

# South Africa Stocks

## v4.44 (Dec-21-2018)

Not present Present Preferred

Stock	Time Series Types			
	B/Bmsy	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 [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	
<b>Scientific Name</b>	Engraulis encrasicolus
<b>Current Assess ID</b>	MARAM-ANCHOSA-1949-2015-deMoor
<b>Area</b>	South Africa
<b>Management Authority</b>	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
<b>Assessor</b>	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
<b>Asmts in RAM</b>	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	$9.94 \times 10^{11}$	Both	0+
R	R-E00	2015	$6.41 \times 10^{11}$	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]

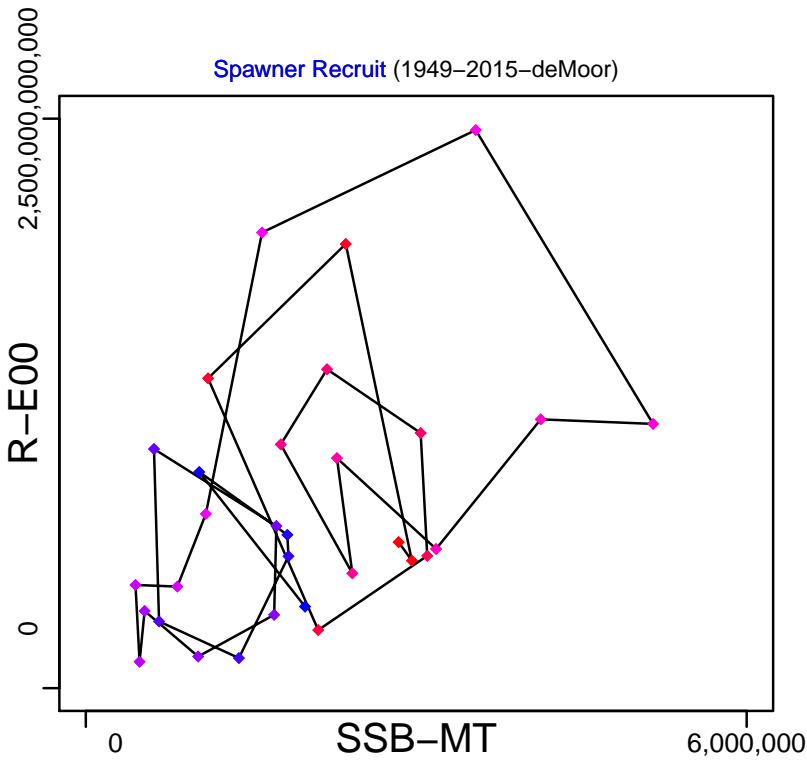
Kobe MSY\*



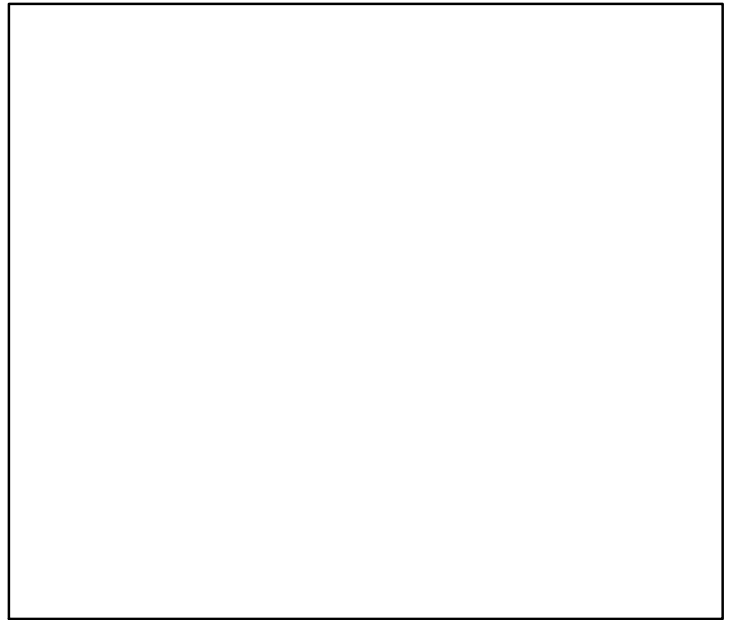
Kobe MGT\*



Spawner Recruit (1949–2015–deMoor)



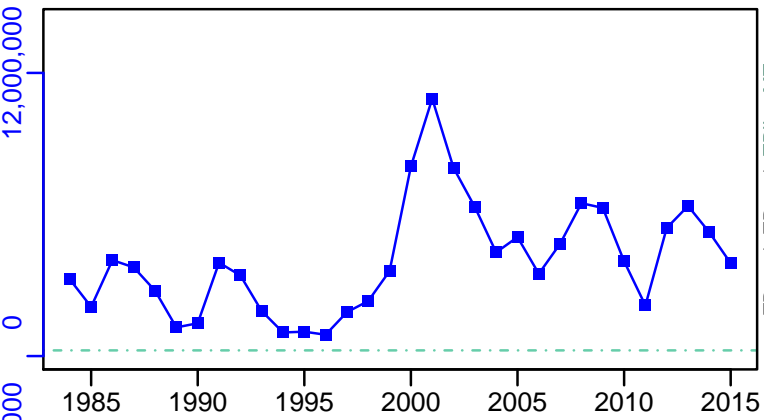
Production\*



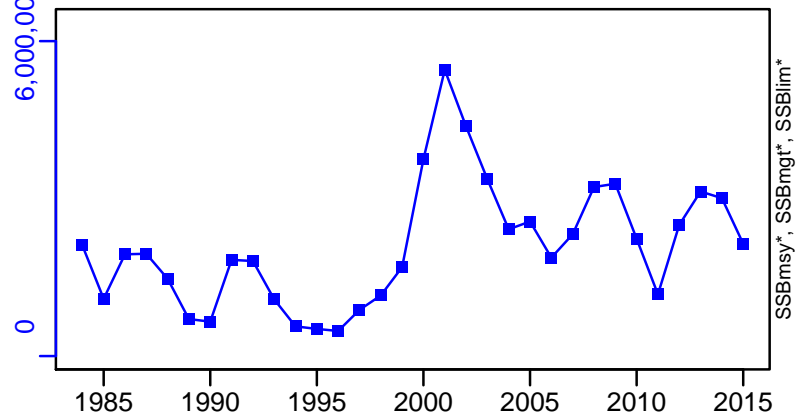
◆ Start Year ◆ End Year \* No Data

### Anchovy South Africa [ANCHOSA]

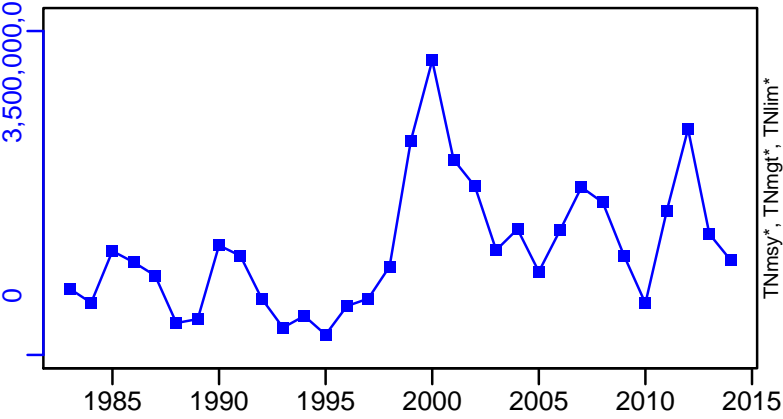
**TB-MT** (1949–2015–deMoor)



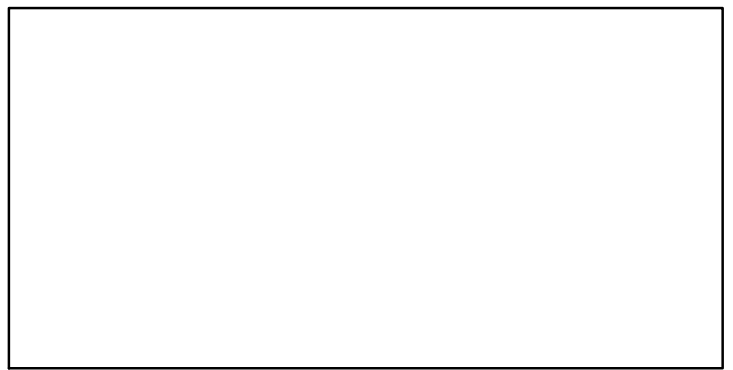
**SSB-MT** (1949–2015–deMoor)



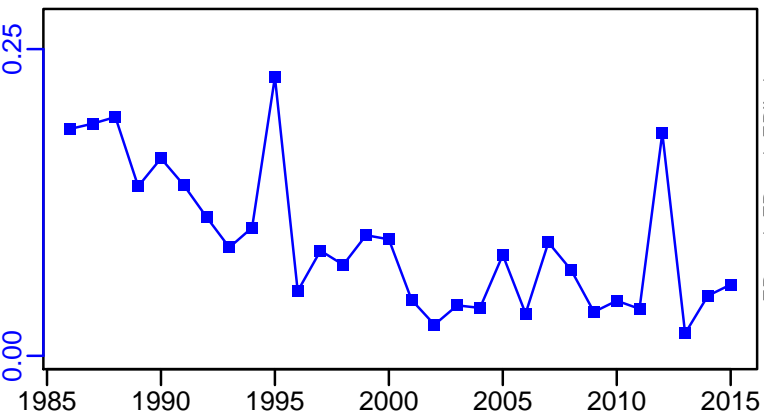
**TN-E00** (1949–2015–deMoor)



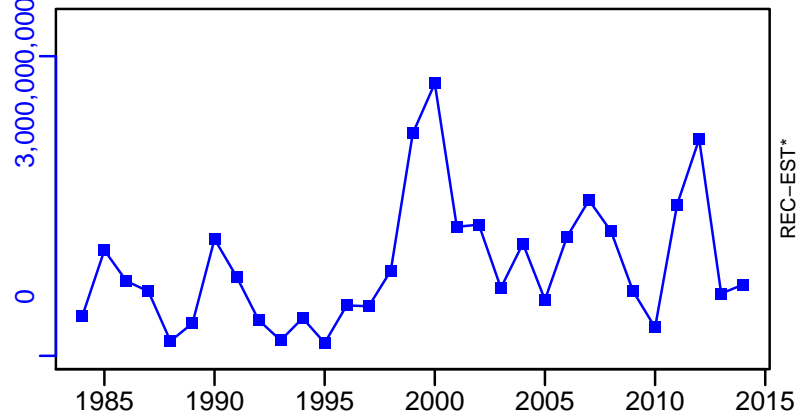
**F\***



**ER-ratio** (1949–2015–deMoor)

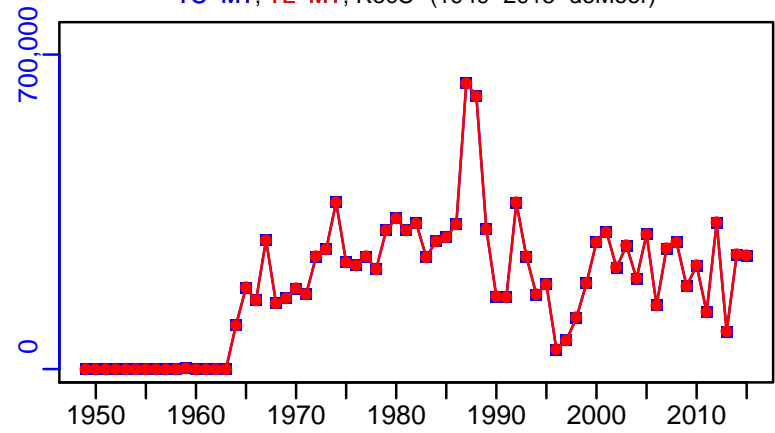


**R-E00** (1949–2015–deMoor)

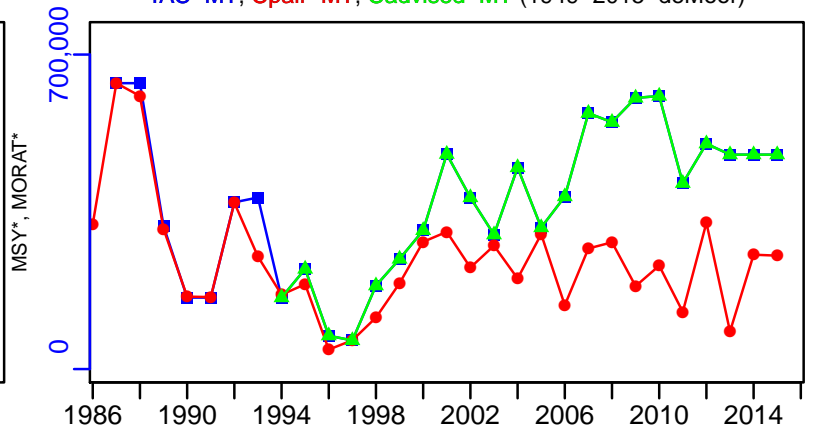


### Anchovy South Africa [ANCHOSA]

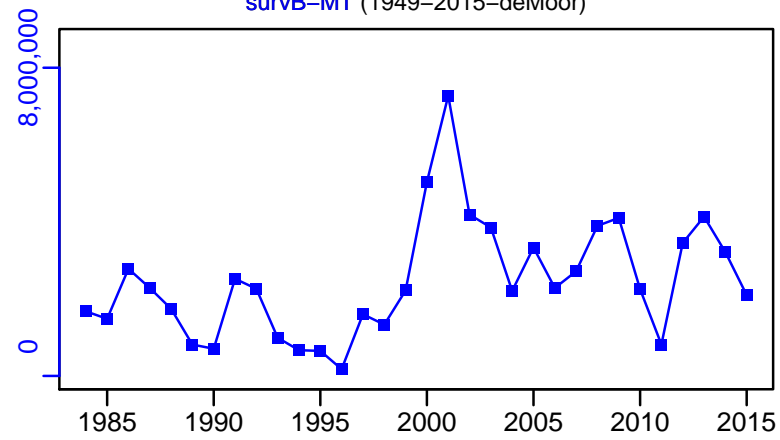
TC-MT, TL-MT, RecC\* (1949-2015-deMoor)



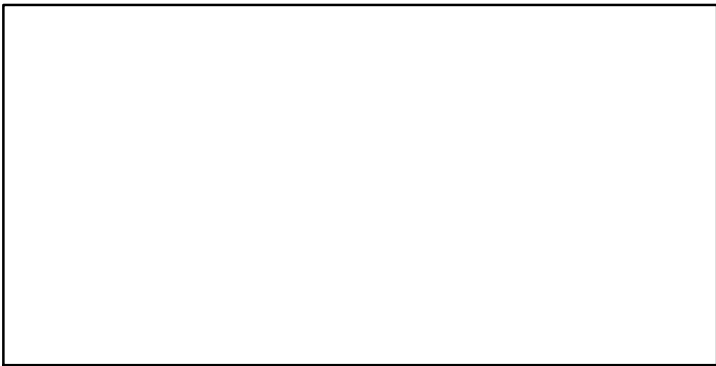
TAC-MT, Cpair-MT, Cadvised-MT (1949-2015-deMoor)



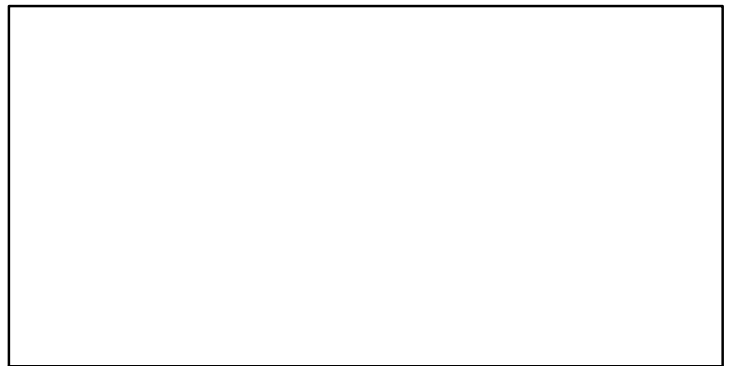
survB-MT (1949-2015-deMoor)



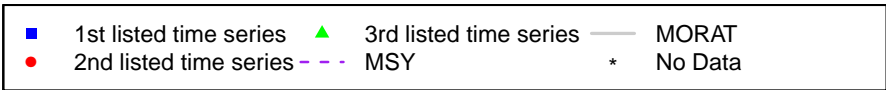
EFFORT\*



CPUE\*



CdivMSY\*



## Shallow-water cape hake South Africa [CHAKESA]

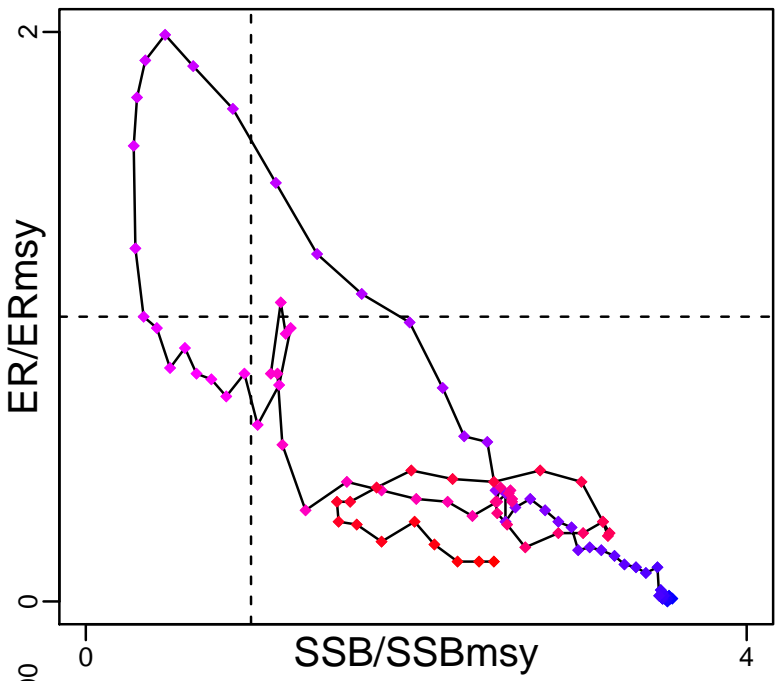
Metadata	
<b>Scientific Name</b>	Merluccius capensis
<b>Current Assess ID</b>	MARAM-CHAKESA-1917-2015-Rademeyer
<b>Area</b>	South Africa
<b>Management Authority</b>	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
<b>Assessor</b>	Marine Resource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

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

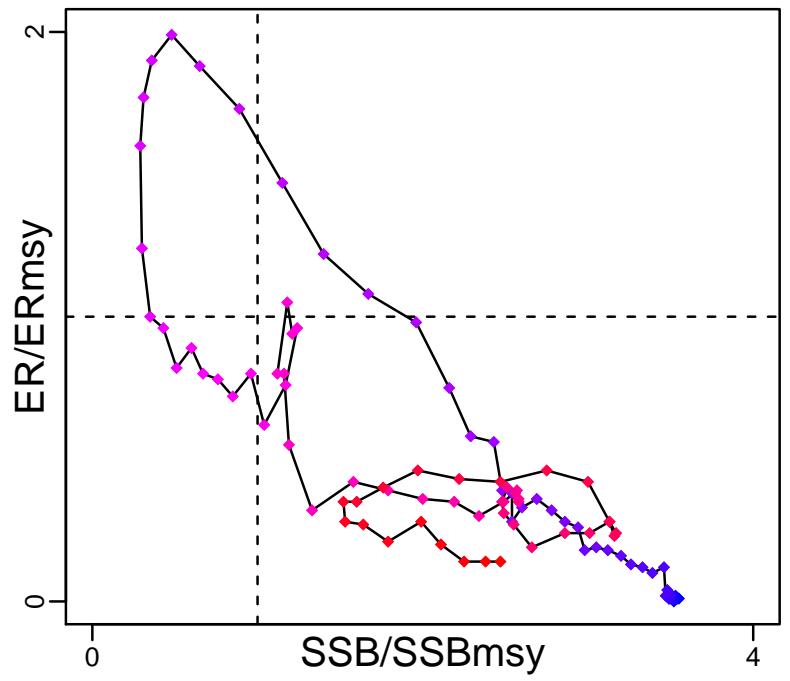
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	510,000	-	0+
<b>SSB</b>	SSB-MT	2015	156,000	Females	5
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	$1.33 \times 10^9$	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2015	0.05	-	-
<b>TC</b>	TC-MT	2015	14,400		
<b>TL</b>	TL-MT	2015	14,400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

Shallow-water cape hake South Africa [CHAKESA]

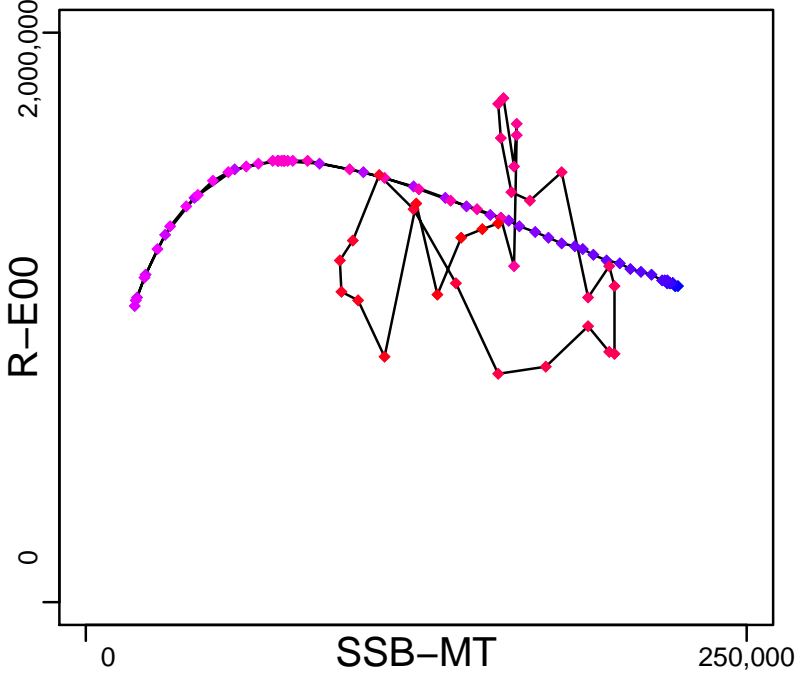
Kobe MSYpref (1917–2015–Rademeyer)



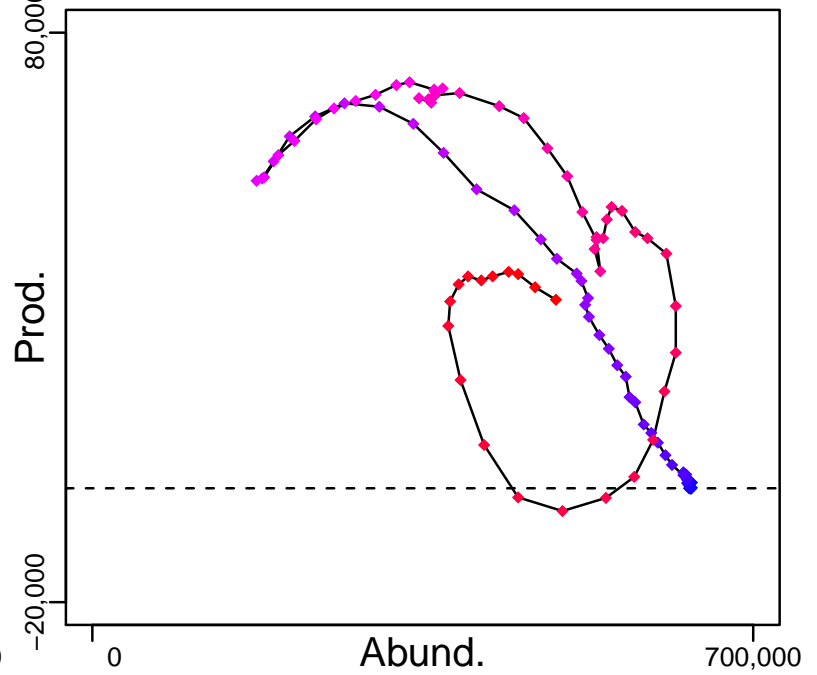
Kobe MGTpref (1917–2015–Rademeyer)



Spawner Recruit (1917–2015–Rademeyer)



Production (1917–2015–Rademeyer)

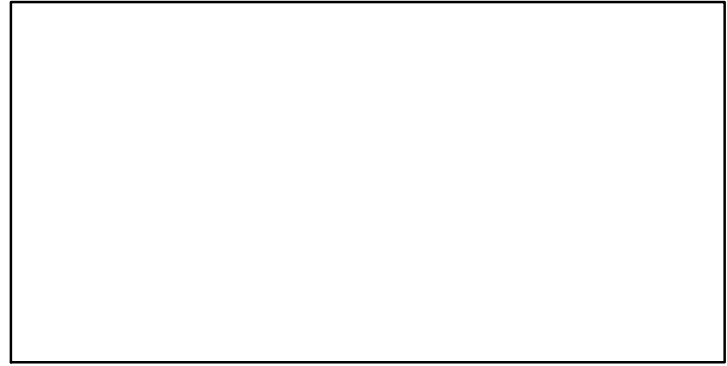
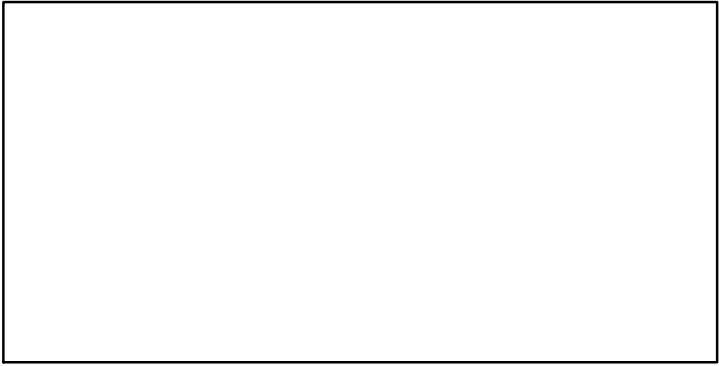
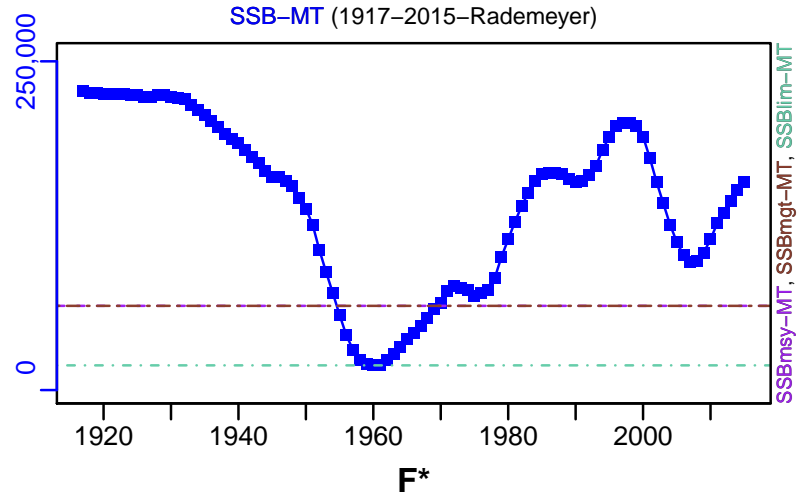
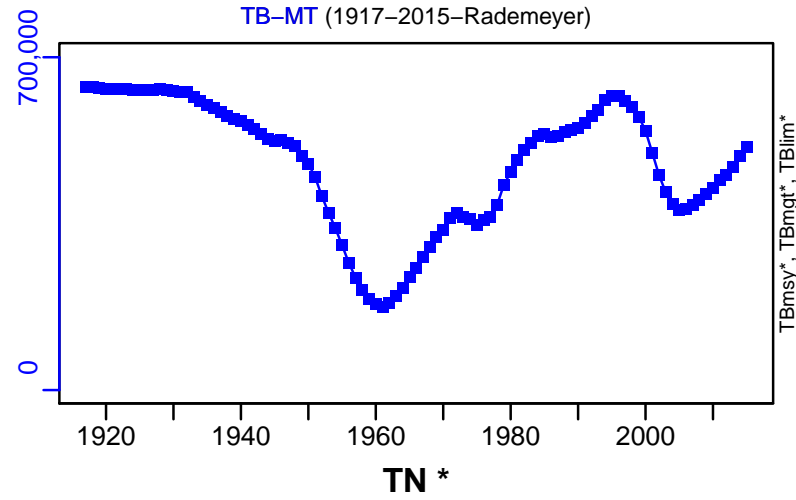


◆ Start Year ◆ End Year \* No Data

### Shallow-water cape hake South Africa [CHAKESA]

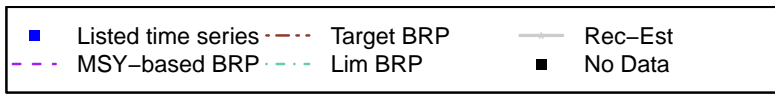
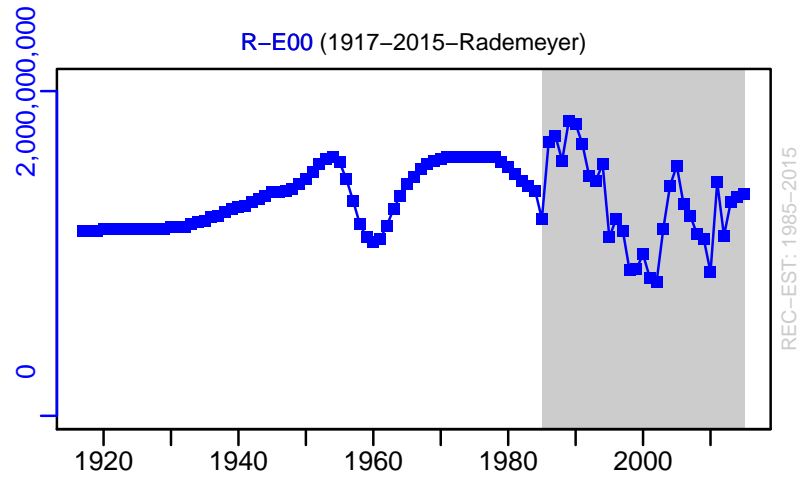
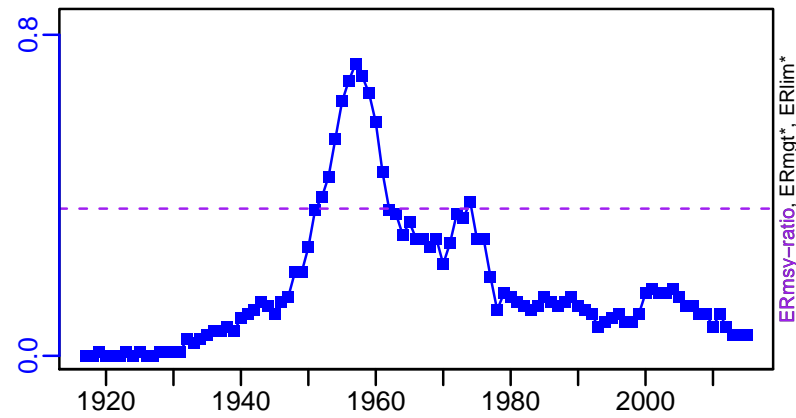
TB-MT (1917-2015-Rademeyer)

