

Plots created using the 'r4ss' package in R

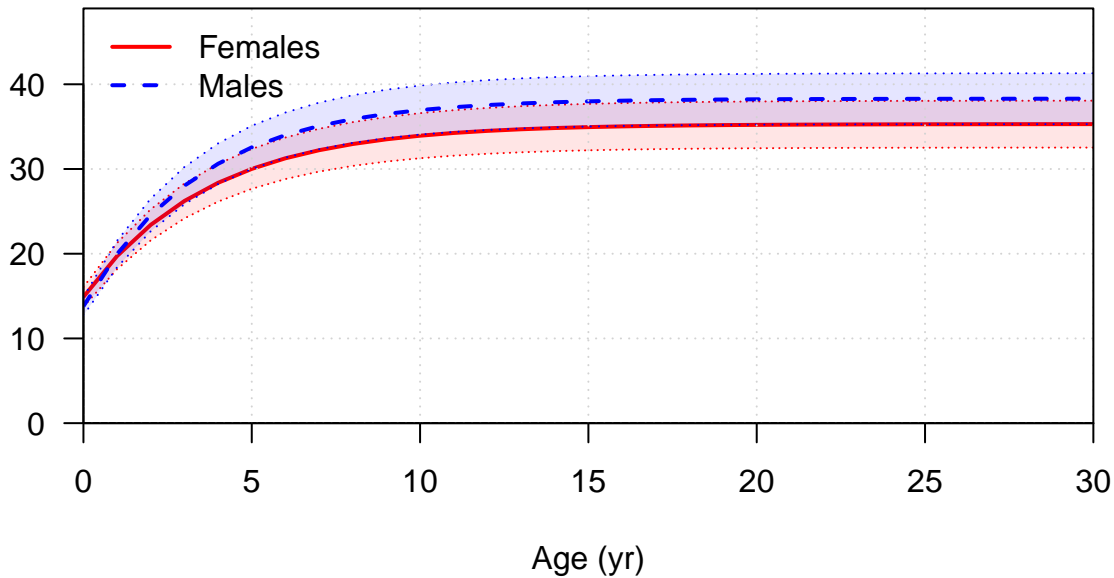
Stock Synthesis version: 3.30.19.0

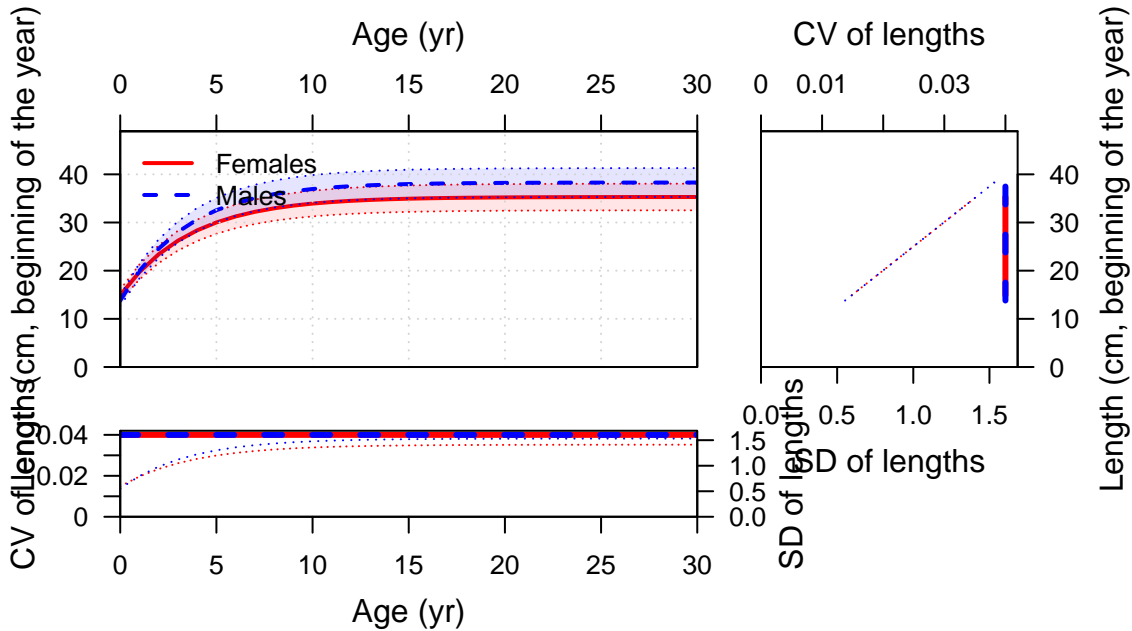
StartTime: Mon Aug 08 10:09:40 2022

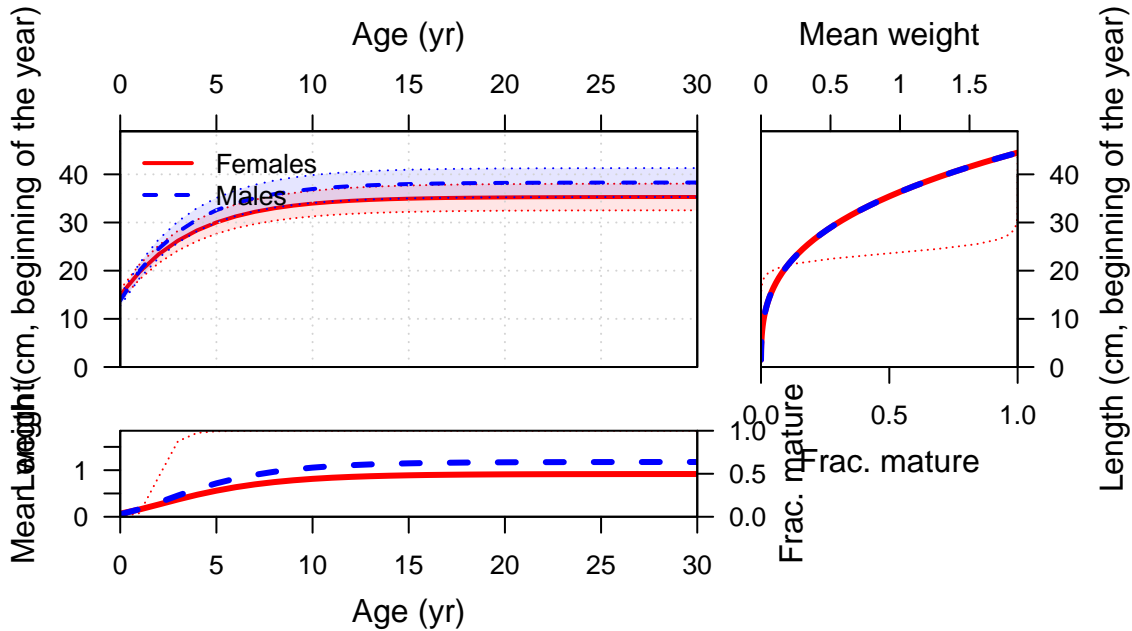
Data\_File: data.ss

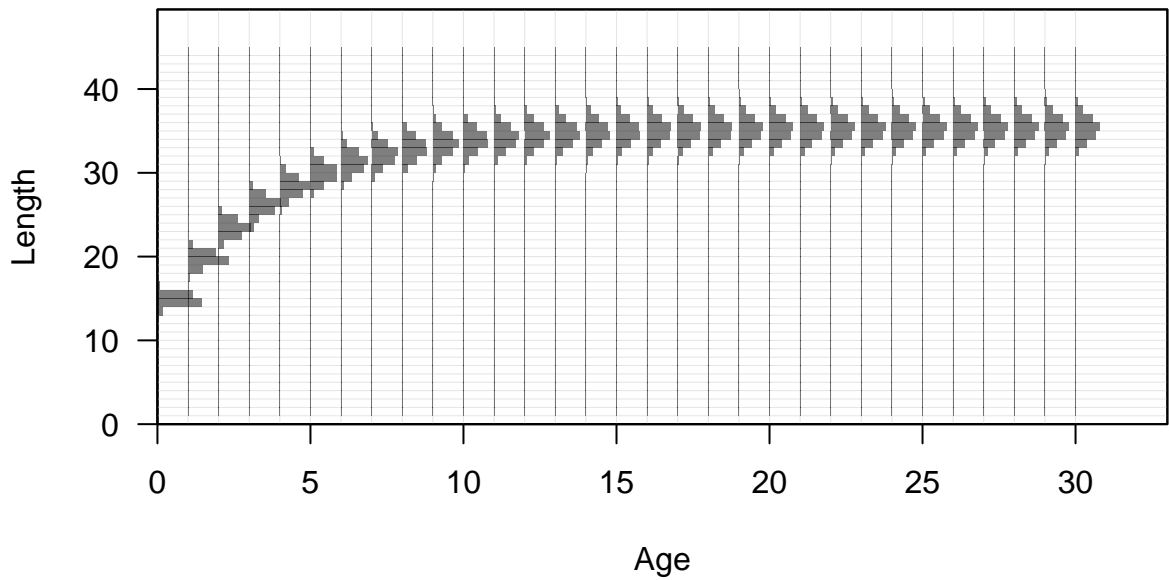
Control\_File: control.ss

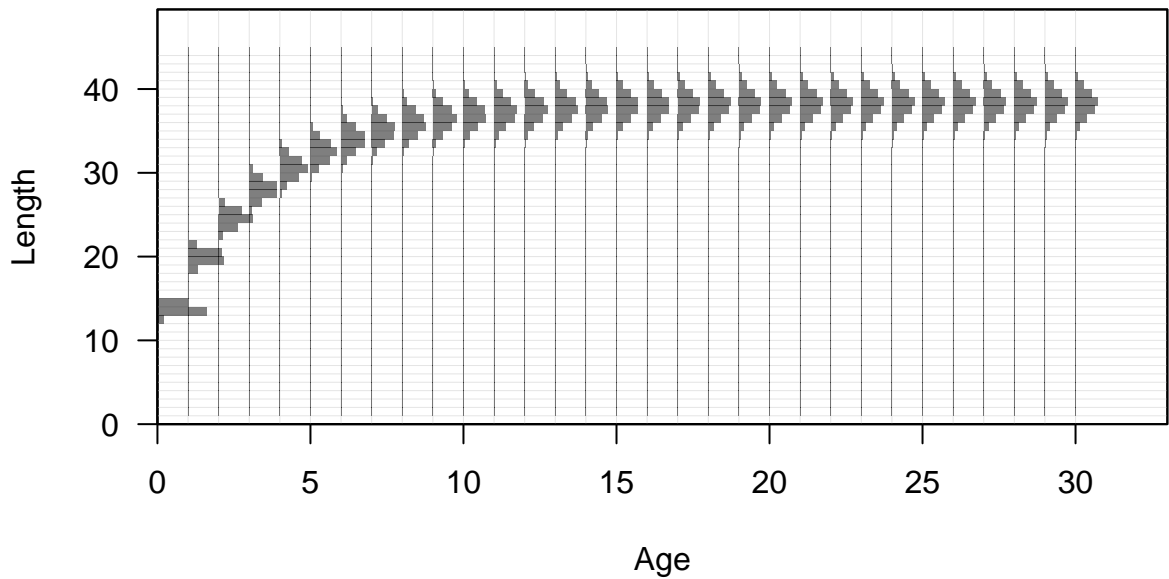
Length (cm, beginning of the year)

