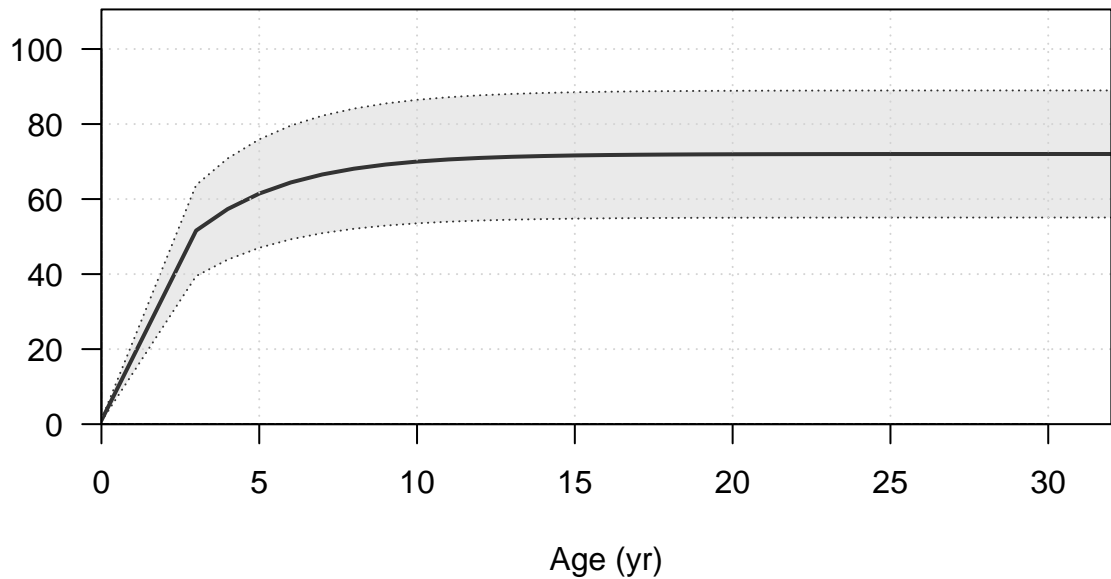
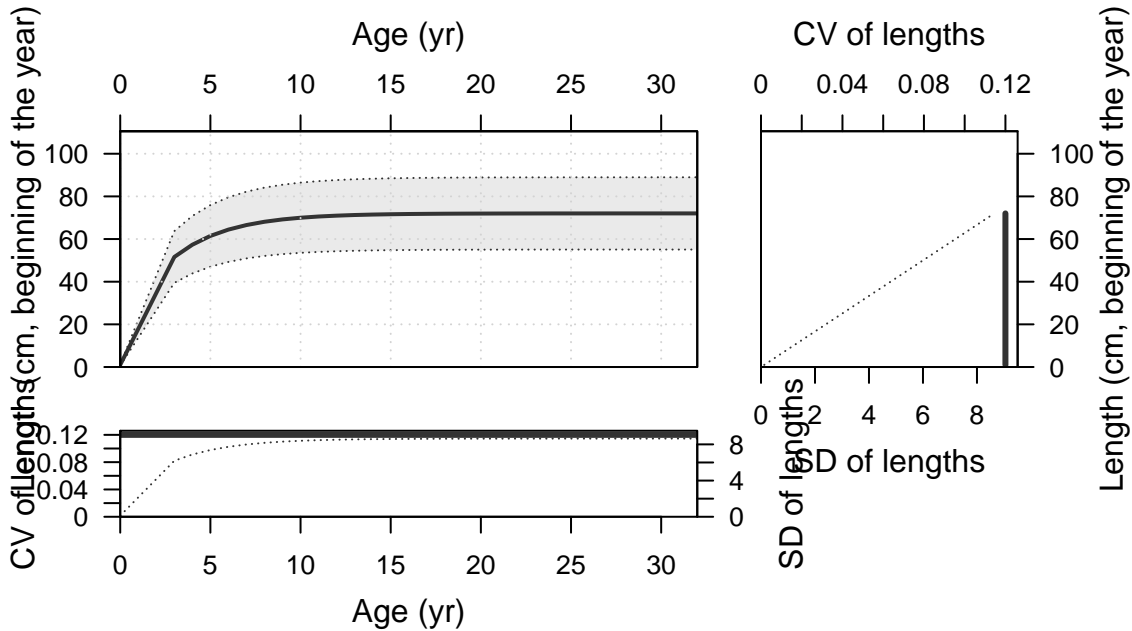
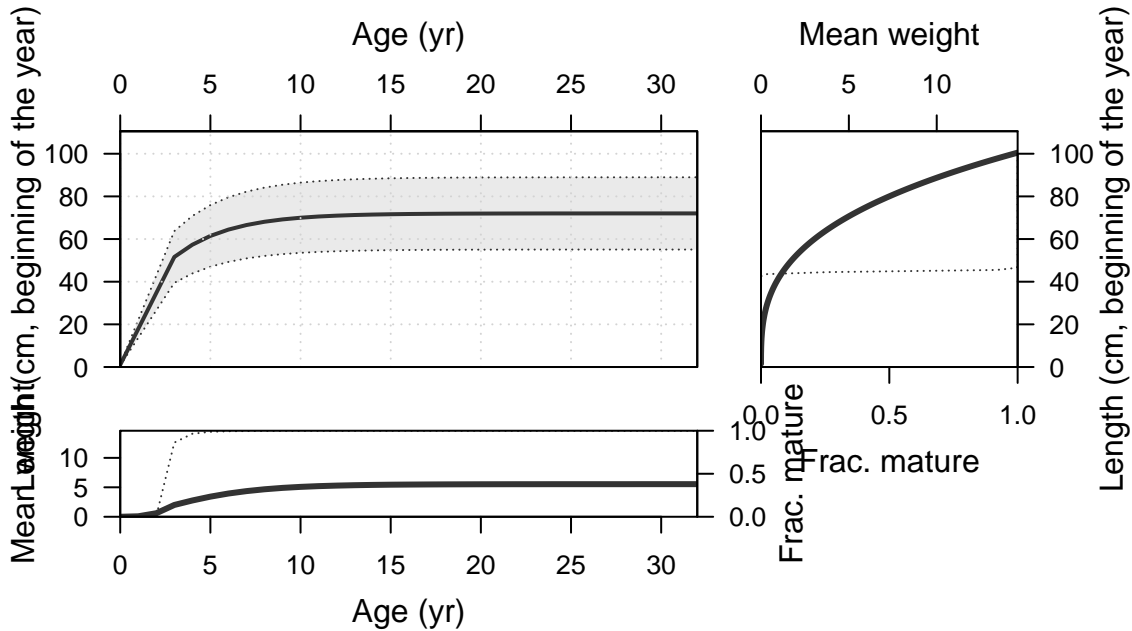


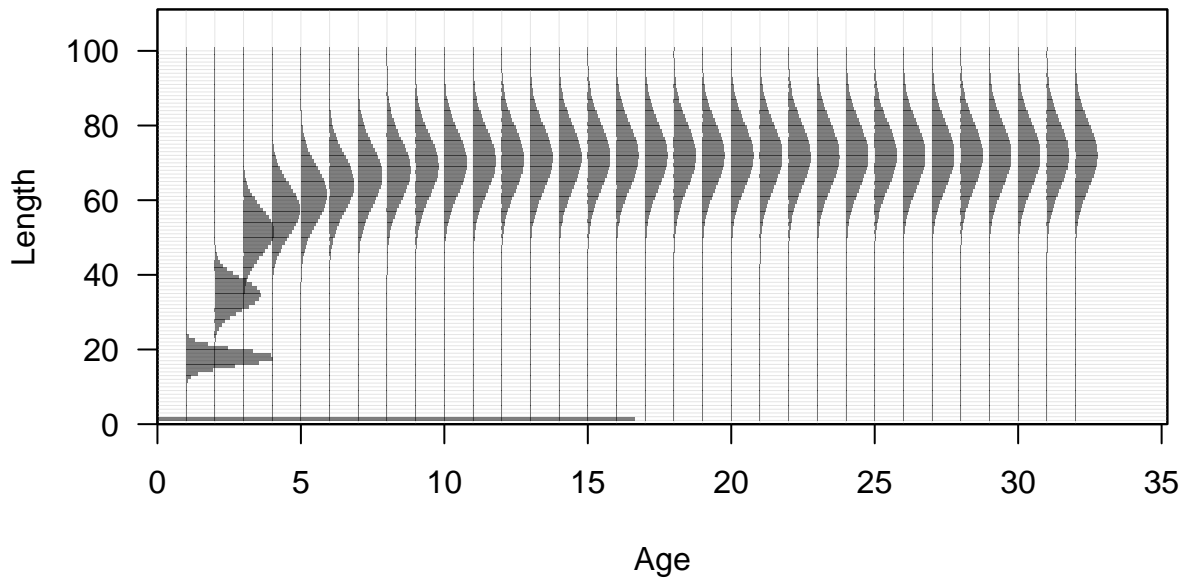
Plots created using the 'r4ss' package in R  
Stock Synthesis version: 3.30.19.b  
StartTime: Fri Jun 17 13:52:34 2022  
Data\_File: data.ss  
Control\_File: control.ss

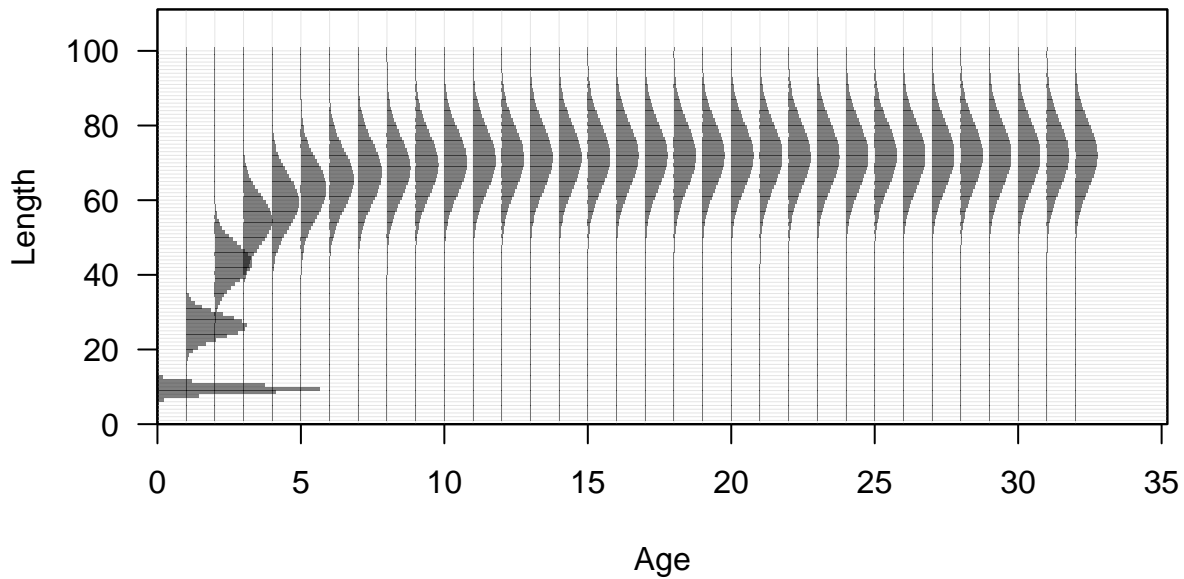
Length (cm, beginning of the year)



