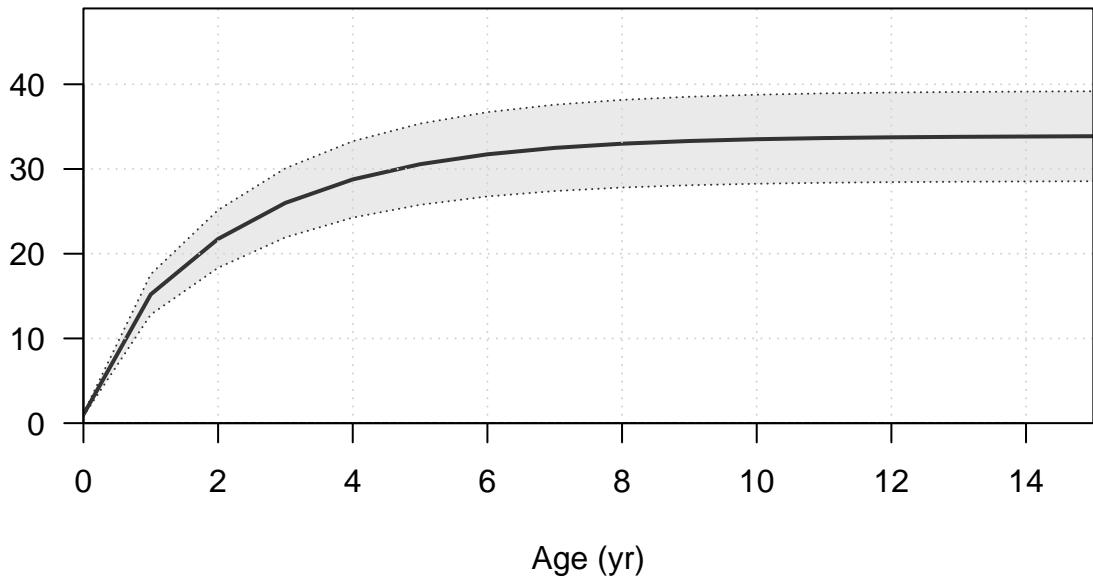
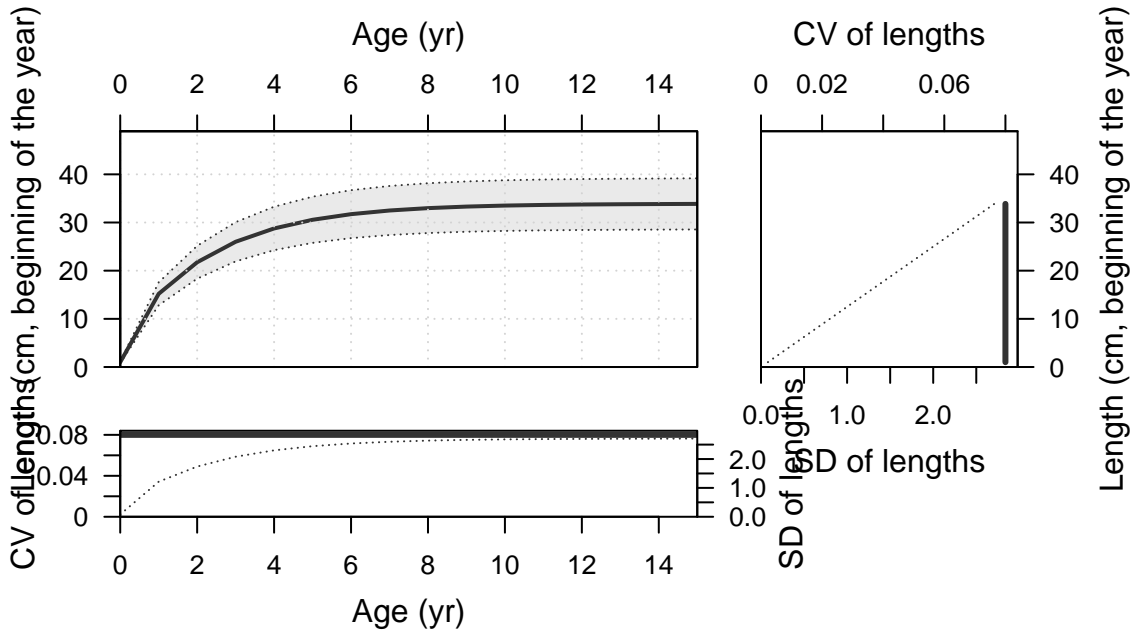
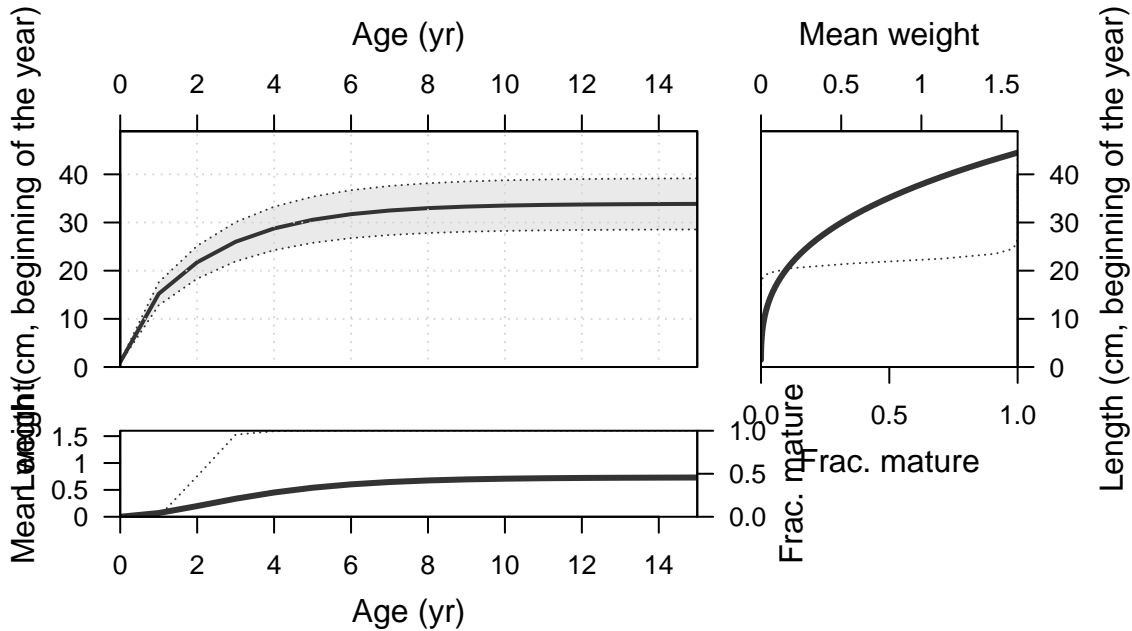


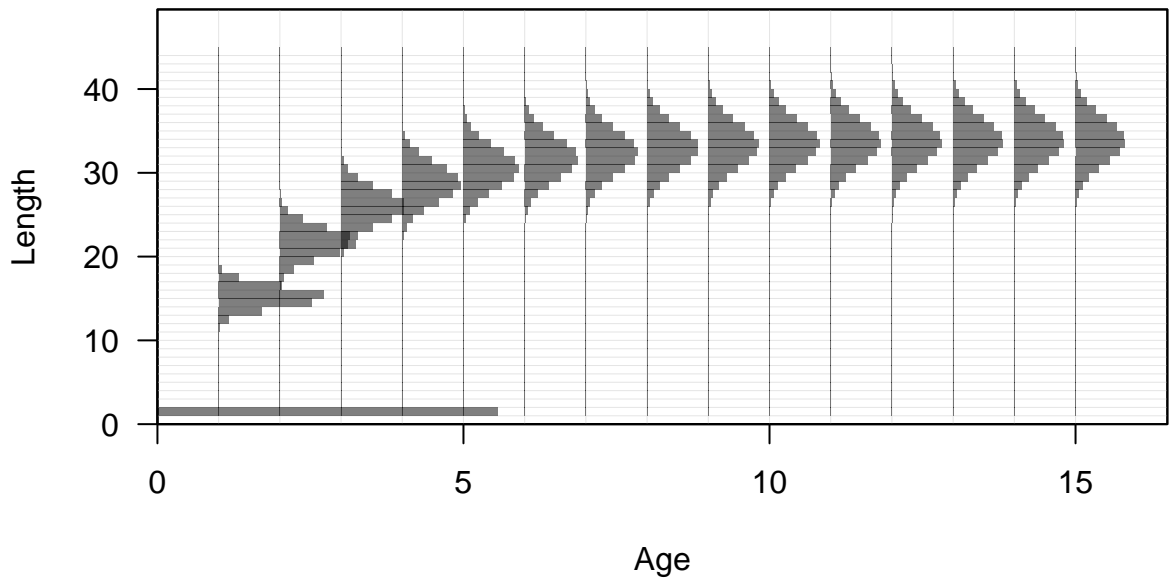
Plots created using the 'r4ss' package in R  
Stock Synthesis version: 3.30.19.0  
StartTime: Thu Jul 28 16:49:42 2022  
Data\_File: data.ss  
Control\_File: control.ss

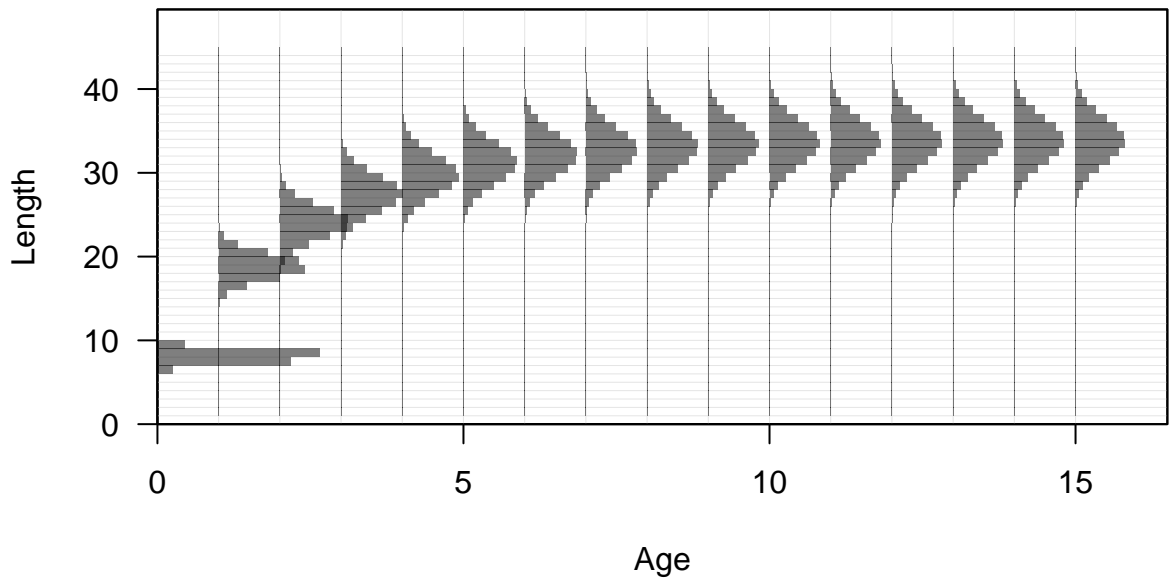
Length (cm, beginning of the year)

