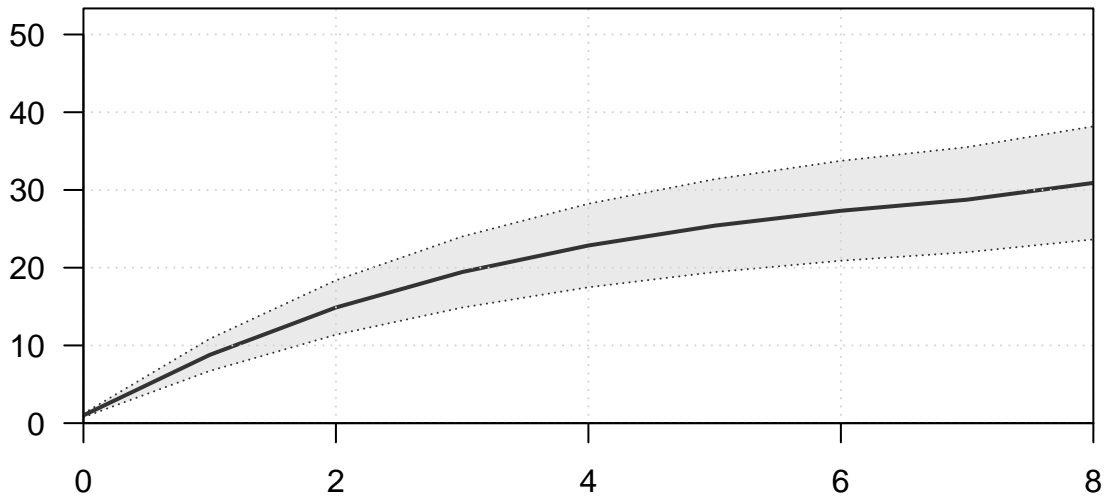
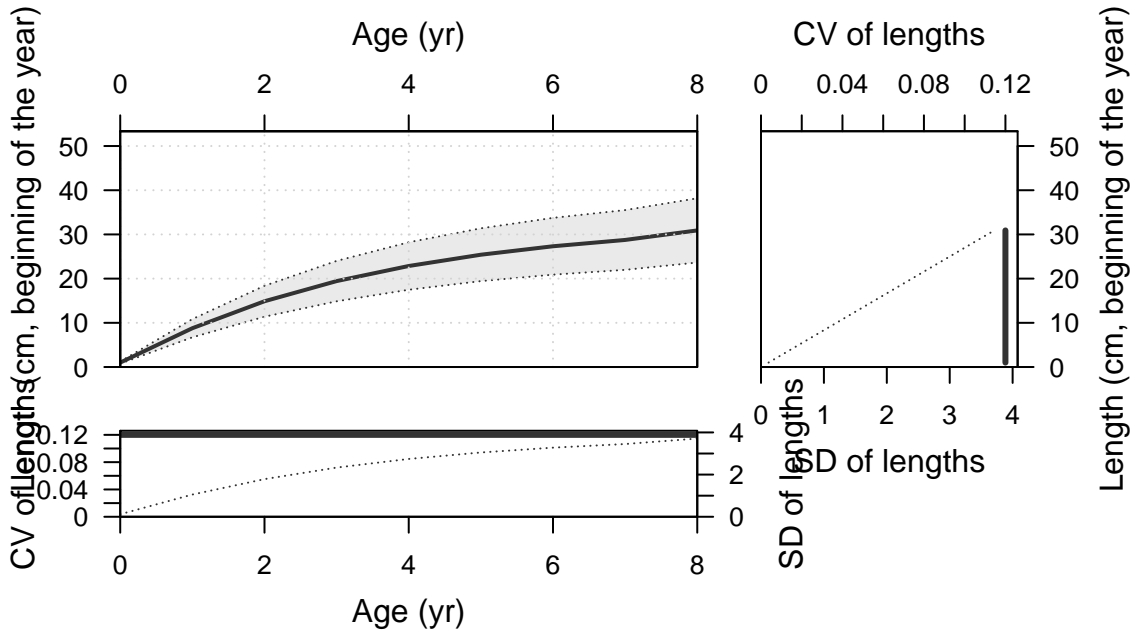


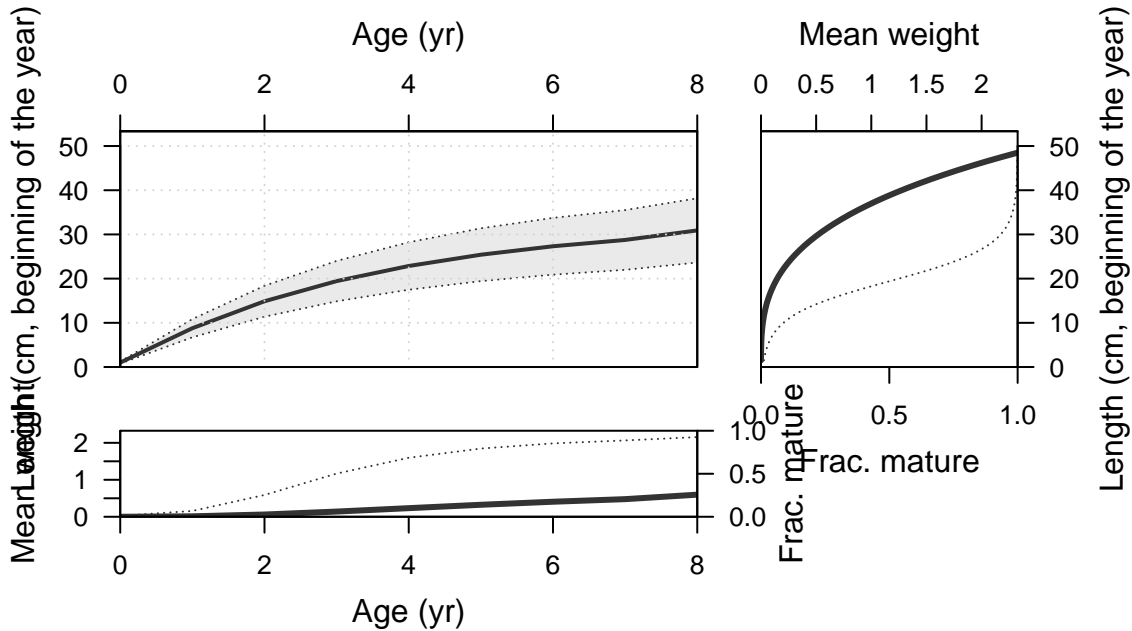
Plots created using the 'r4ss' package in R  
Stock Synthesis version: 3.30.19.0  
StartTime: Mon Jun 20 14:55:01 2022  
Data\_File: data.ss  
Control\_File: control.ss

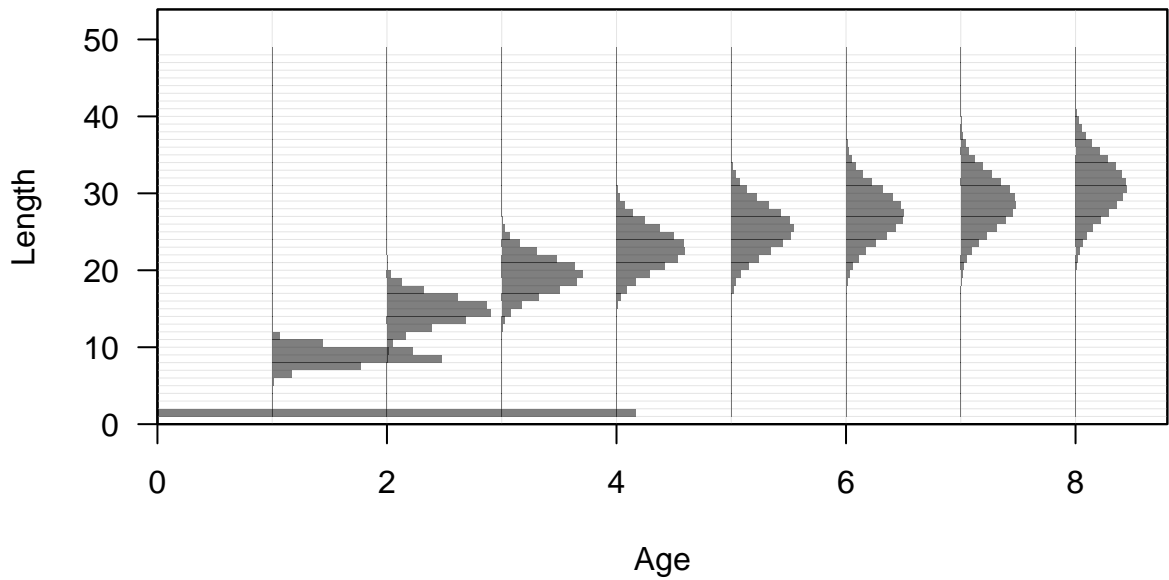
Length (cm, beginning of the year)

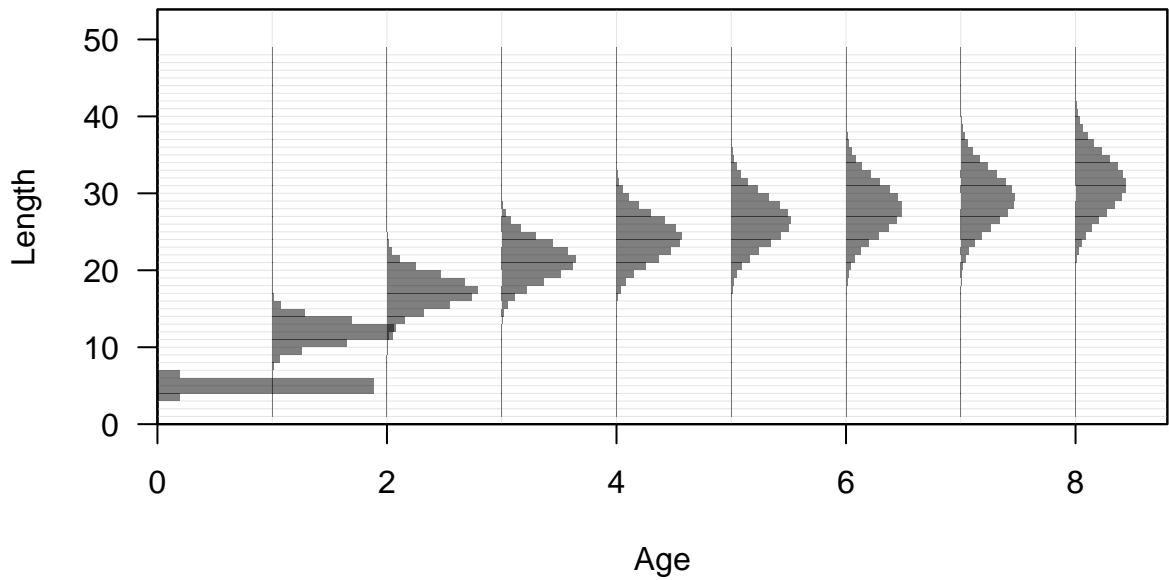


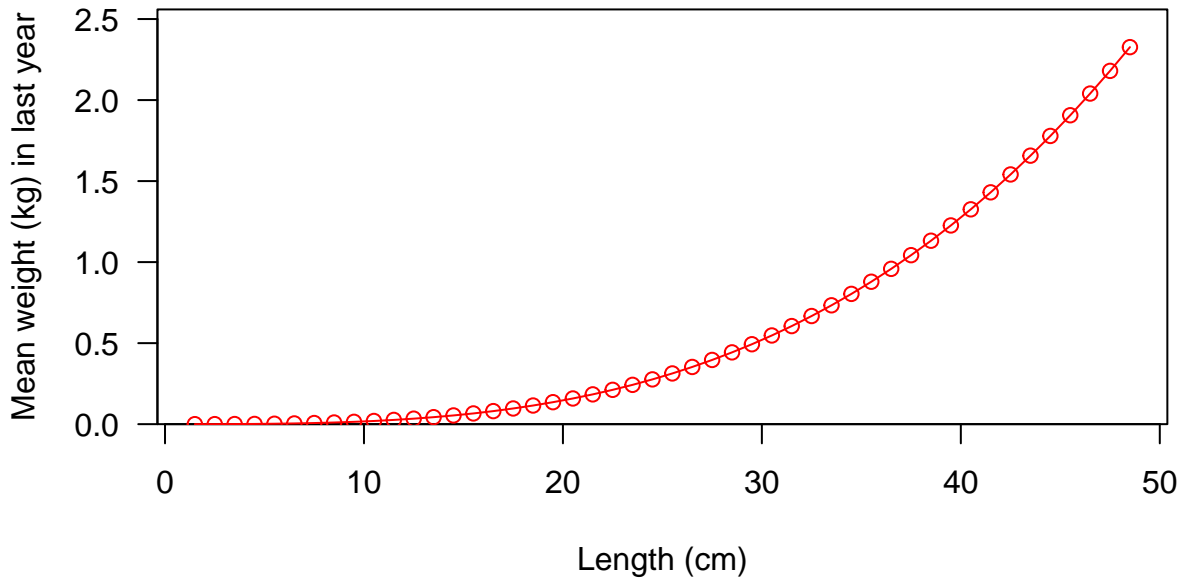
Age (yr)