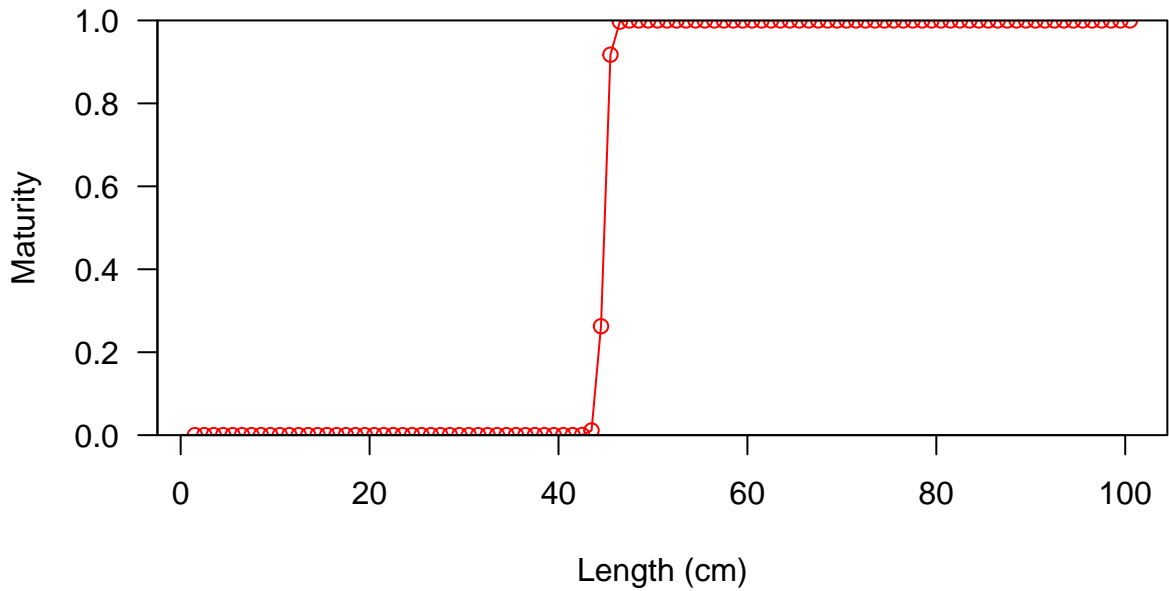












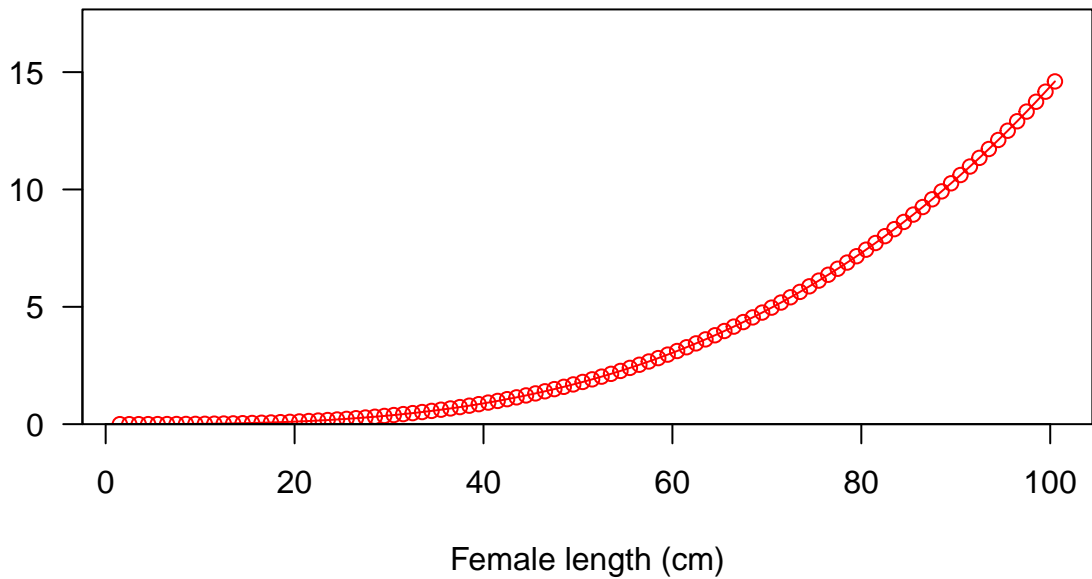




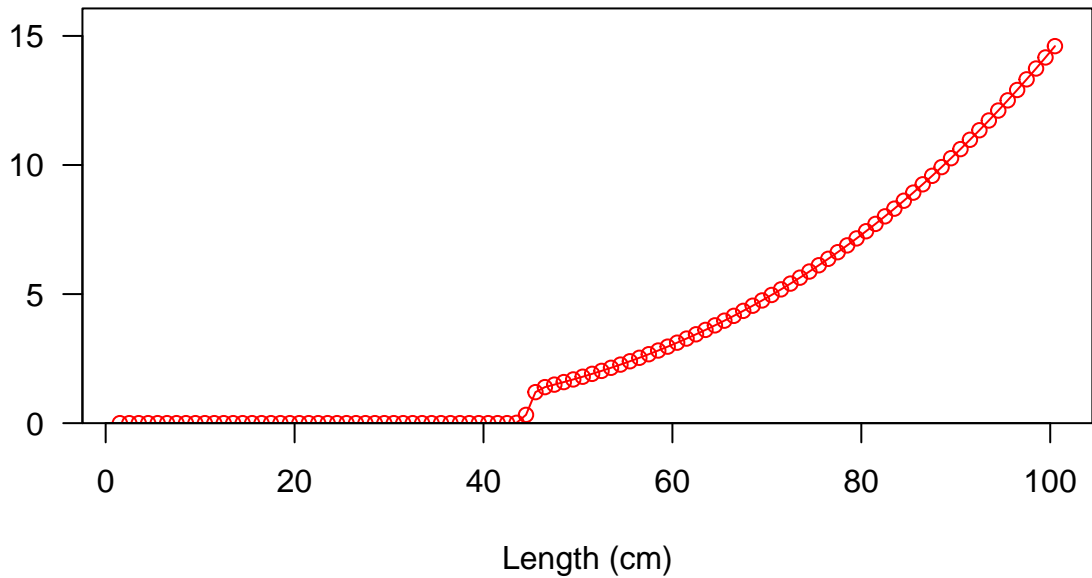
Fecundity

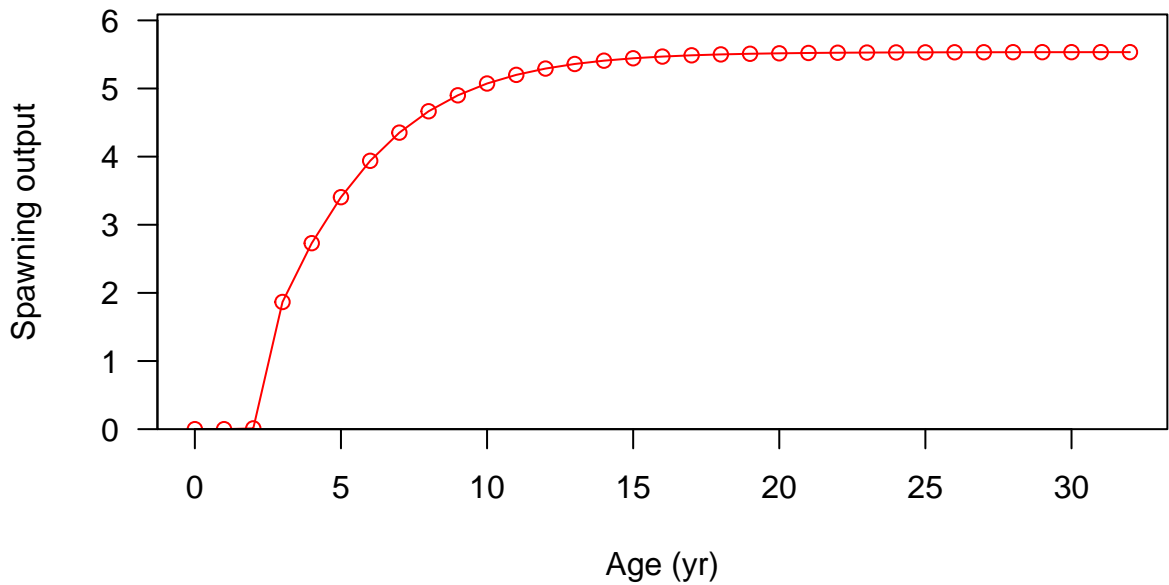


Fecundity

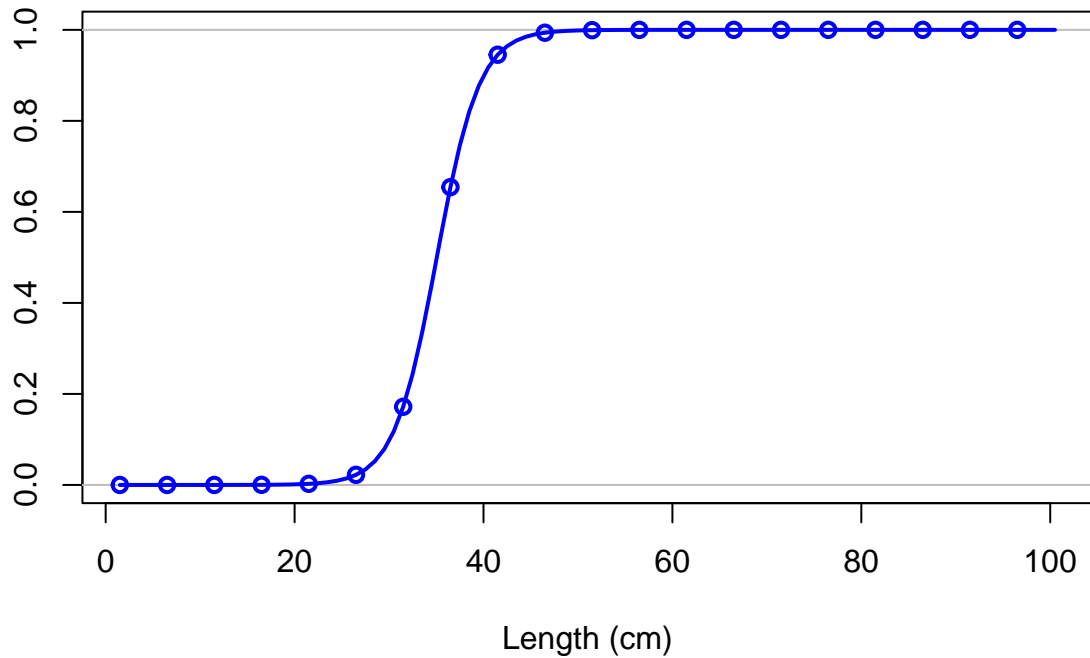


Spawning output

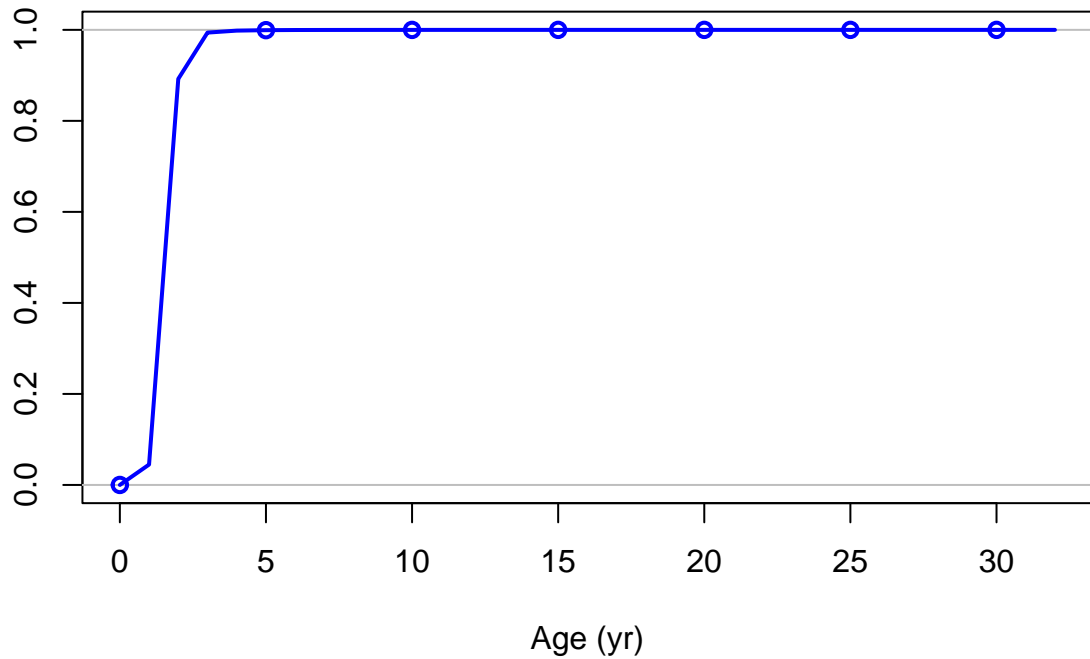




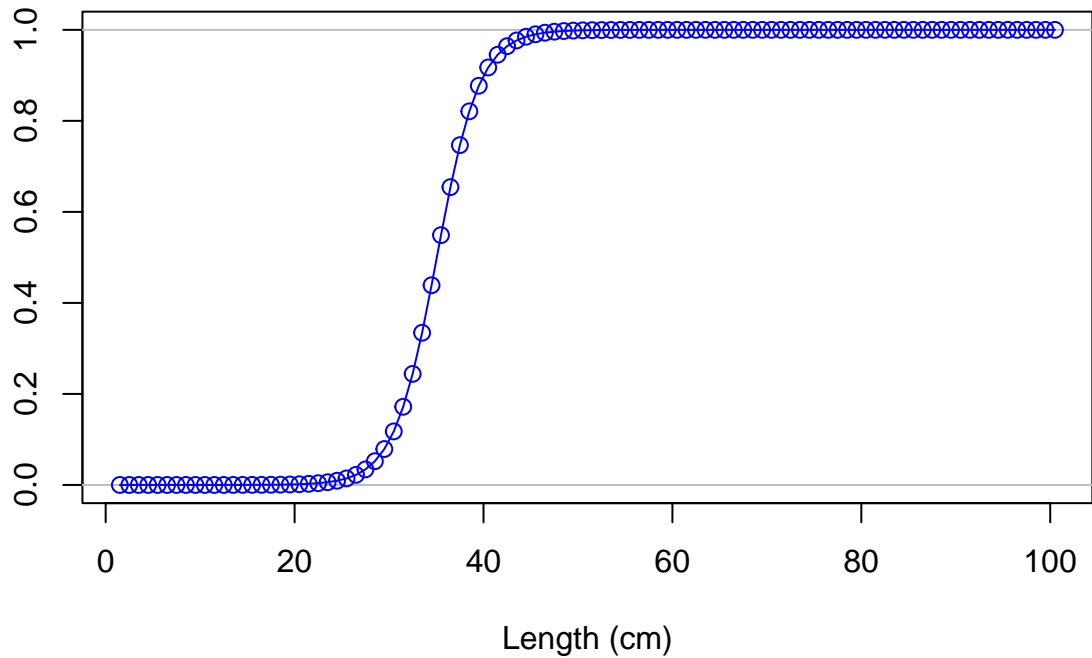
Selectivity



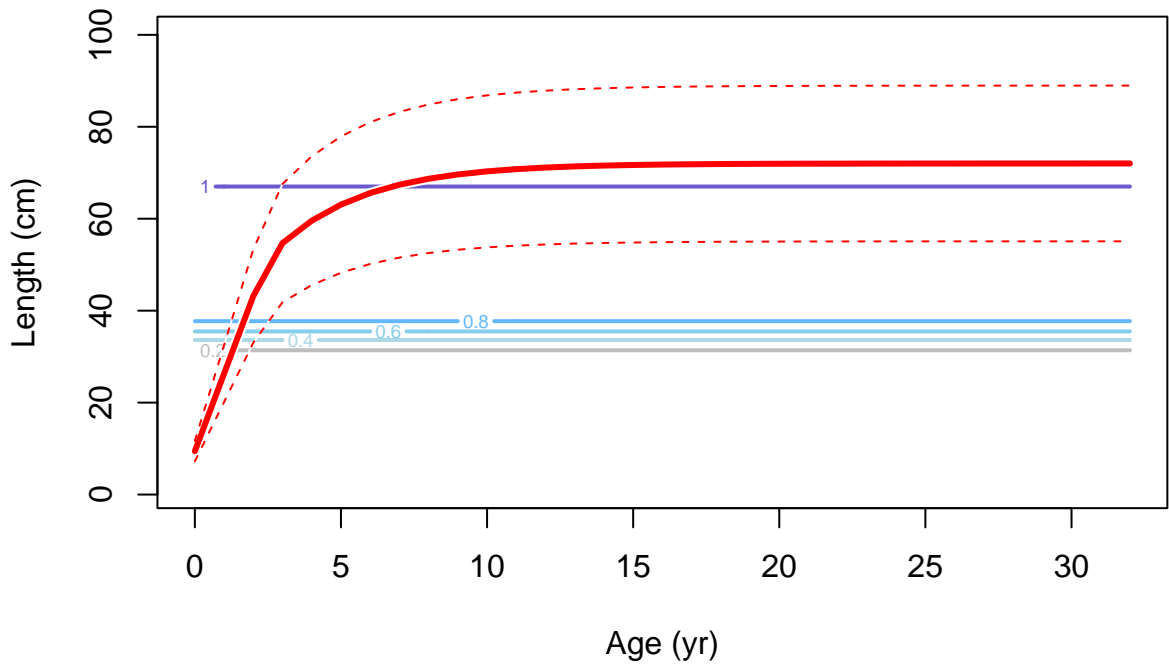
Selectivity

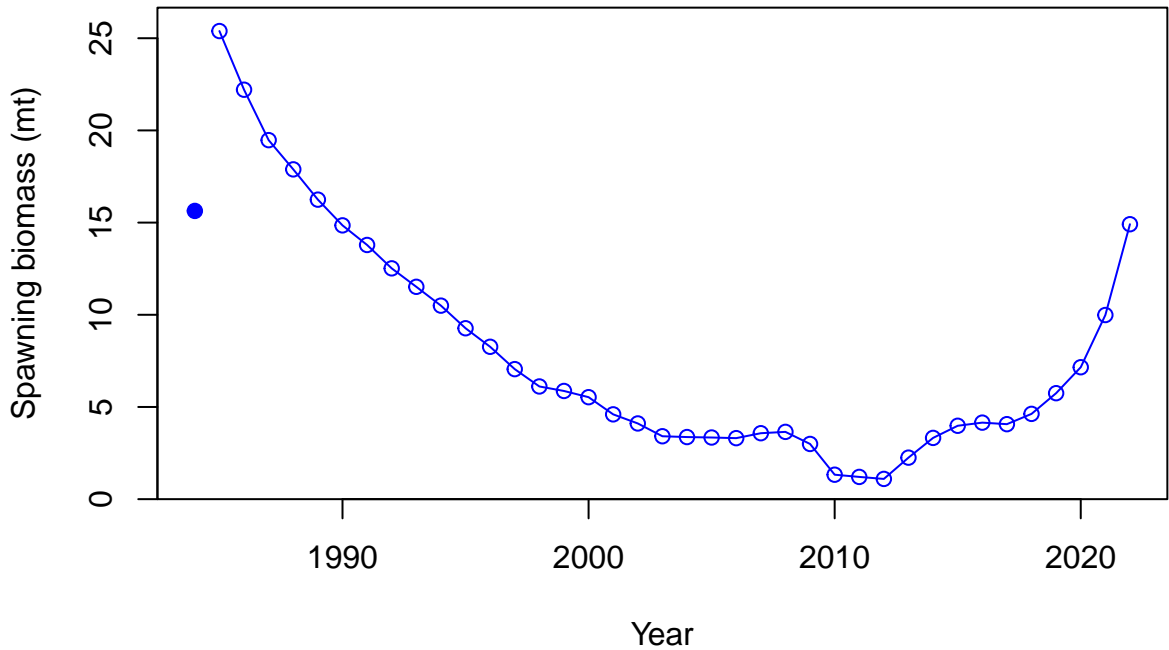