SSB-MT (1917-2015-Rademeyer)



ER-ratio (1917-2015-Rademeyer)

R-E00 (1917-2015-Rademeyer)

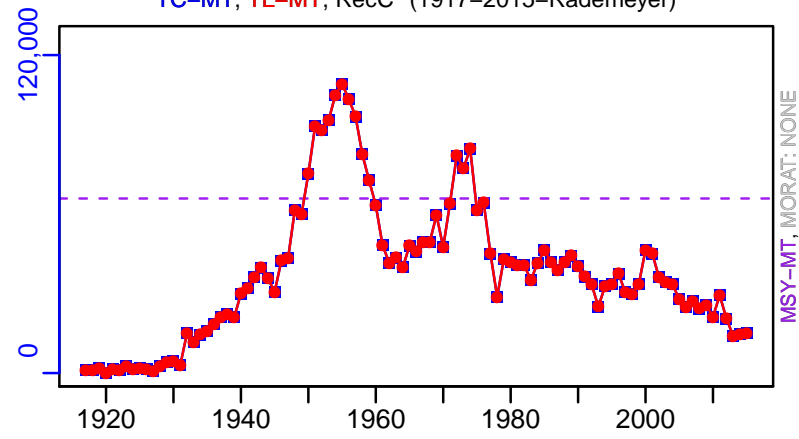




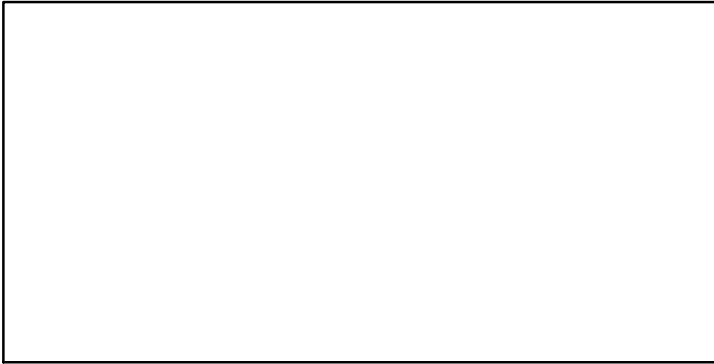
Shallow-water cape hake South Africa [CHAKESA]

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

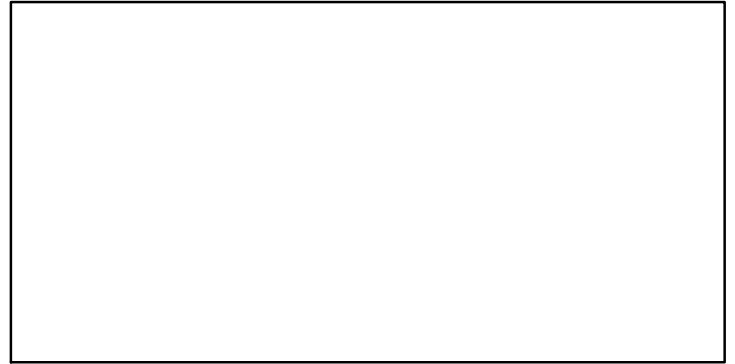
TAC\*, Cpair\*, Cadv\*



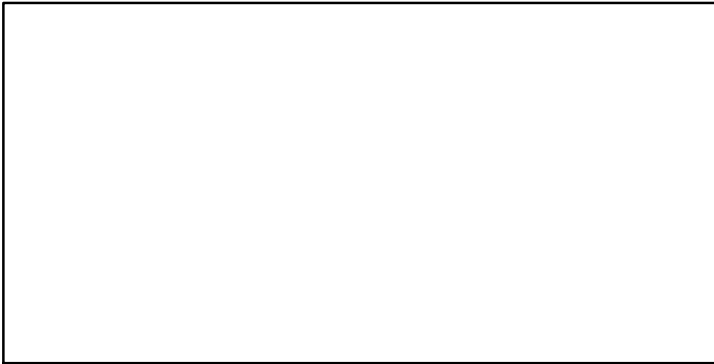
survB\*



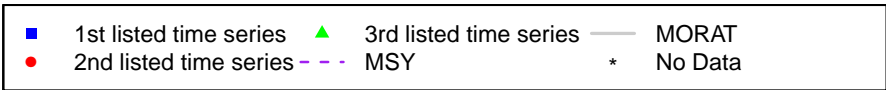
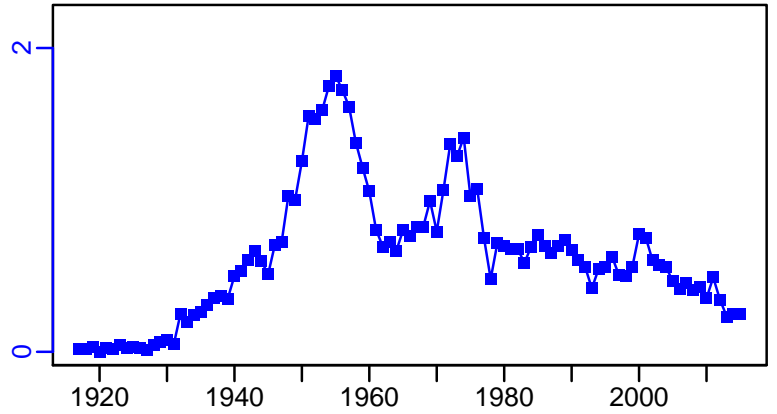
CPUE\*



EFFORT\*



CdivMSY-ratio (1917-2015-Rademeyer)



## Cape Hope squid South Africa [CHSQUIDSA]

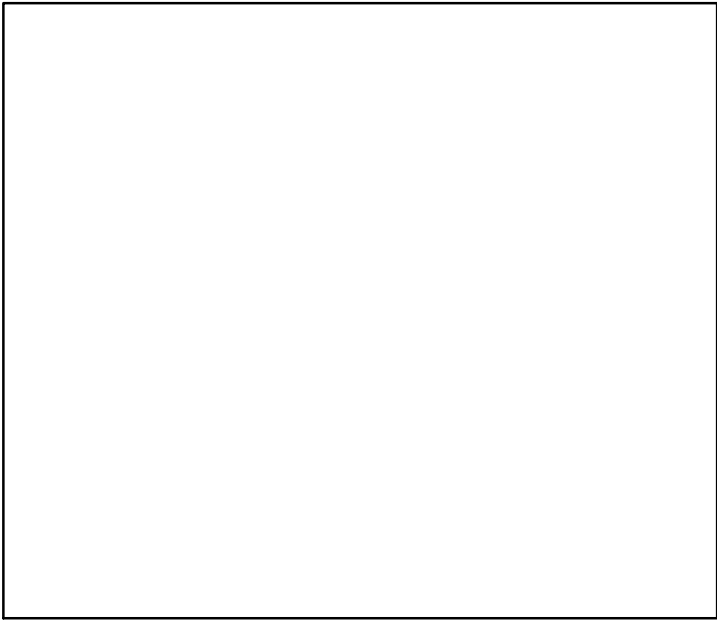
Metadata	
<b>Scientific Name</b>	Loligo reynaudii
<b>Current Assess ID</b>	FBDAFF-CHSQUIDSA-1971-2013-GLAZER
<b>Area</b>	South Africa
<b>Management Authority</b>	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
<b>Assessor</b>	Fisheries Branch of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

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

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

Cape Hope squid South Africa [CHSQUIDSA]

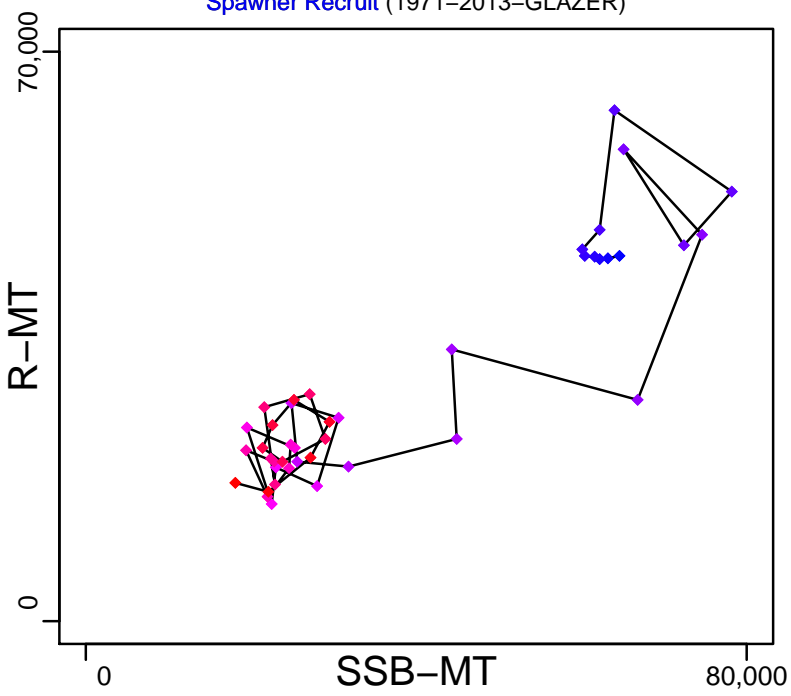
Kobe MSY\*



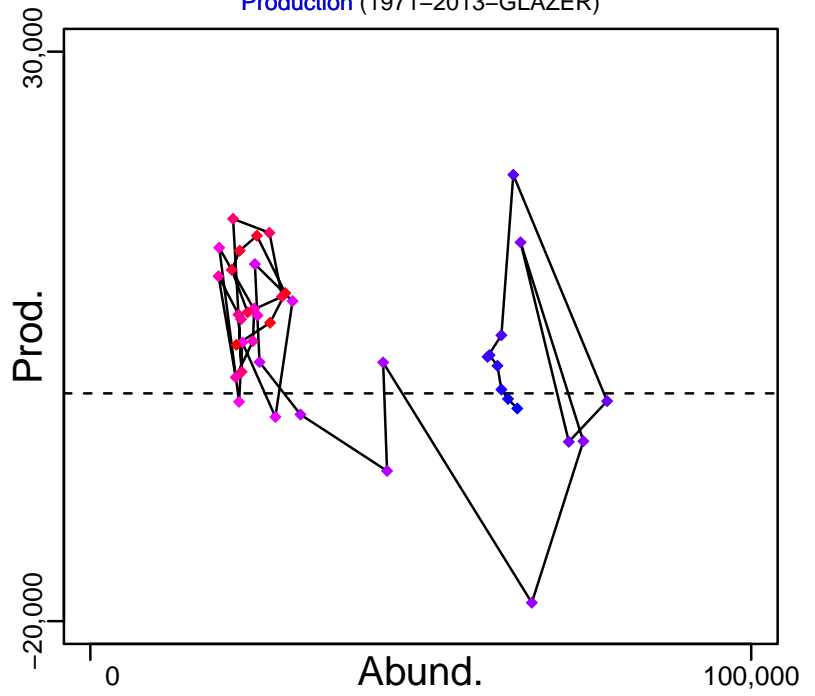
Kobe MGT\*



Spawner Recruit (1971-2013-GLAZER)



Production (1971-2013-GLAZER)

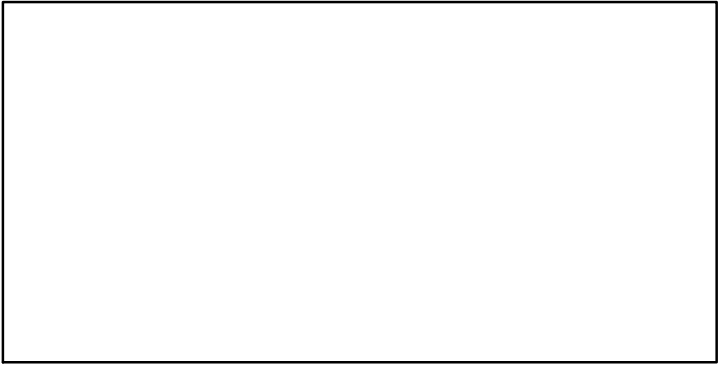
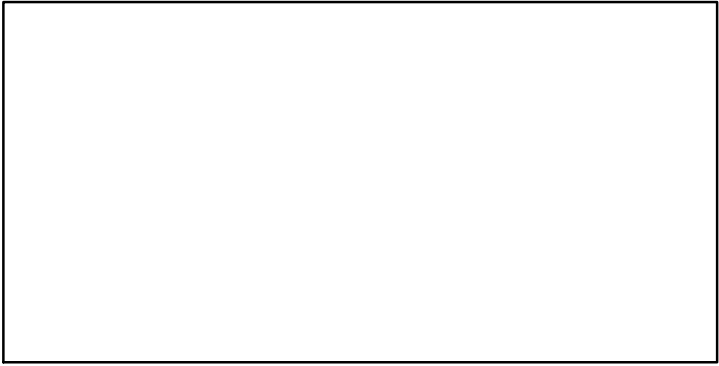
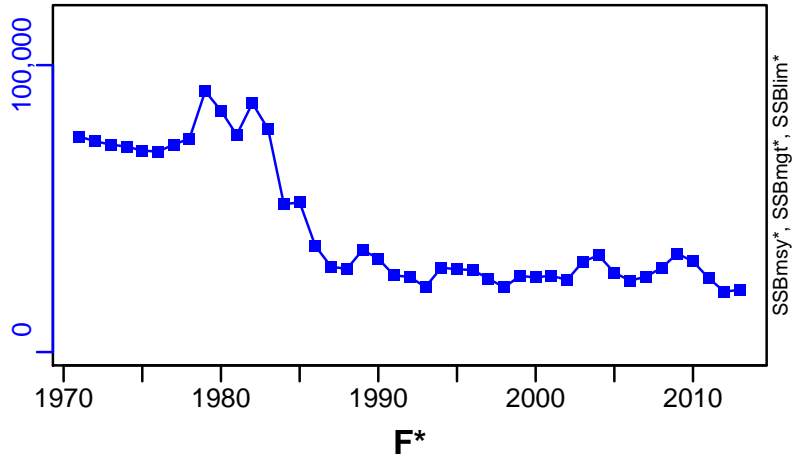
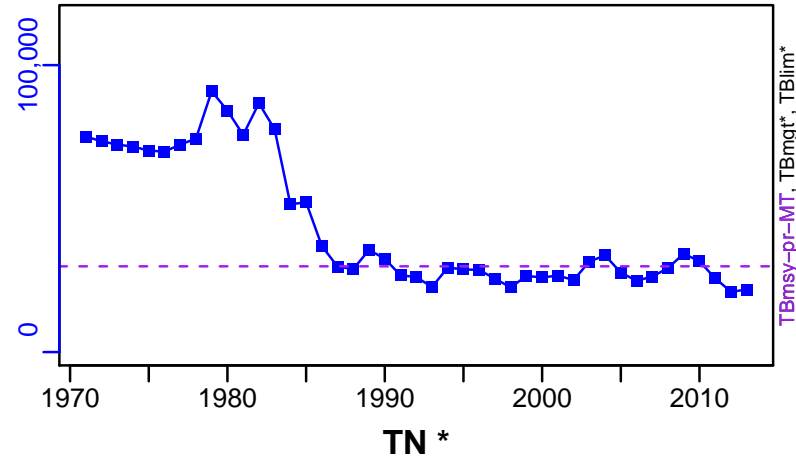


◆ Start Year ◆ End Year \* No Data

Cape Hope squid South Africa [CHSQUIDSA]

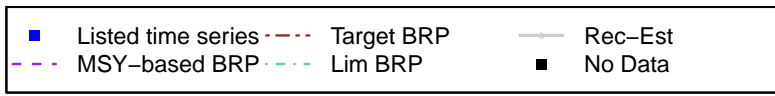
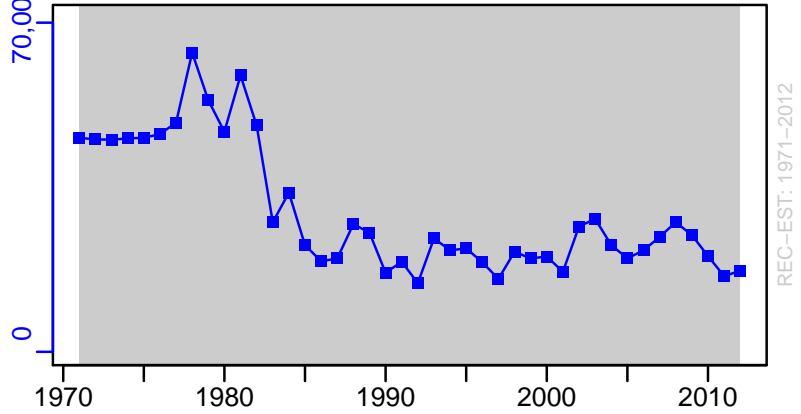
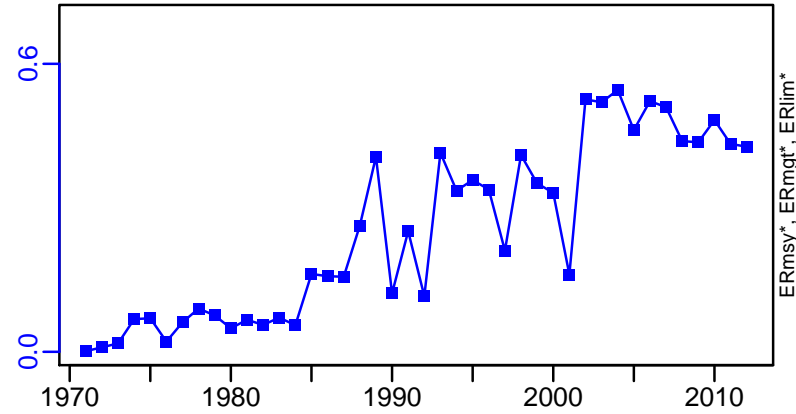
TB-MT (1971-2013-GLAZER)

SSB-MT (1971-2013-GLAZER)



ER-ratio (1971-2013-GLAZER)

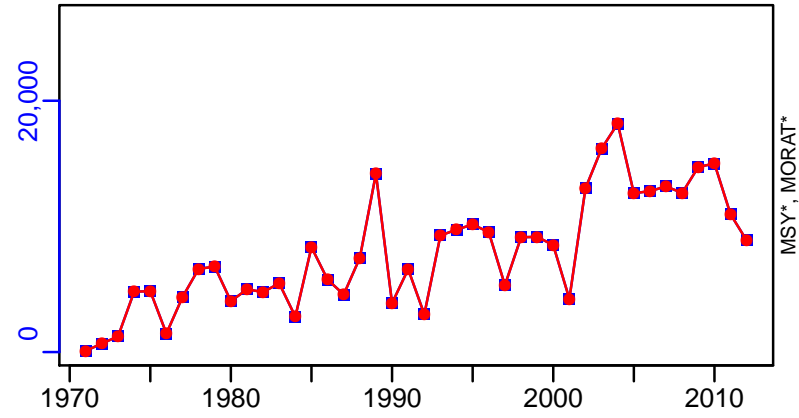
R-MT (1971-2013-GLAZER)



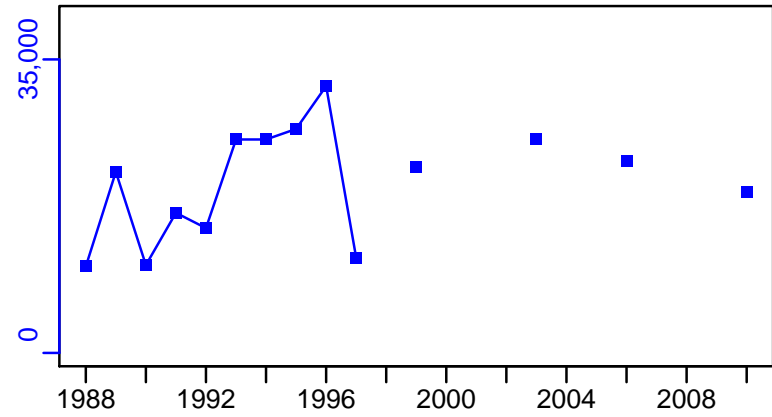
Cape Hope squid South Africa [CHSQUIDSA]

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

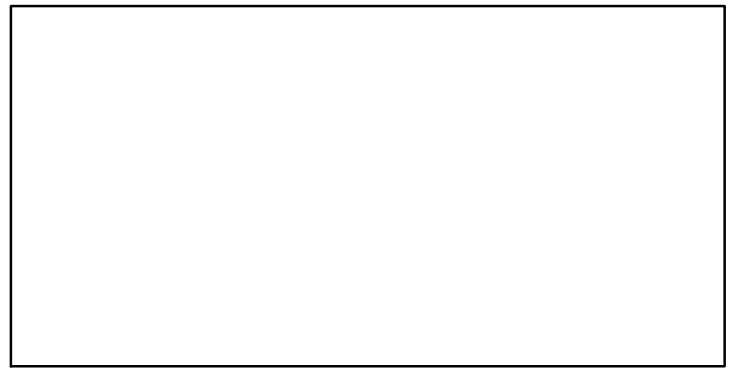
TAC\*, Cpair\*, Cadv\*



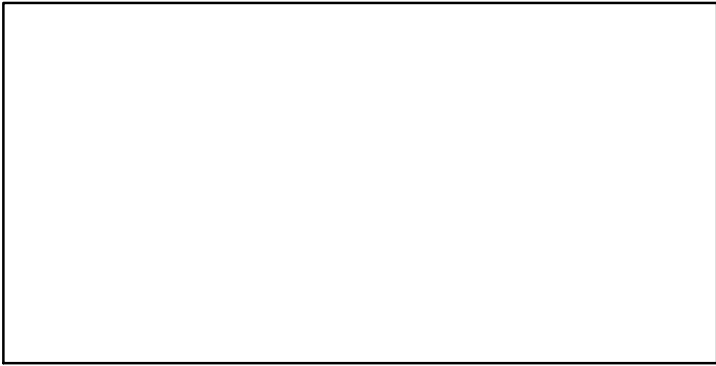
survB-1-MT (1971-2013-GLAZER)



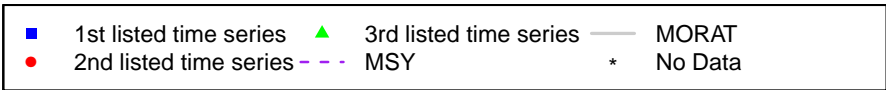
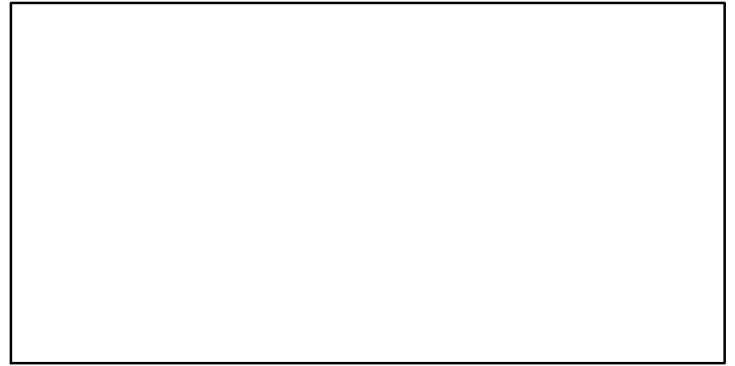
CPUE\*



EFFORT\*



CdivMSY\*



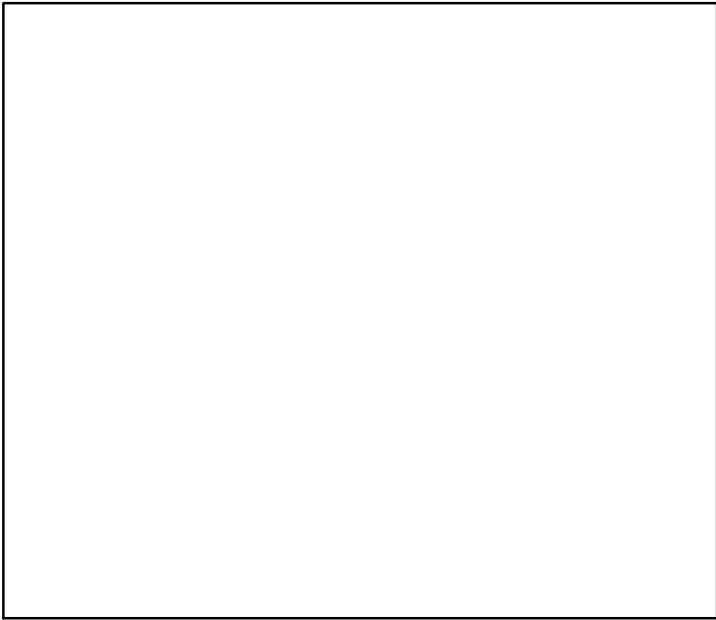
## West coast rock lobster South Africa Areas 1-2 [CRLOBSTERSA12]

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

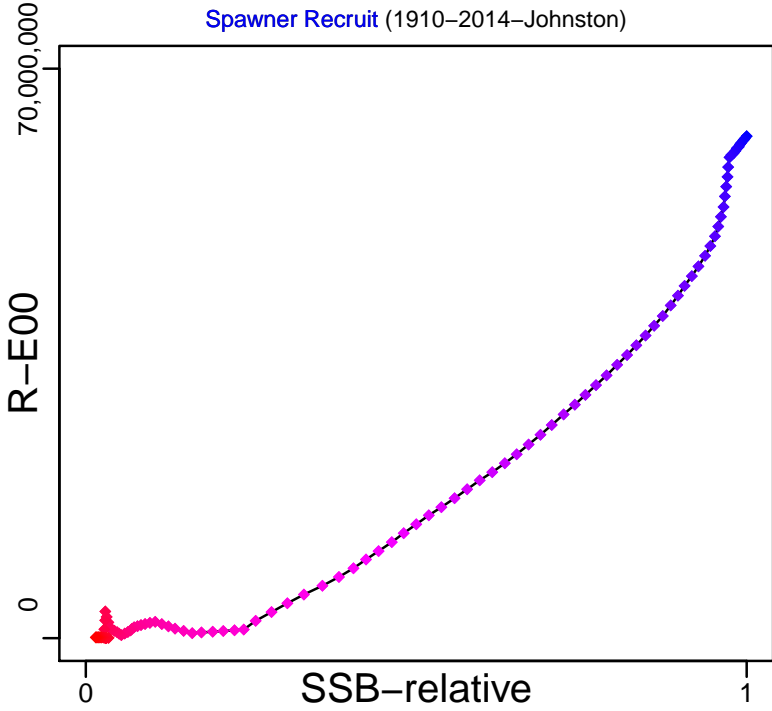
Kobe MSY\*



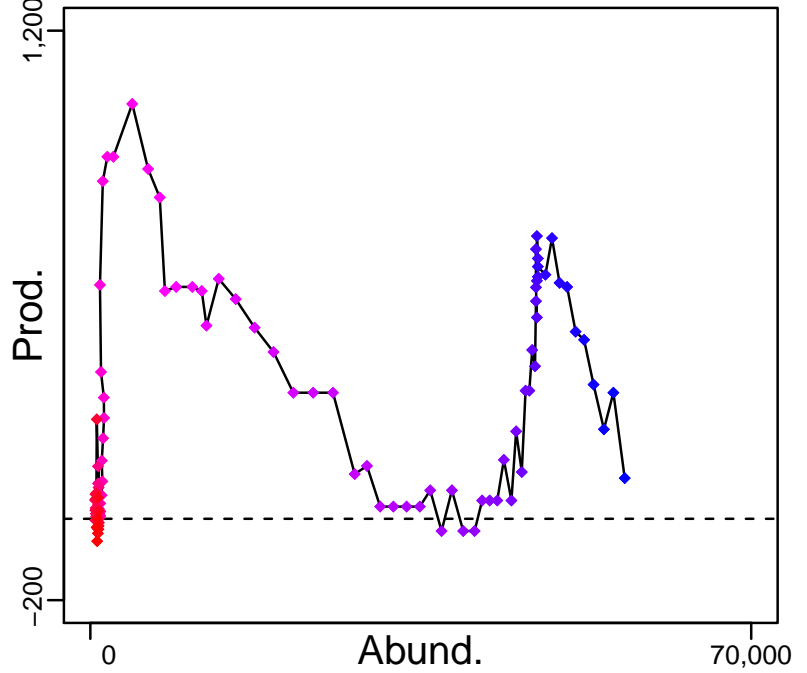
Kobe MGT\*



Spawner Recruit (1910-2014-Johnston)



Production (1910-2014-Johnston)

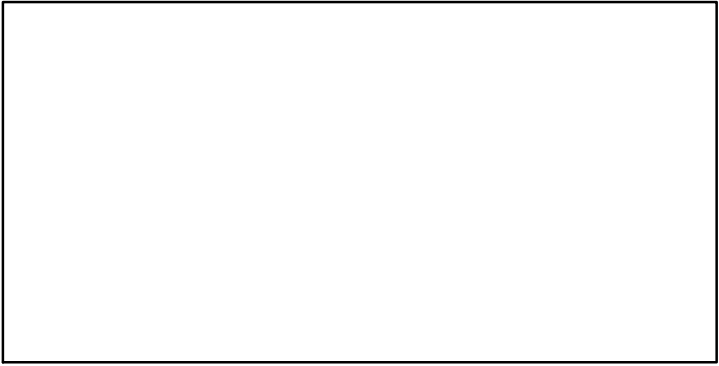
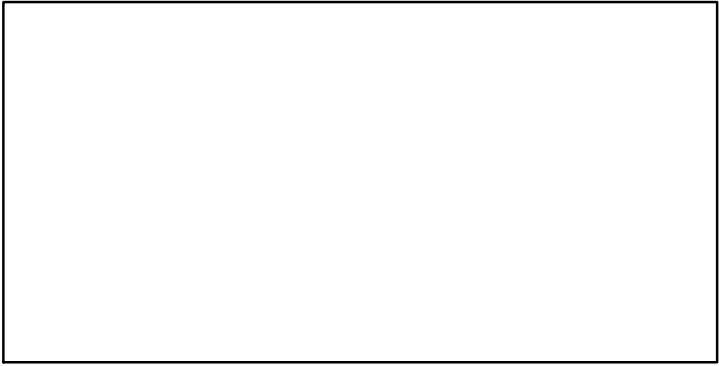
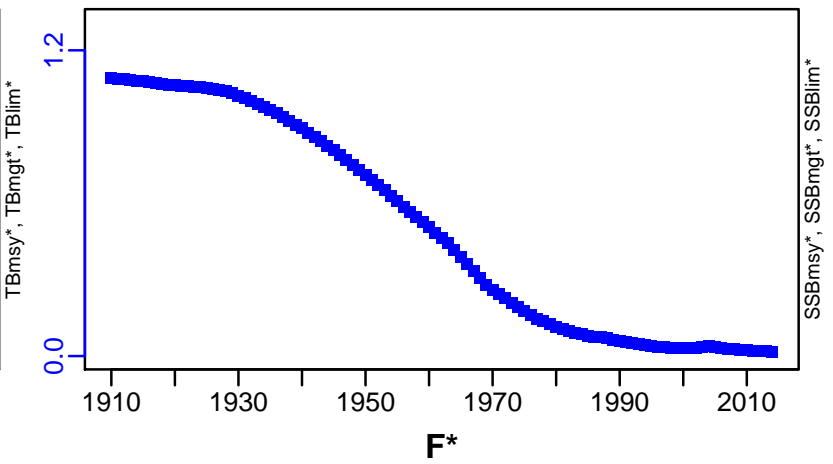
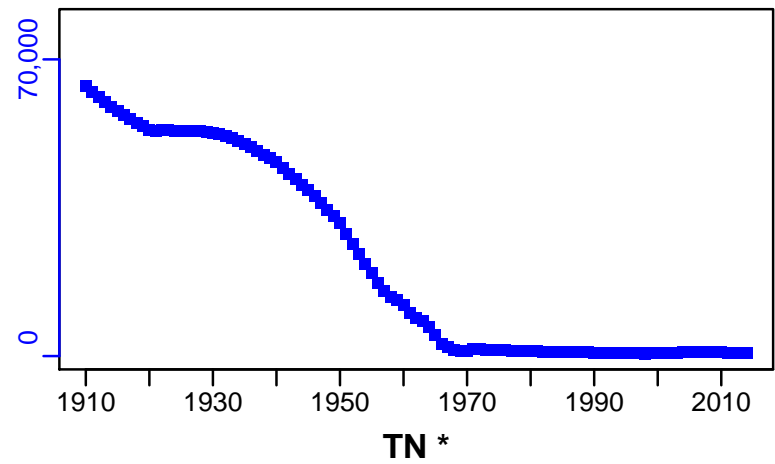


