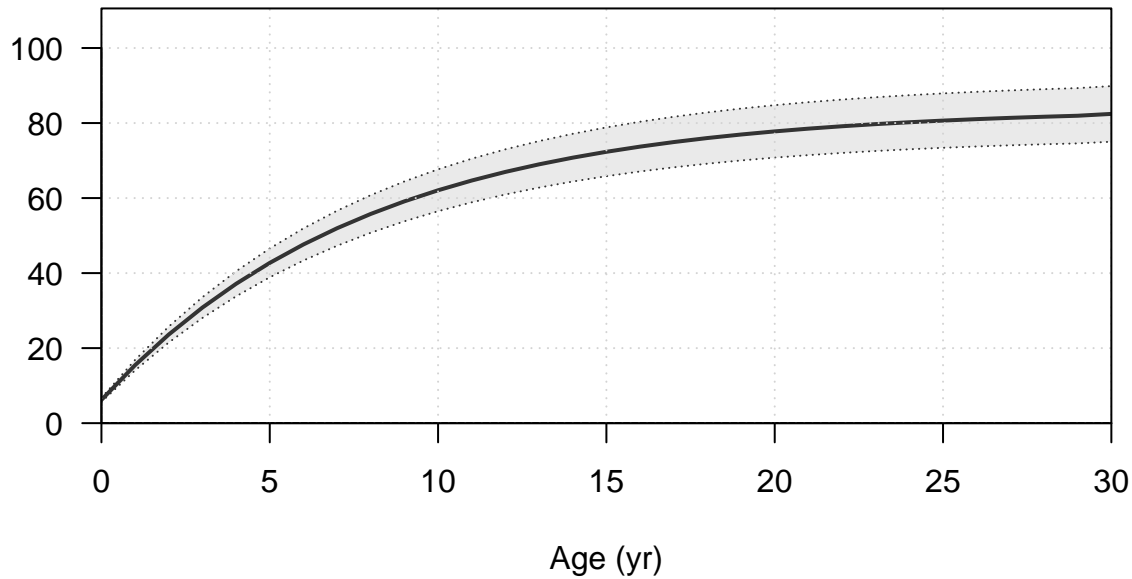
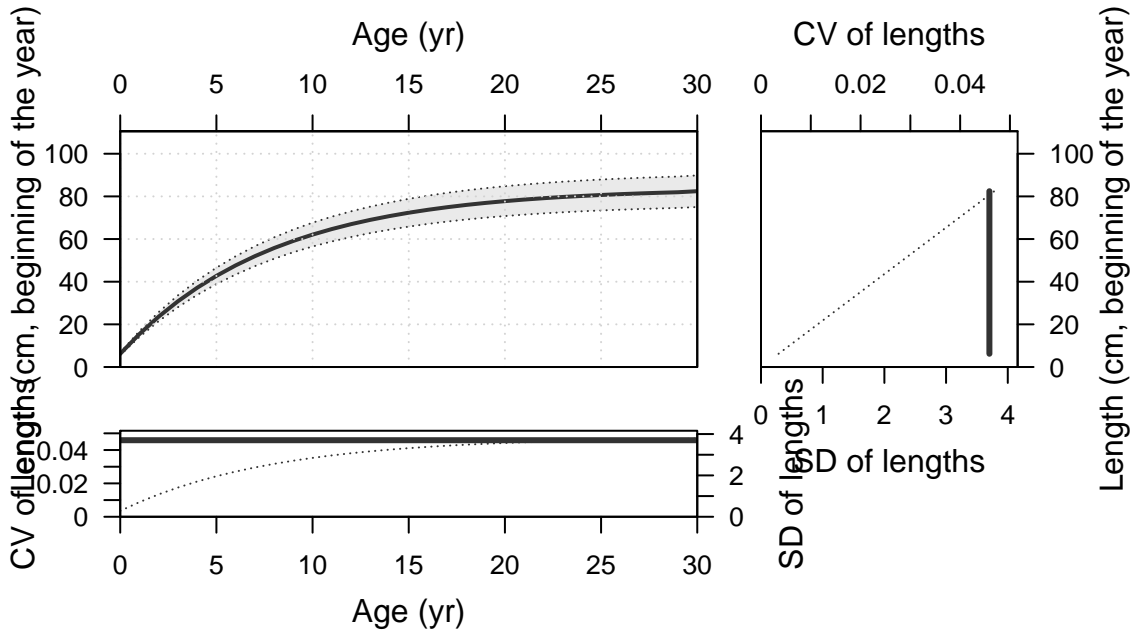
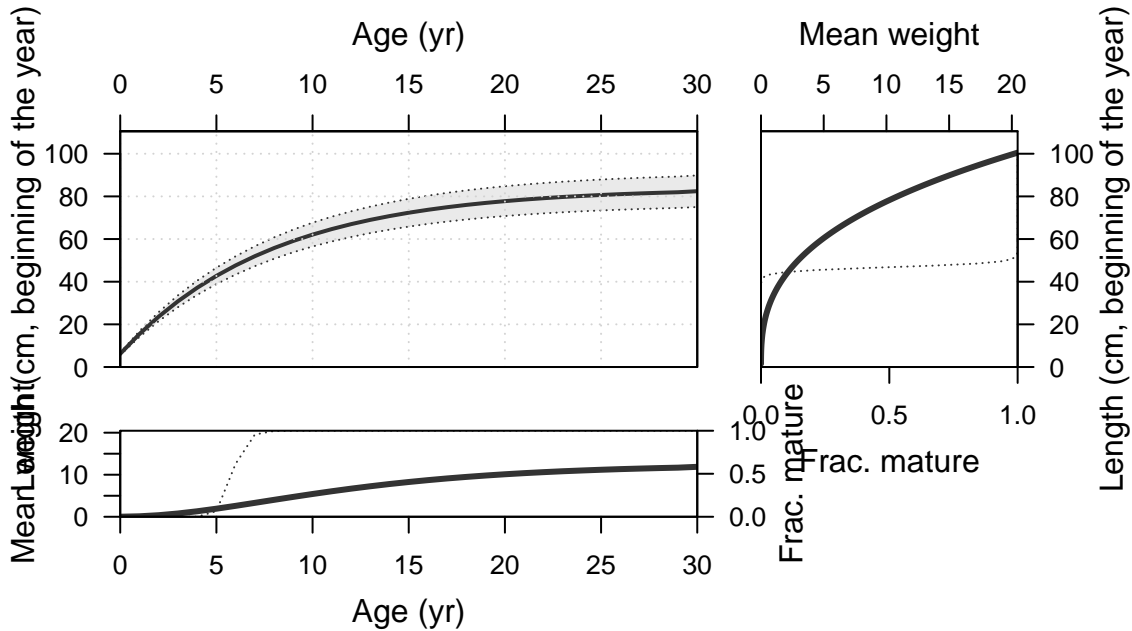


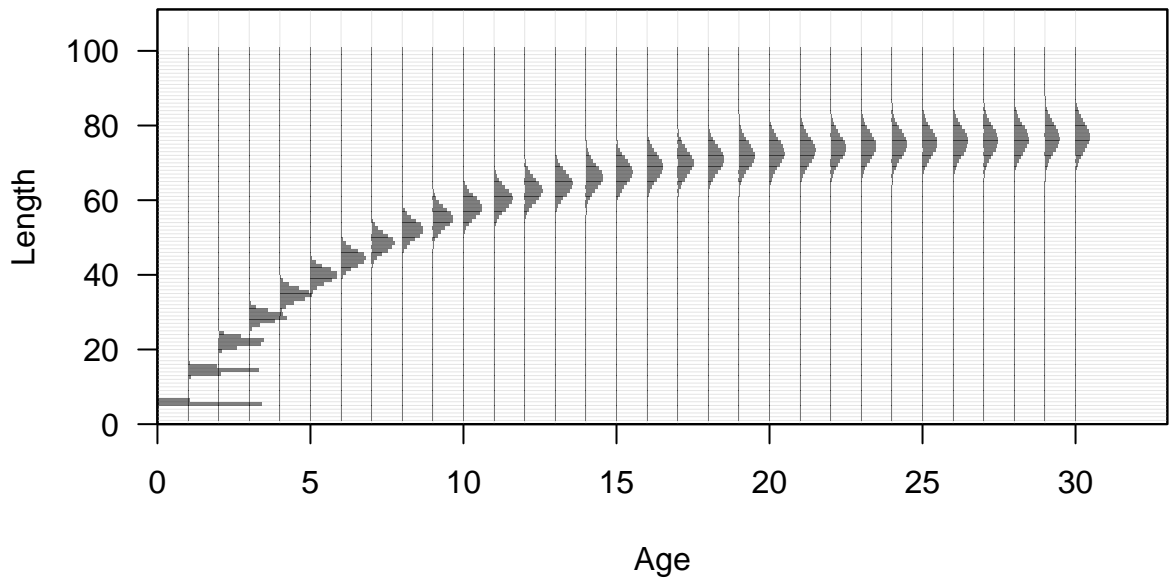
Plots created using the 'r4ss' package in R
Stock Synthesis version: 3.30.19.0
StartTime: Thu Aug 11 11:27:42 2022
Data_File: data.ss
Control_File: control.ss

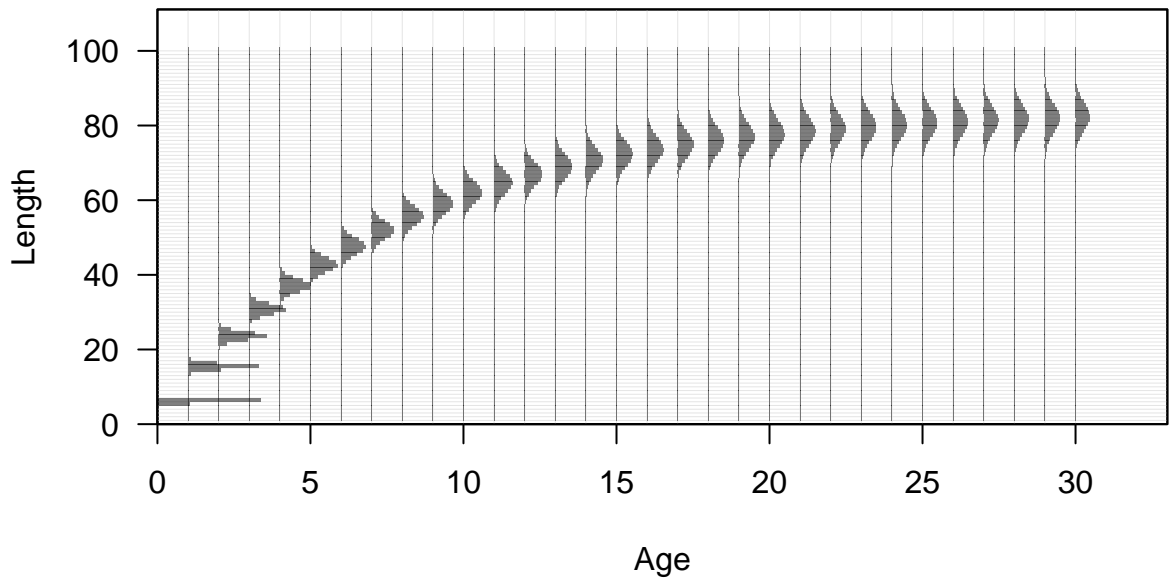
Length (cm, beginning of the year)

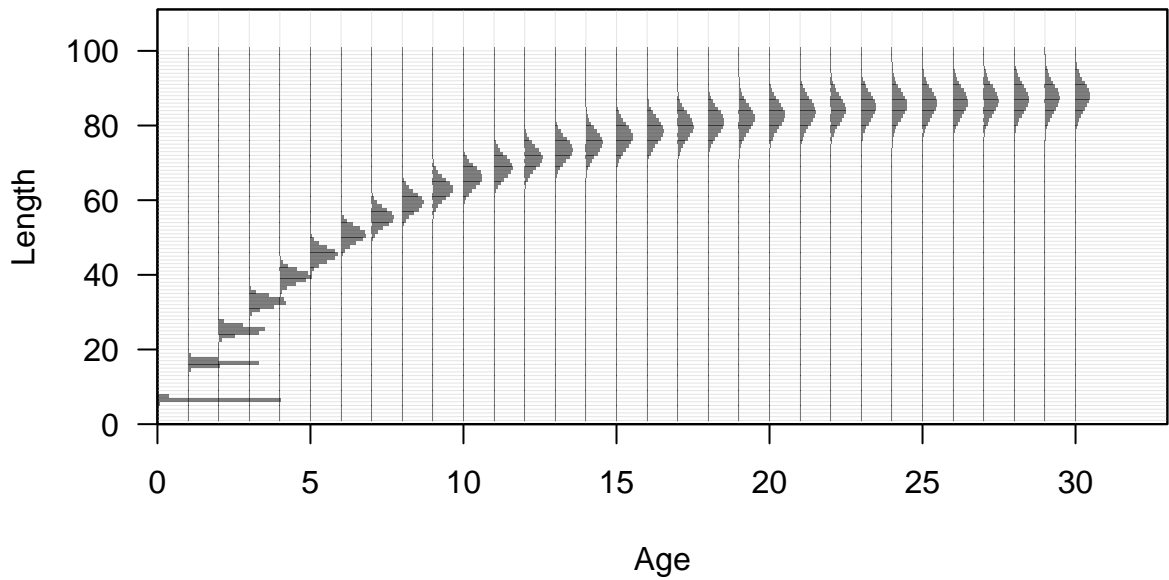


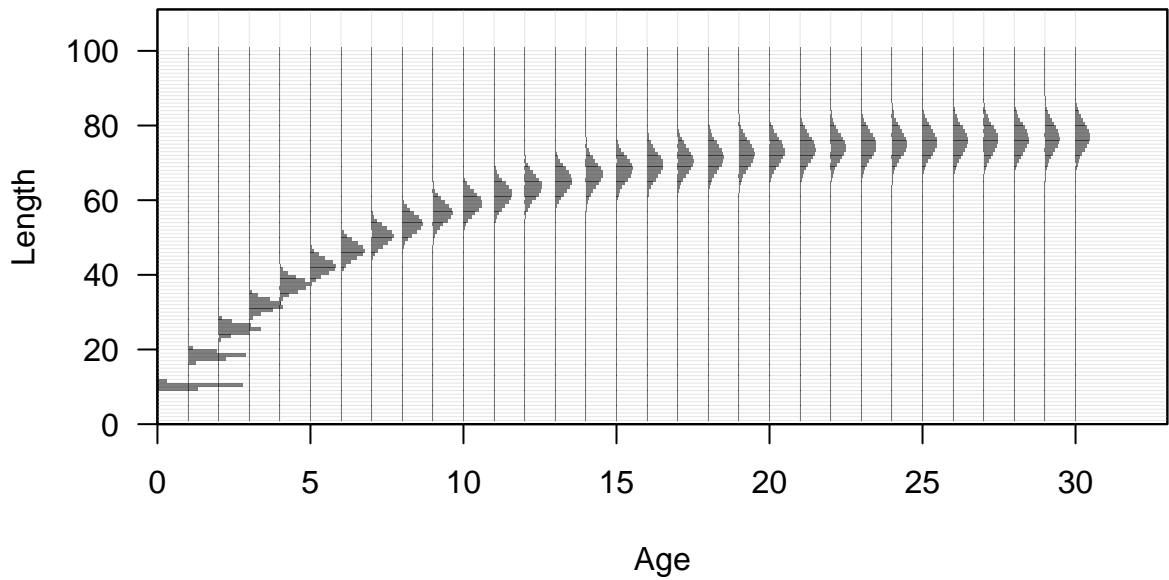


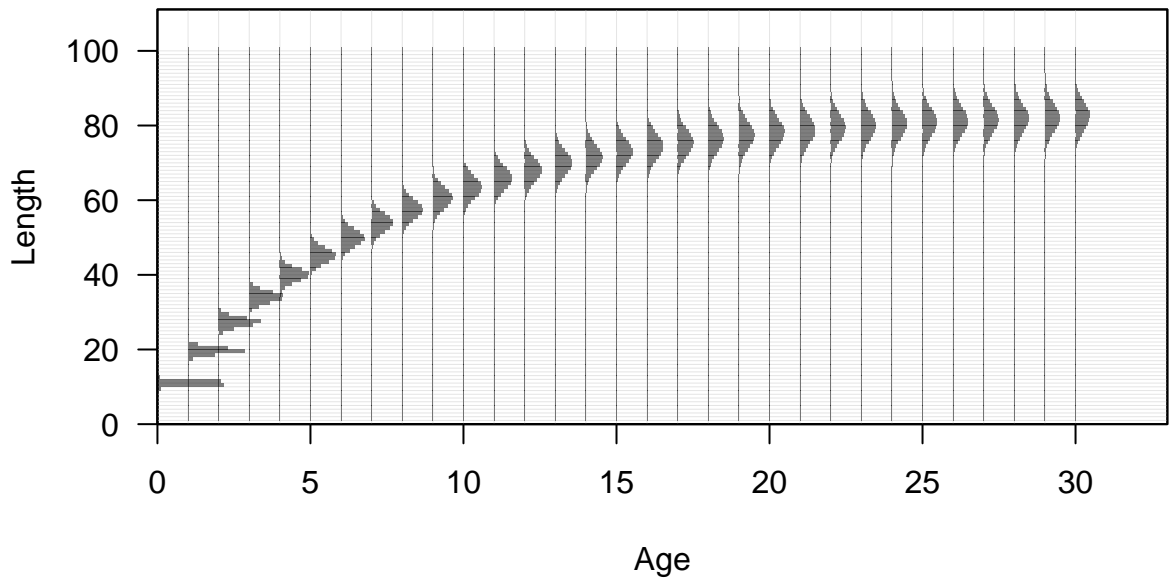


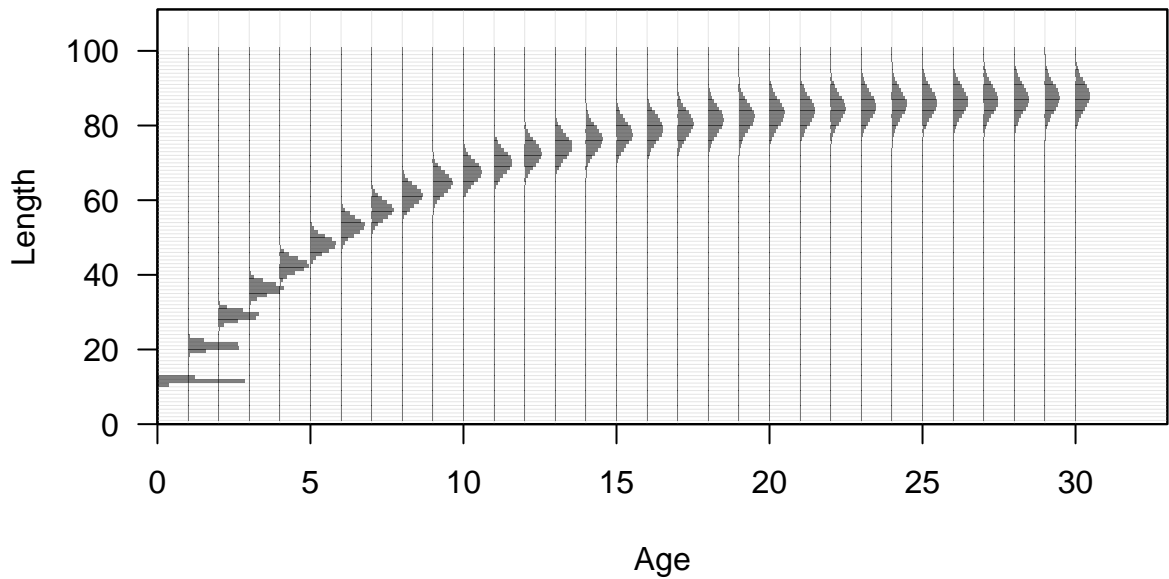


















Fecundity



Fecundity

20

15

10

5

0

0

20

40

60

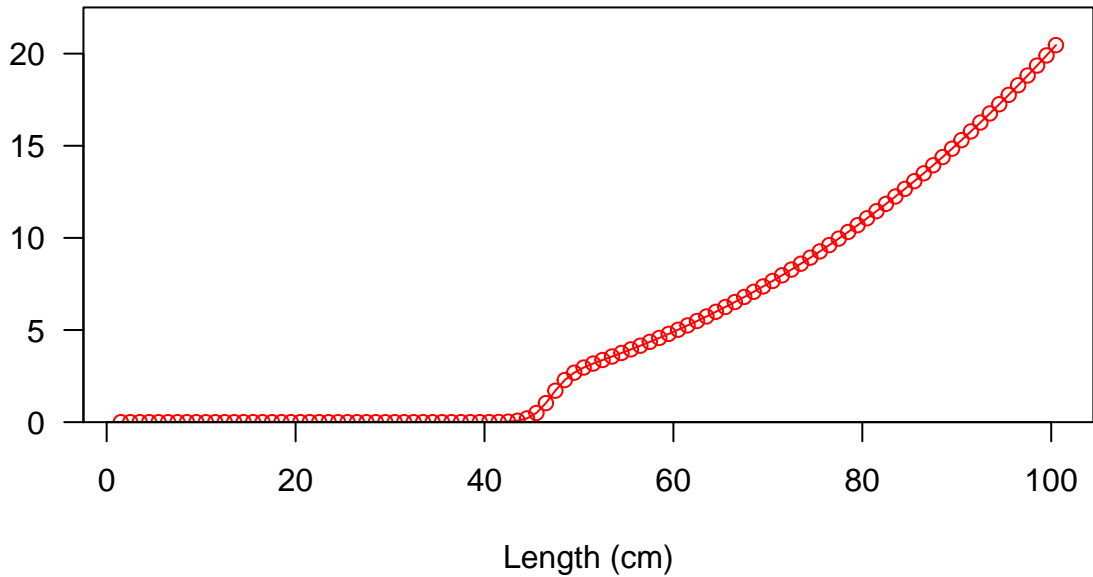
80

100

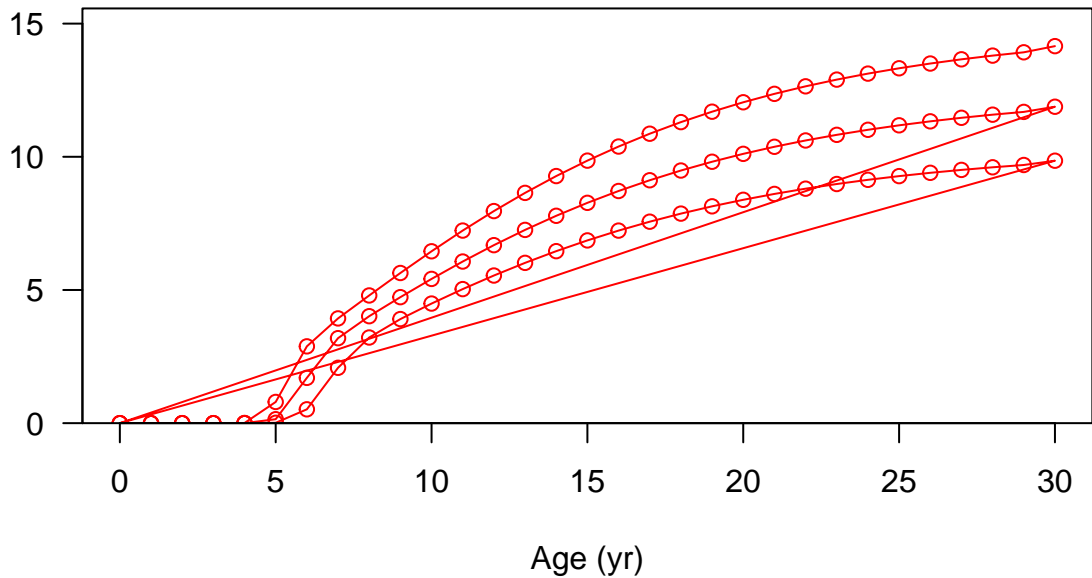
Female length (cm)