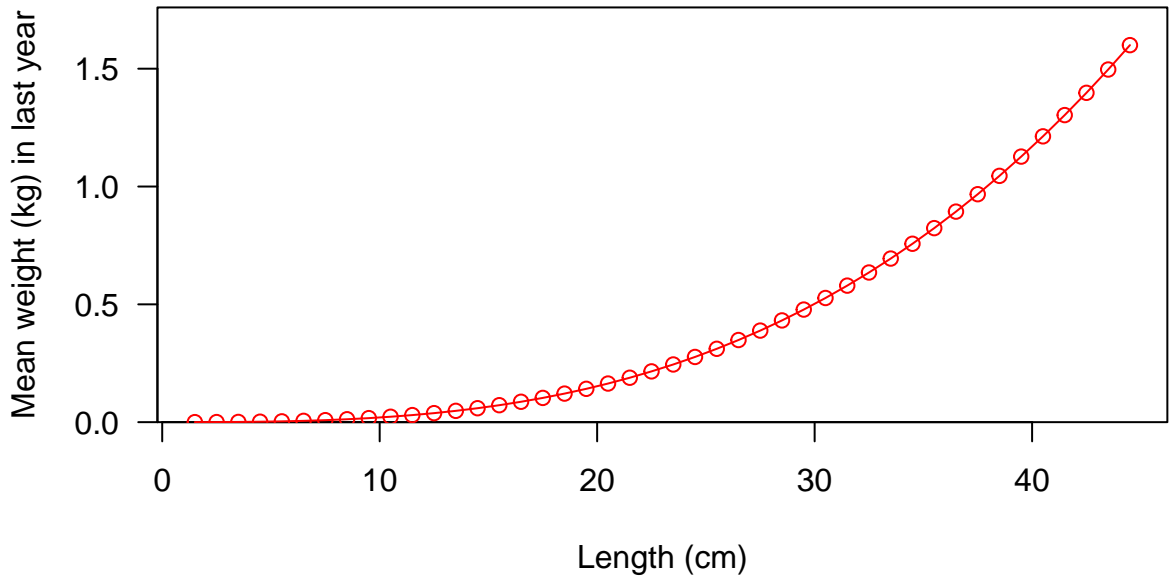


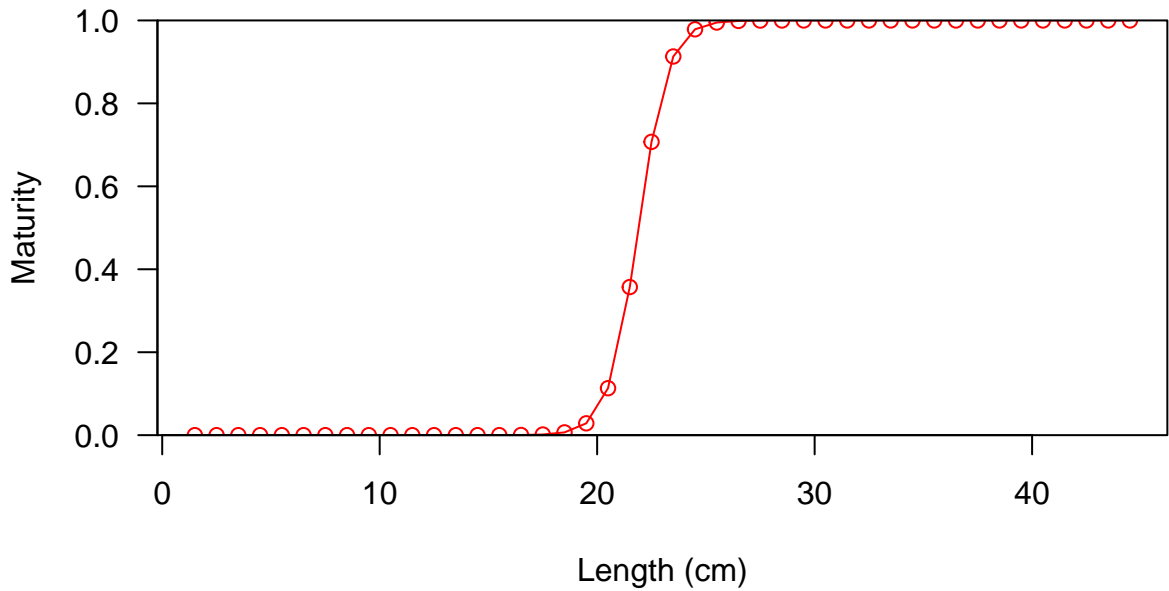




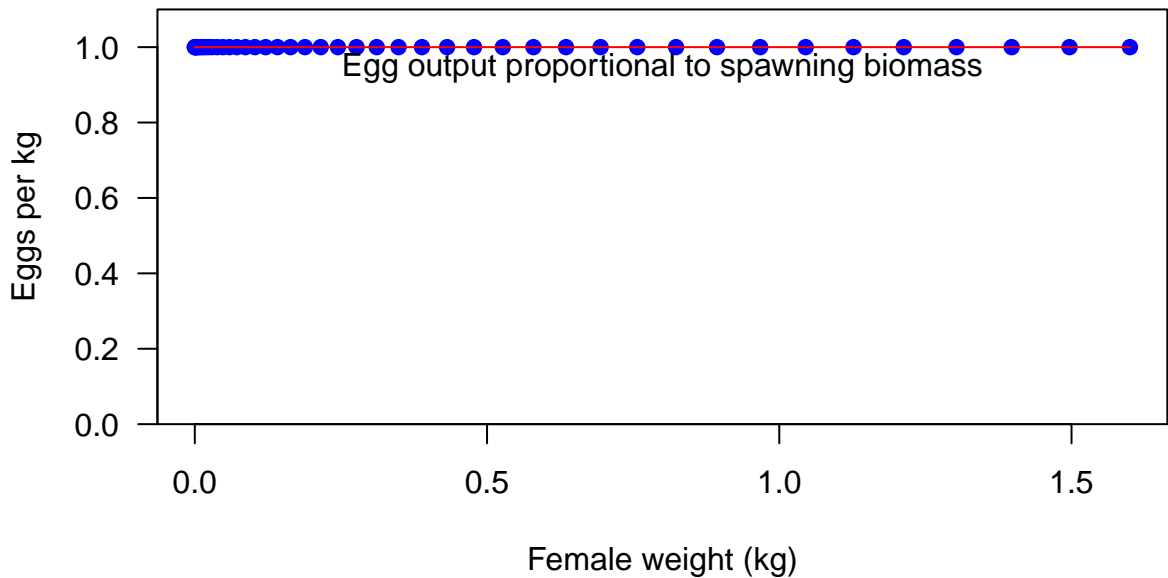


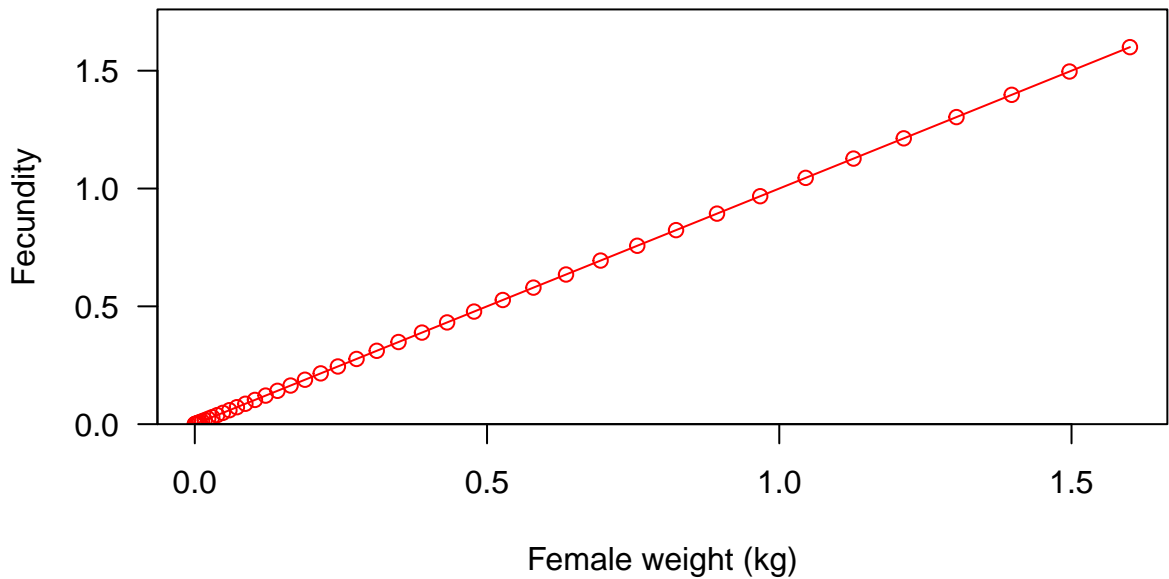


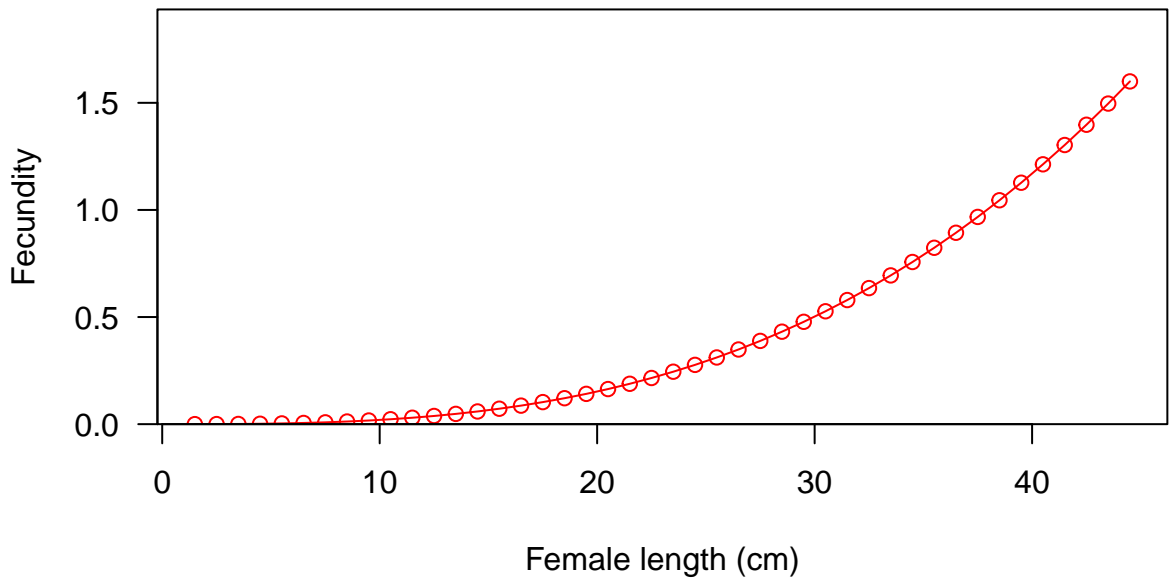


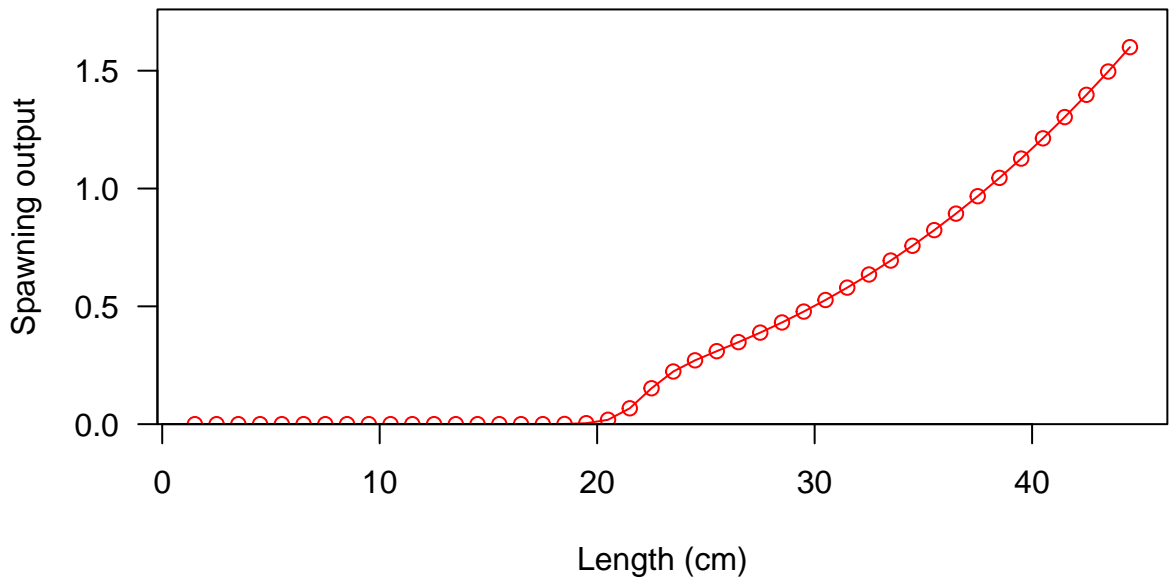


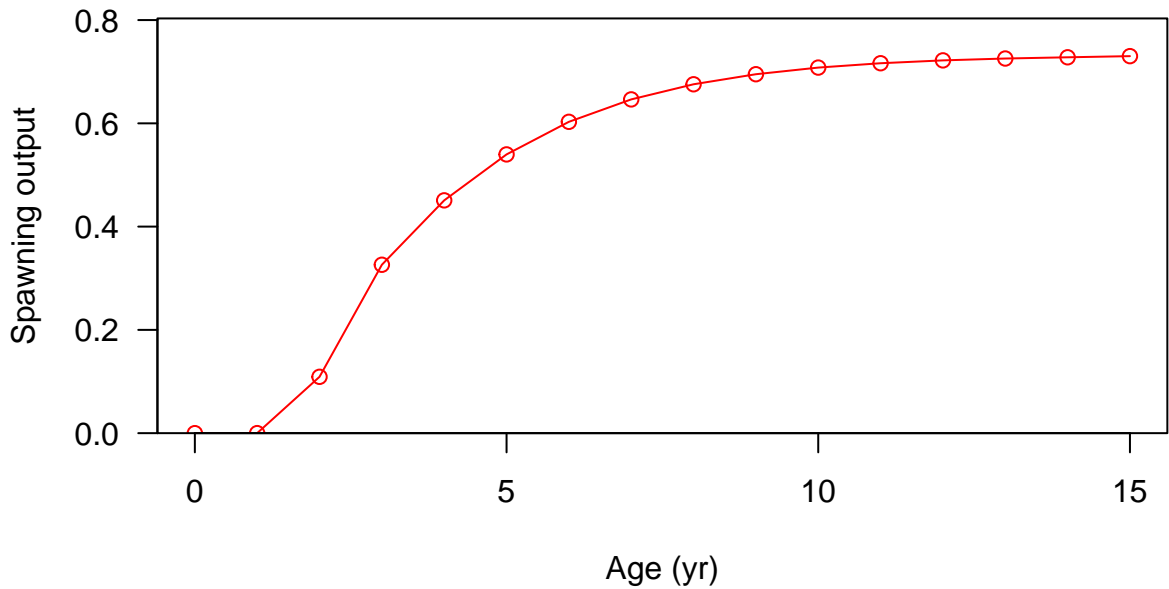








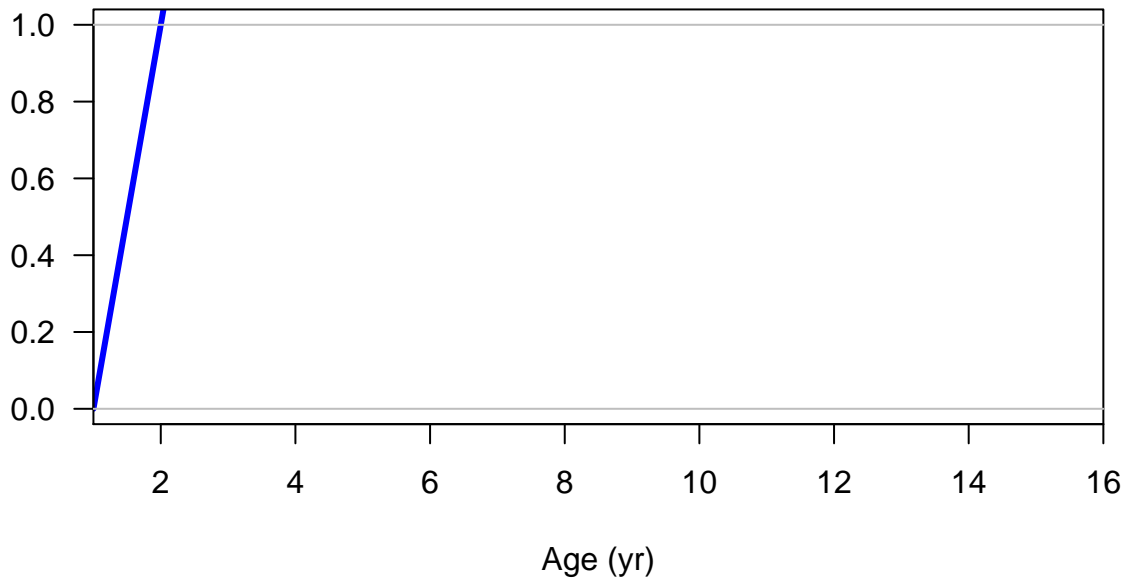




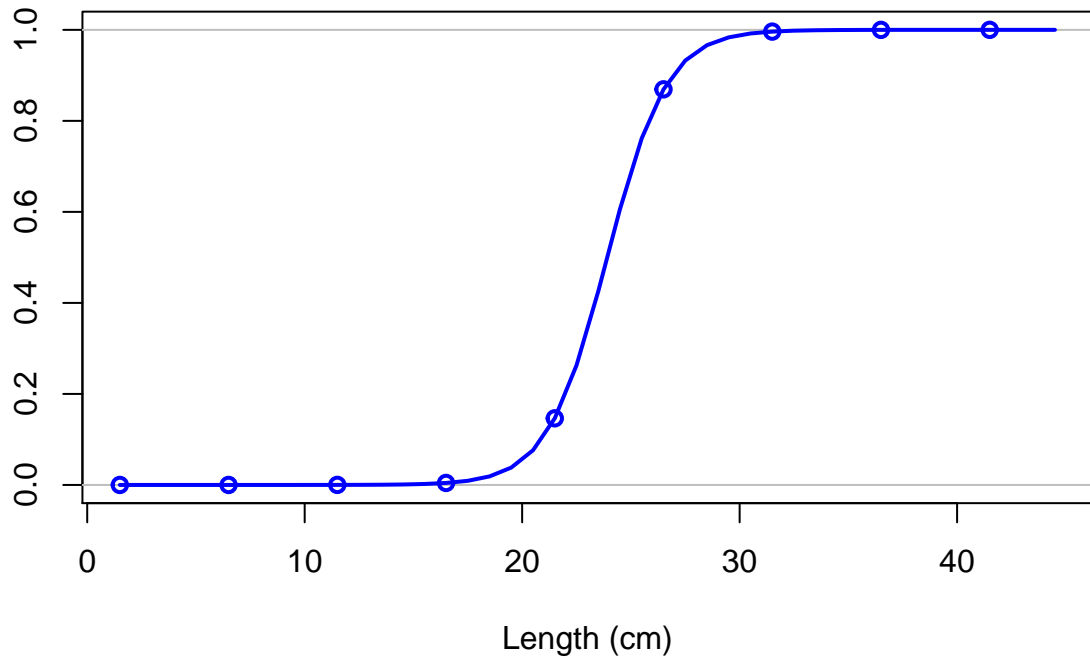
Hermaphroditism transition rate



Fraction females by age at equilibrium

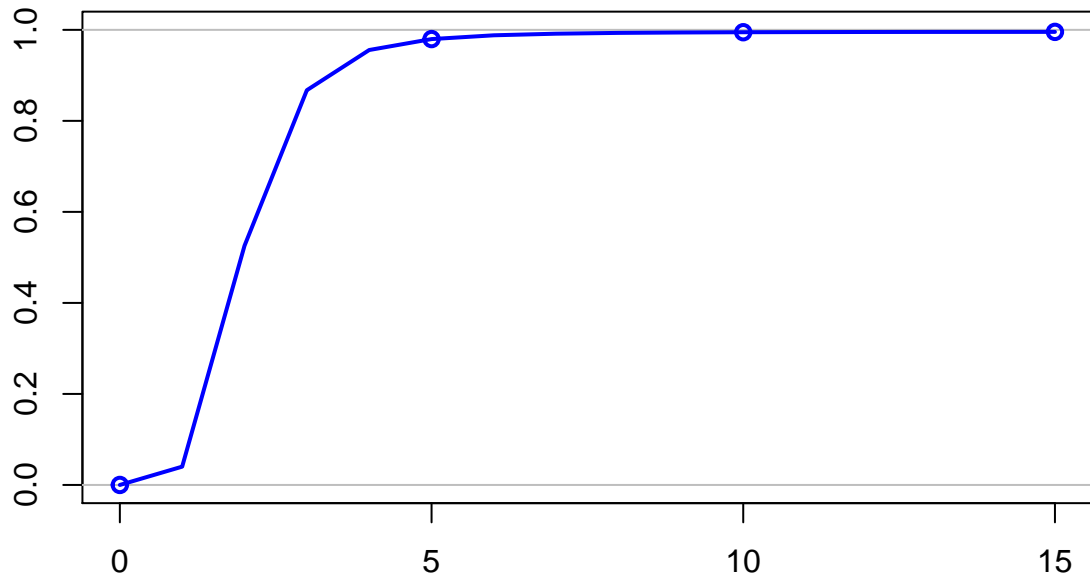


Selectivity



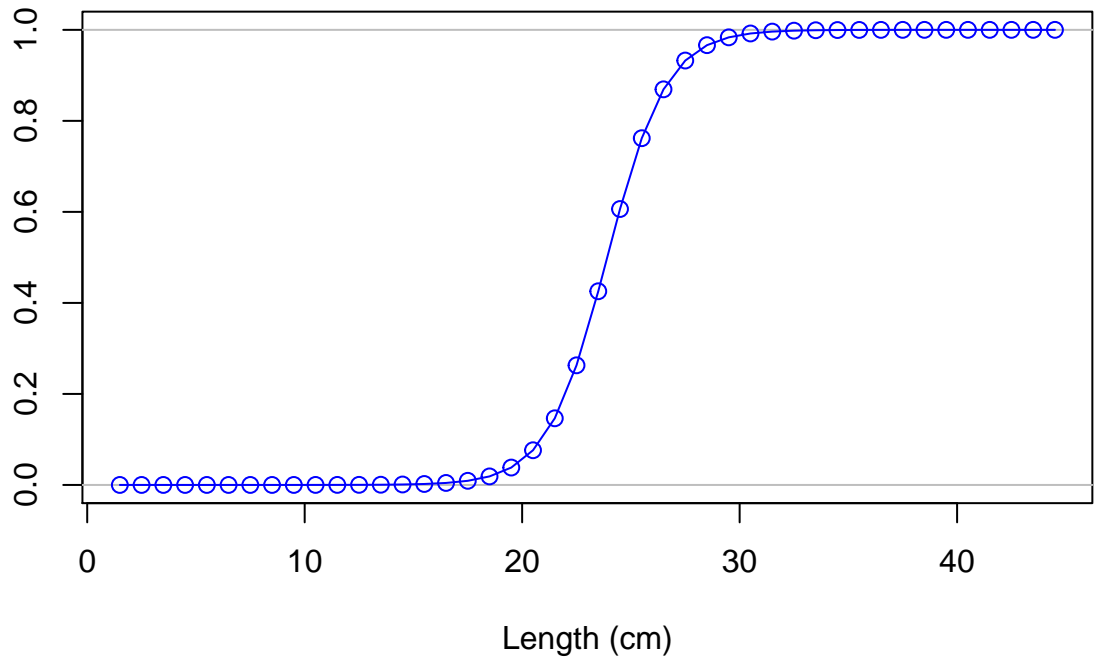


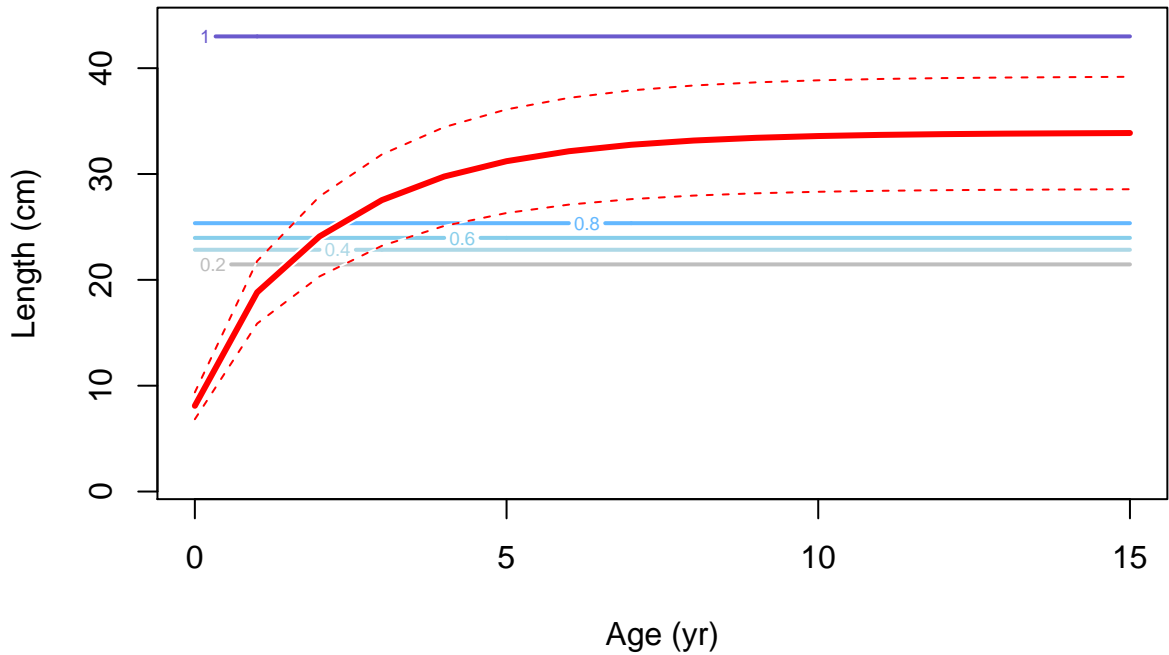
Selectivity



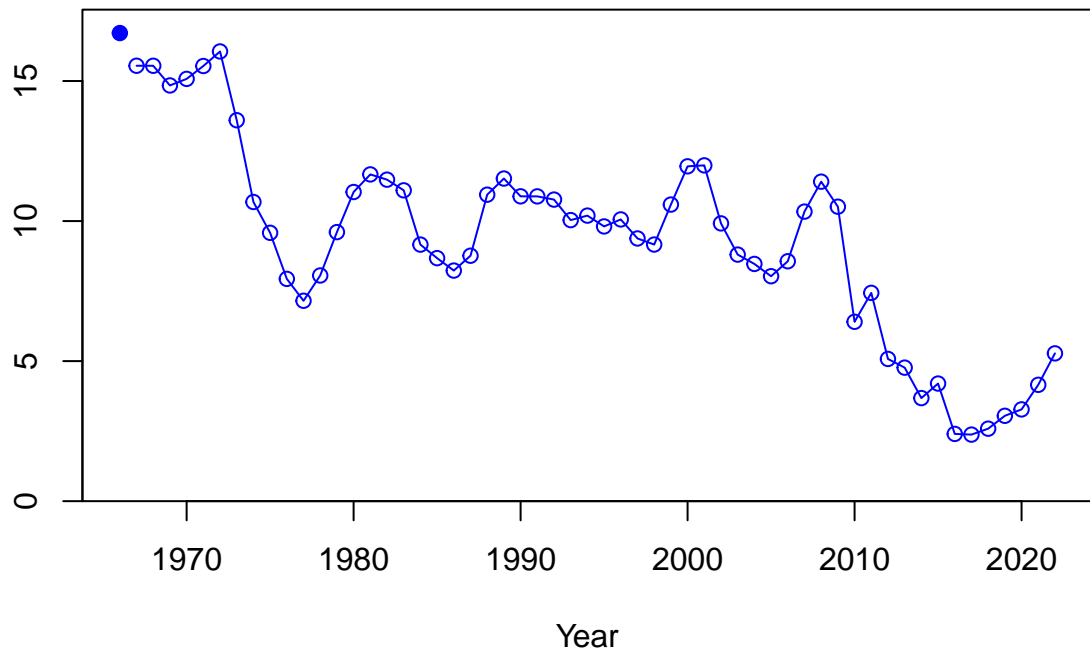
Age (yr)

Selectivity

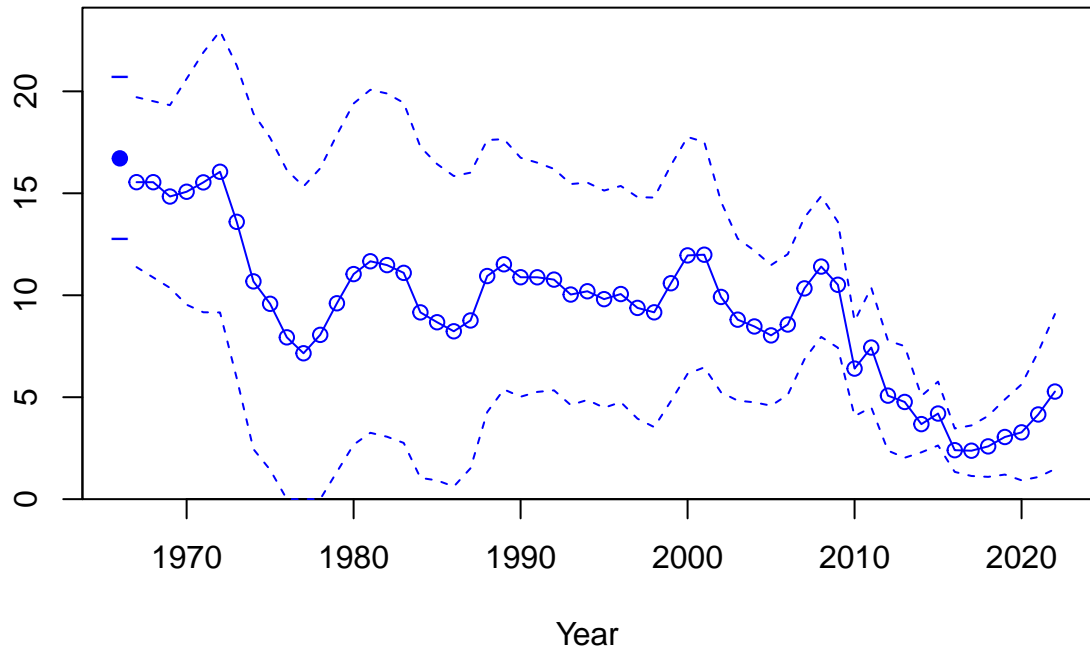




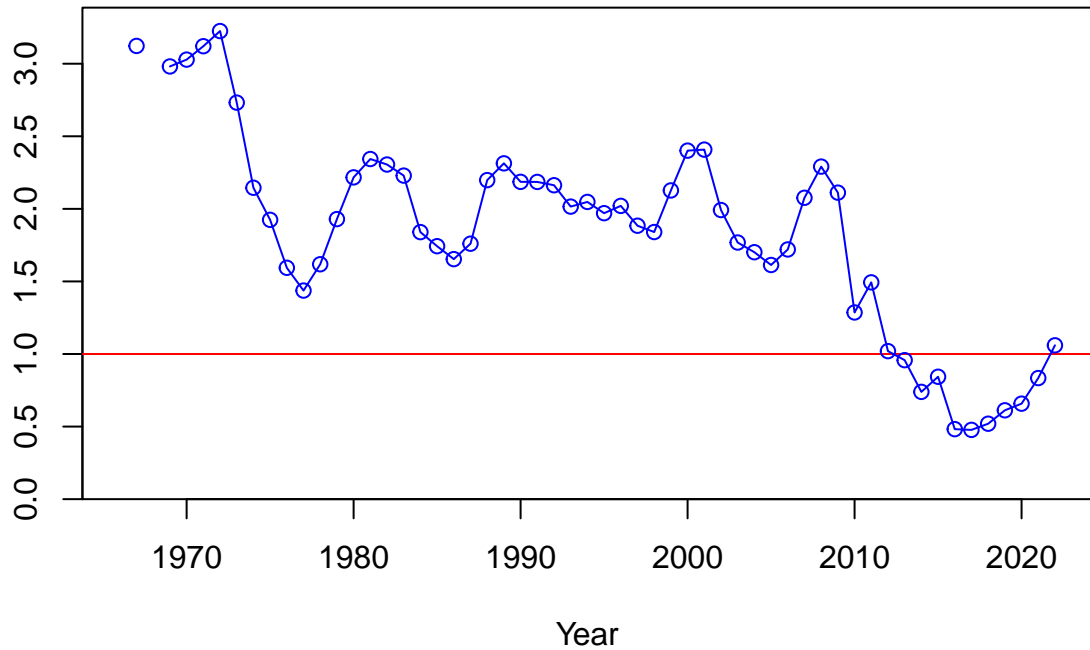
Spawning biomass (mt)