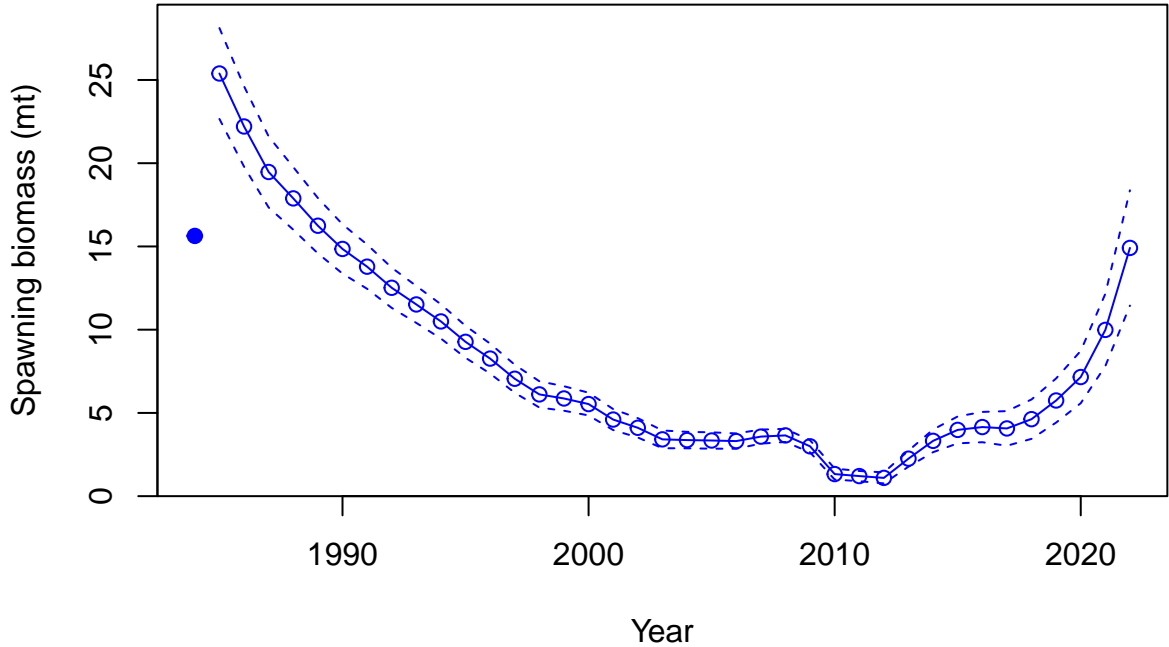
Selectivity



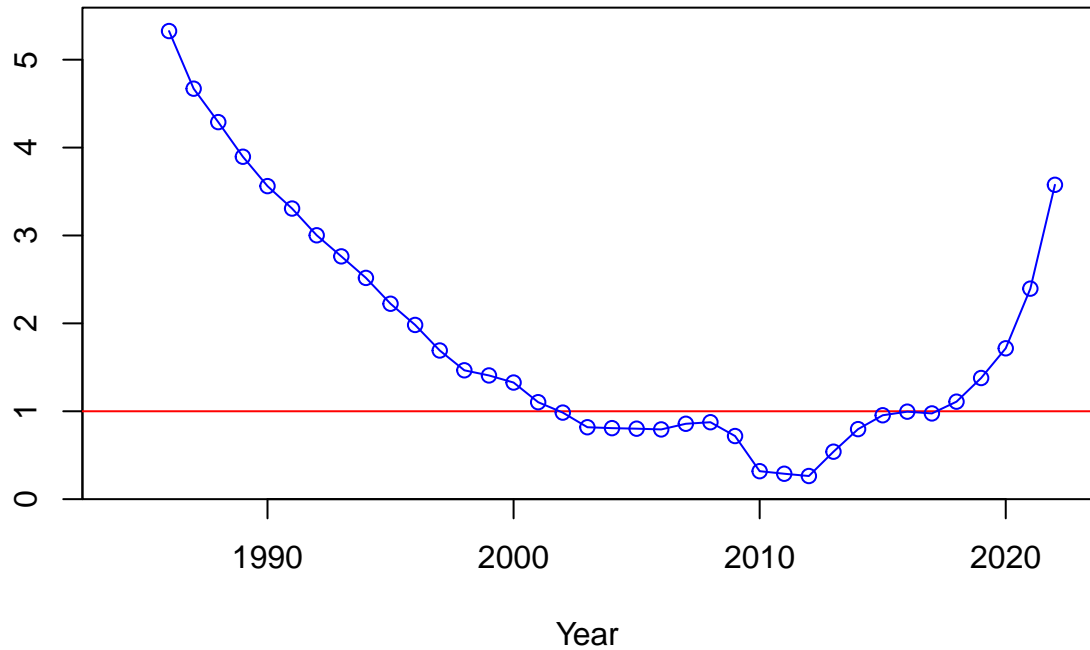




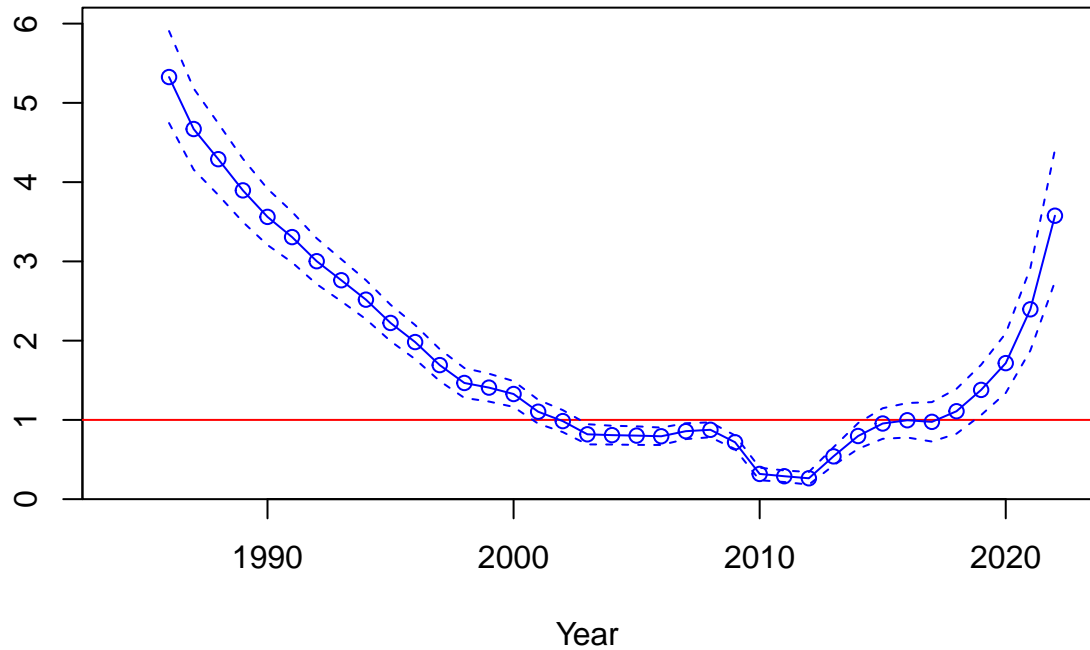


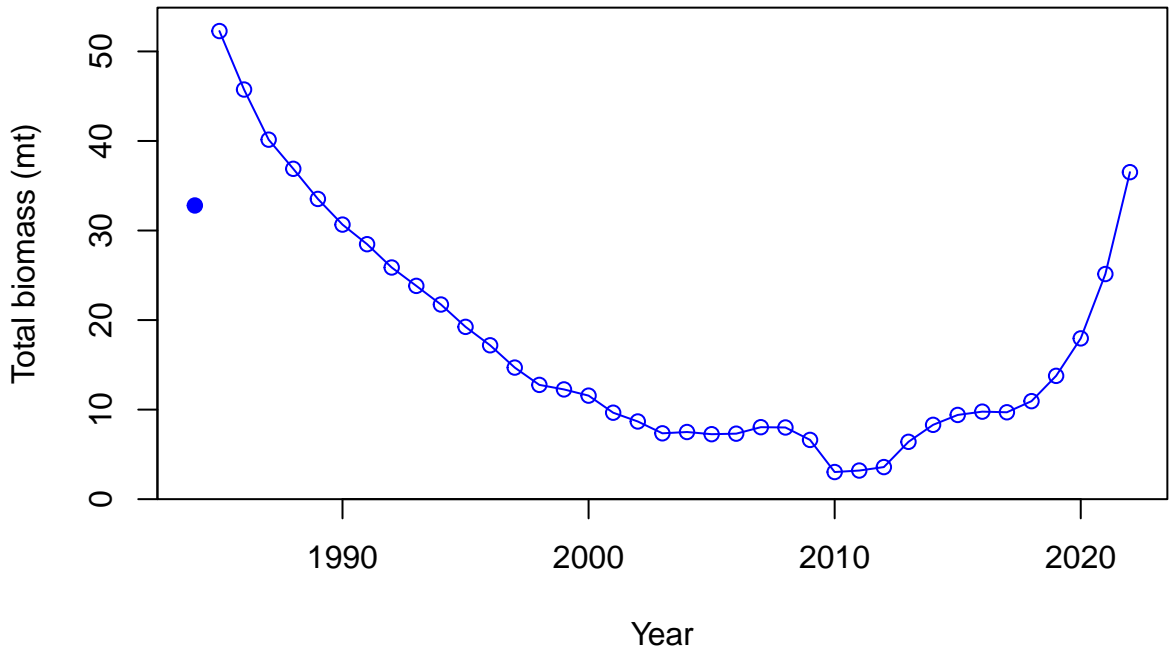


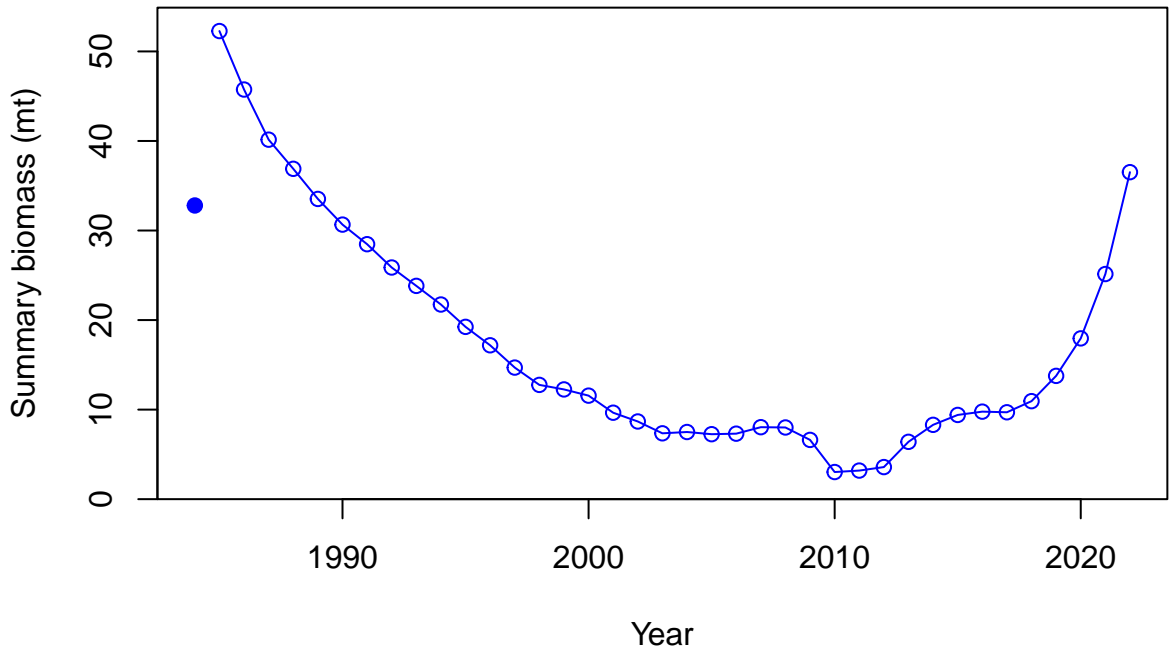
Relative spawning biomass:  $B/B_{MSY}$



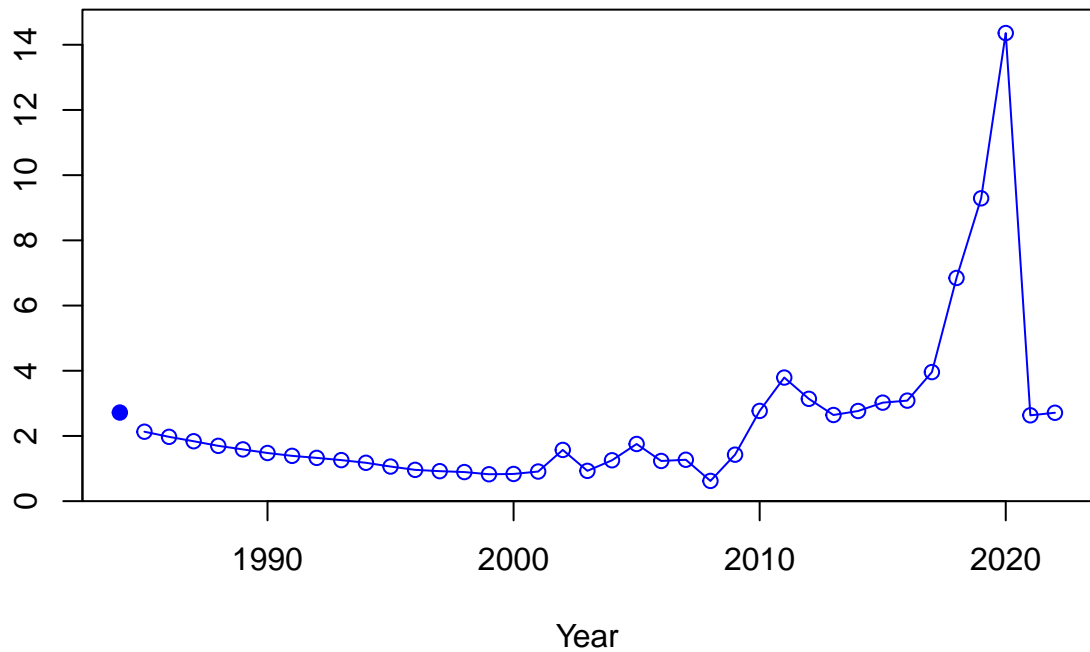
Relative spawning biomass:  $B/B_{MSY}$



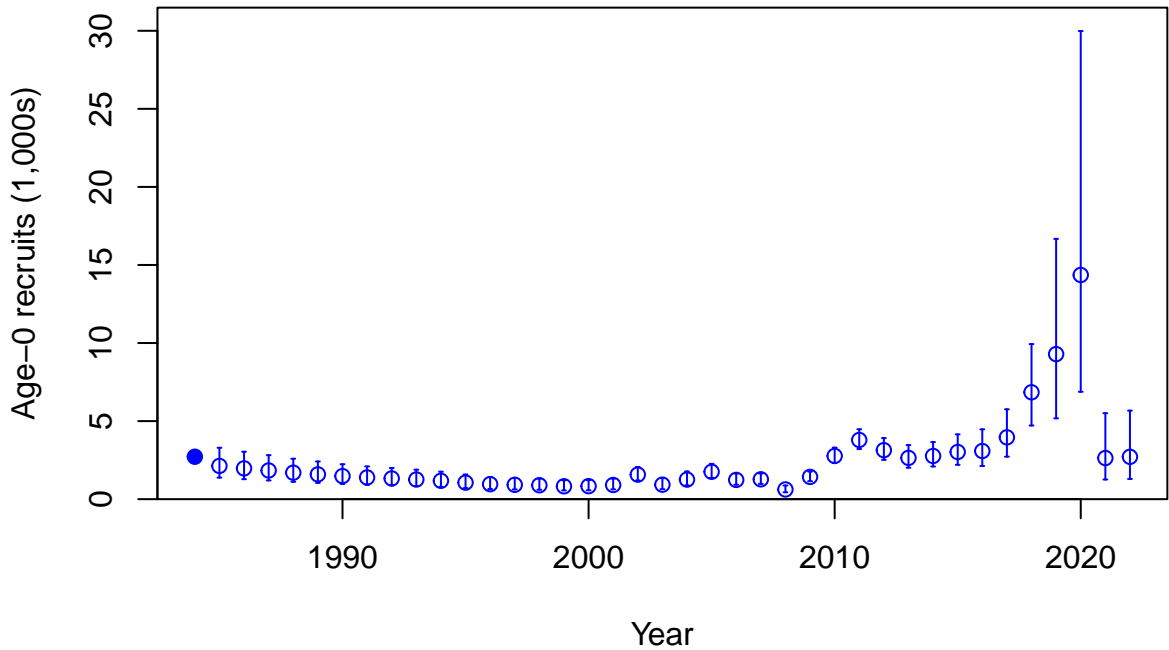




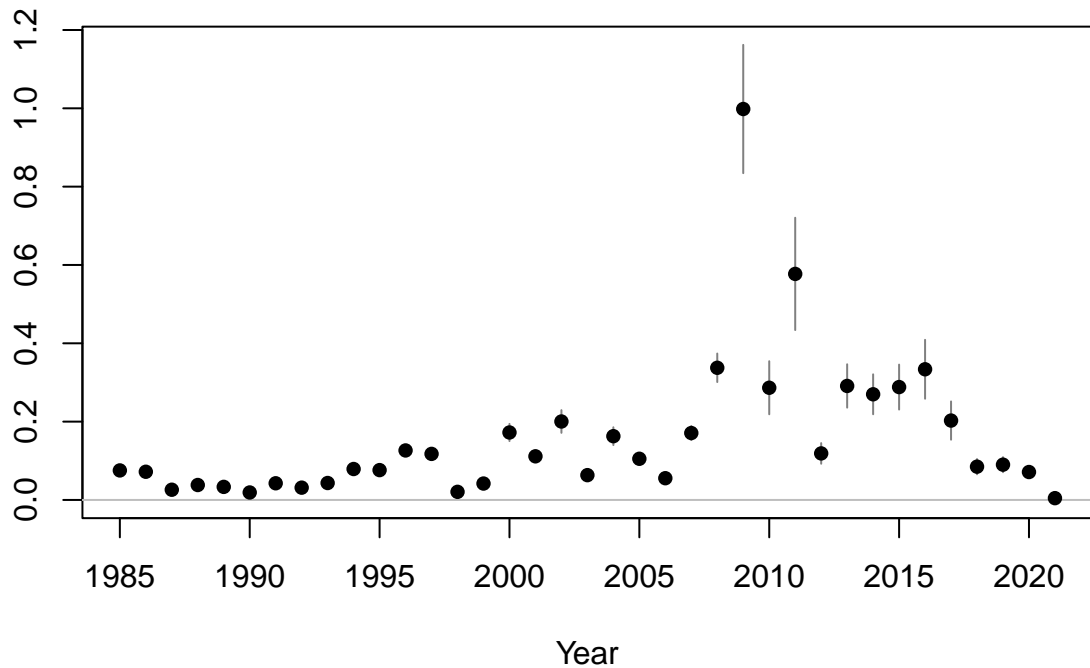
Age-0 recruits (1,000s)

