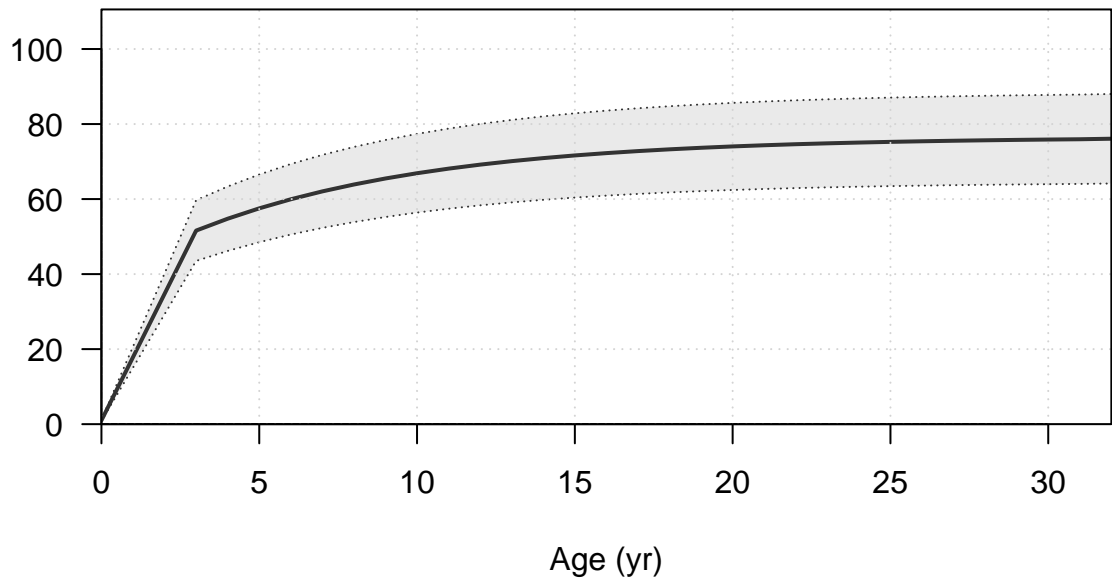
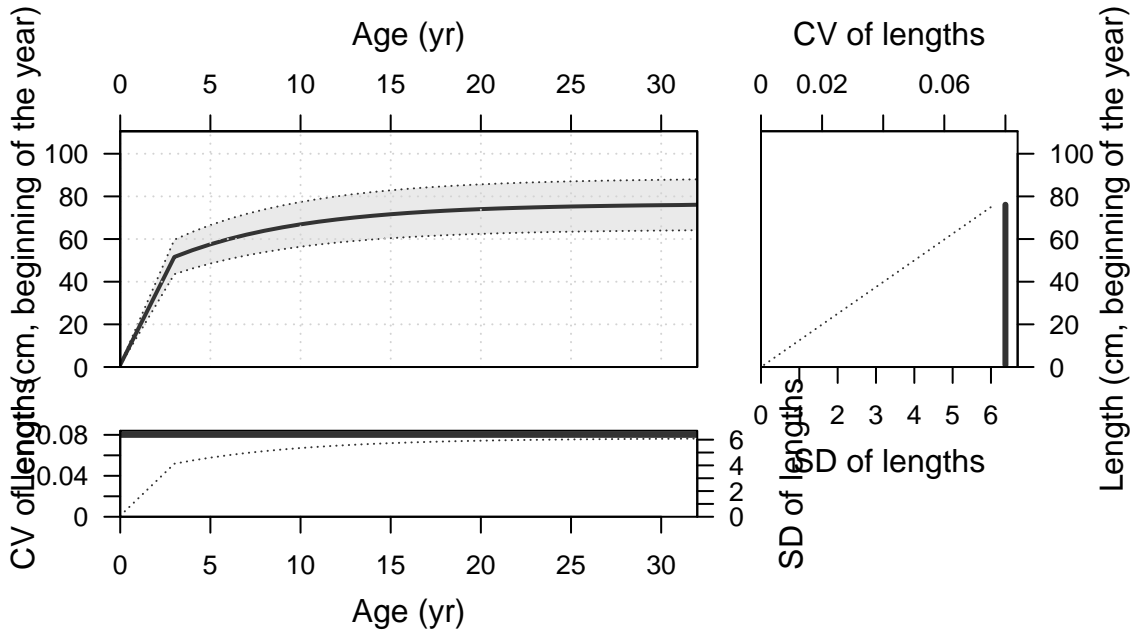
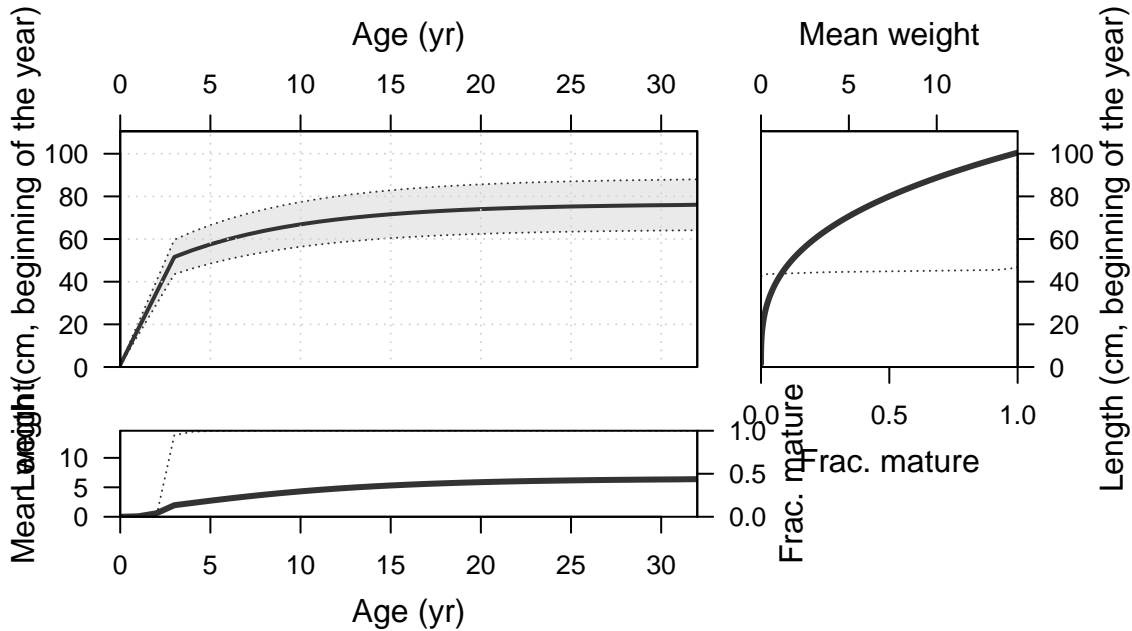


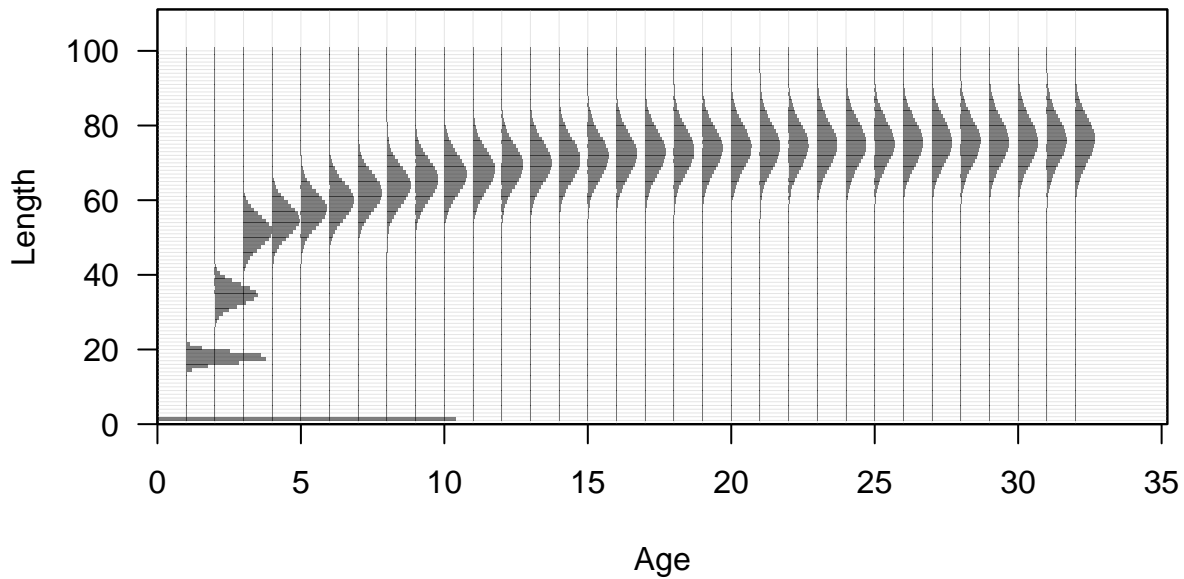
Plots created using the 'r4ss' package in R  
Stock Synthesis version: 3.30.19.0  
StartTime: Thu Jul 28 09:38:34 2022  
Data\_File: data.ss  
Control\_File: control.ss

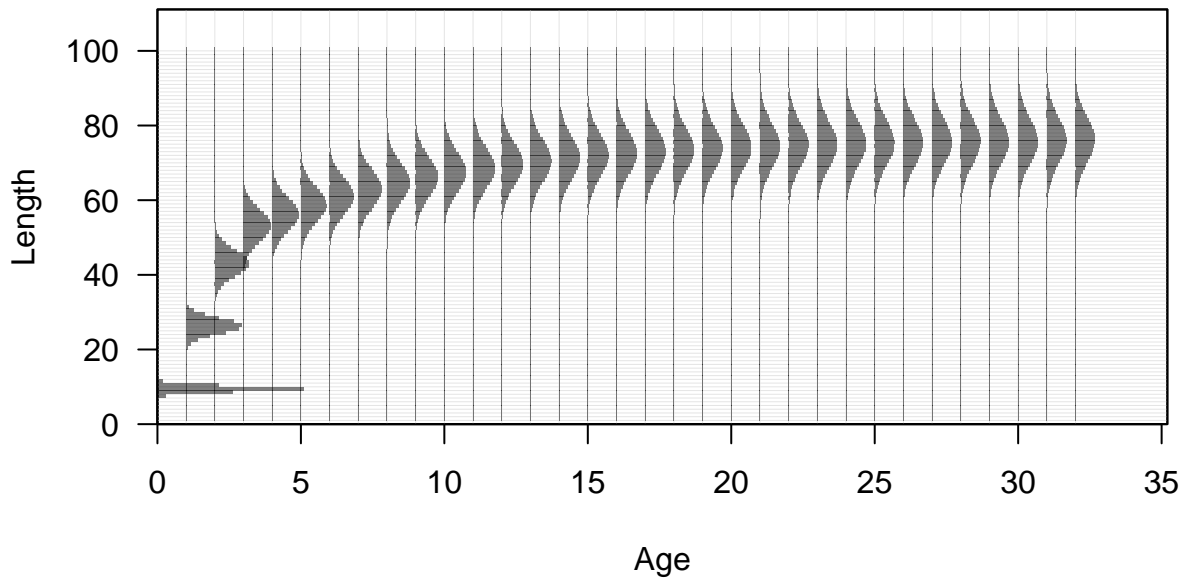
Length (cm, beginning of the year)



