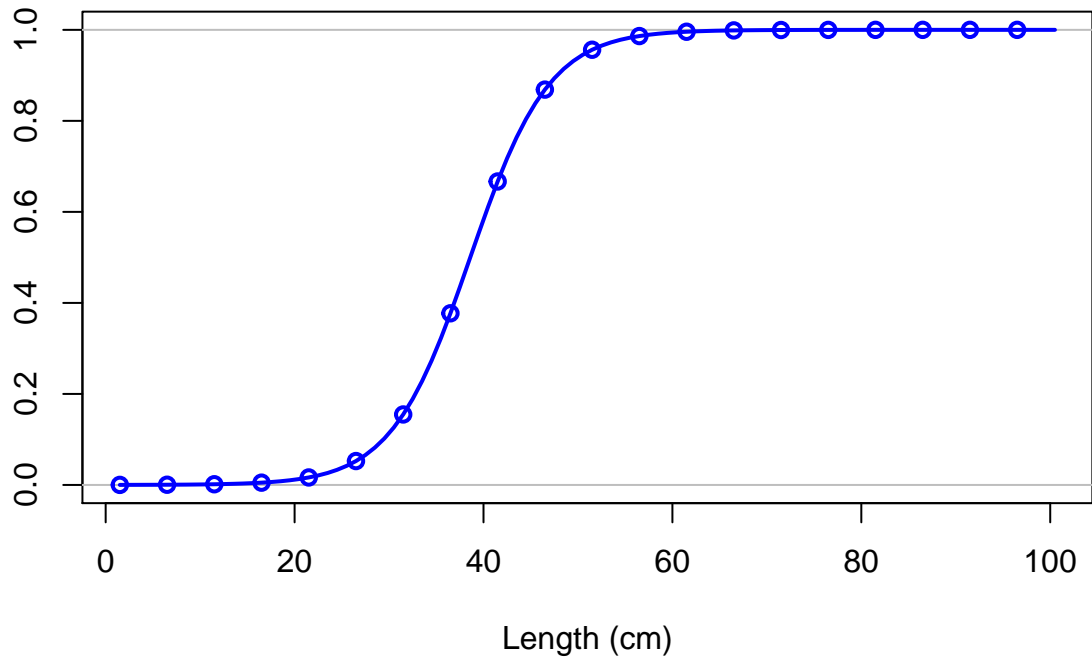
Spawning output



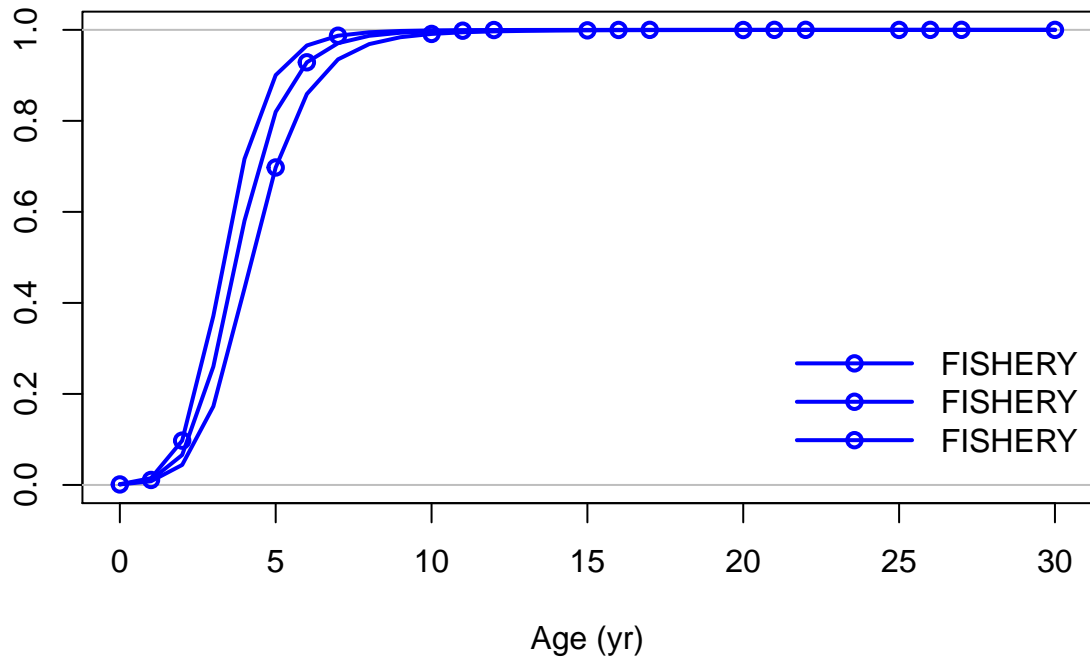
Spawning output



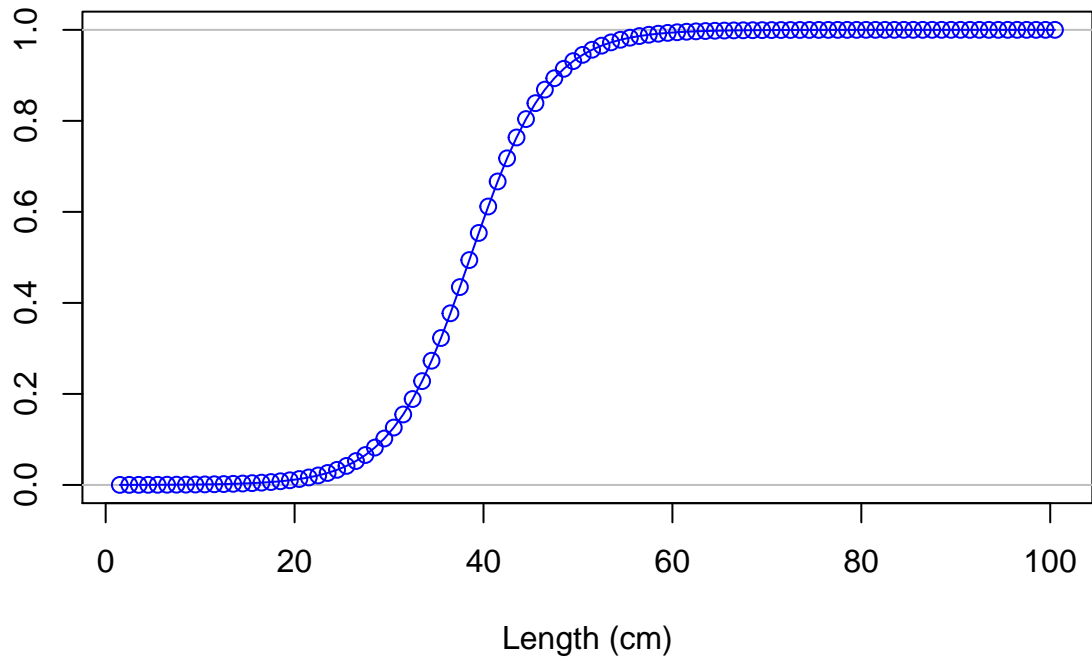
Selectivity

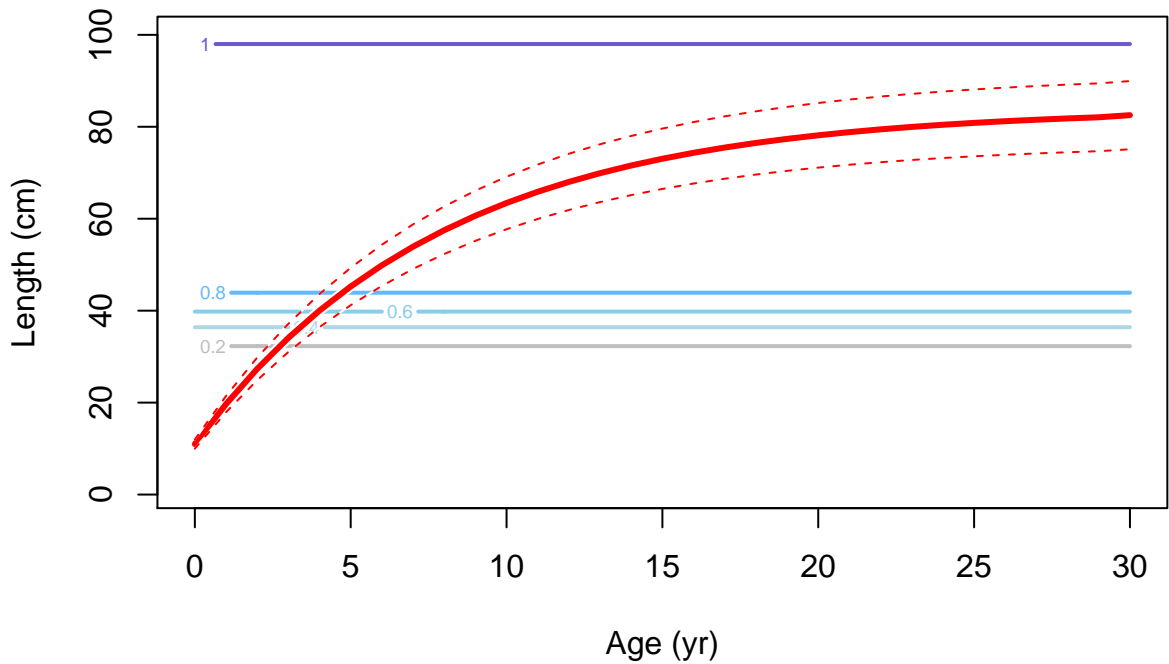


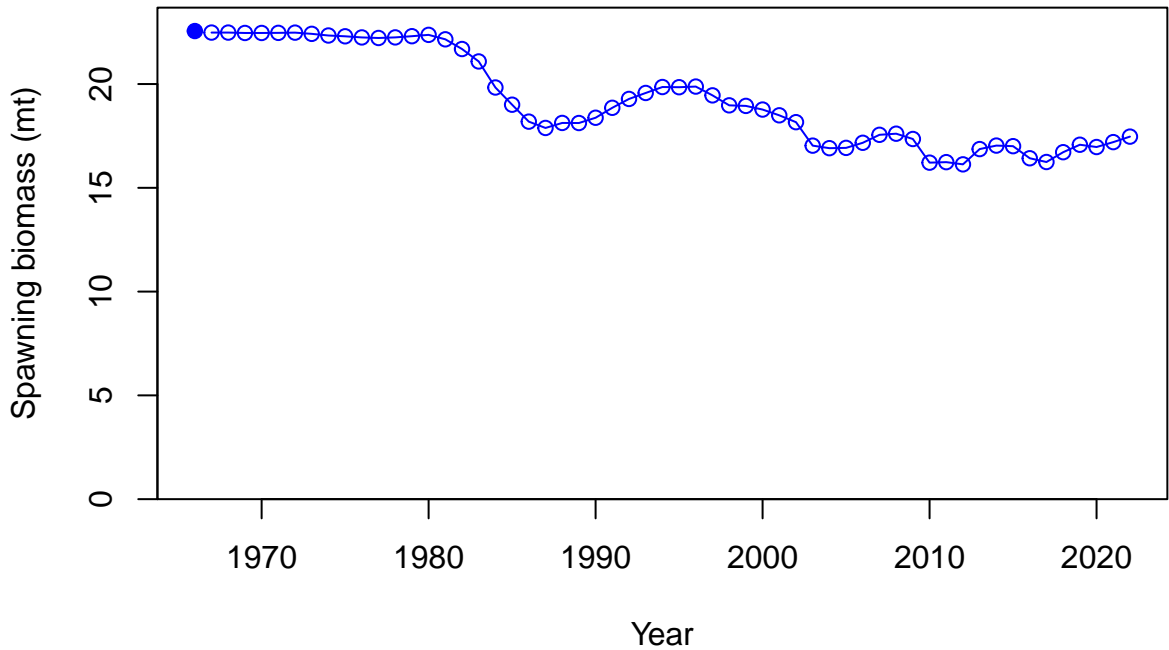
Selectivity



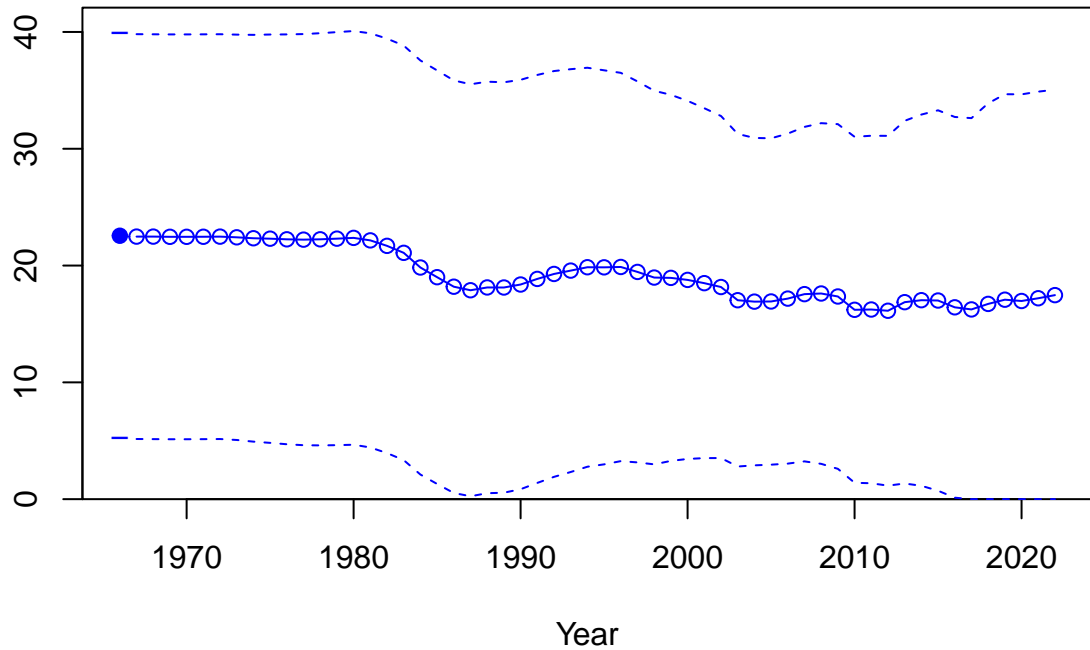
Selectivity



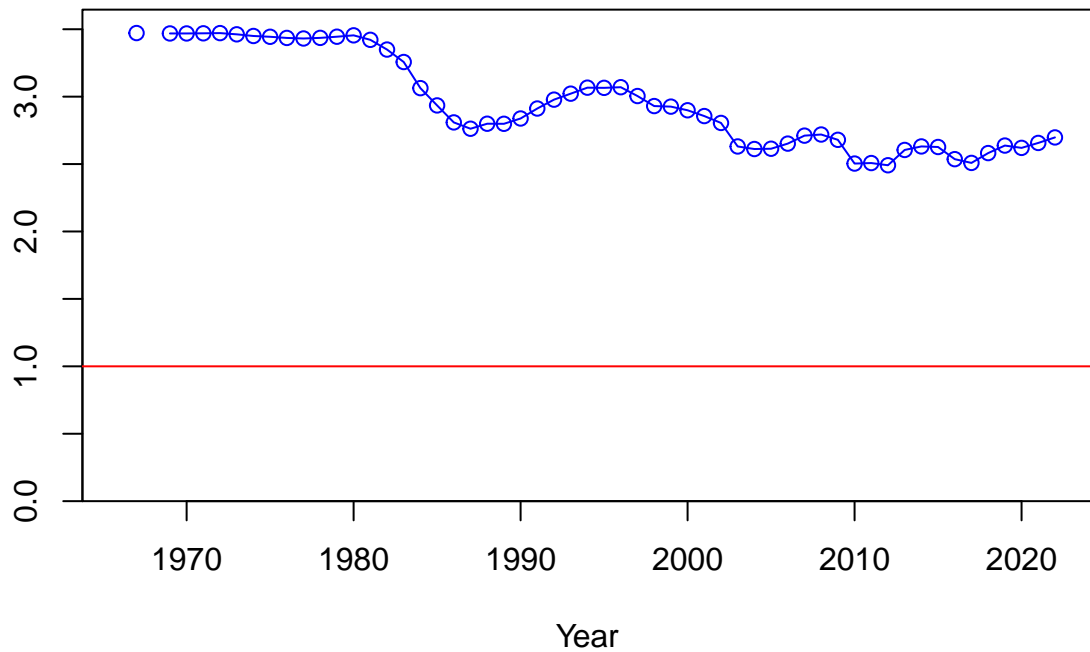




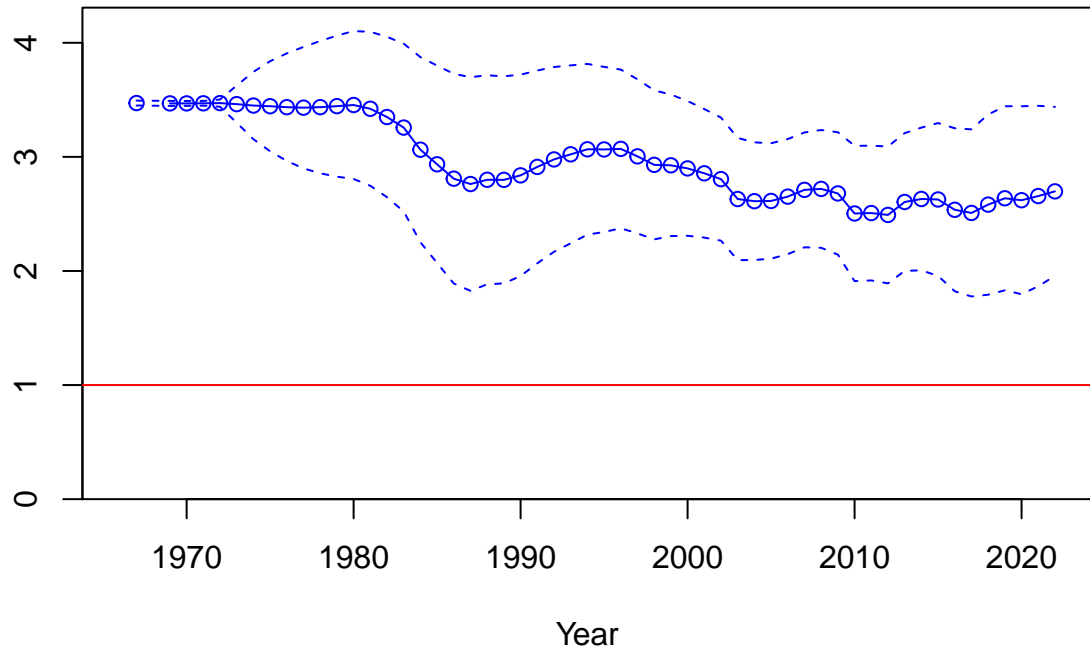
Spawning biomass (mt)