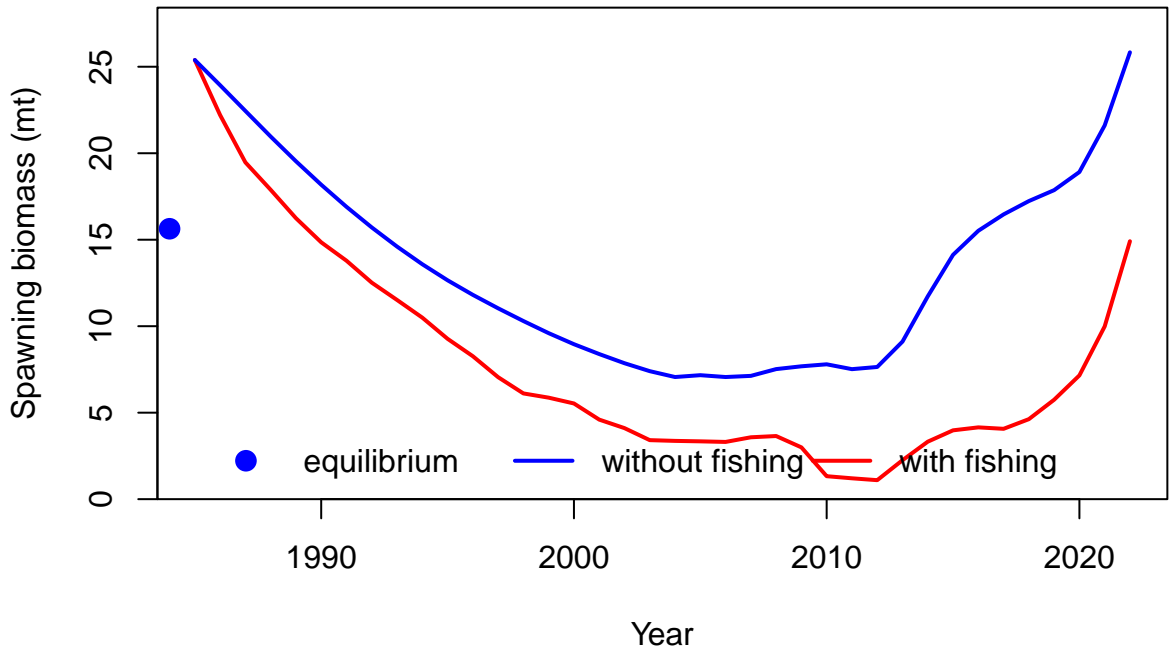






Summary Fishing Mortality





Log recruitment deviation

1.5  
1.0  
0.5  
0.0  
-0.5  
-1.0

1970

1980

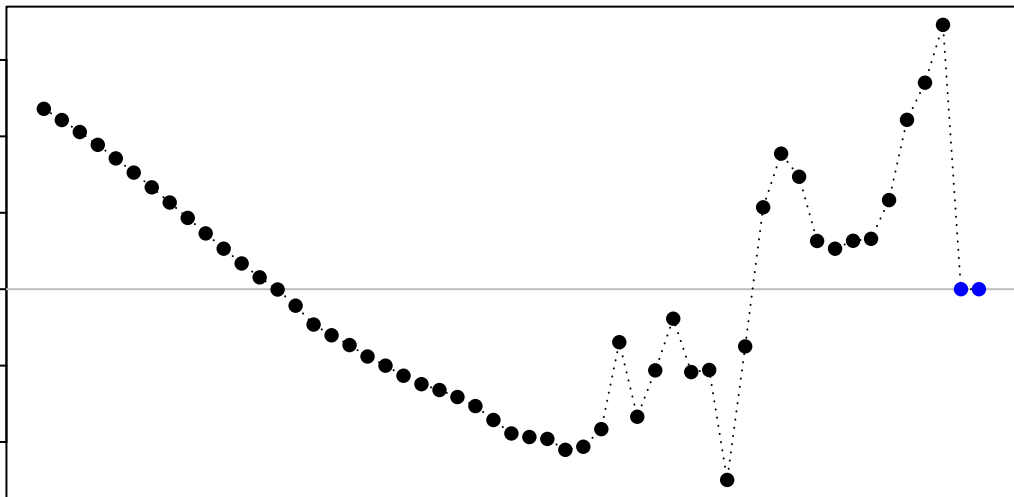
1990

2000

2010

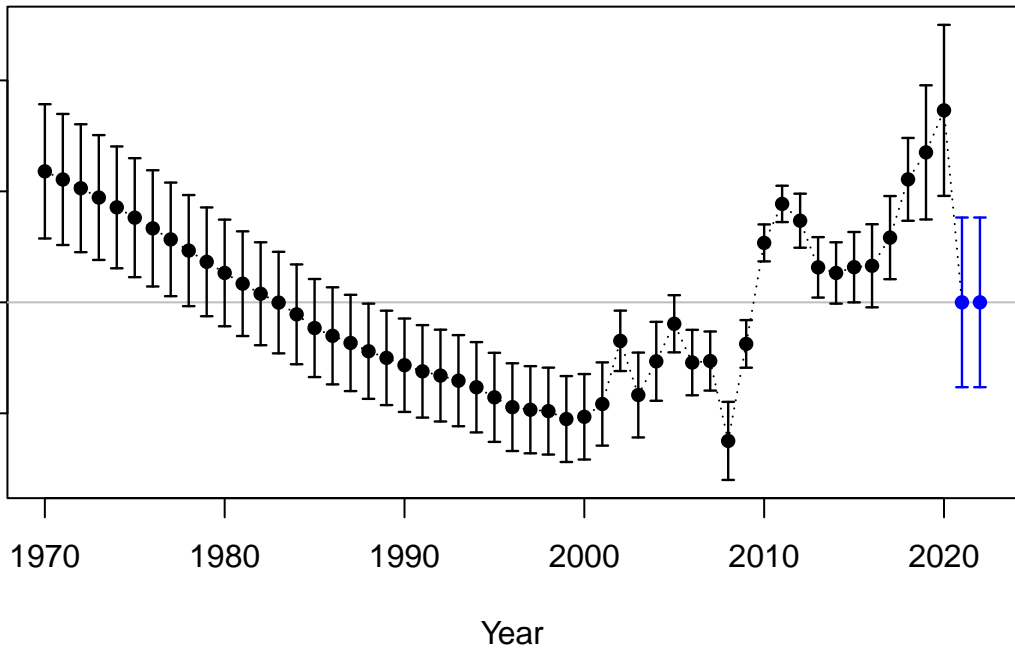
2020

Year

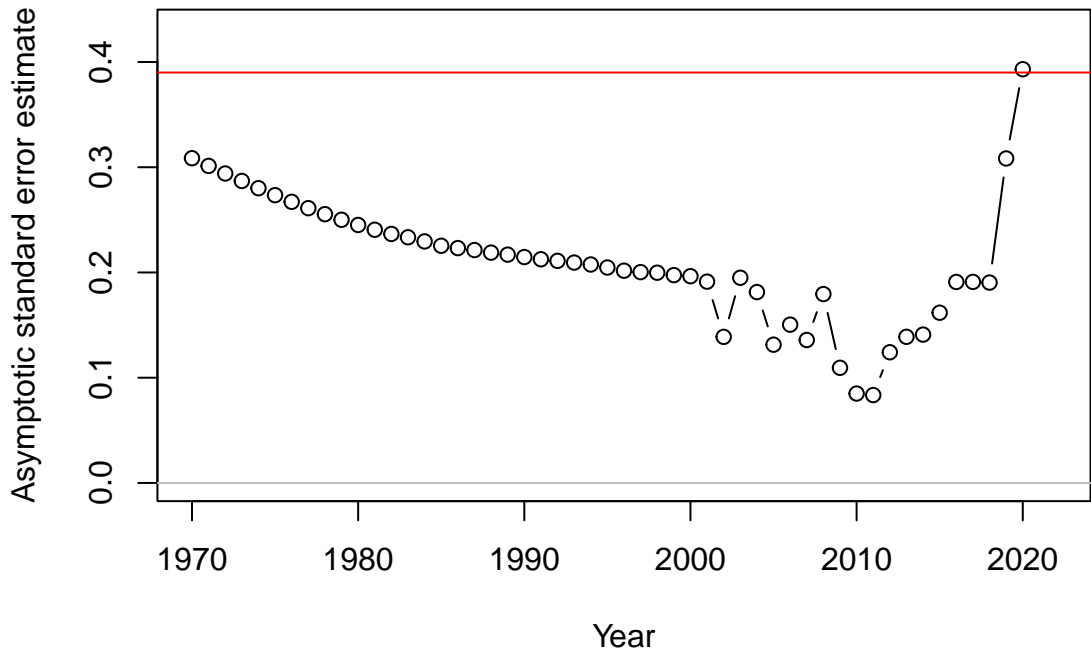


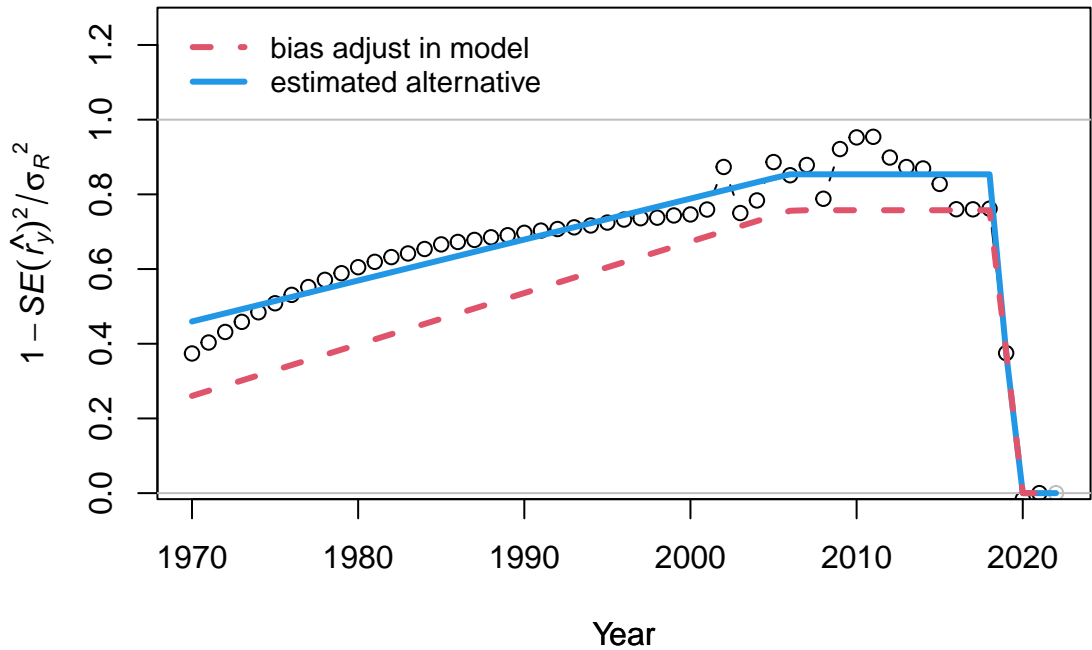
Log recruitment deviation

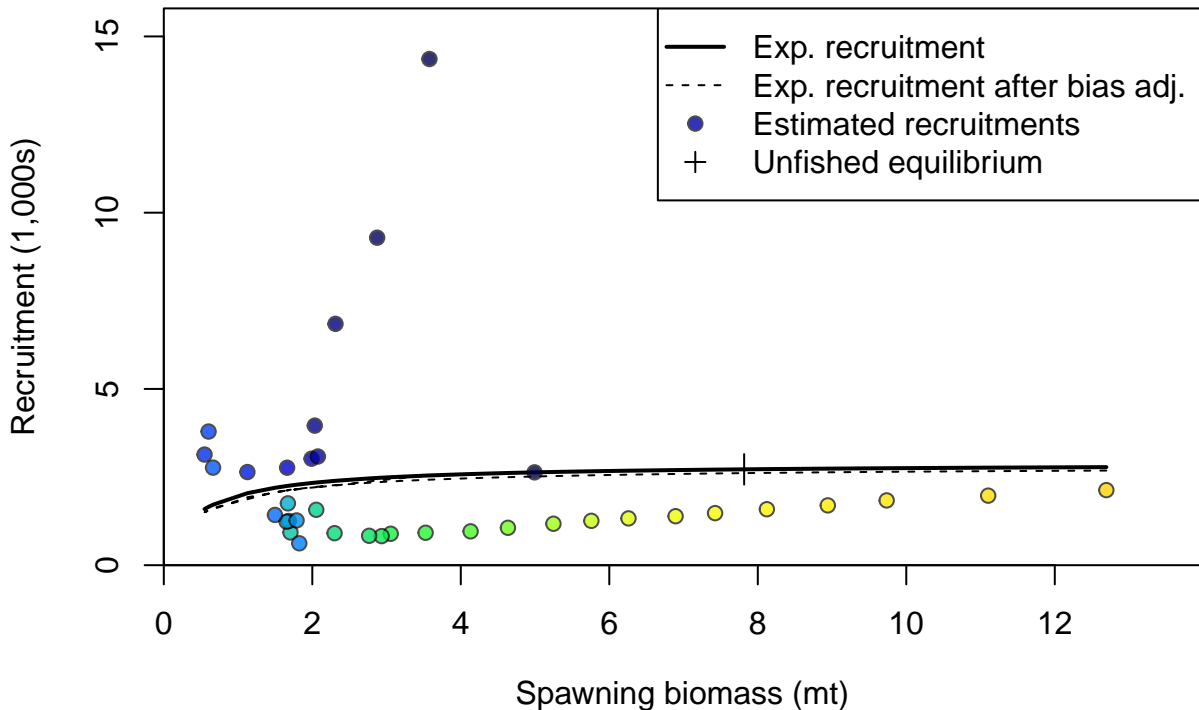
2  
1  
0  
-1



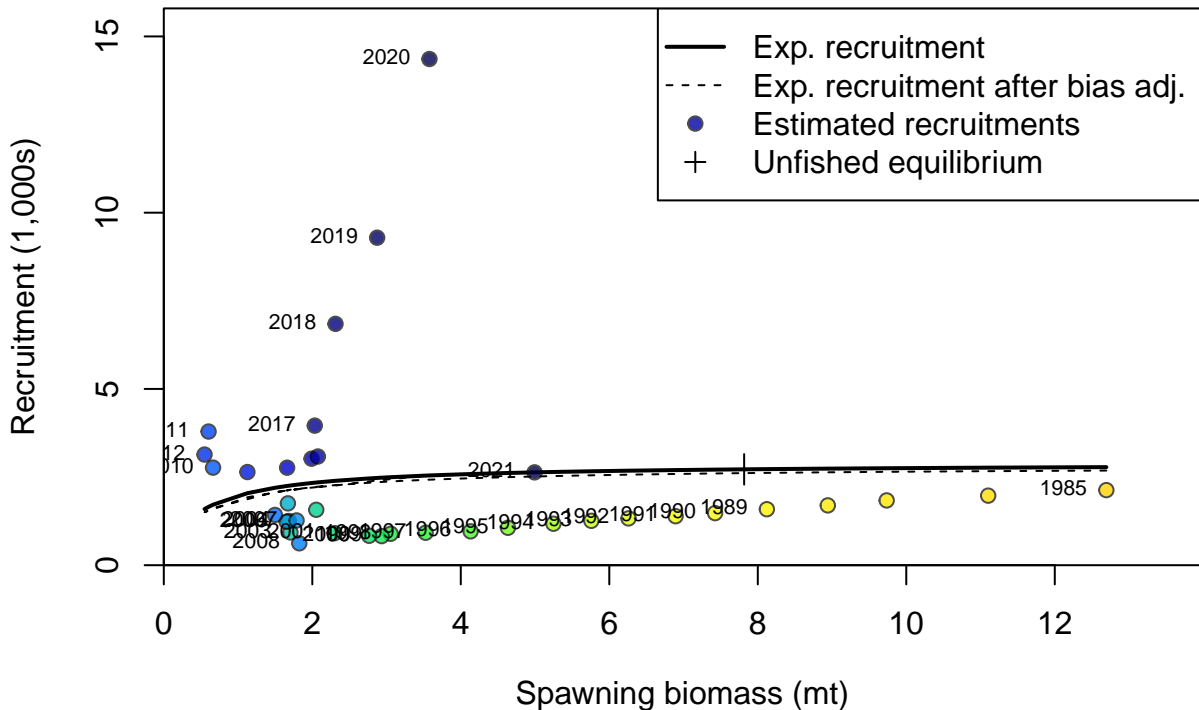
## Recruitment deviation variance



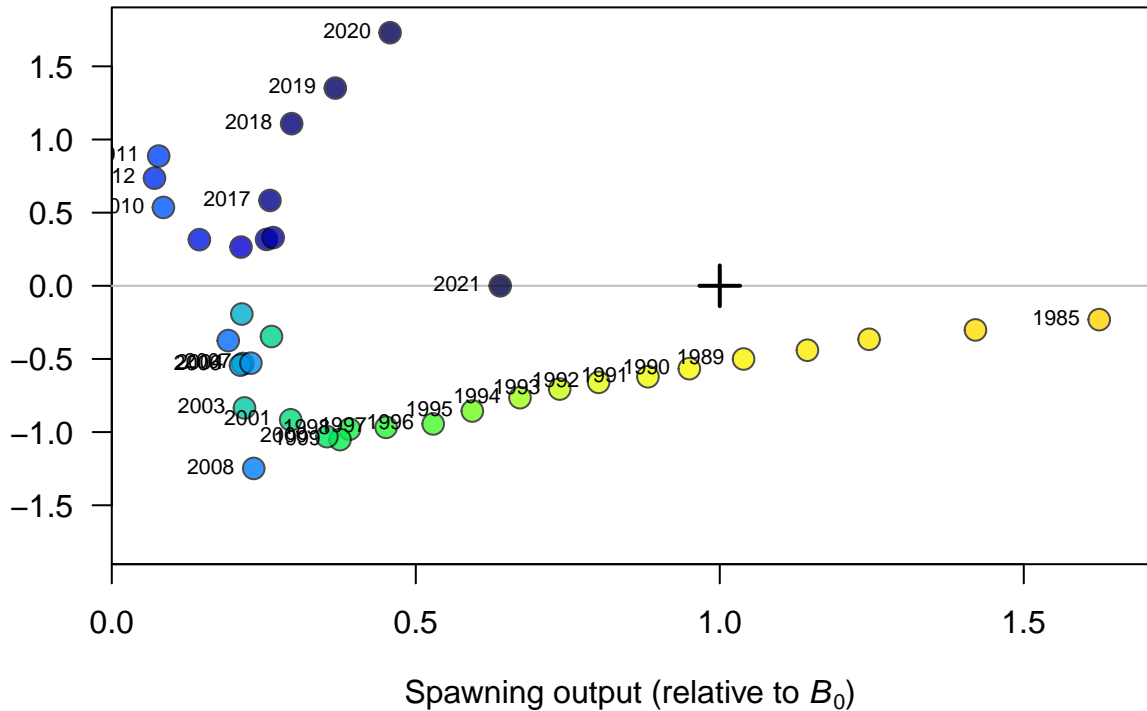