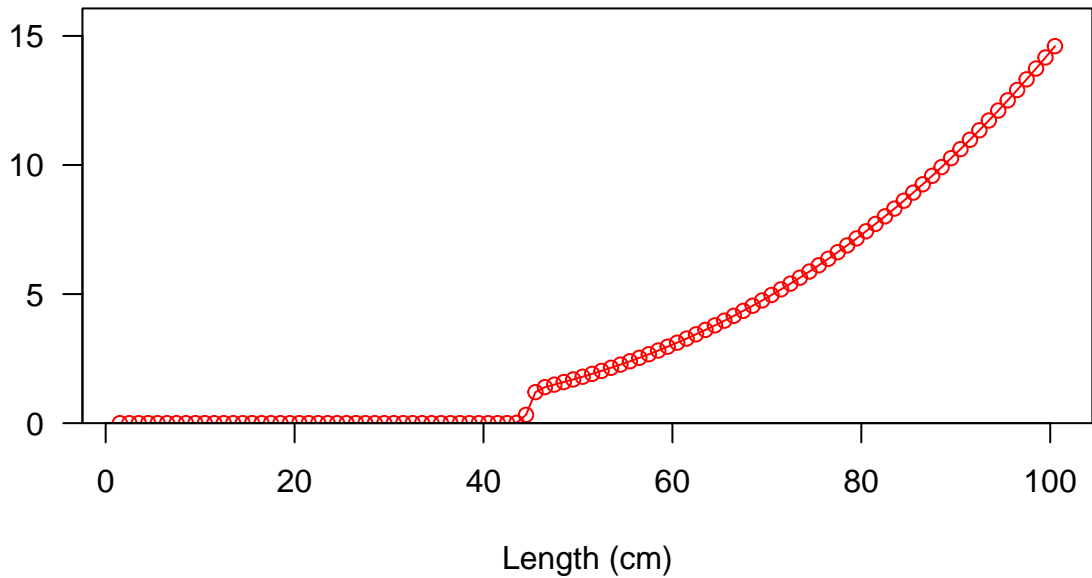
Fecundity



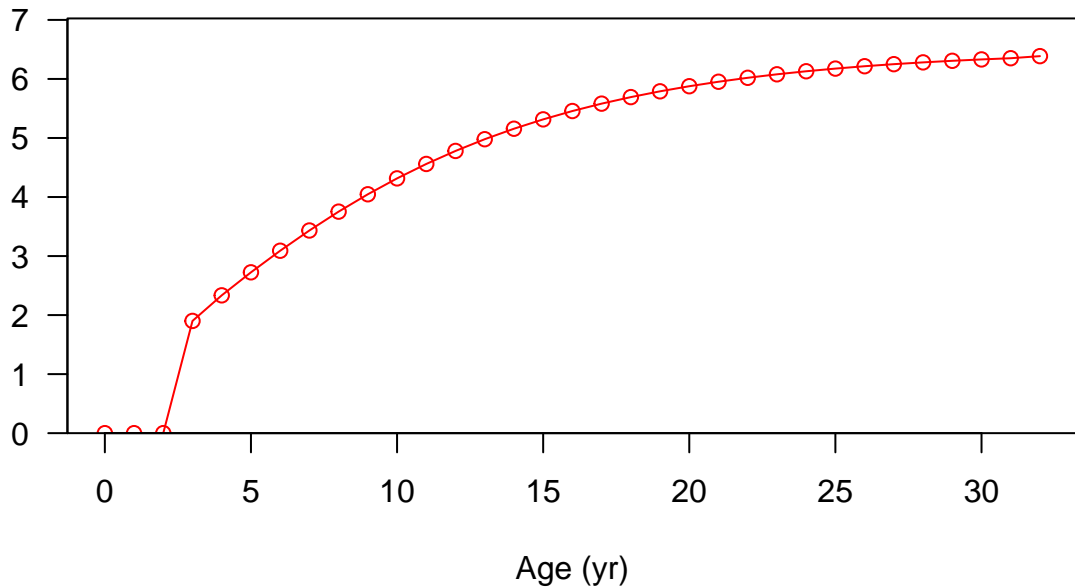
Fecundity



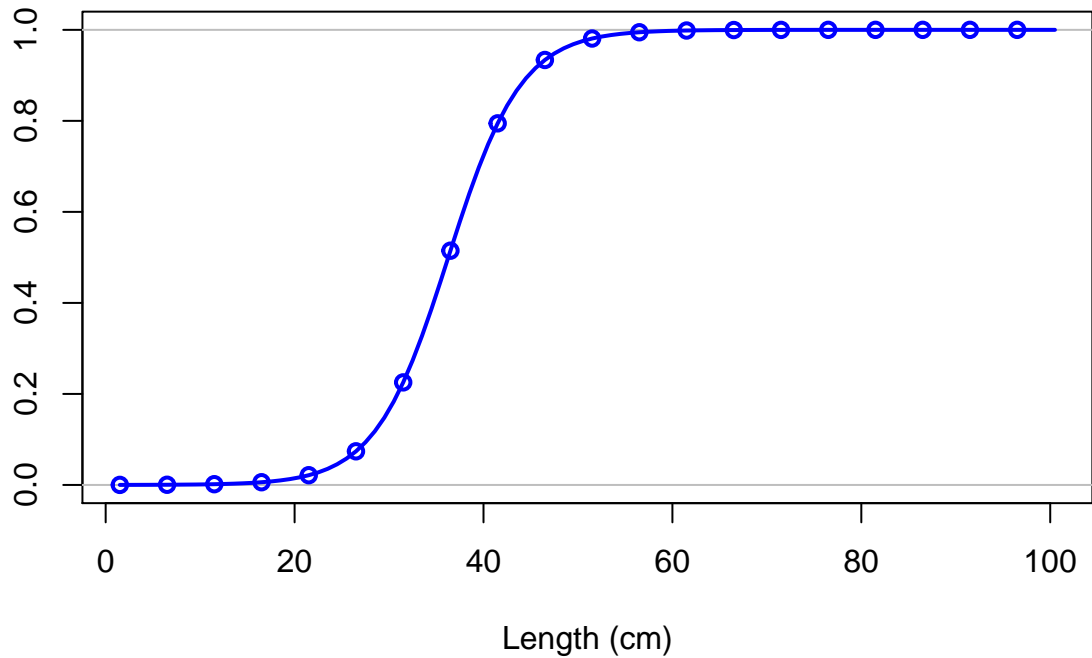
Spawning output



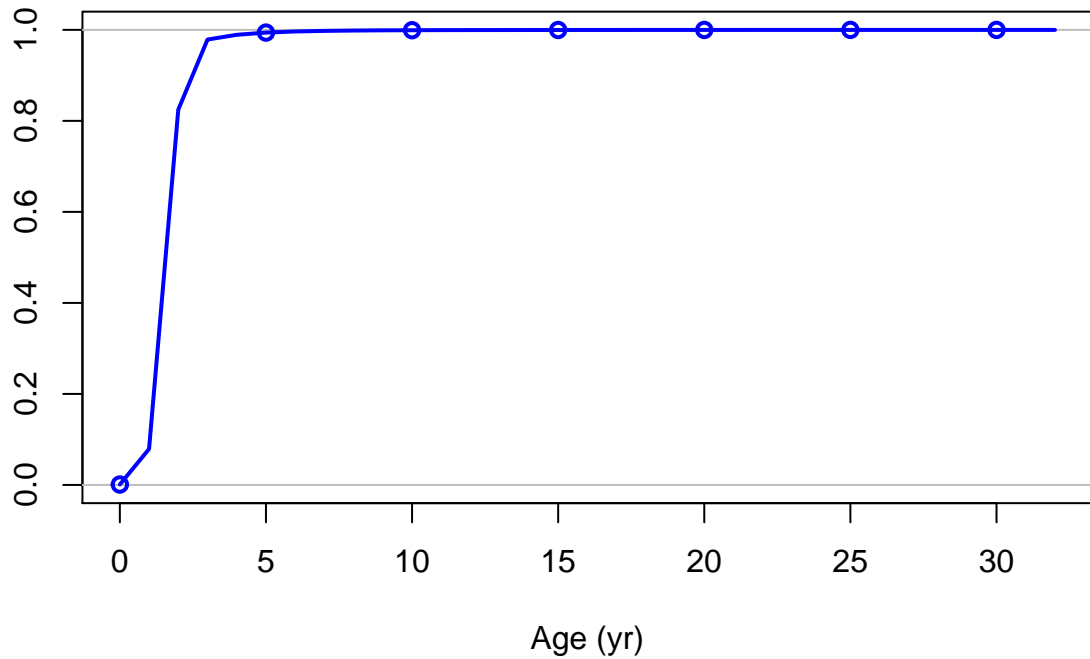
Spawning output



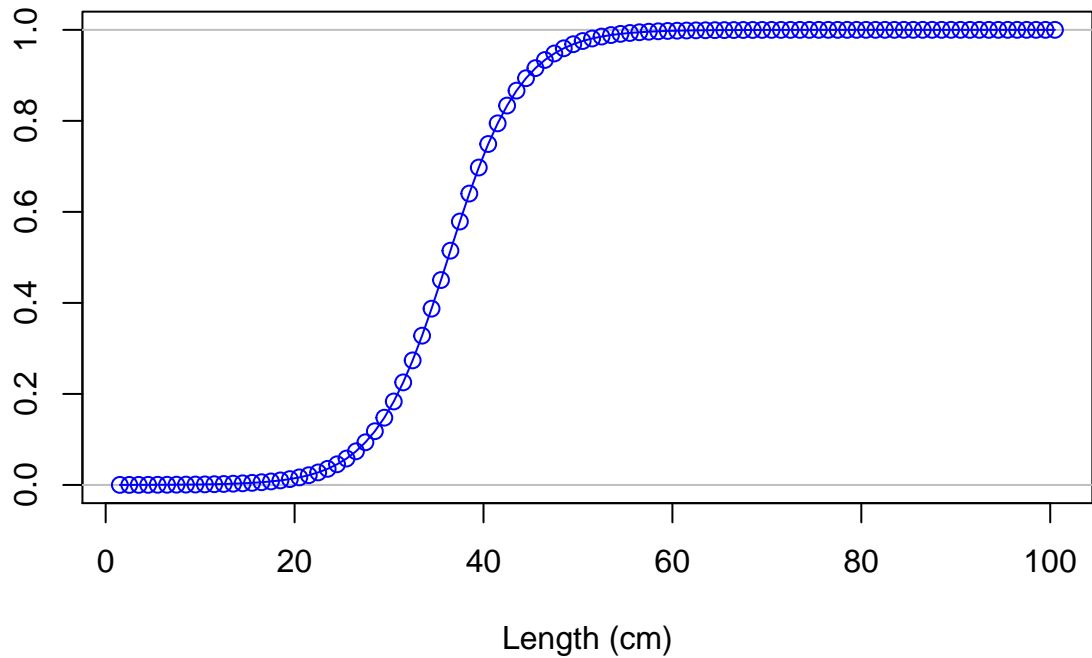
Selectivity



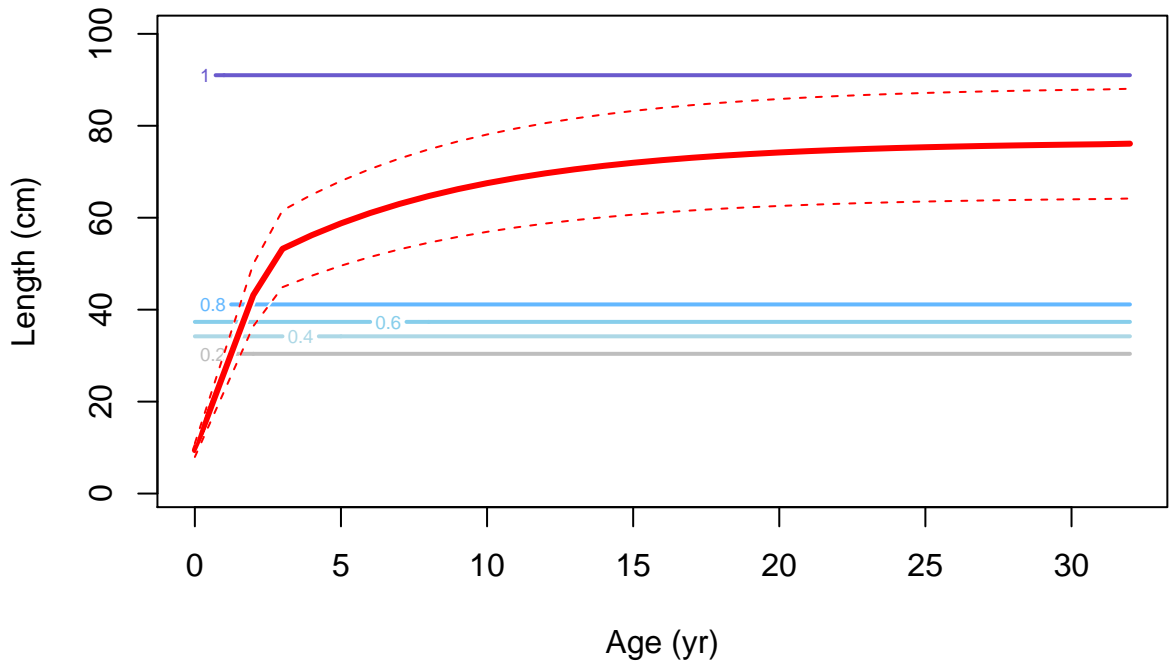
Selectivity

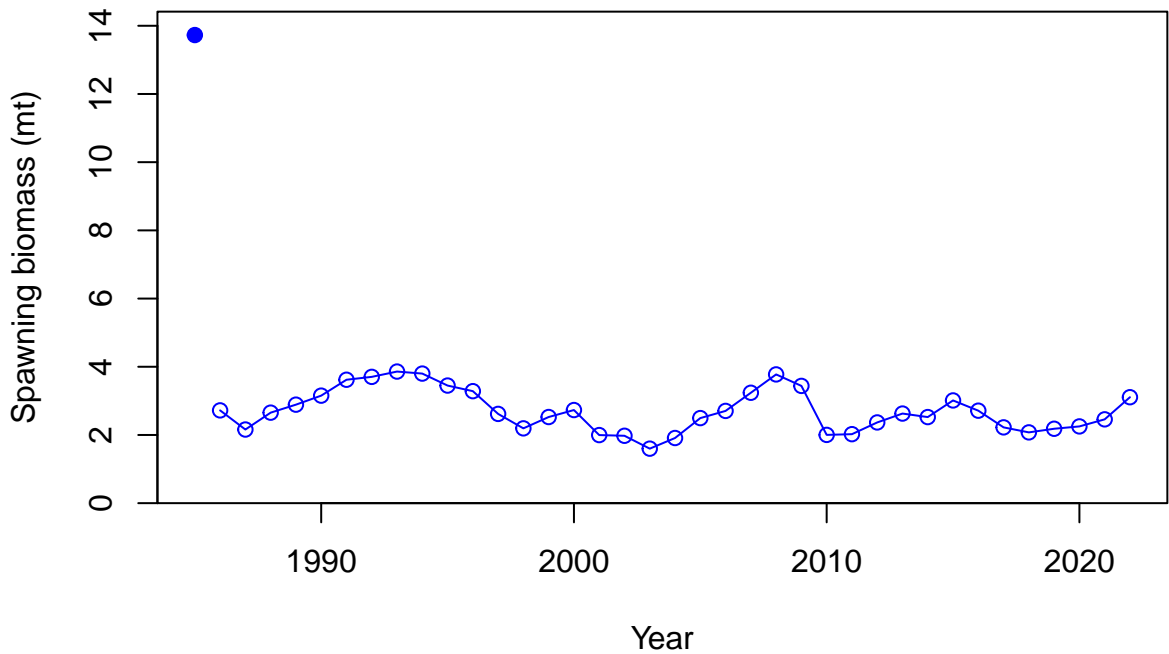


Selectivity









Spawning biomass (mt)

15  
10  
5  
0

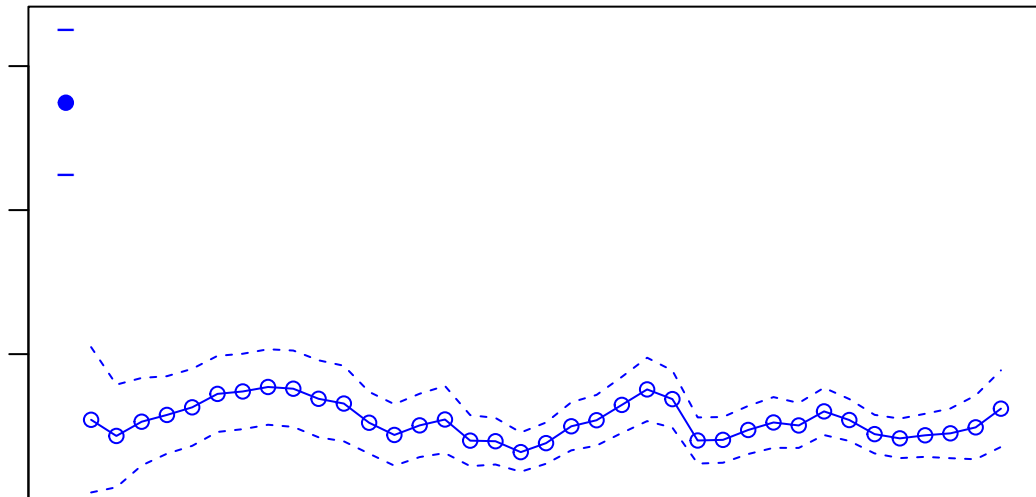
1990

2000

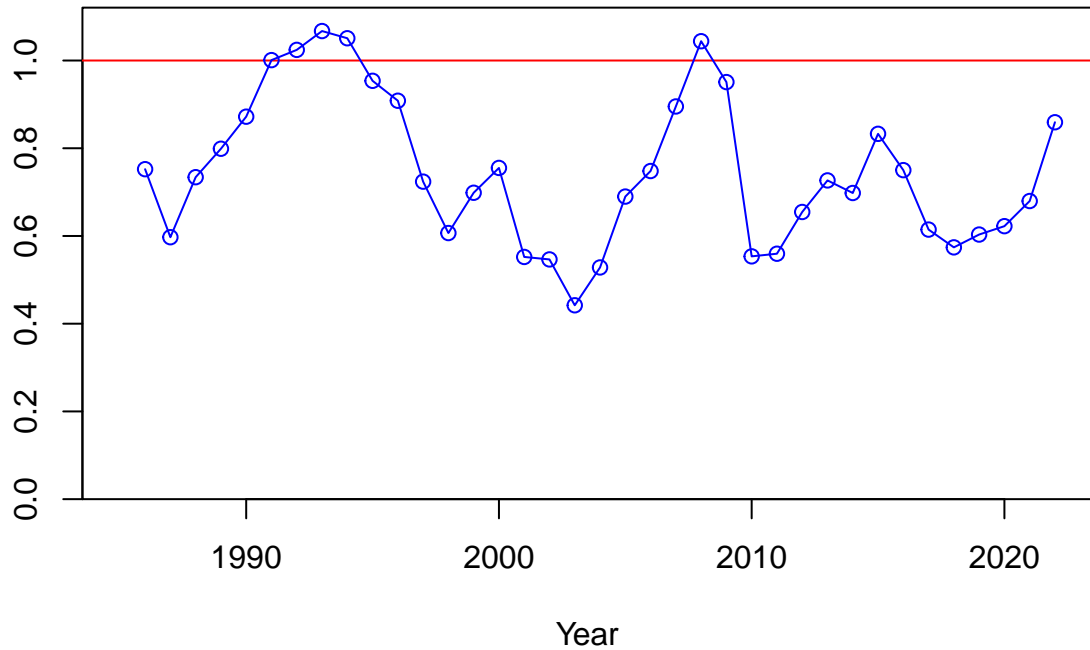
2010

2020

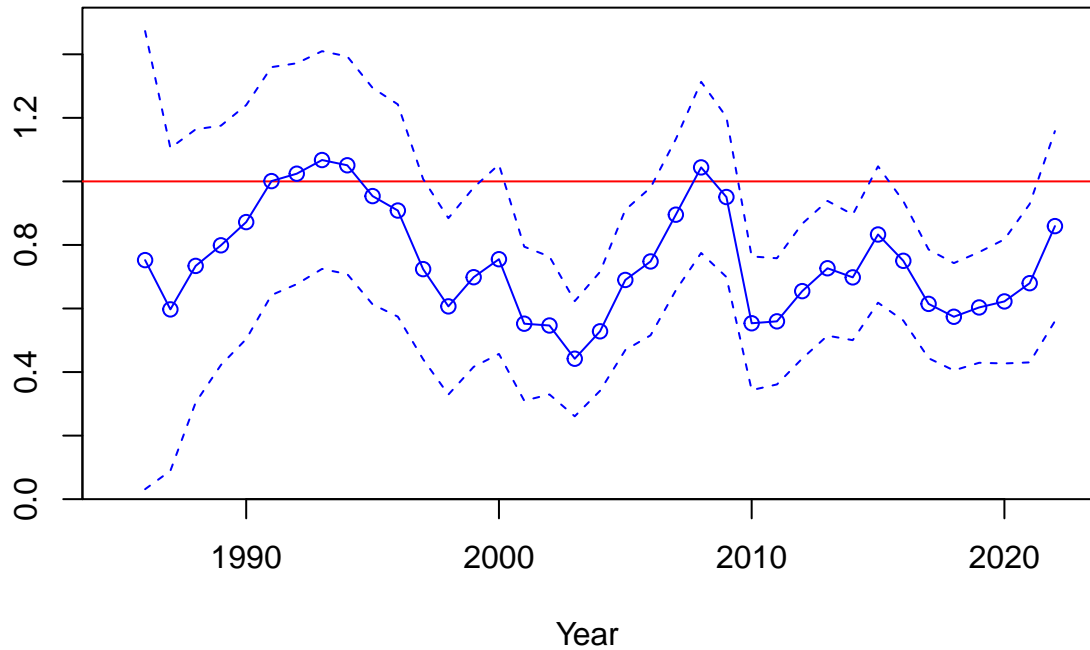
Year

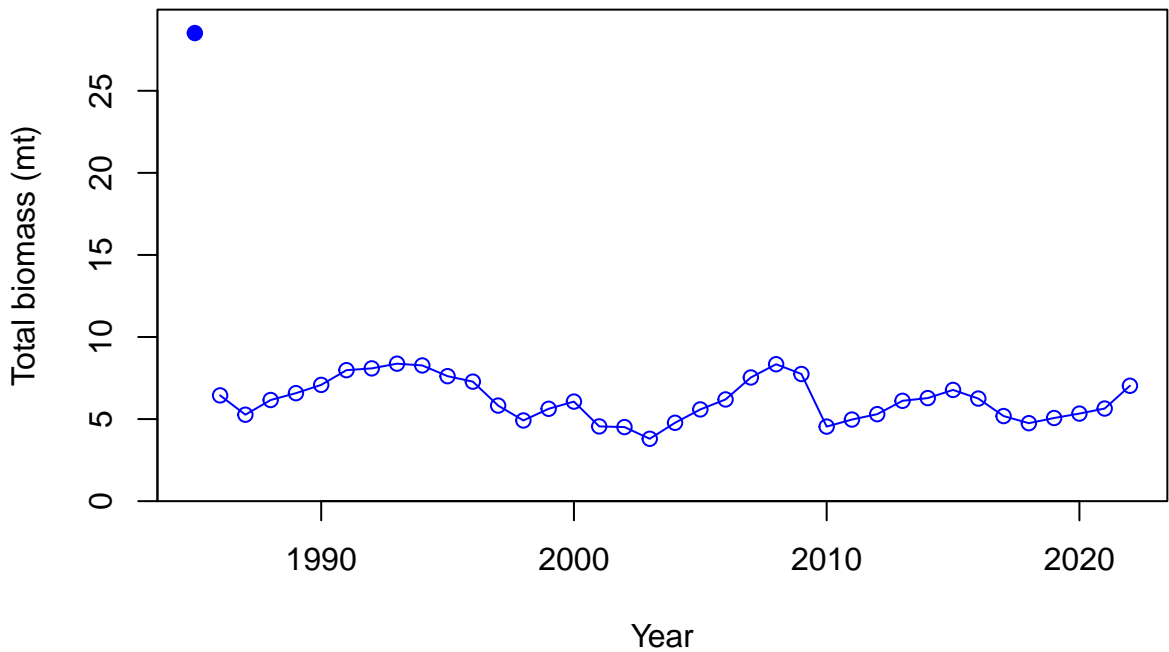


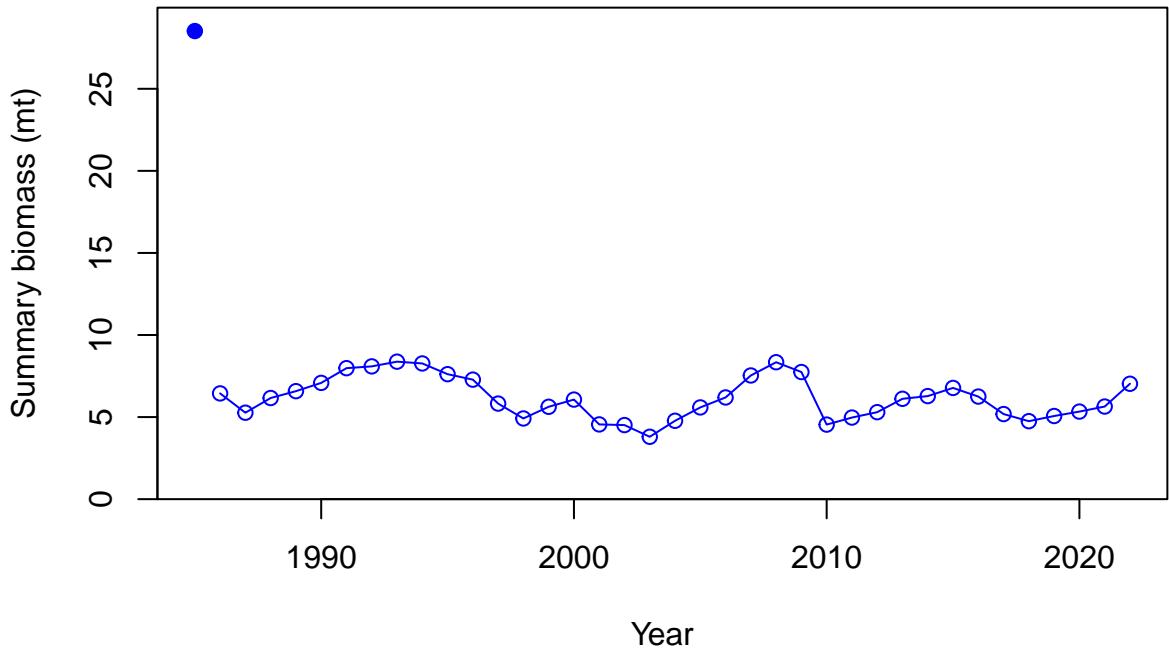
Relative spawning biomass:  $B/B_{MSY}$



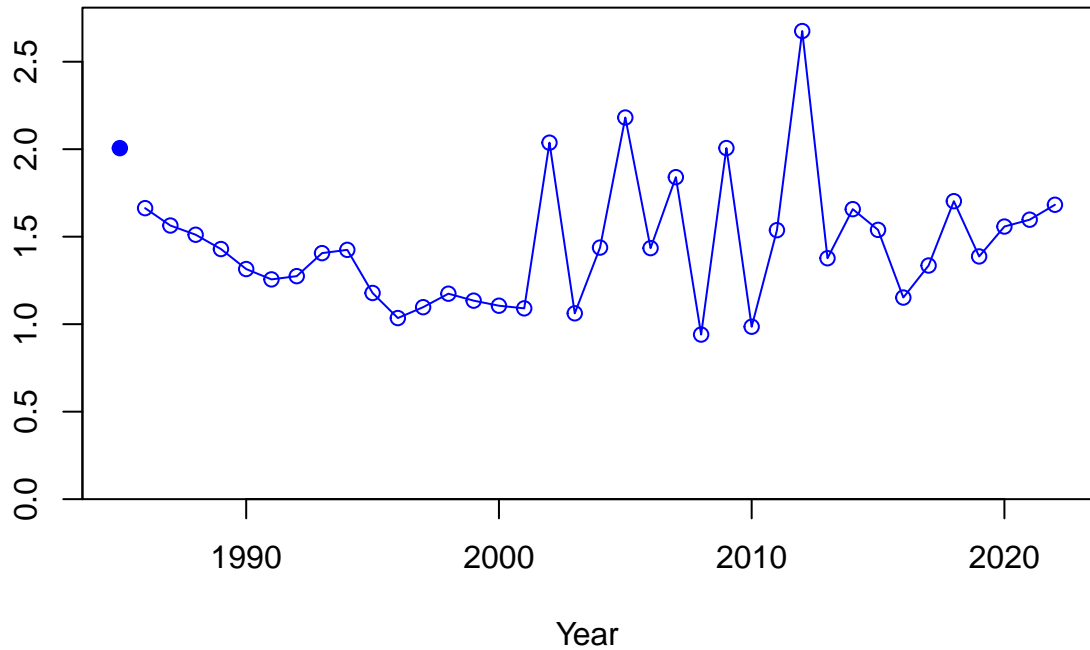
Relative spawning biomass:  $B/B_{MSY}$





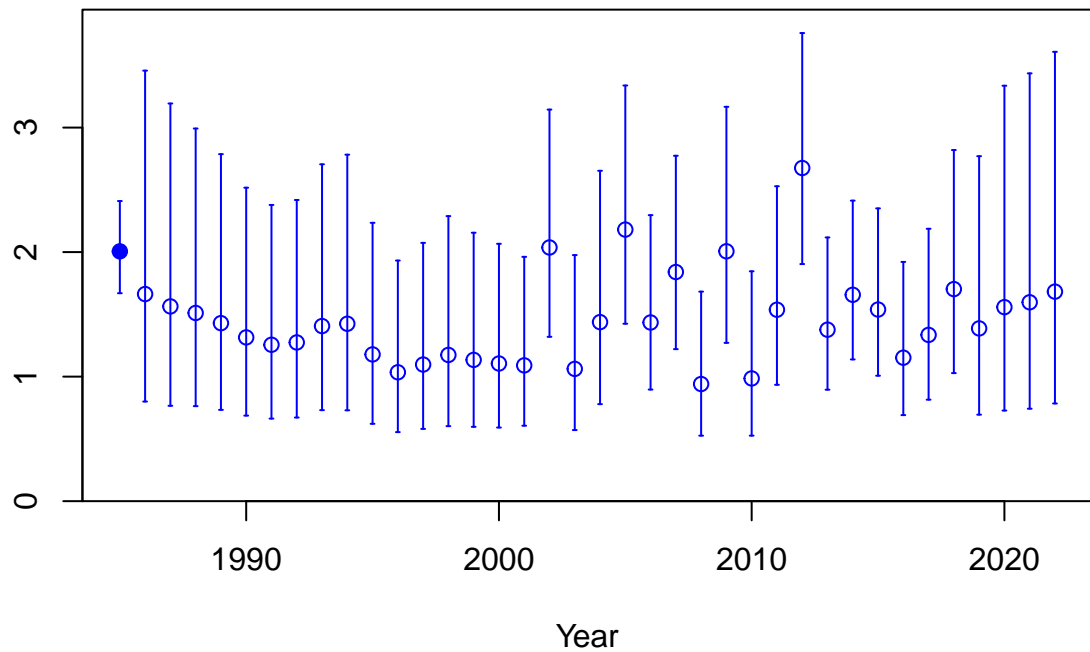


Age-0 recruits (1,000s)