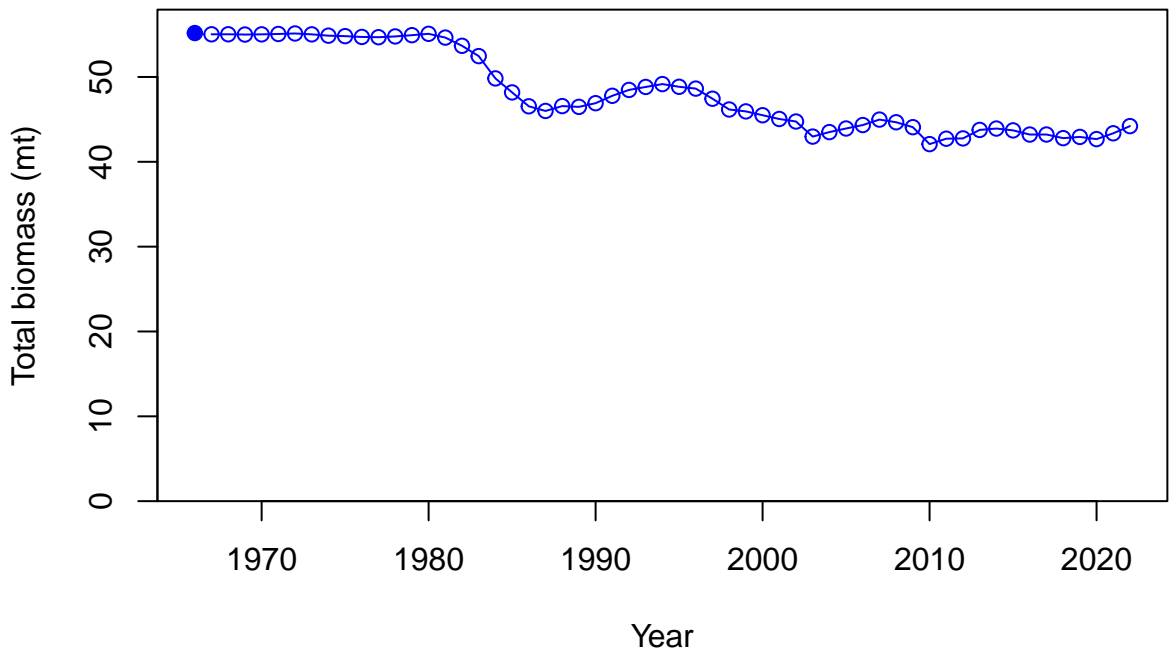


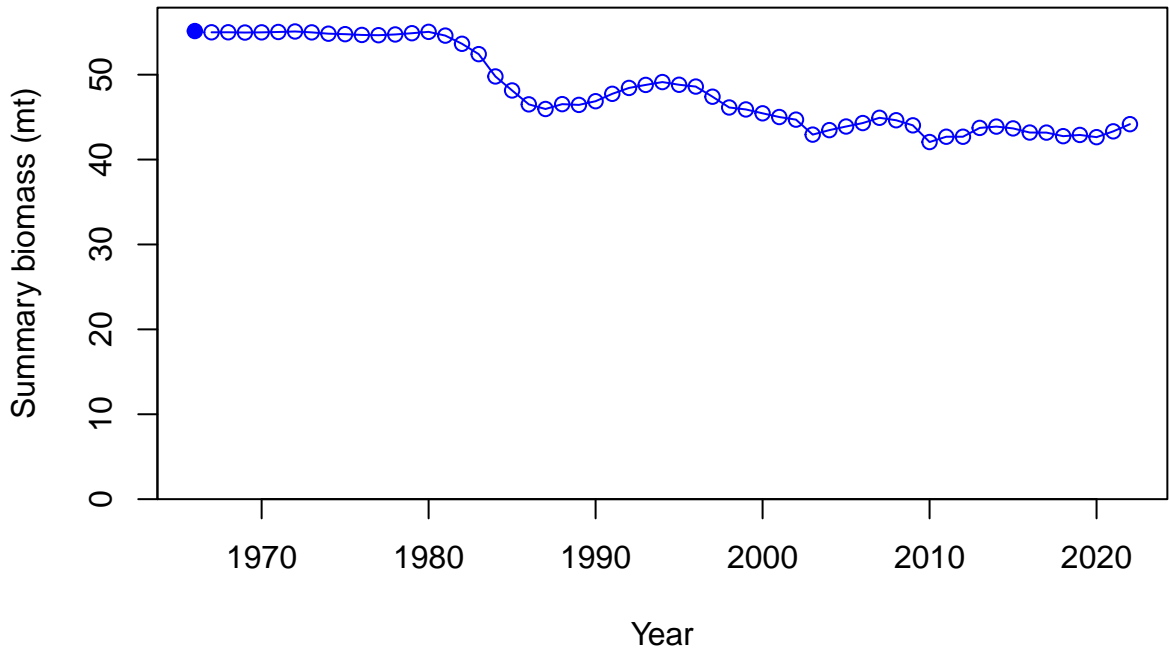
Relative spawning biomass: B/B_{MSY}



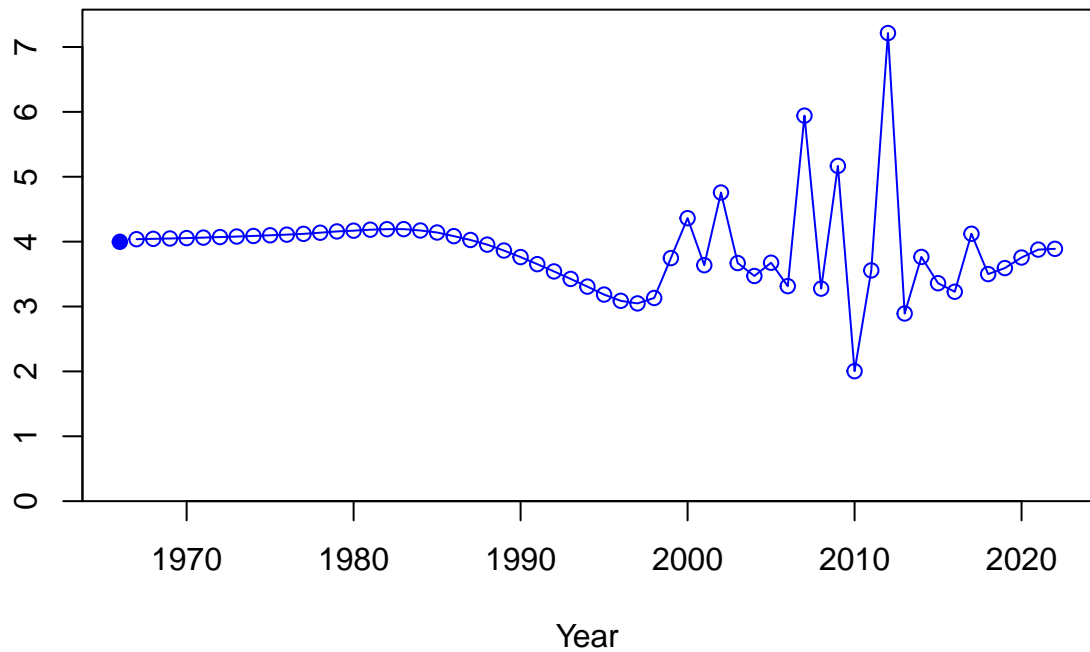
Relative spawning biomass: B/B_{MSY}



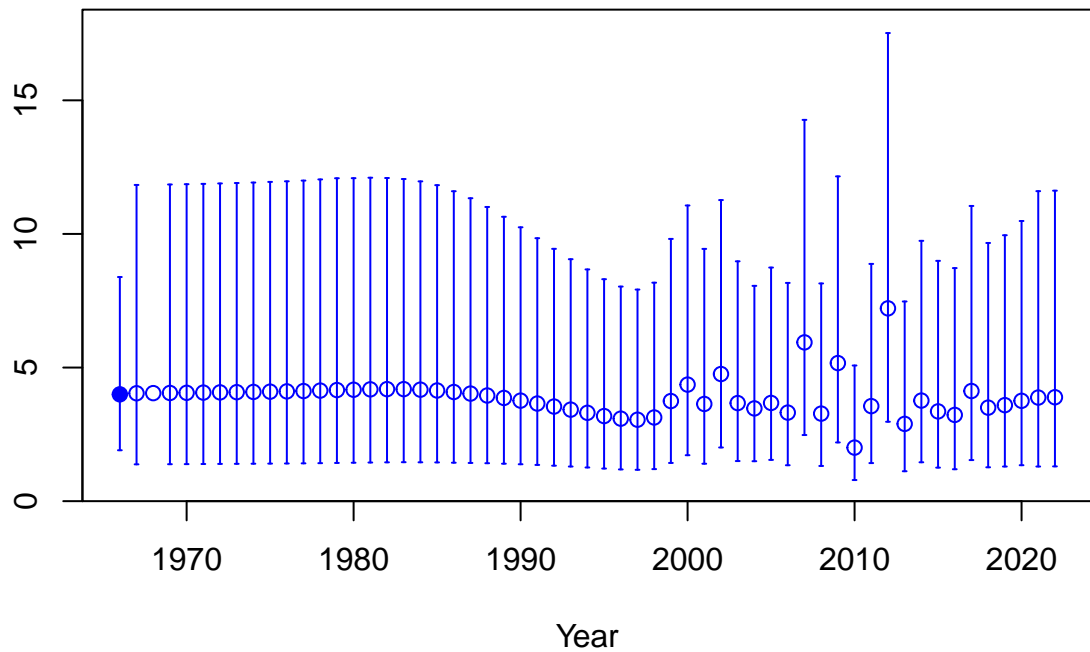




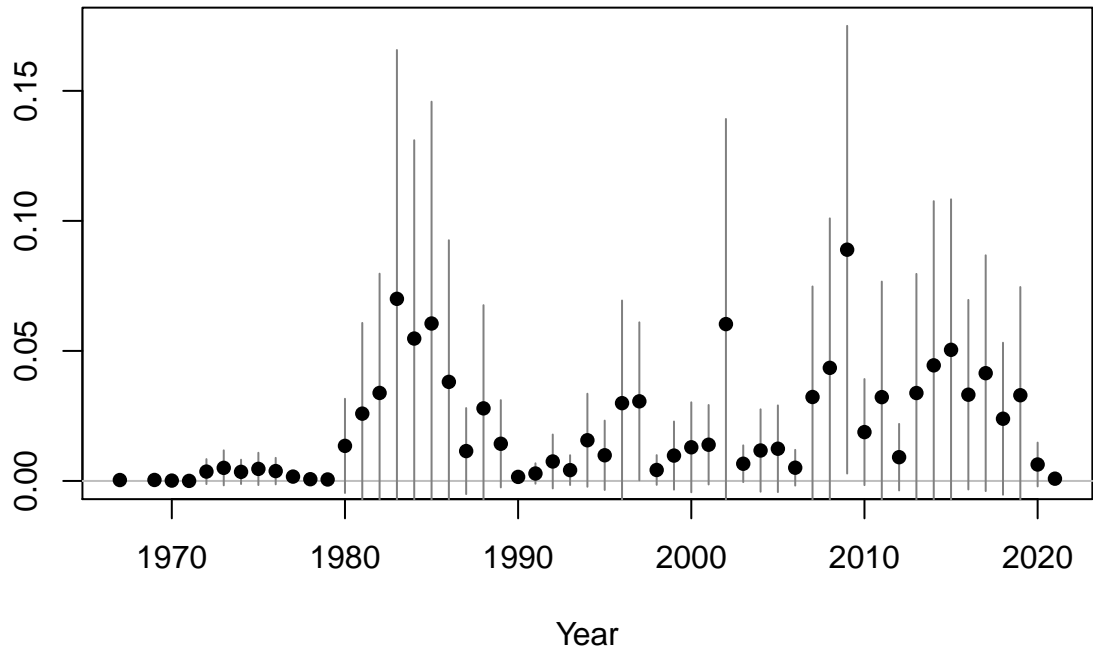
Age-0 recruits (1,000s)

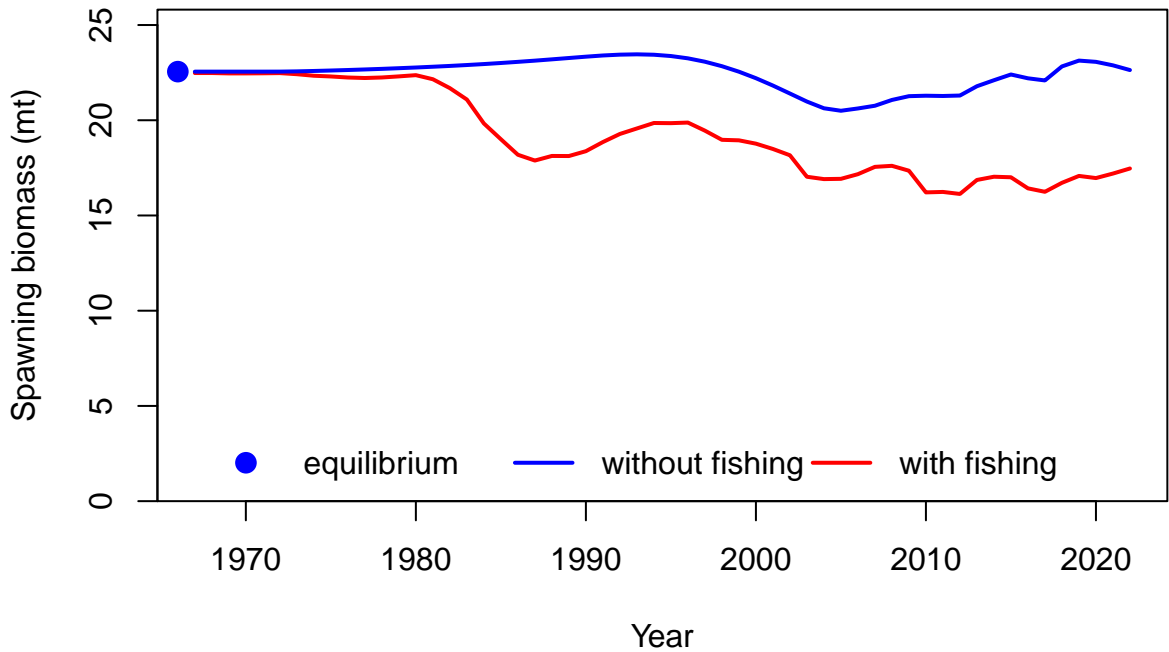


Age-0 recruits (1,000s)