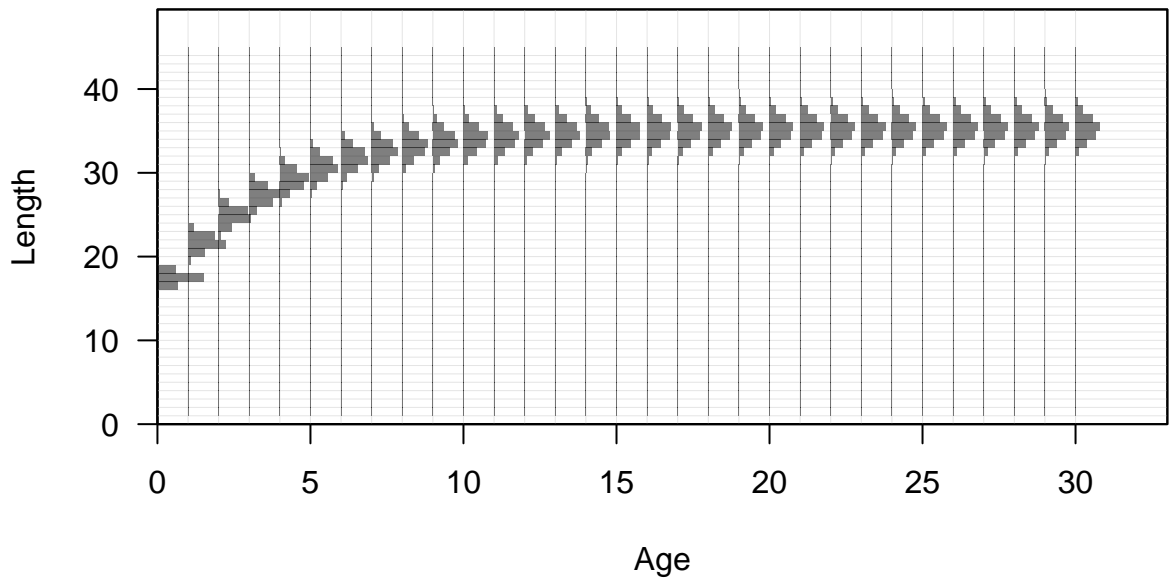


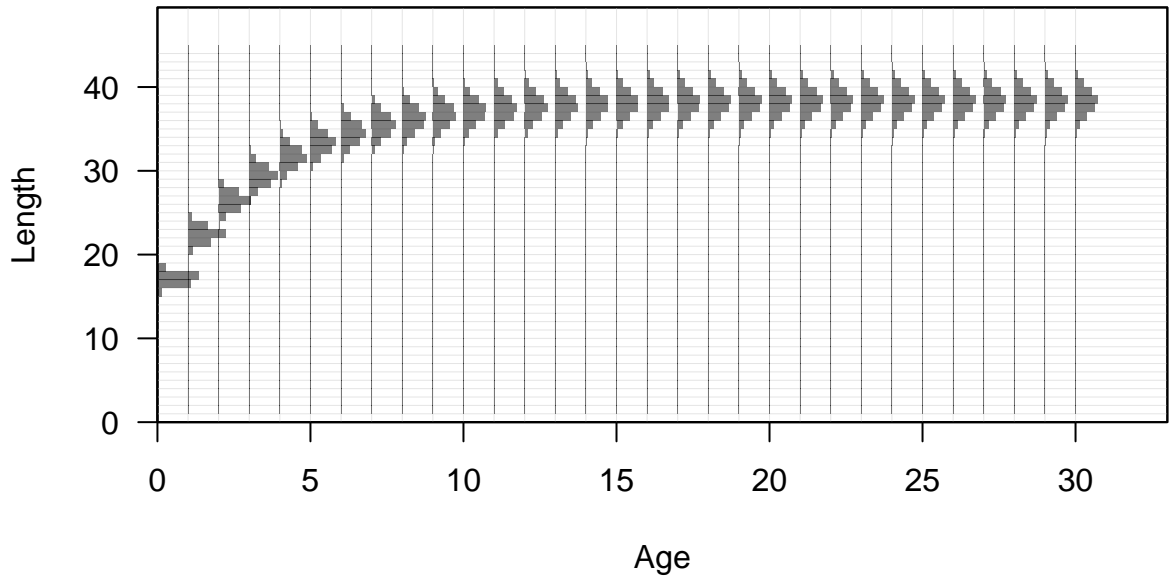


















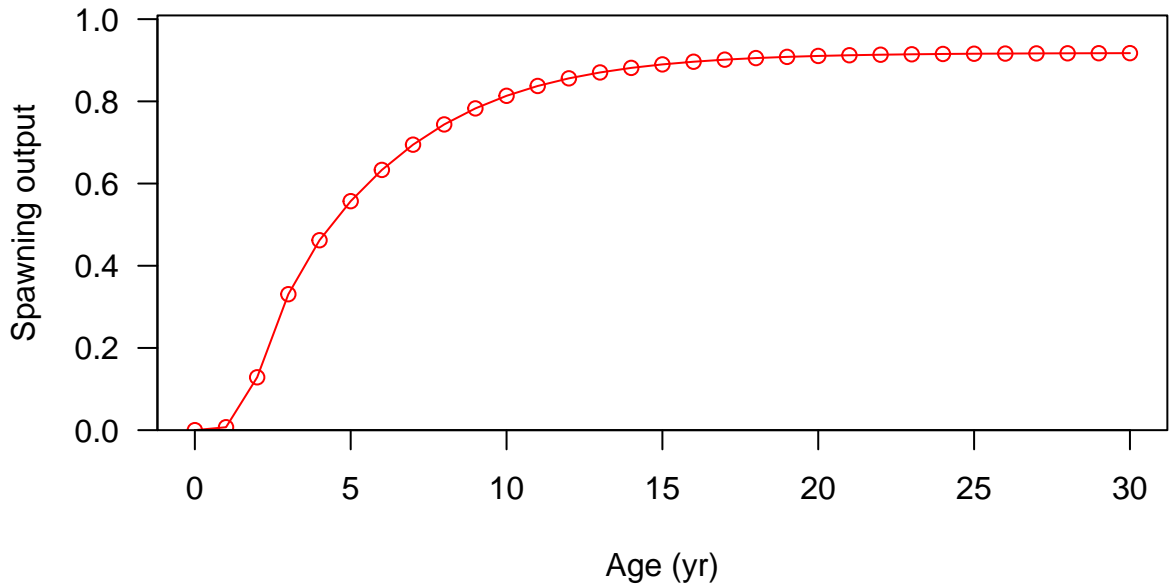






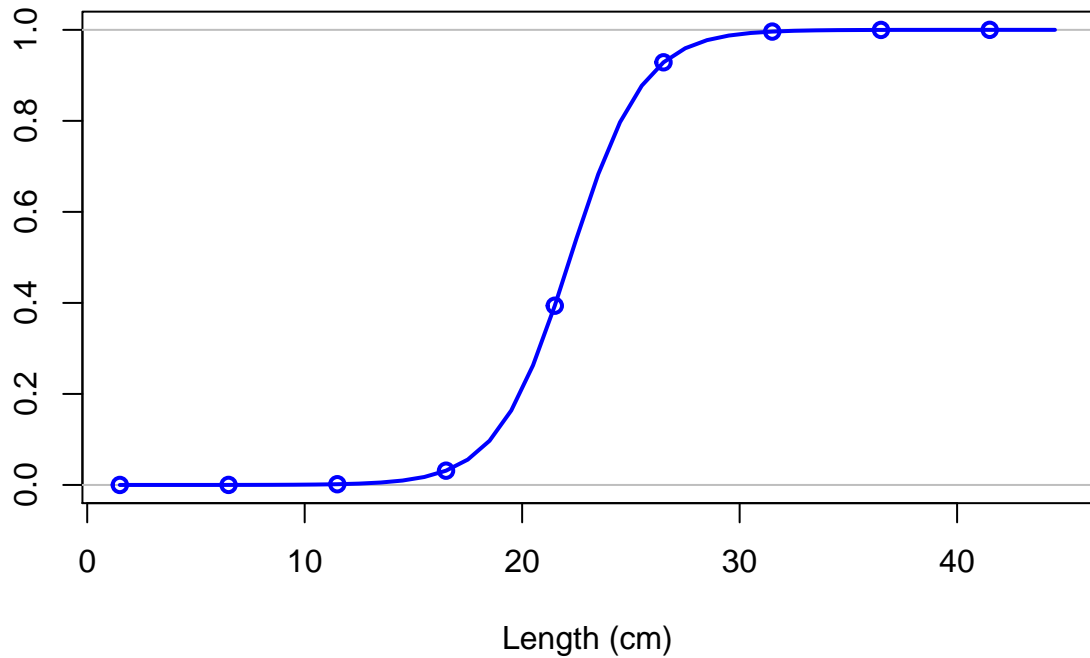




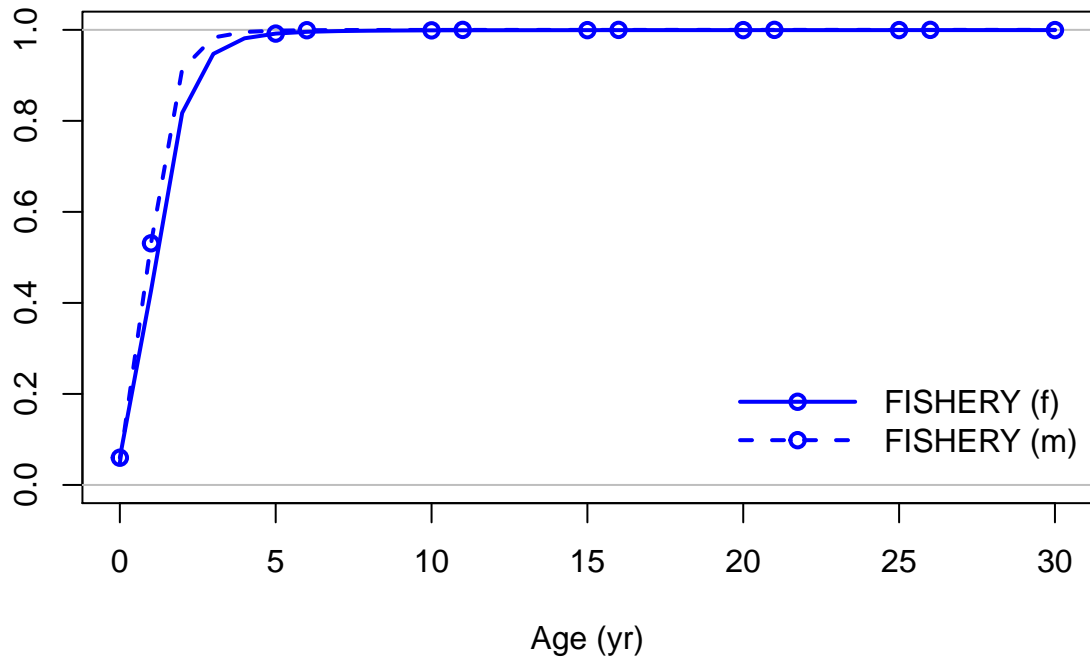




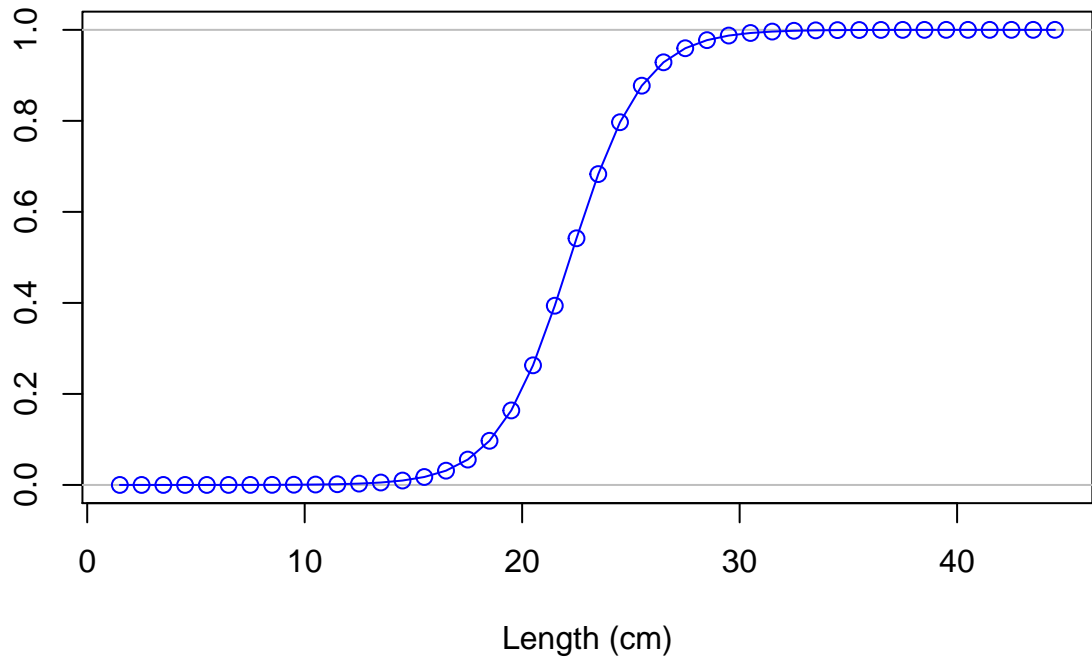
Selectivity



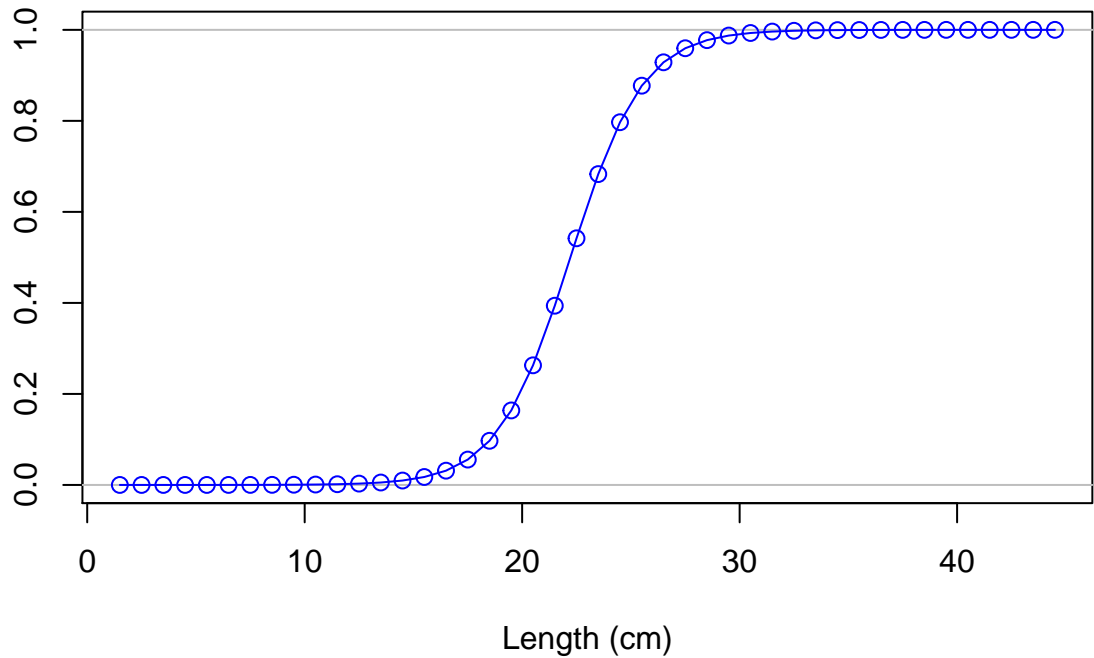
Selectivity

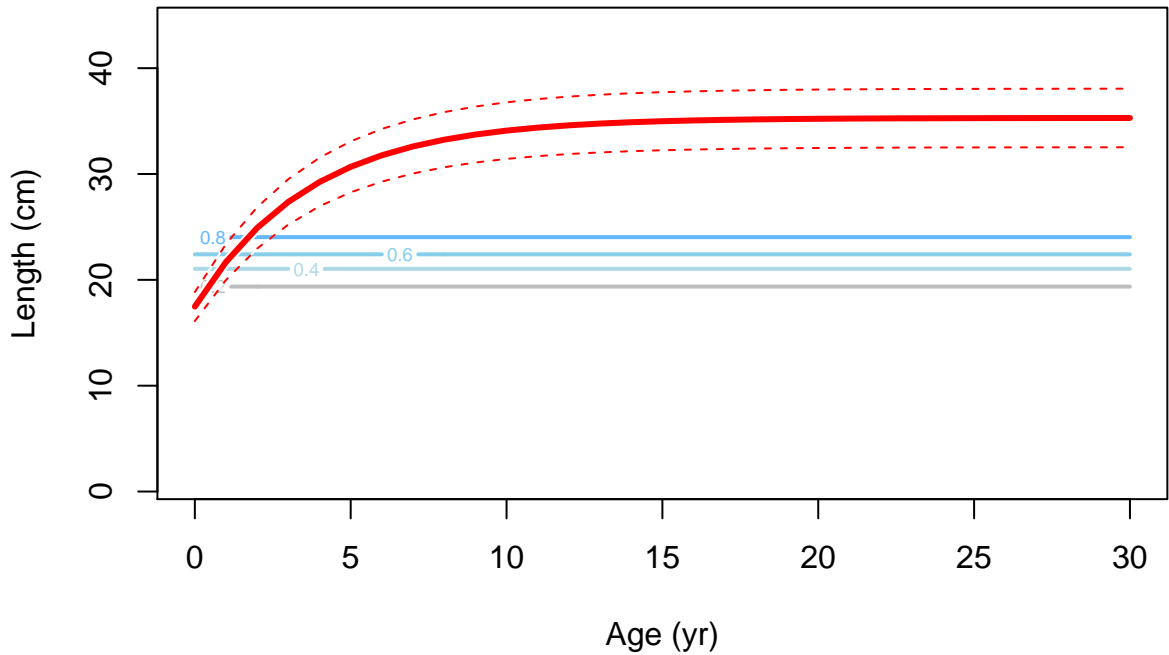


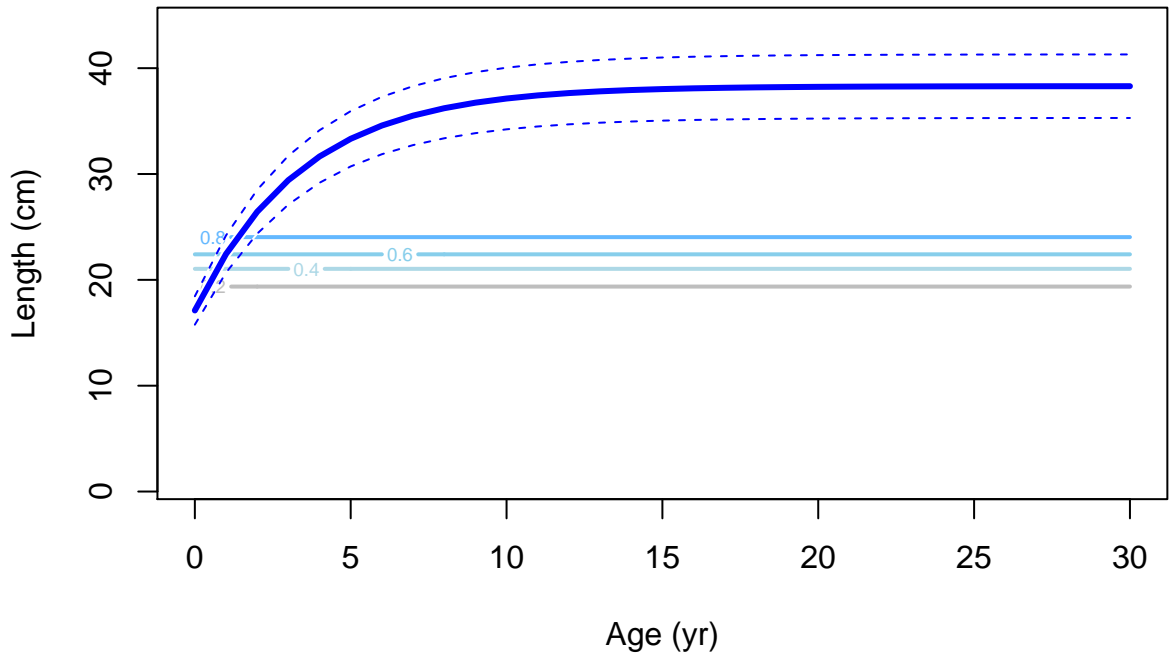
Selectivity

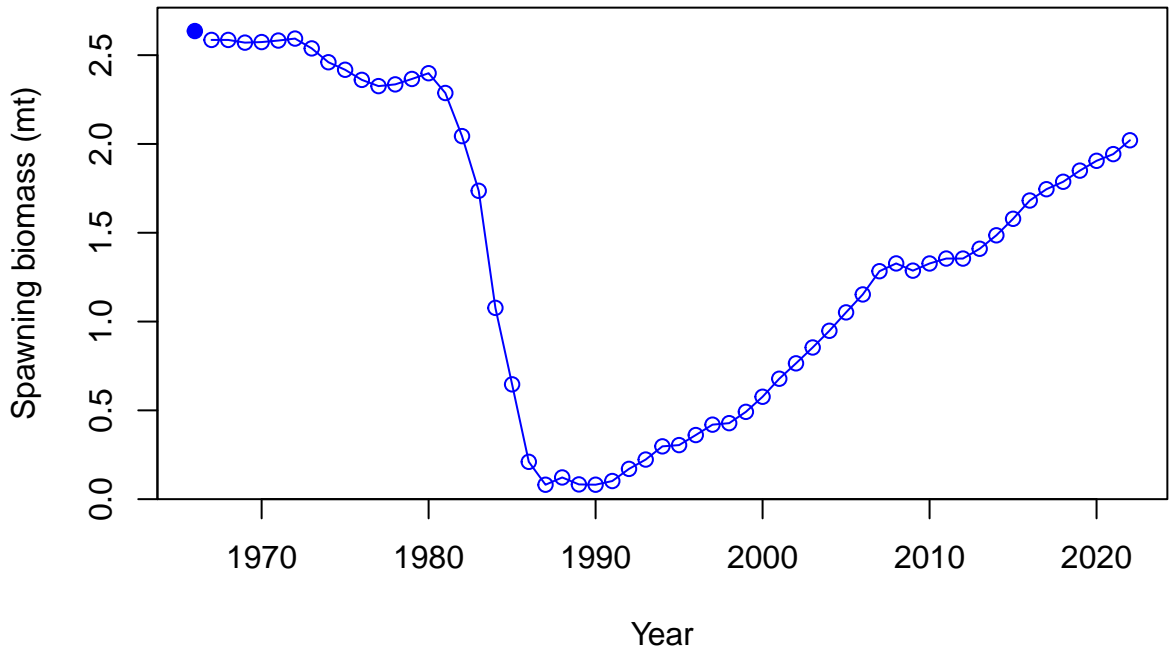


Selectivity

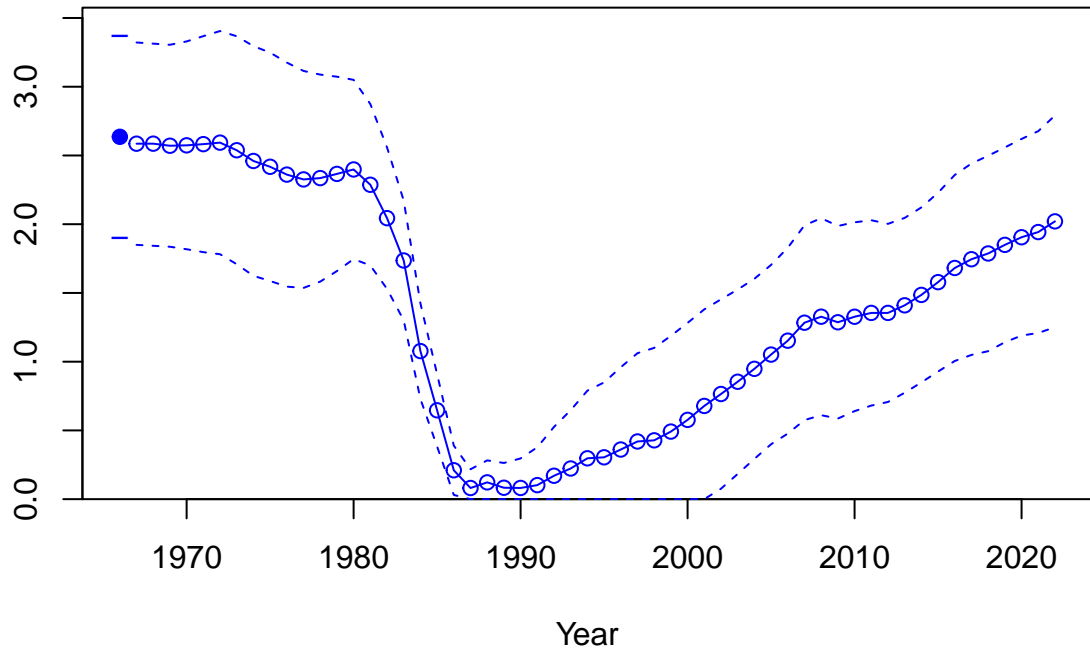






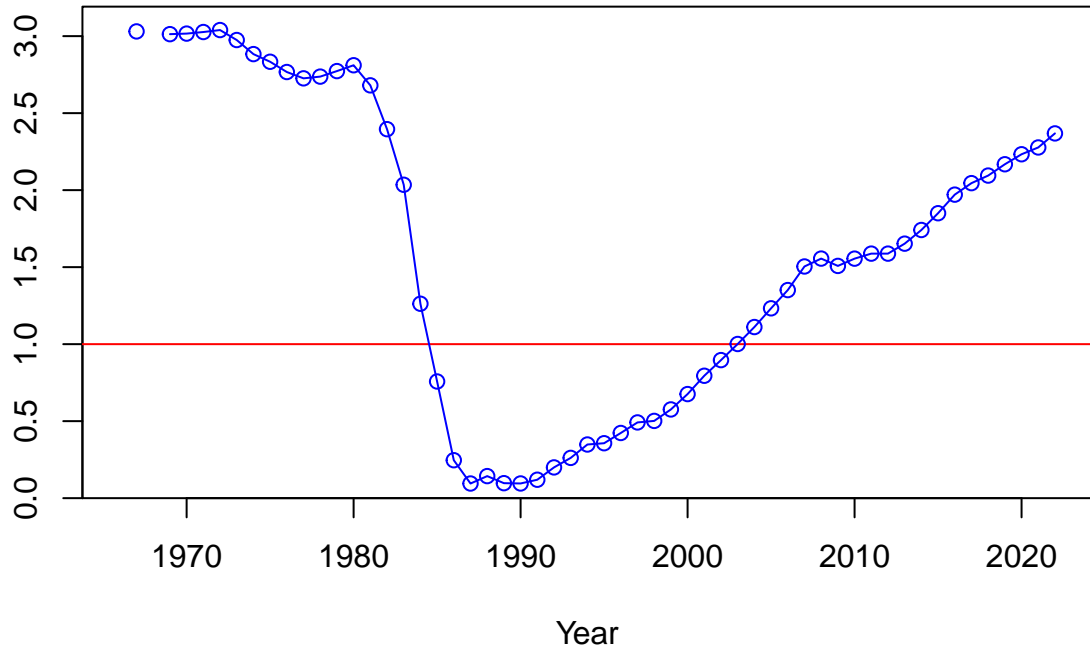


Spawning biomass (mt)

