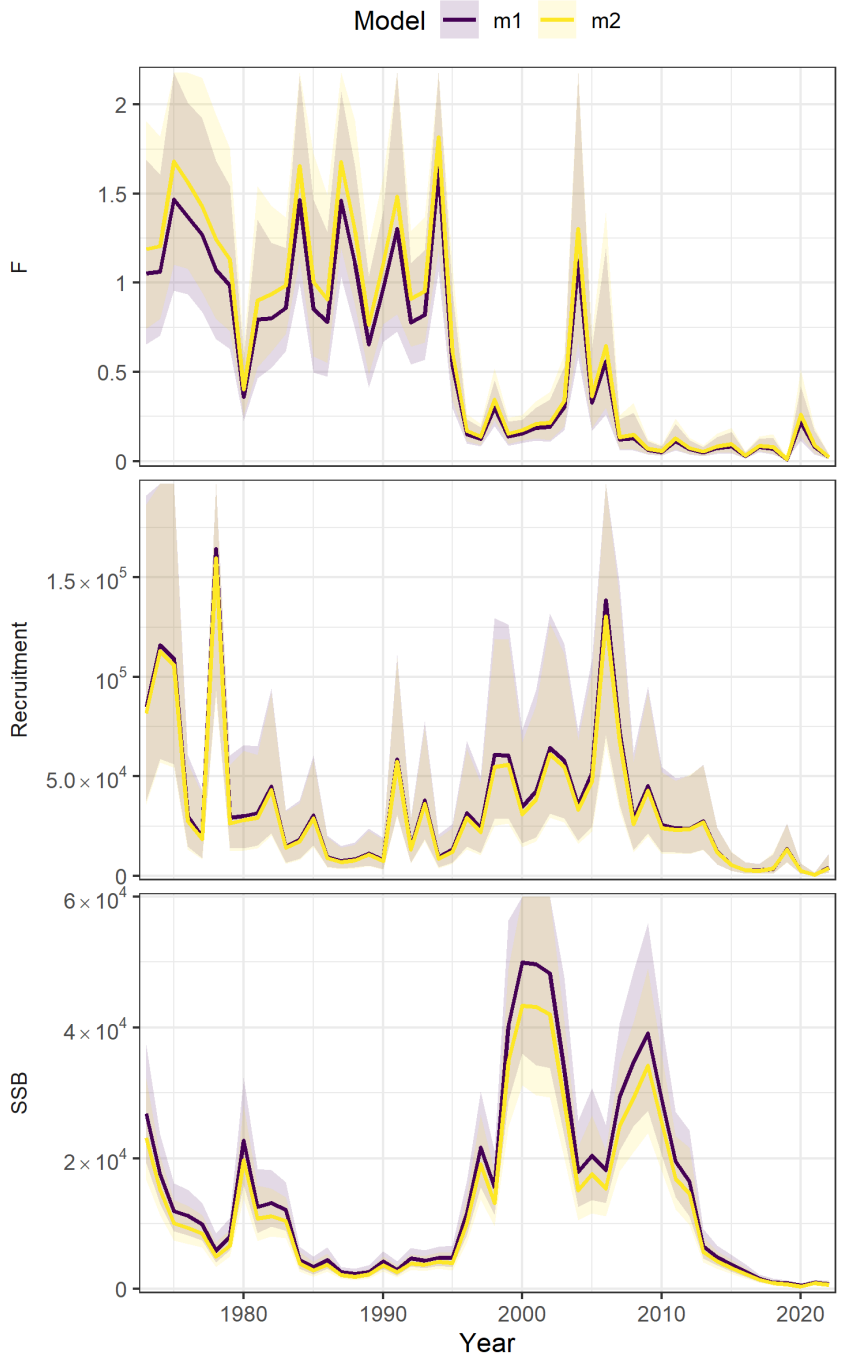
GB ToR 4-6 HW

Alex Hansell

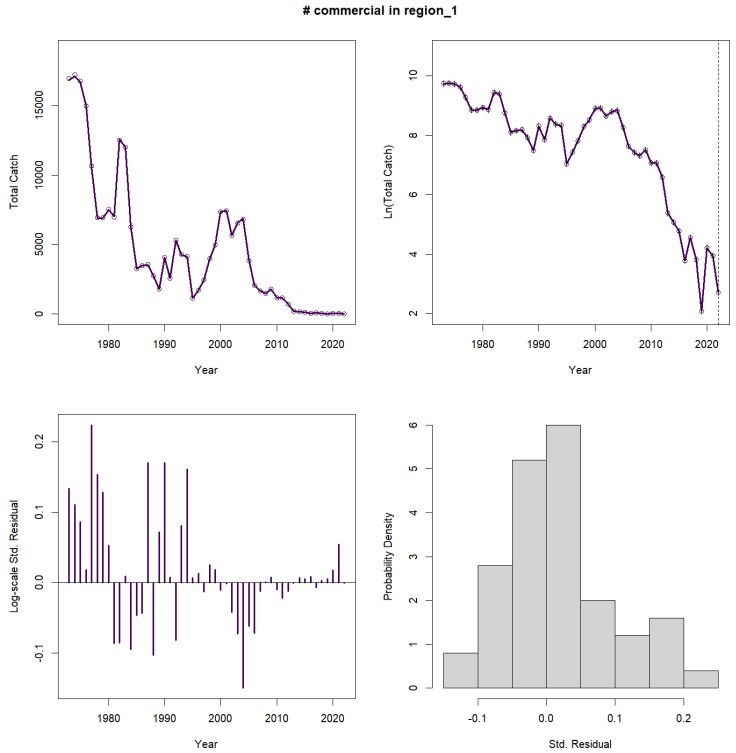
Constant vs Age based M

	dAIC	AIC	rho_R	rho_SSB	rho_Fbar
Constant	0	-2154.1	0.7917	0.0608	-0.0285
Age-based	29.8	-2124.3	0.7623	0.0785	-0.0516