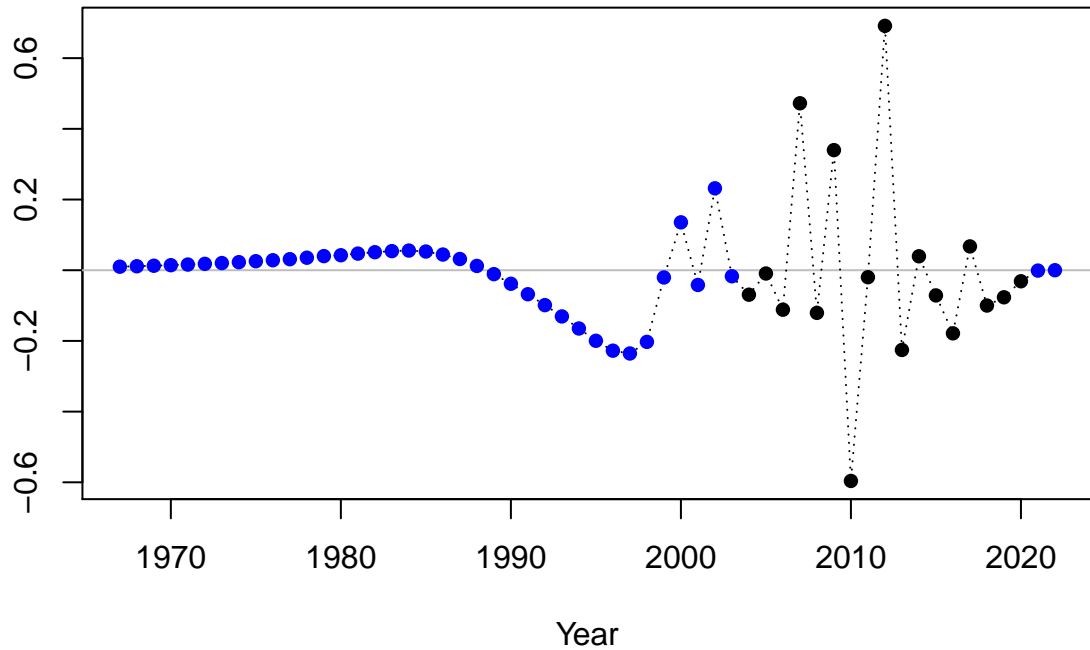


Summary Fishing Mortality

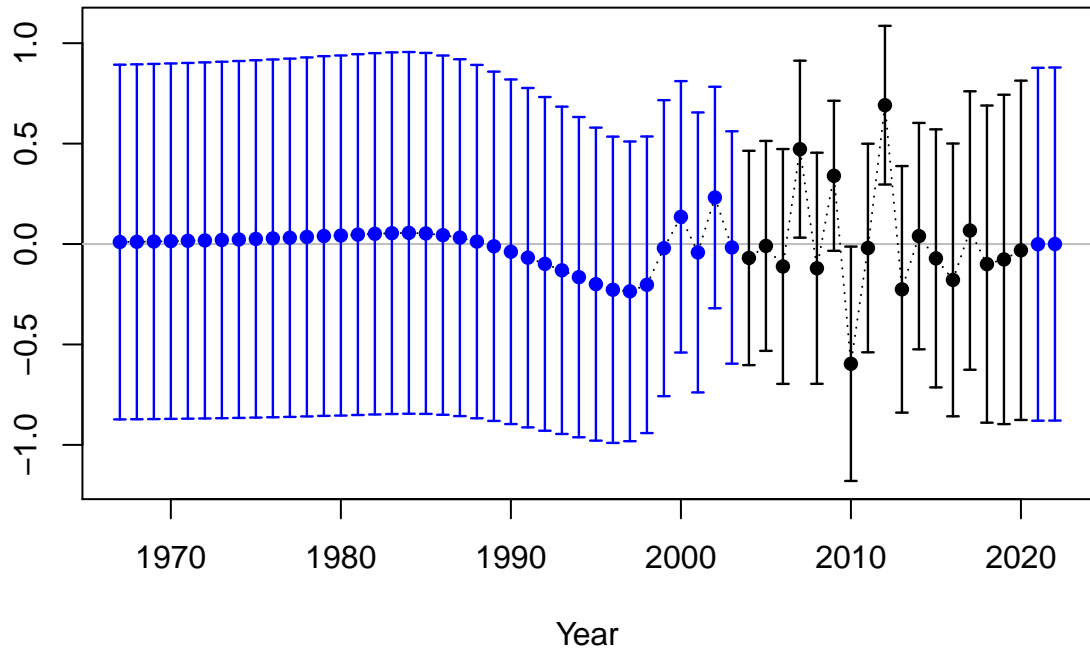




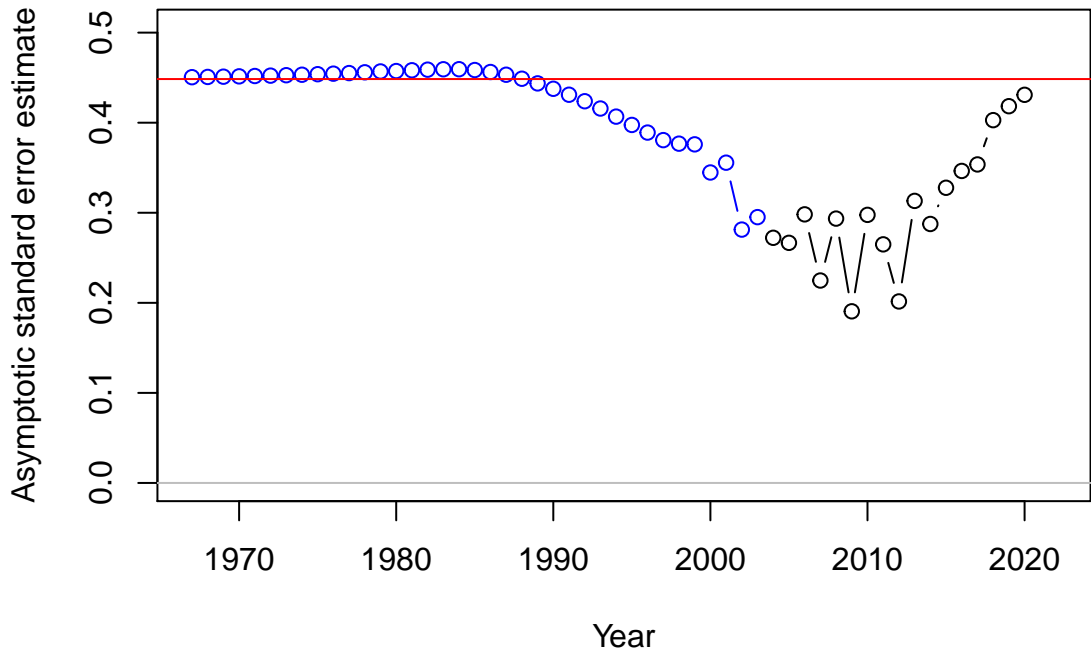
Log recruitment deviation

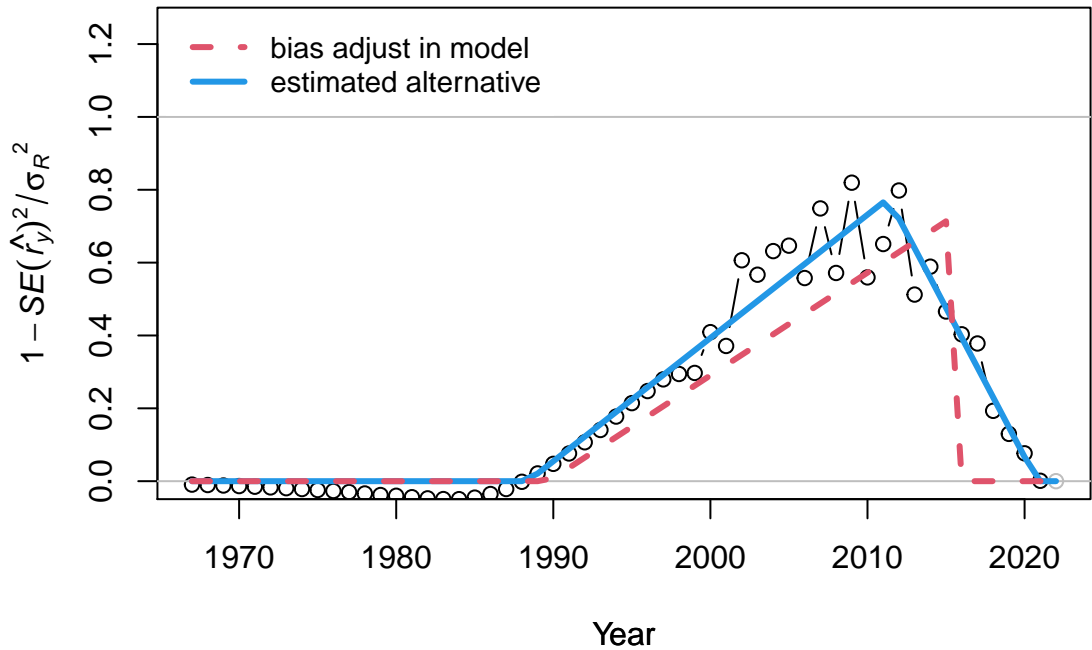


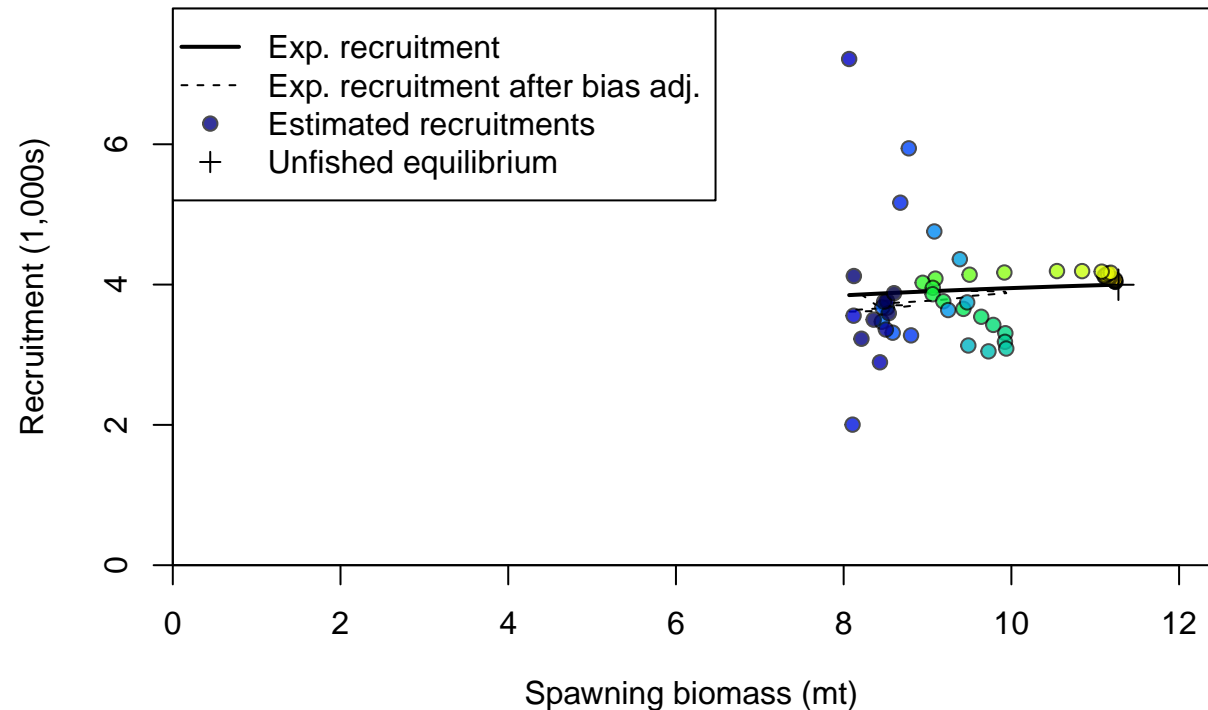
Log recruitment deviation

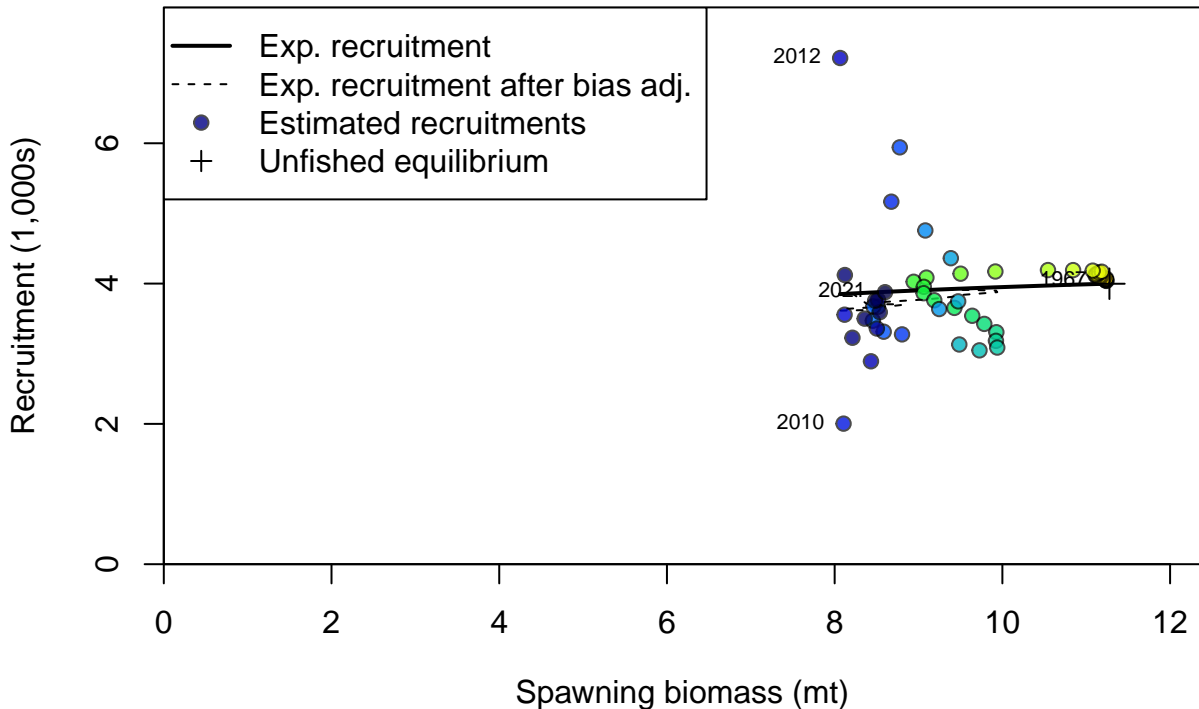


Recruitment deviation variance

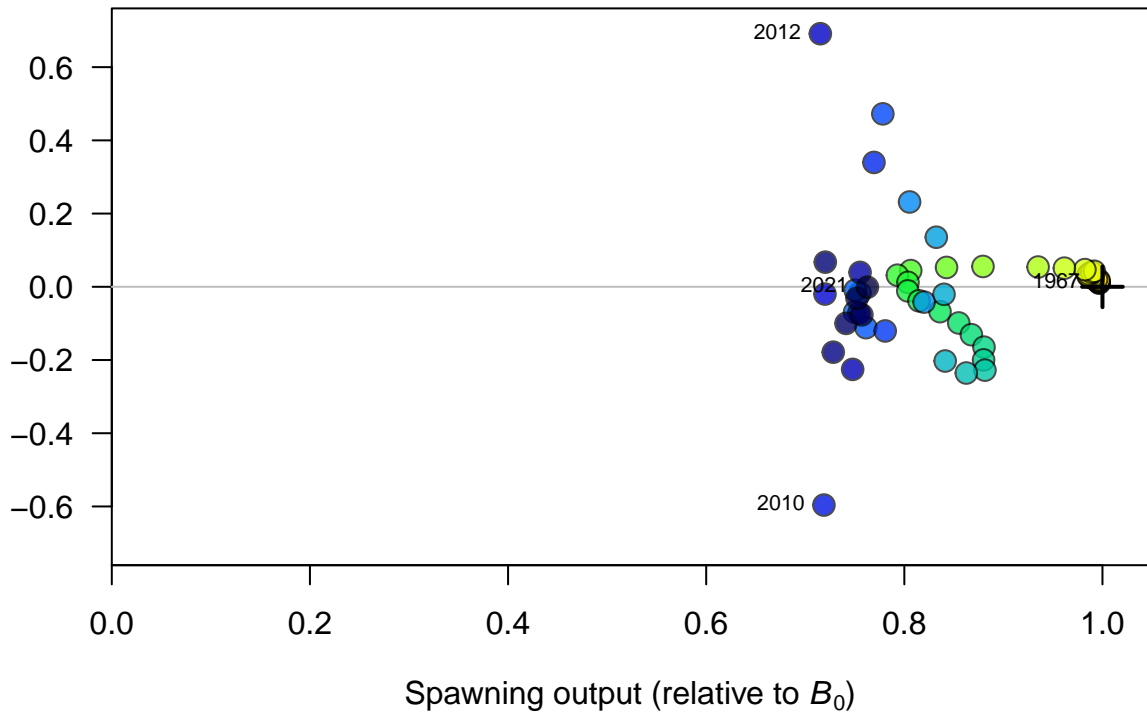


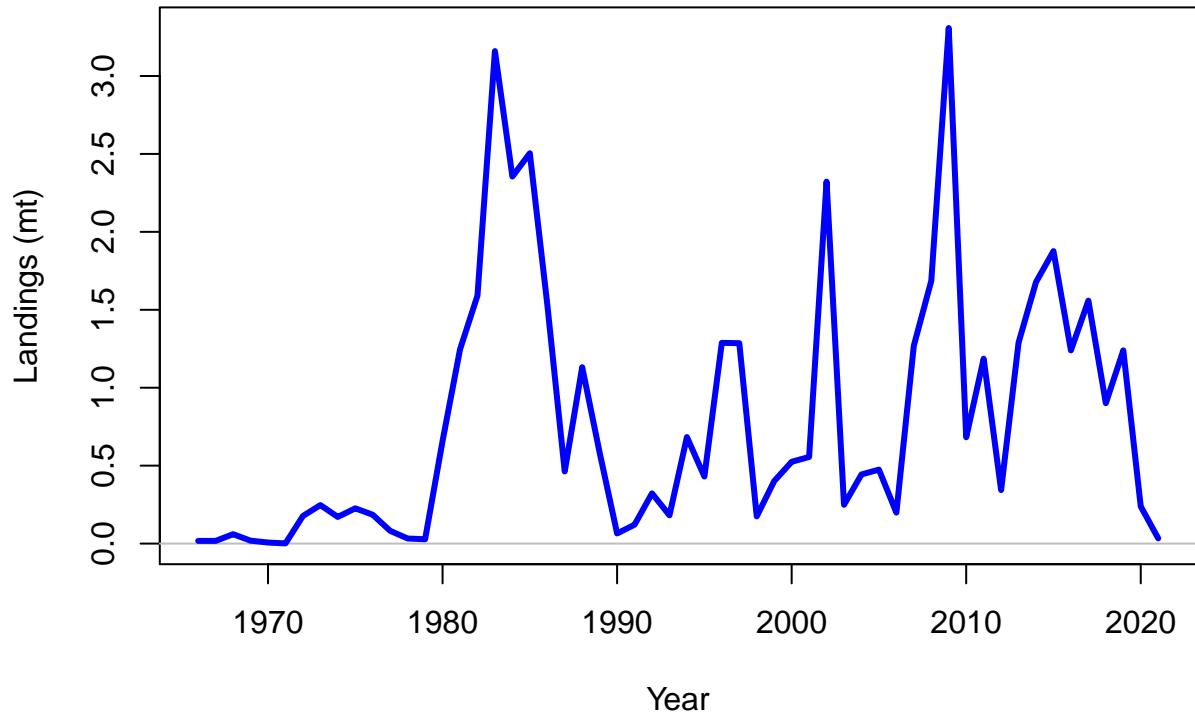


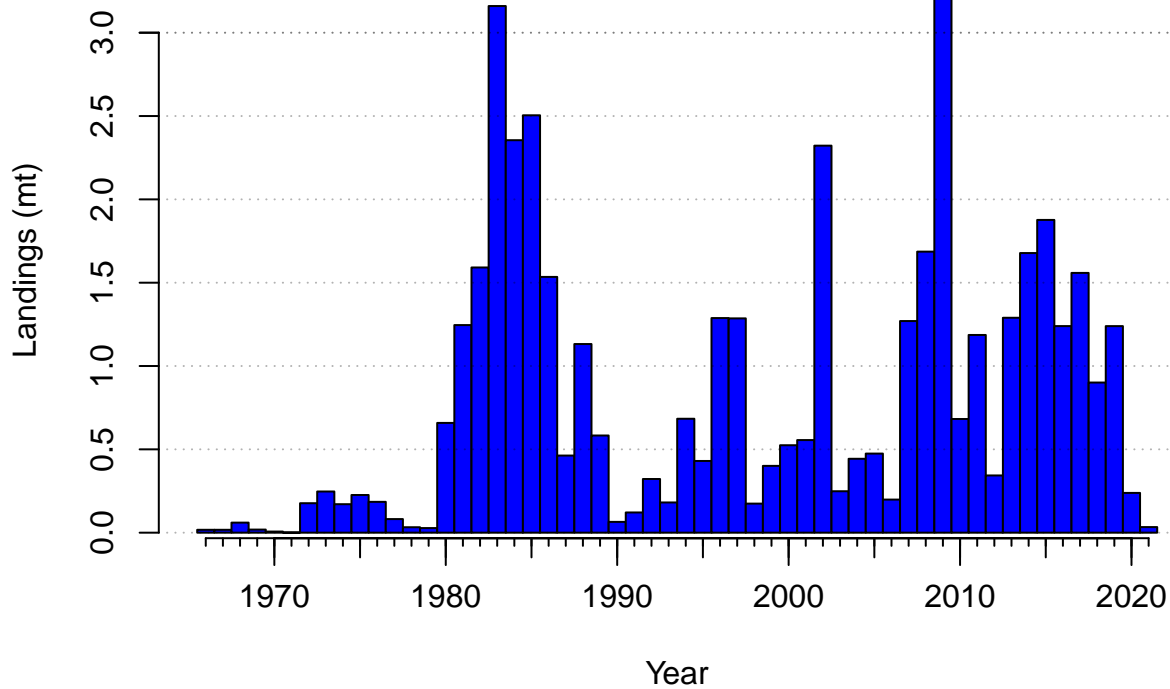




Log recruitment deviation







Observed and expected Landings (mt)

FISHERY
FISHERY obs.

