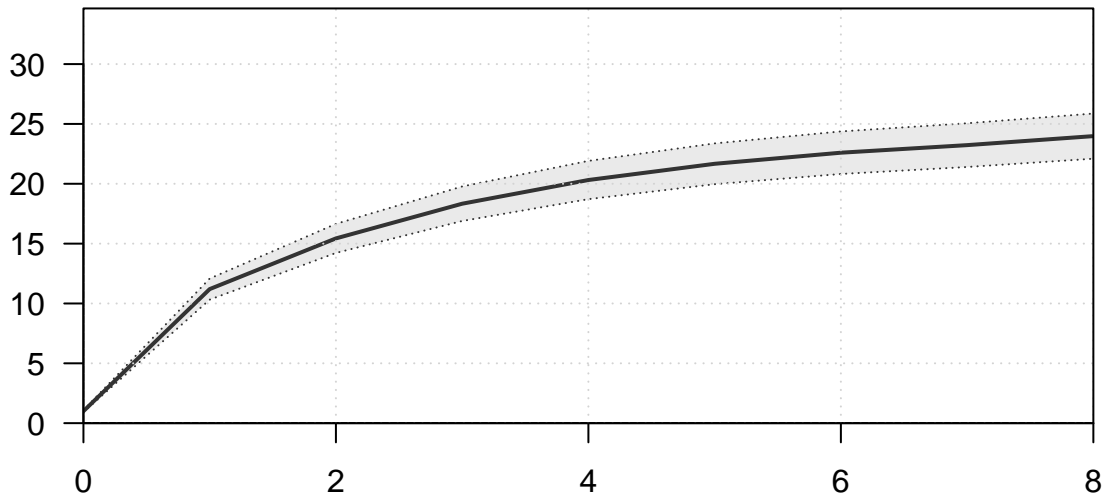


Plots created using the 'r4ss' package in R
Stock Synthesis version: 3.30.19.0
StartTime: Tue Feb 14 12:47:52 2023
Data_File: data.ss
Control_File: control.ss

Length (cm, beginning of the year)



Age (yr)