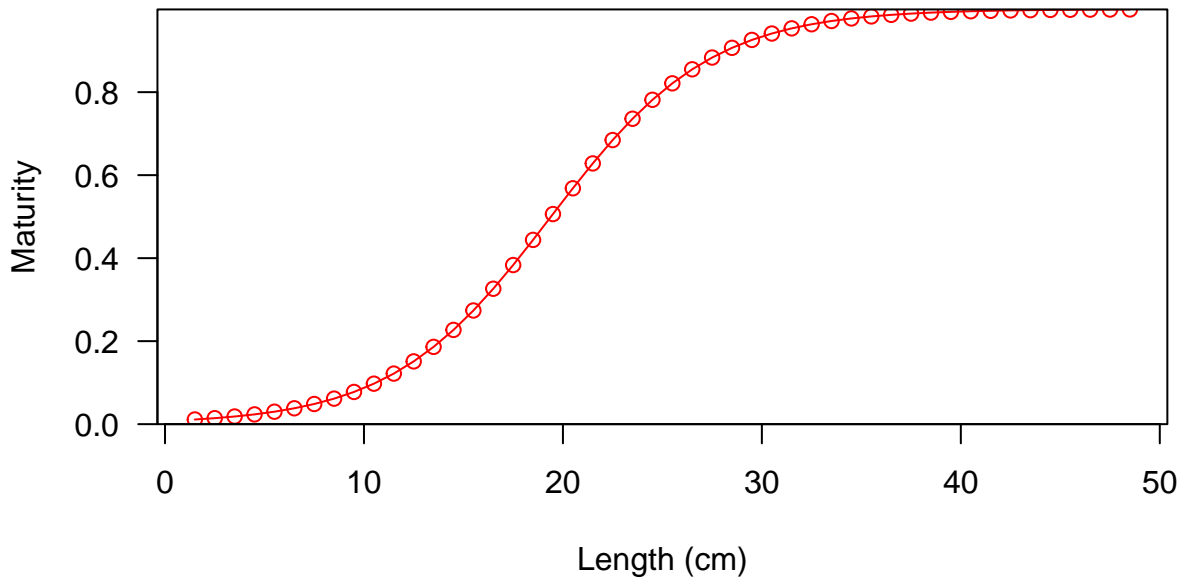




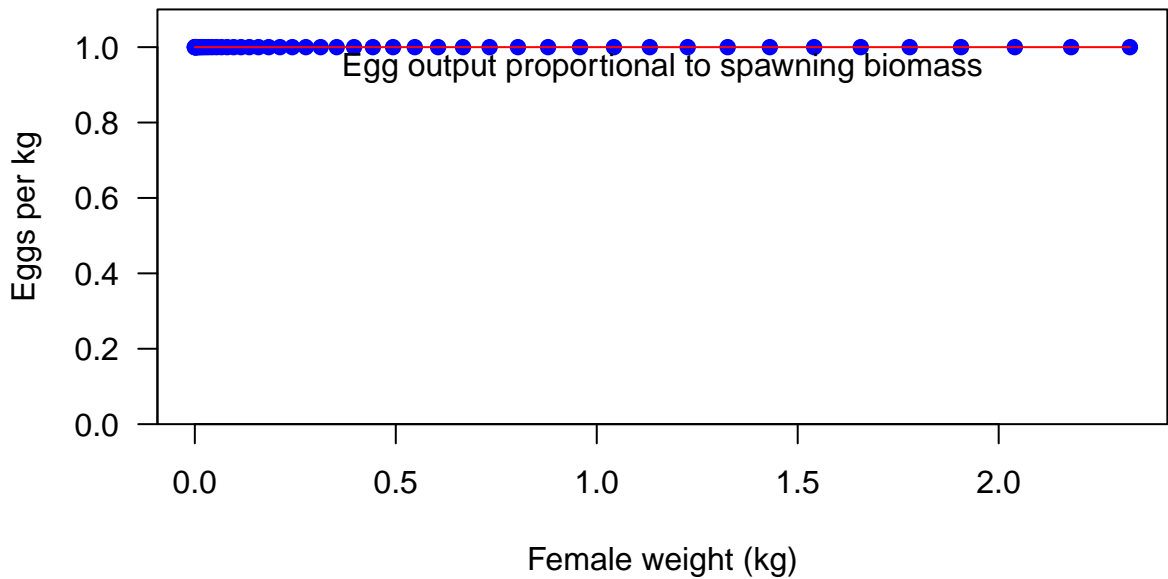


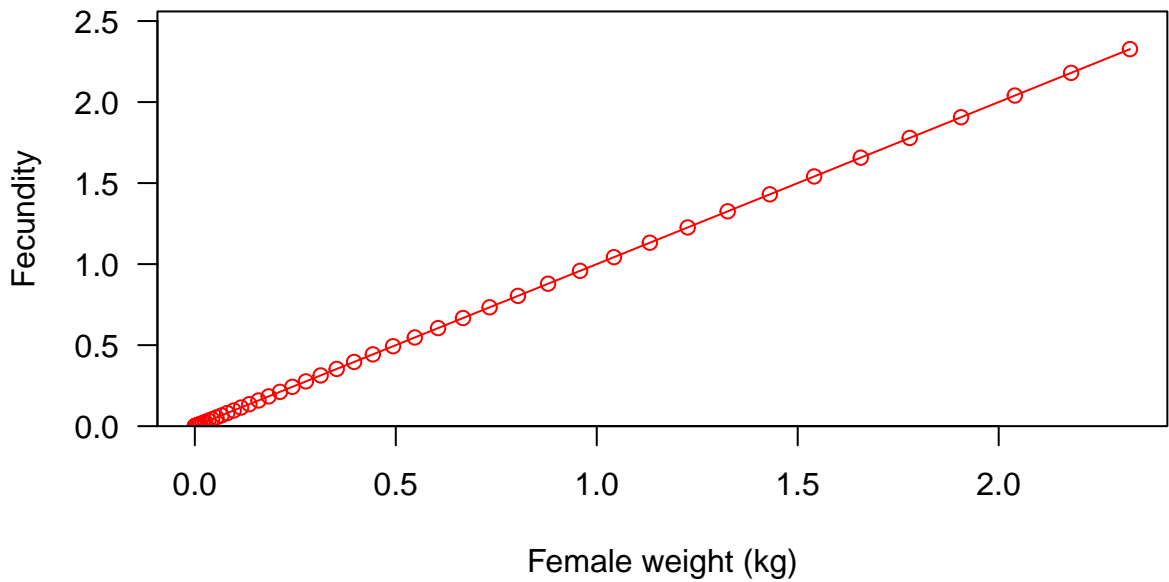


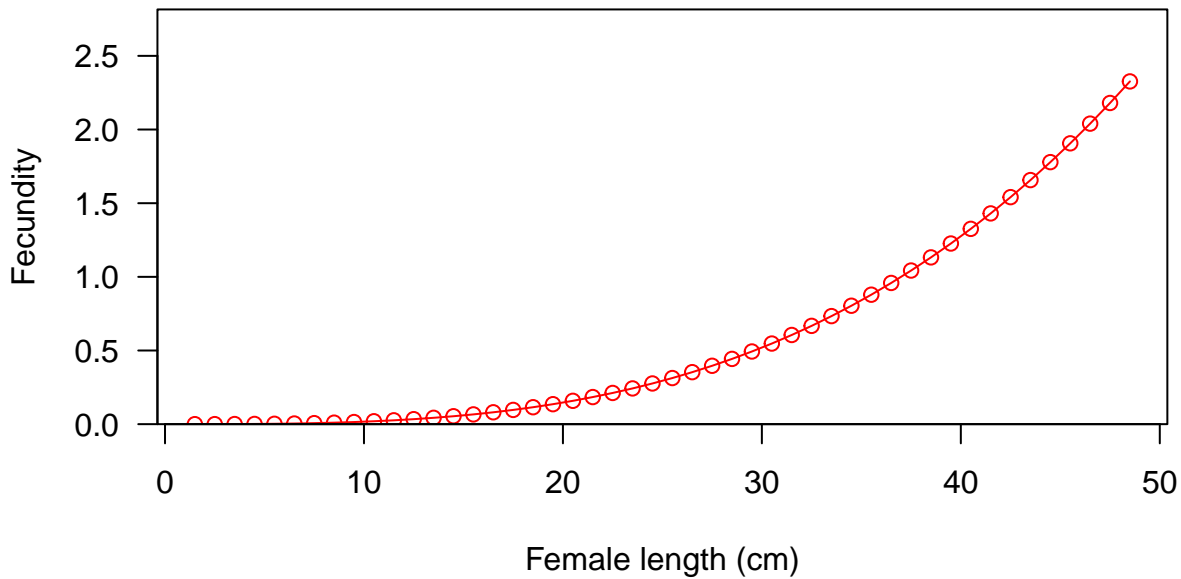


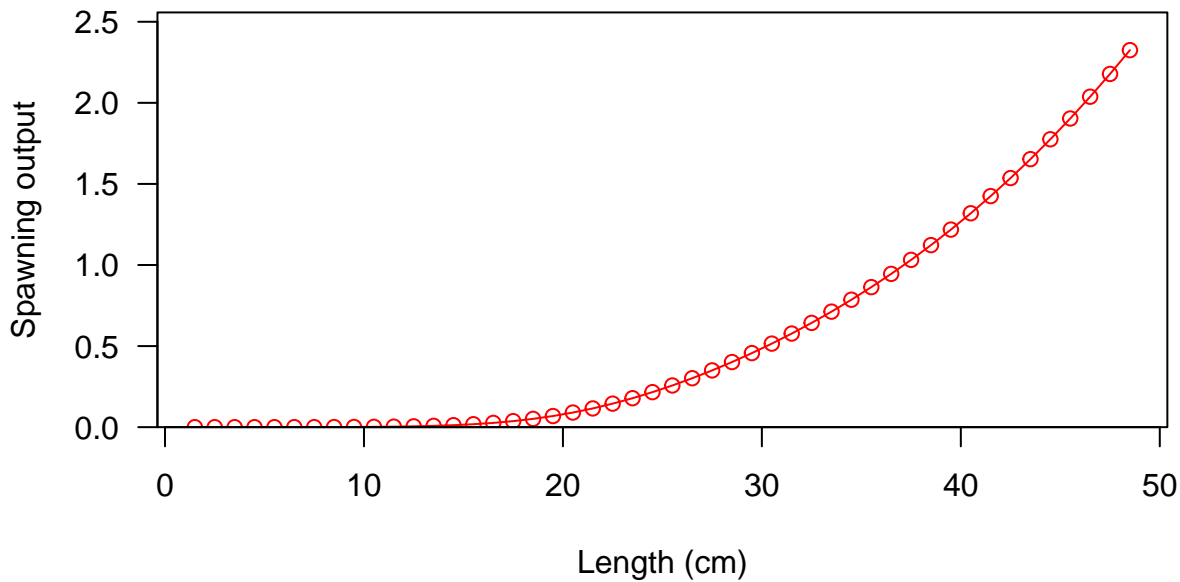


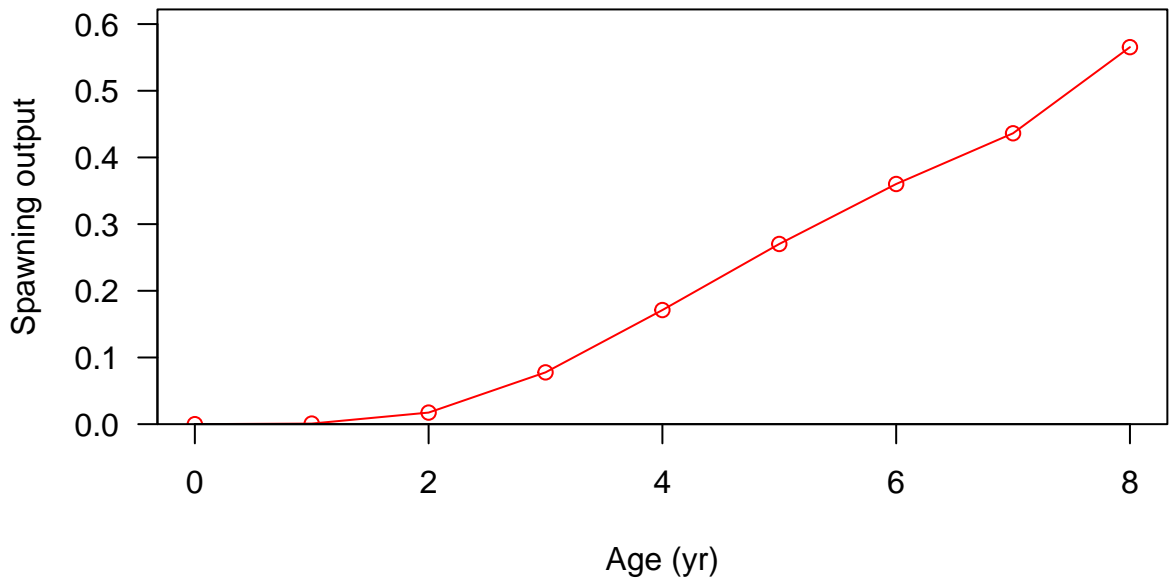




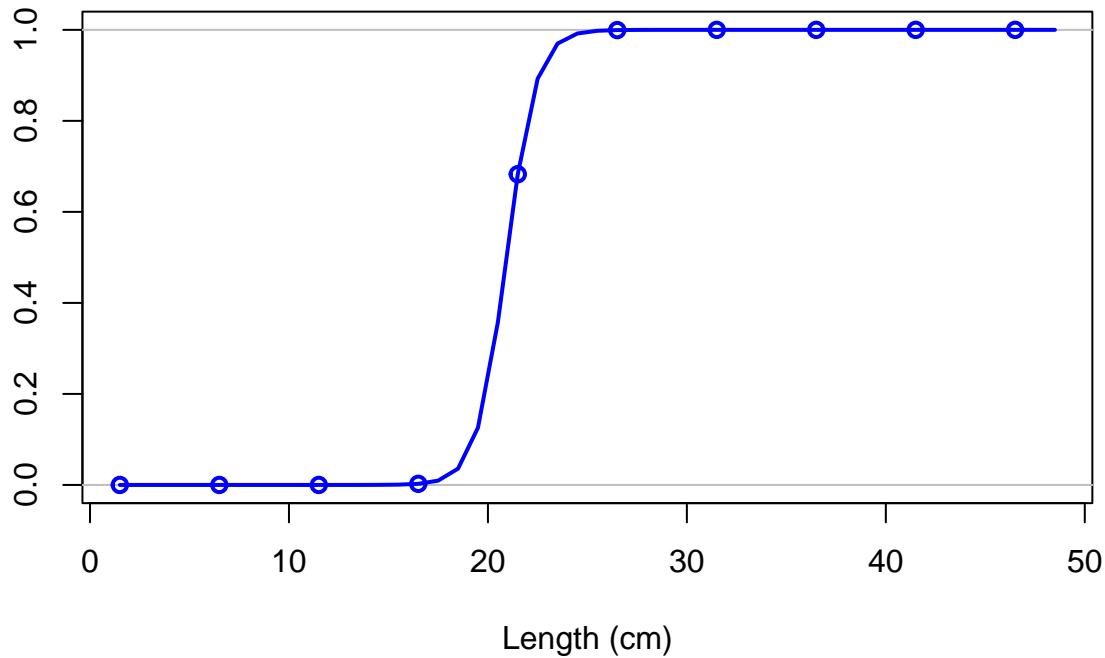




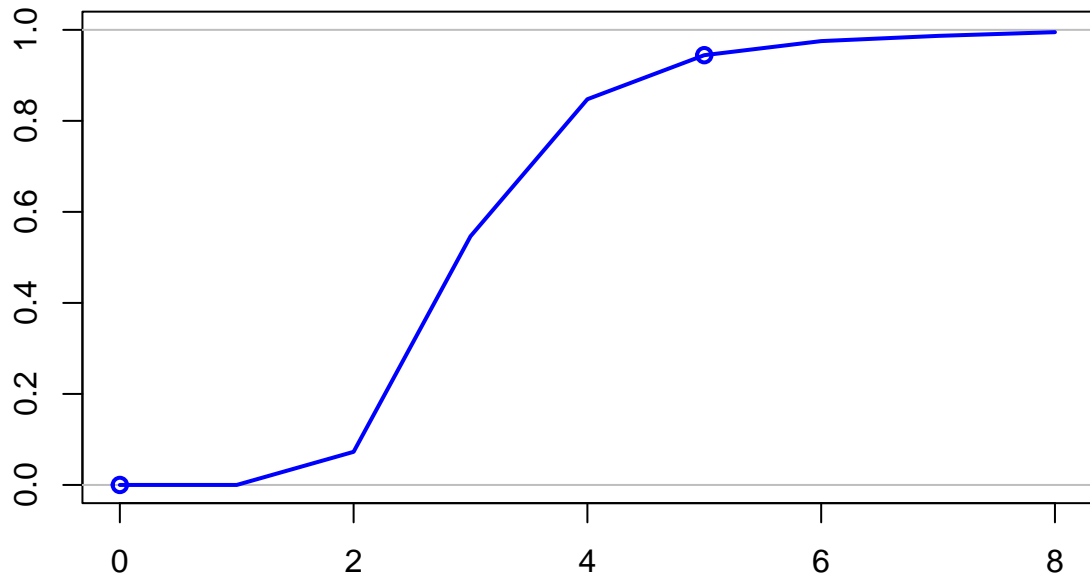




Selectivity

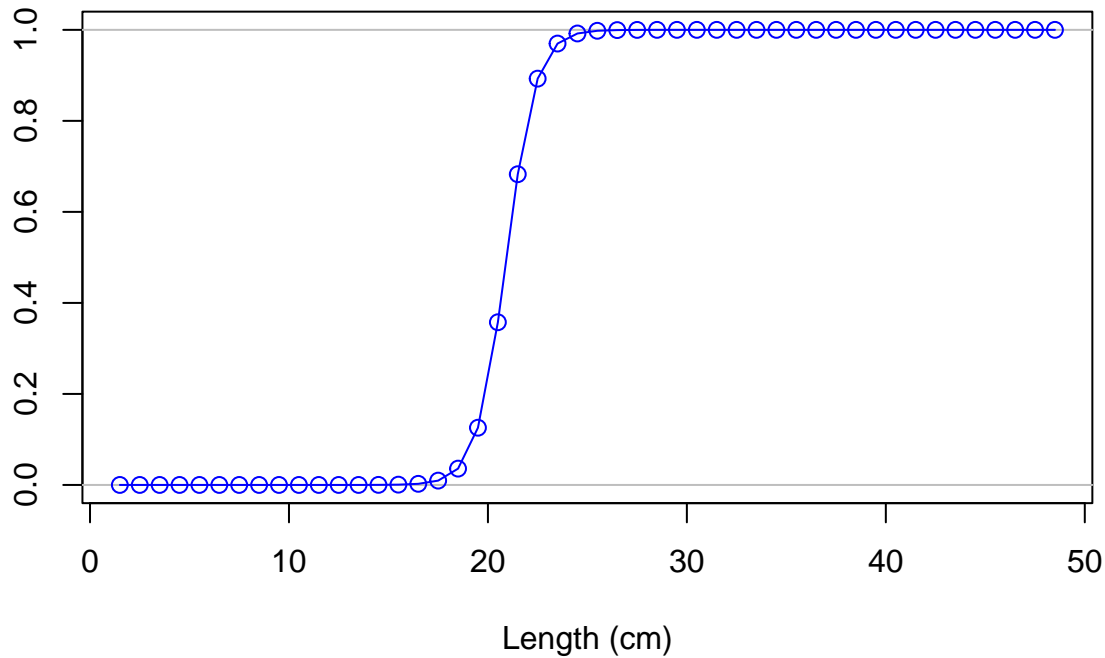


Selectivity

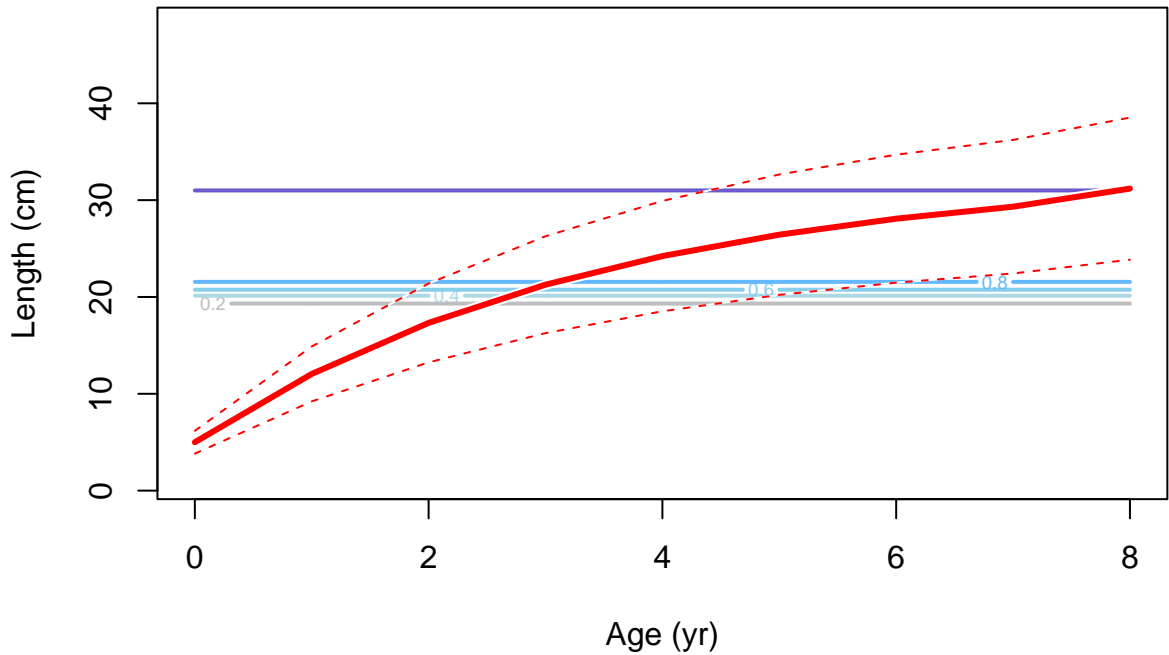


Age (yr)

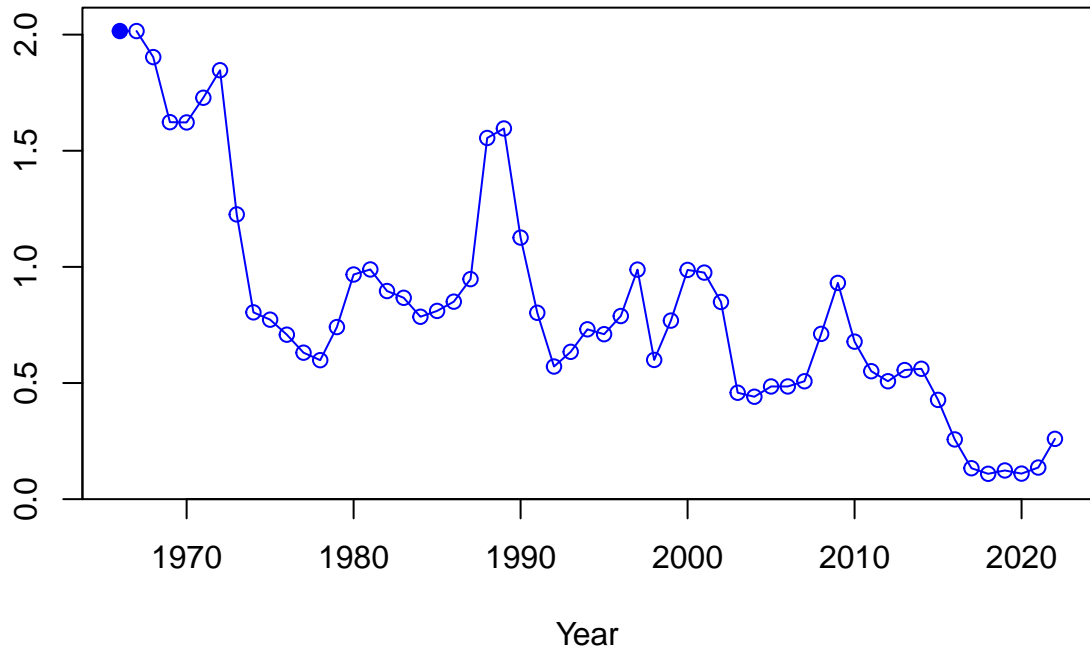
Selectivity



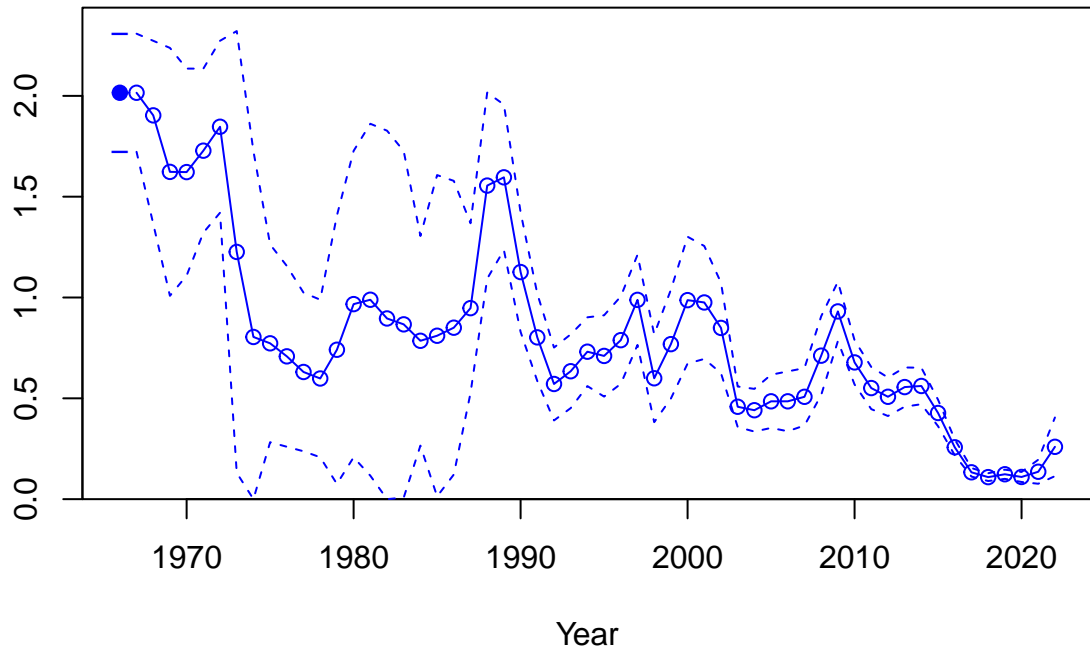




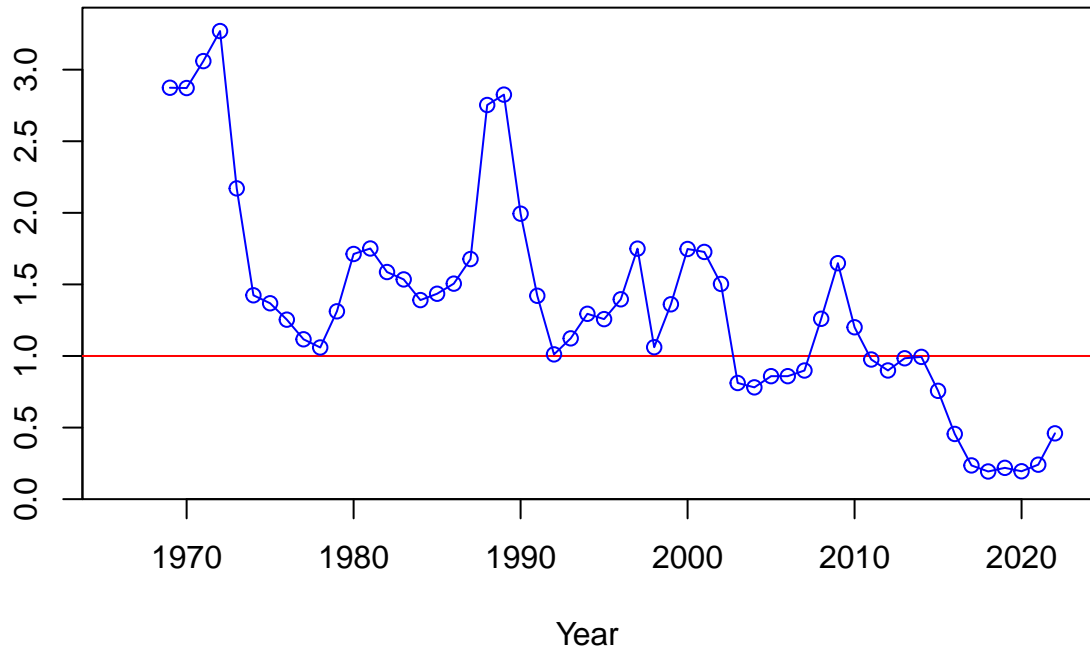
Spawning biomass (mt)



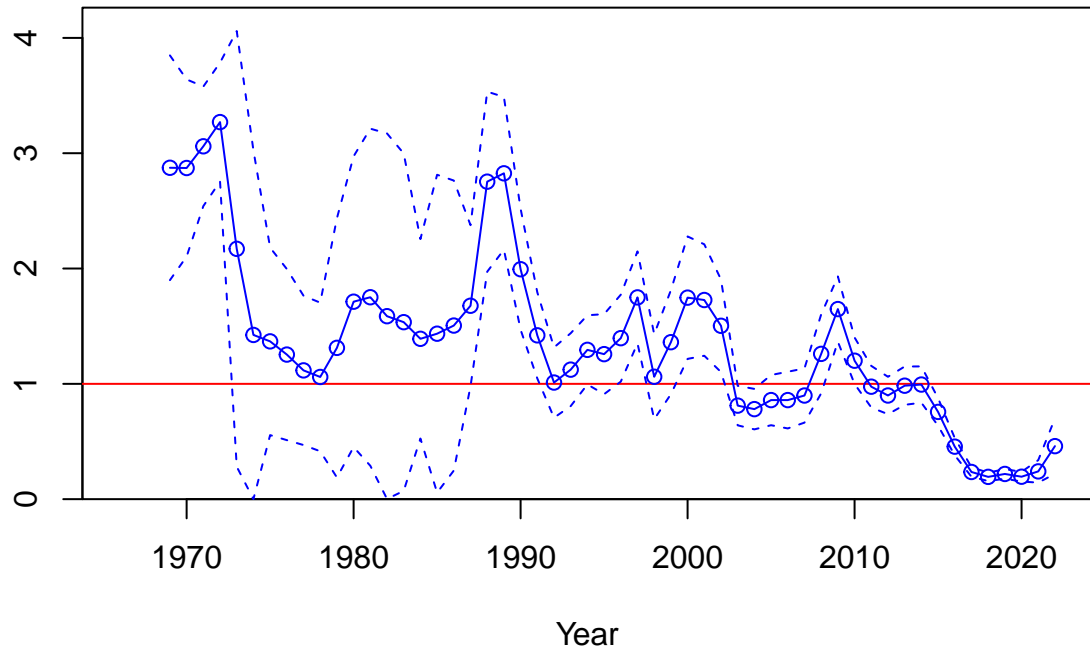
Spawning biomass (mt)