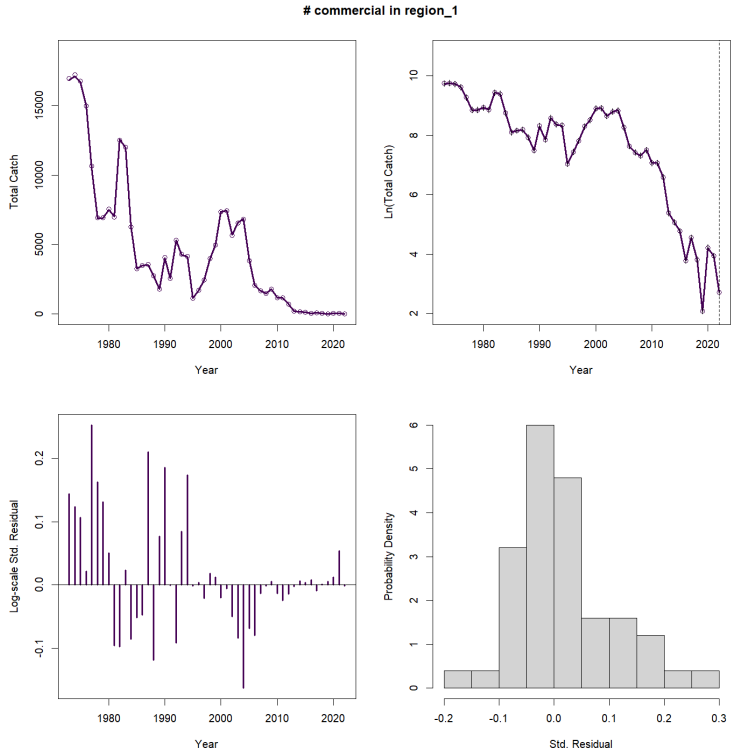


Fit to catch

Constant M

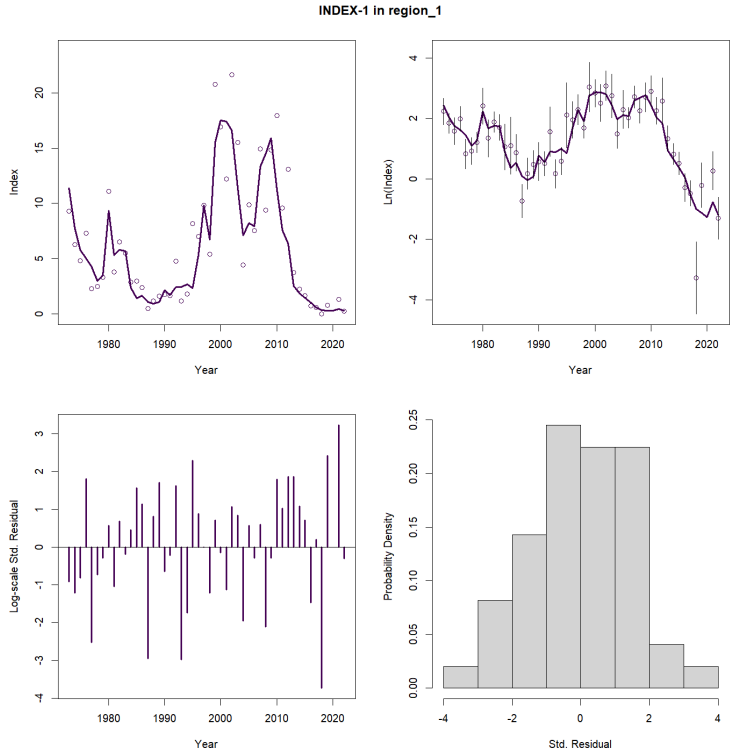


Age based M

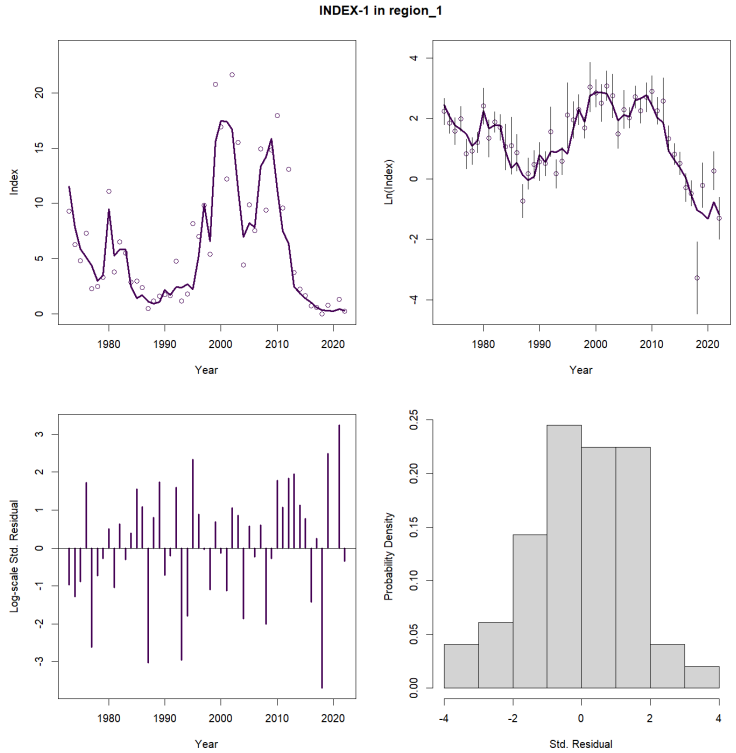


Fit to NEFSC spring

Constant M

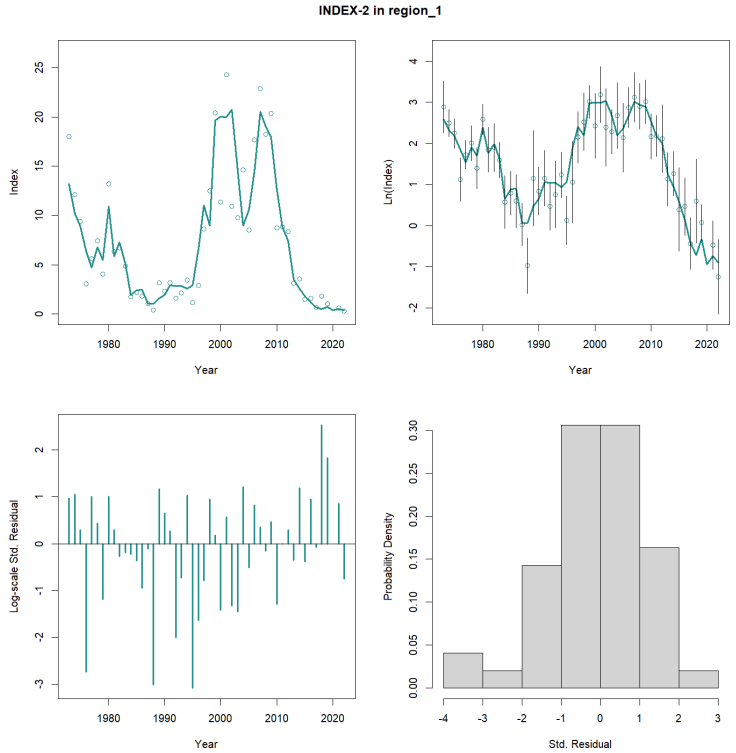


Age based M

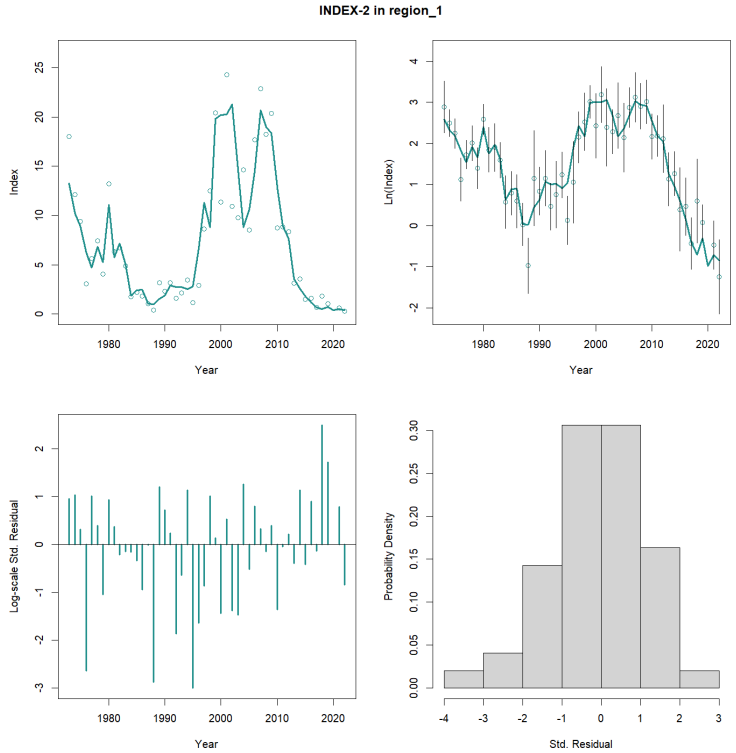


Fit to NEFSC fall

Constant M

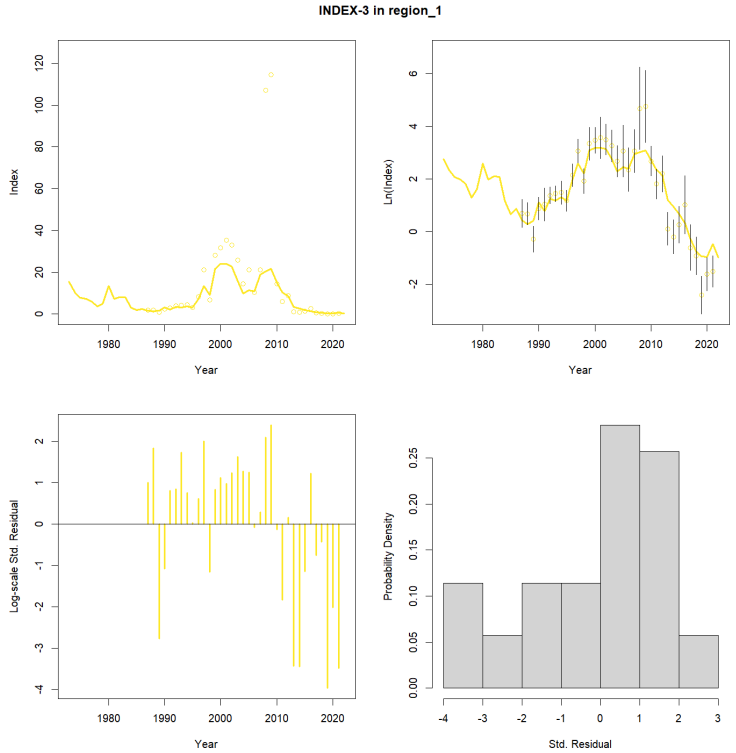


Age based M

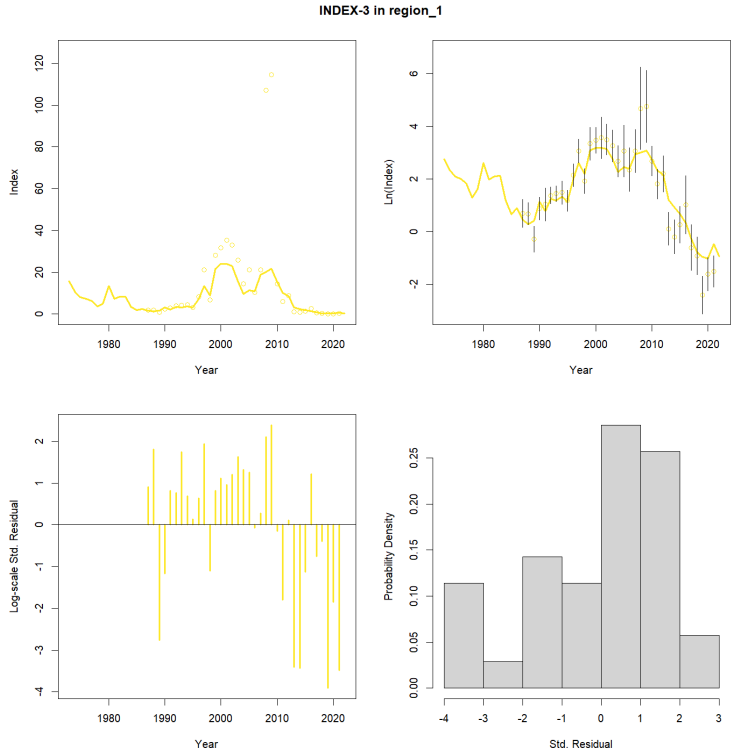


Fit to DFO

Constant M

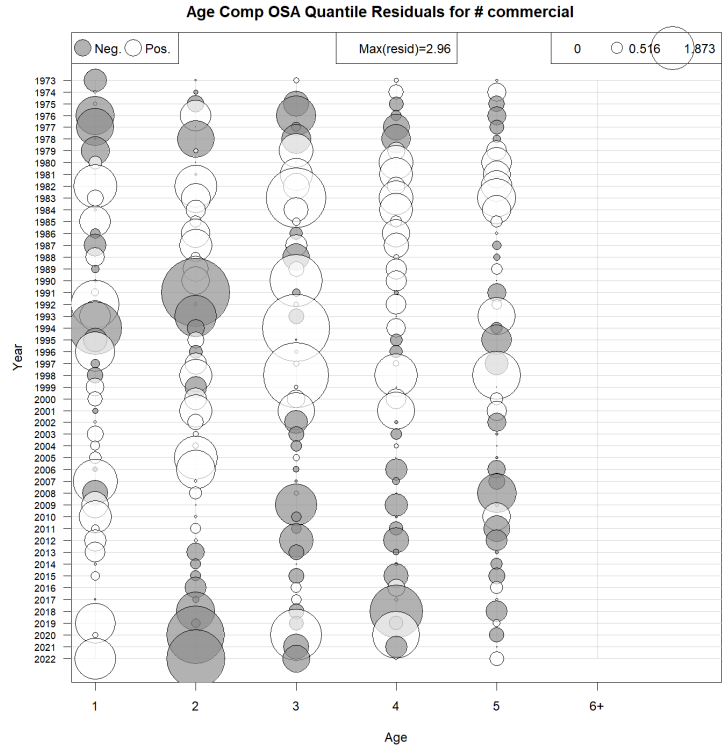