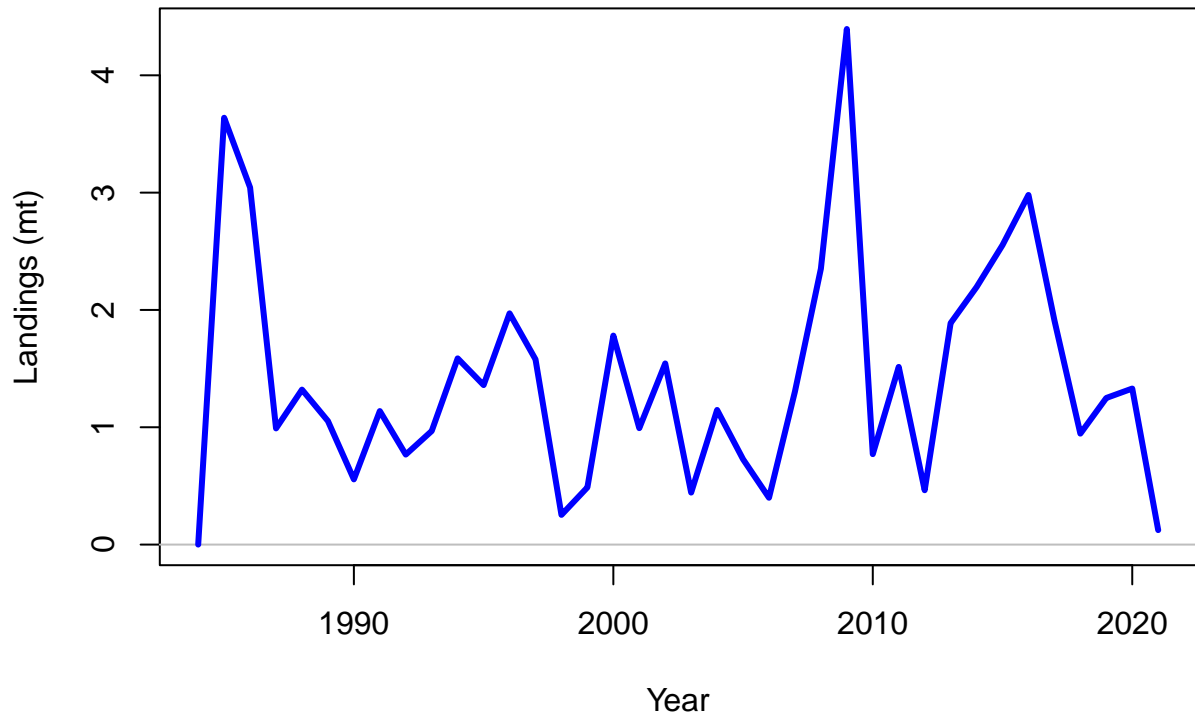


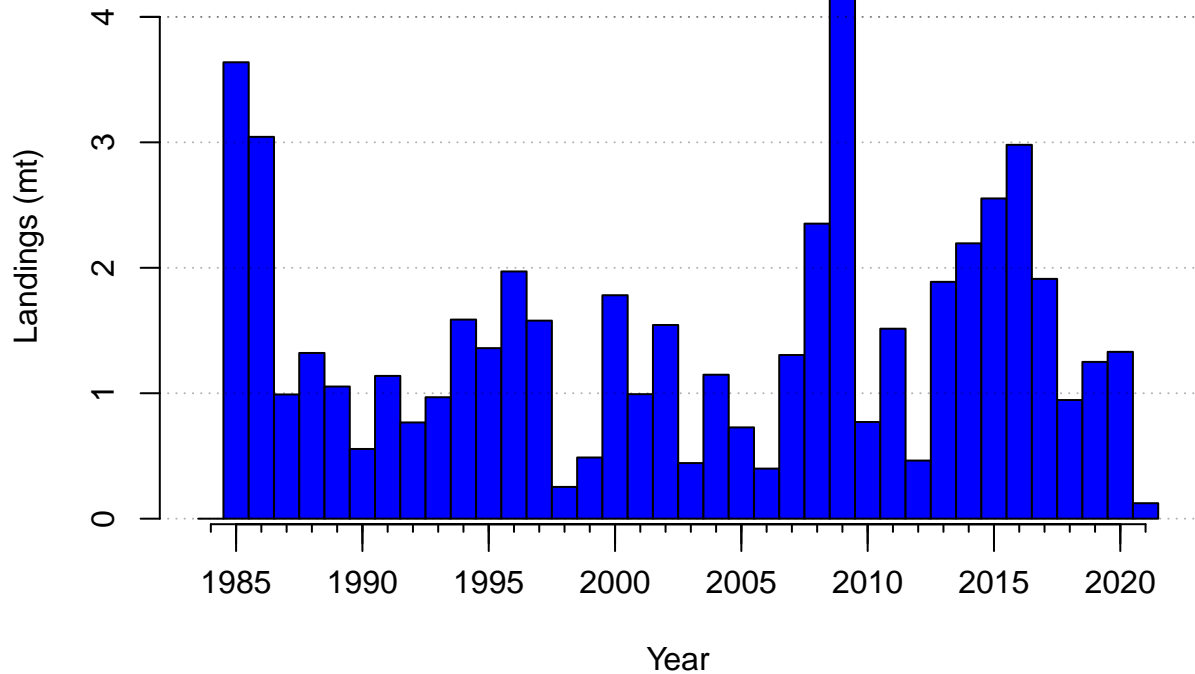


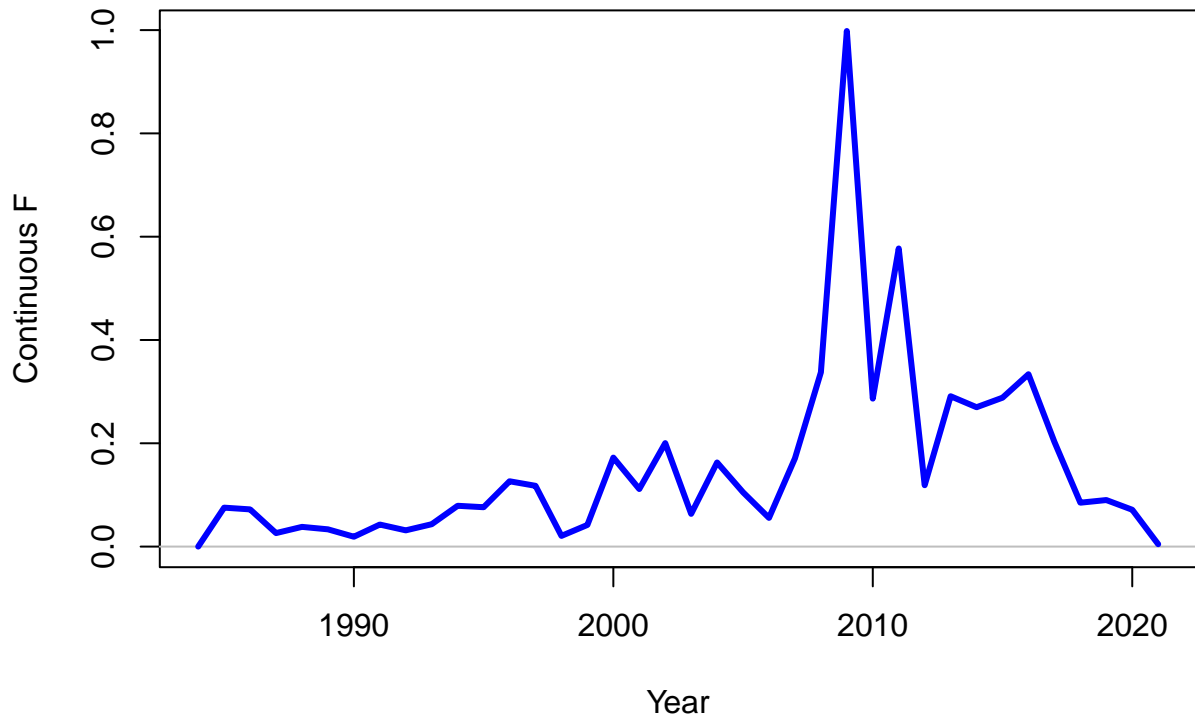


Log recruitment deviation

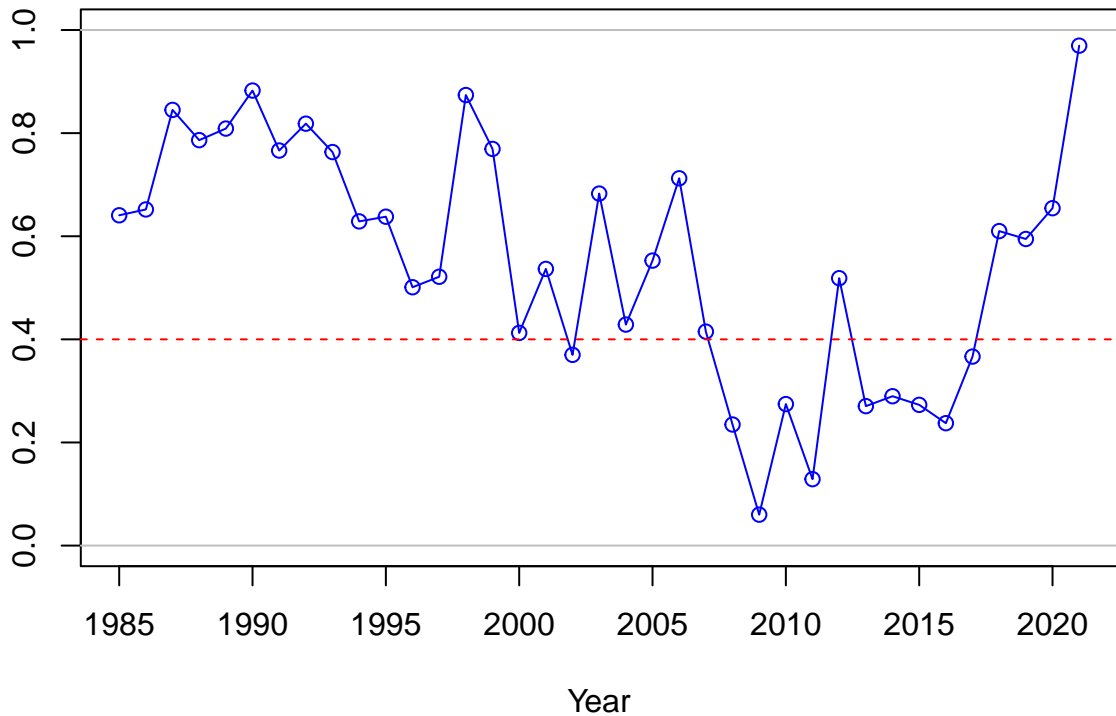




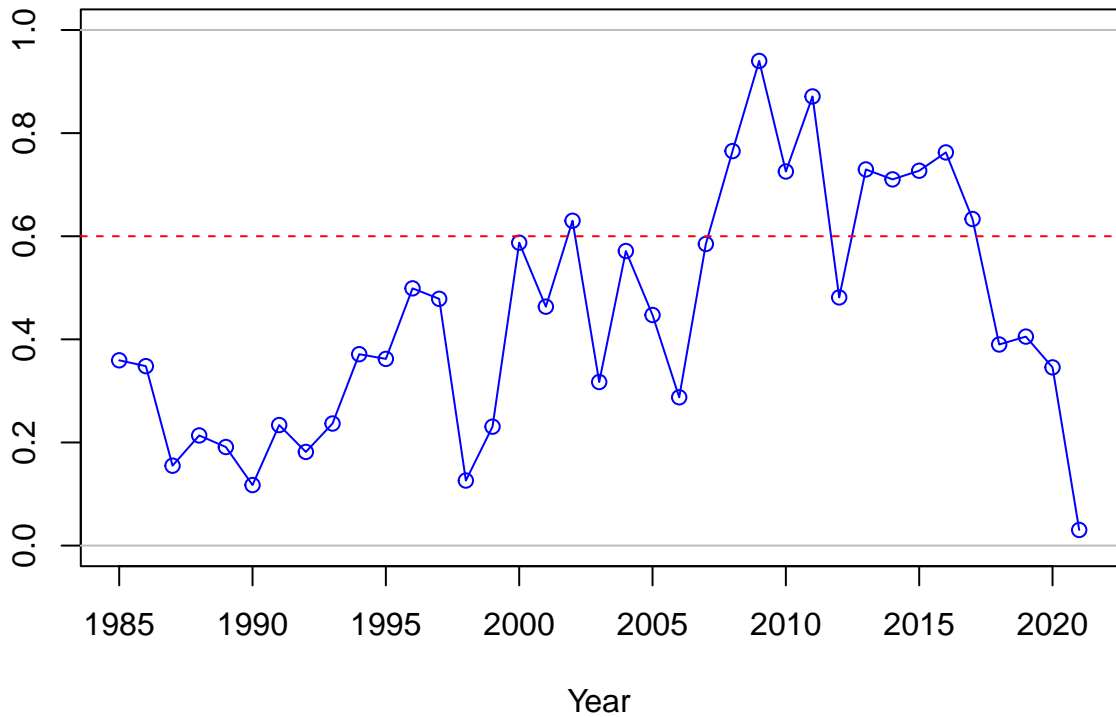




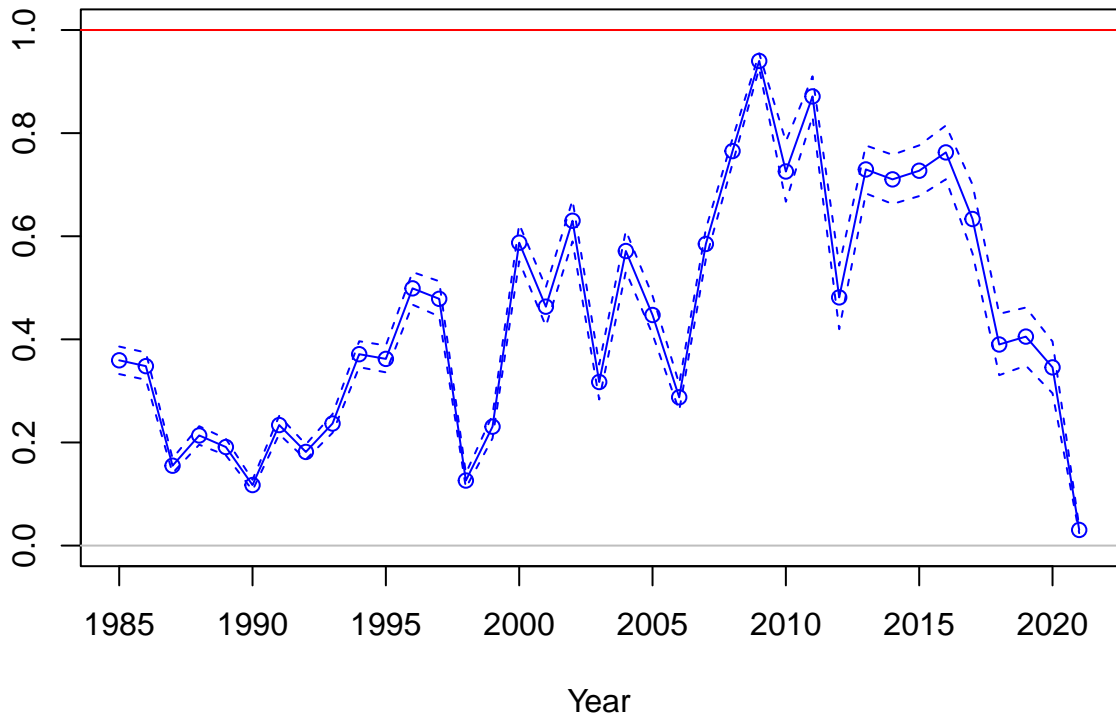
SPR



1-SPR

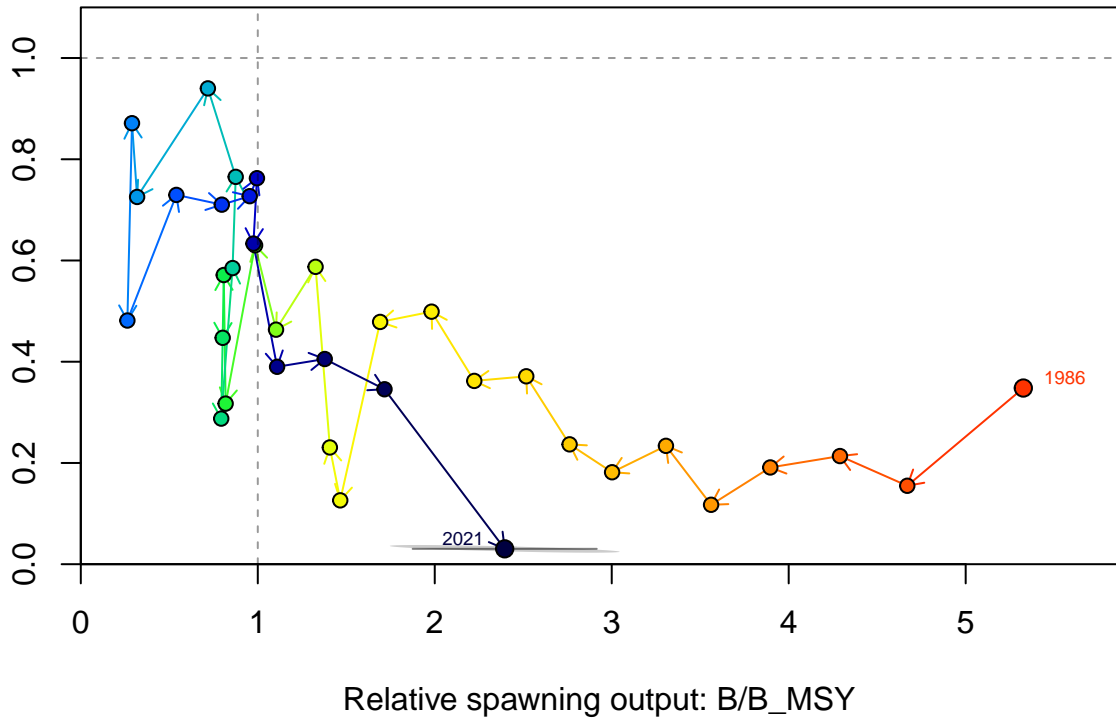


Fishing intensity: 1-SPR

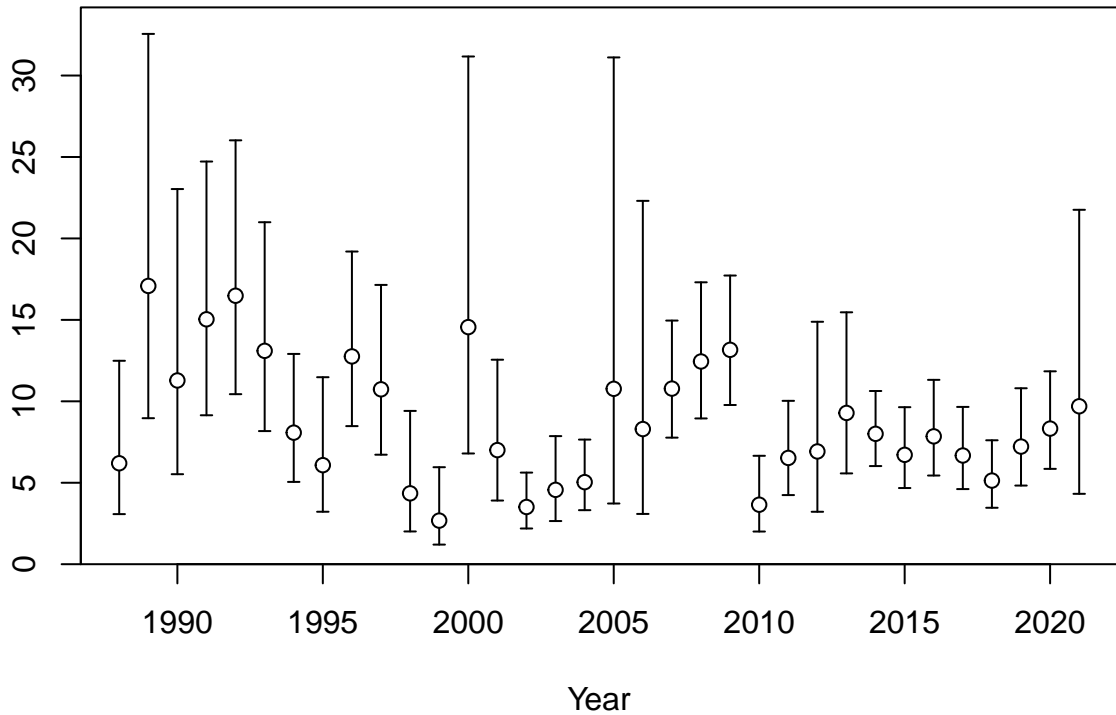




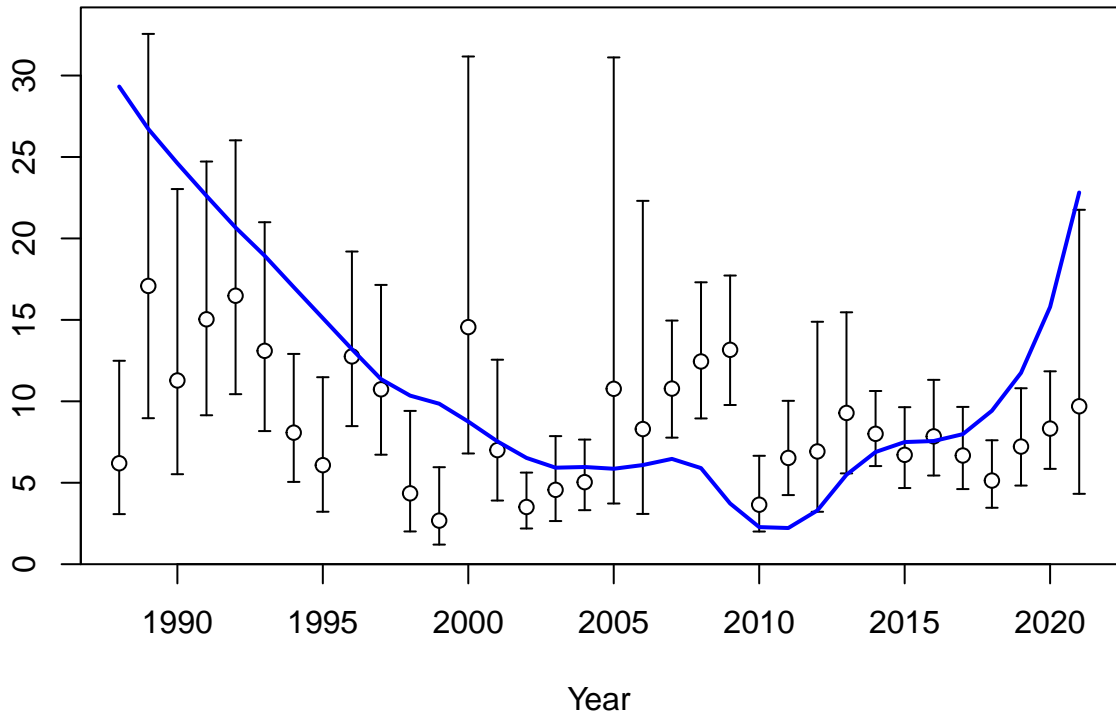
Fishing intensity: 1-SPR

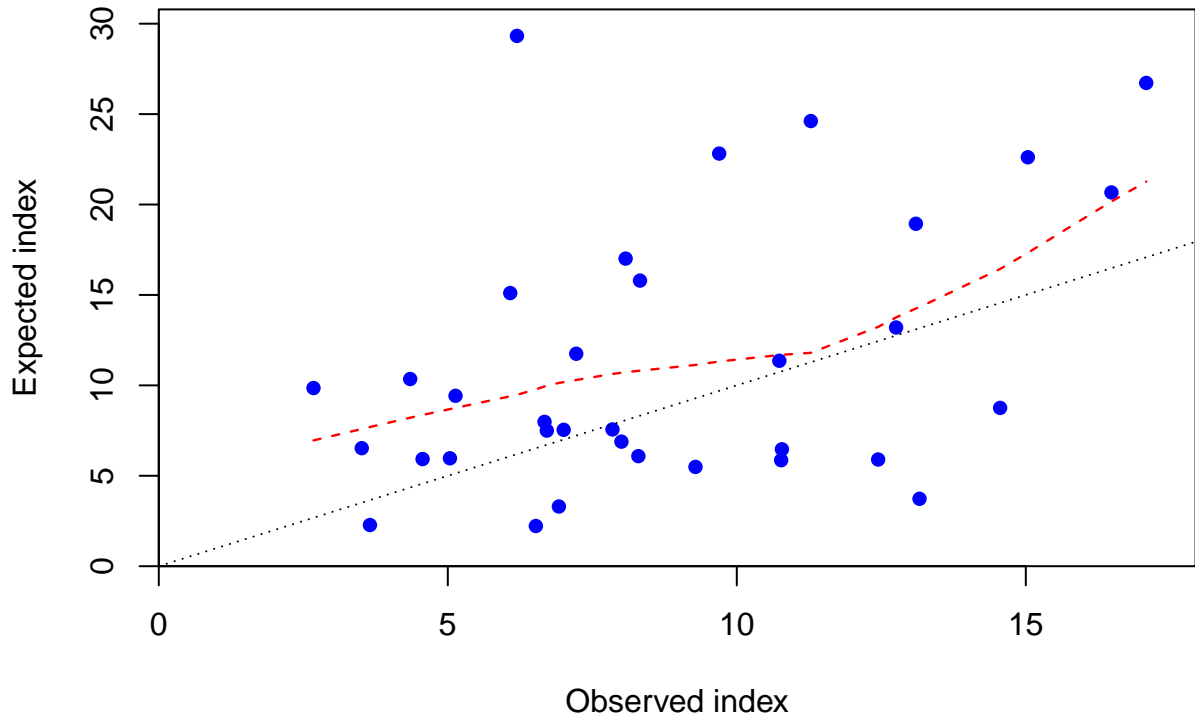


