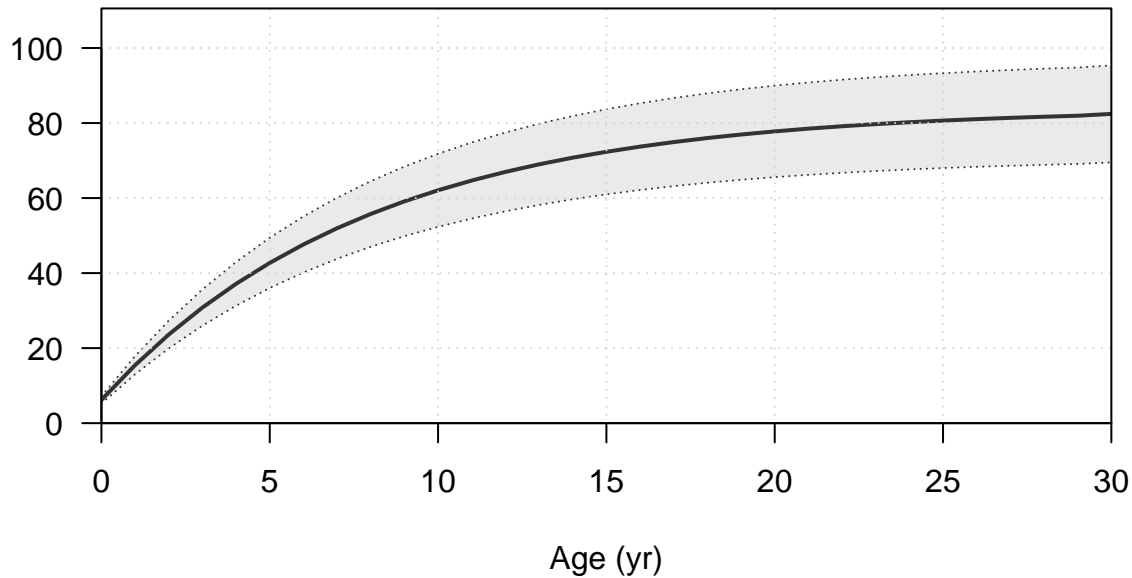
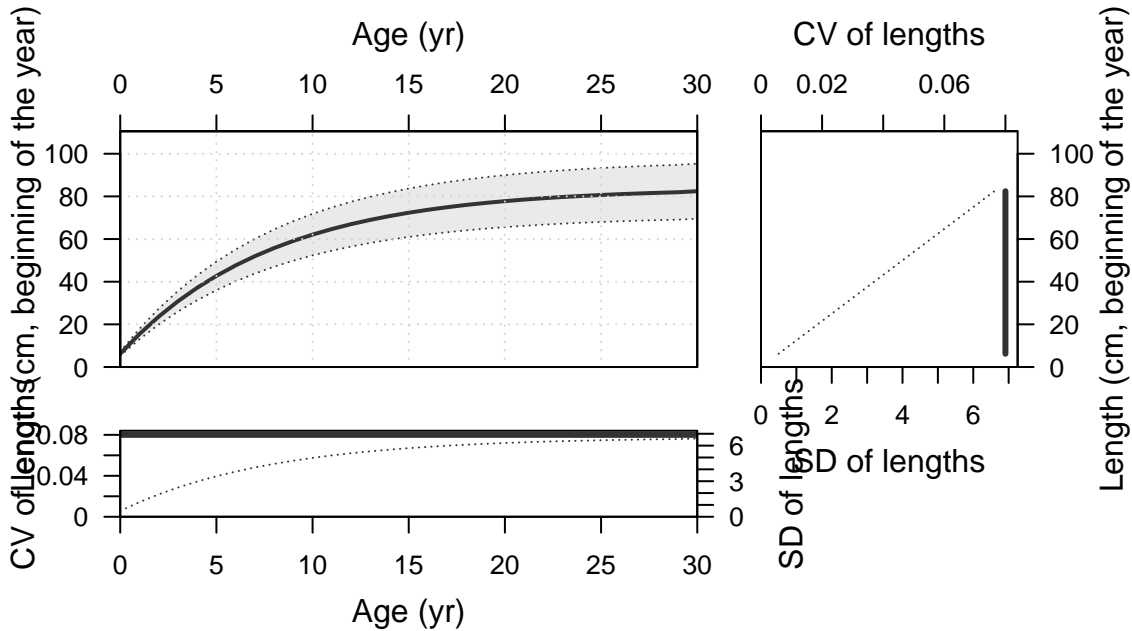
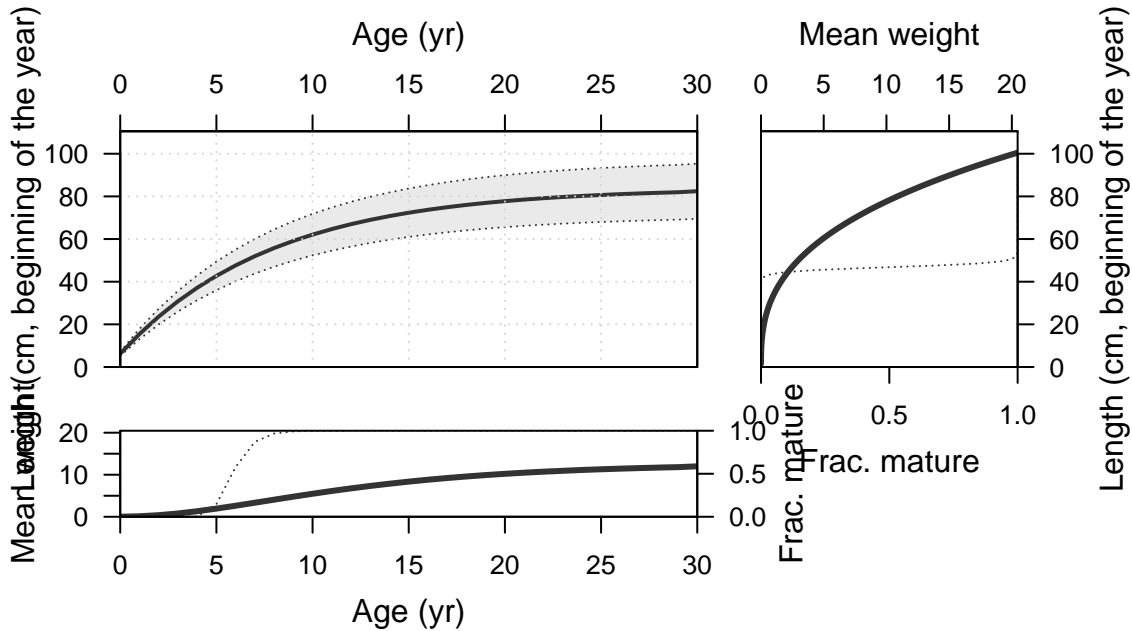


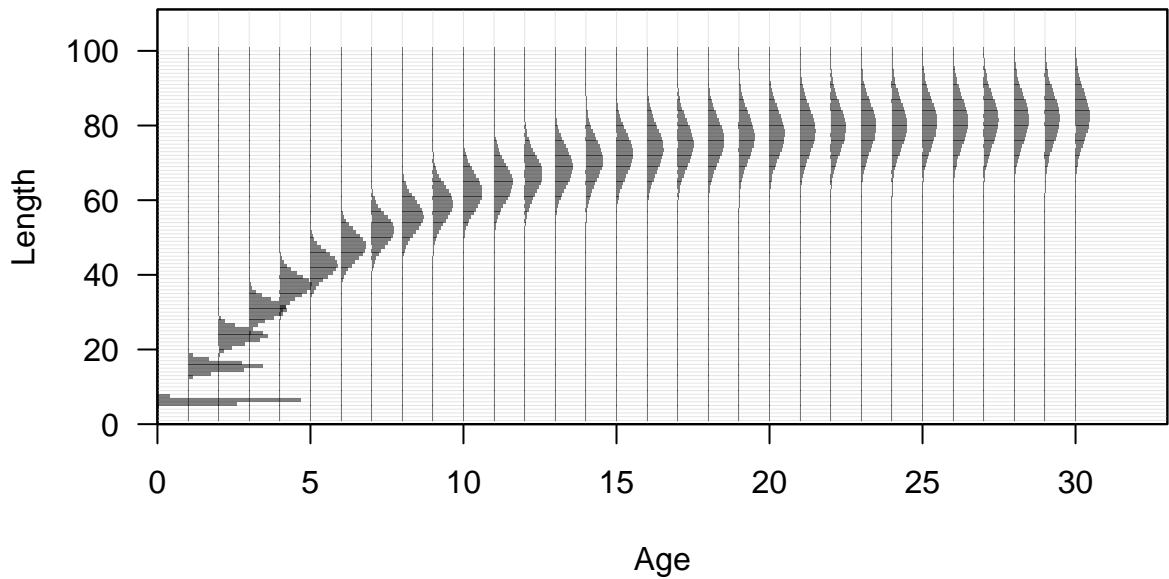
Plots created using the 'r4ss' package in R  
Stock Synthesis version: 3.30.19.0  
StartTime: Mon Jul 18 15:51:01 2022  
Data\_File: data.ss  
Control\_File: control.ss

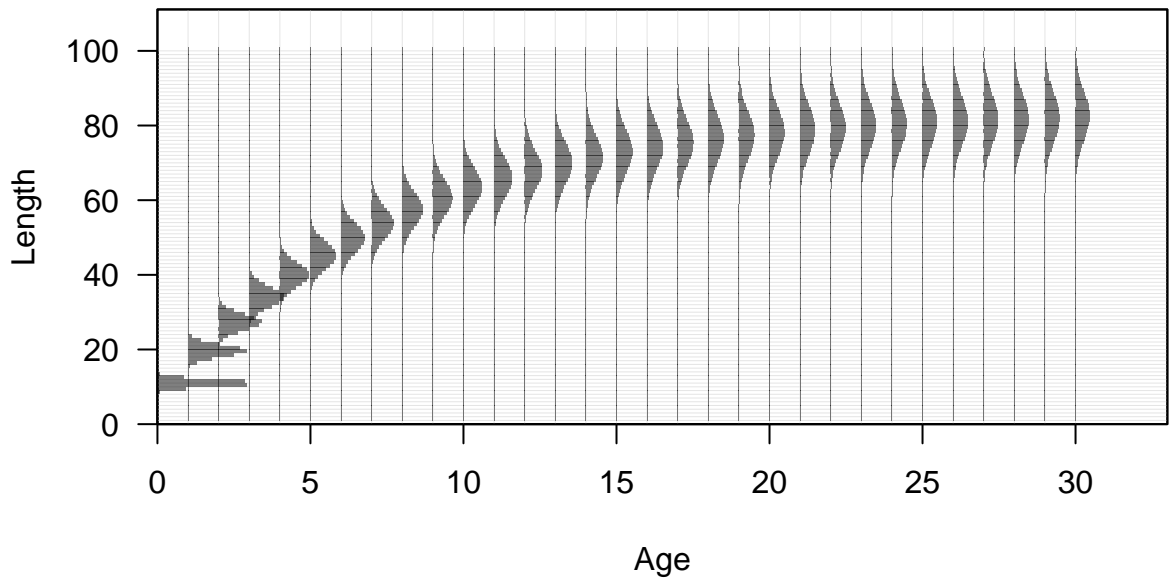
Length (cm, beginning of the year)

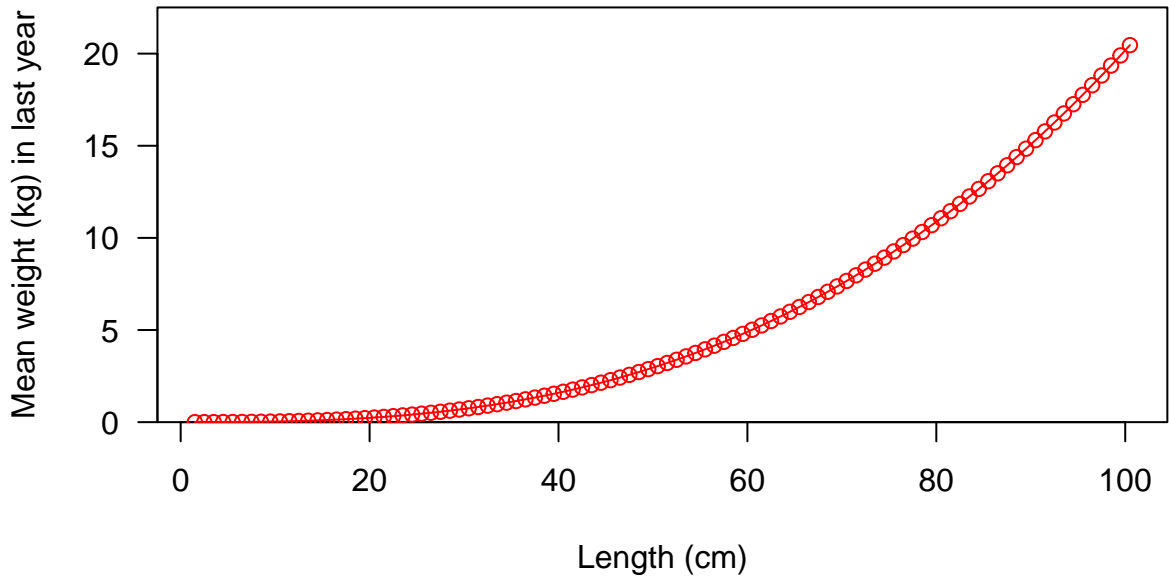


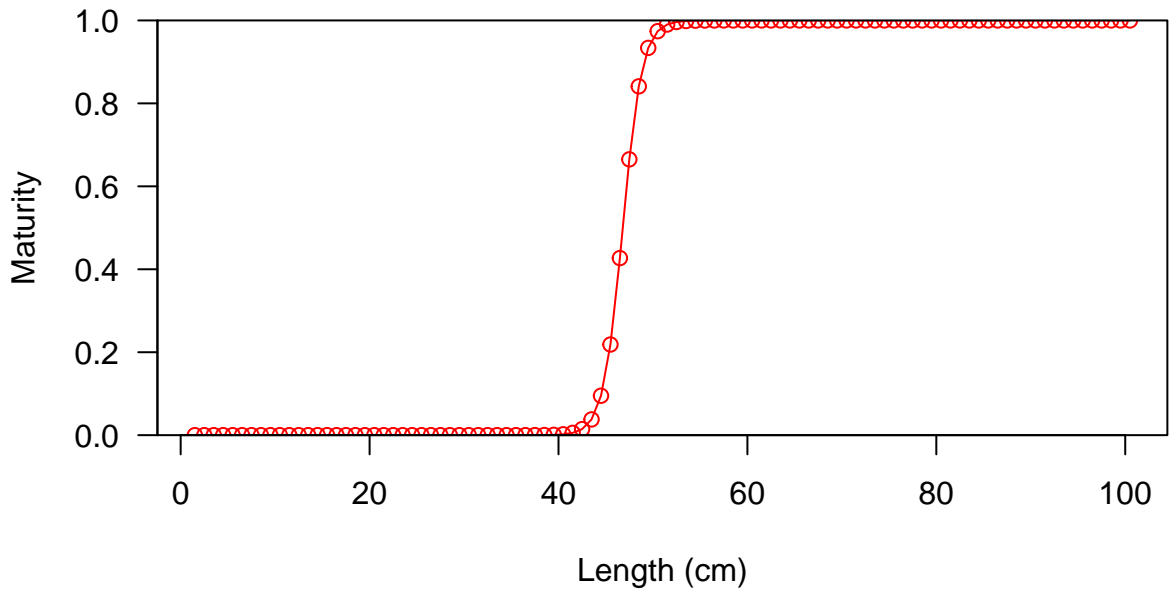




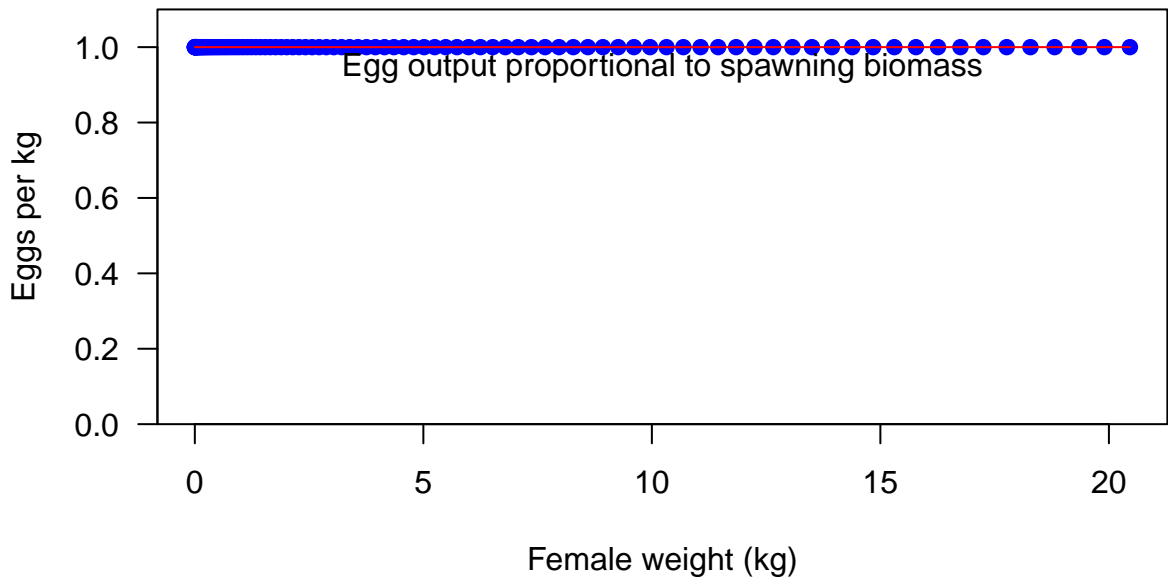




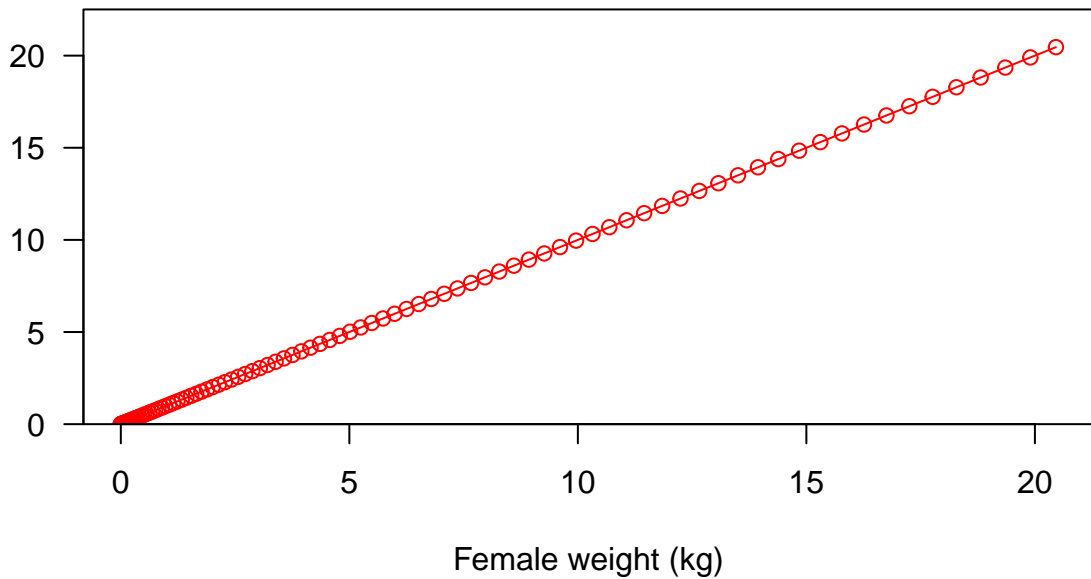








Fecundity



Fecundity

20

15

10

5

0

0

20

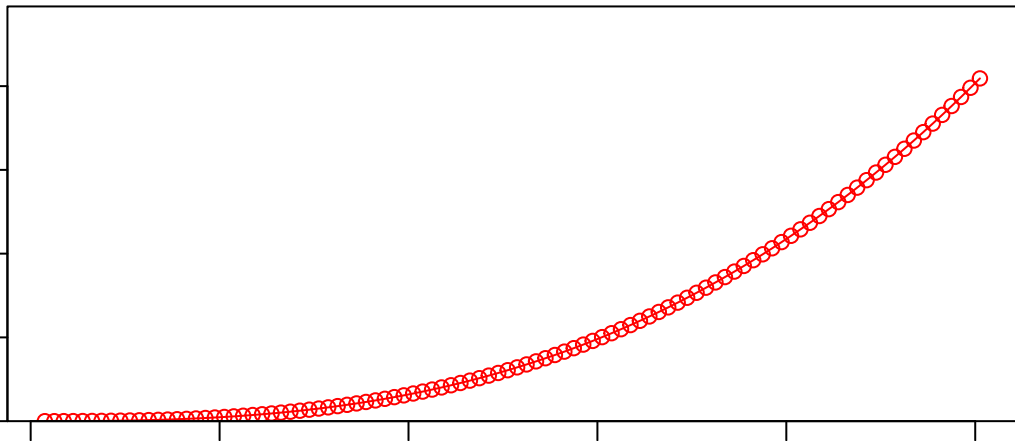
40

60

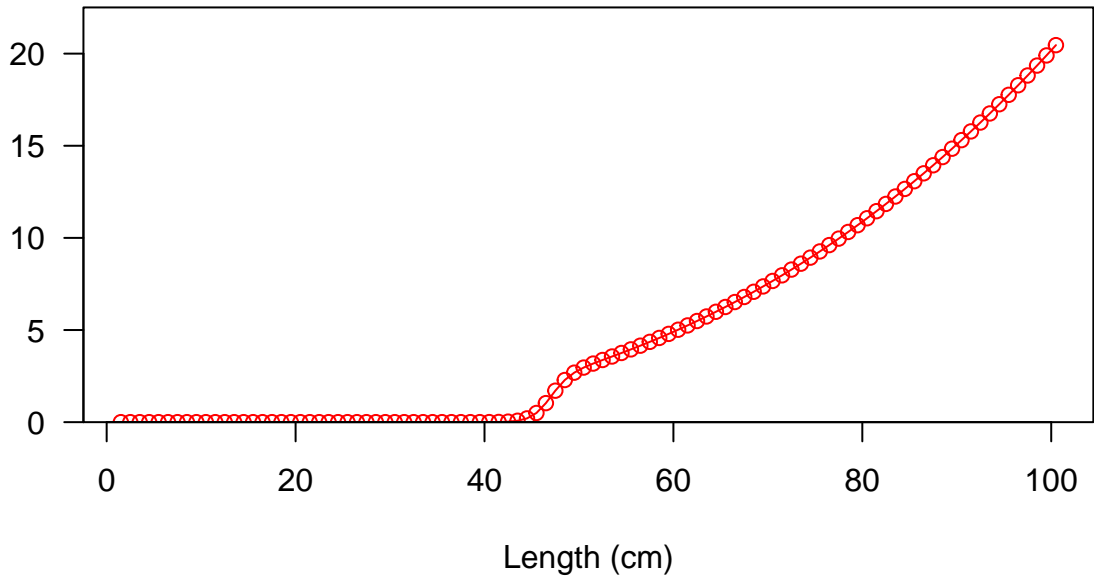
80

100

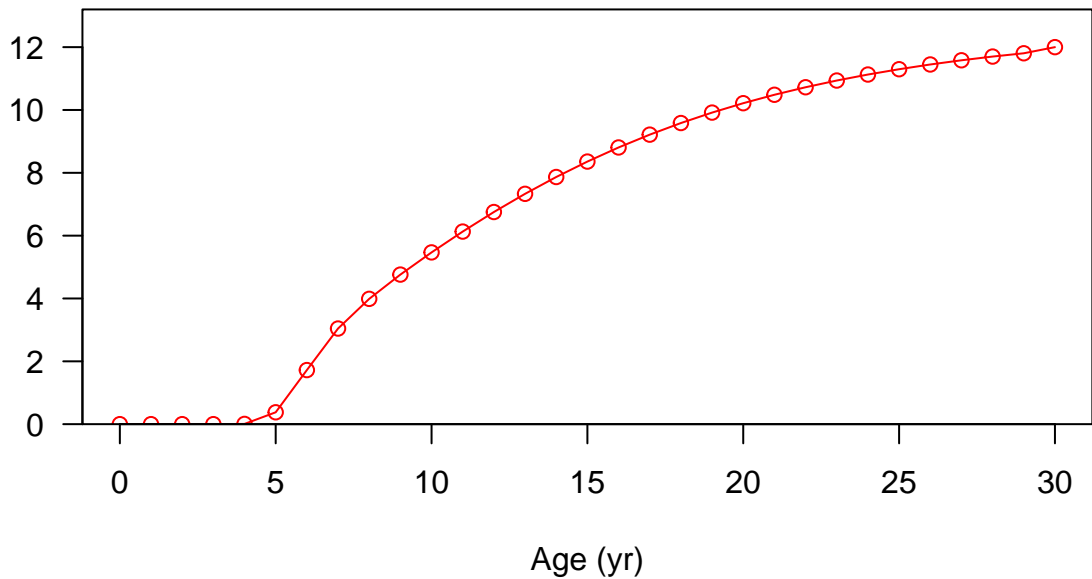
Female length (cm)