Age based M

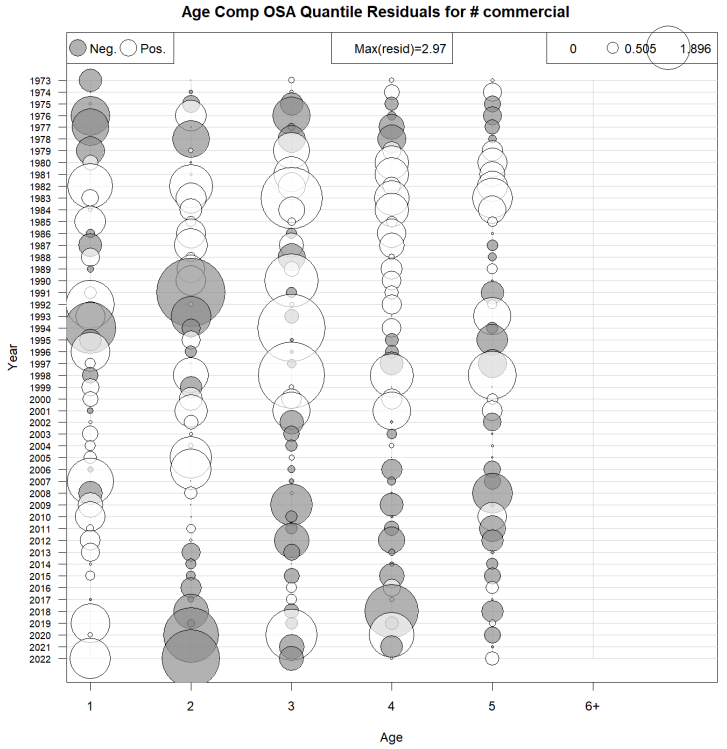


Commercial OSA

Constant M

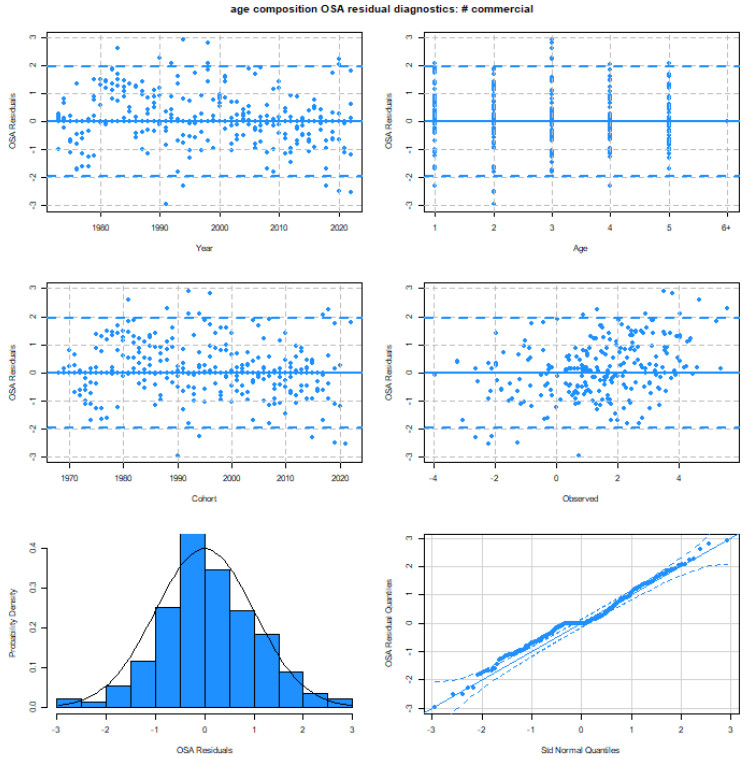


Age based M

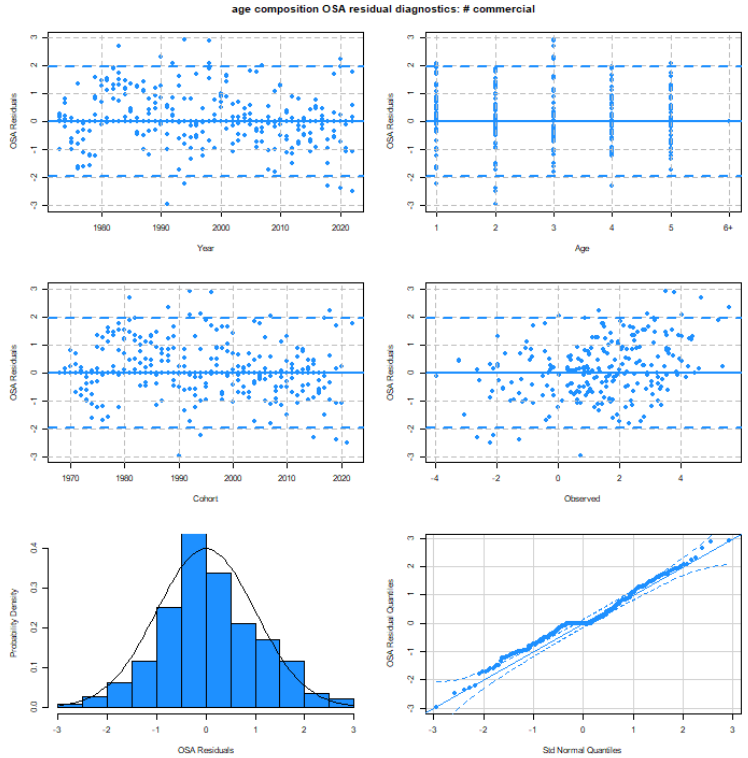


Commercial OSA

Constant M

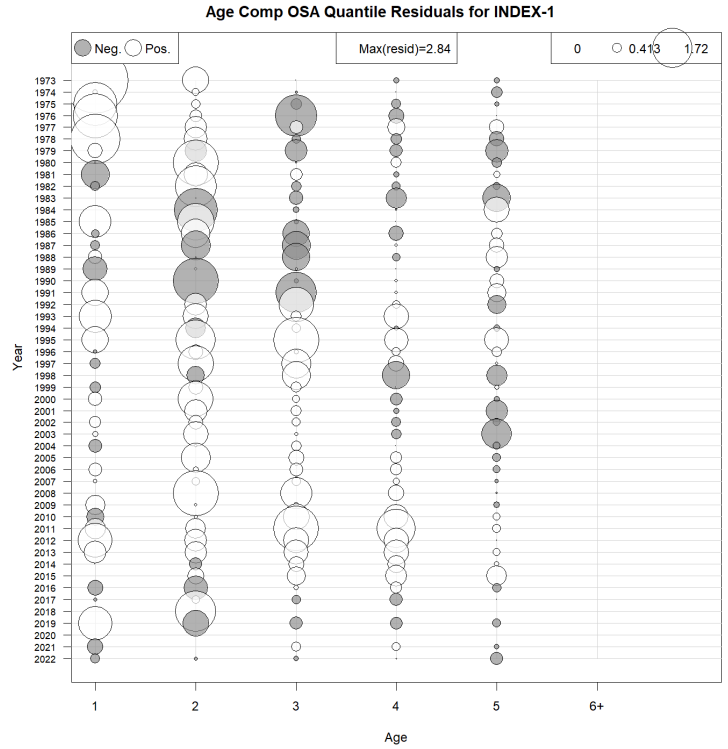


Age based M

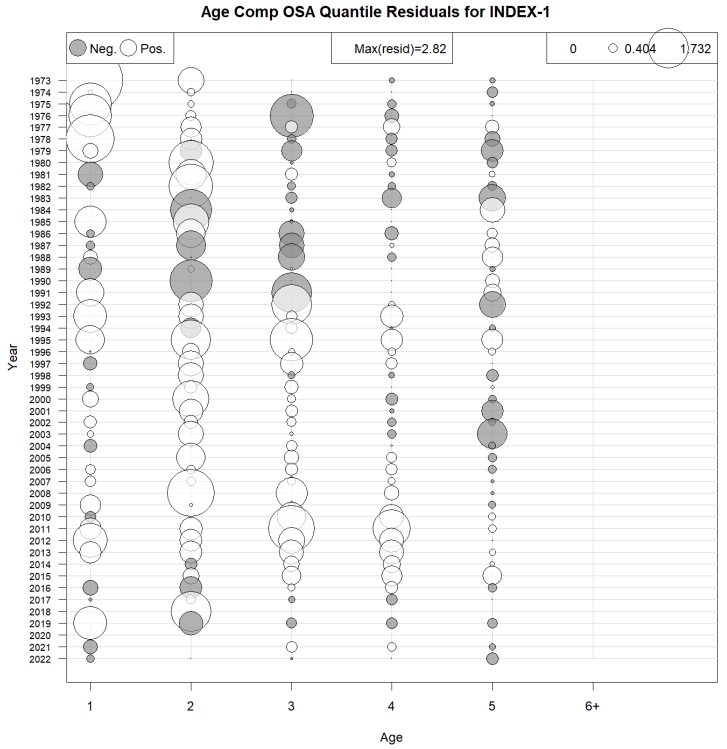


Spring NEFSC OSA

Constant M

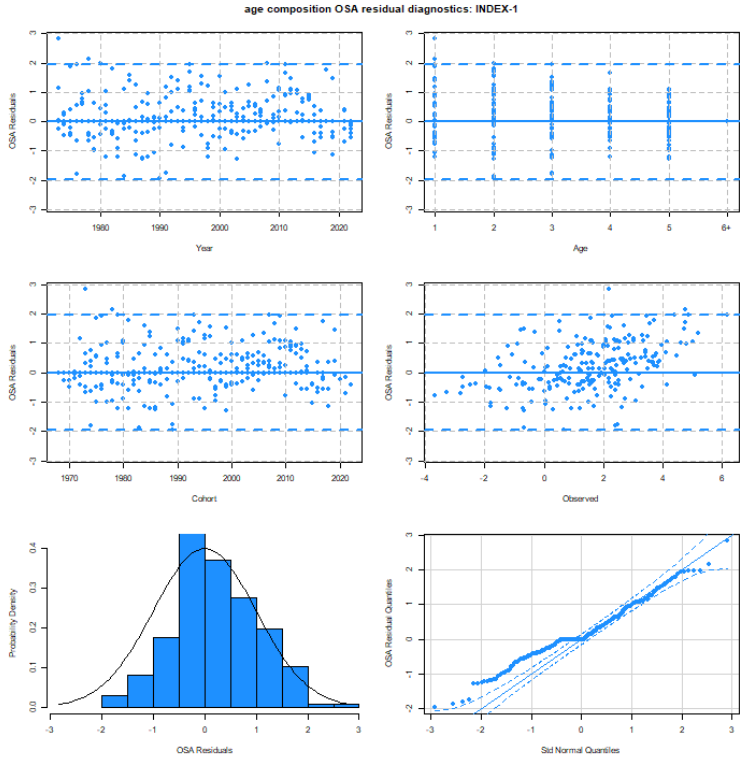


Age based M

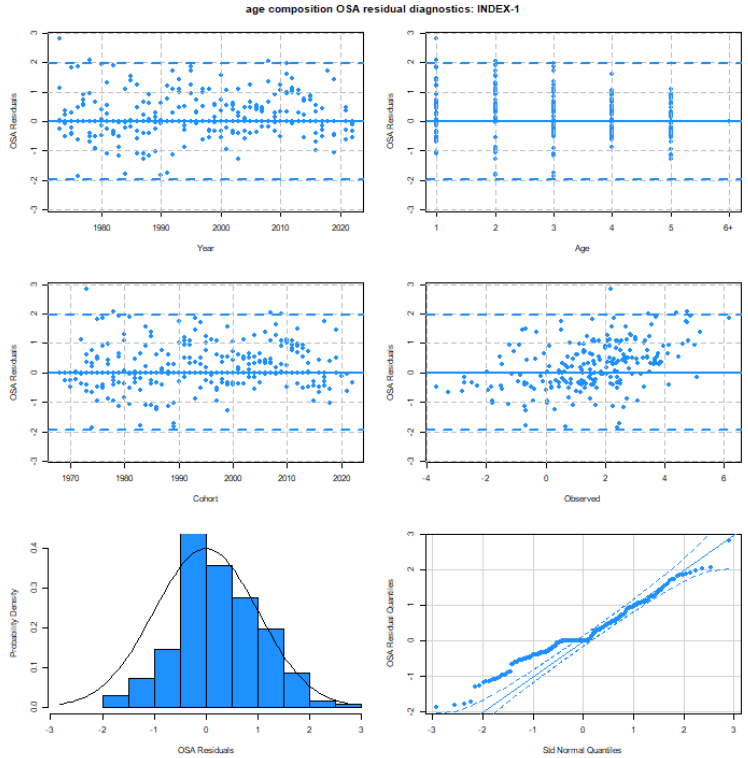


Spring NEFSC OSA

Constant M