◆ Start Year ◆ End Year \* No Data

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

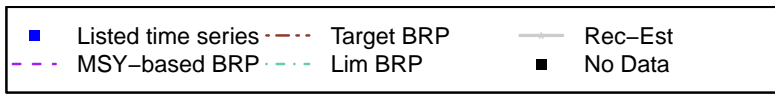
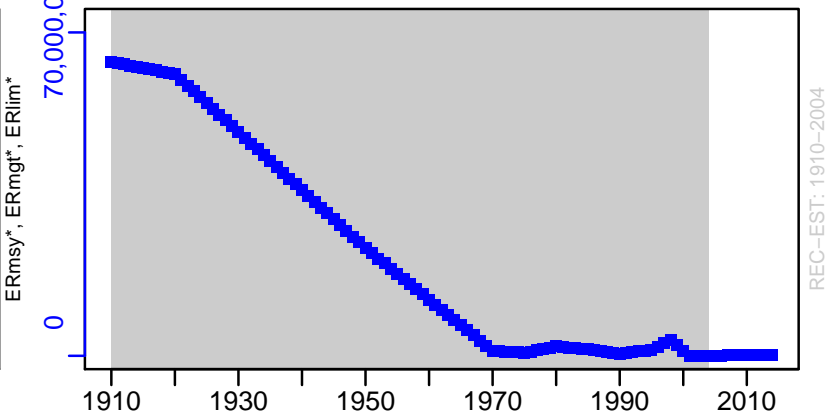
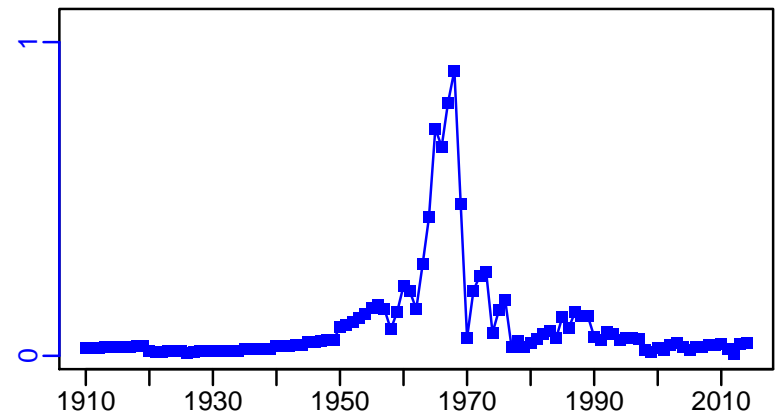
TB-MT (1910-2014-Johnston)

SSB-relative (1910-2014-Johnston)



ER-ratio (1910-2014-Johnston)

R-E00 (1910-2014-Johnston)

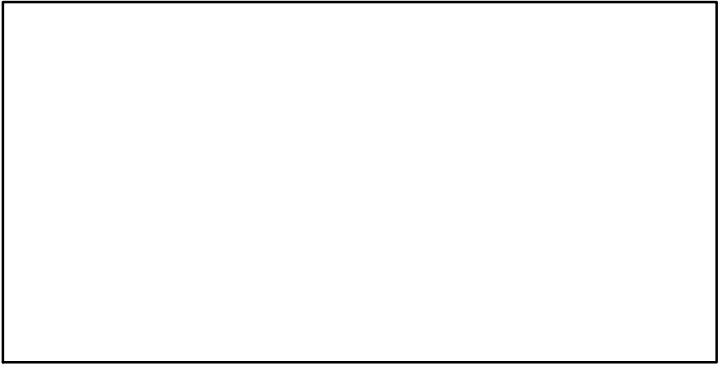
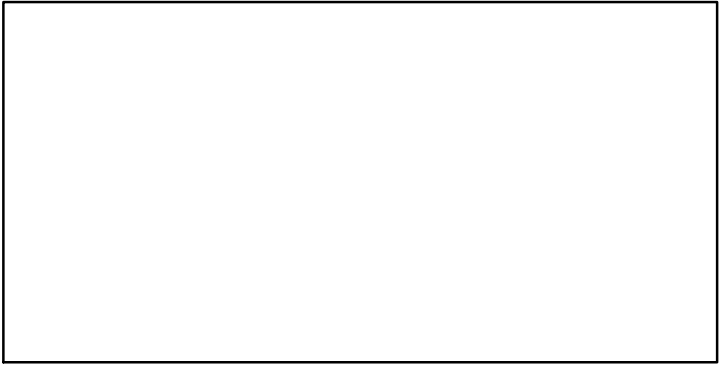
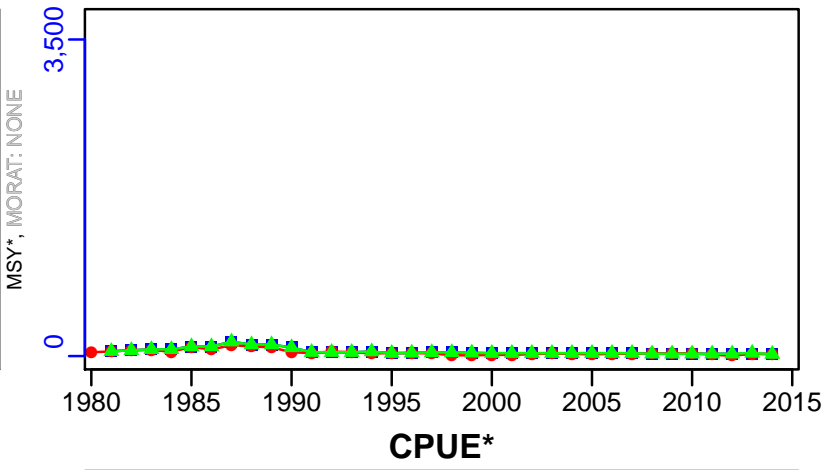
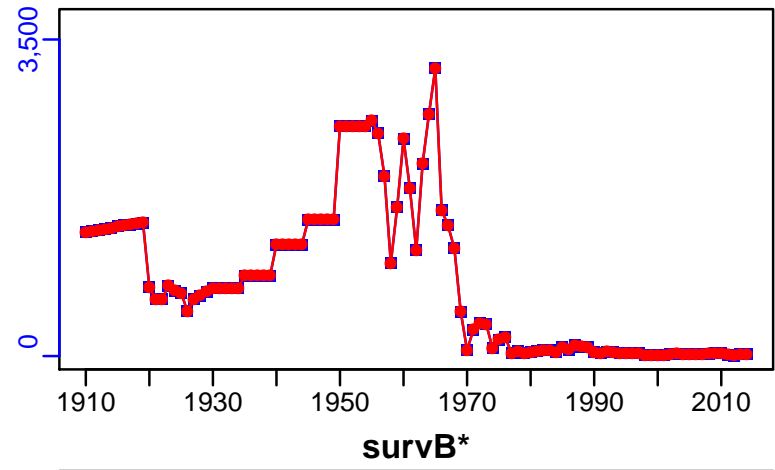




West coast rock lobster South Africa Areas 1-2 [CRLOBSTERSA12]

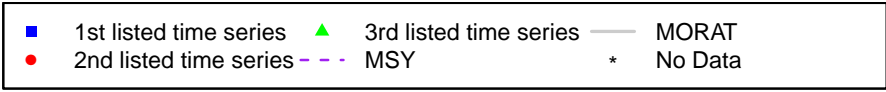
TC-MT, TL-MT, RecC\* (1910-2014-Johnston)

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



EFFORT\*

CdivMSY\*



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

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

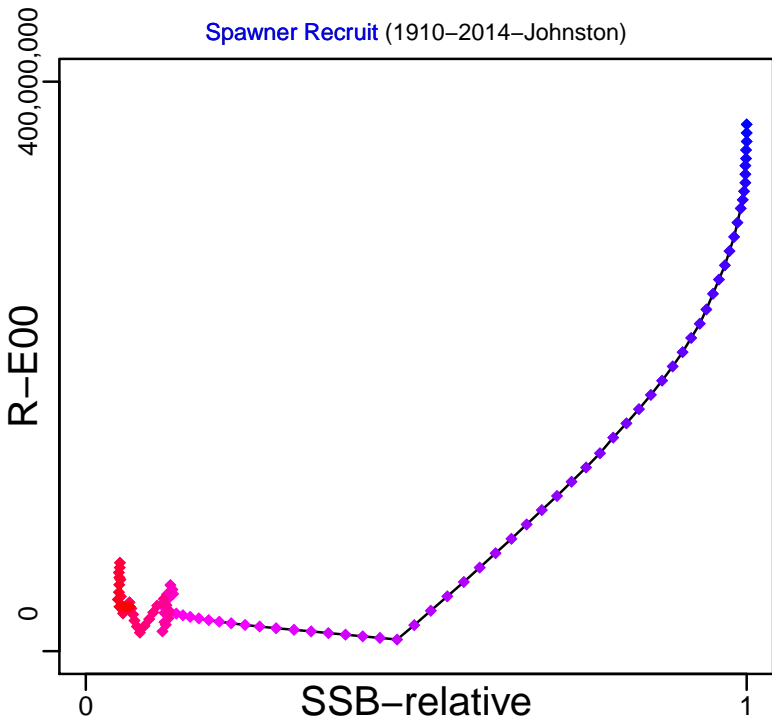
Kobe MSY\*



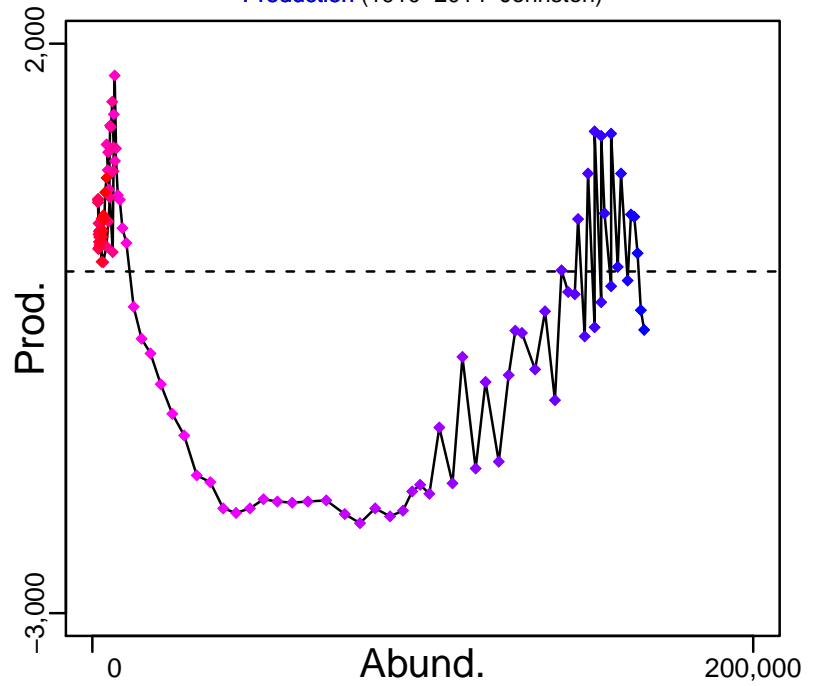
Kobe MGT\*



Spawner Recruit (1910-2014-Johnston)



Production (1910-2014-Johnston)

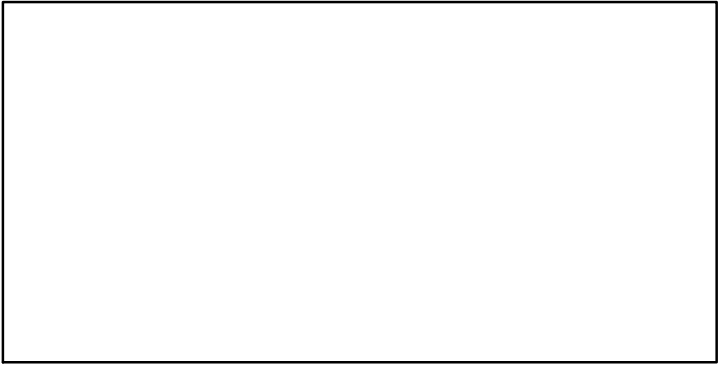
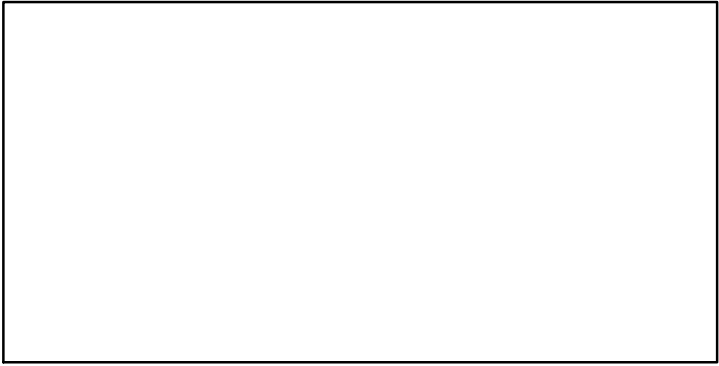
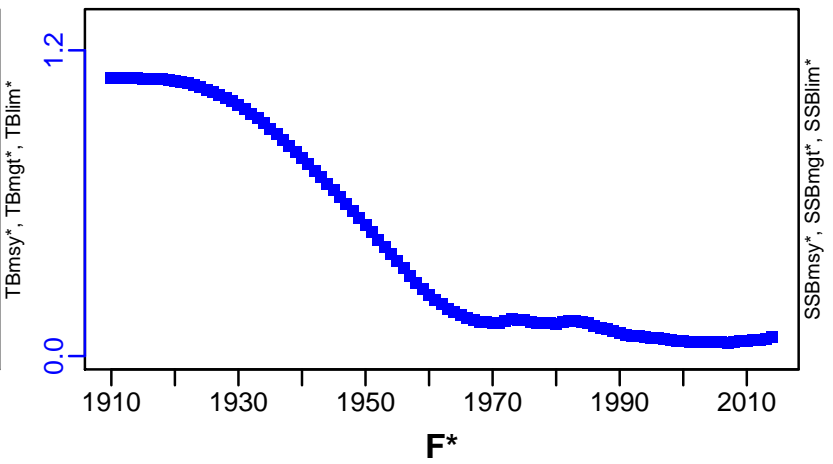
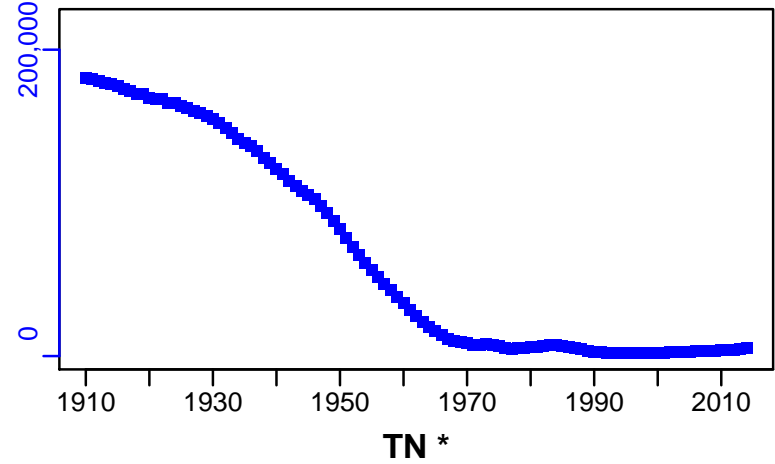


◆ Start Year ◆ End Year \* No Data

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

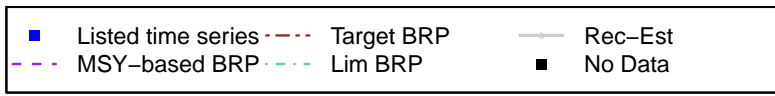
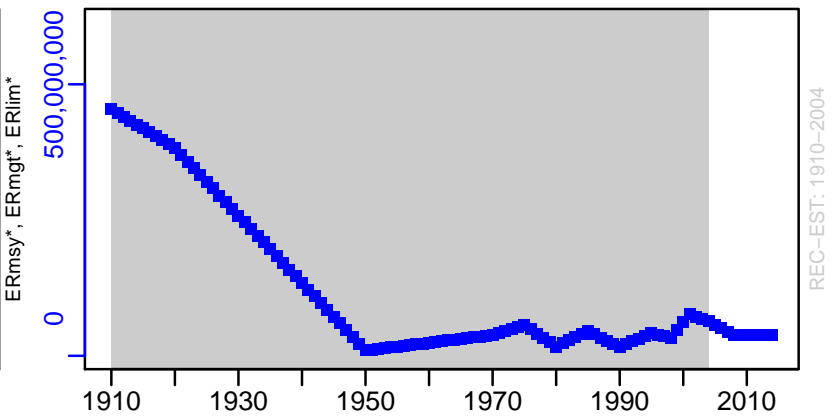
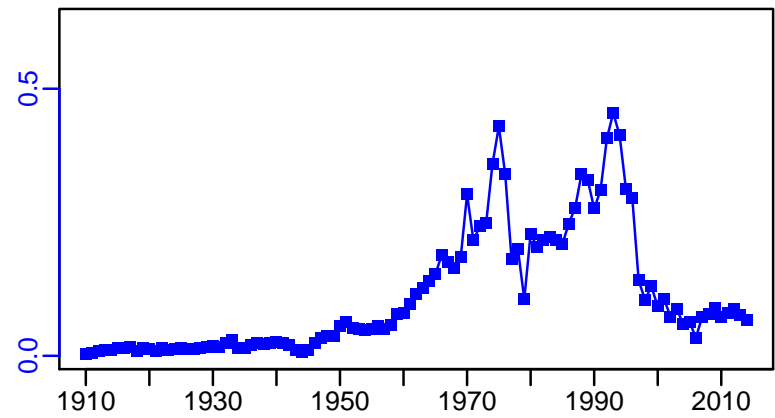
TB-MT (1910-2014-Johnston)

SSB-relative (1910-2014-Johnston)



ER-ratio (1910-2014-Johnston)

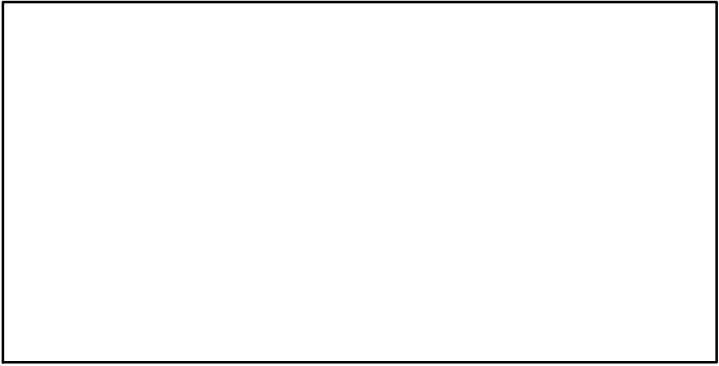
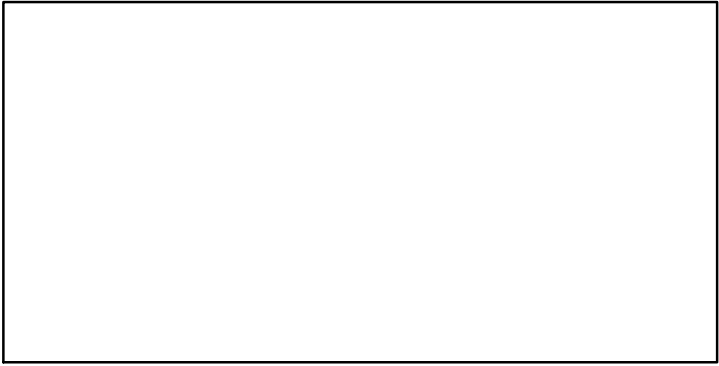
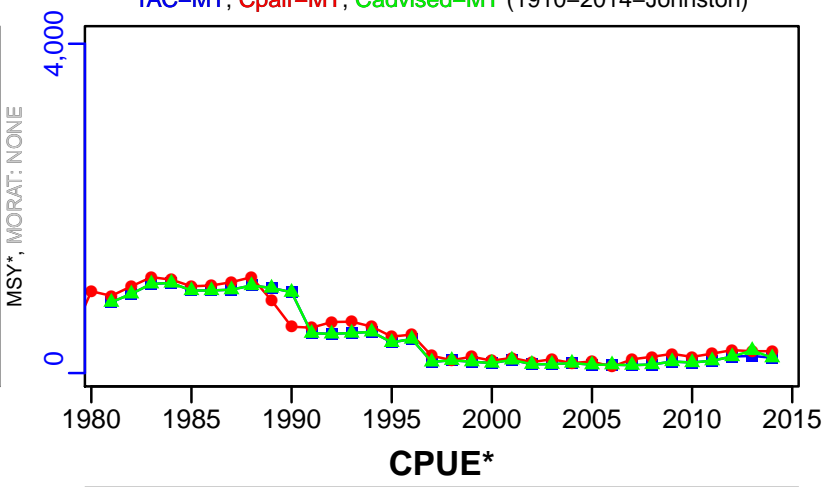
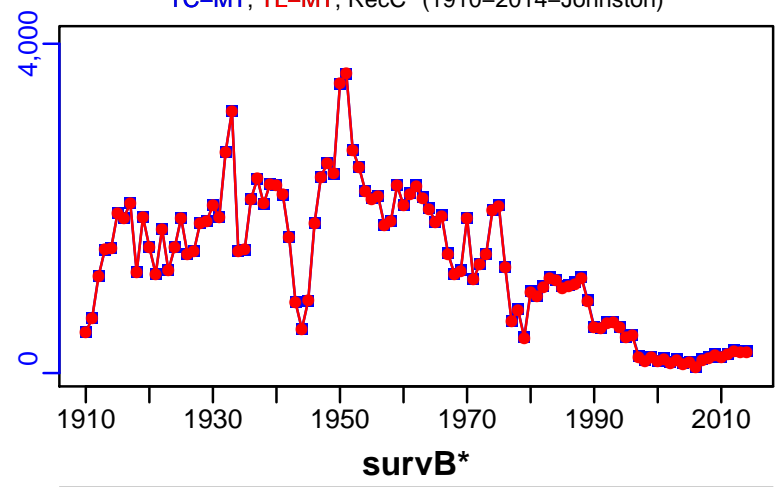
R-E00 (1910-2014-Johnston)



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

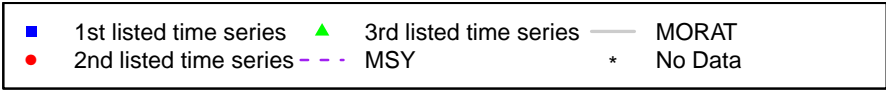
TC-MT, TL-MT, RecC\* (1910-2014-Johnston)

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



EFFORT\*

CdivMSY\*



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

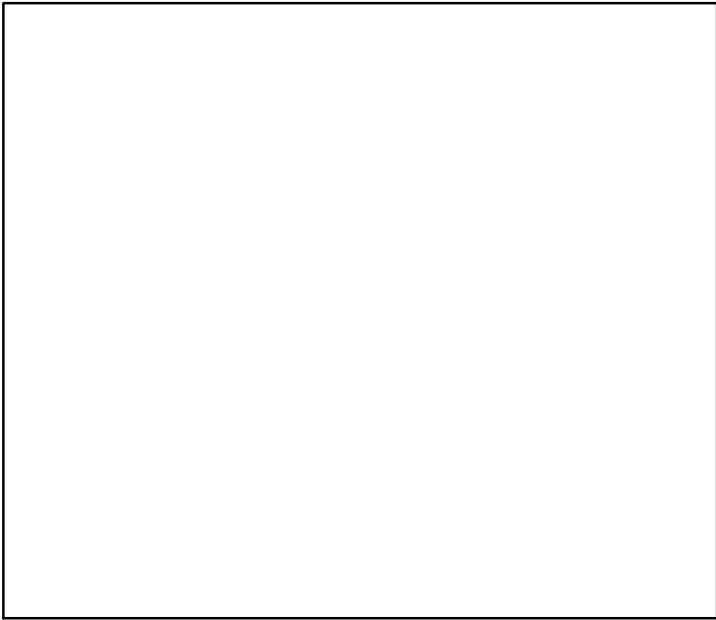
Metadata	
<b>Scientific Name</b>	Jasus Ialandii
<b>Current Assess ID</b>	MARAM-CRLOBSTERSA56-1910-2014-Johnston
<b>Area</b>	South Africa Areas 5-6
<b>Management Authority</b>	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
<b>Assessor</b>	Marine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

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

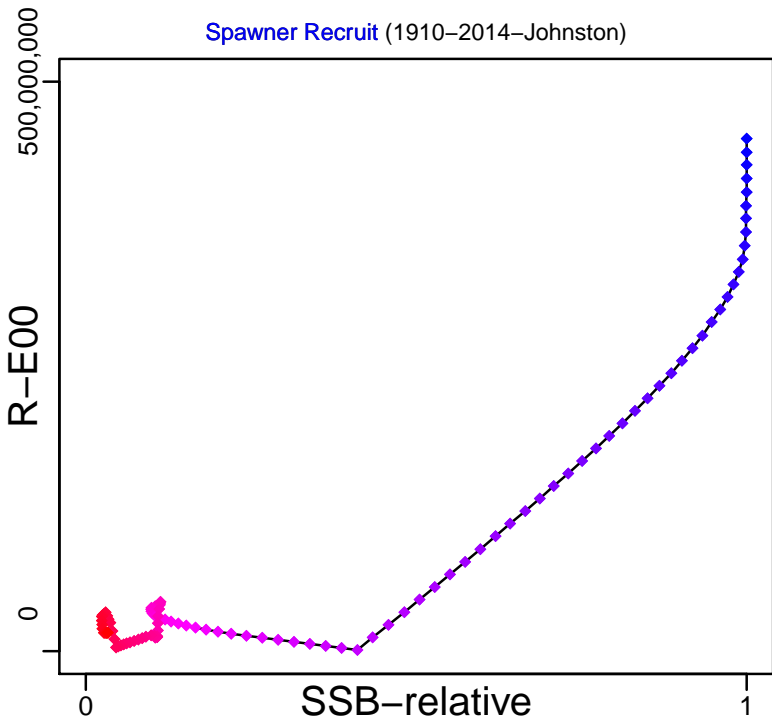
Kobe MSY\*



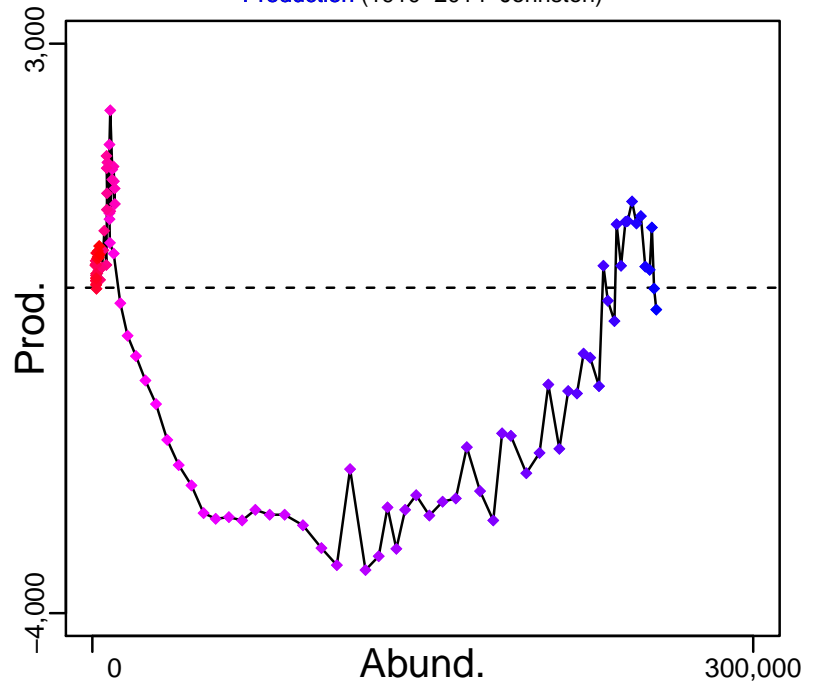
Kobe MGT\*



Spawner Recruit (1910-2014-Johnston)



Production (1910-2014-Johnston)