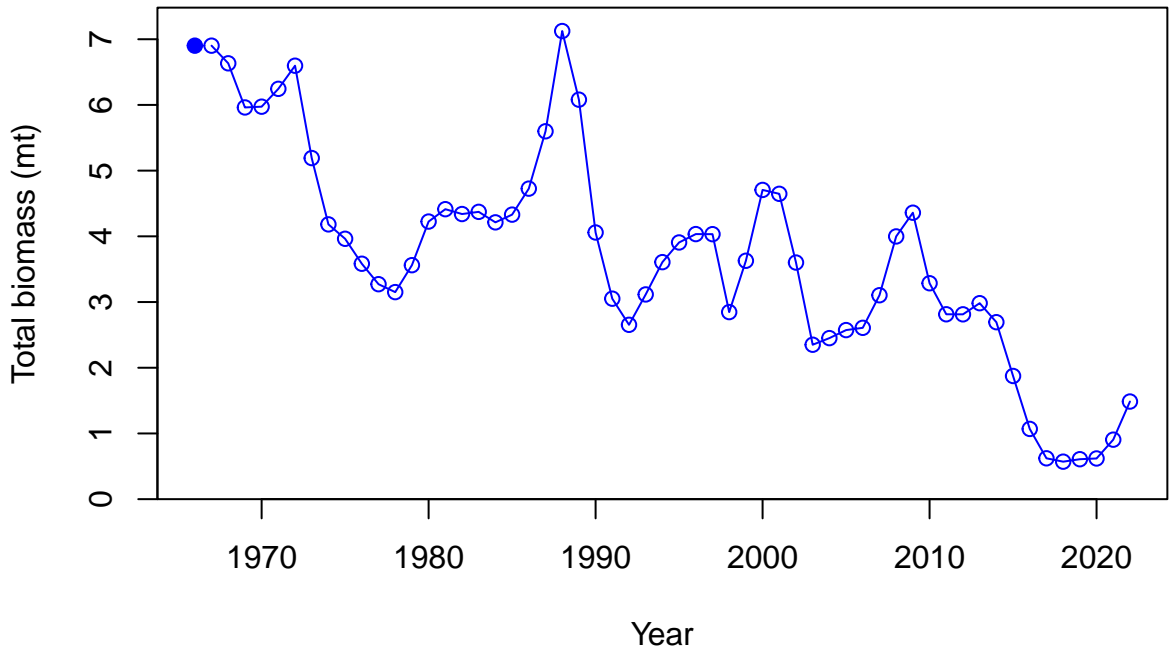


Relative spawning biomass:  $B/B_{MSY}$

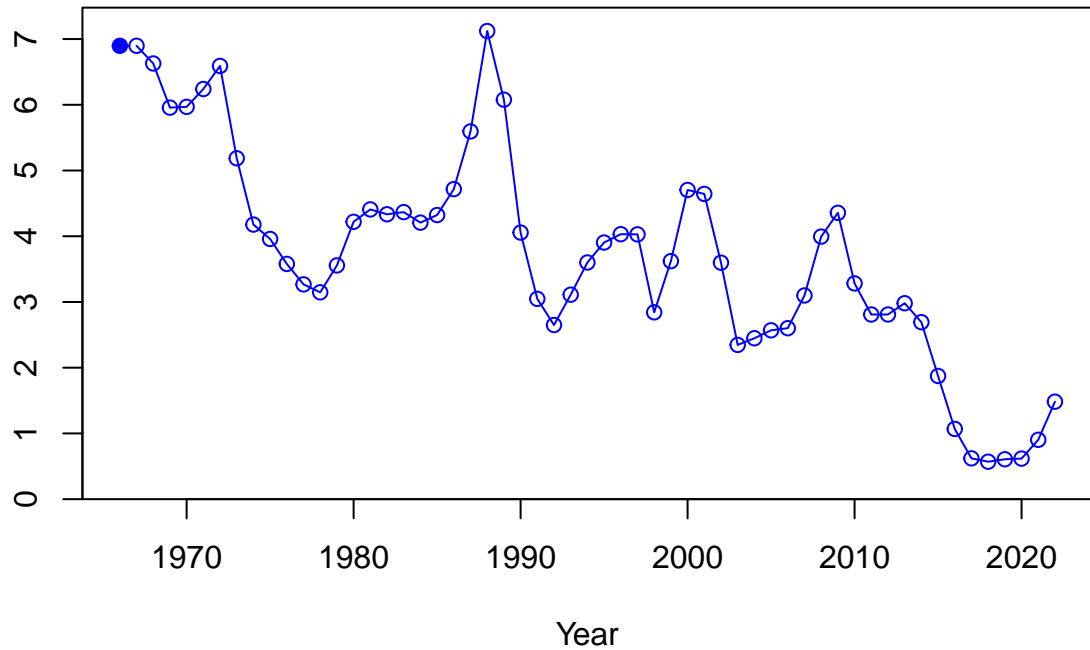


Relative spawning biomass:  $B/B_{MSY}$

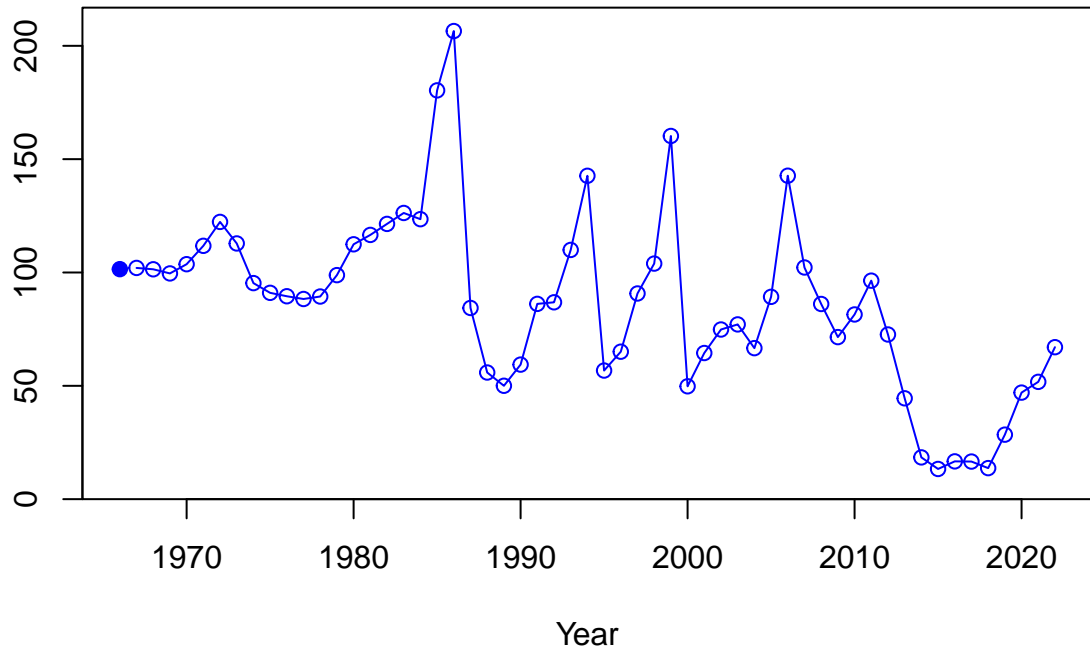




Summary biomass (mt)

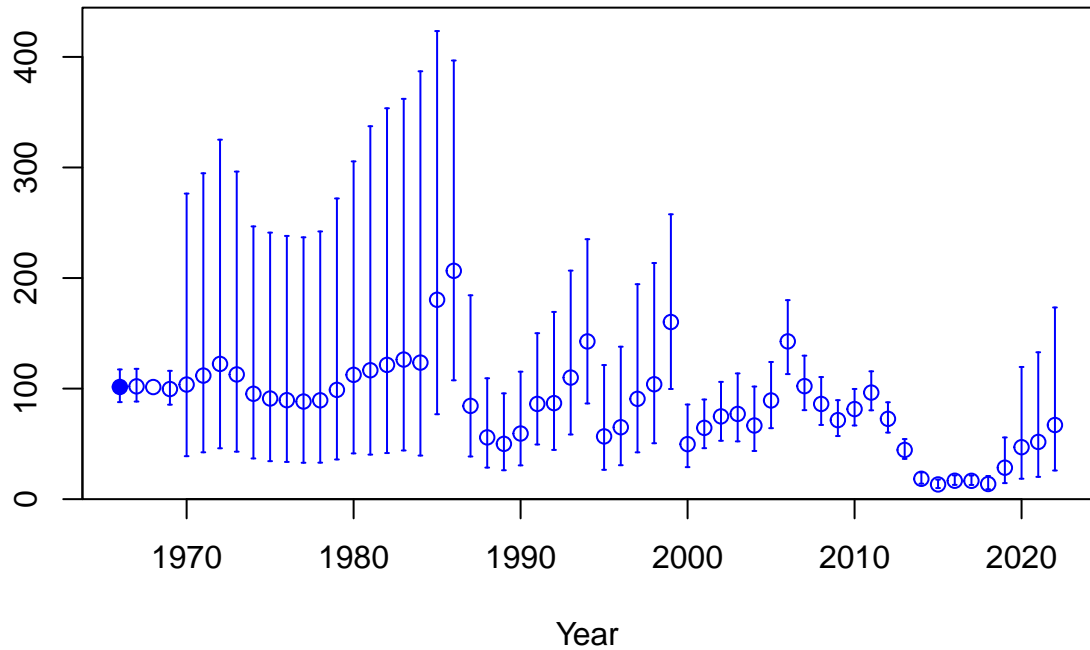


Age-0 recruits (1,000s)

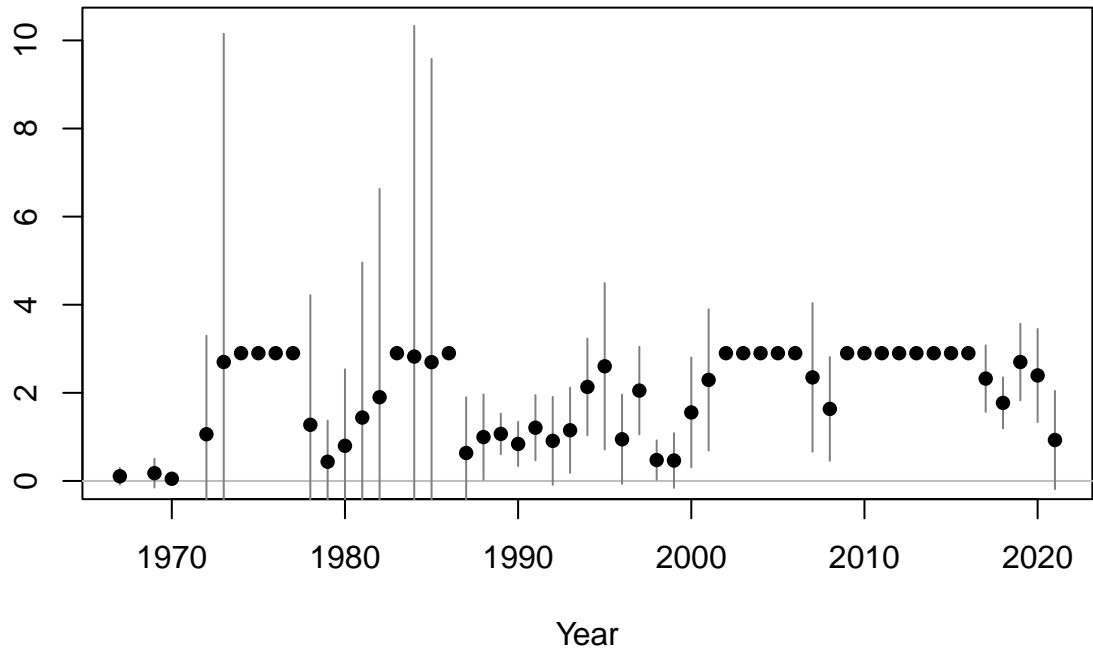


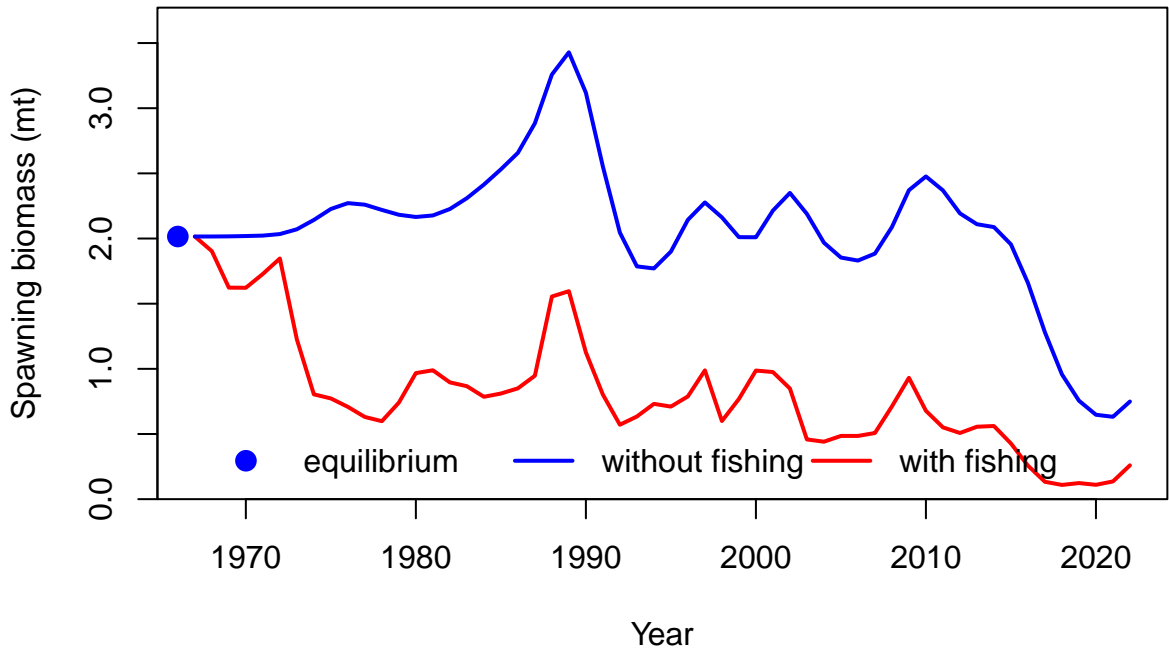


Age-0 recruits (1,000s)