3.0
2.5
2.0
1.5
1.0
0.5
0.0

1970

1980

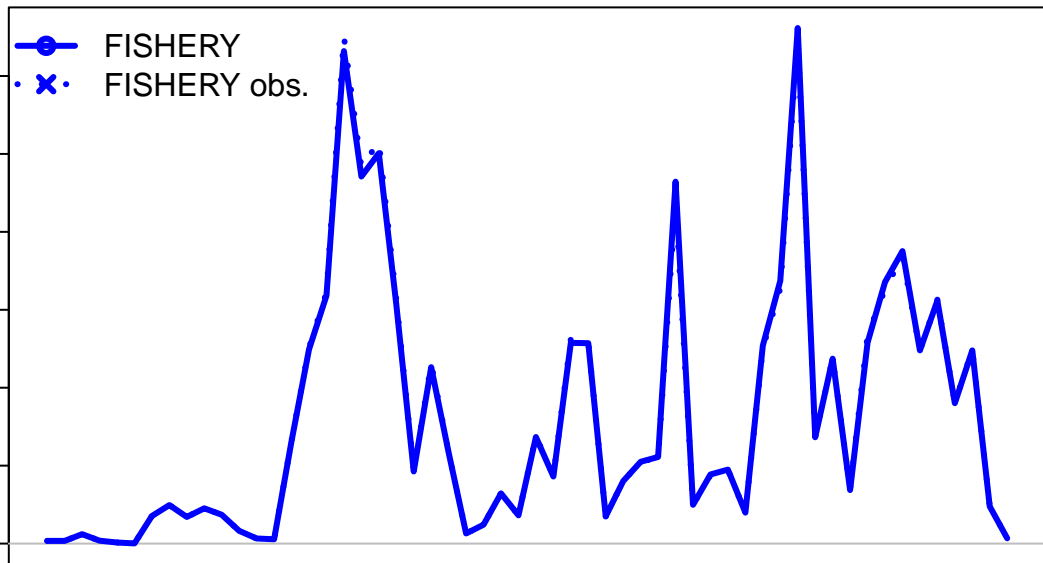
1990

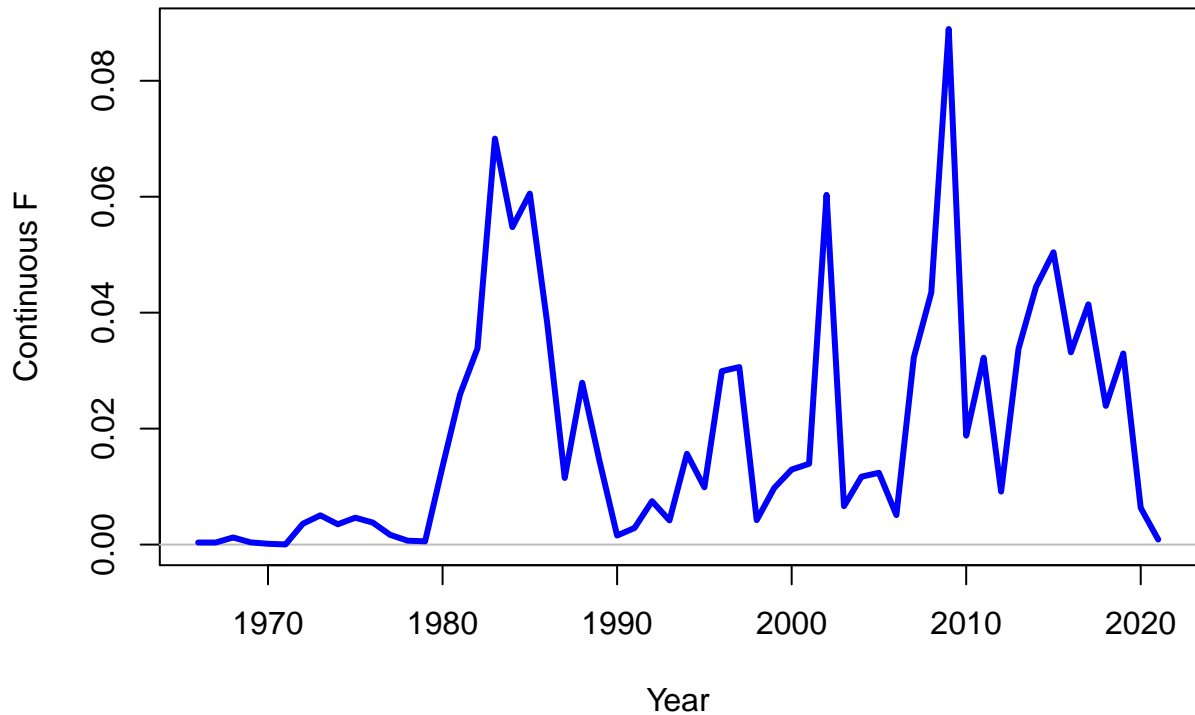
2000

2010

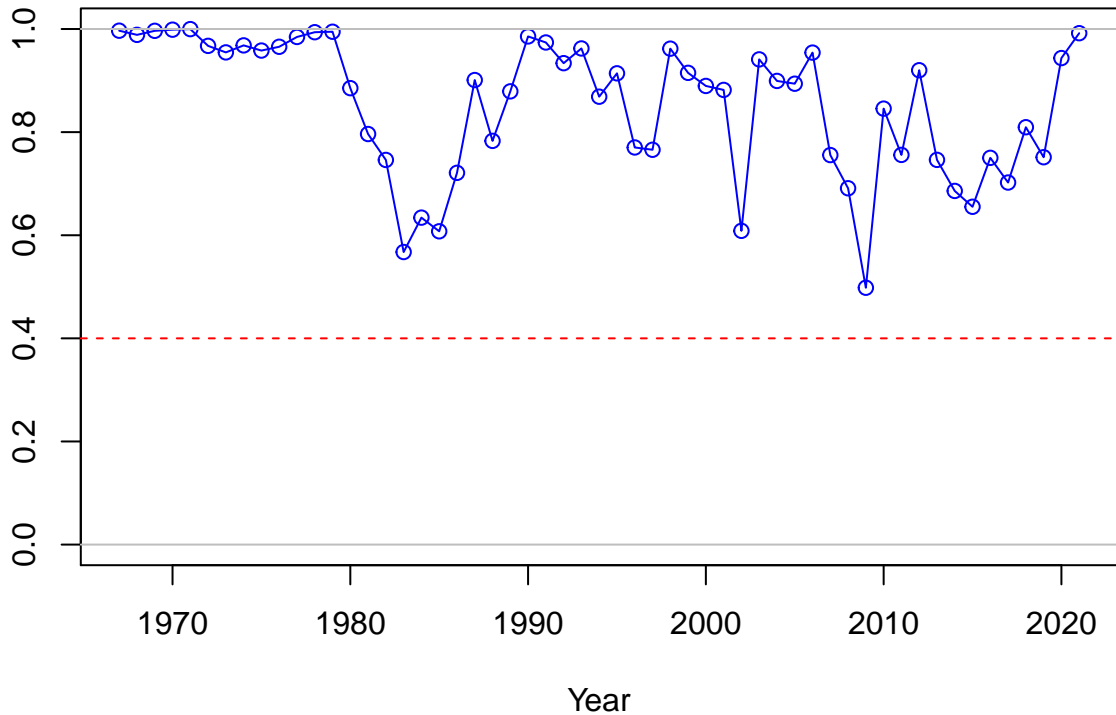
2020

Year

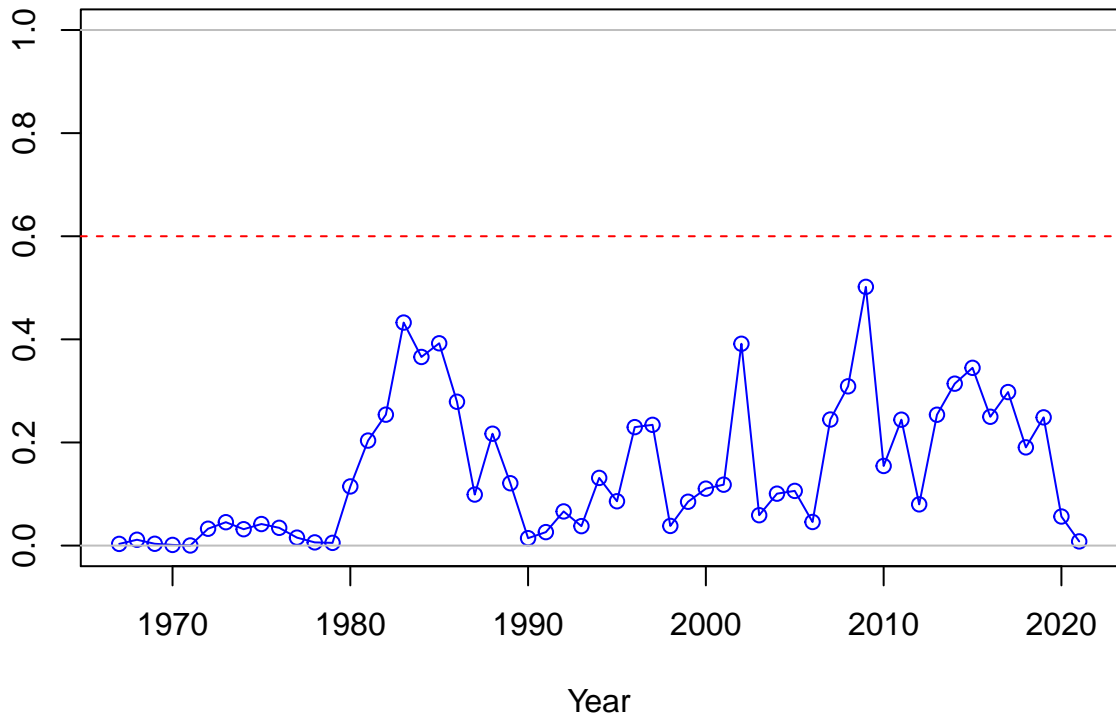




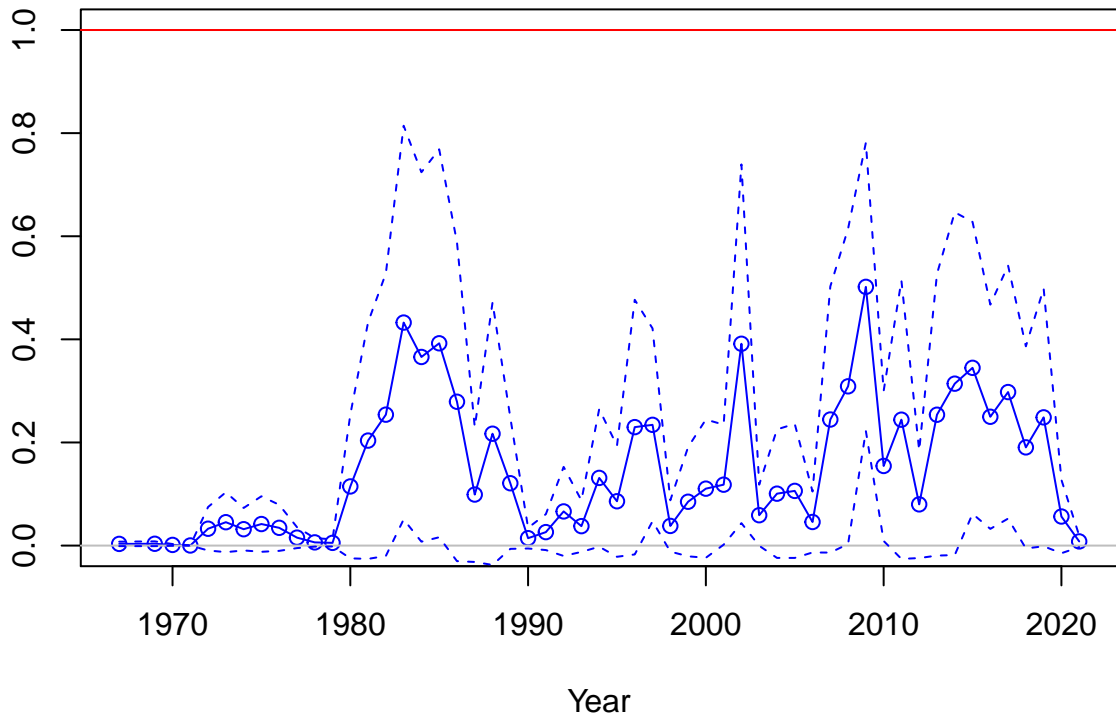
SPR



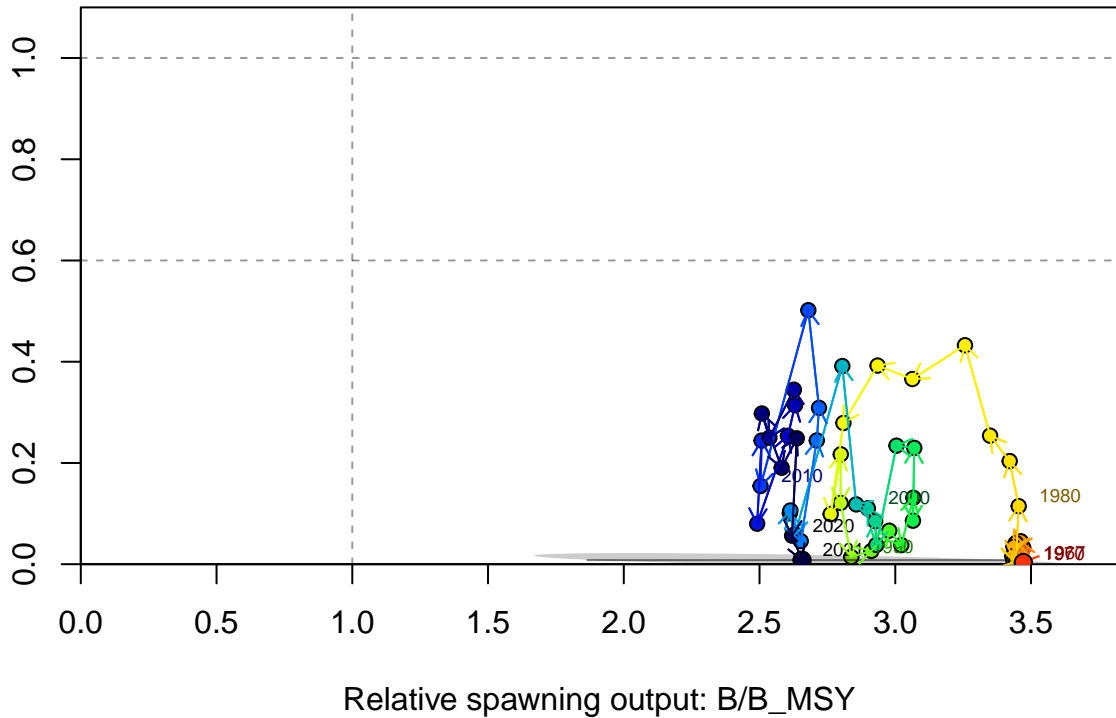
1-SPR



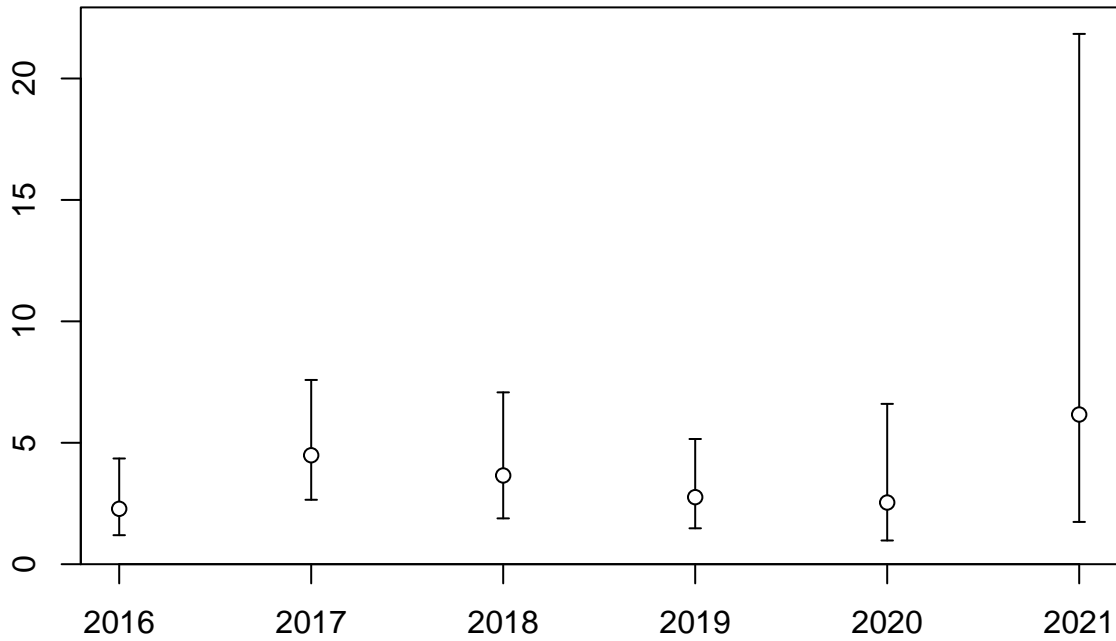
Fishing intensity: 1-SPR



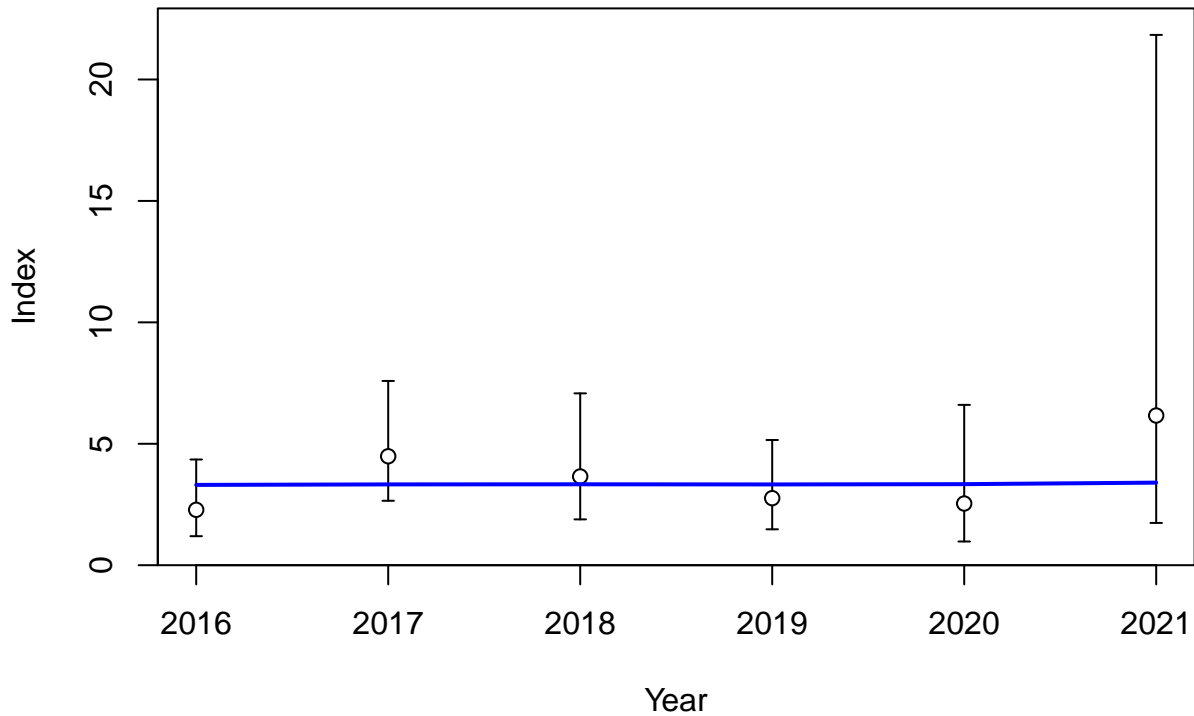
Fishing intensity: 1-SPR



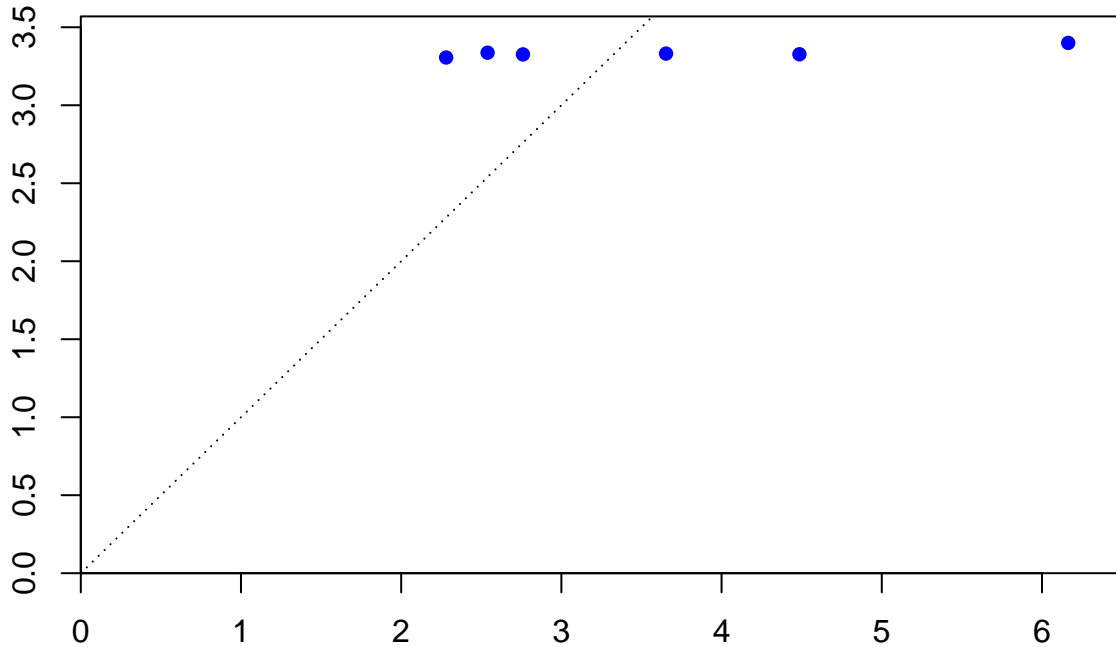