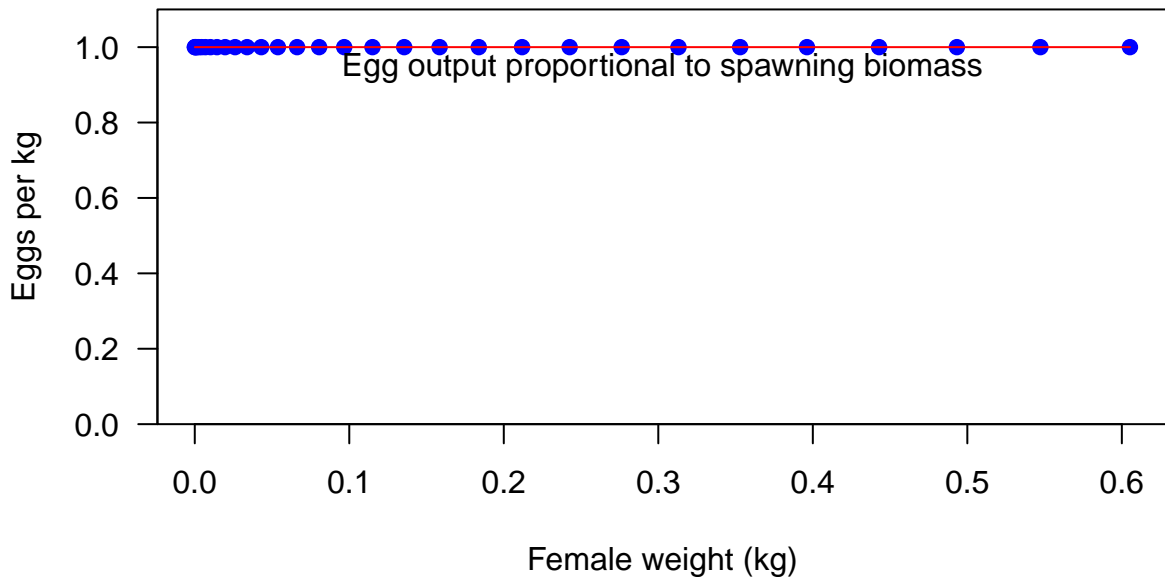






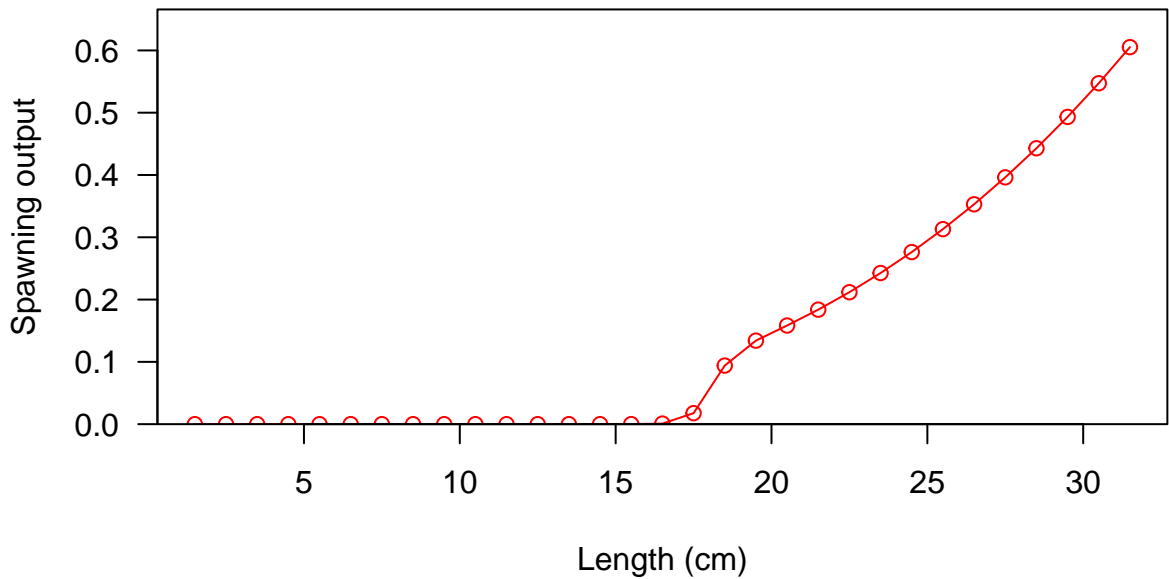






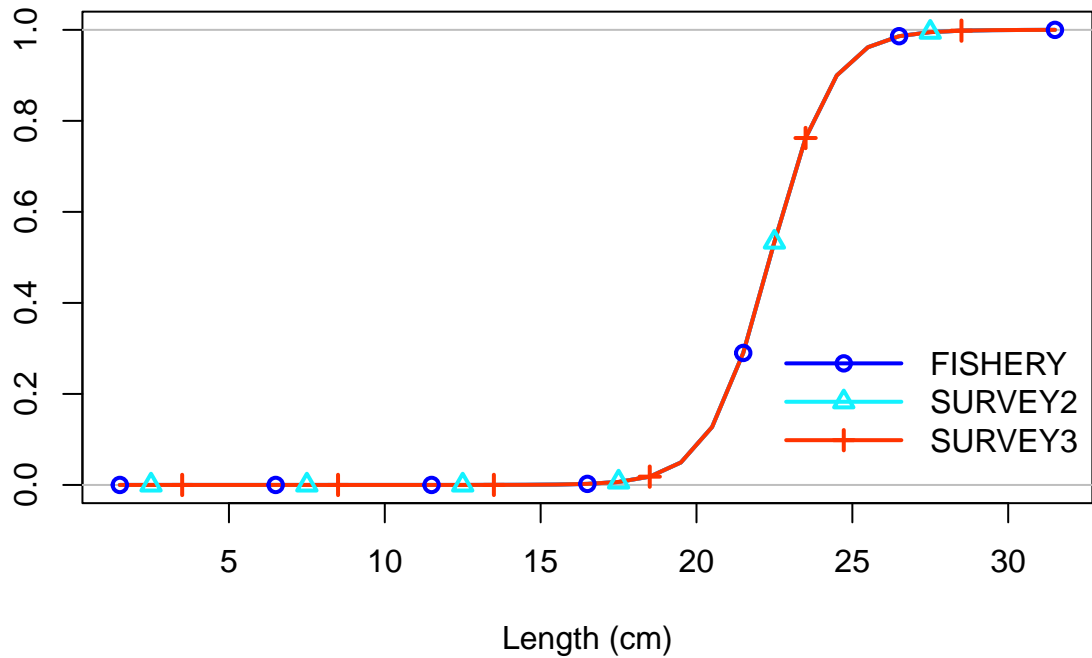


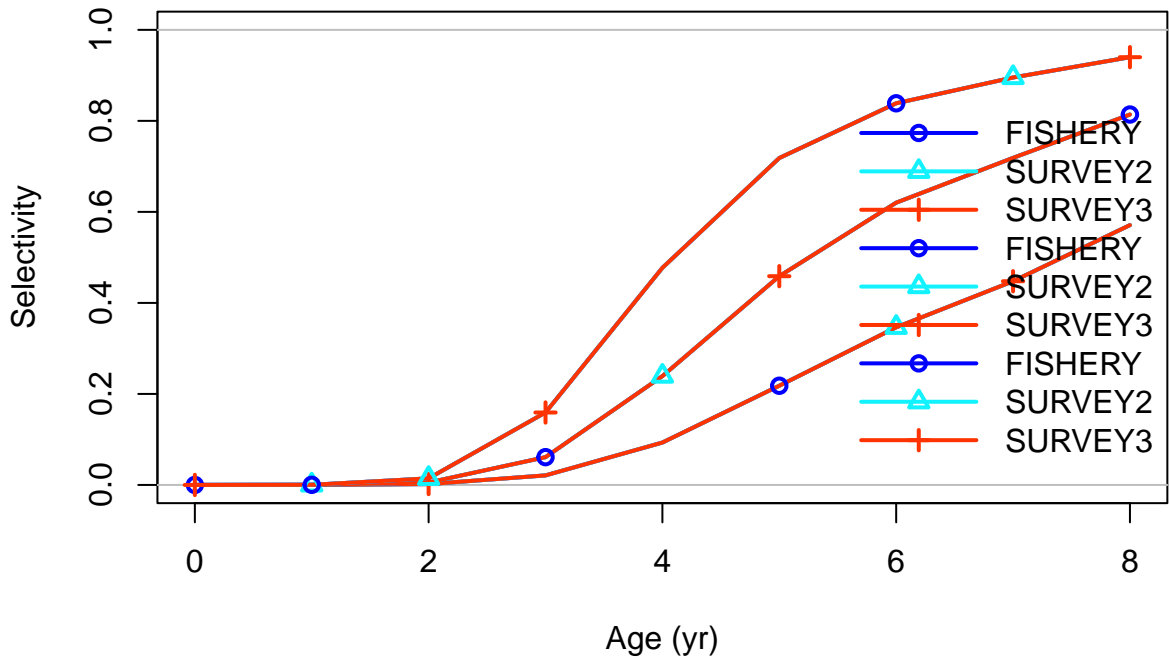




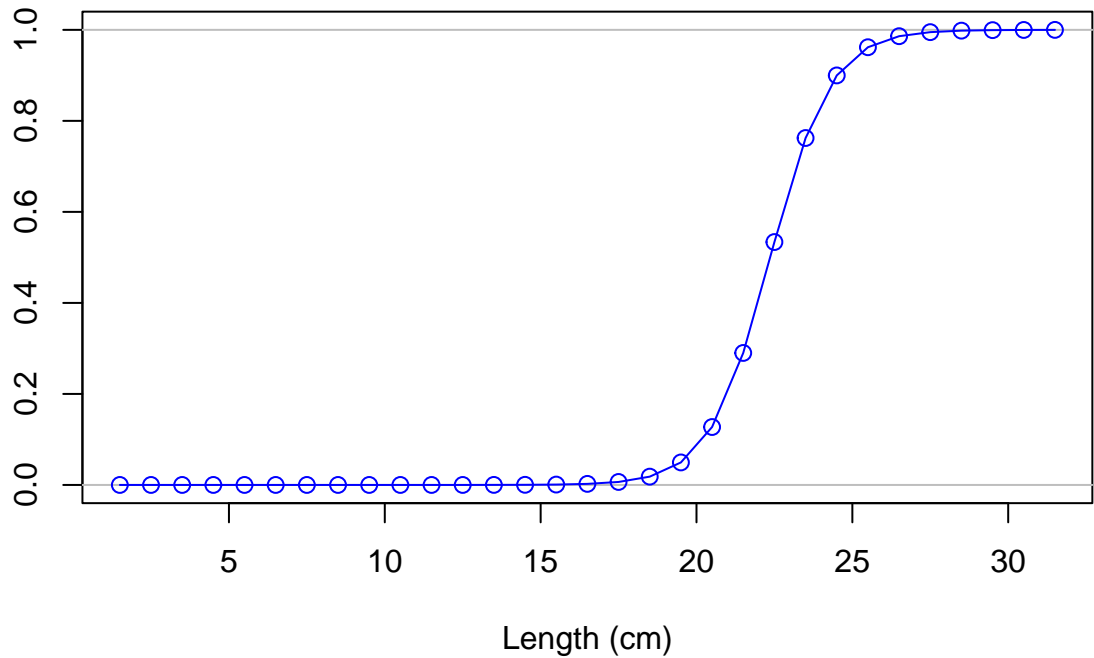


Selectivity

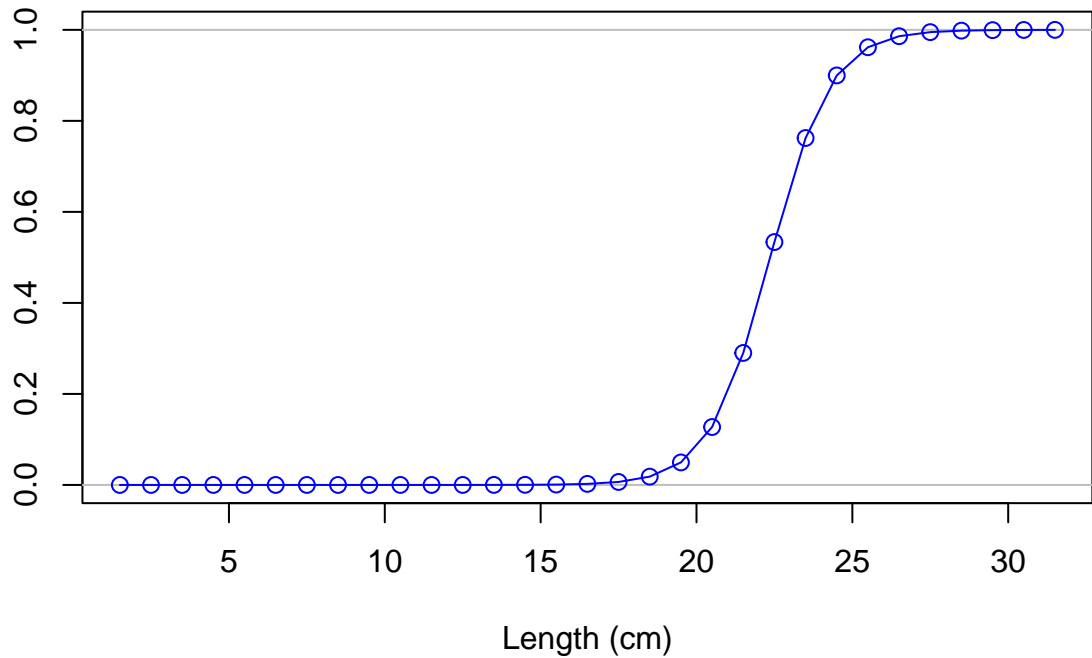




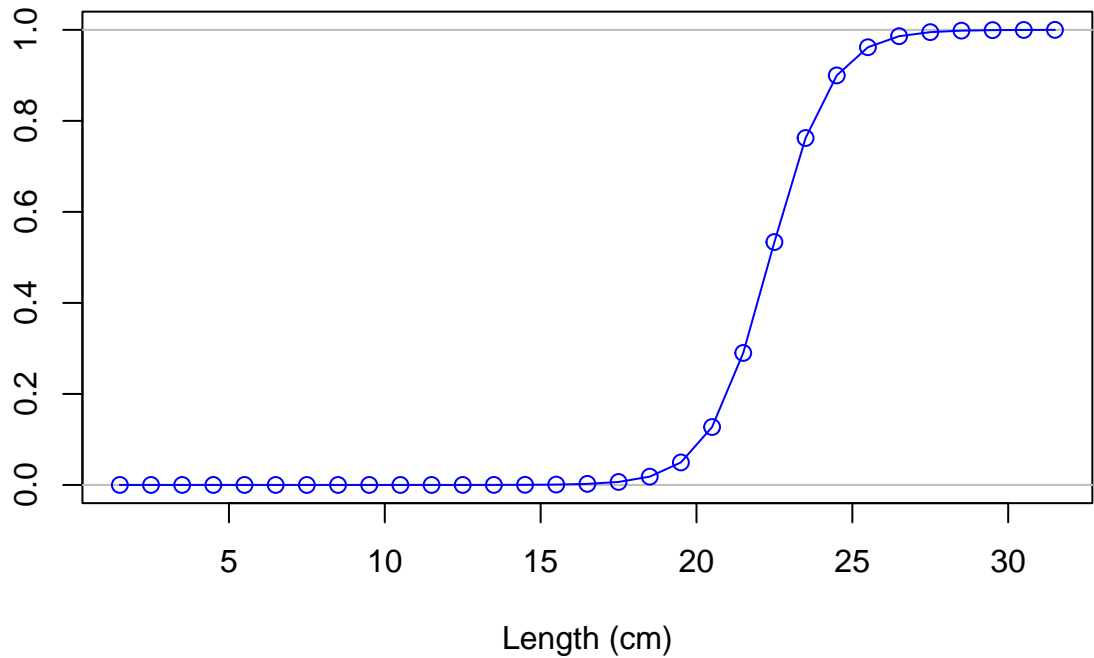
Selectivity

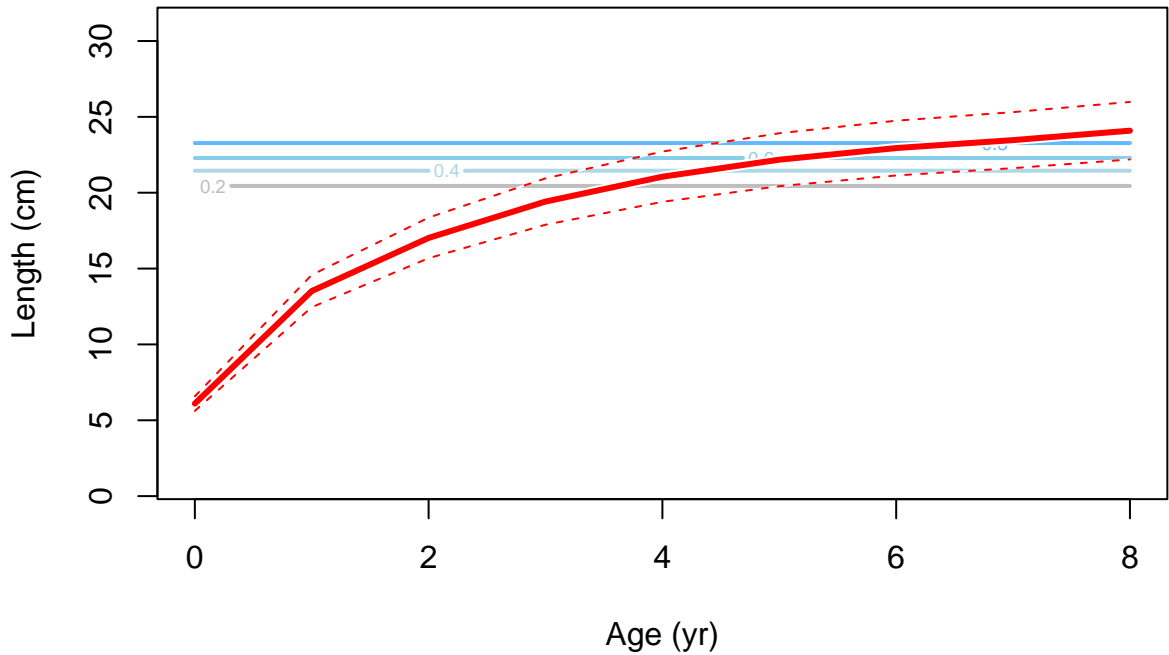


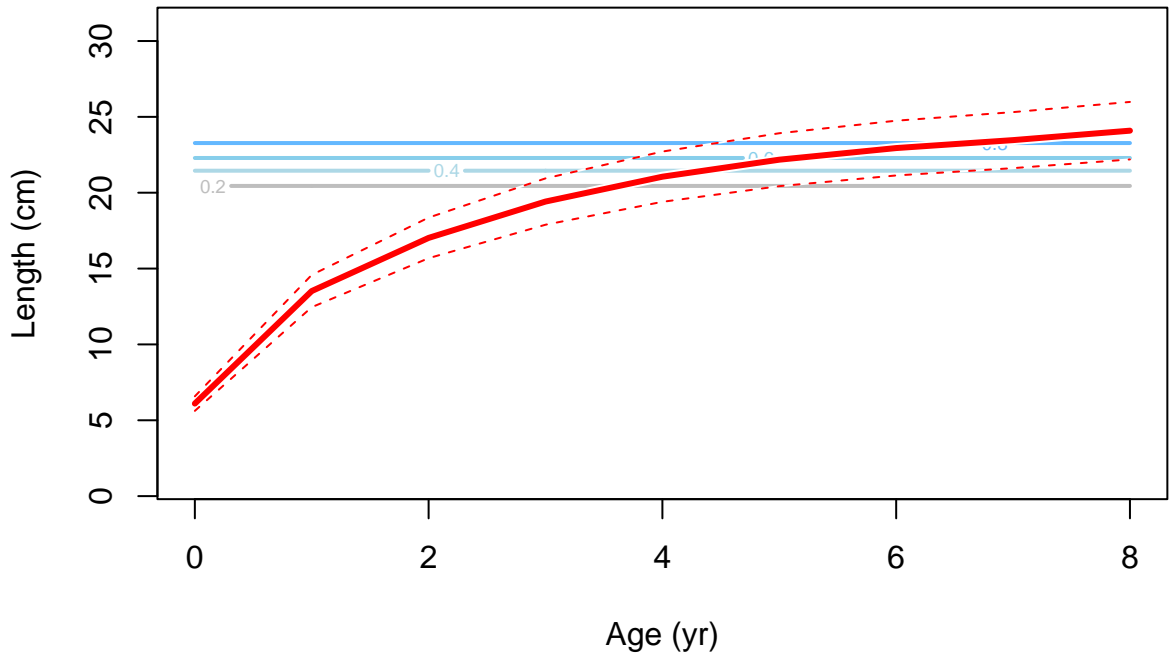
Selectivity

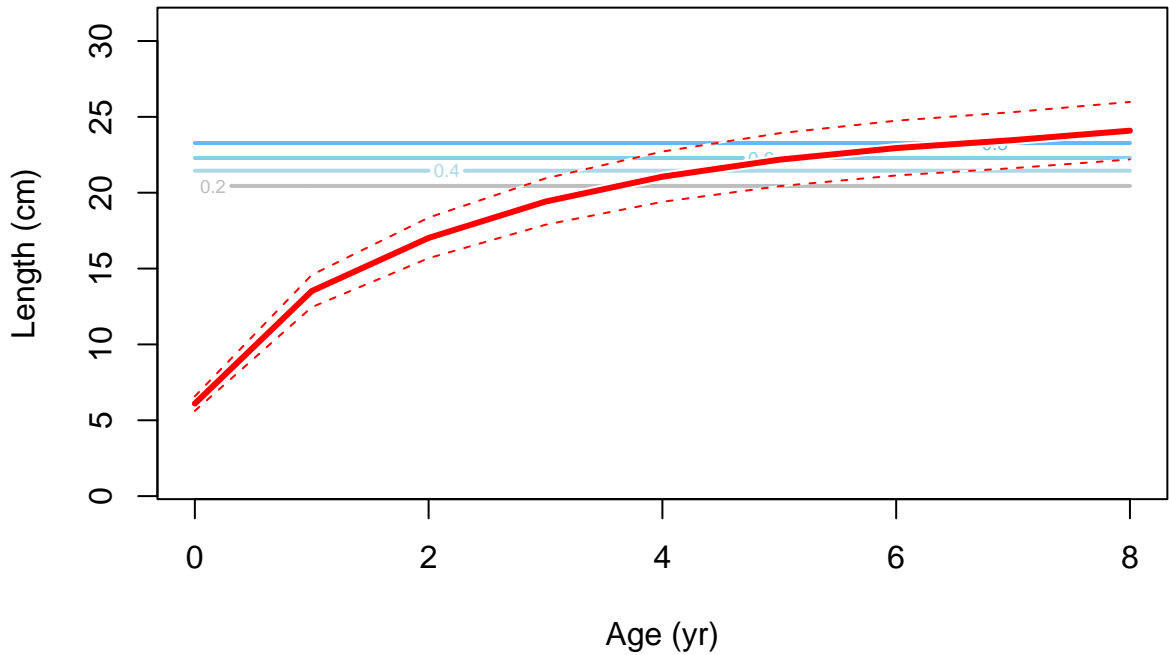


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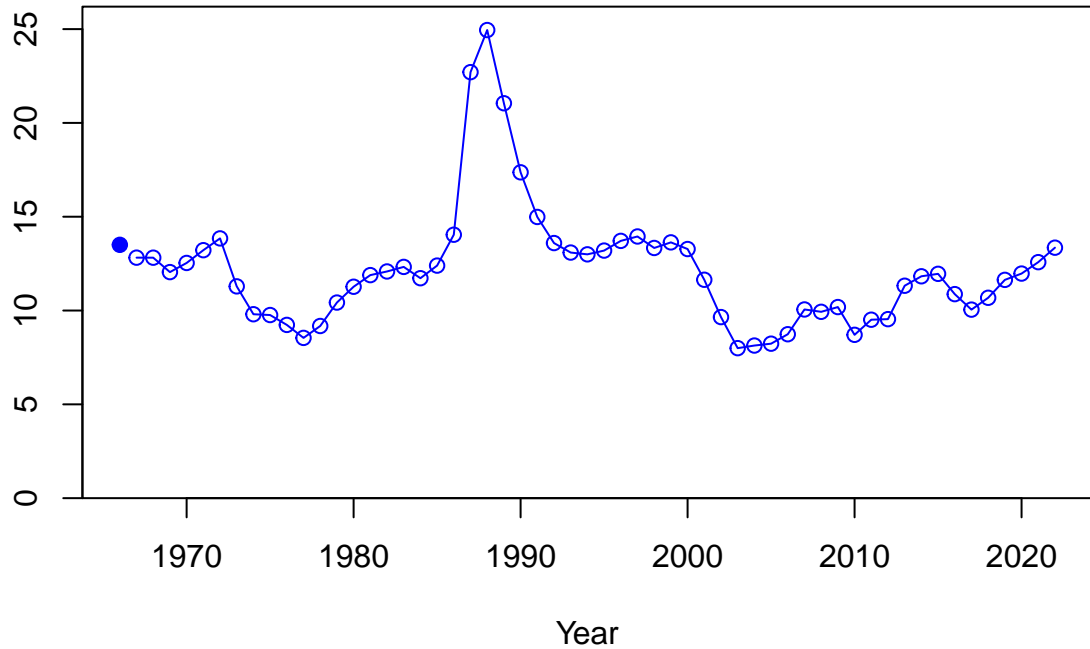




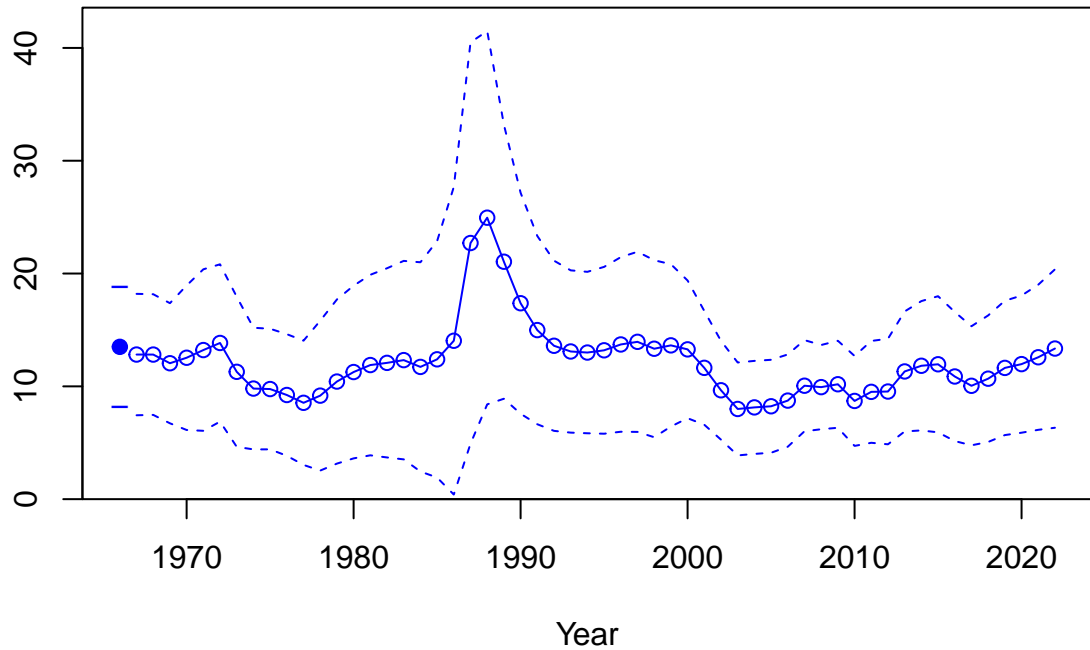




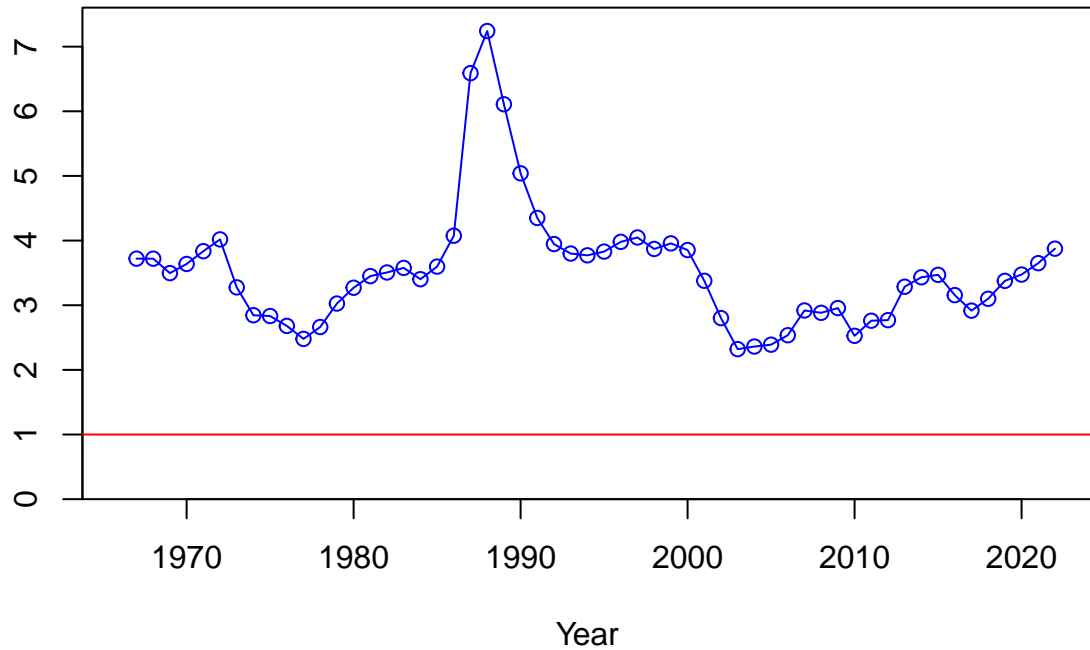
Spawning biomass (mt)



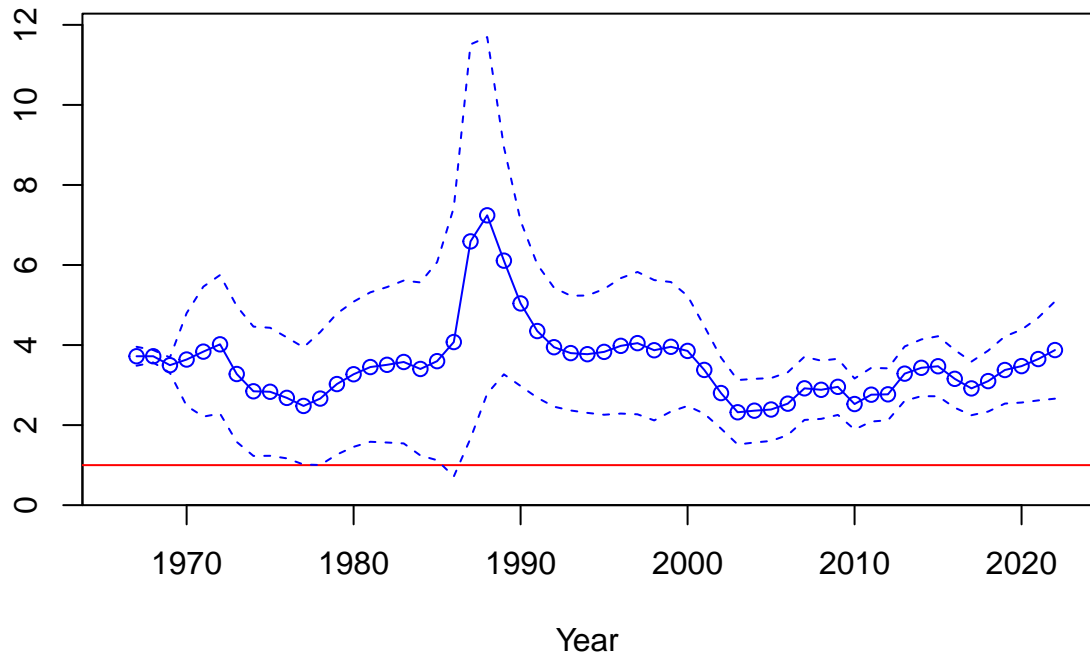
Spawning biomass (mt)

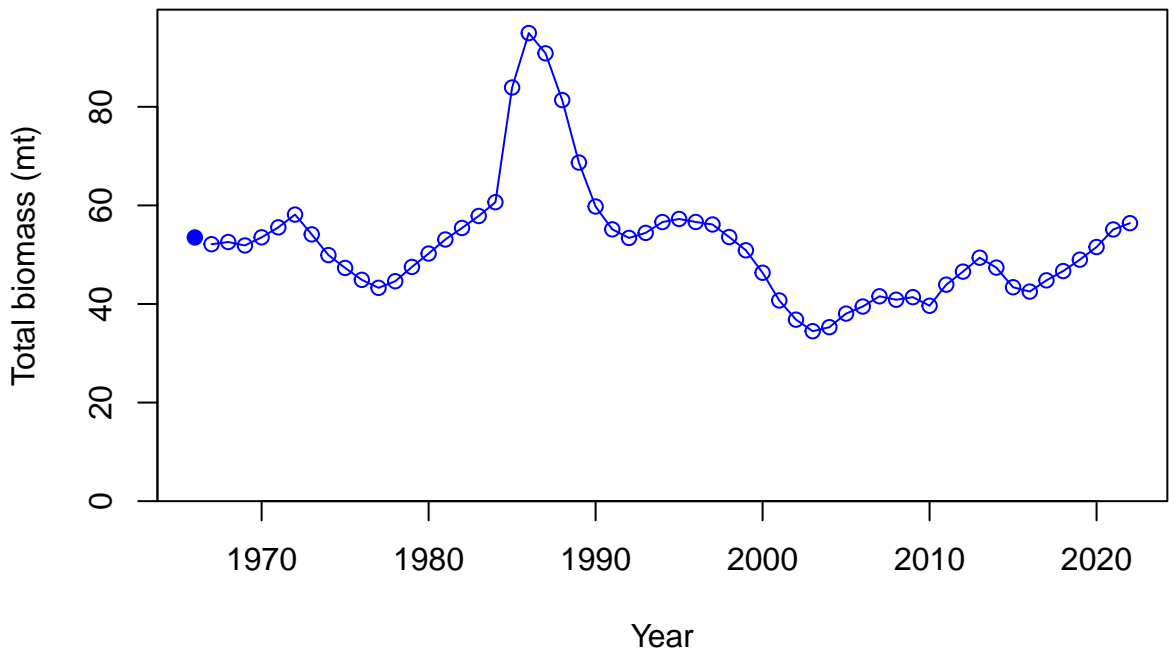


Relative spawning biomass: B/B_{MSY}

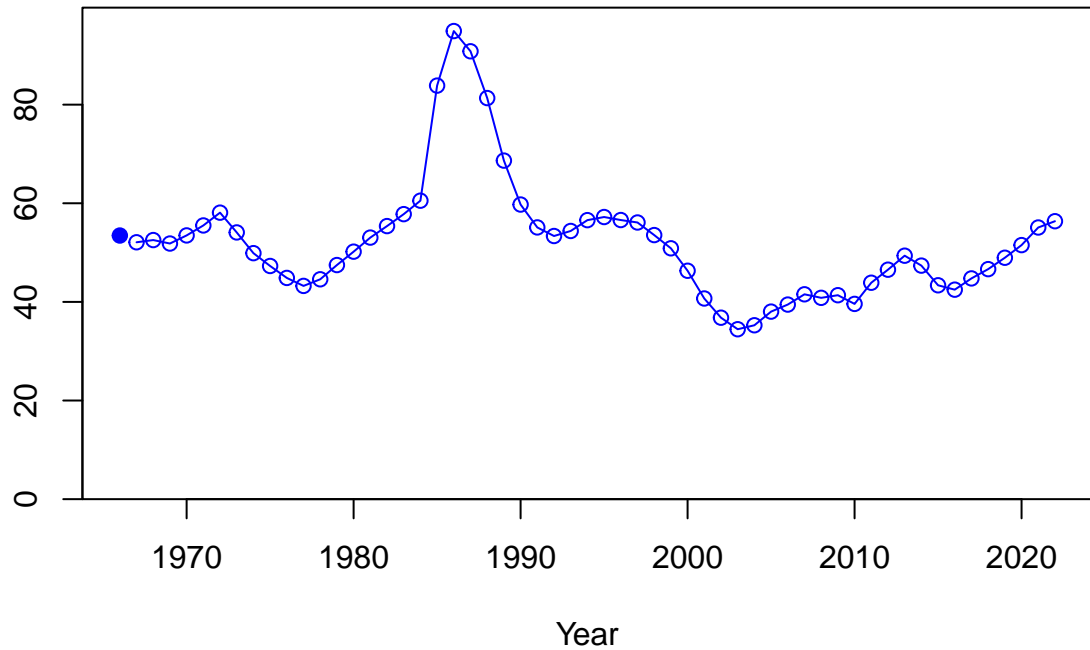


Relative spawning biomass: B/B_{MSY}

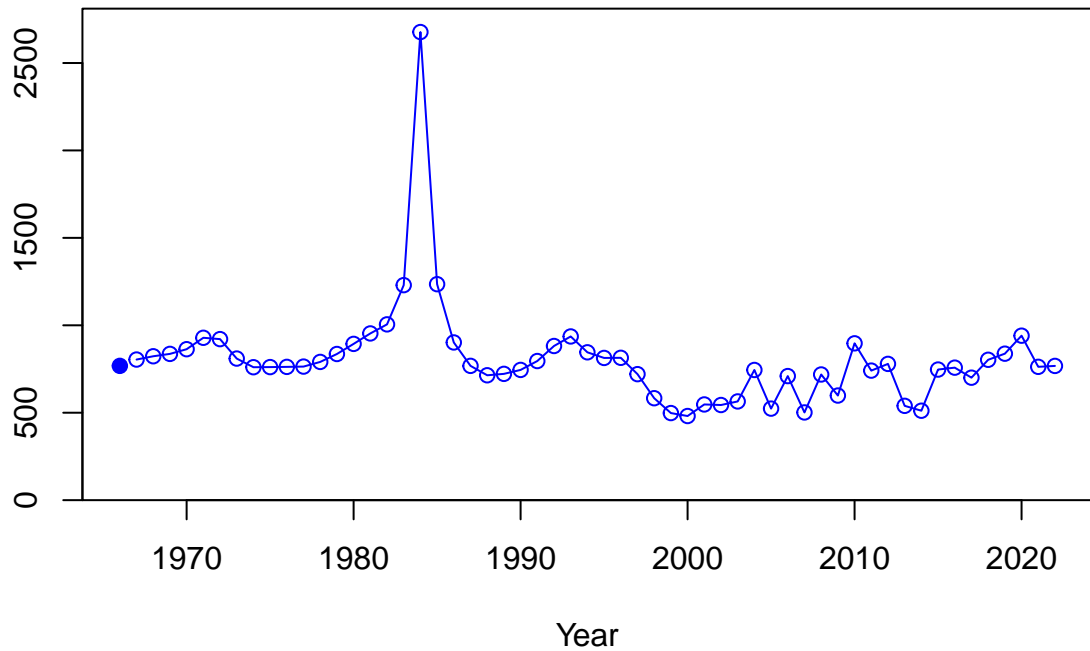




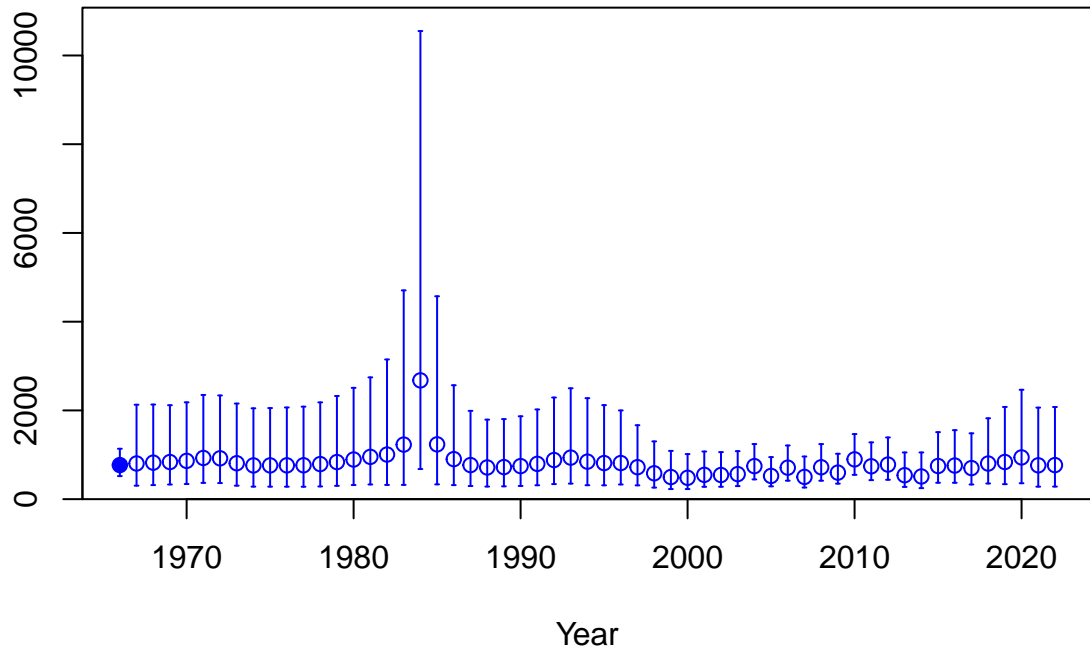
Summary biomass (mt)