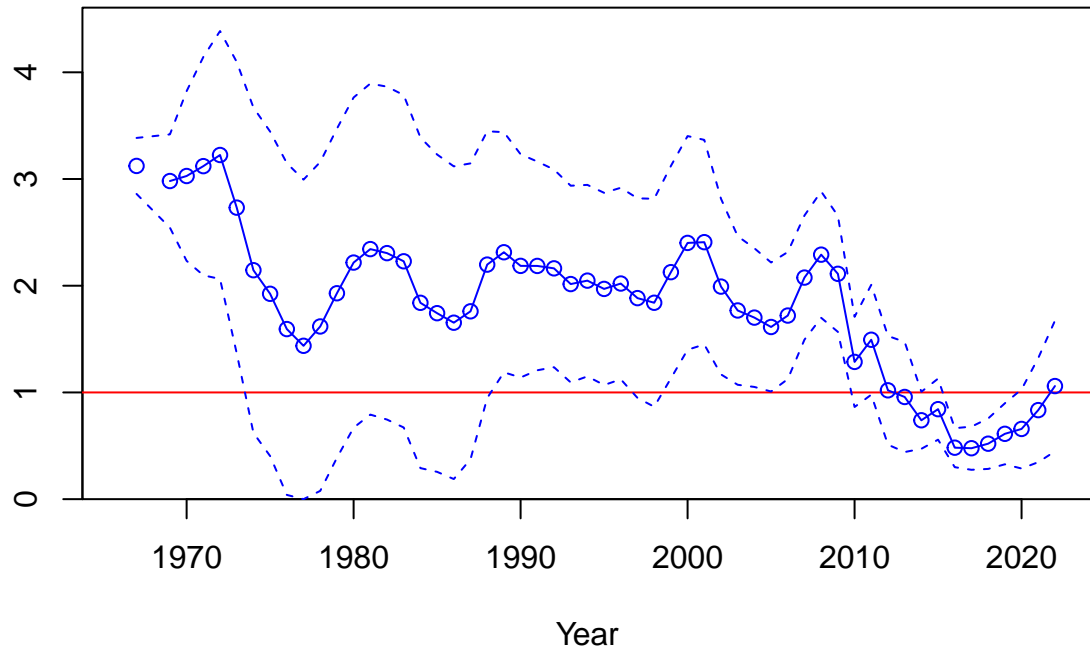
Spawning biomass (mt)

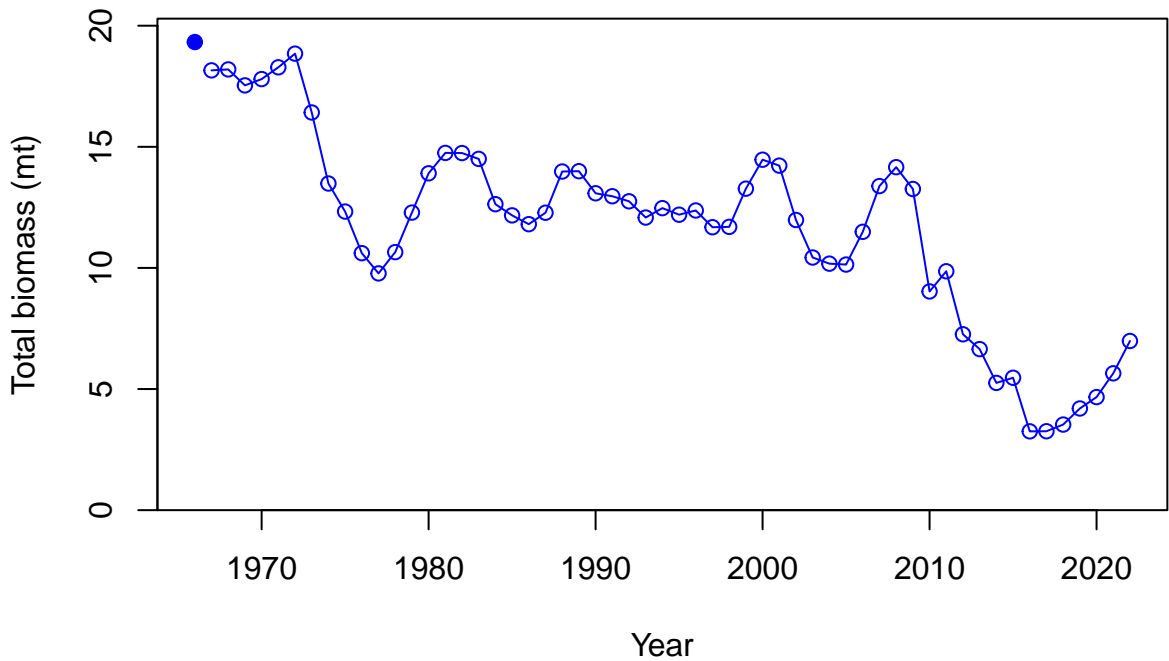


Relative spawning biomass:  $B/B_{MSY}$

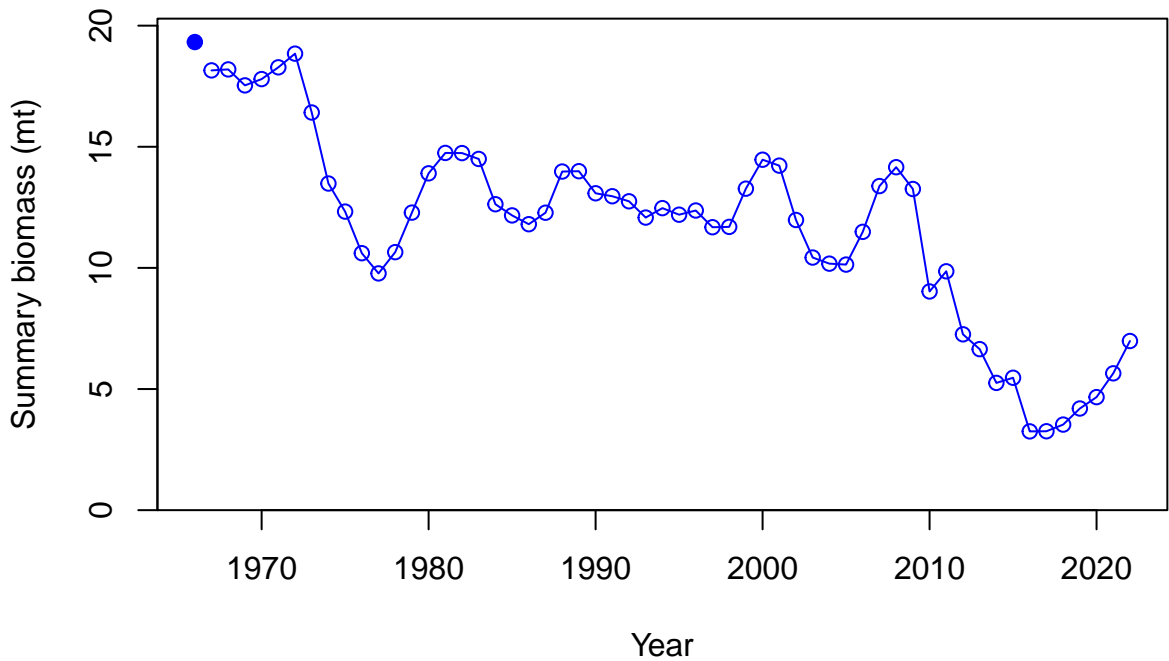


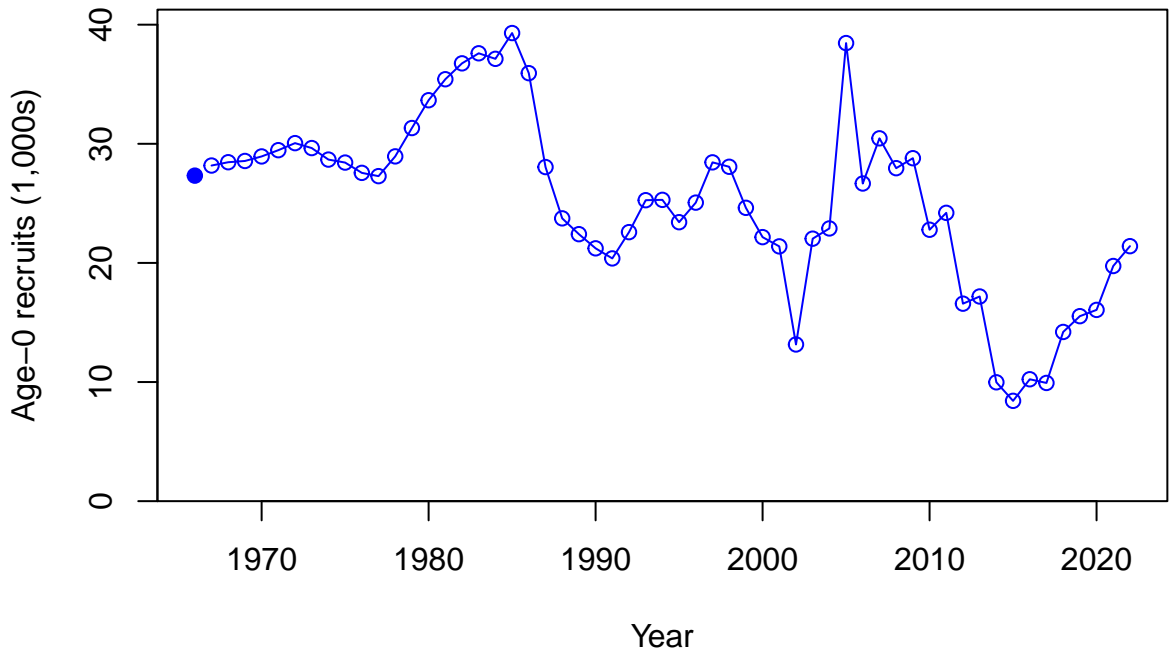
Relative spawning biomass:  $B/B_{MSY}$



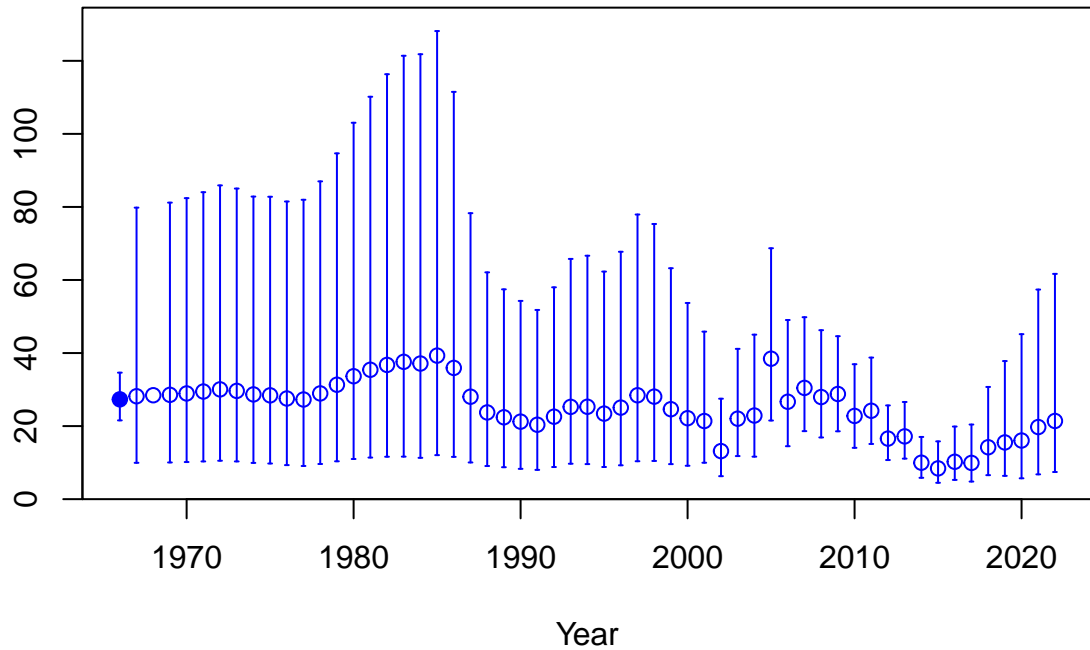




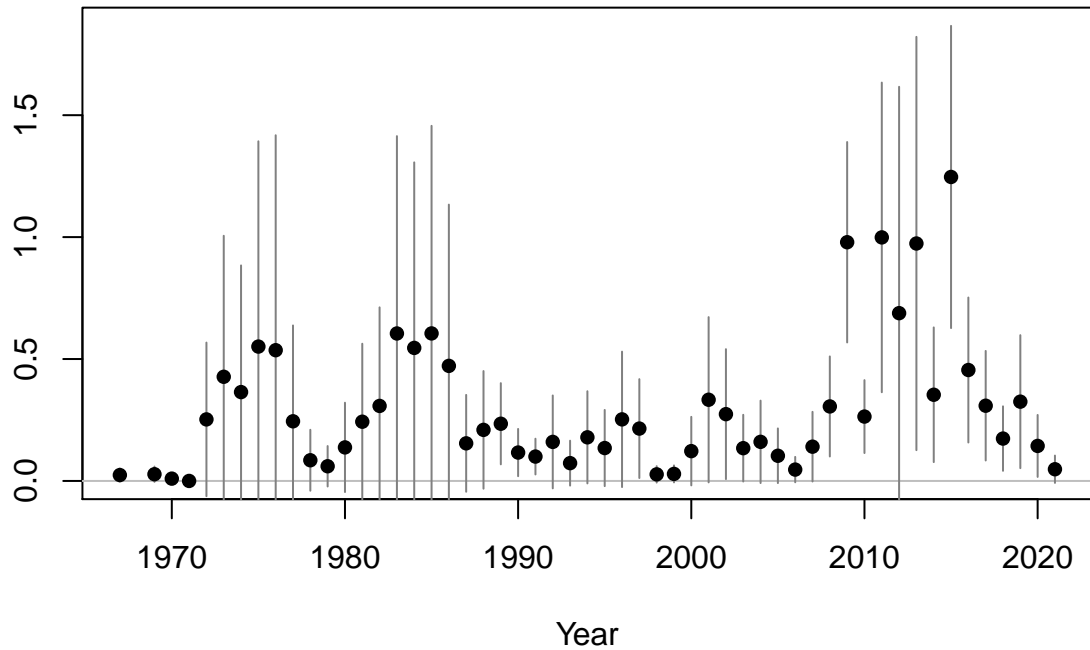


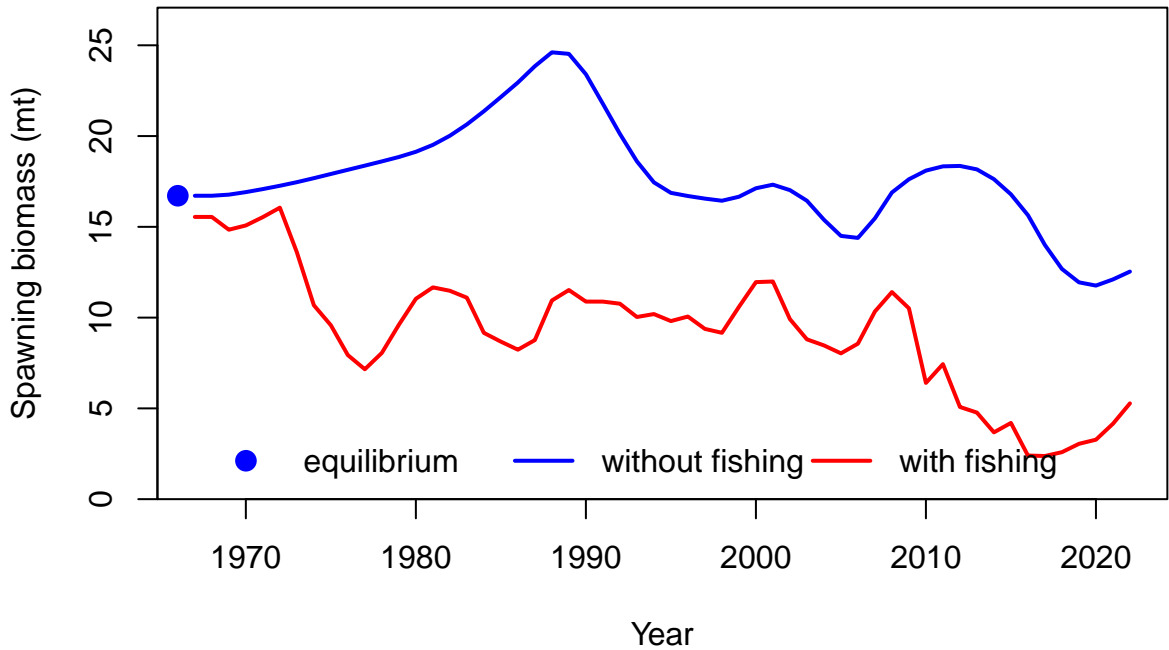


Age-0 recruits (1,000s)