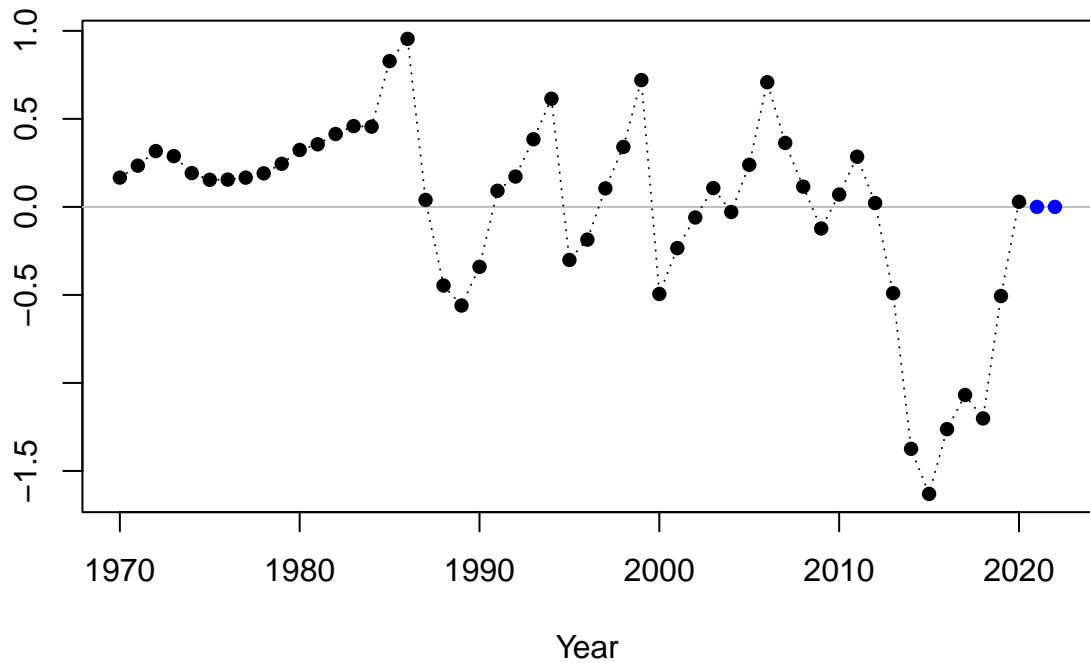


Summary Fishing Mortality

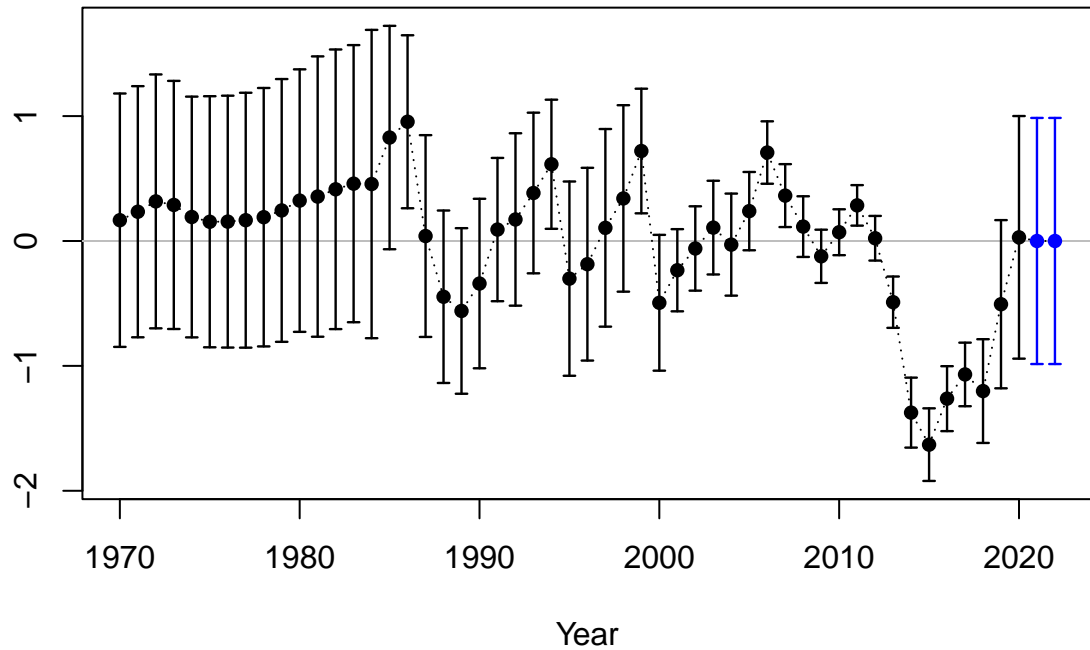




Log recruitment deviation

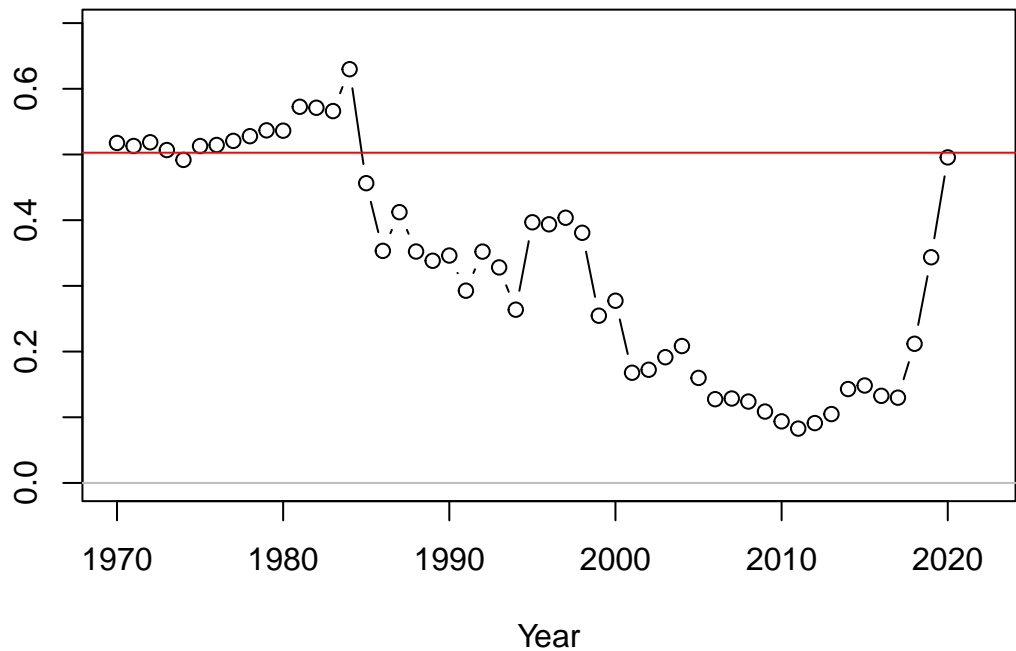


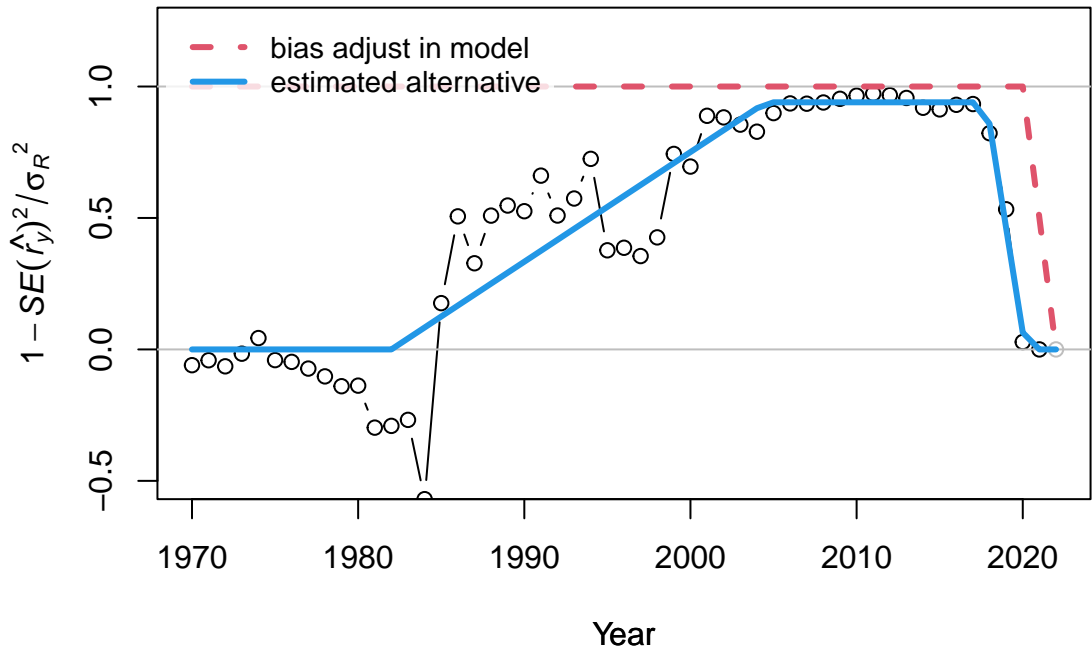
Log recruitment deviation

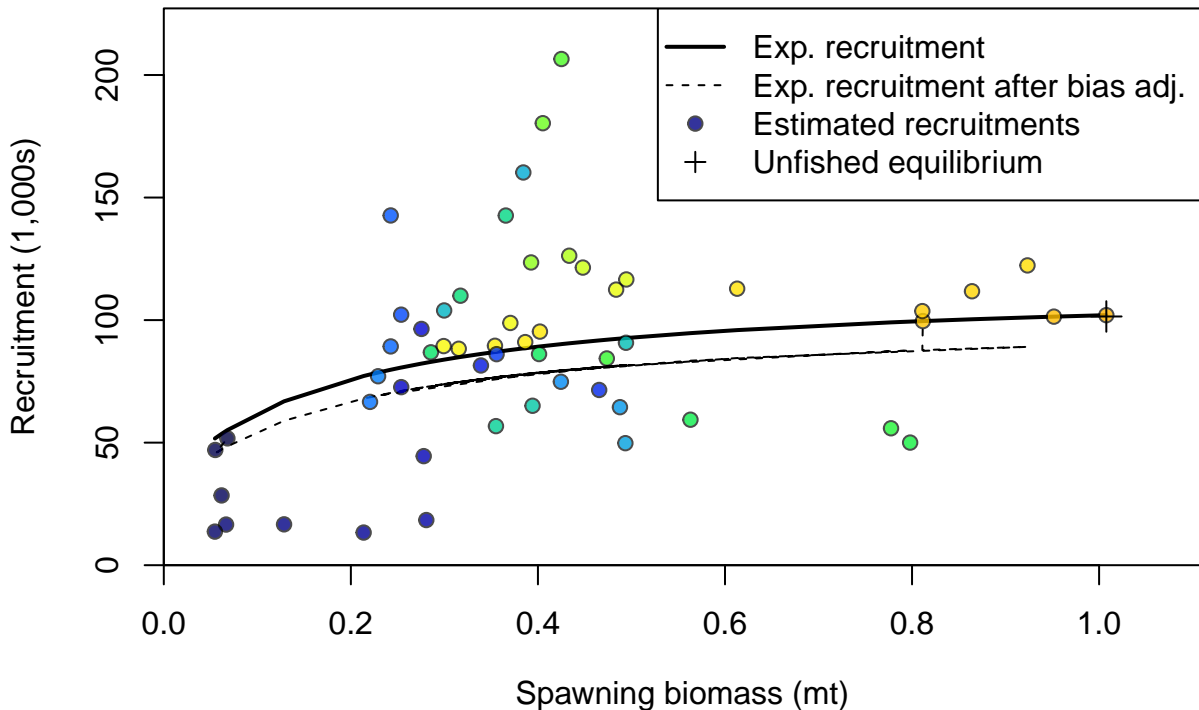


## Recruitment deviation variance

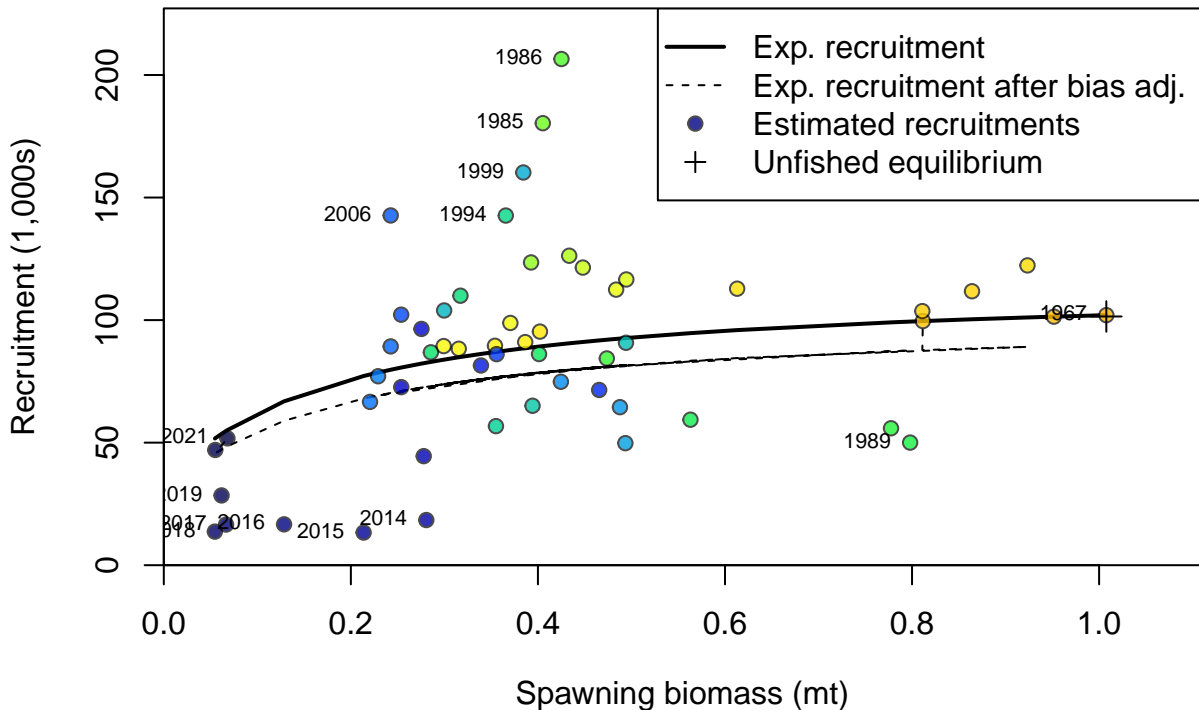