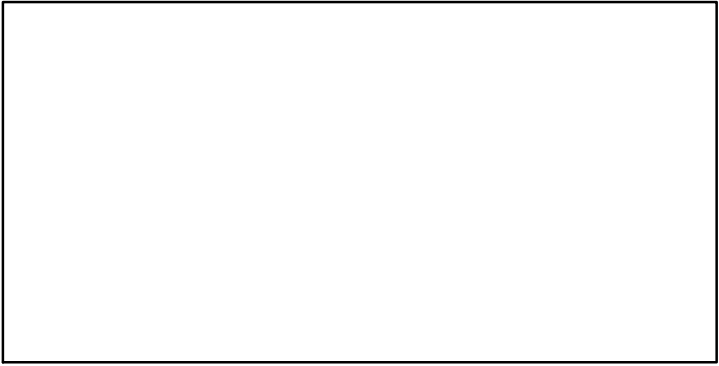
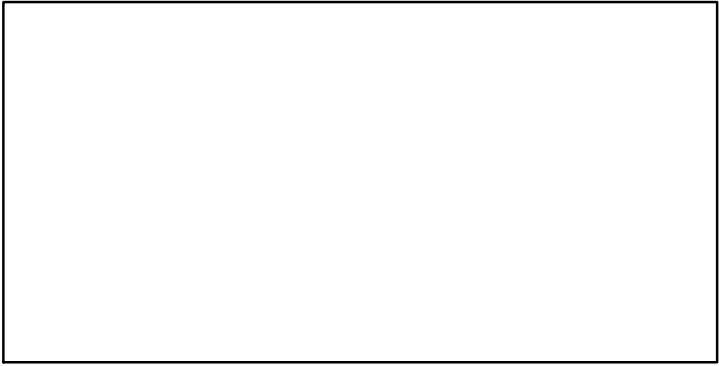
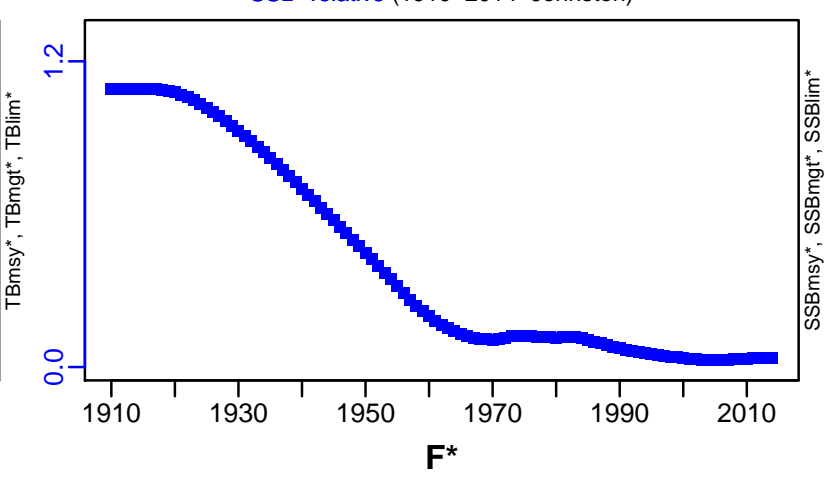
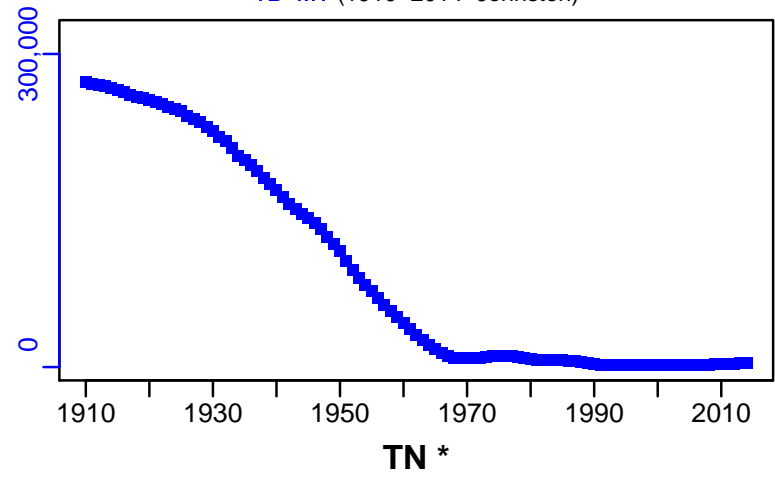


◆ Start Year ◆ End Year \* No Data

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

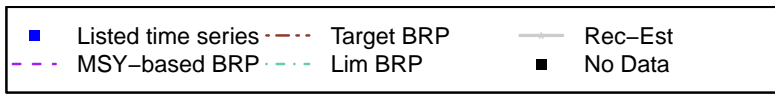
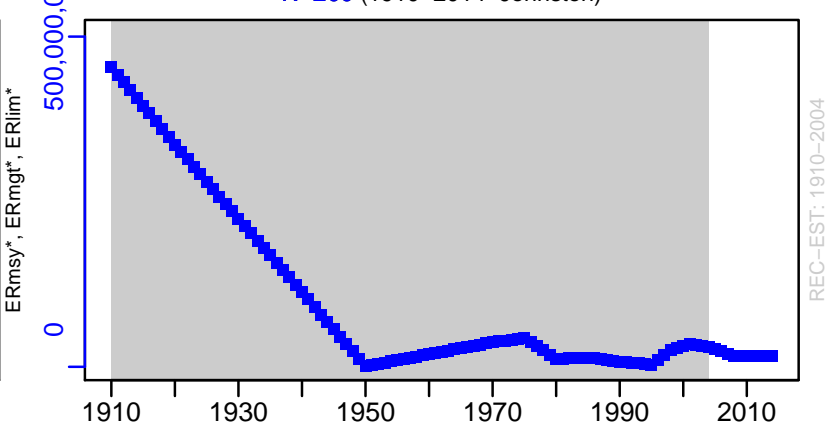
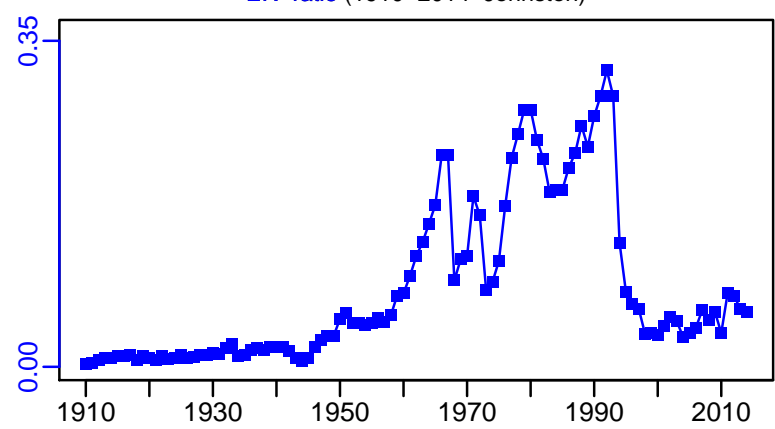
TB-MT (1910-2014-Johnston)

SSB-relative (1910-2014-Johnston)



ER-ratio (1910-2014-Johnston)

R-E00 (1910-2014-Johnston)

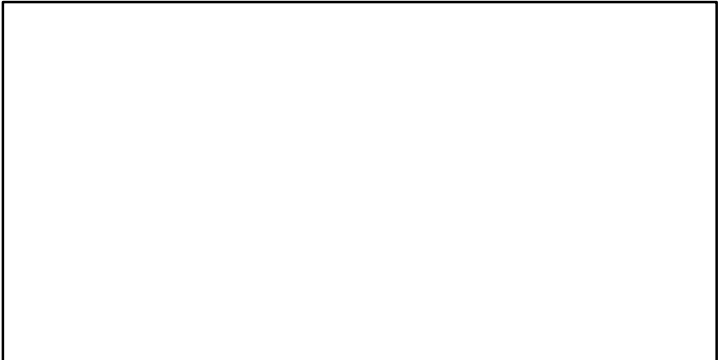
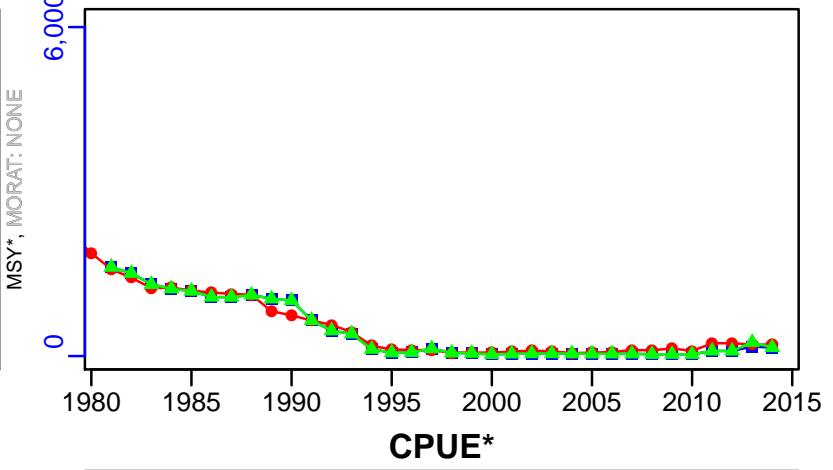
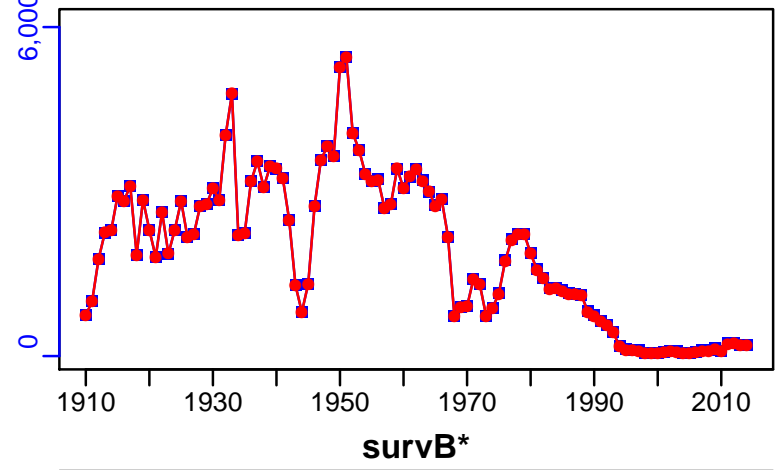




West coast rock lobster South Africa Areas 5-6 [CRLOBSTERSA56]

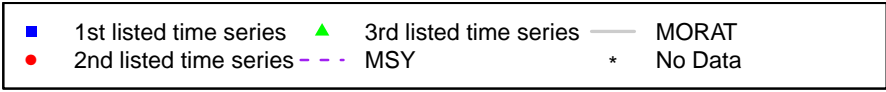
TC-MT, TL-MT, RecC\* (1910-2014-Johnston)

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



EFFORT\*

CdivMSY\*



## West coast rock lobster South Africa Area 7 [CRLOBSTERSA7]

Metadata	
<b>Scientific Name</b>	Jasus Ialandii
<b>Current Assess ID</b>	MARAM-CRLOBSTERSA7-1910-2014-Johnston
<b>Area</b>	South Africa Area 7
<b>Management Authority</b>	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
<b>Assessor</b>	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
<b>Asmts in RAM</b>	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 [CROBSTERSA7]

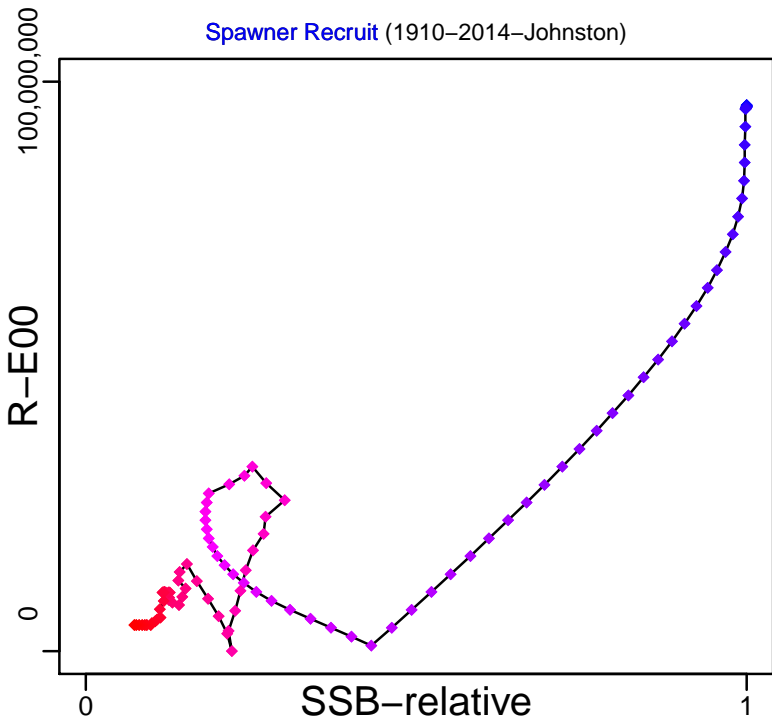
Kobe MSY\*



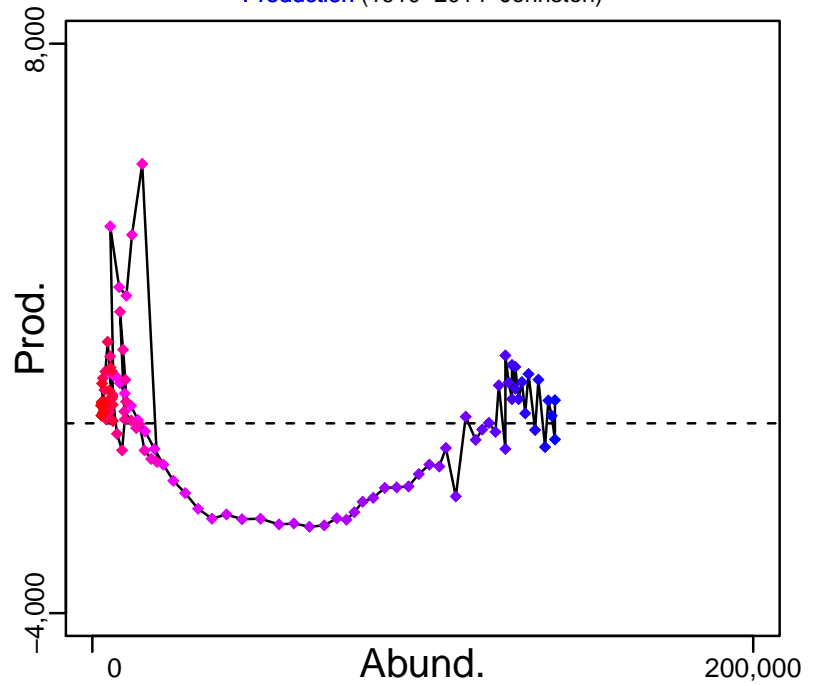
Kobe MGT\*



Spawner Recruit (1910–2014–Johnston)



Production (1910–2014–Johnston)

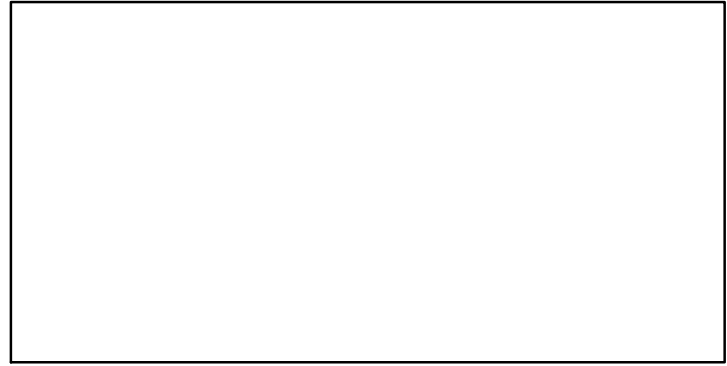
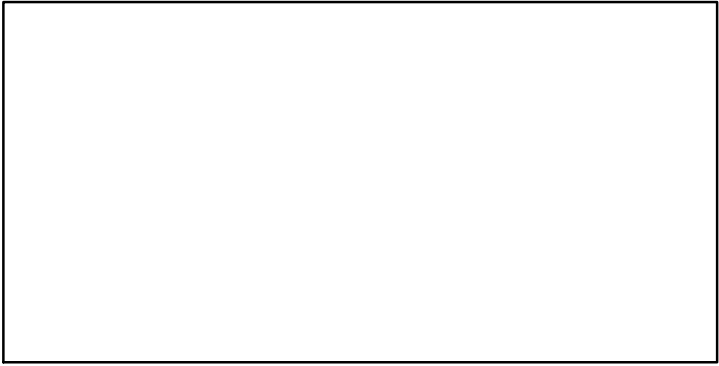
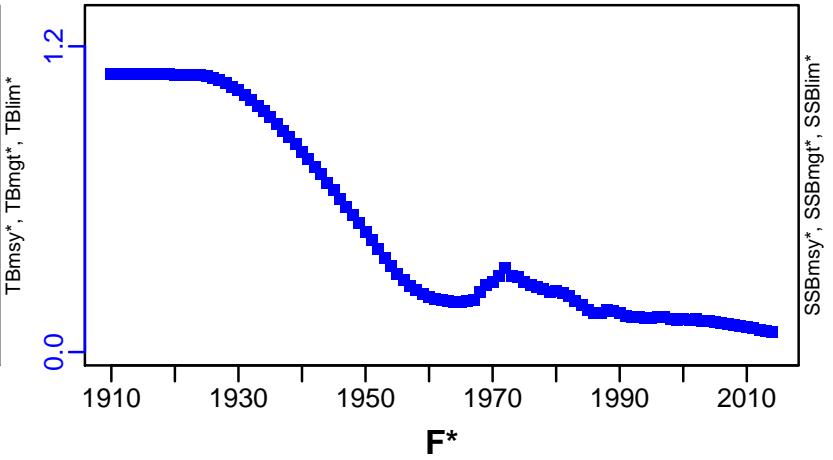
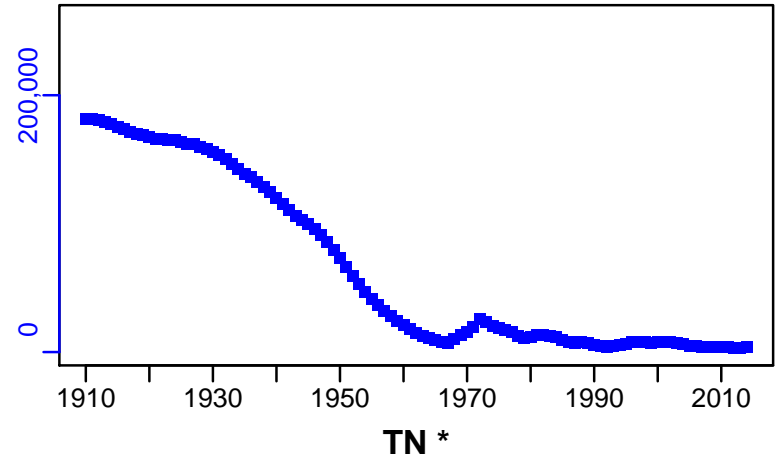


◆ Start Year ◆ End Year \* No Data

West coast rock lobster South Africa Area 7 [CROBSTERSA7]

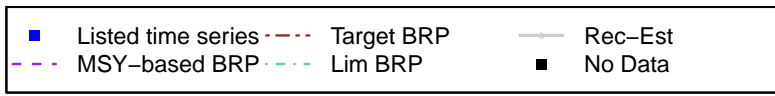
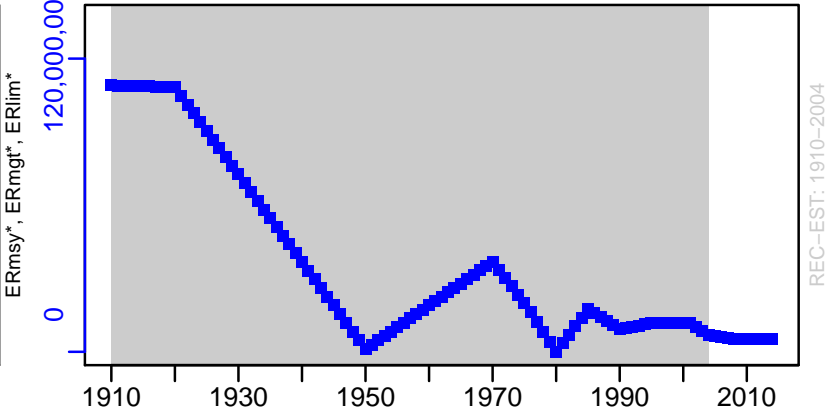
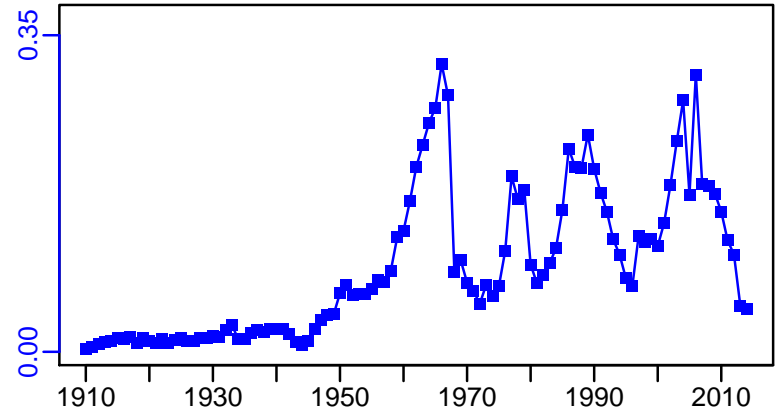
TB-MT (1910-2014-Johnston)

SSB-relative (1910-2014-Johnston)



ER-ratio (1910-2014-Johnston)

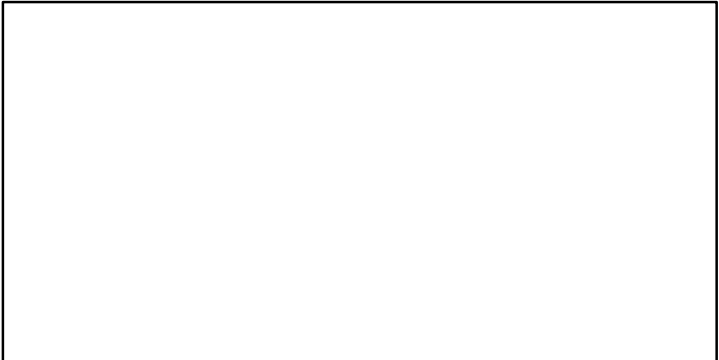
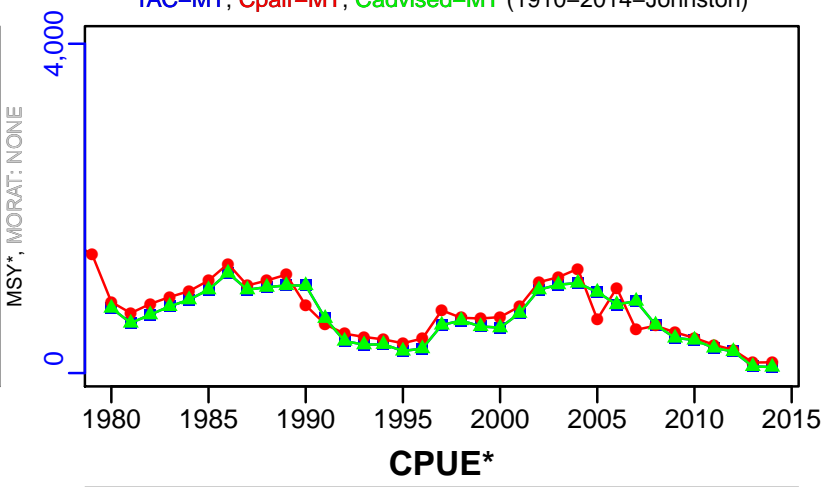
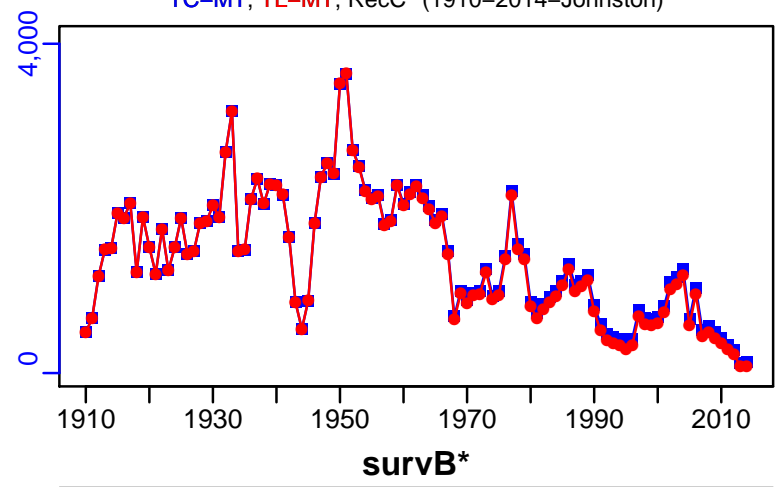
R-E00 (1910-2014-Johnston)



West coast rock lobster South Africa Area 7 [CRLOBSTERSA7]

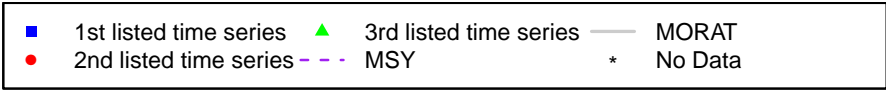
TC-MT, TL-MT, RecC\* (1910-2014-Johnston)

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



EFFORT\*

CdivMSY\*



## West coast rock lobster South Africa Area 8 [CRLOBSTERSA8]

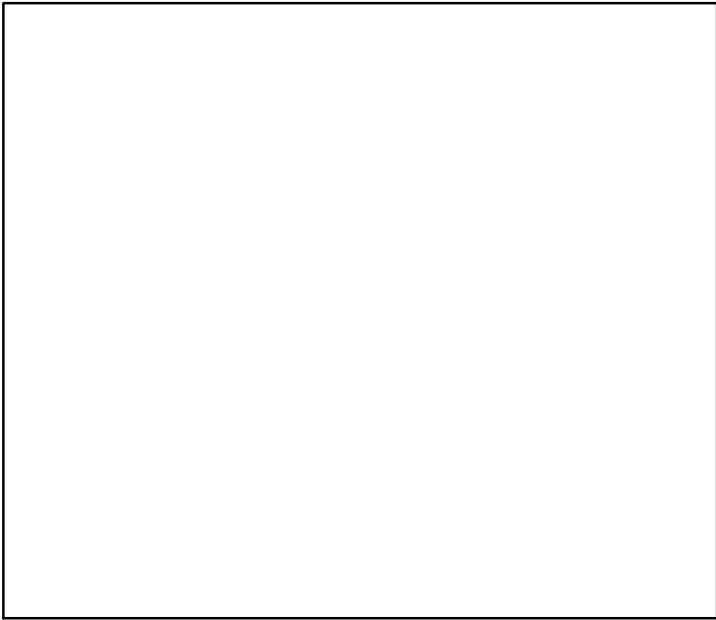
Metadata	
<b>Scientific Name</b>	Jasus Ialandii
<b>Current Assess ID</b>	MARAM-CRLOBSTERSA8-1910-2014-Johnston
<b>Area</b>	South Africa Area 8
<b>Management Authority</b>	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
<b>Assessor</b>	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
<b>Asmts in RAM</b>	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	$2.05 \times 10^8$	-	-
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 [CRLOBSTERSA8]

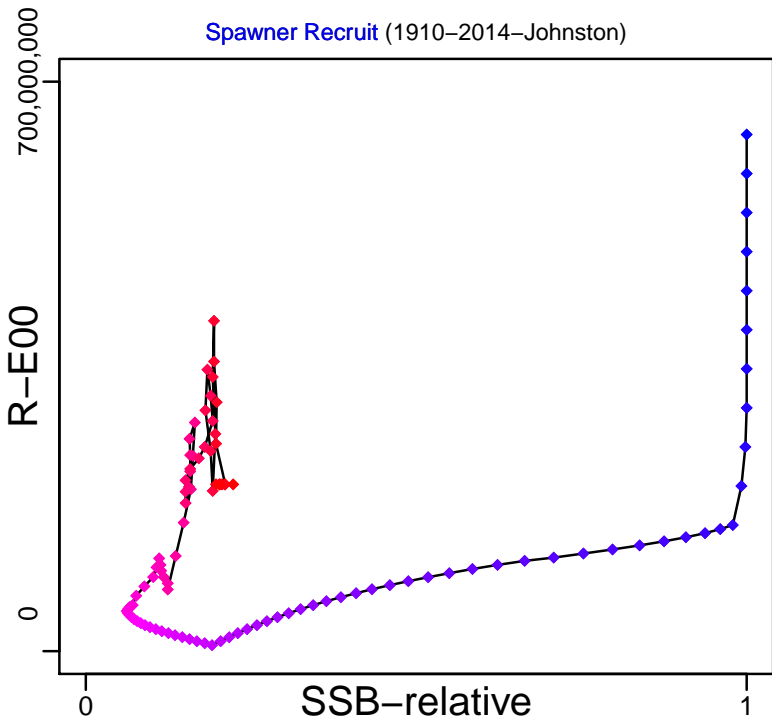
Kobe MSY\*



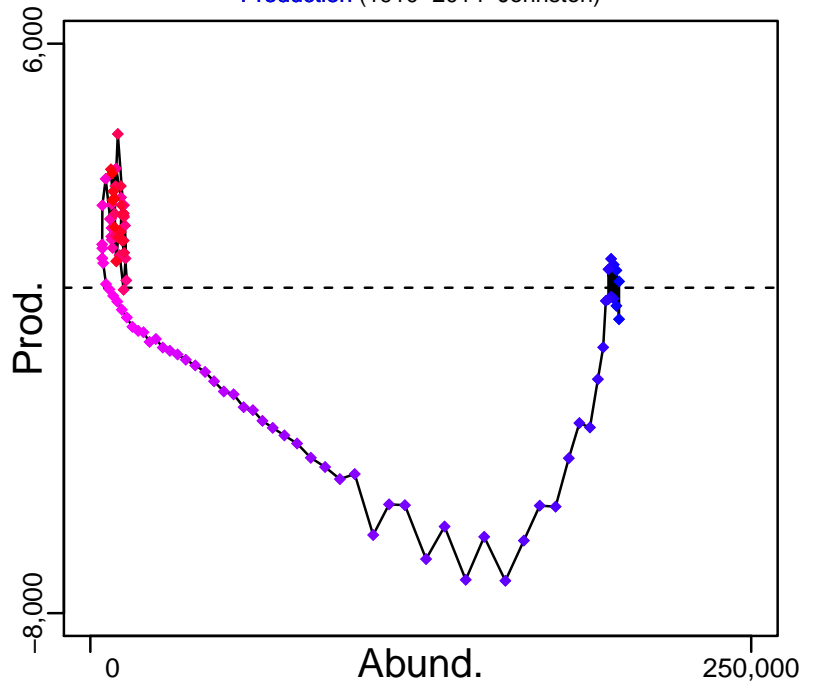
Kobe MGT\*



Spawner Recruit (1910–2014–Johnston)



Production (1910–2014–Johnston)

