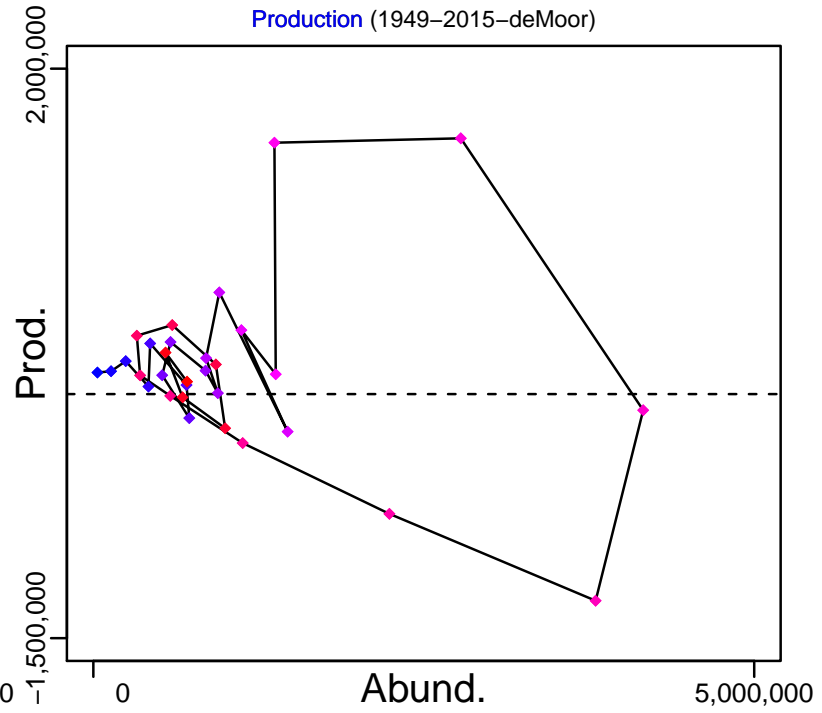
Kobe MGT*



Spawner Recruit (1949–2015–deMoor)