Asymptotic standard error estimate



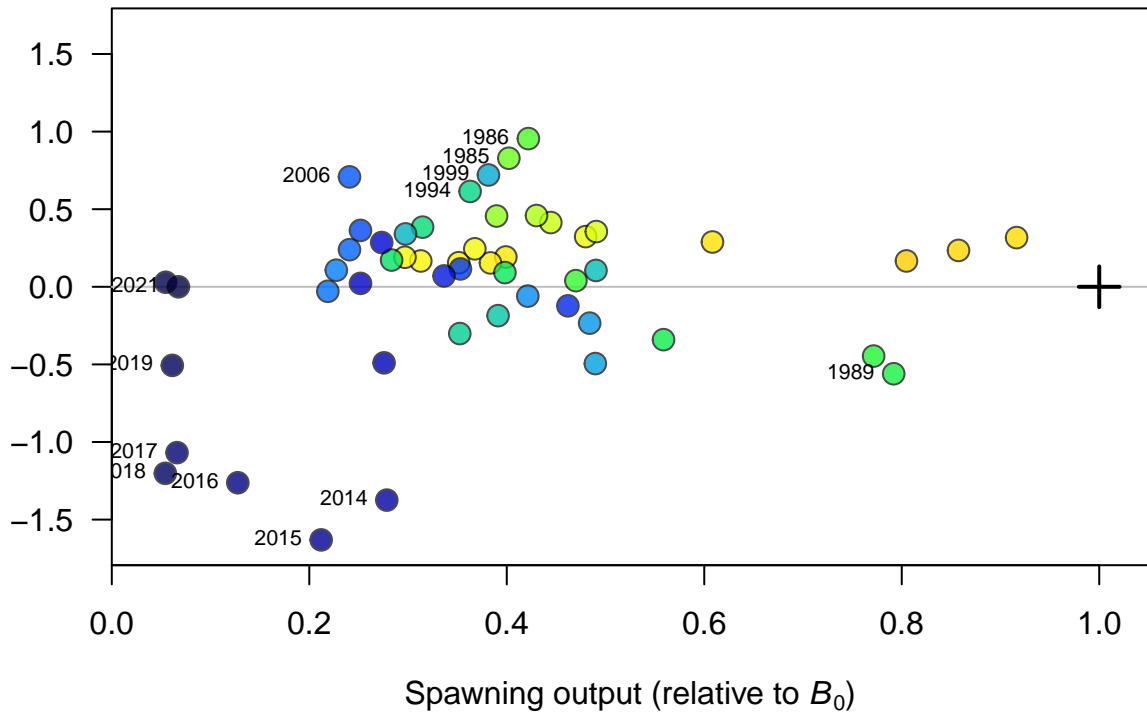


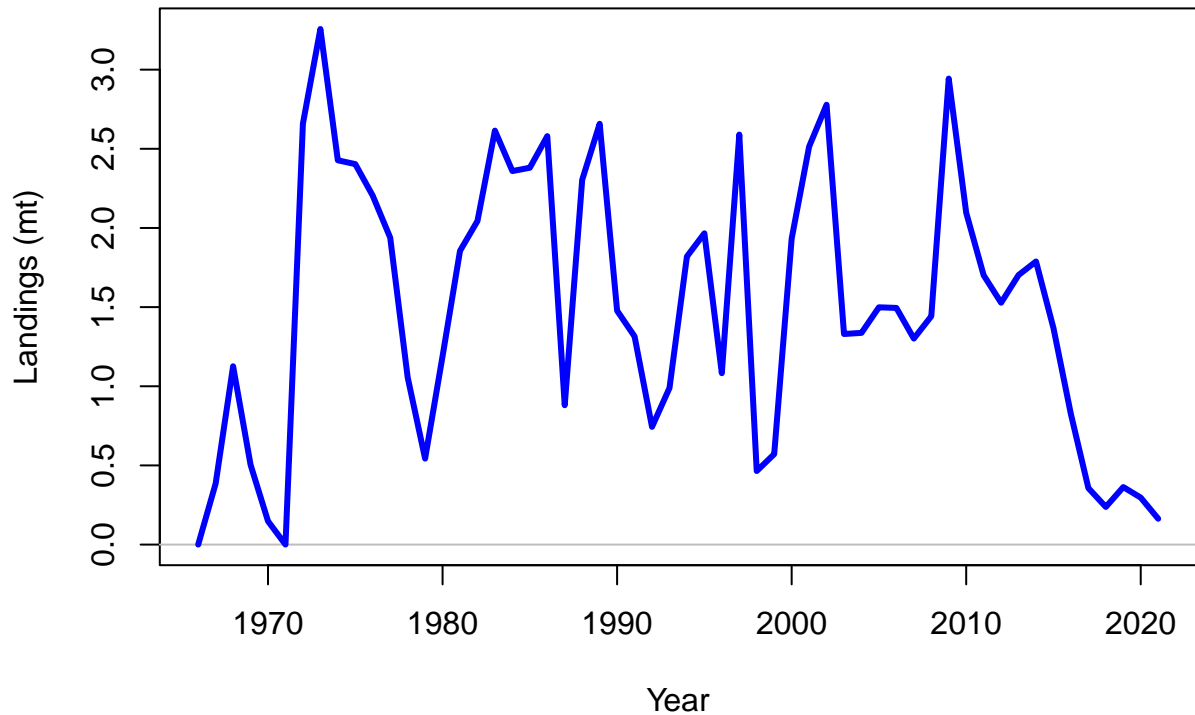


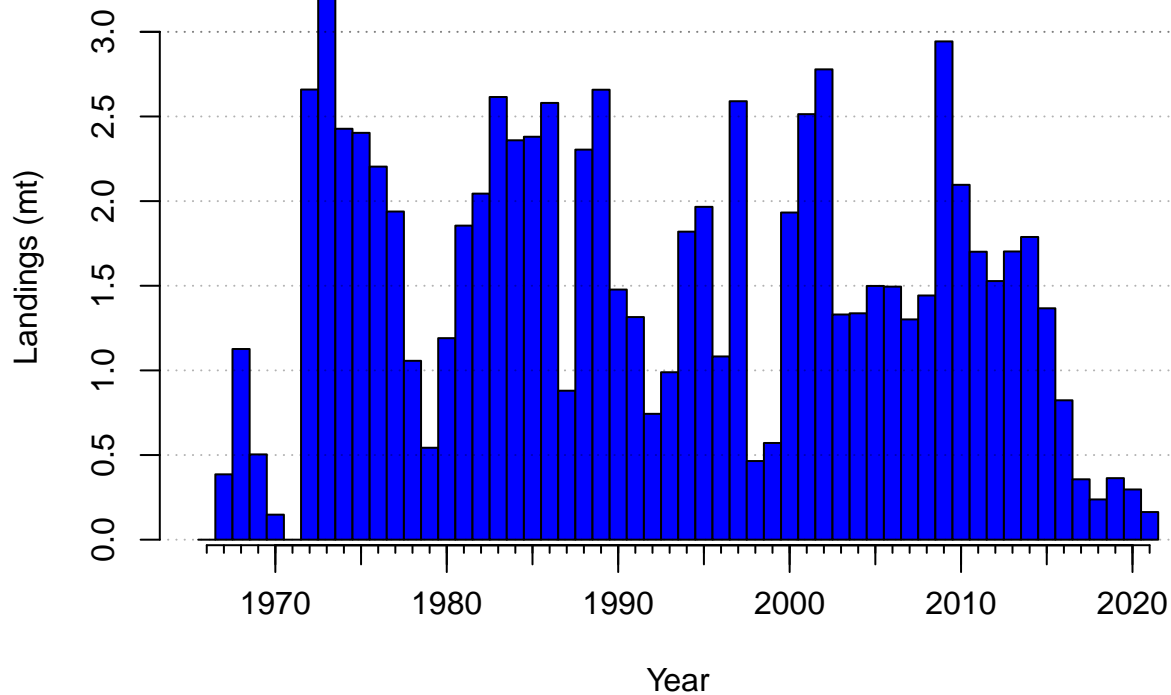




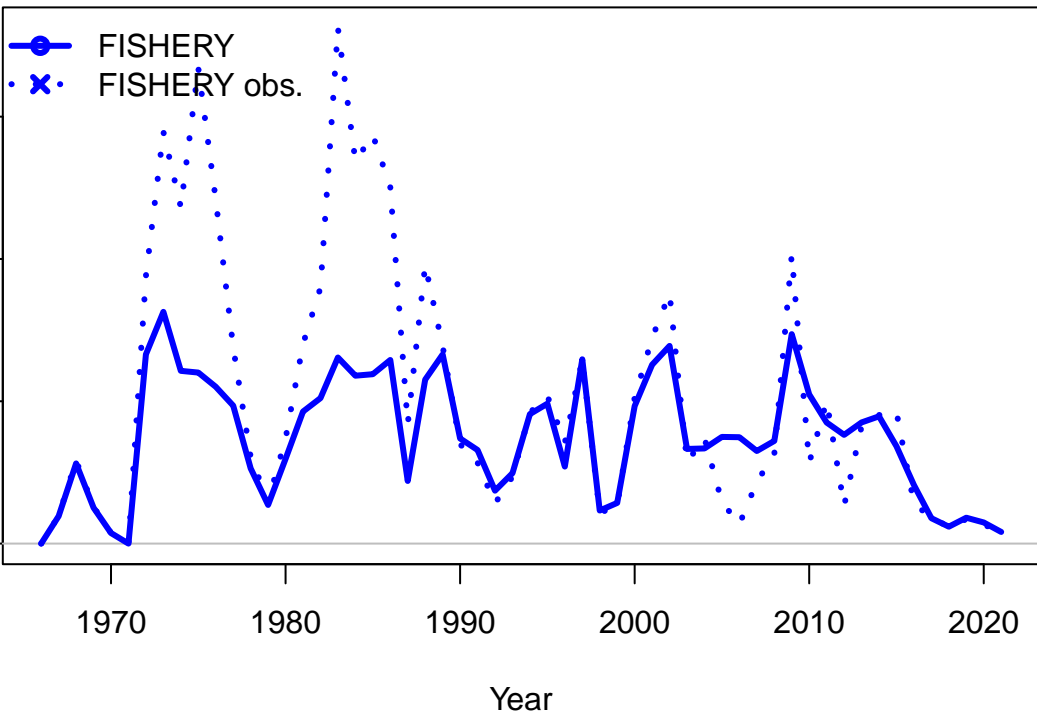
Log recruitment deviation

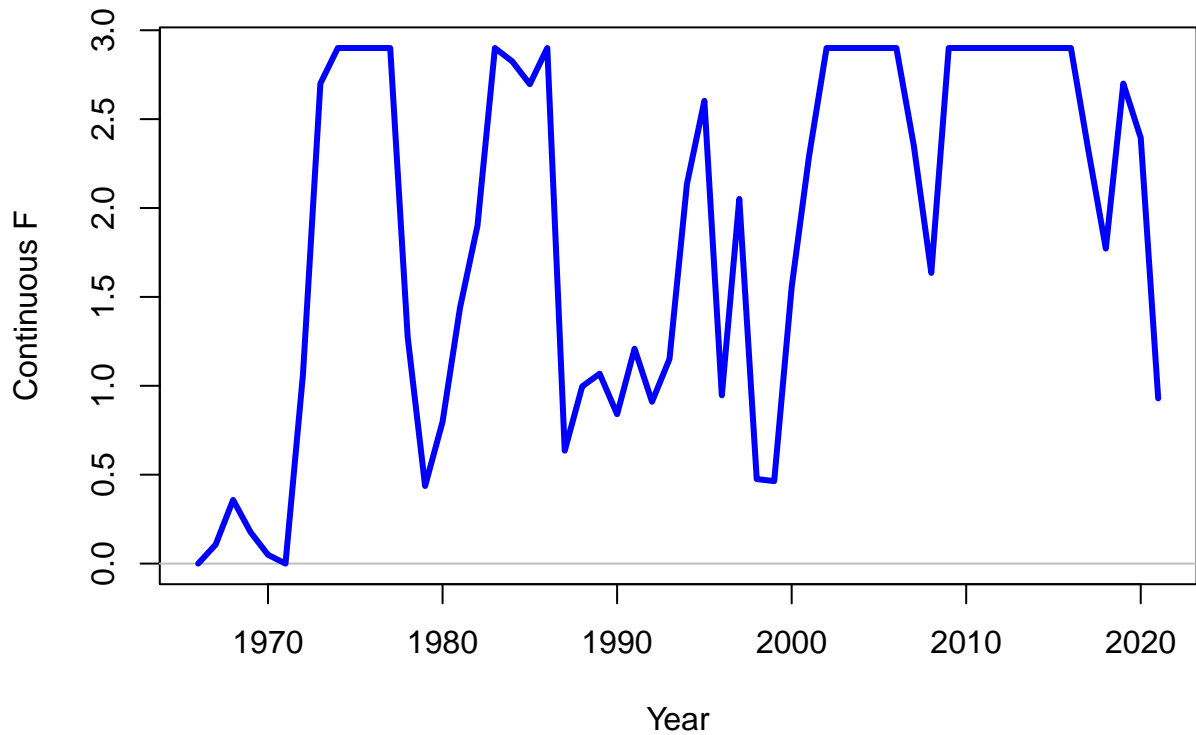




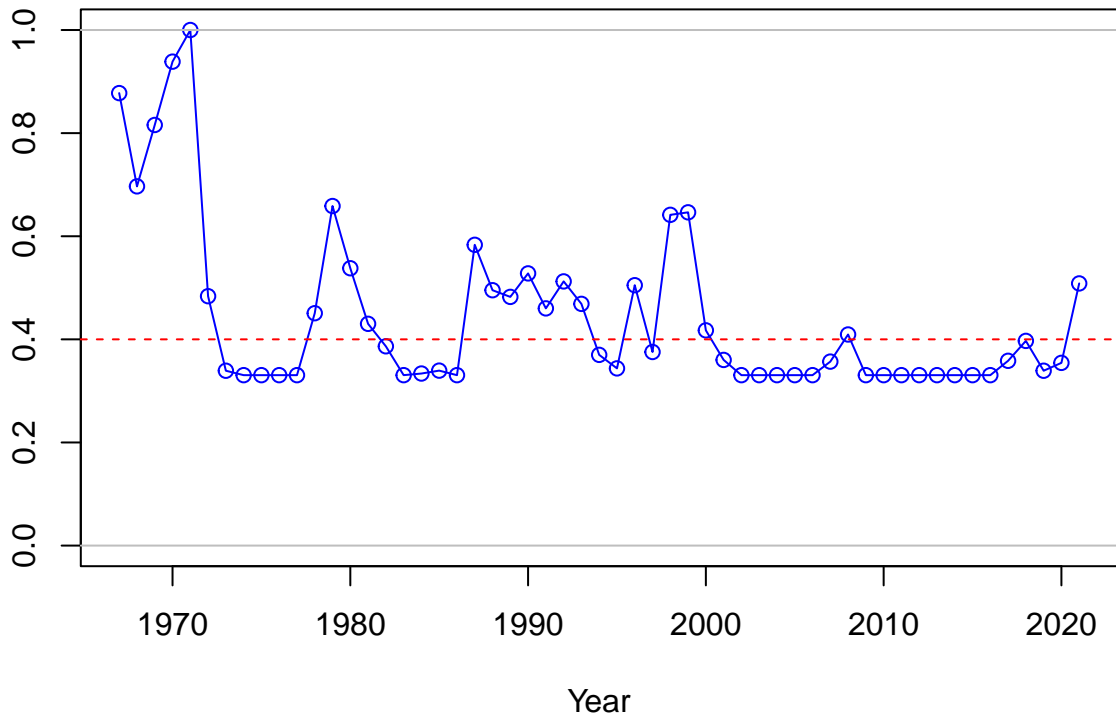


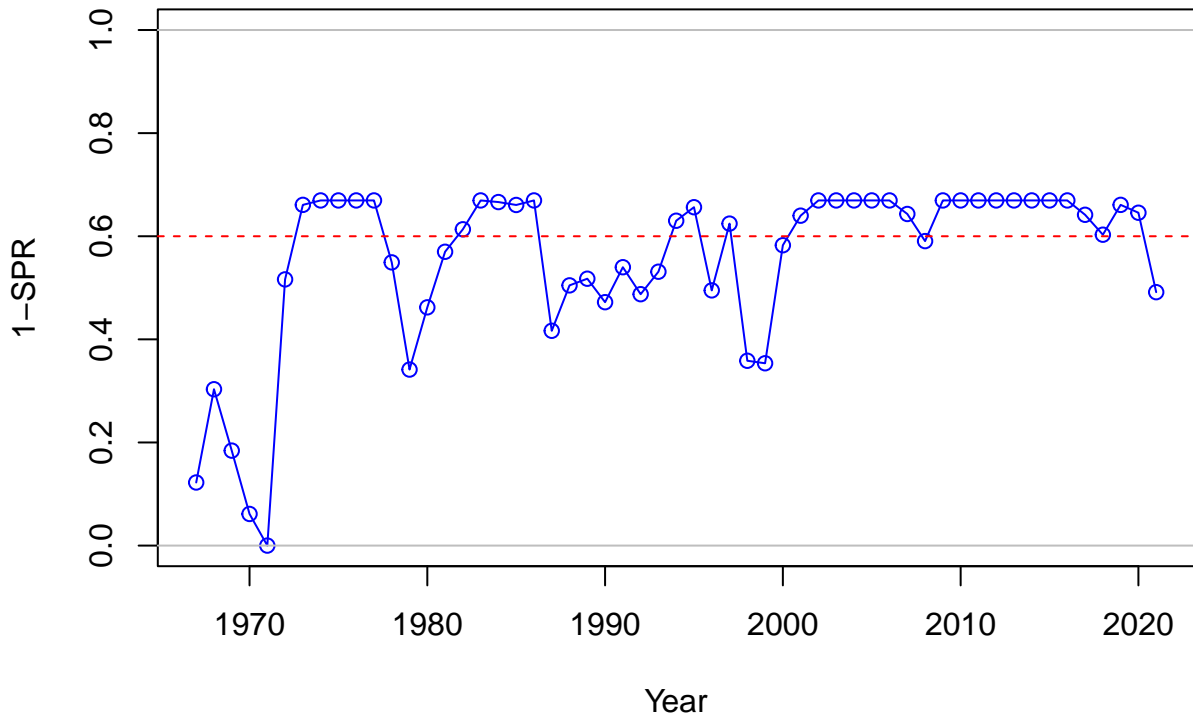
Observed and expected Landings (mt)