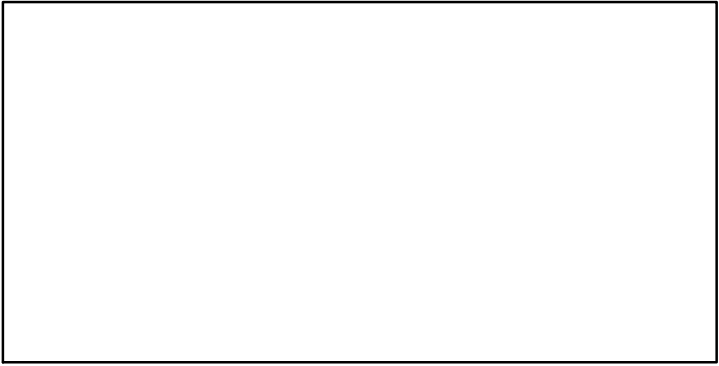
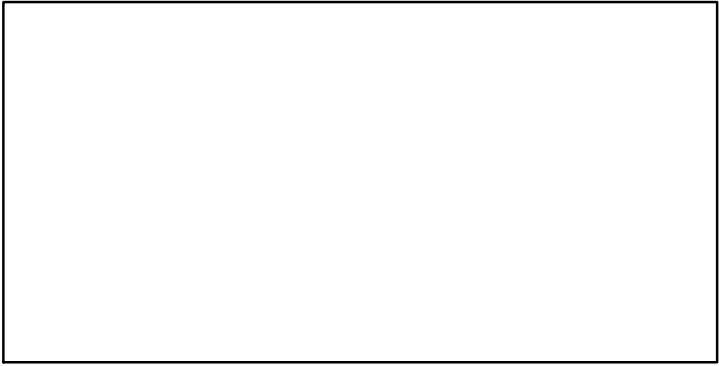
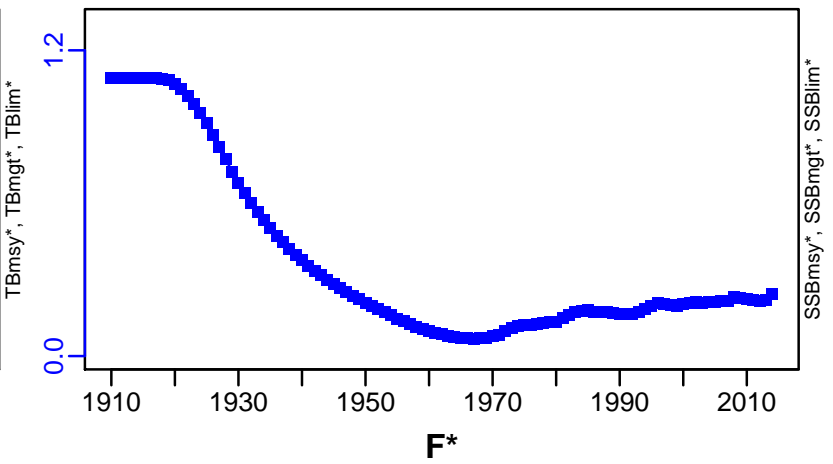
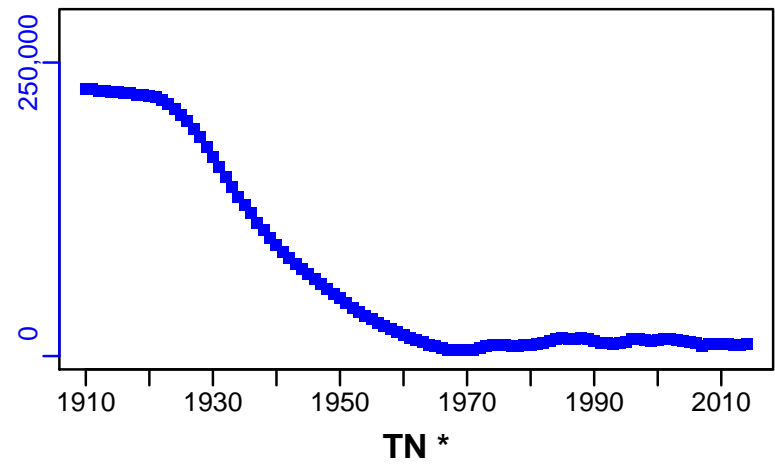


◆ Start Year ◆ End Year \* No Data

West coast rock lobster South Africa Area 8 [CRLOBSTERSA8]

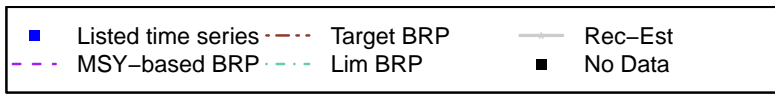
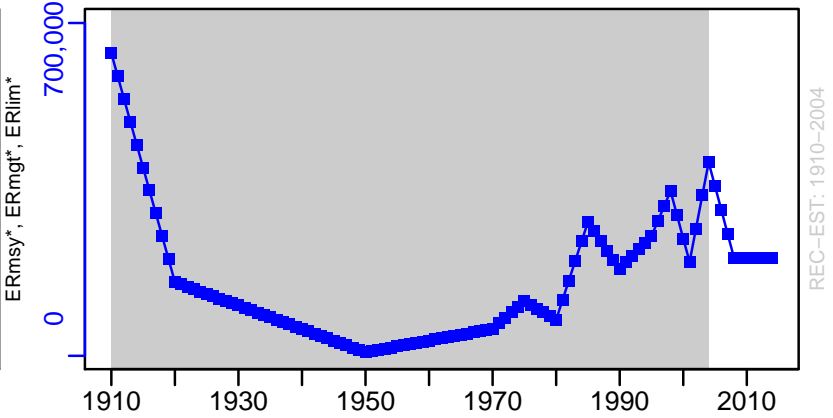
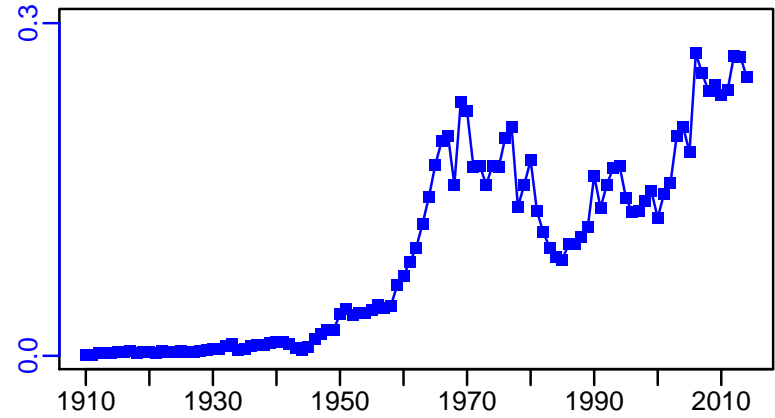
TB-MT (1910-2014-Johnston)

SSB-relative (1910-2014-Johnston)



ER-ratio (1910-2014-Johnston)

R-E00 (1910-2014-Johnston)

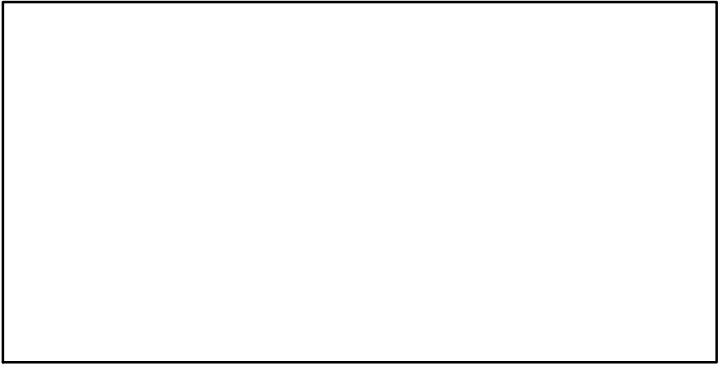
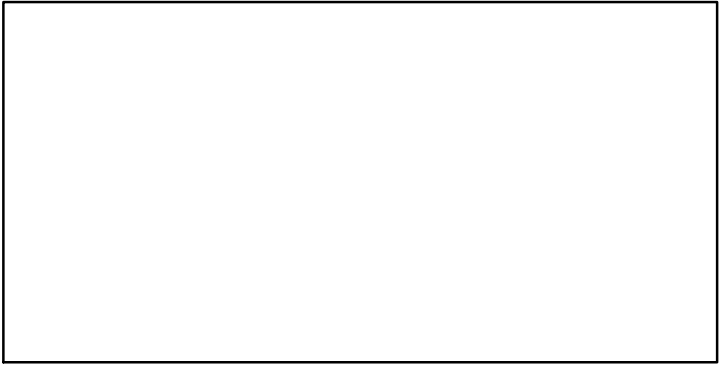
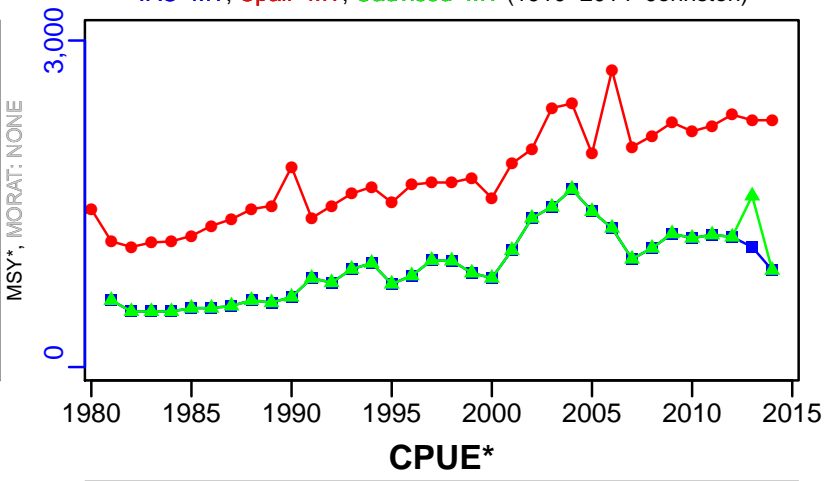
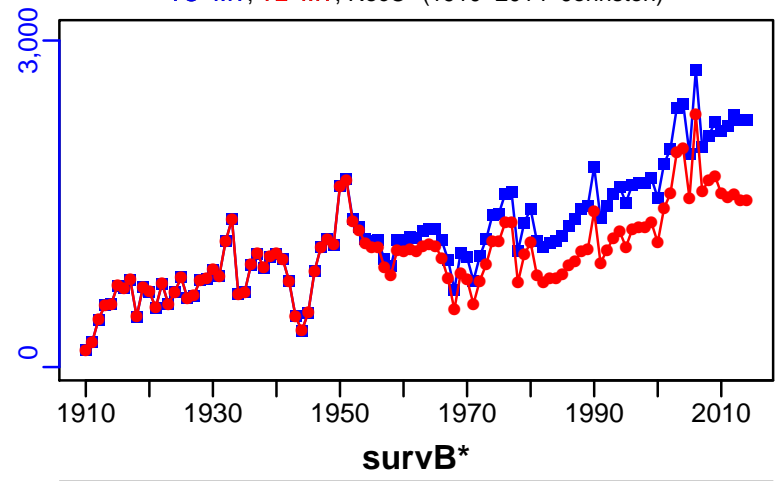




West coast rock lobster South Africa Area 8 [CROBSTERSA8]

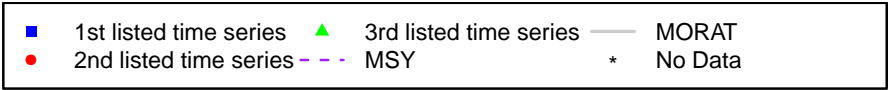
TC-MT, TL-MT, RecC\* (1910-2014-Johnston)

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



EFFORT\*

CdivMSY\*



## Cape horse mackerel South Africa South coast [CTRACSA]

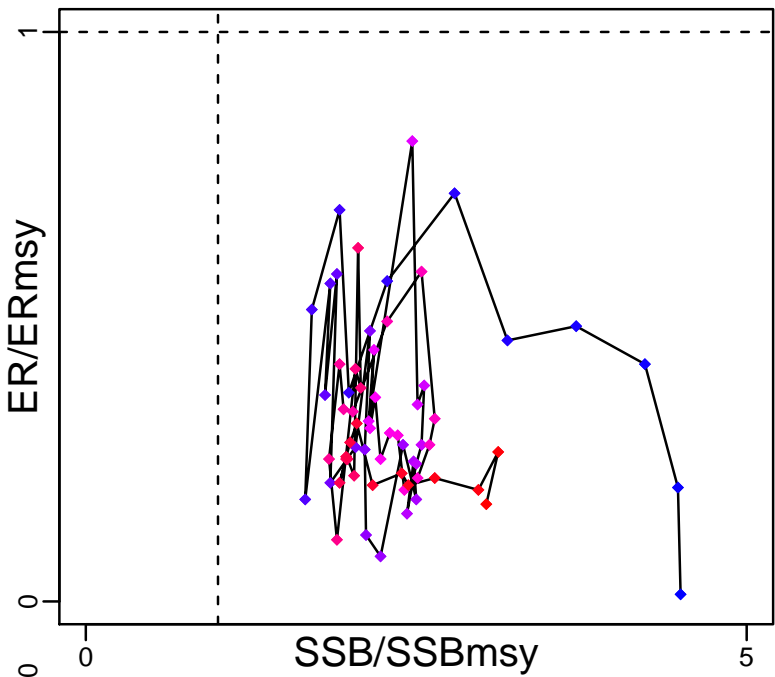
Metadata	
<b>Scientific Name</b>	Trachurus capensis
<b>Current Assess ID</b>	MARAM-CTRACSA-1949-2013-Furman
<b>Area</b>	South Africa South coast
<b>Management Authority</b>	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
<b>Assessor</b>	Marine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

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

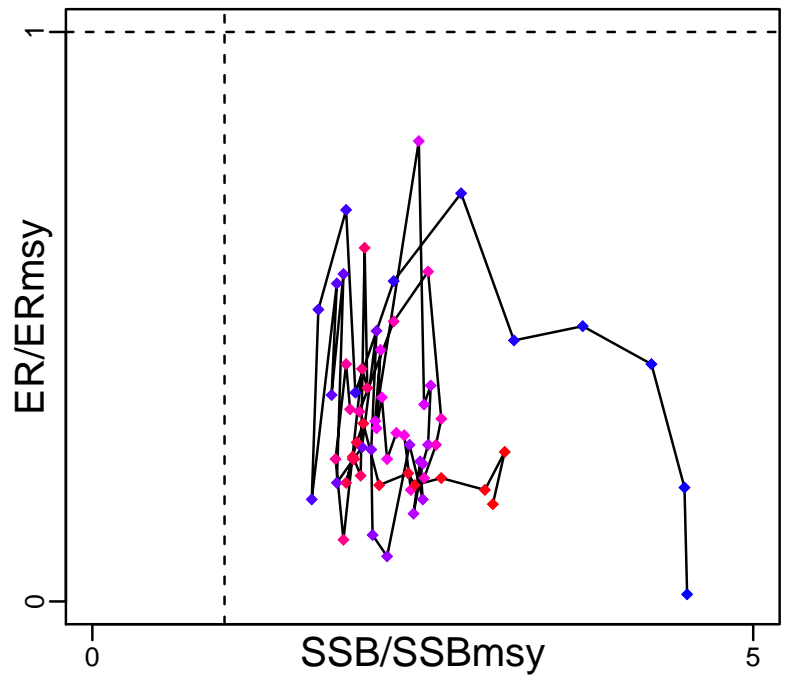
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	731,000	-	0+
<b>SSB</b>	SSB-MT	2013	606,000	Both	3+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	$1.46 \times 10^9$	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2013	0.041	-	-
<b>TC</b>	TC-MT	2013	29,700		
<b>TL</b>	TL-MT	2013	29,700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

Cape horse mackerel South Africa South coast [CTRACSA]

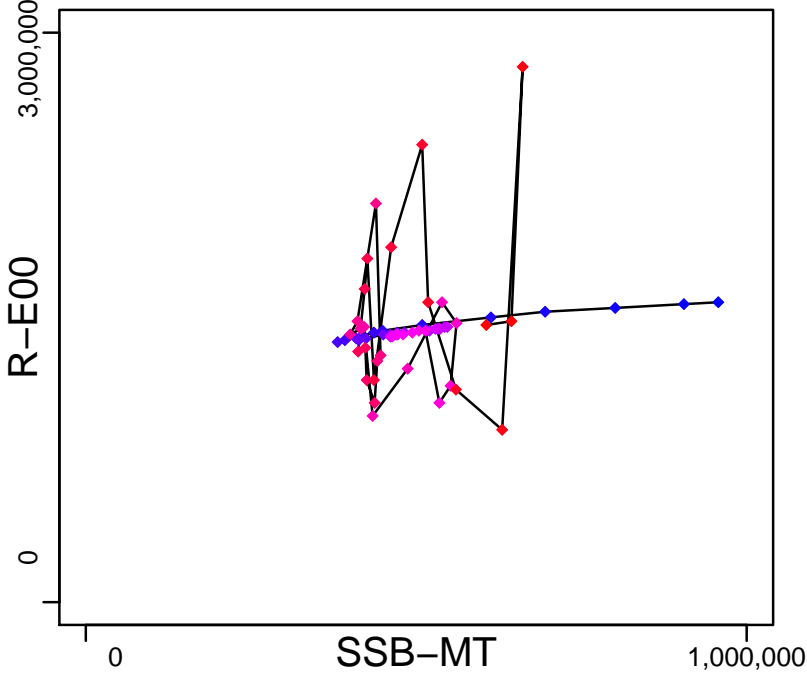
Kobe MSYpref (1949–2013–Furman)



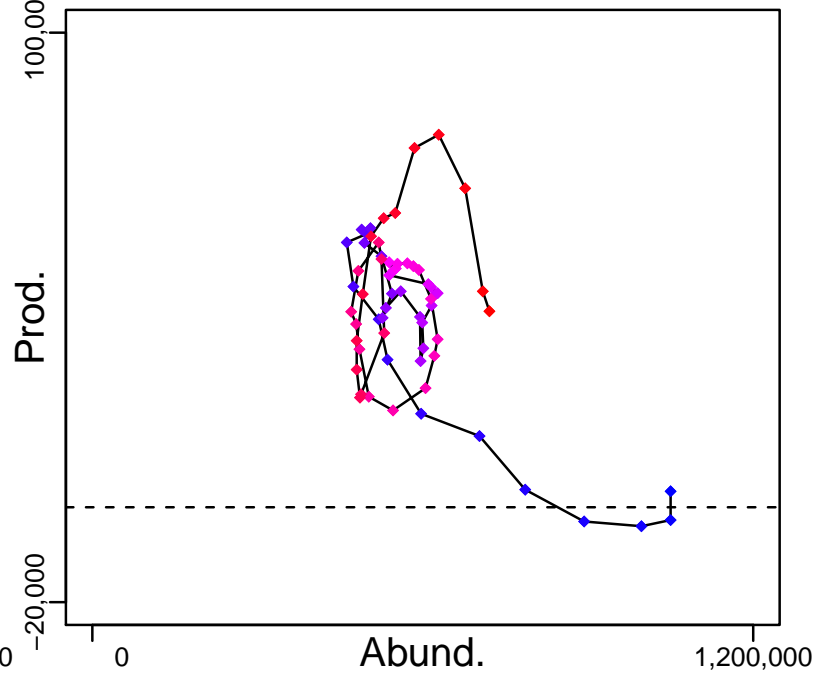
Kobe MGTpref (1949–2013–Furman)



Spawner Recruit (1949–2013–Furman)



Production (1949–2013–Furman)

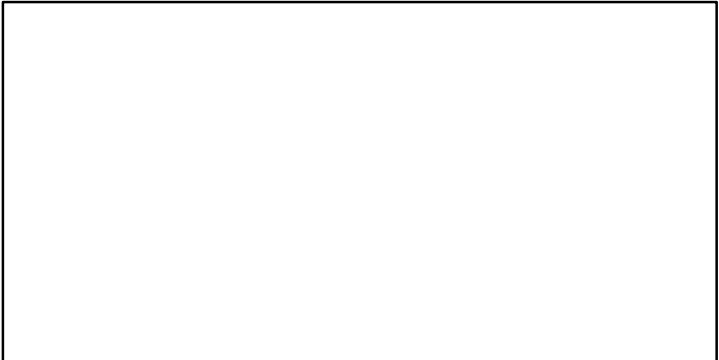
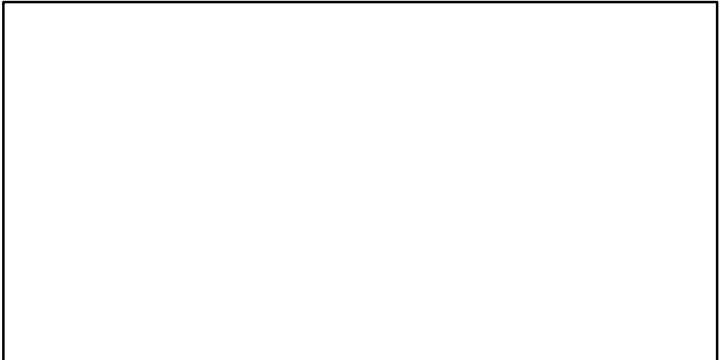
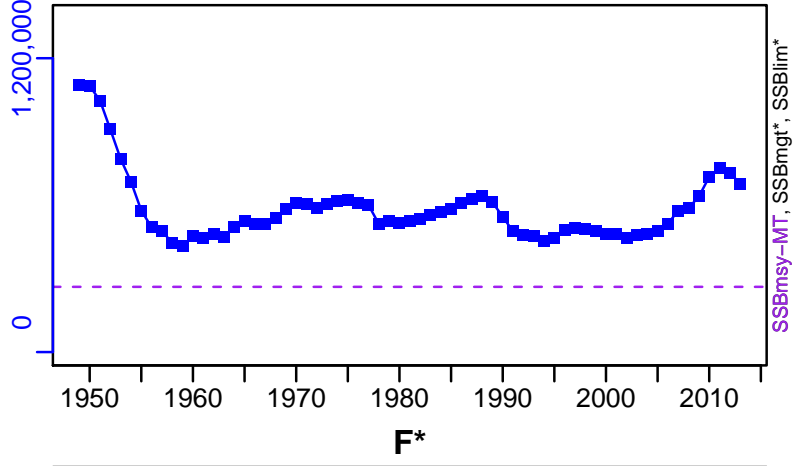
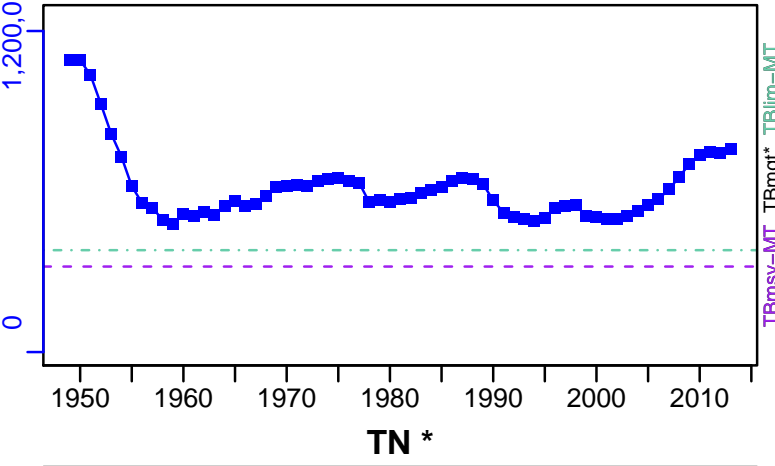


◆ Start Year ◆ End Year \* No Data

Cape horse mackerel South Africa South coast [CTRACSA]

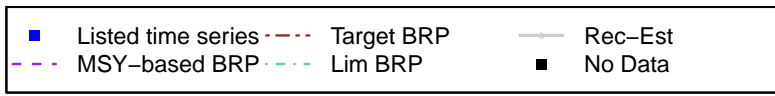
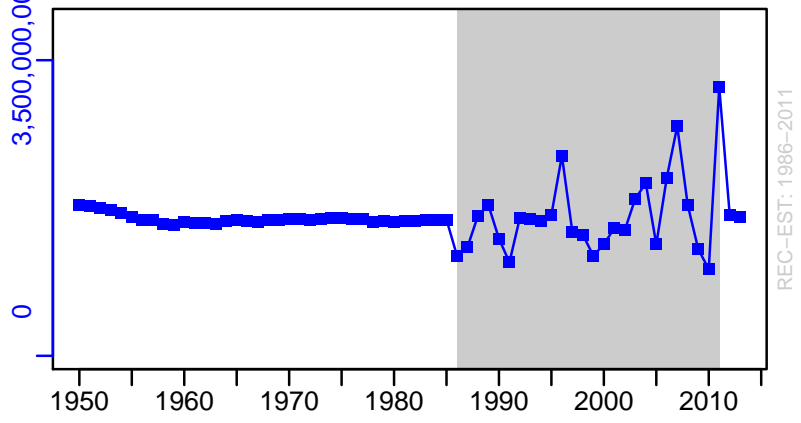
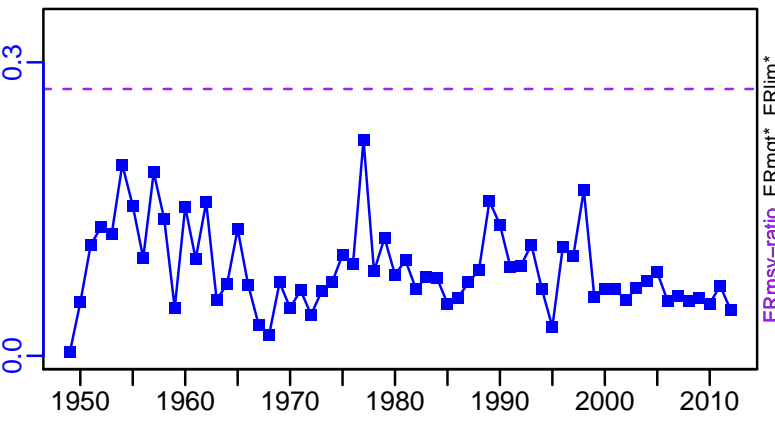
TB-MT (1949-2013-Furman)

SSB-MT (1949-2013-Furman)



ER-ratio (1949-2013-Furman)

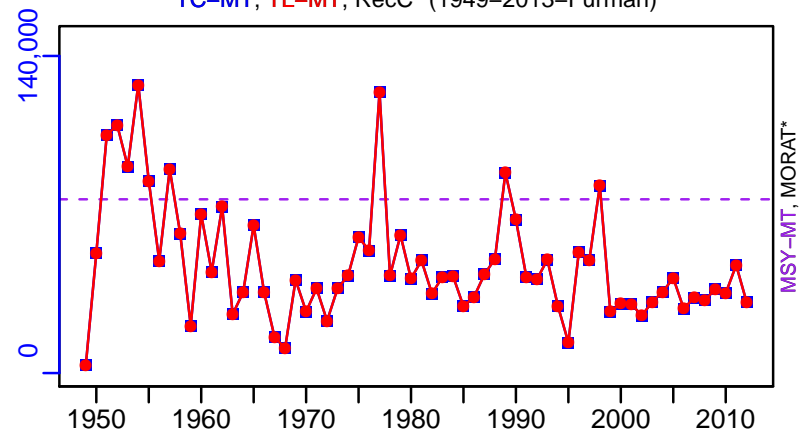
R-E00 (1949-2013-Furman)



Cape horse mackerel South Africa South coast [CTRACSA]

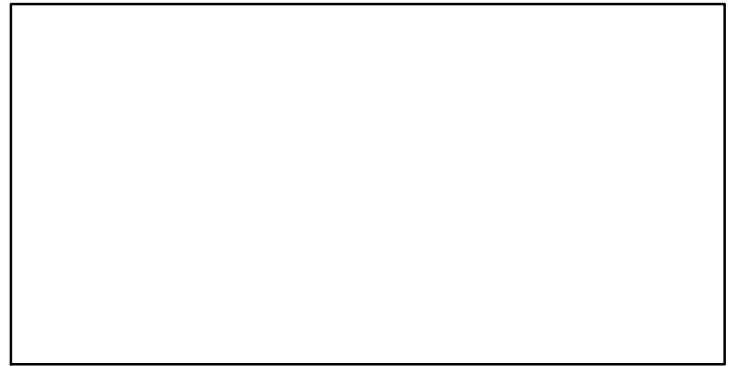
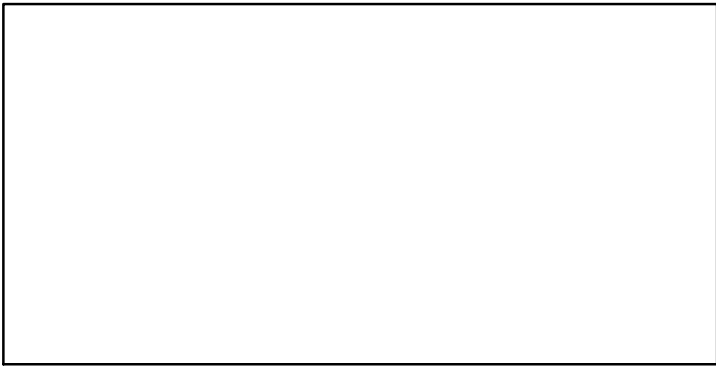
TC-MT, TL-MT, RecC\* (1949-2013-Furman)

TAC\*, Cpair\*, Cadv\*



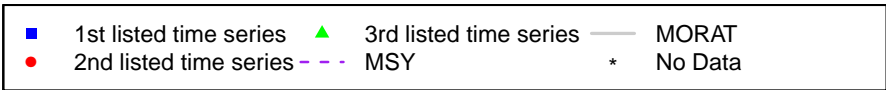
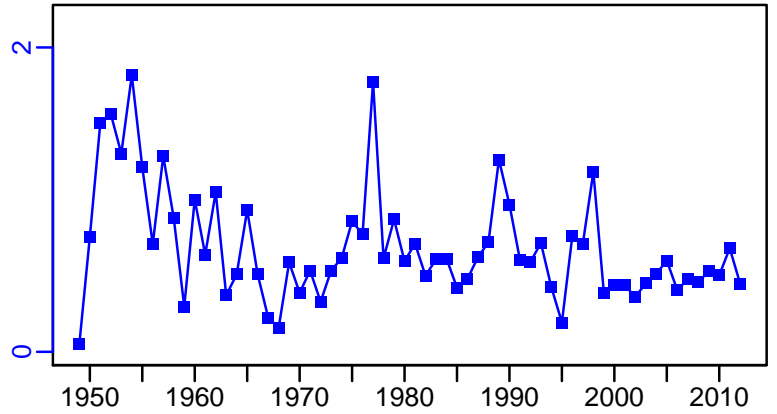
survB\*

CPUE\*



EFFORT\*

CdivMSY-ratio (1949-2013-Furman)



## Deep-water cape hake South Africa [DEEPCHAKESA]

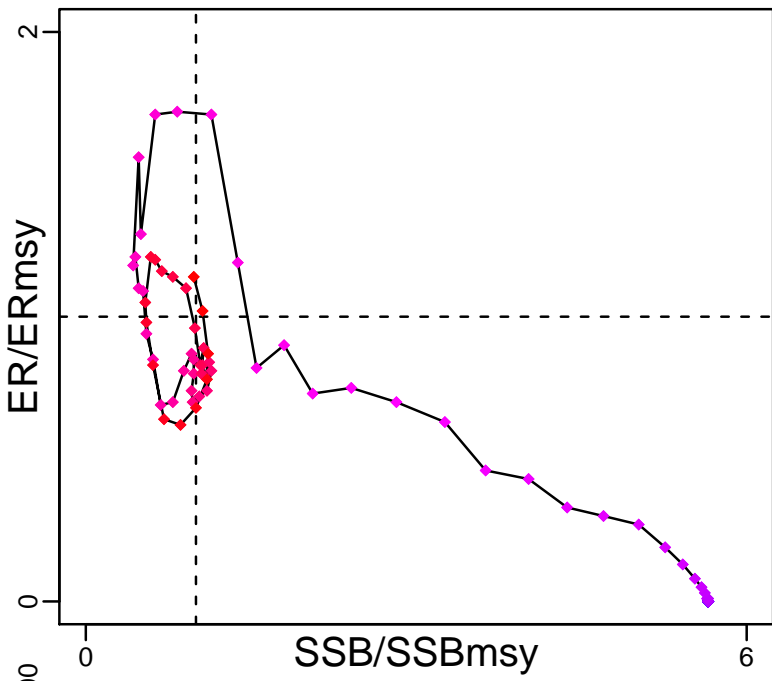
Metadata	
<b>Scientific Name</b>	Merluccius paradoxus
<b>Current Assess ID</b>	MARAM-DEEPCHAKESA-1917-2015-Rademeyer
<b>Area</b>	South Africa
<b>Management Authority</b>	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
<b>Assessor</b>	Marine Resource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