Index



Year



Expected index



Observed index

Log index

3.0
2.5
2.0
1.5
1.0
0.5
0.0

2016

2017

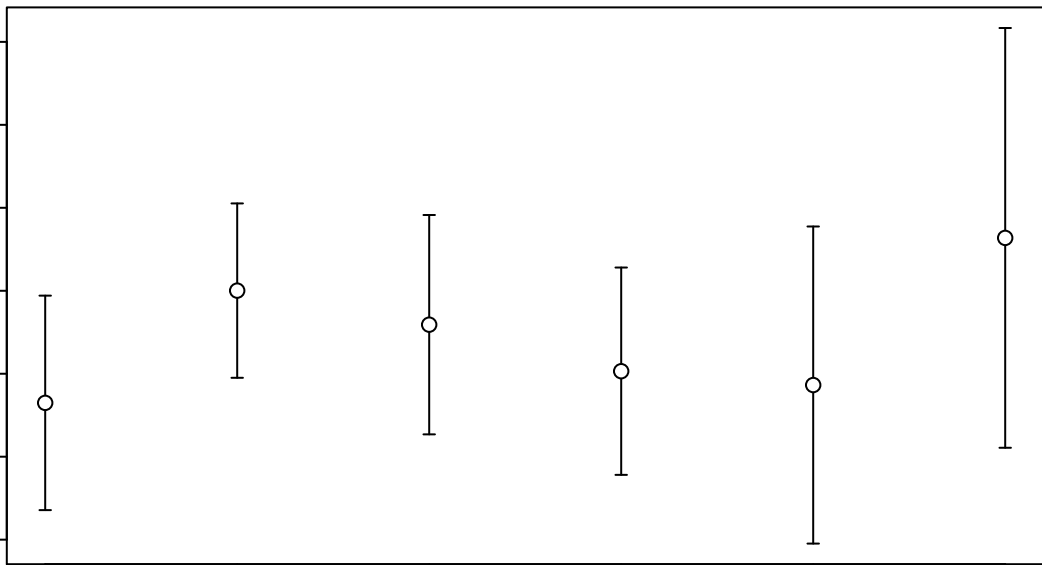
2018

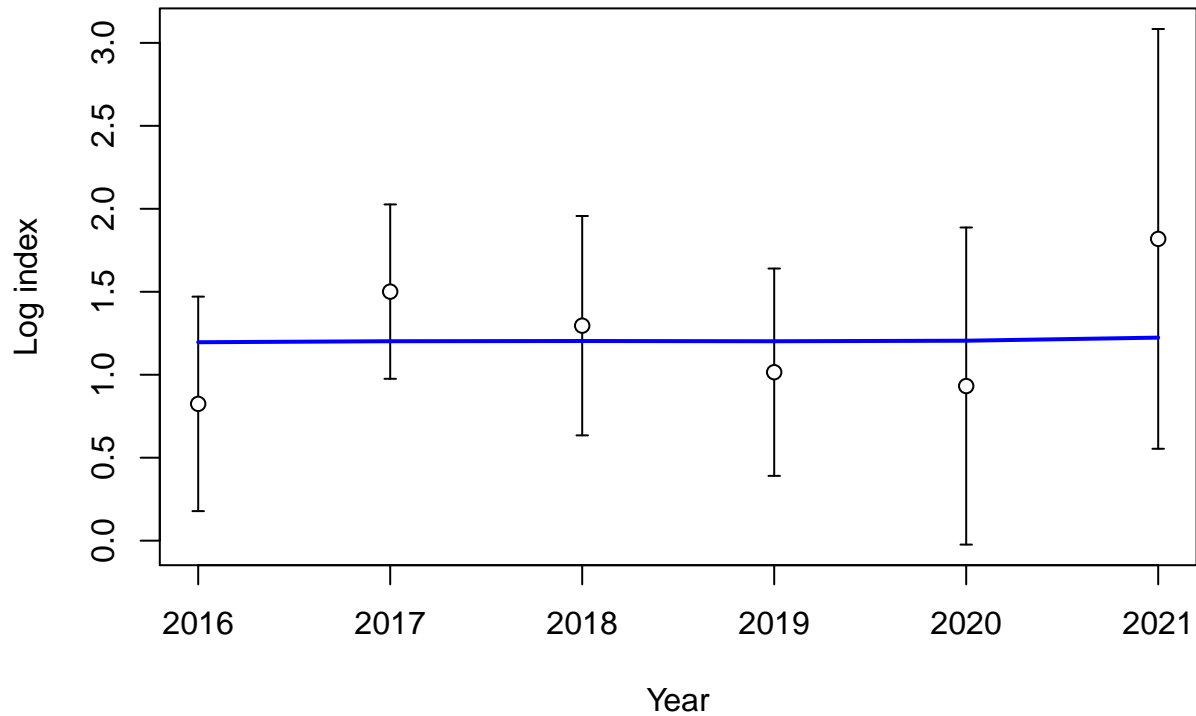
2019

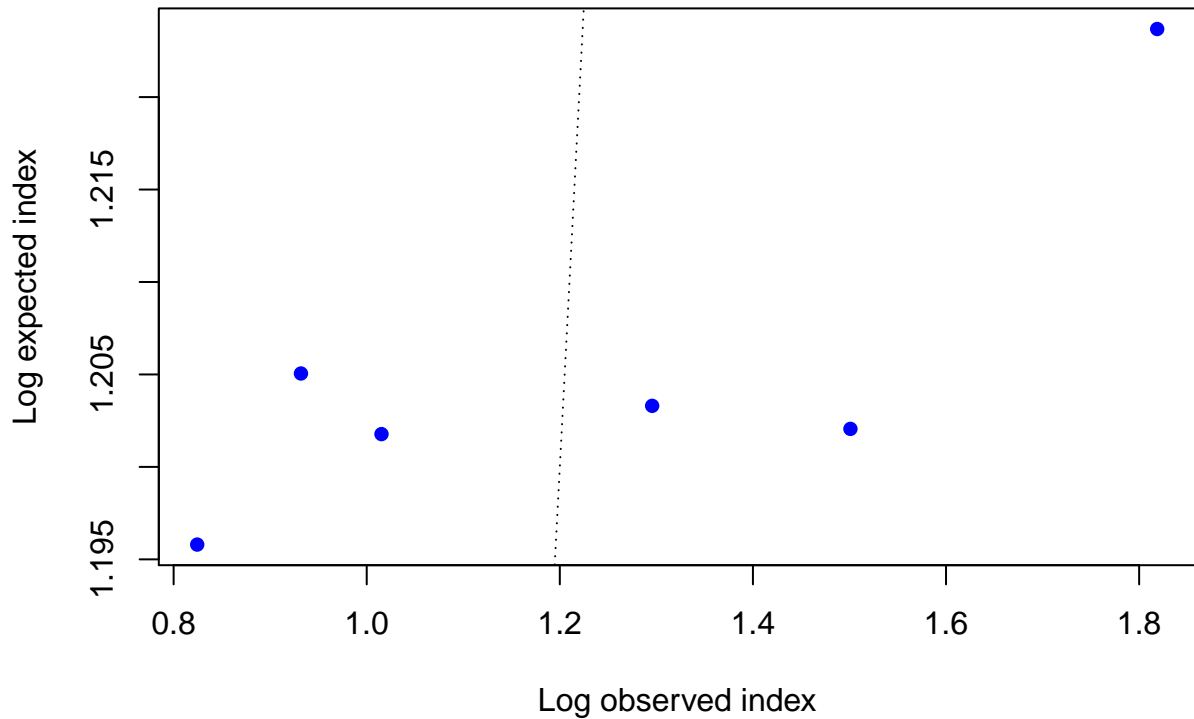
2020

2021

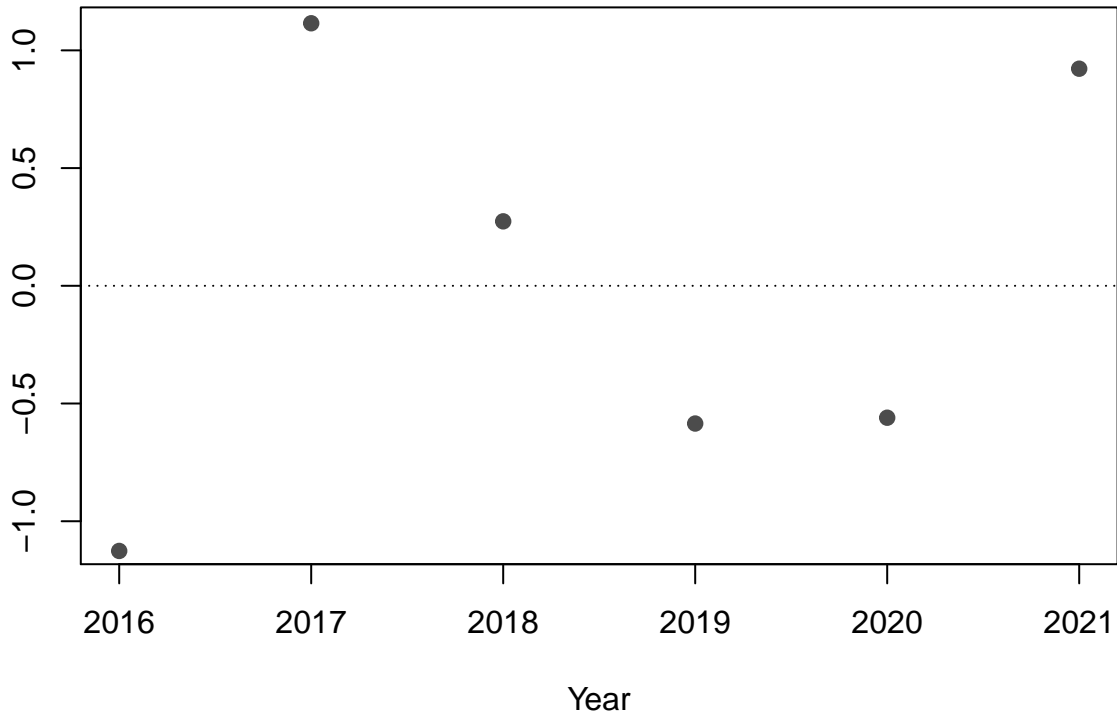
Year

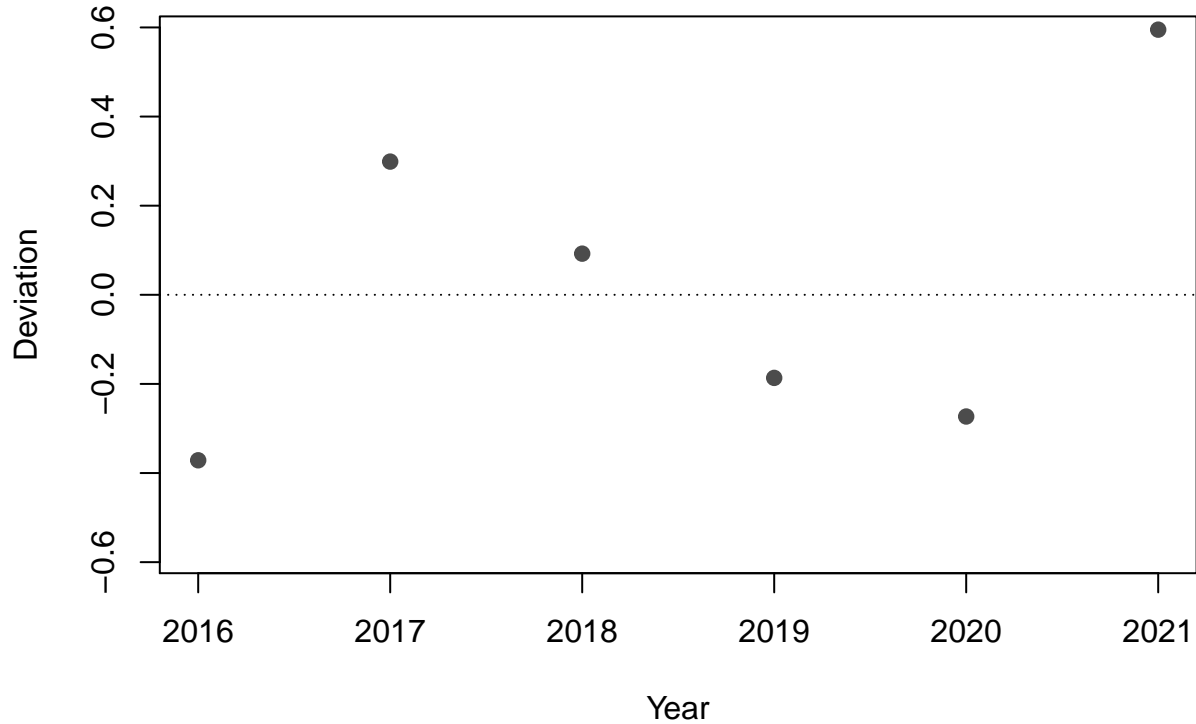


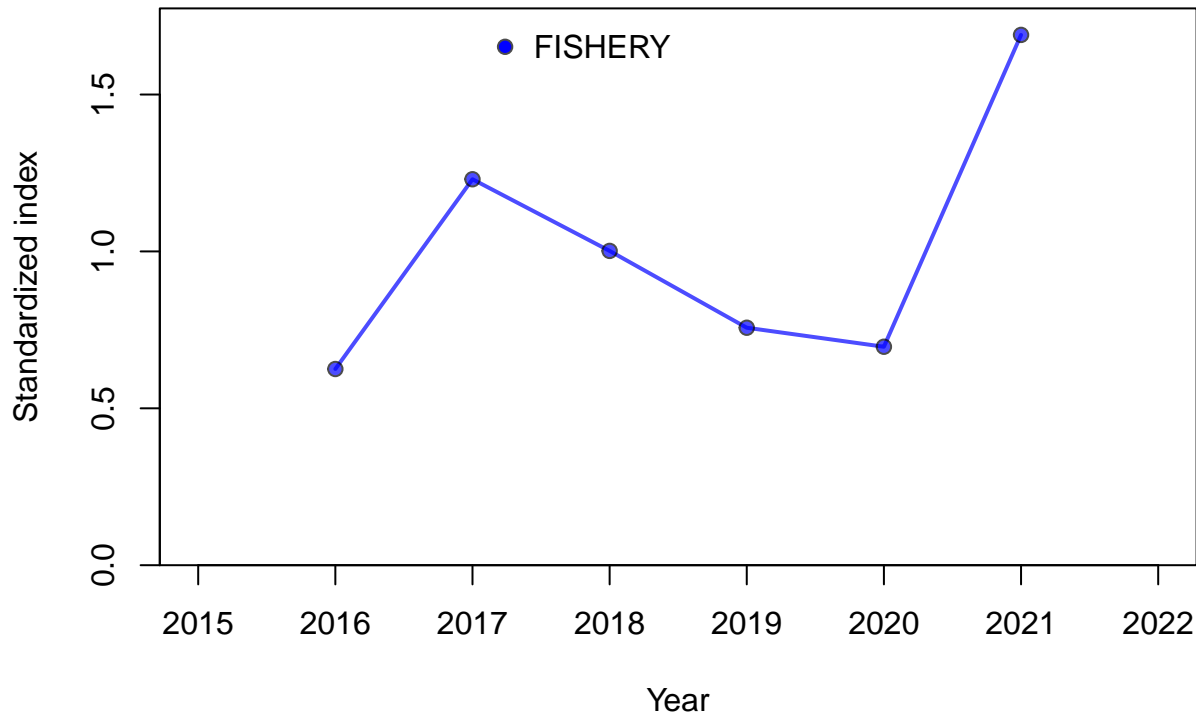


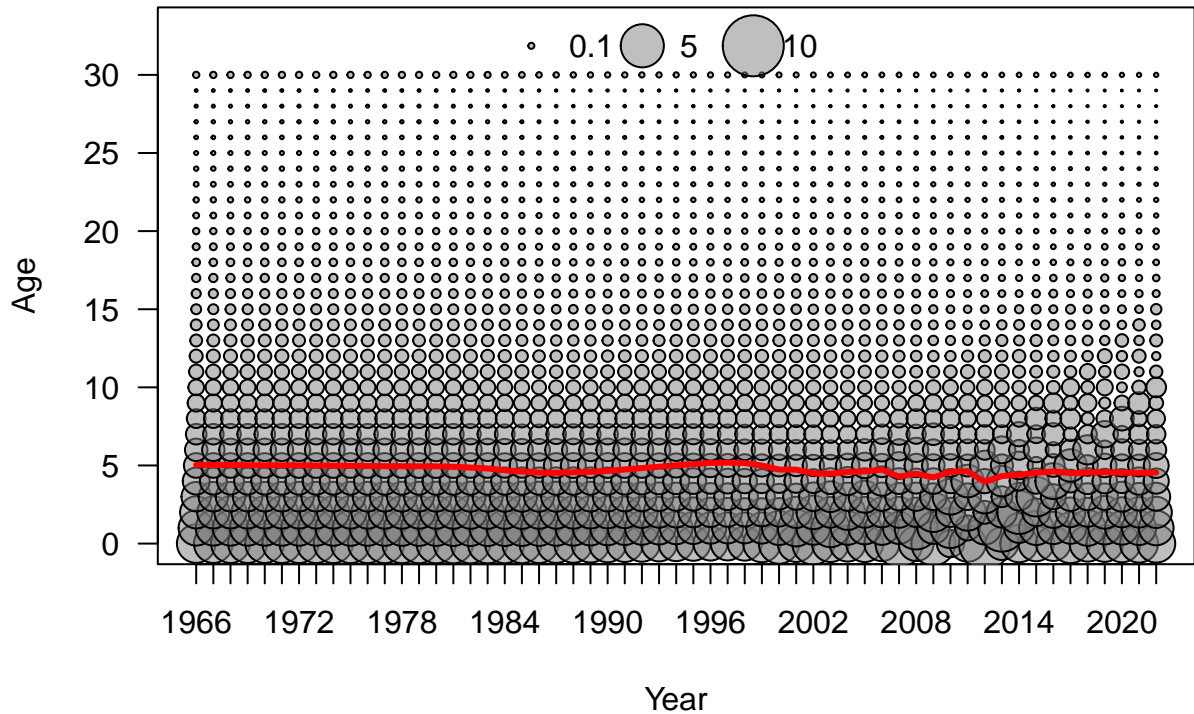


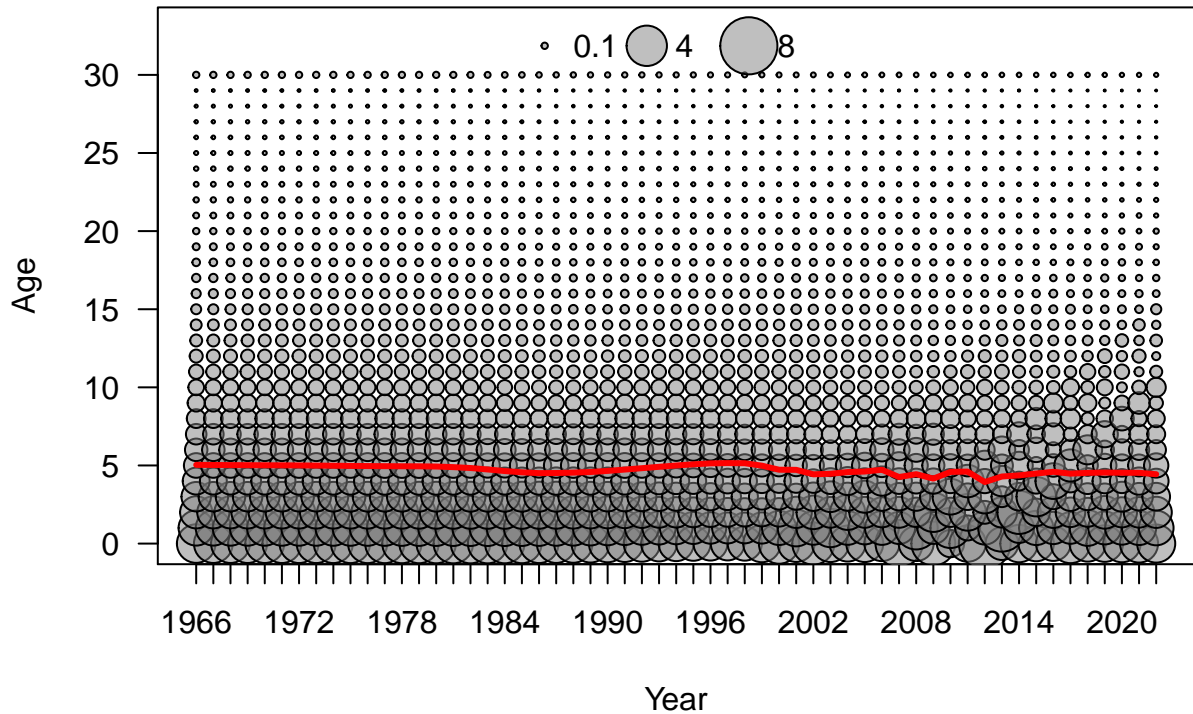
Residual

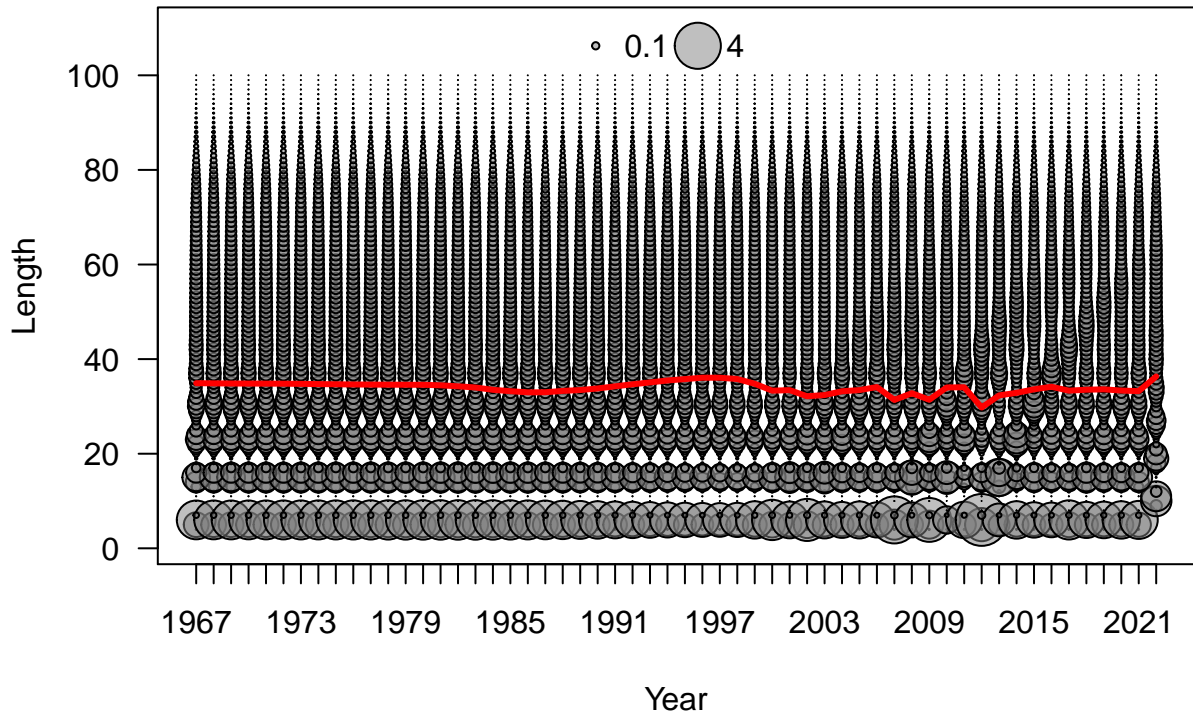