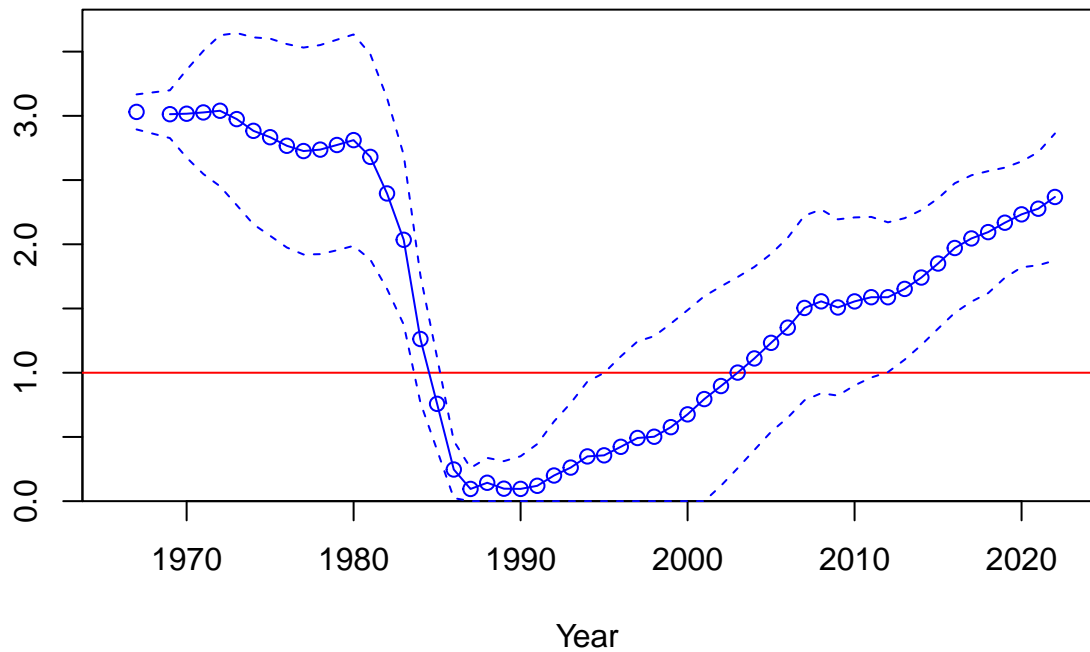


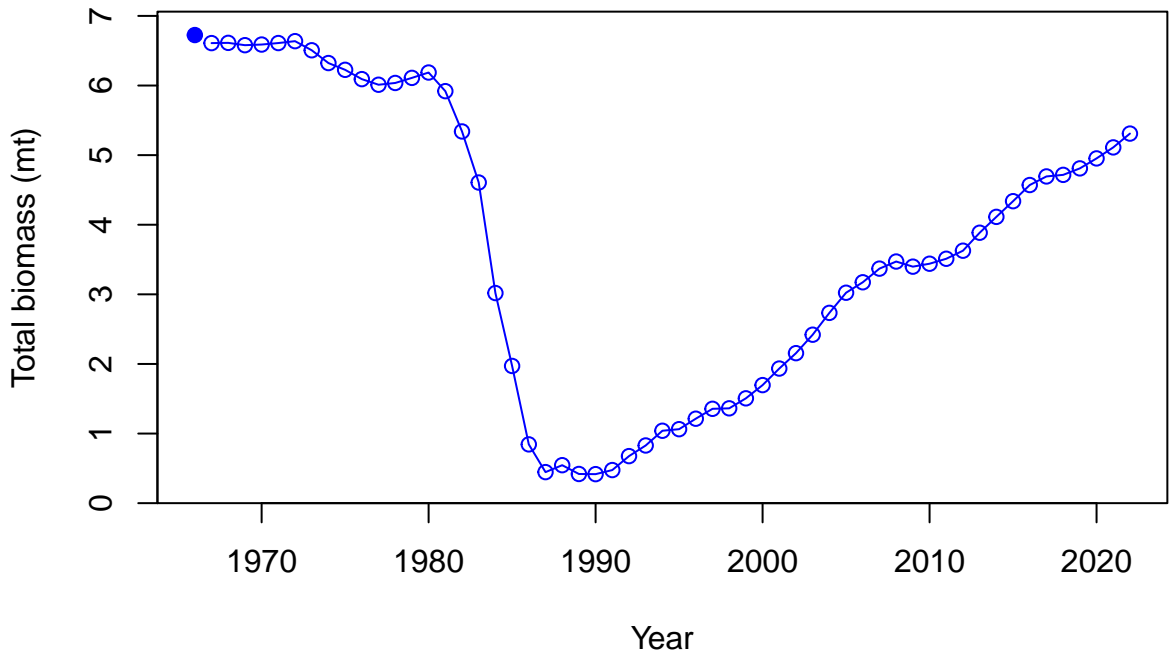


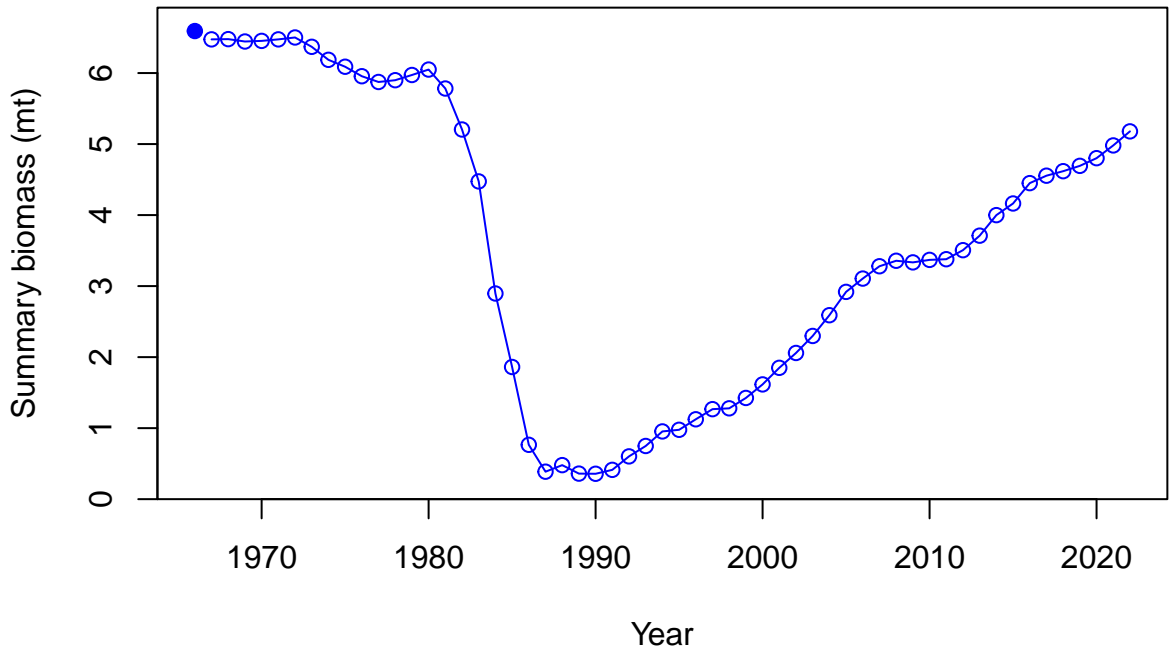
Relative spawning biomass:  $B/B_{MSY}$

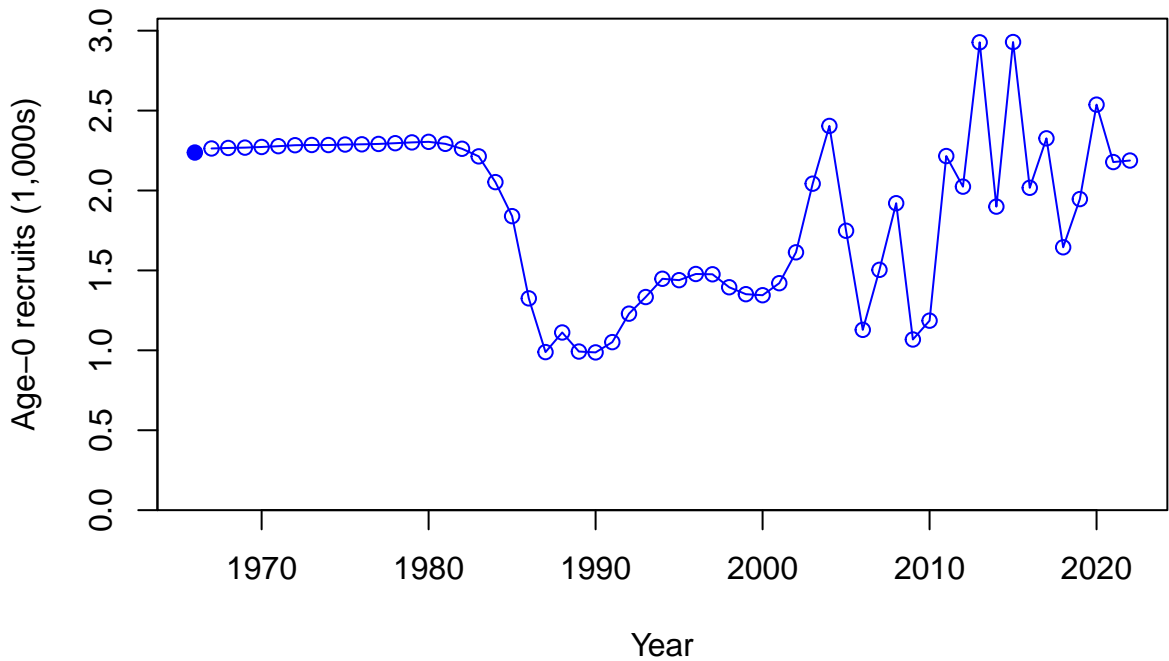


Relative spawning biomass:  $B/B_{MSY}$

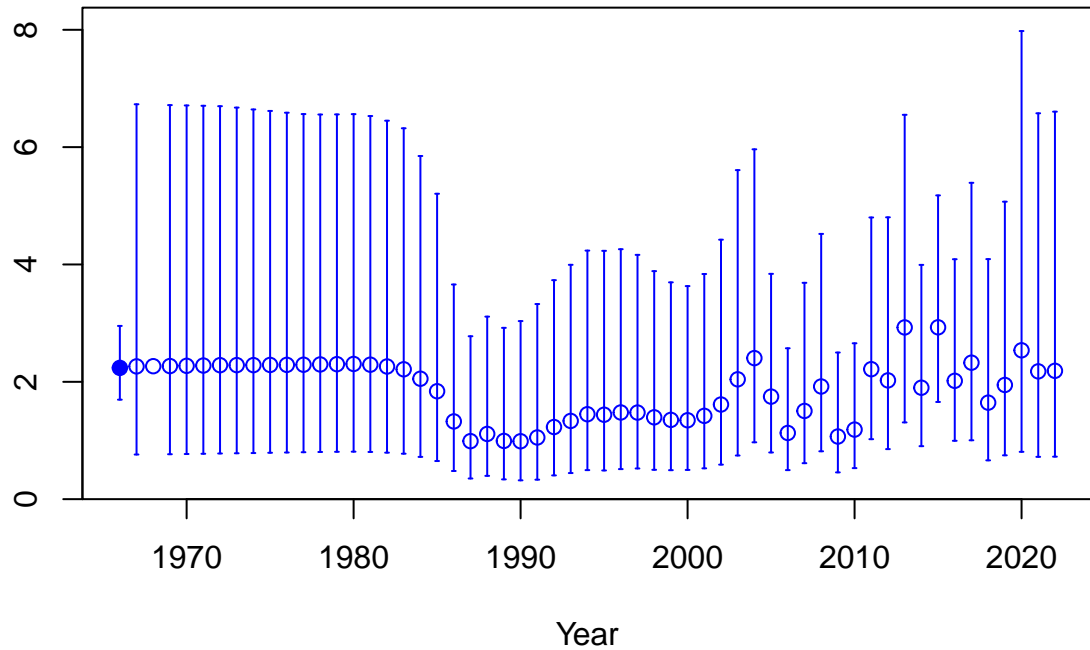




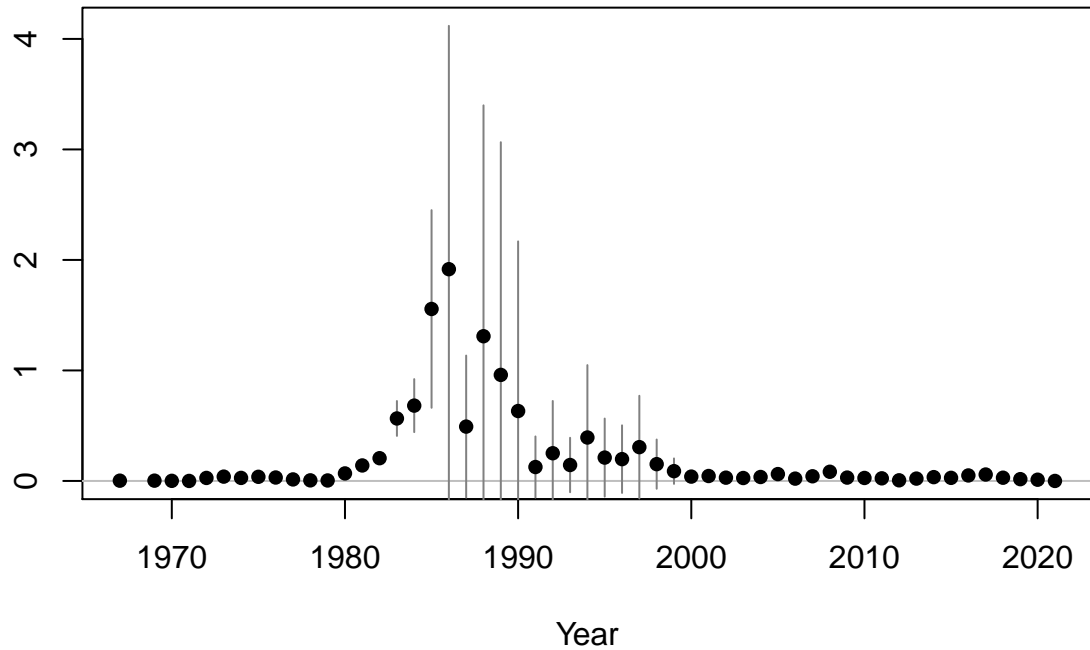


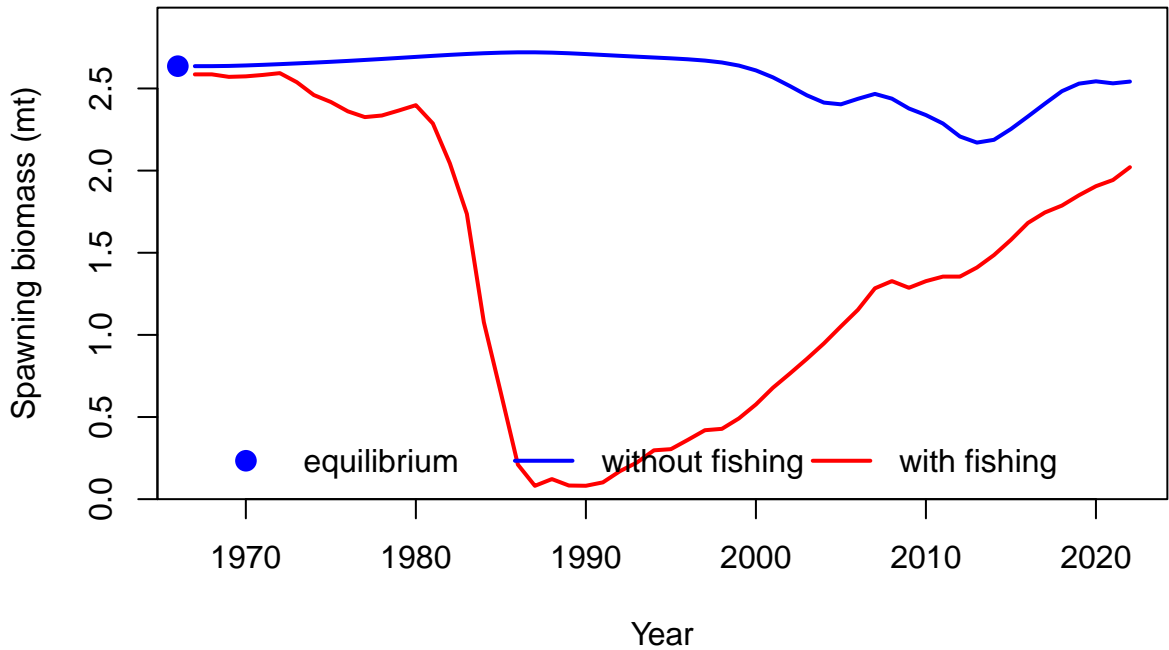


Age-0 recruits (1,000s)