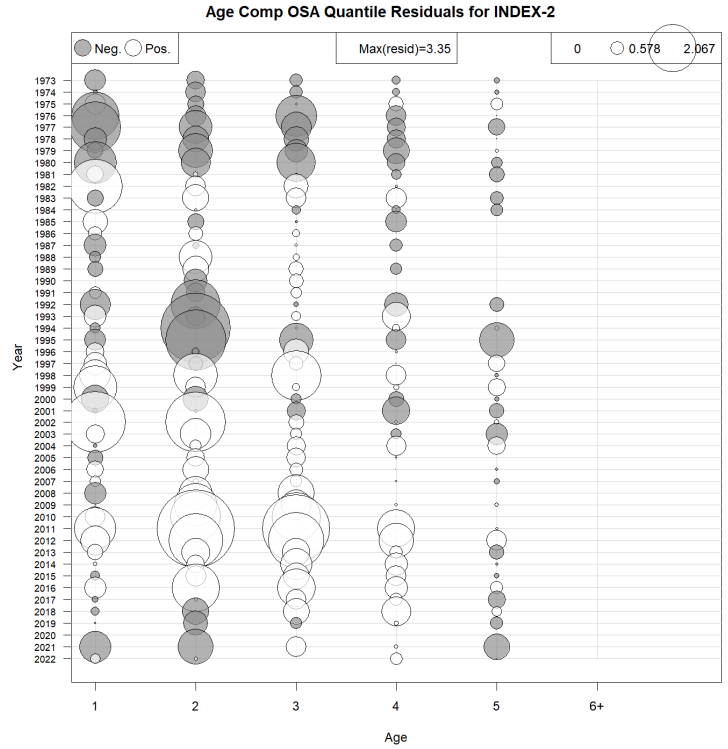


Age based M

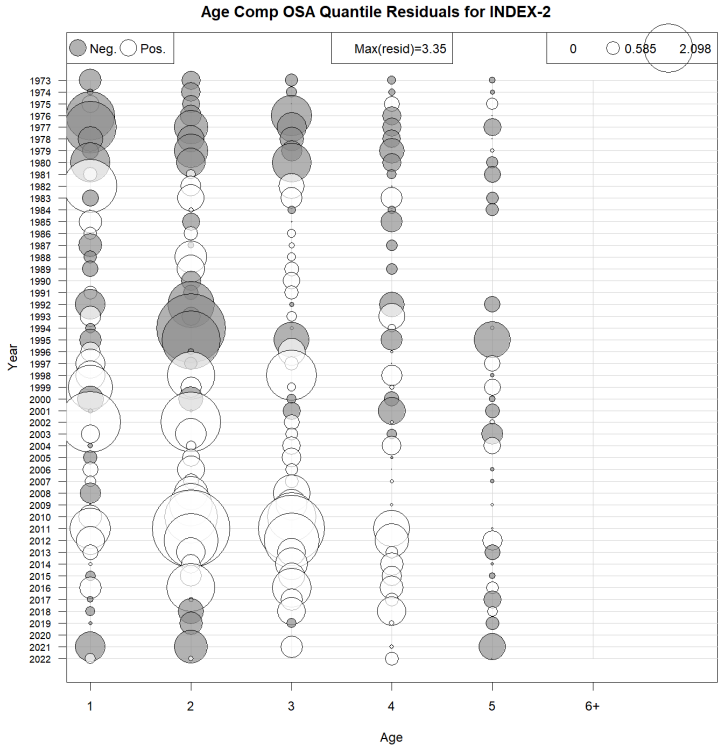


Fall NEFSC OSA

Constant M

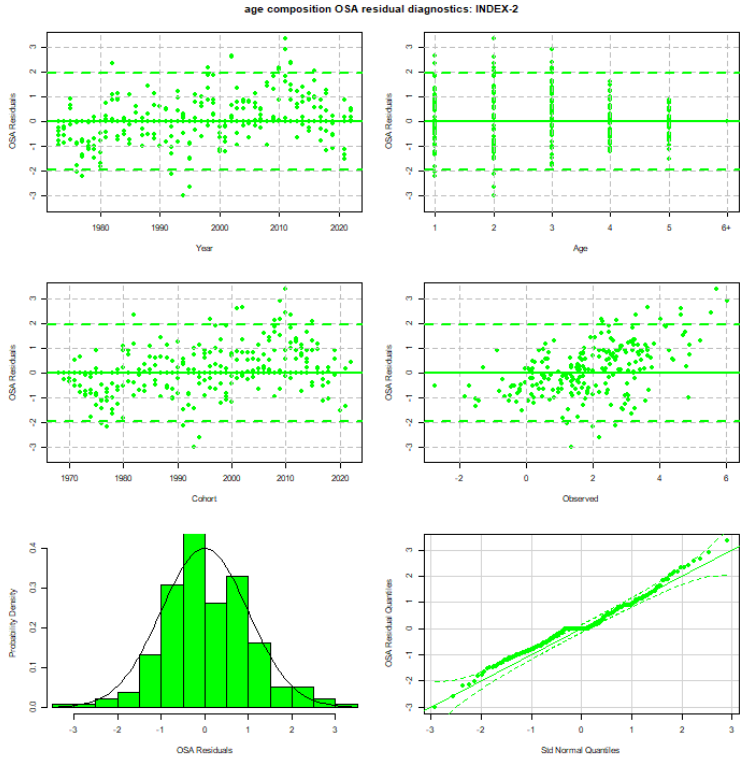


Age based M

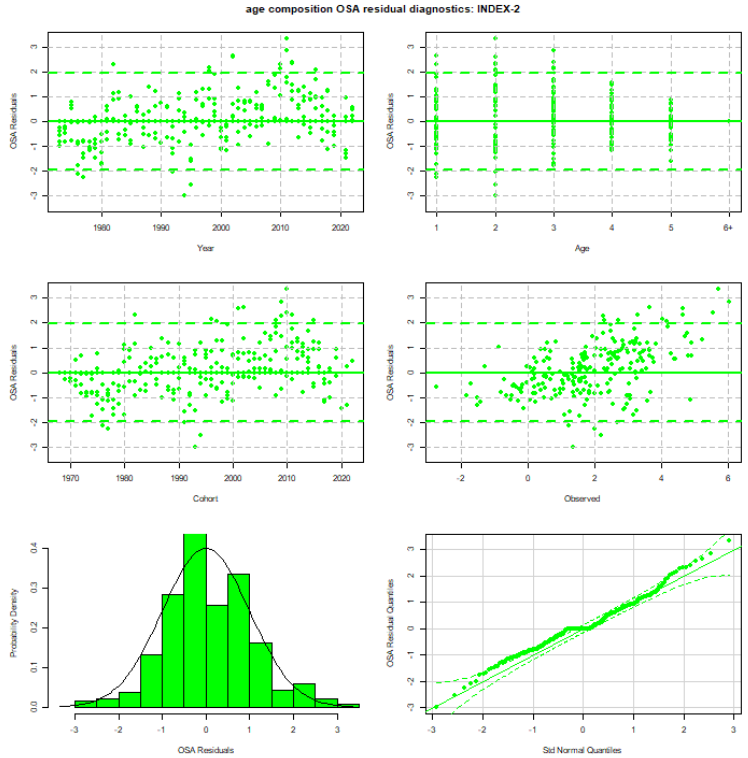


Fall NEFSC OSA

Constant M

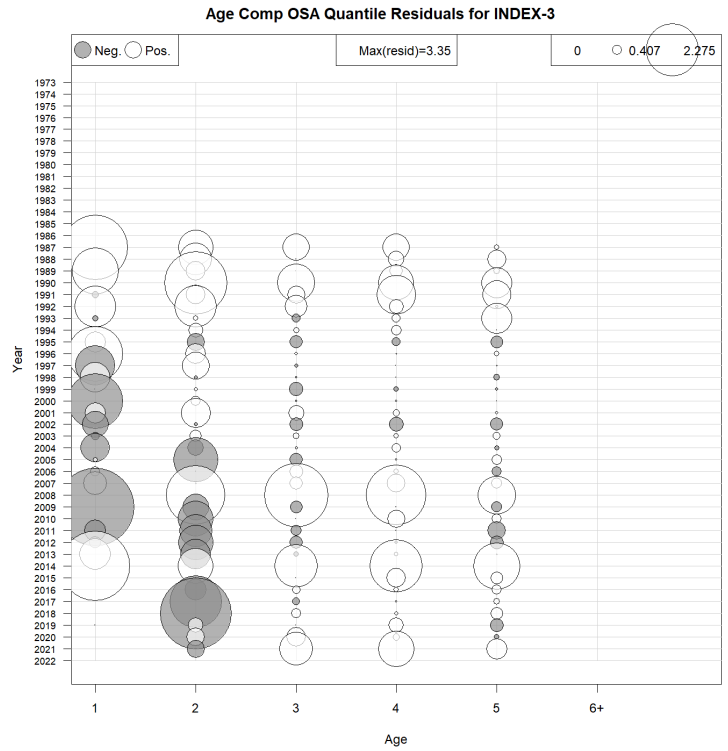


Age based M

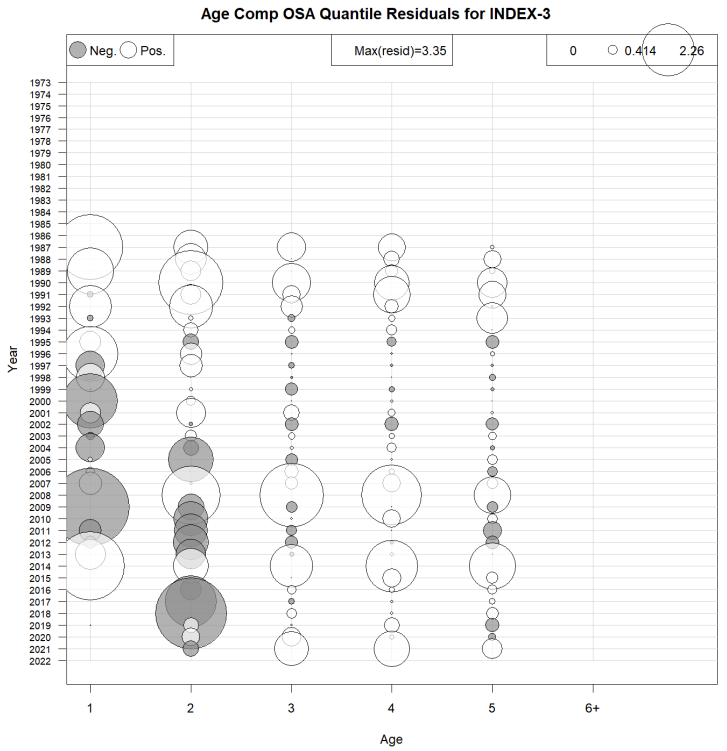


DFO

Constant M

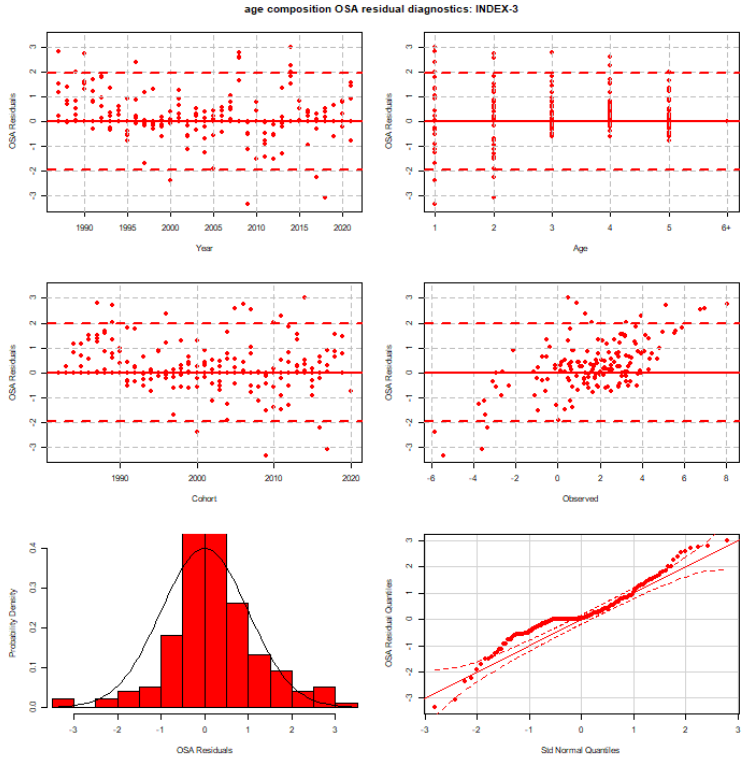


Age based M

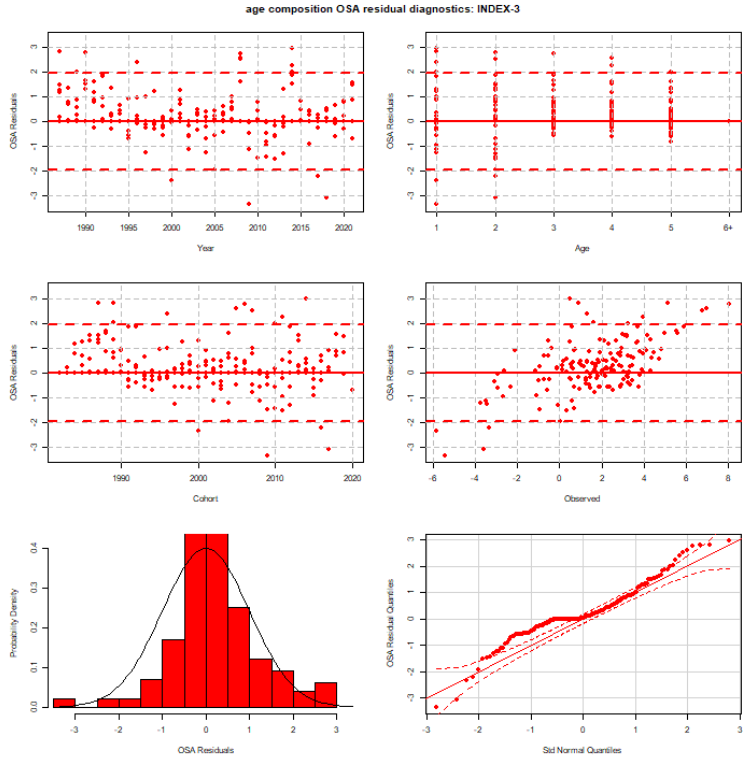


DFO OSA

Constant M