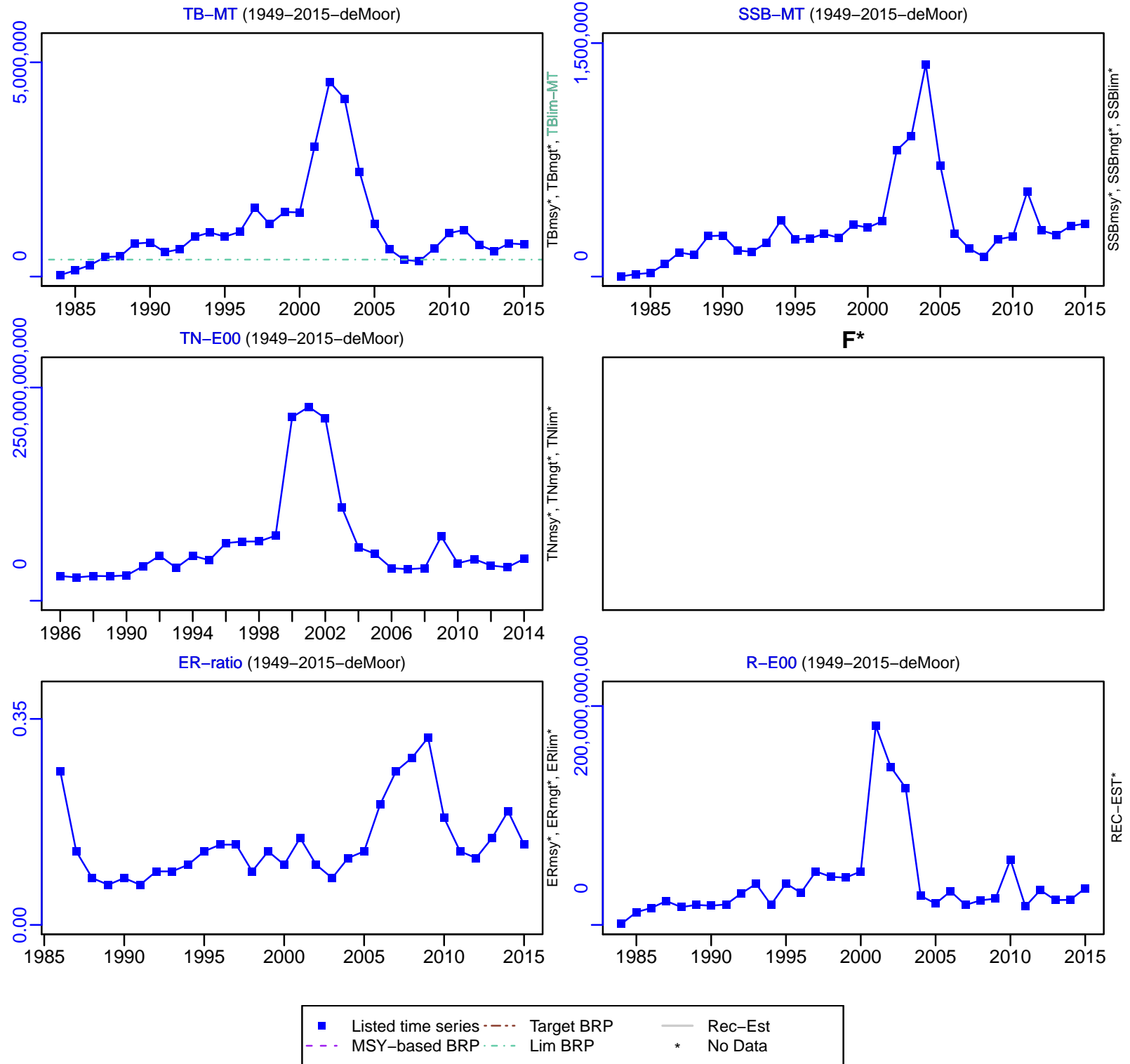


Production (1949–2015–deMoor)



◆ Start Year ◆ End Year * No Data

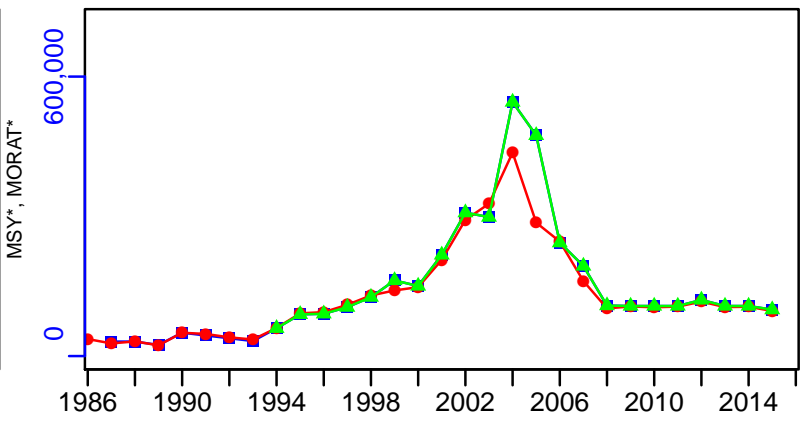
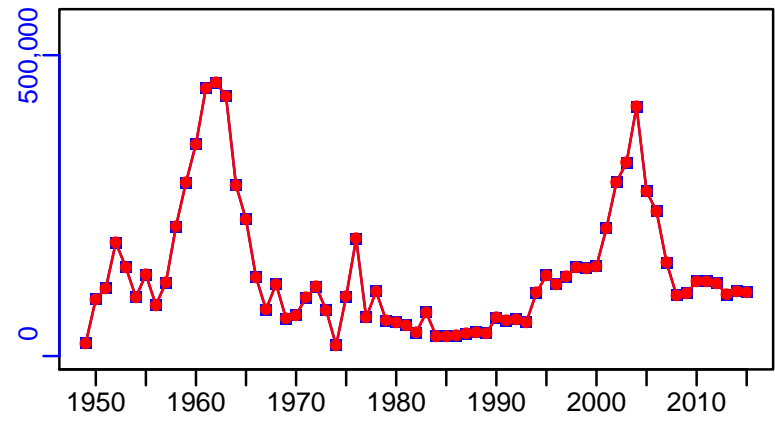
Sardine South Africa [SARDSA]