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

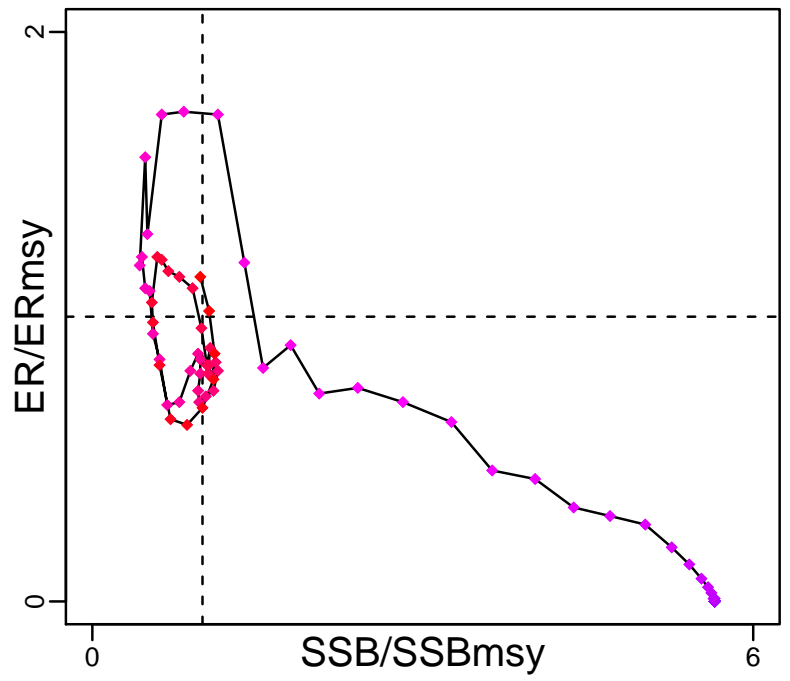
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	517,000	-	0+
<b>SSB</b>	SSB-MT	2015	178,000	Females	4
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	$3.86 \times 10^9$	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2015	0.47	-	-
<b>TC</b>	TC-MT	2015	133,000		
<b>TL</b>	TL-MT	2015	133,000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

Deep-water cape hake South Africa [DEEPCHAKESA]

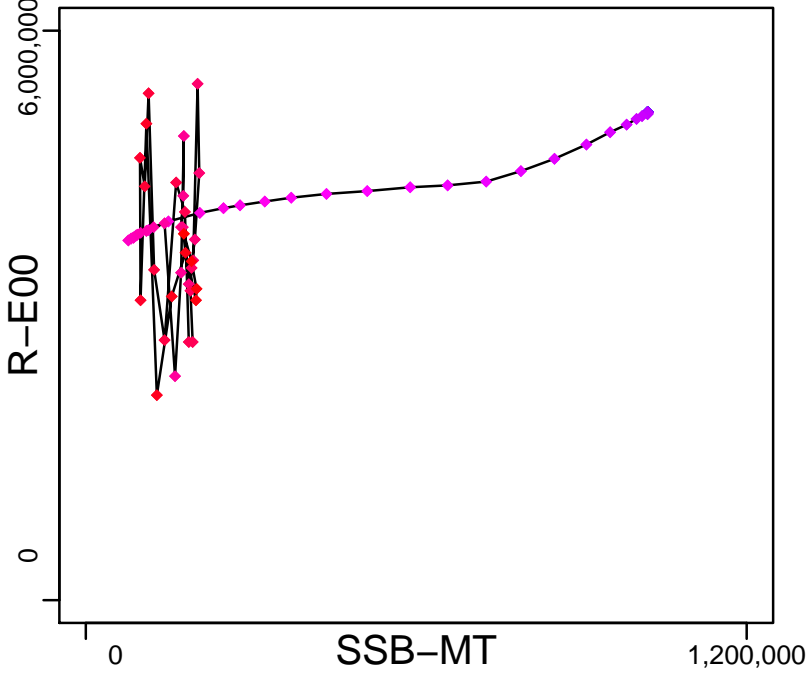
Kobe MSYpref (1917–2015–Rademeyer)



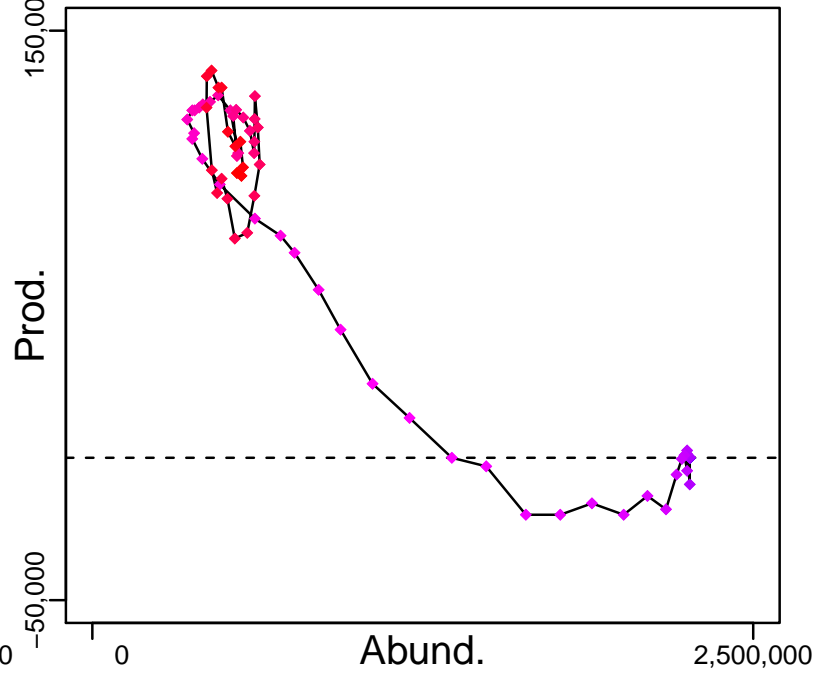
Kobe MGTpref (1917–2015–Rademeyer)



Spawner Recruit (1917–2015–Rademeyer)



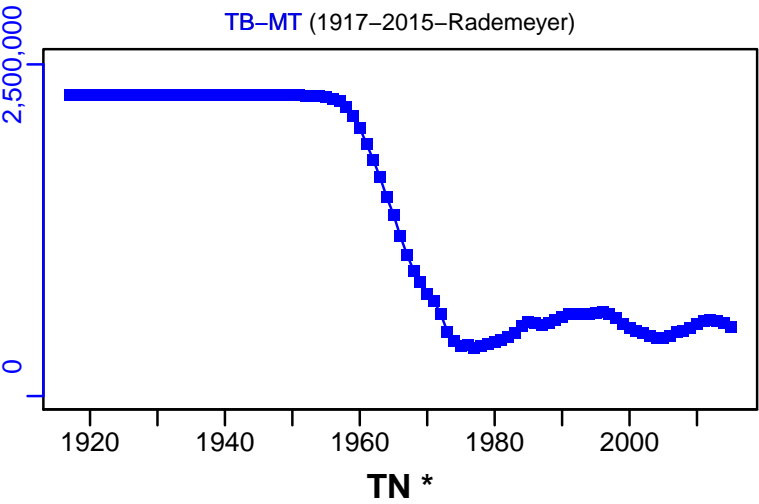
Production (1917–2015–Rademeyer)



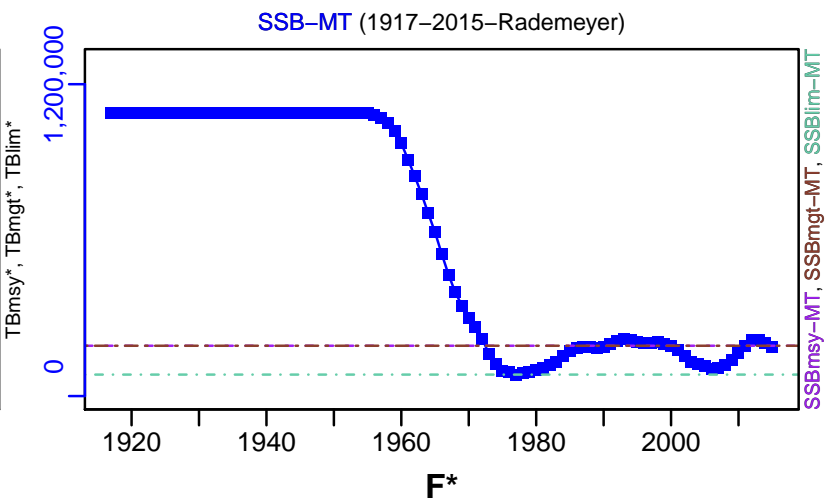
◆ Start Year ◆ End Year \* No Data

### Deep-water cape hake South Africa [DEEPCHAKESA]

TB-MT (1917-2015-Rademeyer)

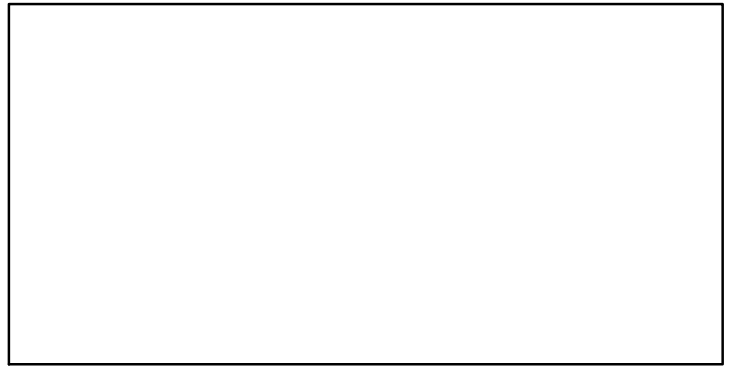
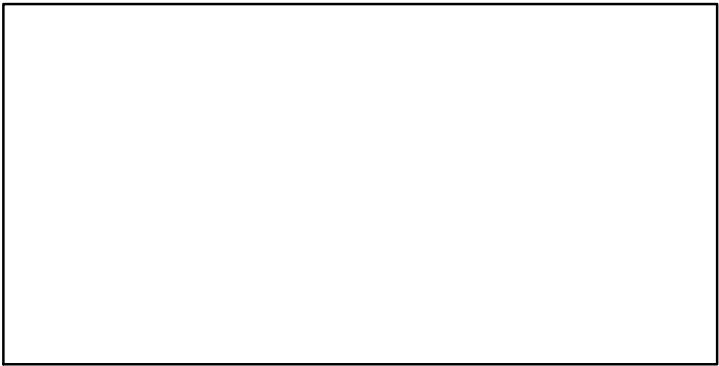


SSB-MT (1917-2015-Rademeyer)

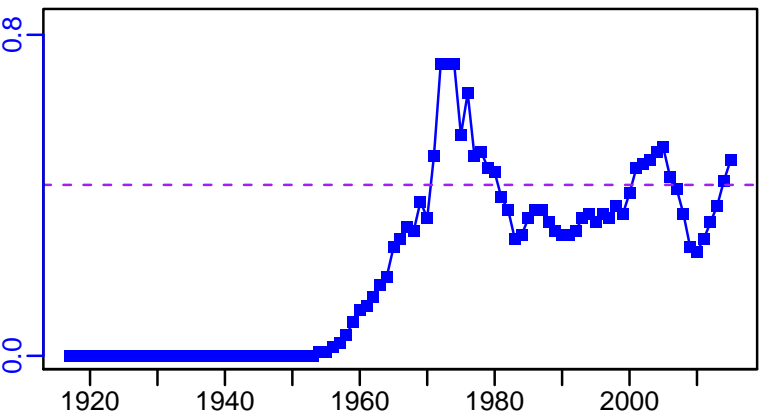


TN \*

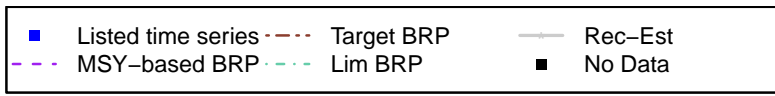
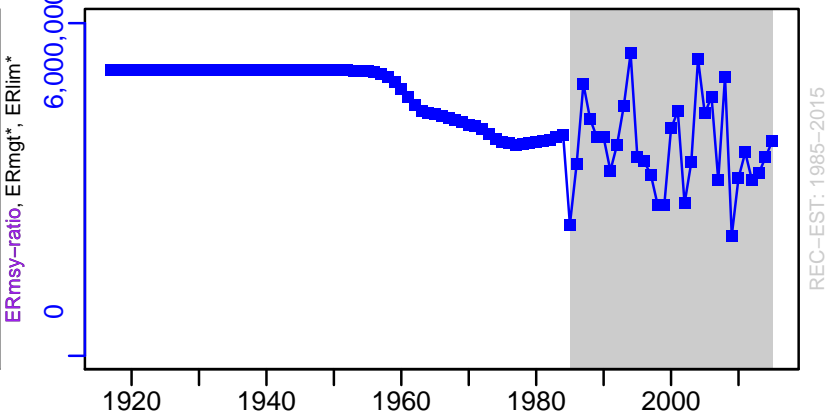
F\*



ER-ratio (1917-2015-Rademeyer)



R-E00 (1917-2015-Rademeyer)

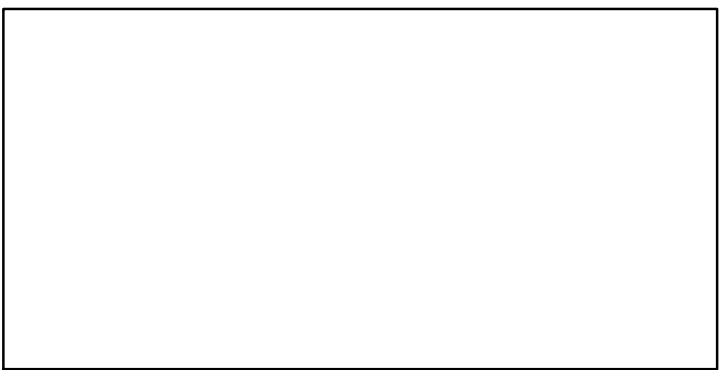
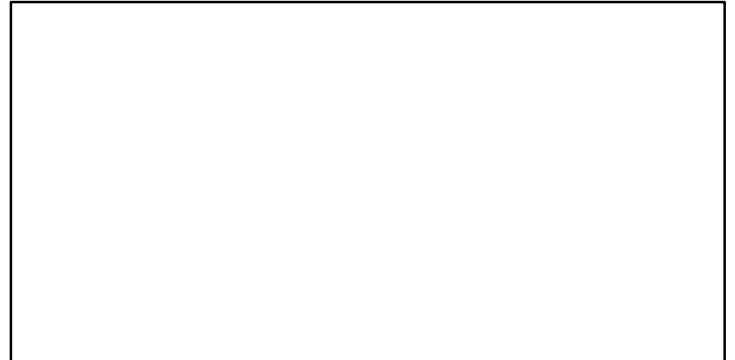
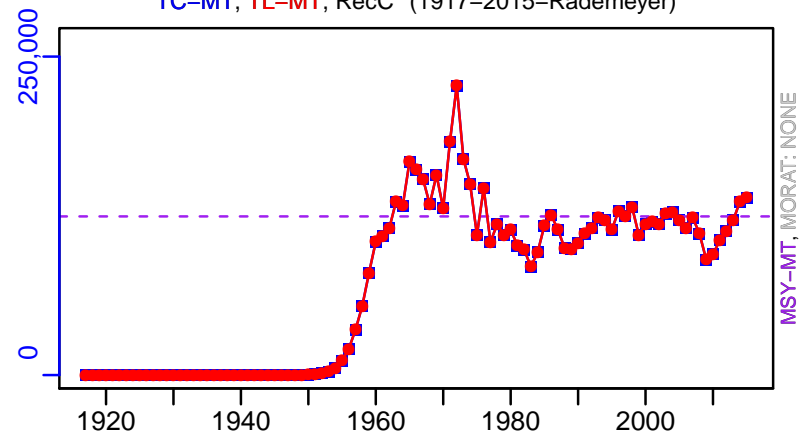




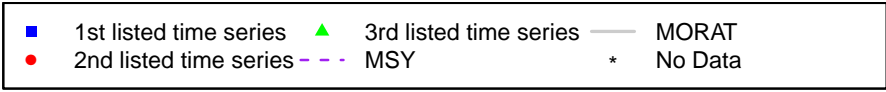
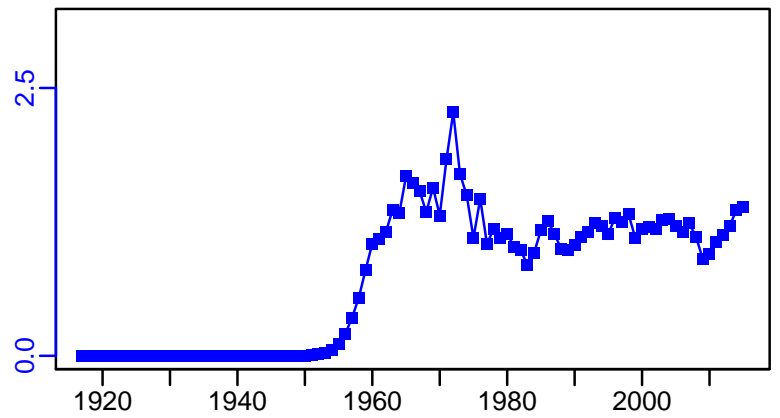
Deep-water cape hake South Africa [DEEPCHAKESA]

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

TAC\*, Cpair\*, Cadv\*



CdivMSY-ratio (1917-2015-Rademeyer)



## Kingklip South Africa [KINGKLIPSA]

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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2012	85,311
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2012	5855
<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	113,000	-	0+
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2012	0.031	-	-
<b>TC</b>	TC-MT	2012	3520		
<b>TL</b>	TL-MT	2012	3520		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Kingklip South Africa [KINGKLIPSA]

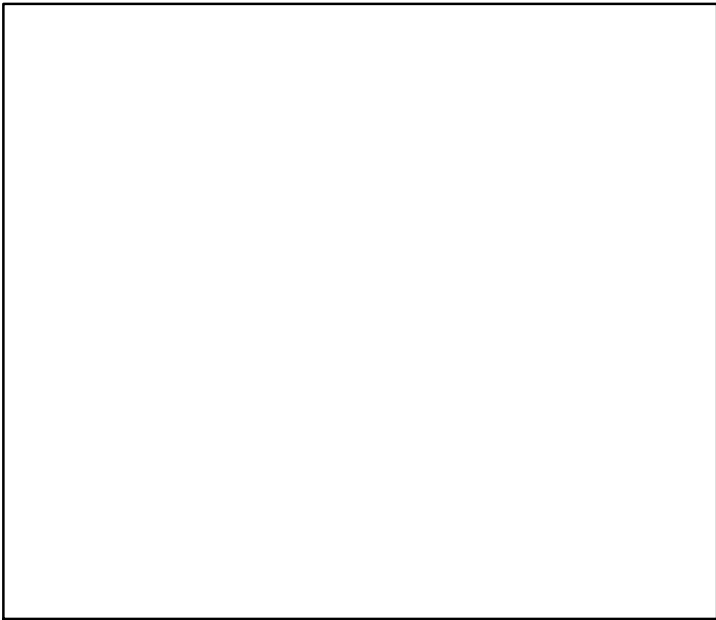
Kobe MSY\*



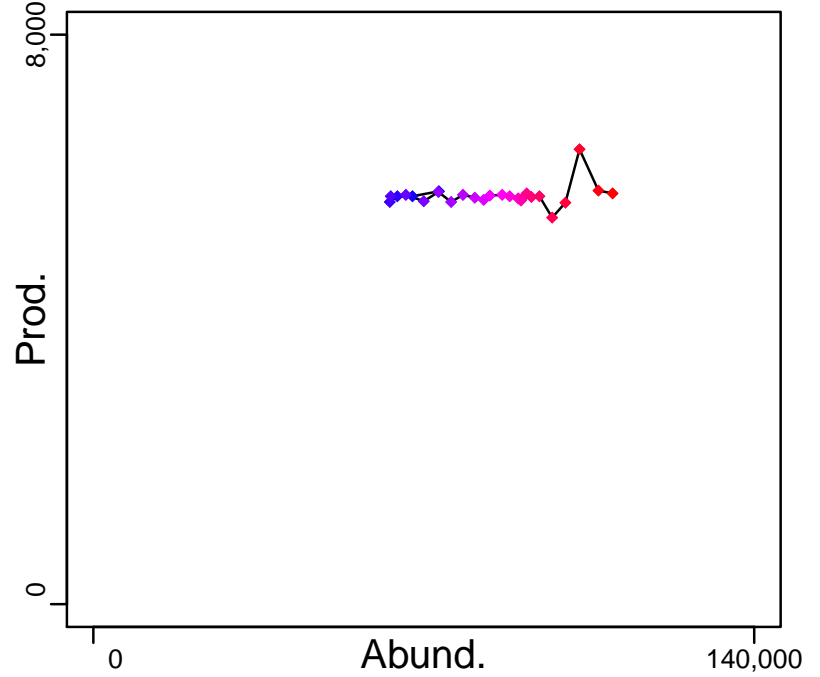
Kobe MGT\*



Spawner Recruit\*



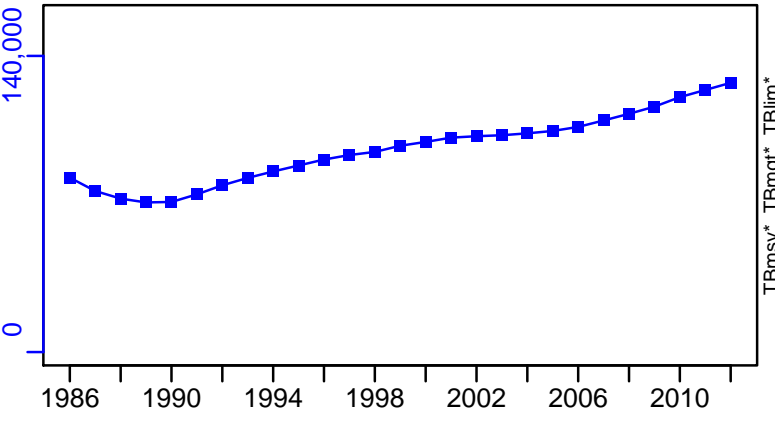
Production (1986–2012–Brandao)



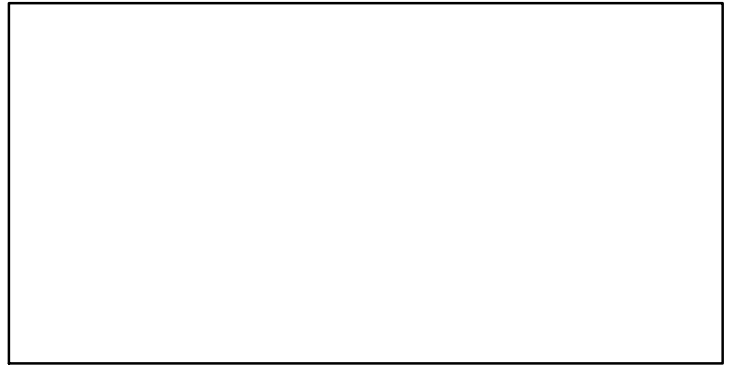
◆ Start Year ◆ End Year \* No Data

Kingklip South Africa [KINGKLIPSA]

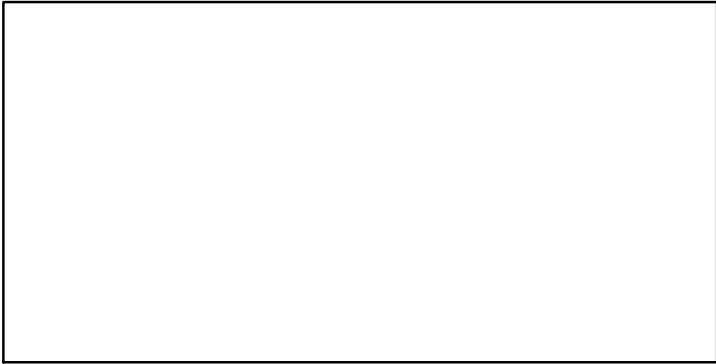
TB-MT (1986-2012-Brandao)



SSB\*



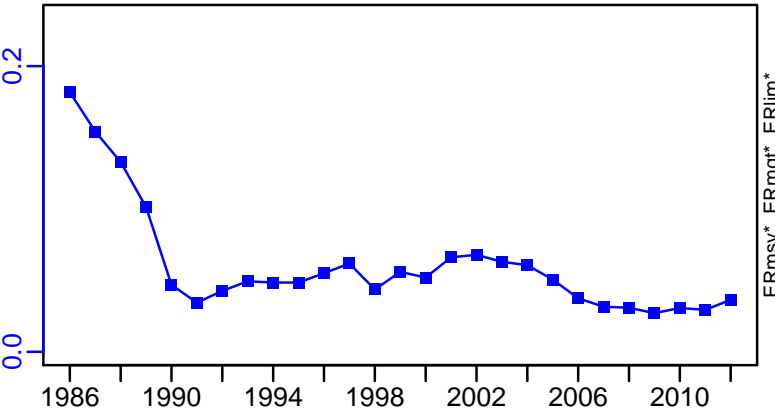
TN \*



F\*



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



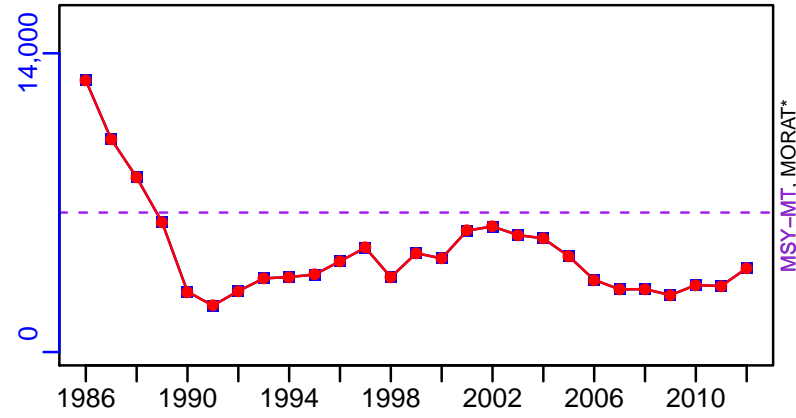
Recruits\*



Kingklip South Africa [KINGKLIPSA]

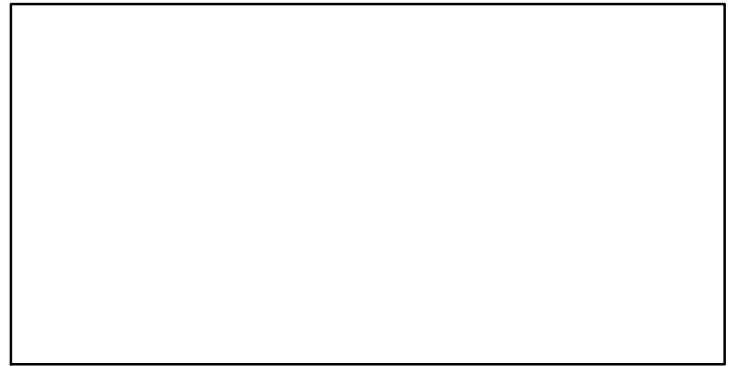
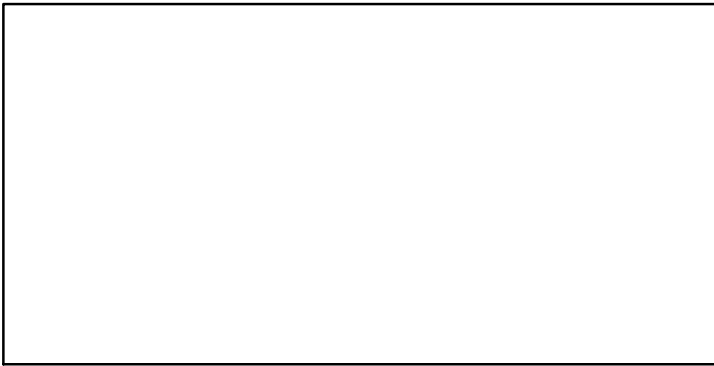
TC-MT, TL-MT, RecC\* (1986-2012-Brandao)

TAC\*, Cpair\*, Cadv\*



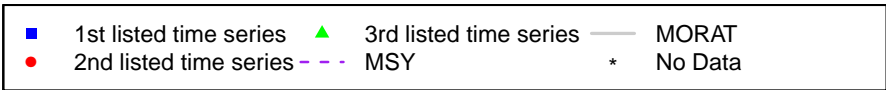
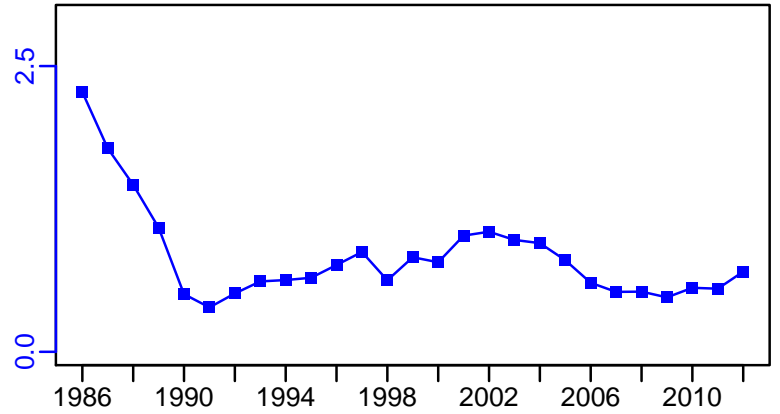
survB\*

CPUE\*



EFFORT\*

CdivMSY-ratio (1986-2012-Brandao)



**Patagonian toothfish South Africa Subantarctic Prince Edward Islands  
[PTOOTHFISHPEI]**

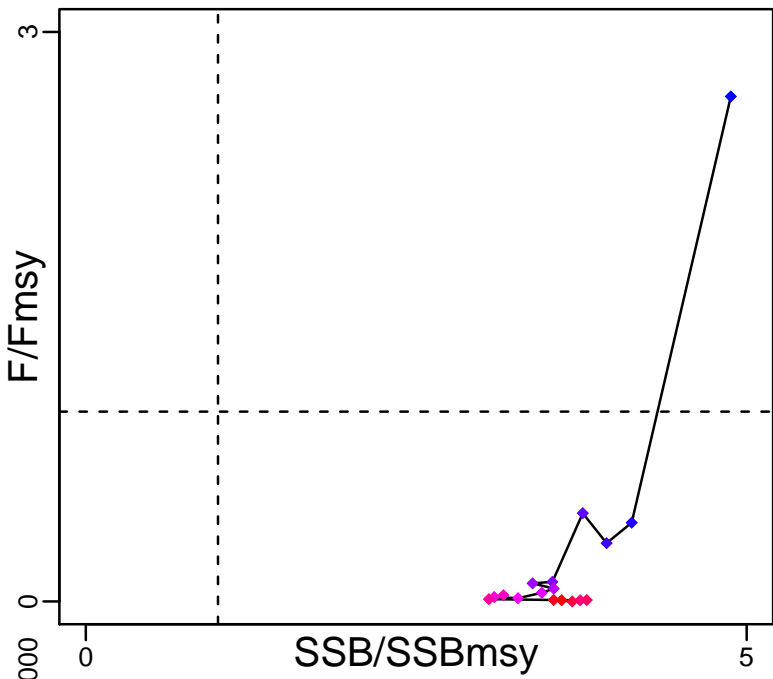
<b>Metadata</b>	
<b>Scientific Name</b>	Dissostichus eleginoides
<b>Current Assess ID</b>	MARAM-PTOOTHFISHPEI-1960-2015-Brandao
<b>Area</b>	South Africa Subantarctic Prince Edward Islands
<b>Management Authority</b>	South African national management, Fisheries Branch of Department of Agriculture, Forestry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