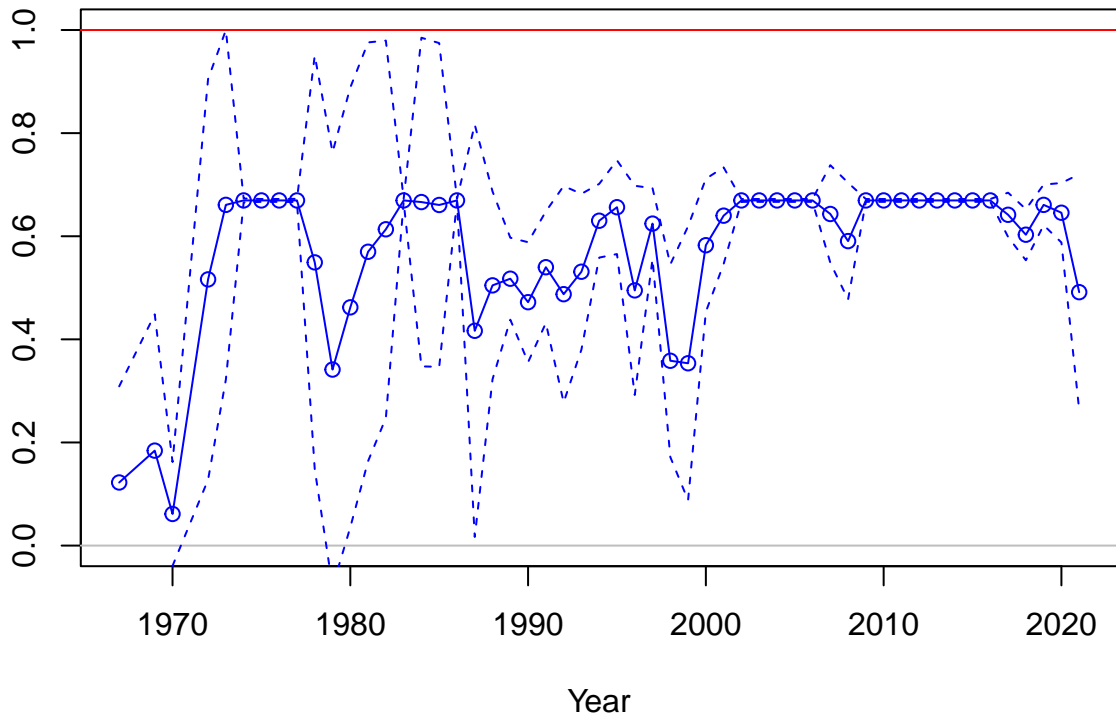
SPR



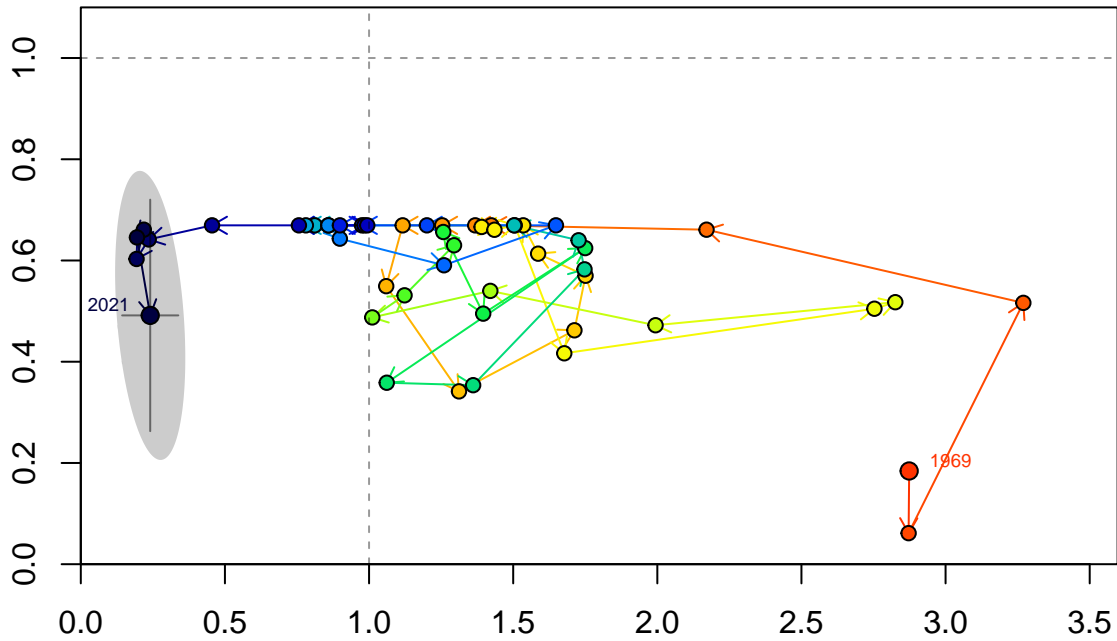




Fishing intensity: 1-SPR

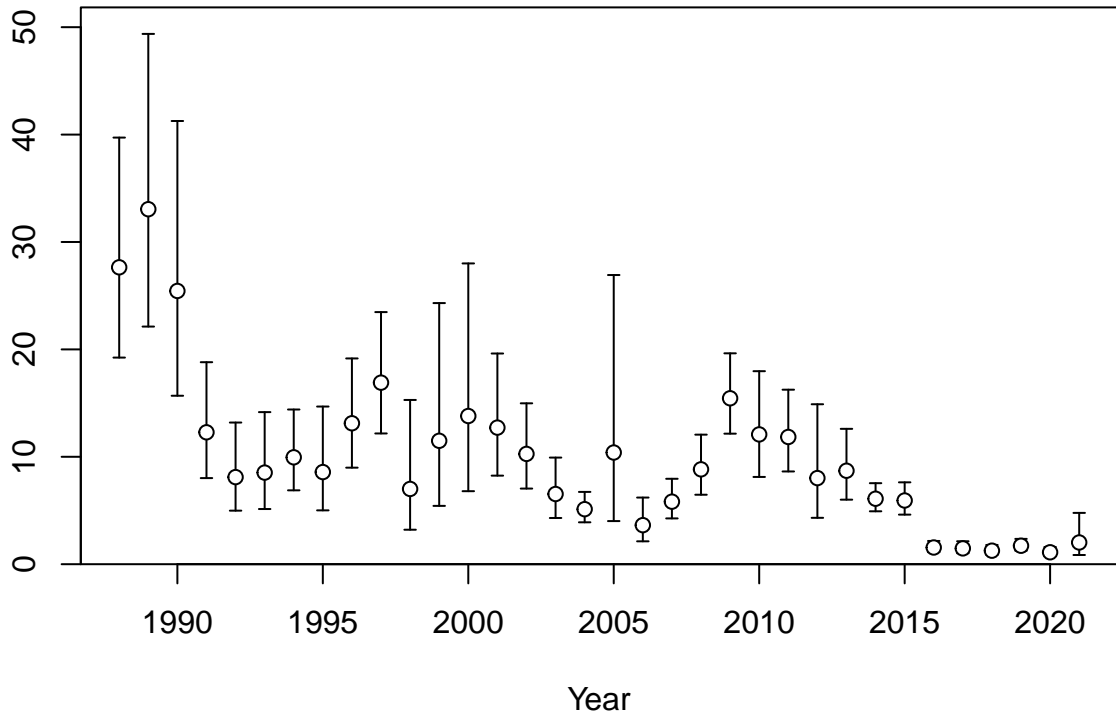


Fishing intensity: 1-SPR

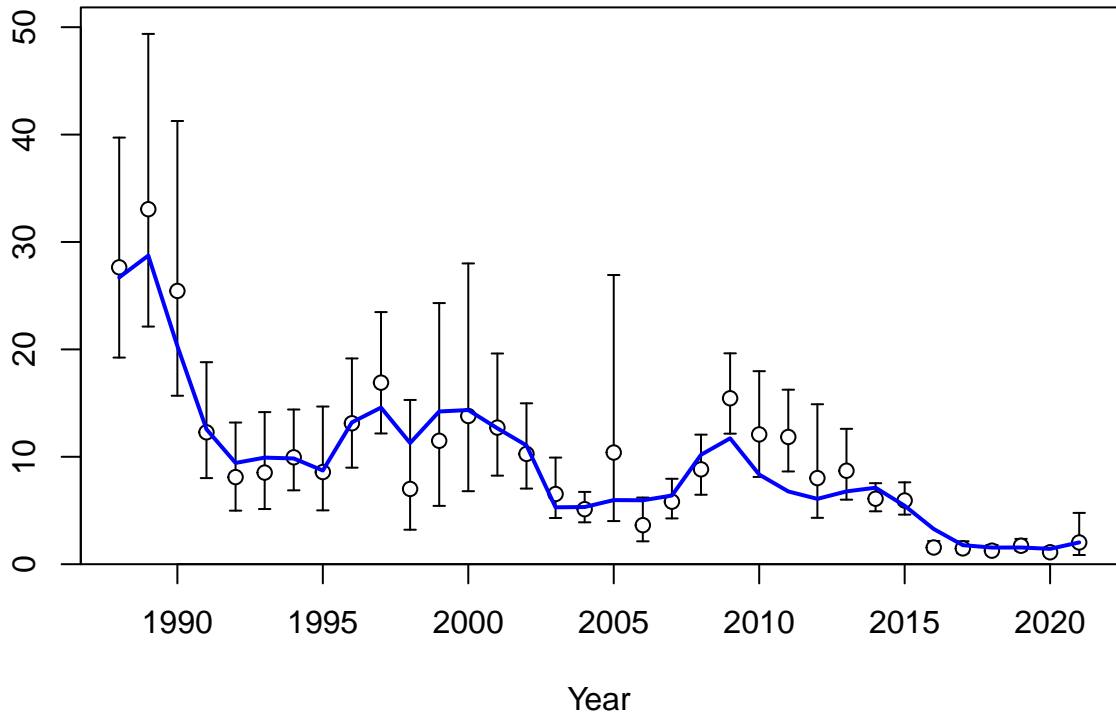


Relative spawning output:  $B/B_{MSY}$

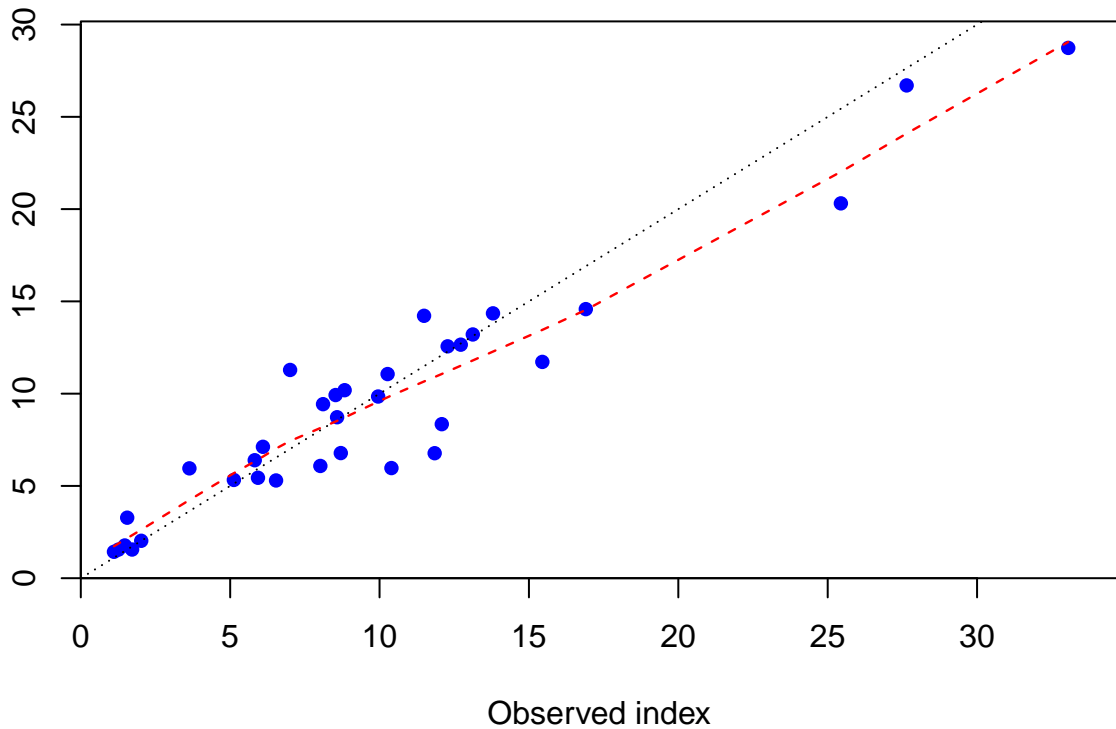
Index



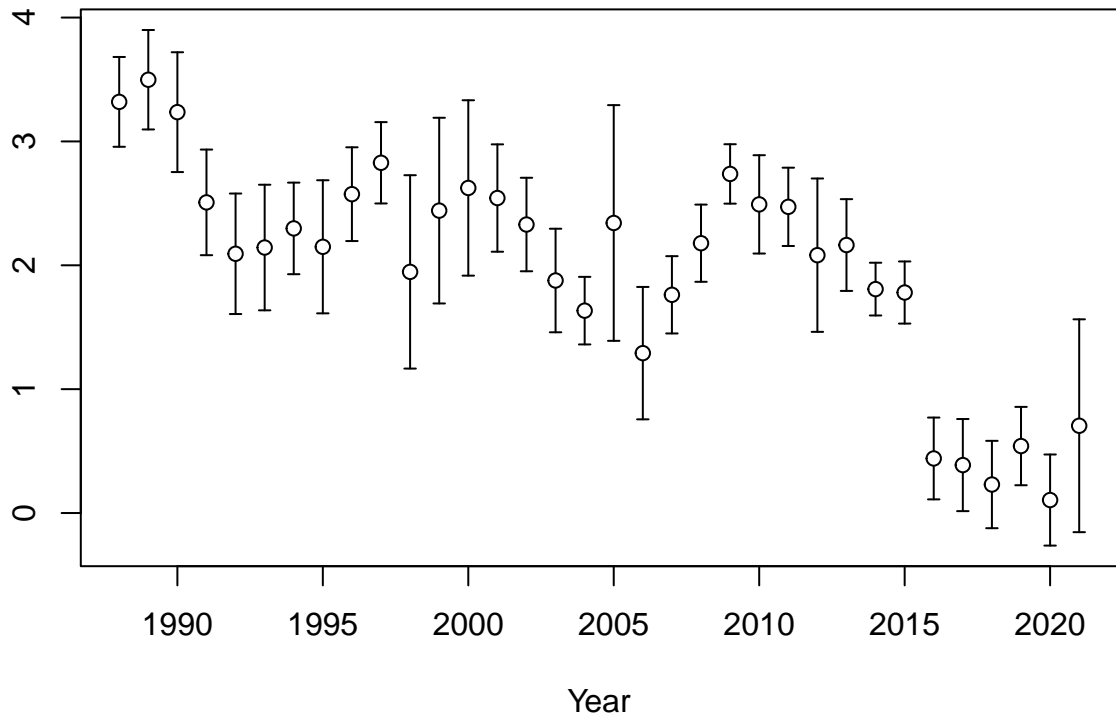
Index



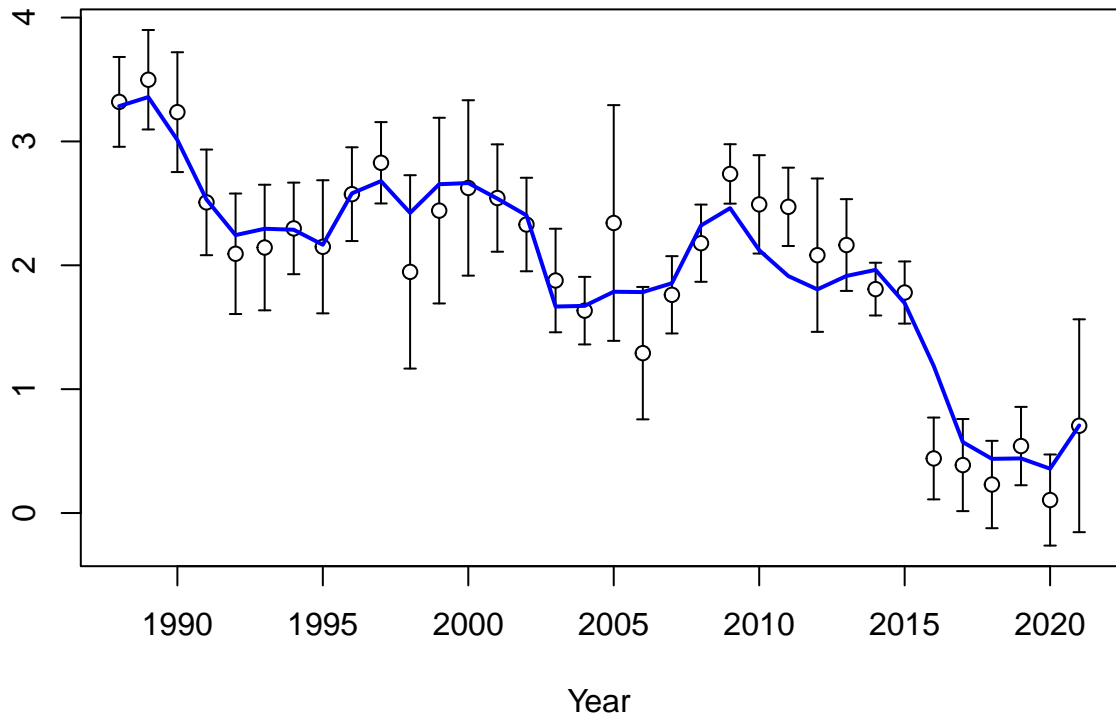
Expected index

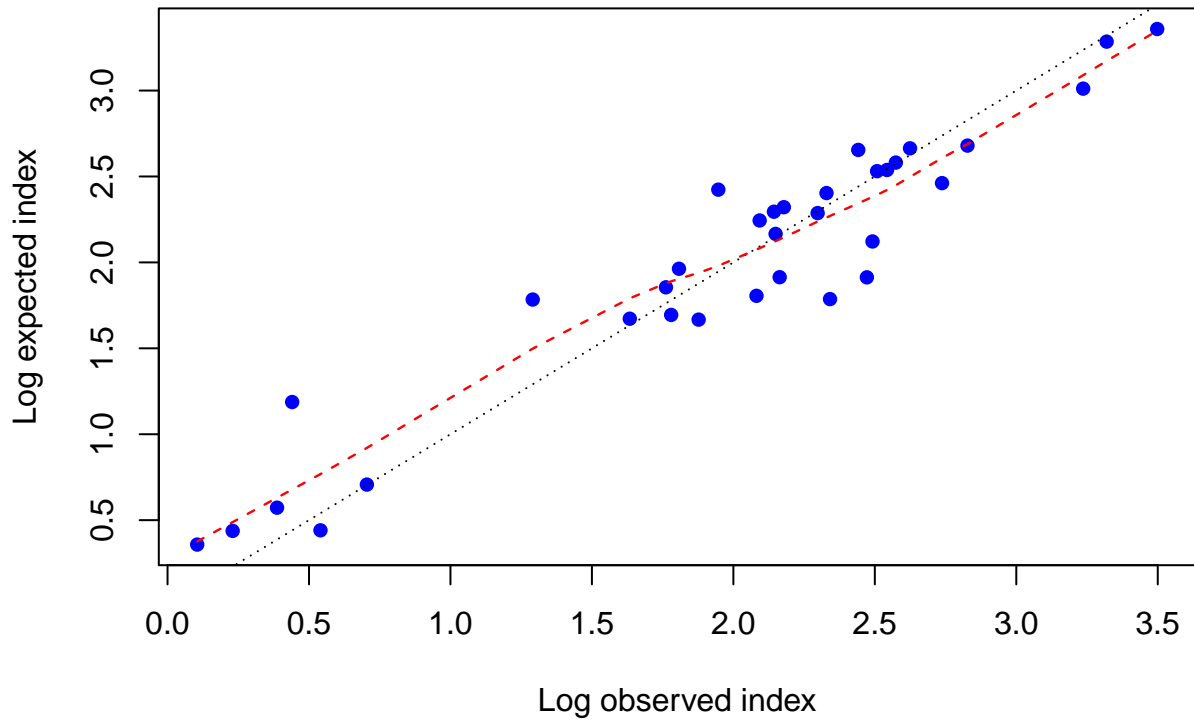


Log index



Log index







Effective catchability

11.54688  
11.54684  
11.54680

0.5

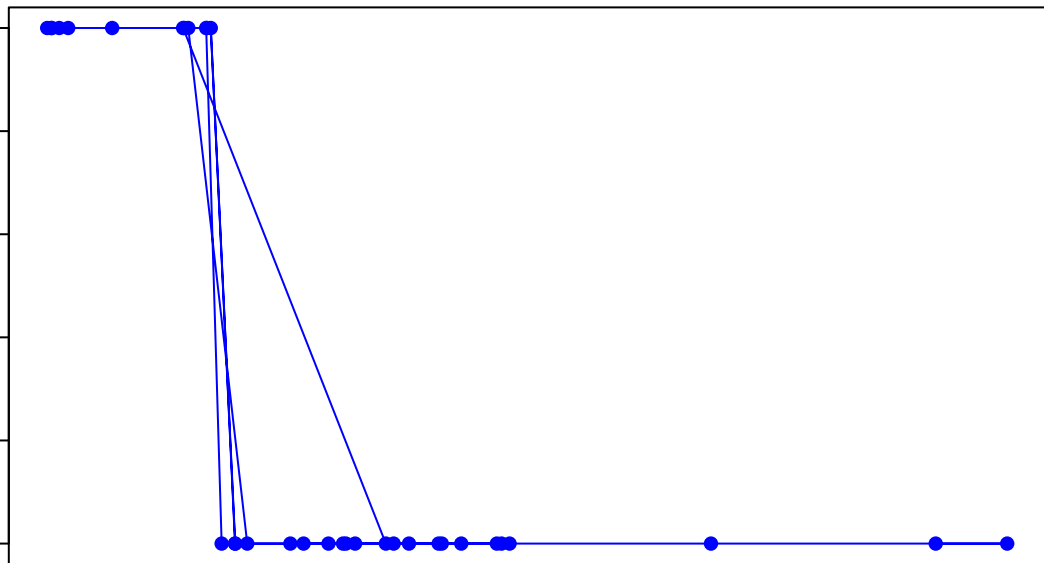
Vulnerable biomass

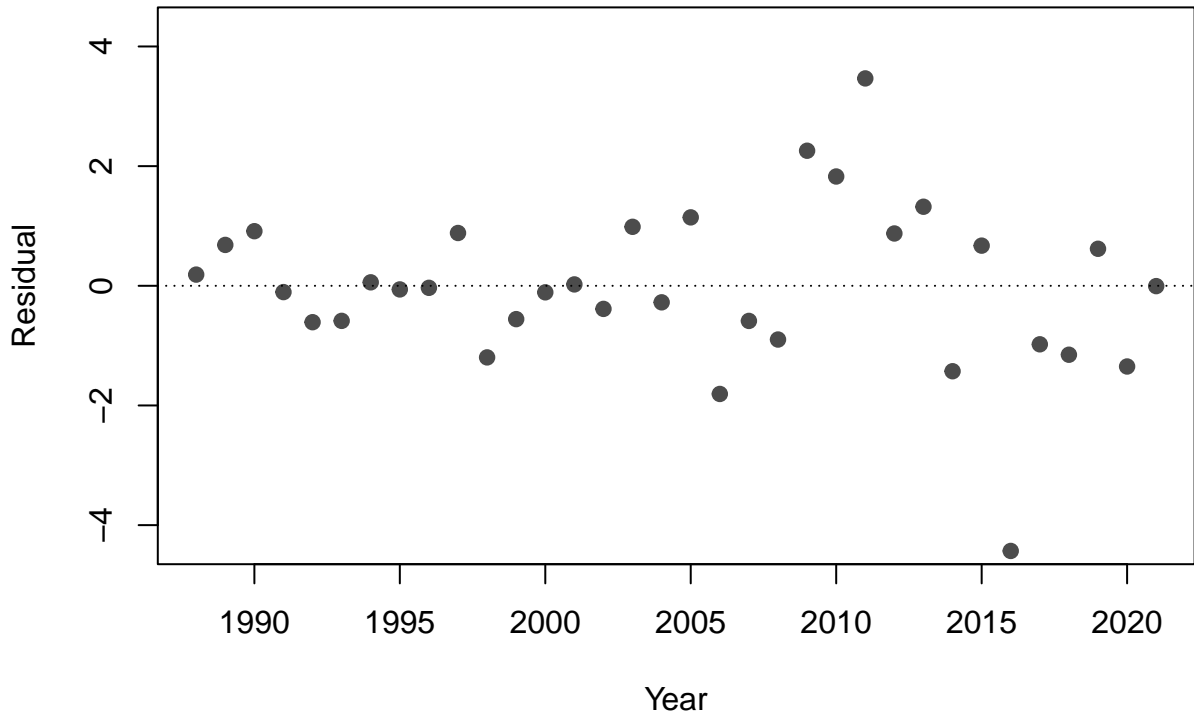
1.0

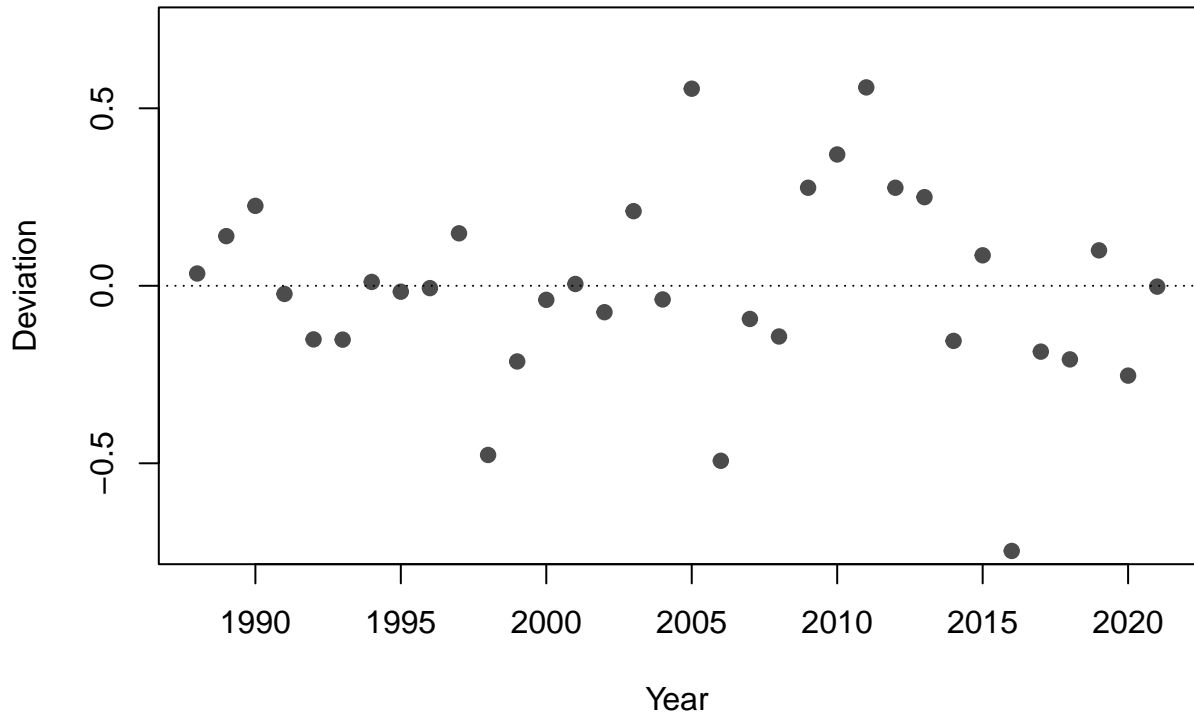
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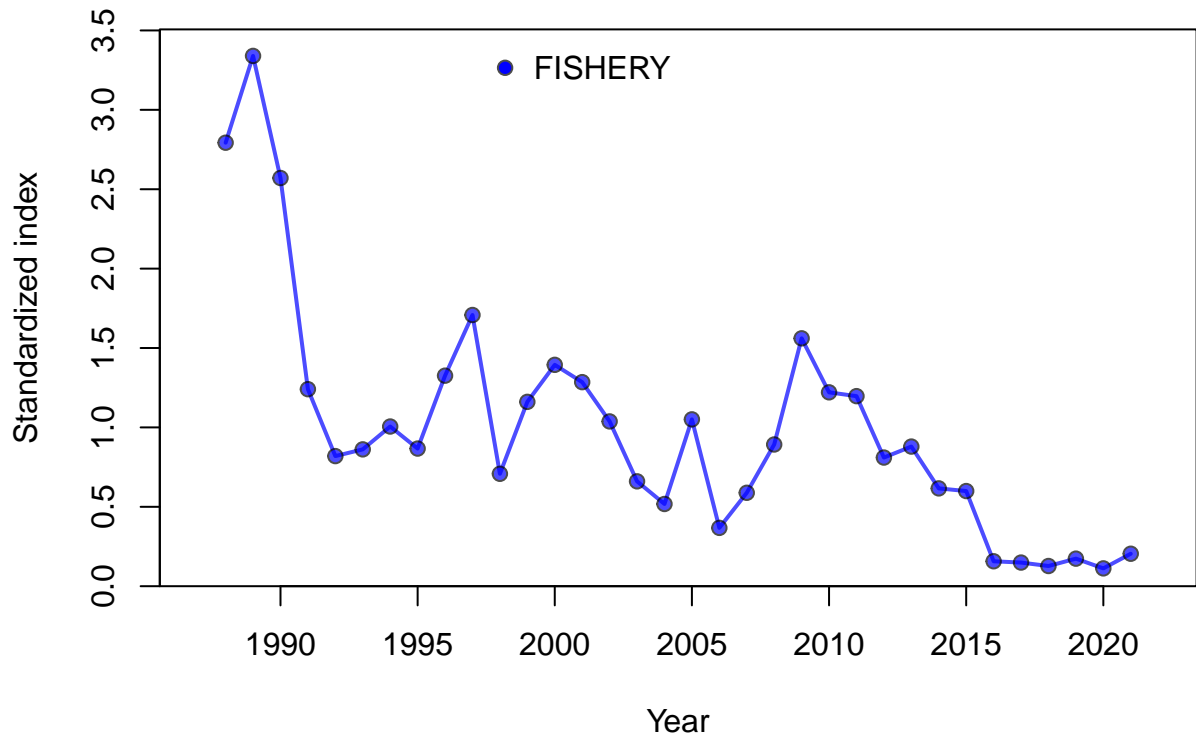
2.0