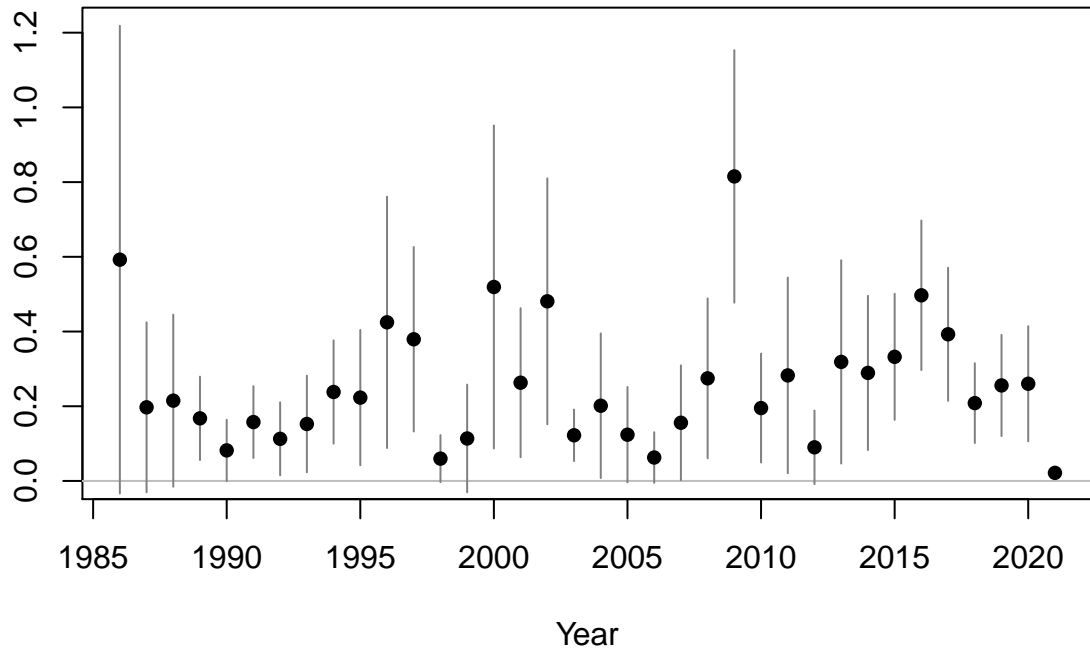


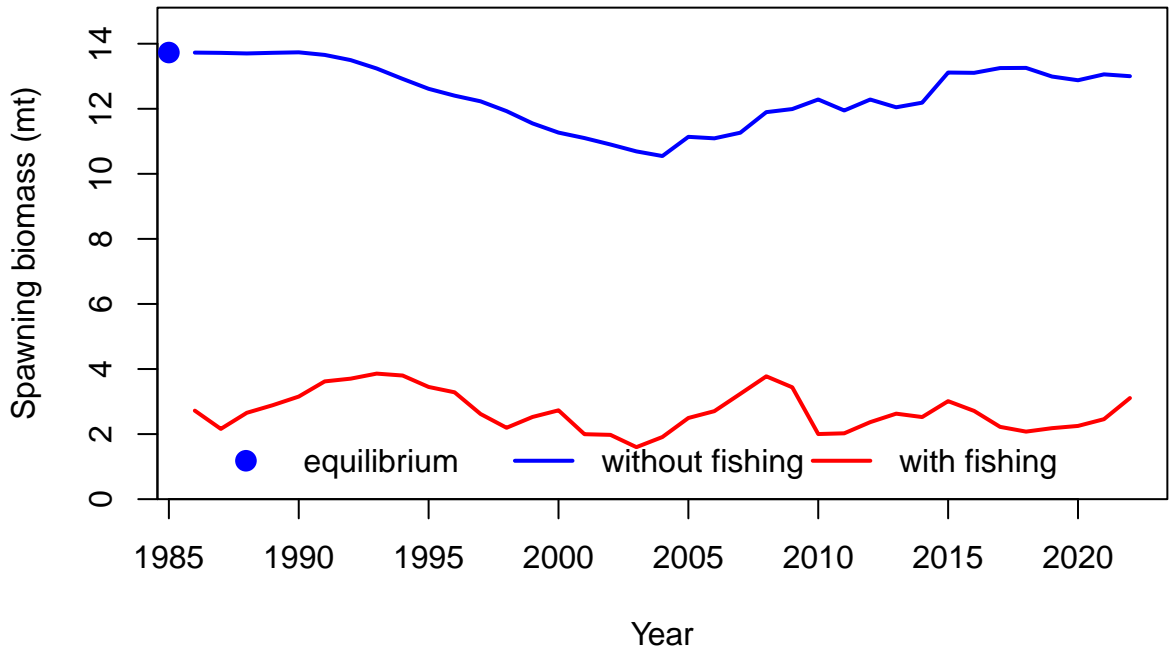


Age-0 recruits (1,000s)