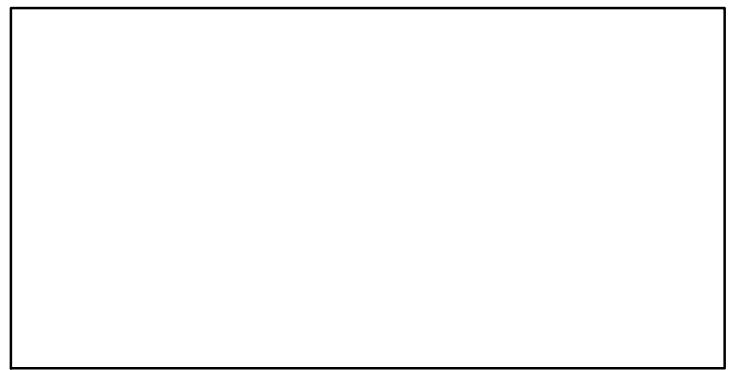
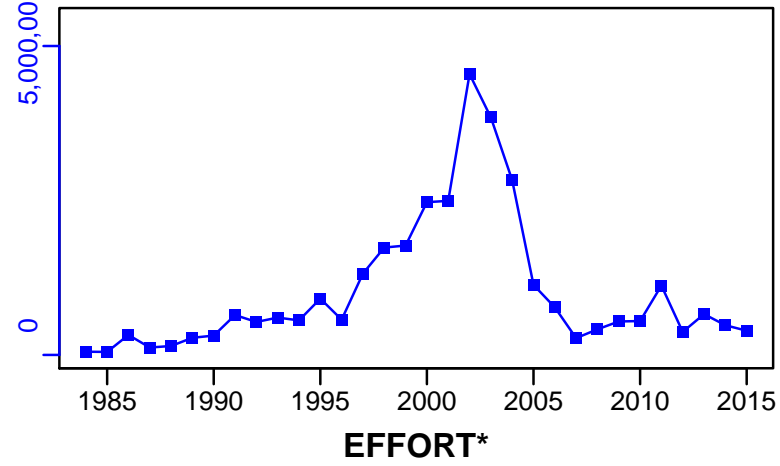
Sardine South Africa [SARDSA]

TC-MT, TL-MT, RecC* (1949-2015-deMoor)

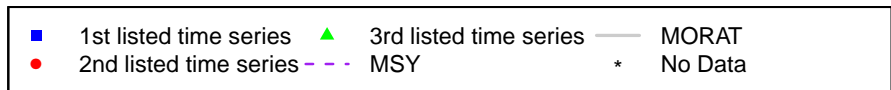
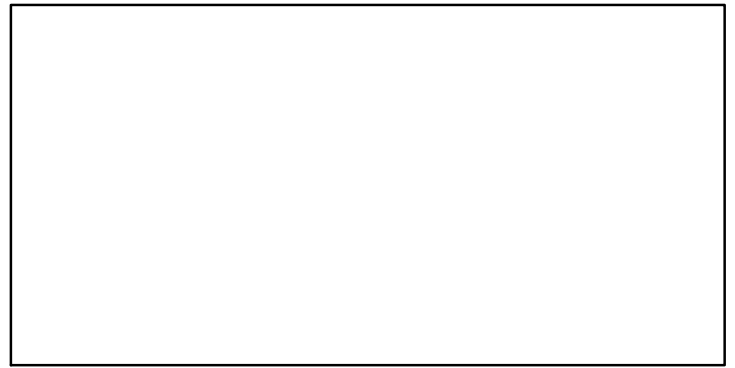
TAC-MT, Cpair-MT, Cadvised-MT (1949-2015-deMoor)



survB-MT (1949-2015-deMoor)