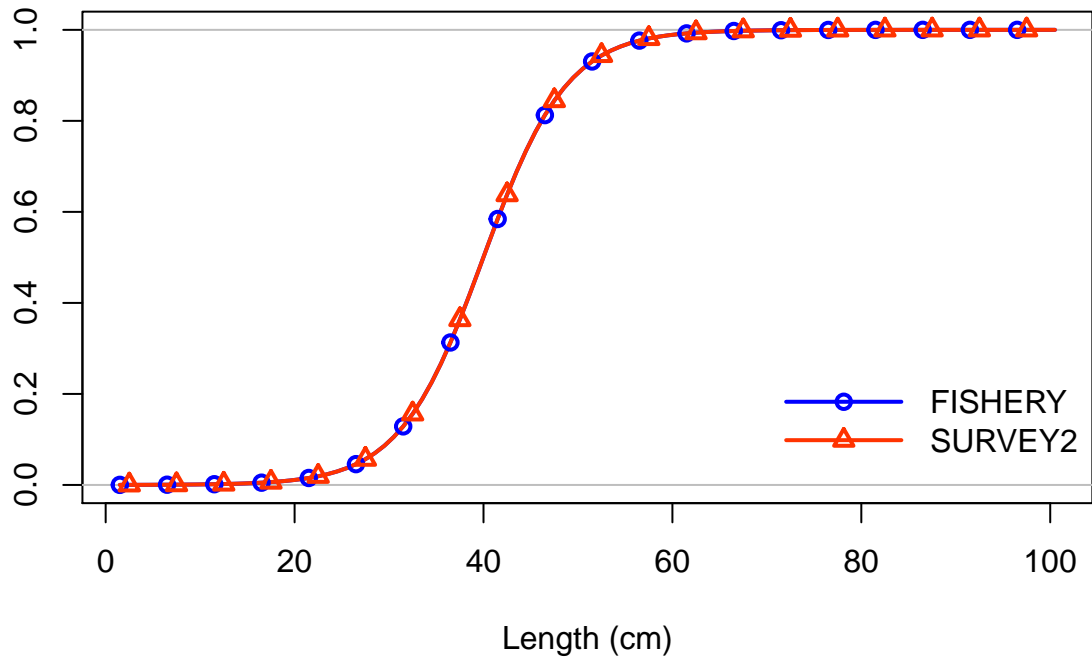
Spawning output



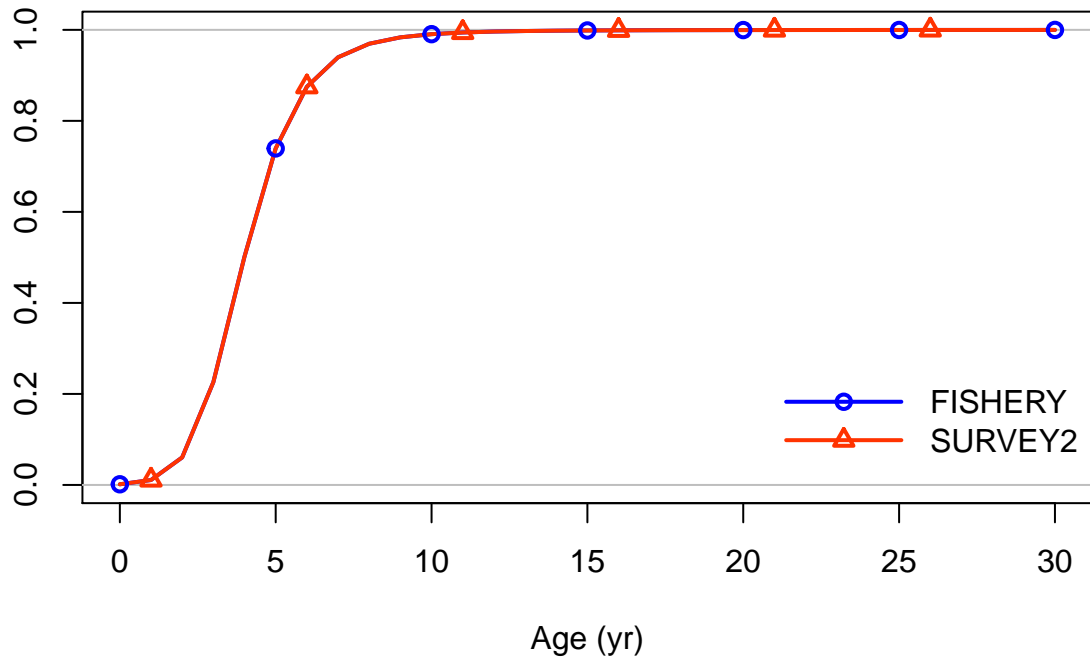
Spawning output



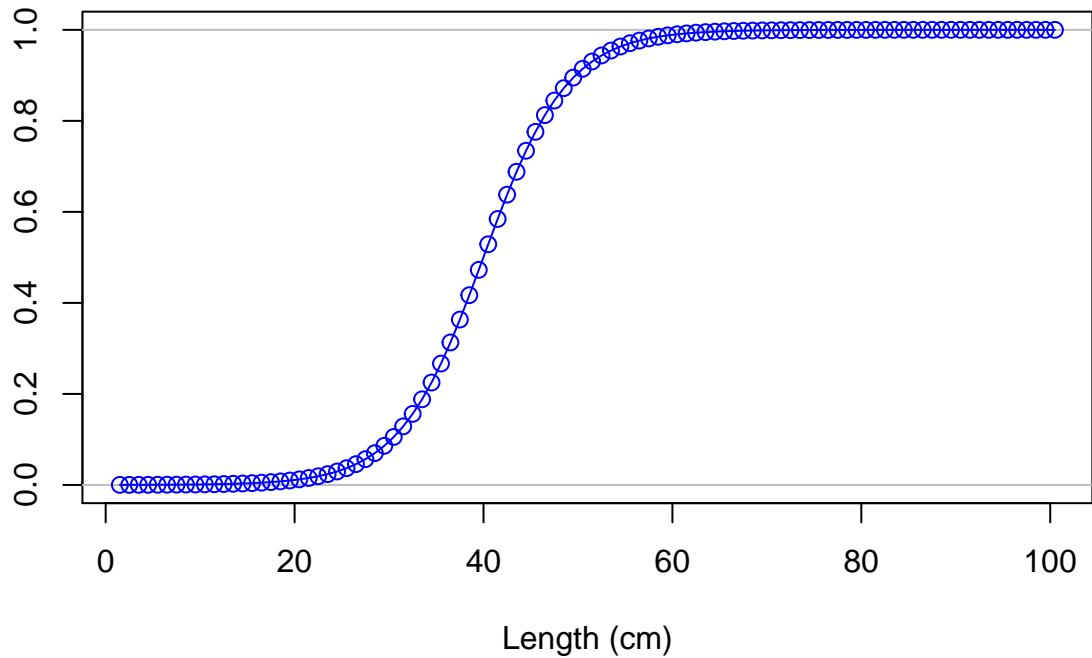
Selectivity



Selectivity

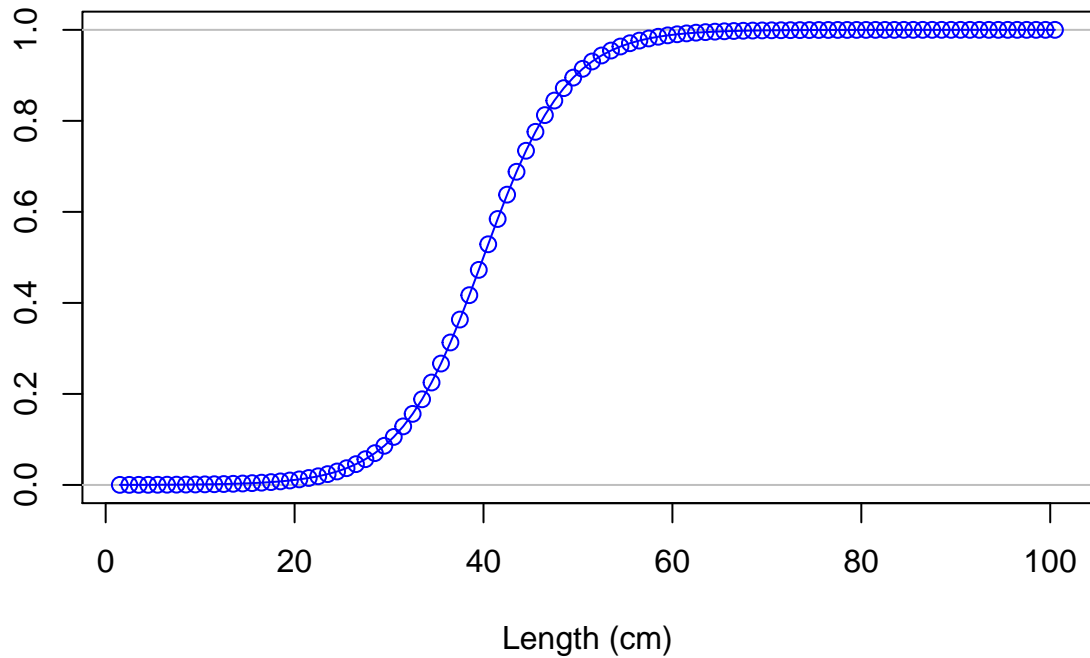


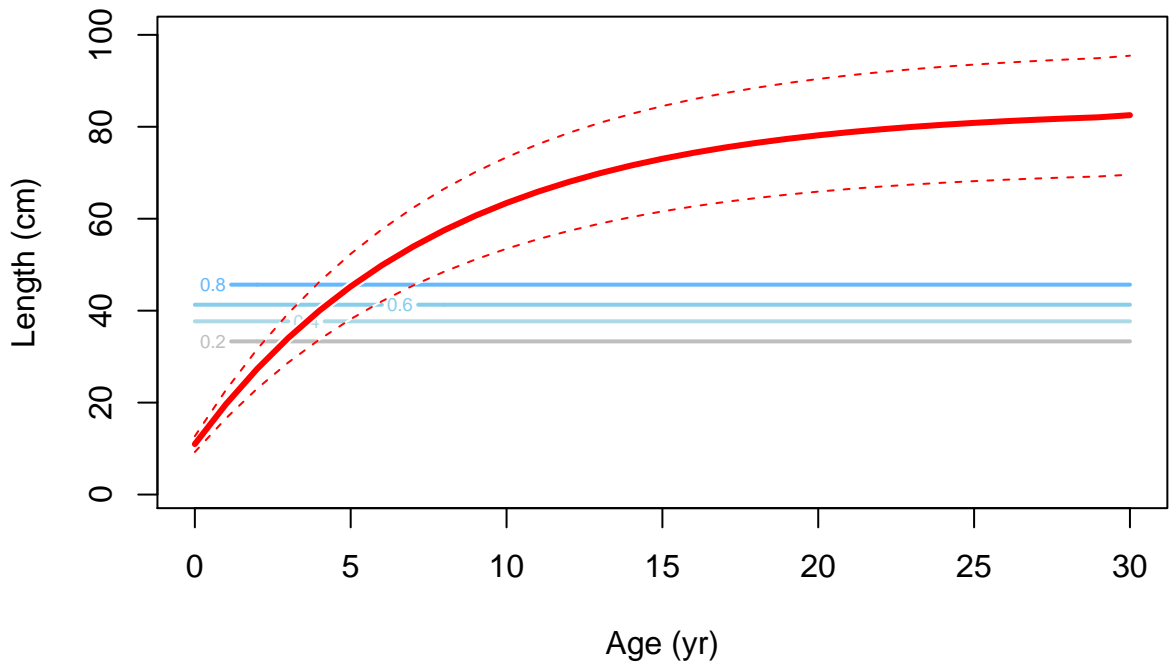
Selectivity

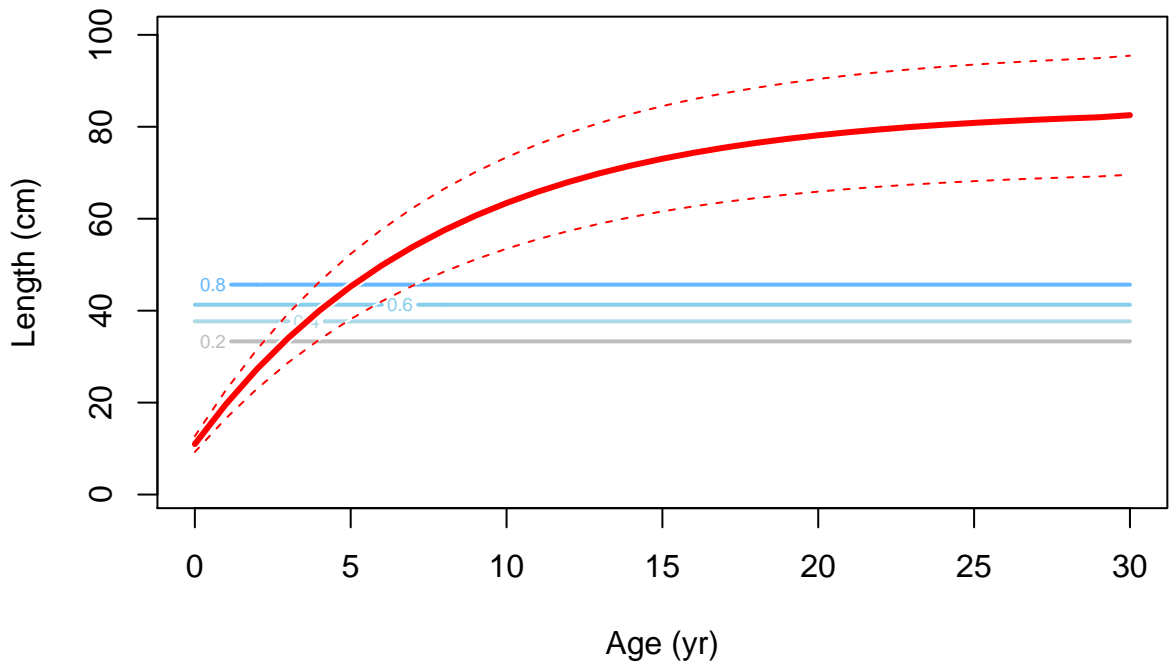




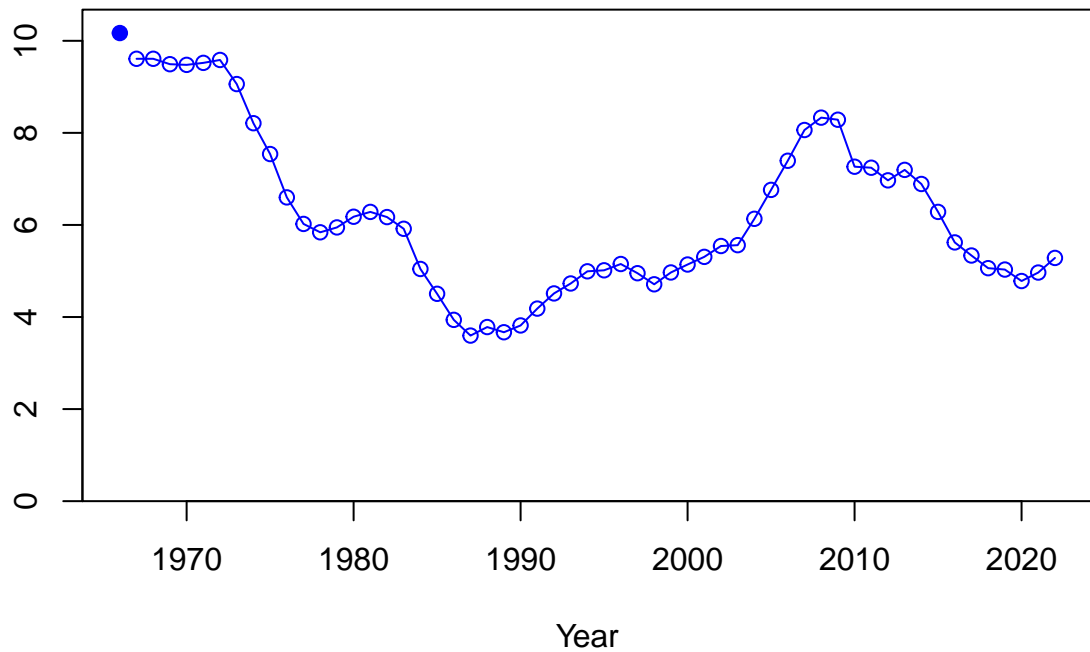
Selectivity

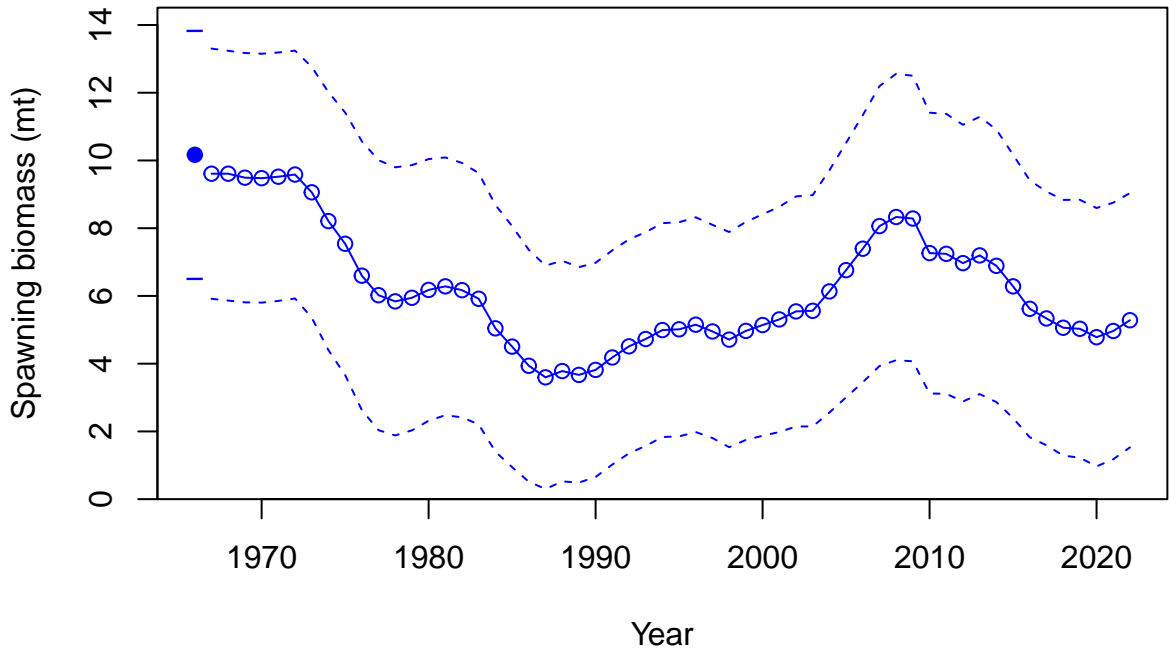




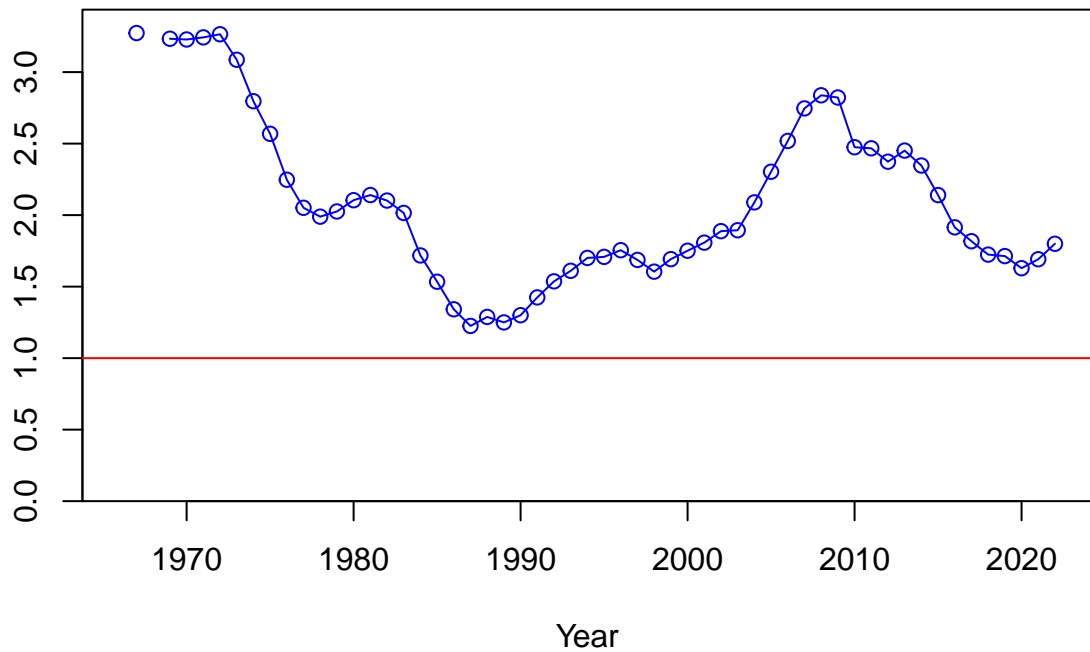


Spawning biomass (mt)