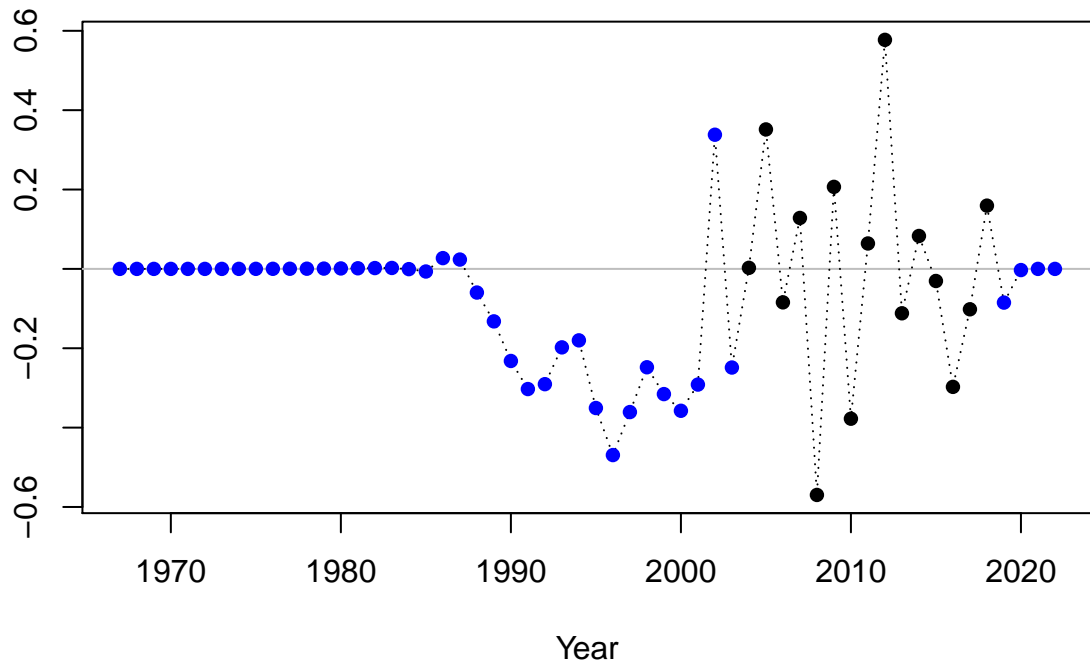


Summary Fishing Mortality

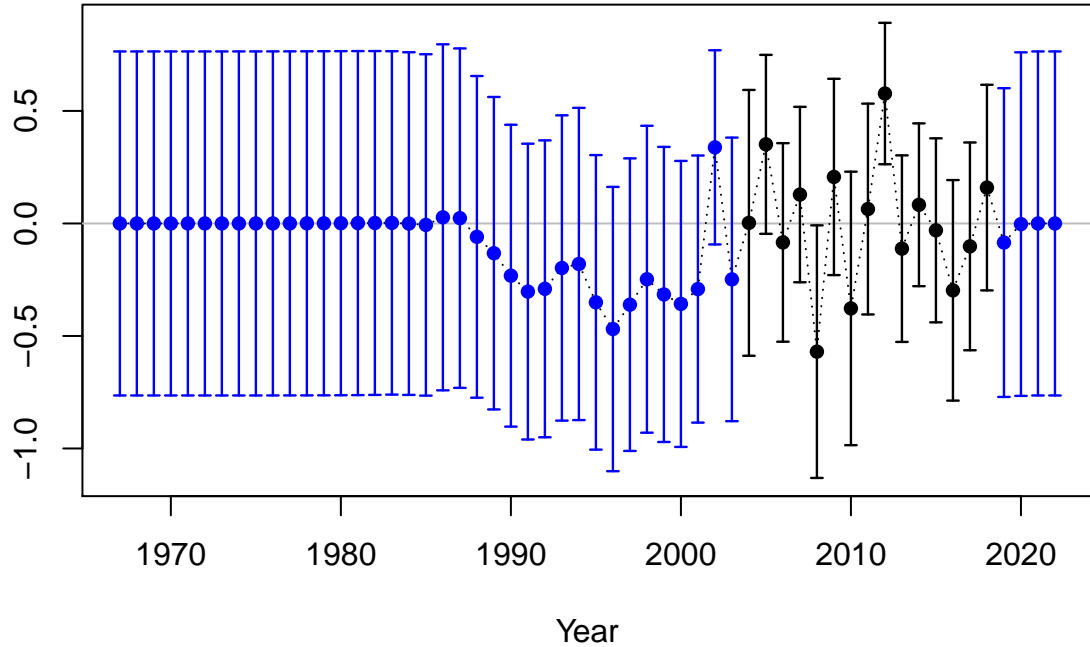




Log recruitment deviation

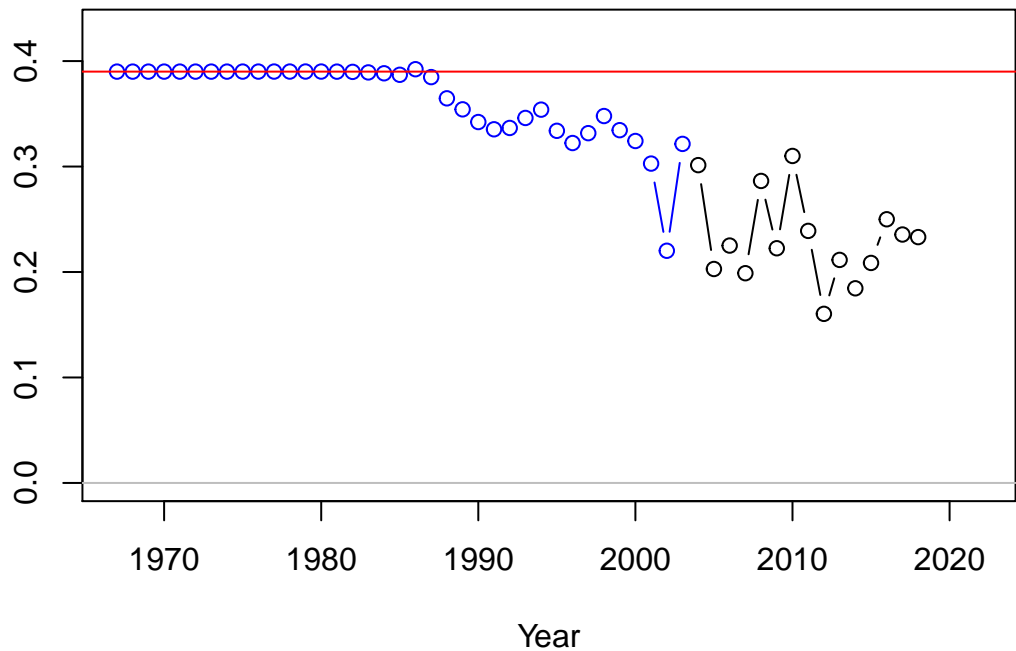


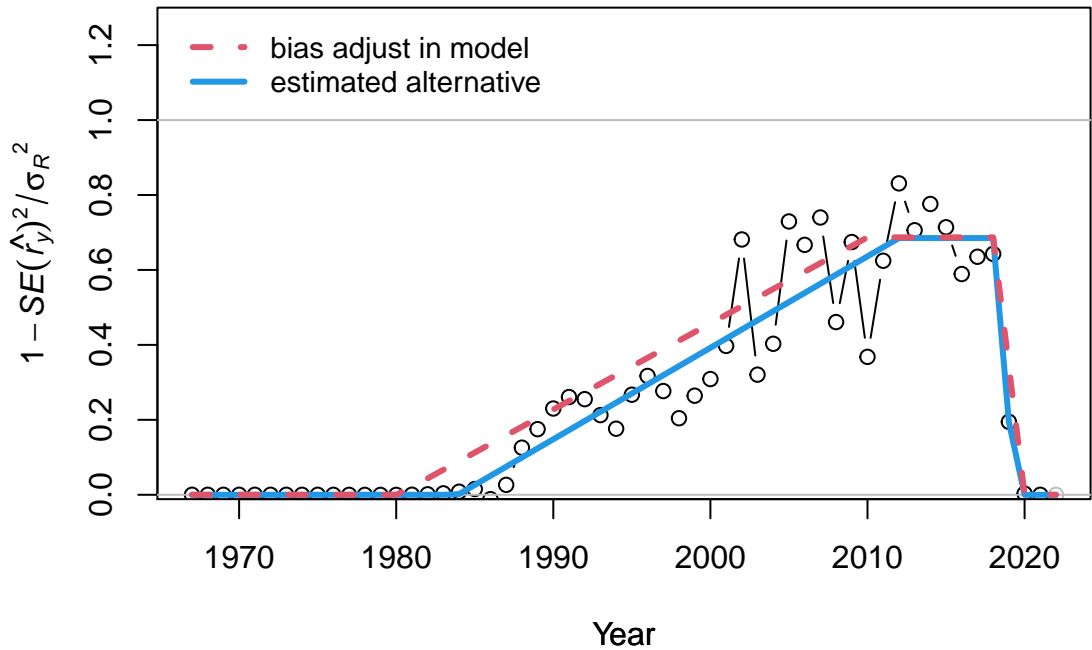
Log recruitment deviation

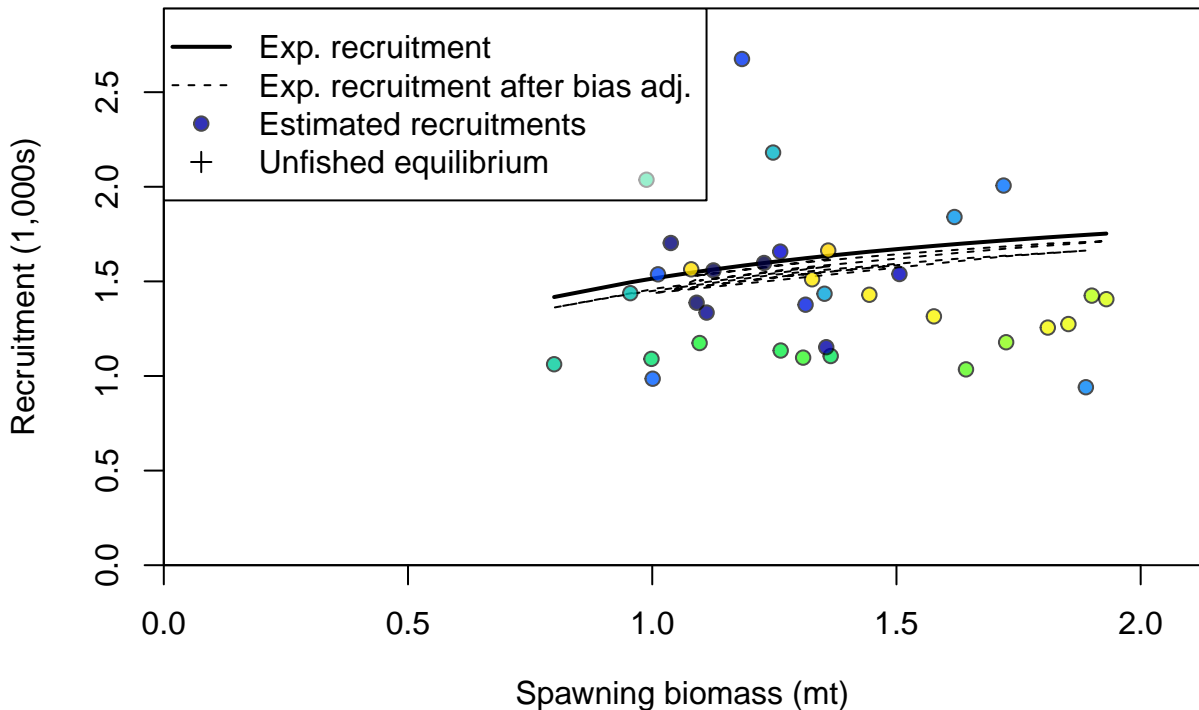


## Recruitment deviation variance

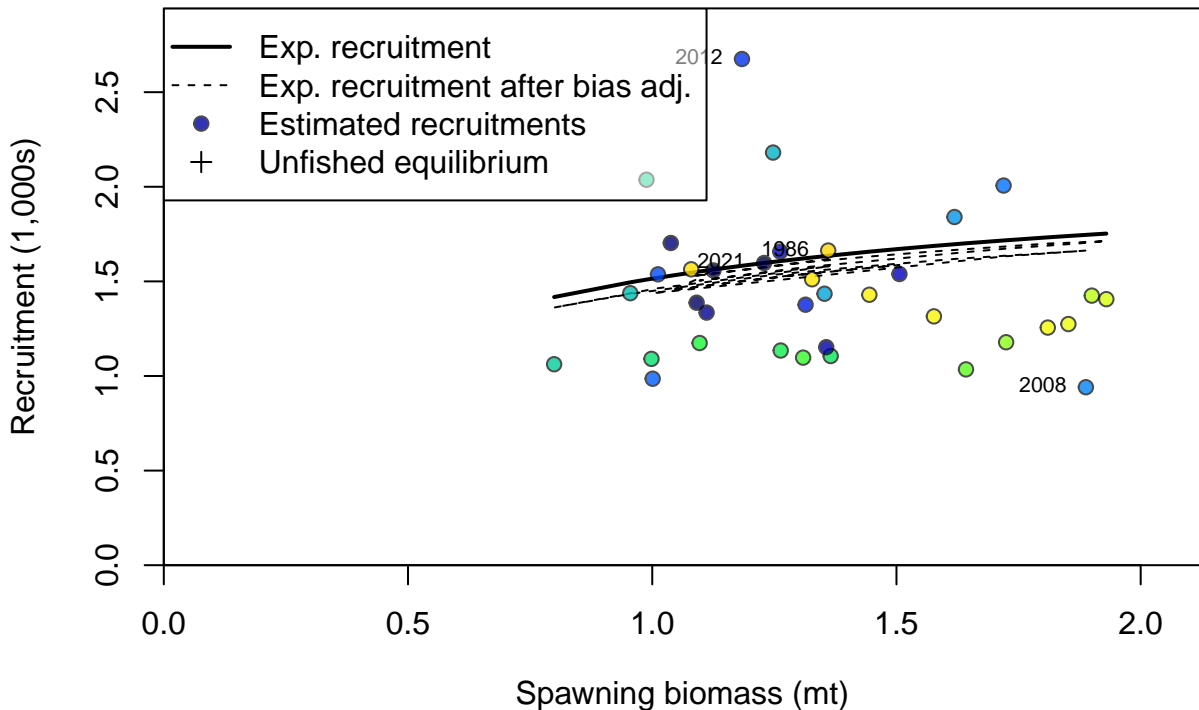
Asymptotic standard error estimate



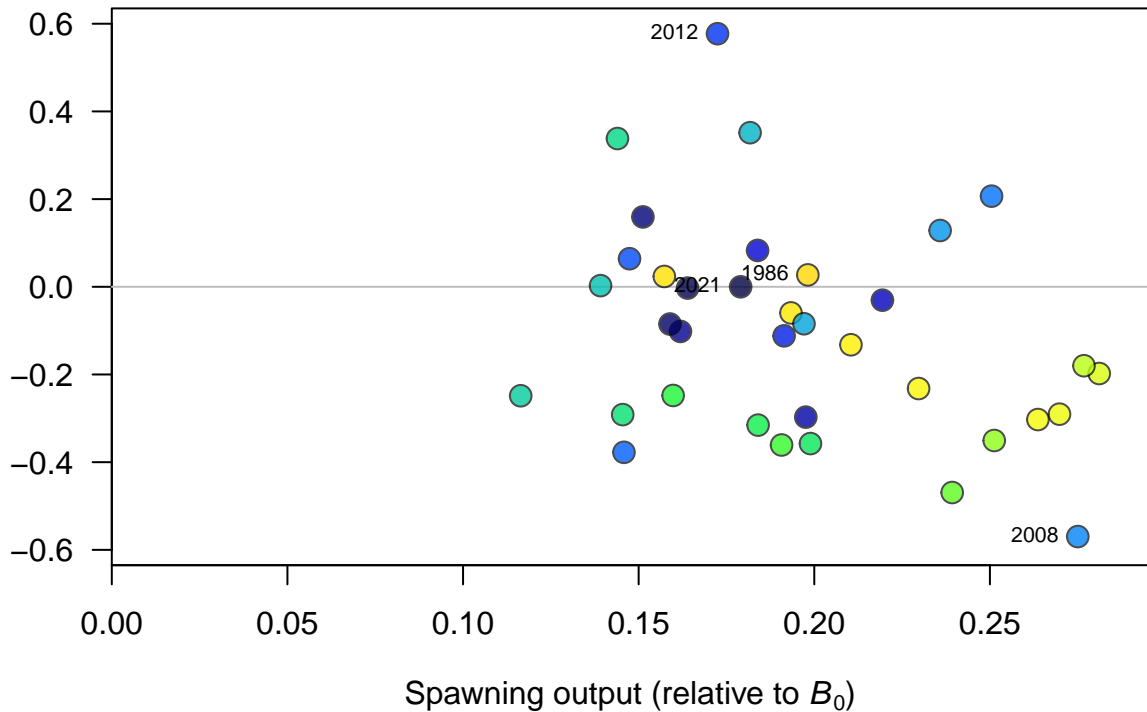


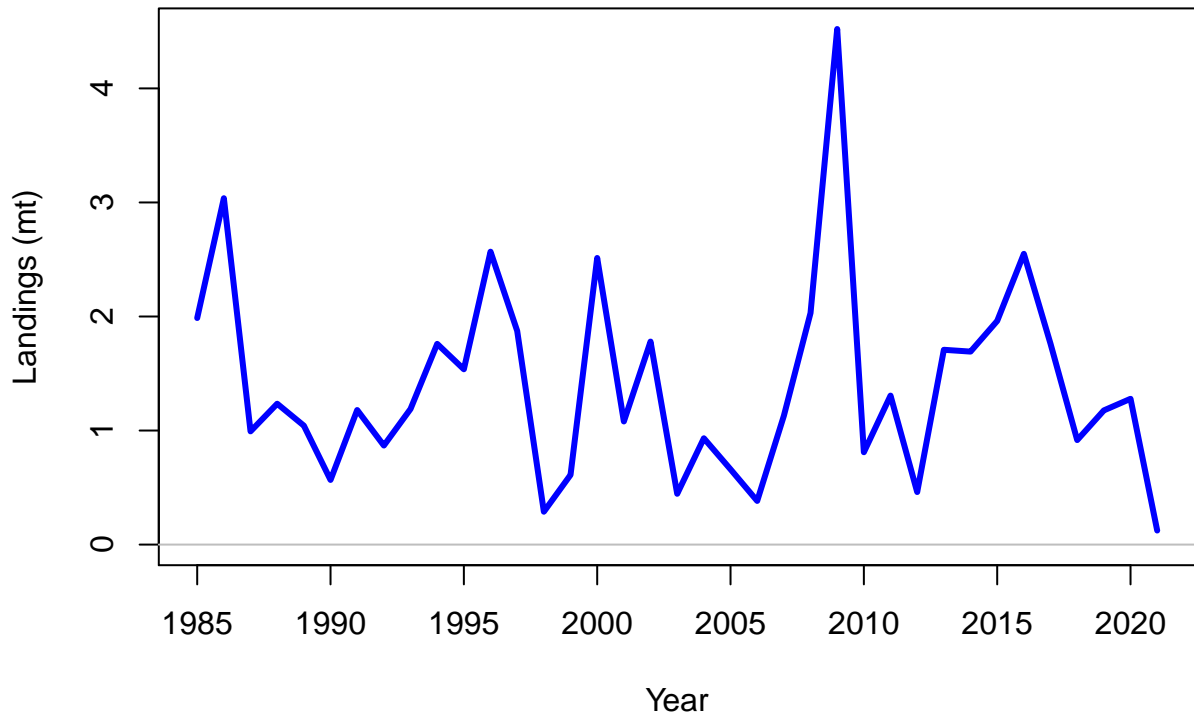


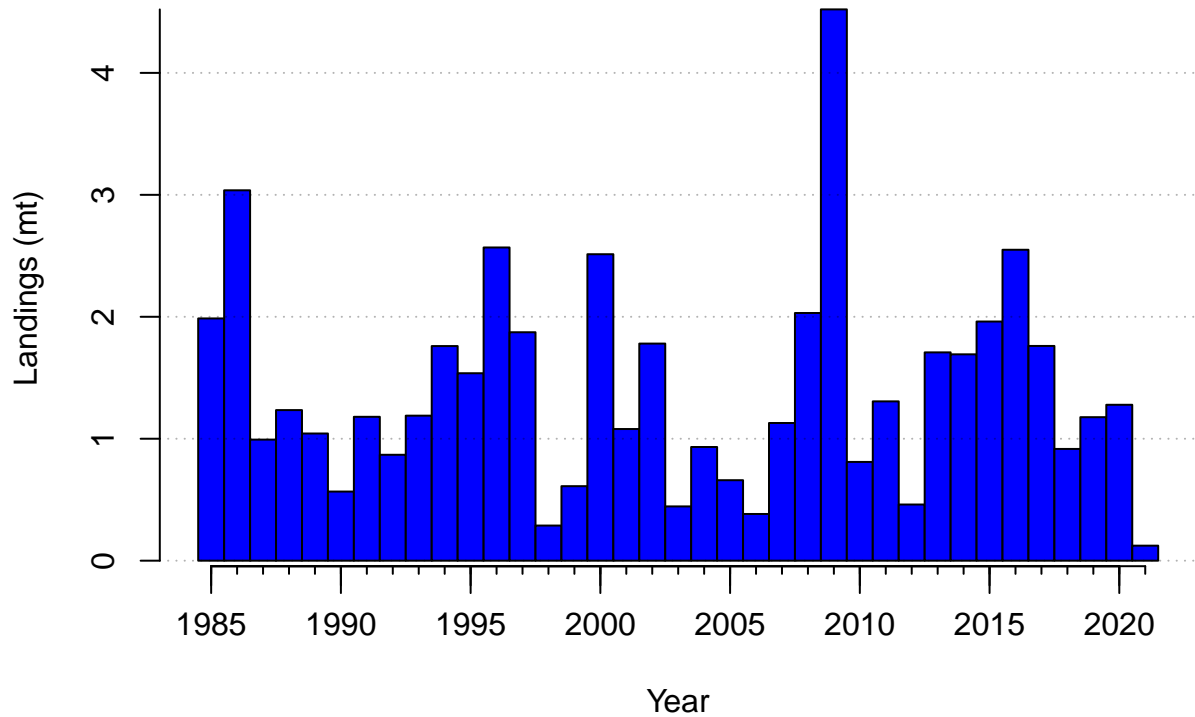




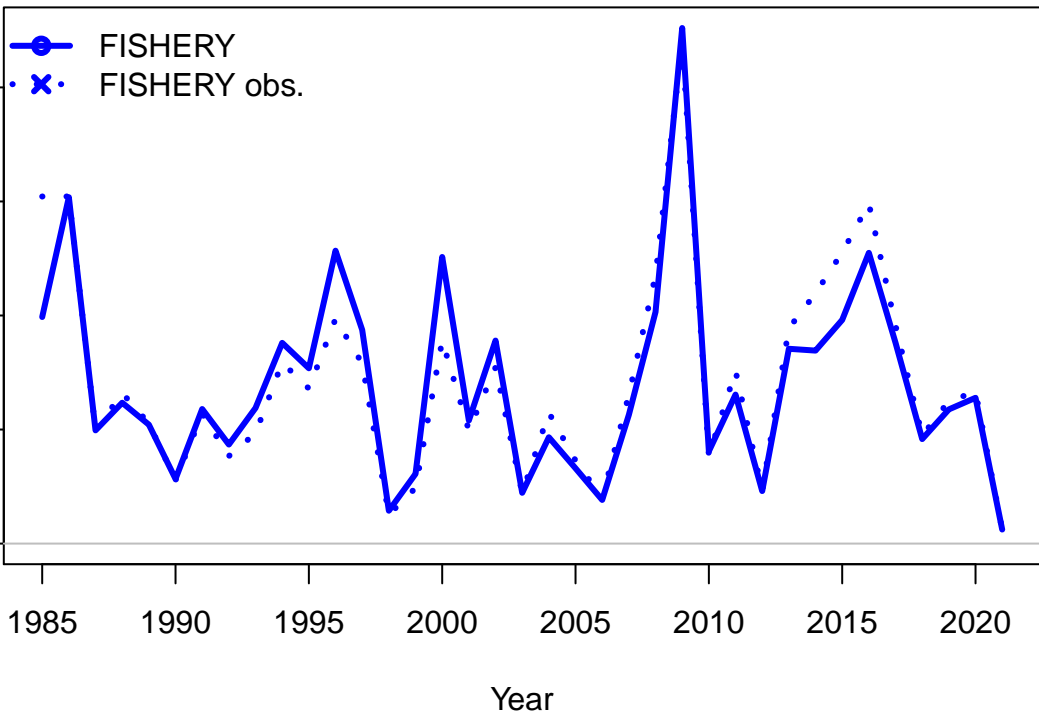
Log recruitment deviation

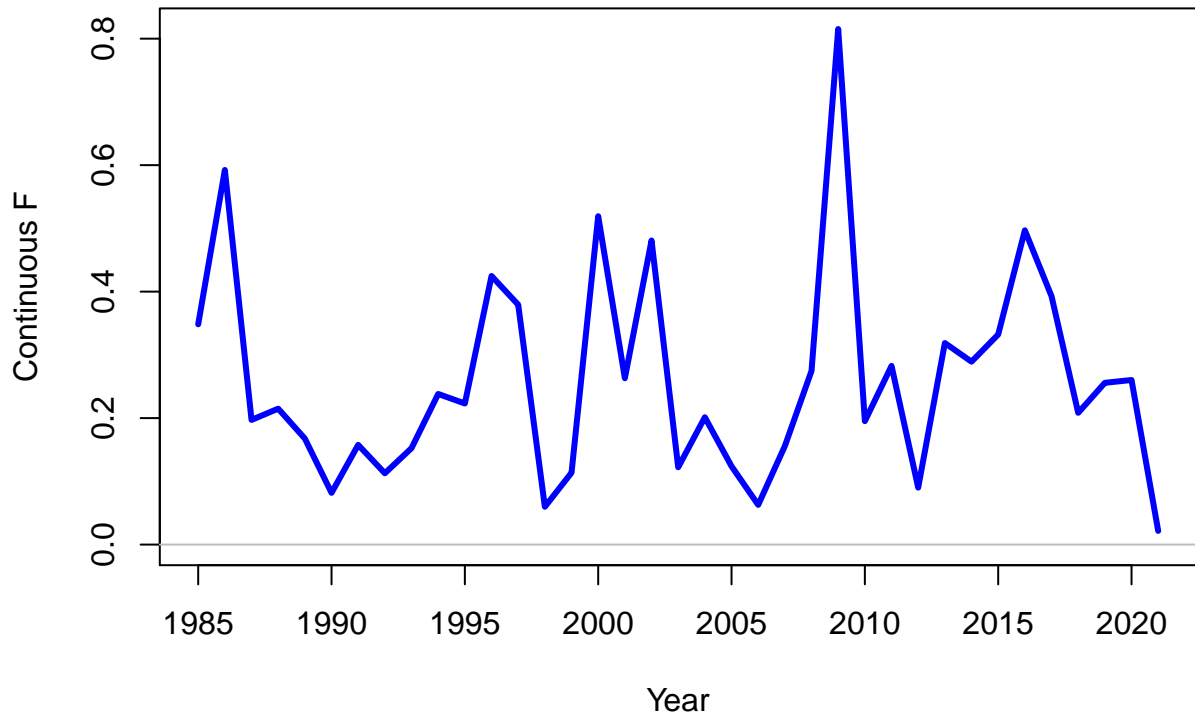




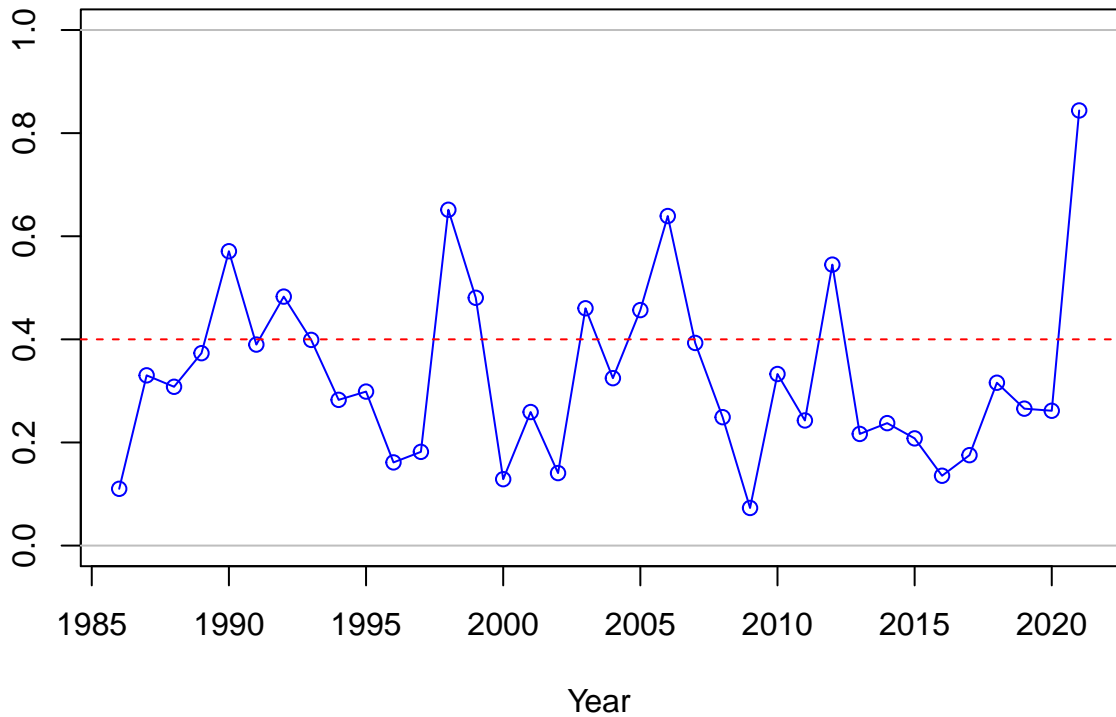


Observed and expected Landings (mt)