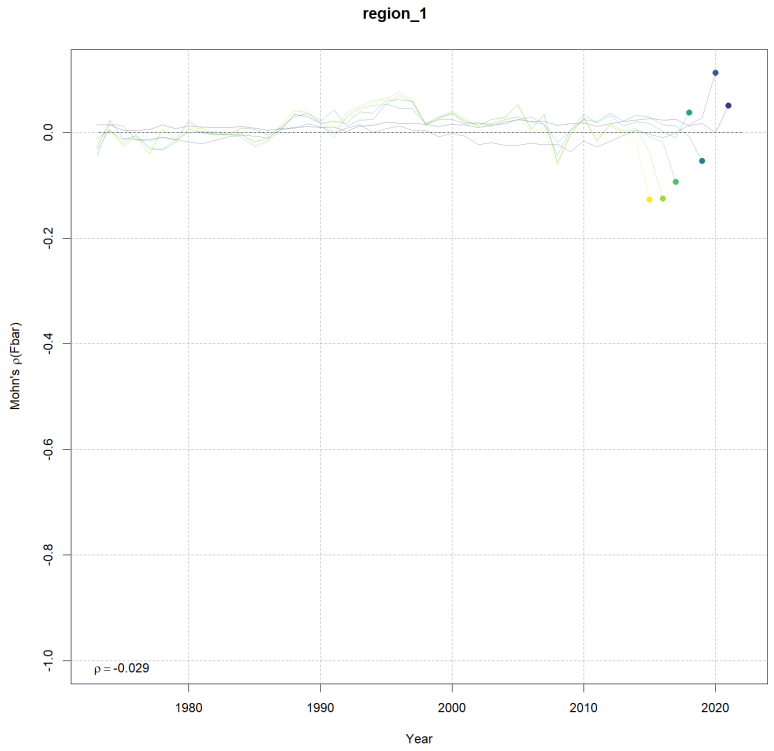


Age based M

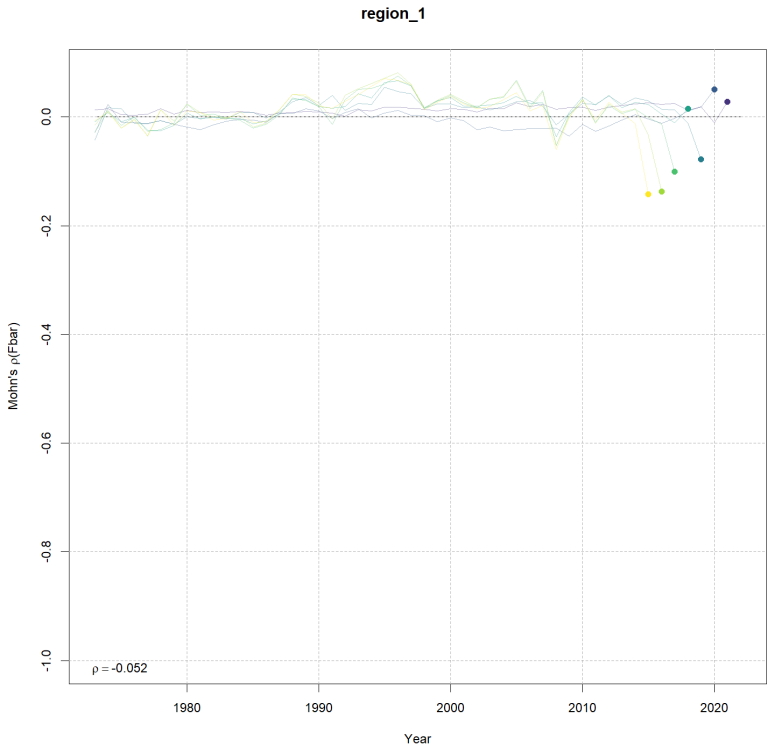


Mohns Rho Fbar

Constant M -0.029

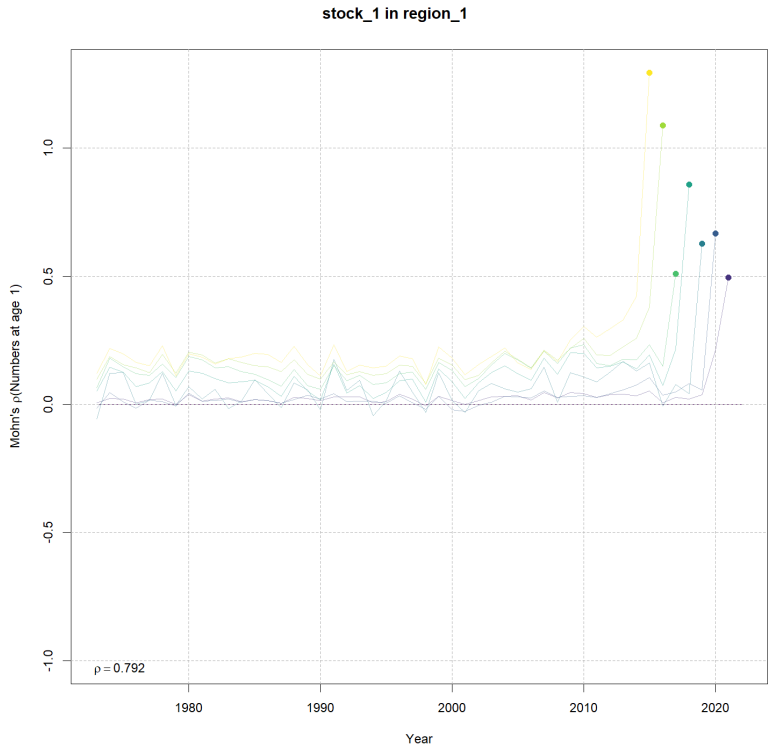


Age based M -0.052

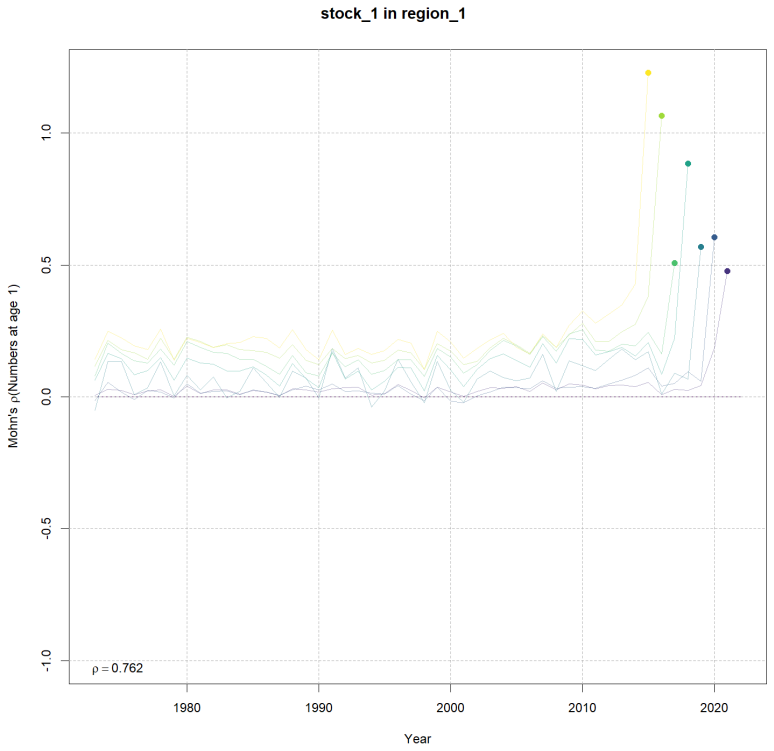


Mohns Rho R

Constant M 0.792

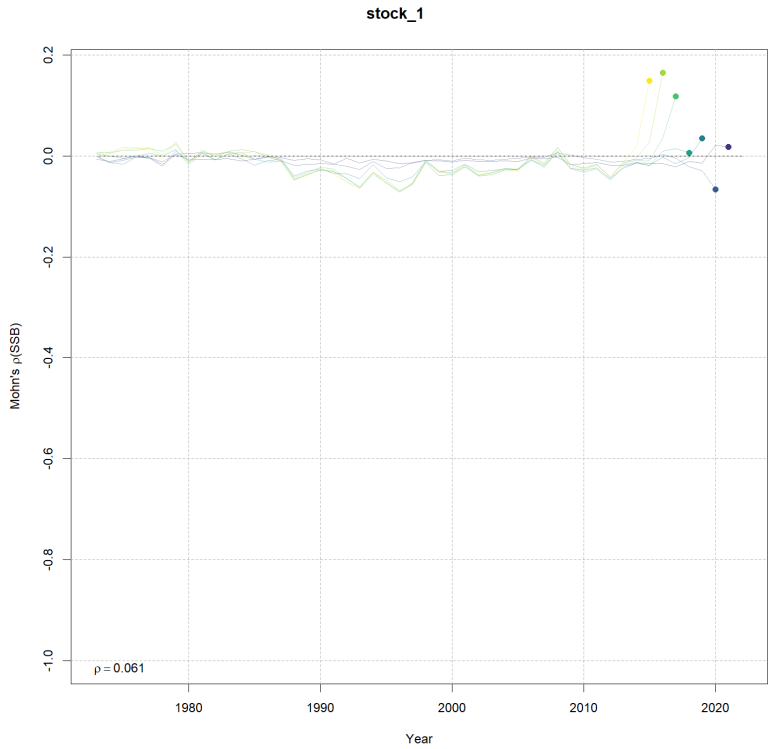


Age based M 0.762

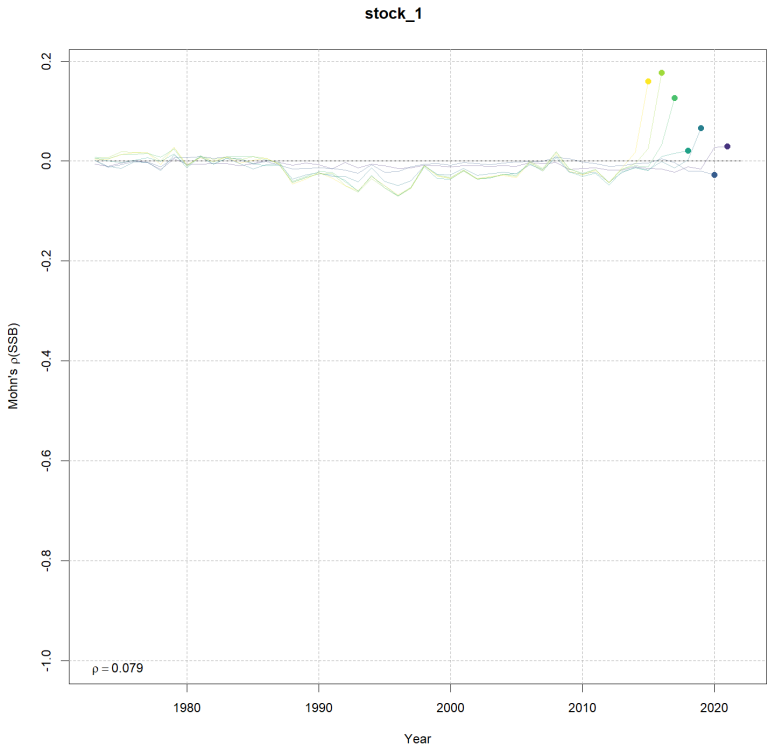


Mohns Rho SSB

Constant M 0.061



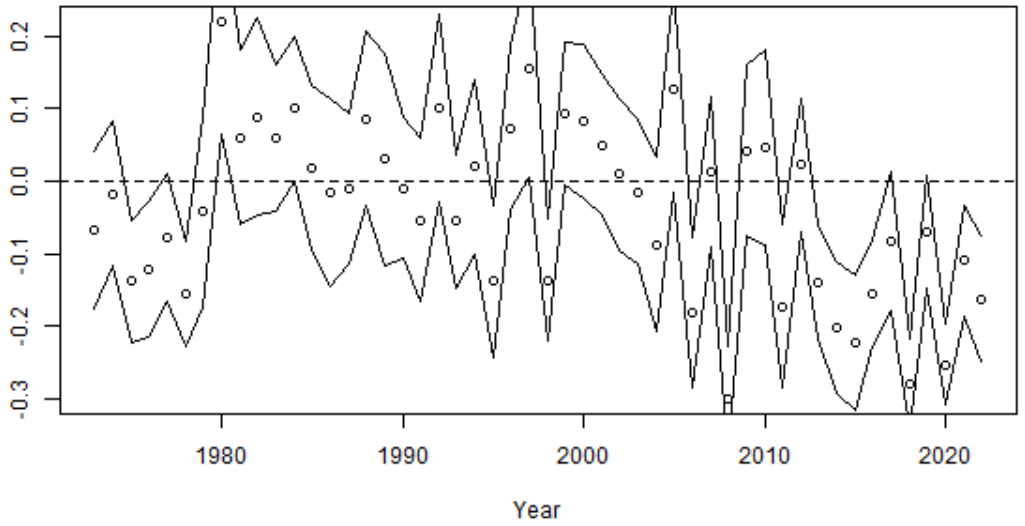
Age based M 0.079



Self test F