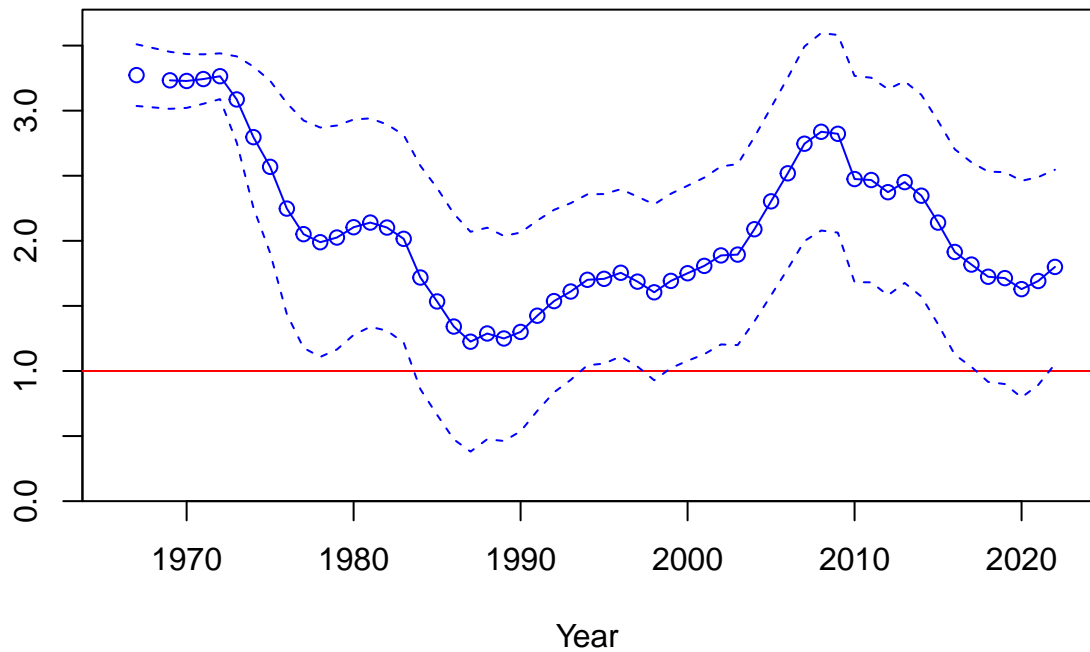


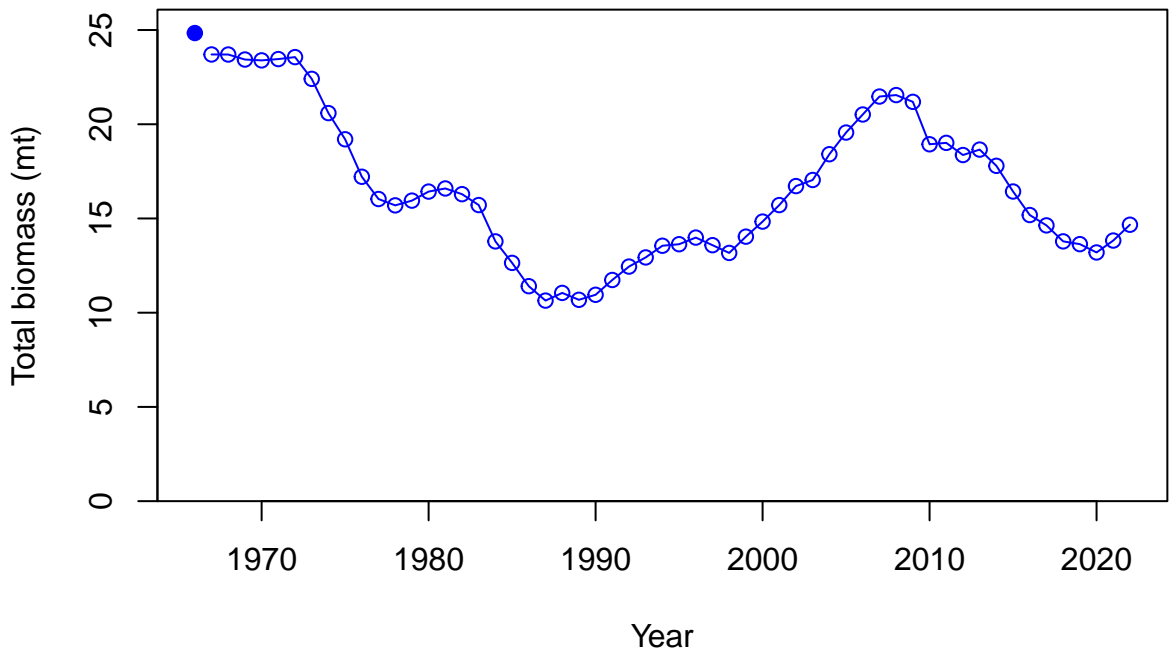


Relative spawning biomass:  $B/B_{MSY}$

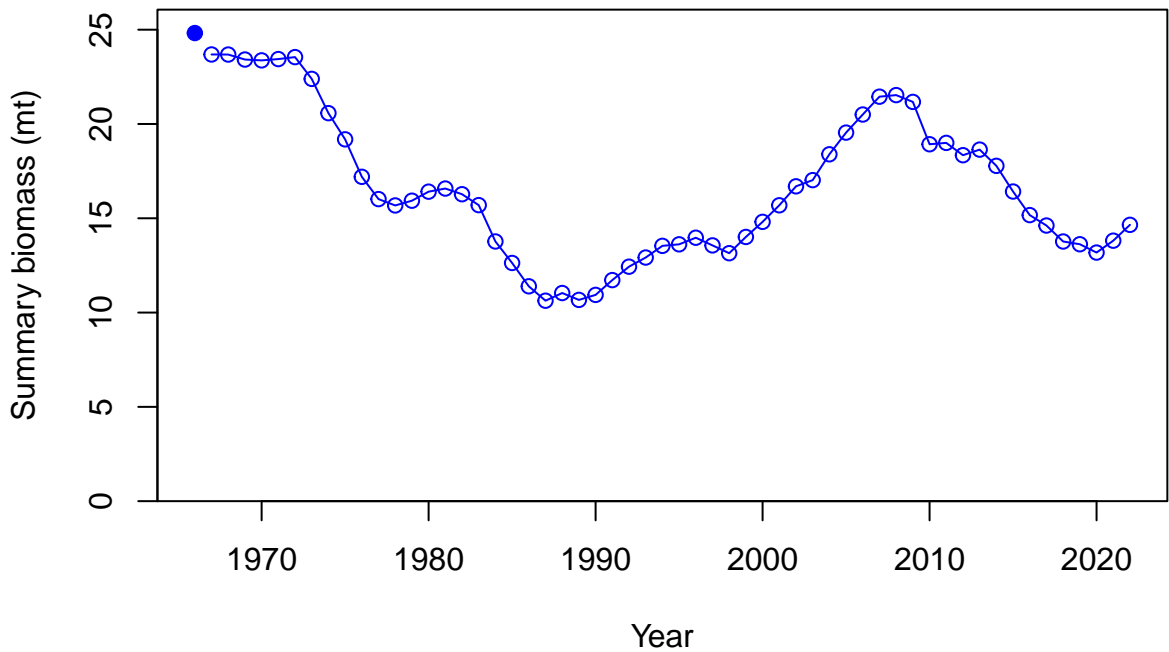


Relative spawning biomass:  $B/B_{MSY}$

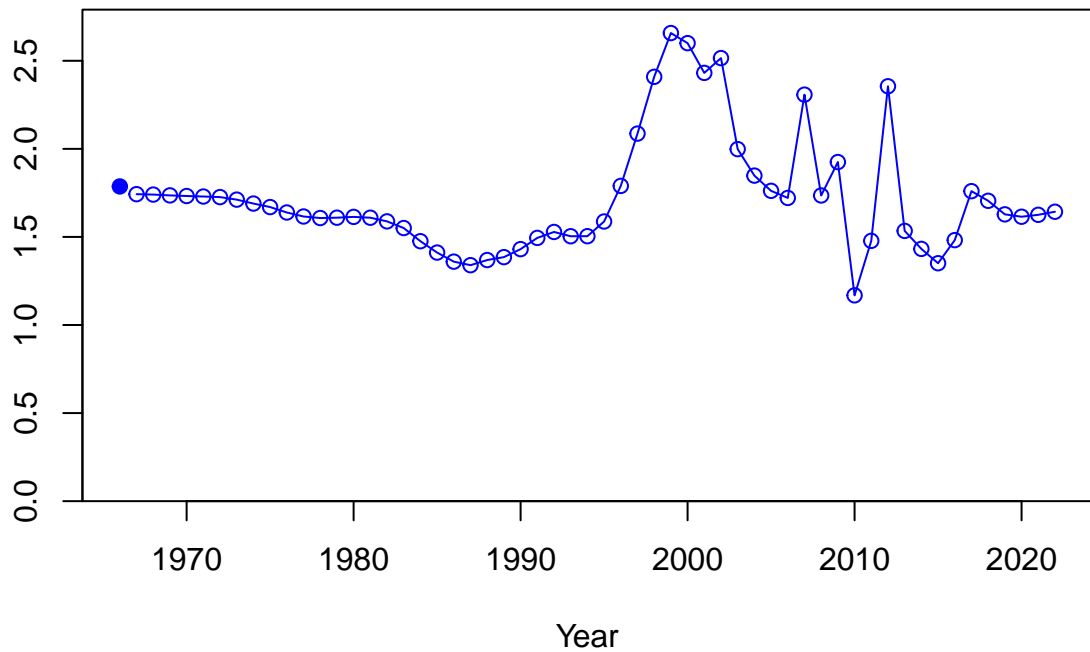




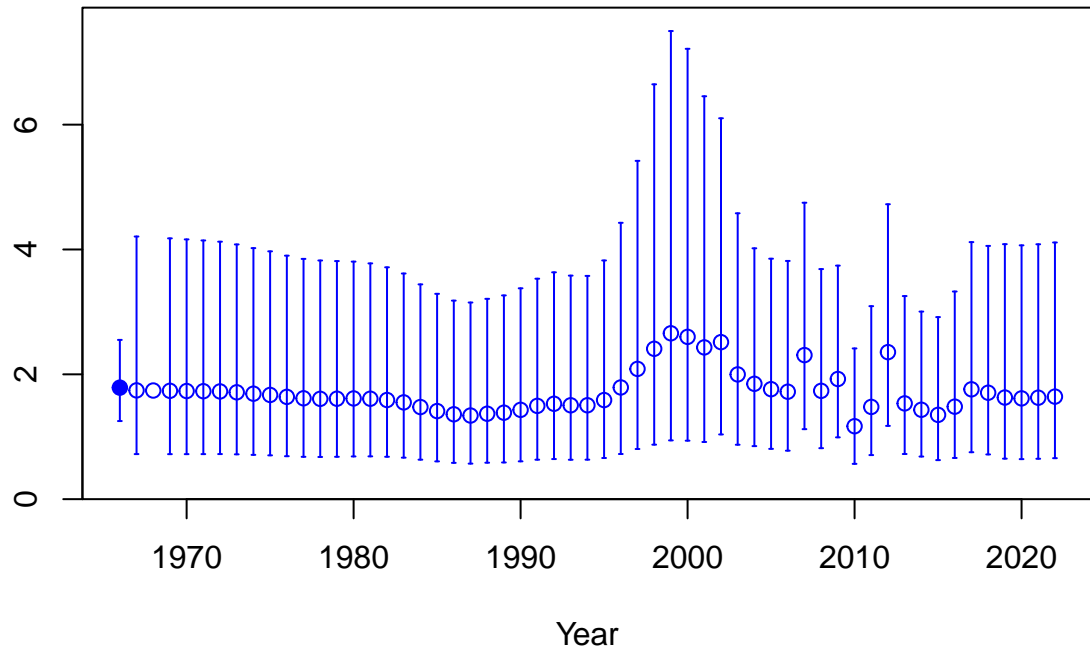




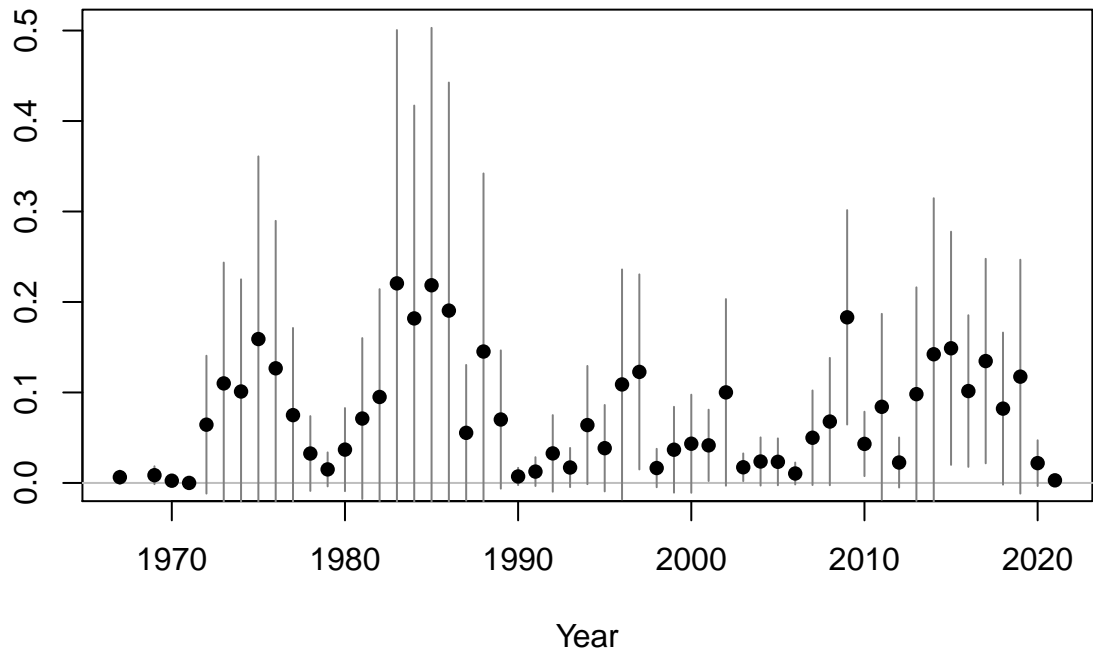
Age-0 recruits (1,000s)

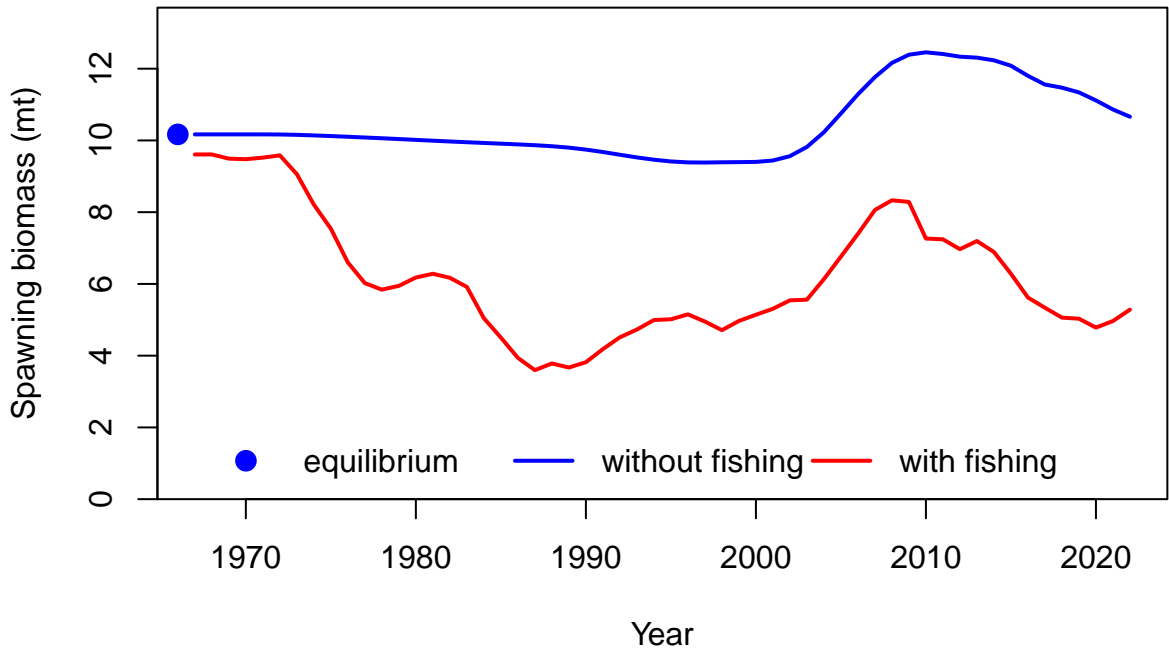


Age-0 recruits (1,000s)



Summary Fishing Mortality





Log recruitment deviation

0.4  
0.2  
0.0  
-0.2

1970

1980

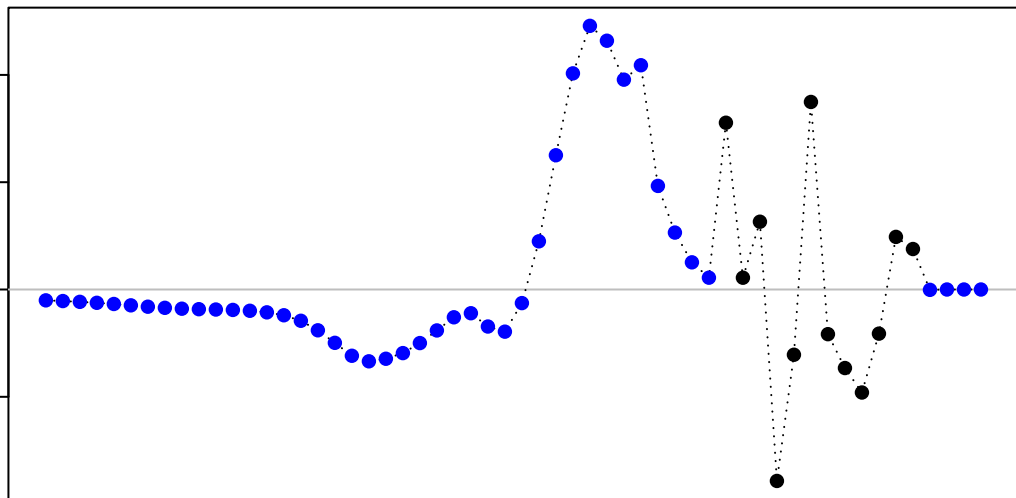
1990

2000

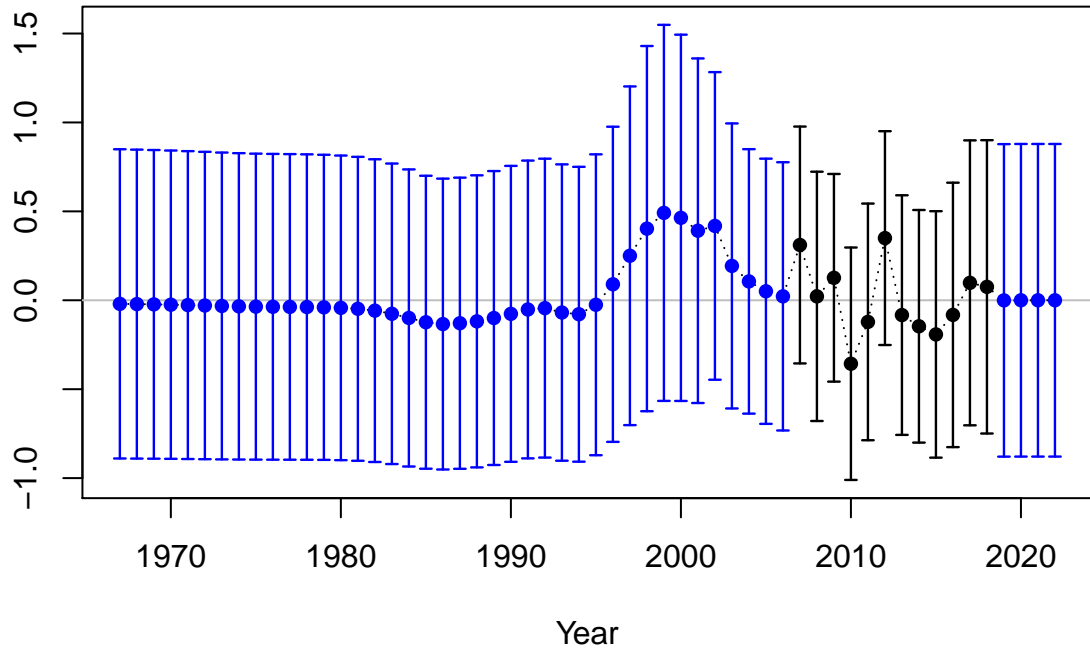
2010

2020

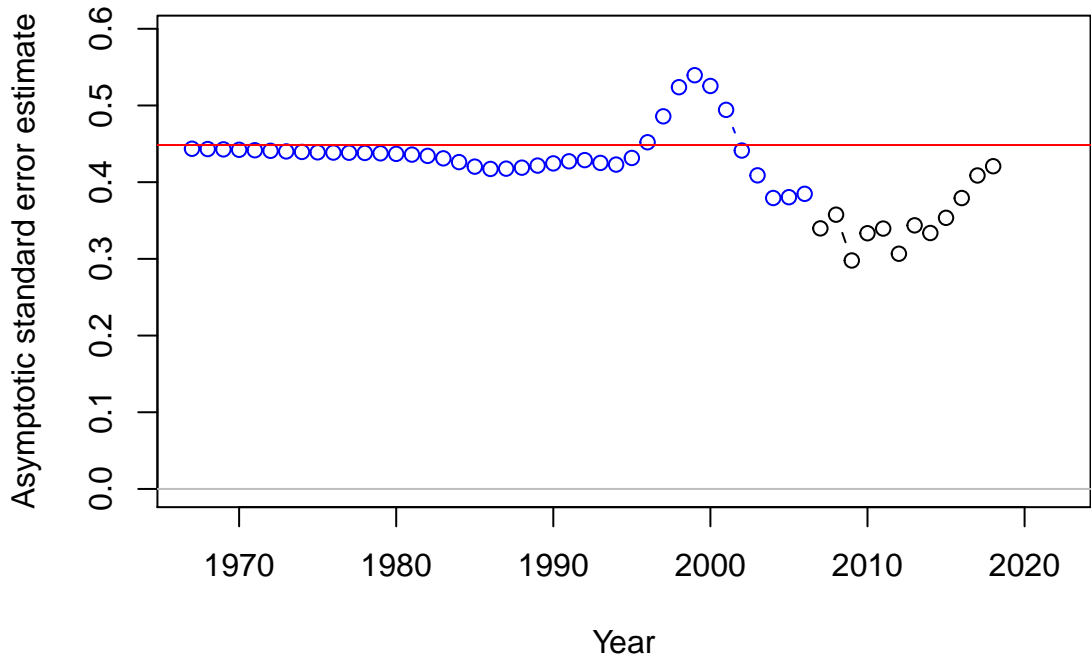
Year



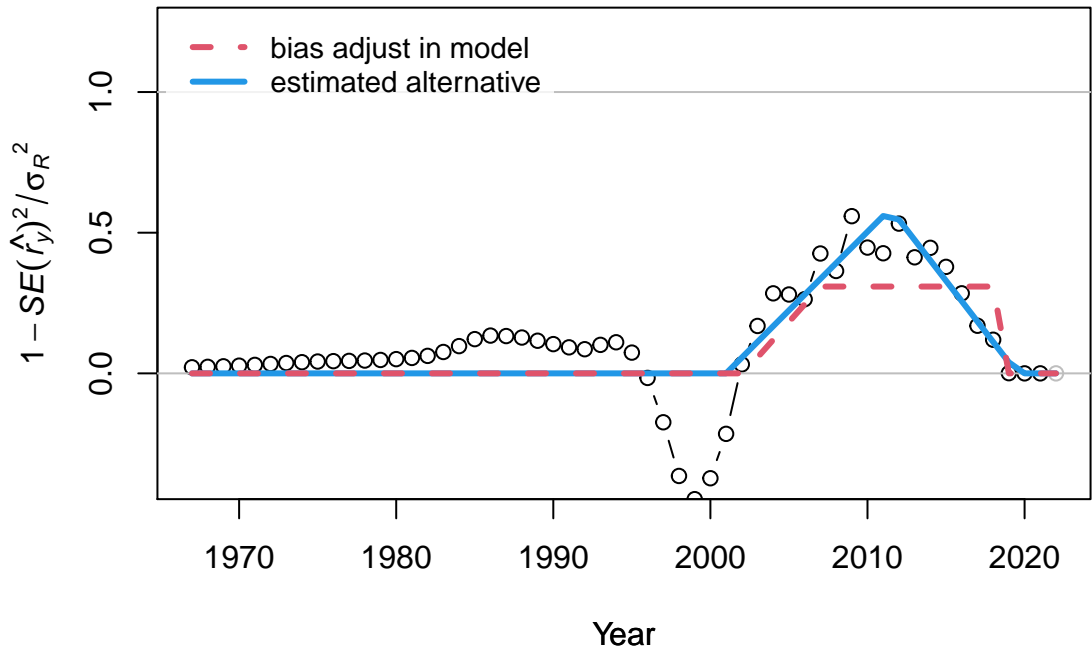
Log recruitment deviation

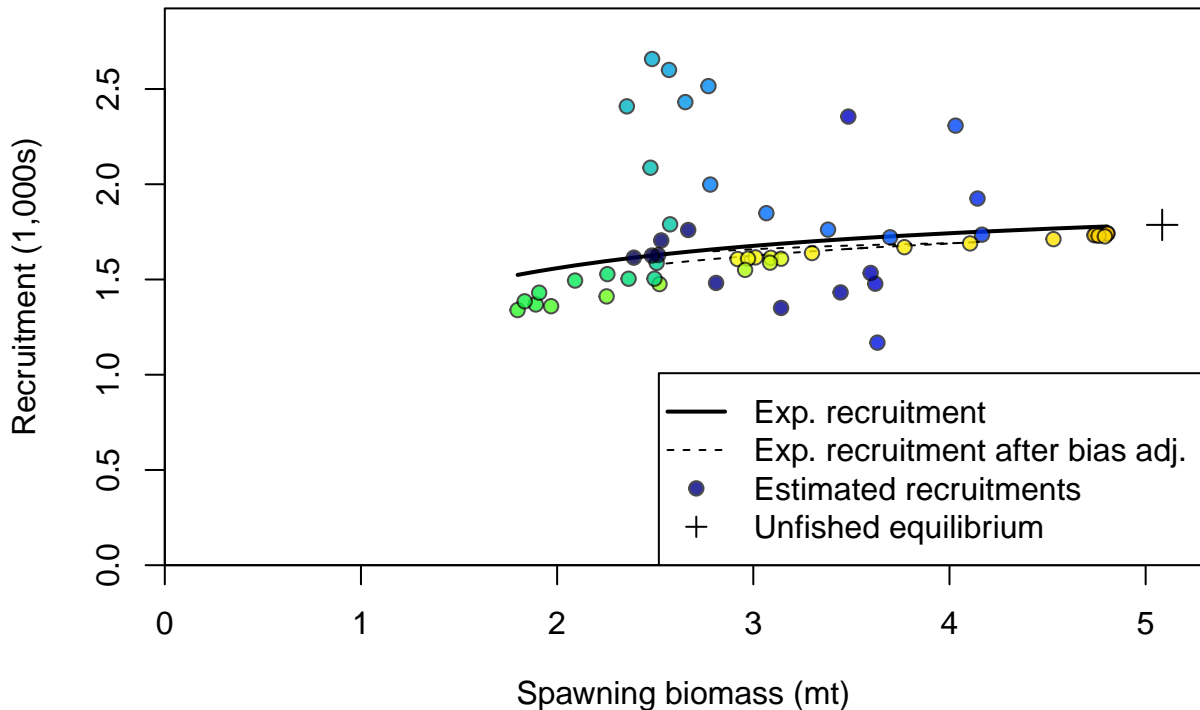


## Recruitment deviation variance

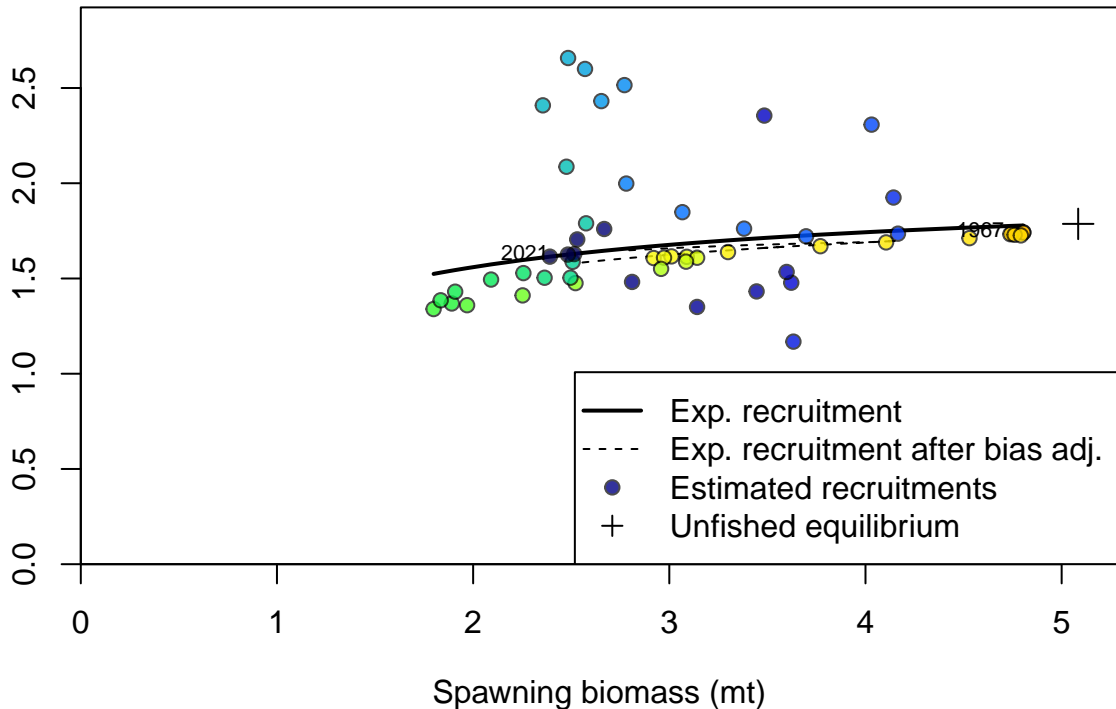








Recruitment (1,000s)