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

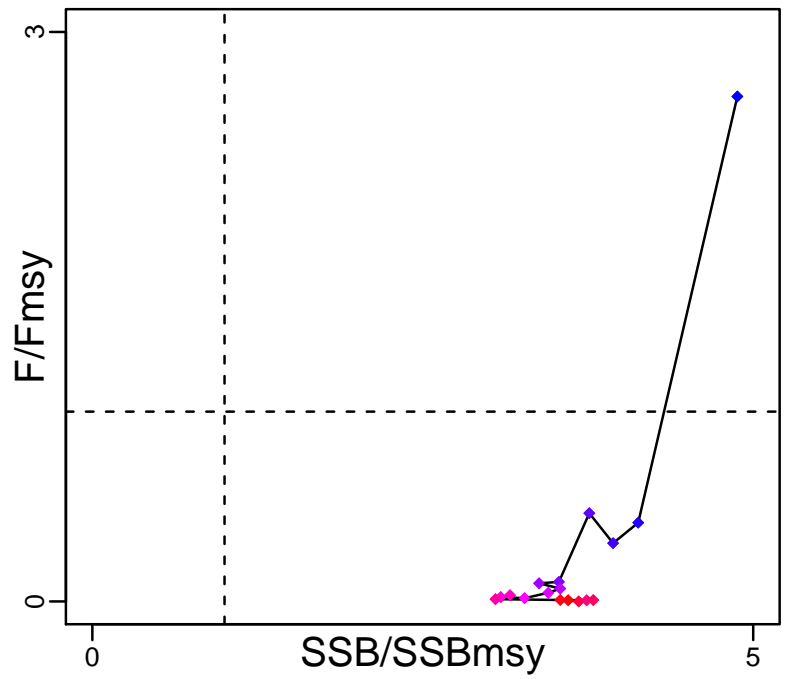
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2015	34,100	-	0+
<b>SSB</b>	SSB-MT	2015	21,700	-	13+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	$1.41 \times 10^{12}$	-	6
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2015	0.017	-	-
<b>TC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

Patagonian toothfish South Africa Subantarctic Prince Edward Islands [PTOOTHFISHPEI]

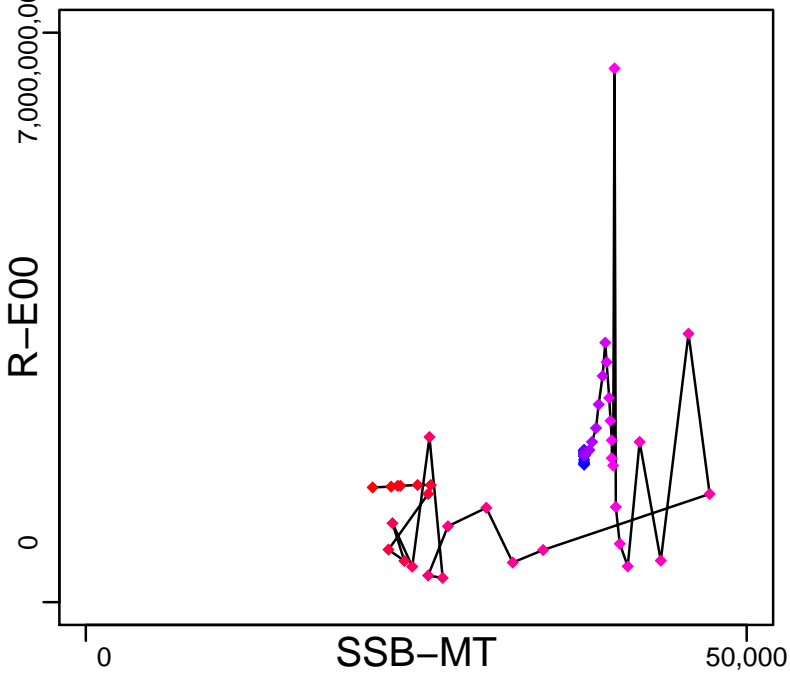
Kobe MSYpref (1960–2013–Brandao)



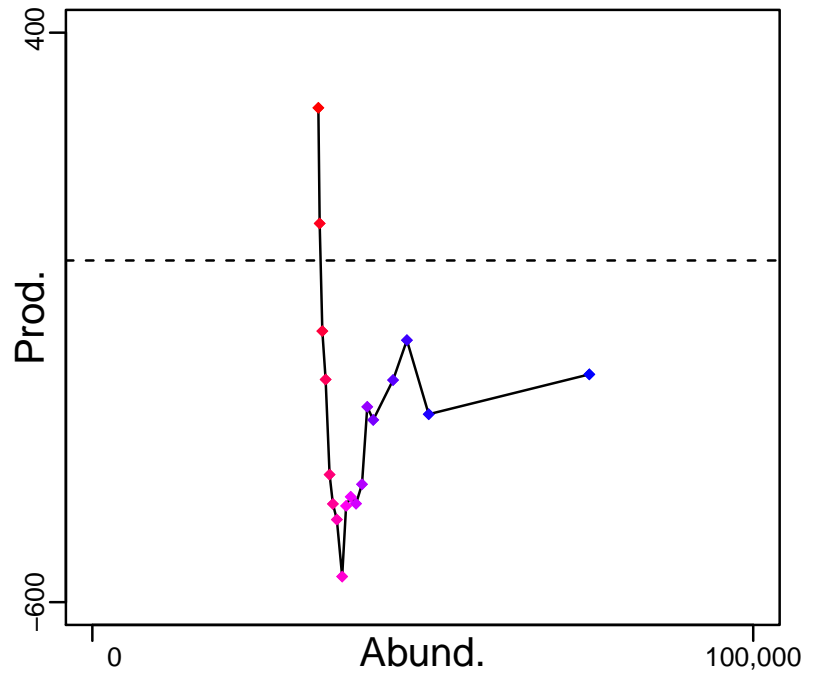
Kobe MGTpref (1960–2013–Brandao)



Spawner Recruit (1960–2015–Brandao)



Production (1960–2015–Brandao)

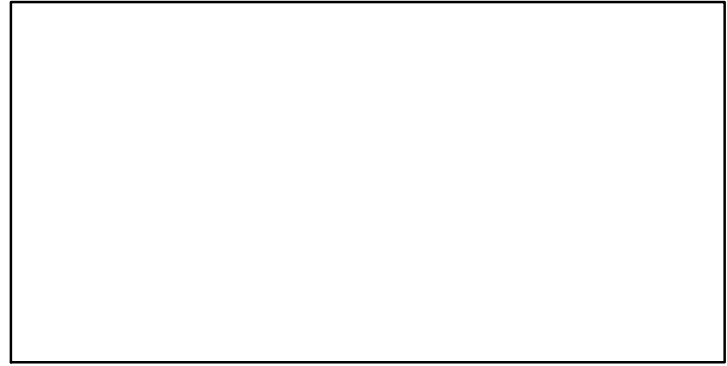
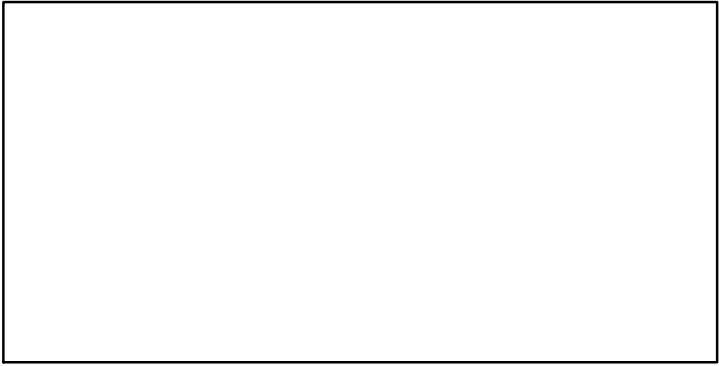
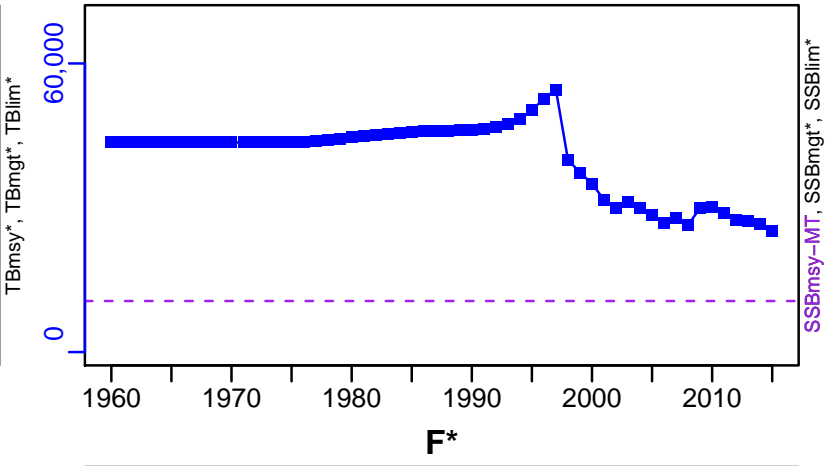
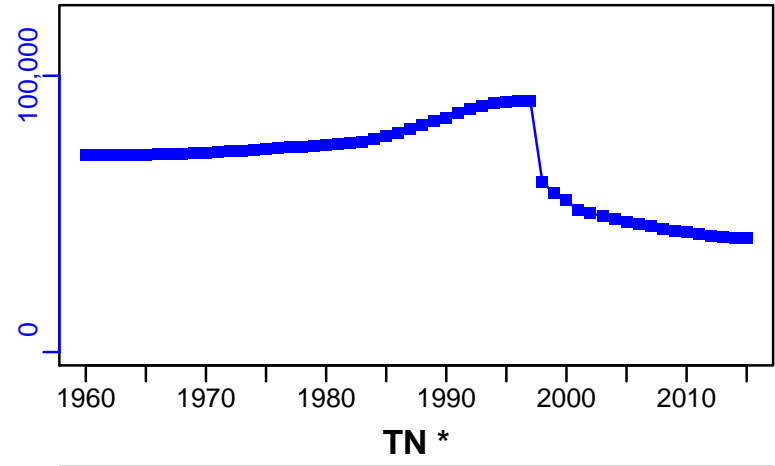


◆ Start Year ◆ End Year \* No Data

Patagonian toothfish South Africa Subantarctic Prince Edward Islands [PTOOTHFISHPEI]

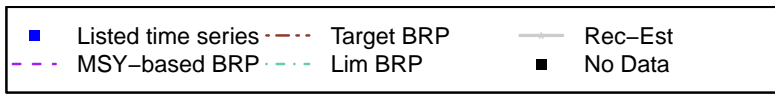
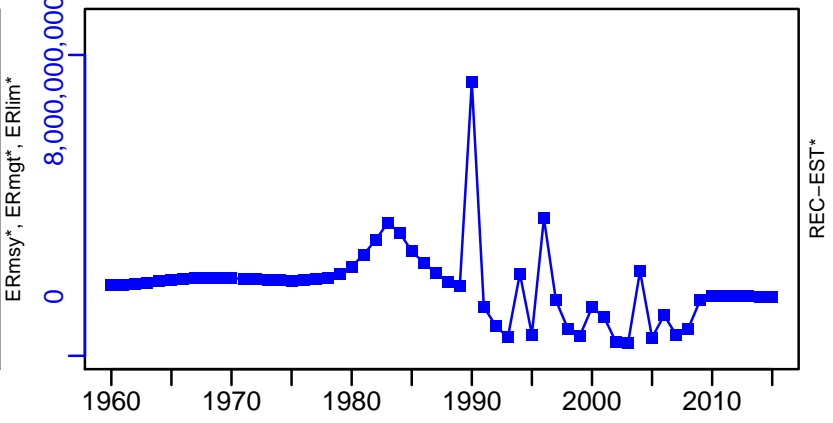
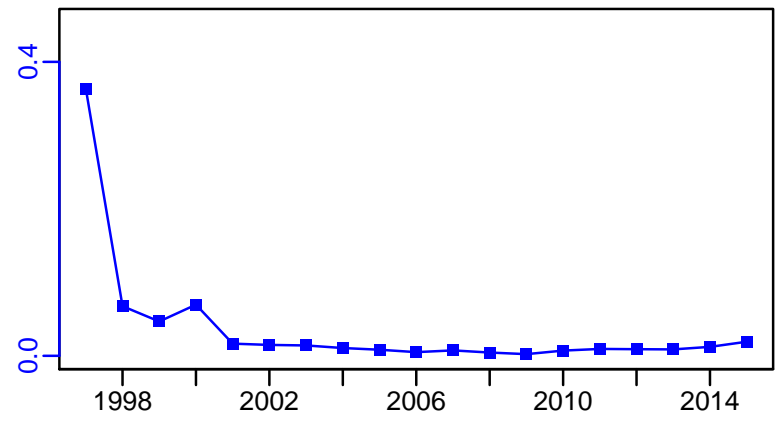
TB-MT (1960-2015-Brandao)

SSB-MT (1960-2015-Brandao)



ER-calc-ratio (1960-2015-Brandao)

R-E00 (1960-2015-Brandao)

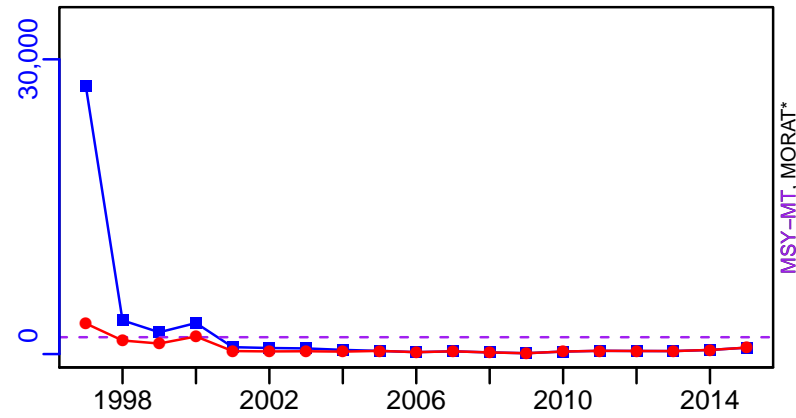




Patagonian toothfish South Africa Subantarctic Prince Edward Islands [PTOOTHFISHPEI]

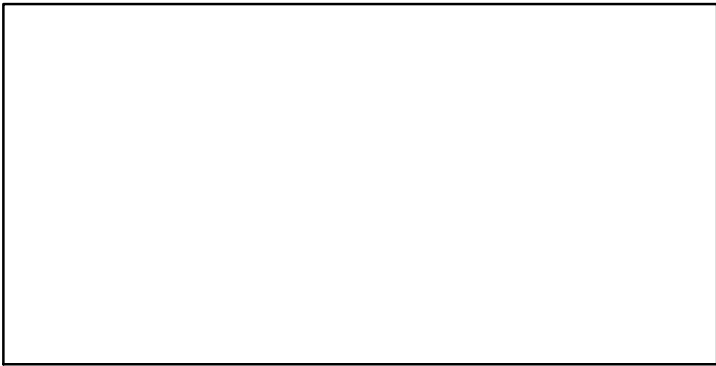
TC-MT, TL-MT, RecC\* (1960-2015-Brandao)

TAC\*, Cpair\*, Cadv\*

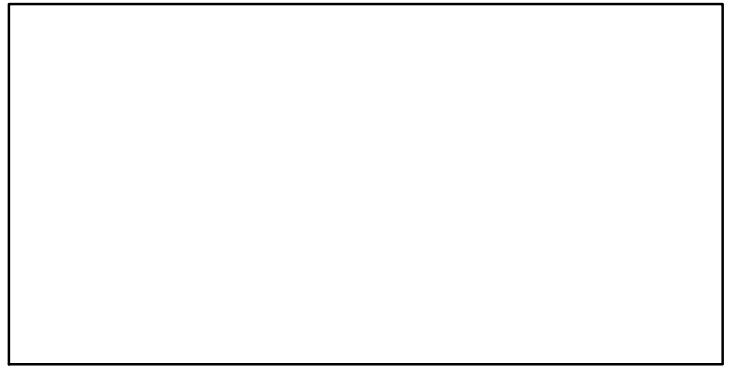


MSY-MT, MORAT\*

survB\*



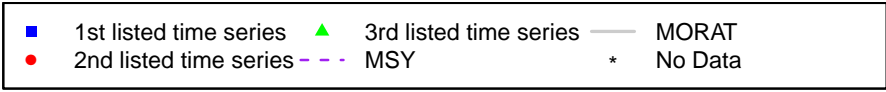
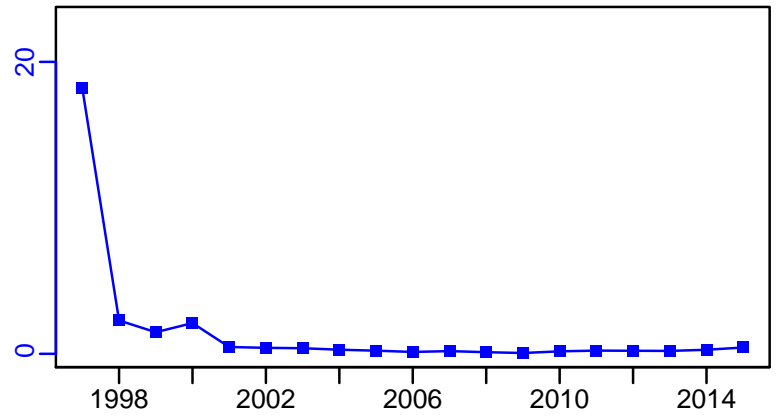
CPUE\*



EFFORT\*



CdivMSY-ratio (1960-2015-Brandao)



## Abalone South Africa [SAABALONESA]

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

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2015	11,575
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2015	31,391
<b>SSB0</b>	SSB0-MT	2015	28,937
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2015	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	2015	6210	-	1+
<b>SSB</b>	SSB-MT	2015	5080	-	7+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	9,070,000	-	8
<b>F</b>	F-1/yr	2015	0.035	-	-
<b>ER</b>	ER-ratio	2015	0.16	-	-
<b>TC</b>	TC-MT	2015	985		
<b>TL</b>	TL-MT	2015	50		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2015	0.439		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Abalone South Africa [SAABALONESA]

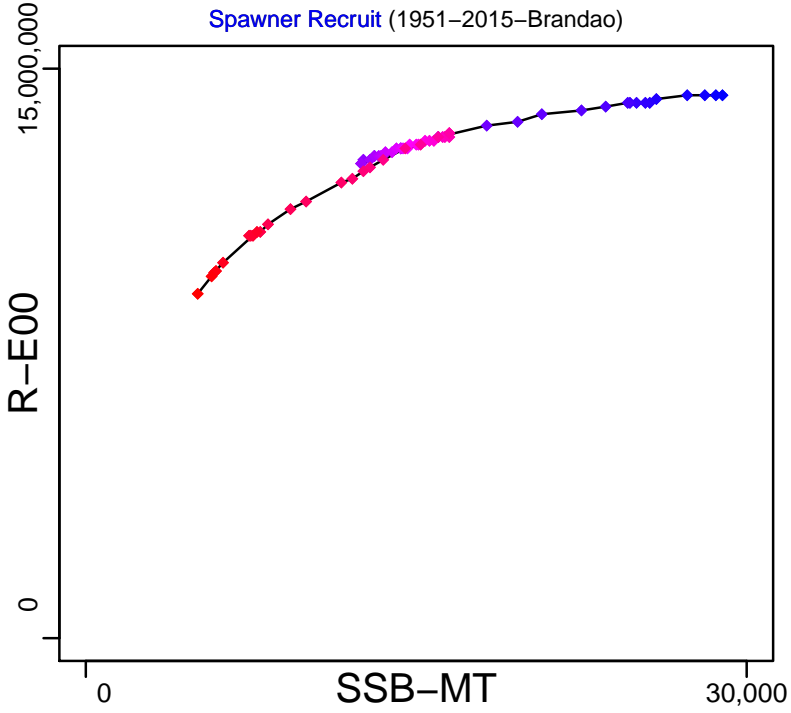
Kobe MSY\*



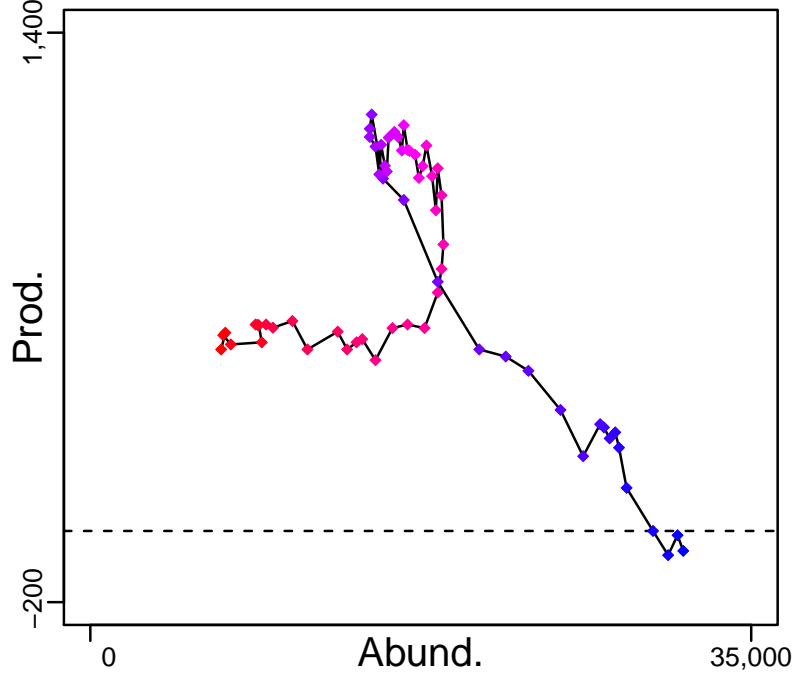
Kobe MGT\*



Spawner Recruit (1951-2015-Brandao)



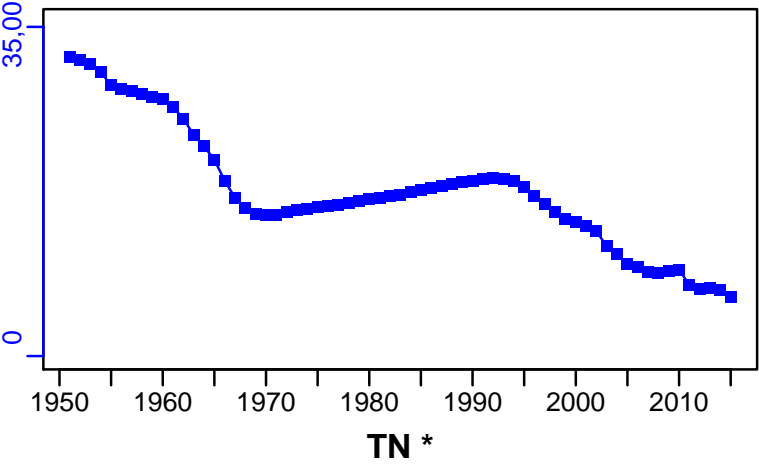
Production (1951-2015-Brandao)



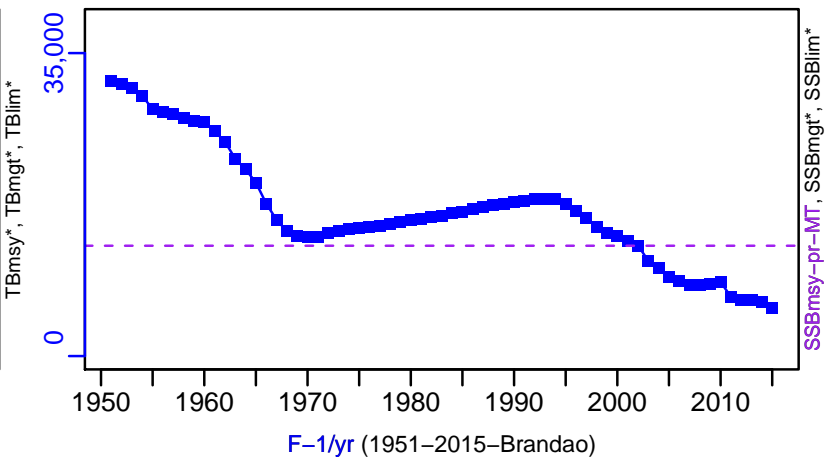
◆ Start Year ◆ End Year \* No Data

### Abalone South Africa [SAABALONESA]

TB-MT (1951-2015-Brandao)



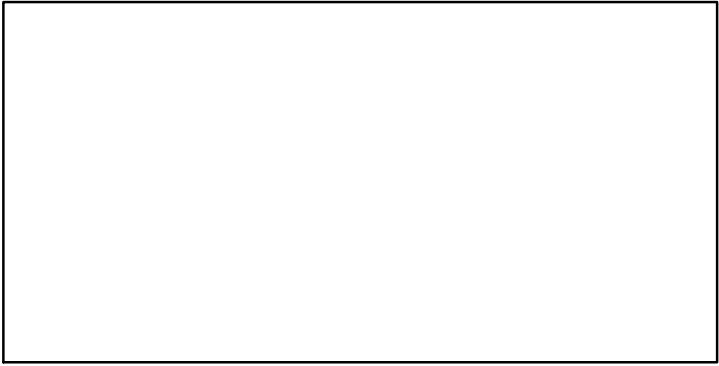
SSB-MT (1951-2015-Brandao)



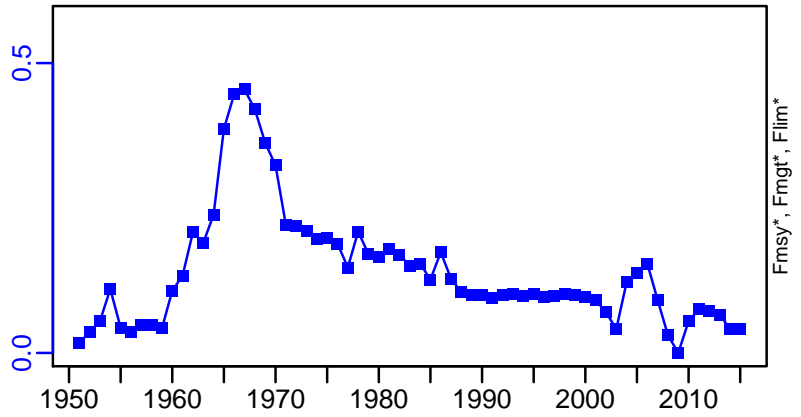
TN \*

TBmsy\*, TBmgt\*, TBlim\*

SSBmsy-pr-MT, SSBmgt\*, SSBlim\*

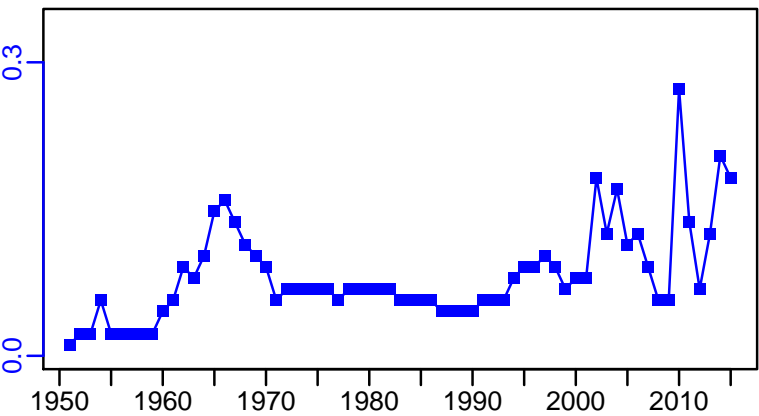


F-1/yr (1951-2015-Brandao)

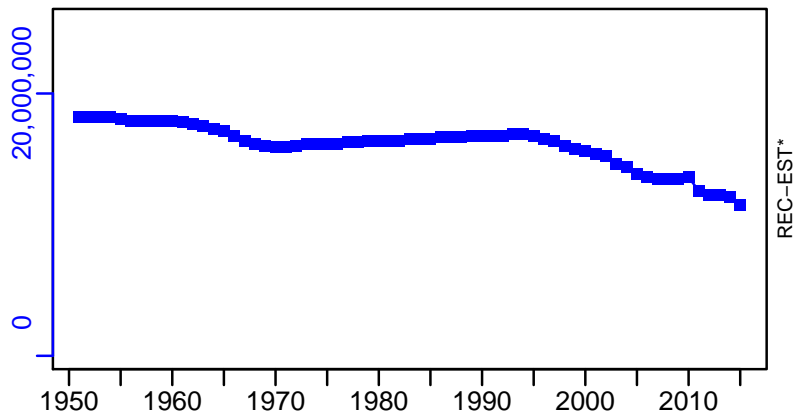


Fmsy\*, Fmgt\*, Flim\*

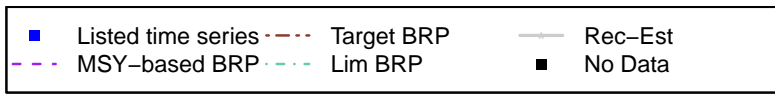
ER-ratio (1951-2015-Brandao)



R-E00 (1951-2015-Brandao)