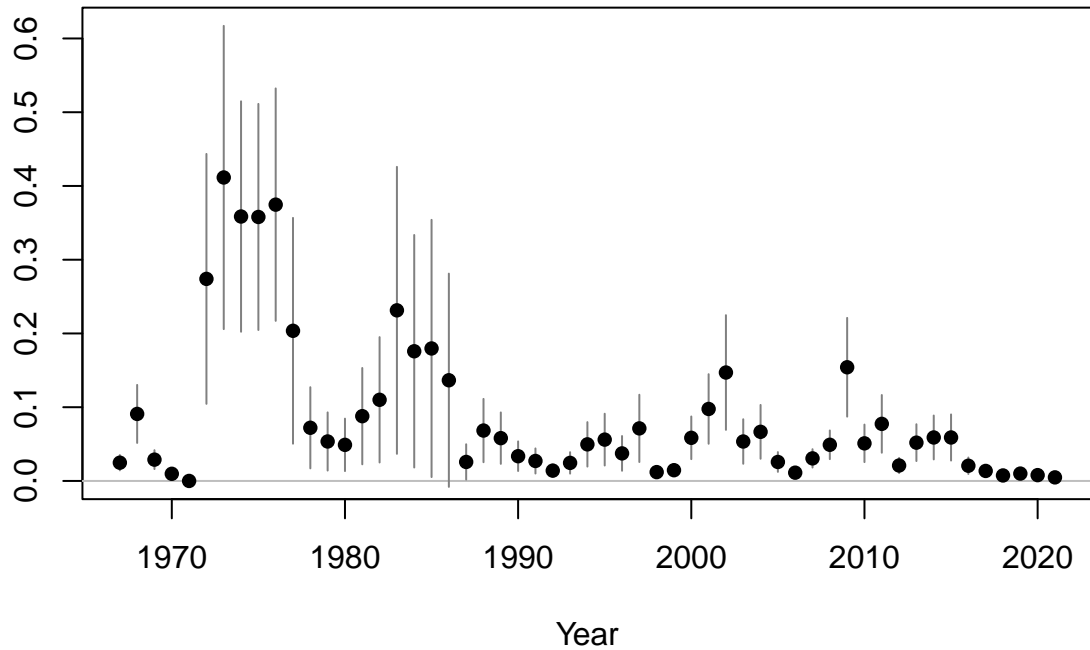
Age-0 recruits (1,000s)

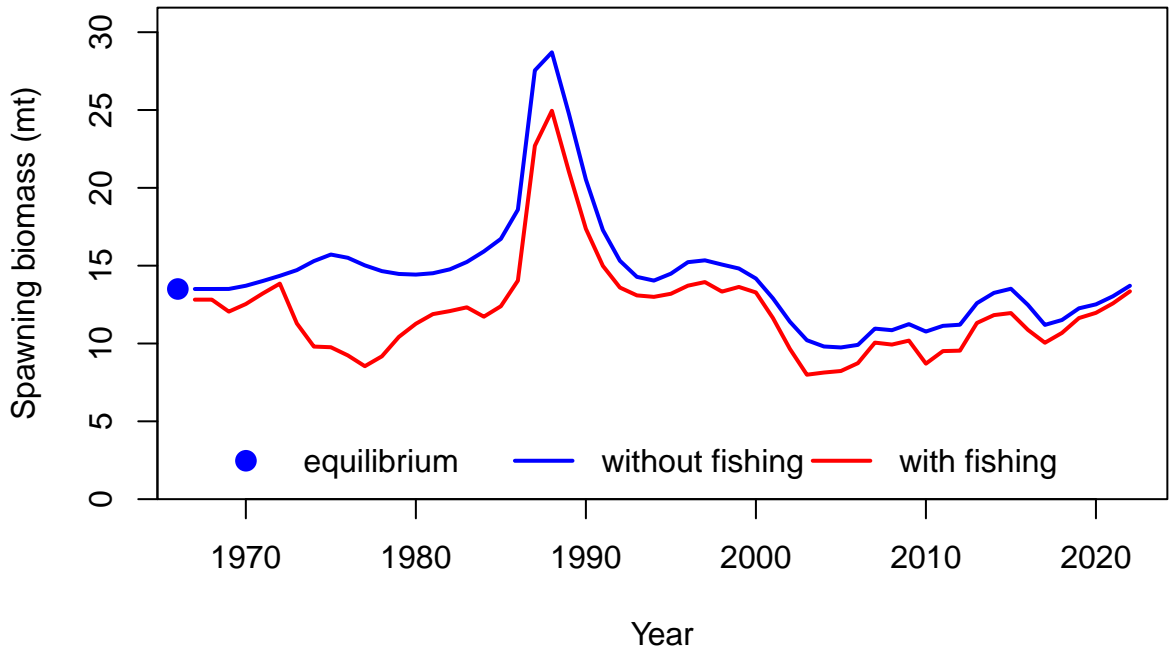


Age-0 recruits (1,000s)