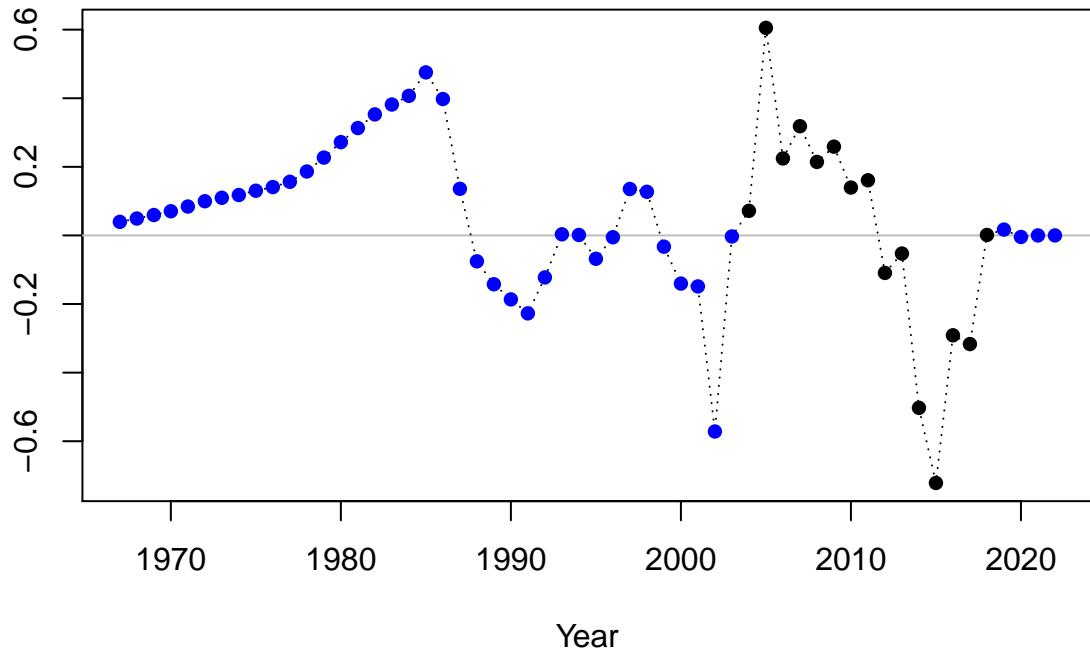


Summary Fishing Mortality





Log recruitment deviation



Log recruitment deviation

-1.0  
0.0  
0.5  
1.0  
1.5

1970

1980

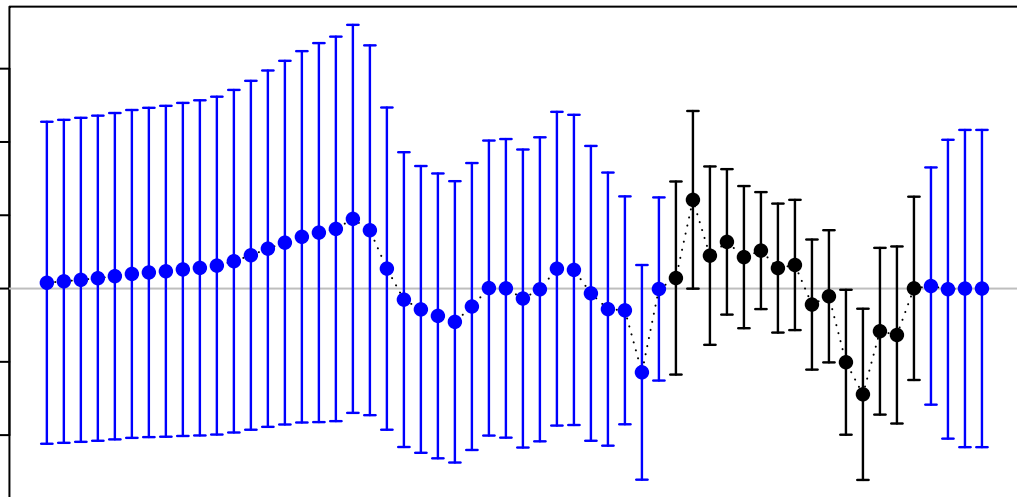
1990

2000

2010

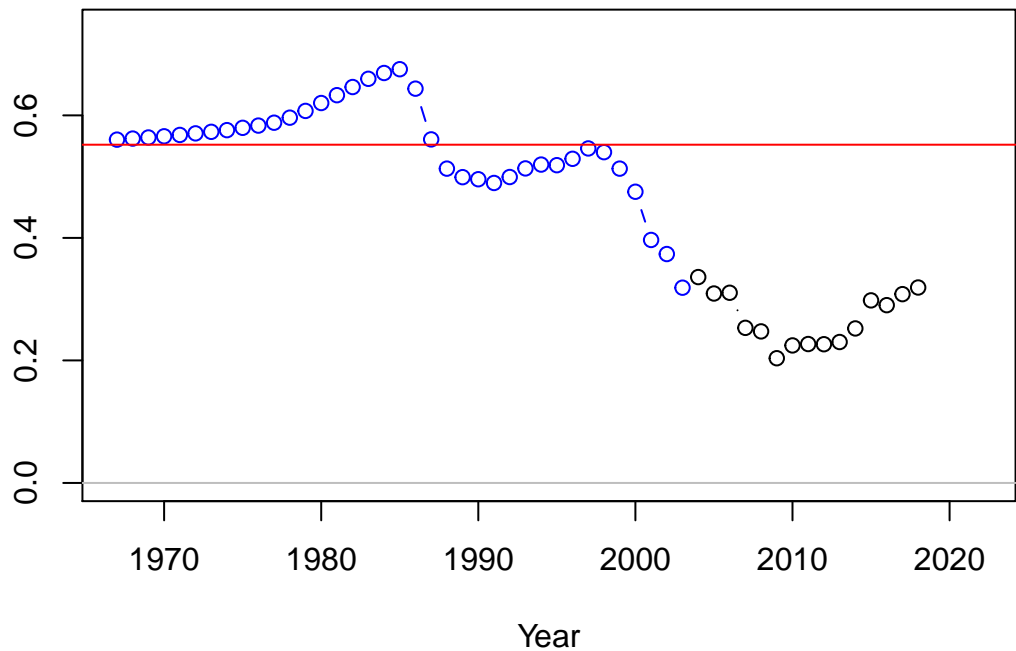
2020

Year

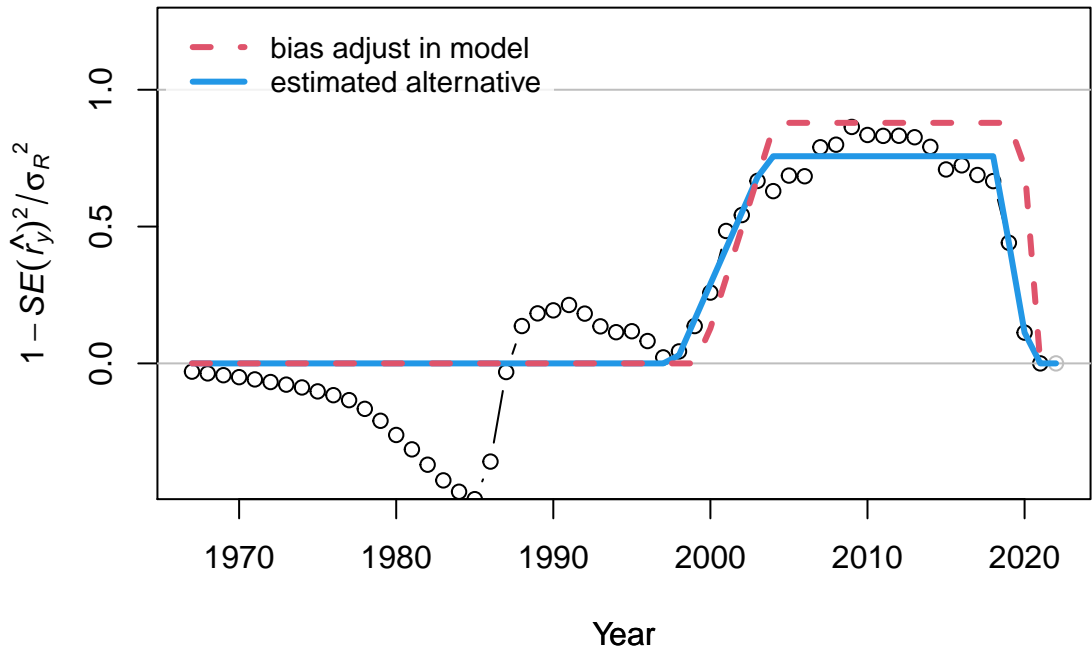


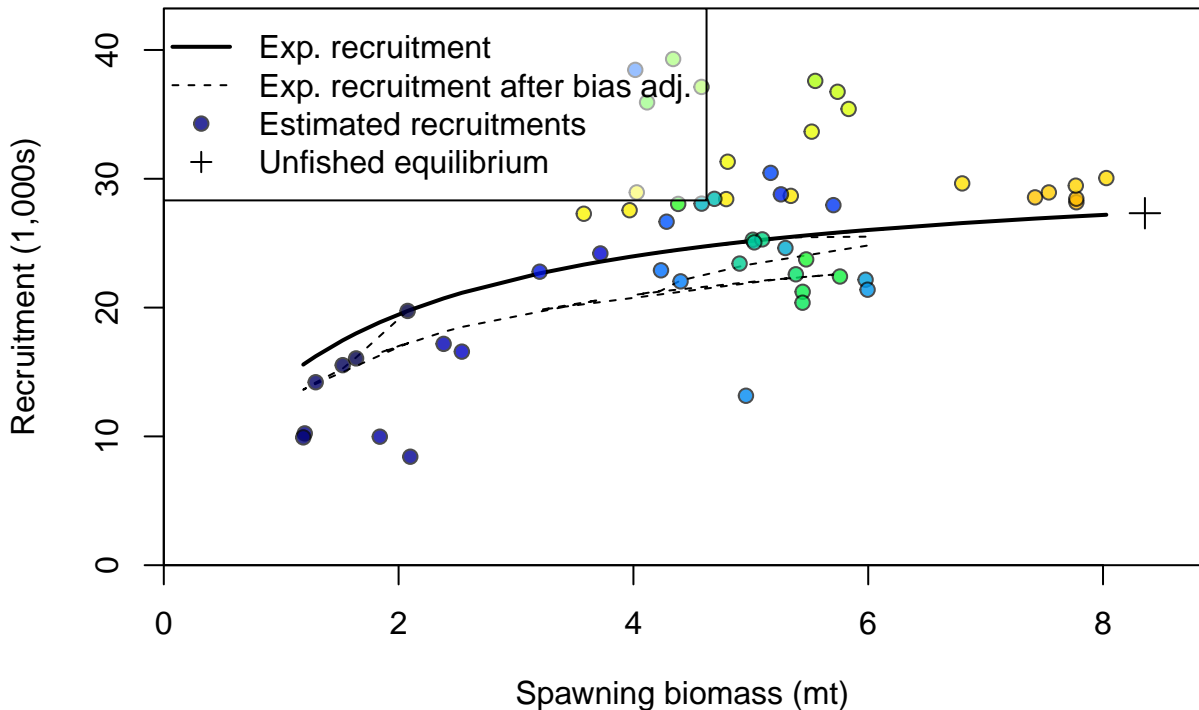
## Recruitment deviation variance

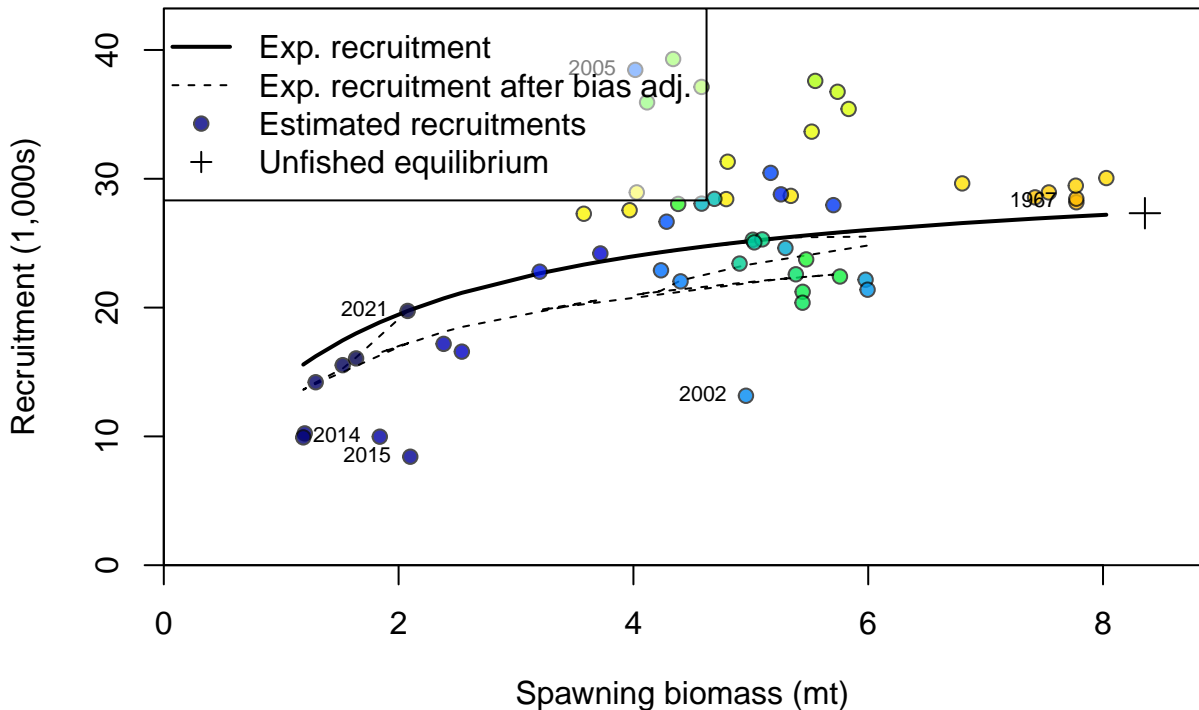
Asymptotic standard error estimate











Log recruitment deviation

0.5  
0.0  
-0.5

0.0

0.2

0.4

0.6

0.8

1.0

Spawning output (relative to  $B_0$ )

2005

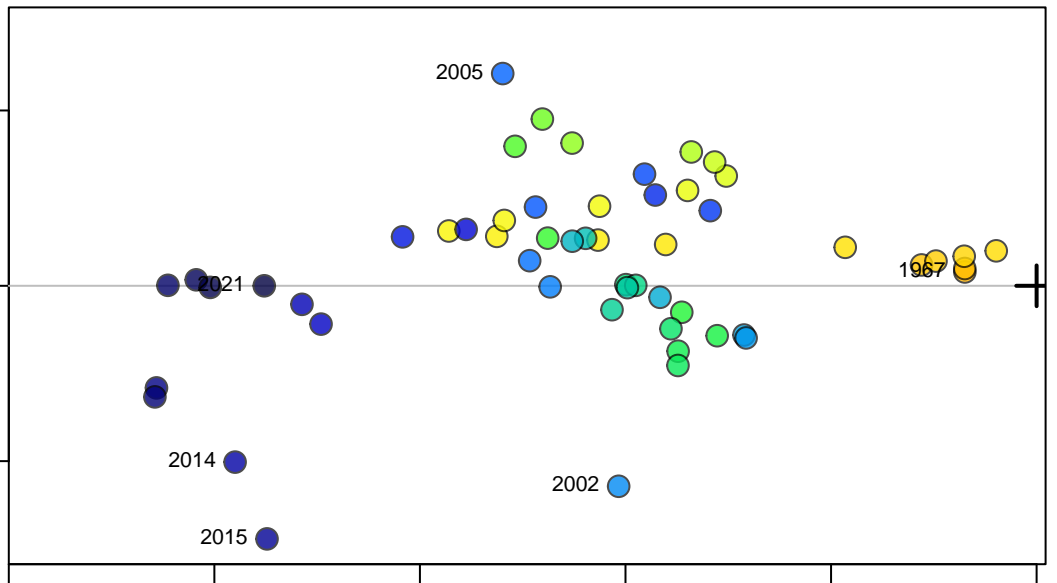
2021

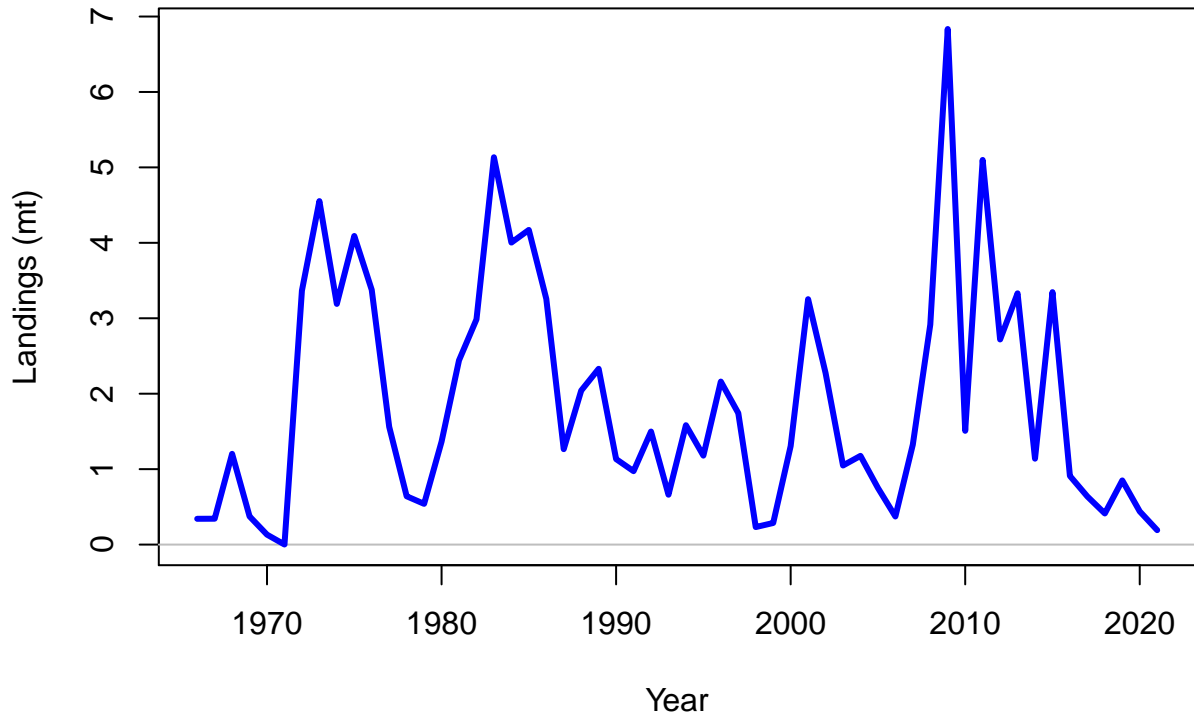
2014

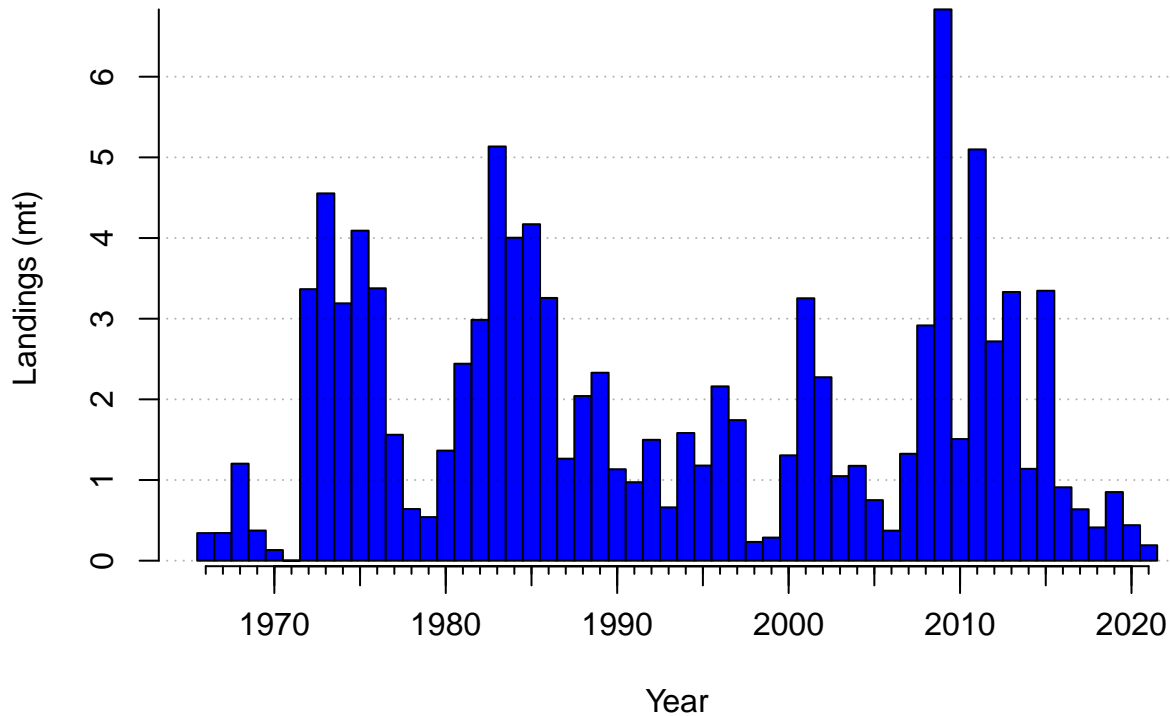
2015

2002

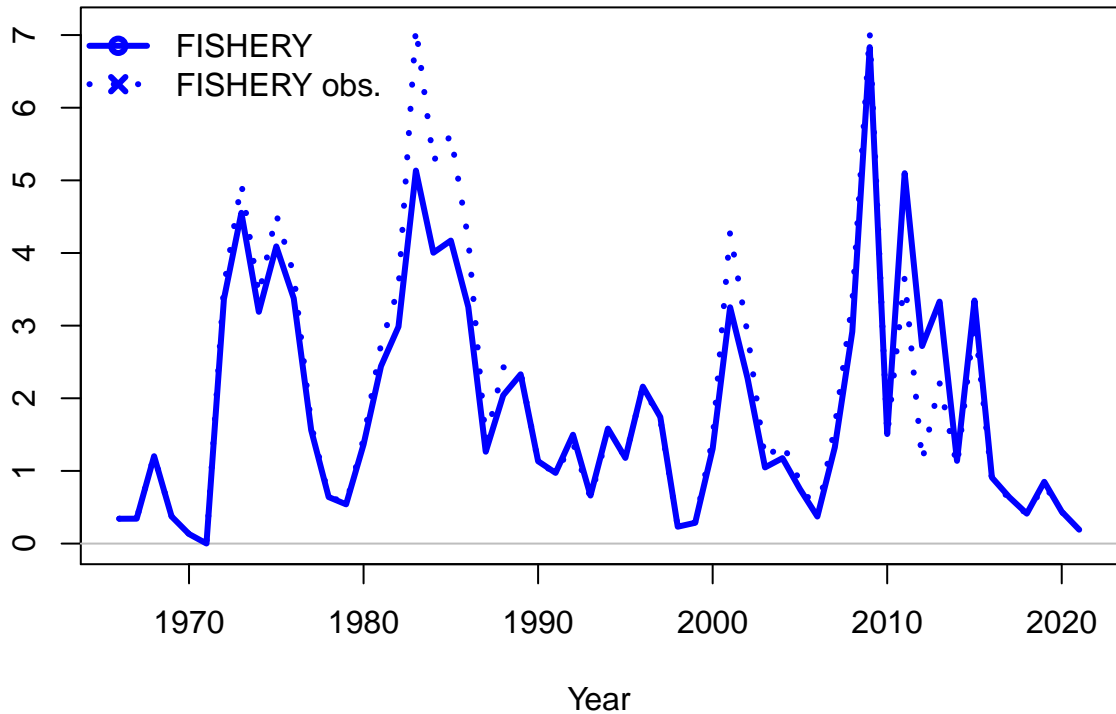
1967

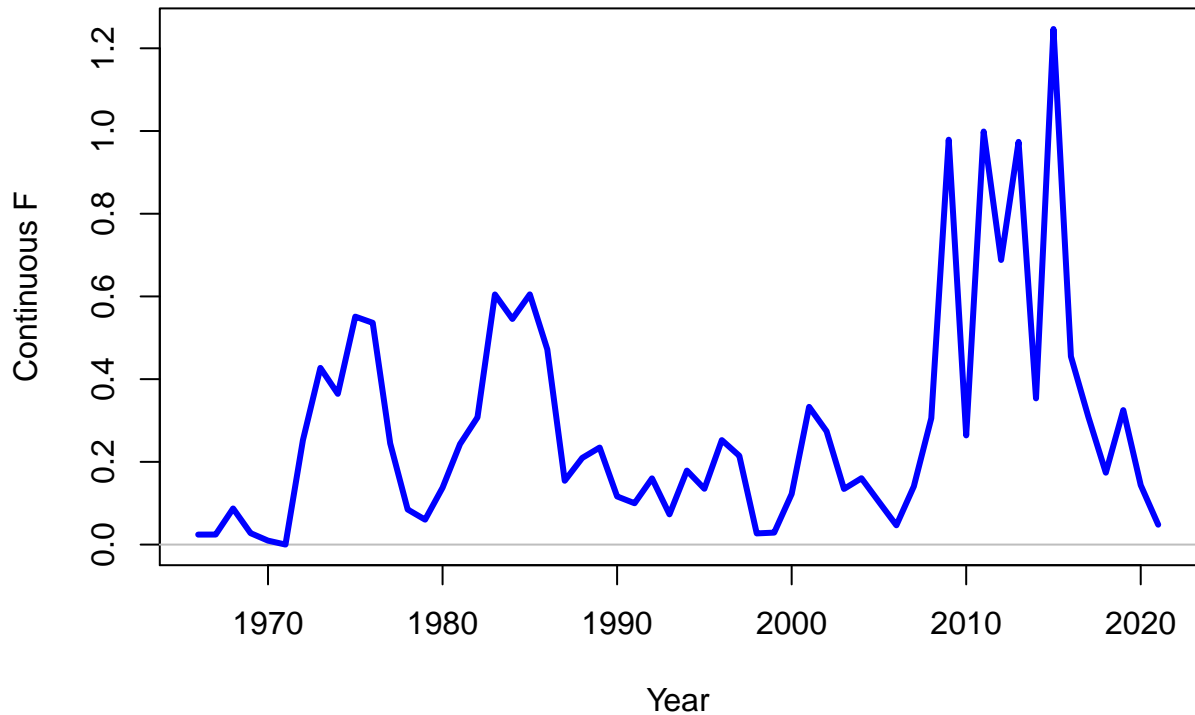






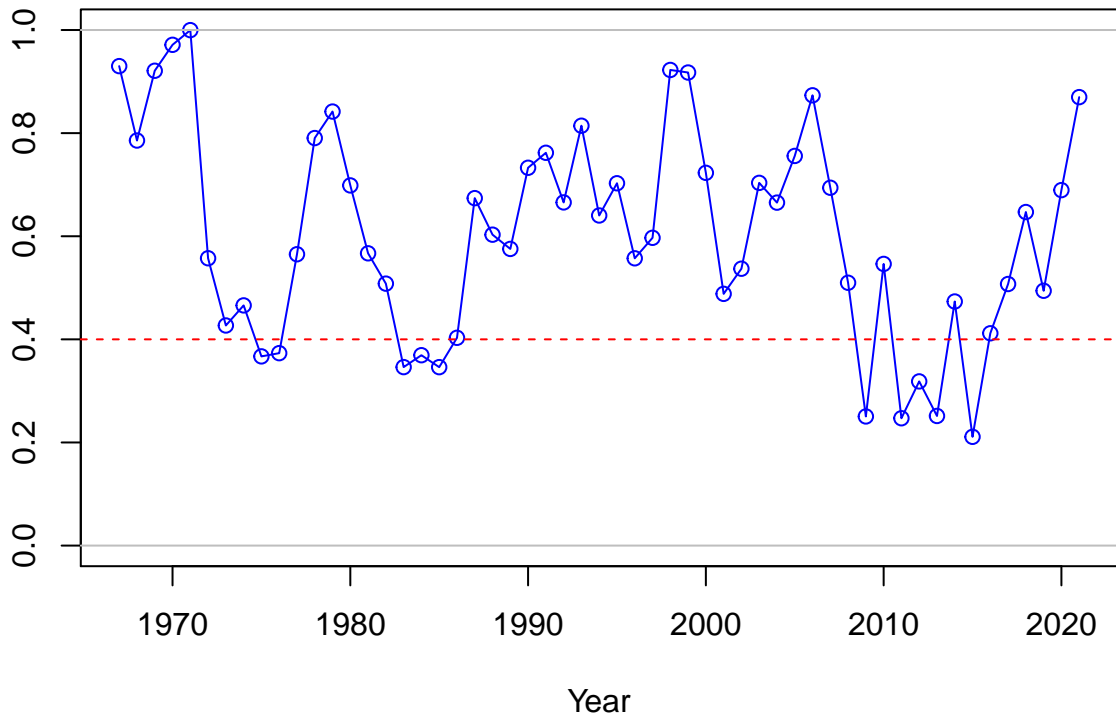
Observed and expected Landings (mt)