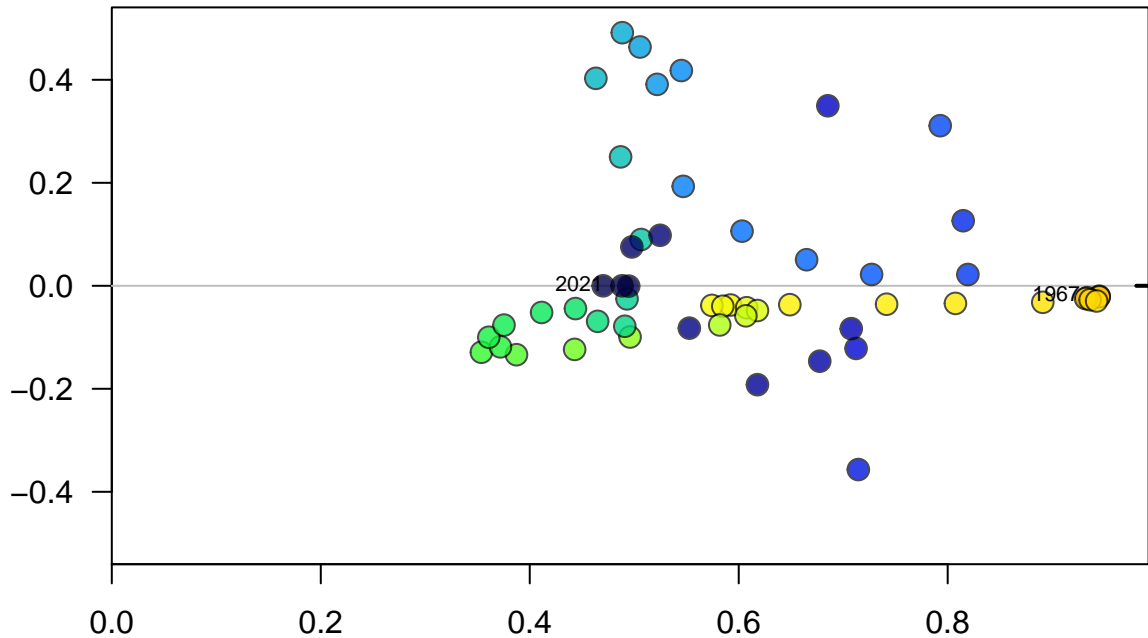


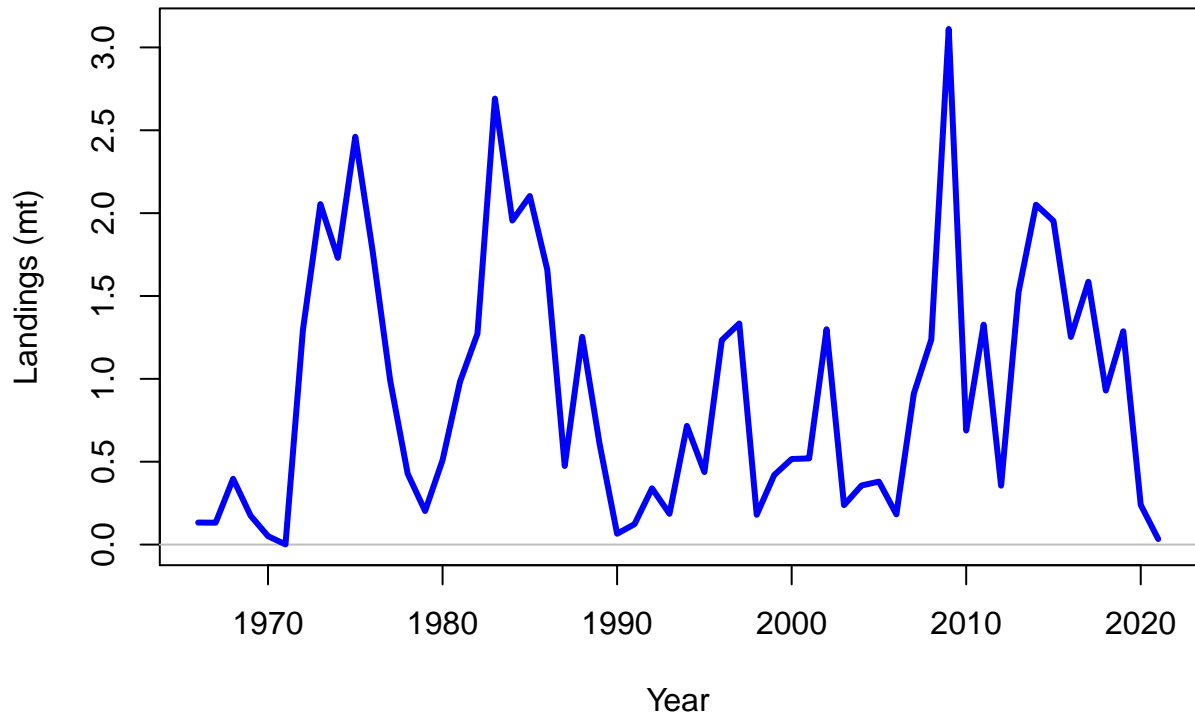
Log recruitment deviation

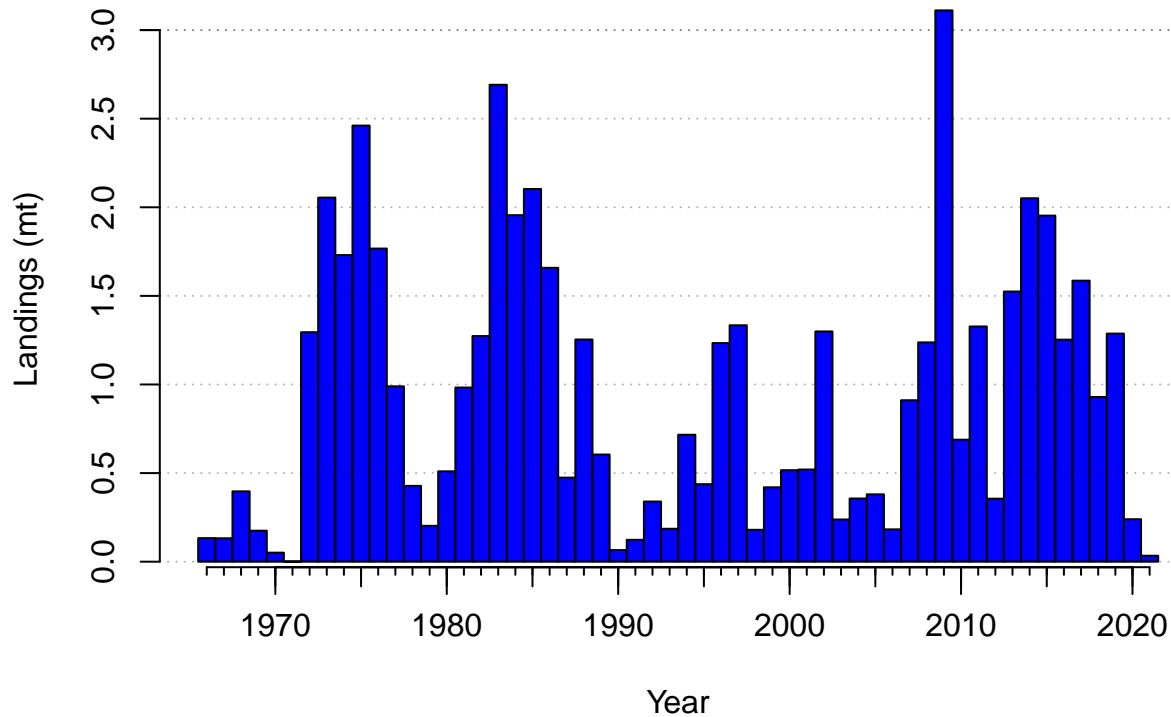
2021

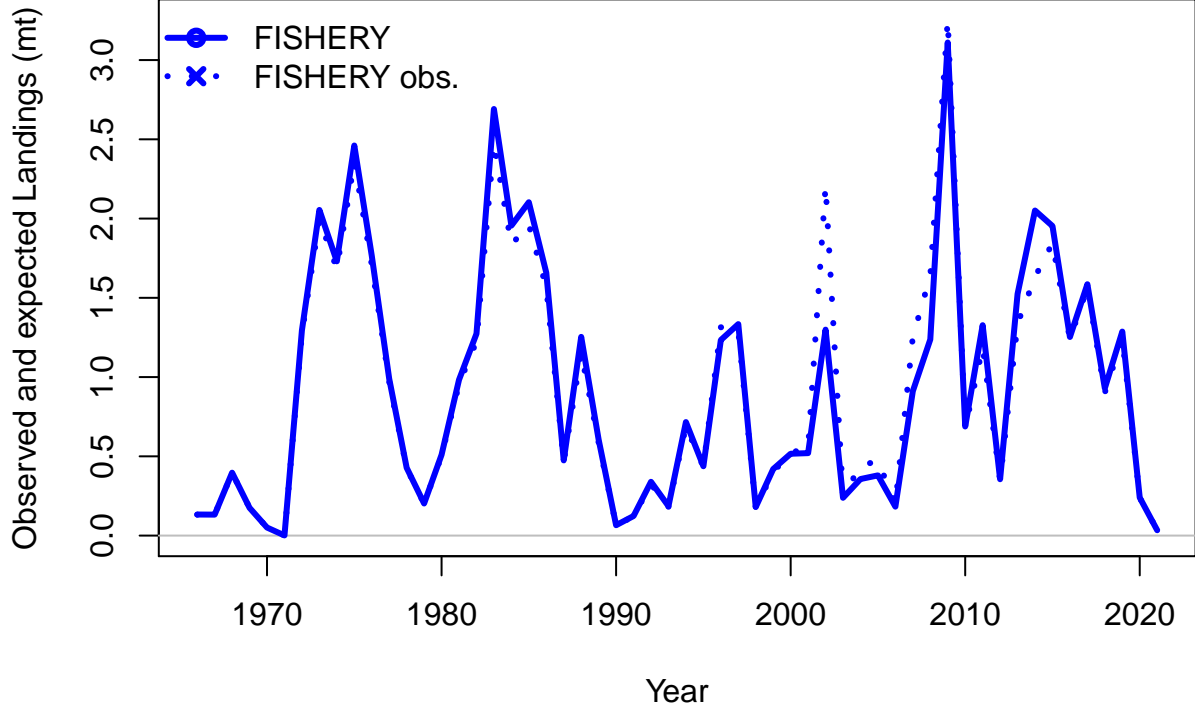
1967

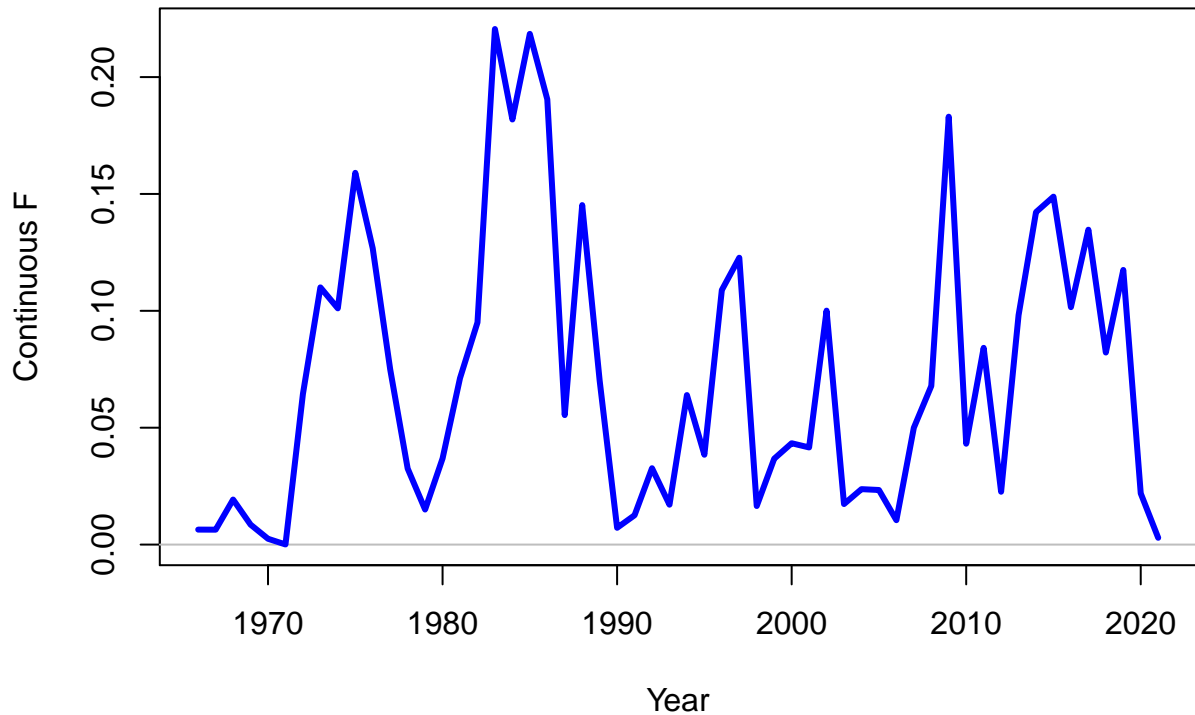
Spawning output (relative to  $B_0$ )