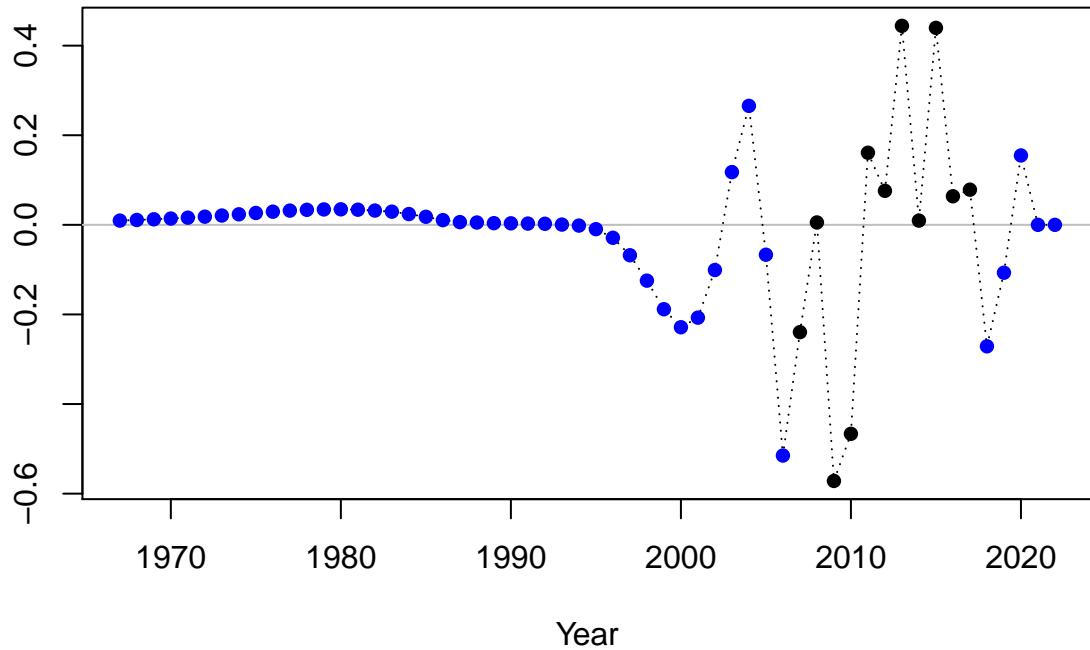
Summary Fishing Mortality



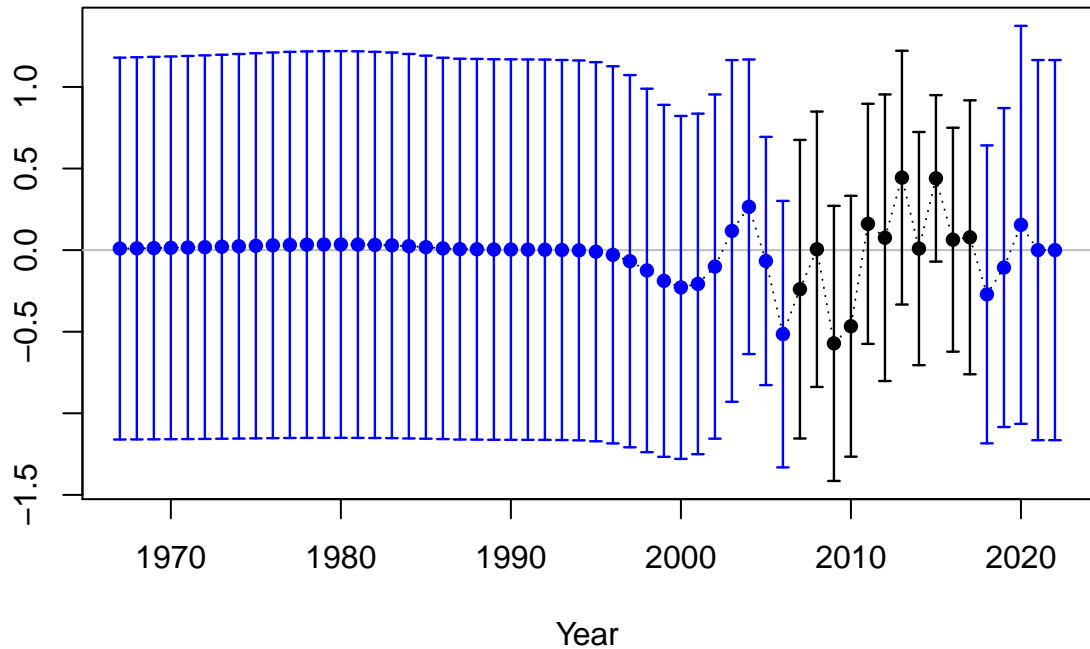




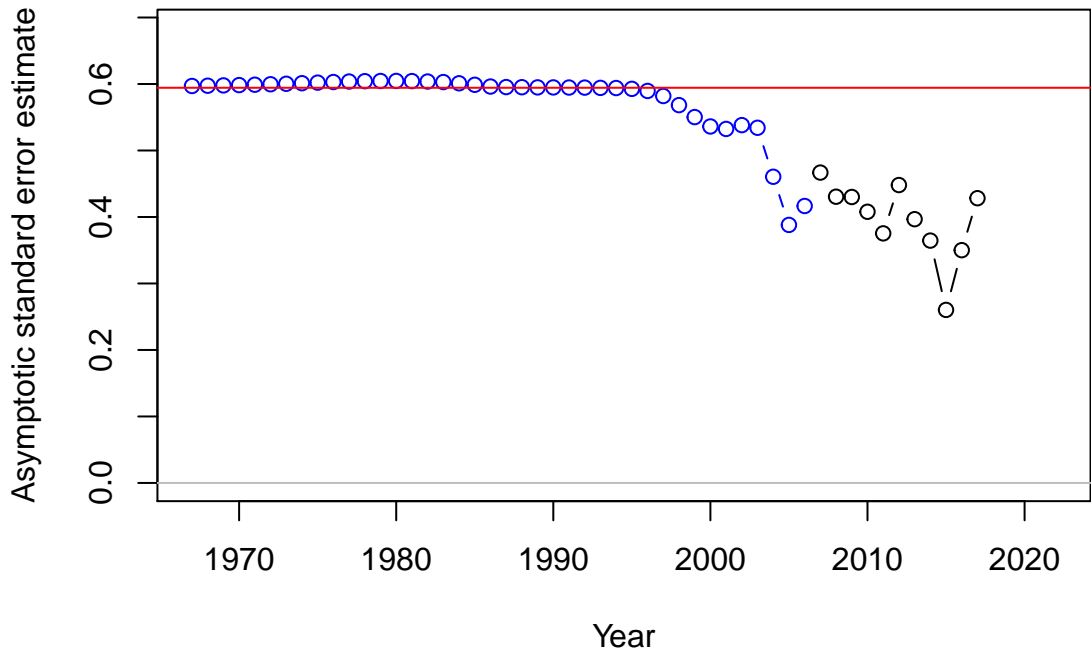
Log recruitment deviation

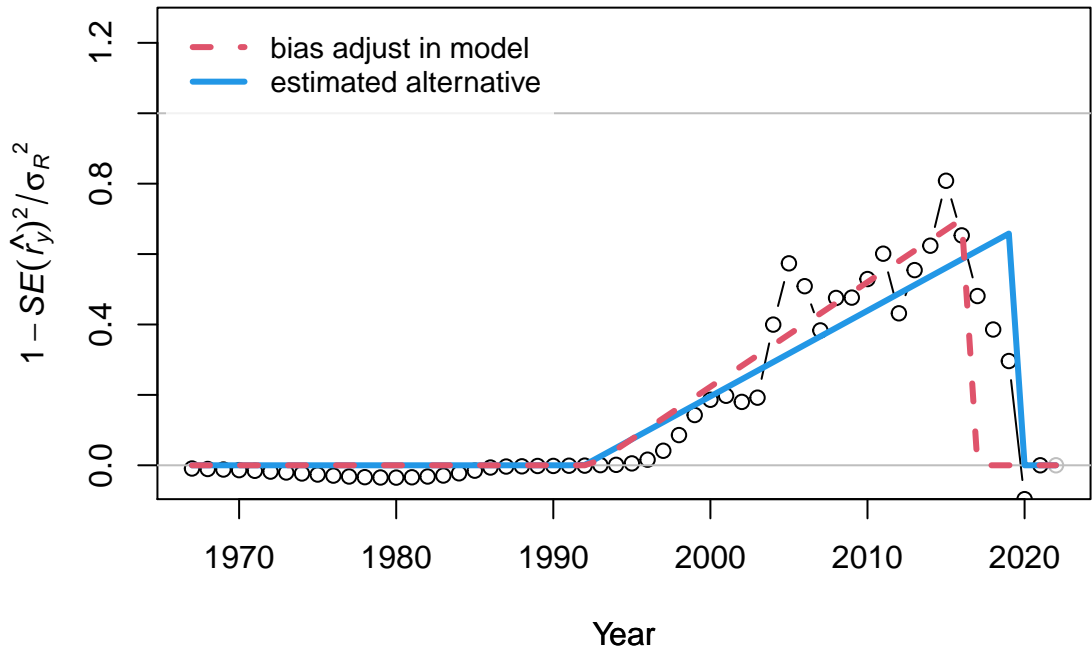


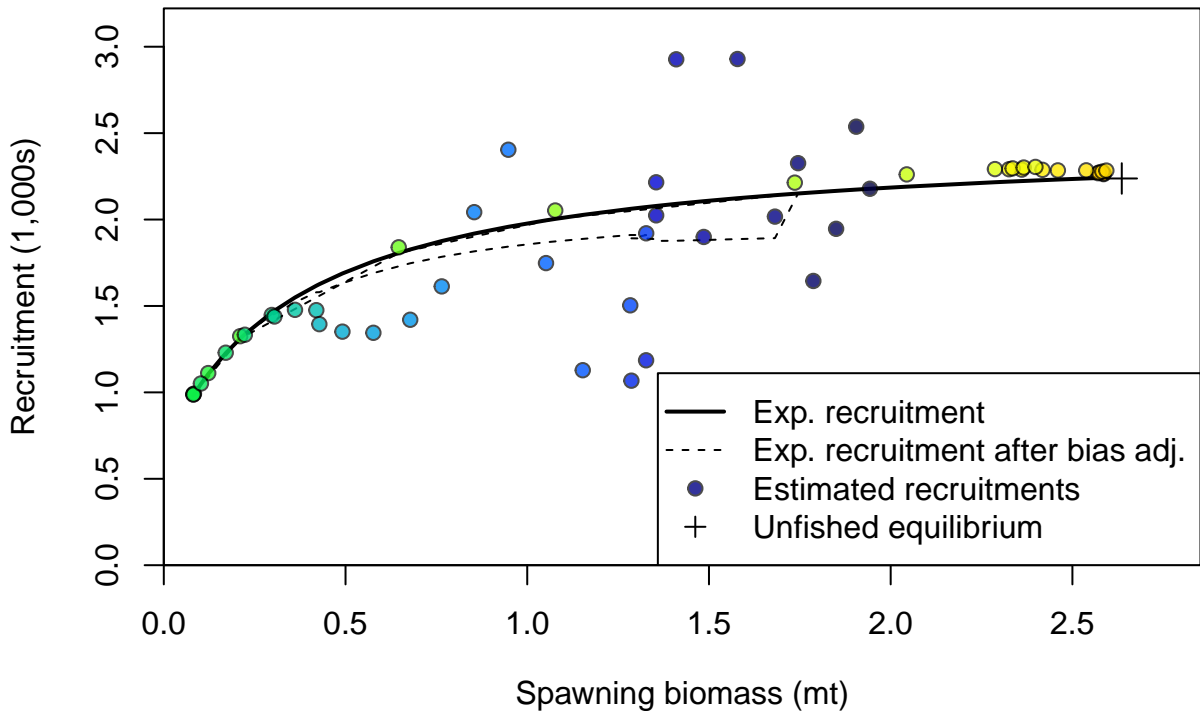
Log recruitment deviation

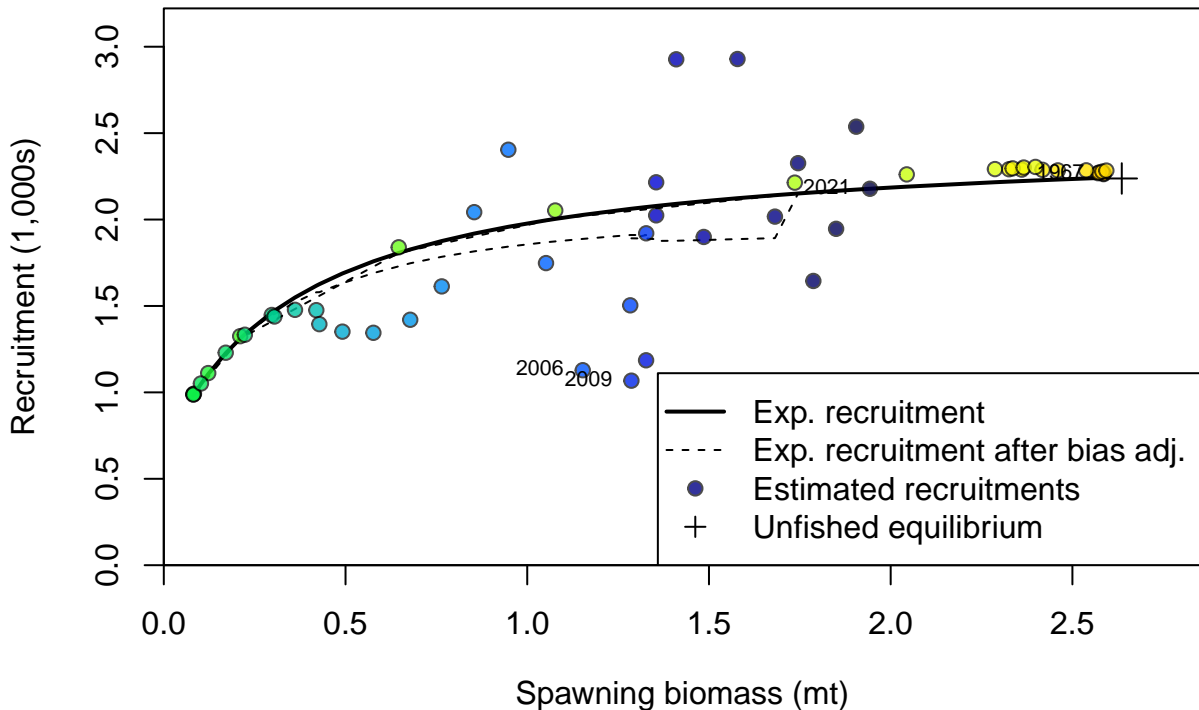


## Recruitment deviation variance

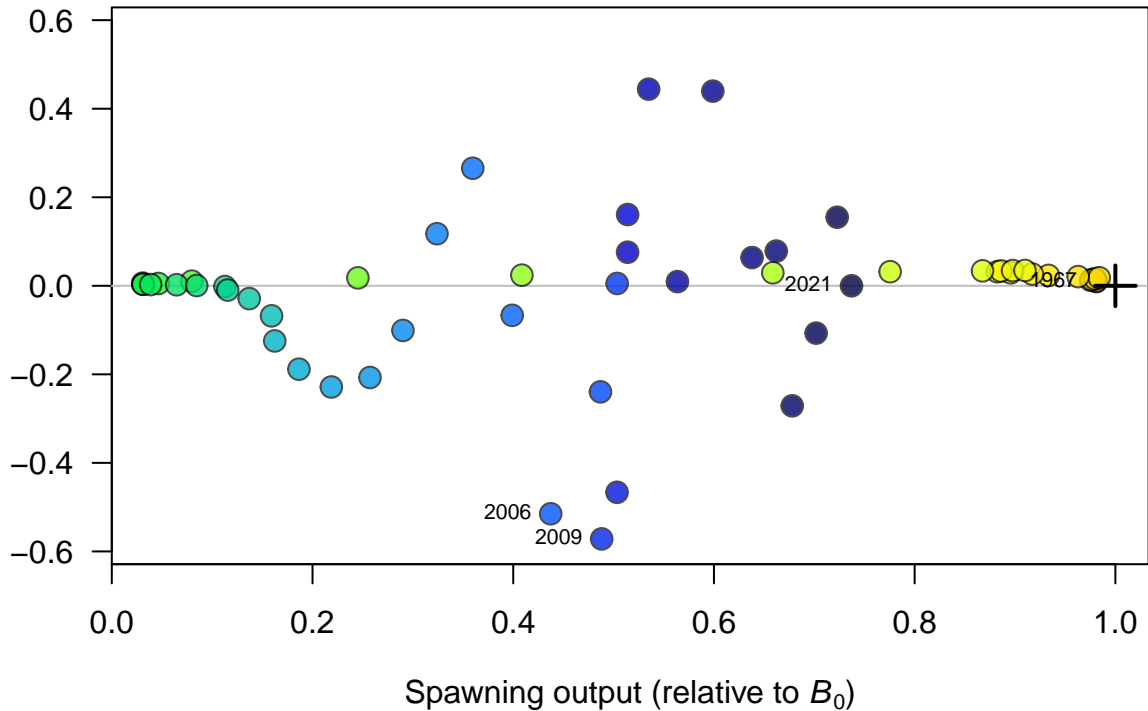


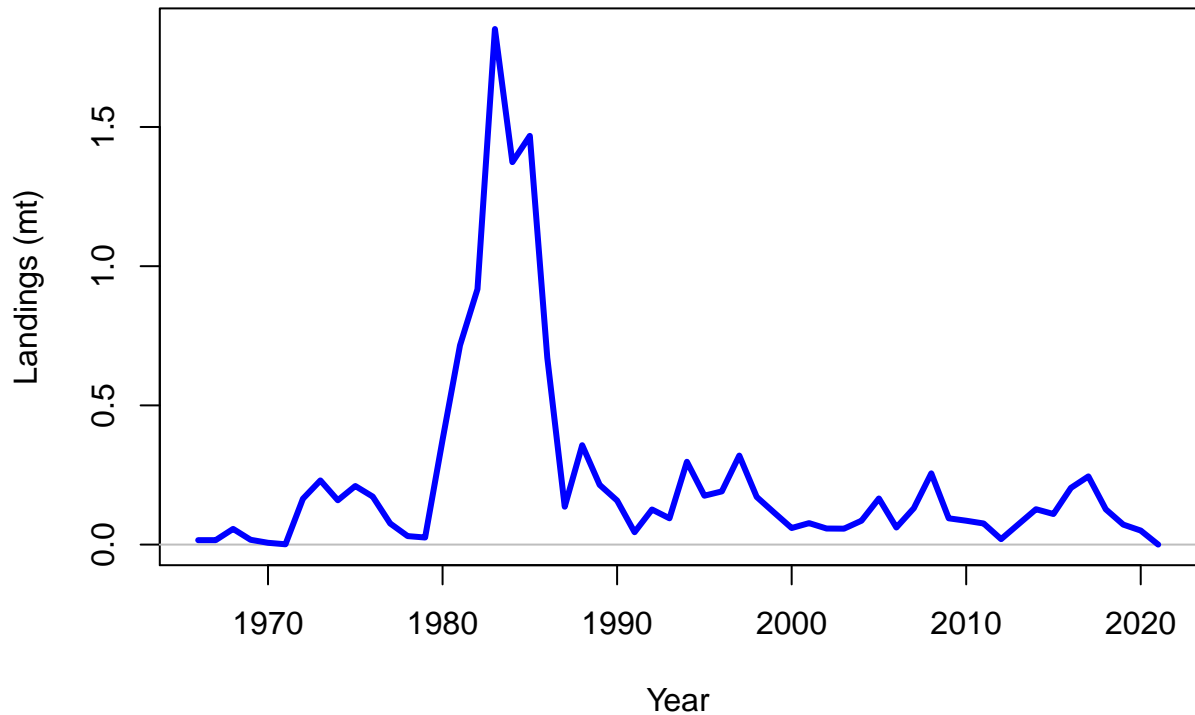




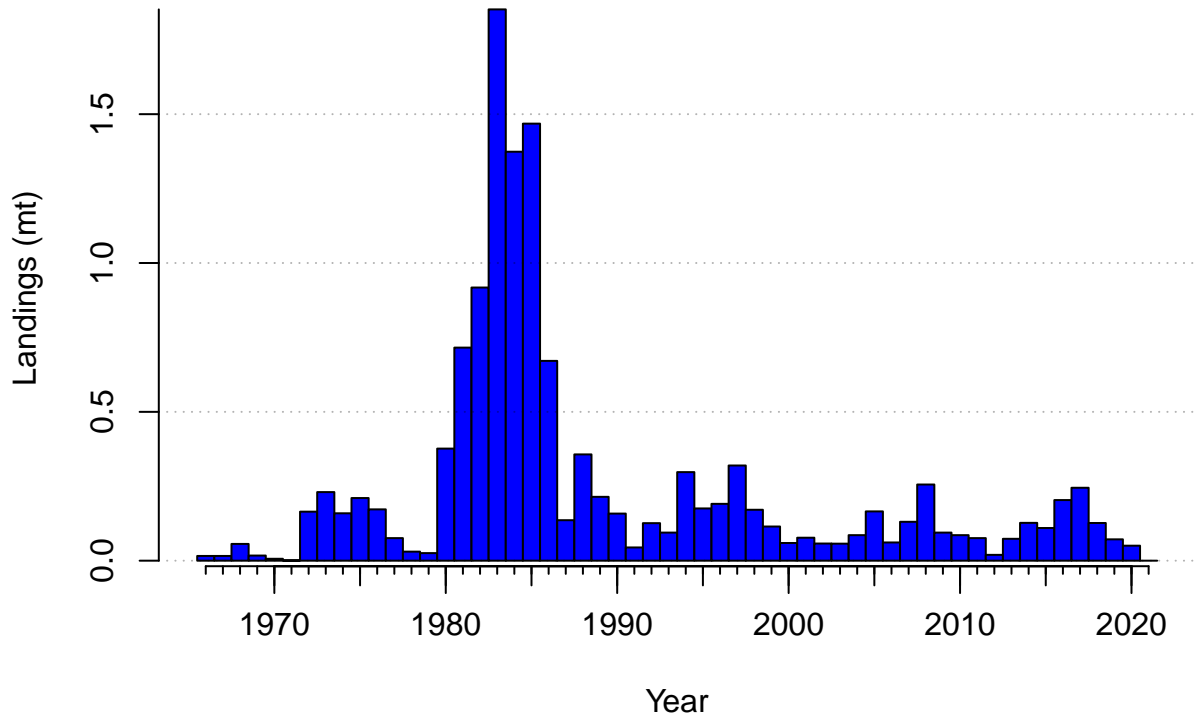


Log recruitment deviation









Observed and expected Landings (mt)

FISHERY  
FISHERY obs.