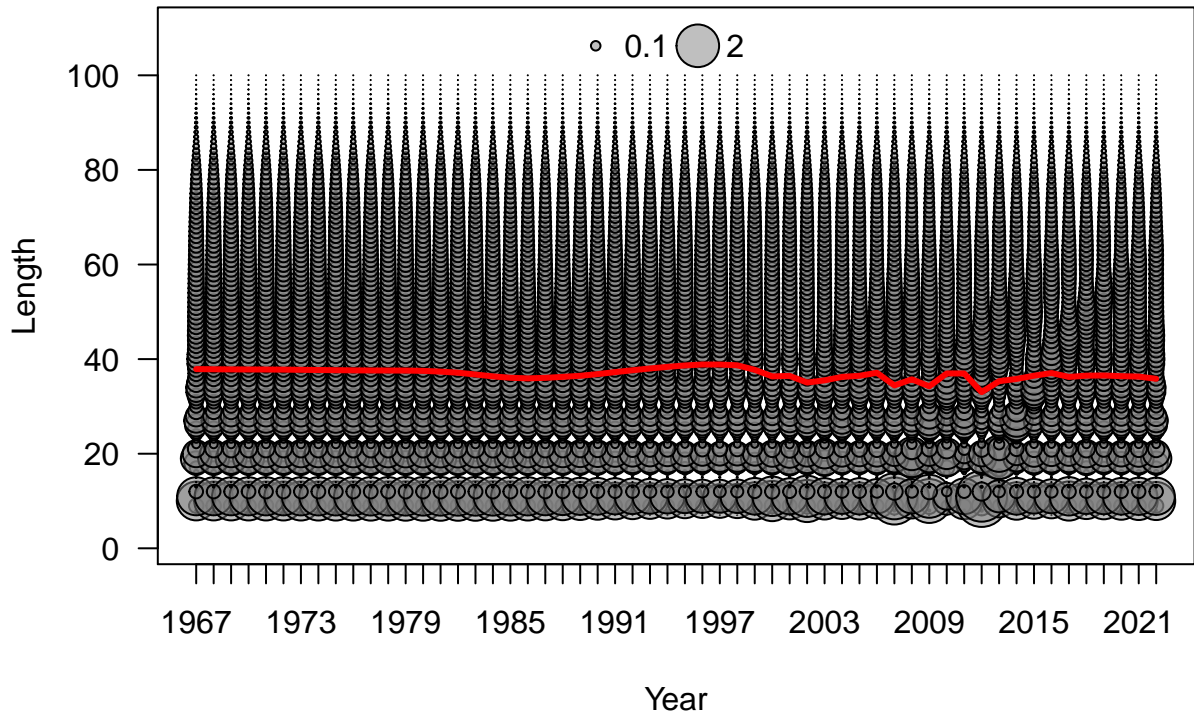


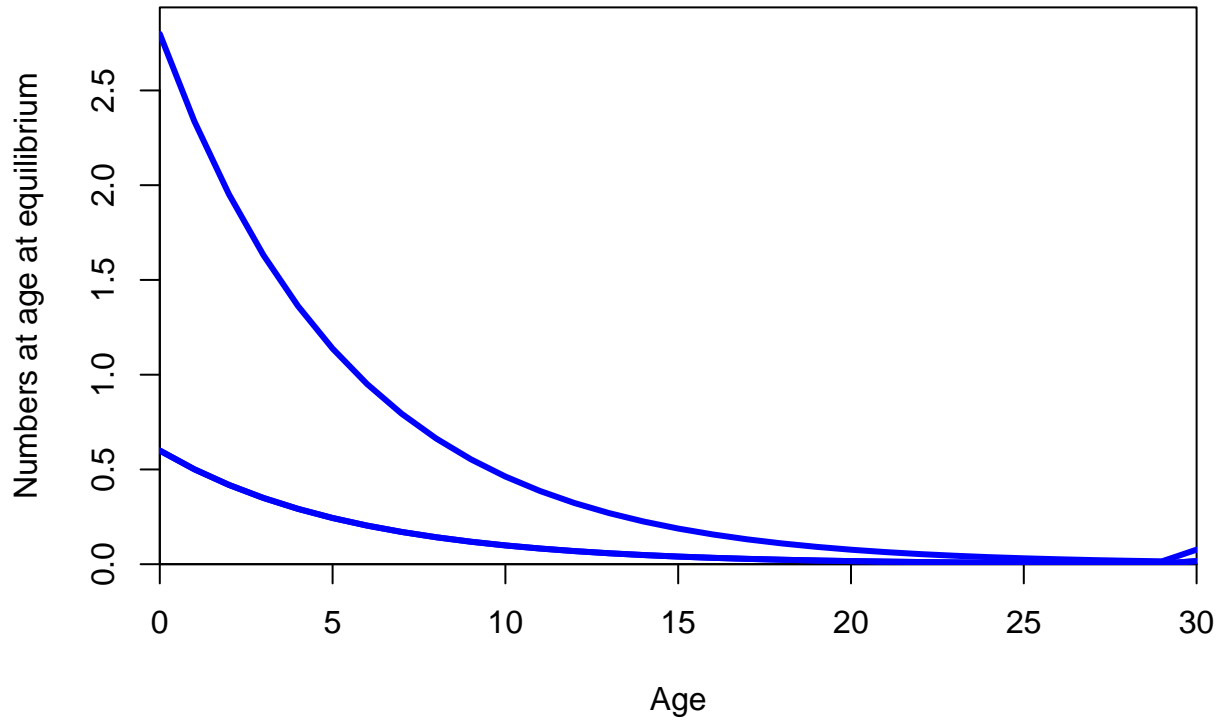






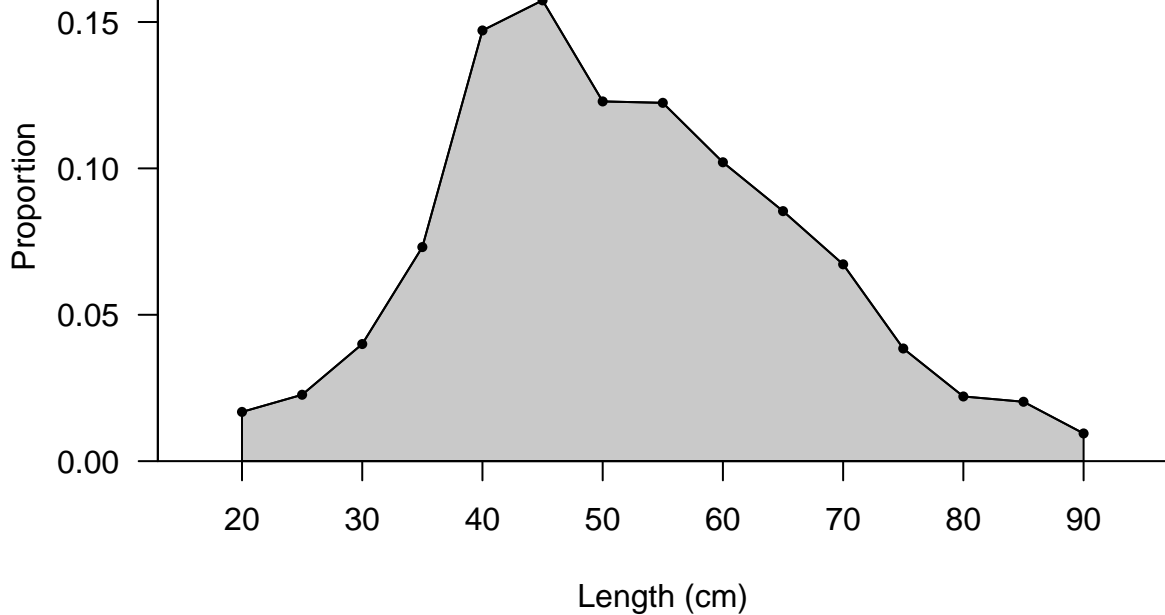






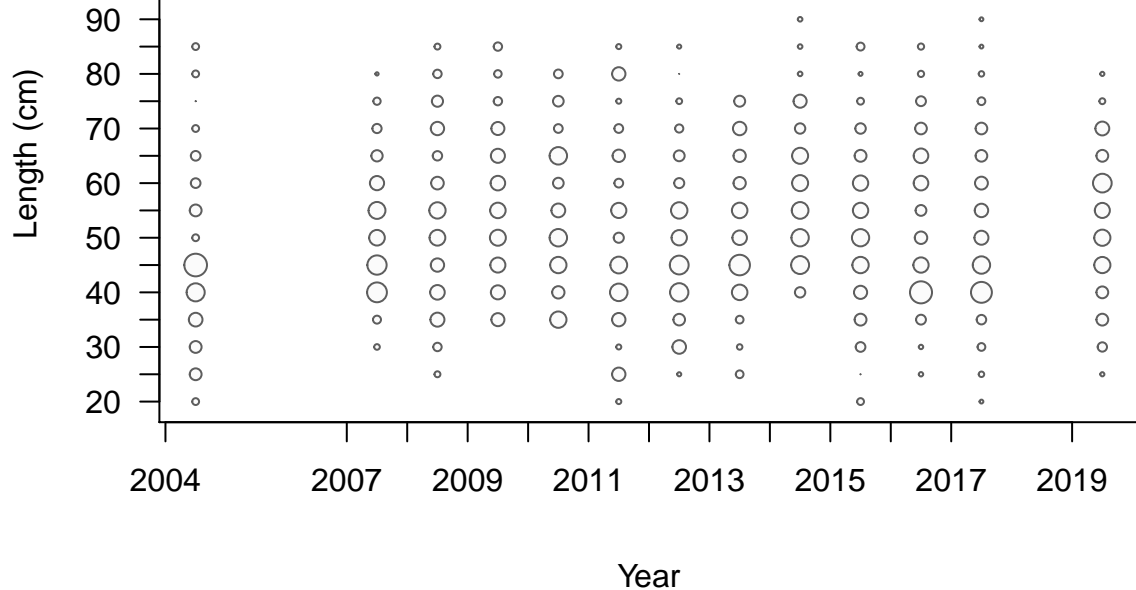
FISHERY

Sum of N adj.=1008.7

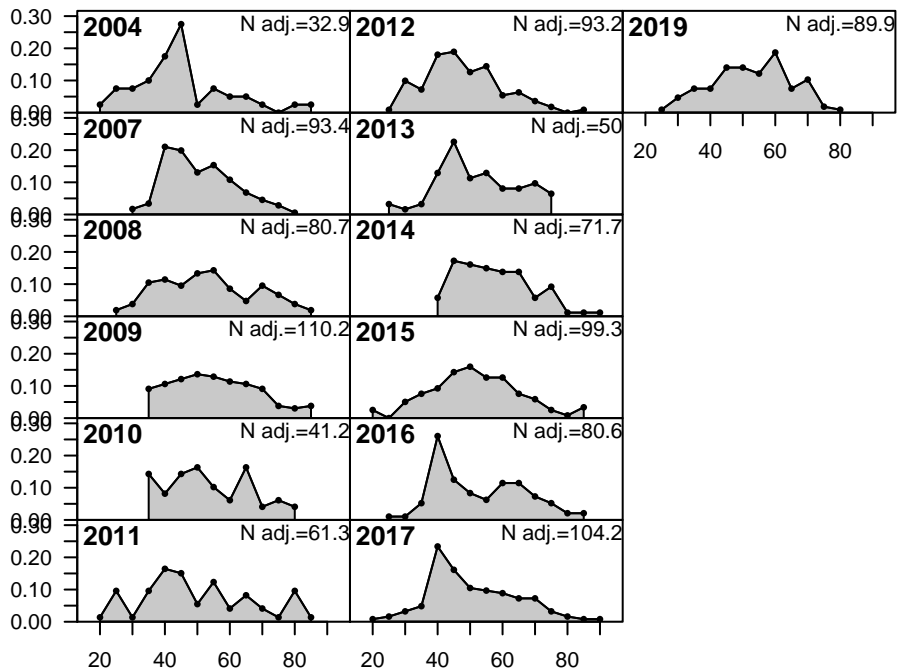


FISHERY

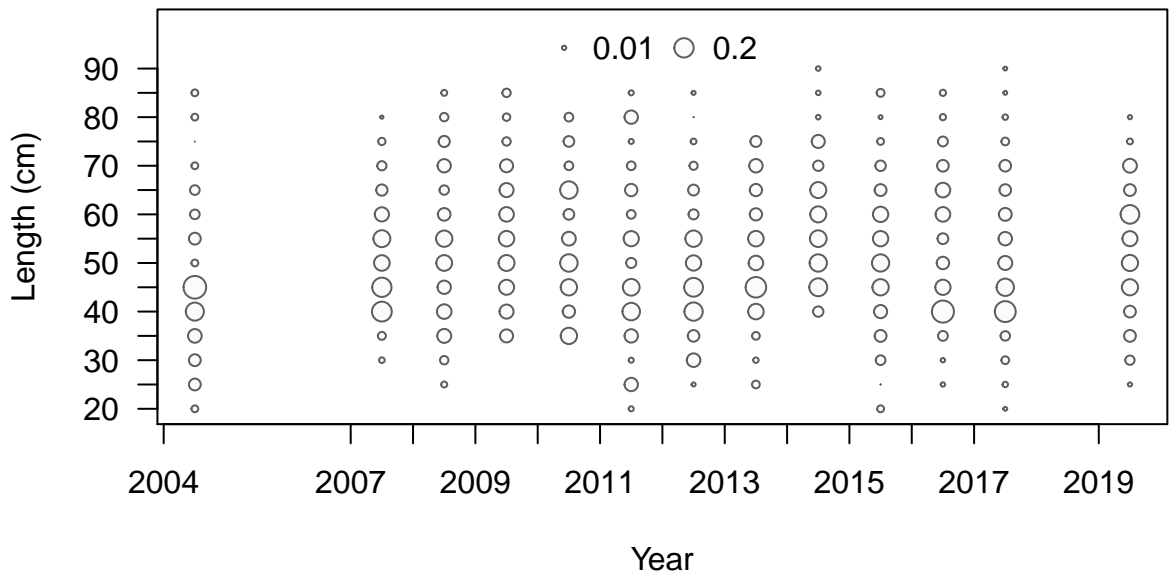
◦ 0.01 ○ 0.2



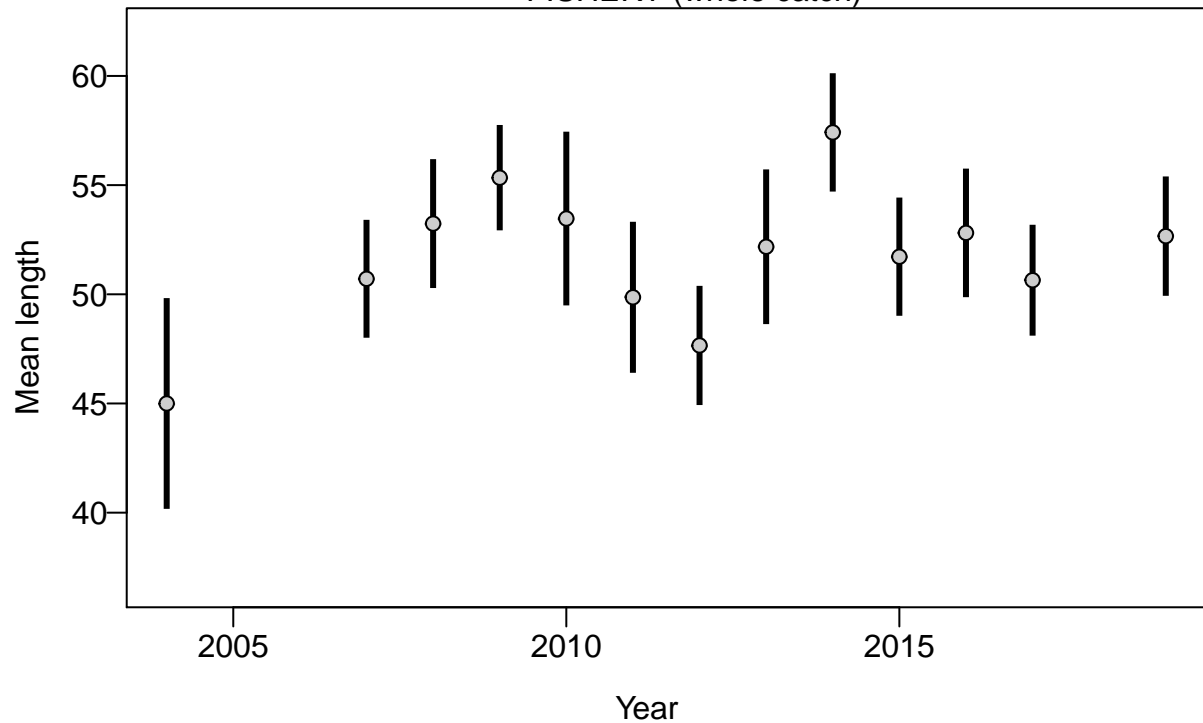
Proportion



Length (cm)

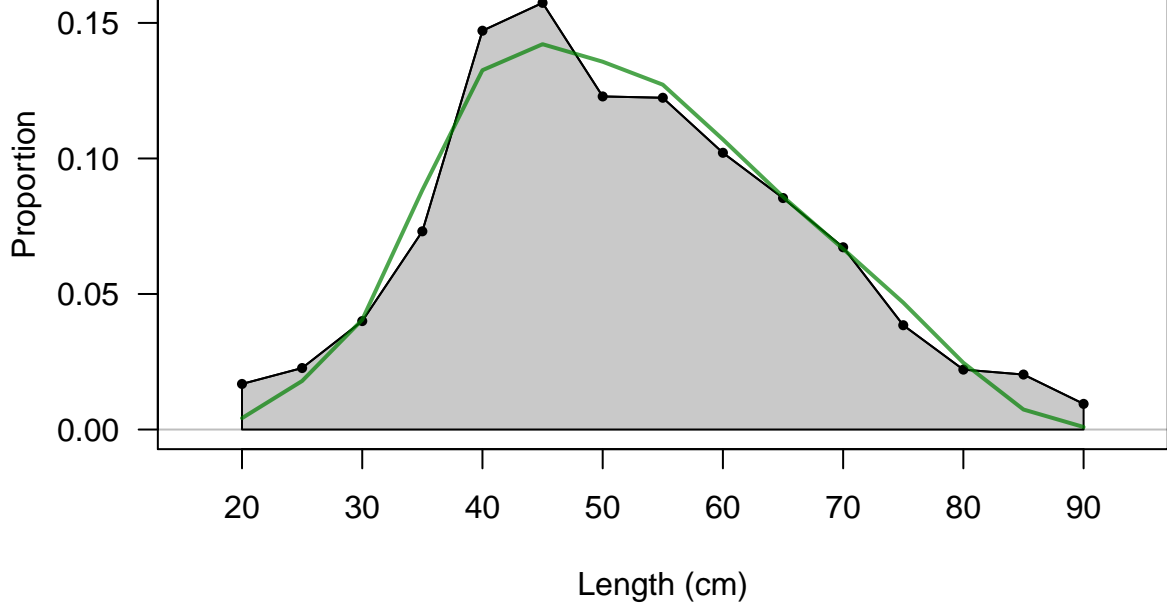


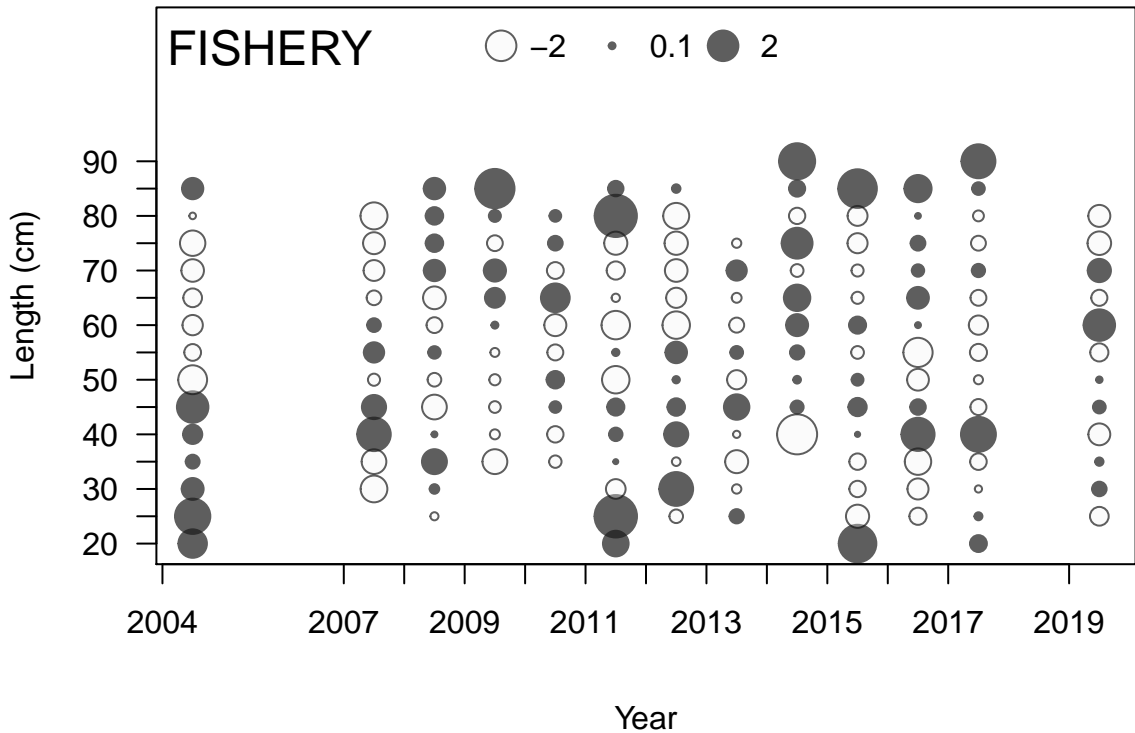
FISHERY (whole catch)