CdivMSY*



Southern spiny lobster South Africa South coast [SSLOBSTERSASC]

Metadata	
Scientific Name	Palinurus gilchristi
Current Assess ID	MARAM-SSLOBSTERSASC-1973-2014-Johnston
Area	South Africa South coast
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2012, 2014

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2014	1484
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2014	4047
MSY	-	-	-
M	M-1/yr	2014	0.1
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

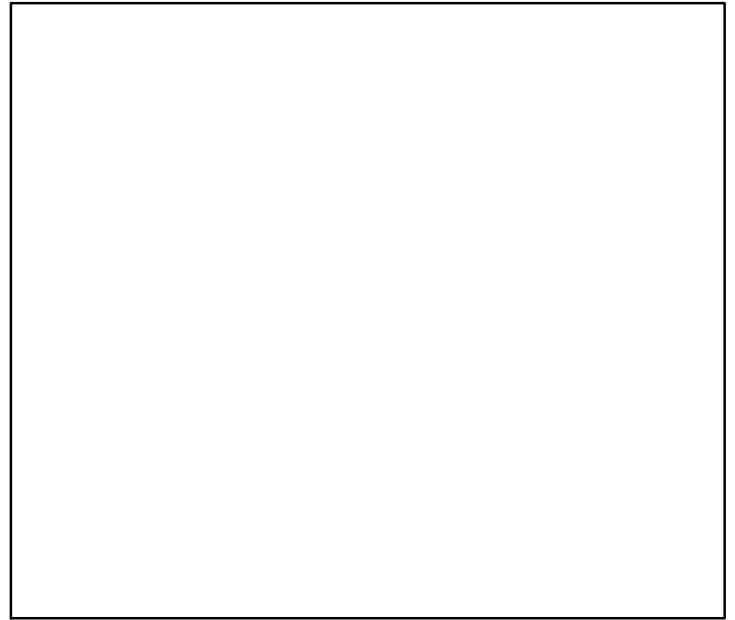
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2014	1070	-	-
SSB	SSB-MT	2014	1170	Females	-
TN	-	-	-	-	-
R	R-E00	2014	3,840,000	-	-
F	-	-	-	-	-
ER	ER-ratio	2014	0.336	-	-
TC	TC-MT	2014	359		
TL	TL-MT	2014	359		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2014	0.788		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Southern spiny lobster South Africa South coast [SSLOBSTERSASC]