1.5  
1.0  
0.5  
0.0

1970

1980

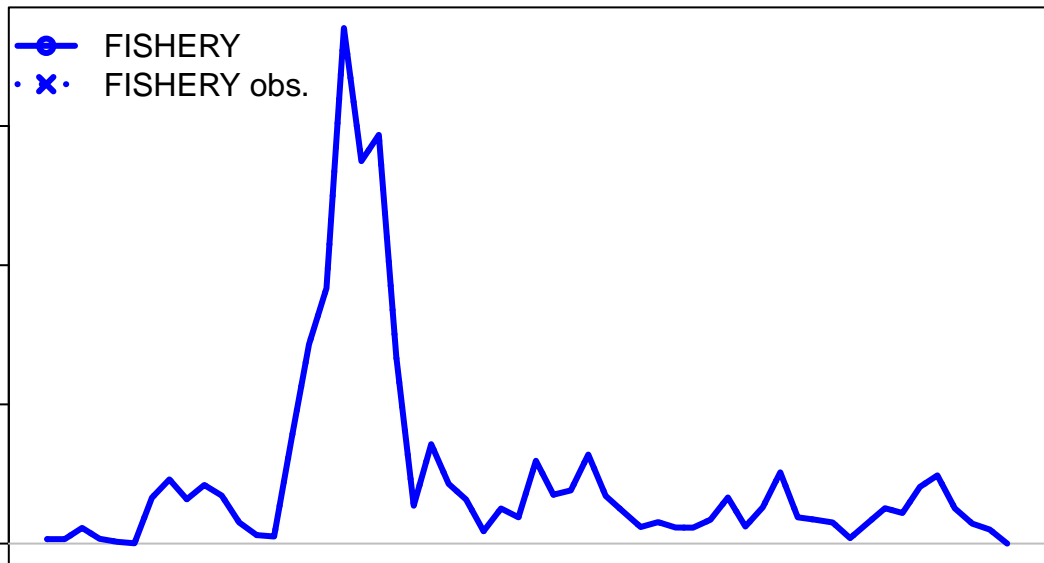
1990

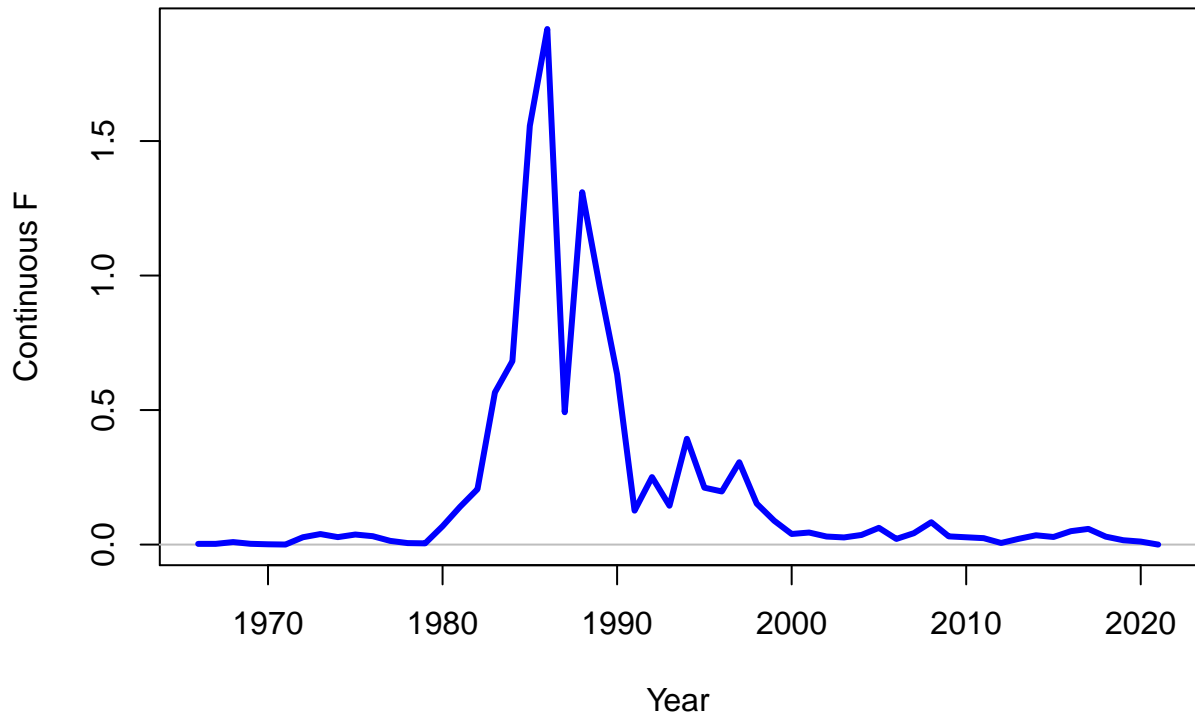
2000

2010

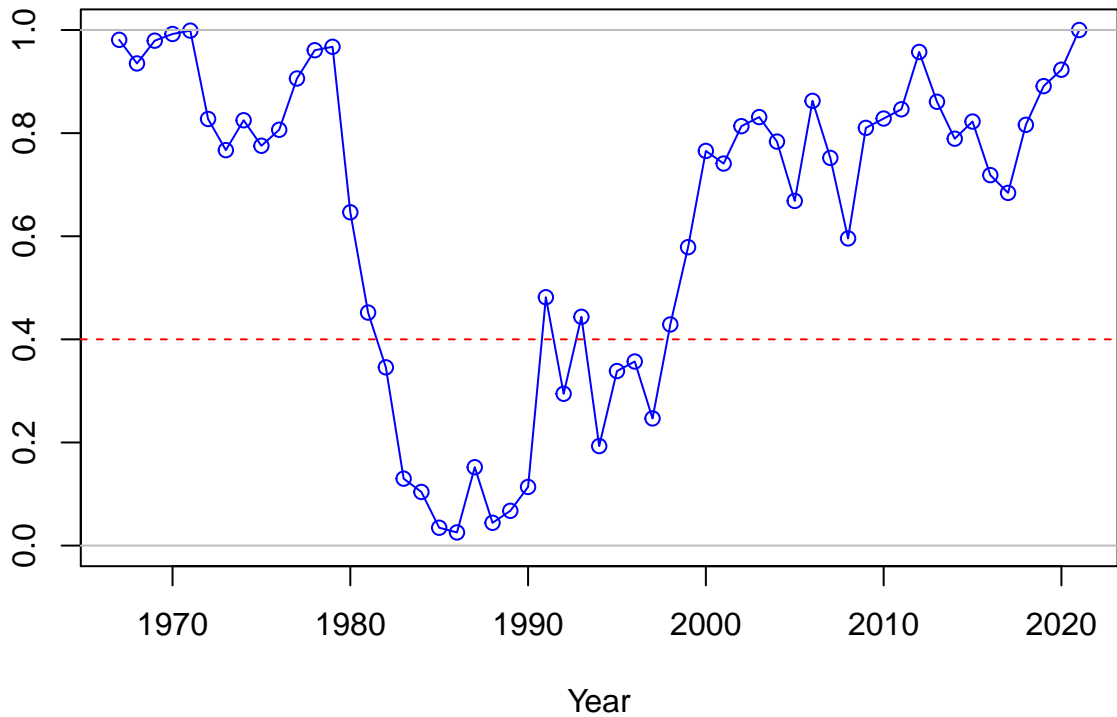
2020

Year

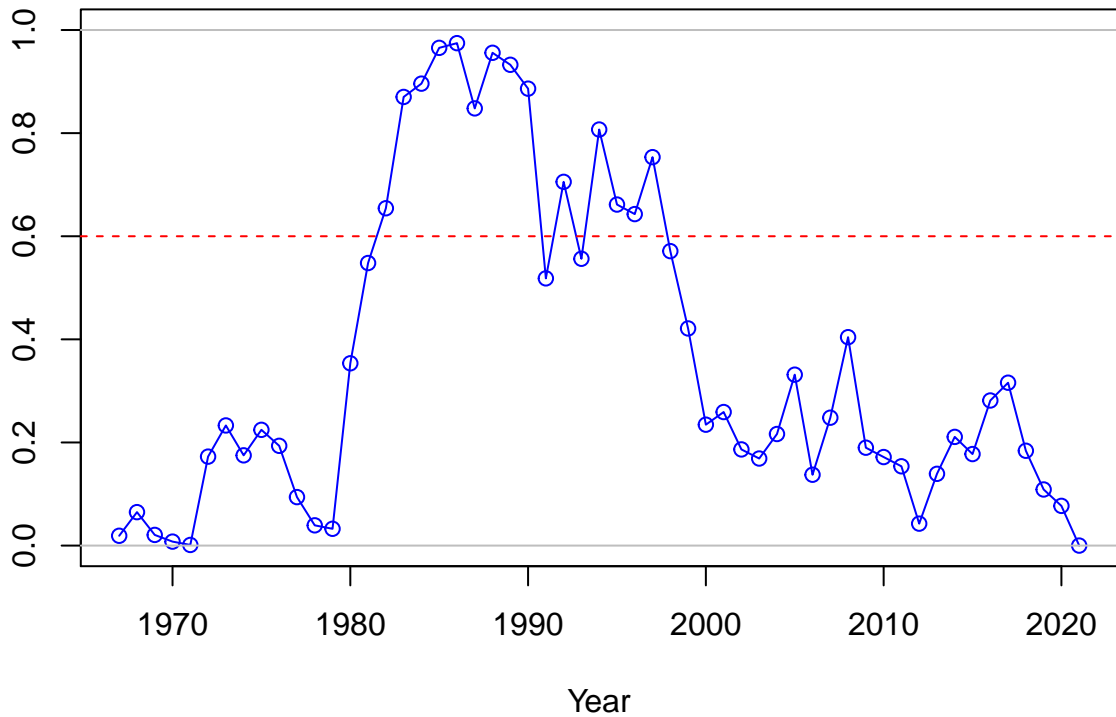




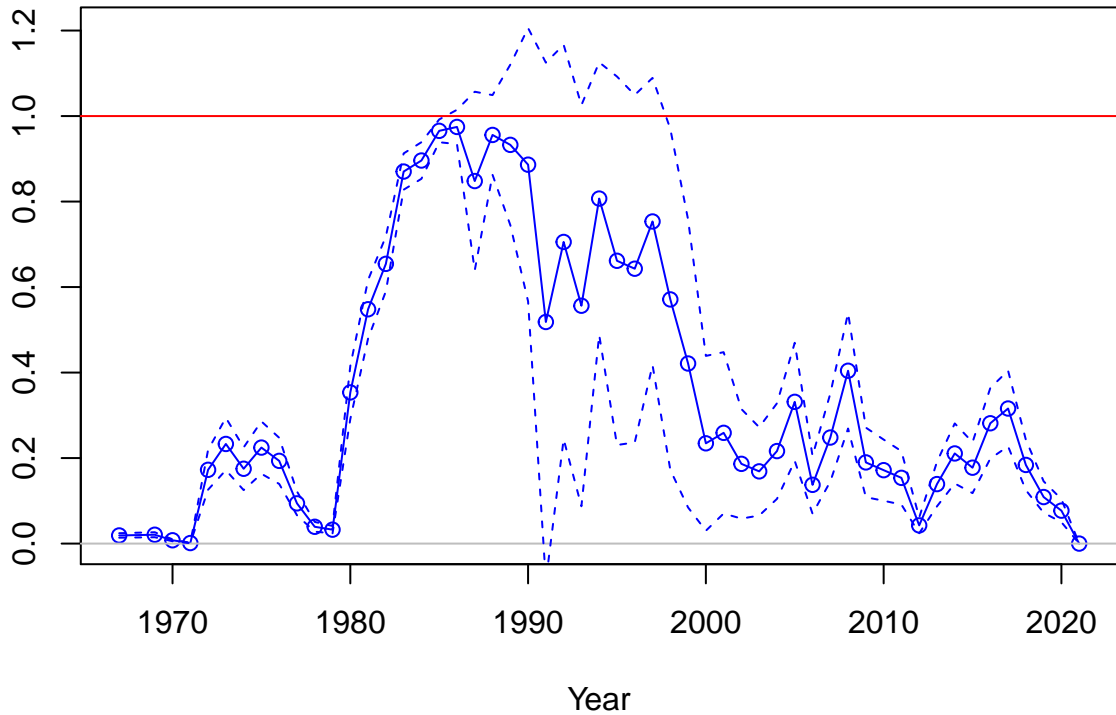
SPR

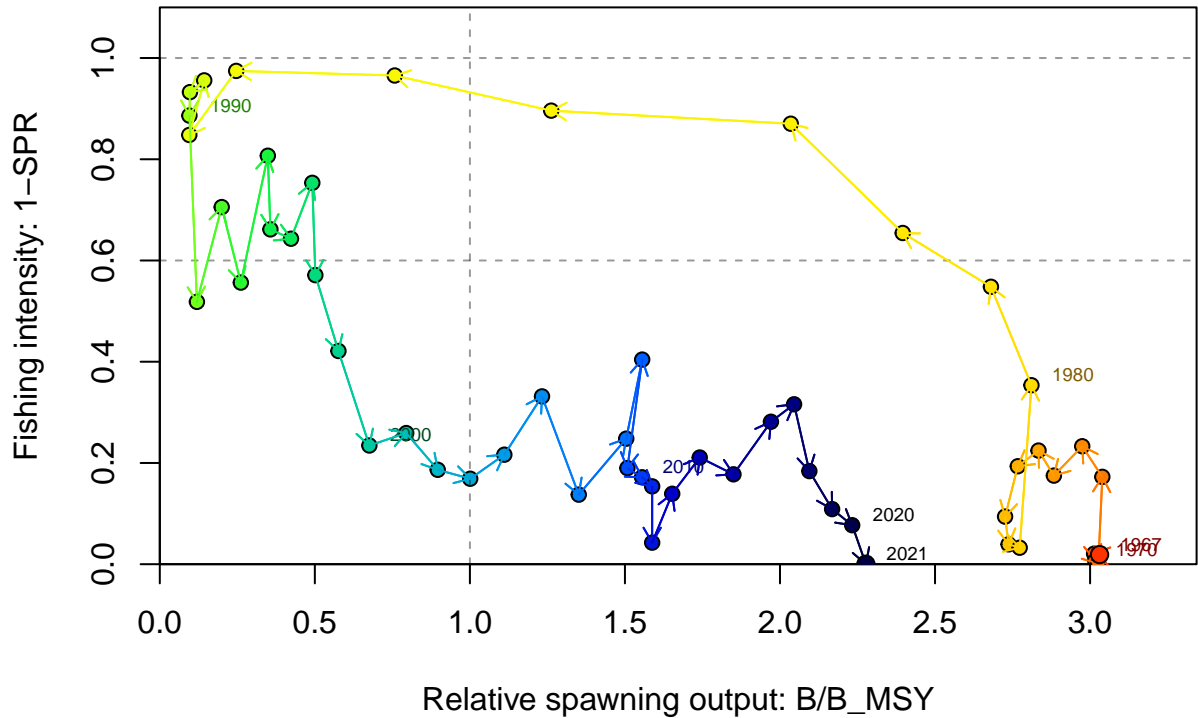


1-SPR

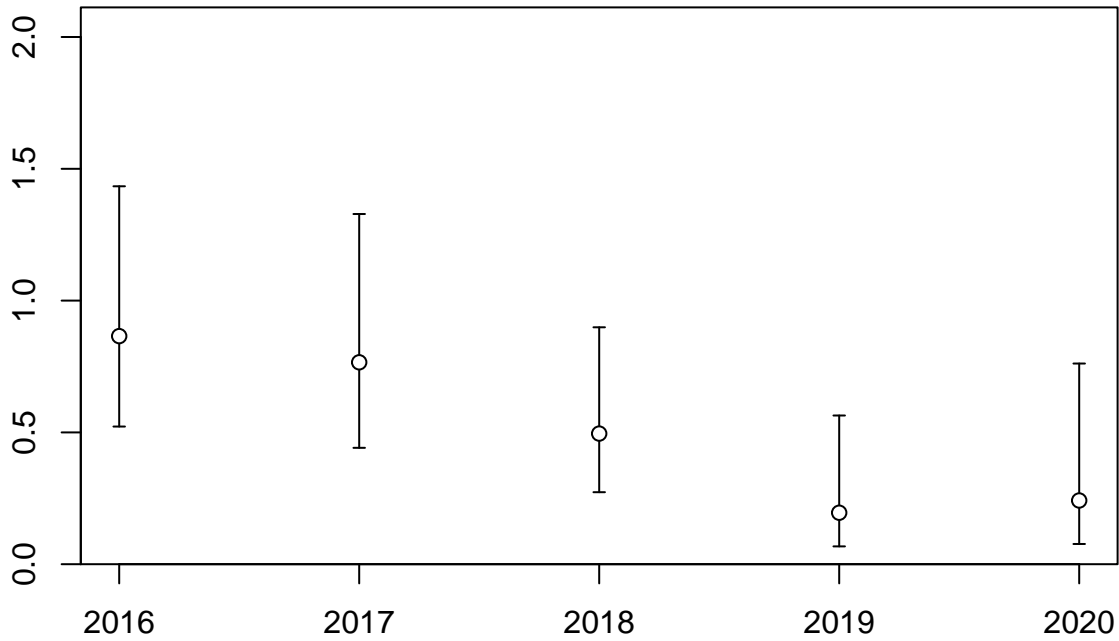


Fishing intensity: 1-SPR





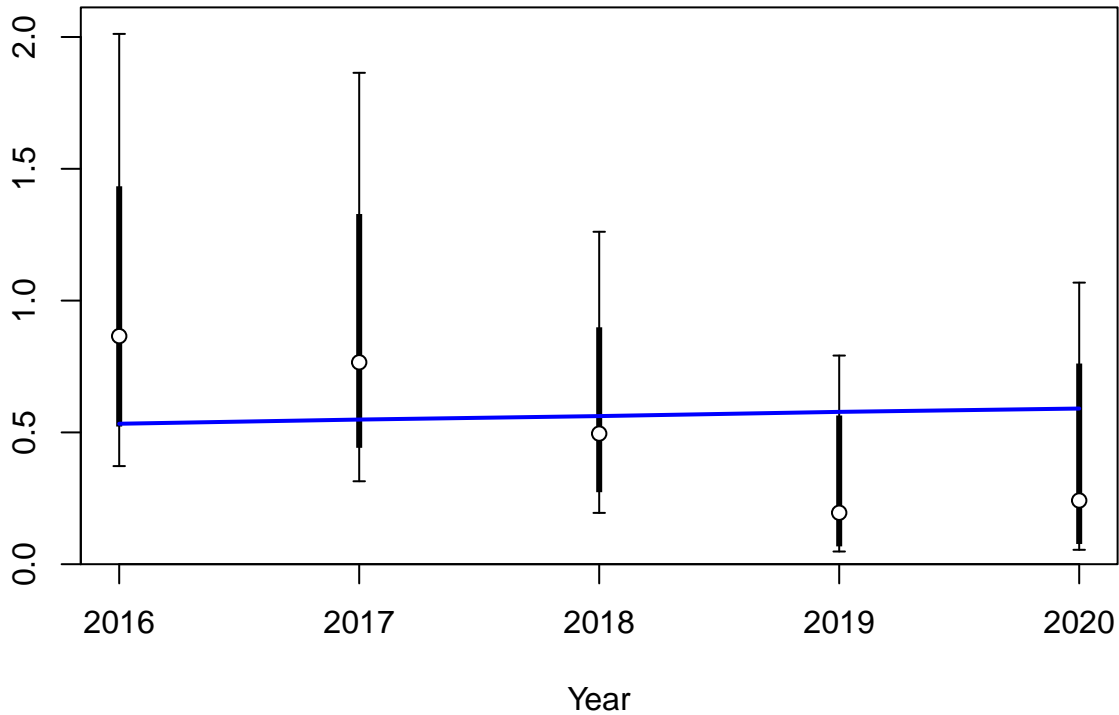
Index

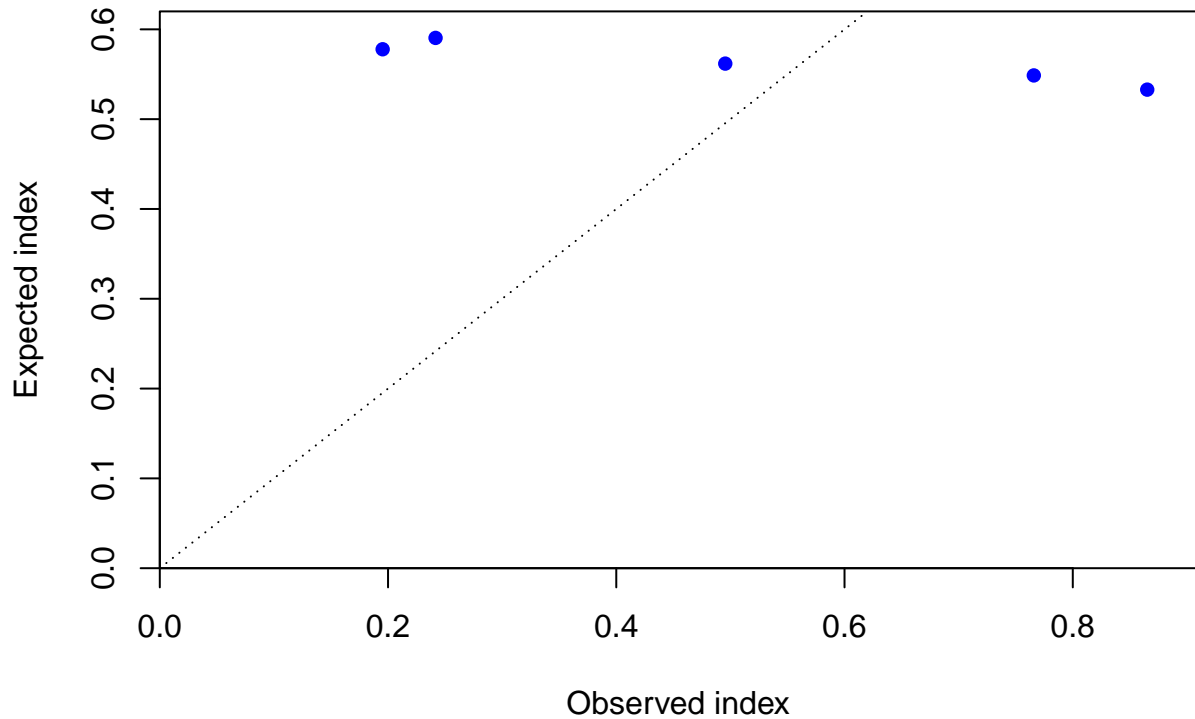


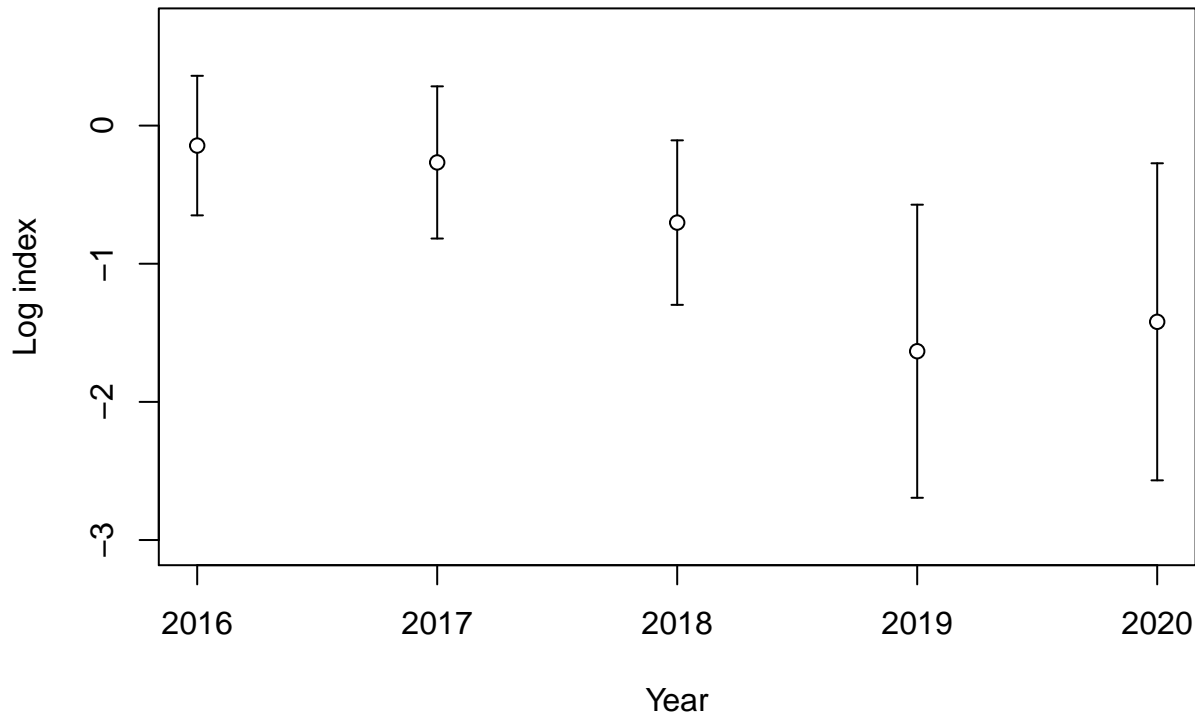
Year

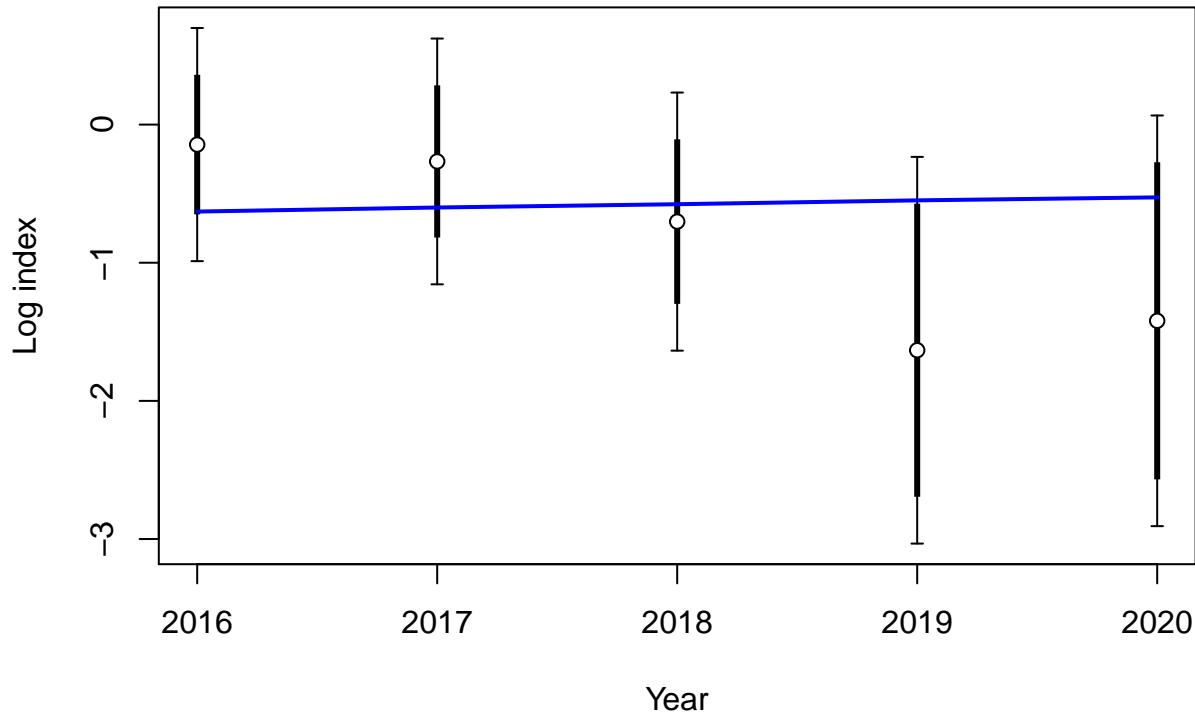


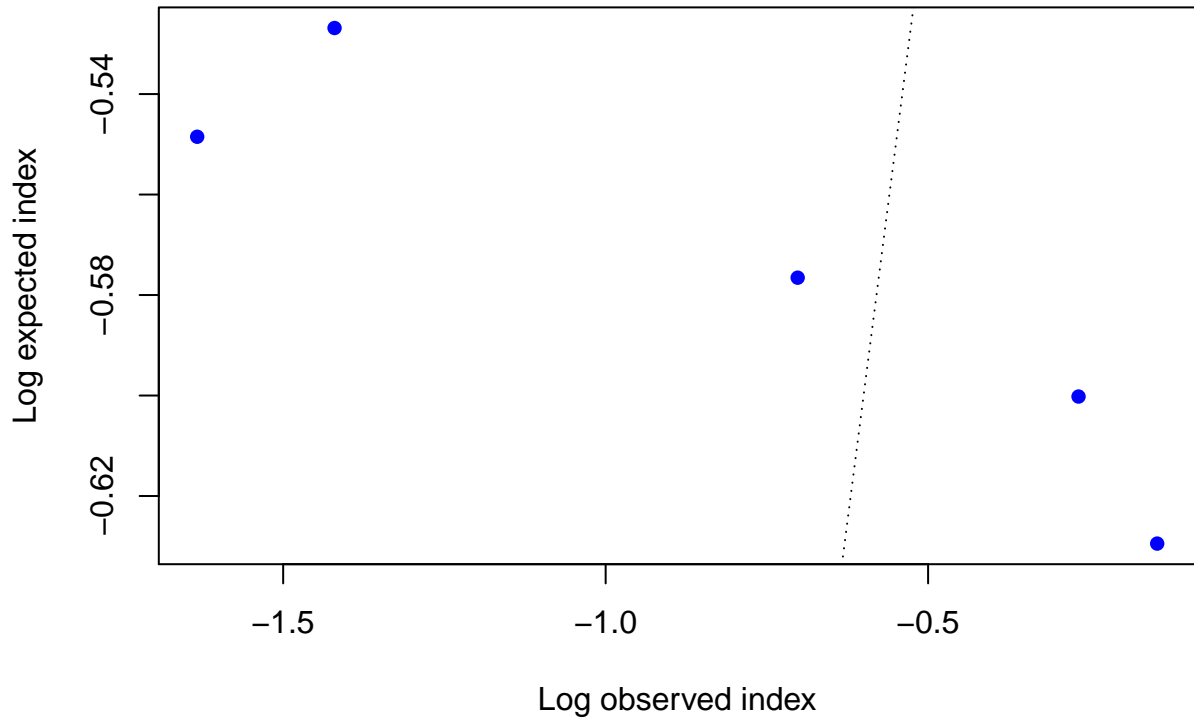