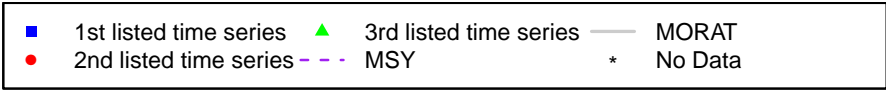
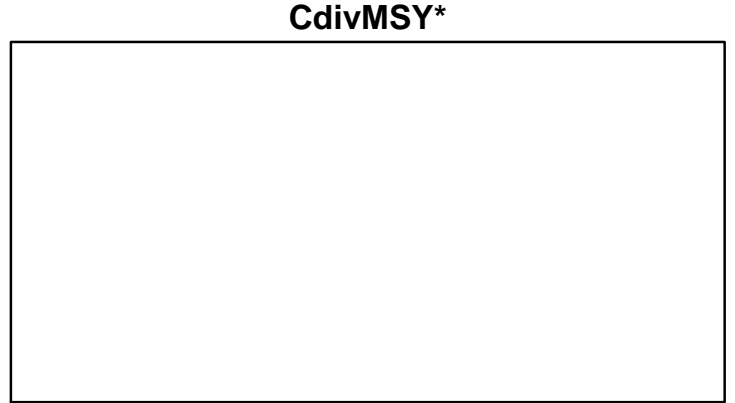
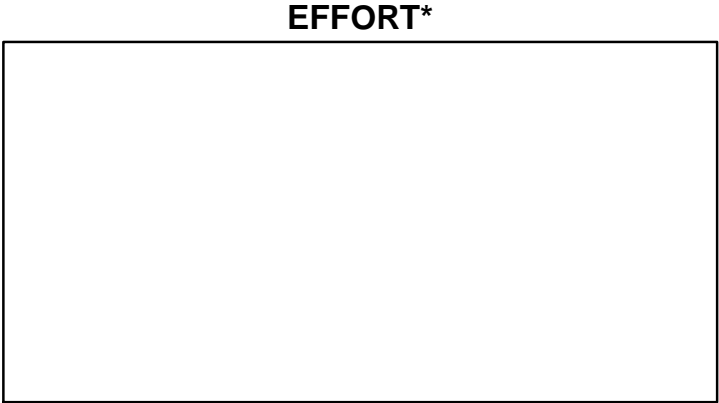
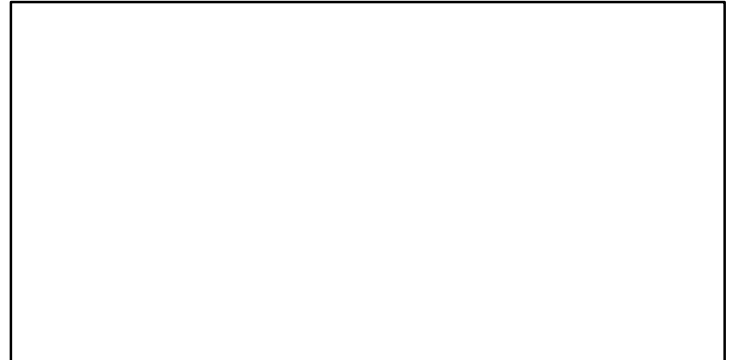
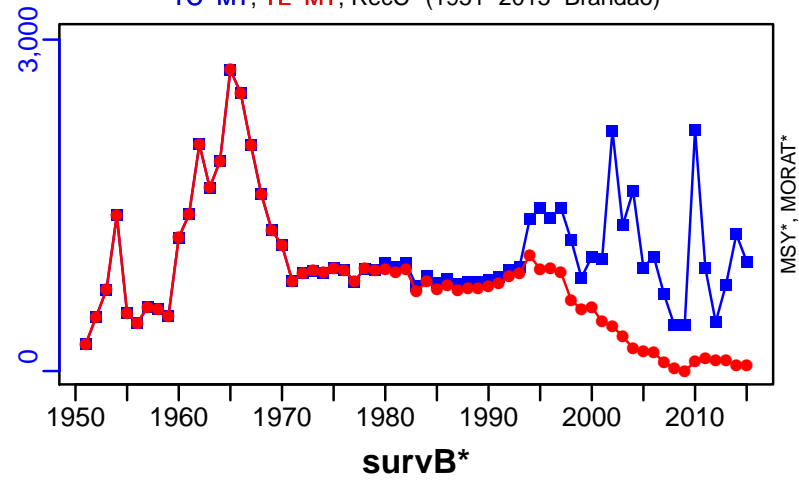
REC-EST\*



Abalone South Africa [SAABALONESA]

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

TAC\*, Cpair\*, Cadv\*



## Sardine South Africa [SARDSA]

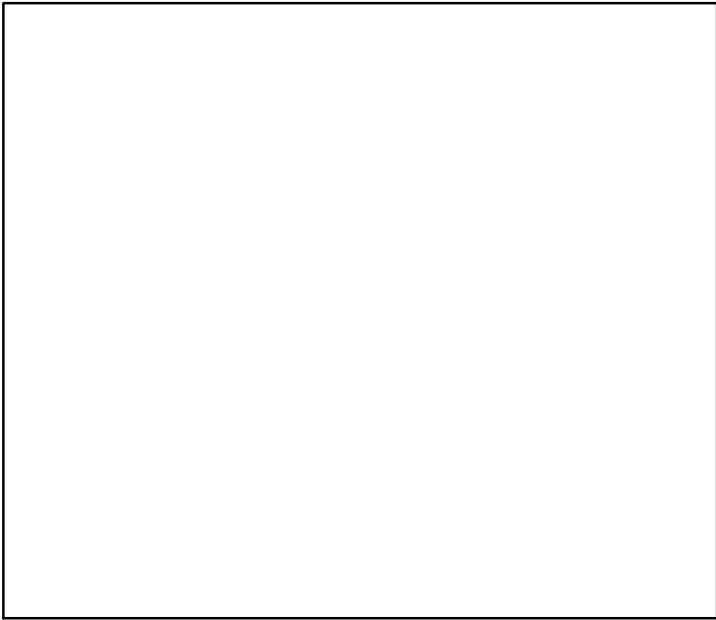
Metadata	
<b>Scientific Name</b>	Sardinops sagax
<b>Current Assess ID</b>	MARAM-SARDSA-1949-2015-deMoor
<b>Area</b>	South Africa
<b>Management Authority</b>	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
<b>Assessor</b>	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
<b>Asmts in RAM</b>	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	$4.47 \times 10^{10}$	Both	0+
R	R-E00	2015	$3.13 \times 10^{10}$	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]

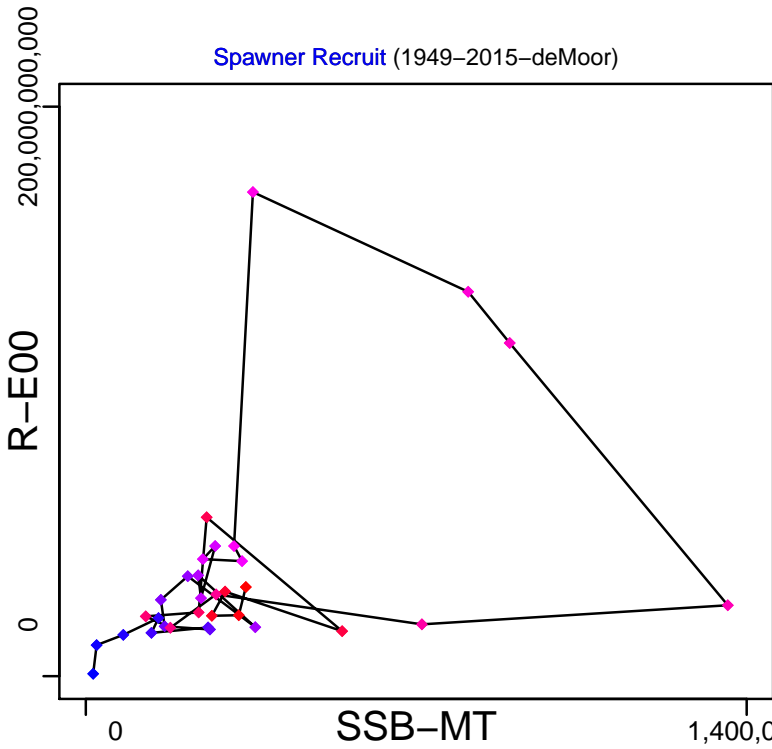
Kobe MSY\*



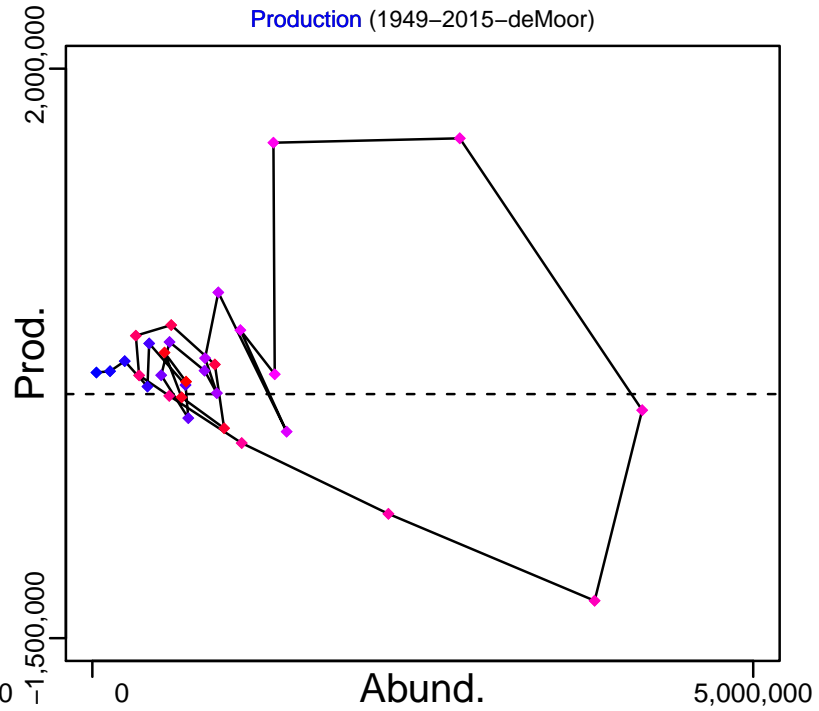
Kobe MGT\*



Spawner Recruit (1949–2015–deMoor)



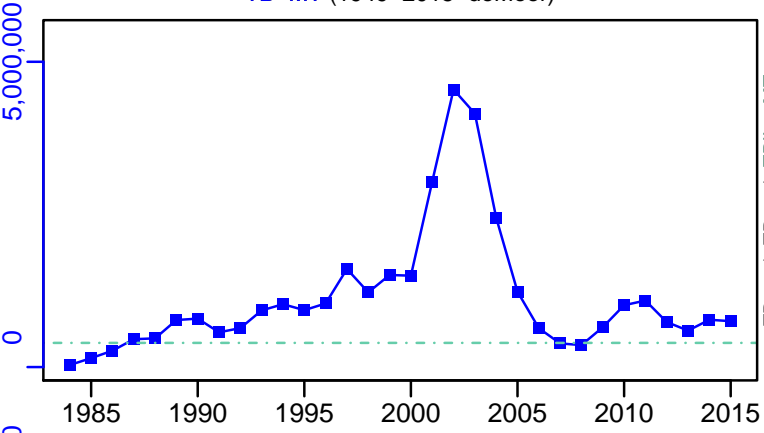
Production (1949–2015–deMoor)



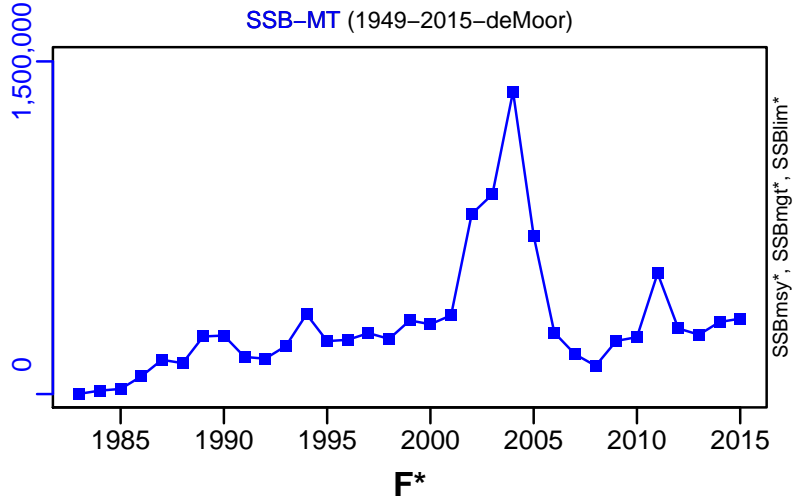
◆ Start Year ◆ End Year \* No Data

Sardine South Africa [SARDSA]

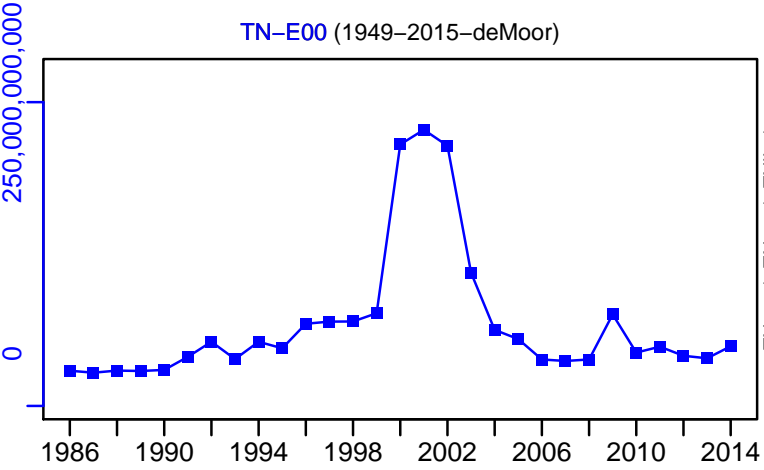
TB-MT (1949-2015-deMoor)



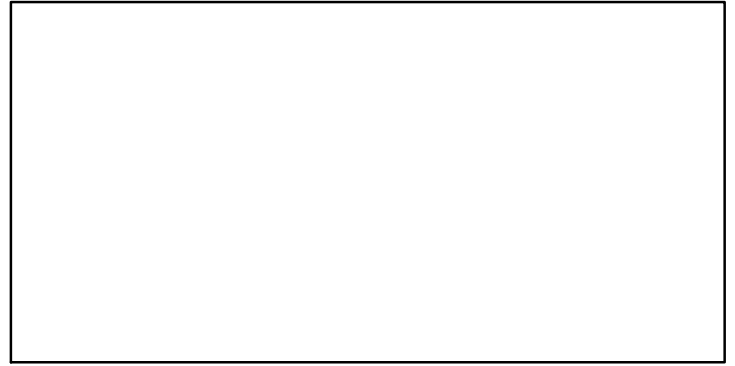
SSB-MT (1949-2015-deMoor)



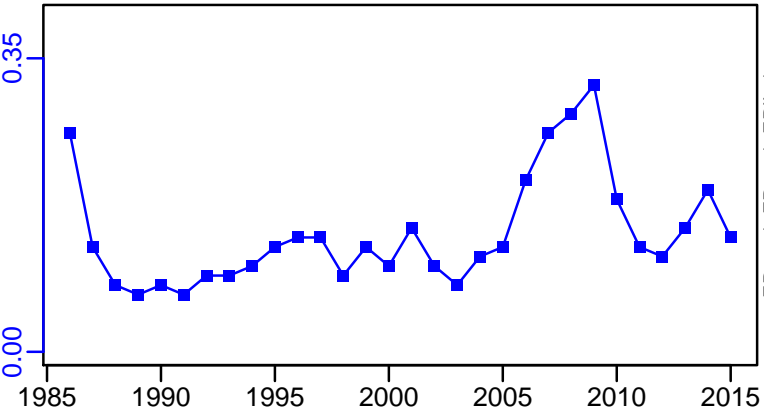
TN-E00 (1949-2015-deMoor)



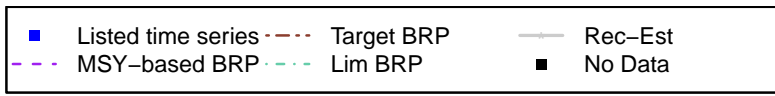
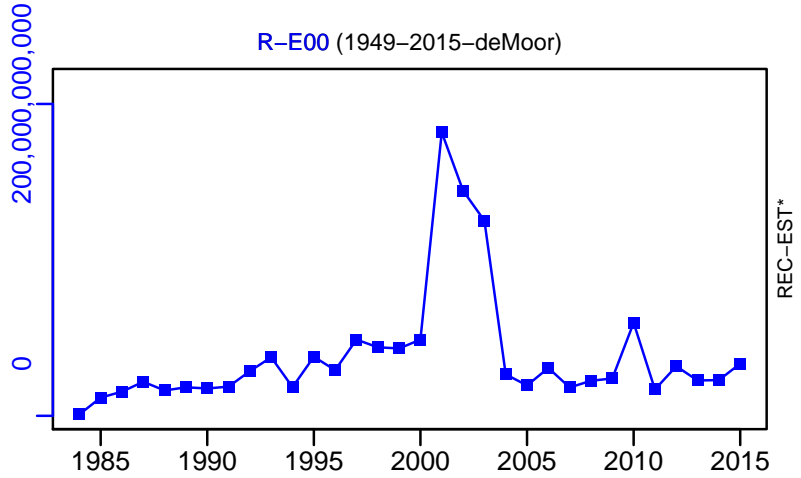
F\*



ER-ratio (1949-2015-deMoor)



R-E00 (1949-2015-deMoor)

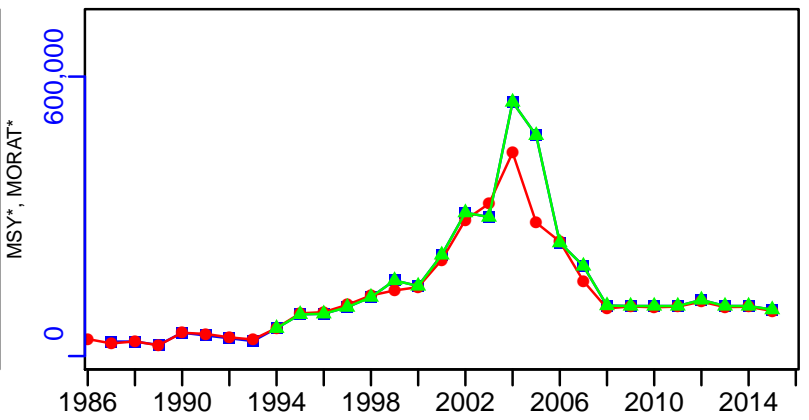
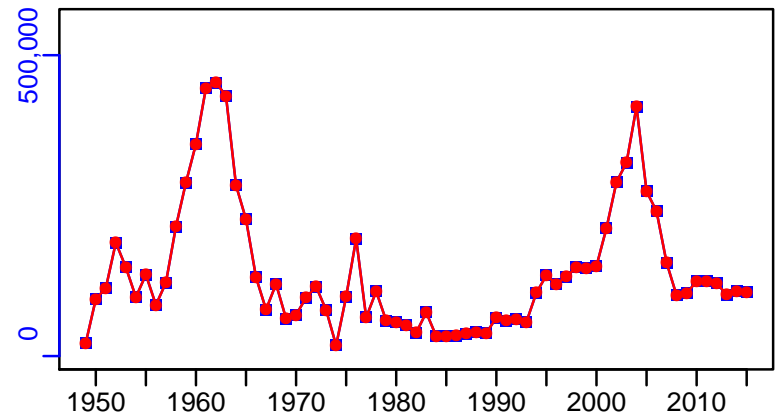




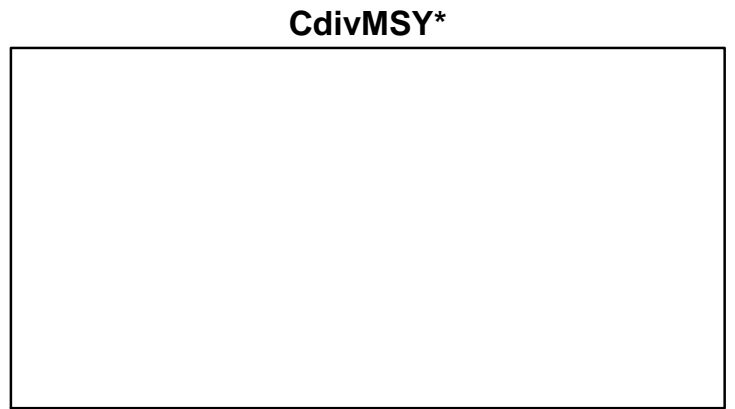
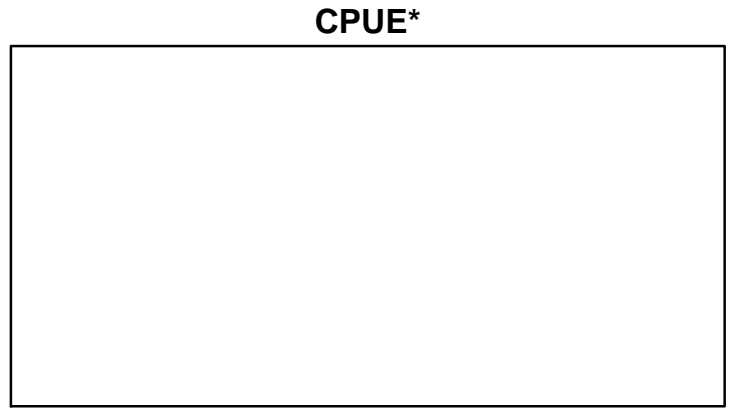
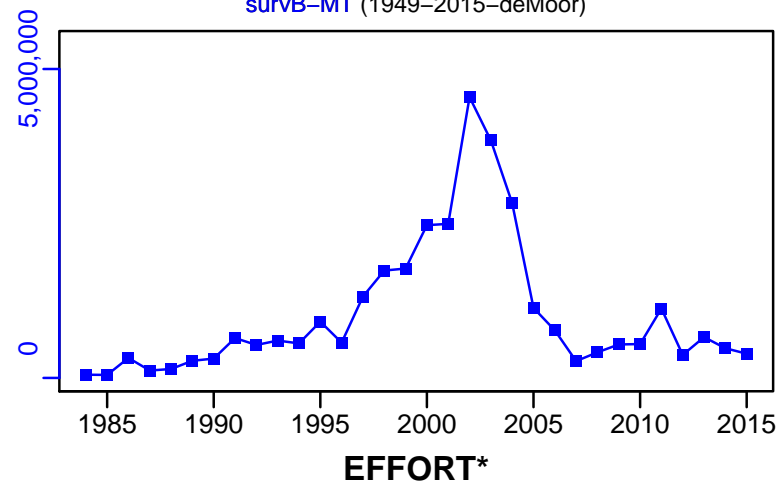
### Sardine South Africa [SARDSA]

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

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



survB-MT (1949-2015-deMoor)



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

## Southern spiny lobster South Africa South coast [SSLOBSTERSASC]

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

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

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

Southern spiny lobster South Africa South coast [SSLOBSTERSASC]

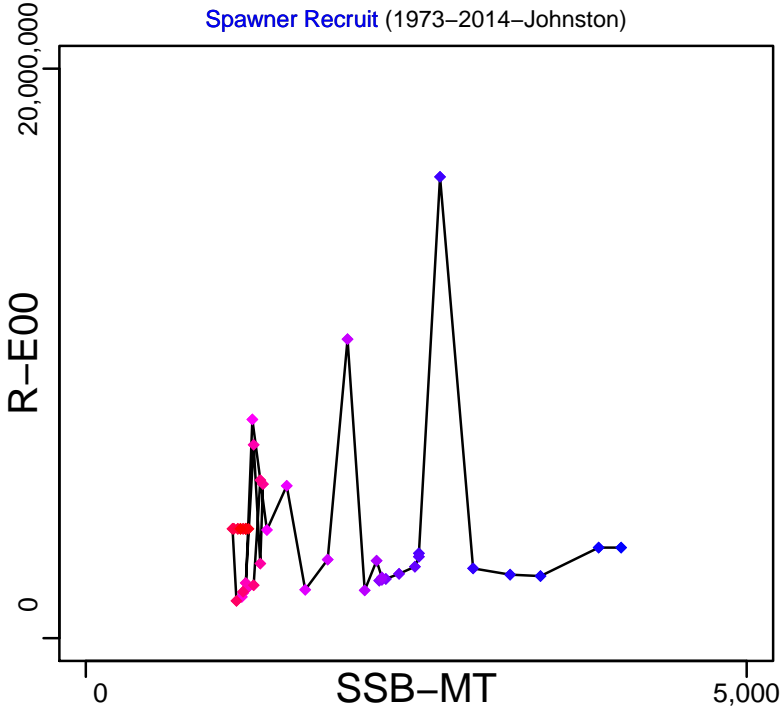
Kobe MSY\*



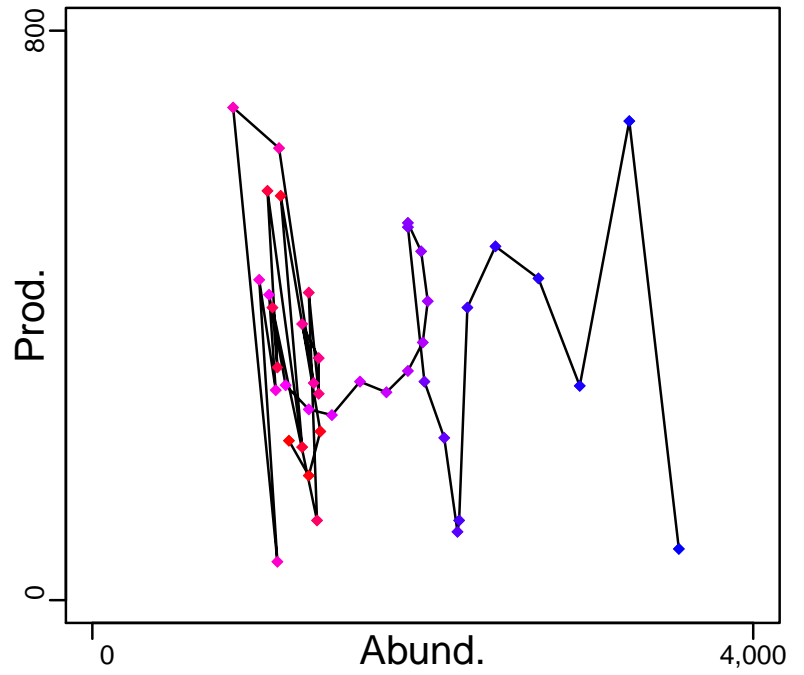
Kobe MGT\*



Spawner Recruit (1973–2014–Johnston)



Production (1973–2014–Johnston)

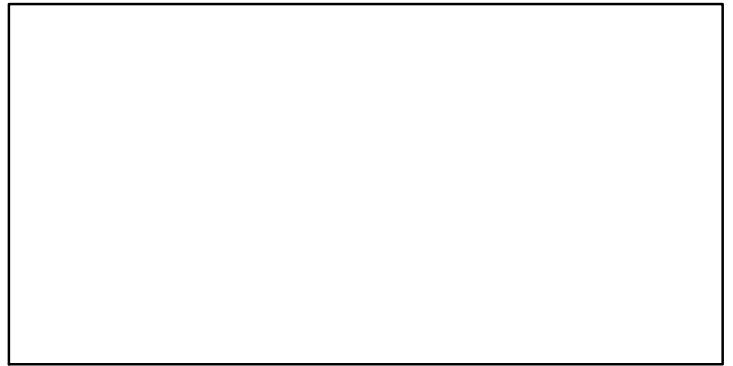
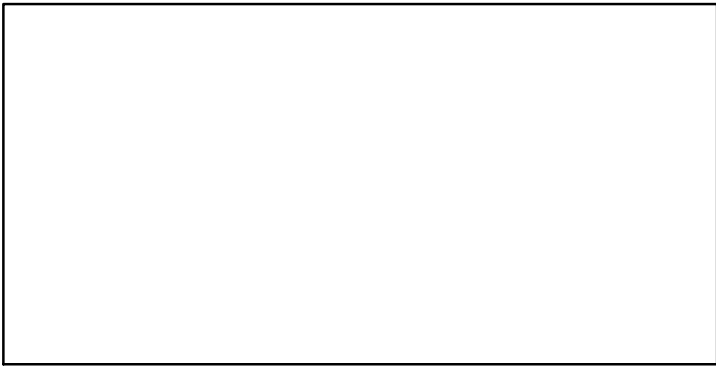
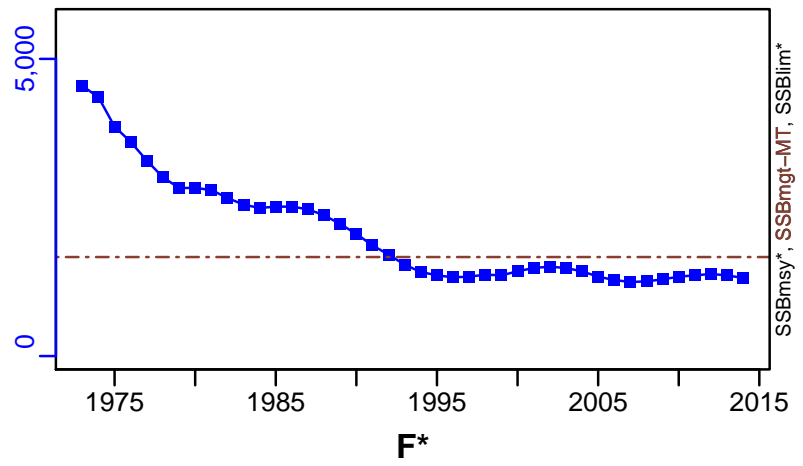
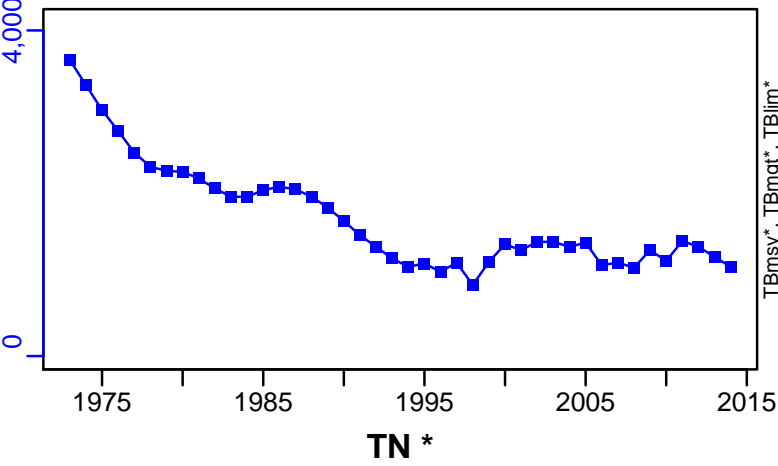


◆ Start Year ◆ End Year \* No Data

Southern spiny lobster South Africa South coast [SSLOBSTERSASC]

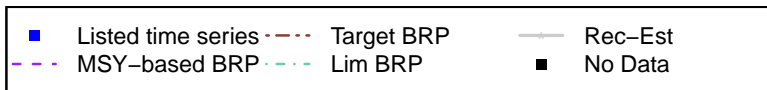
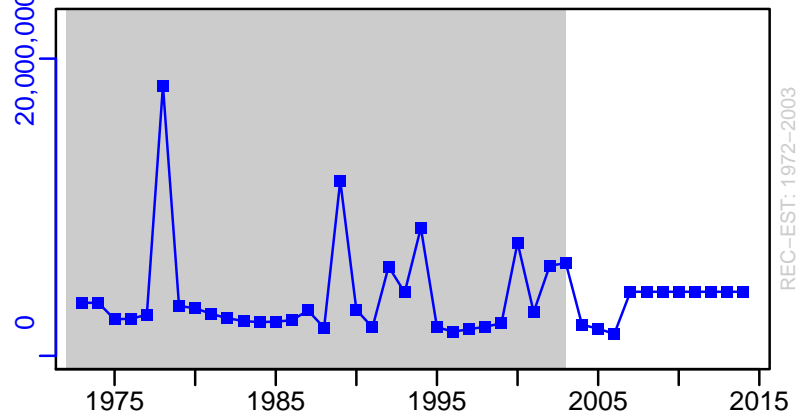
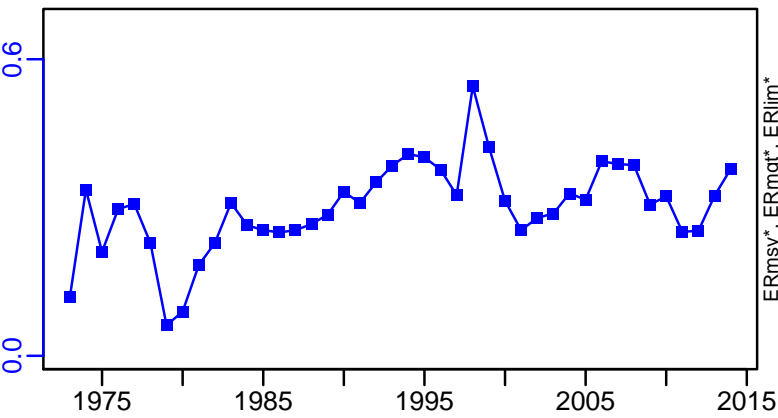
TB-MT (1973-2014-Johnston)

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\*