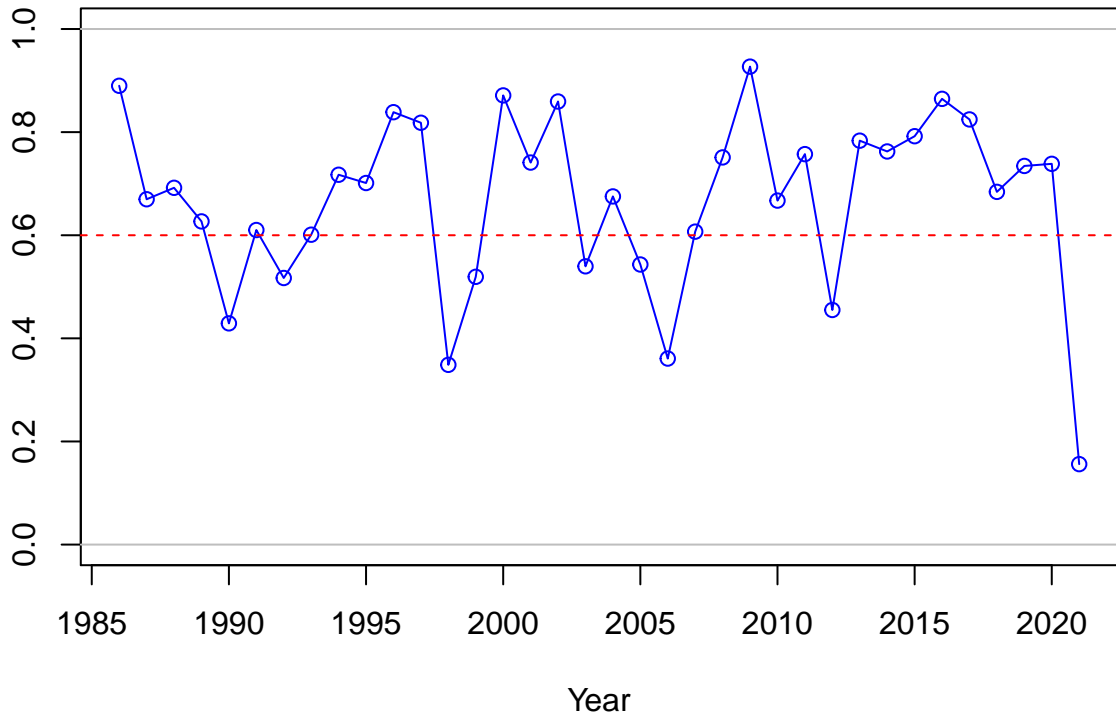




SPR

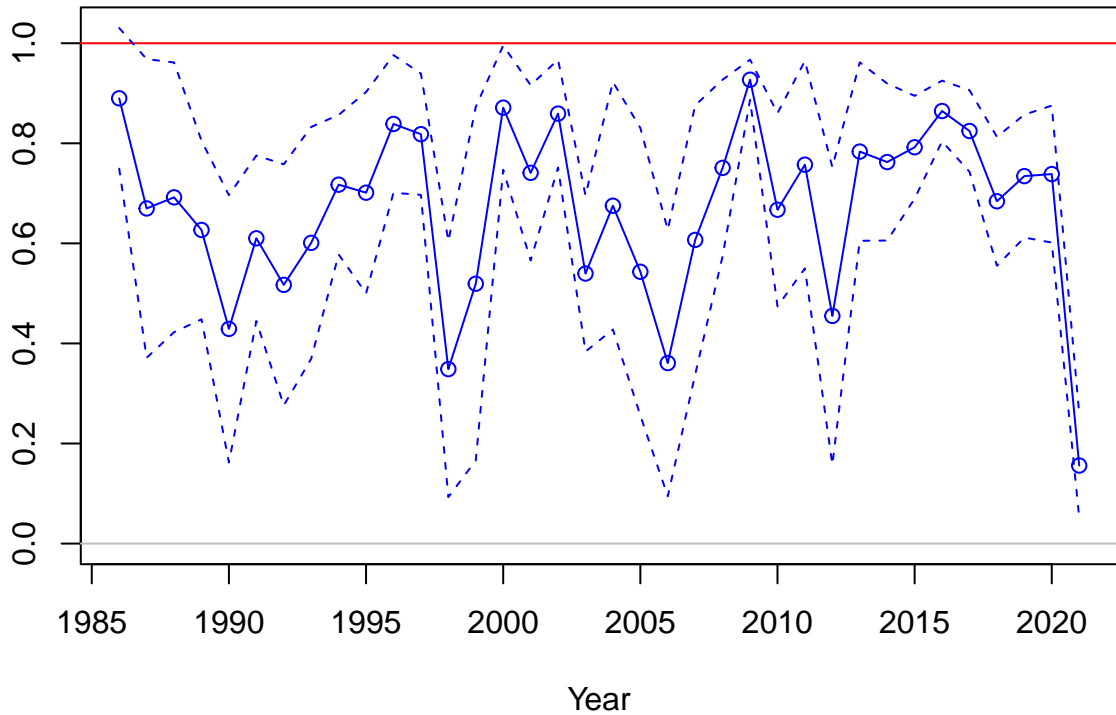


1-SPR

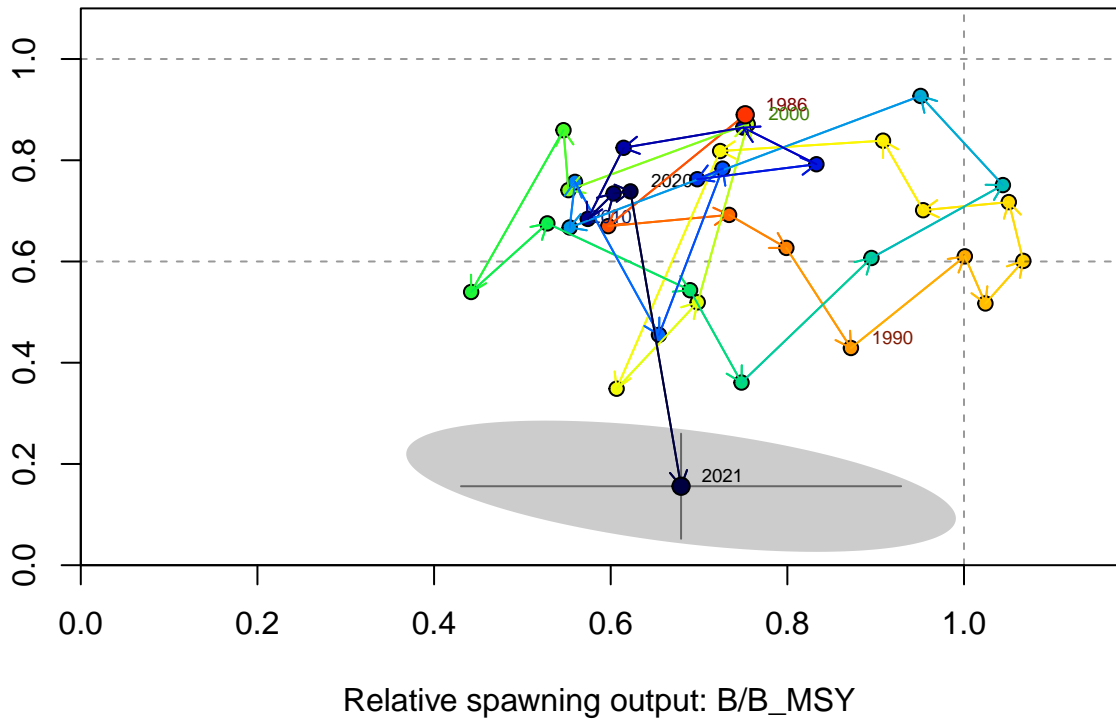




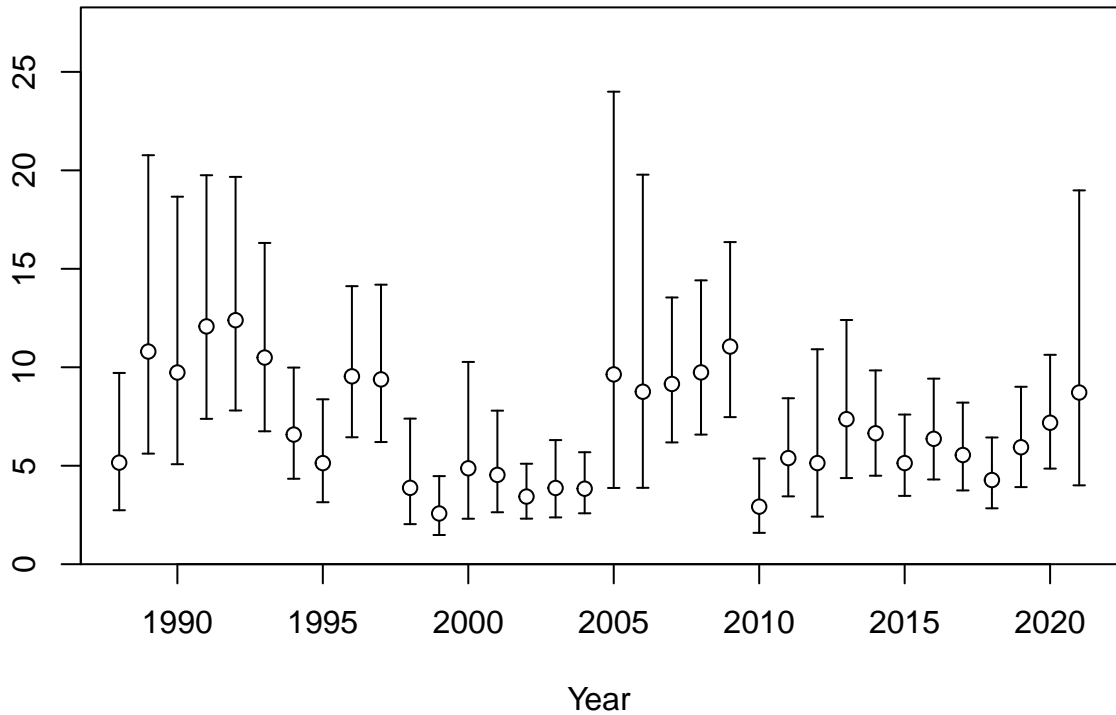
Fishing intensity: 1-SPR



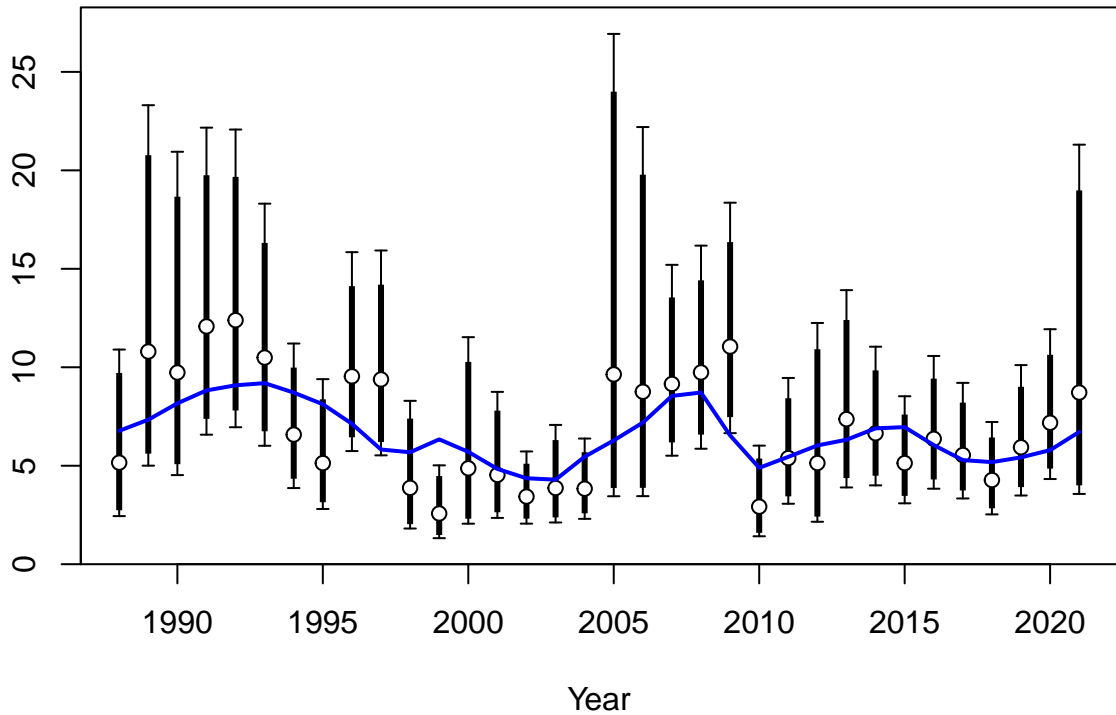
Fishing intensity: 1-SPR

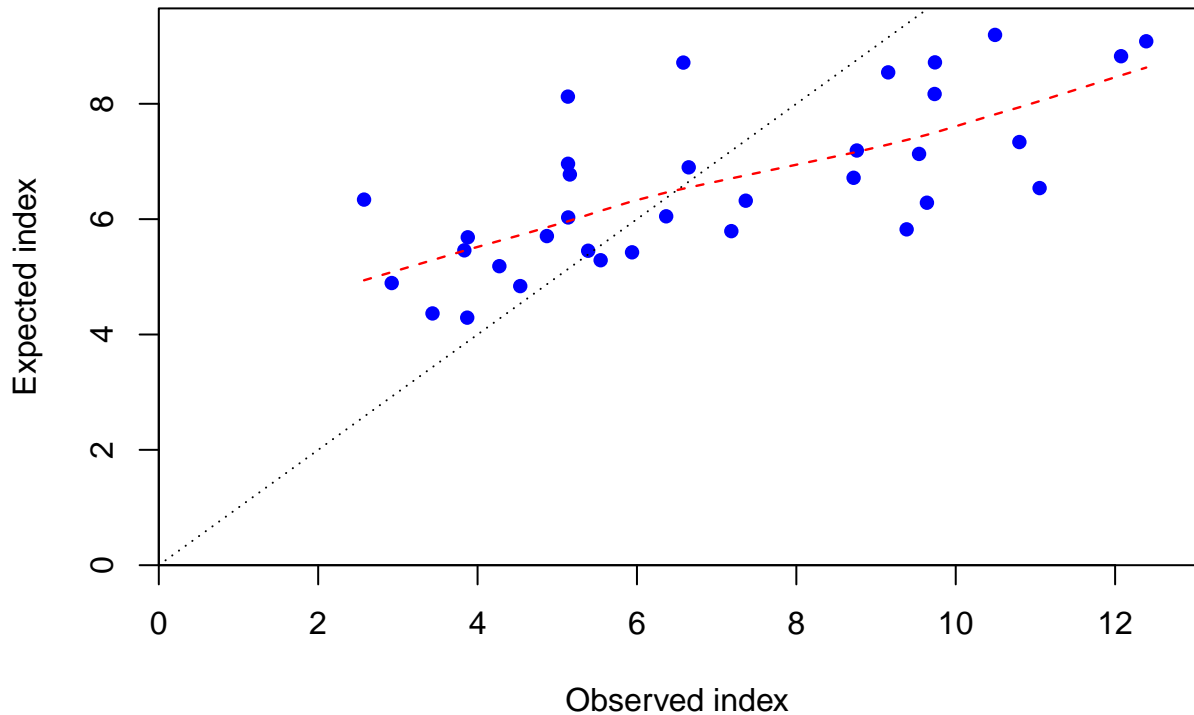


Index



Index





Log index

0.5  
1.0  
1.5  
2.0  
2.5  
3.0

1990

1995

2000

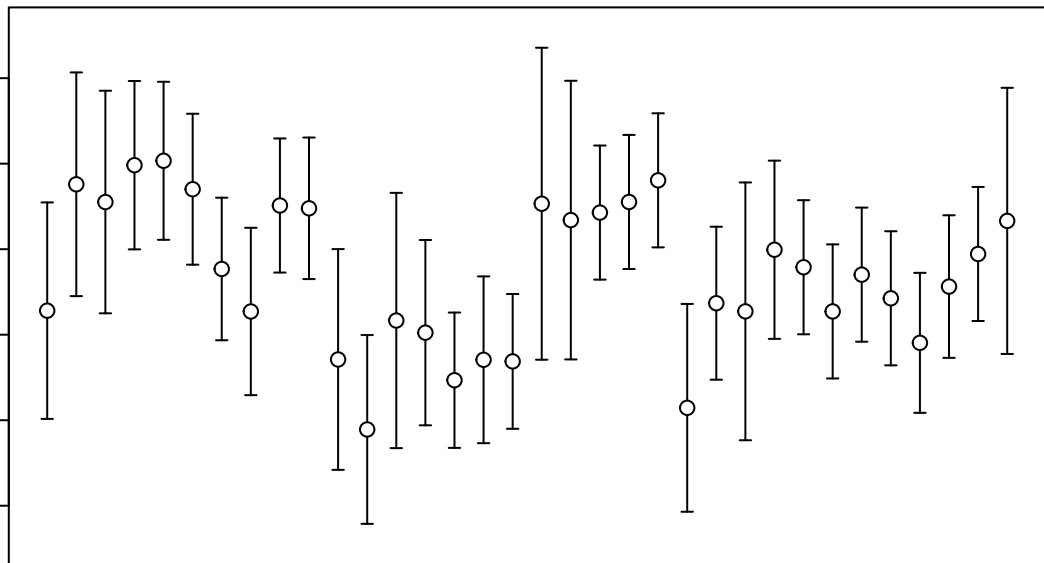
2005

2010

2015

2020

Year



Log index

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2.0  
1.5  
1.0  
0.5

1990

1995

2000

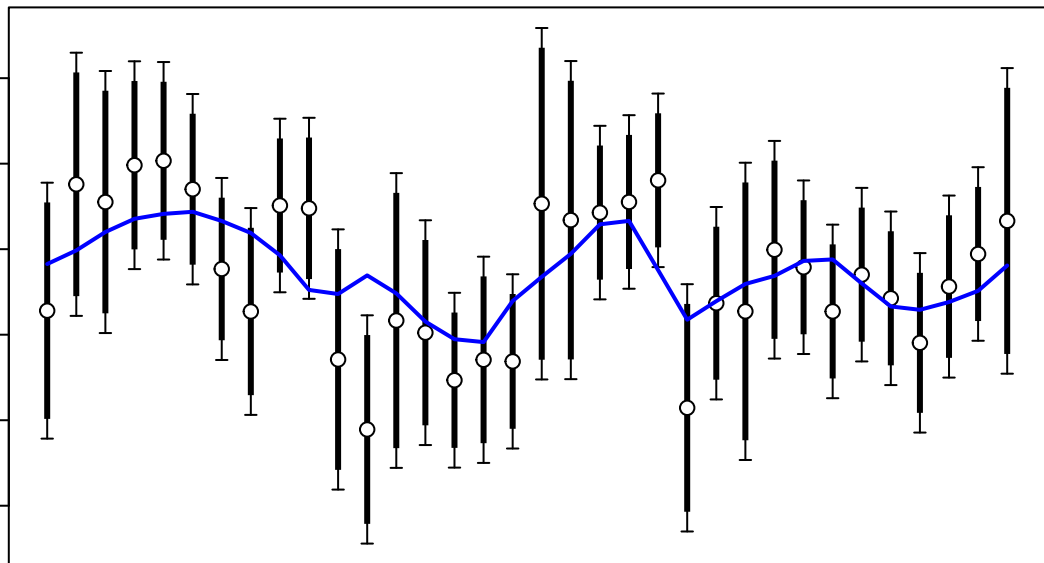
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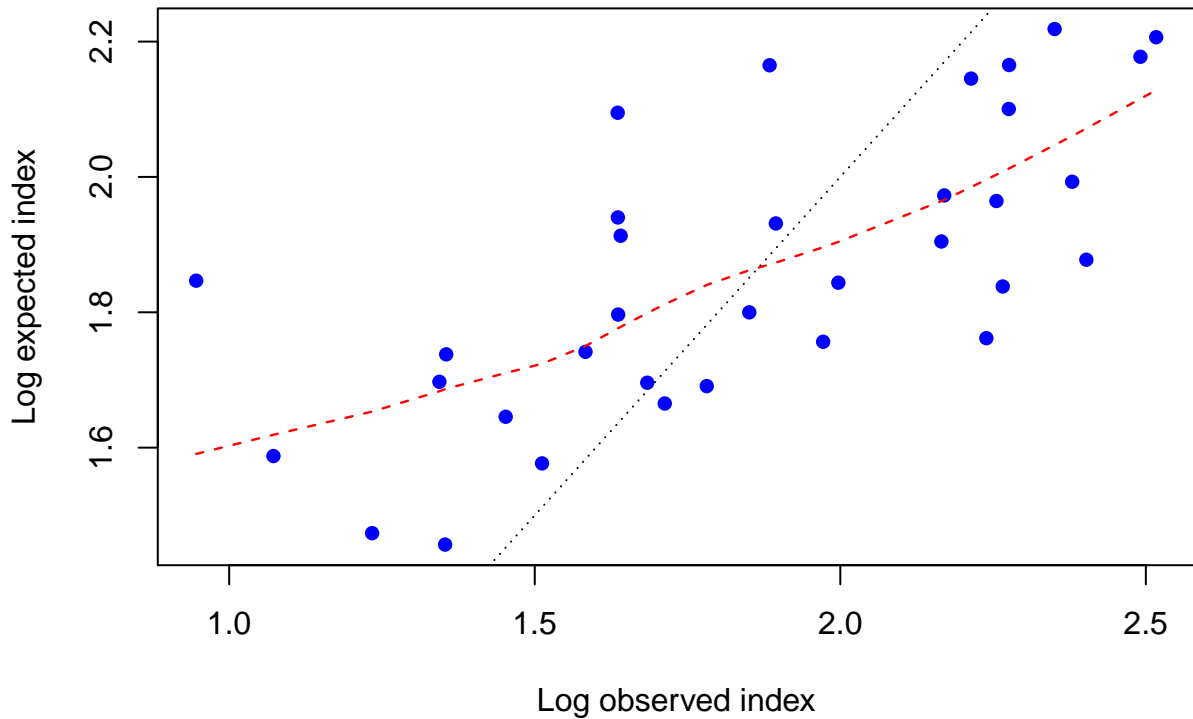
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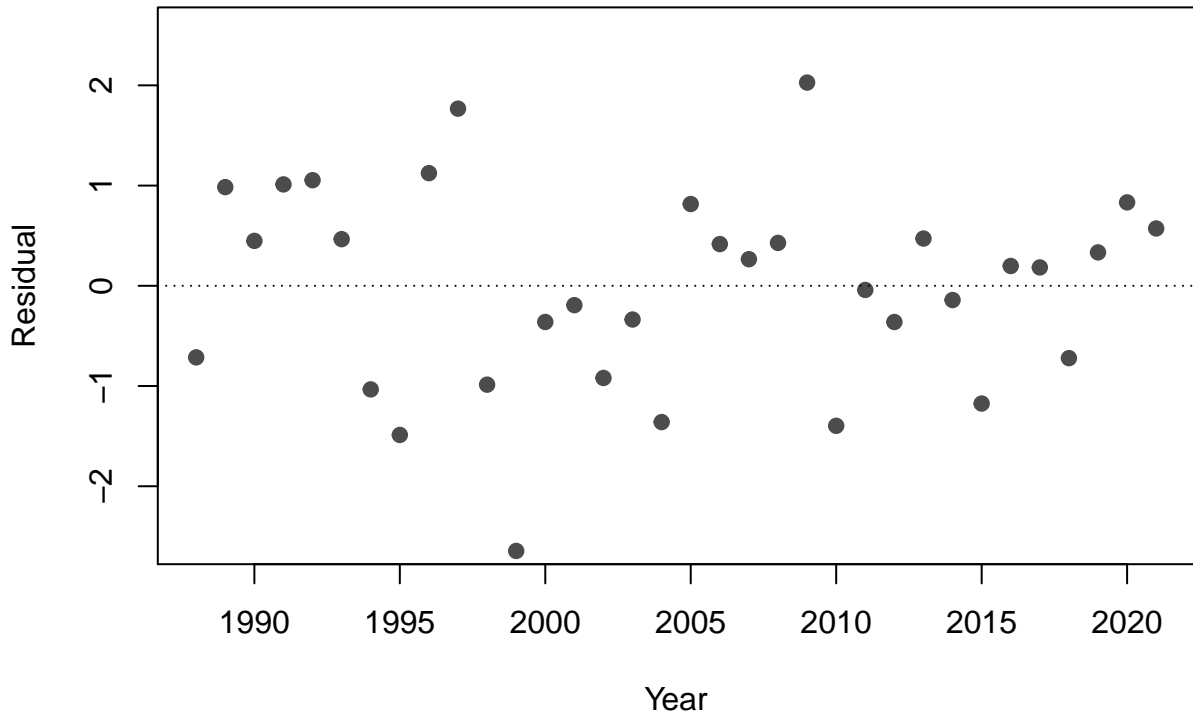
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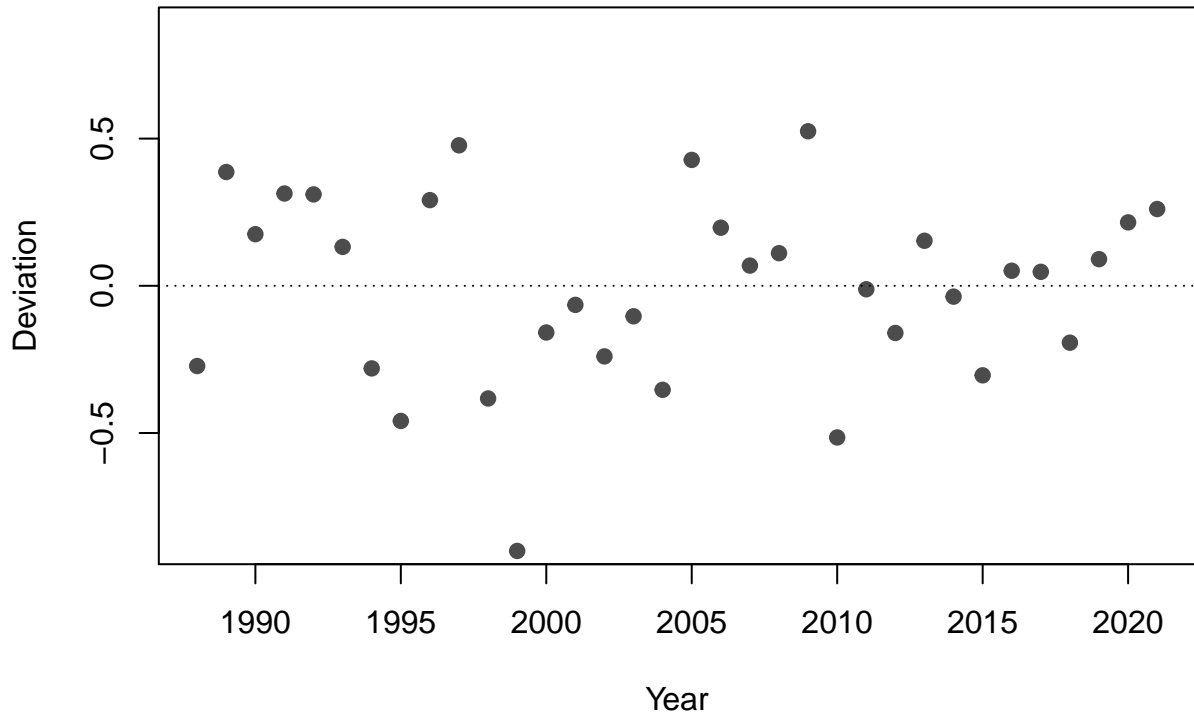
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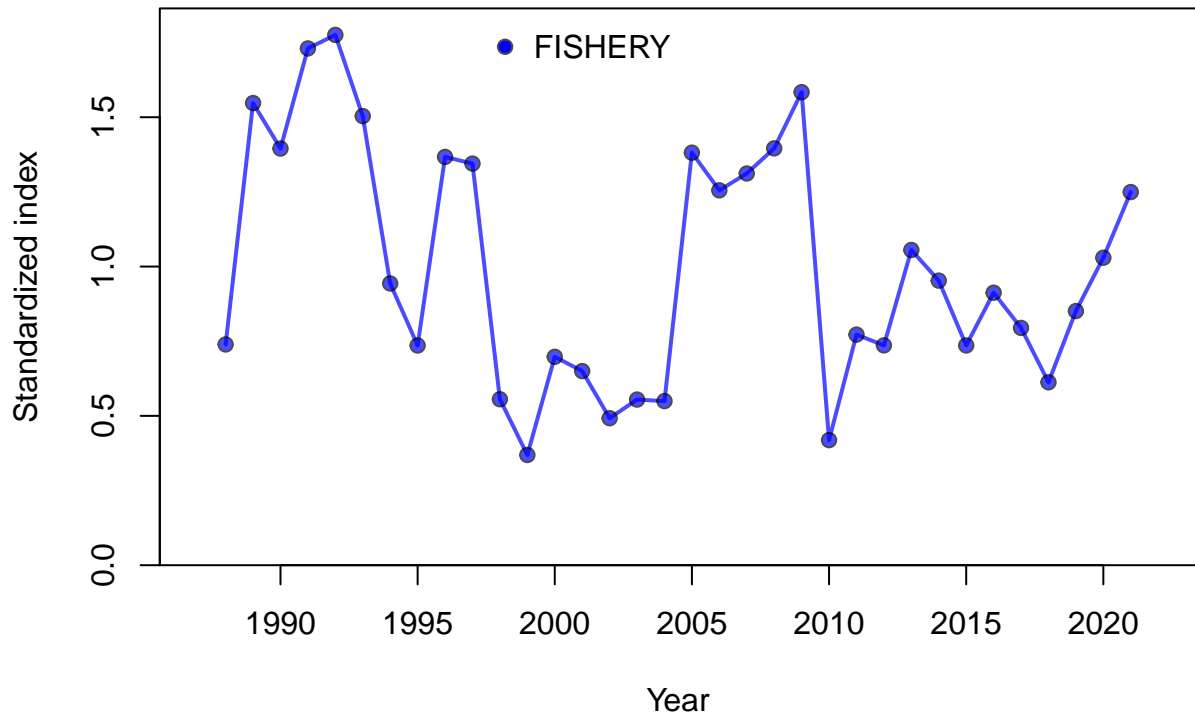