Index



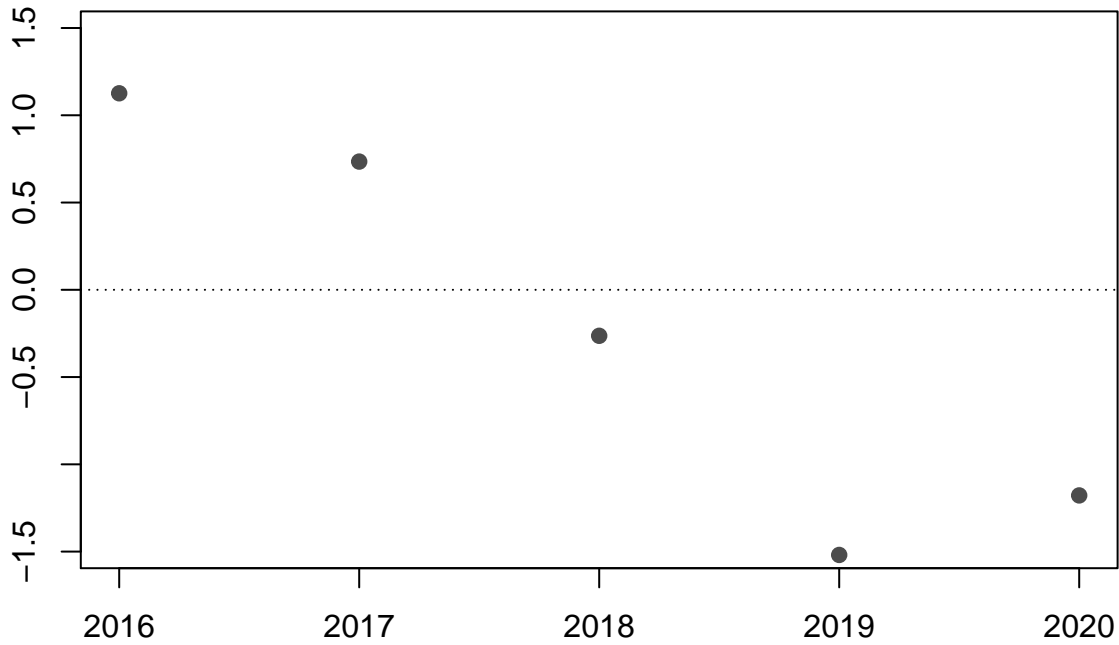




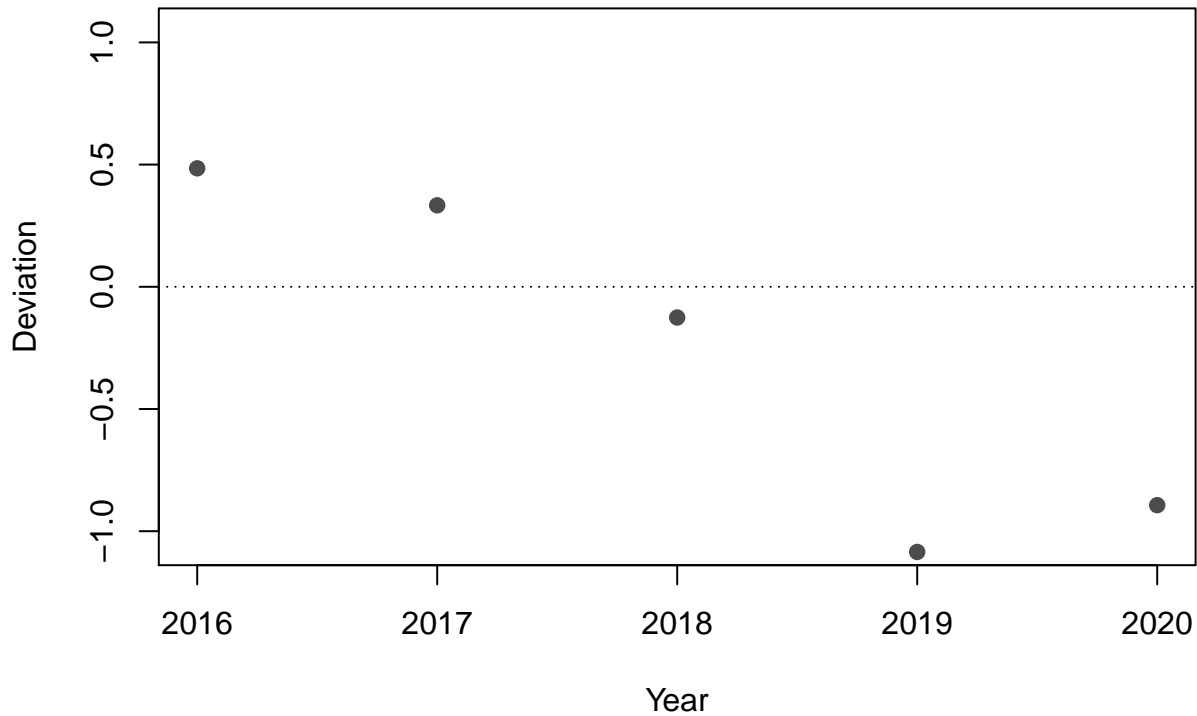


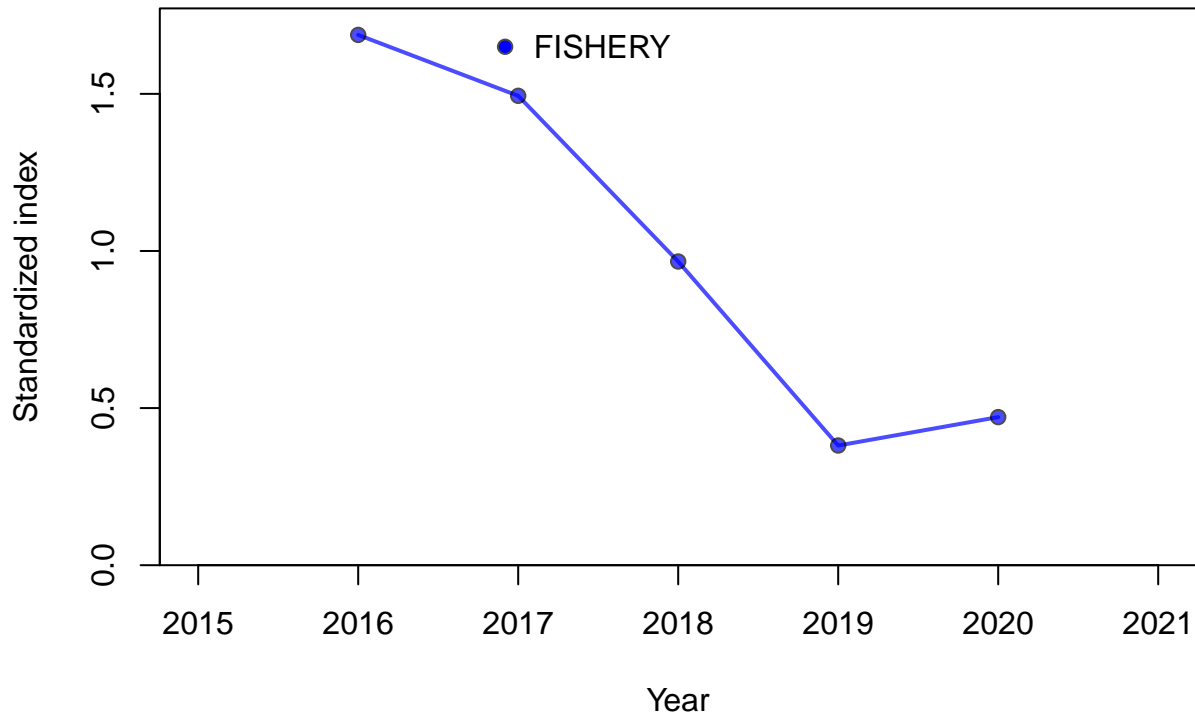


Residual

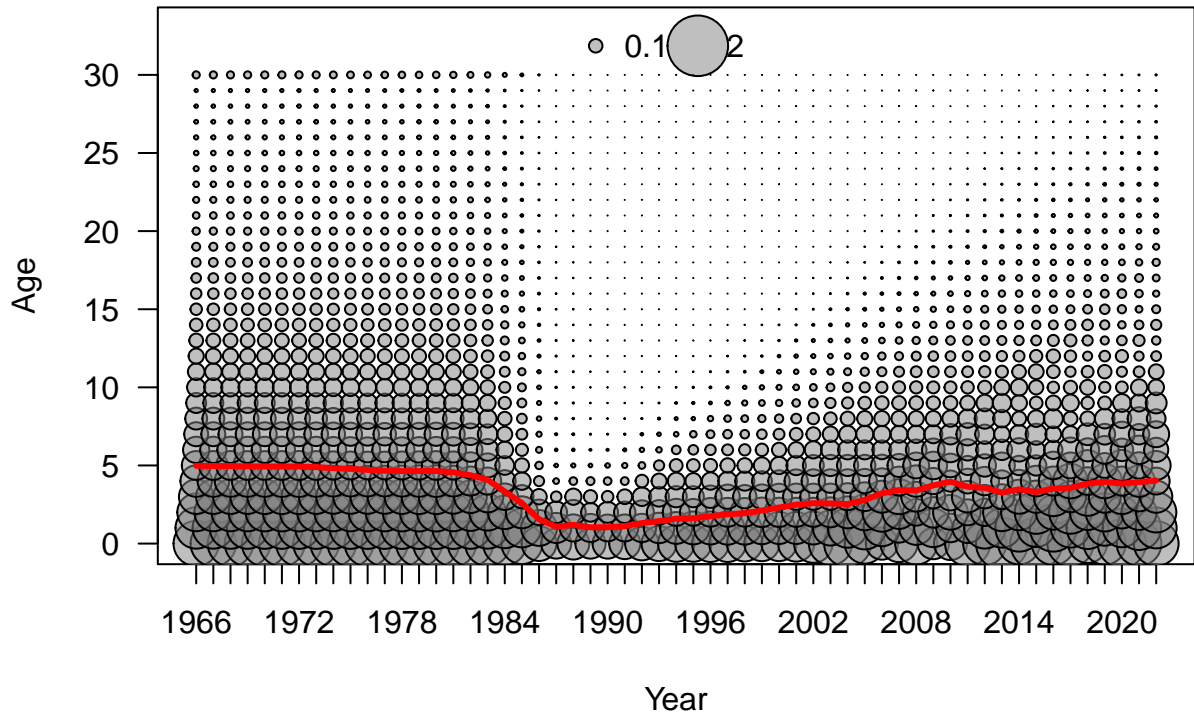


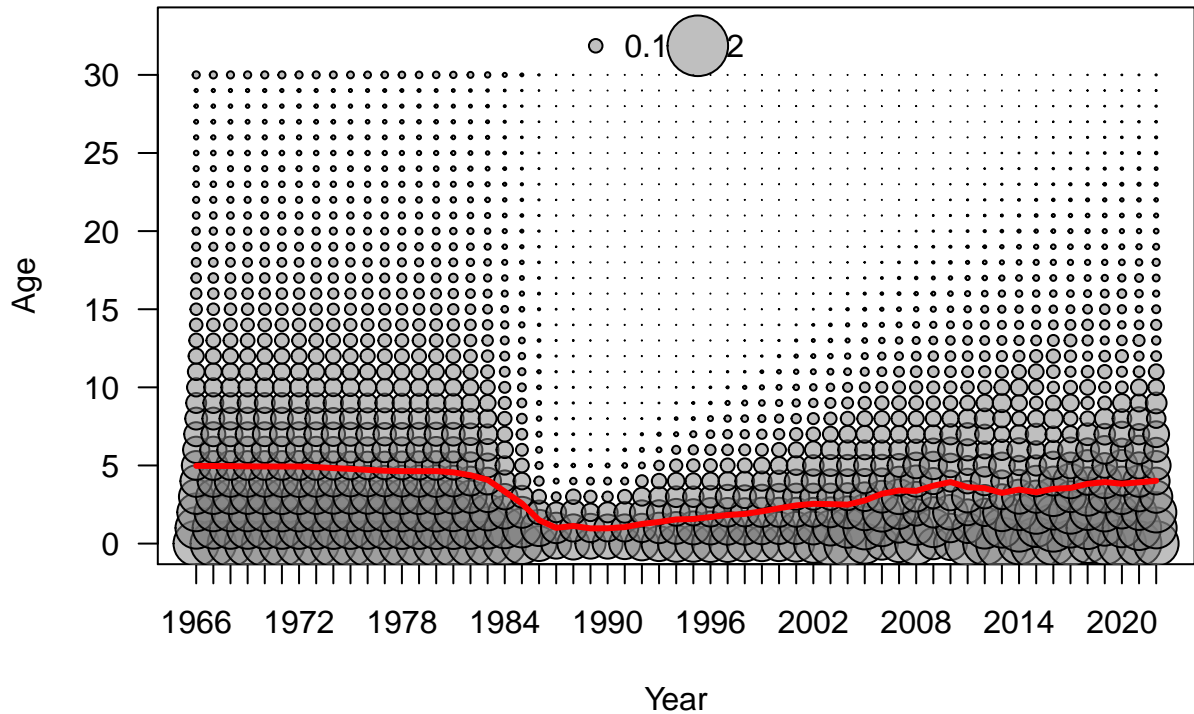
Year

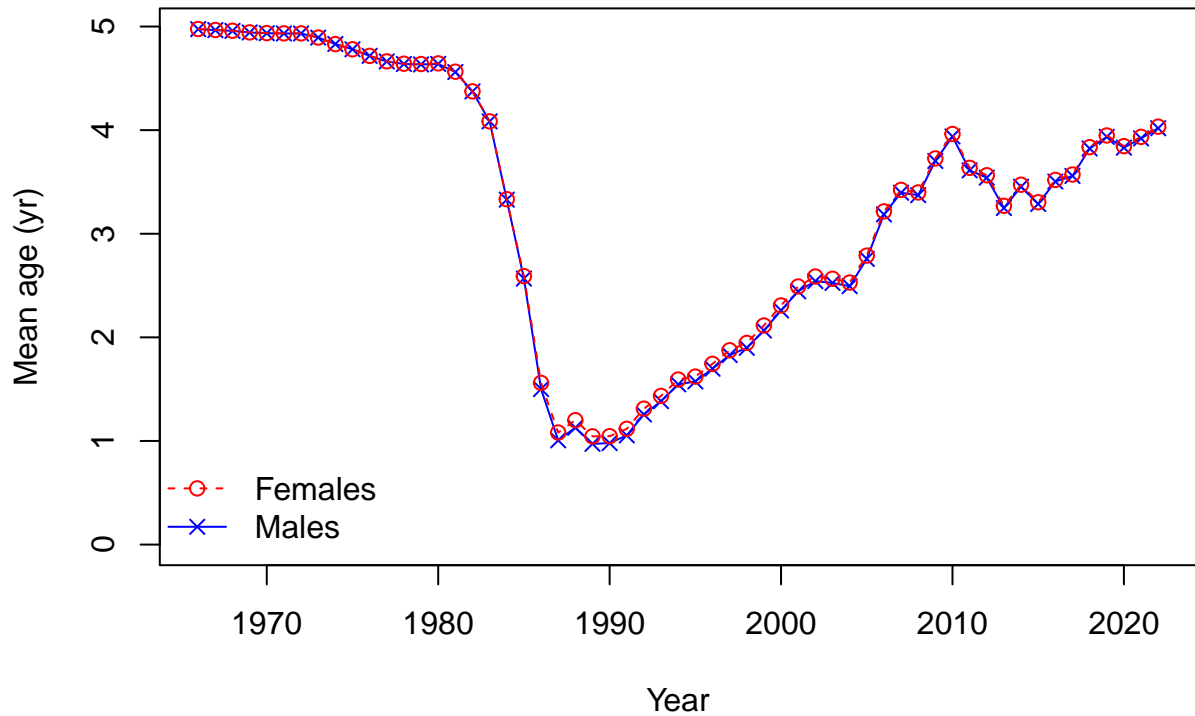


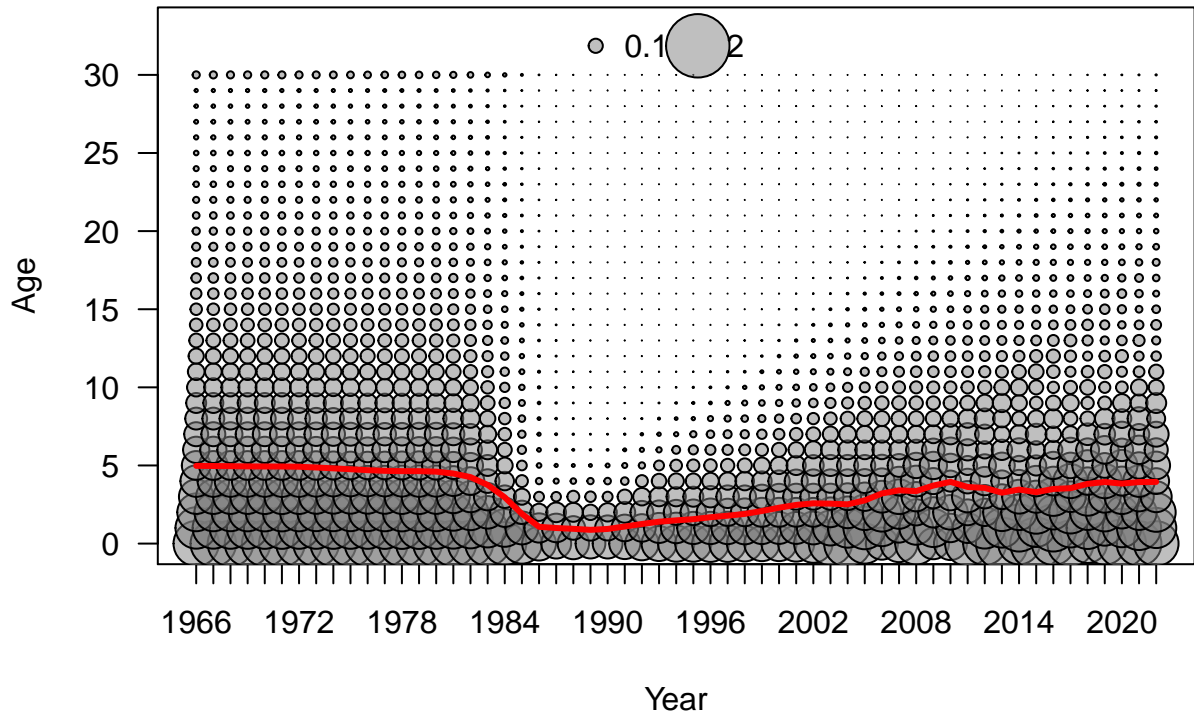


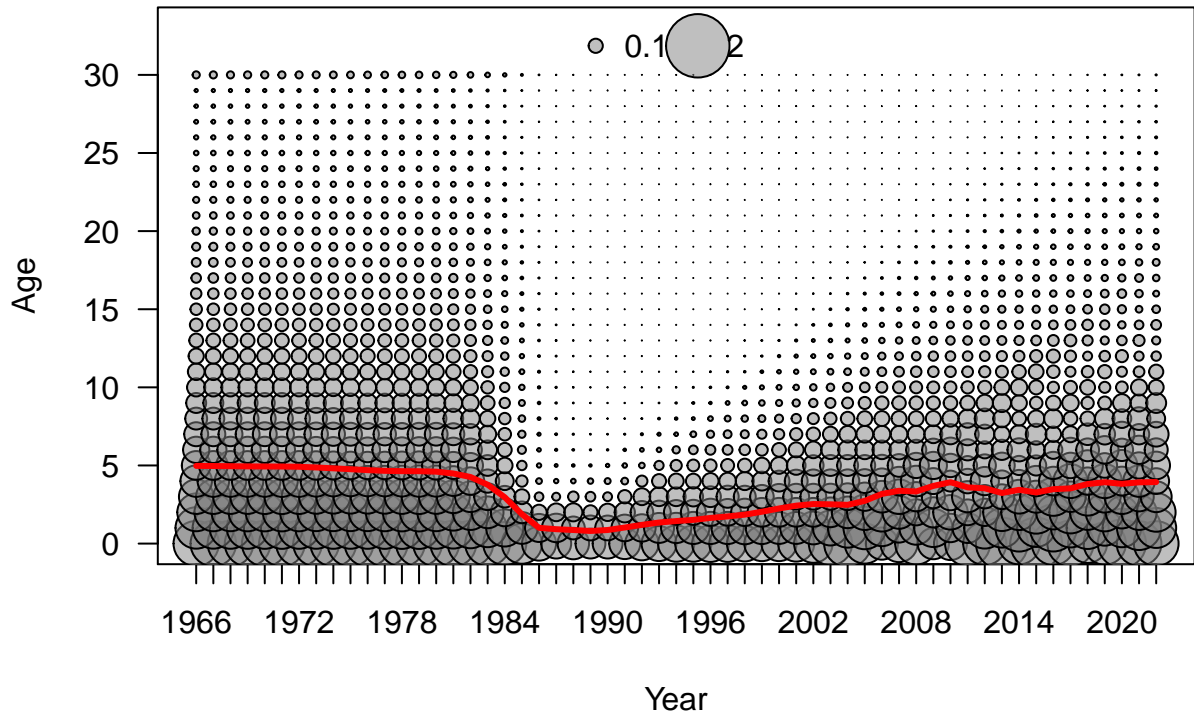


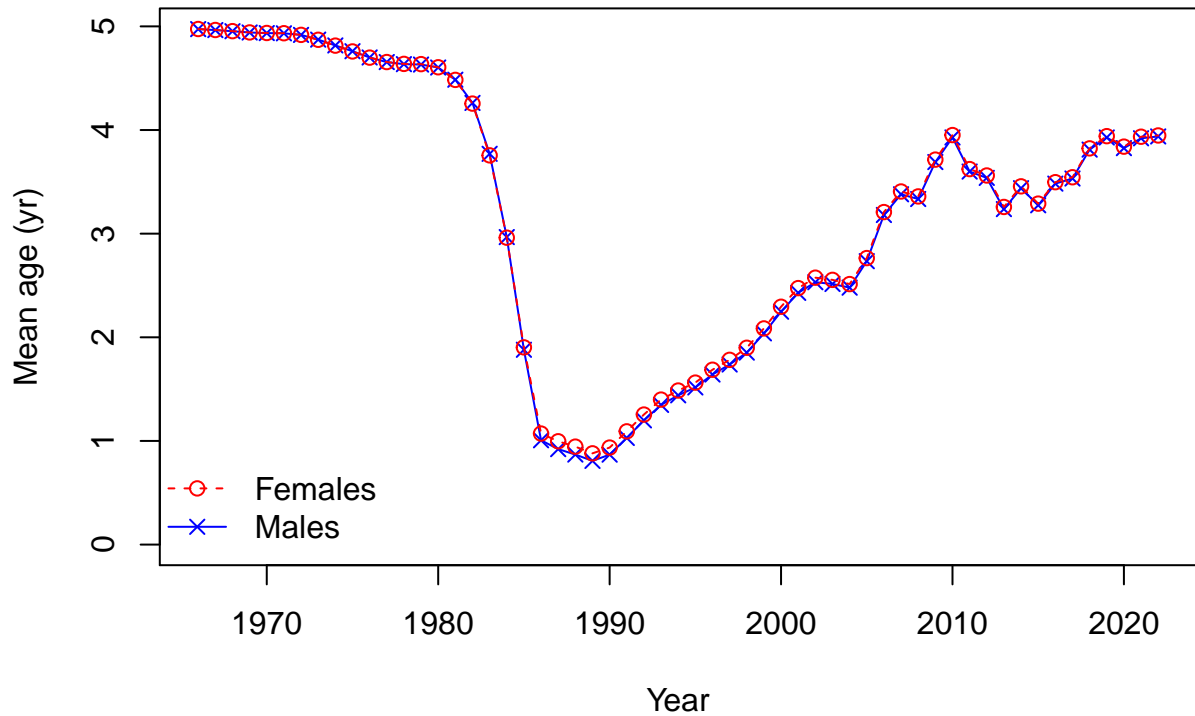


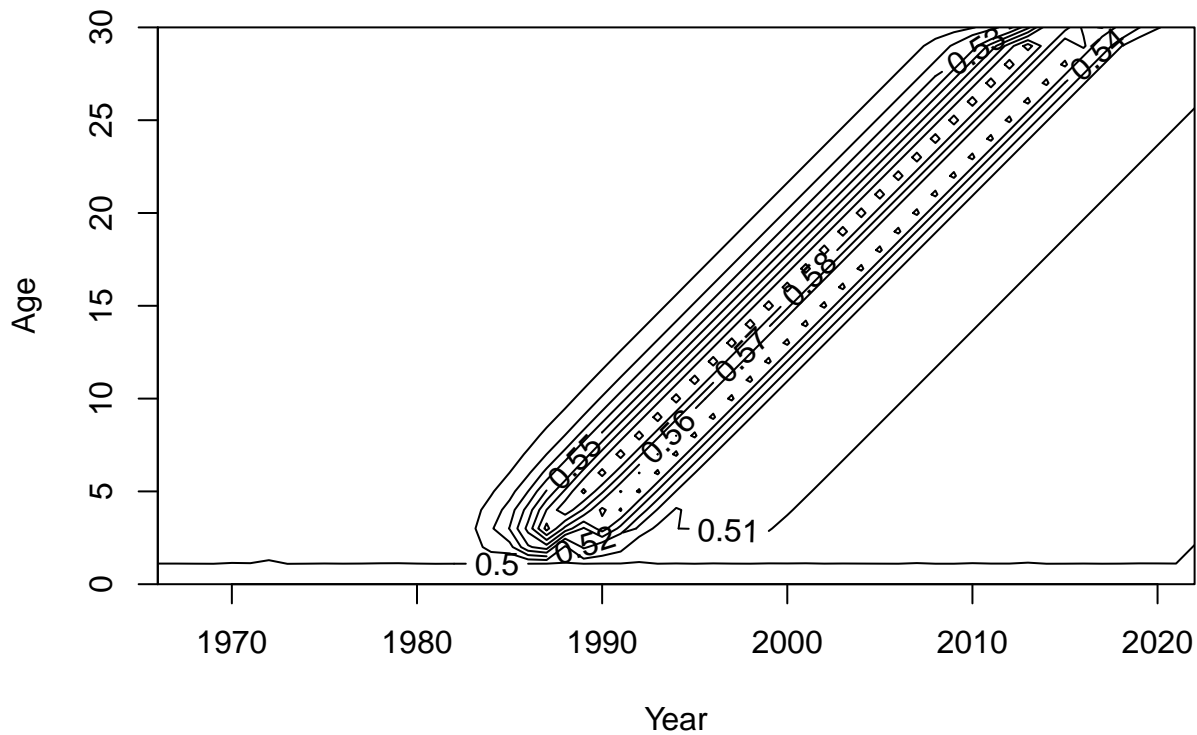


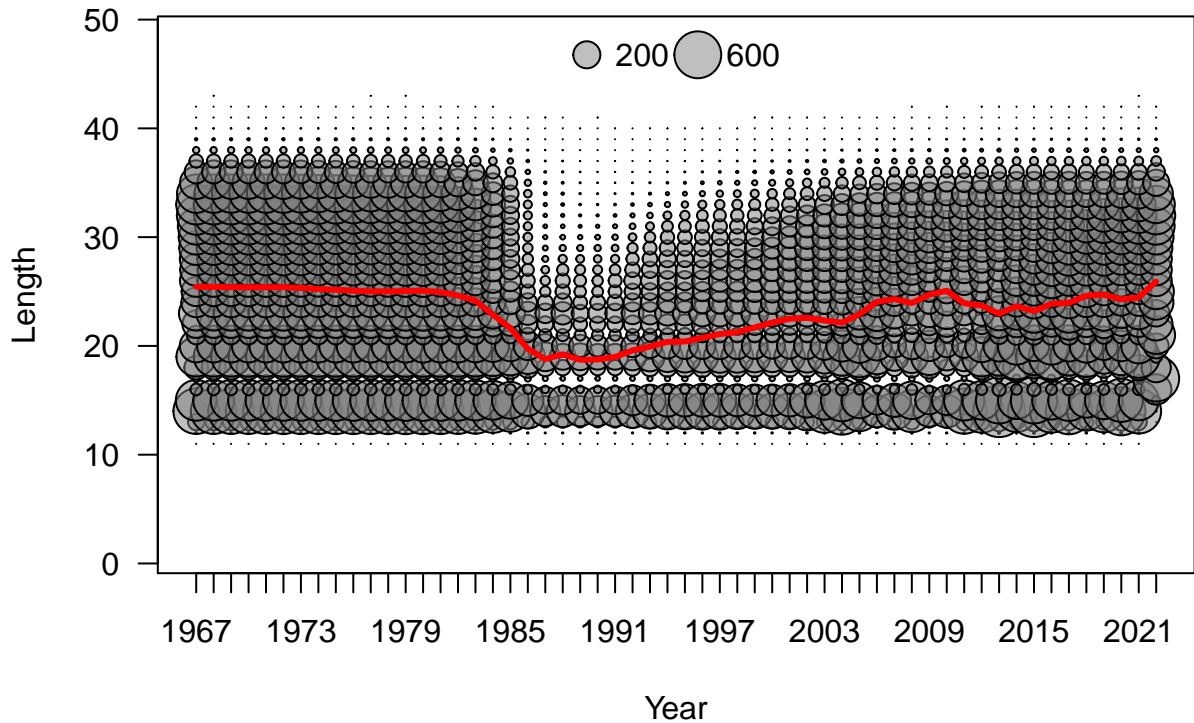




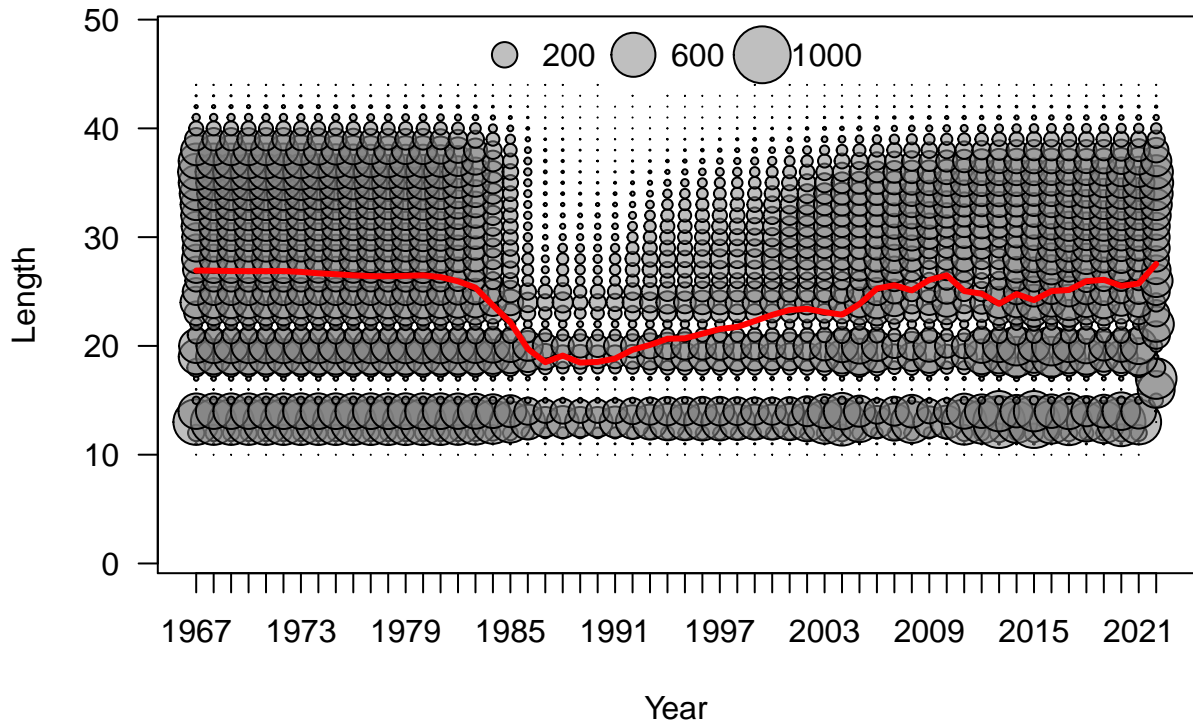


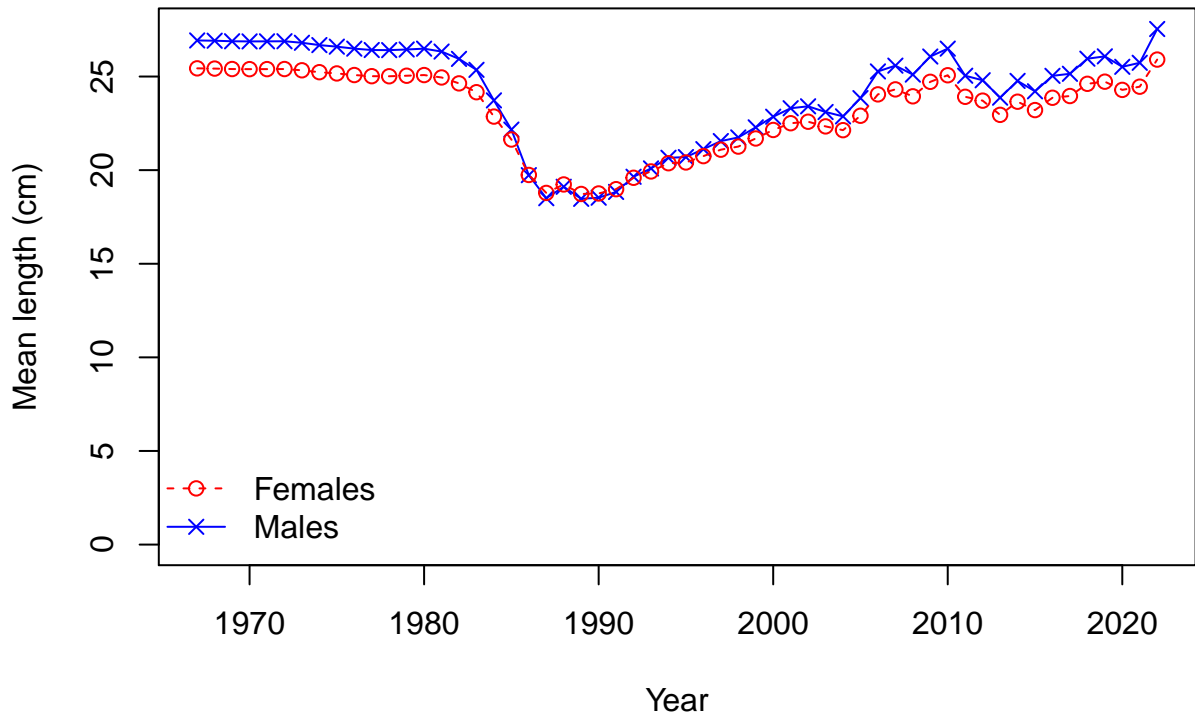