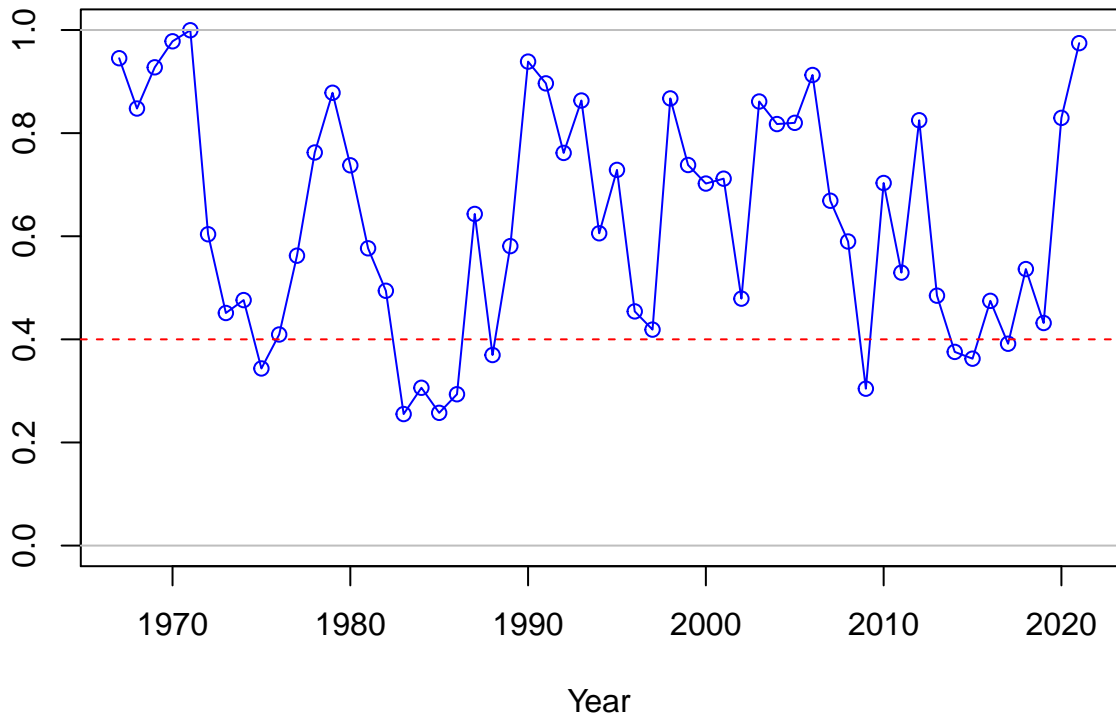


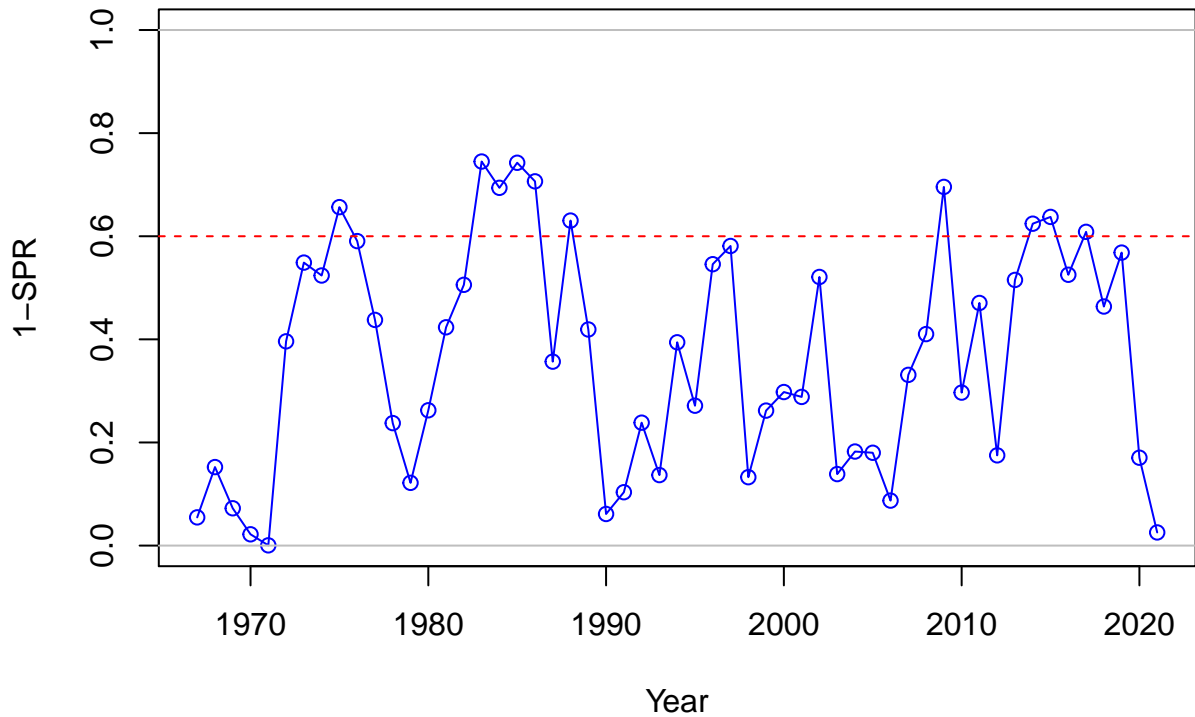




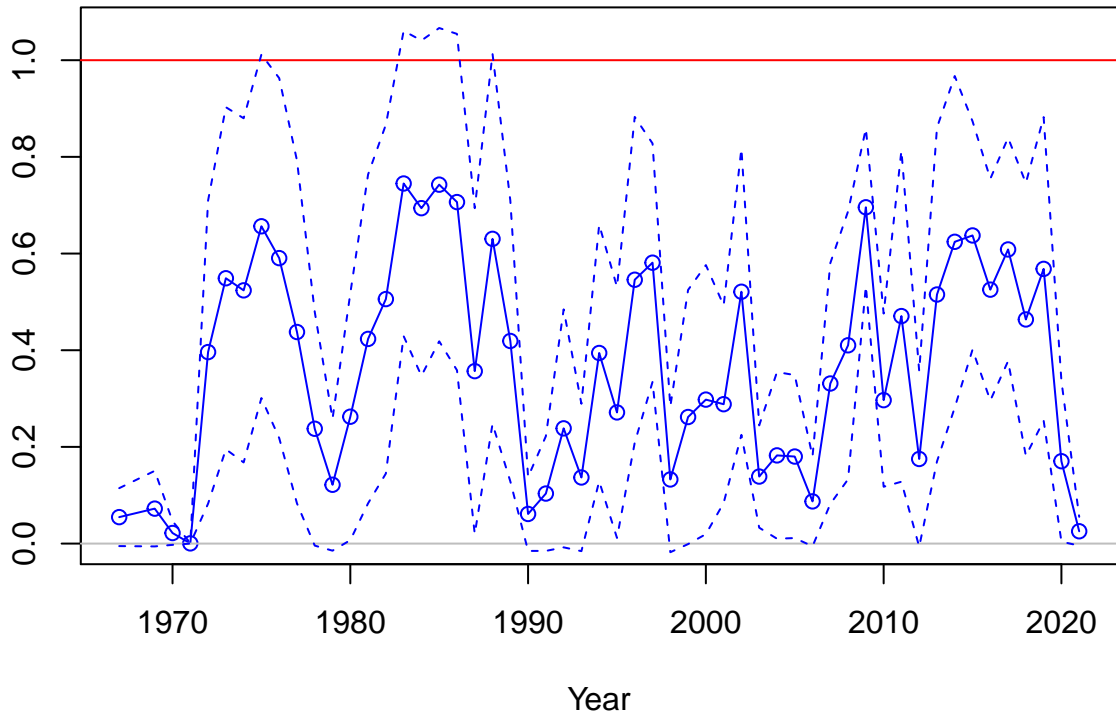


SPR

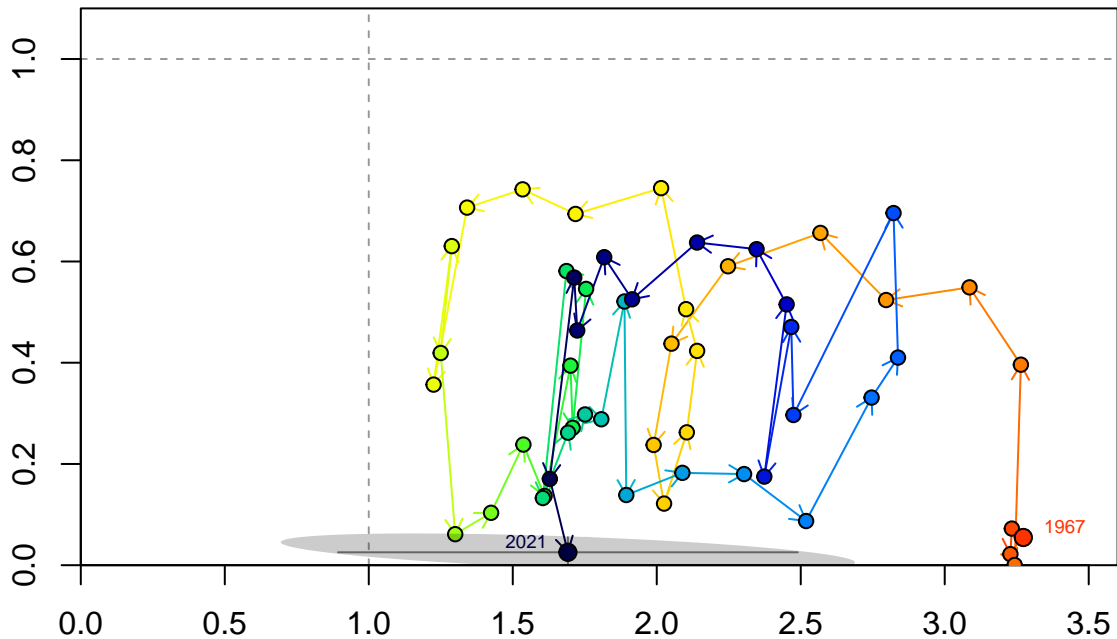




Fishing intensity: 1-SPR

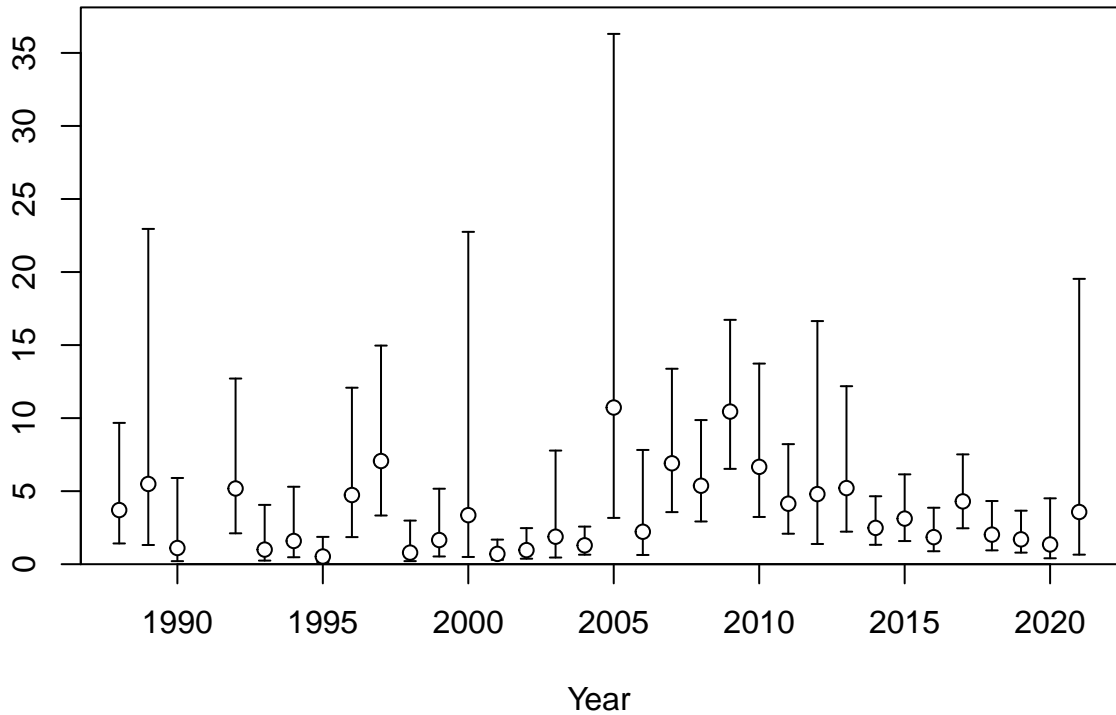


Fishing intensity: 1-SPR

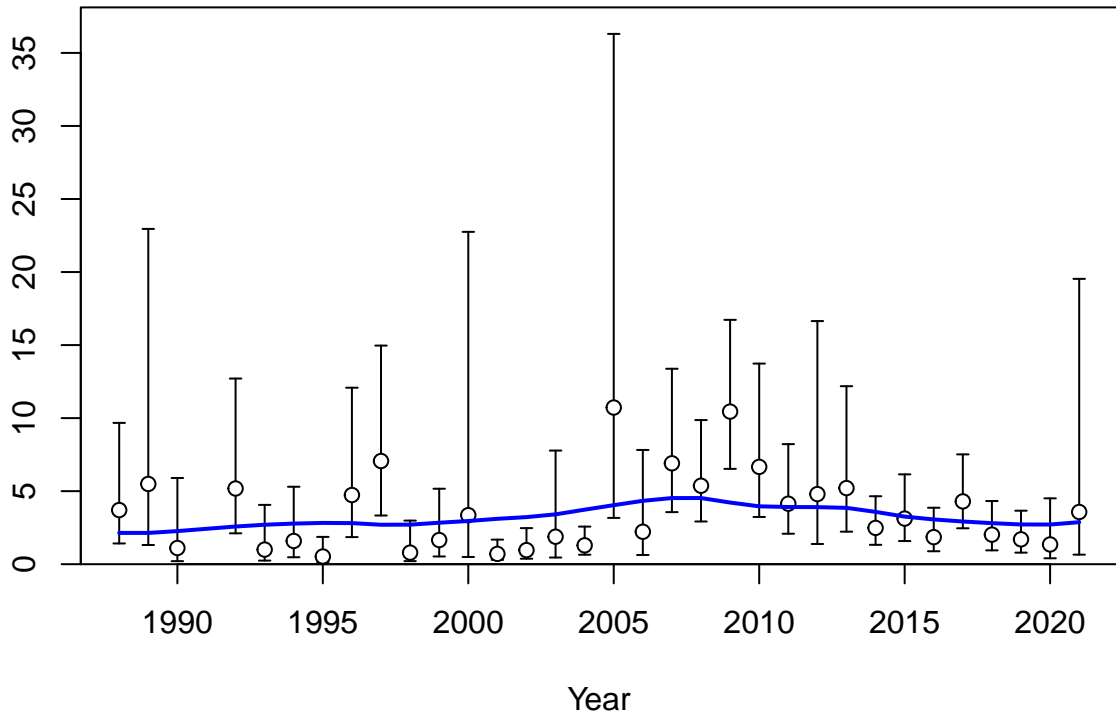


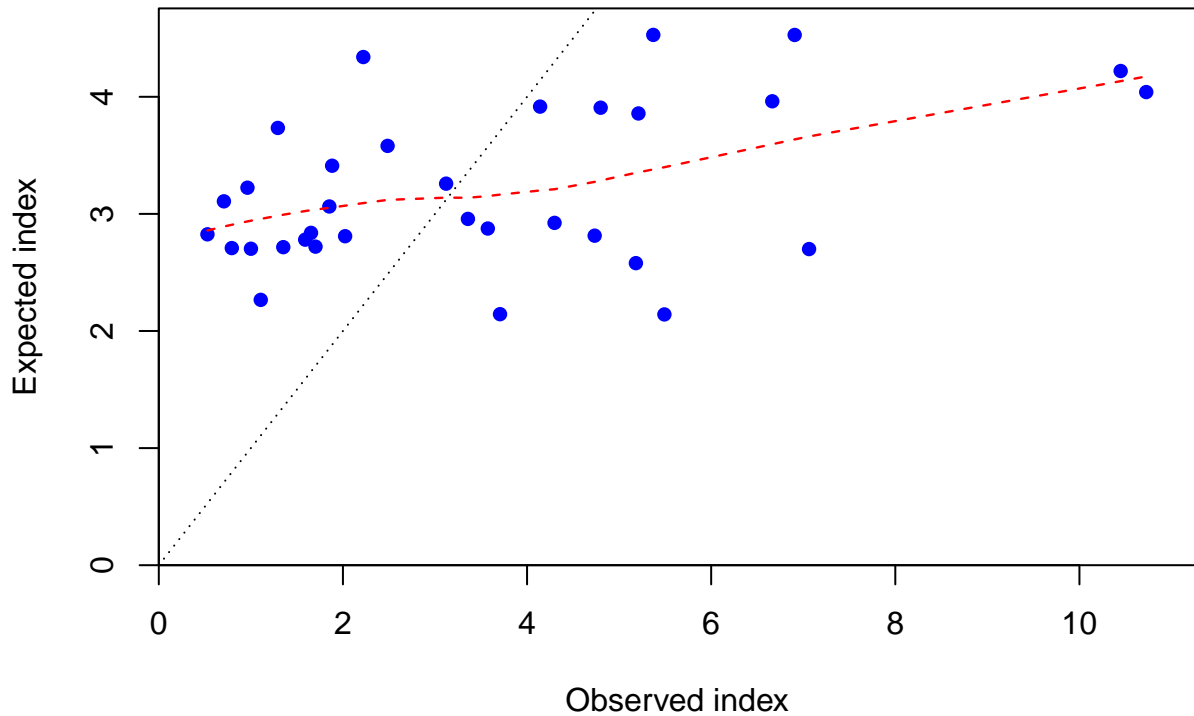
Relative spawning output: B/B\_MS

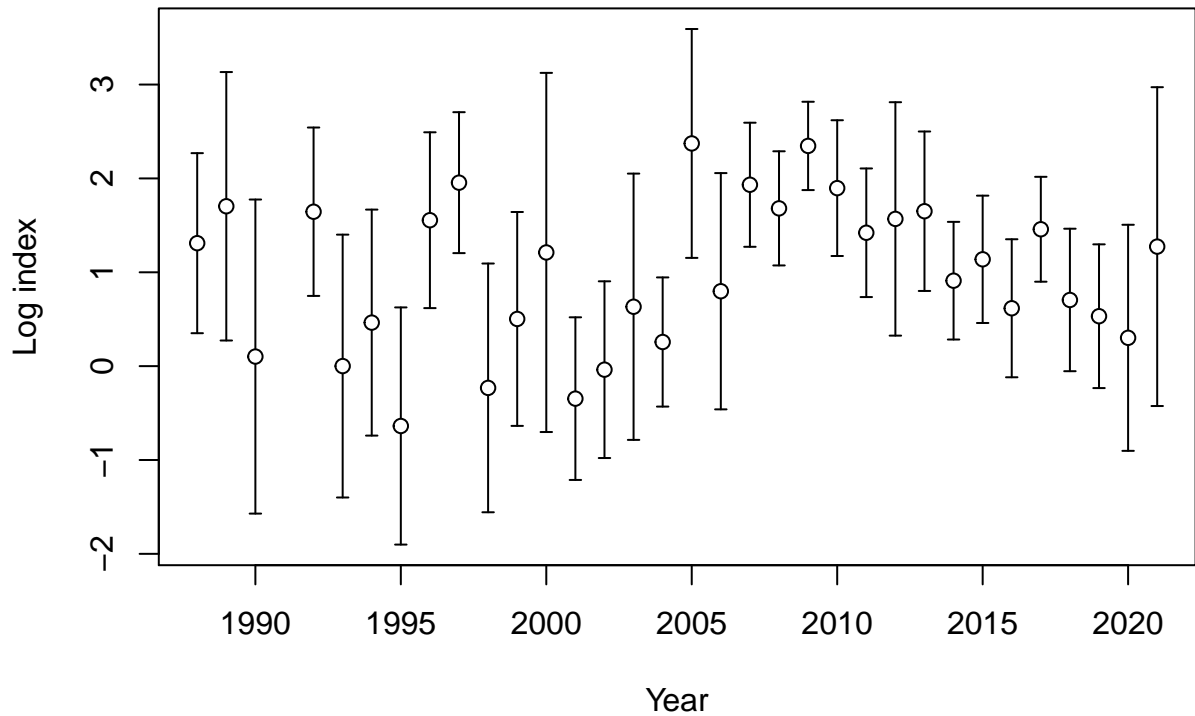
Index



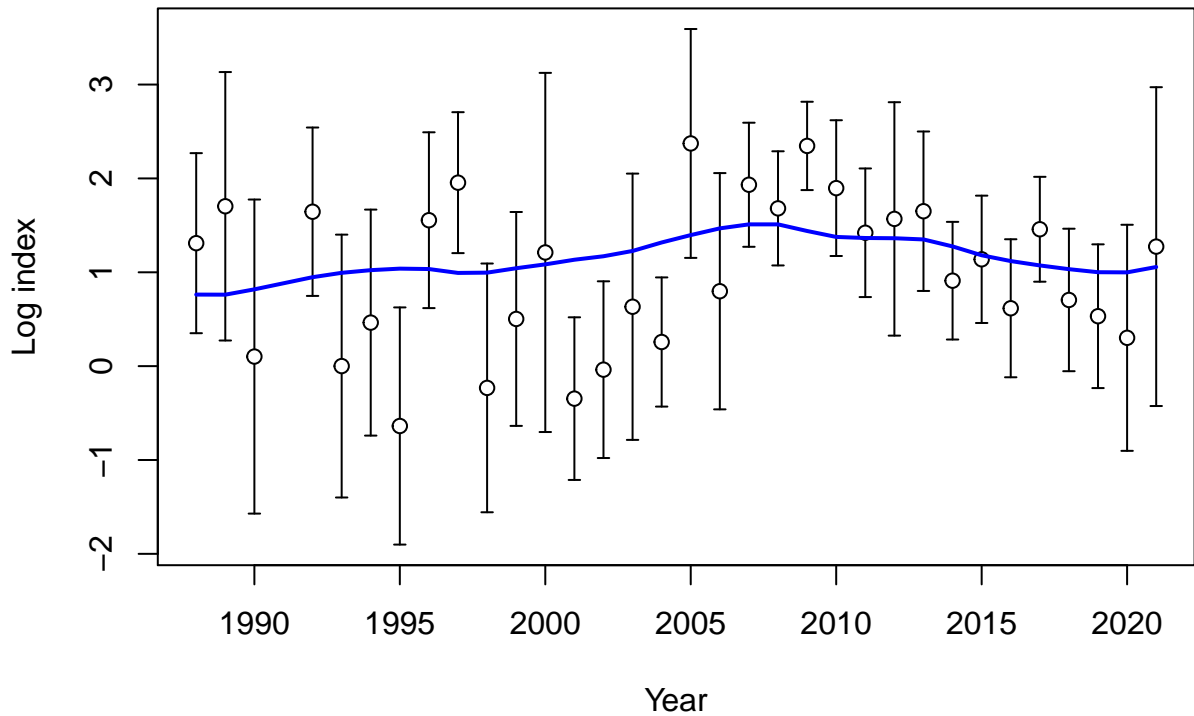
Index

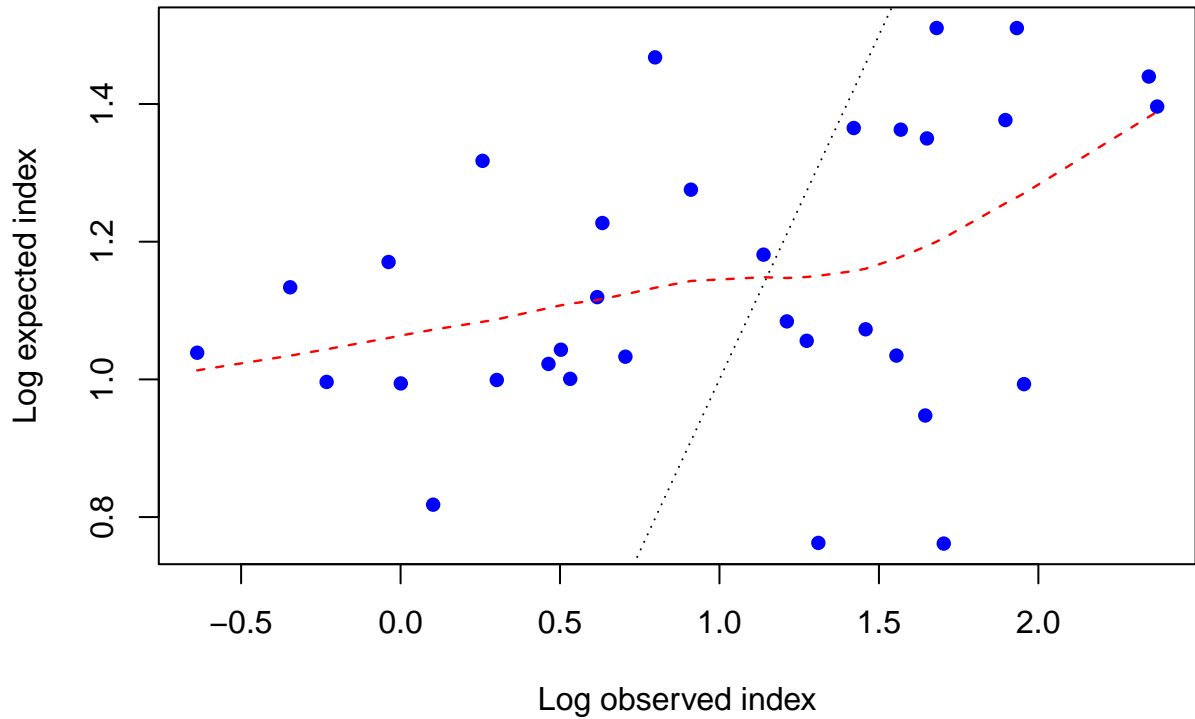