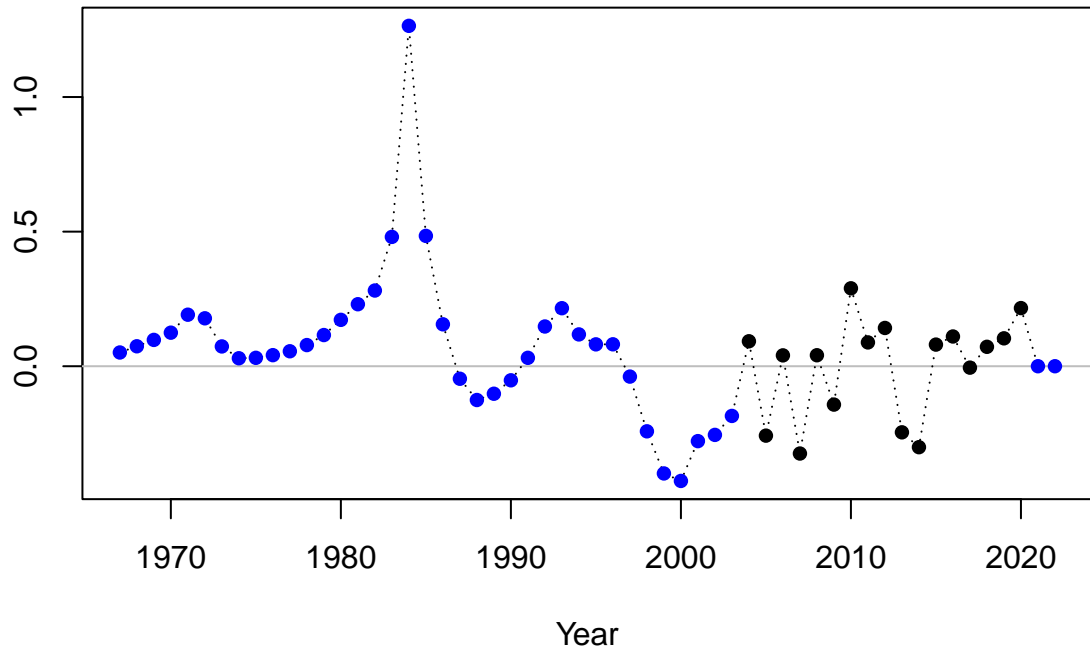


Summary Fishing Mortality

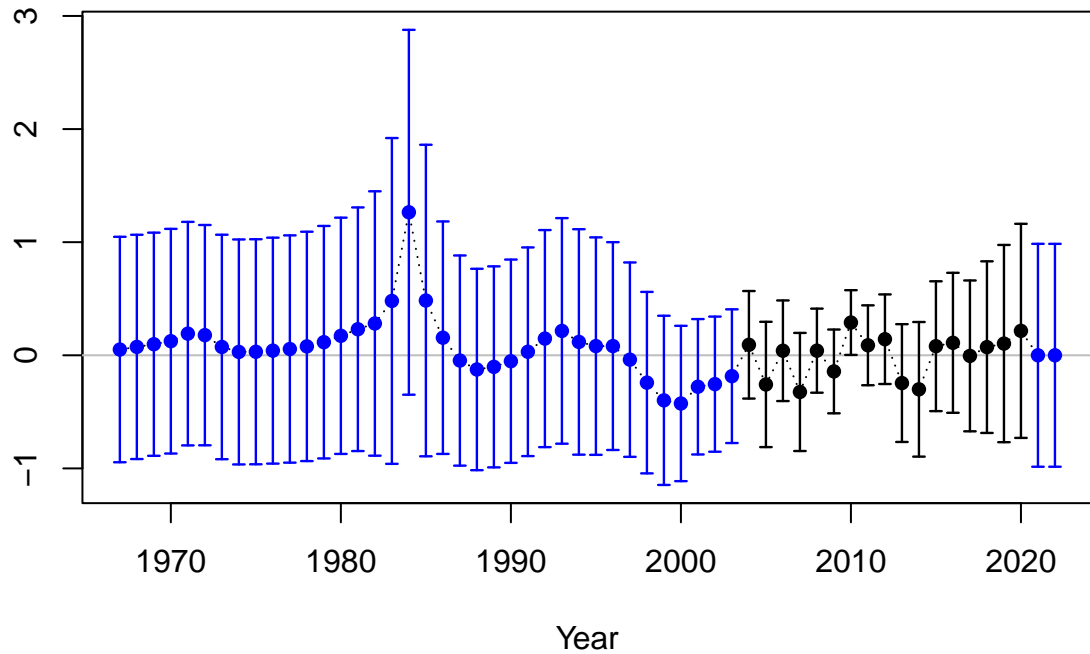




Log recruitment deviation

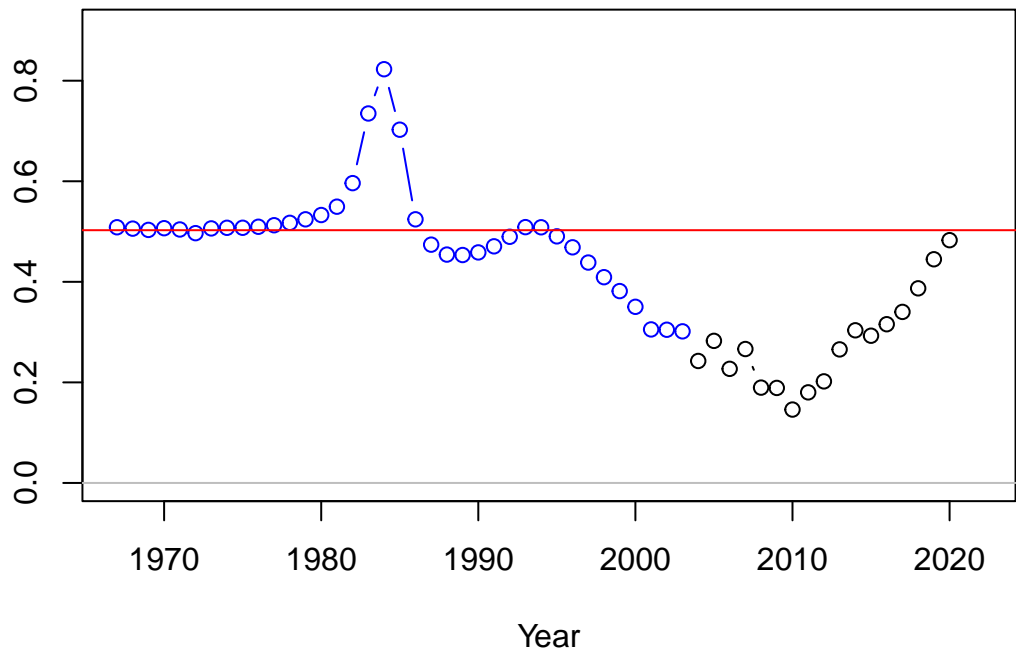


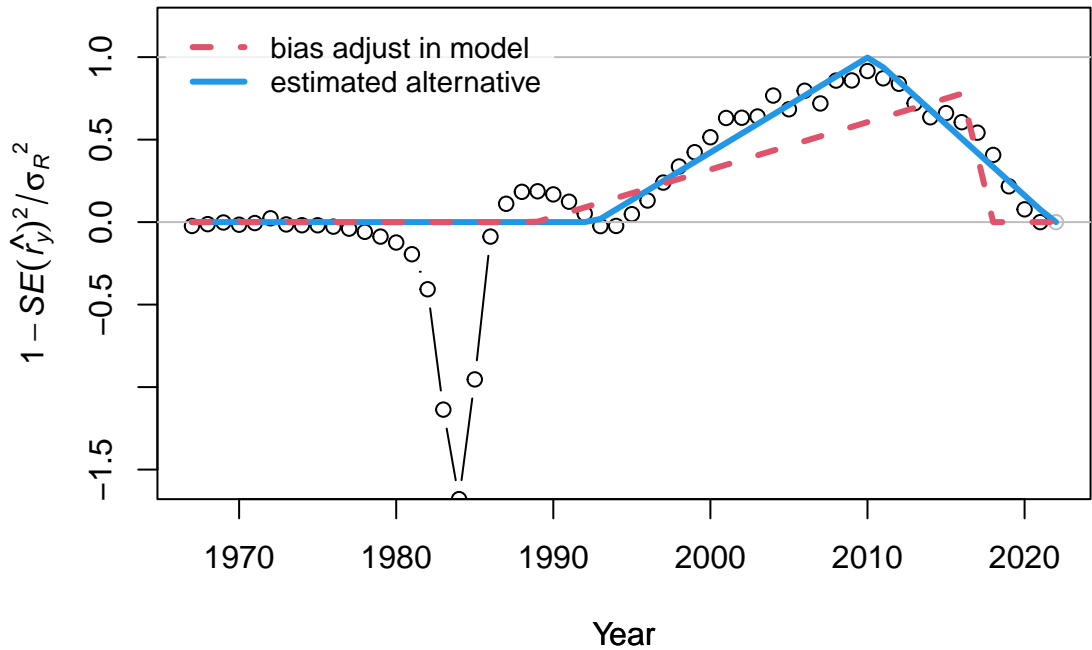
Log recruitment deviation

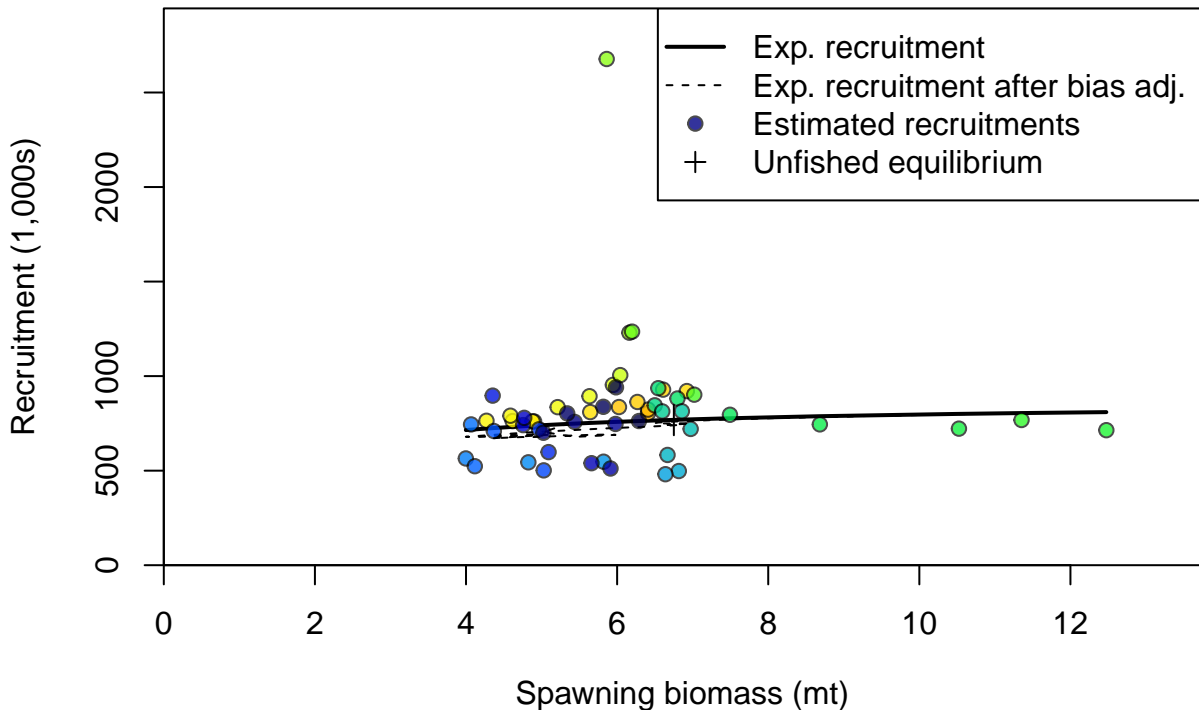


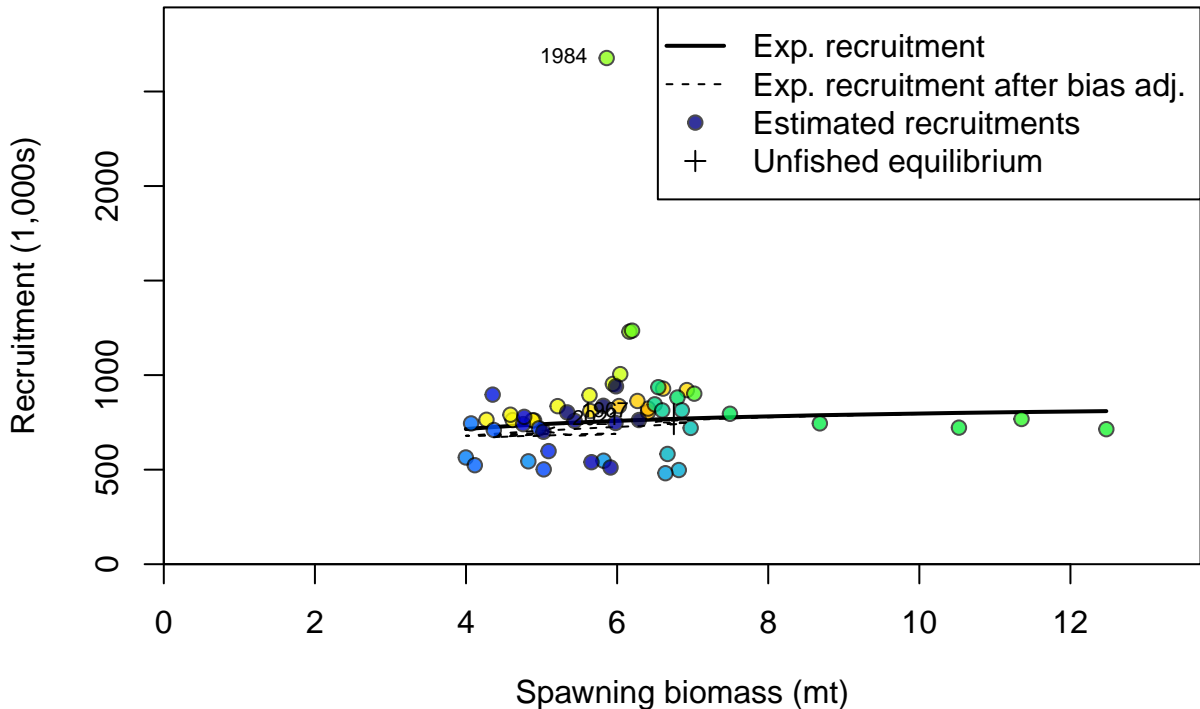
Recruitment deviation variance

Asymptotic standard error estimate









Log recruitment deviation

1984

2021

0.0

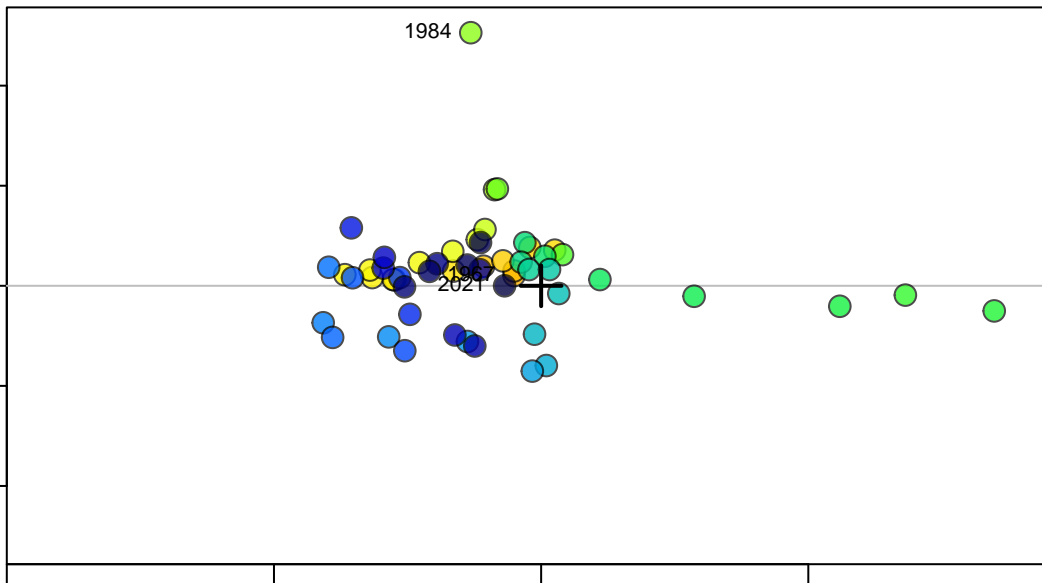
0.5

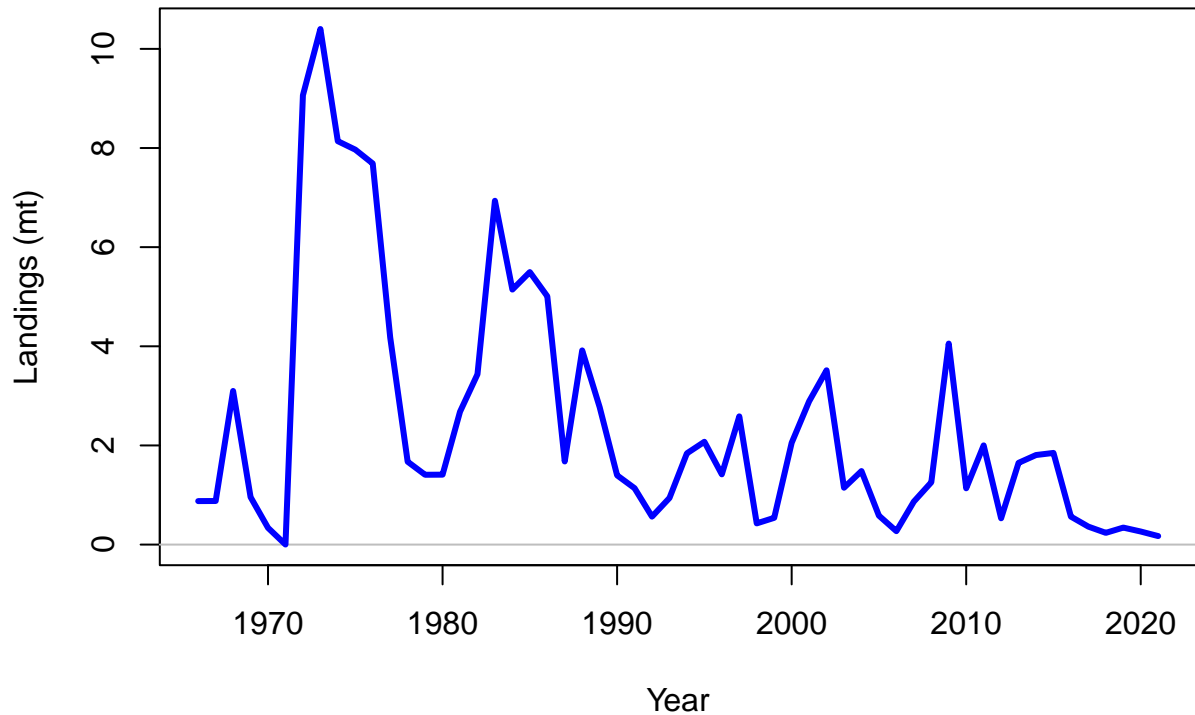
1.0

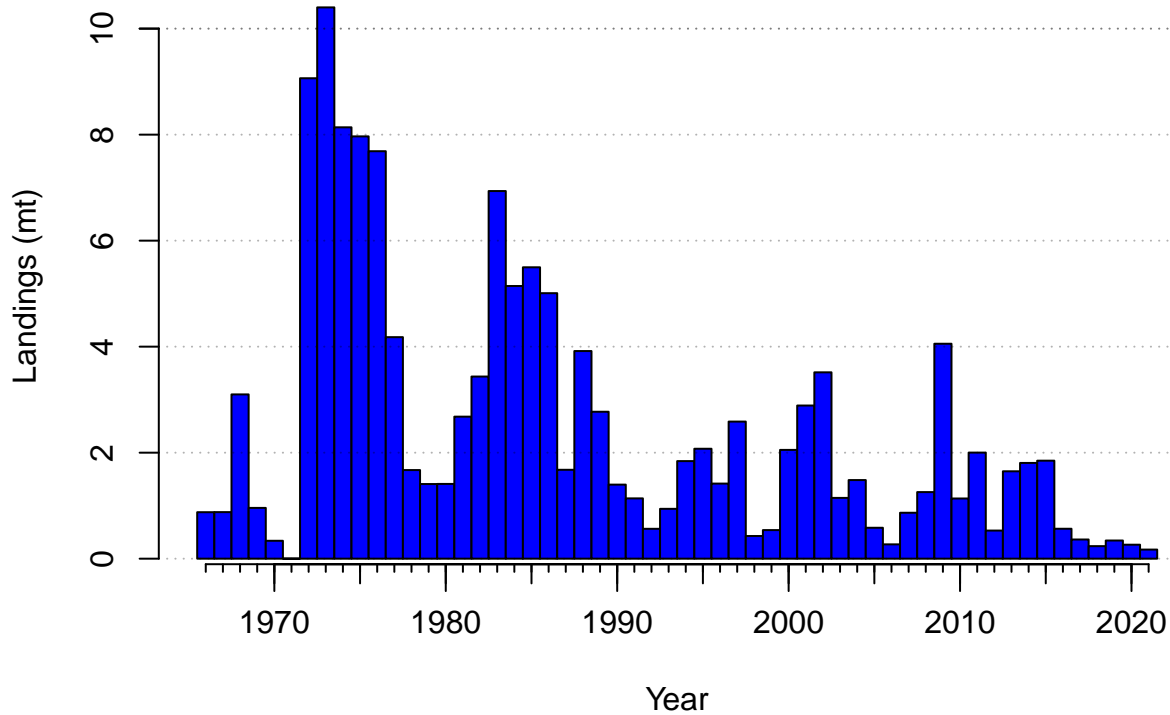
1.5

Spawning output (relative to B_0)

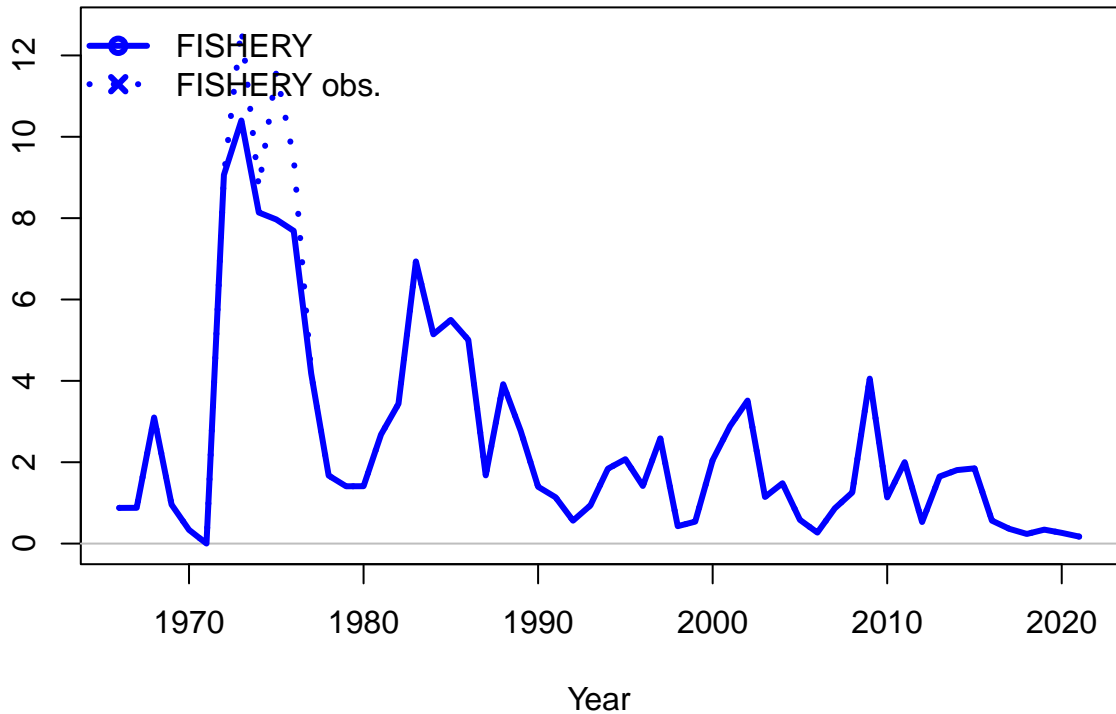
1.0
0.5
0.0
-0.5
-1.0

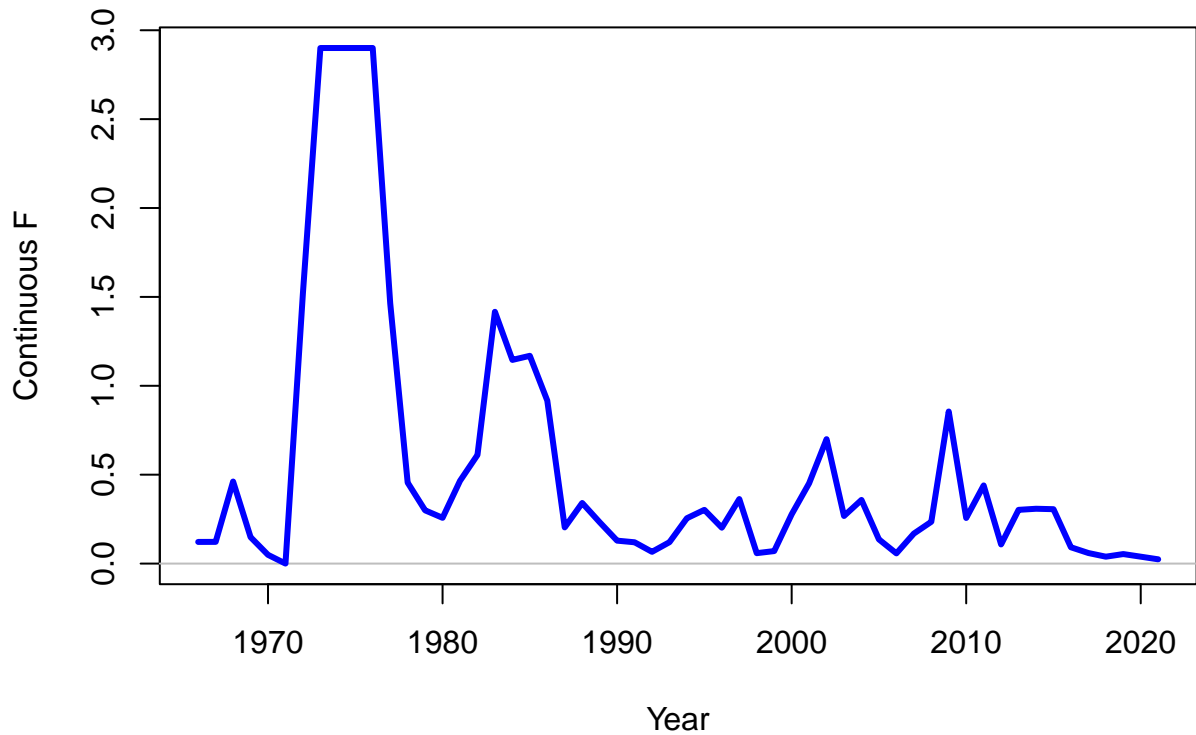




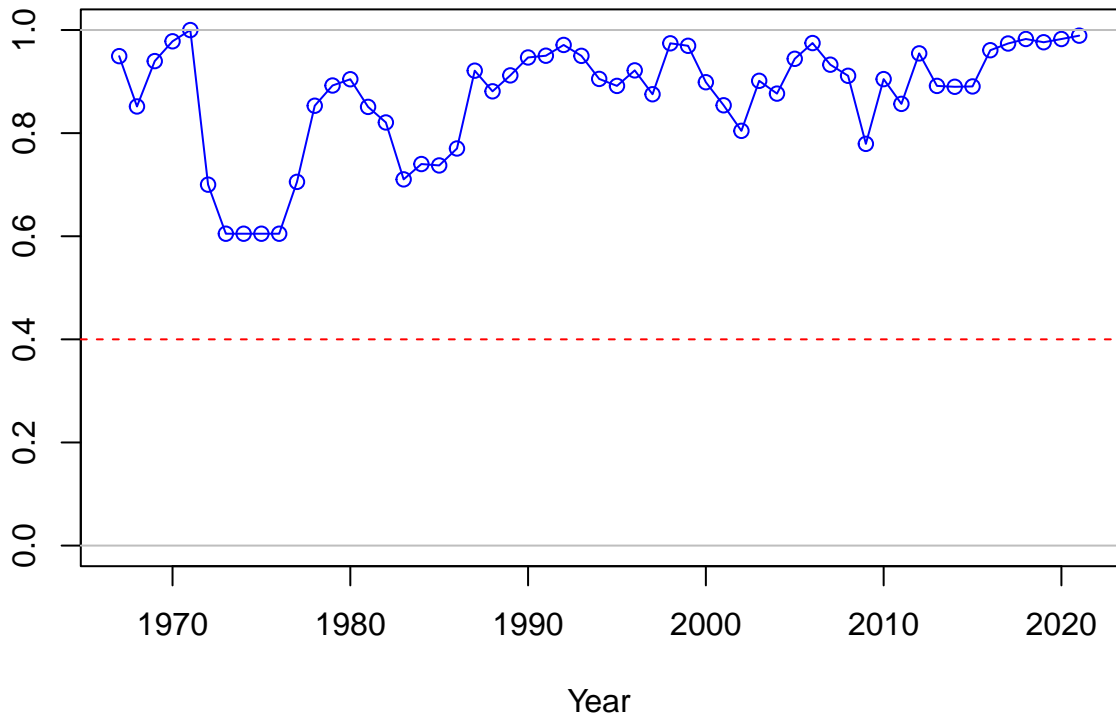


Observed and expected Landings (mt)