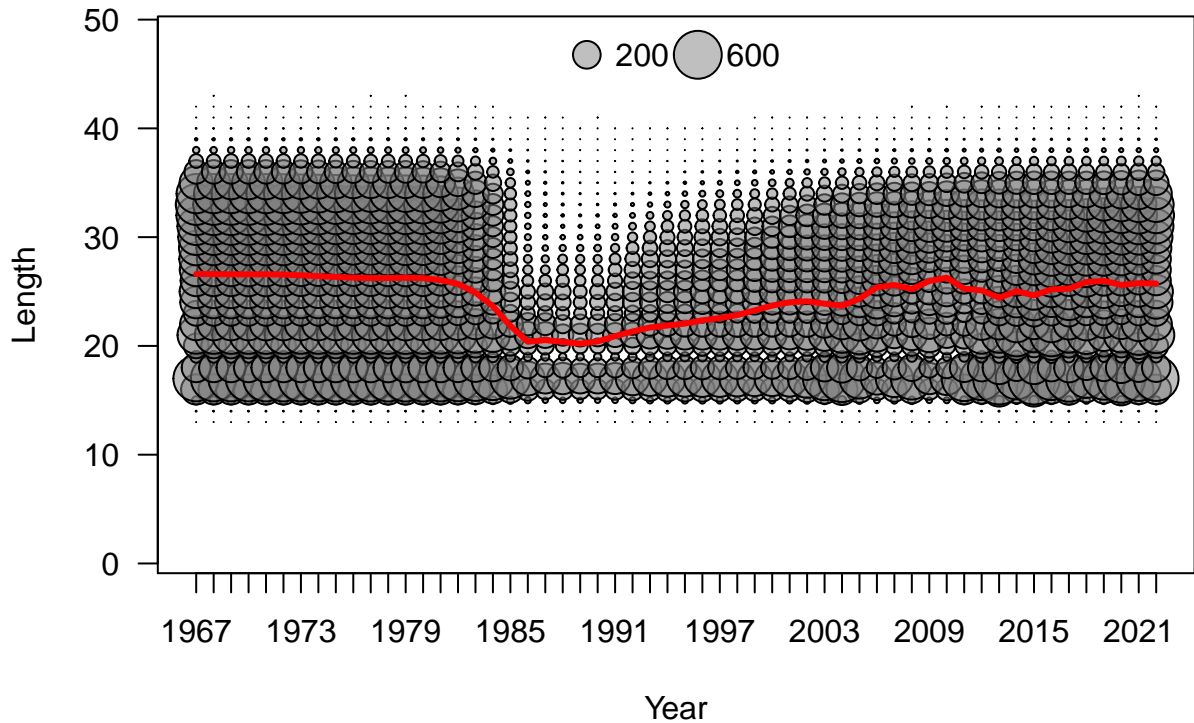


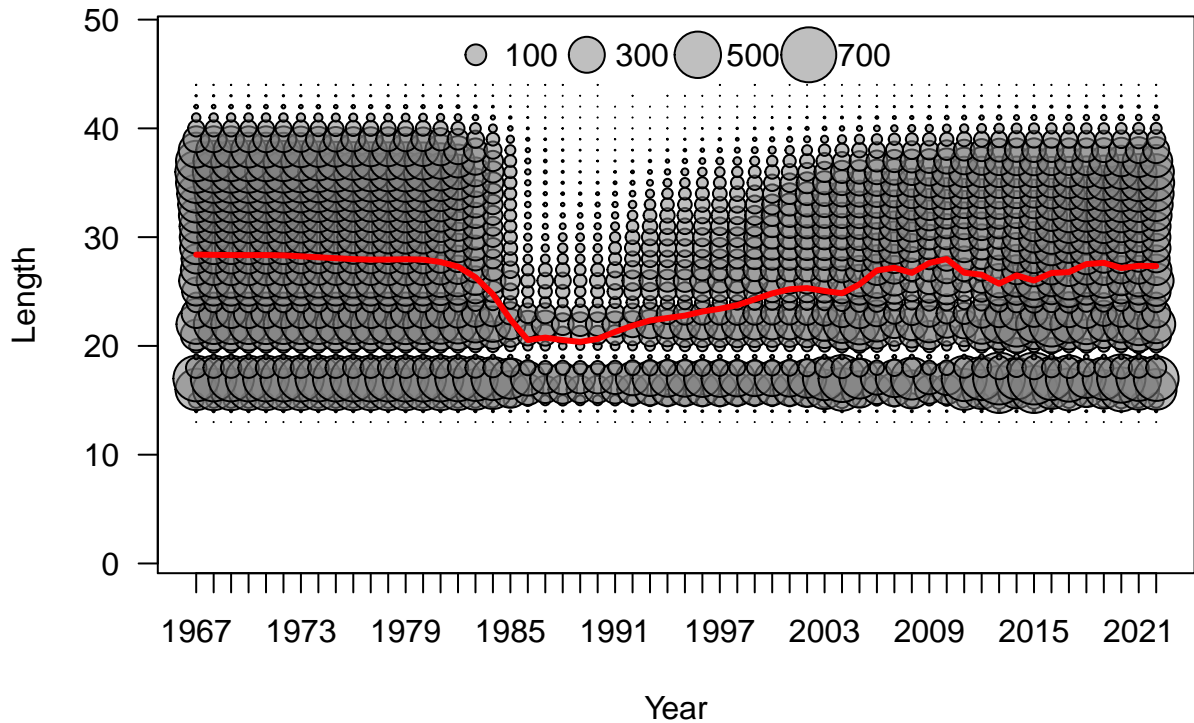


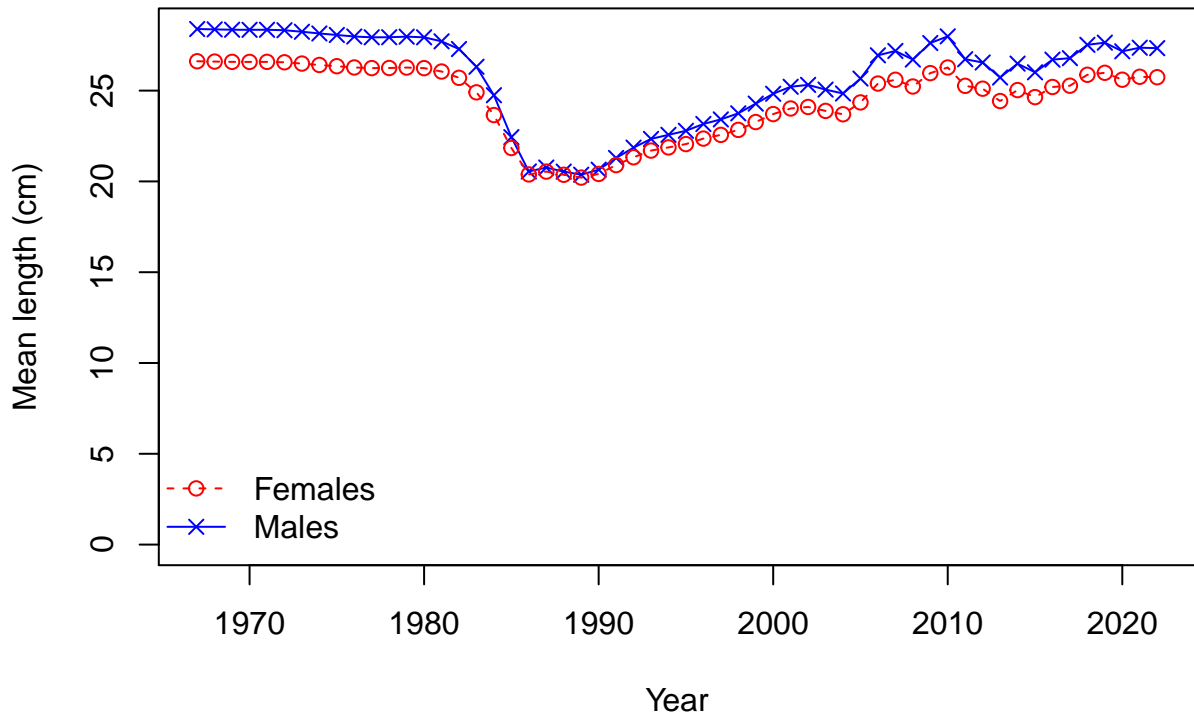


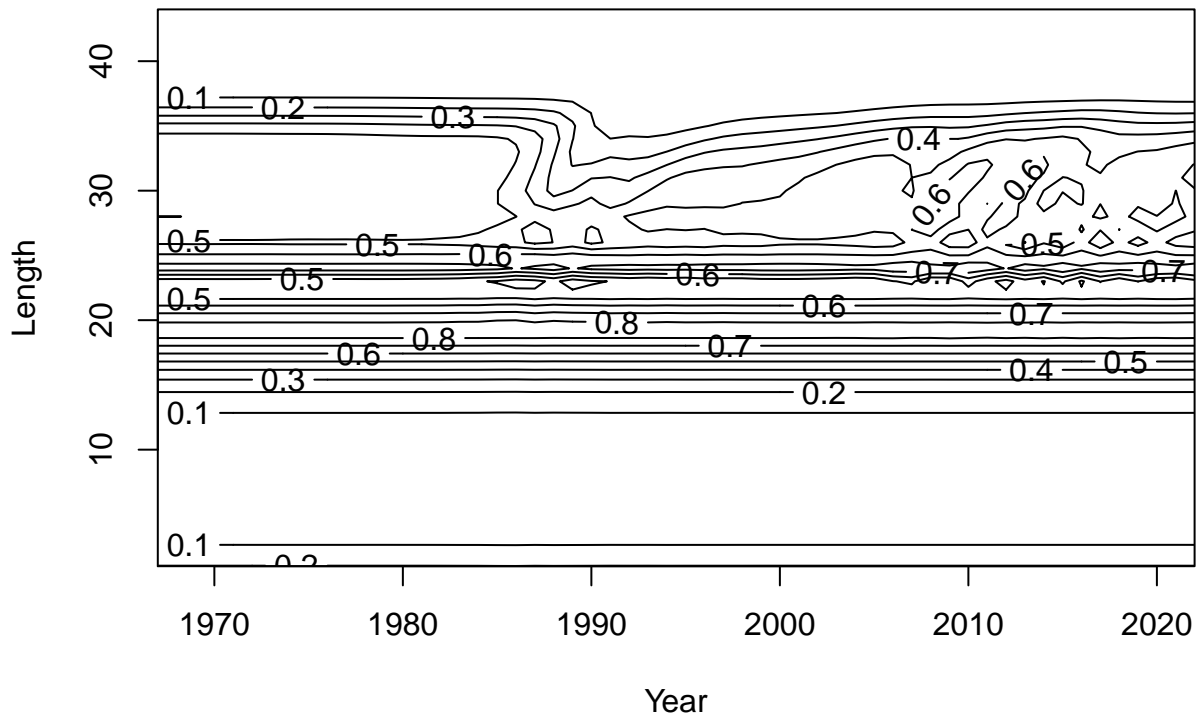


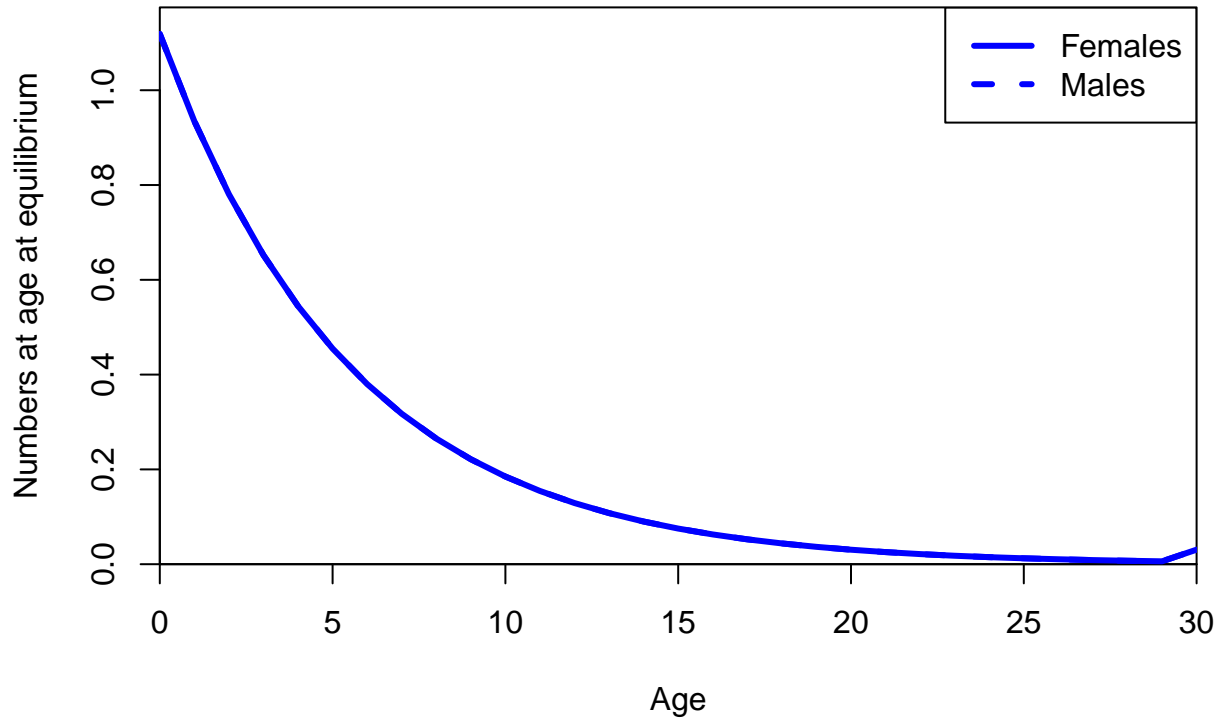












# FISHERY

Sum of N adj.=308

Proportion

0.15  
0.10  
0.05  
0.00

15

20

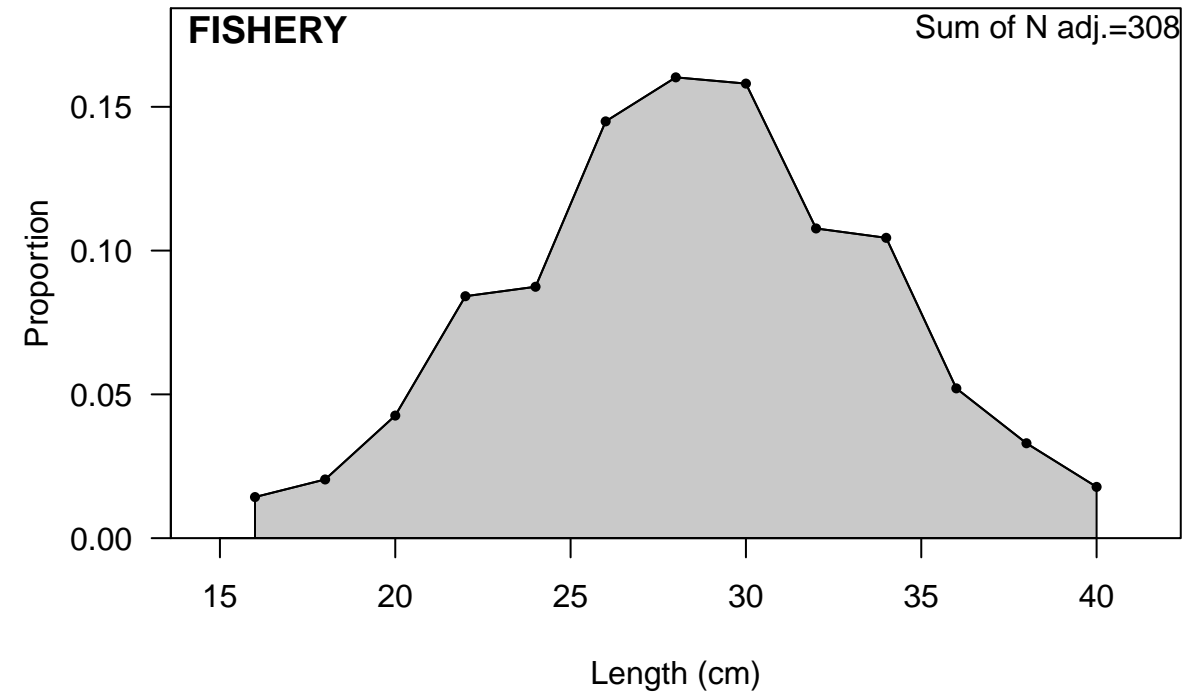
25

30

35

40

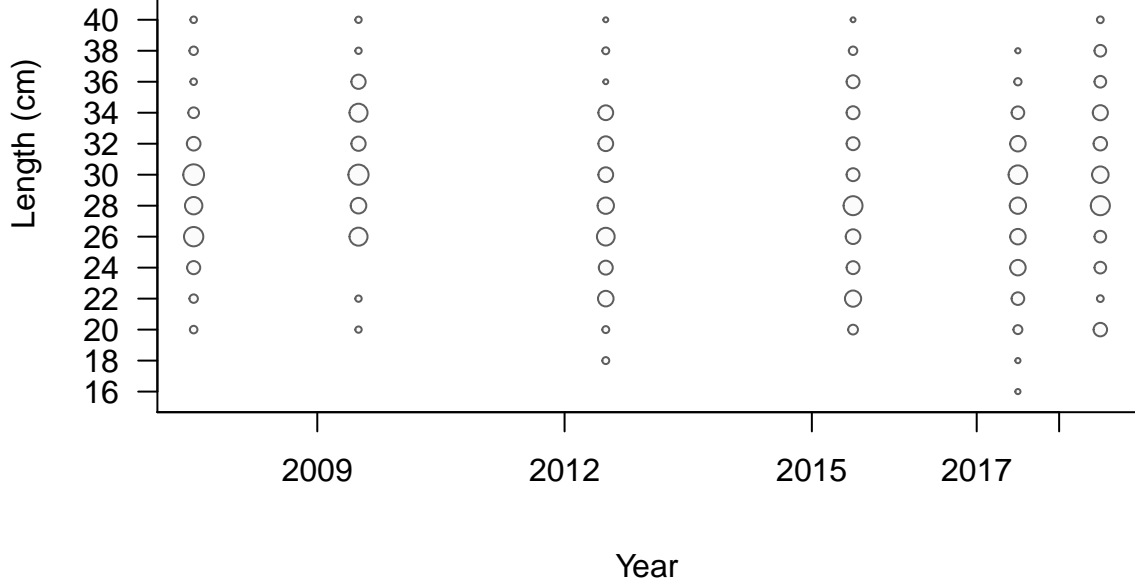
Length (cm)



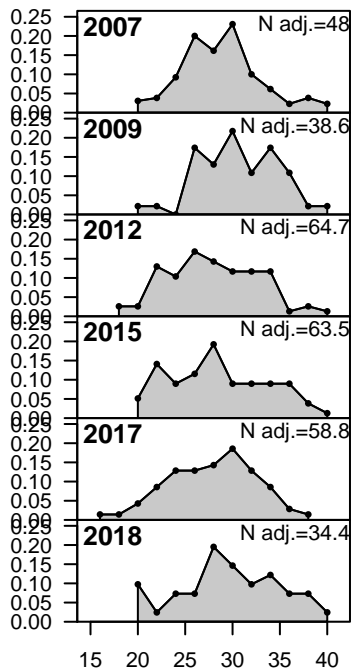


# FISHERY

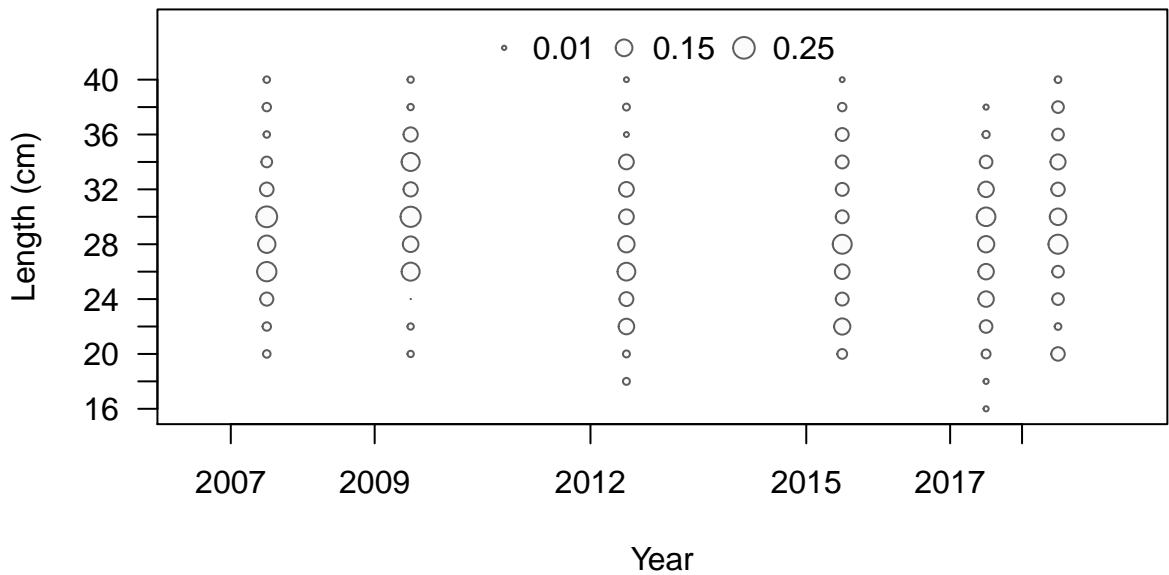
◦ 0.01 ○ 0.15 ○ 0.25



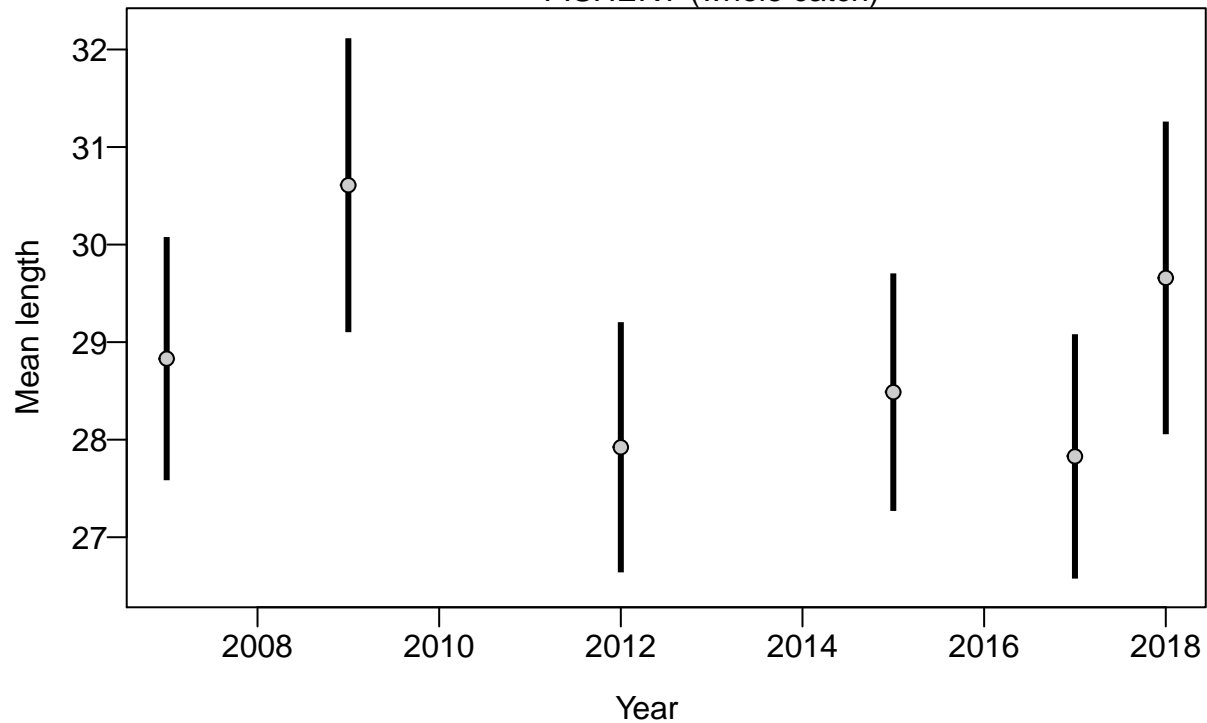
Proportion



Length (cm)