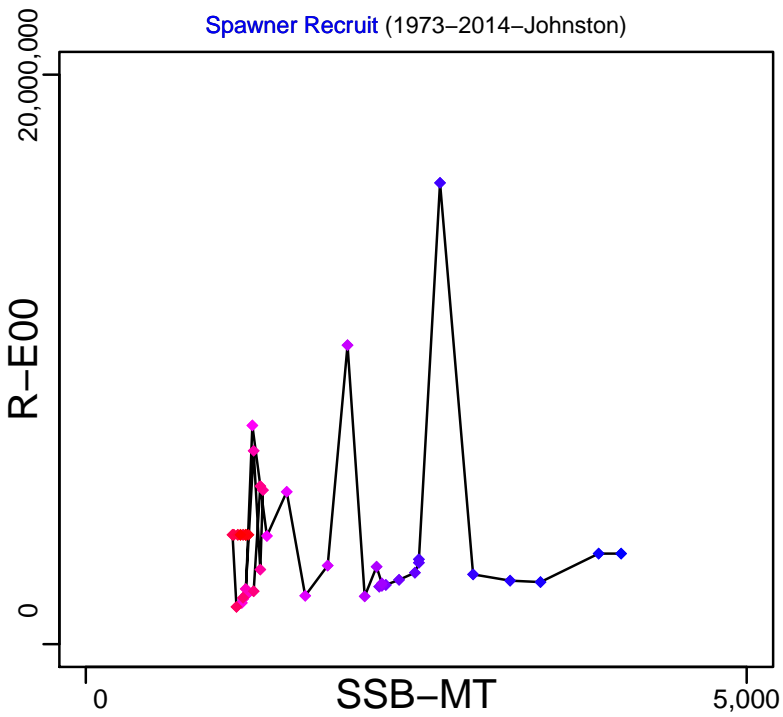
Kobe MSY*



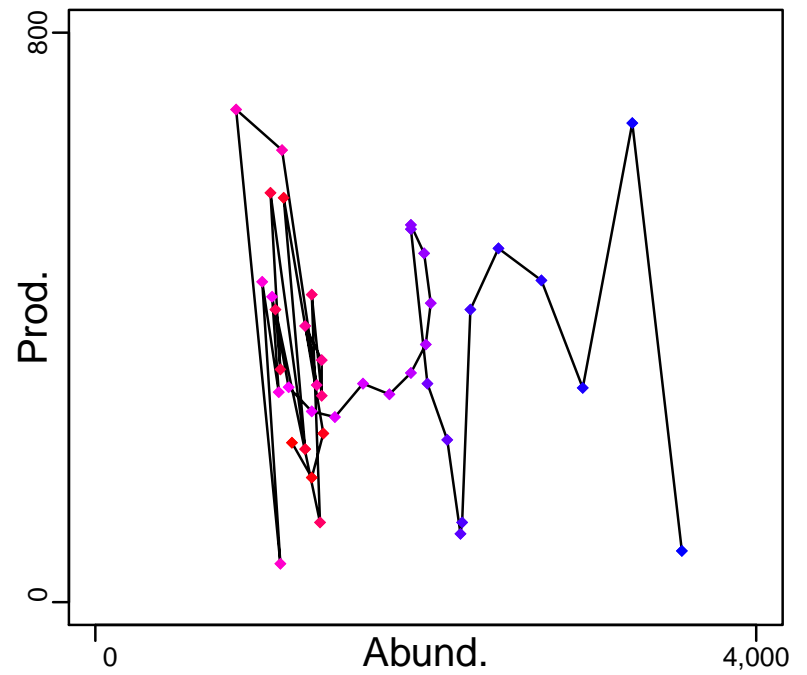
Kobe MGT*



Spawner Recruit (1973–2014–Johnston)



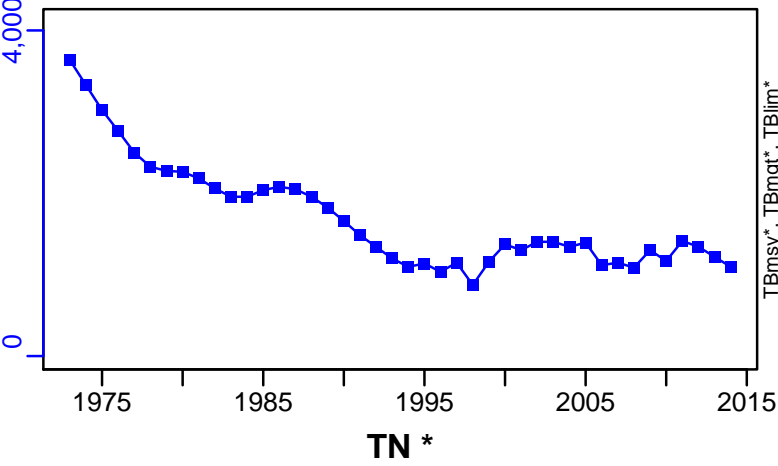
Production (1973–2014–Johnston)