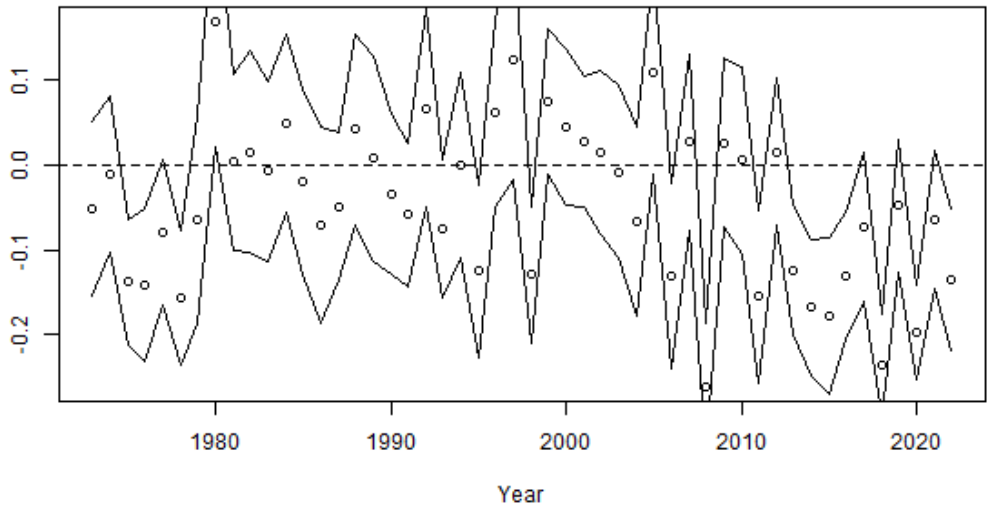
Constant M

F = -0.05



Age based M

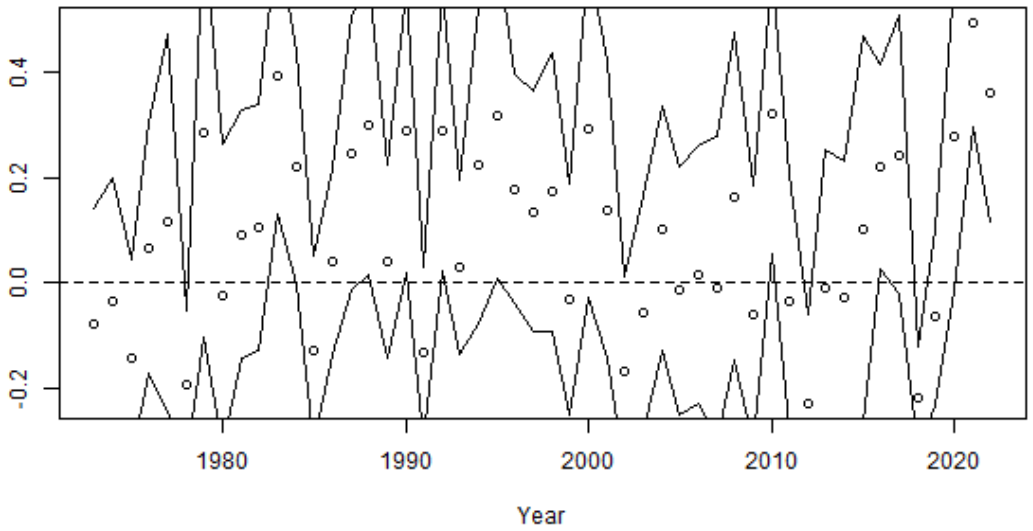
F = -0.046



Self test R

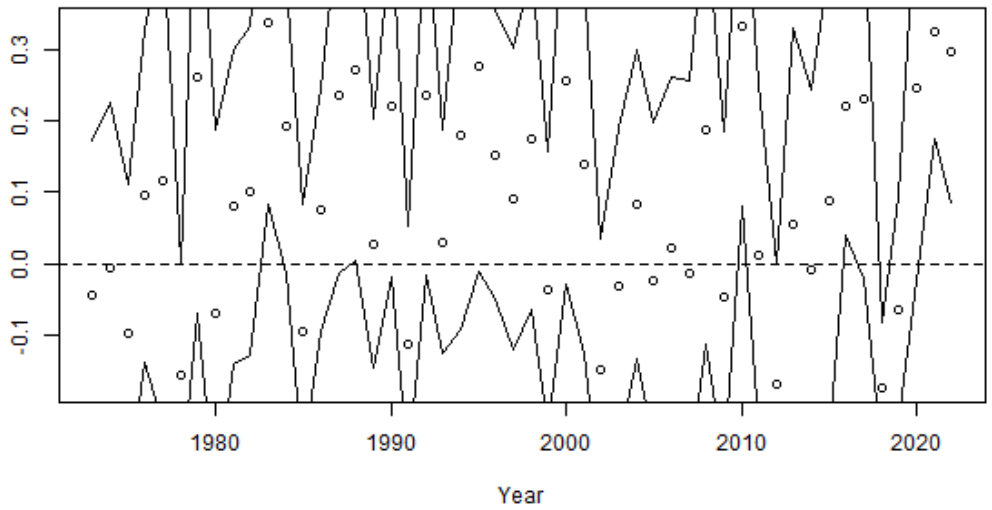
Constant M

R = 0.099



Age based M

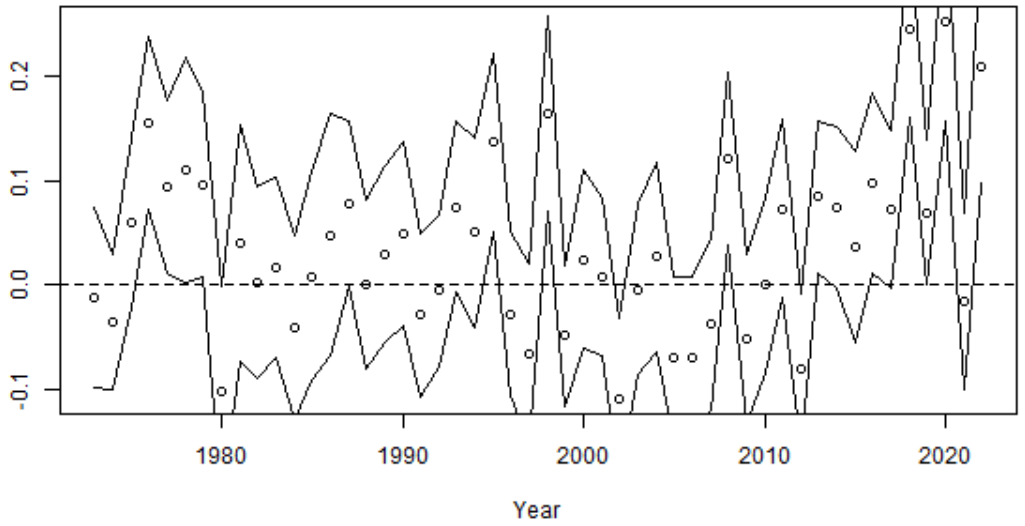
R = 0.09



Self test SSB

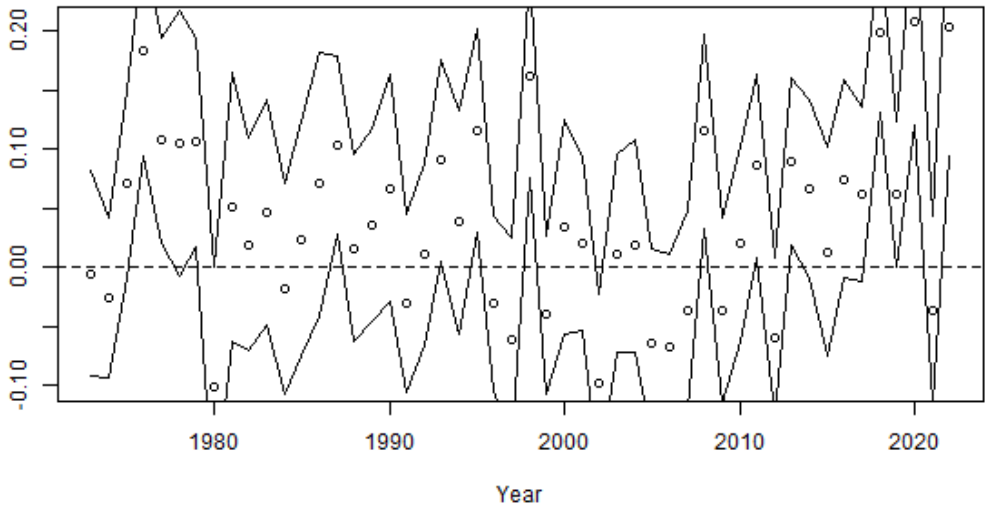
Constant M

SSB = 0.045



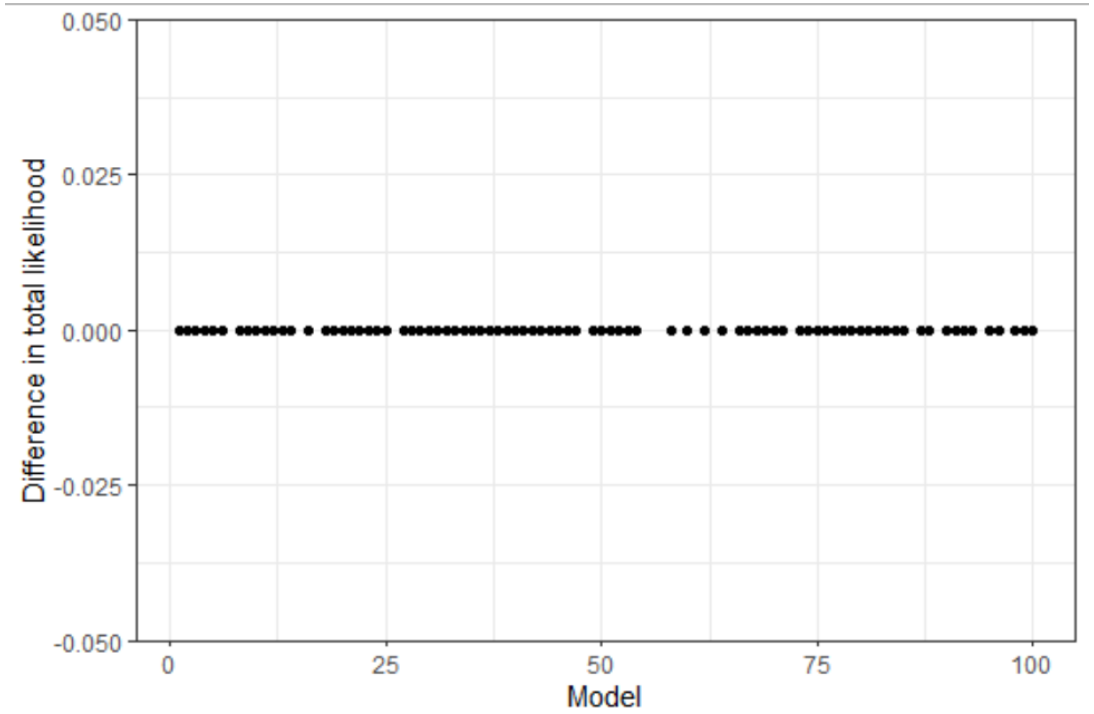
Age based M

SSB = 0.04

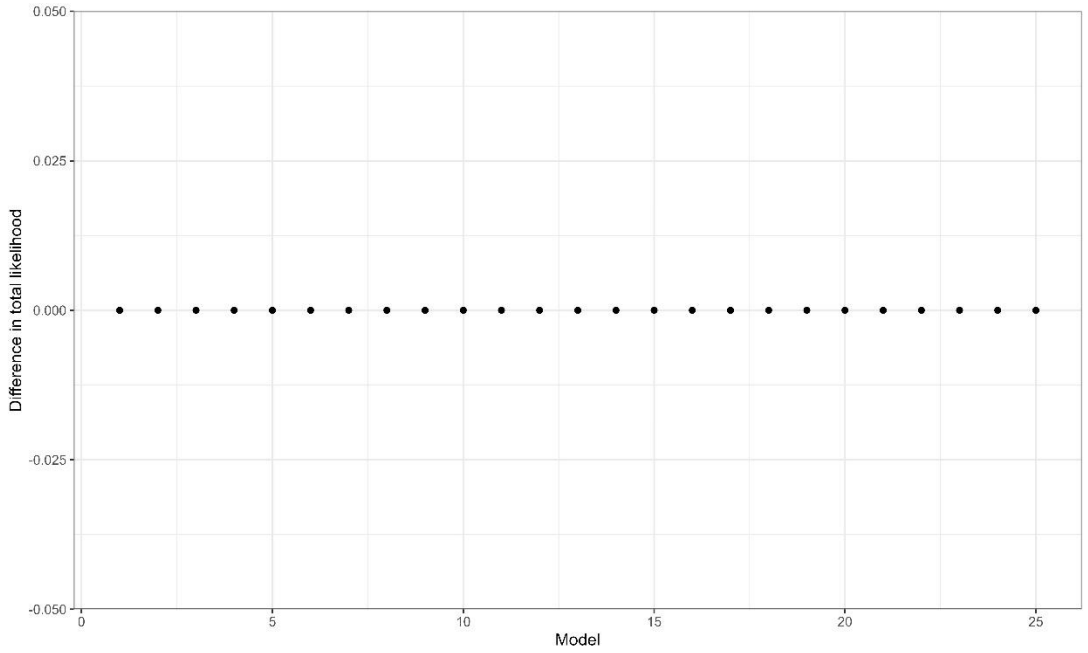


Jitter