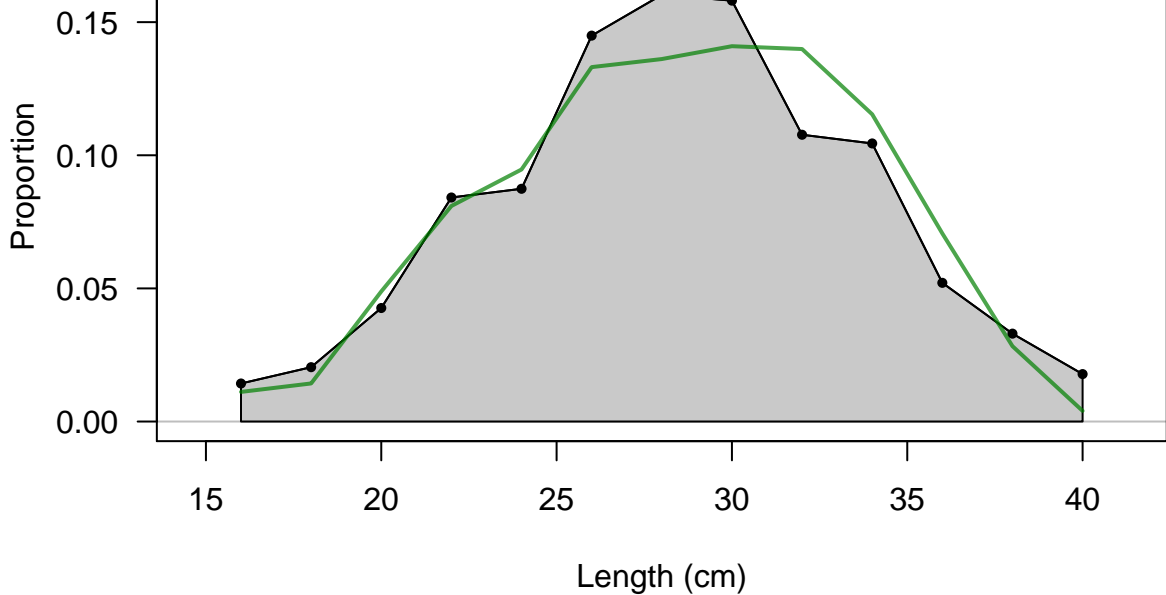


## FISHERY (whole catch)



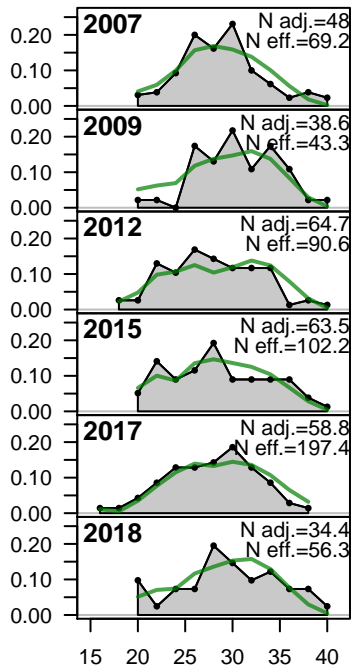
# FISHERY

Sum of N adj.=308  
Sum of N eff.=559

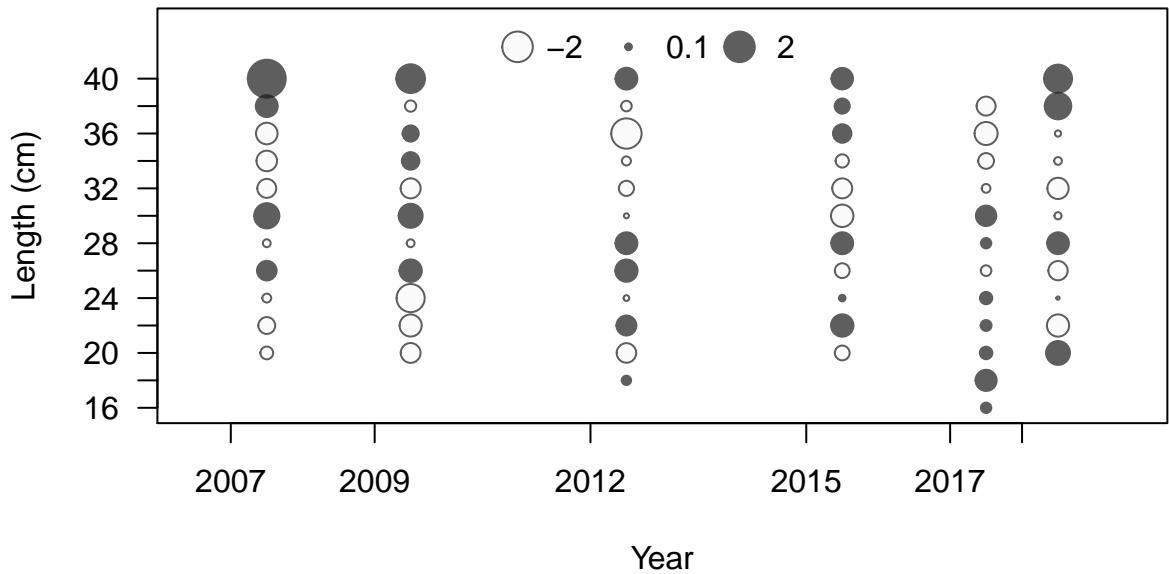




Proportion

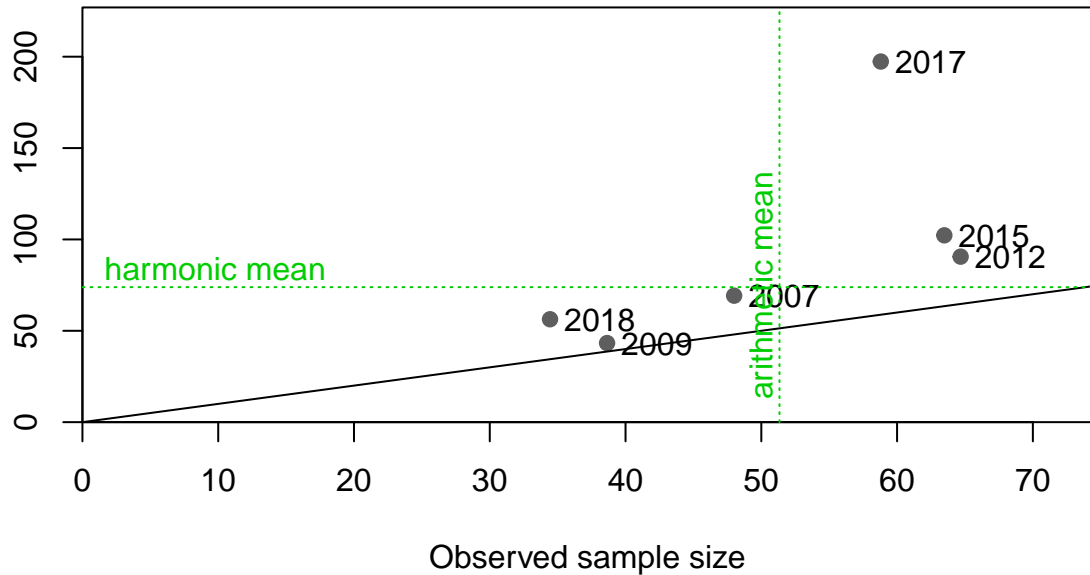


Length (cm)

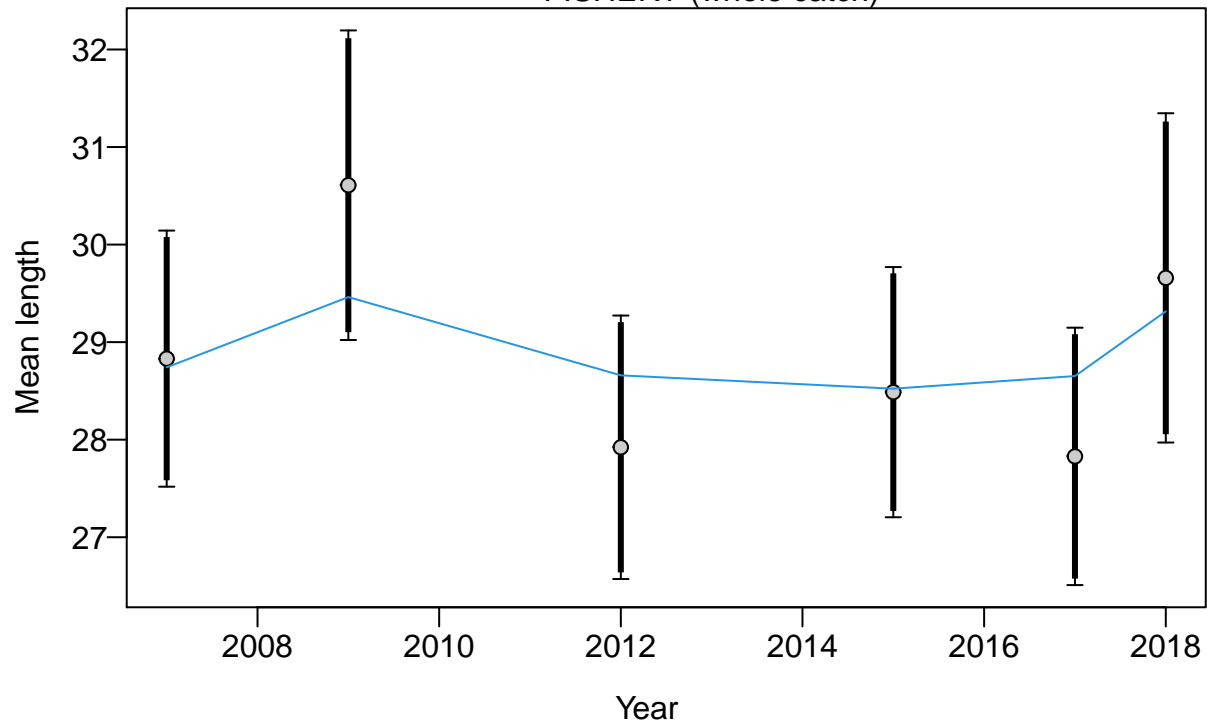


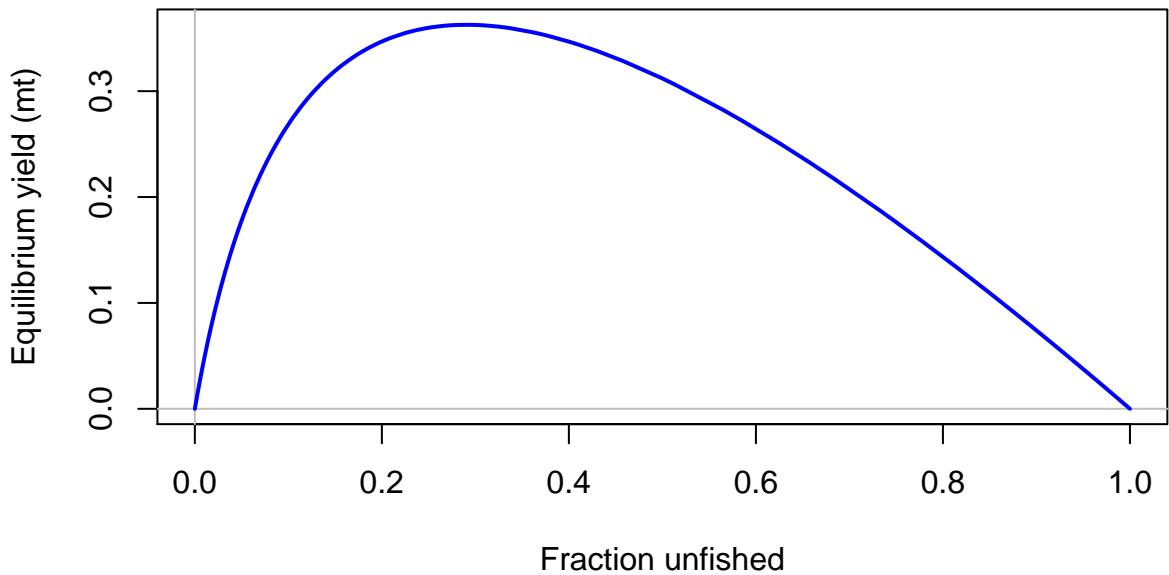


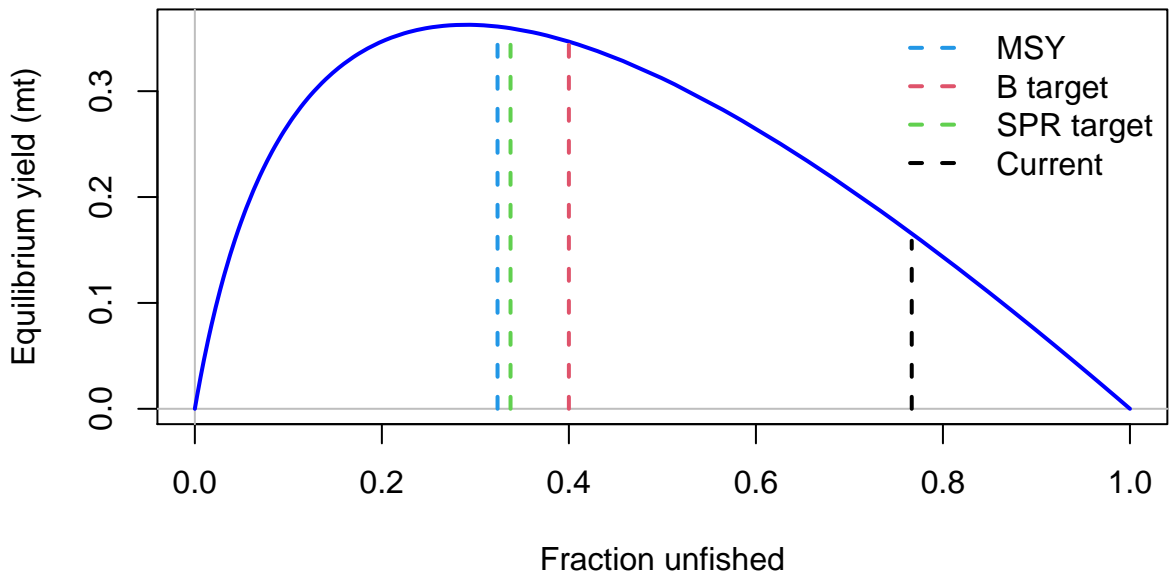
Effective sample size



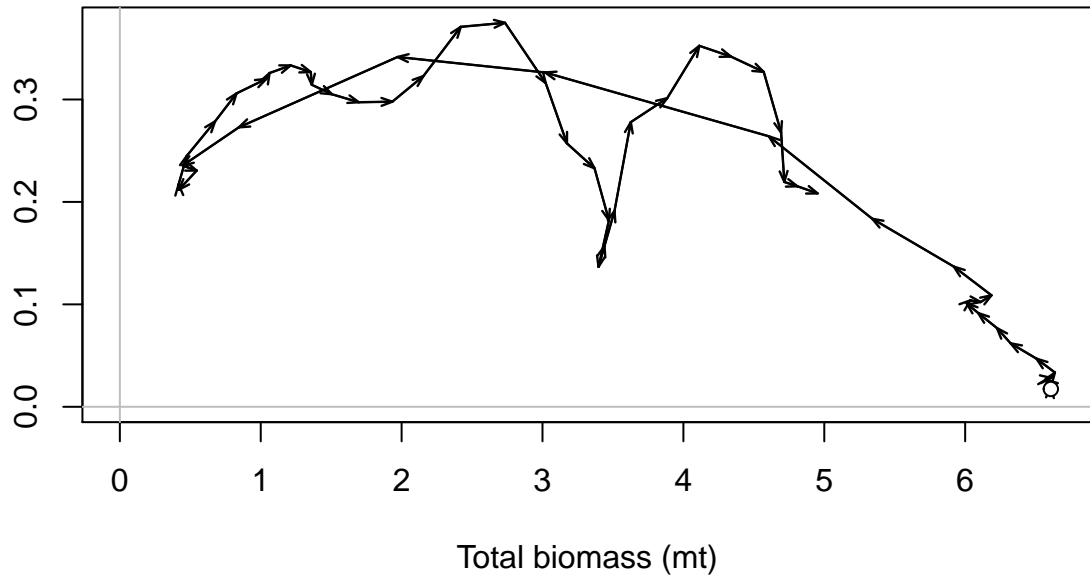
FISHERY (whole catch)

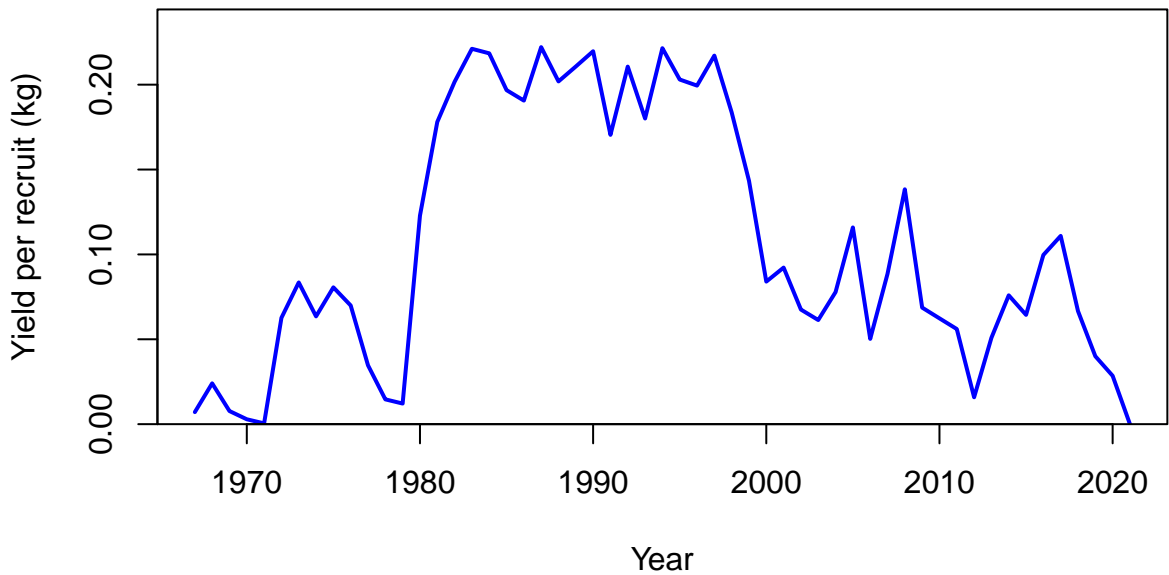


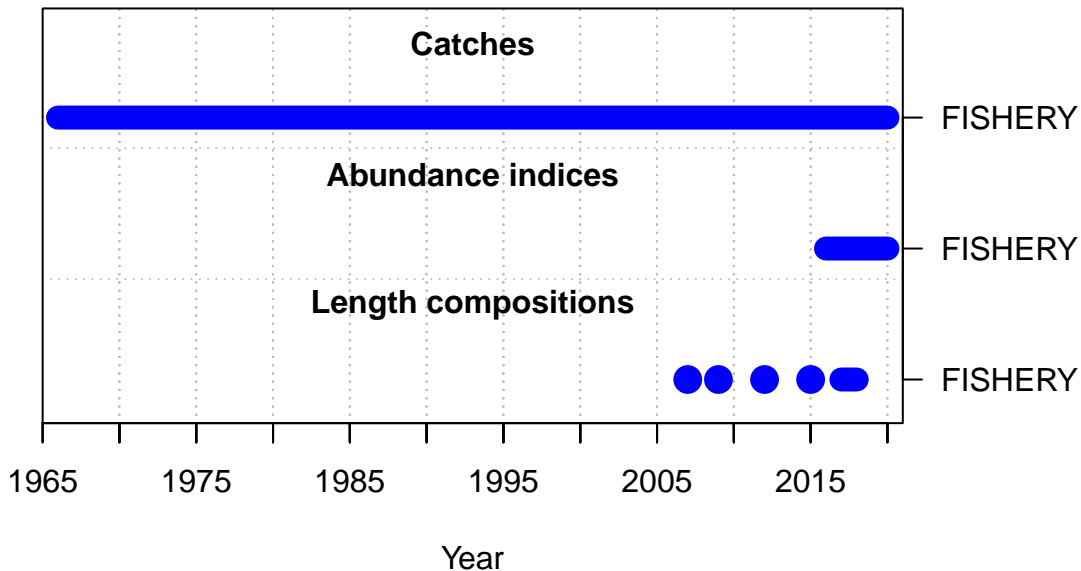


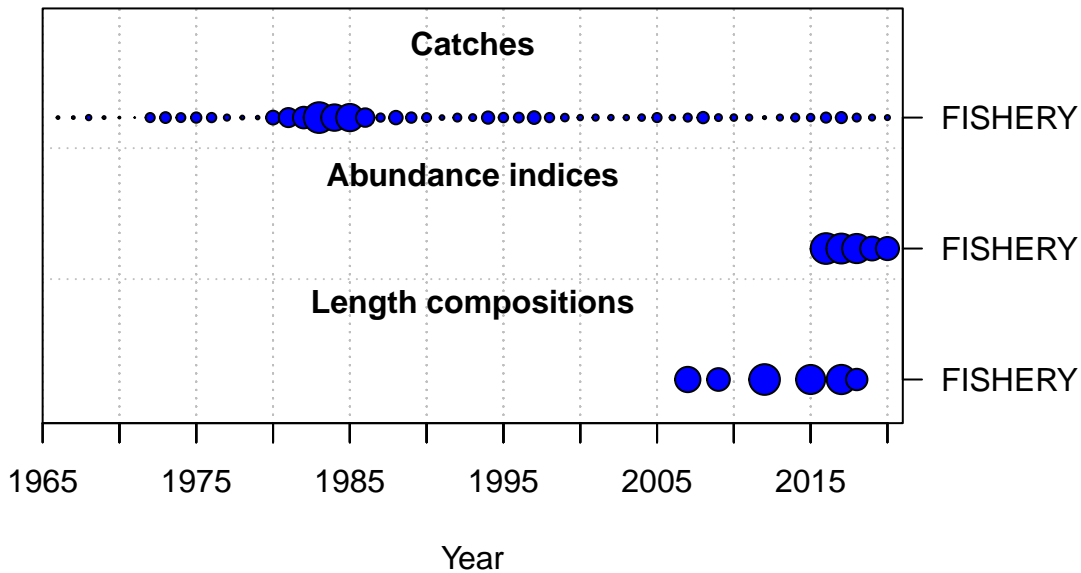


Surplus production (mt)



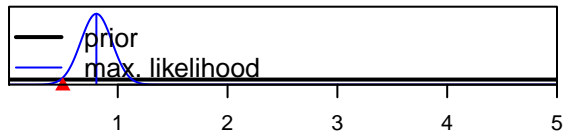




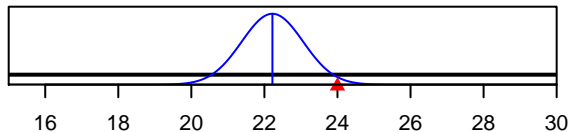




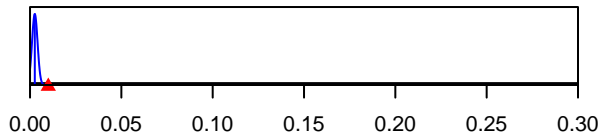
SR\_LN(R0)



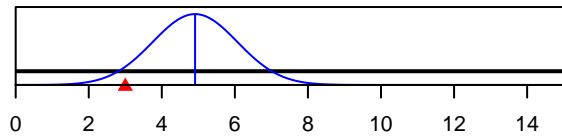
Size\_inflection\_FISHERY(1)



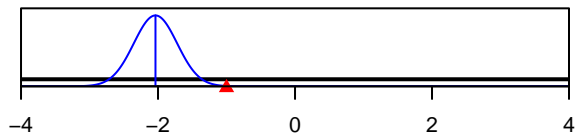
InitF\_seas\_1\_flt\_1FISHERY



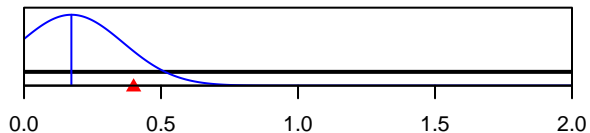
Size\_95%width\_FISHERY(1)



LnQ\_base\_FISHERY(1)



Q\_extraSD\_FISHERY(1)



Parameter value