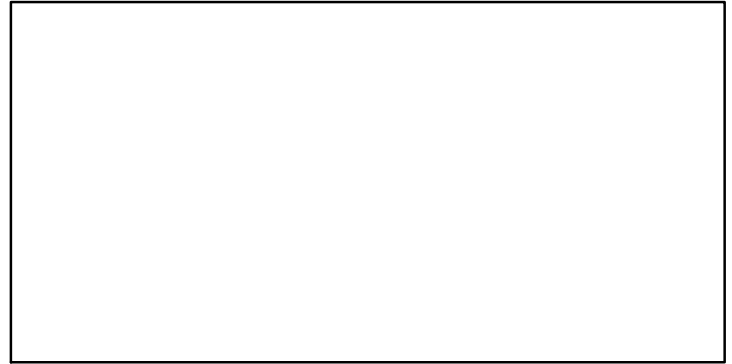
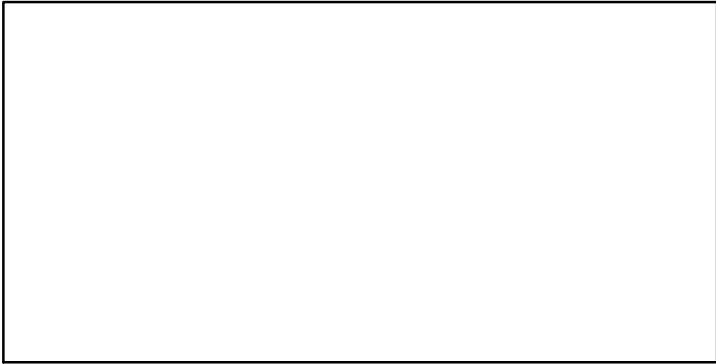
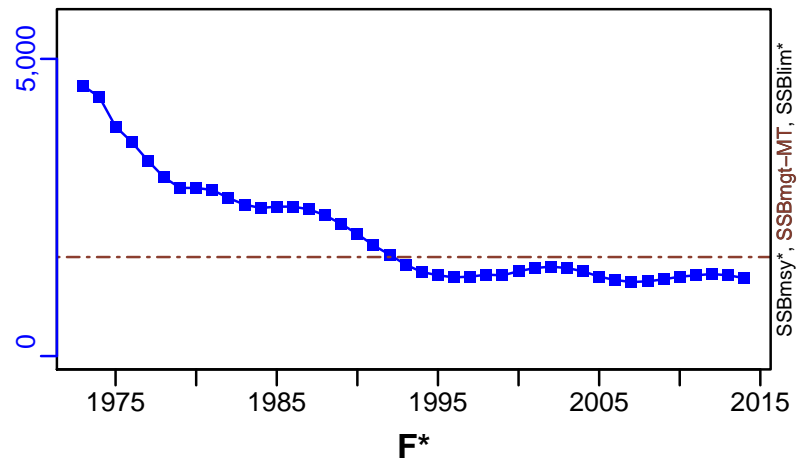
◆ Start Year ◆ End Year * No Data

Southern spiny lobster South Africa South coast [SSLOBSTERSASC]

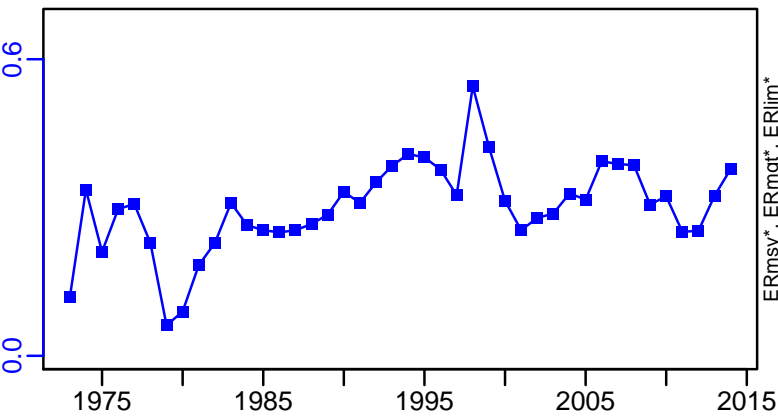
TB-MT (1973–2014–Johnston)