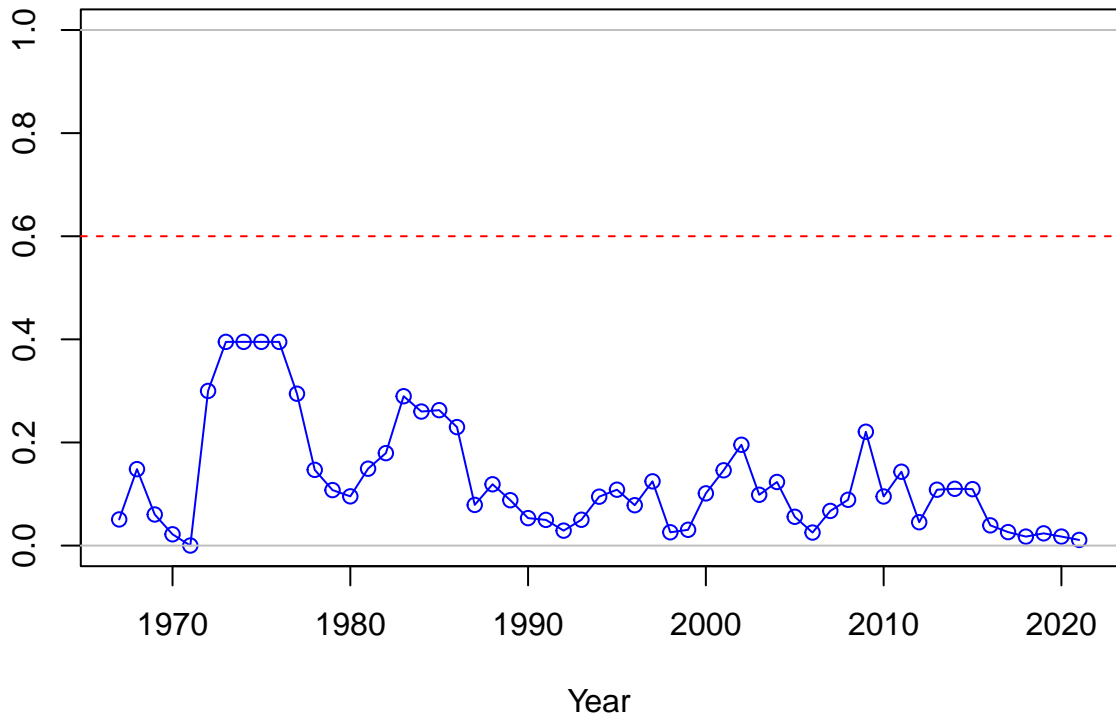




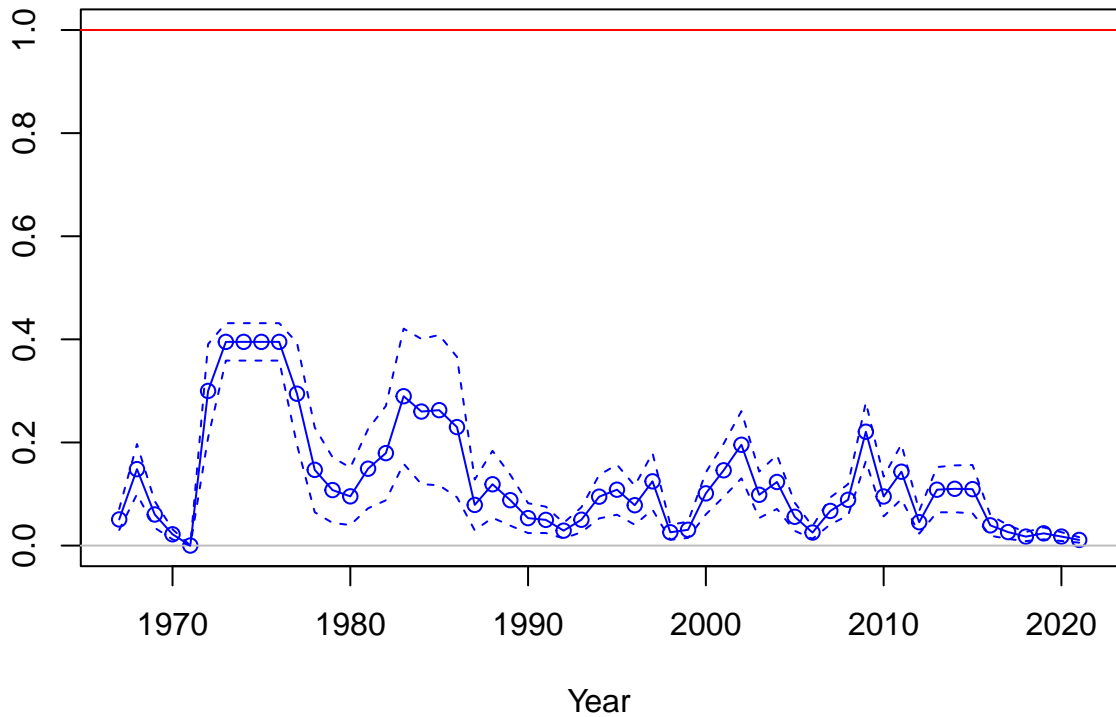
SPR



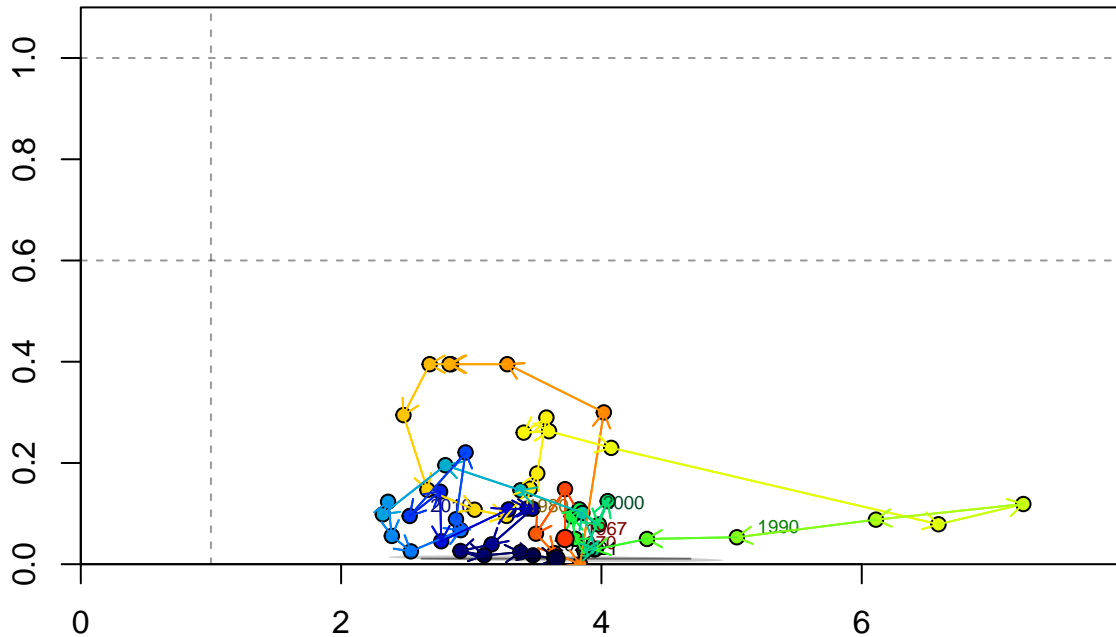
1-SPR



Fishing intensity: 1-SPR



Fishing intensity: 1-SPR



Relative spawning output: B/B_MS

Index

80
60
40
20
0

1990

1995

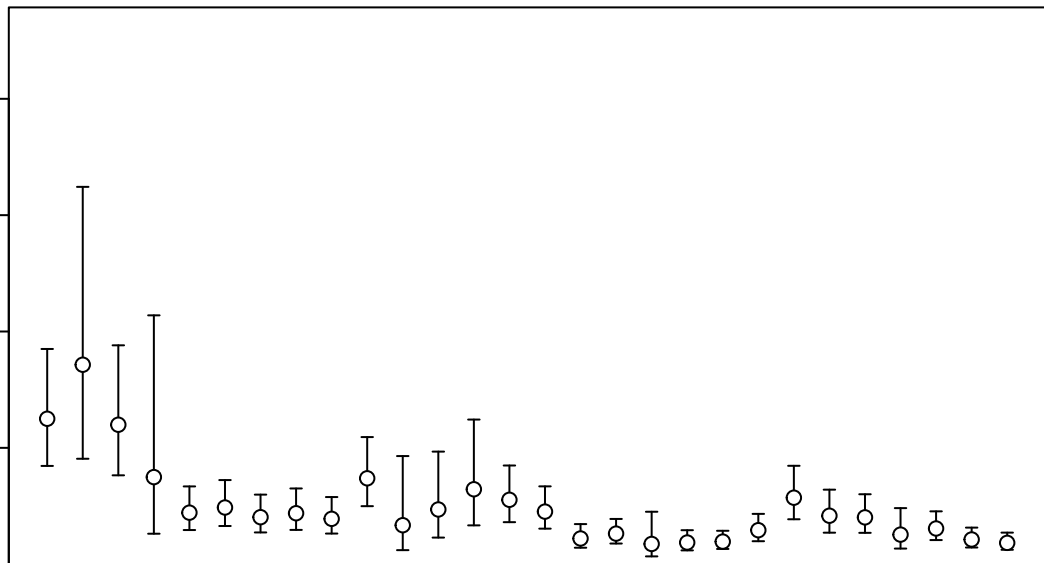
2000

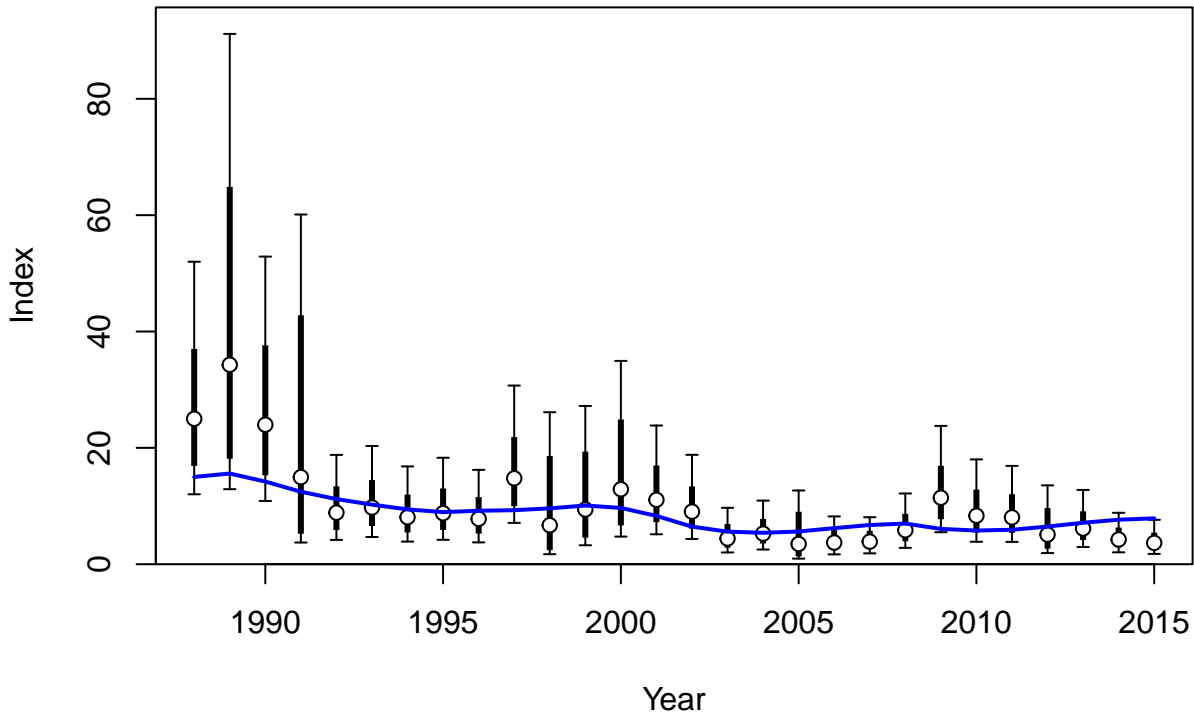
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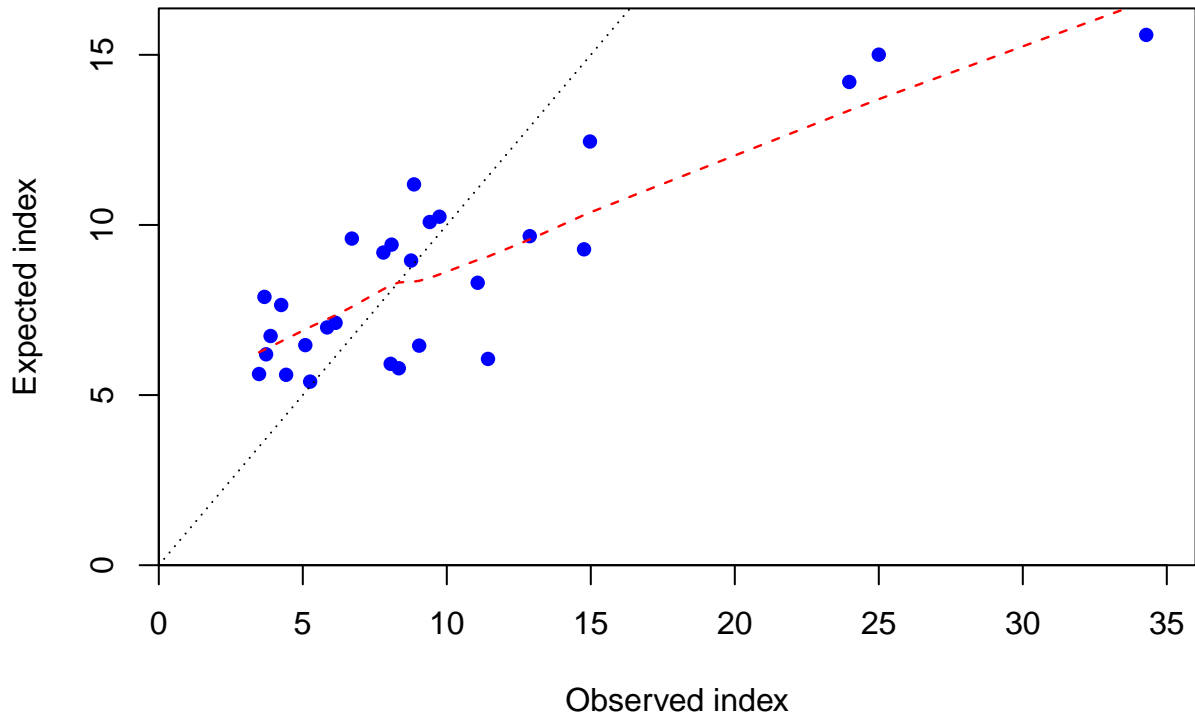
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2015