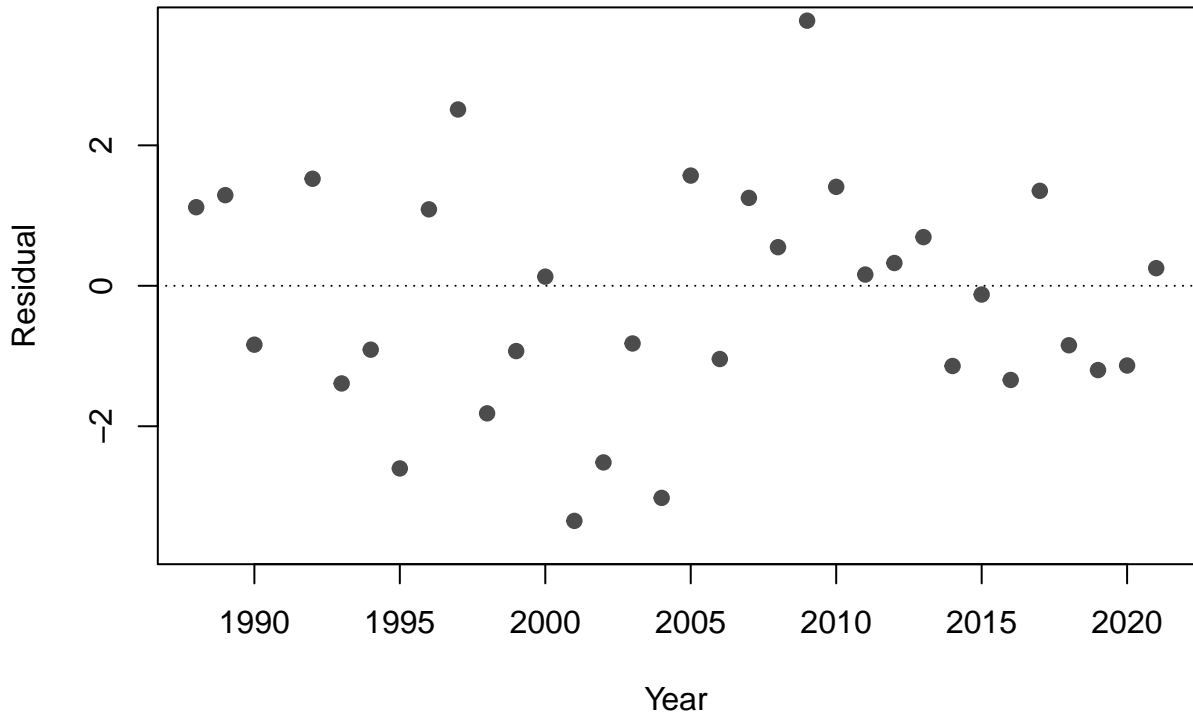


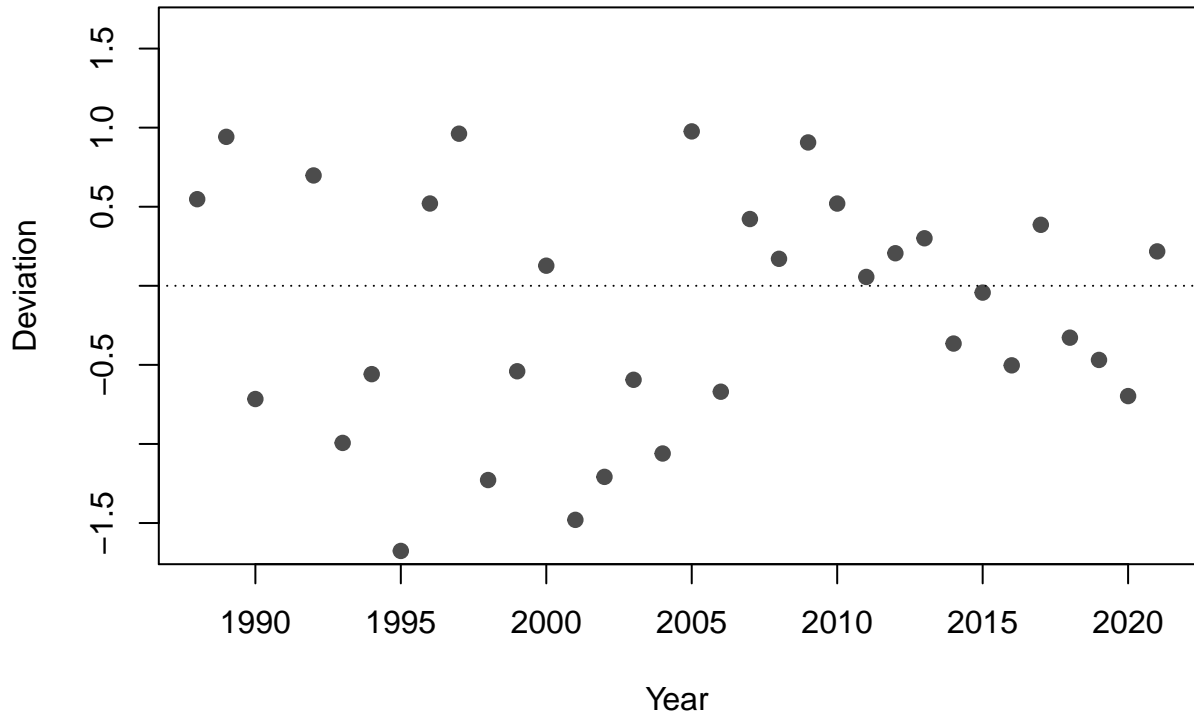


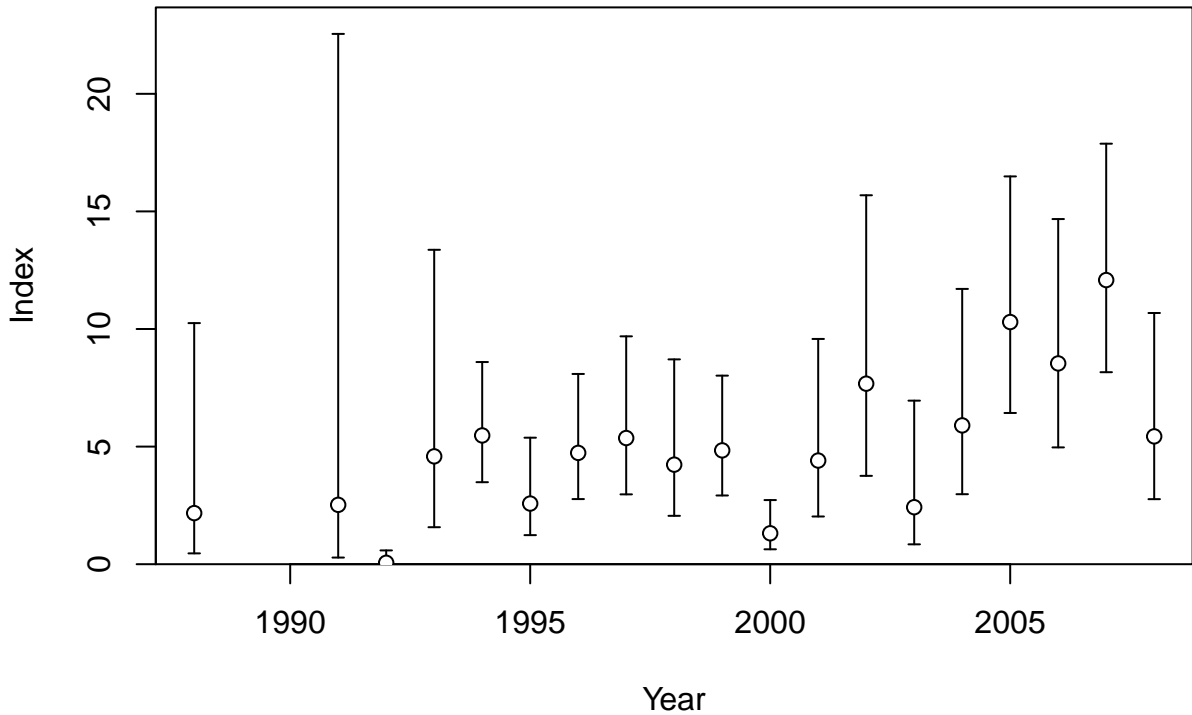


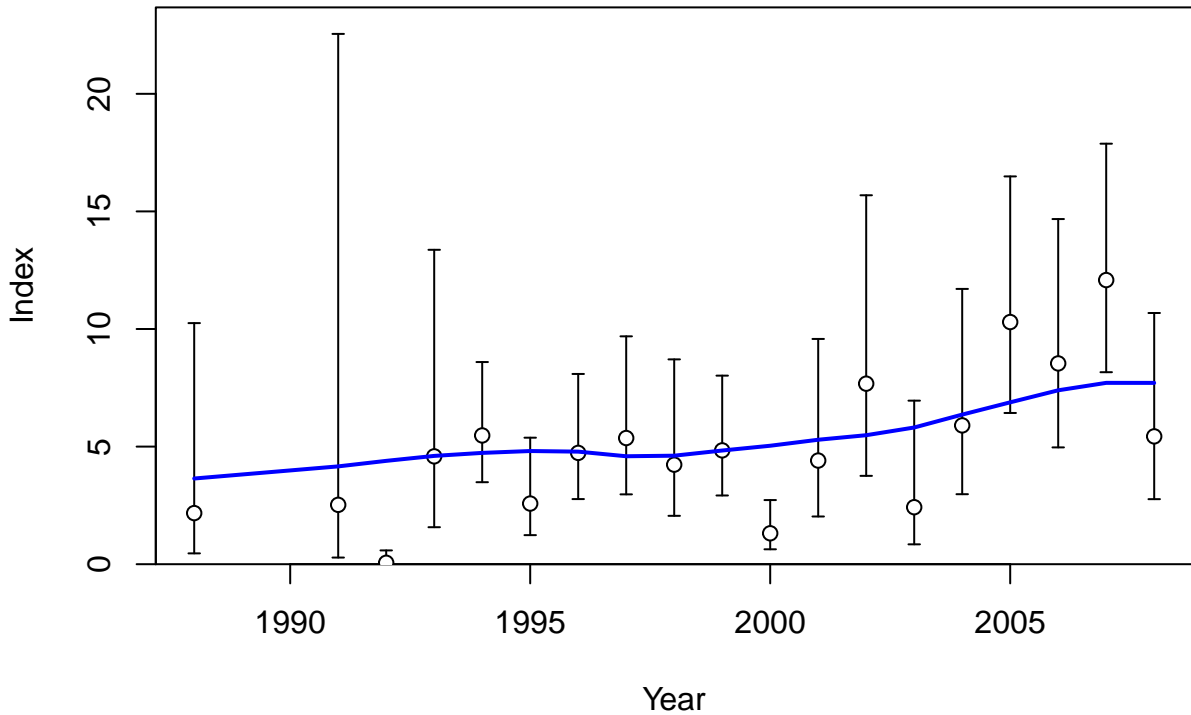


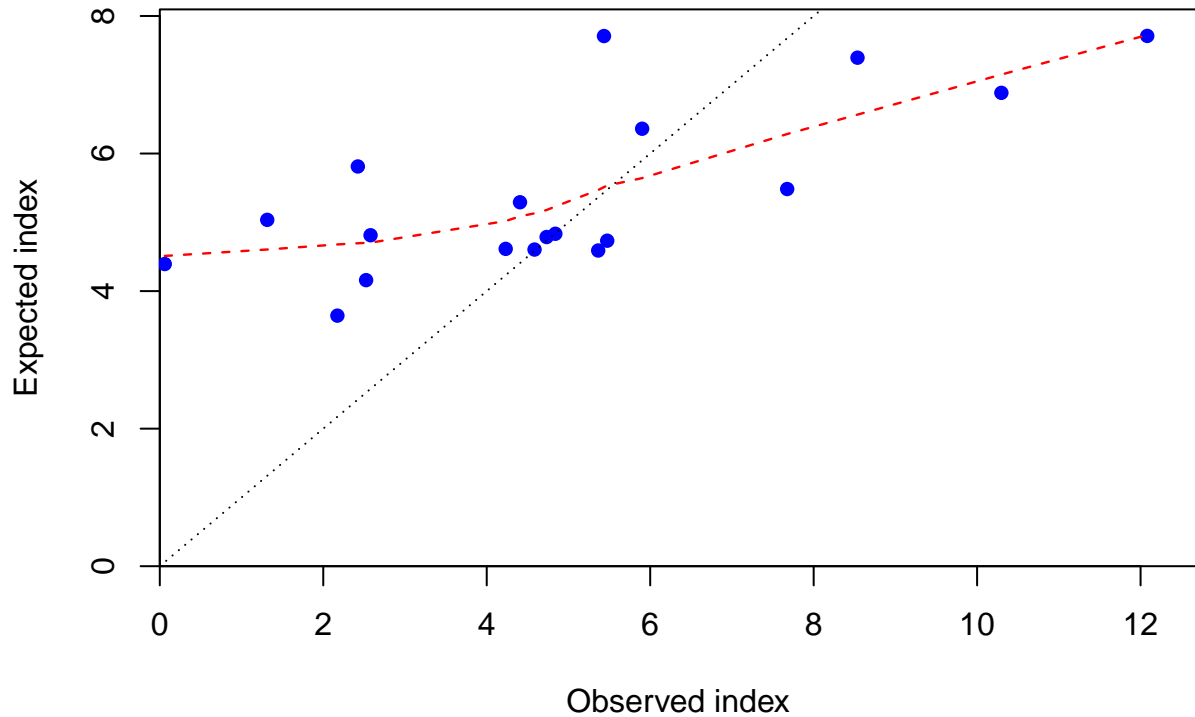


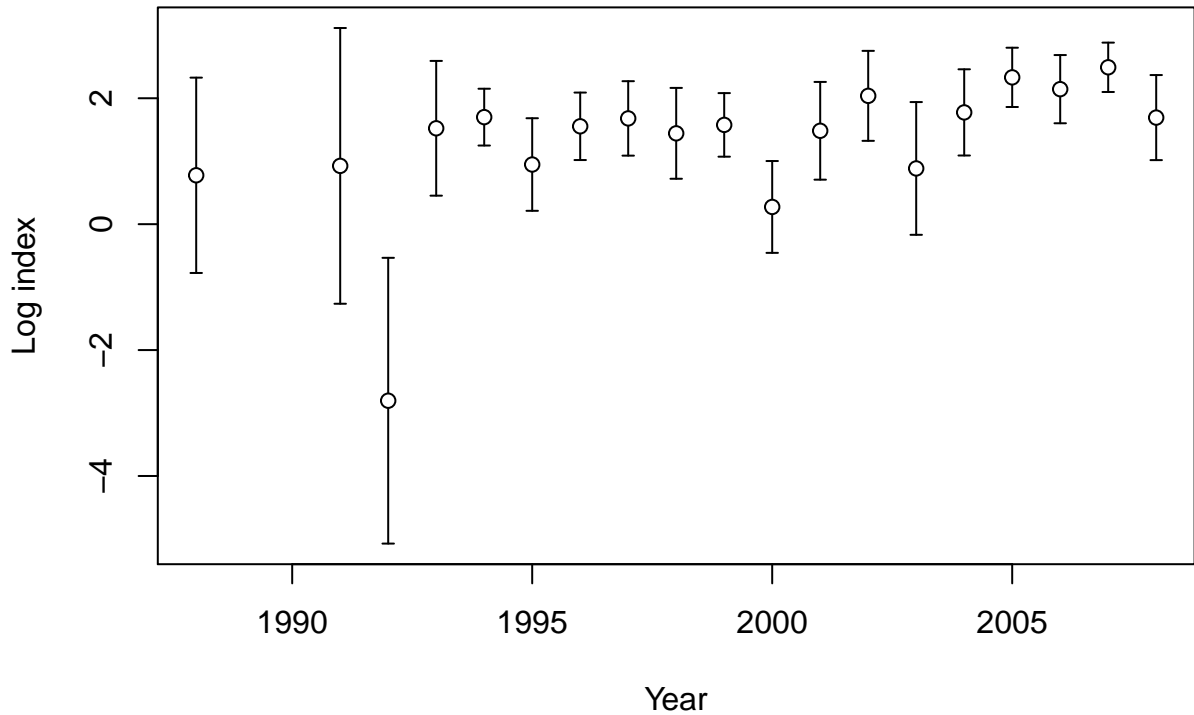




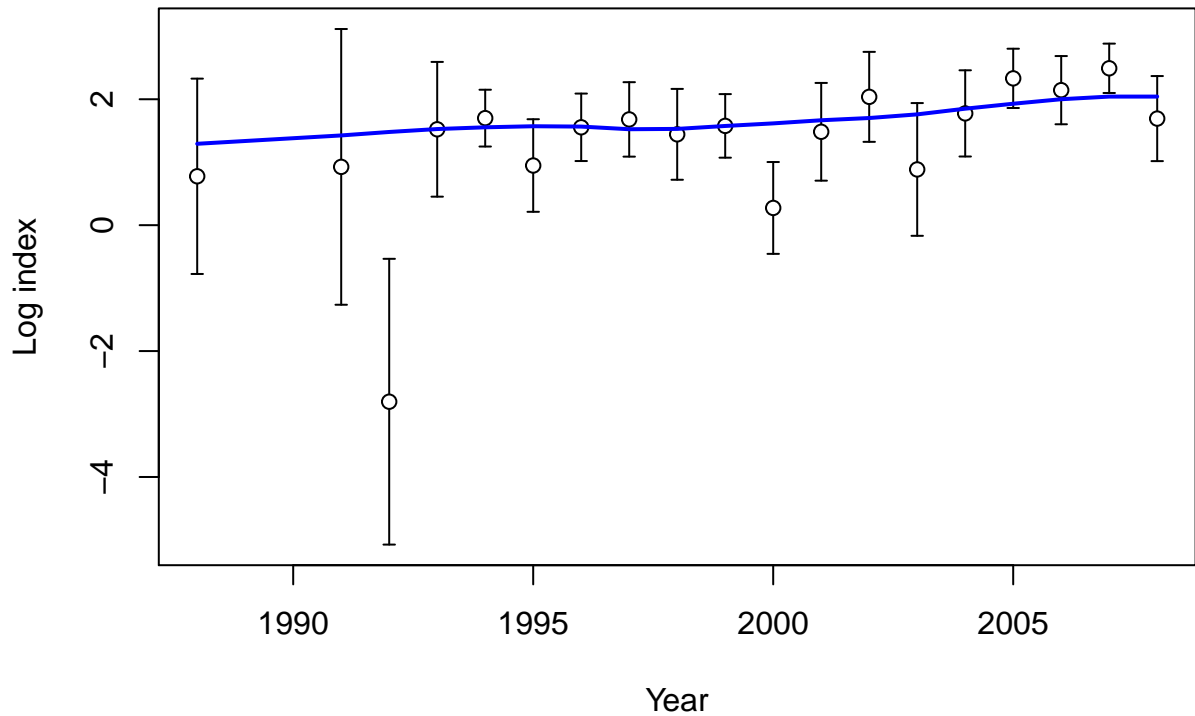


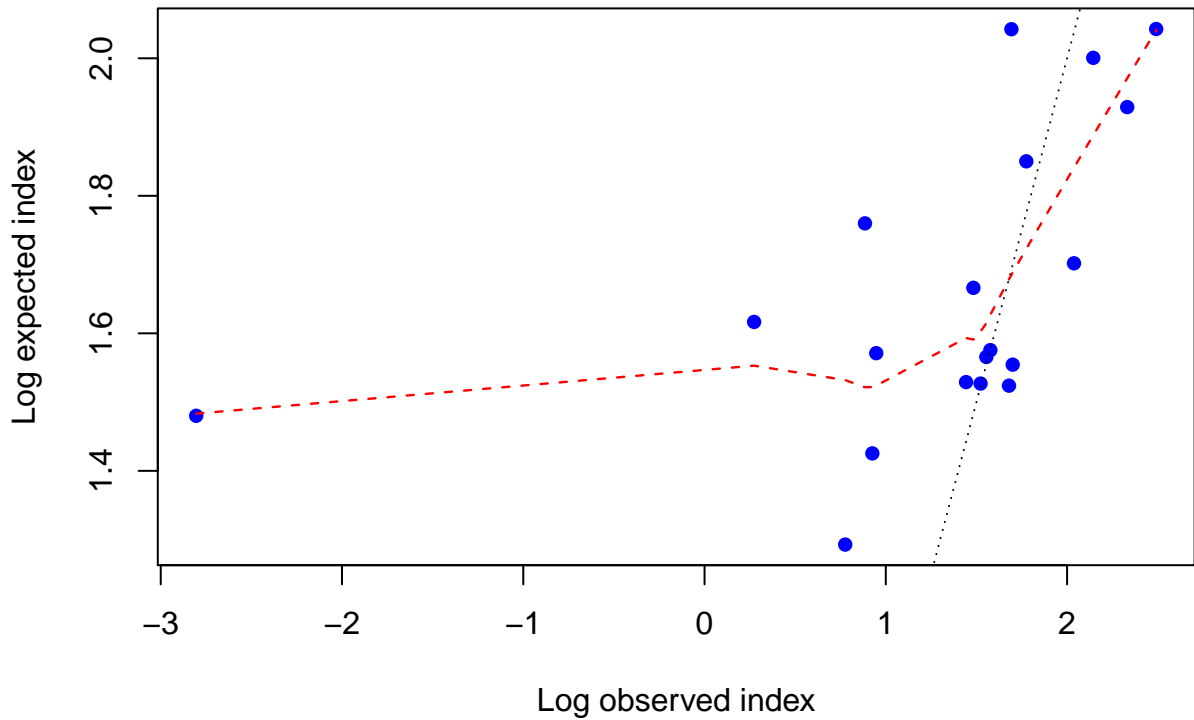


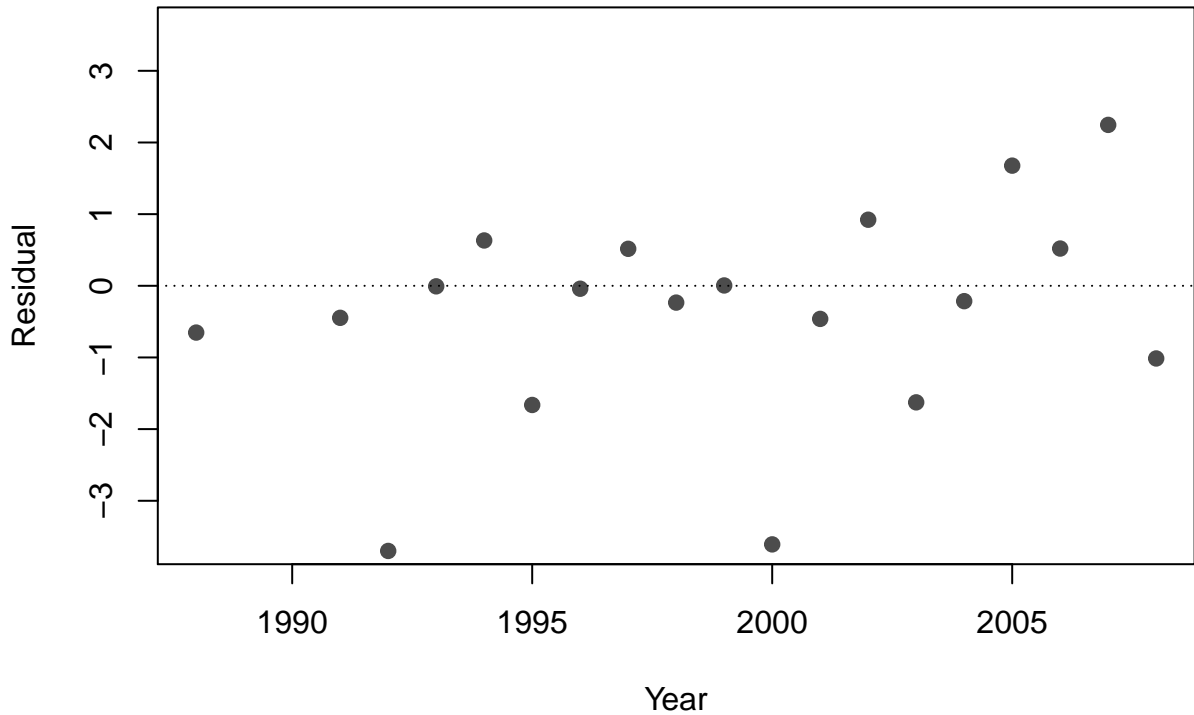


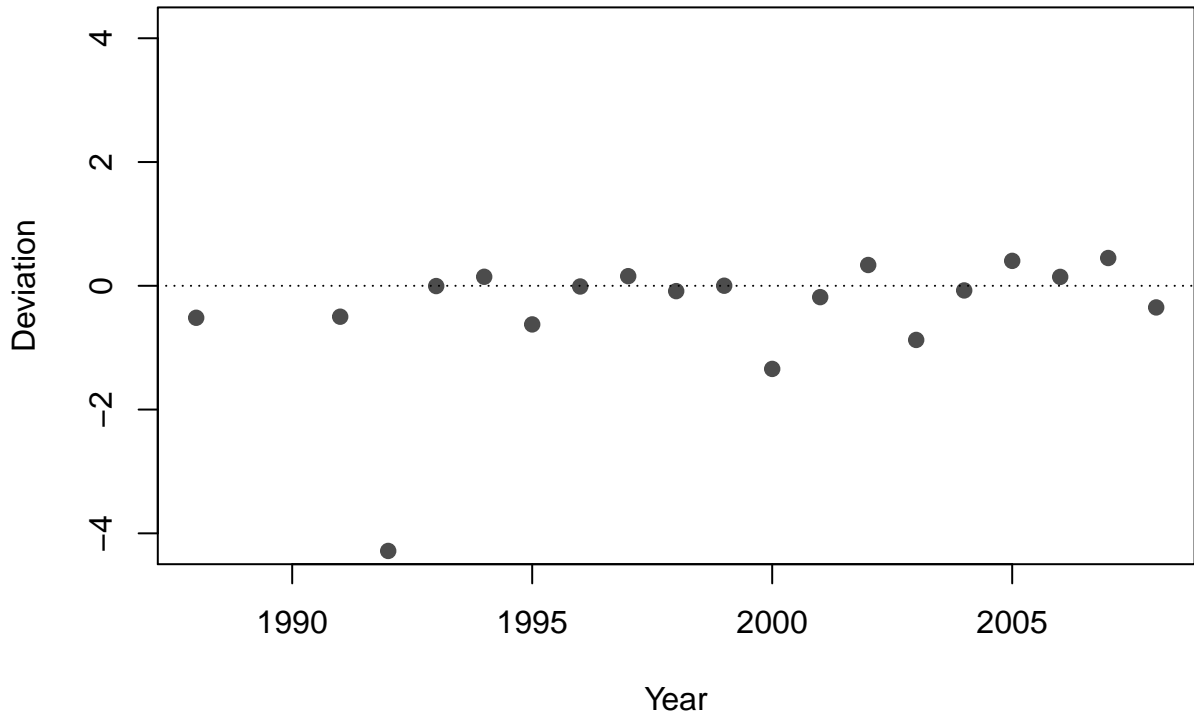




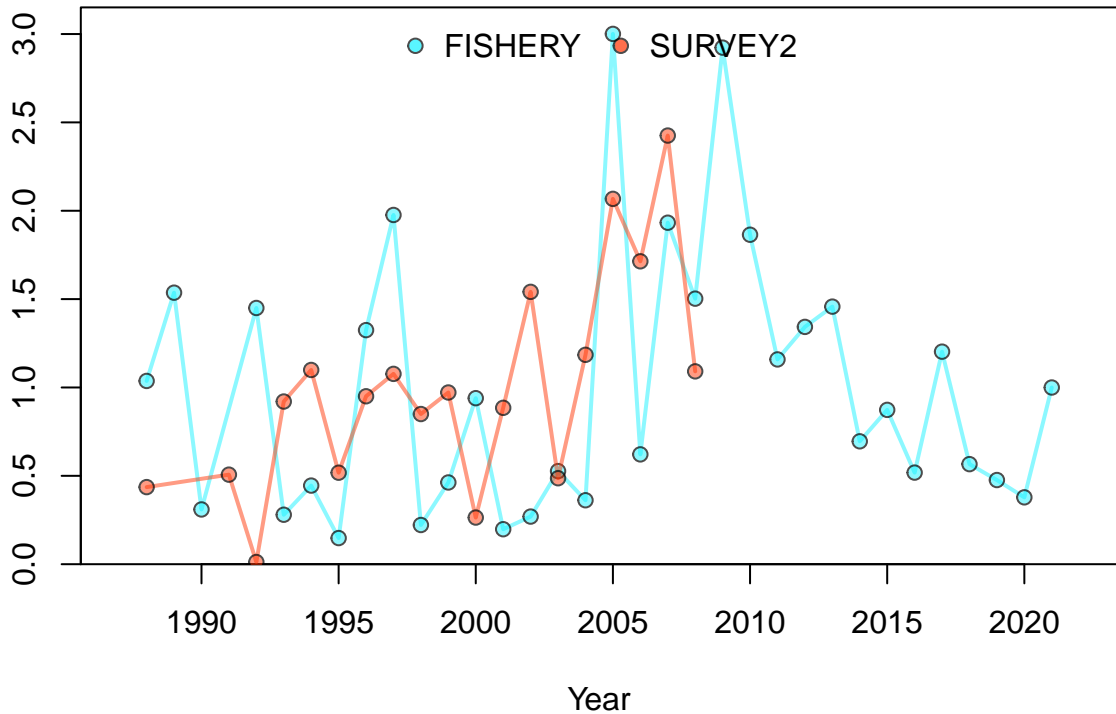


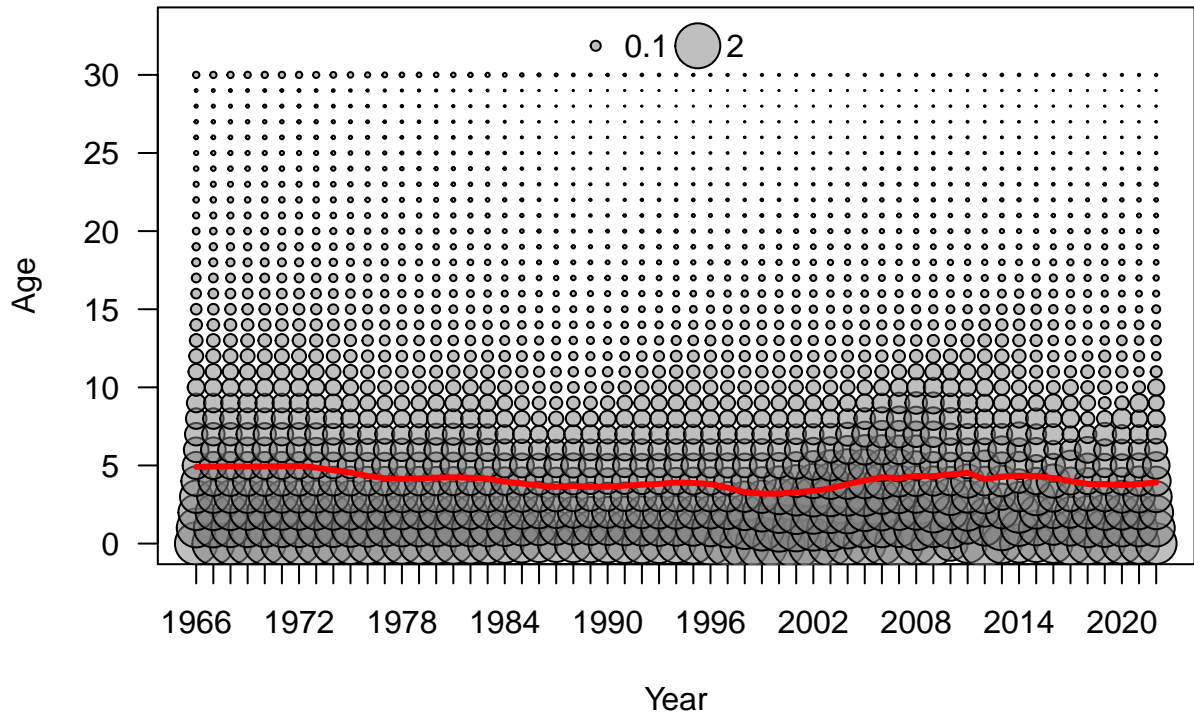