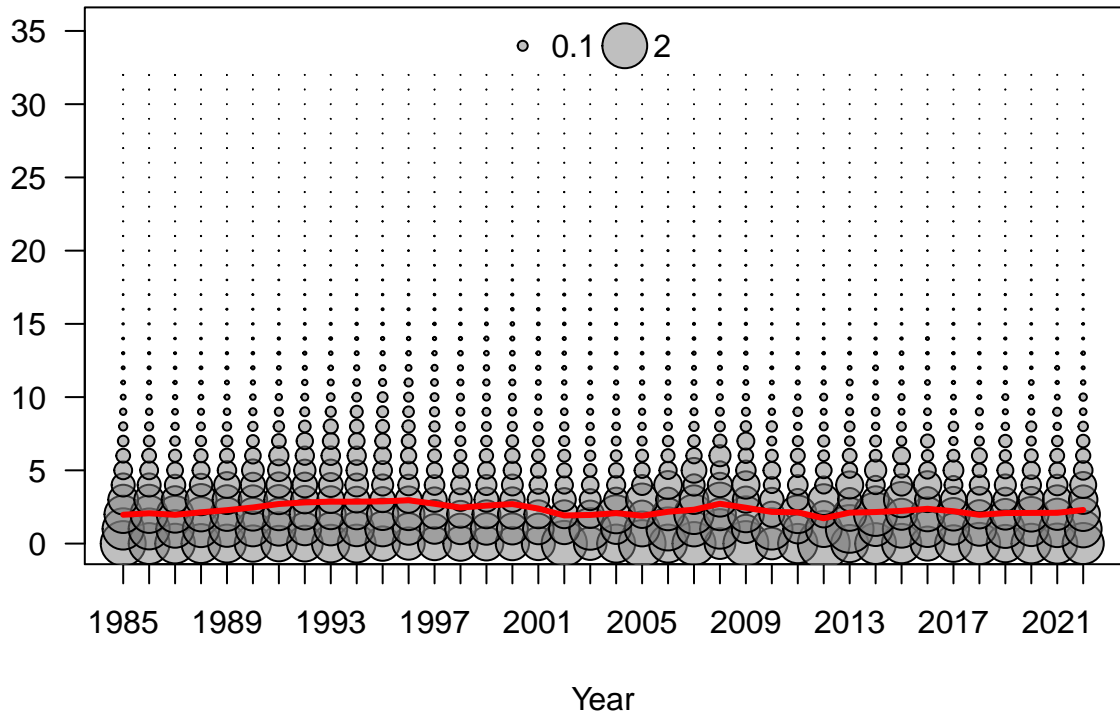


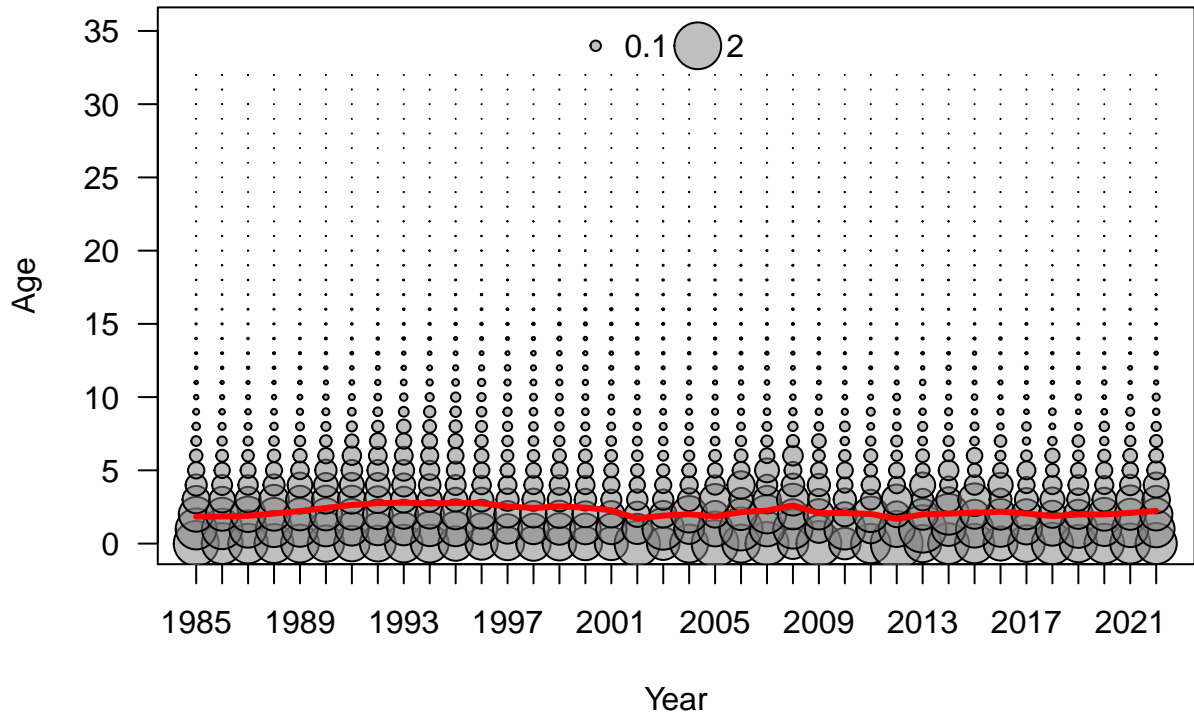


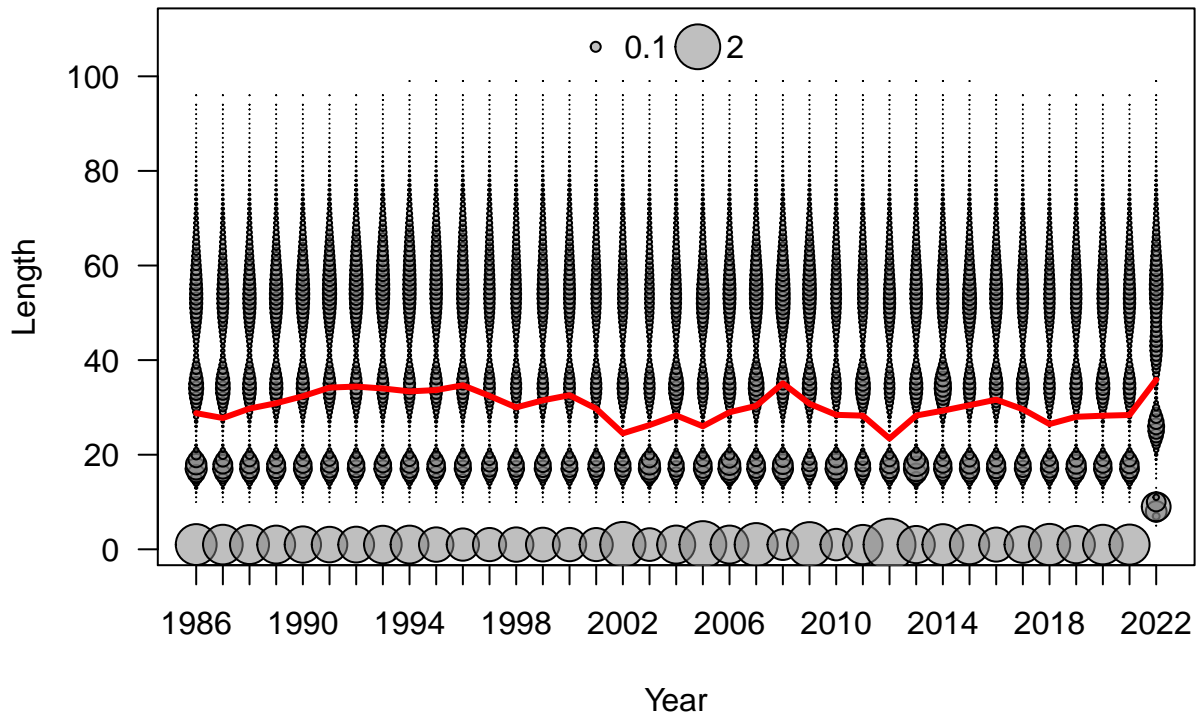


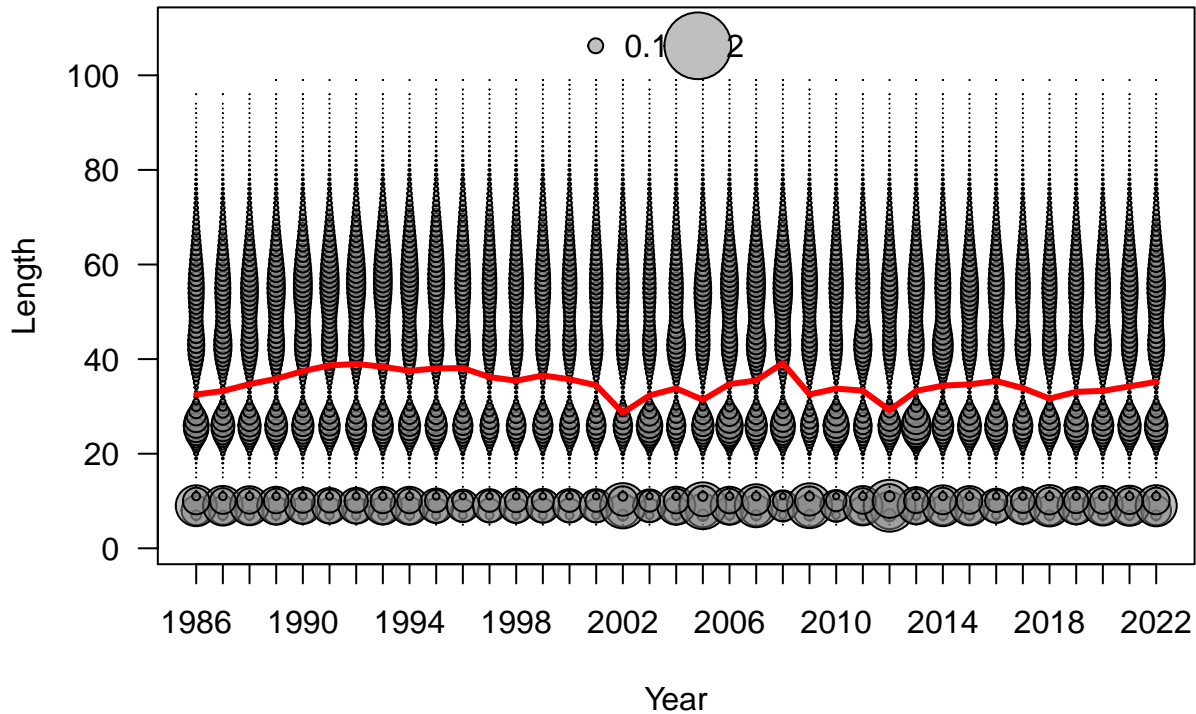


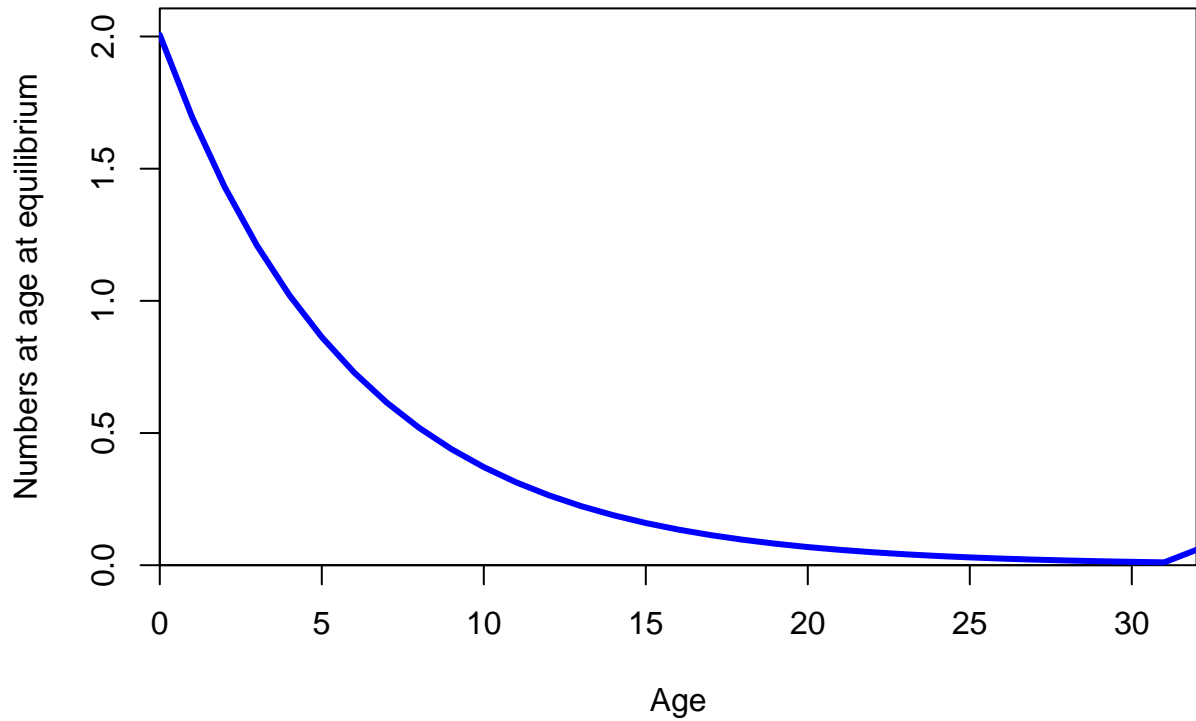
Age



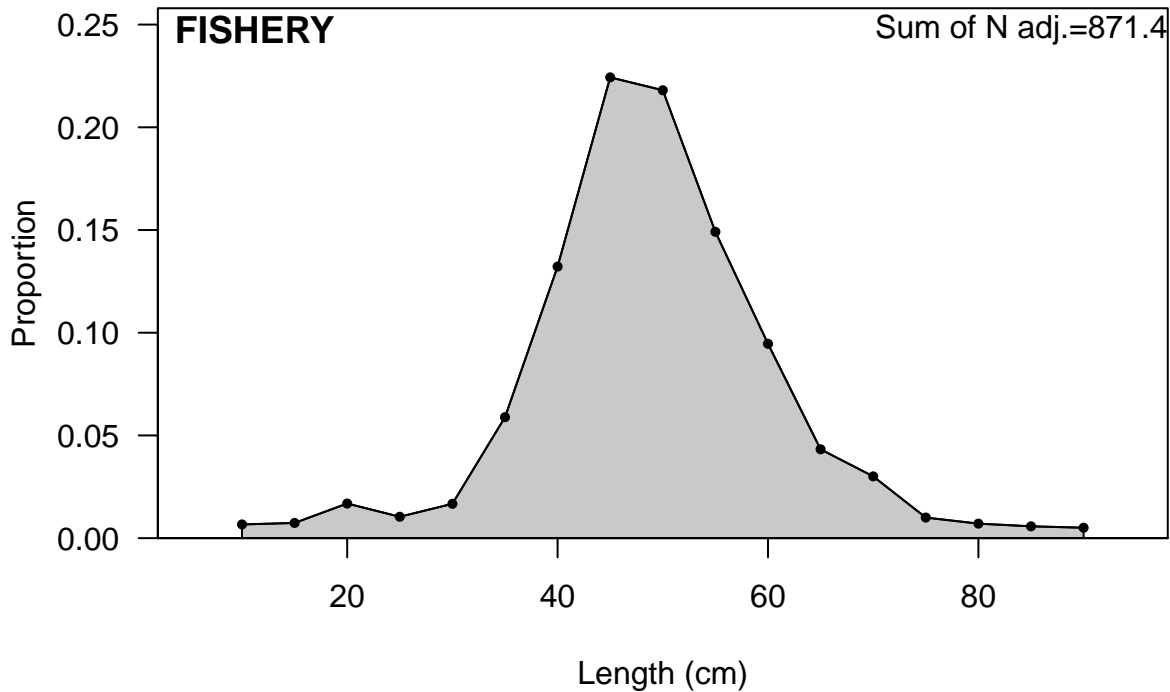






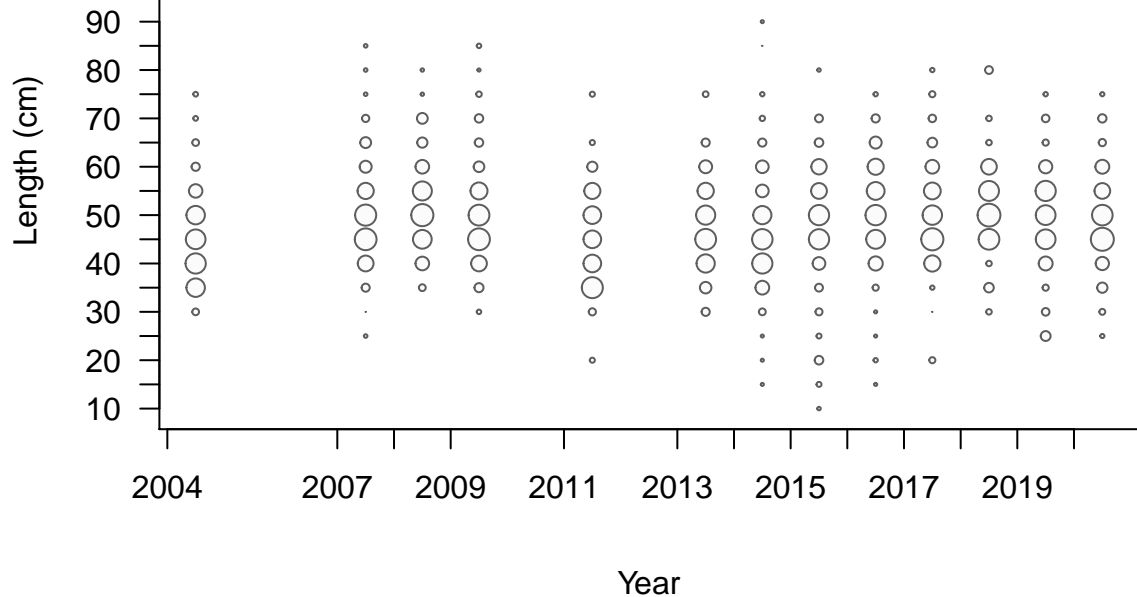




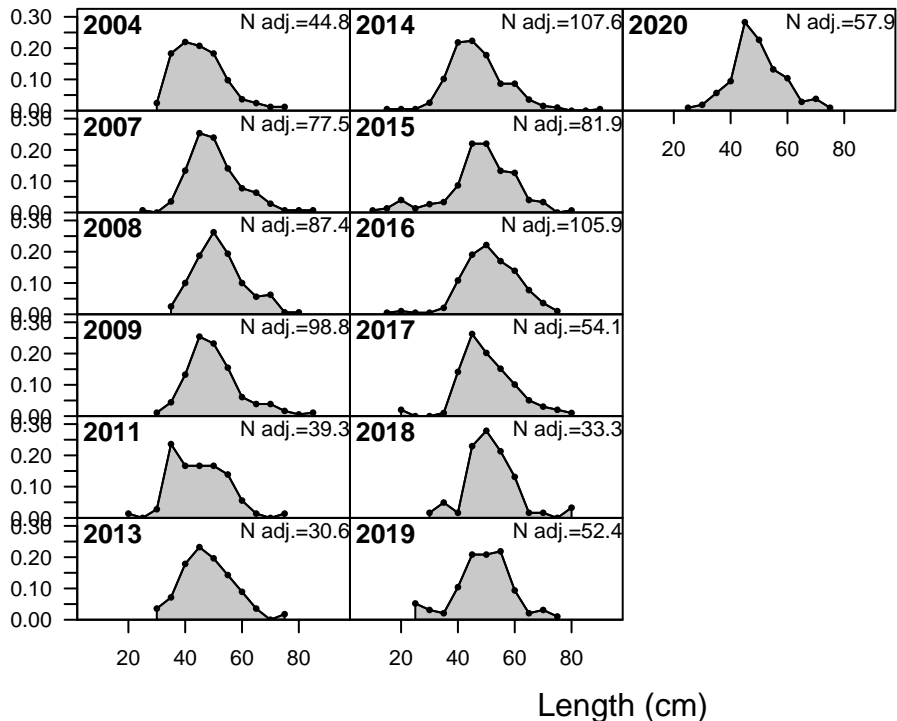