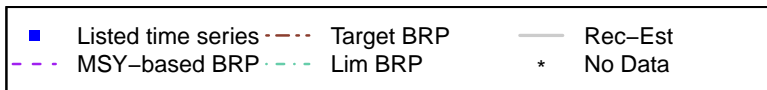
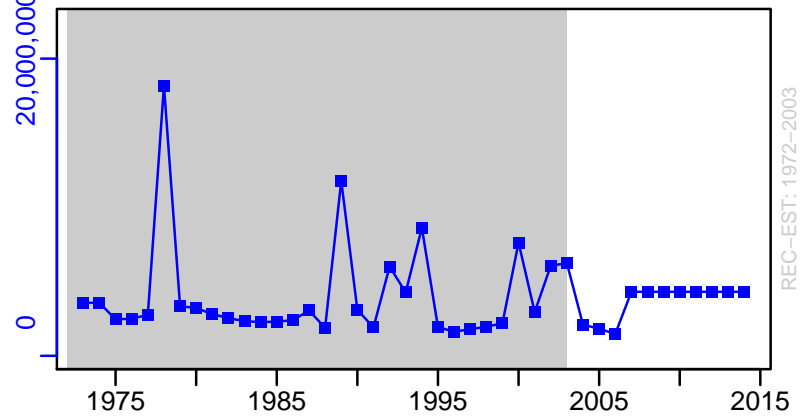
SSB-MT (1973–2014–Johnston)



ER-ratio (1973–2014–Johnston)



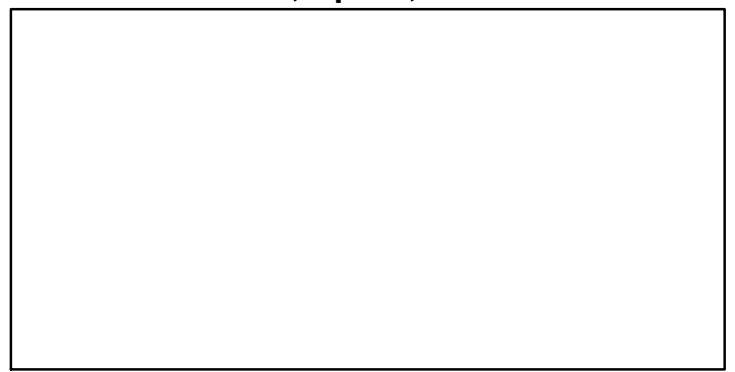
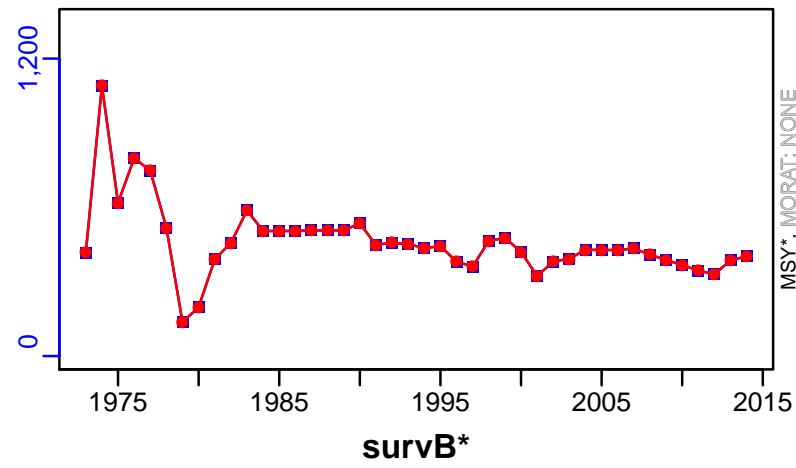
R-E00 (1973–2014–Johnston)



Southern spiny lobster South Africa South coast [SSLOBSTERSASC]

TC-MT, TL-MT, RecC* (1973–2014–Johnston)

TAC*, Cpair*, Cadv*



EFFORT*

CdivMSY*