2.5

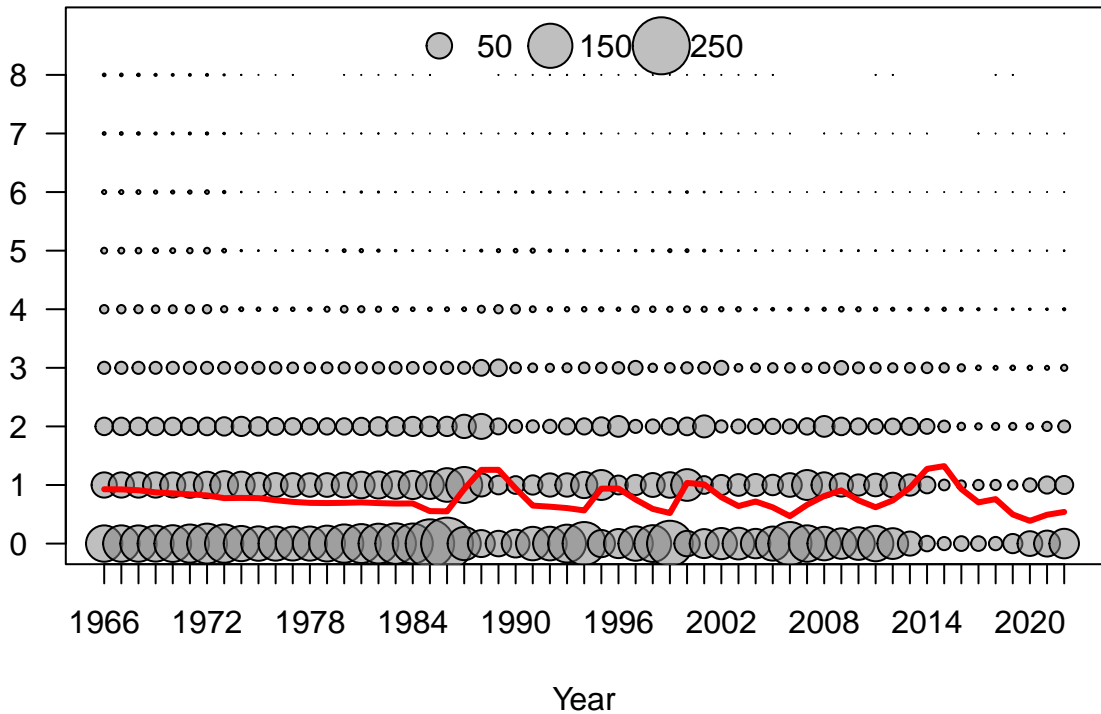




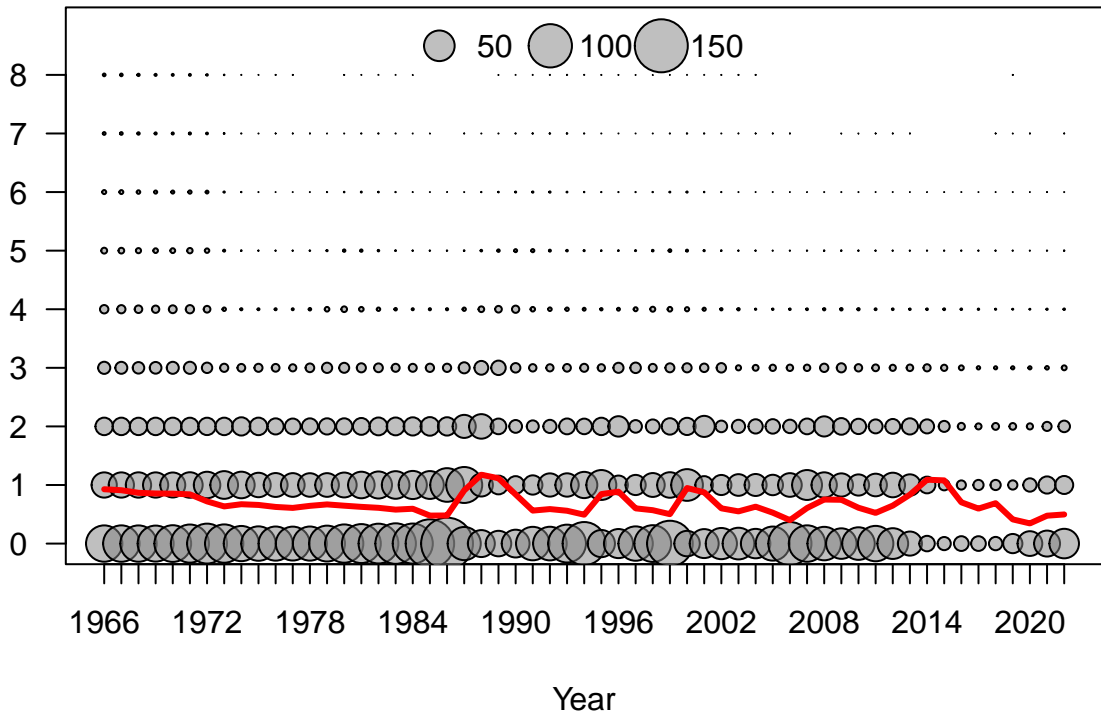


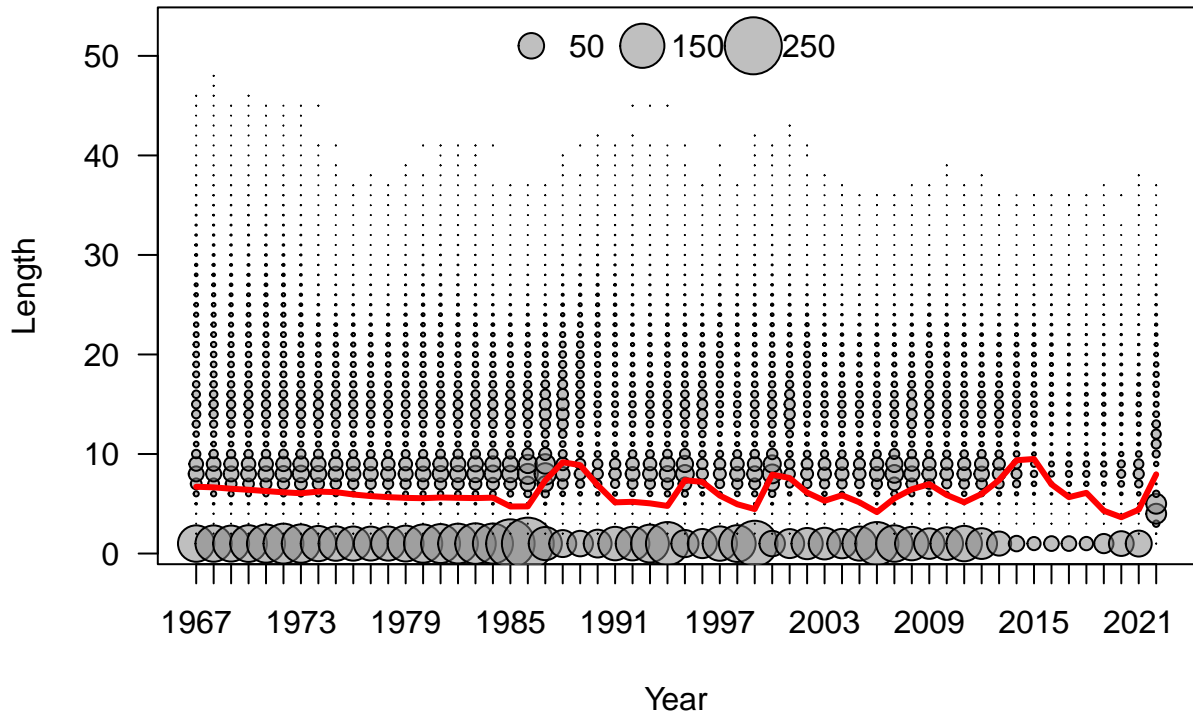


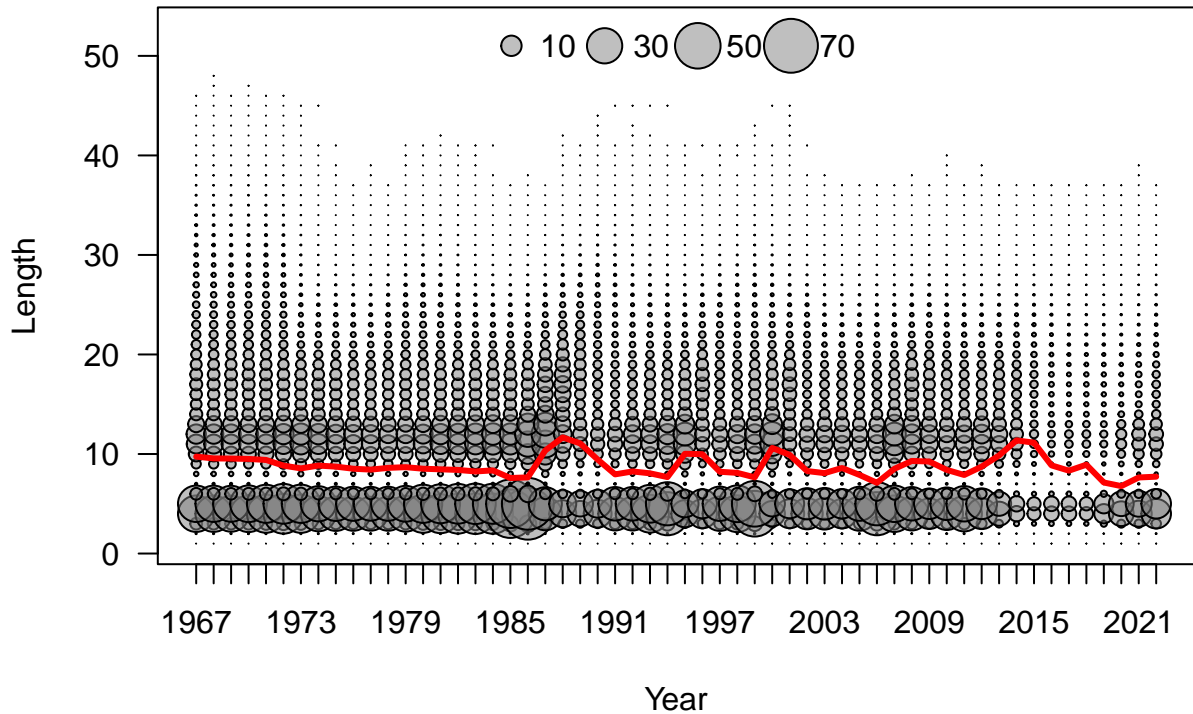
Age



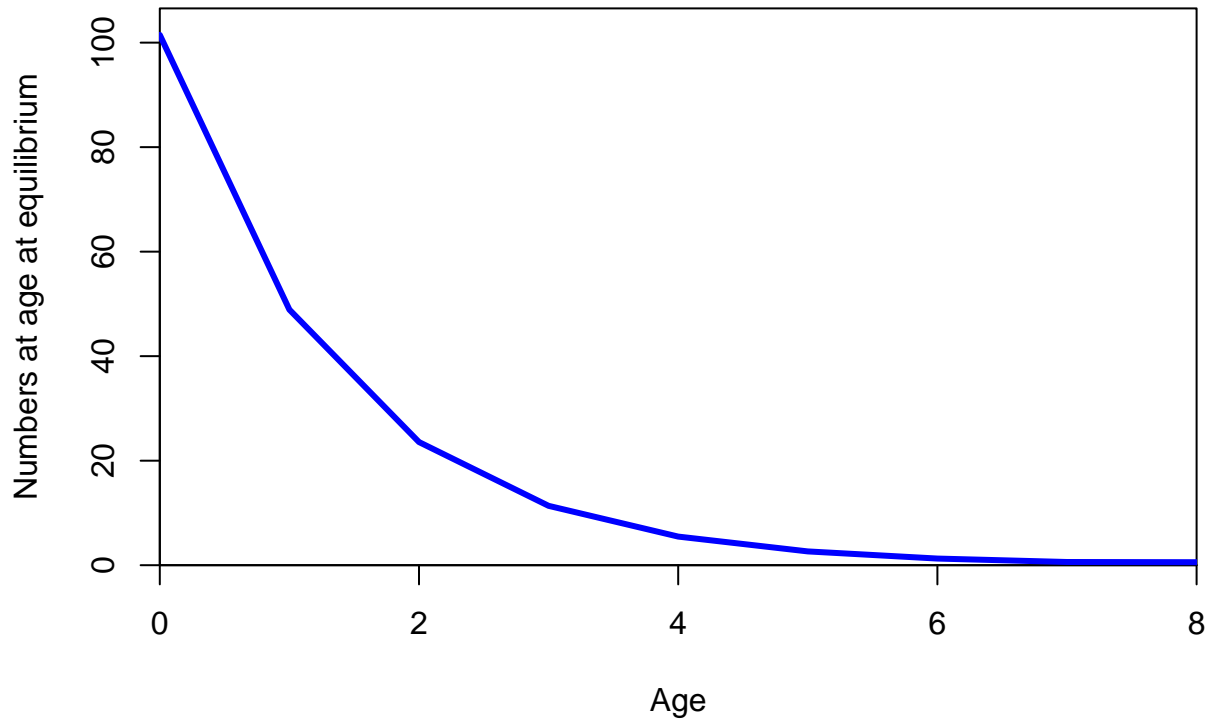
Age

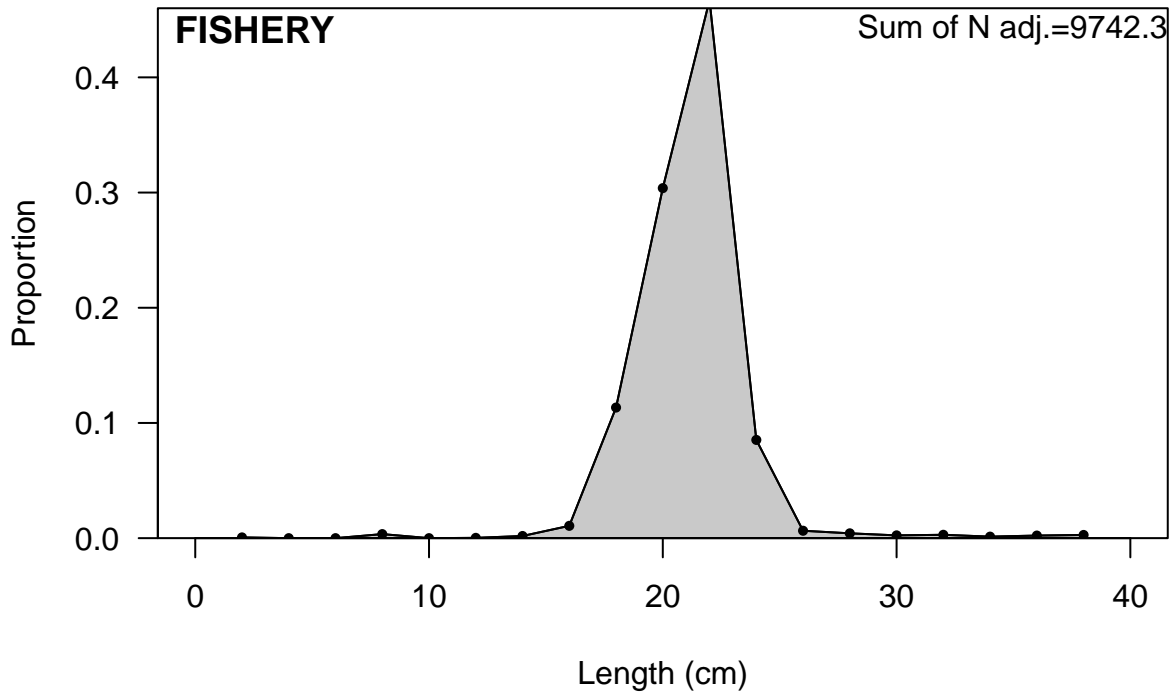


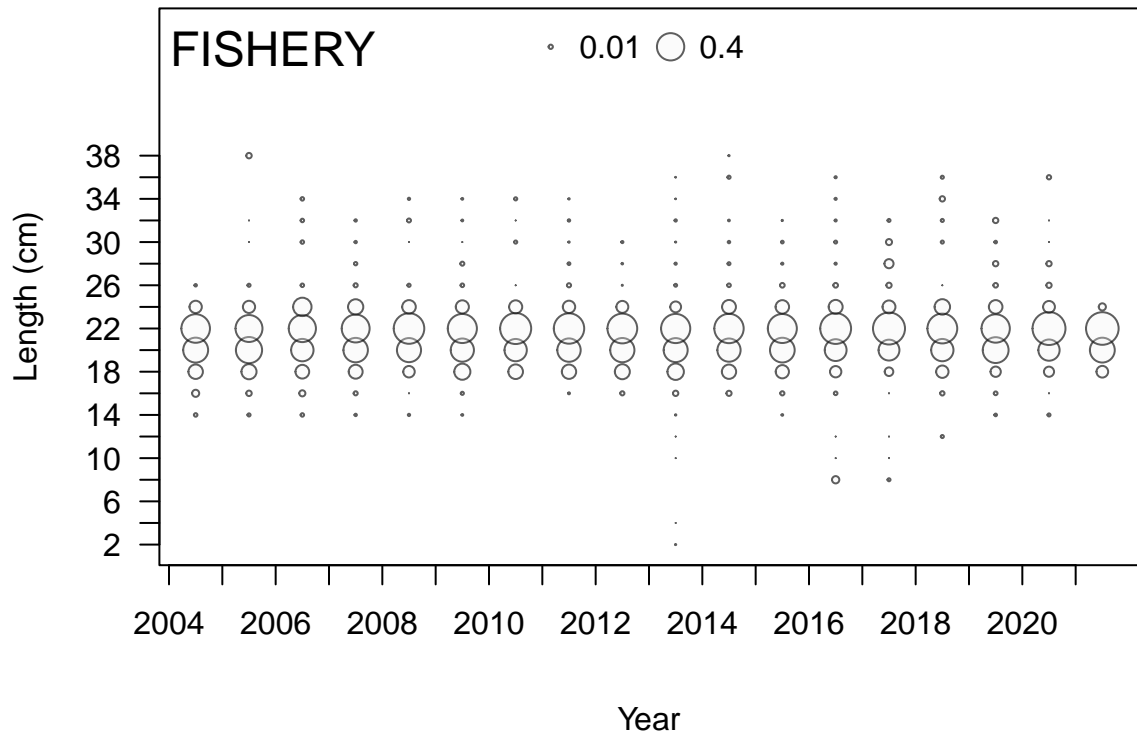




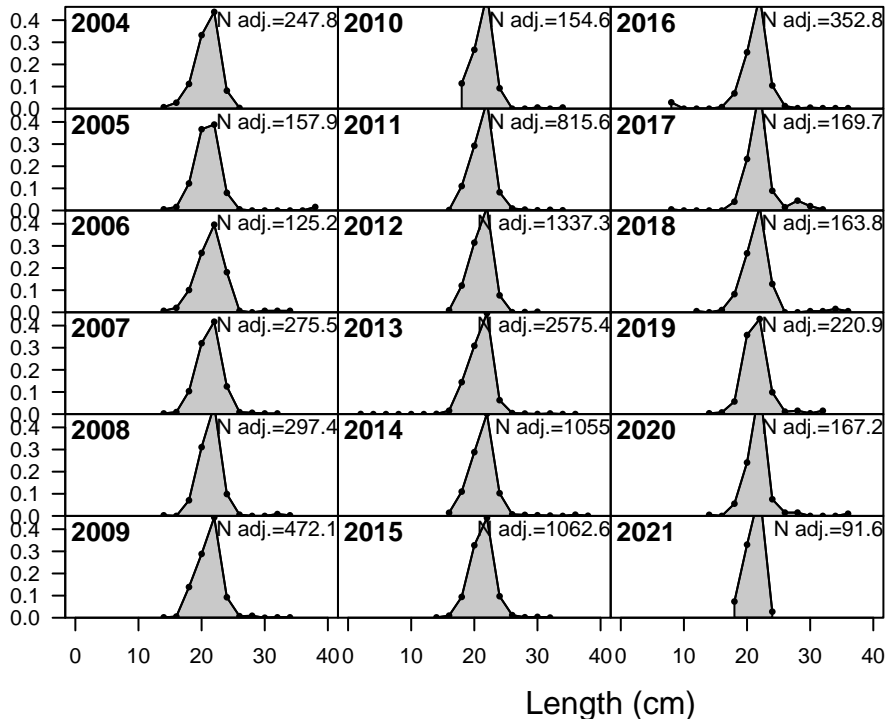




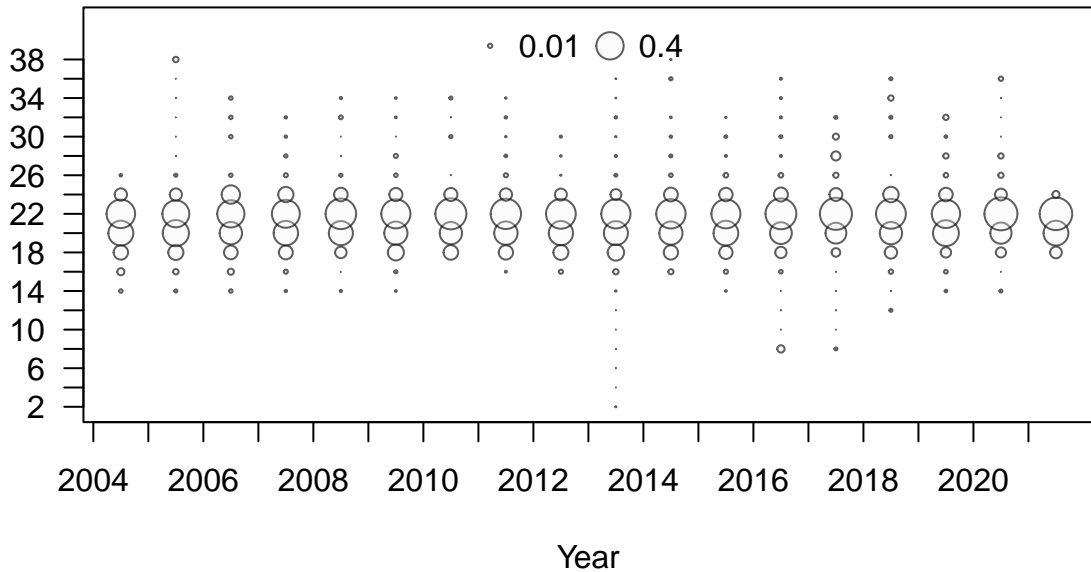




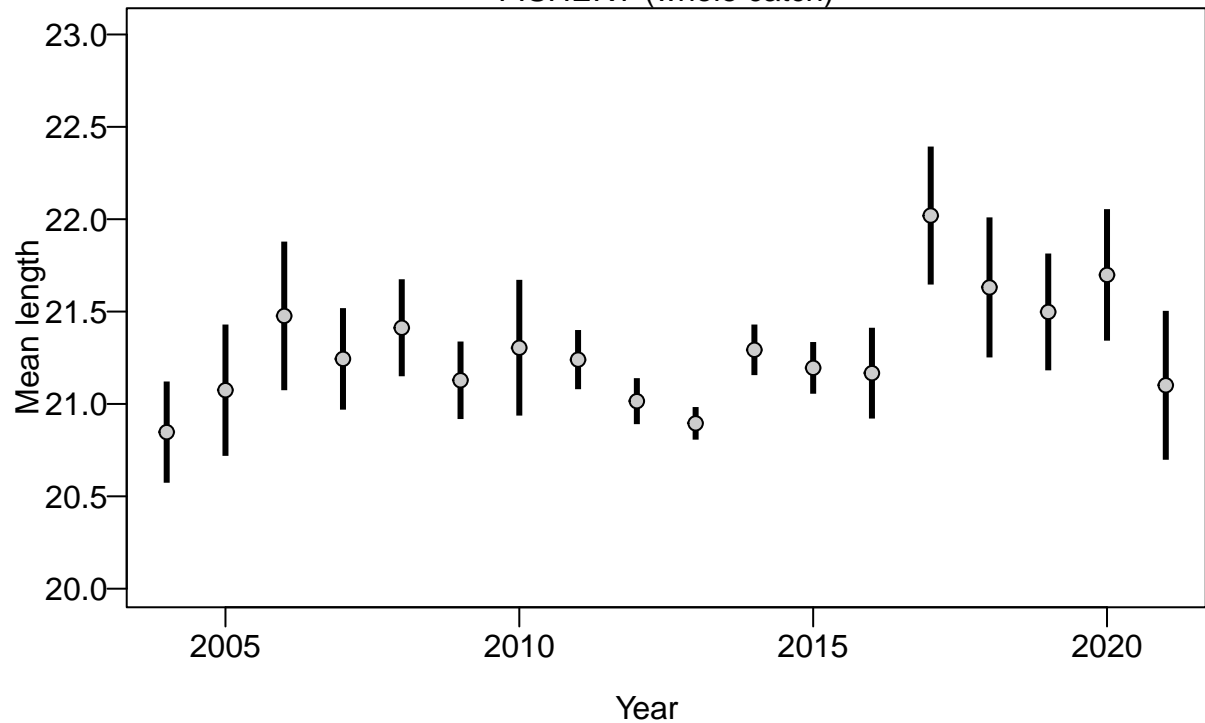
Proportion

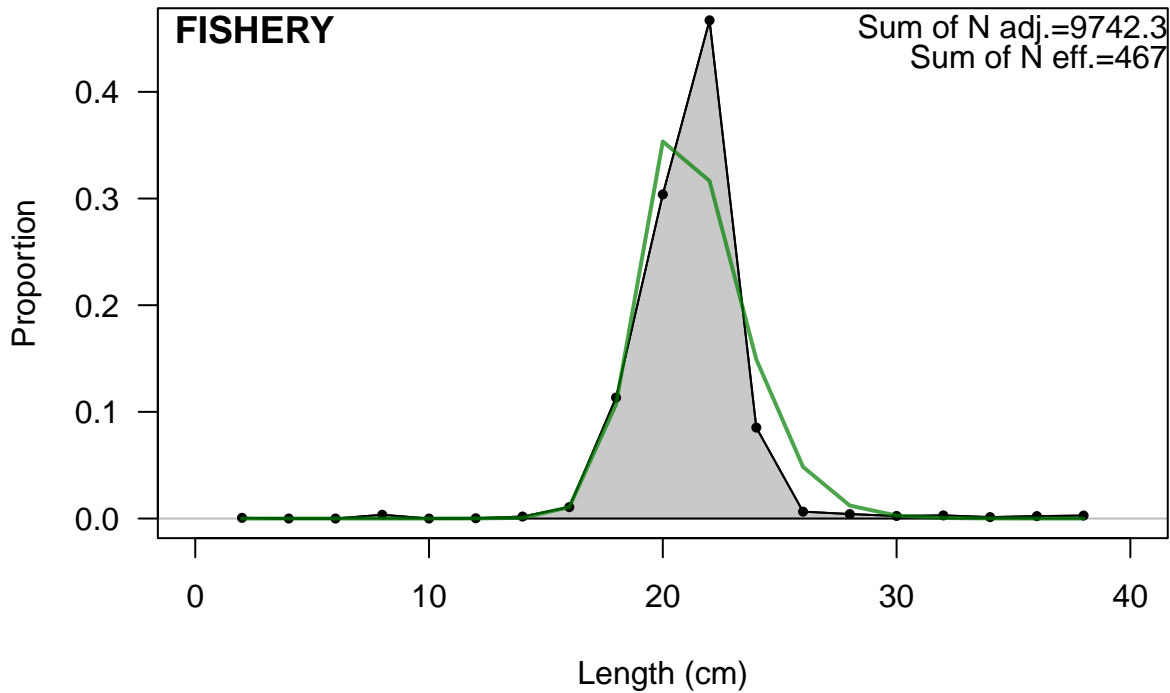


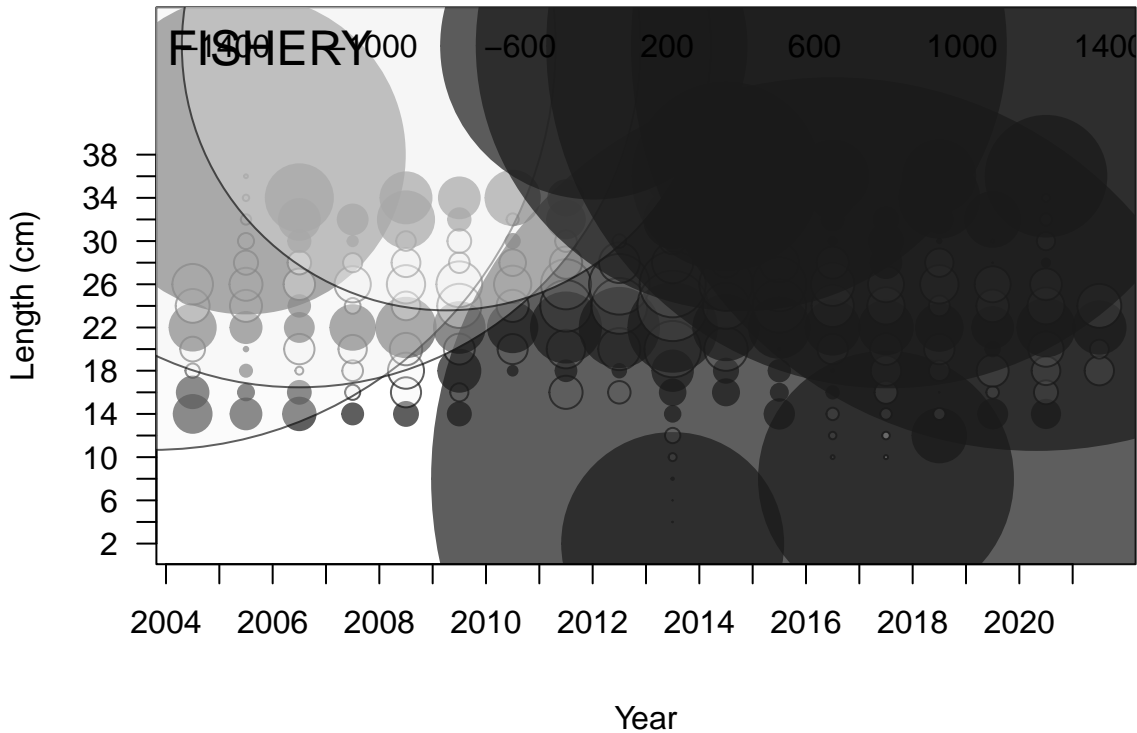
Length (cm)



FISHERY (whole catch)