Index

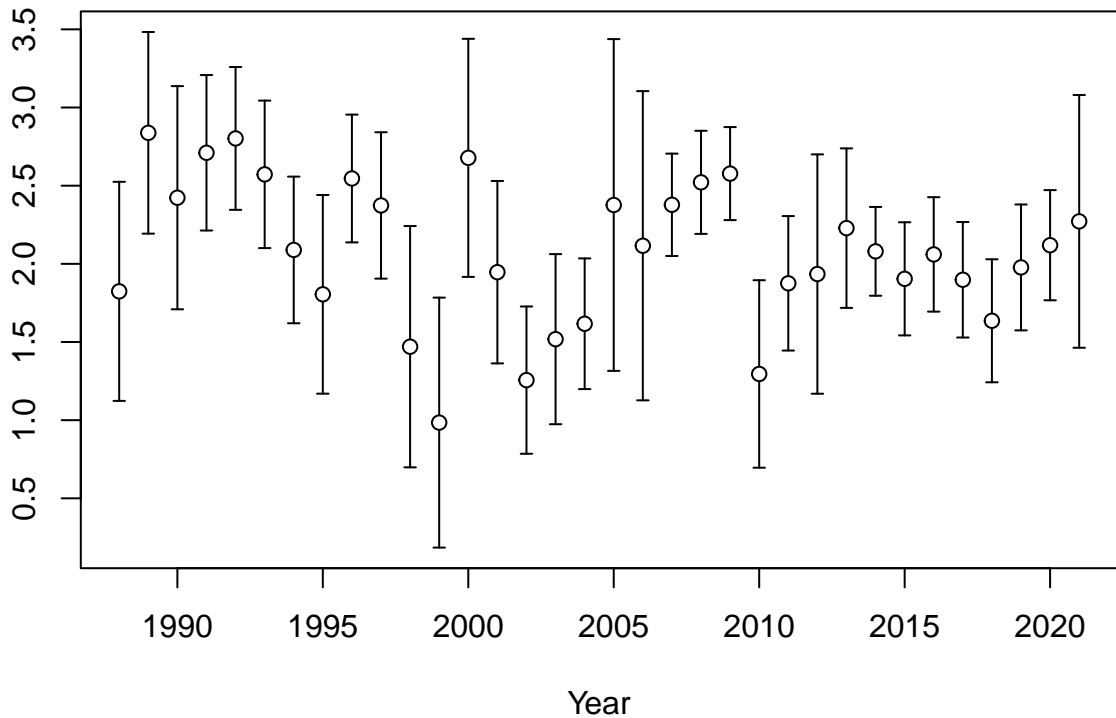


Index

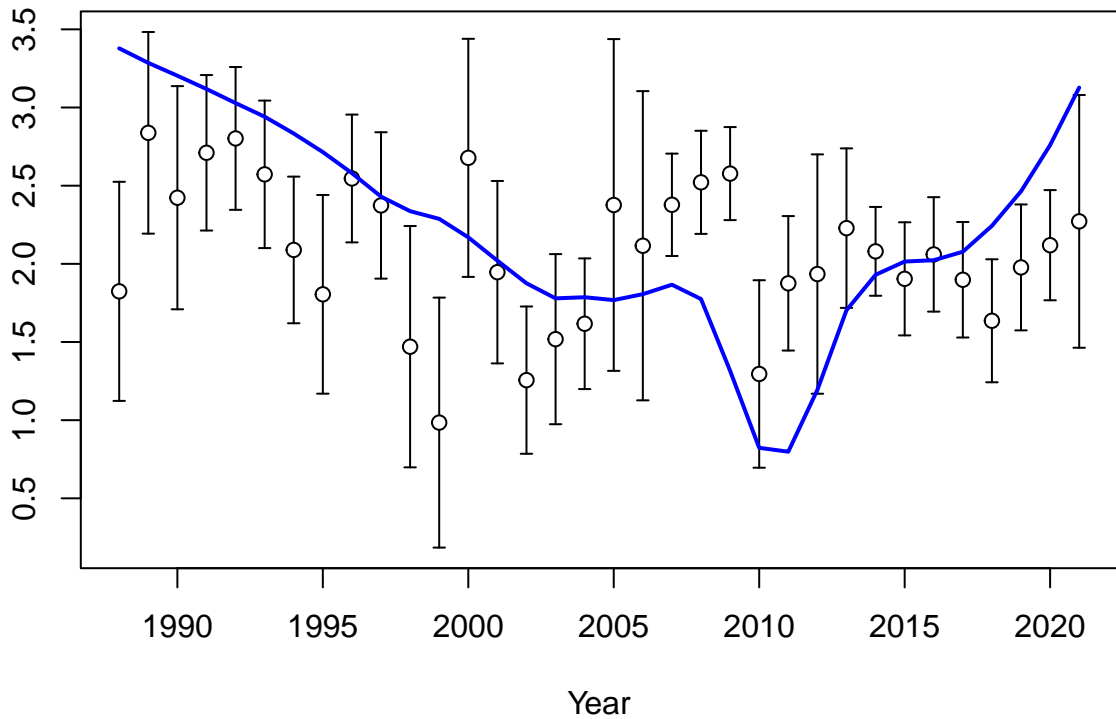


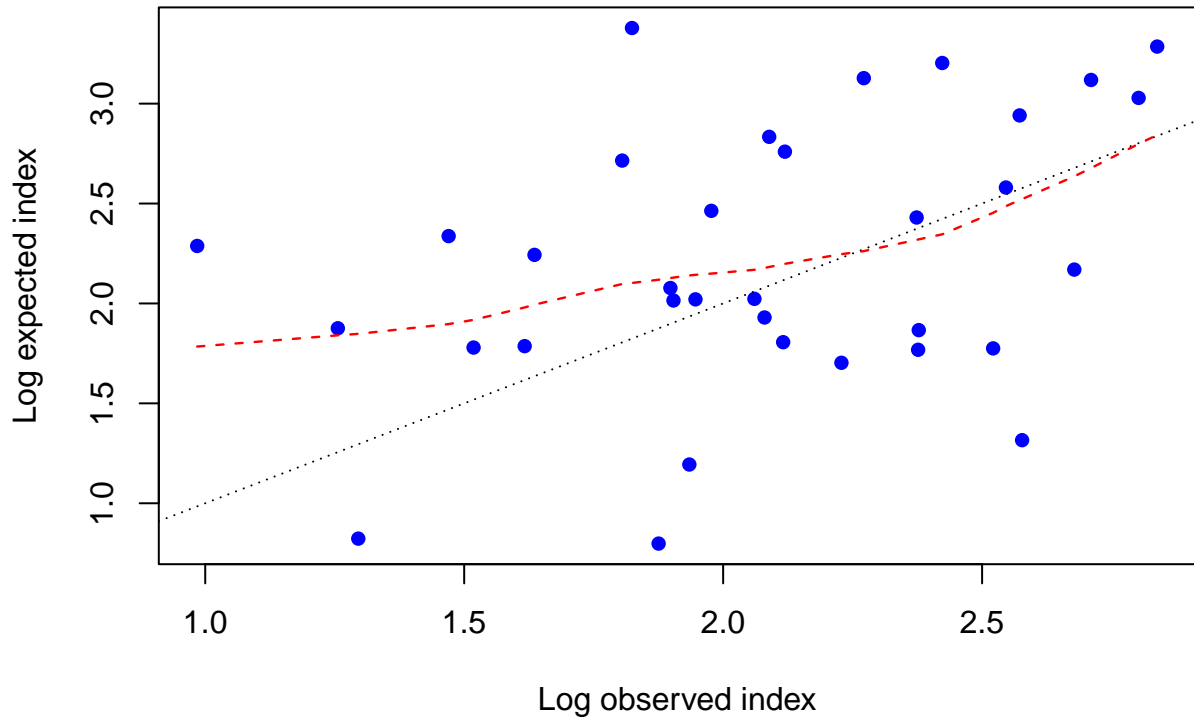


Log index

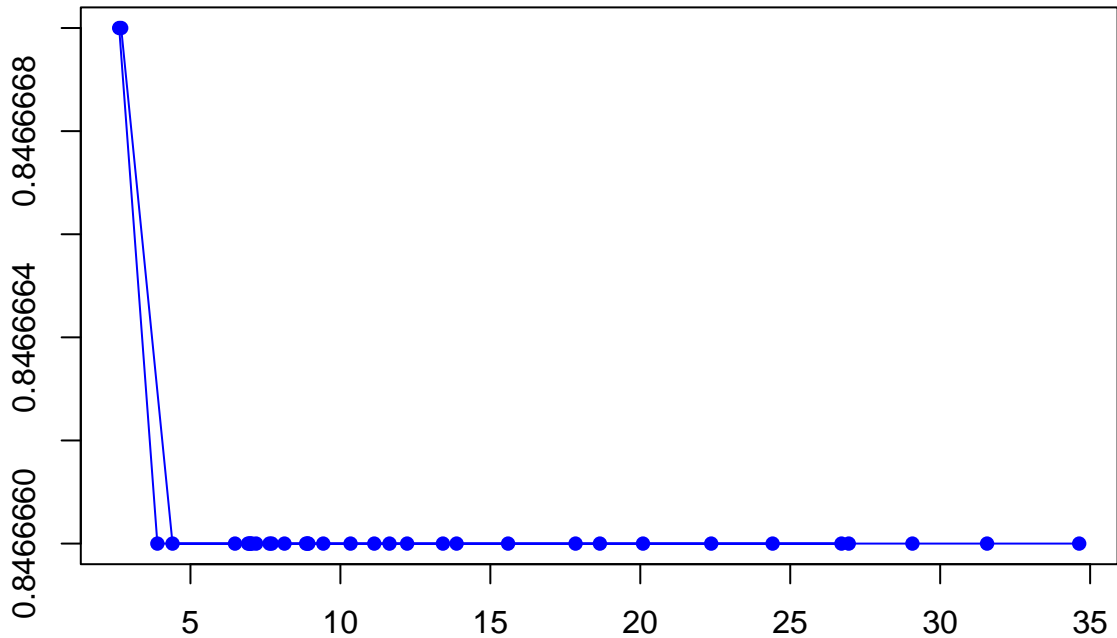


Log index



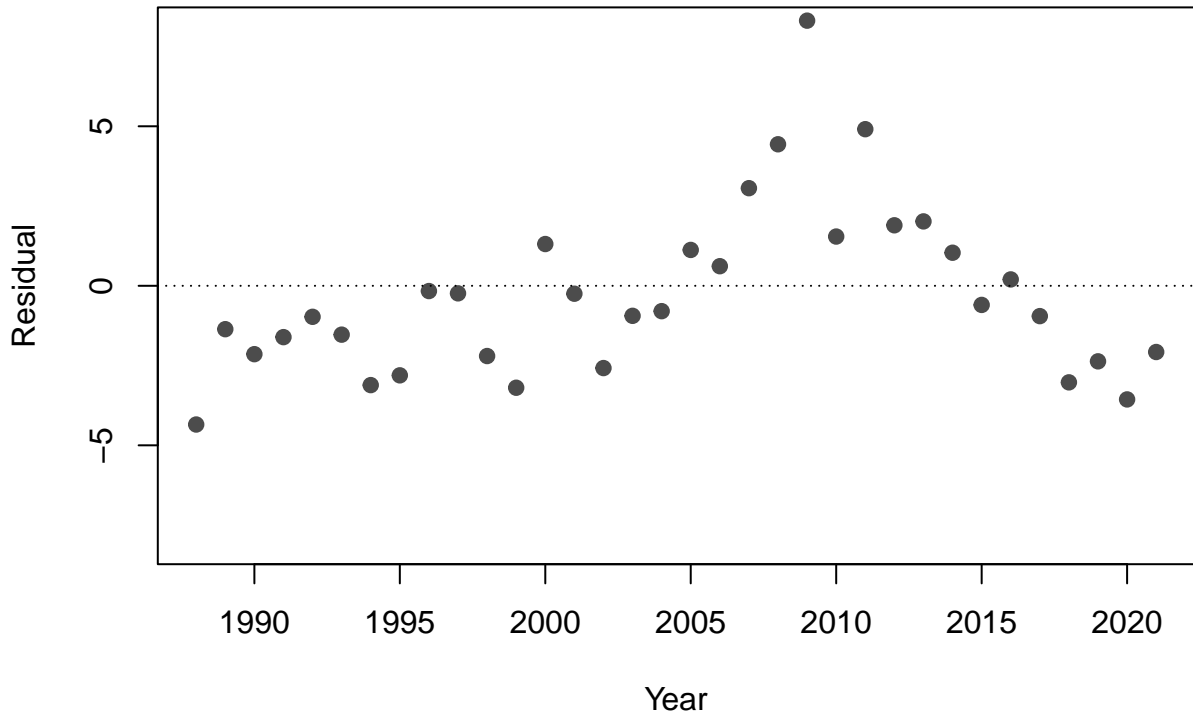


Effective catchability

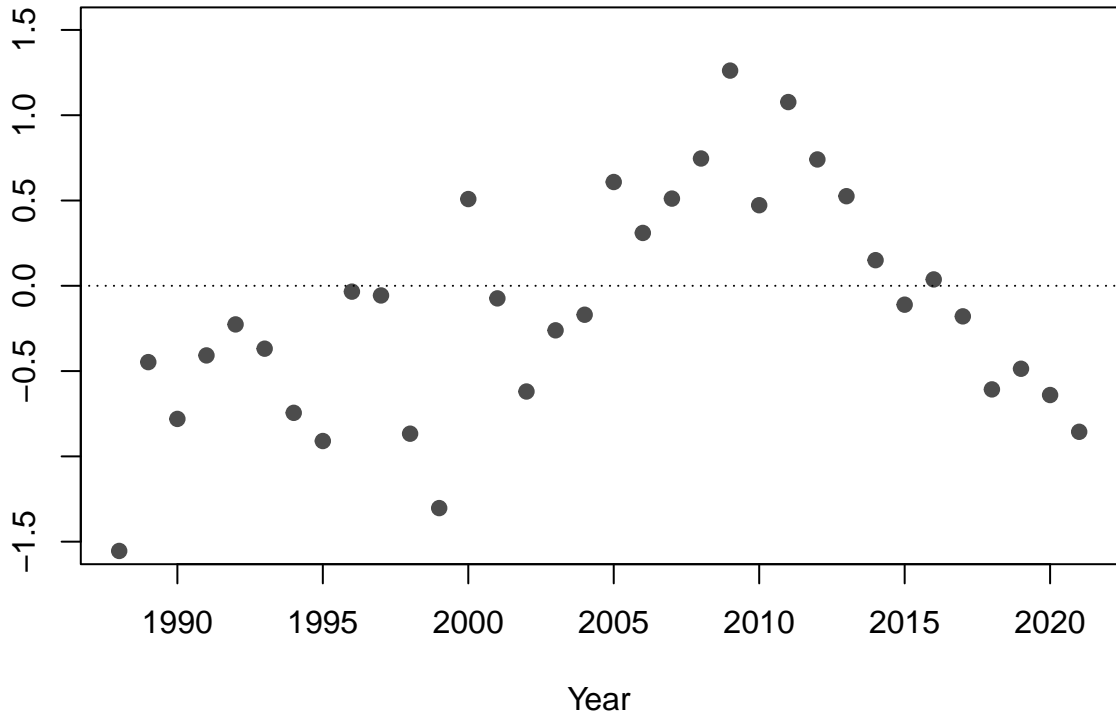


Vulnerable biomass

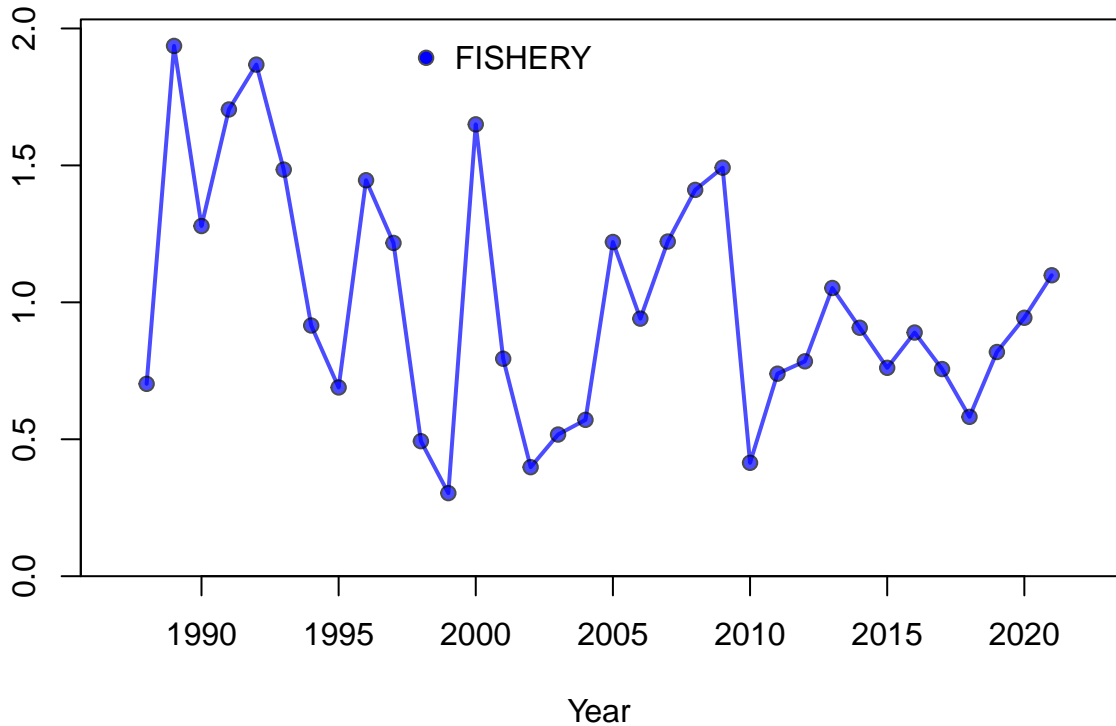




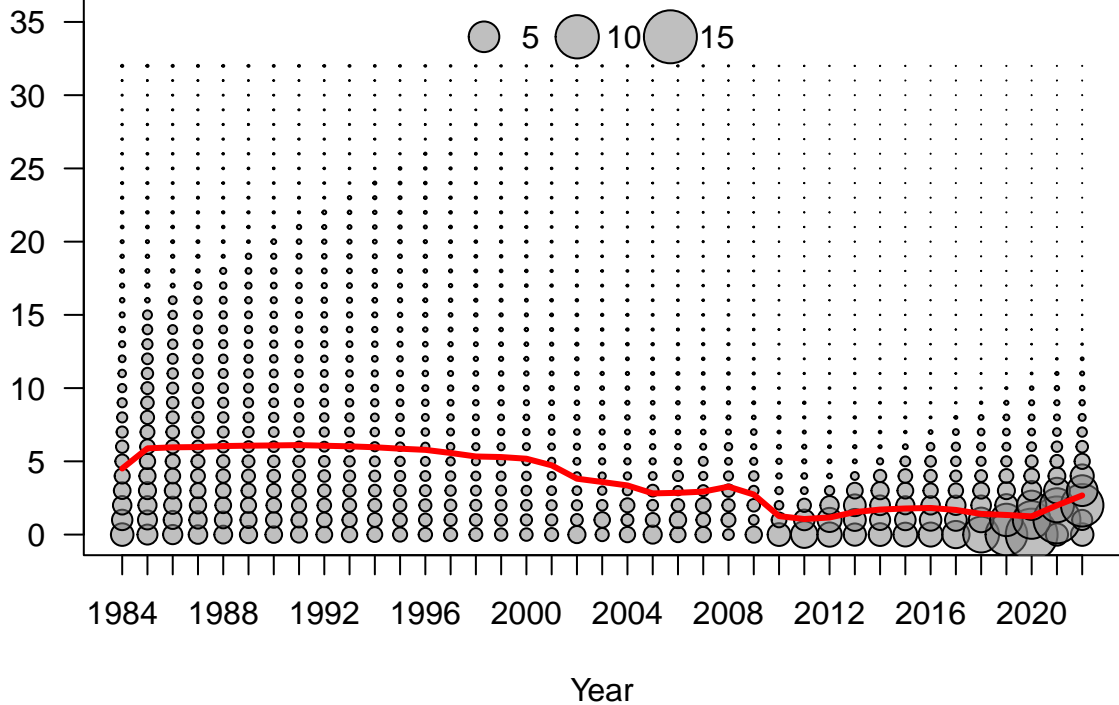
Deviation

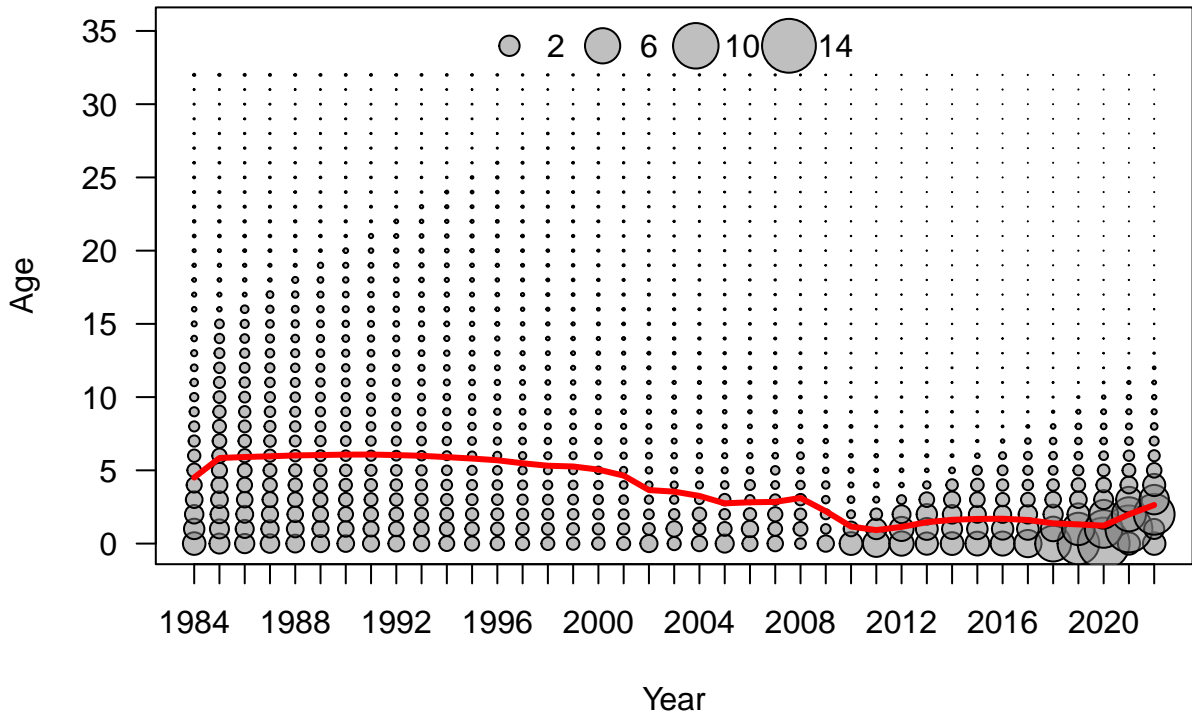


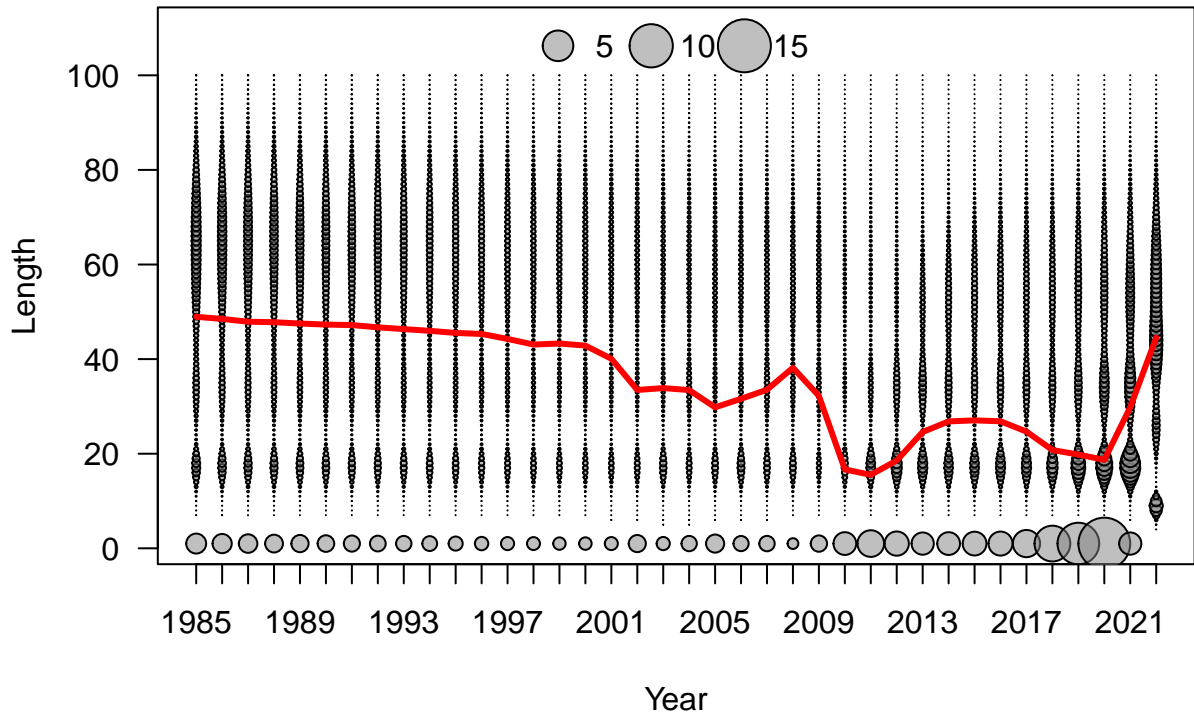