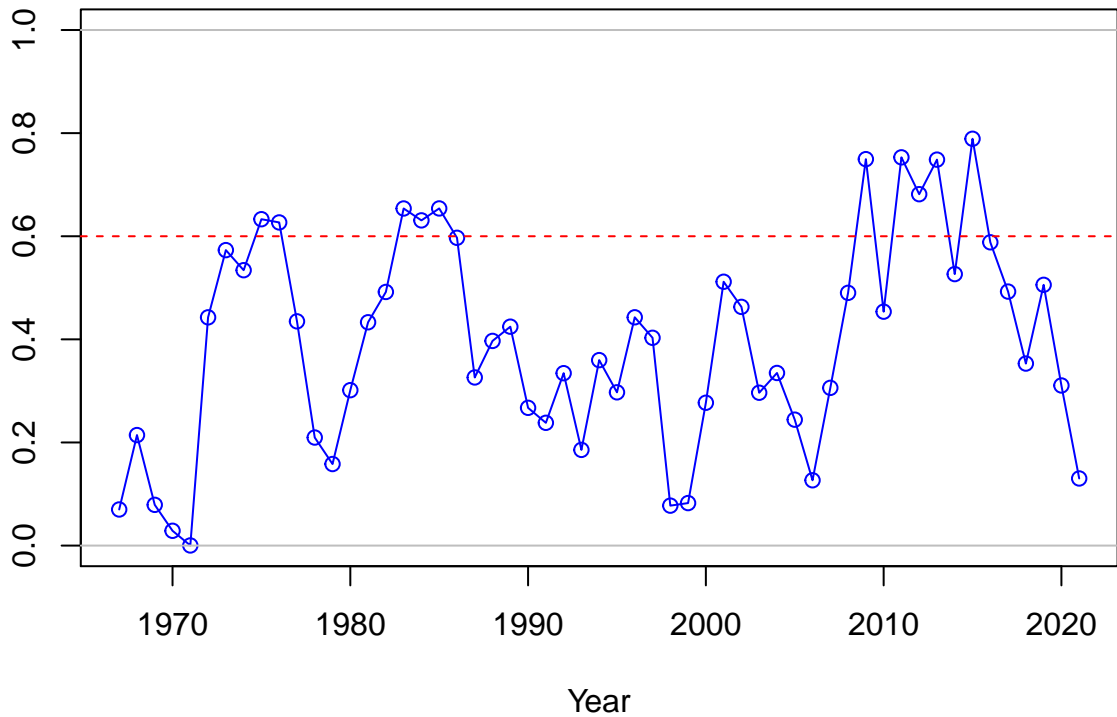




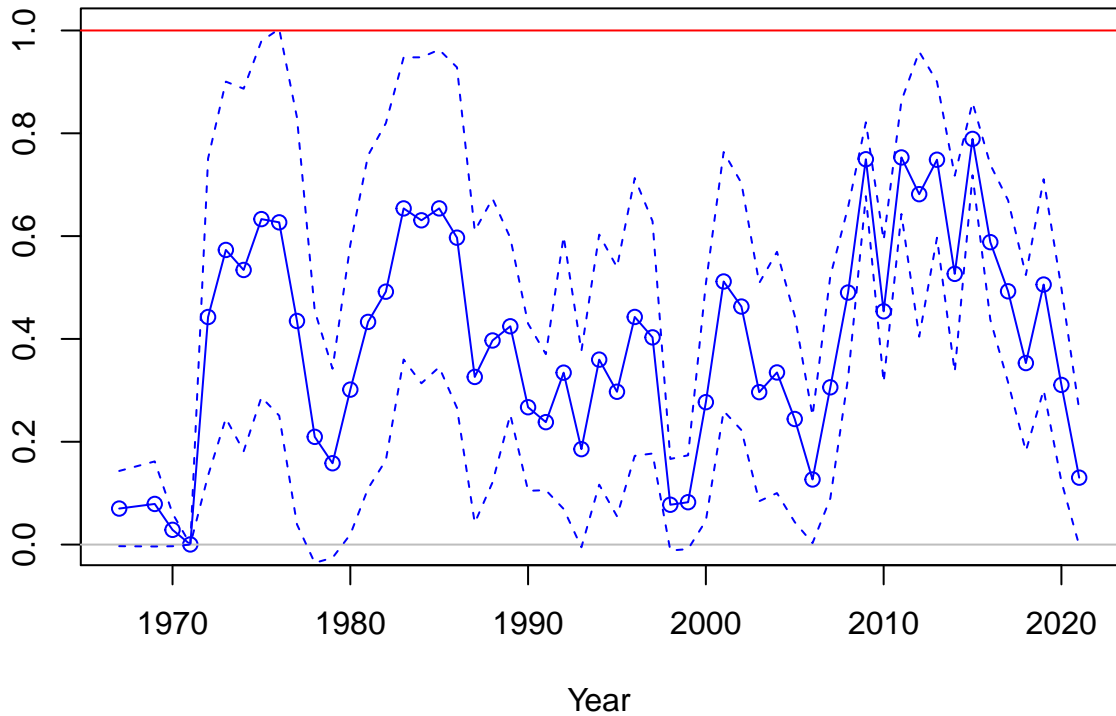
SPR



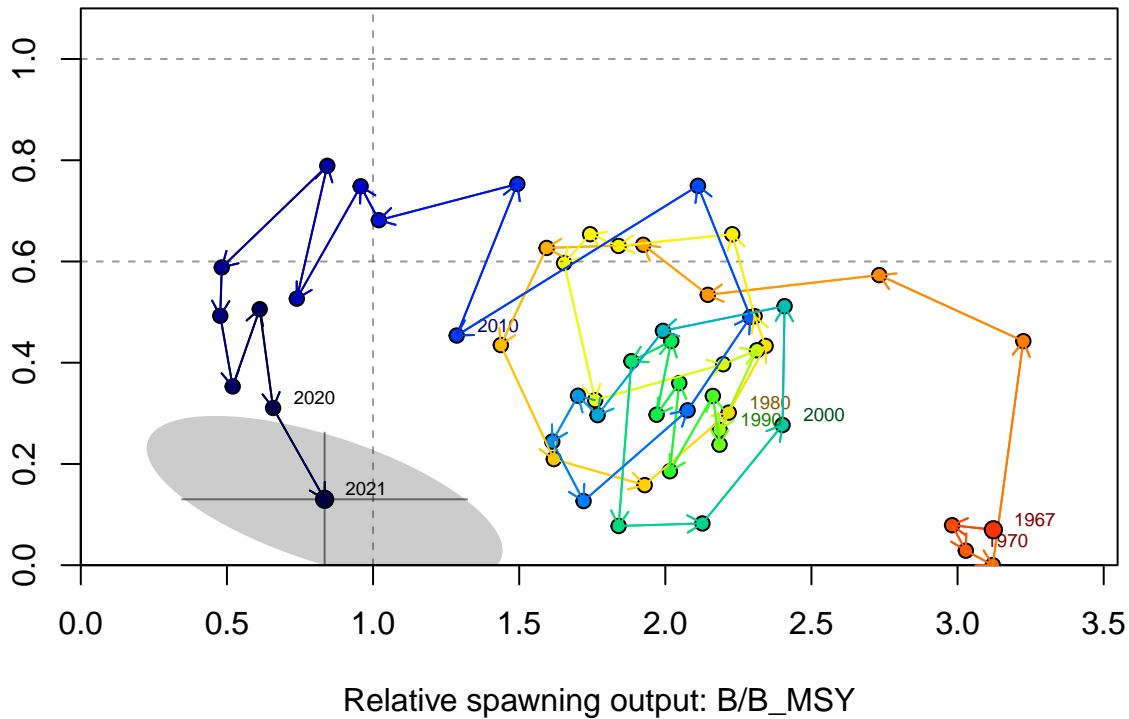
1-SPR



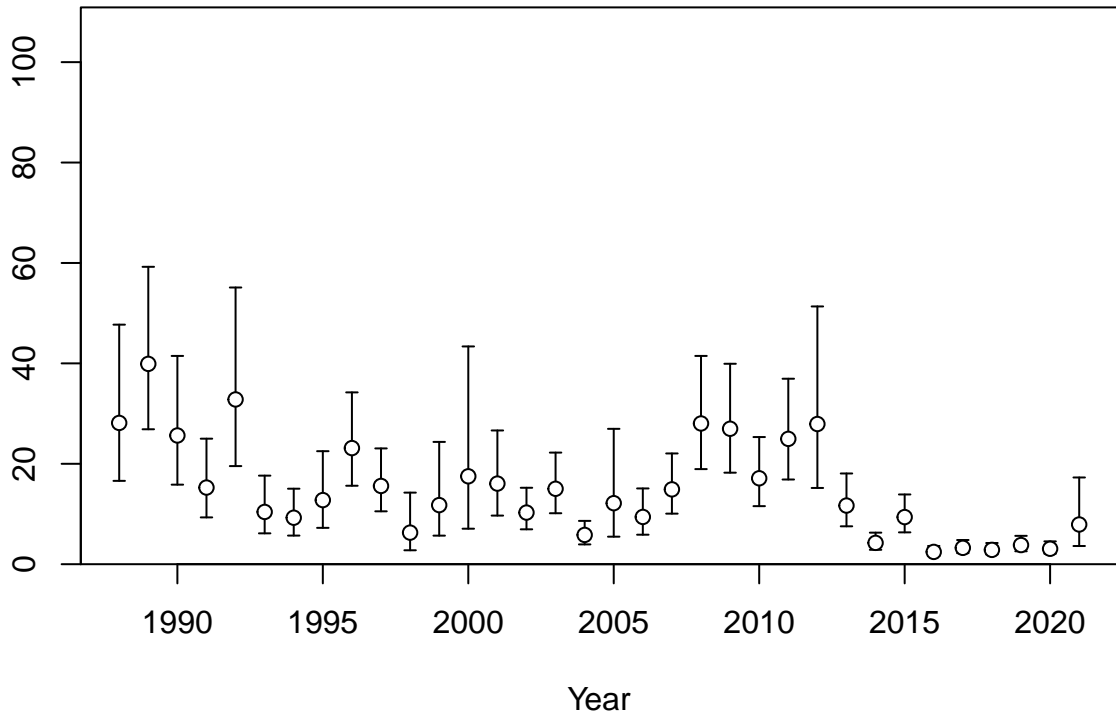
Fishing intensity: 1-SPR



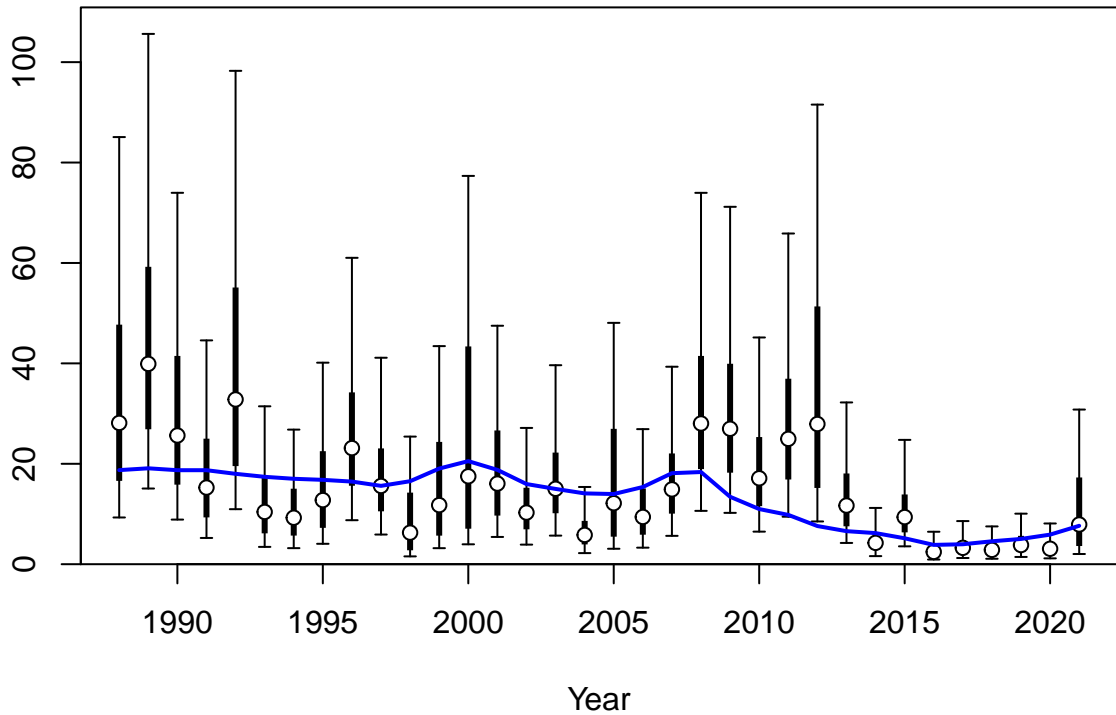
Fishing intensity: 1-SPR

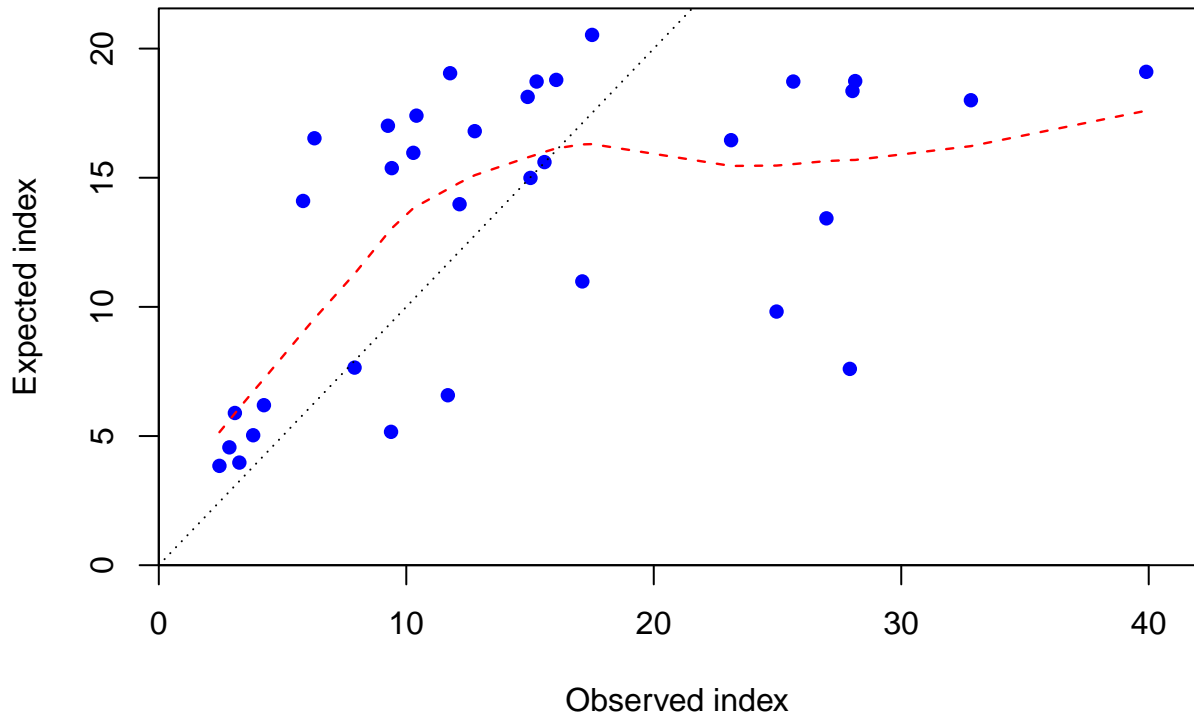


Index



Index





Log index

4  
3  
2  
1  
0

1990

1995

2000

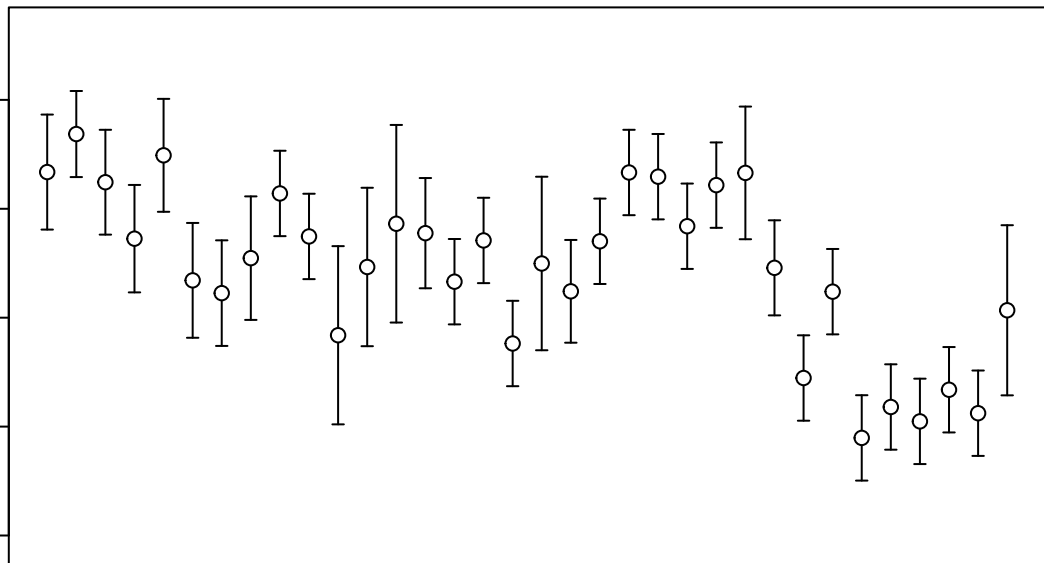
2005