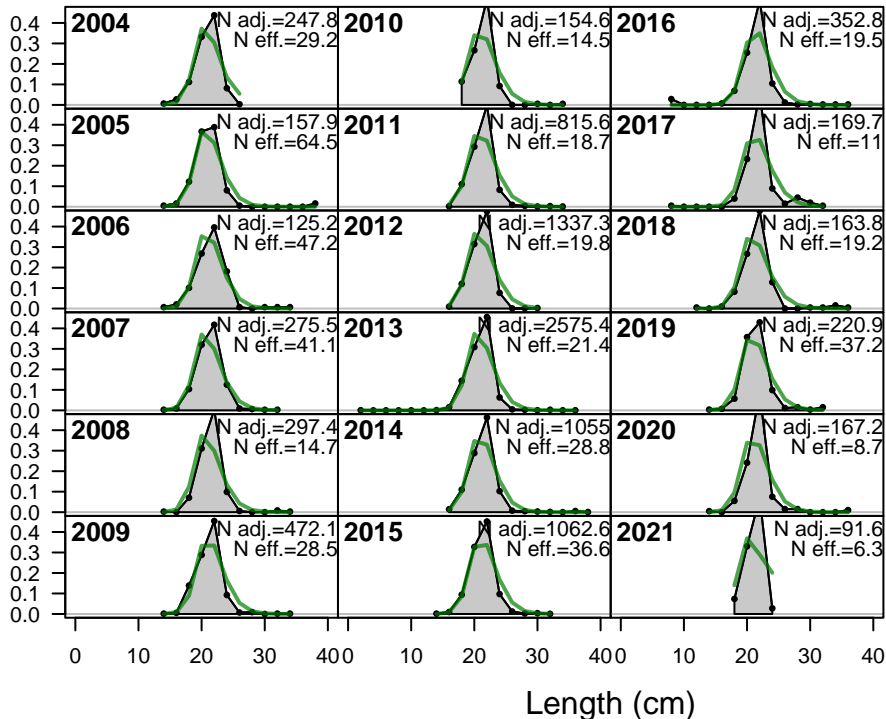


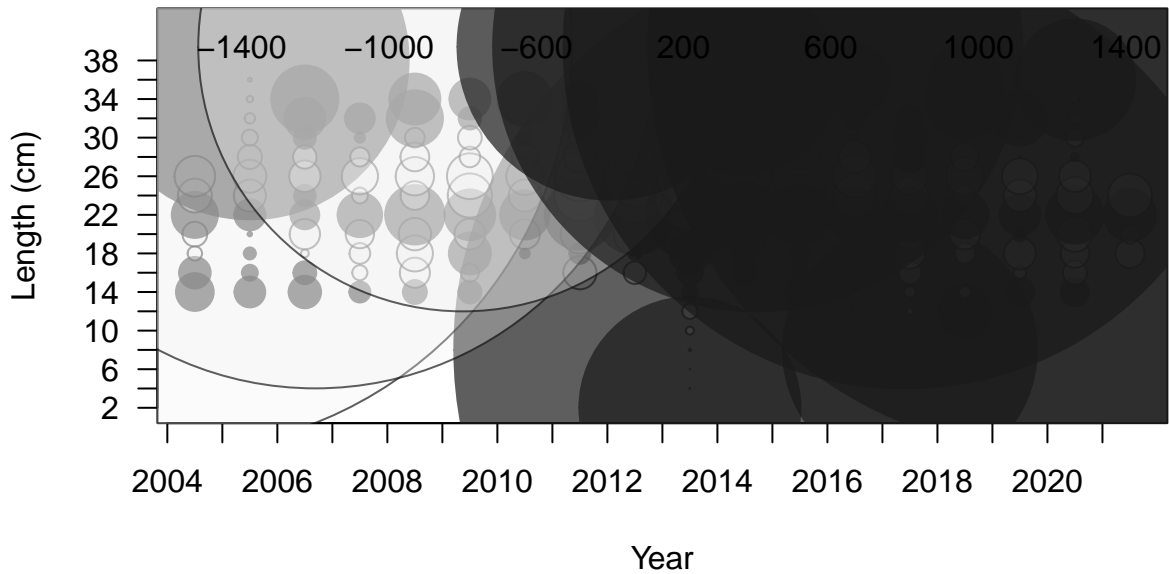




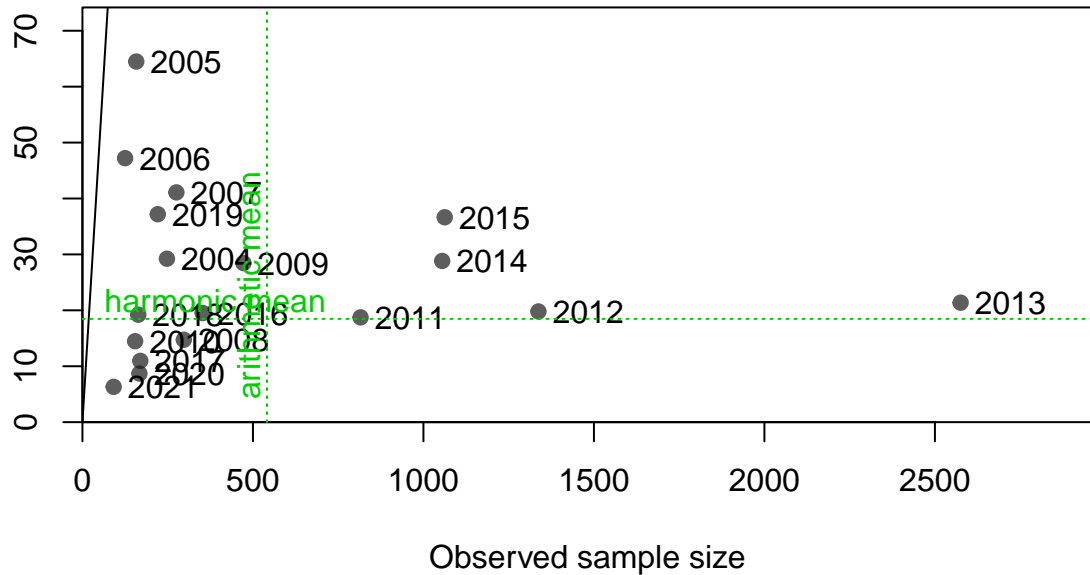


Proportion

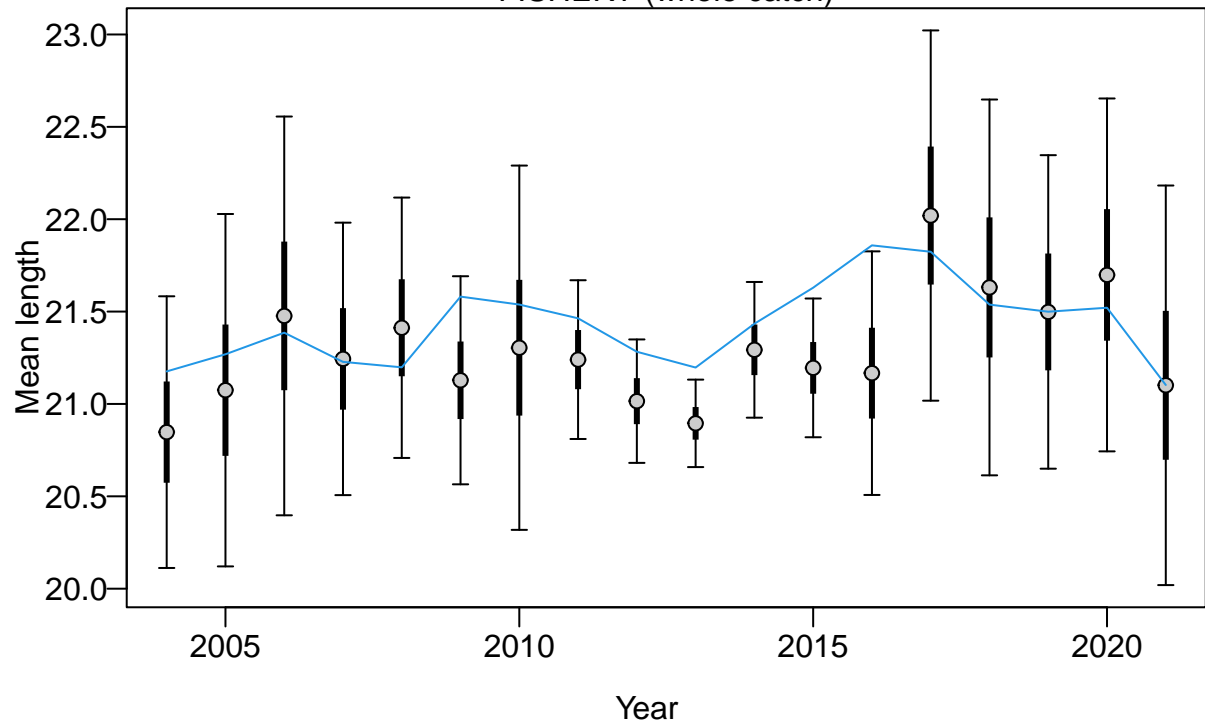


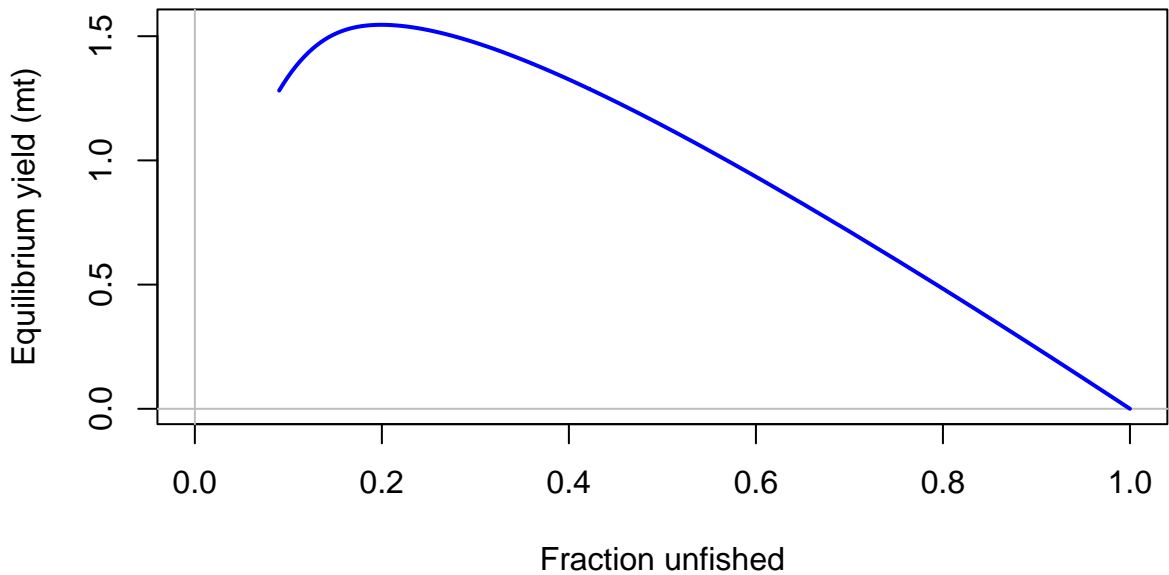


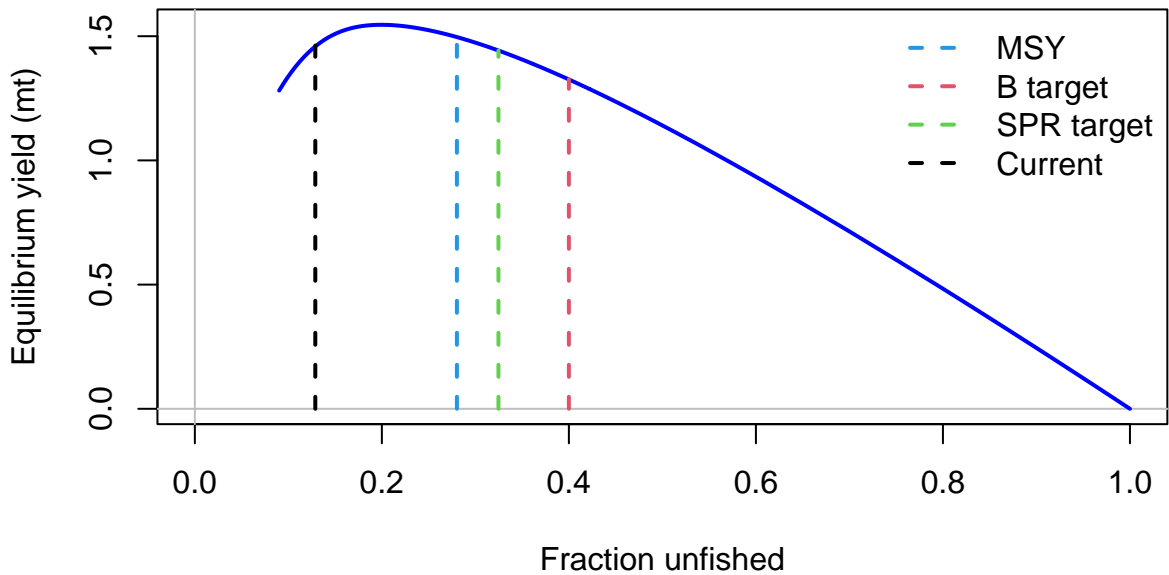
Effective sample size



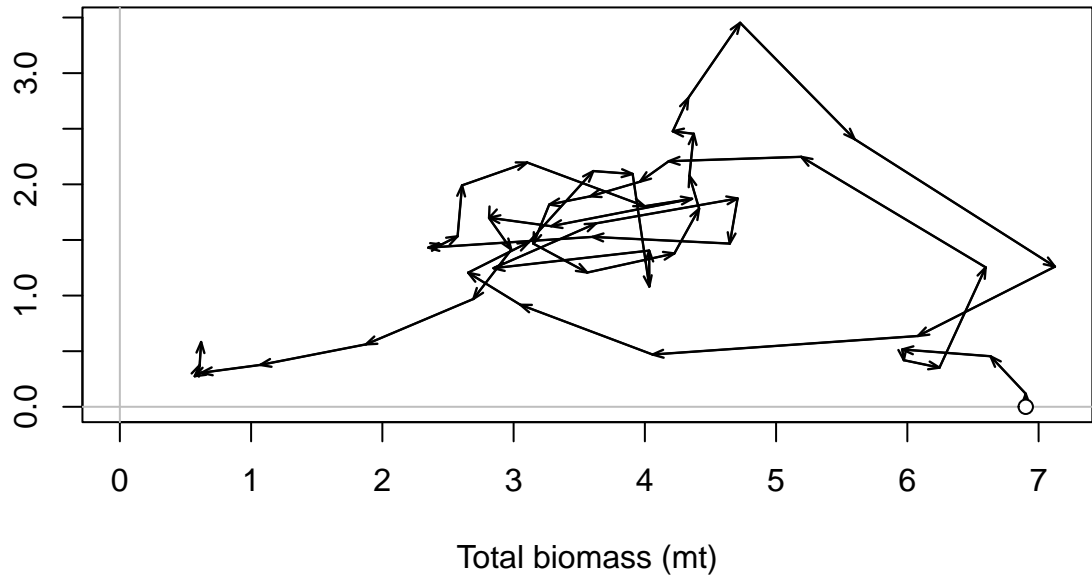
FISHERY (whole catch)

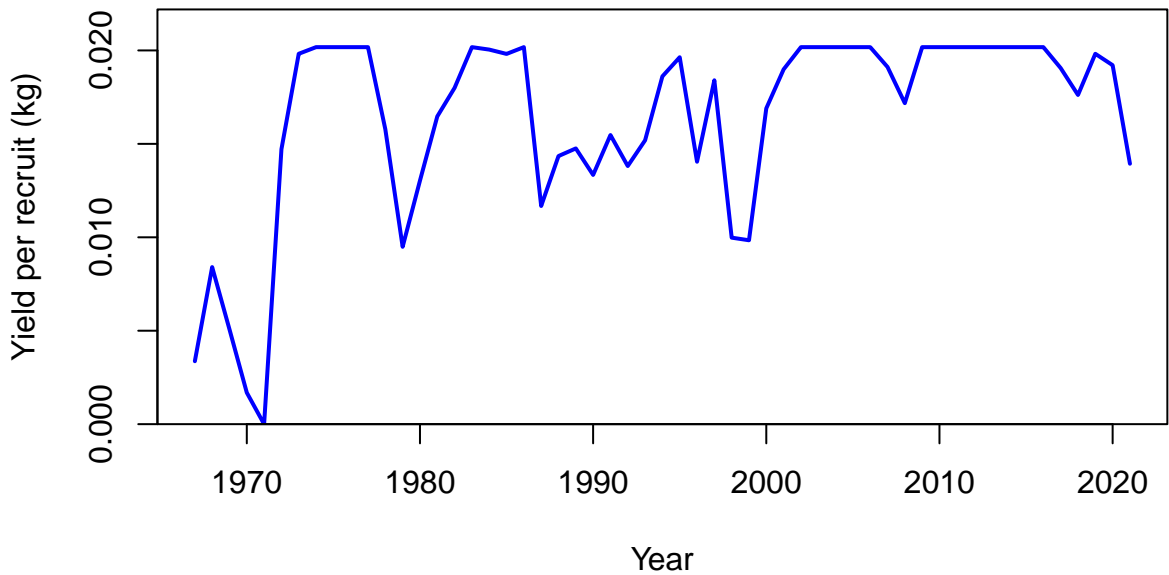




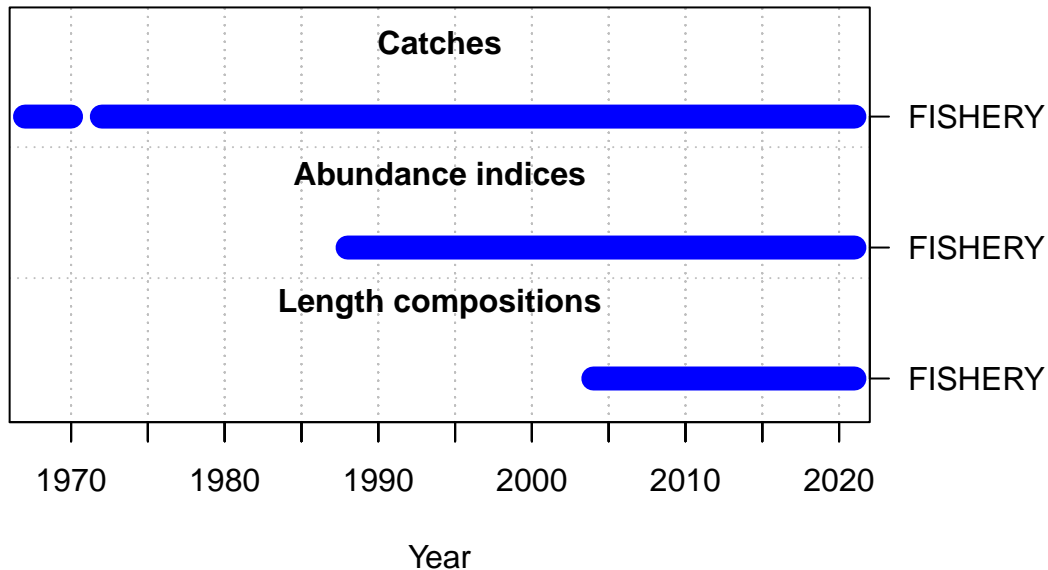


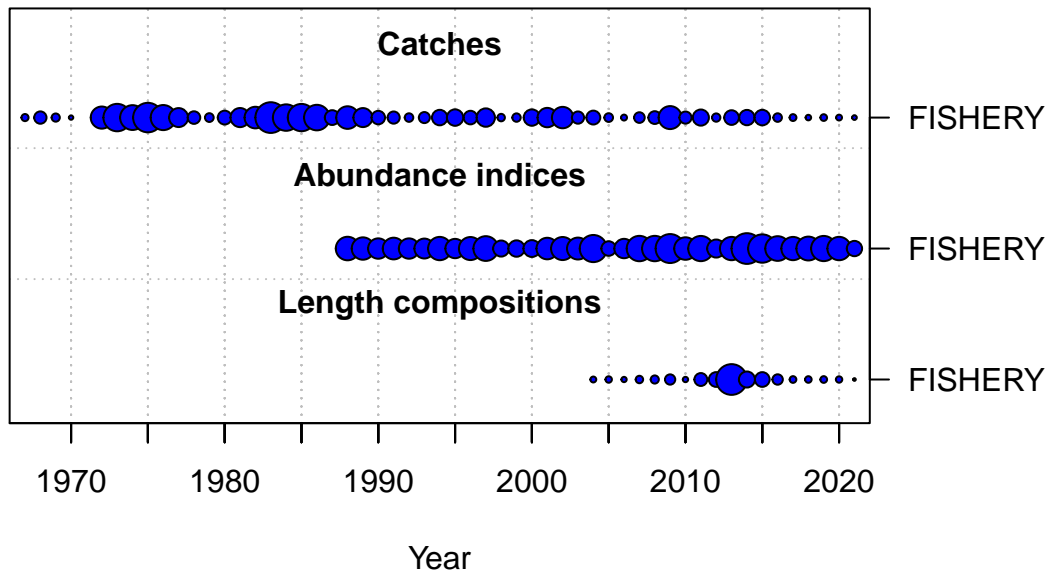
Surplus production (mt)



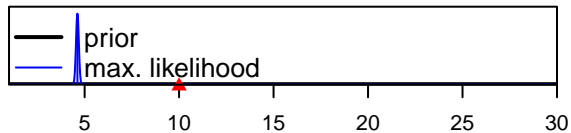




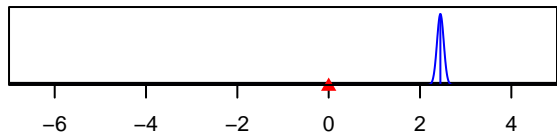




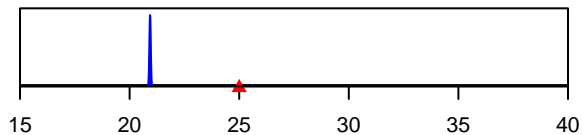
SR\_LN(R0)



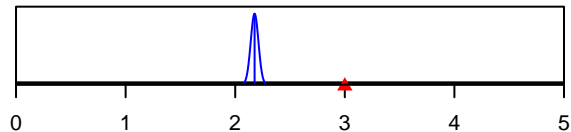
LnQ\_base\_FISHERY(1)



Size\_inflection\_FISHERY(1)



Size\_95%width\_FISHERY(1)



Parameter value