Constant M



Age based M



BRP comparison

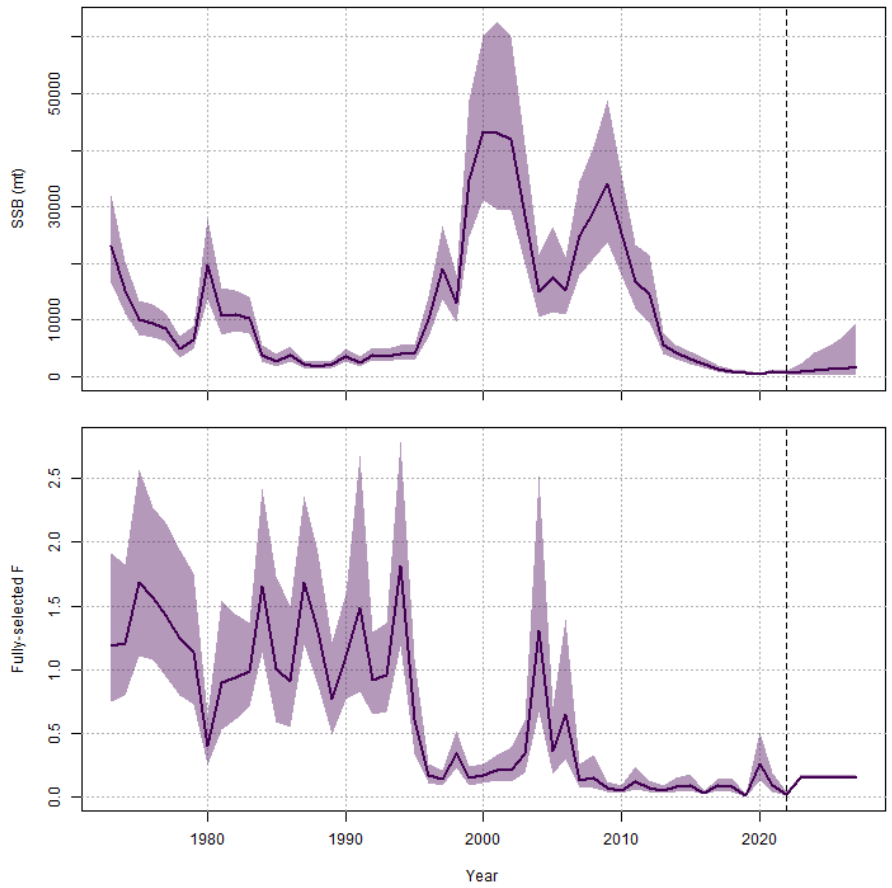
Updated values

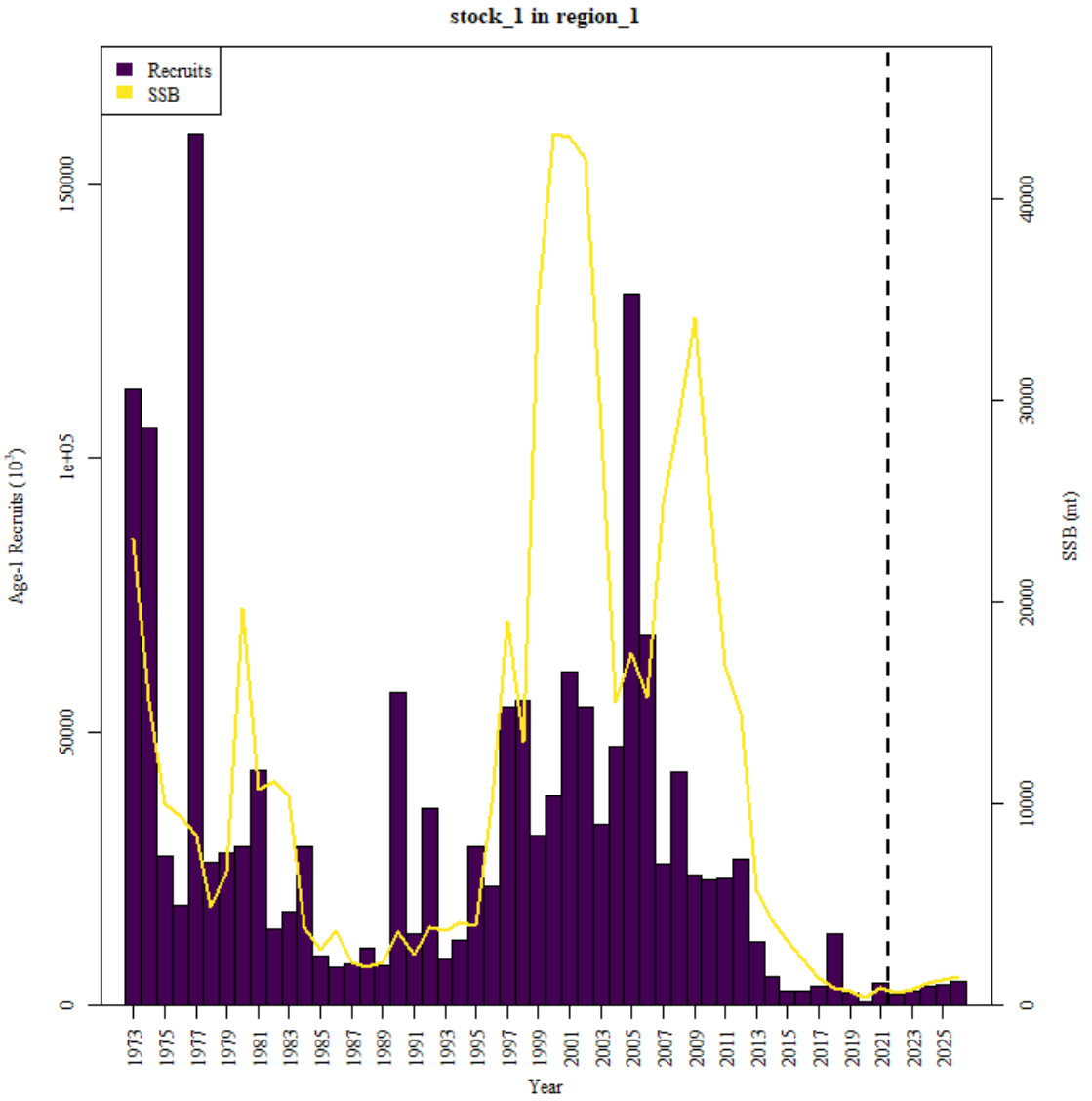
Model	F40	Fmsy	SSBmsy	MSY
Constant M	0.928 (0.49-1.75)	0.499 (0.15-1.7)	11,206 (4,581-27,409)	3,396 (478-24,109)
Age based M	0.415 (0.27-0.65)	0.39 (0.16-0.95)	16,424 (6,960-38,757)	4,467 (629-31,714)

Previous values

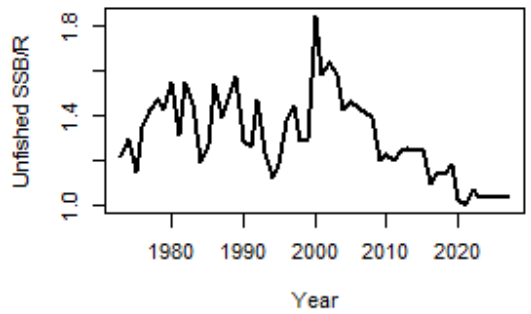
BRP	Values
MSY	554 (54 – 5,661)
Fmsy	0.15 (0.12 – 0.19)
SSBmsy	4,942 (485 – 50,358)