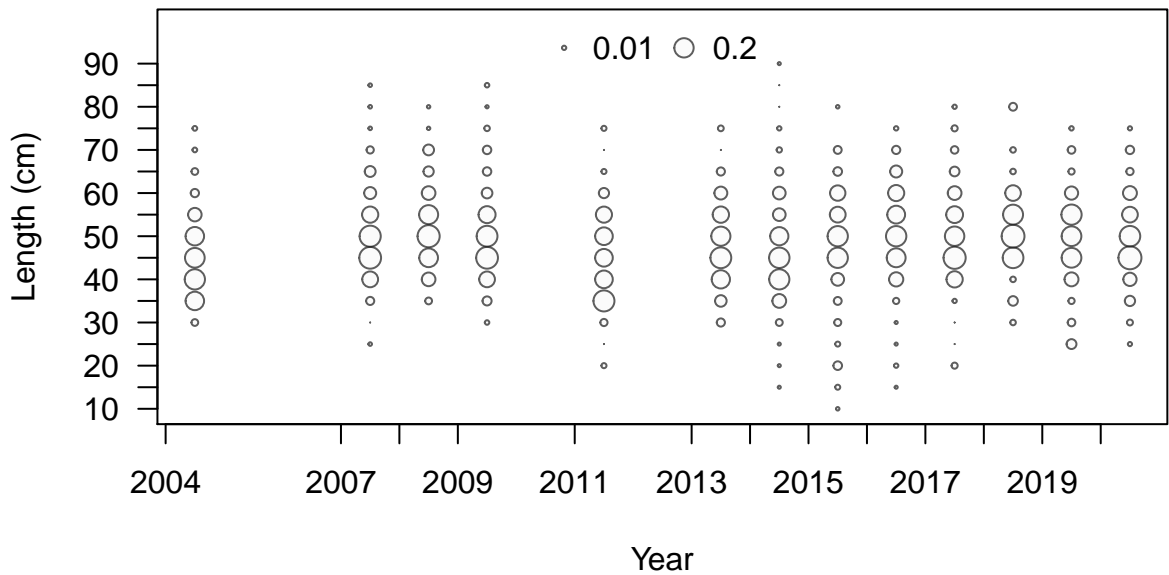
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◦ 0.01 ○ 0.2

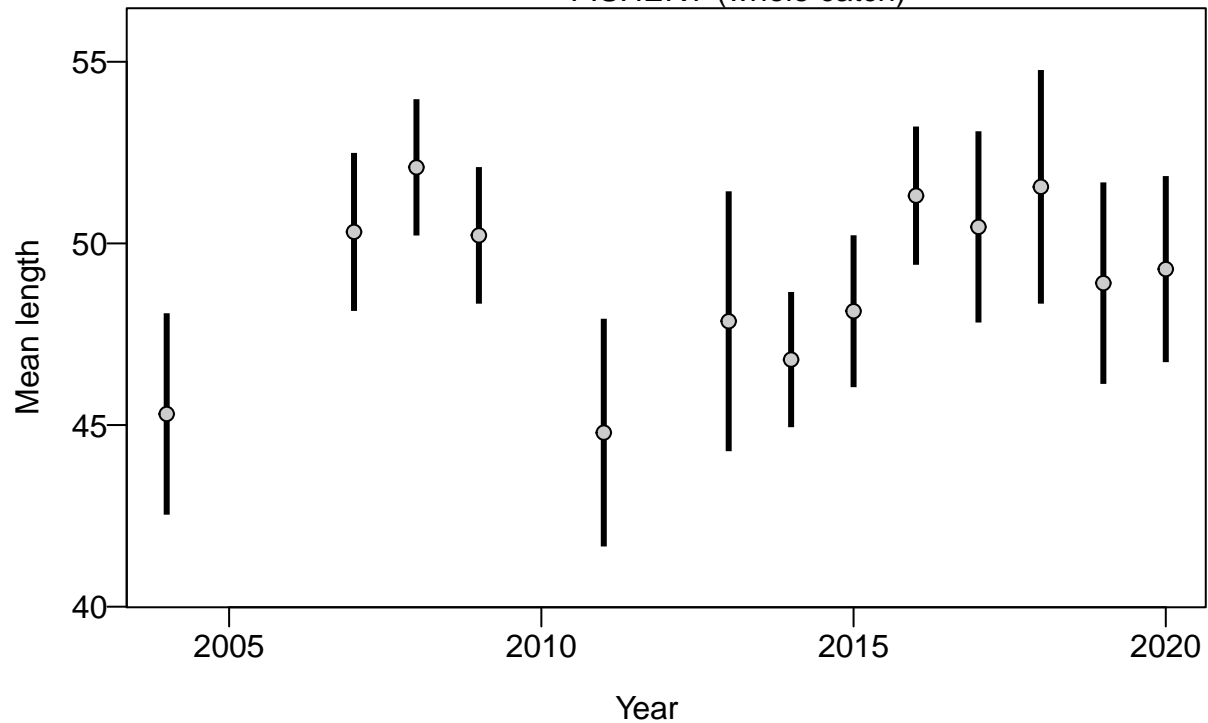


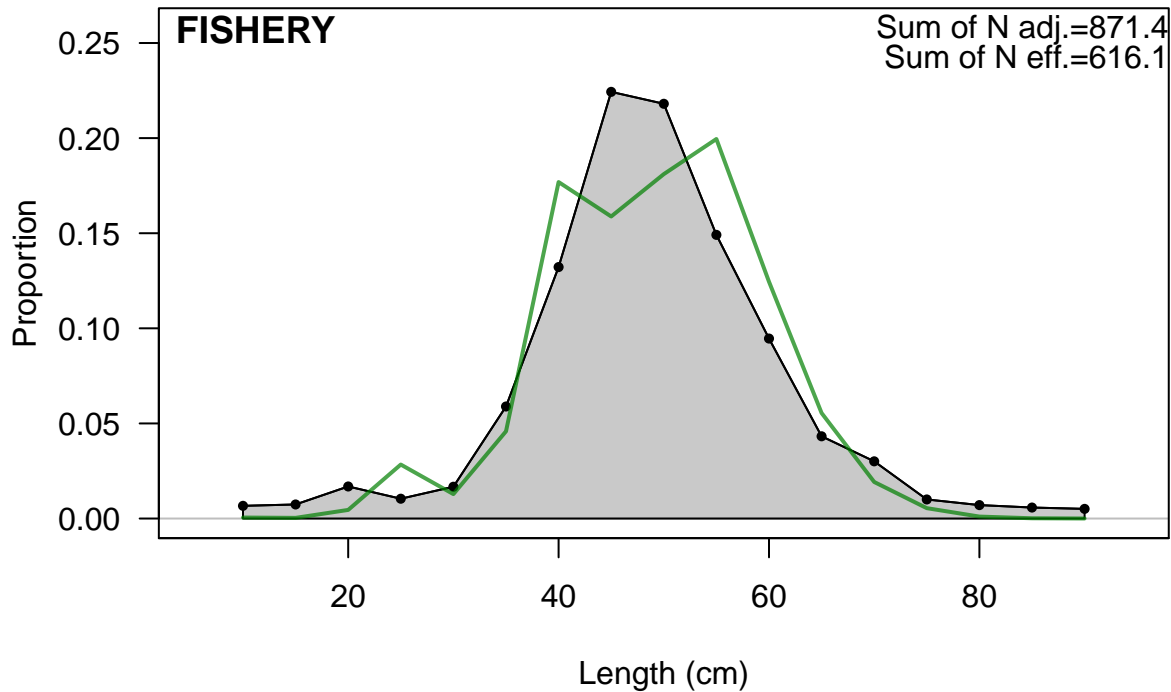
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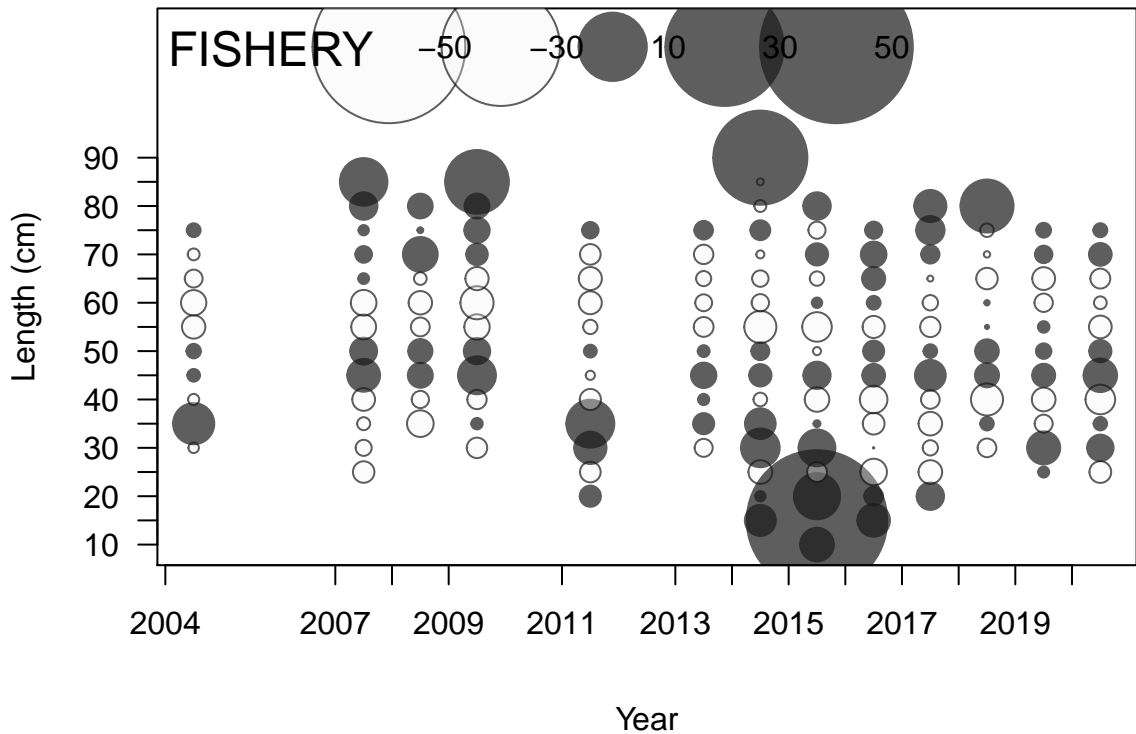




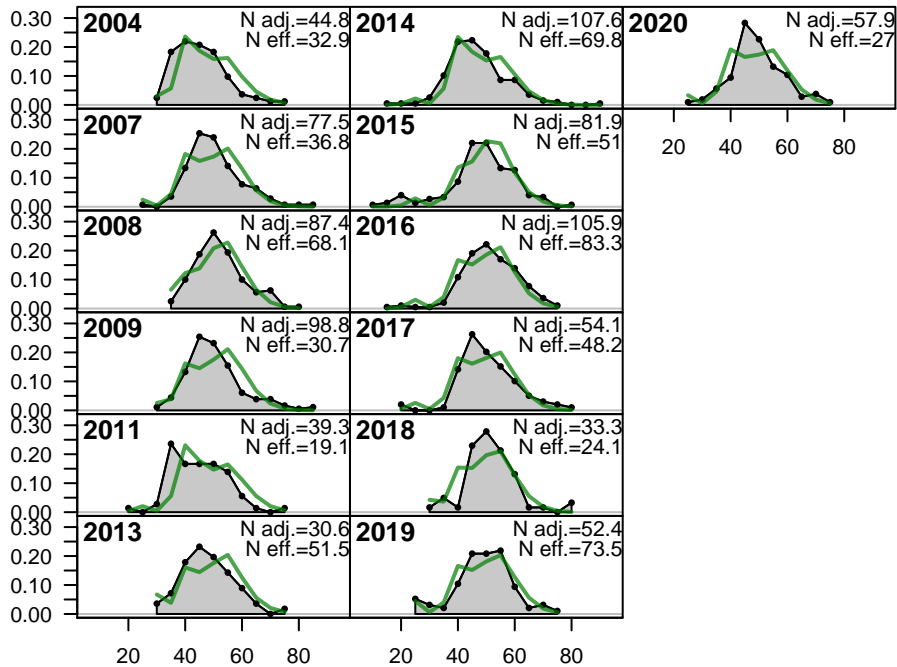
## FISHERY (whole catch)