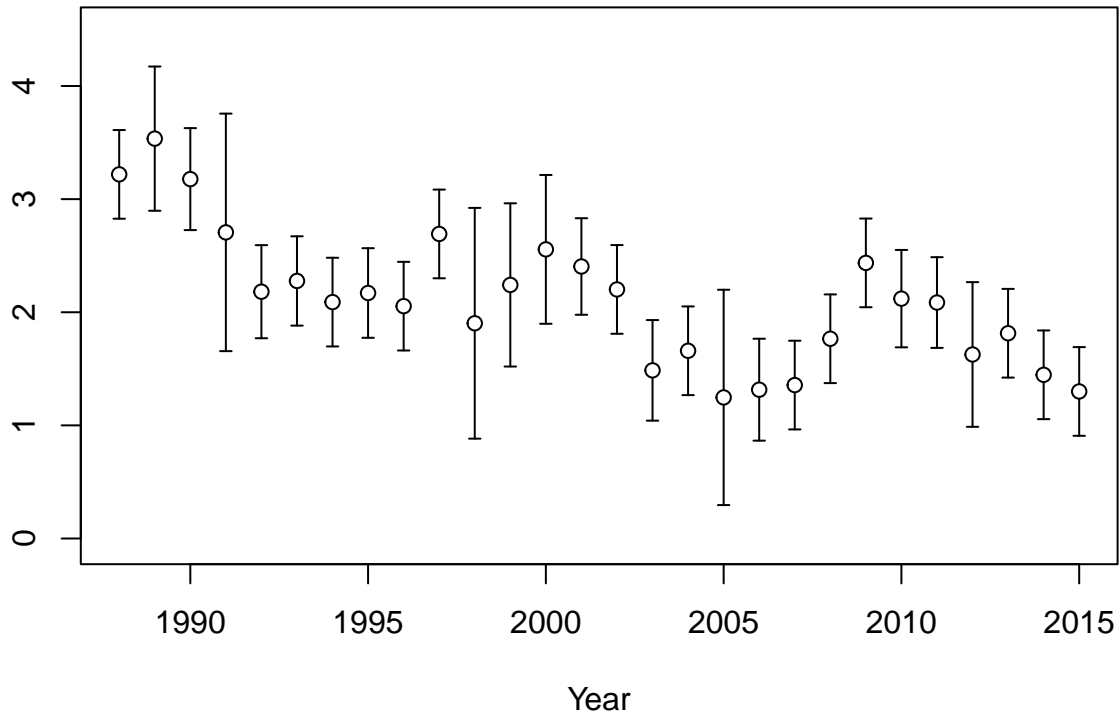
Year

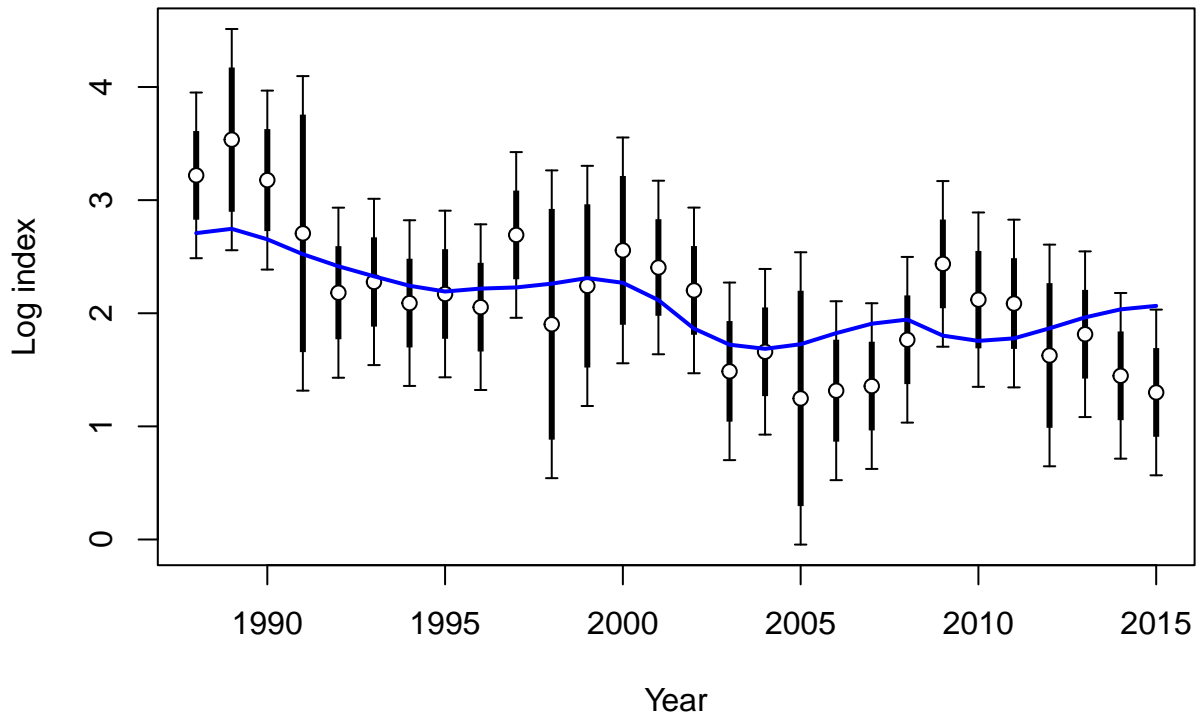


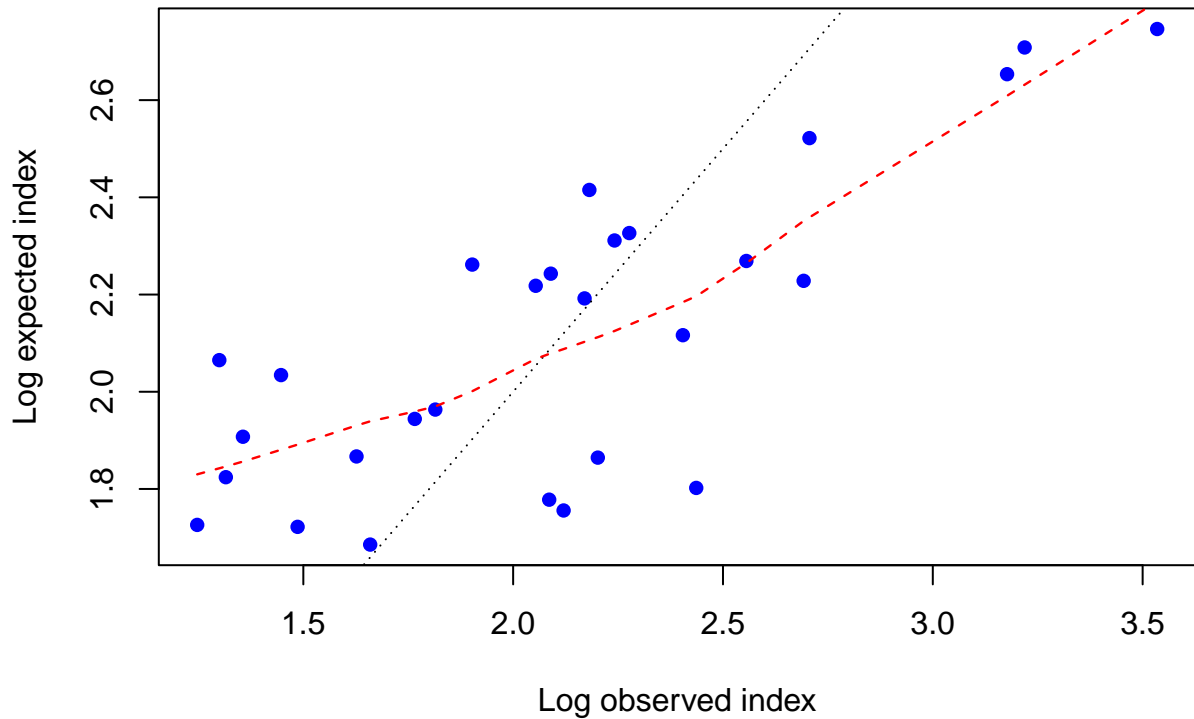


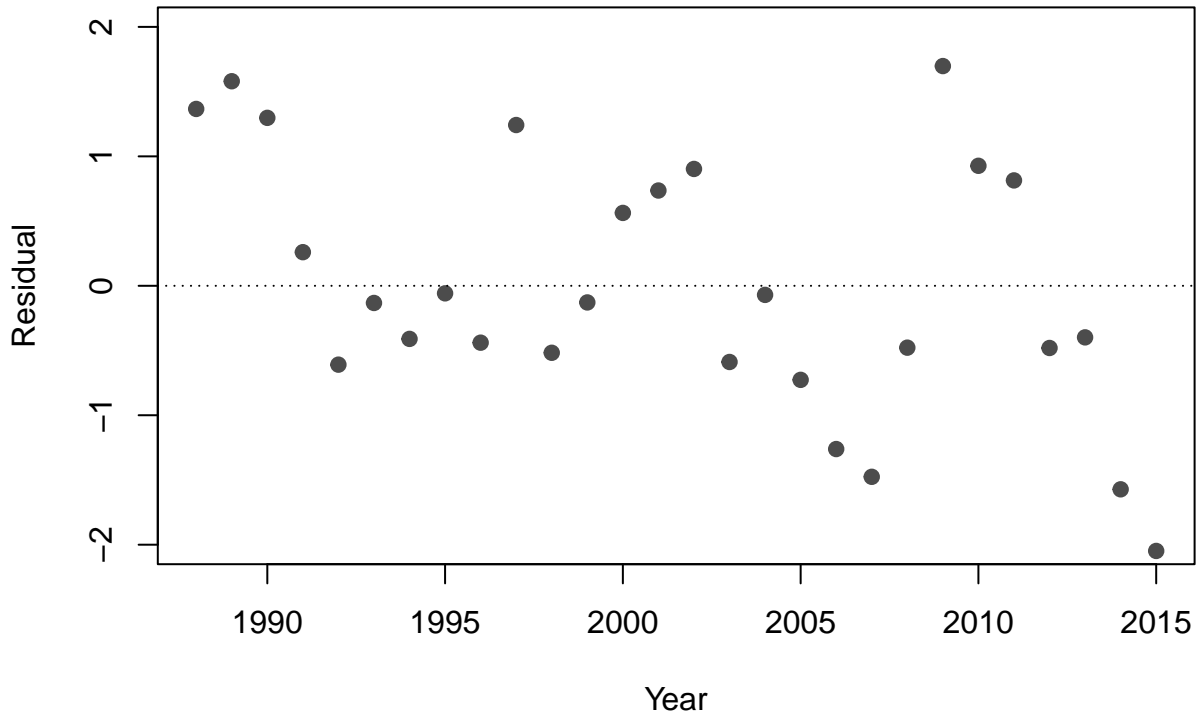


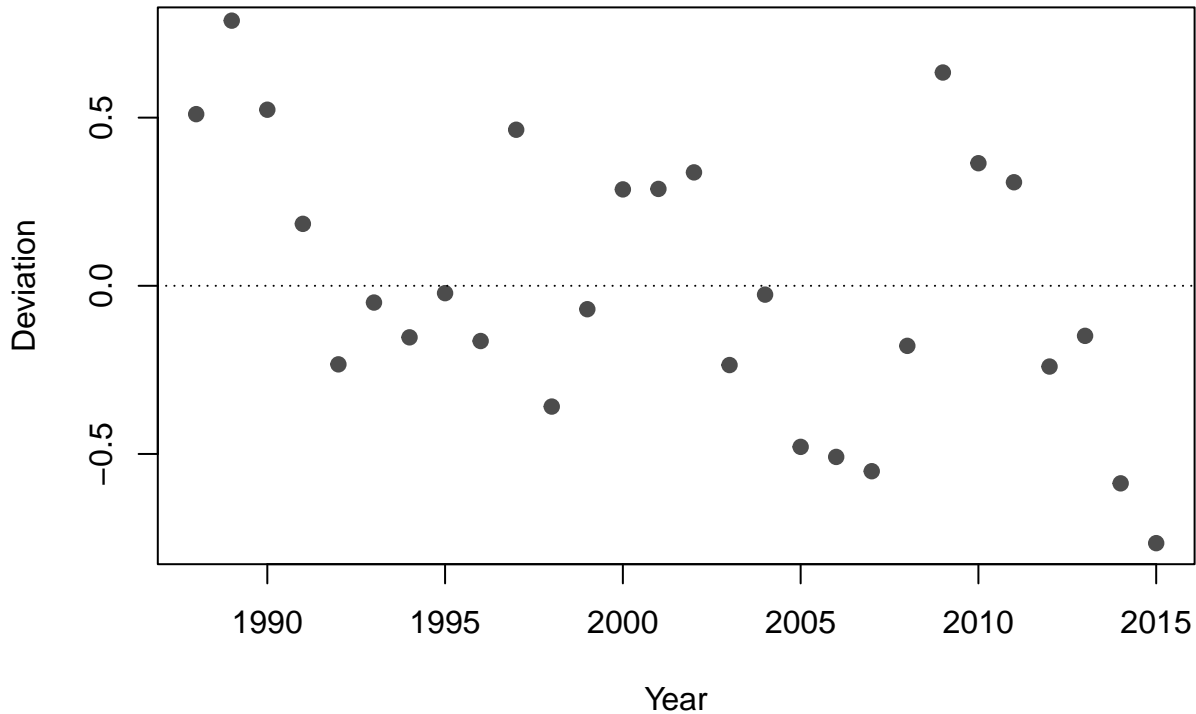
Log index











Index

4
3
2
1
0

2016

2017

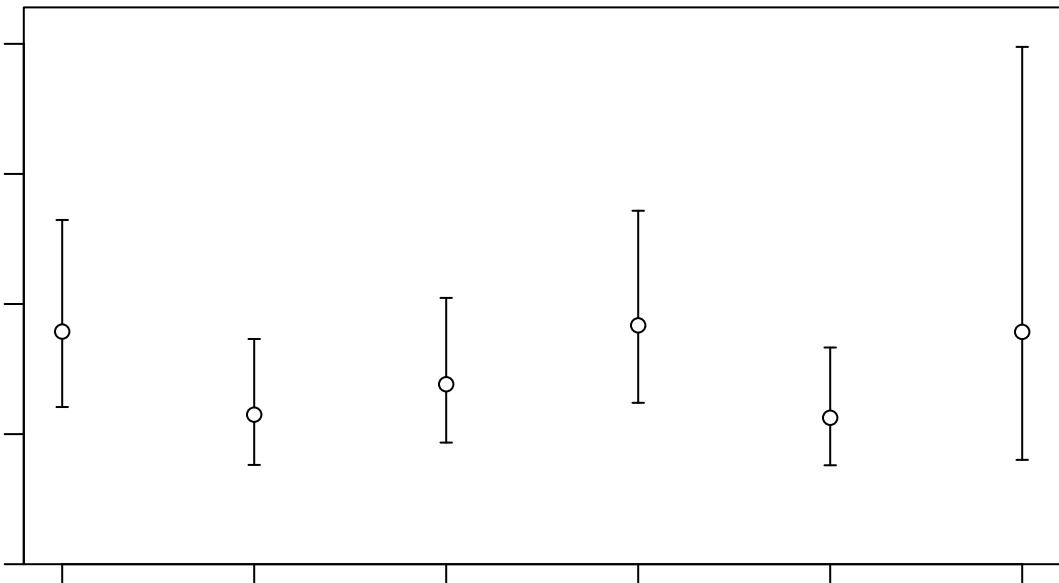
2018

2019

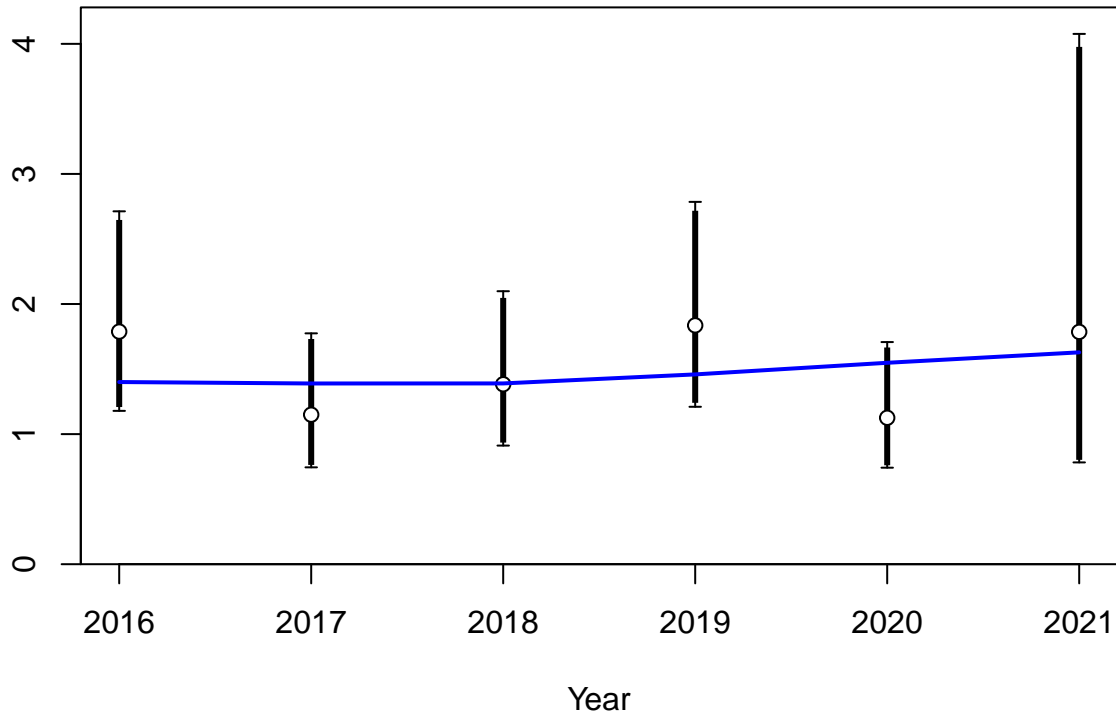
2020

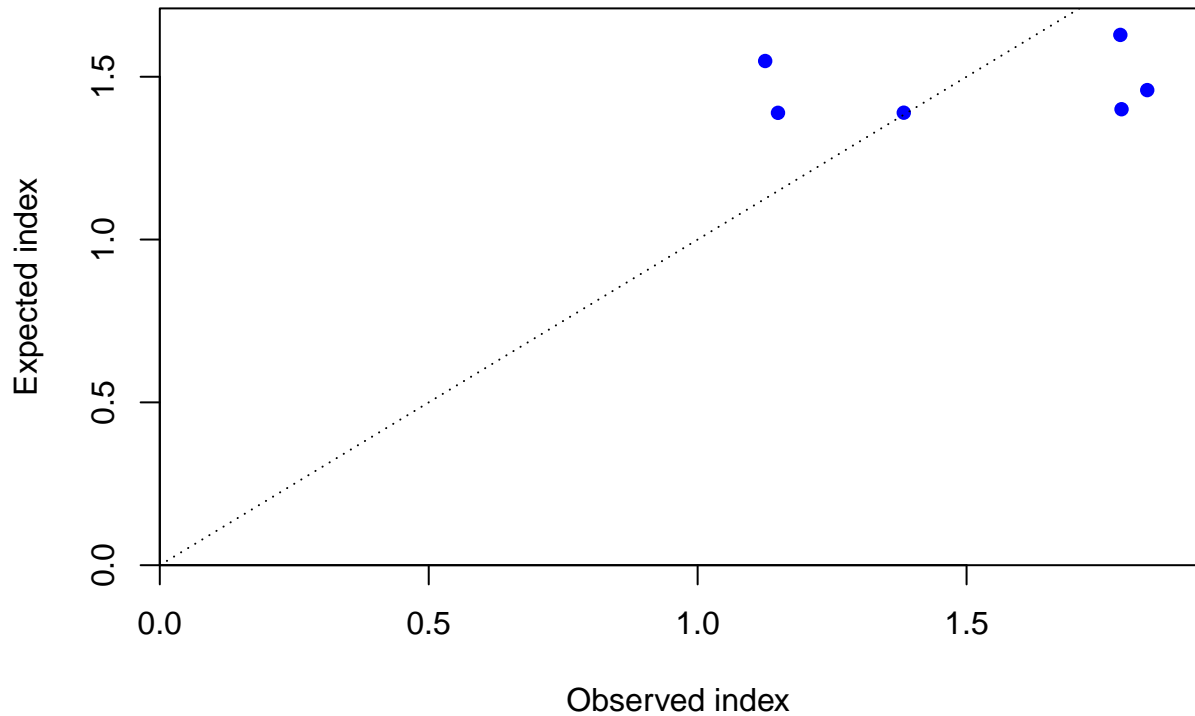
2021

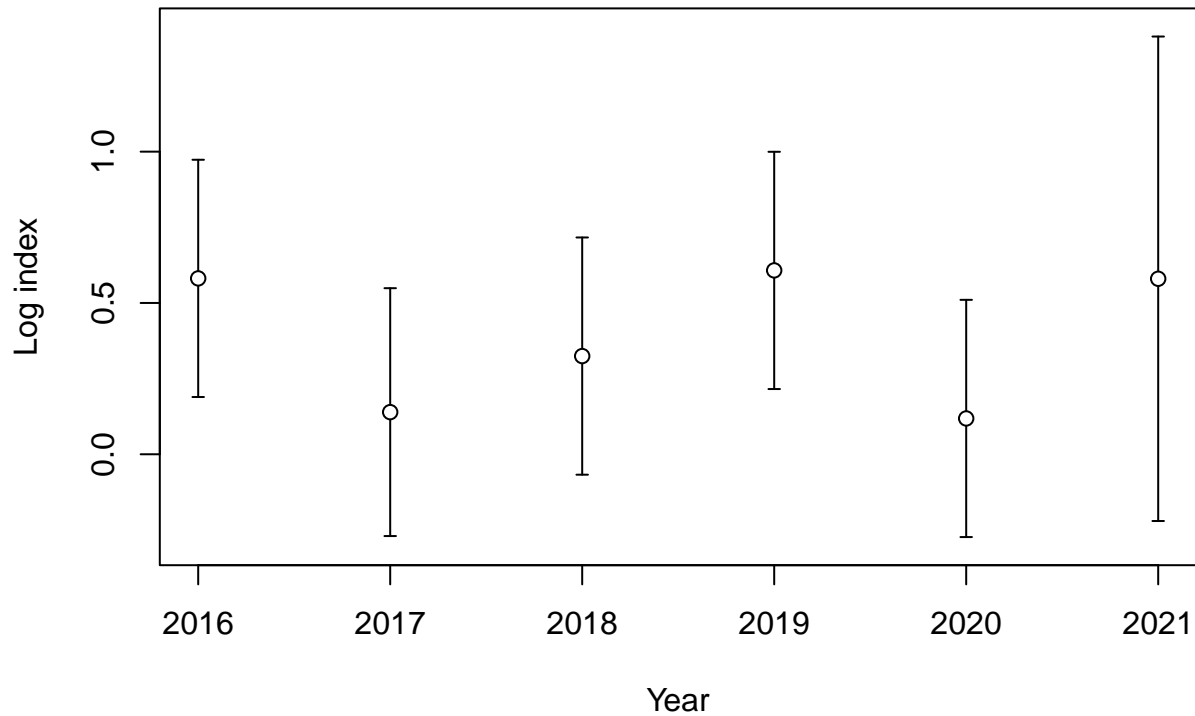
Year

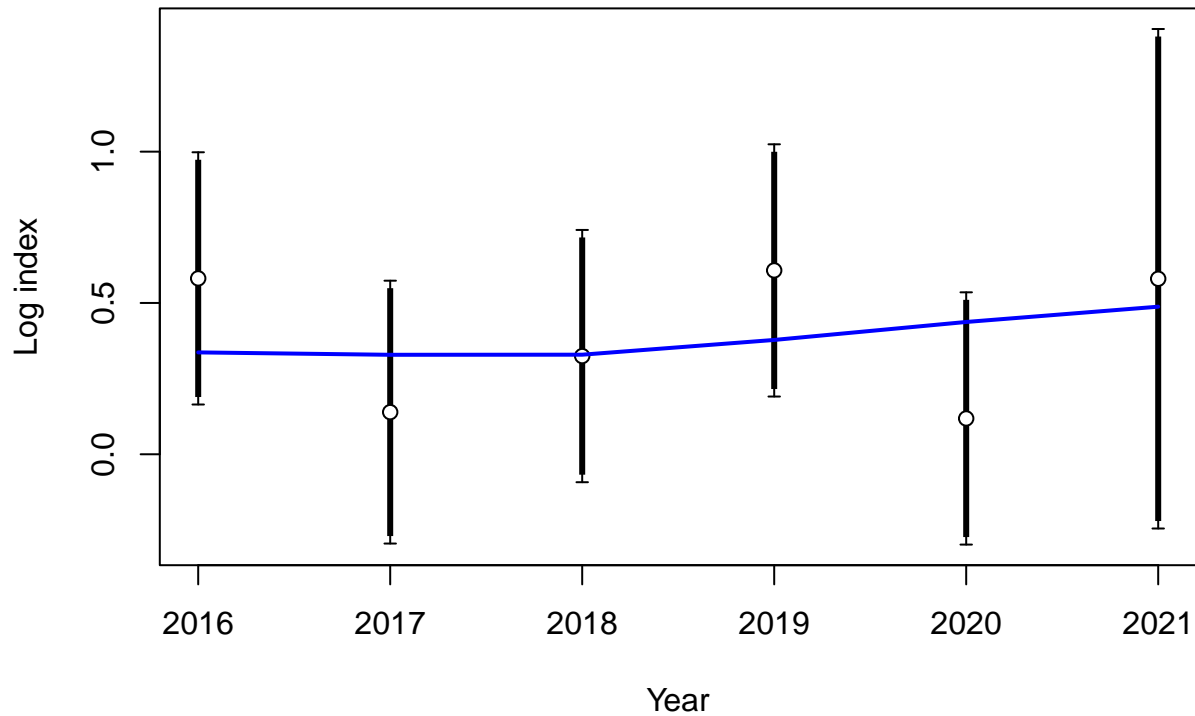


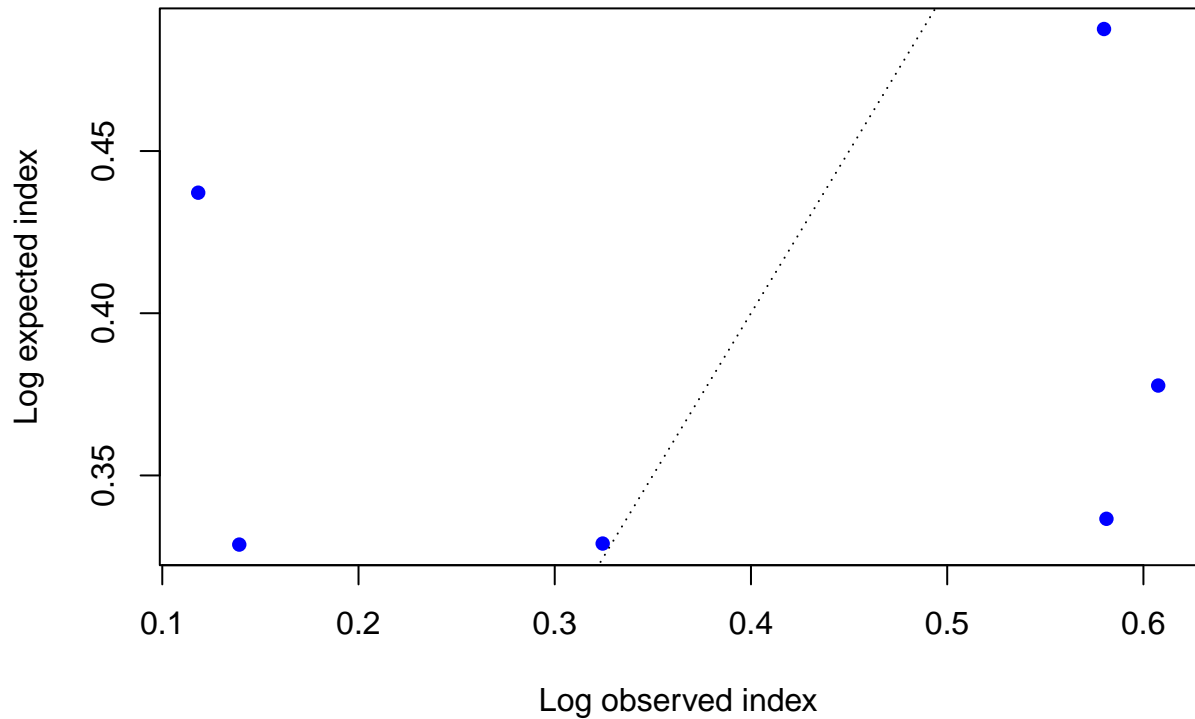
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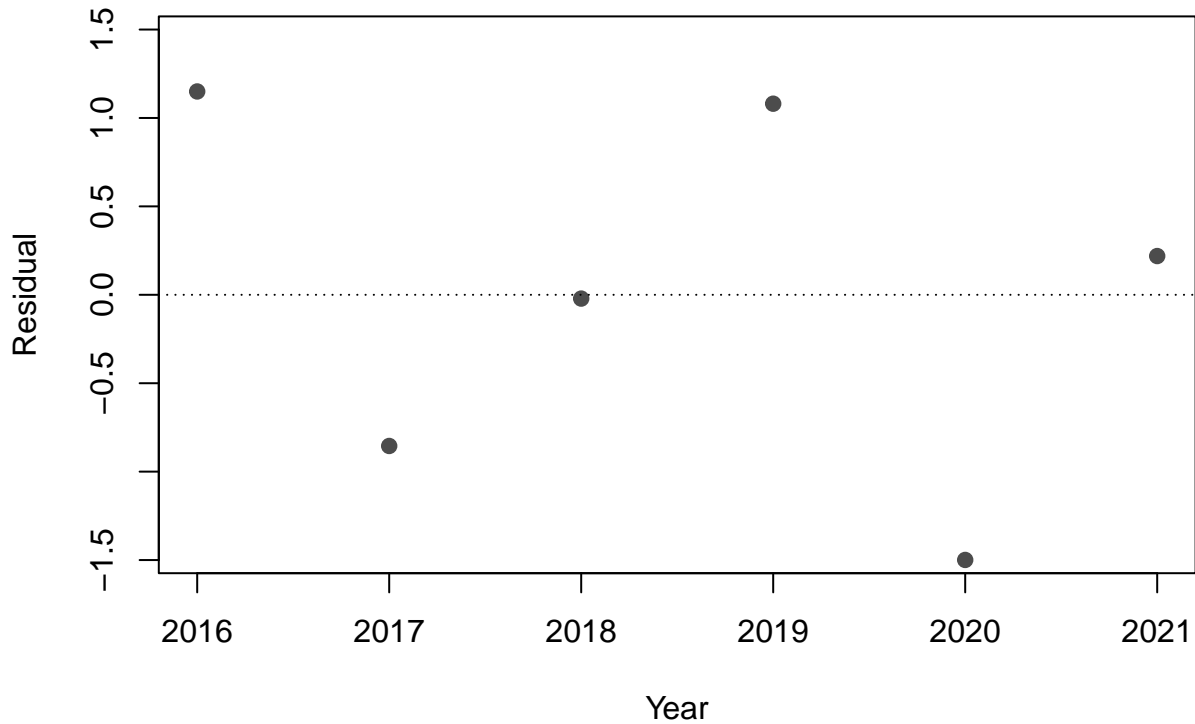