2010

2015

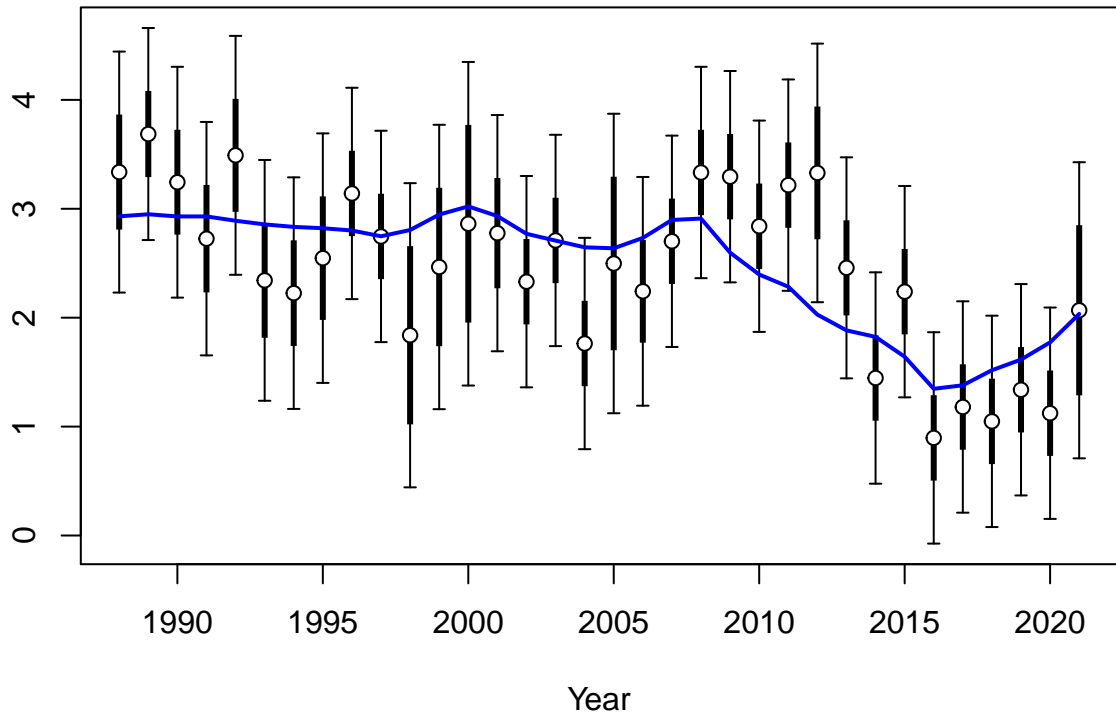
2020

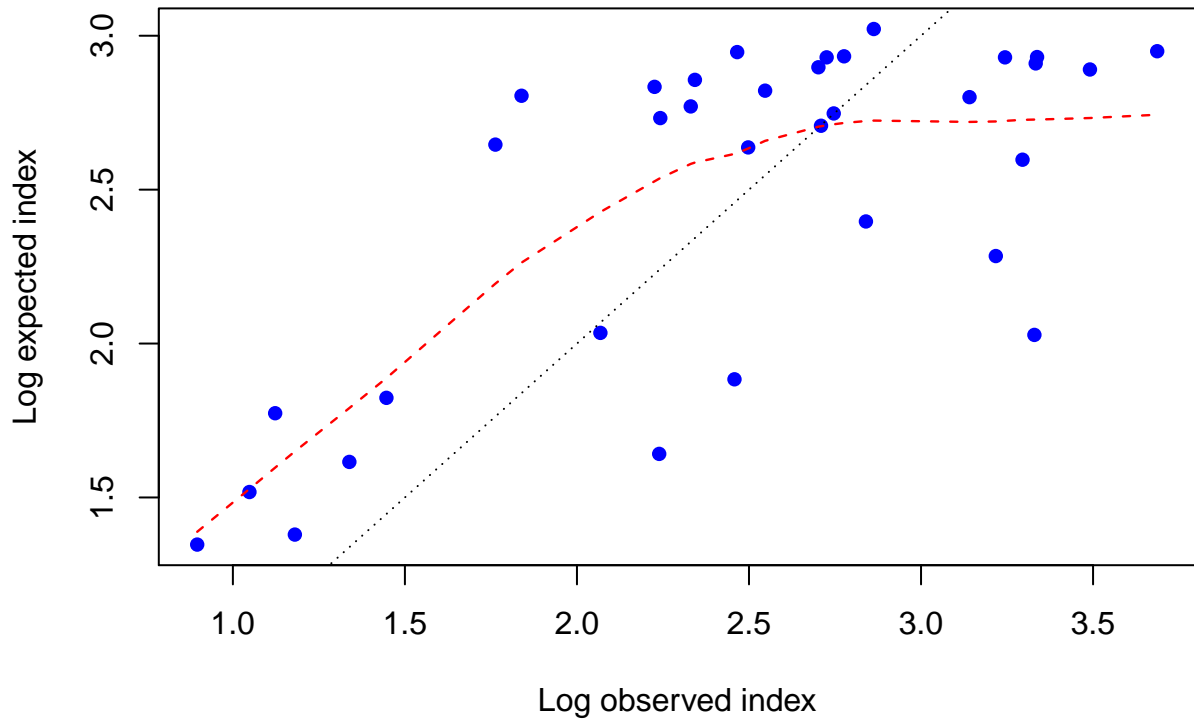
Year

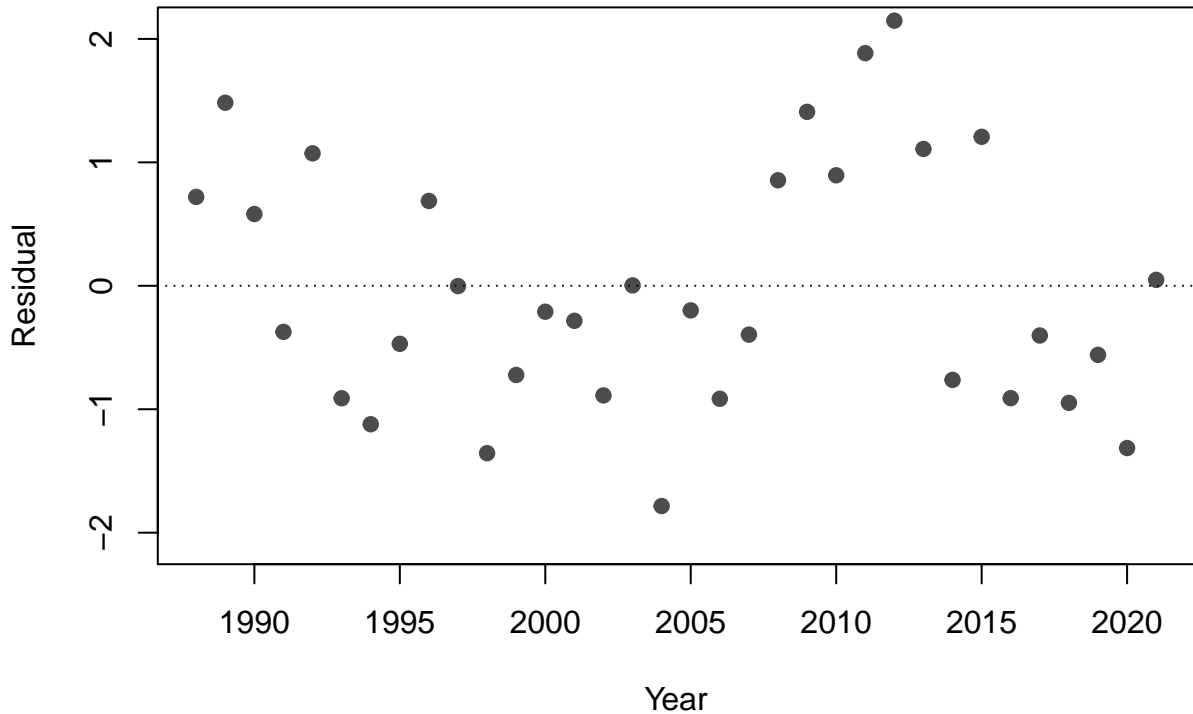


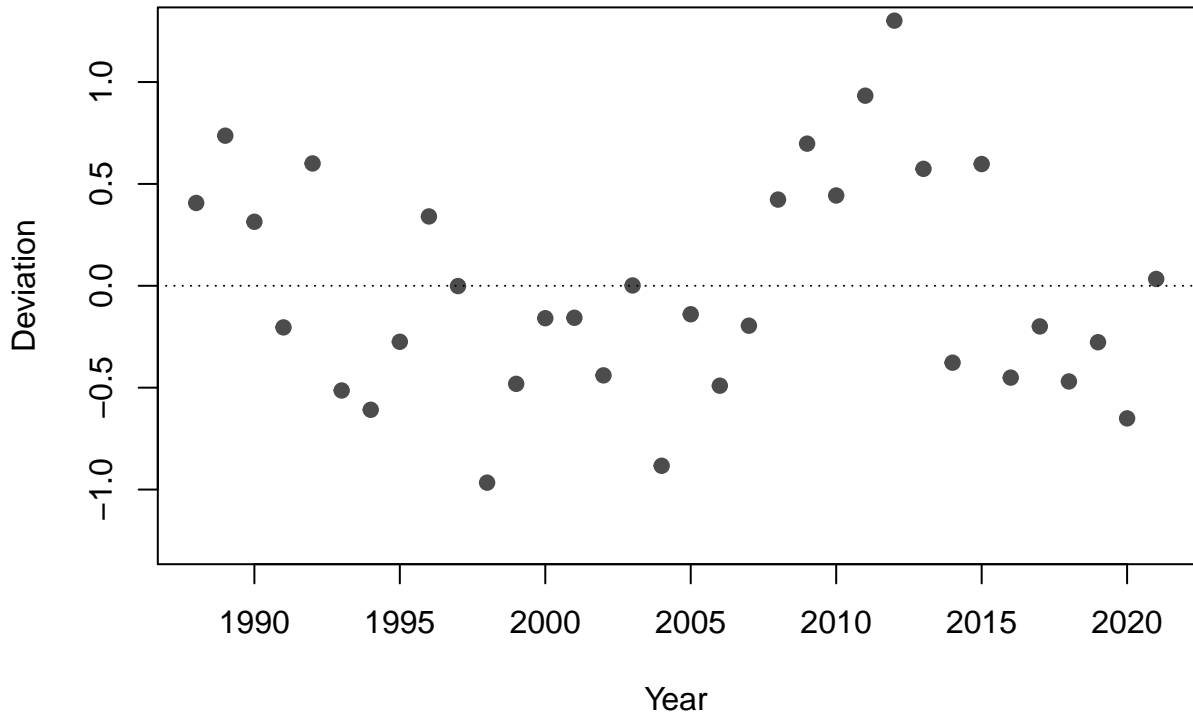


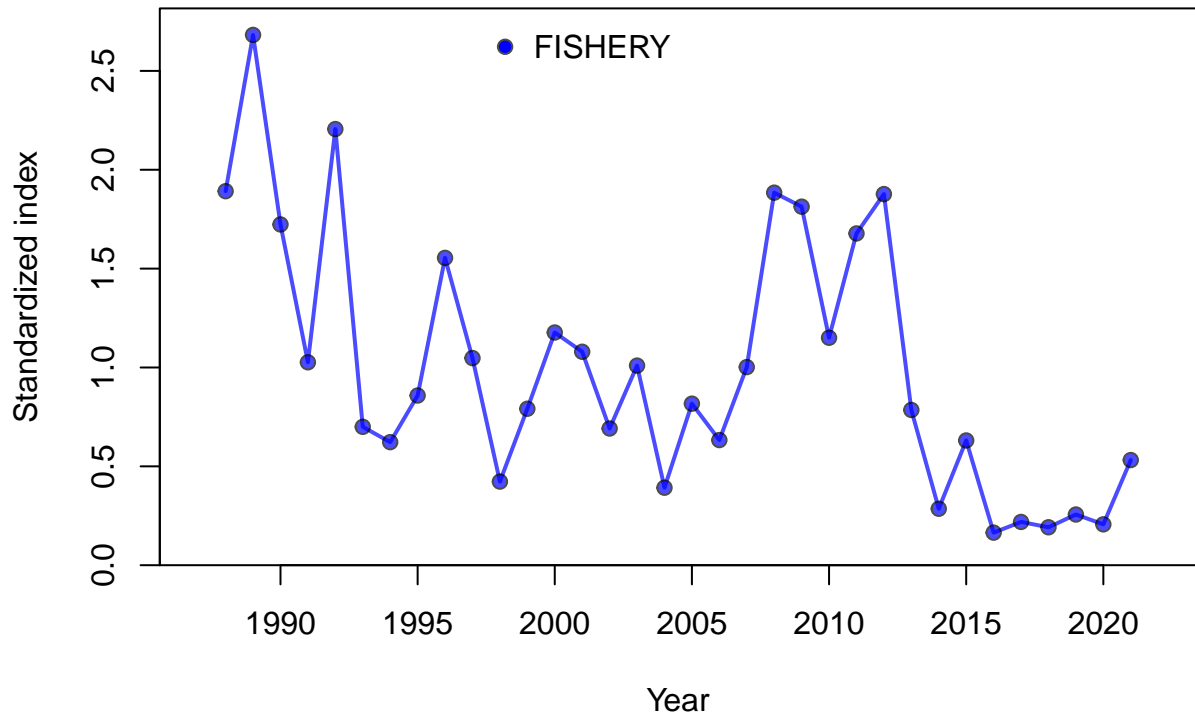
Log index

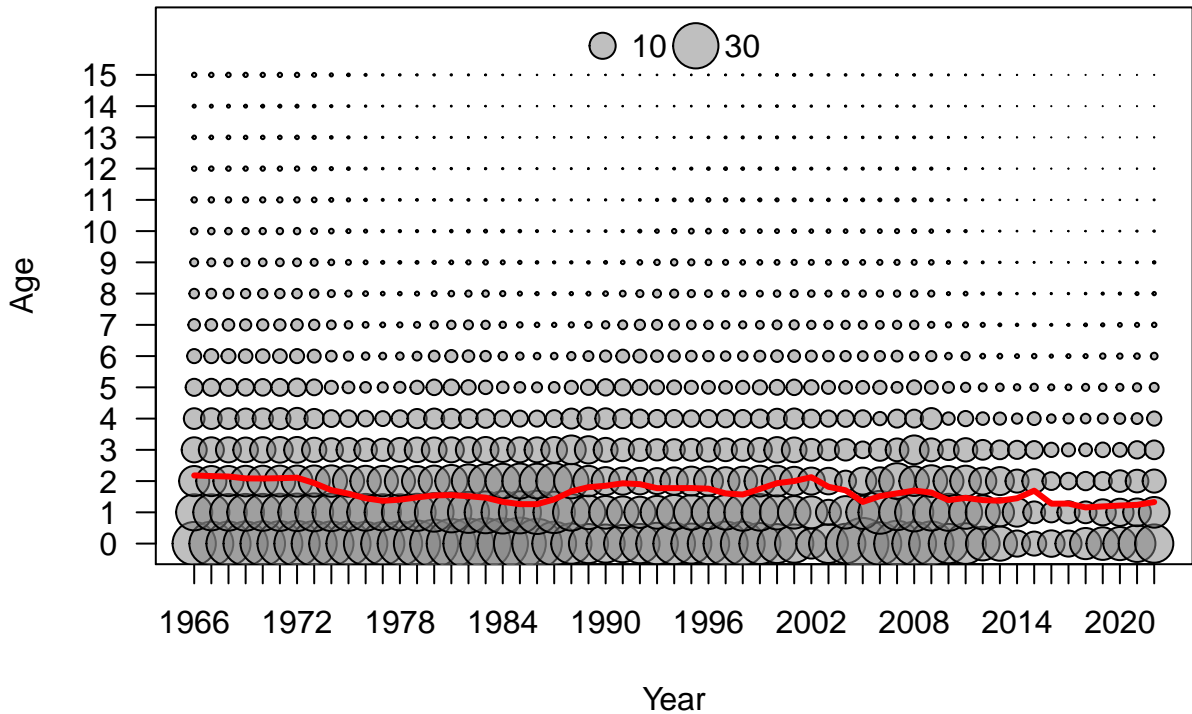




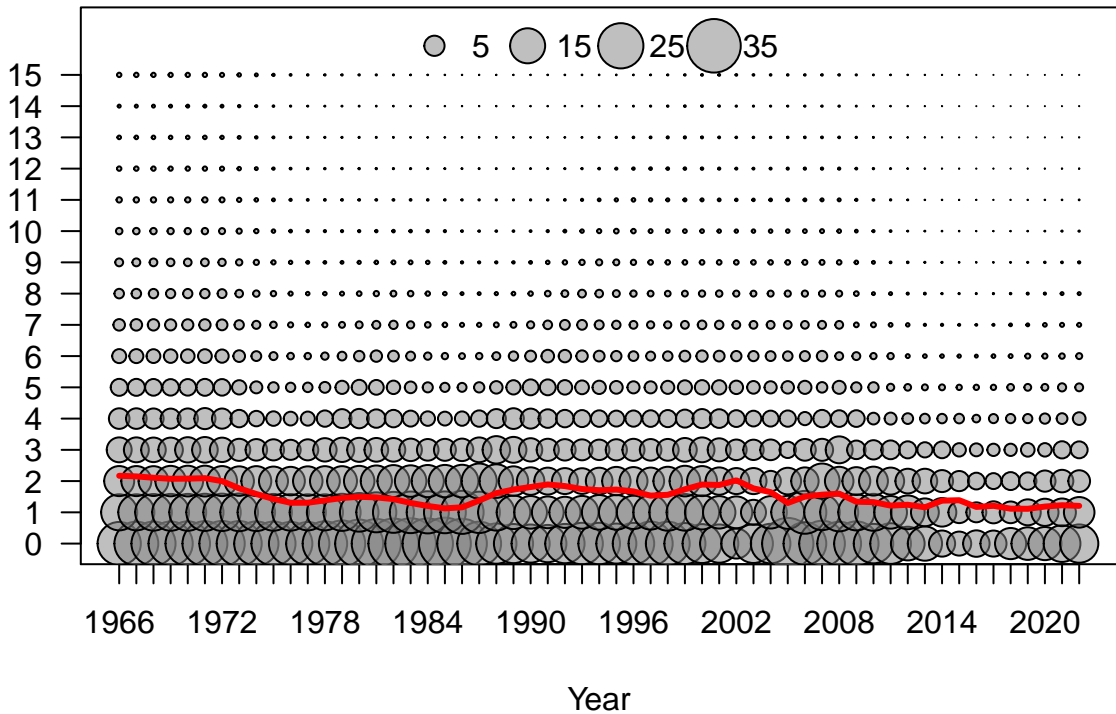


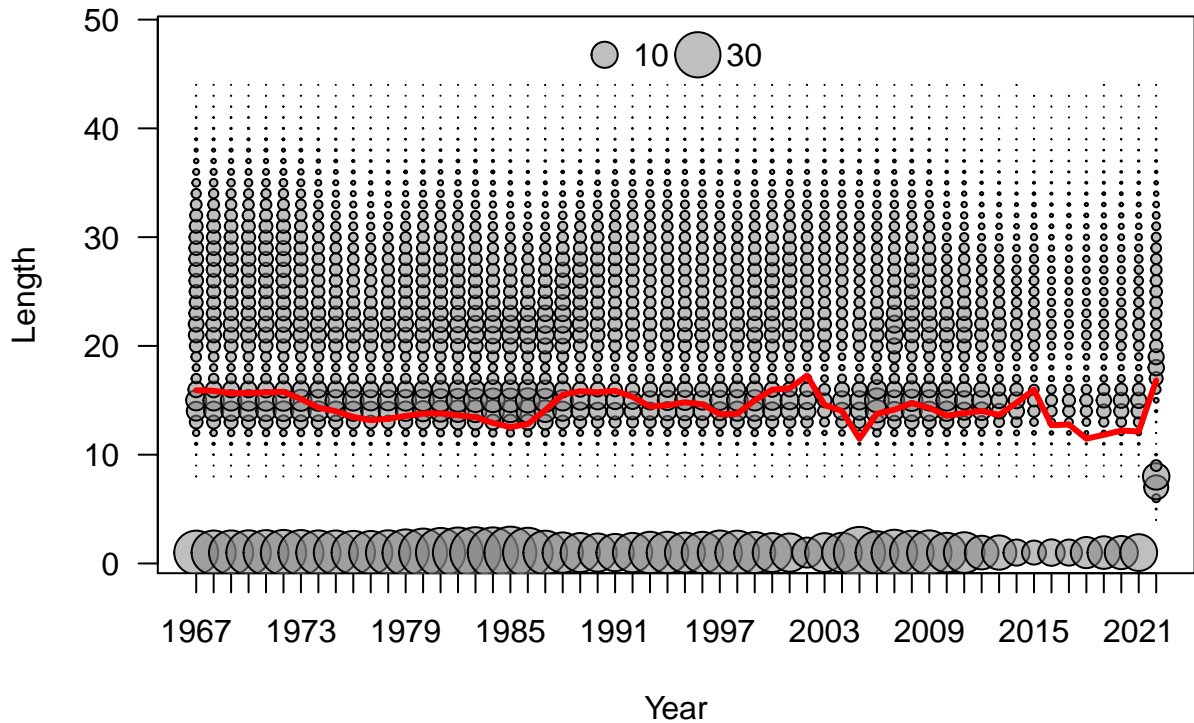




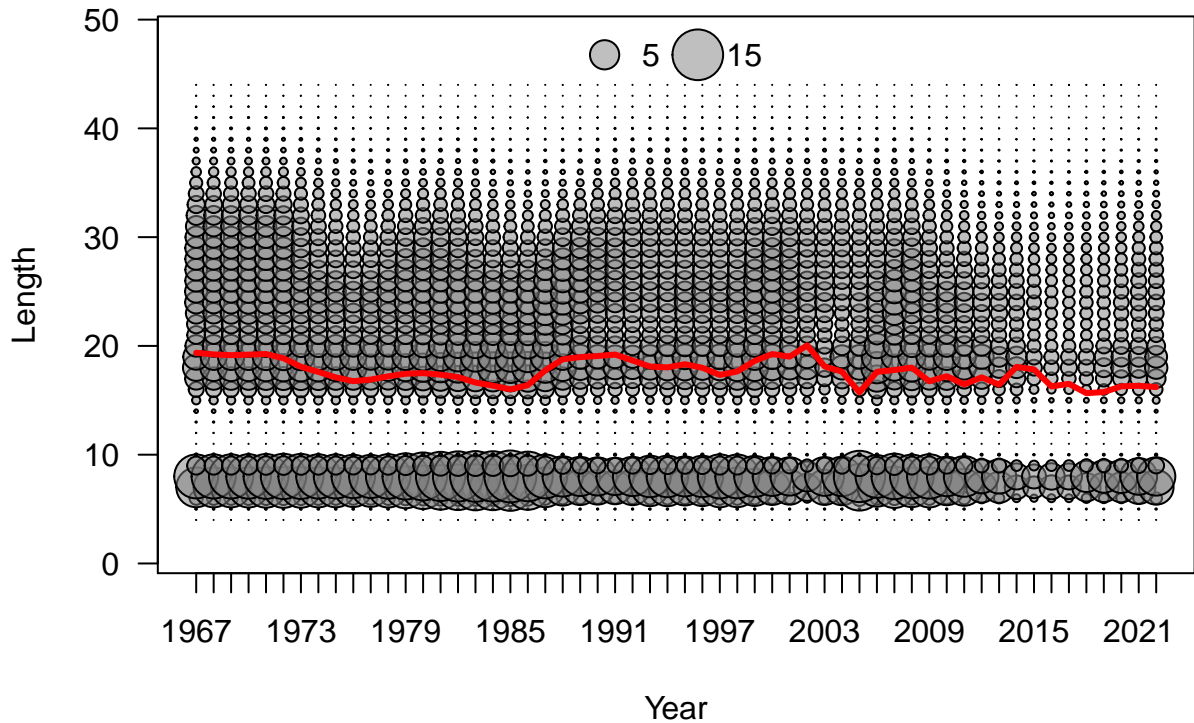