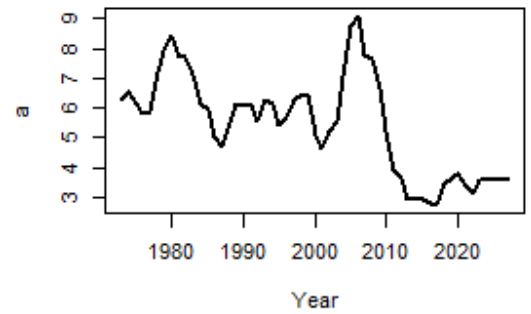
Short term projections

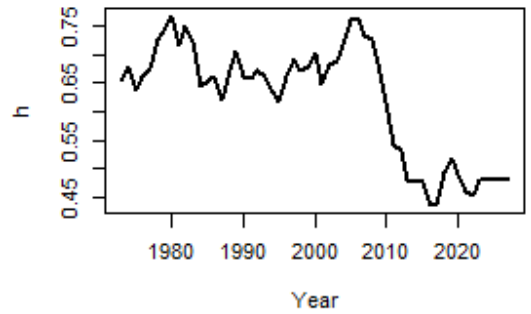


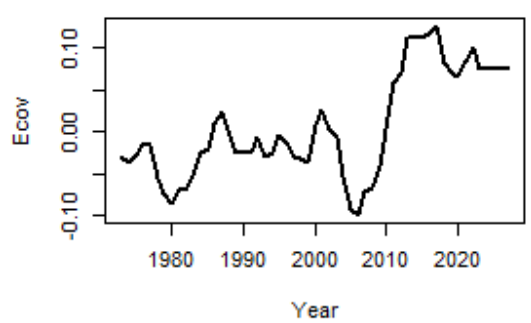


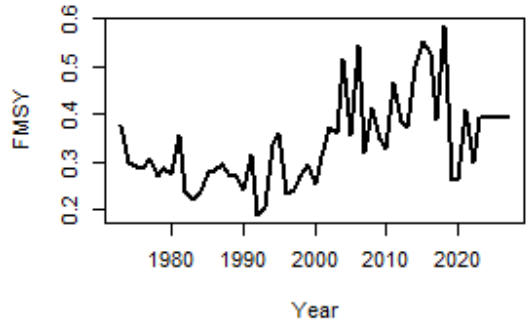
Age based M

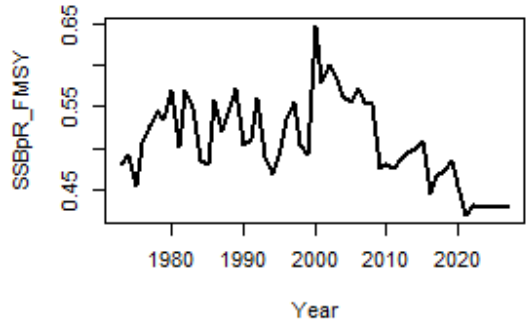

Unfished SSB/R
1.0
1.4
1.8
1980
1990
2000
2010
2020
Year

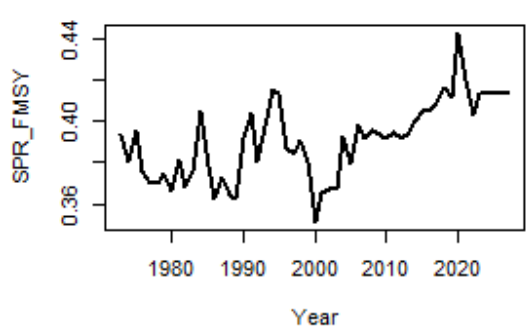

a
3
4
5
6
7
8
9
1980
1990
2000
2010
2020
Year

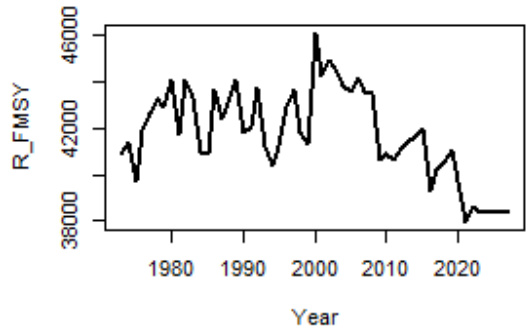

h
0.45
0.55
0.65
0.75
1980
1990
2000
2010
2020
Year

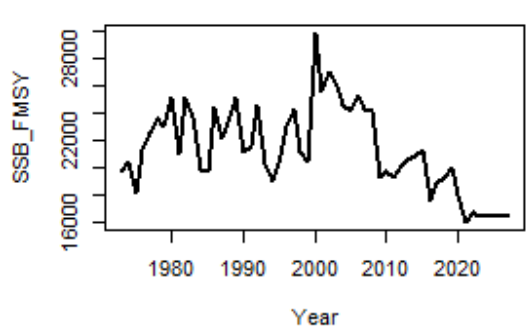

Ecov
-0.10
0.00
0.10
1980
1990
2000
2010
2020
Year


FMSY
0.2
0.3
0.4
0.5
0.6
1980
1990
2000
2010
2020
Year

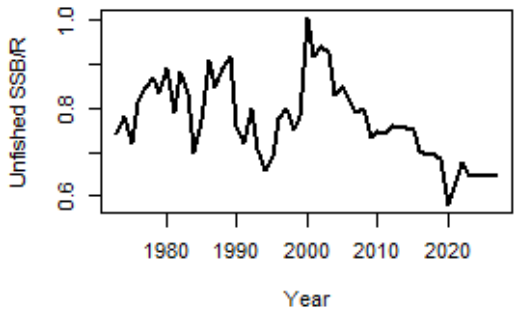

SSBpR_FMSY
0.45
0.55
0.65
1980
1990
2000
2010
2020
Year

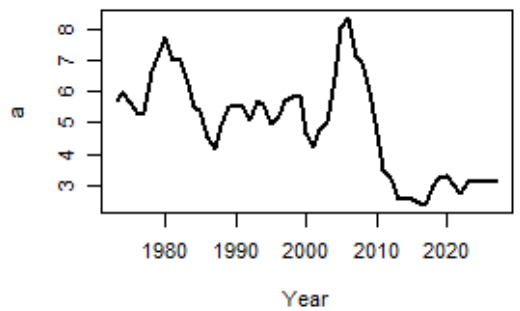

SPR_FMSY
0.36
0.40
0.44
1980
1990
2000
2010
2020
Year

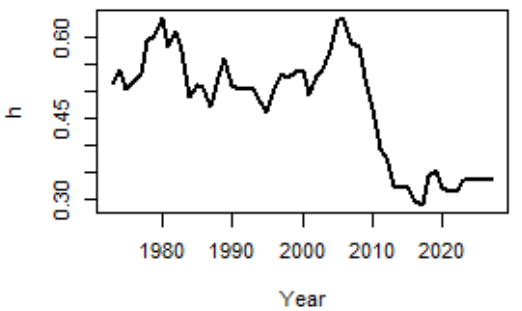

R_FMSY
38000
42000
46000
1980
1990
2000
2010
2020
Year

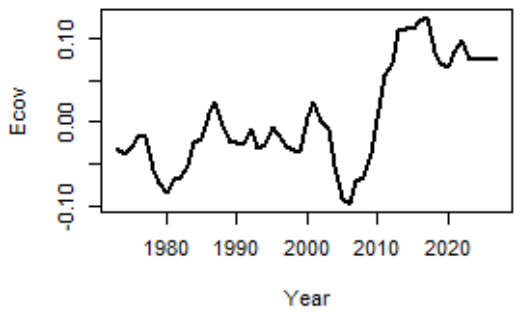

SSB_FMSY
16000
22000
28000
1980
1990
2000
2010
2020
Year

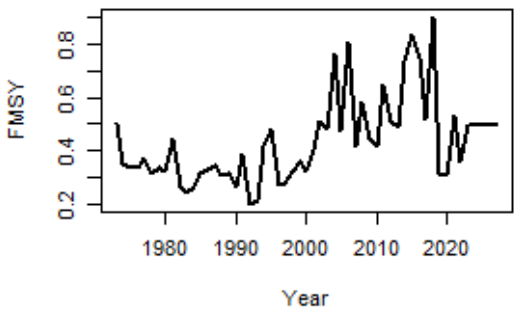
Constant M

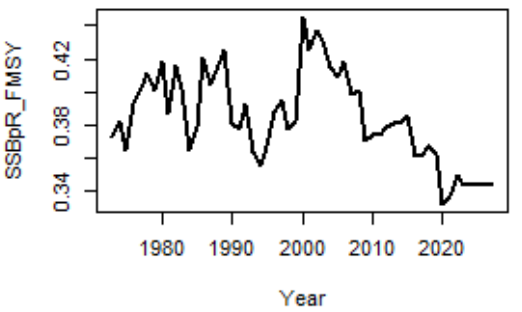

Unfished SSB/R
0.6
0.8
1.0
1980
1990
2000
2010
2020
Year

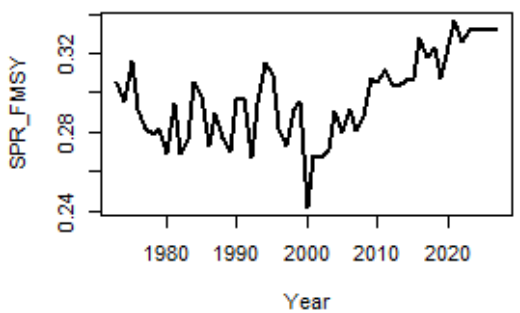

a
3
4
5
6
7
8
1980
1990
2000
2010
2020
Year

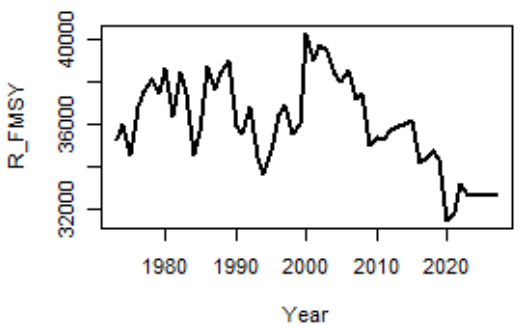

h
0.30
0.45
0.60
1980
1990
2000
2010
2020
Year

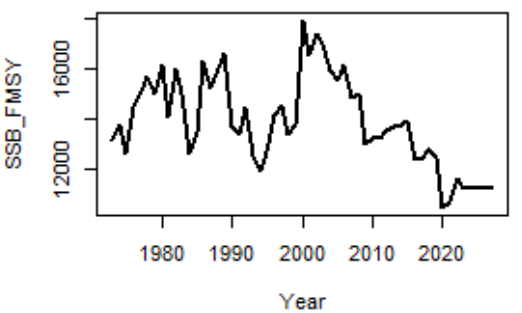

Ecov
-0.10
0.00
0.10
1980
1990
2000
2010
2020
Year


FMSY
0.2
0.4
0.6
0.8
1980
1990
2000
2010
2020
Year


SSBpR_FMSY
0.34
0.38
0.42
1980
1990
2000
2010
2020
Year


SPR_FMSY
0.24
0.28
0.32
1980
1990
2000
2010
2020
Year


R_FMSY
32000
36000
40000
1980
1990
2000
2010
2020
Year


SSB_FMSY
12000
16000
1980
1990
2000
2010
2020
Year

Self test

Constant M

- F = -0.05
- SSB = 0.045
- R = -0.099

Age based M

- F = -0.046
- SSB = 0.04
- R = 0.09