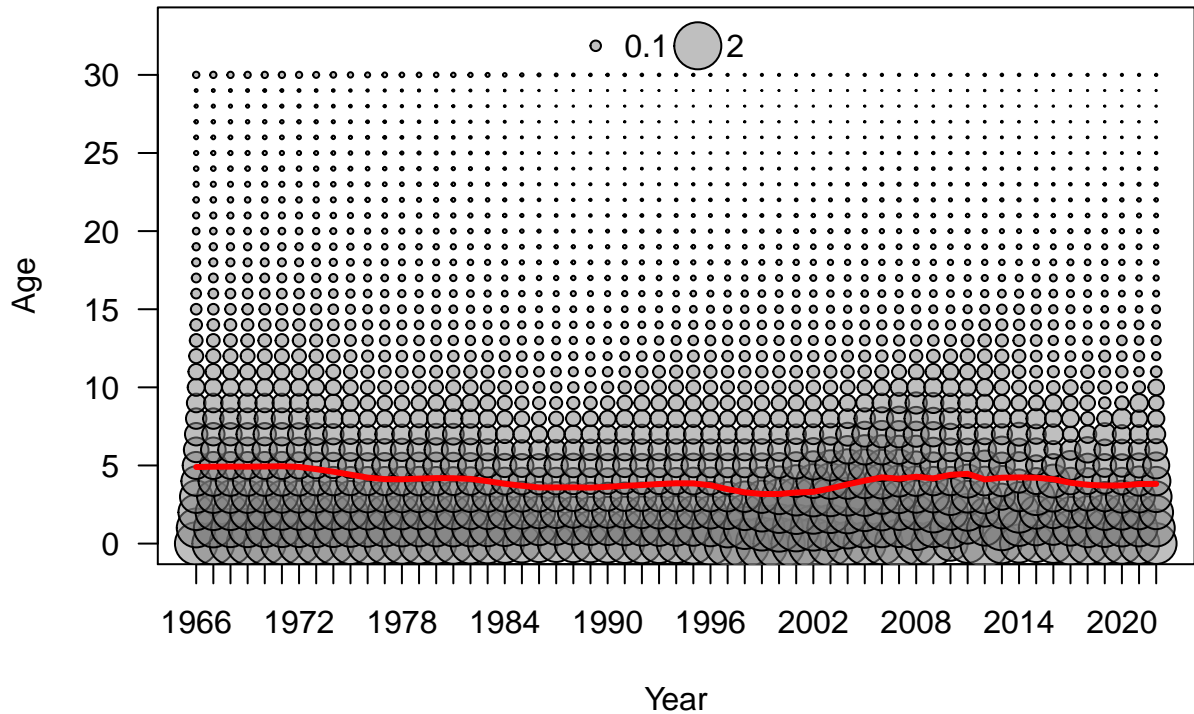


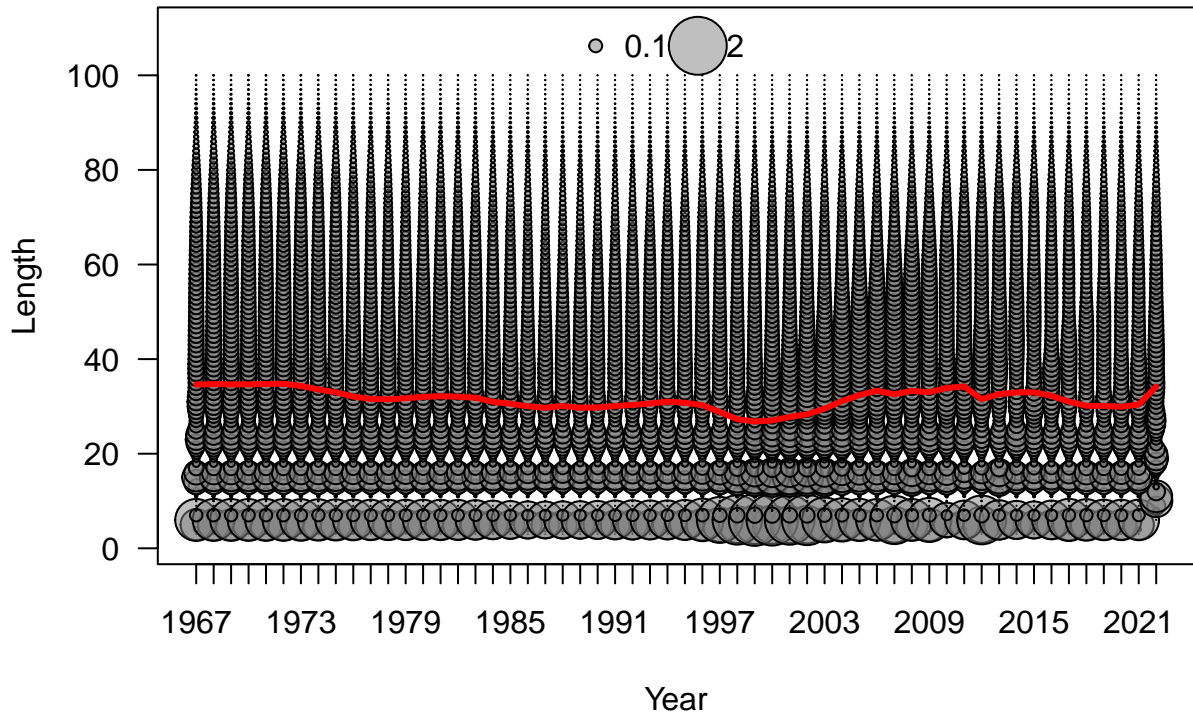


Standardized index

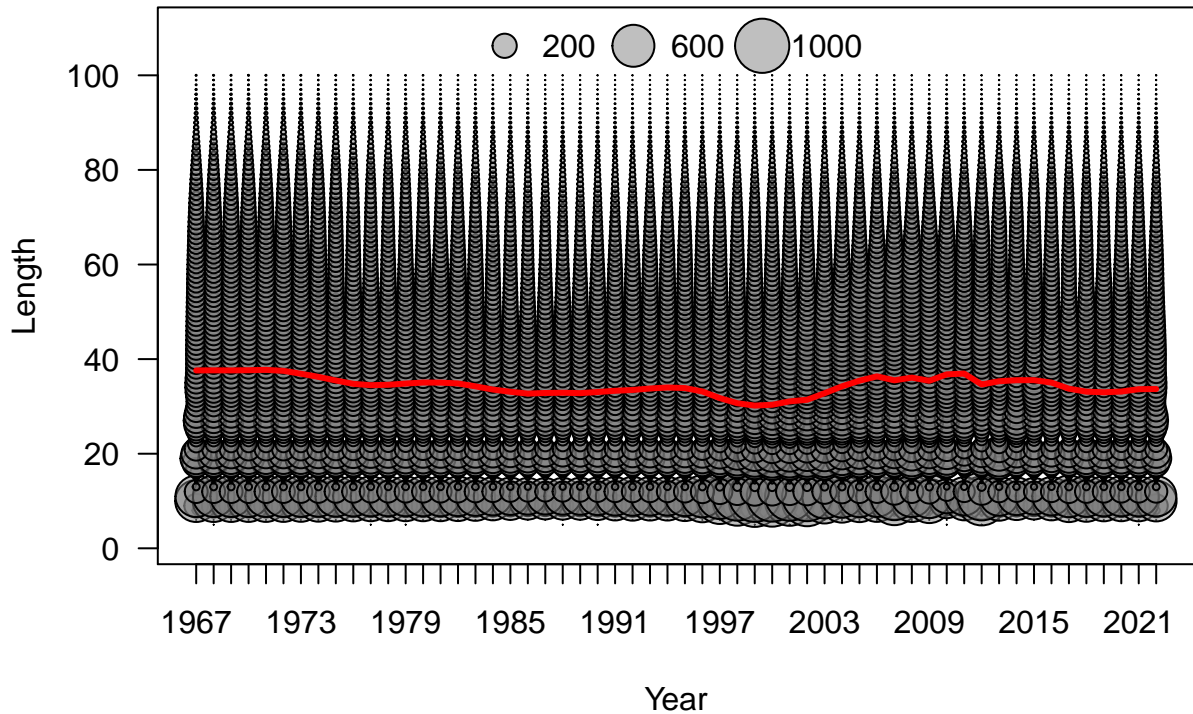


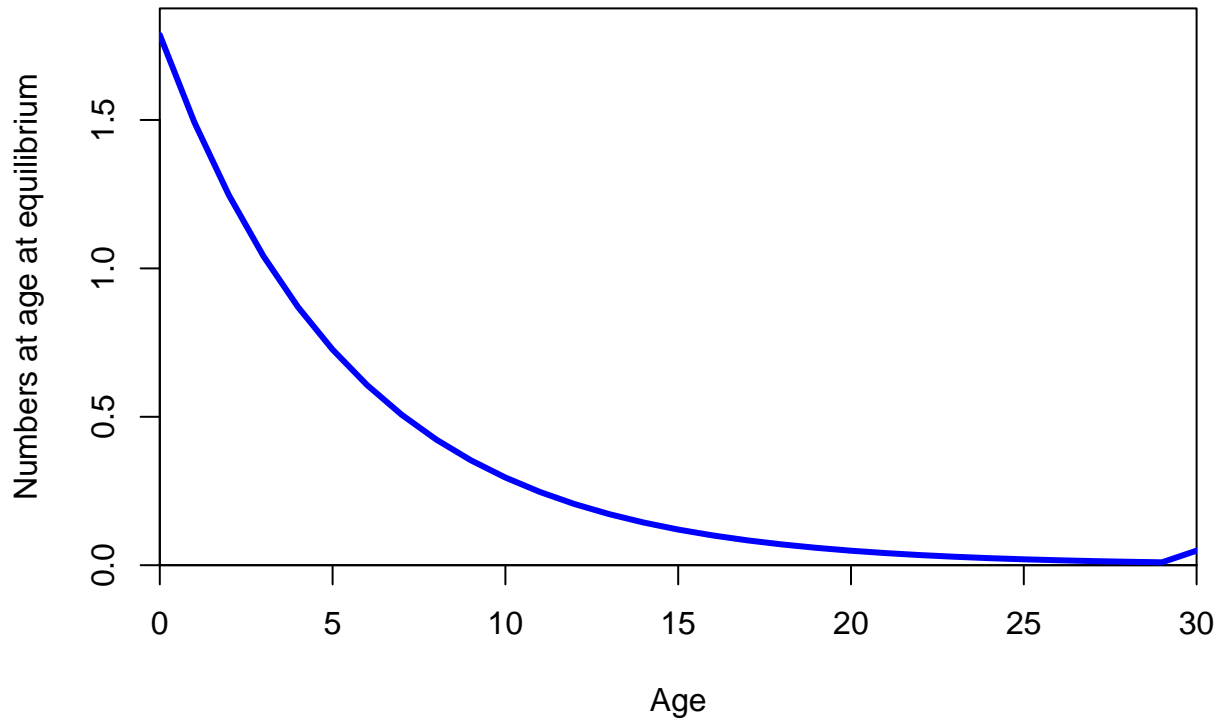






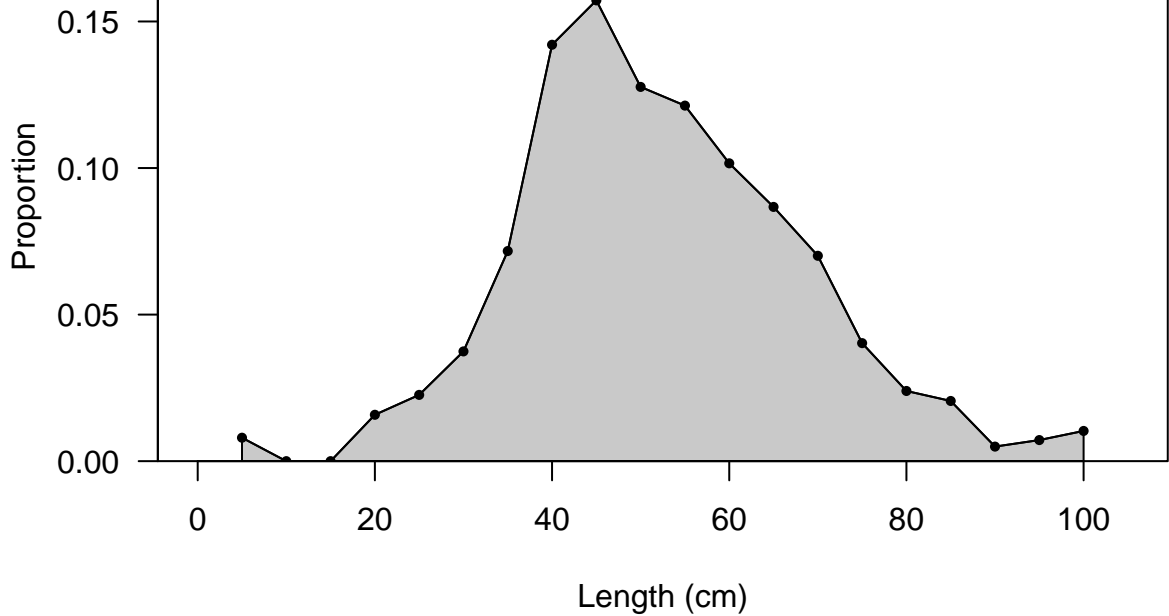


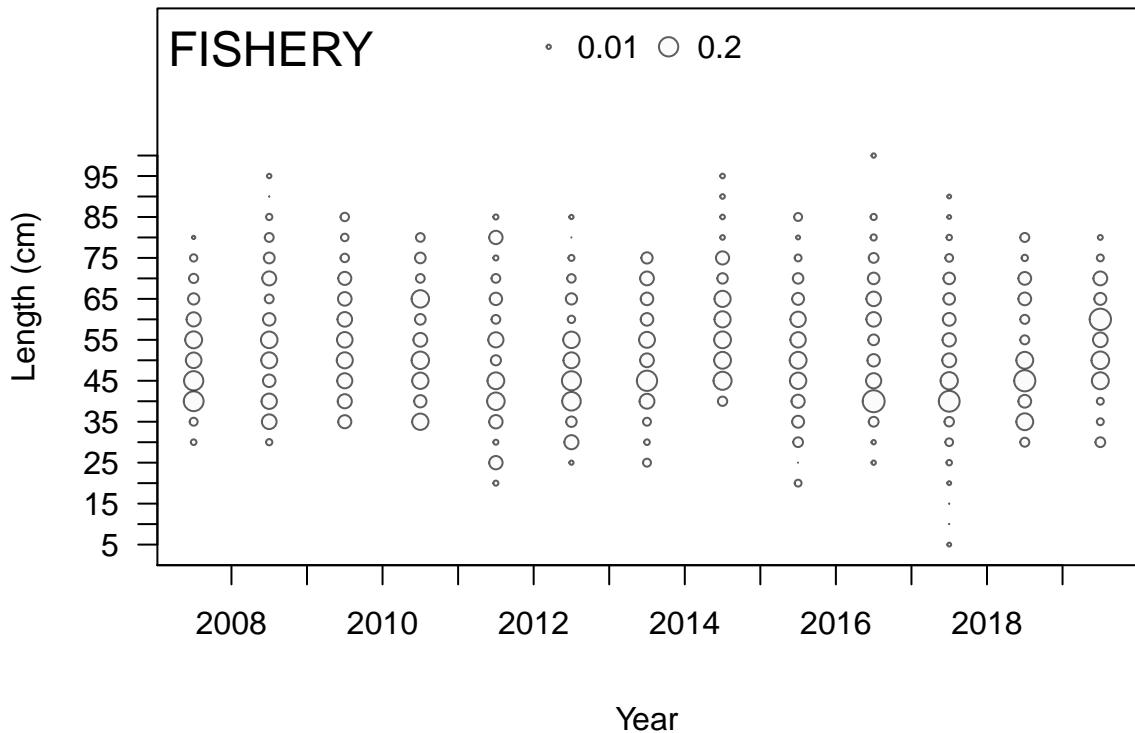


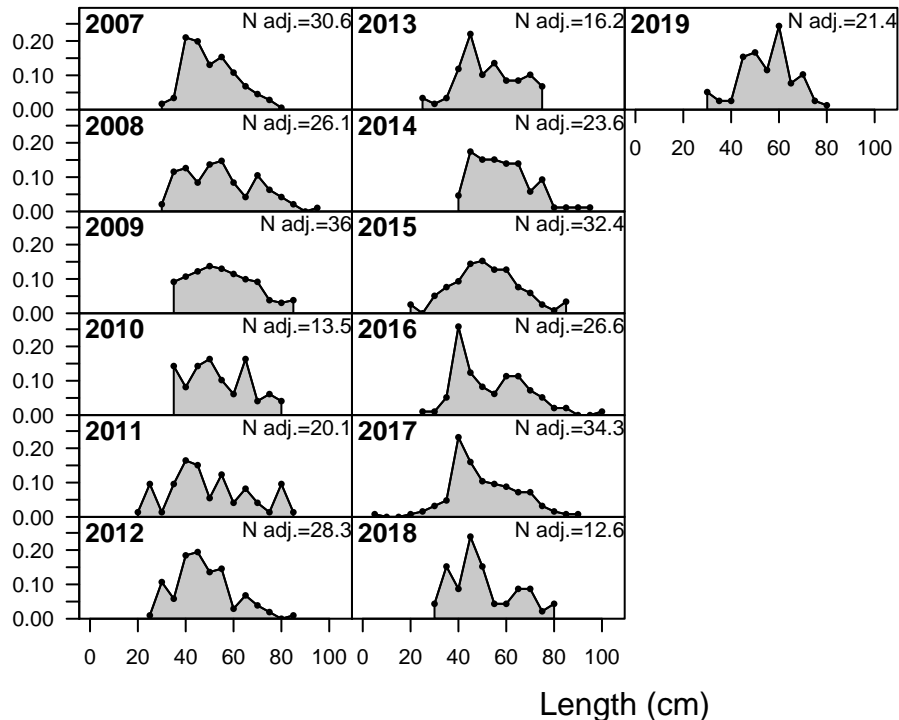


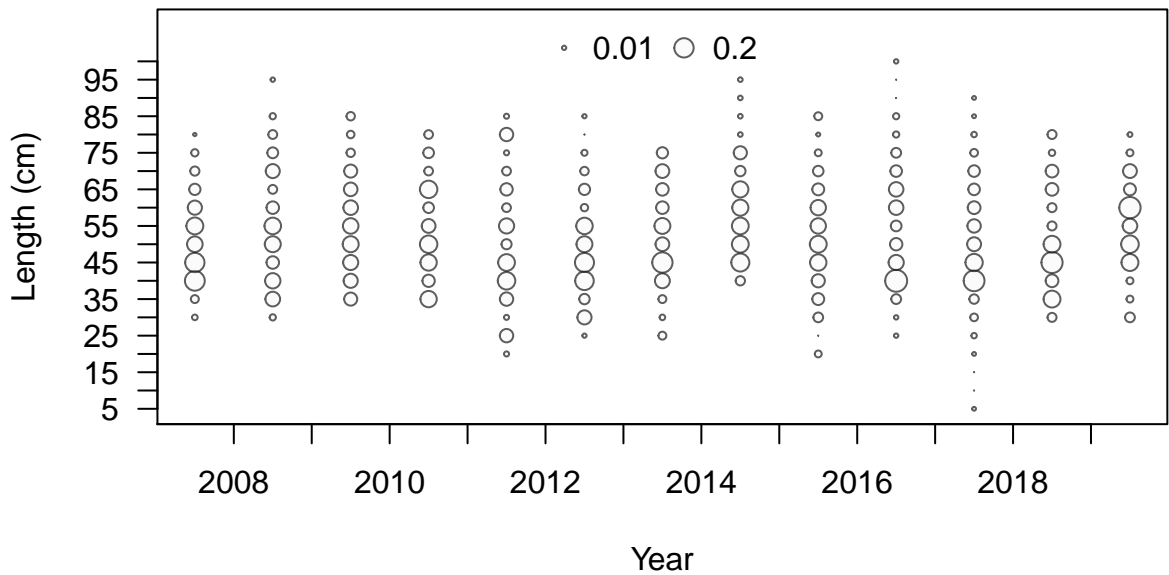
**FISHERY**

Sum of N adj.=321.7

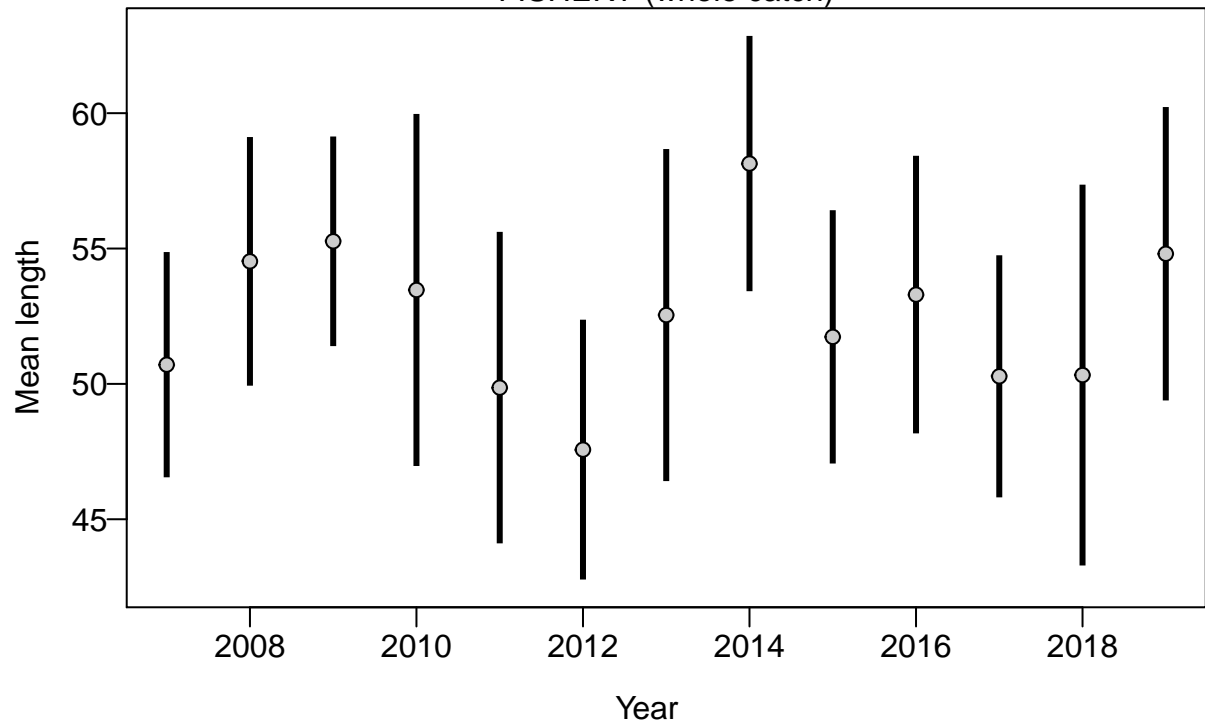






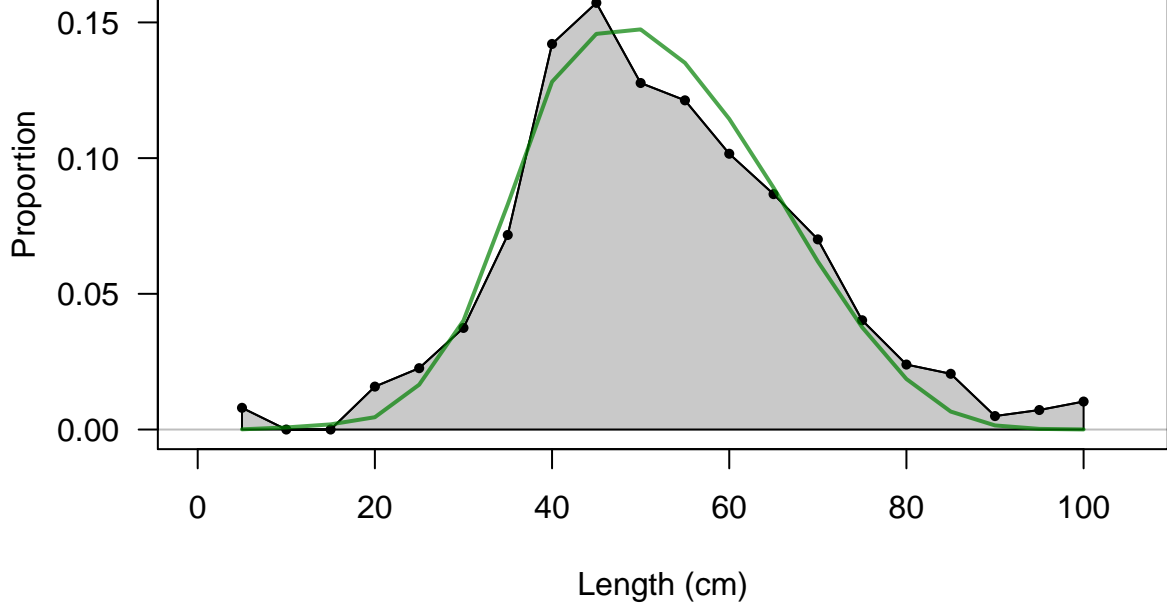


FISHERY (whole catch)