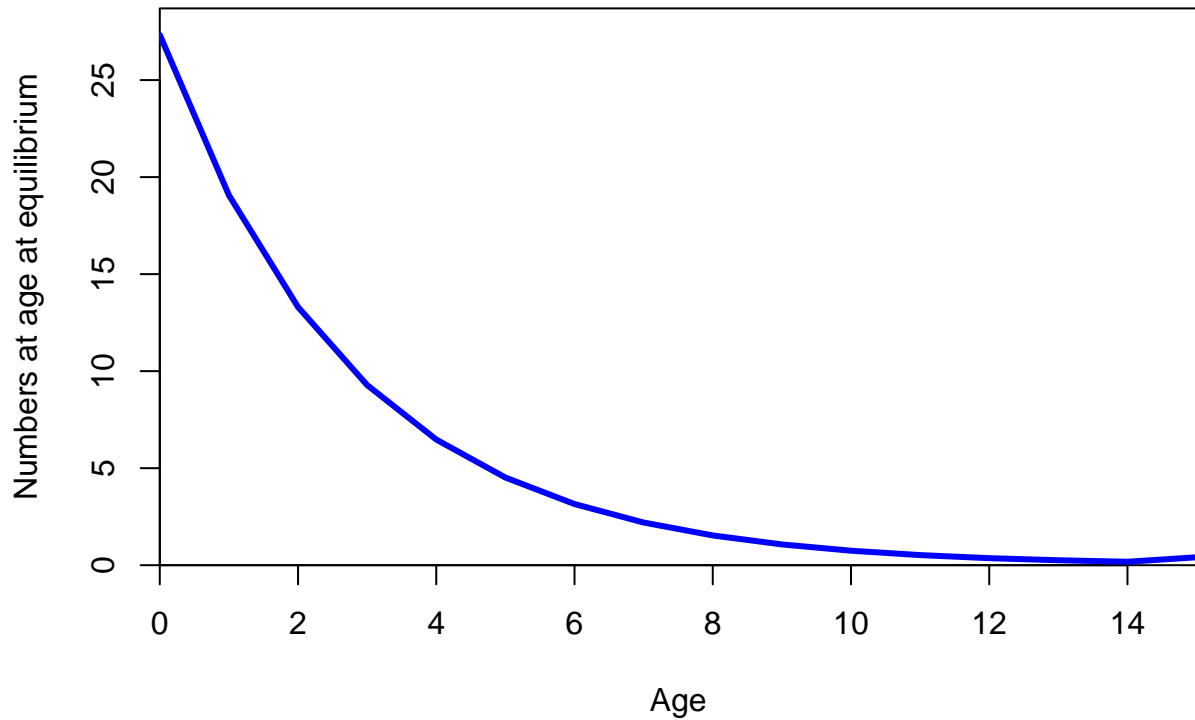
Age





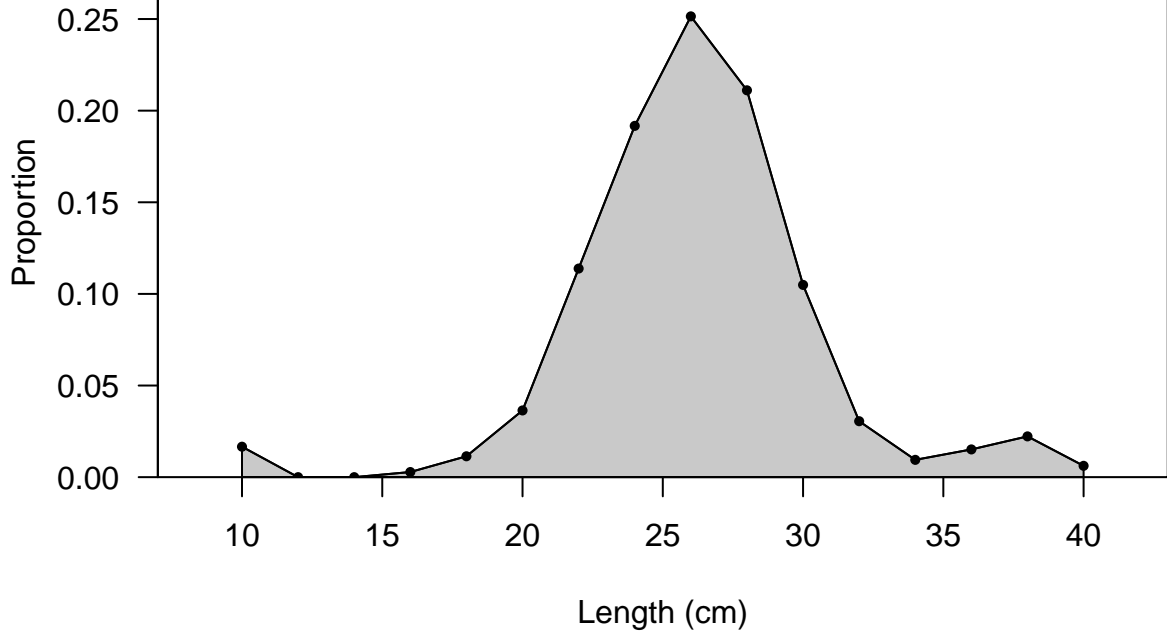


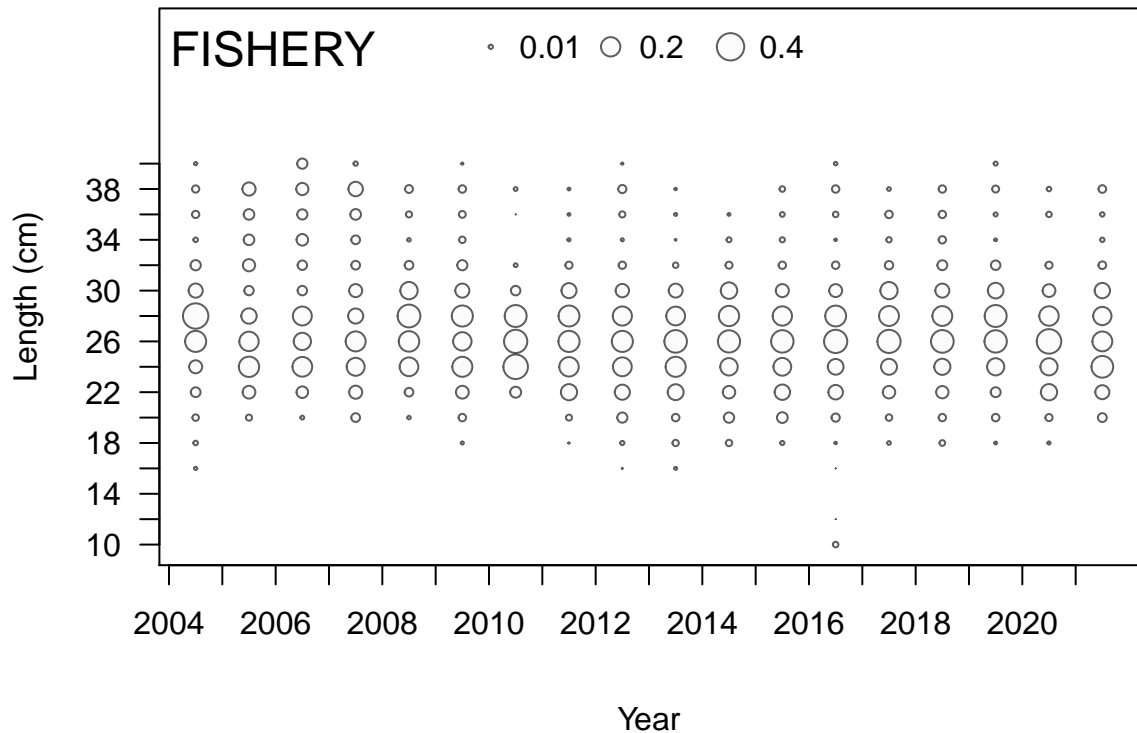


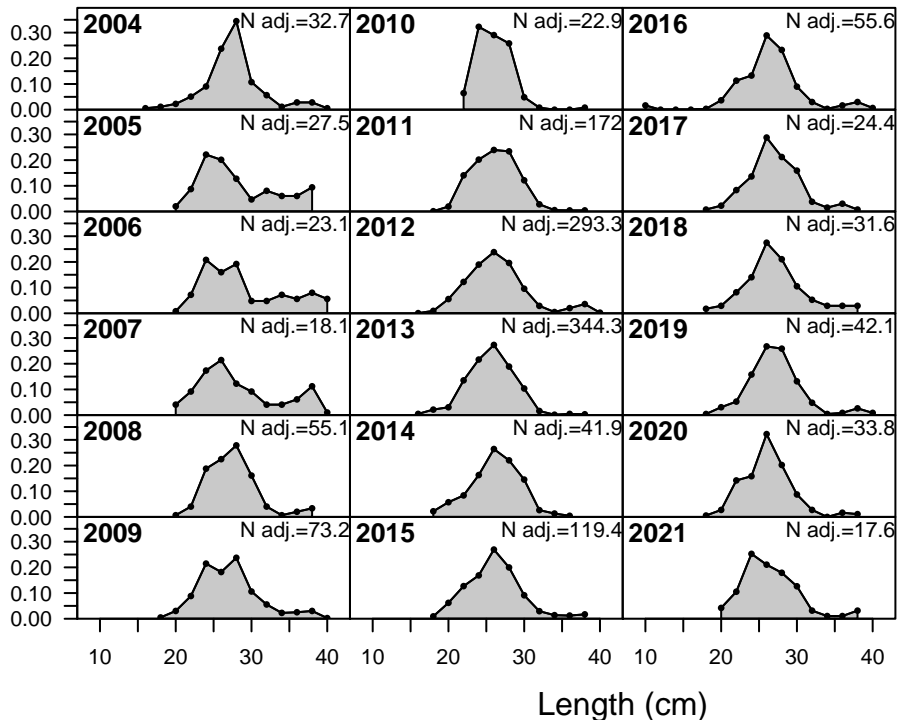


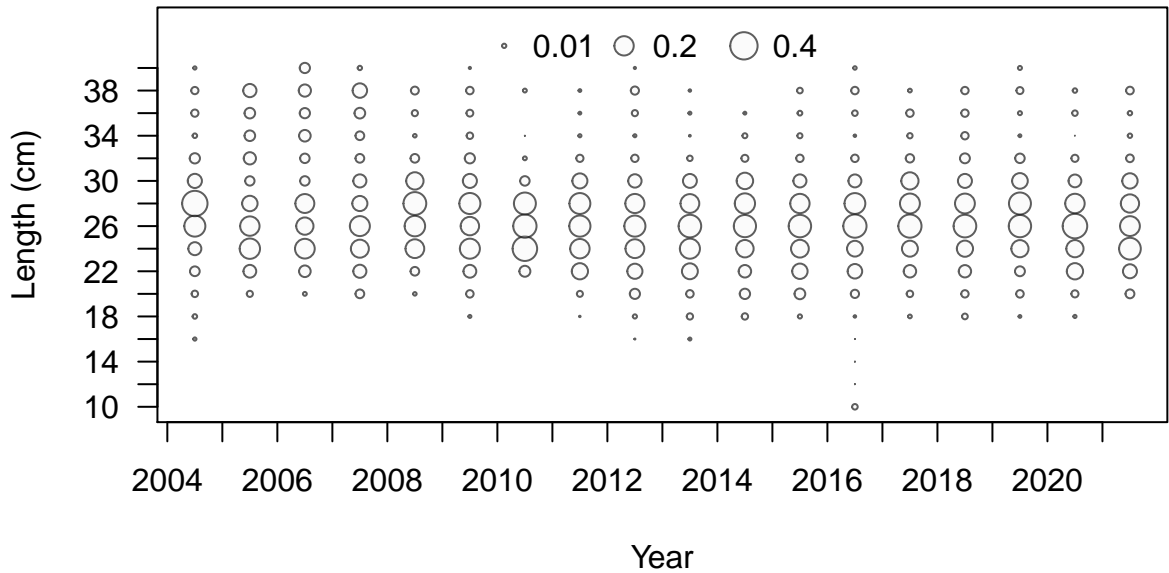
# FISHERY

Sum of N adj.=1428.7

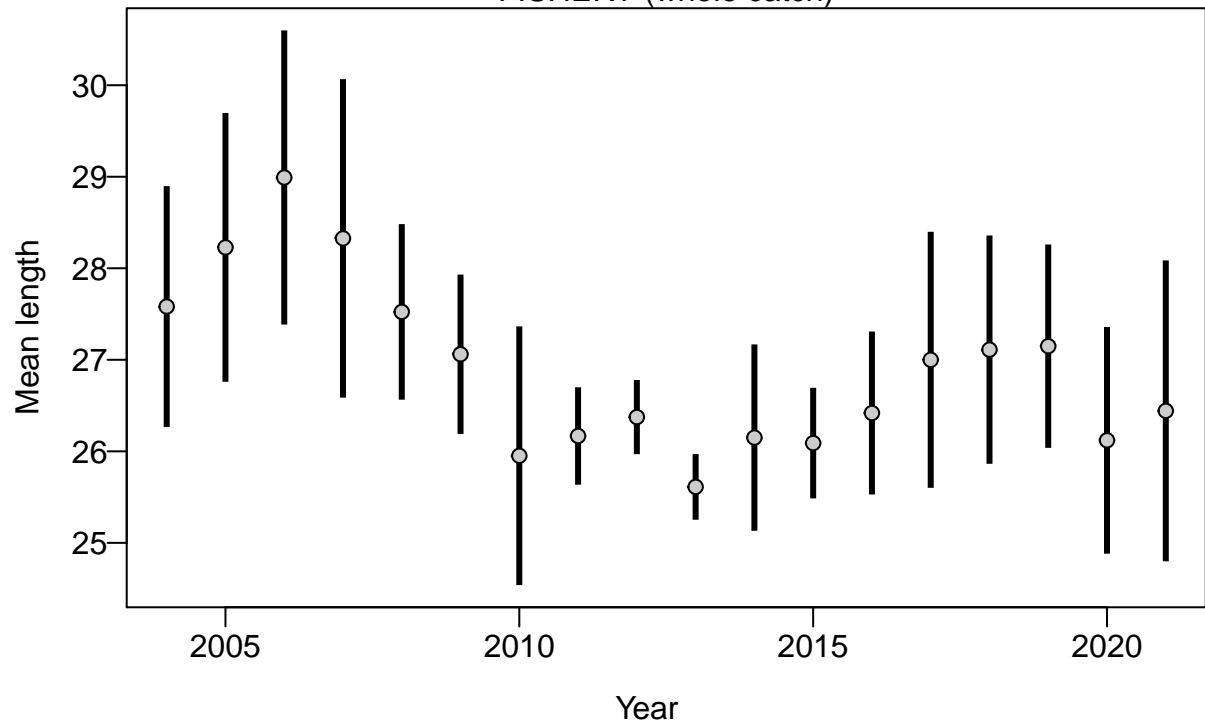


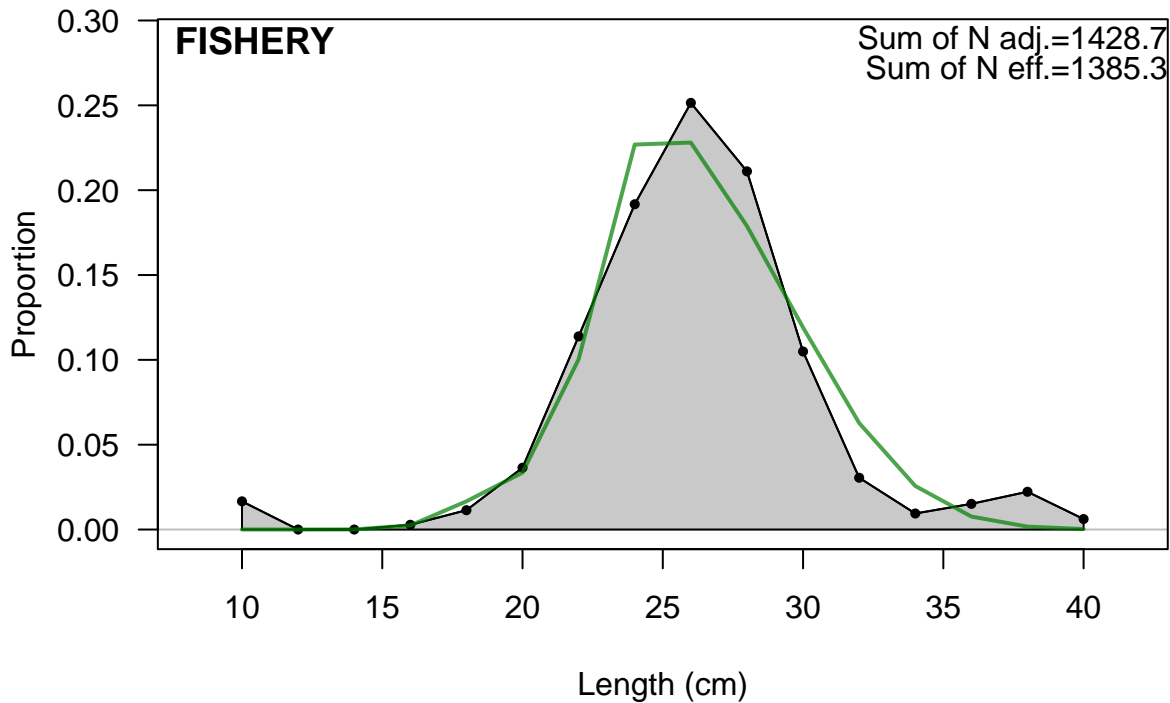




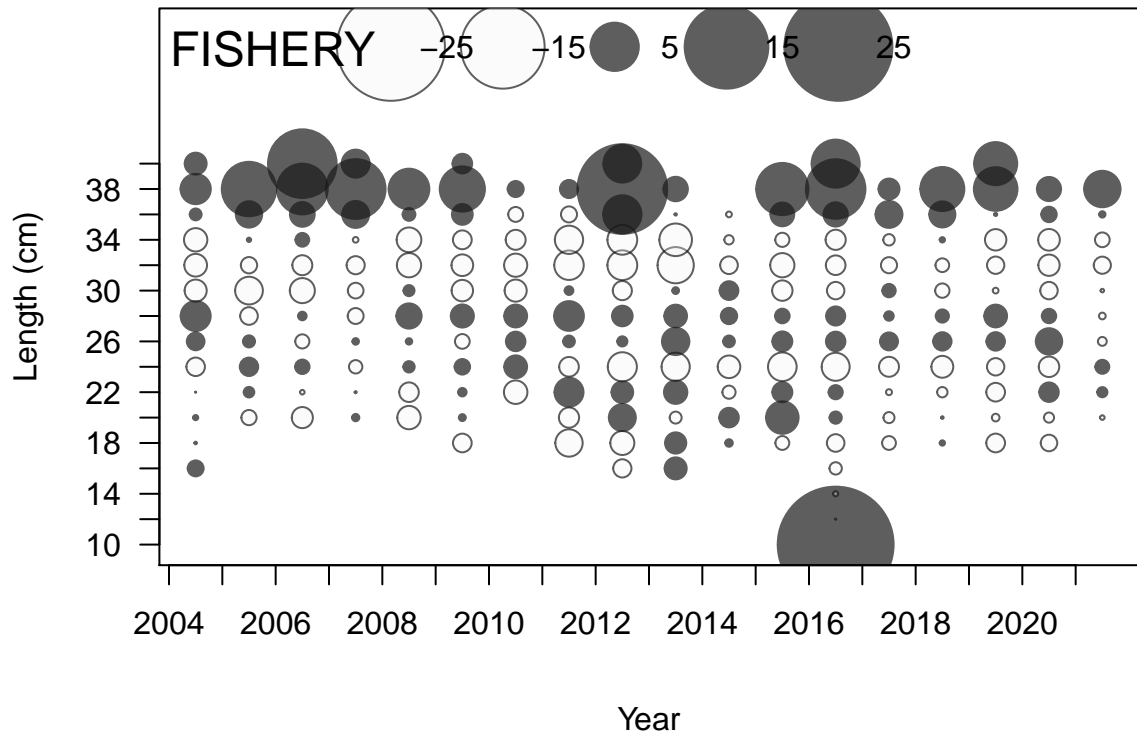


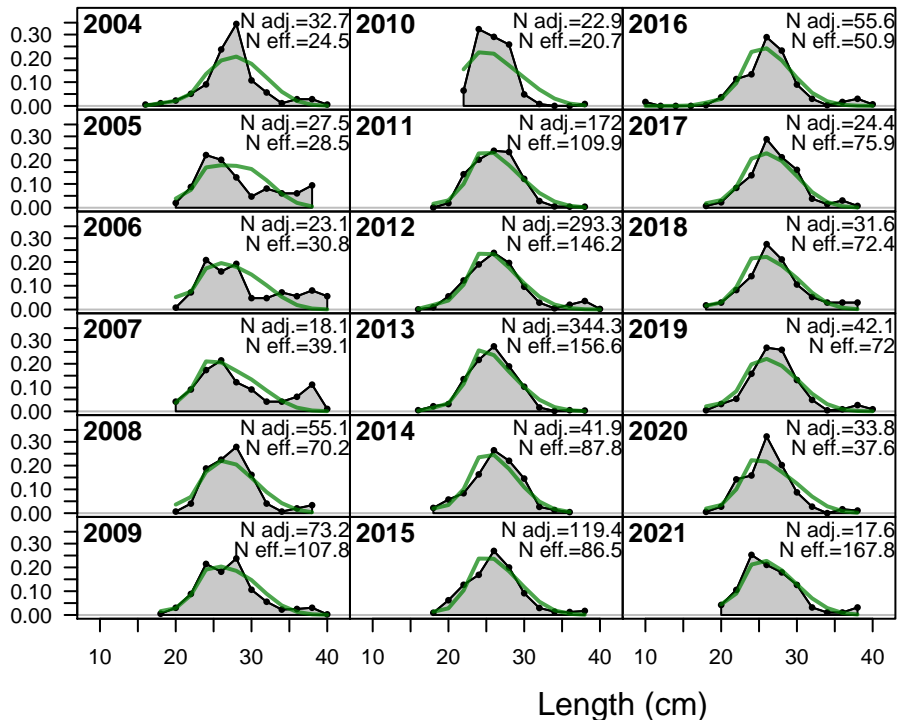
FISHERY (whole catch)