Standardized index

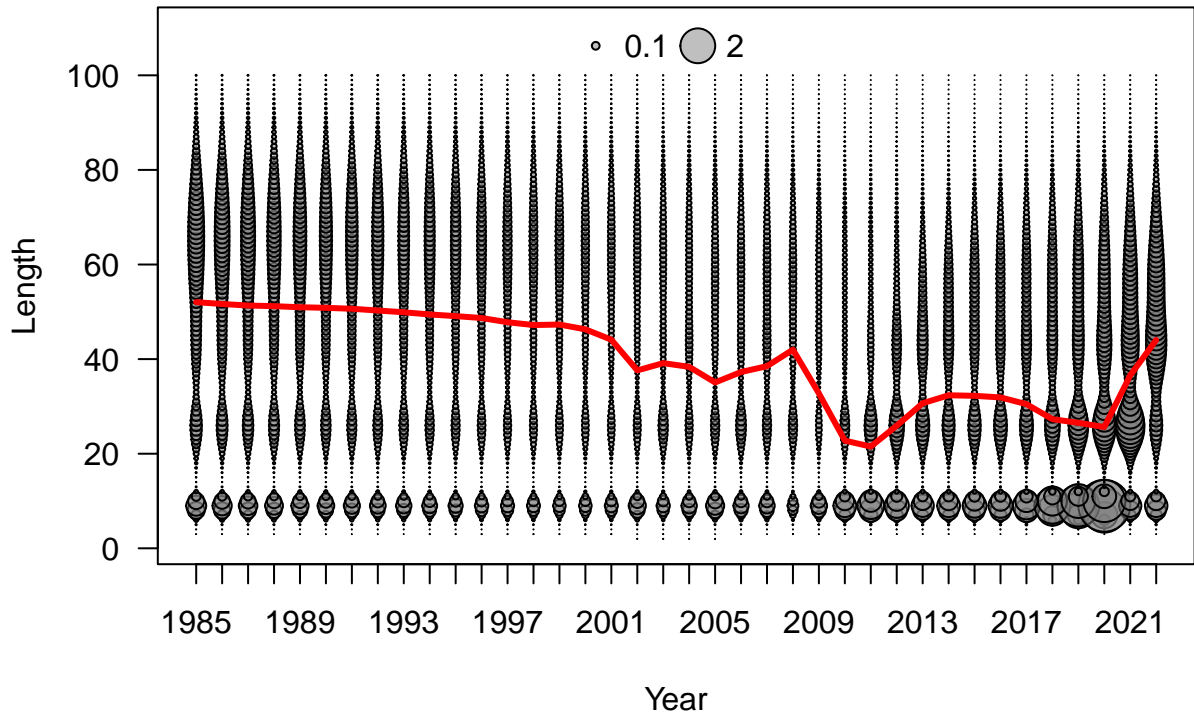


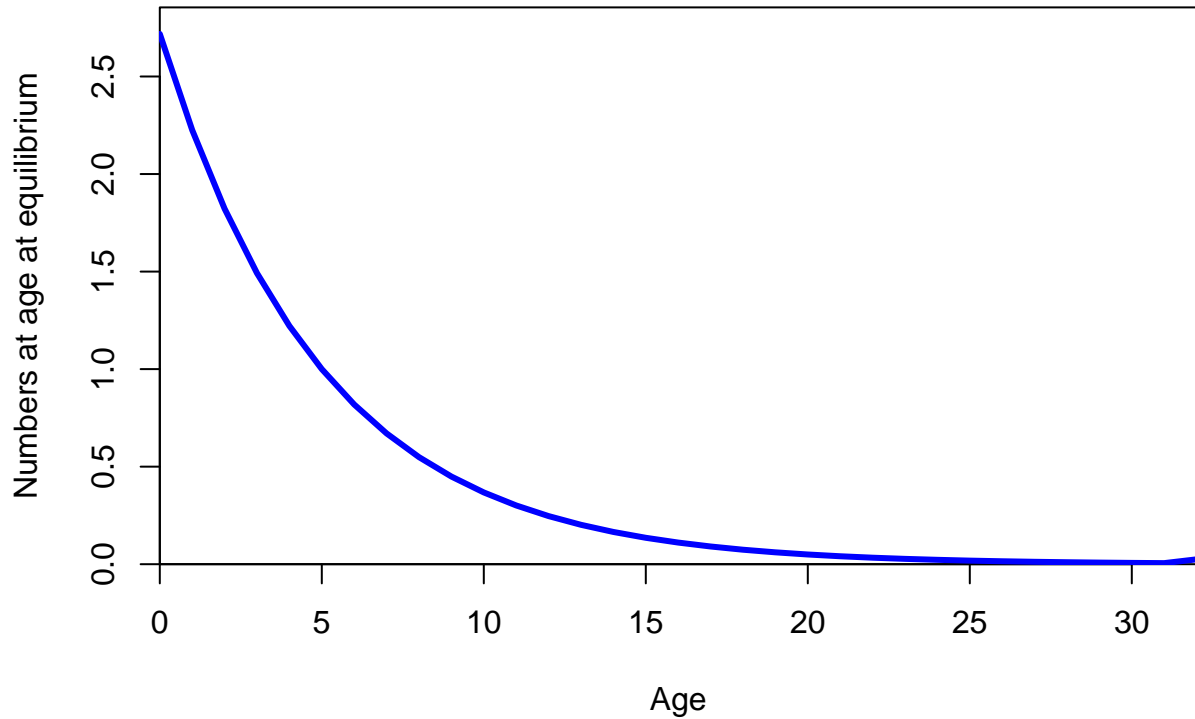
Age



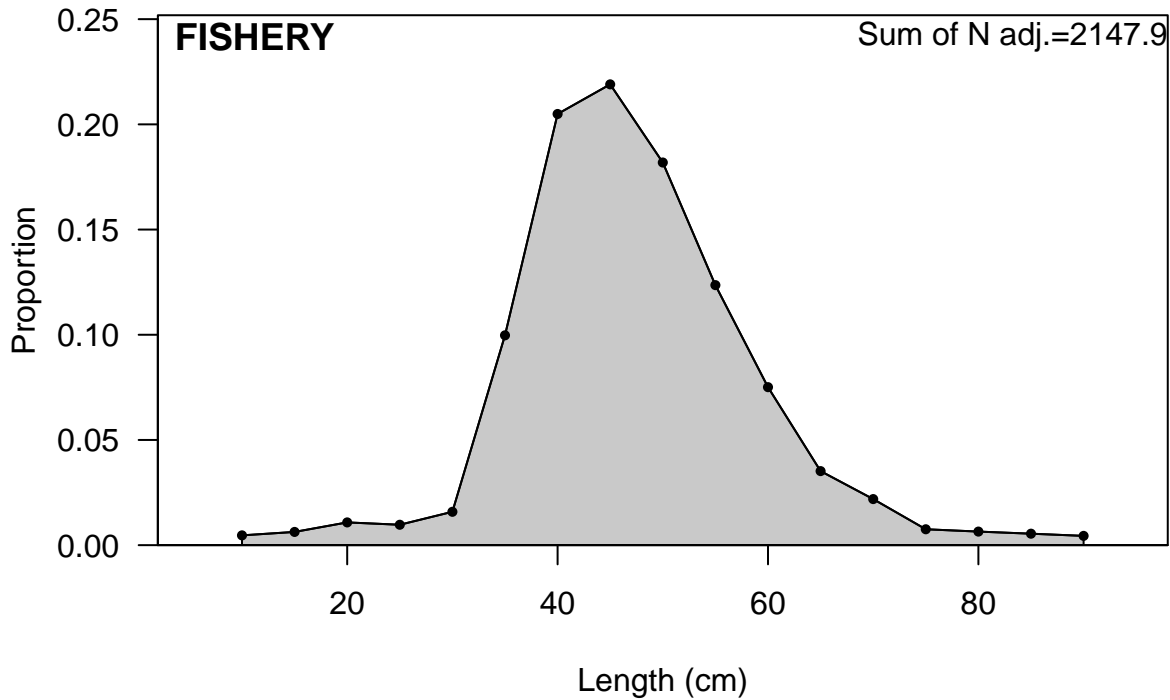






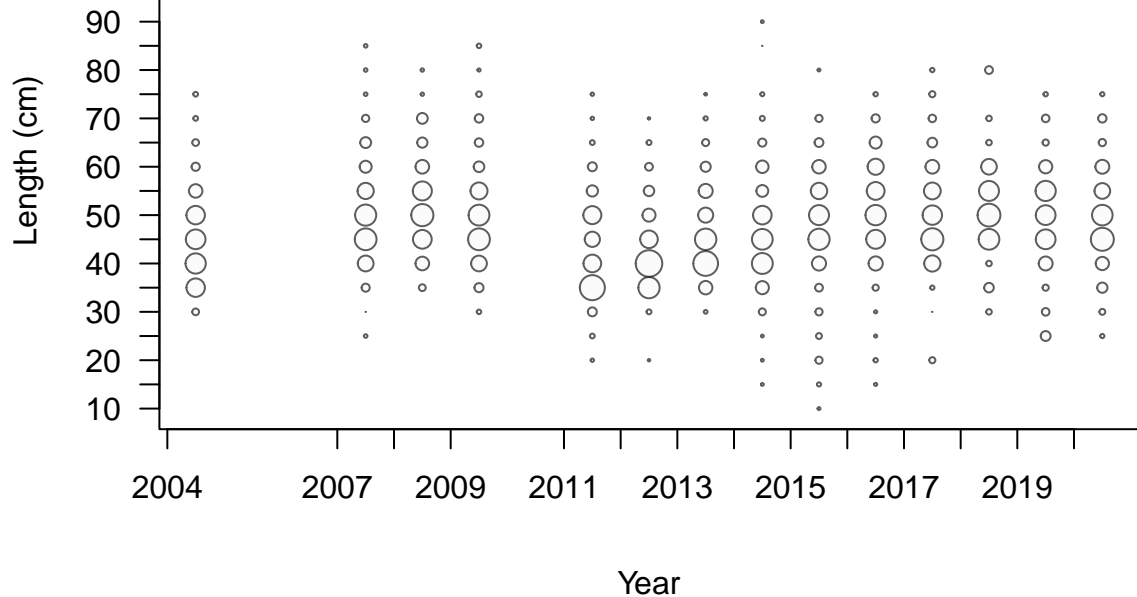




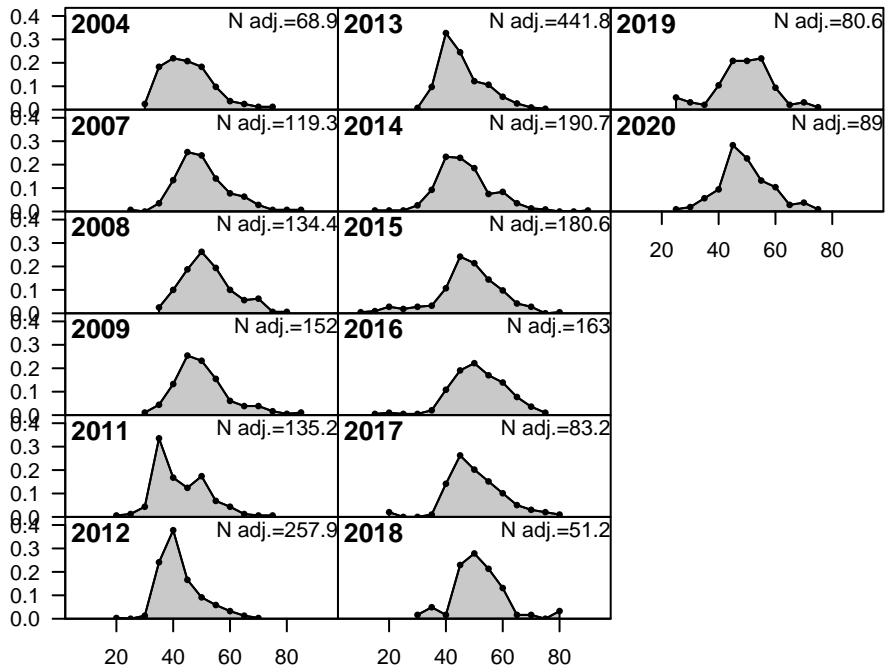


# FISHERY

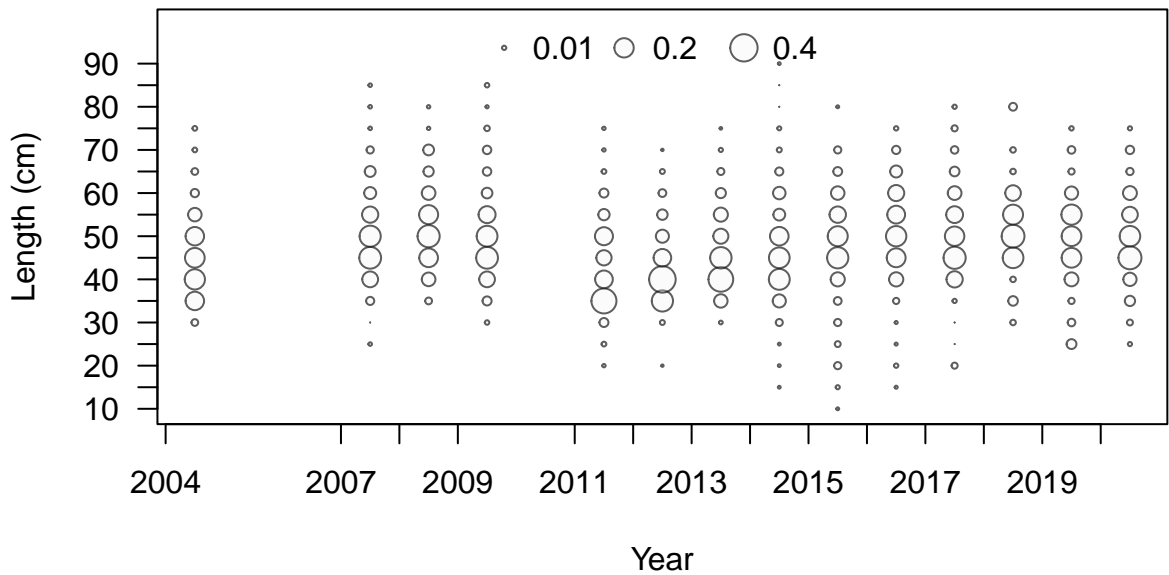
• 0.01 ○ 0.2 ○ 0.4



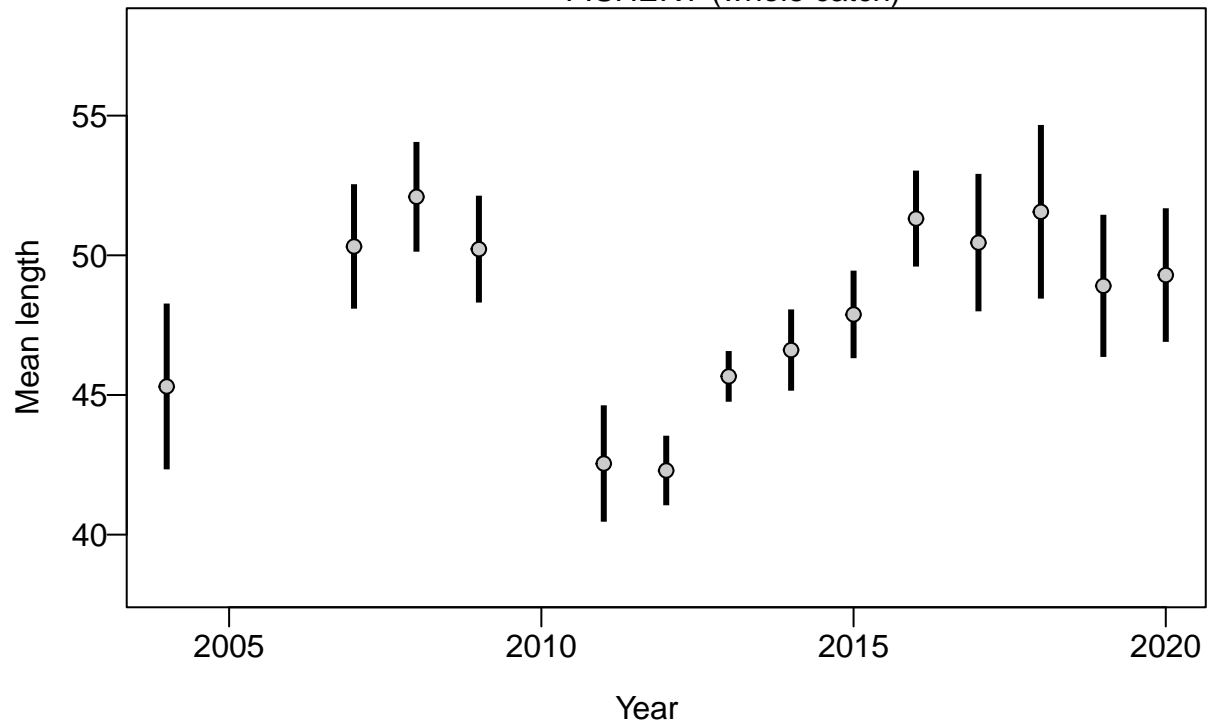
Proportion

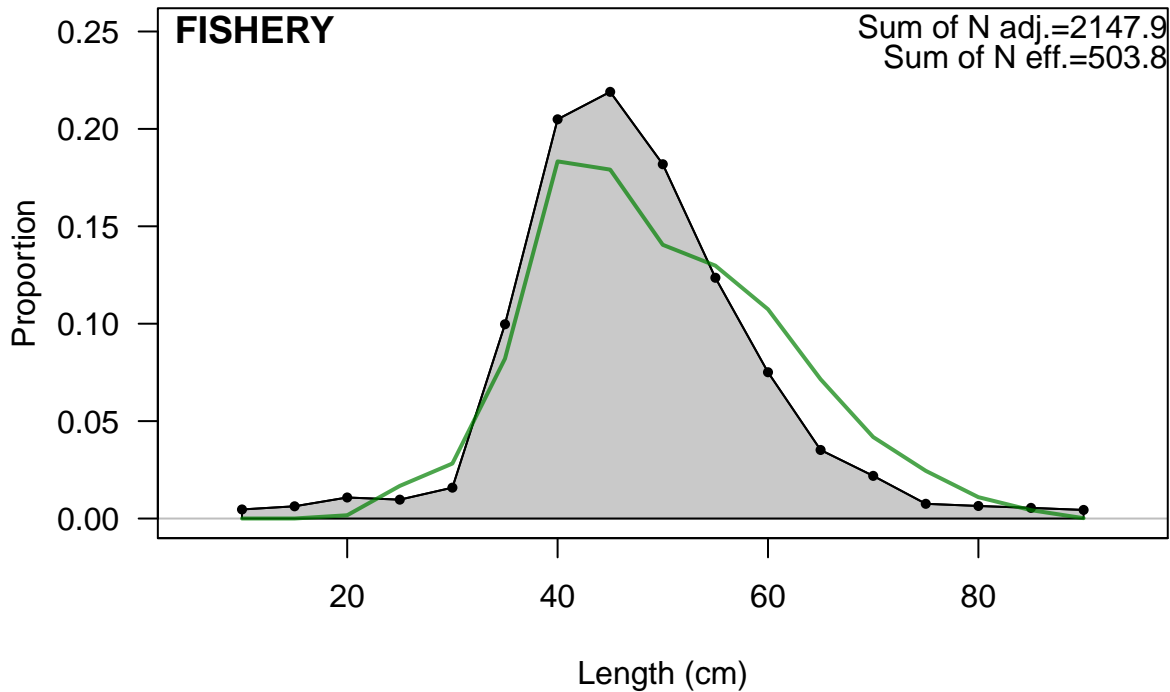


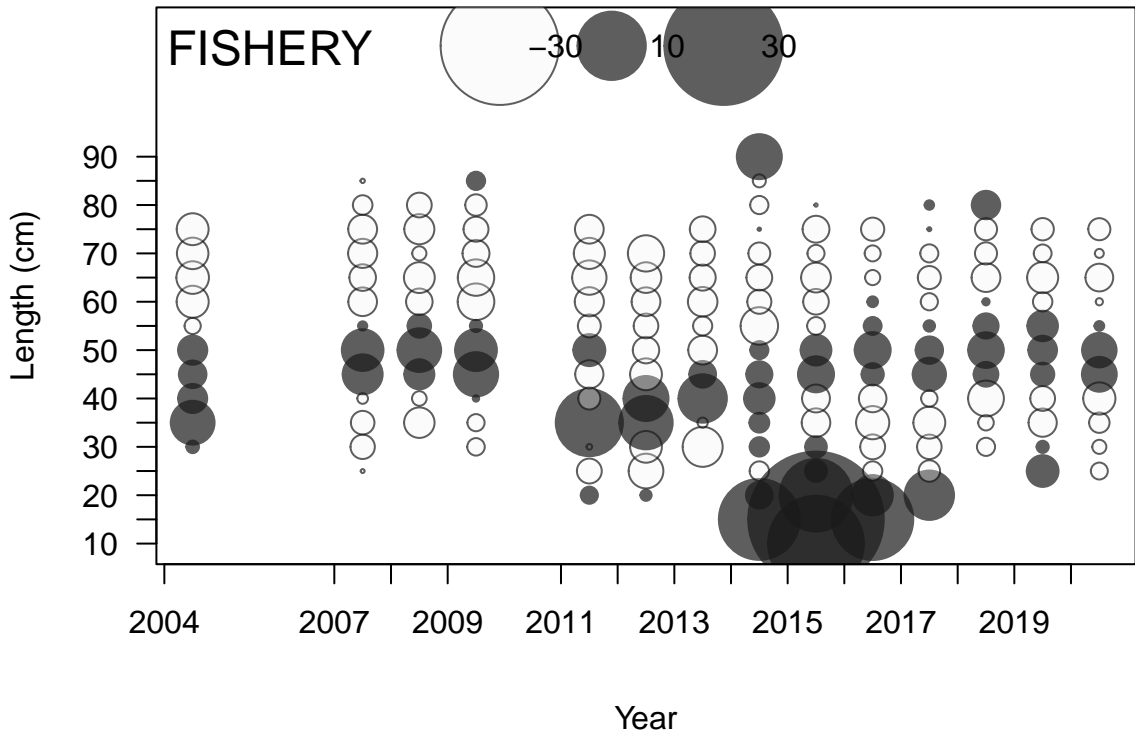
Length (cm)



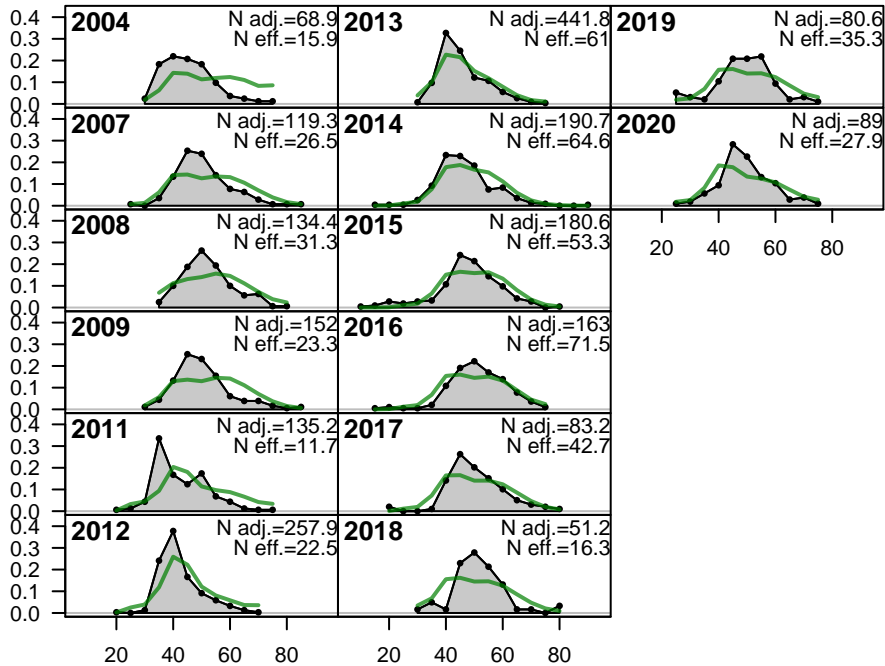
# FISHERY (whole catch)