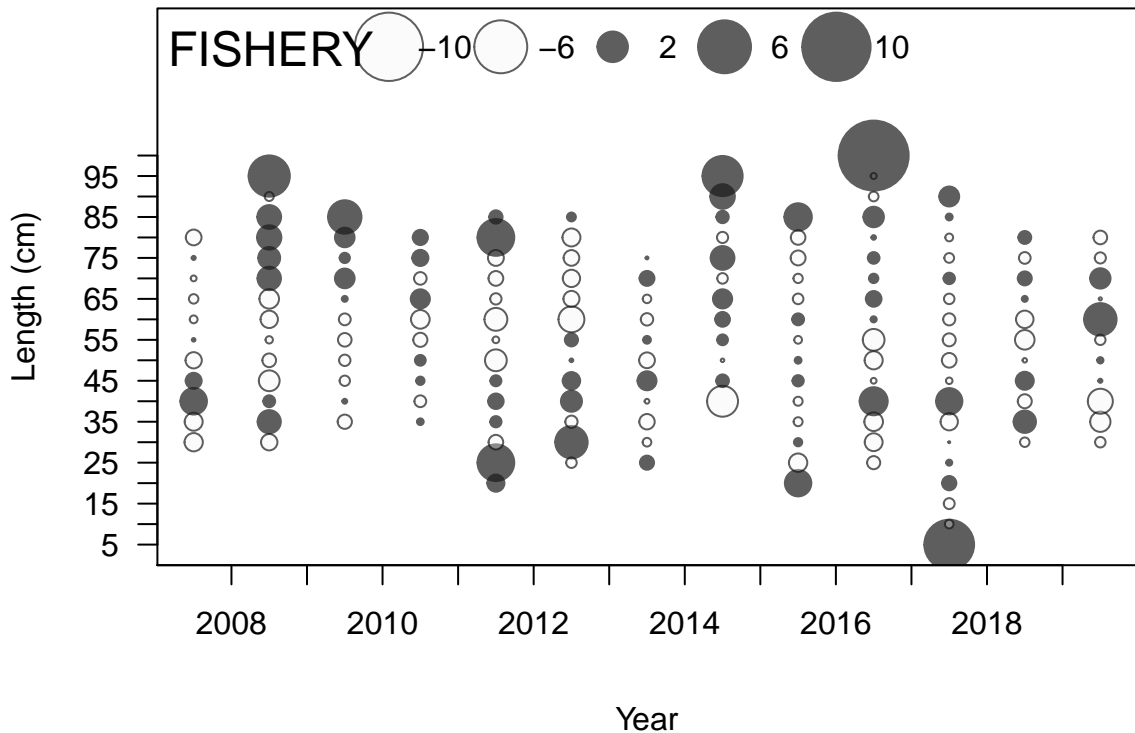


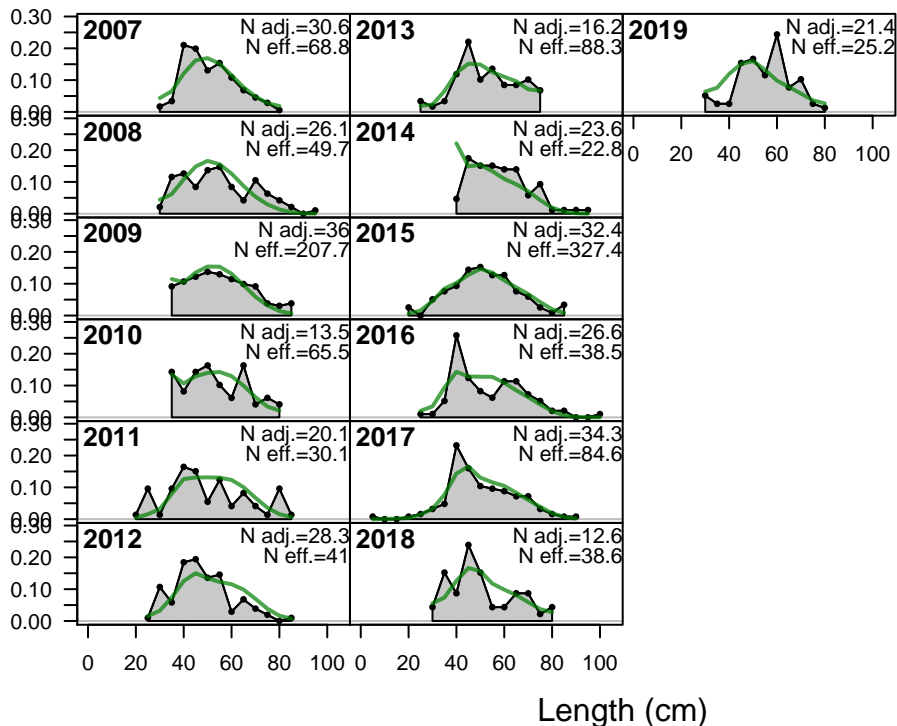
# FISHERY

Sum of N adj.=321.7  
Sum of N eff.=1088.3

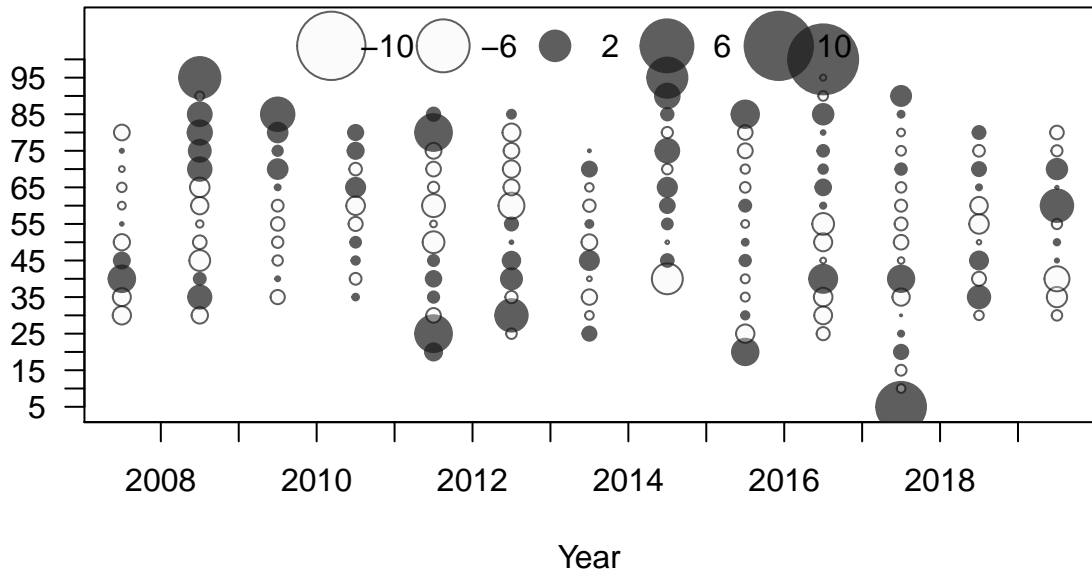




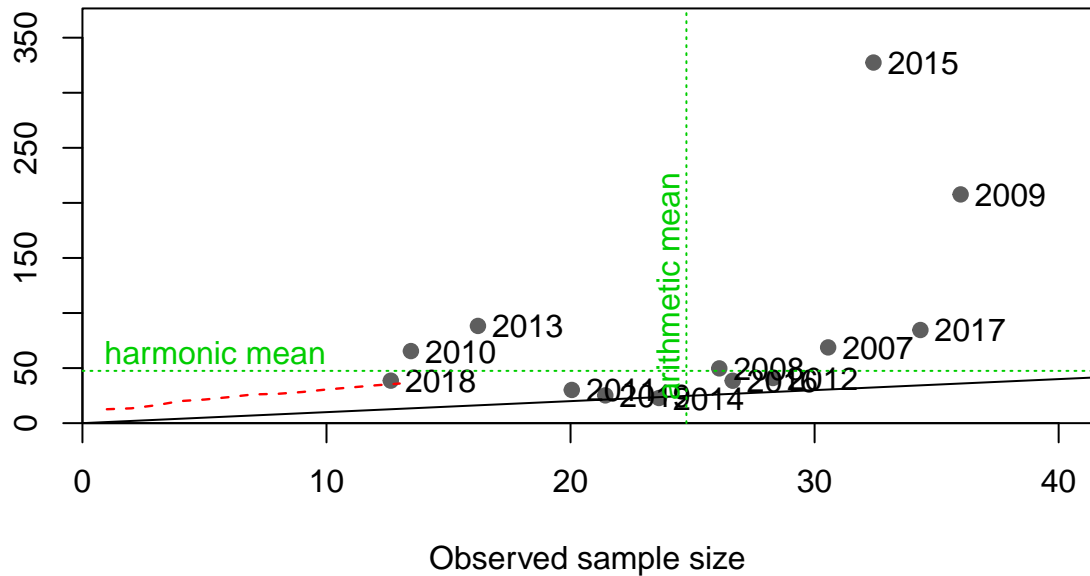




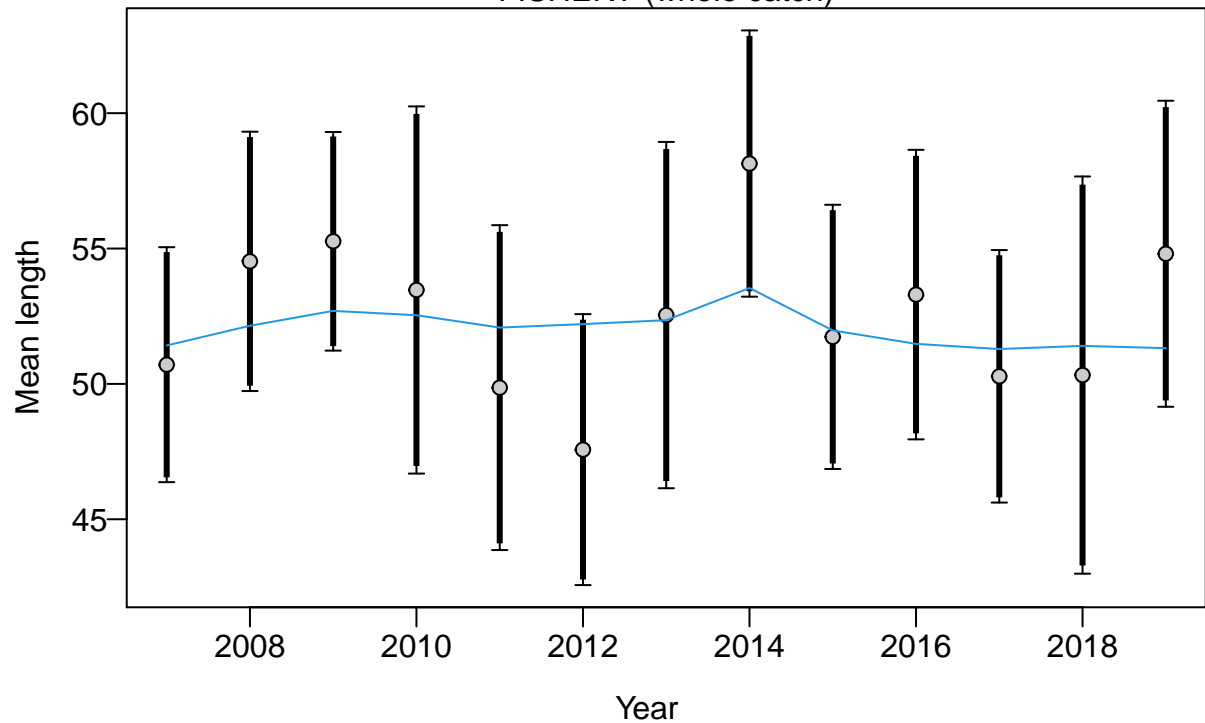
Length (cm)

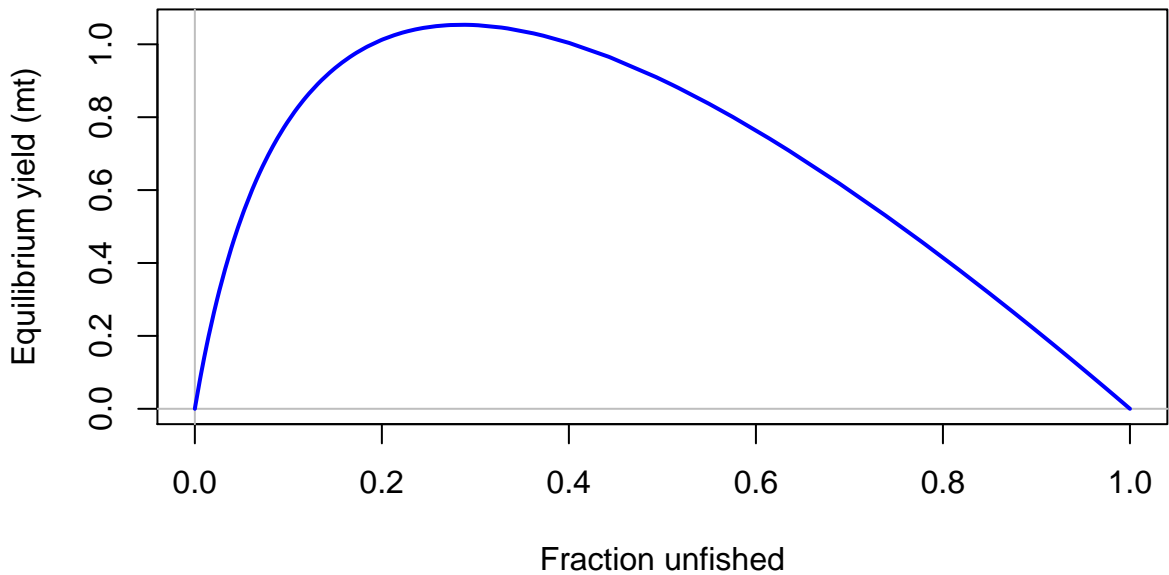


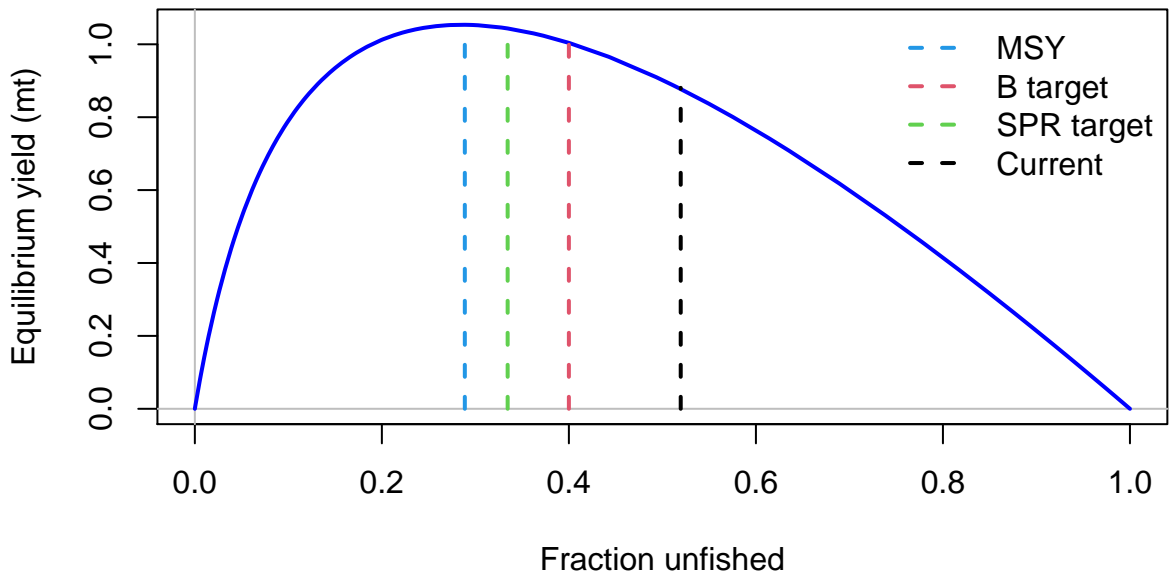
Effective sample size

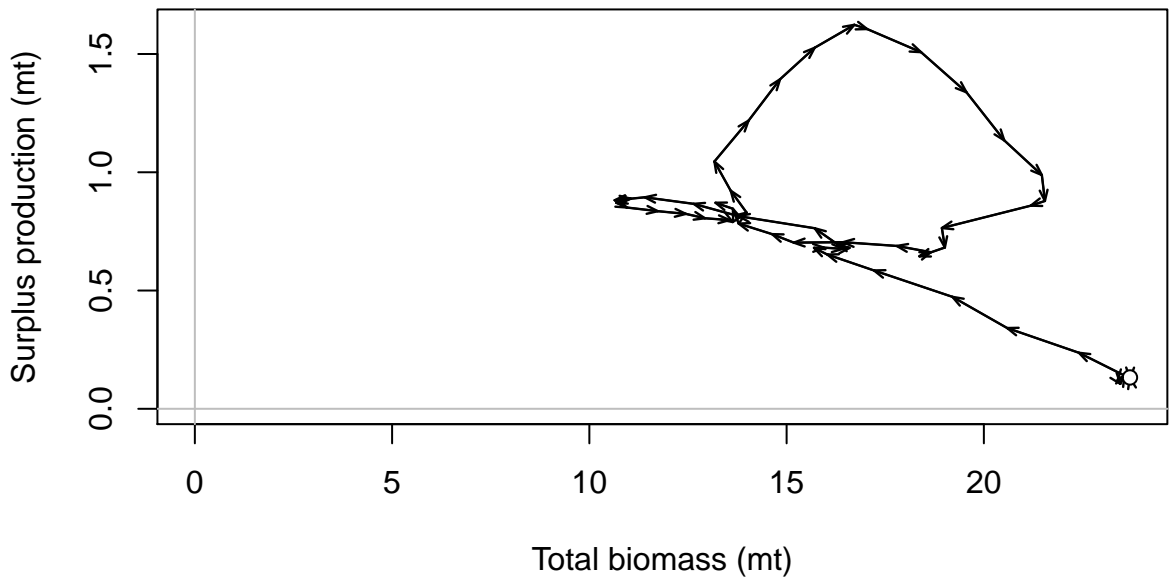


FISHERY (whole catch)

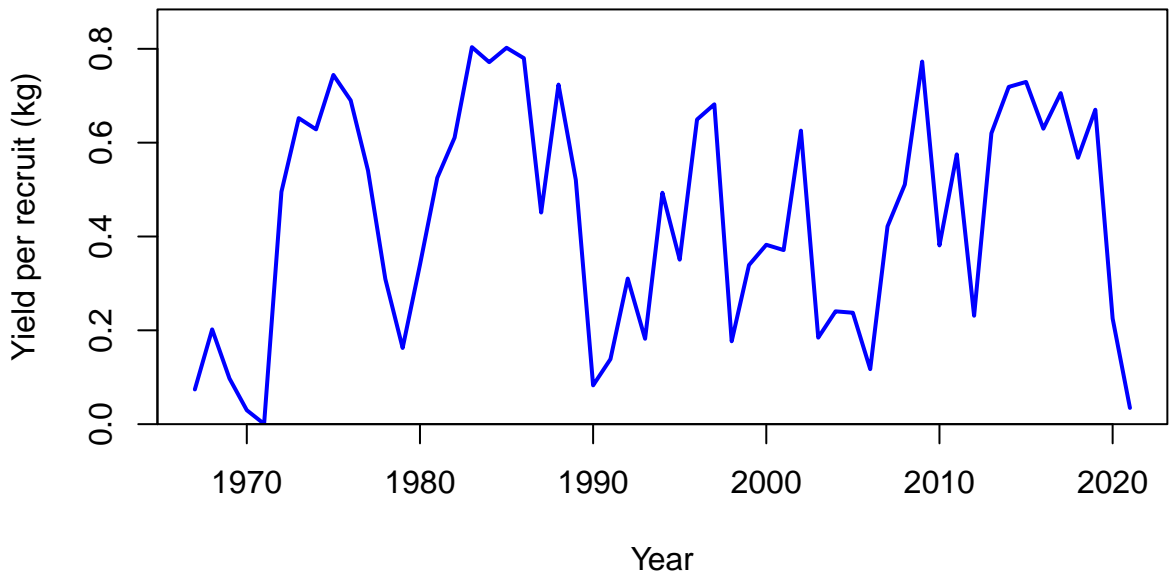


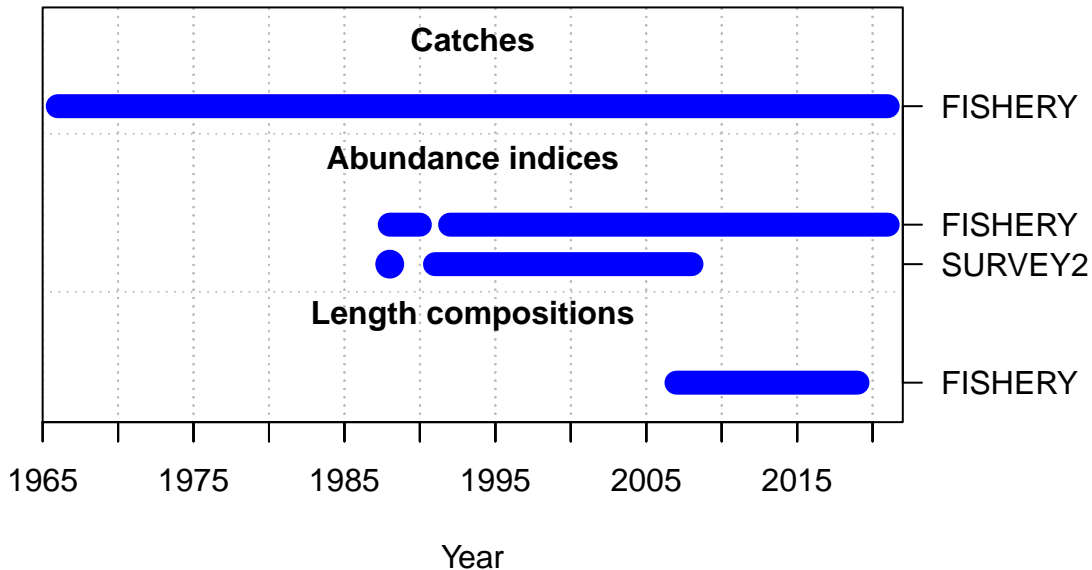


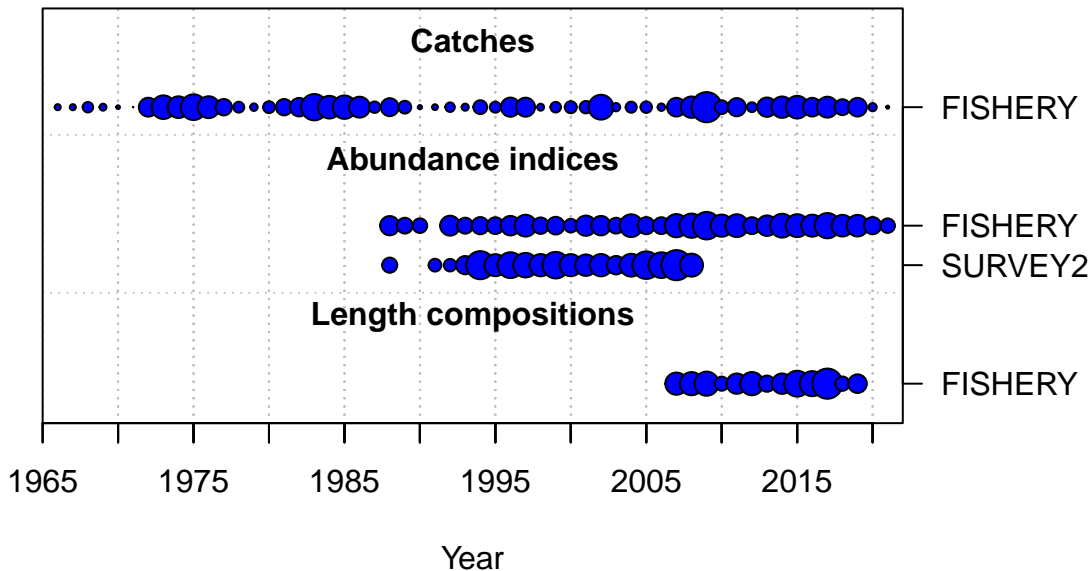








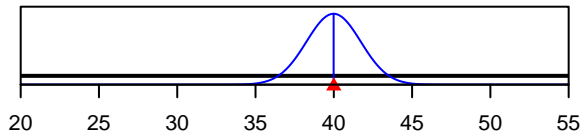




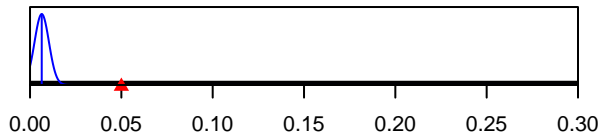
SR\_LN(R0)



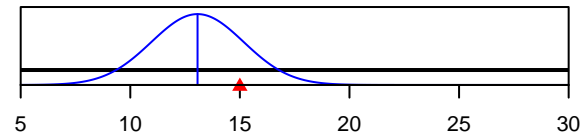
Size\_inflection\_FISHERY(1)



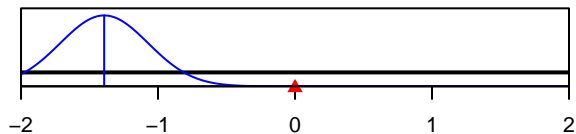
InitF\_seas\_1flt\_1FISHERY



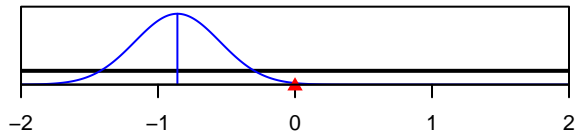
Size\_95%width\_FISHERY(1)



LnQ\_base\_FISHERY(1)



LnQ\_base\_SURVEY2(2)



Parameter value