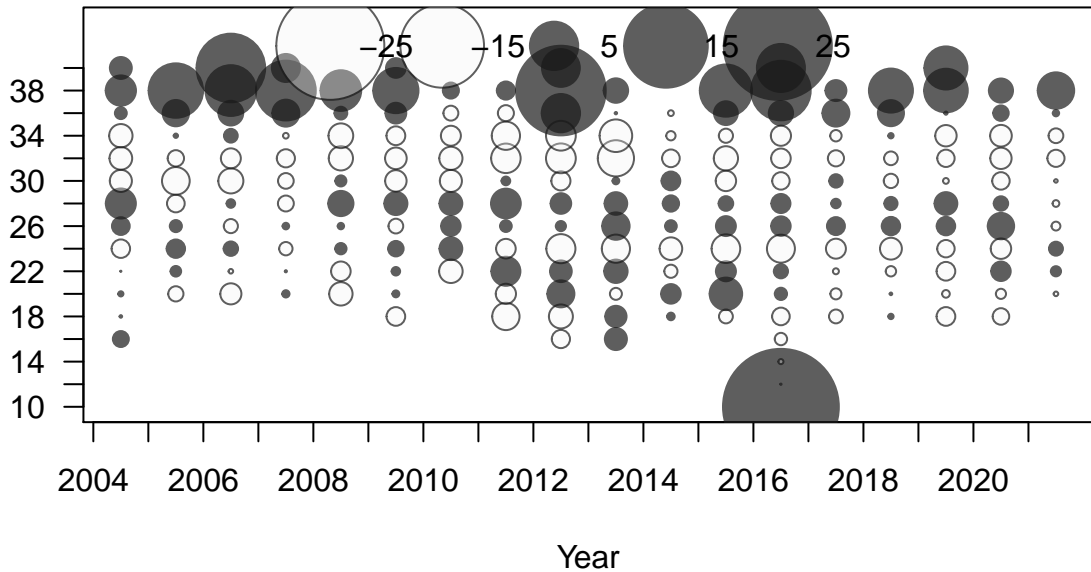




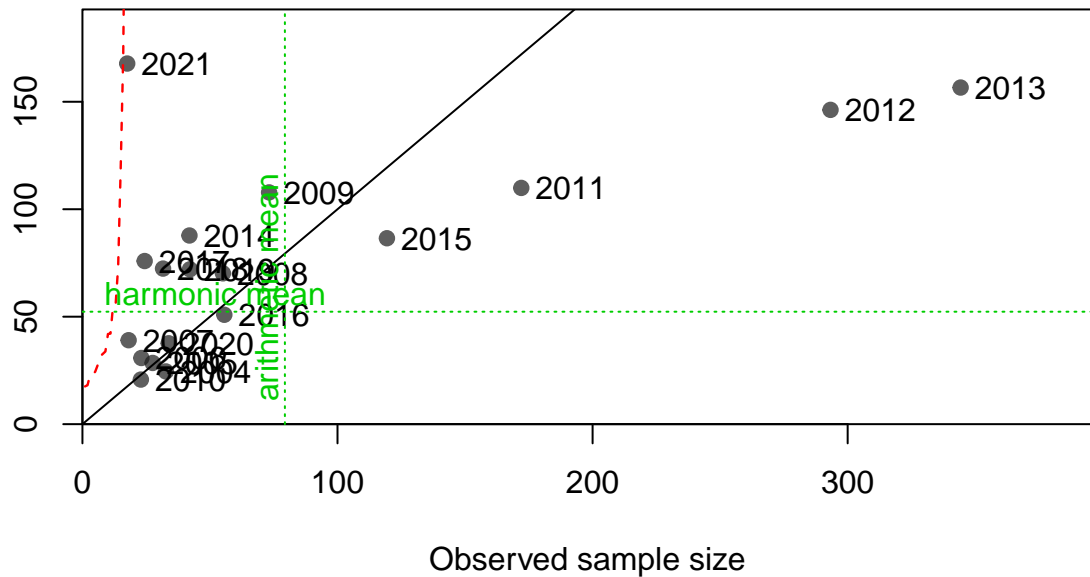




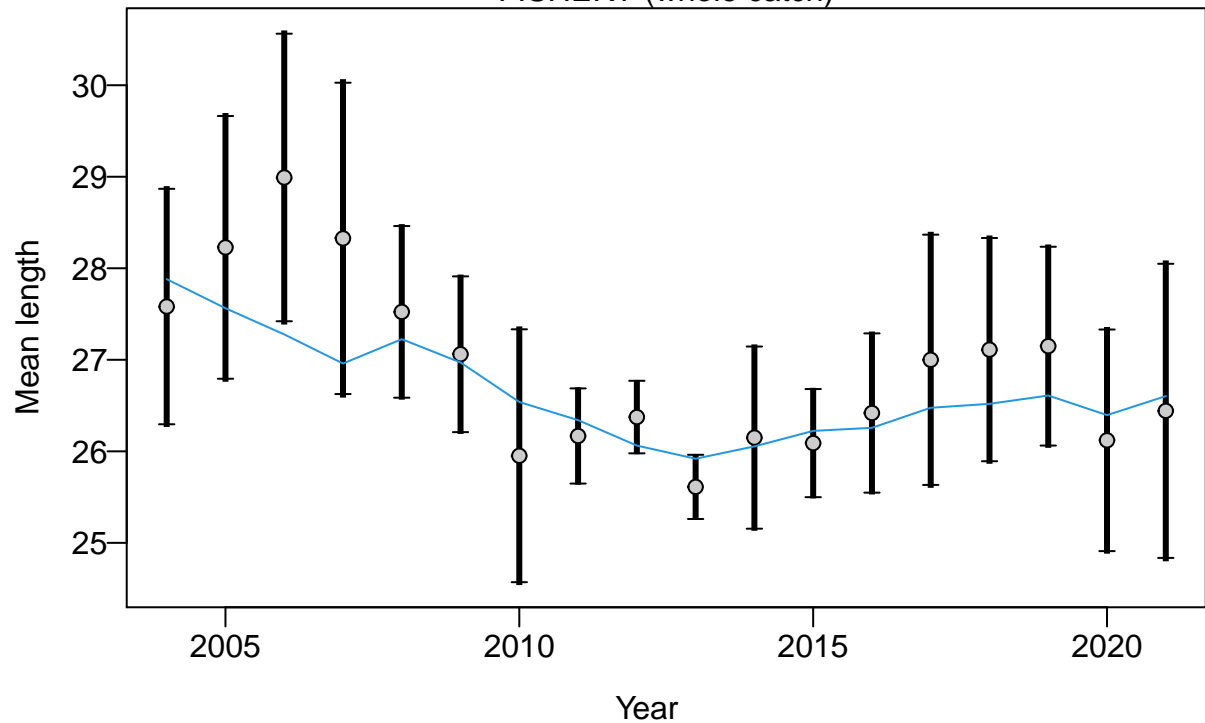
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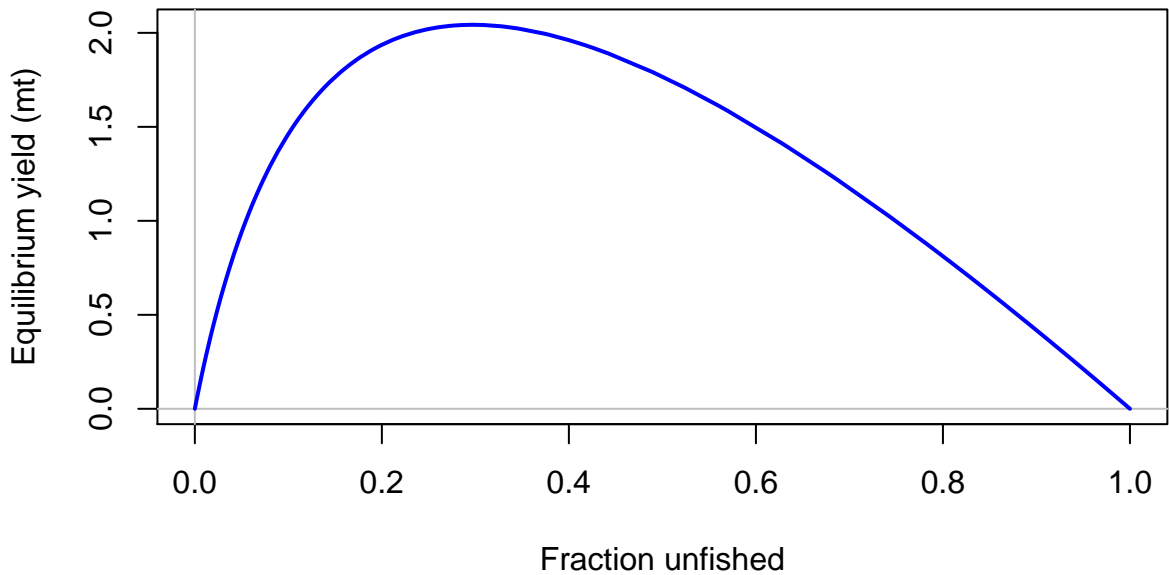


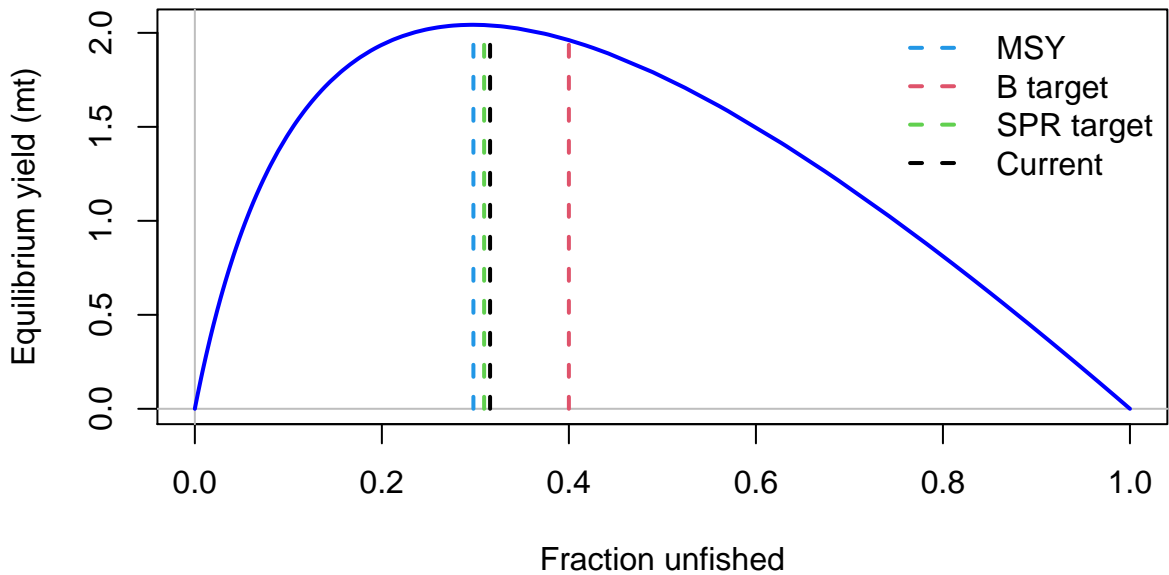
Effective sample size



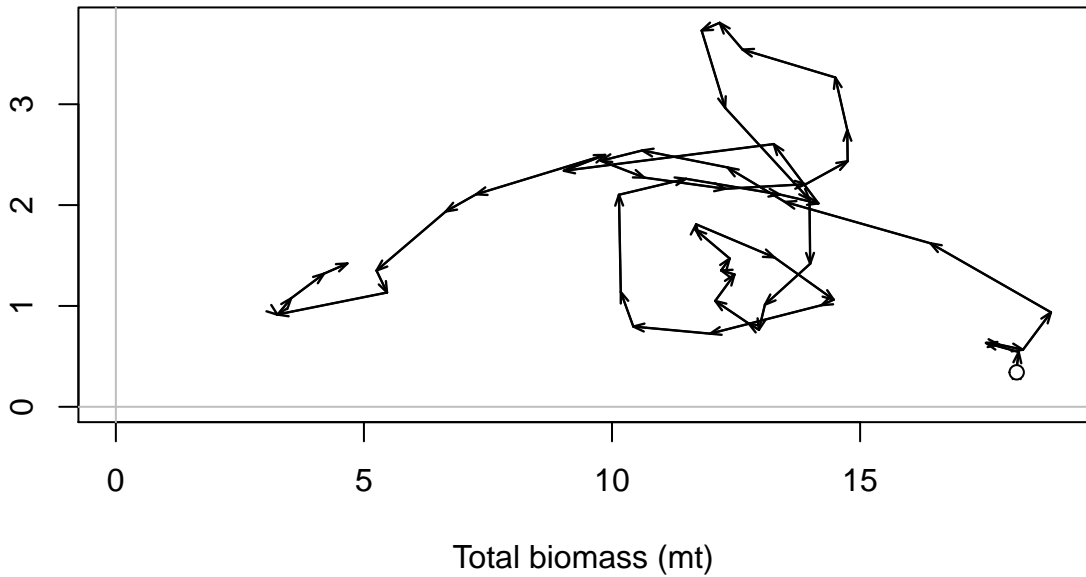
## FISHERY (whole catch)



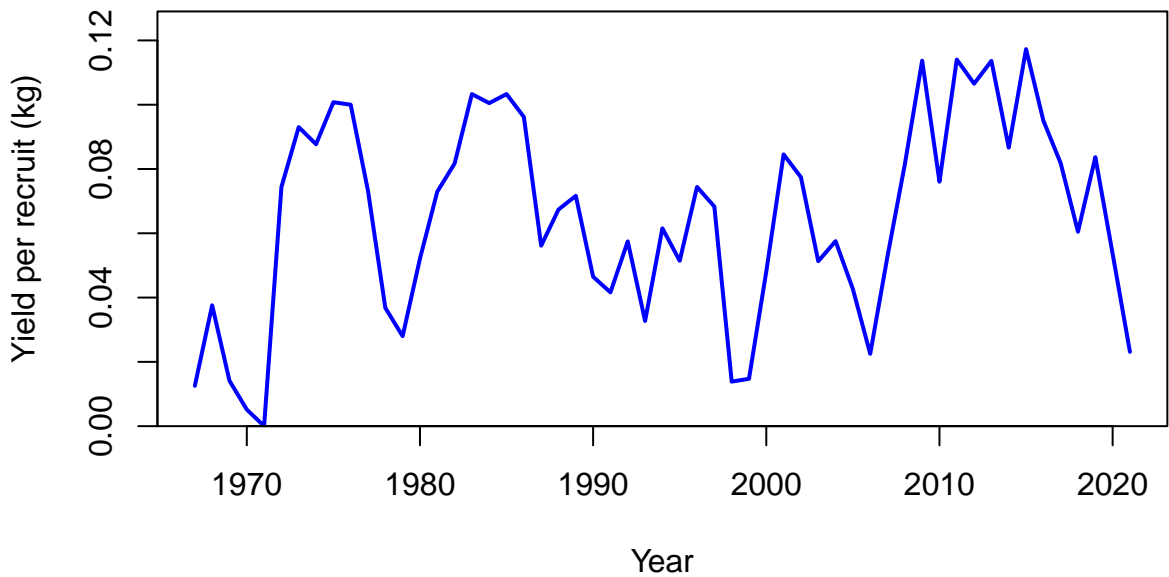


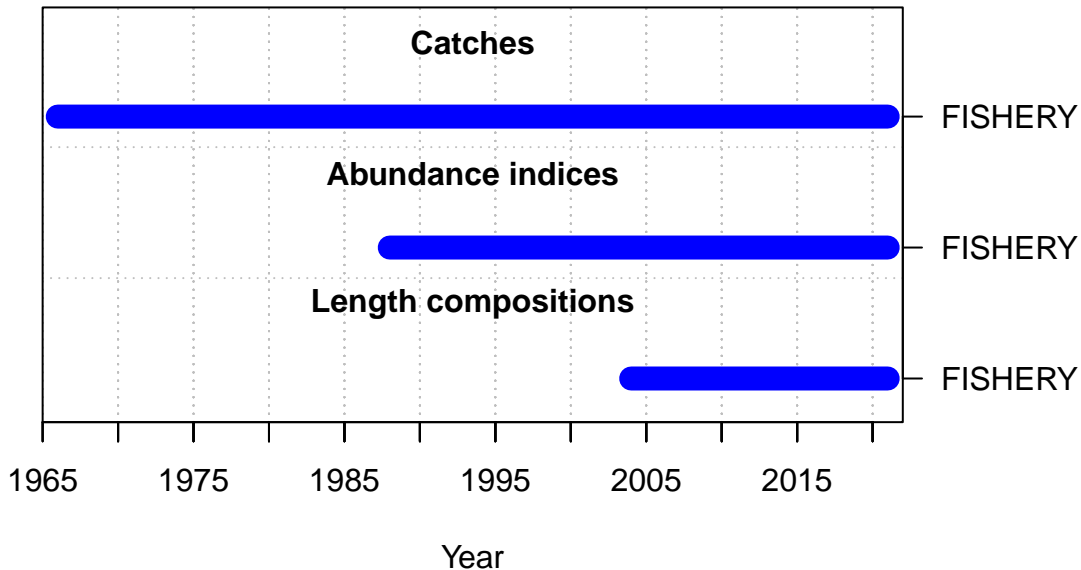


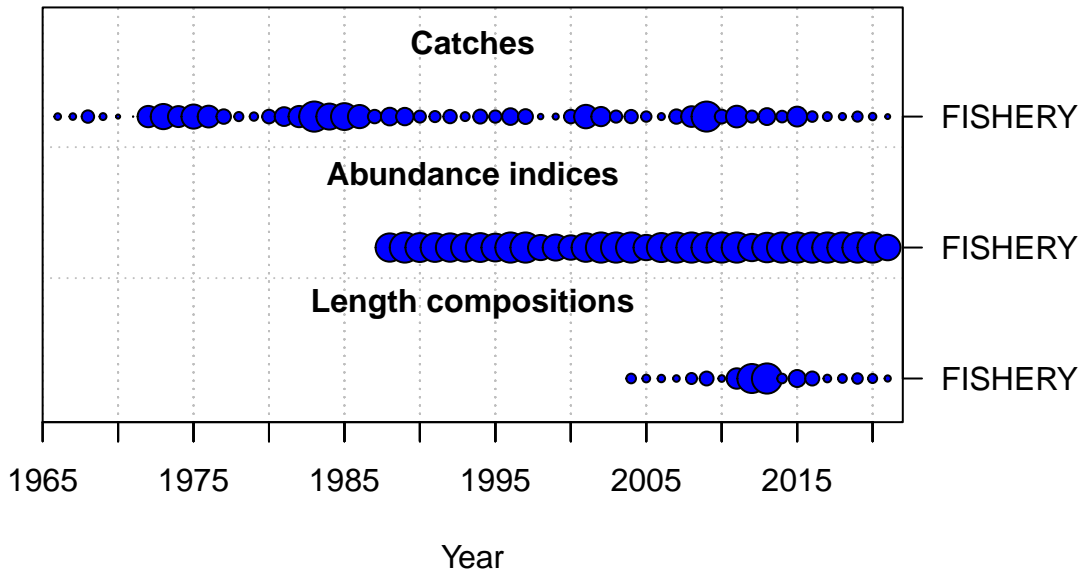
Surplus production (mt)



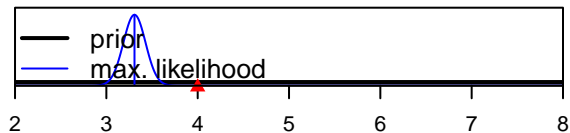




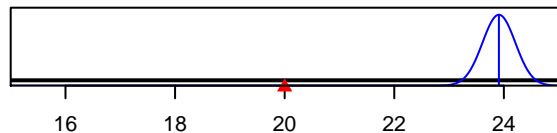




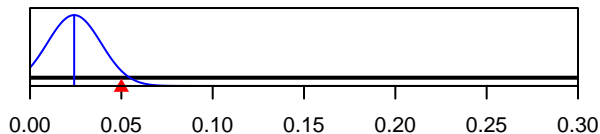
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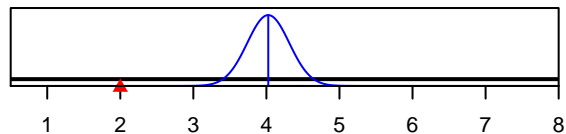
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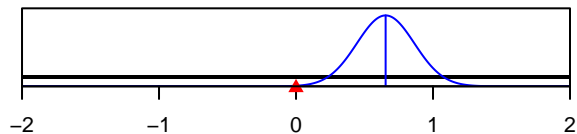
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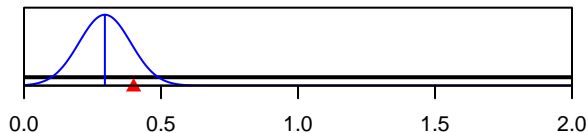
Size\_95%width\_FISHERY(1)



LnQ\_base\_FISHERY(1)



Q\_extraSD\_FISHERY(1)



Parameter value