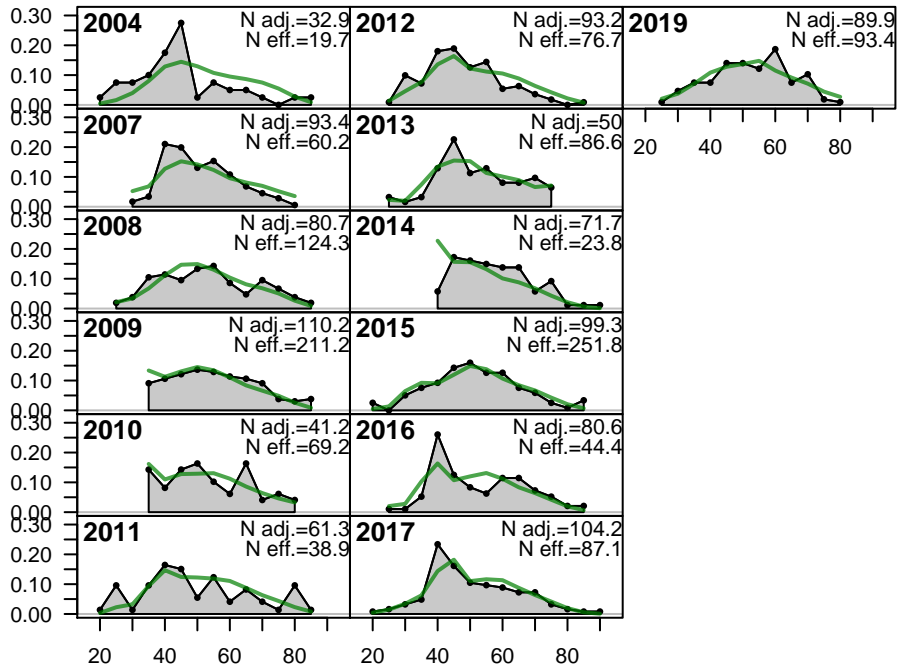


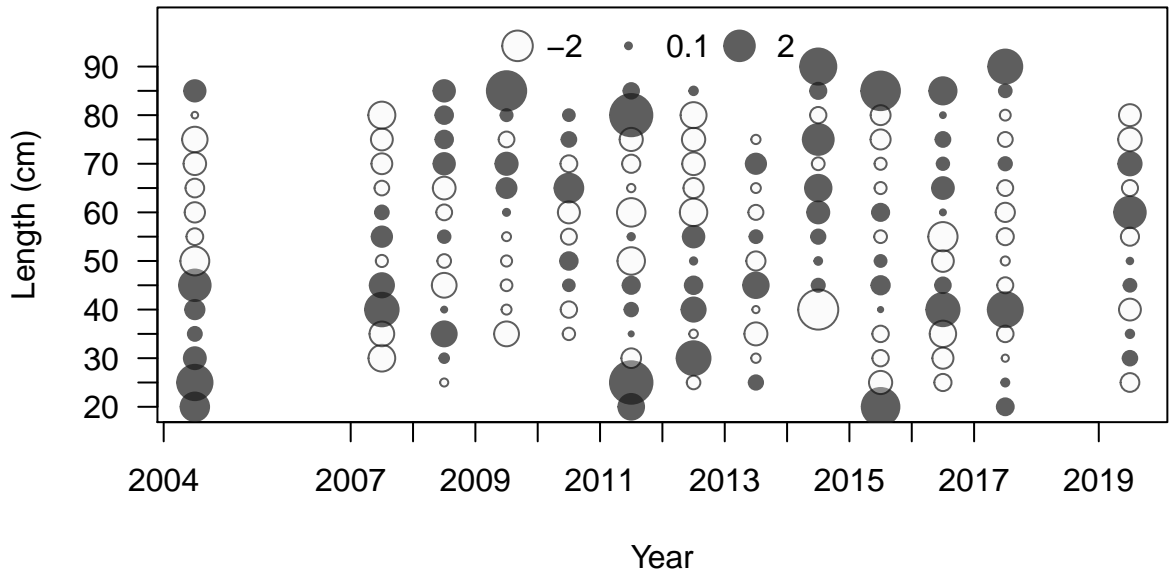
FISHERY

Sum of N adj.=1008.7
Sum of N eff.=1187.2

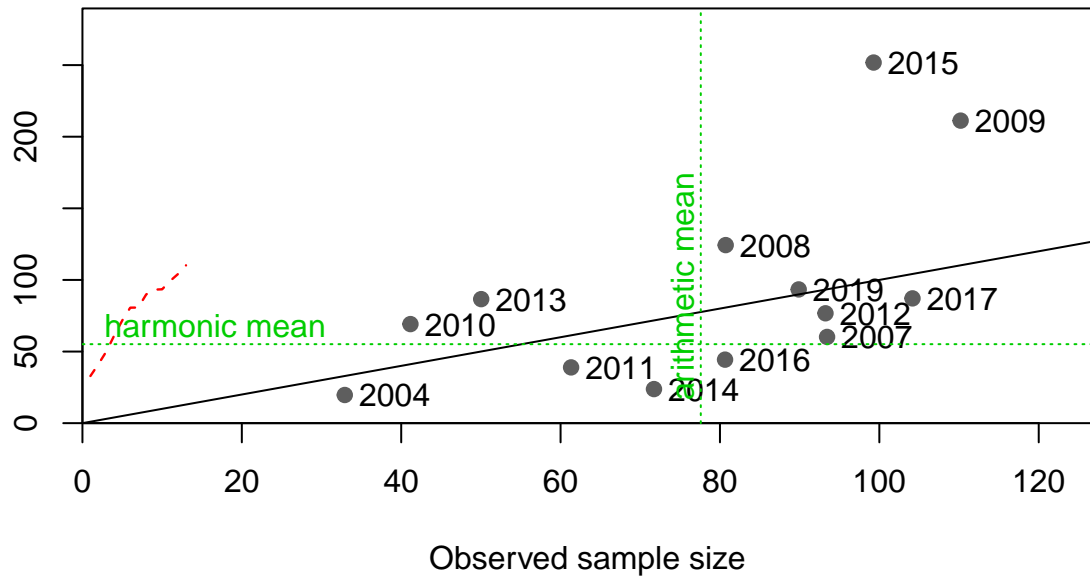




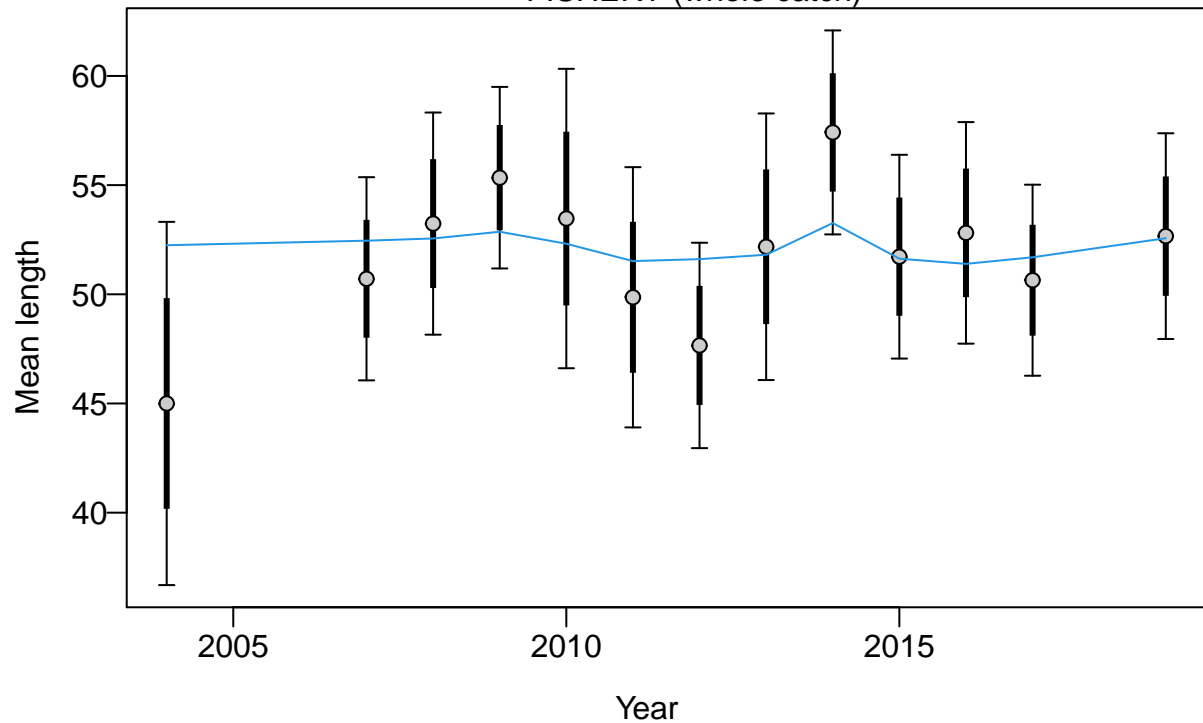


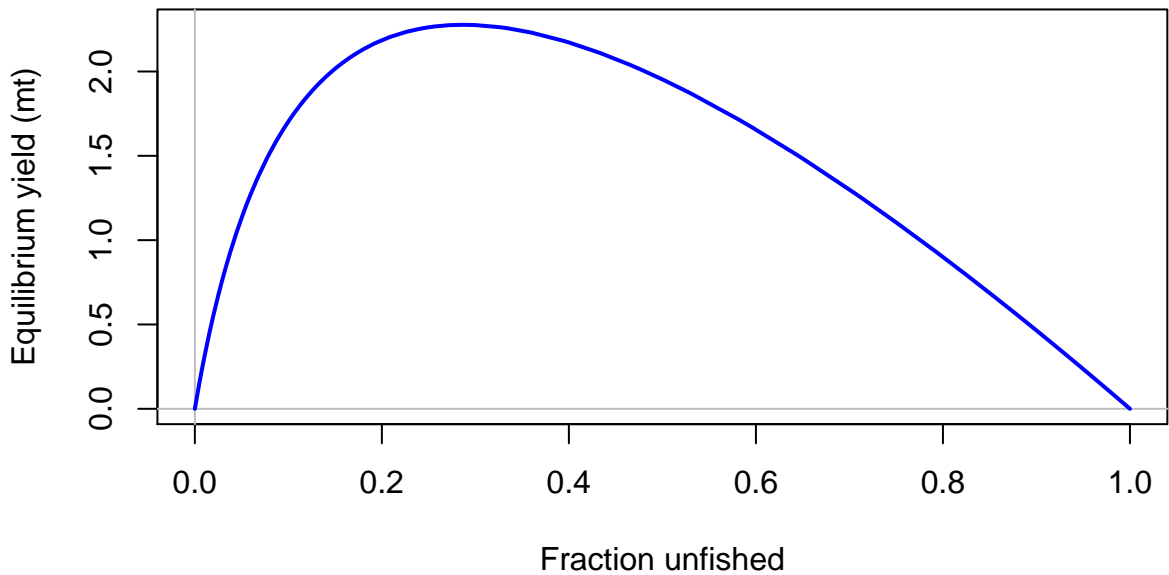


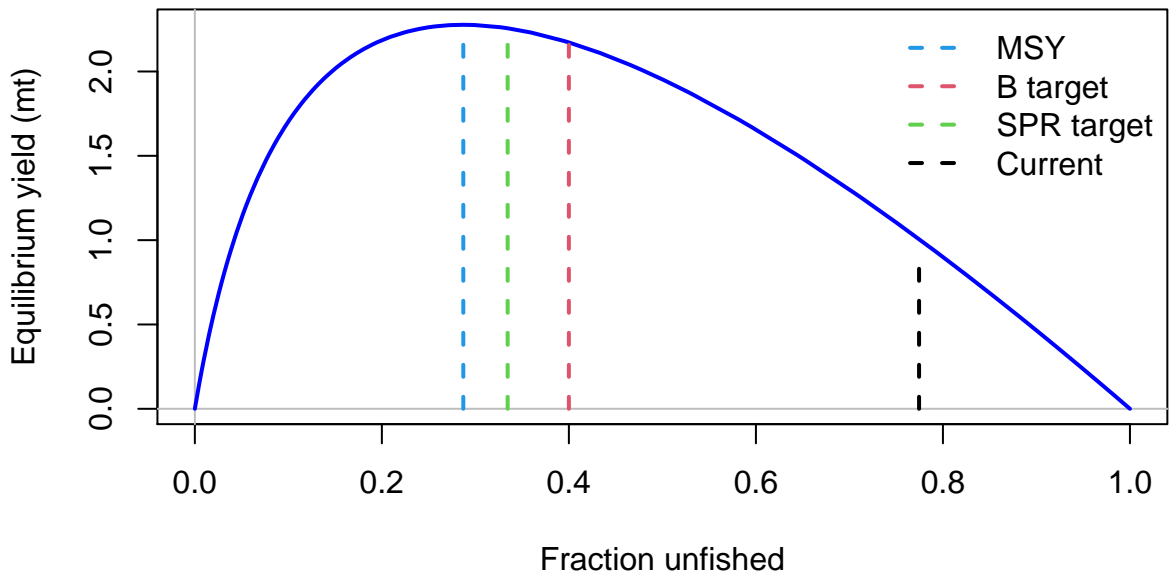
Effective sample size

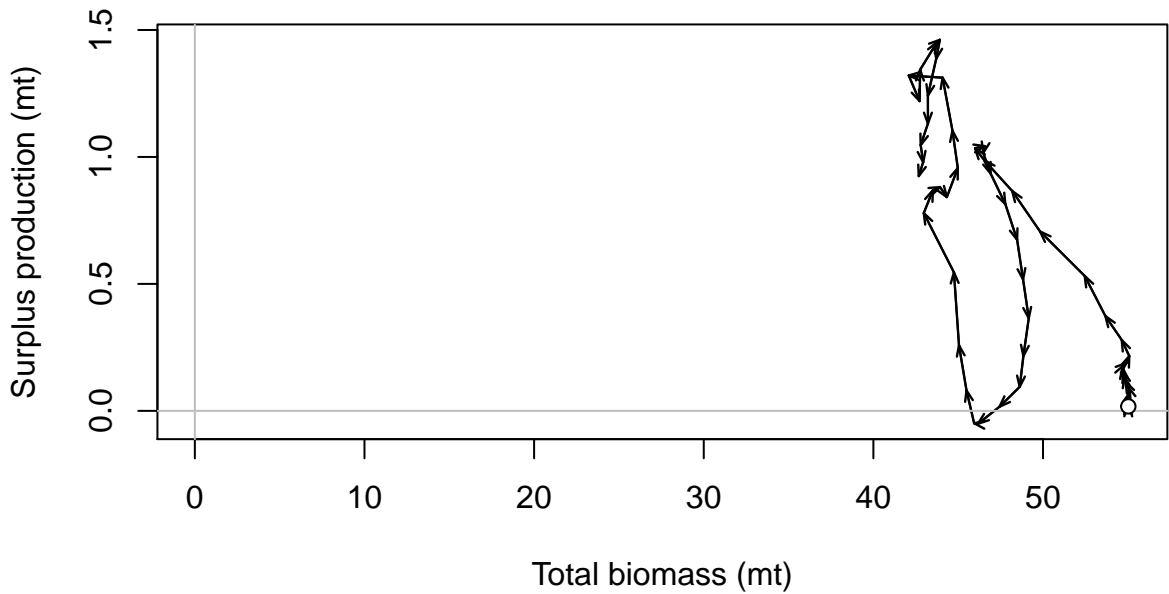


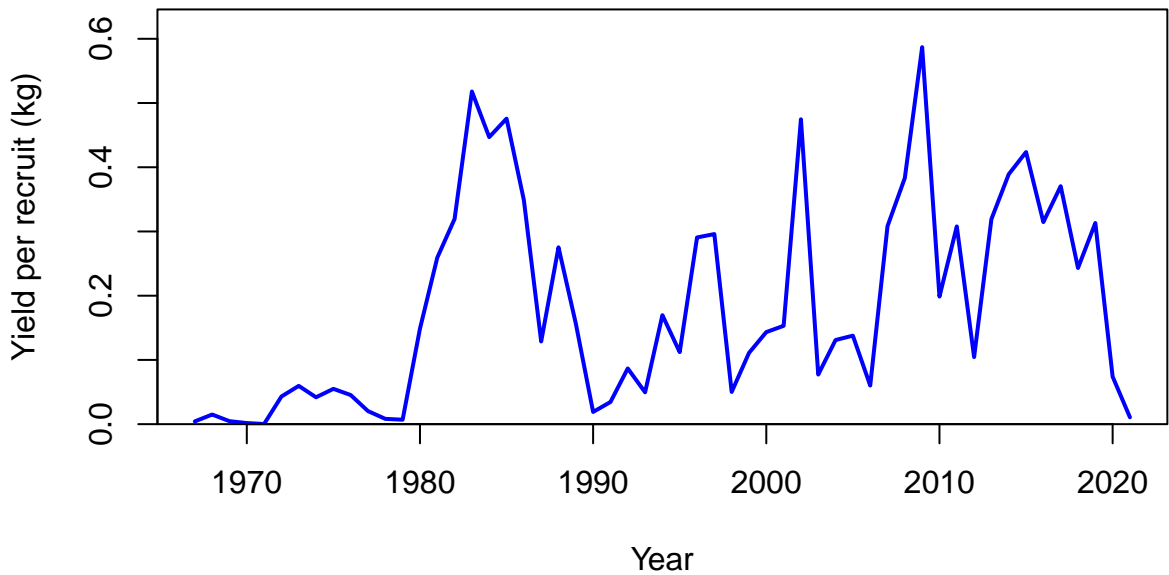
FISHERY (whole catch)

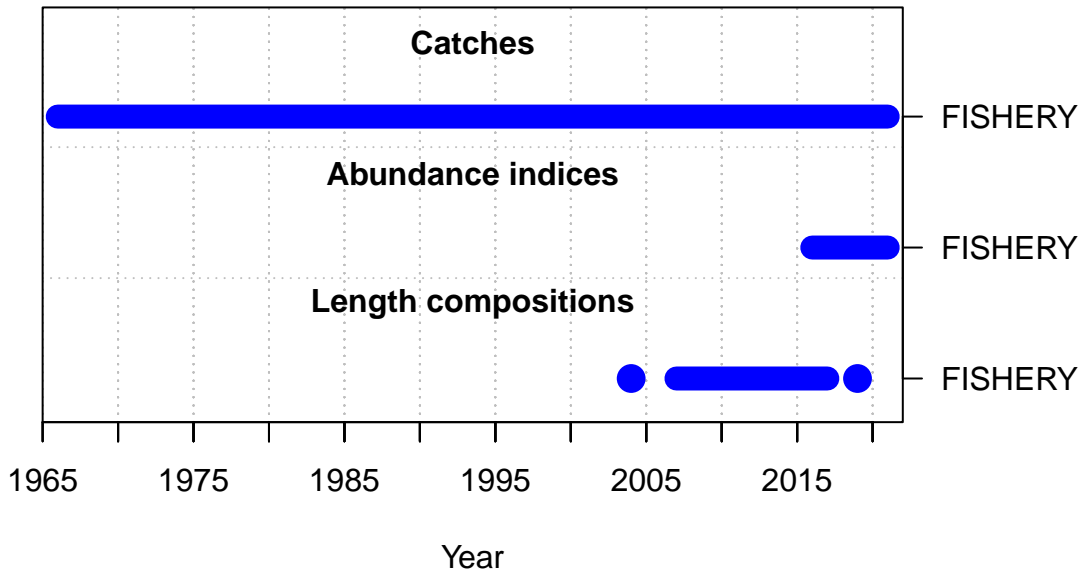


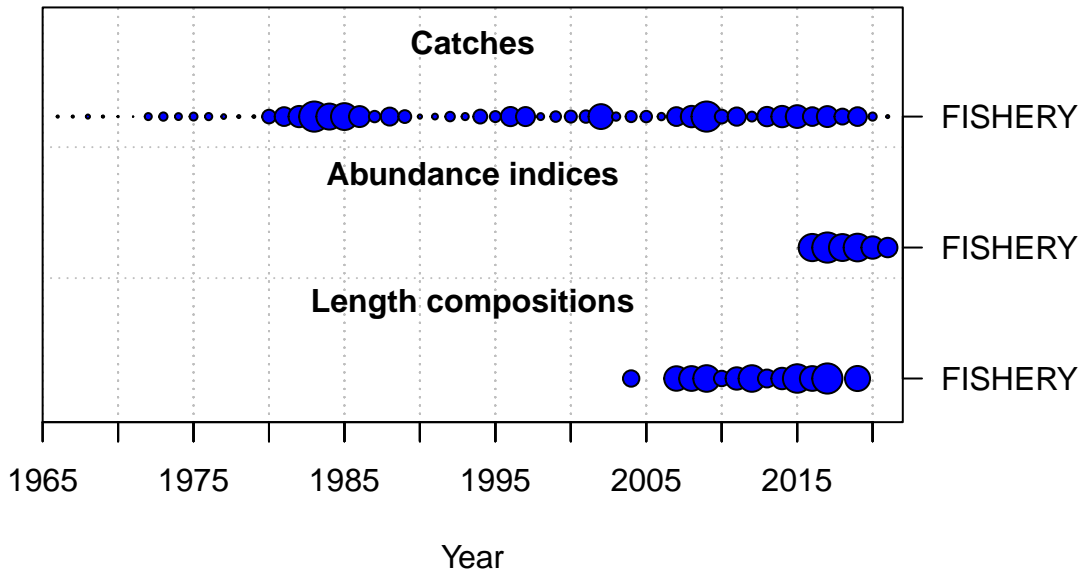




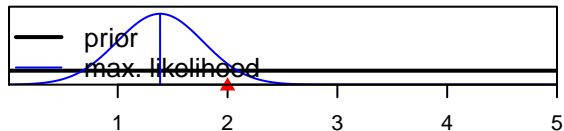




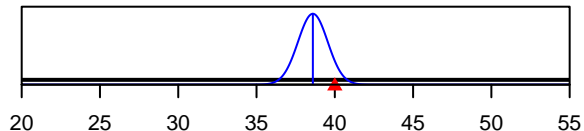




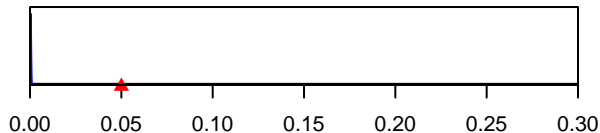
SR_LN(R0)



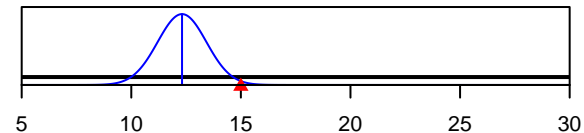
Size_inflection_FISHERY(1)



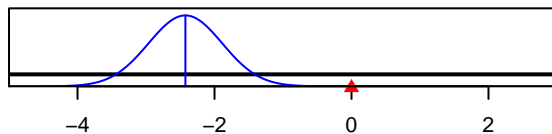
InitF_seas_1_flt_1FISHERY



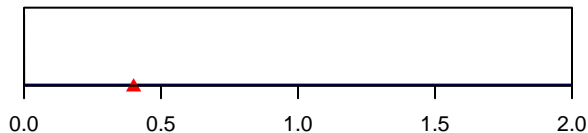
Size_95%width_FISHERY(1)



LnQ_base_FISHERY(1)



Q_extraSD_FISHERY(1)



Parameter value