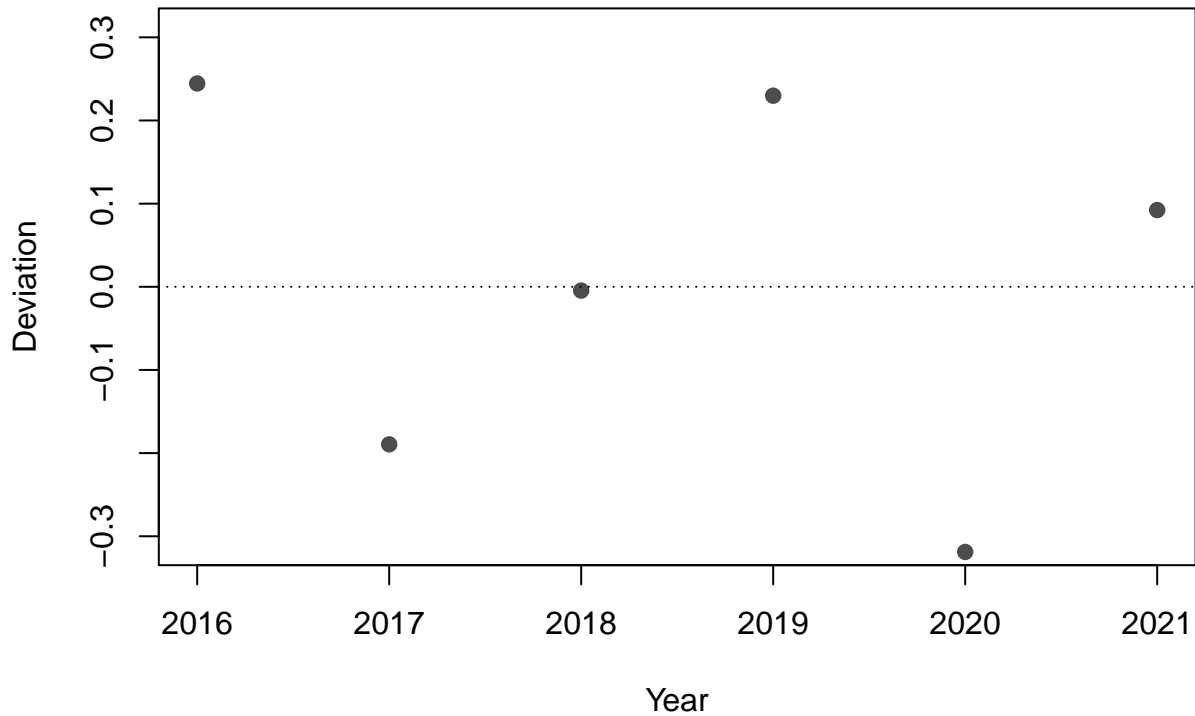


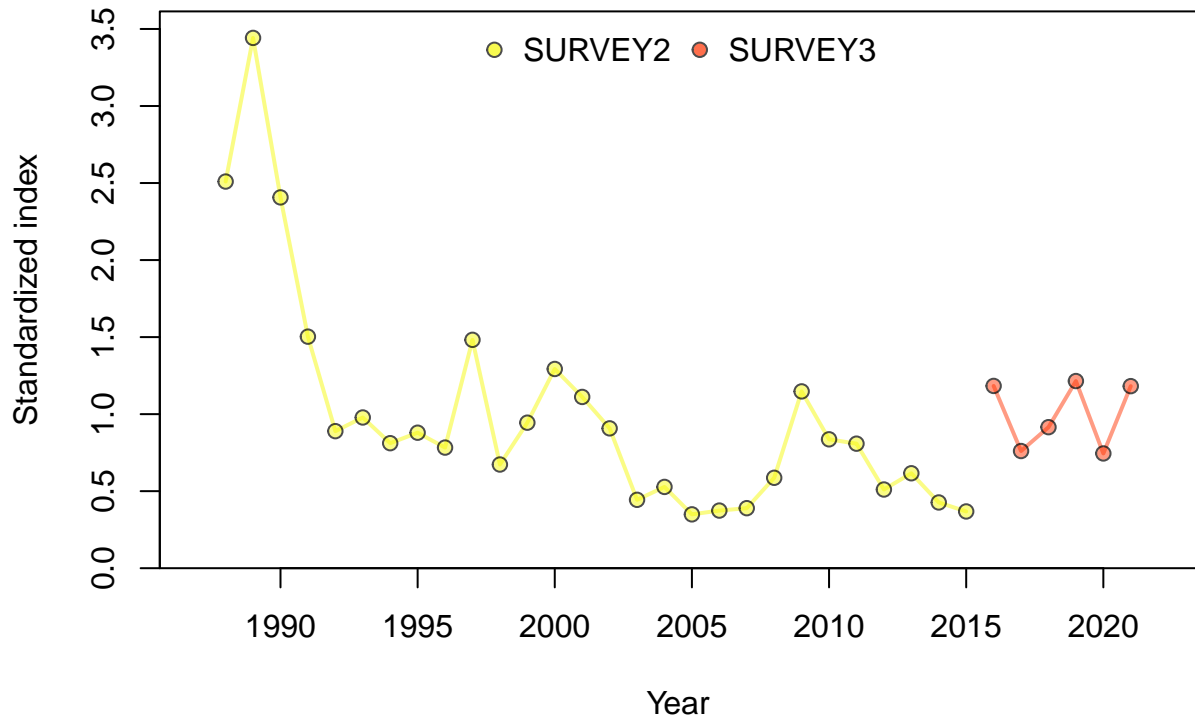


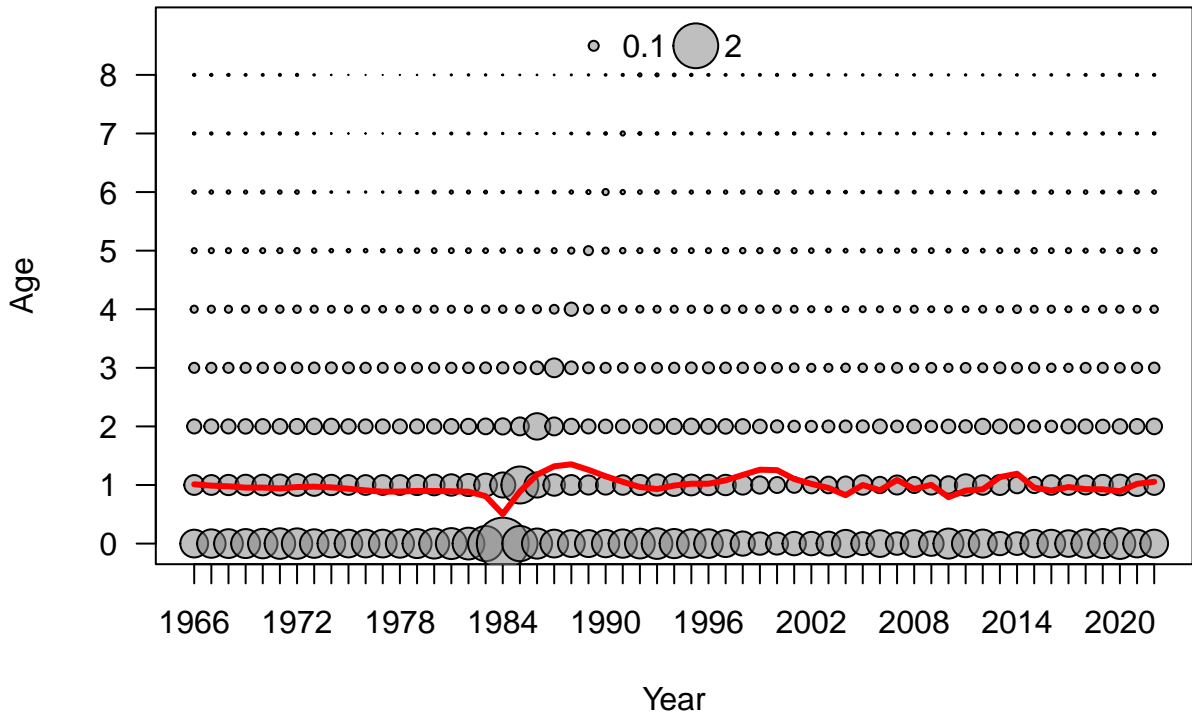


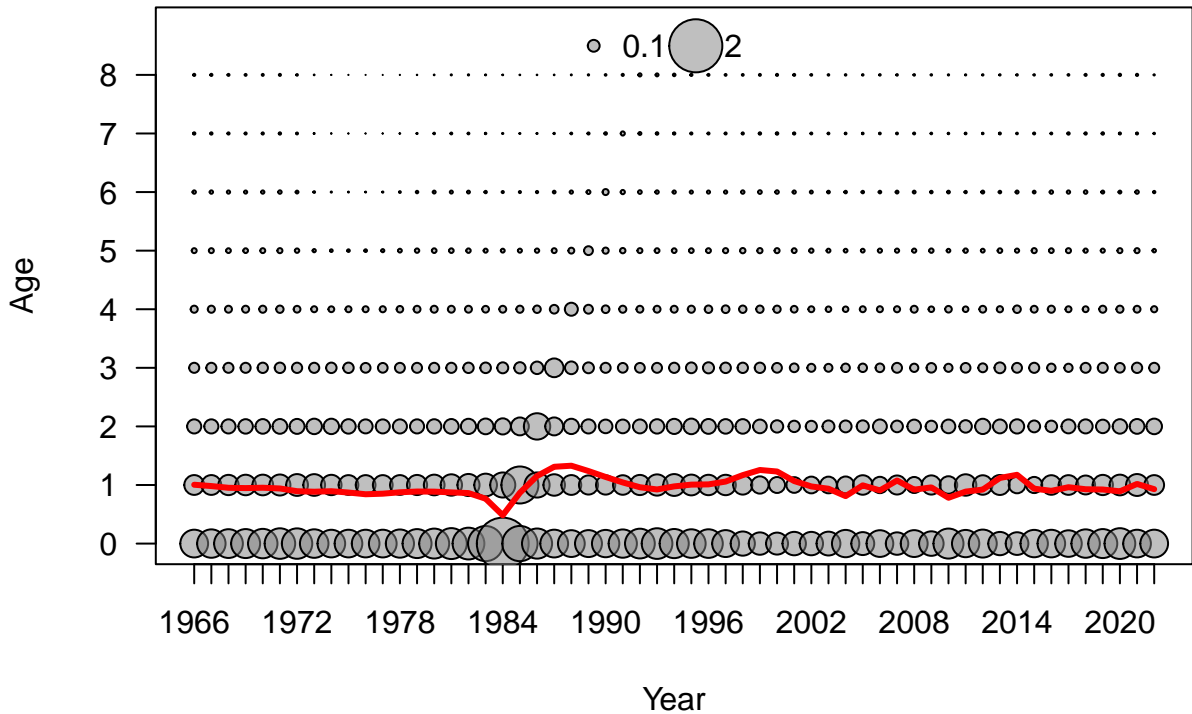


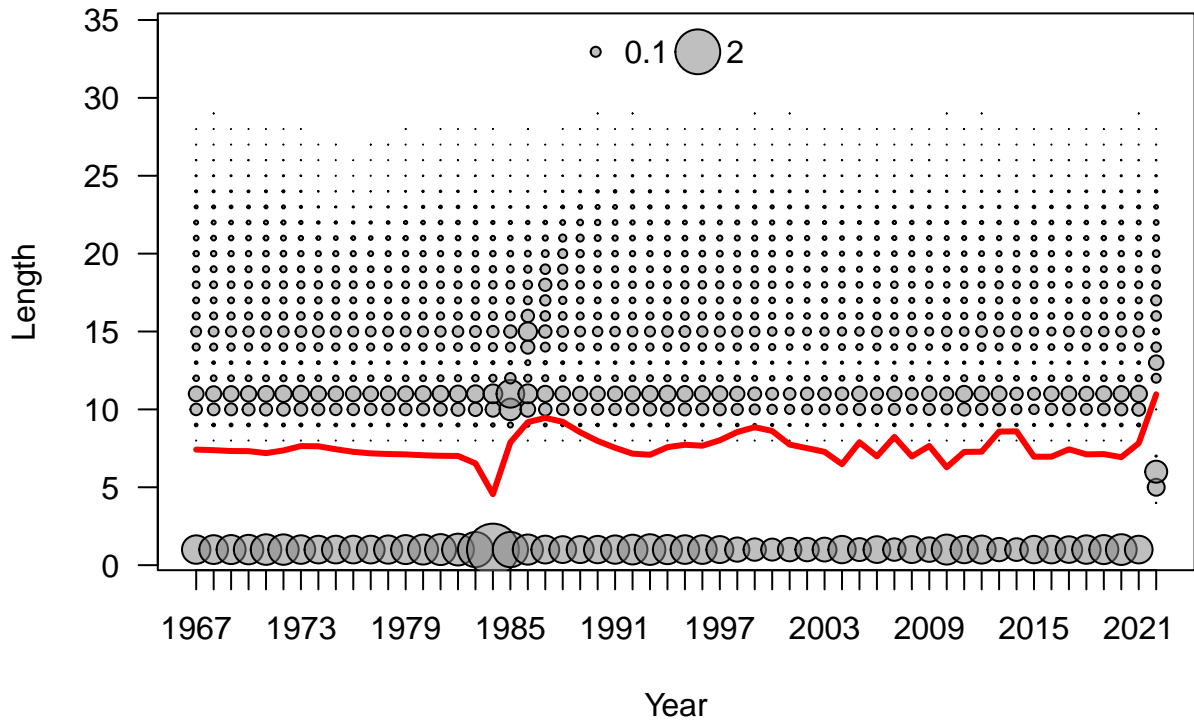


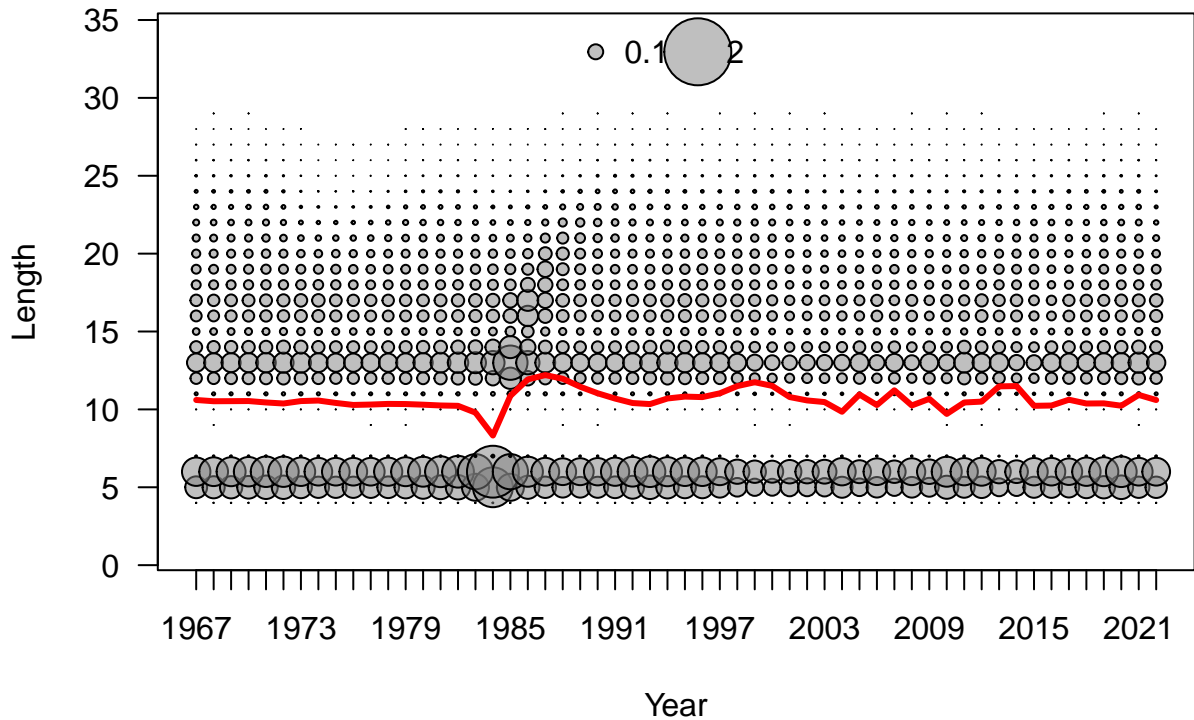


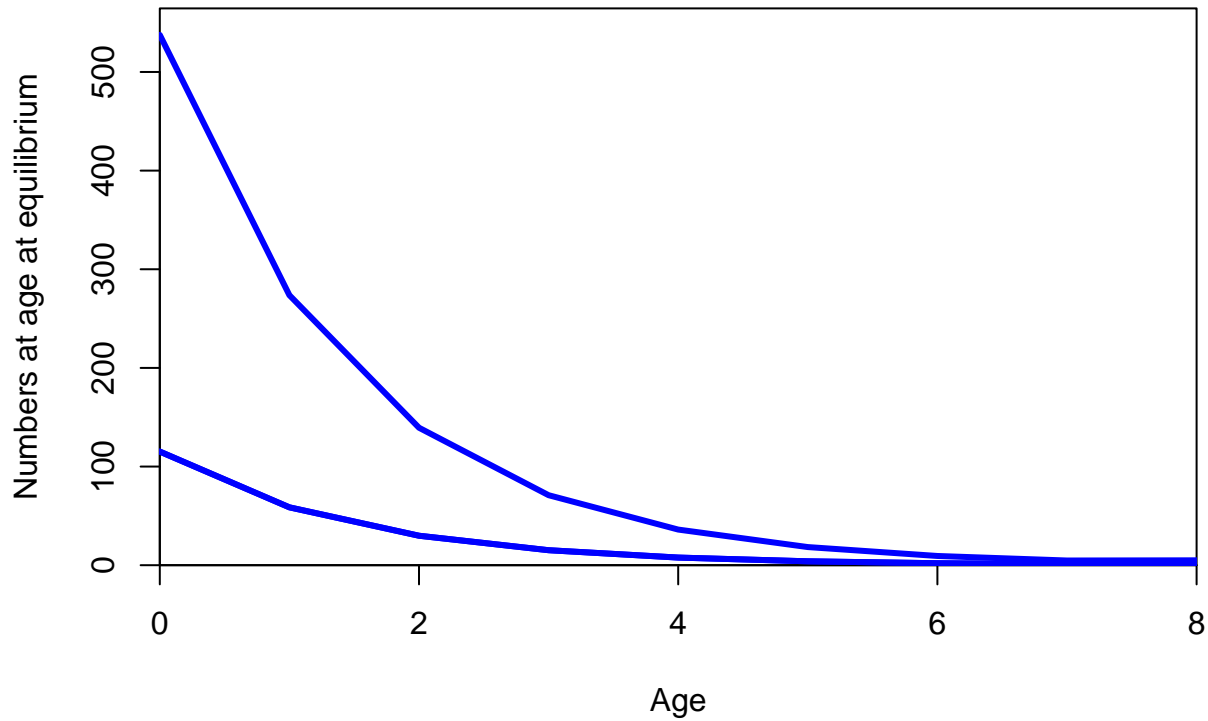


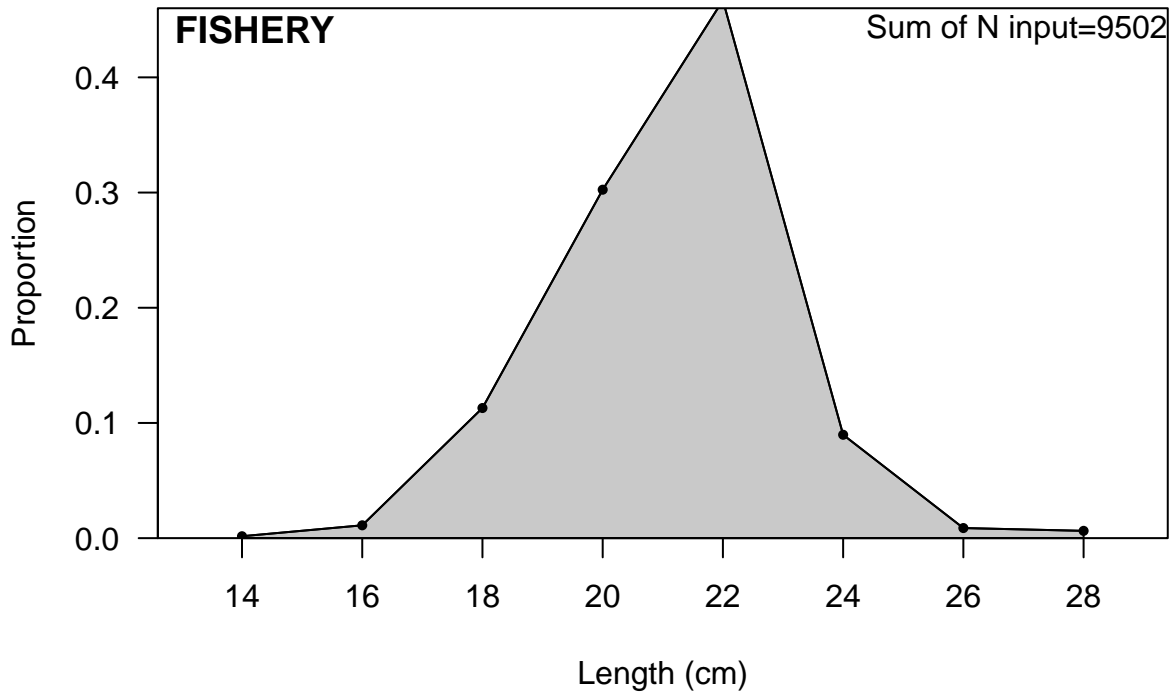


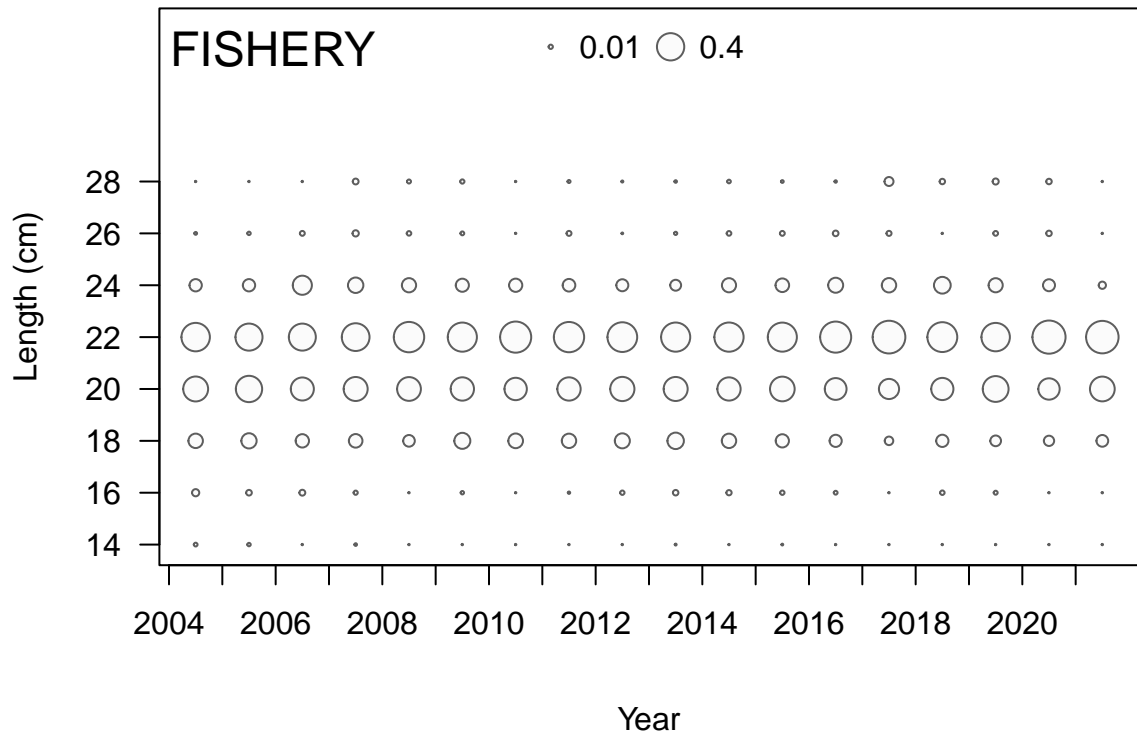