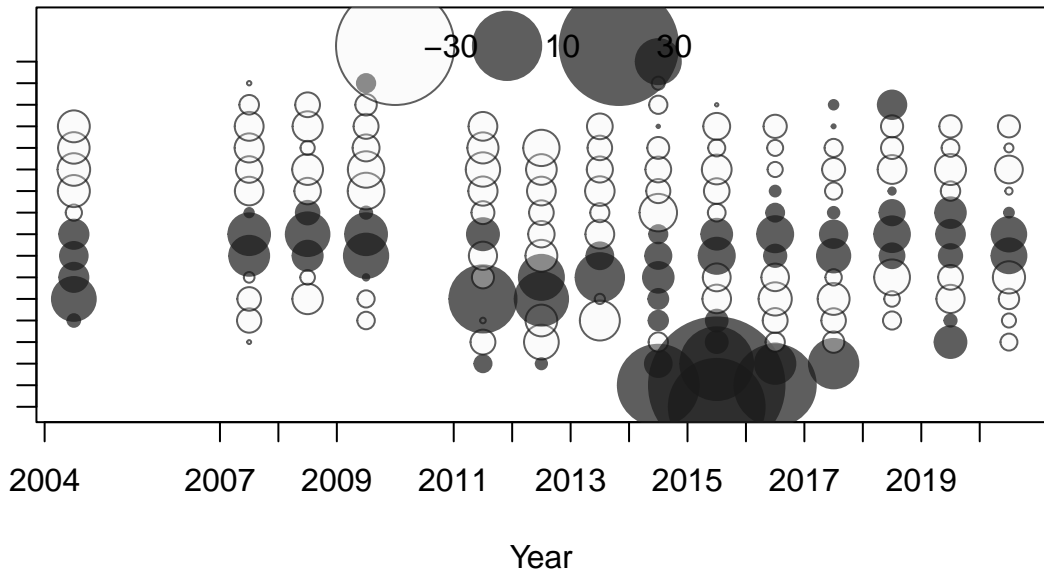
Proportion



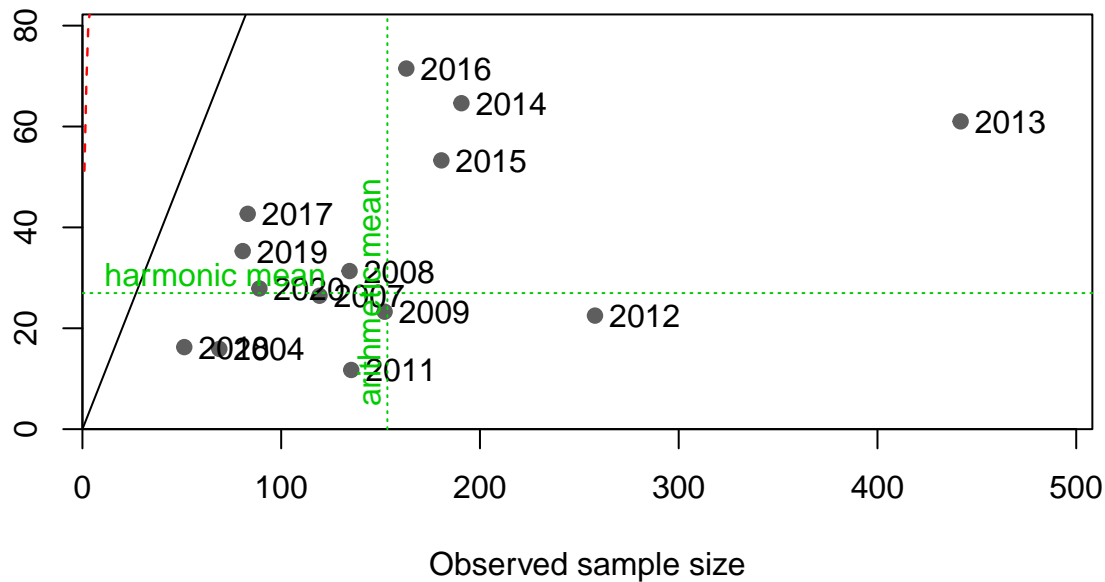
Length (cm)



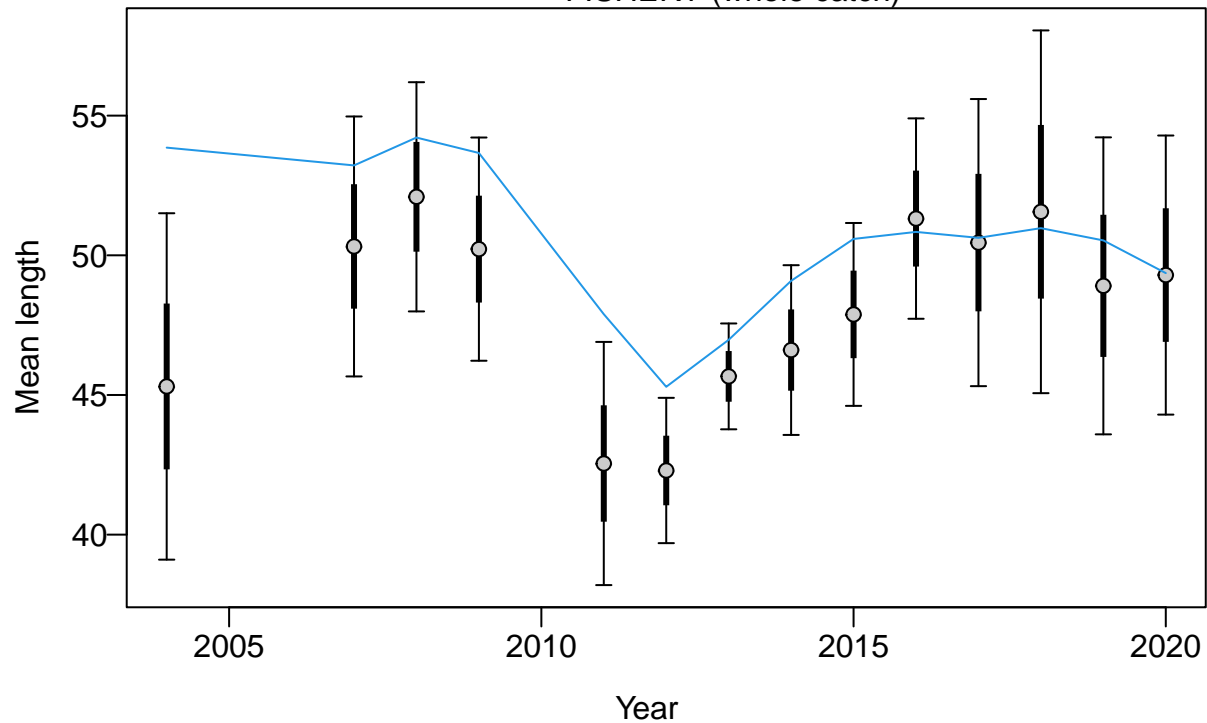
Length (cm)

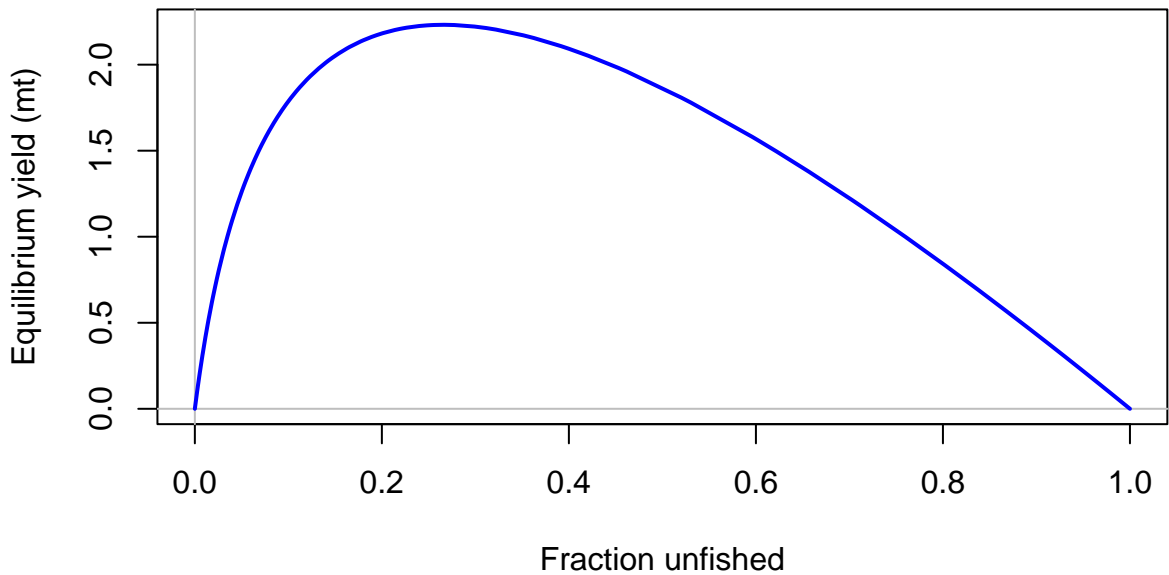


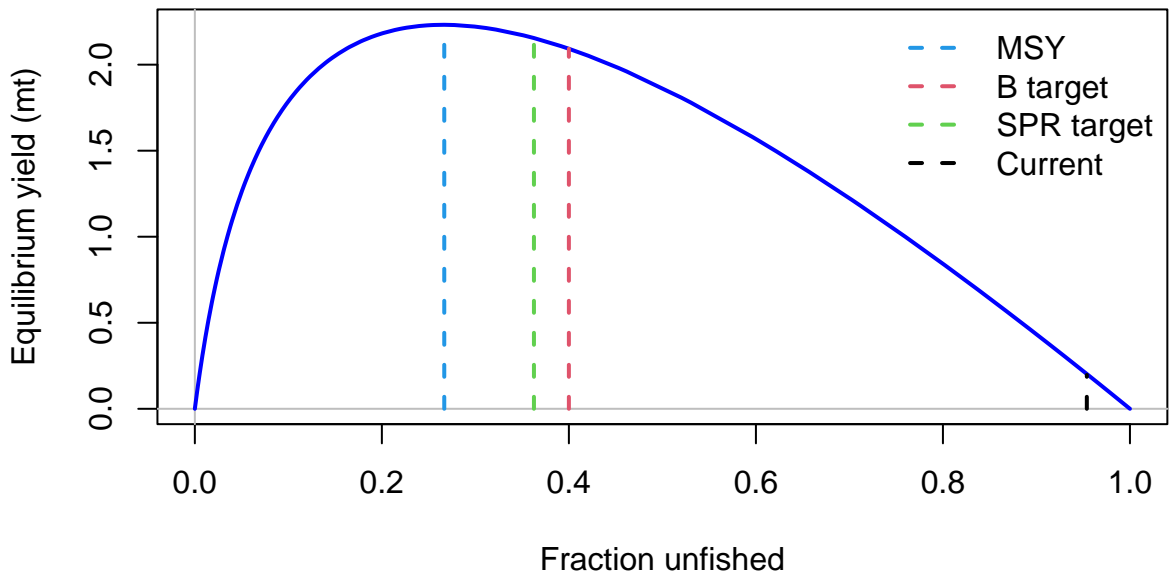
Effective sample size

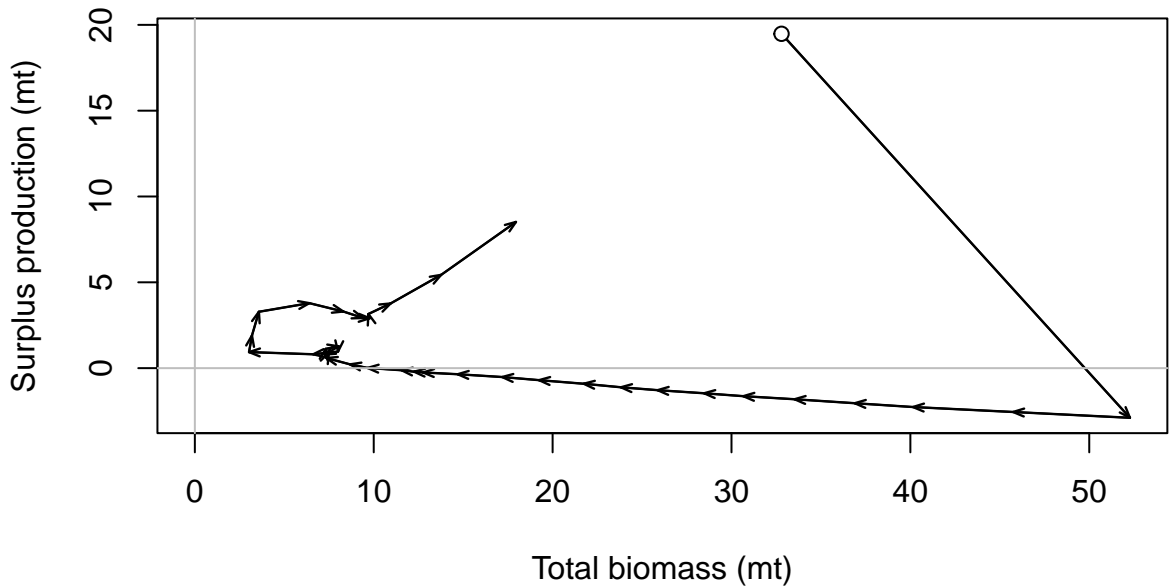


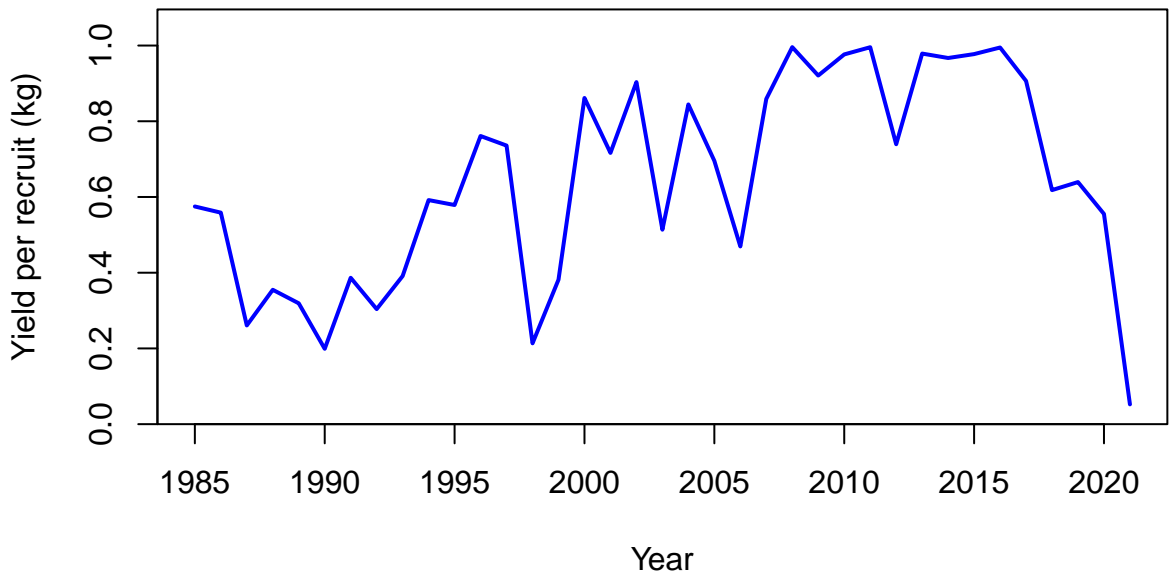
## FISHERY (whole catch)

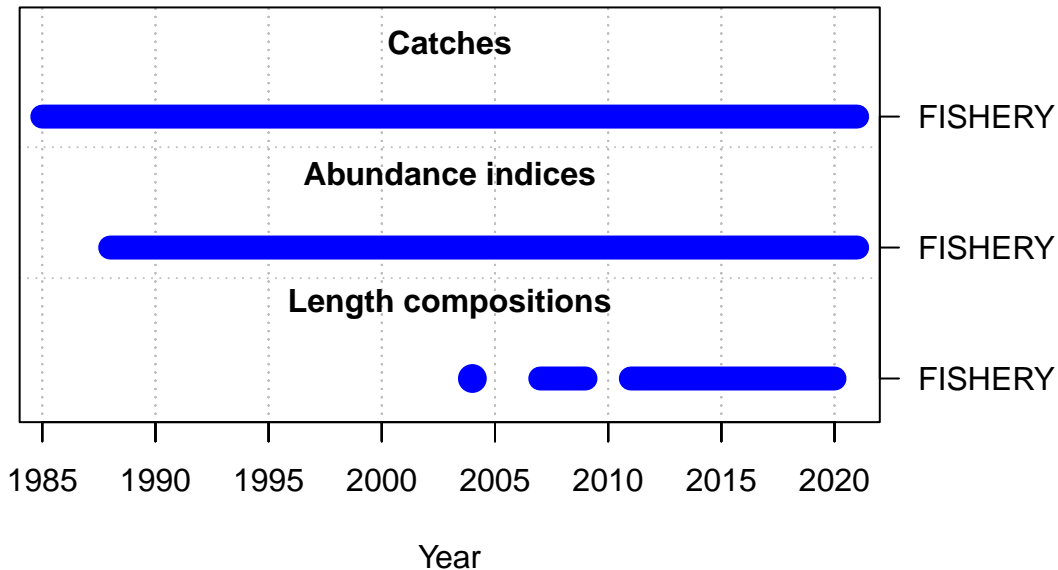




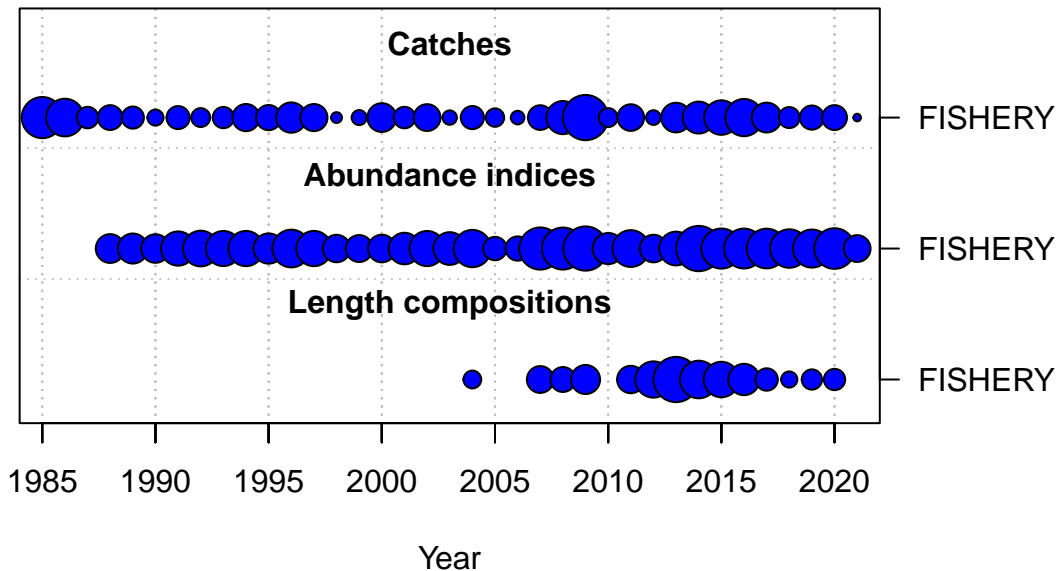




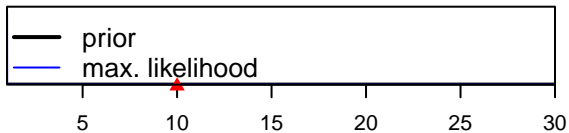




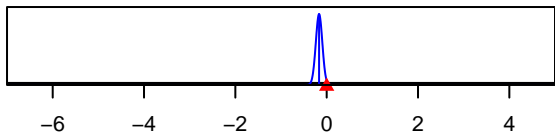




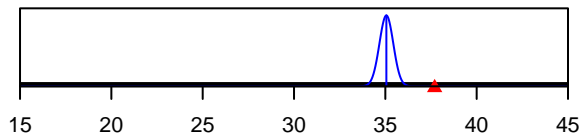
SR\_LN(R0)



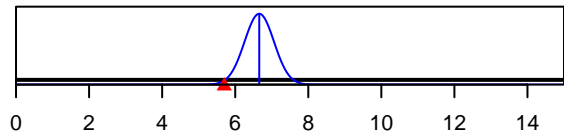
LnQ\_base\_FISHERY(1)



Size\_inflection\_FISHERY(1)



Size\_95%width\_FISHERY(1)



Parameter value