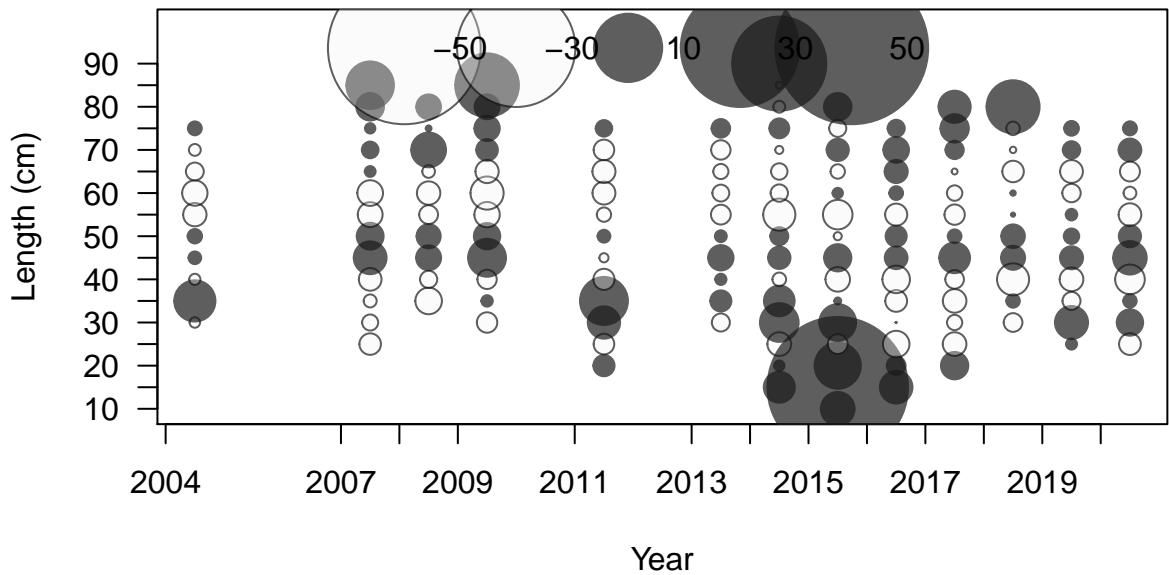


Proportion

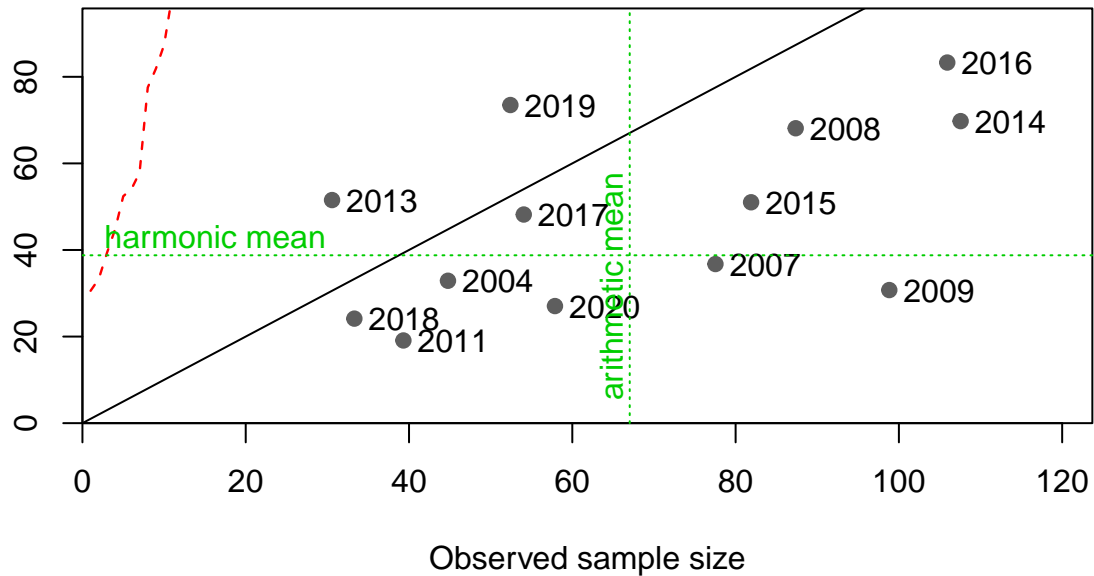


Length (cm)

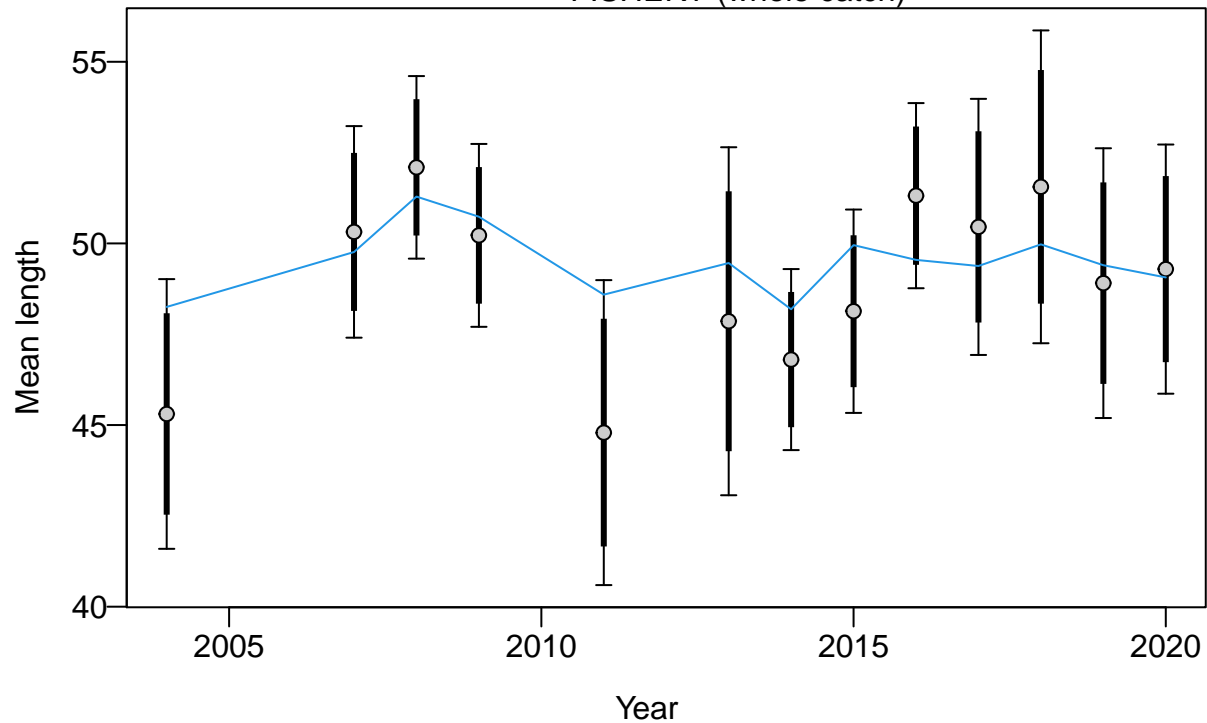


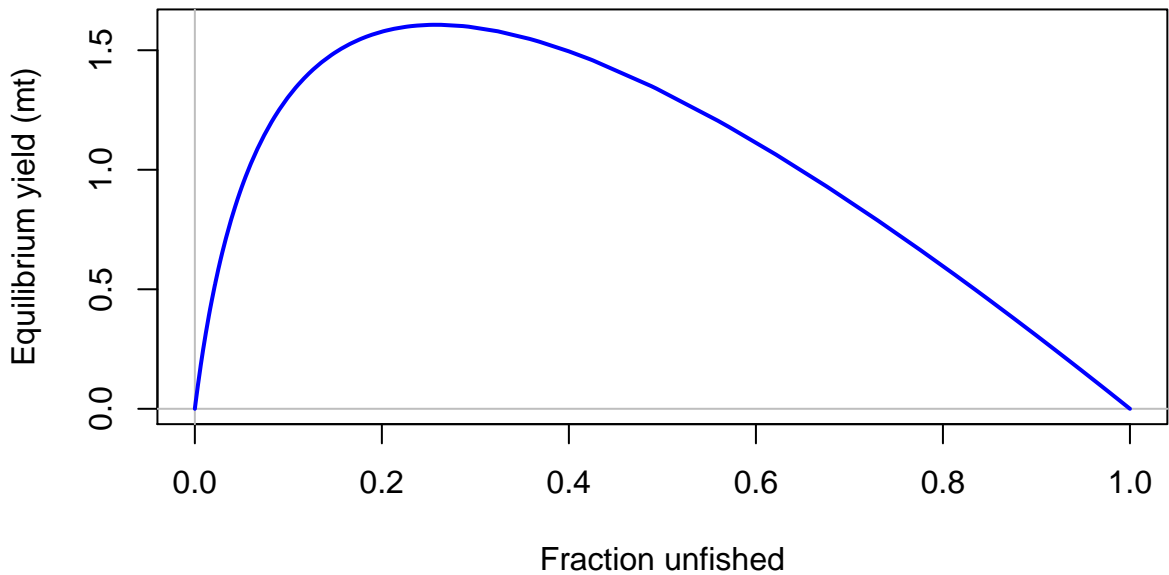


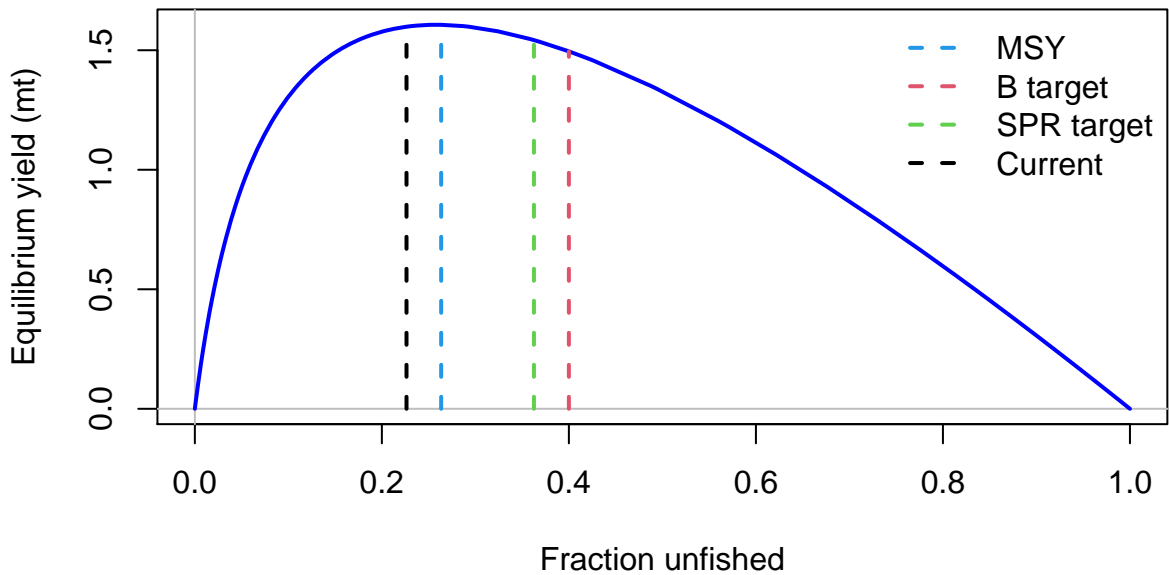
Effective sample size

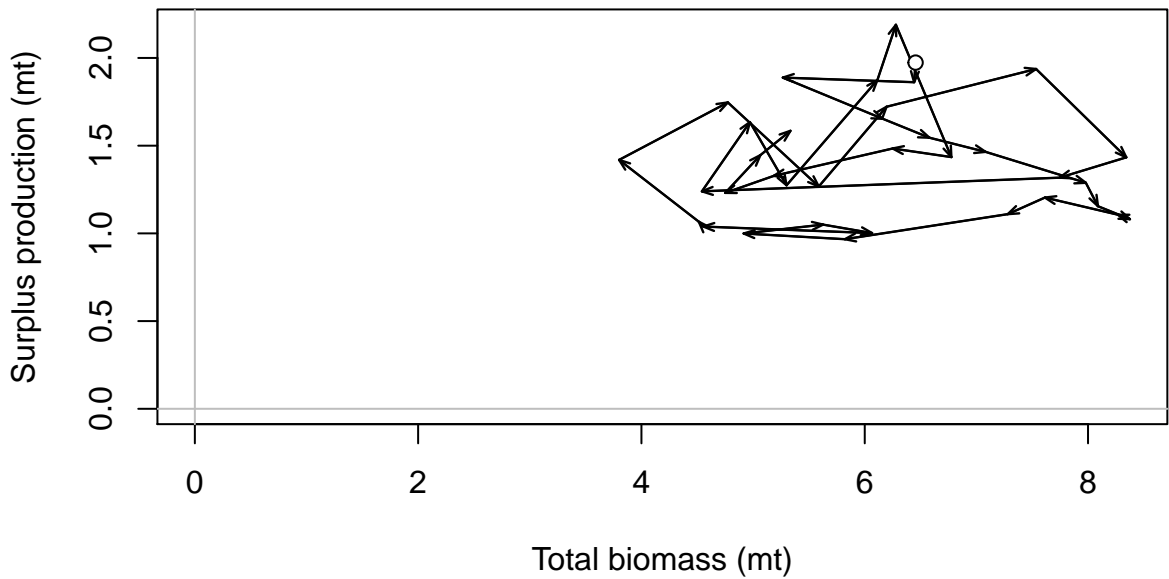


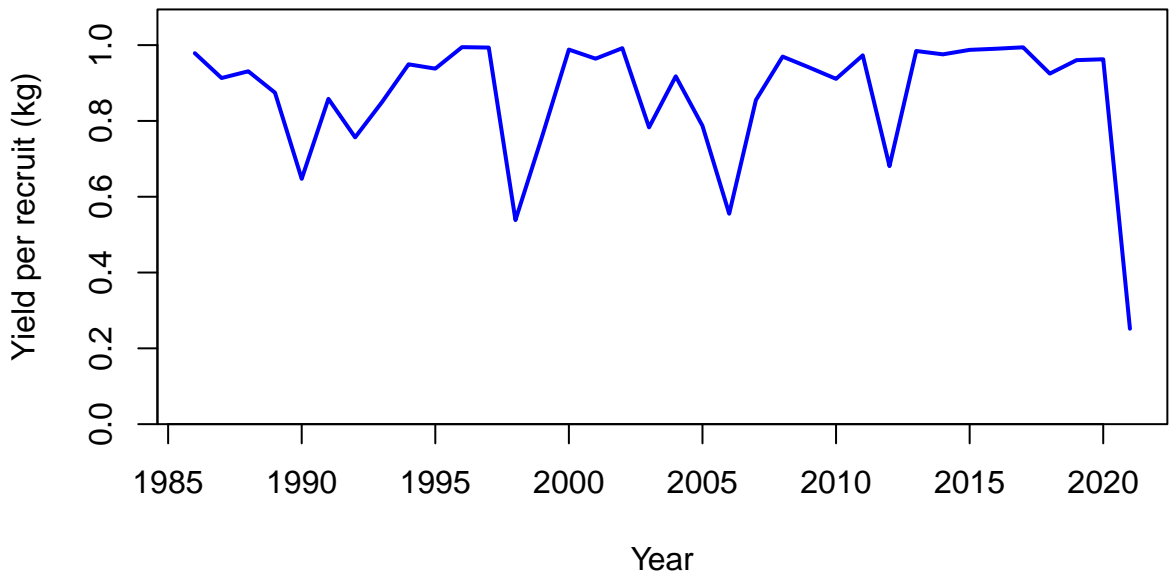
## FISHERY (whole catch)

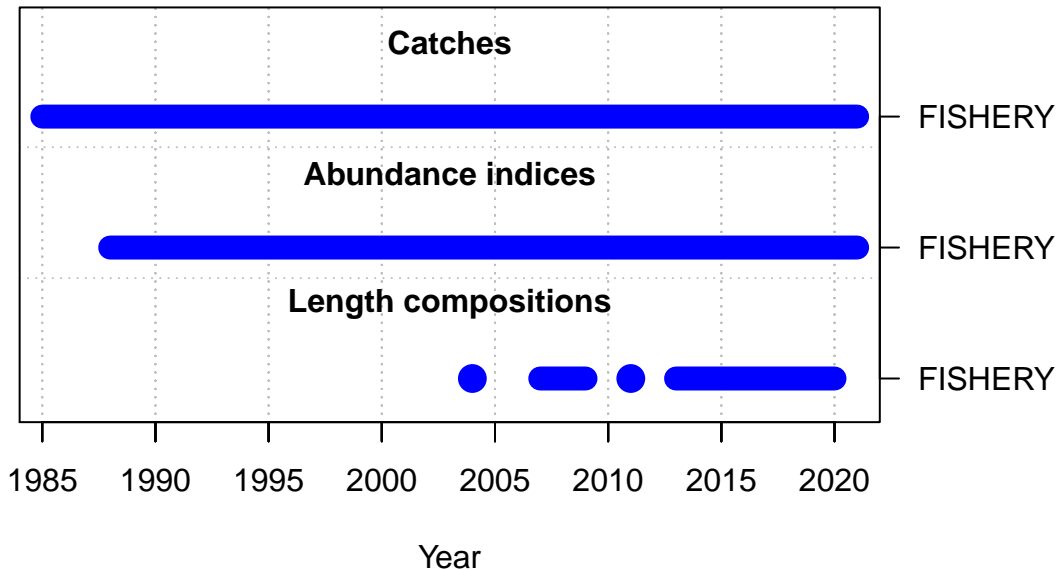




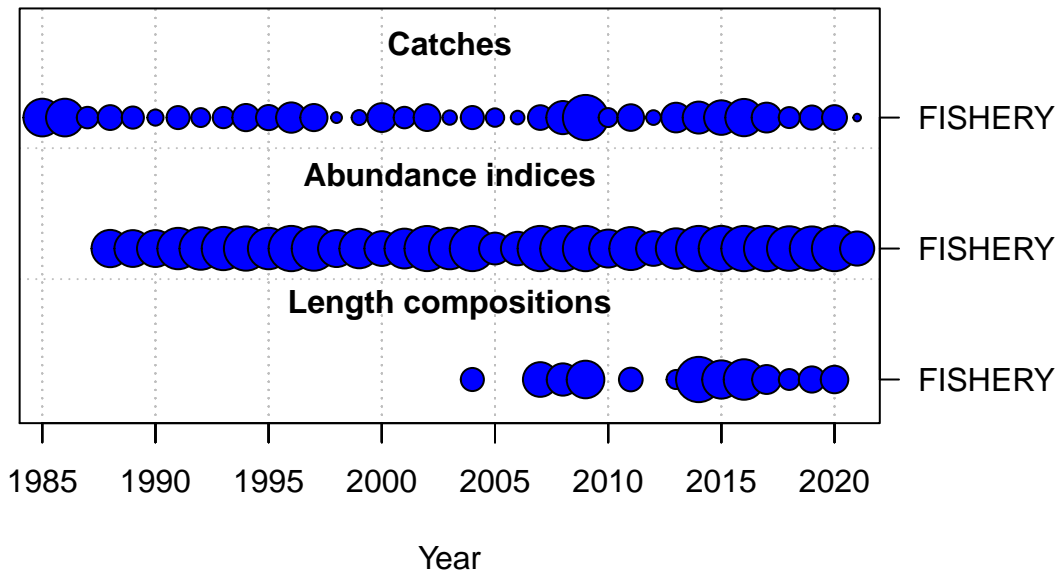








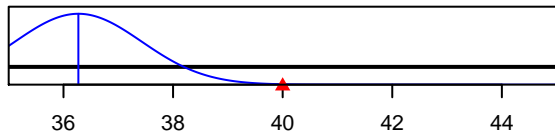




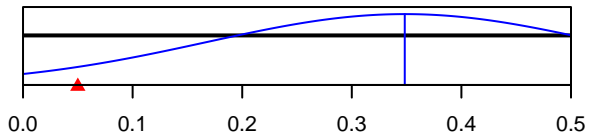
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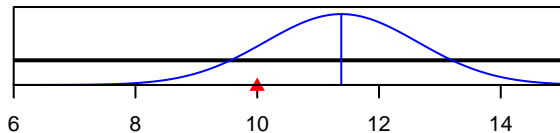
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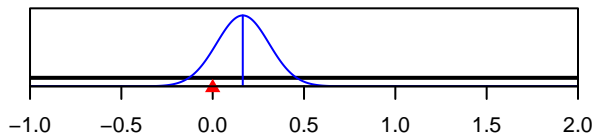
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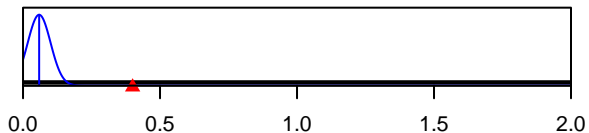
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LnQ\_base\_FISHERY(1)



Q\_extraSD\_FISHERY(1)



Parameter value