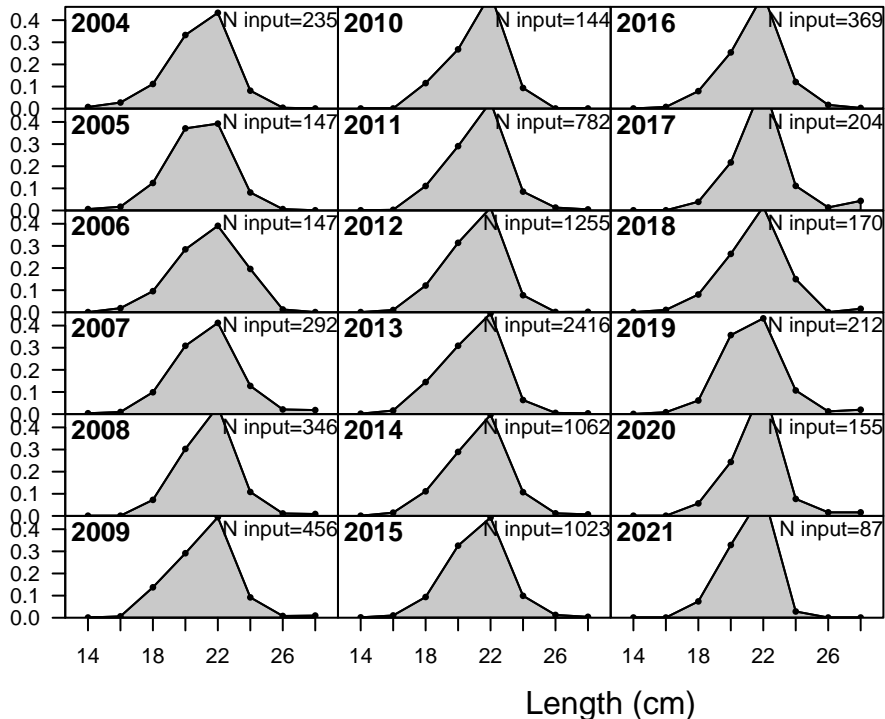


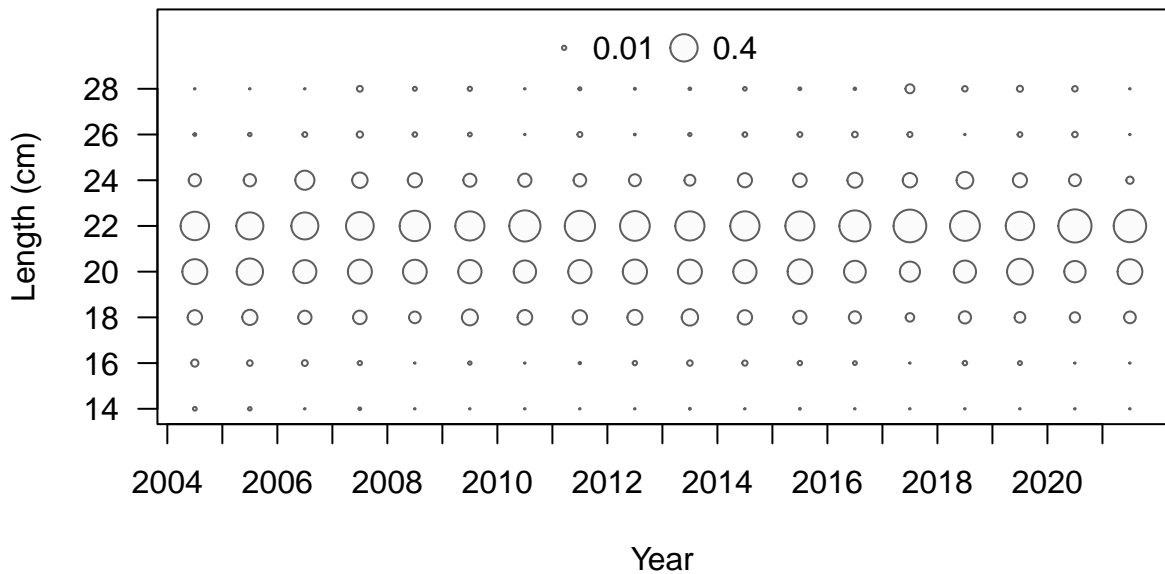




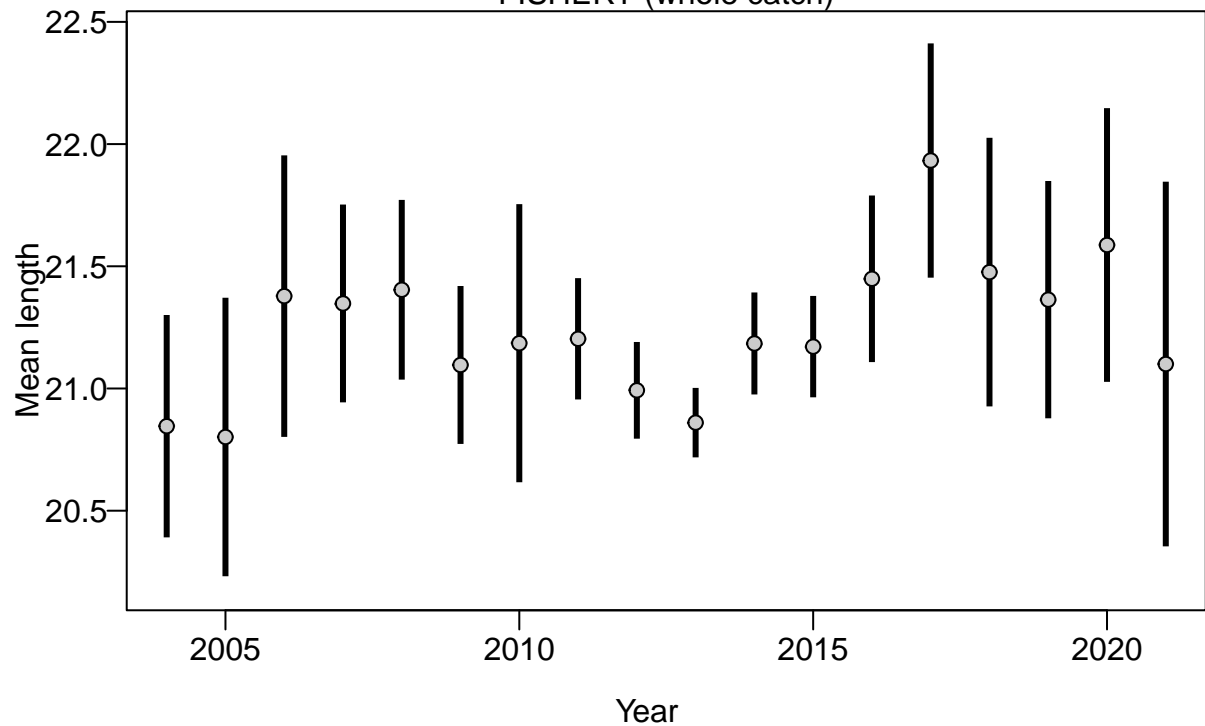


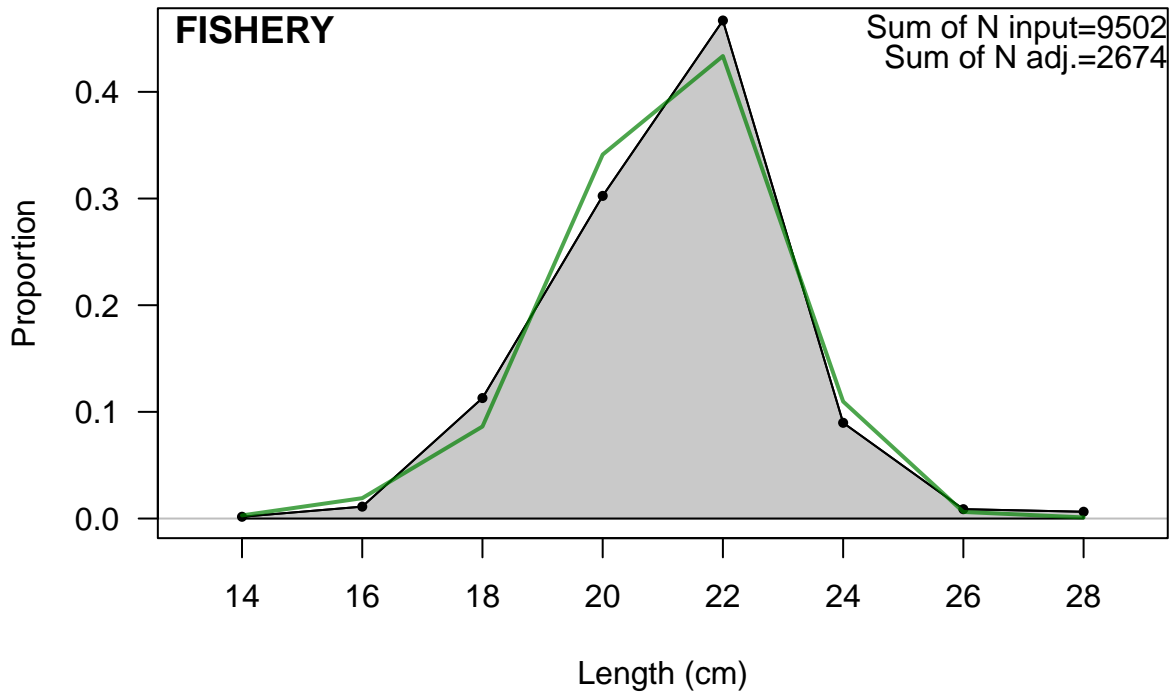
Proportion

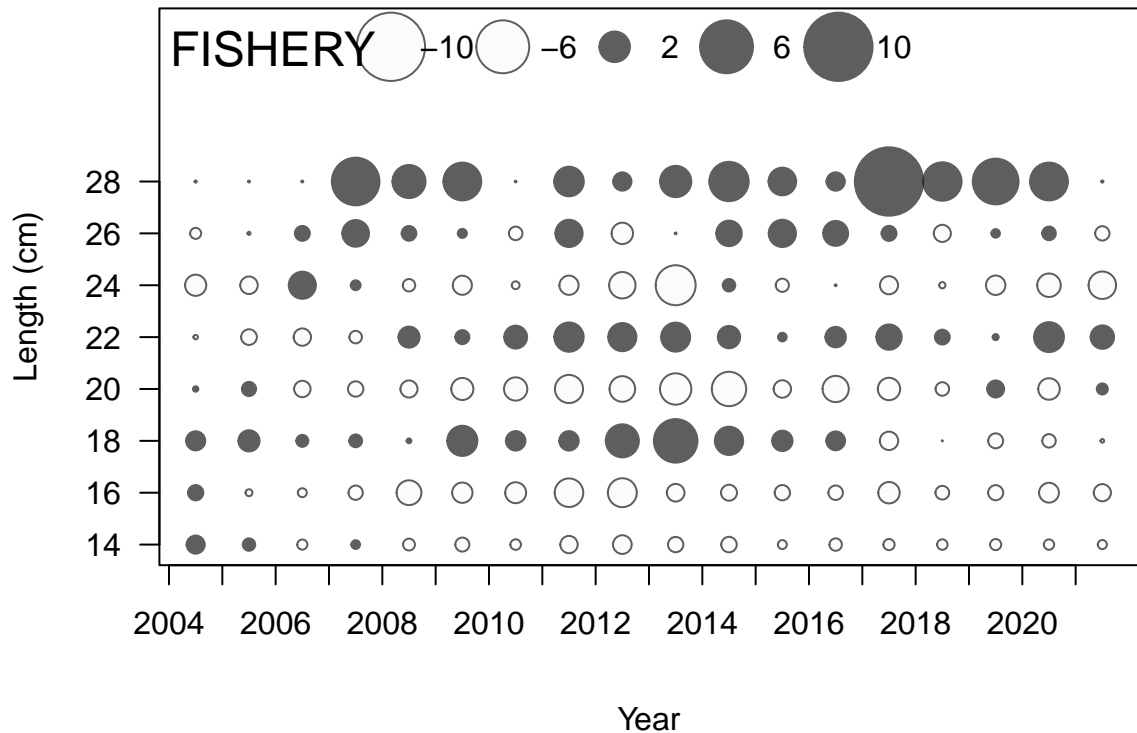




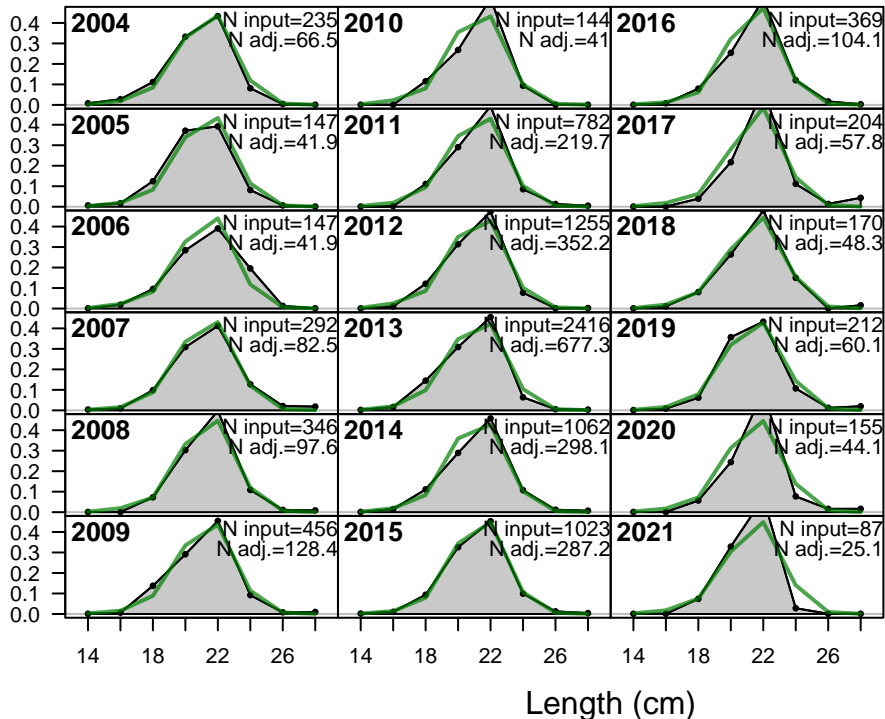
FISHERY (whole catch)

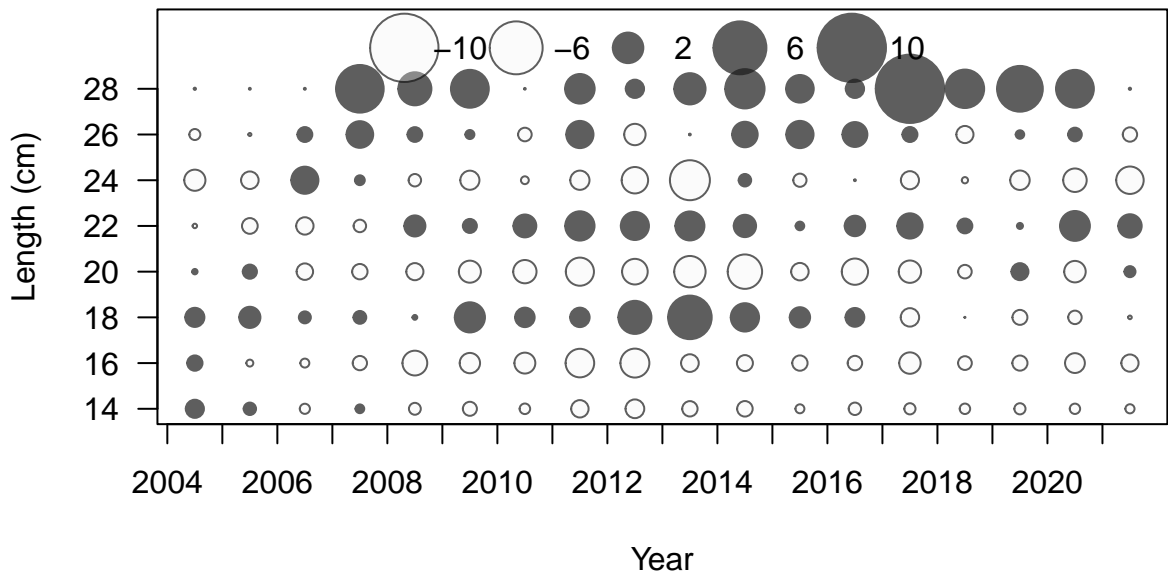




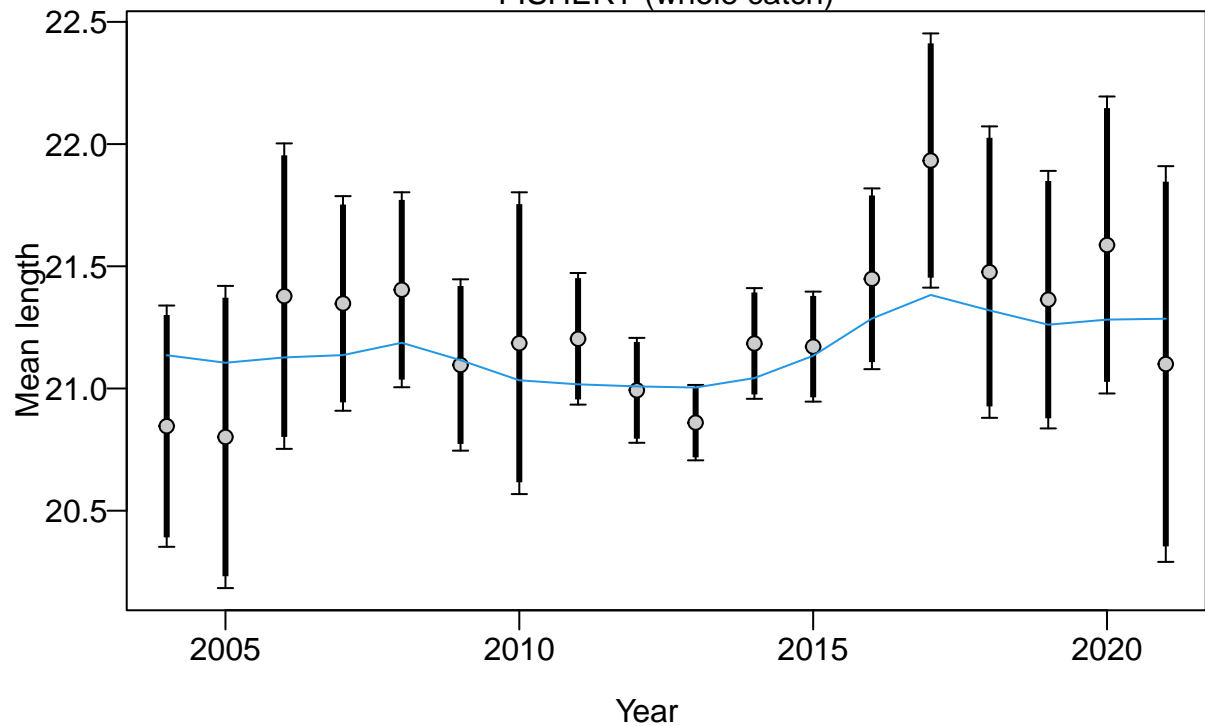


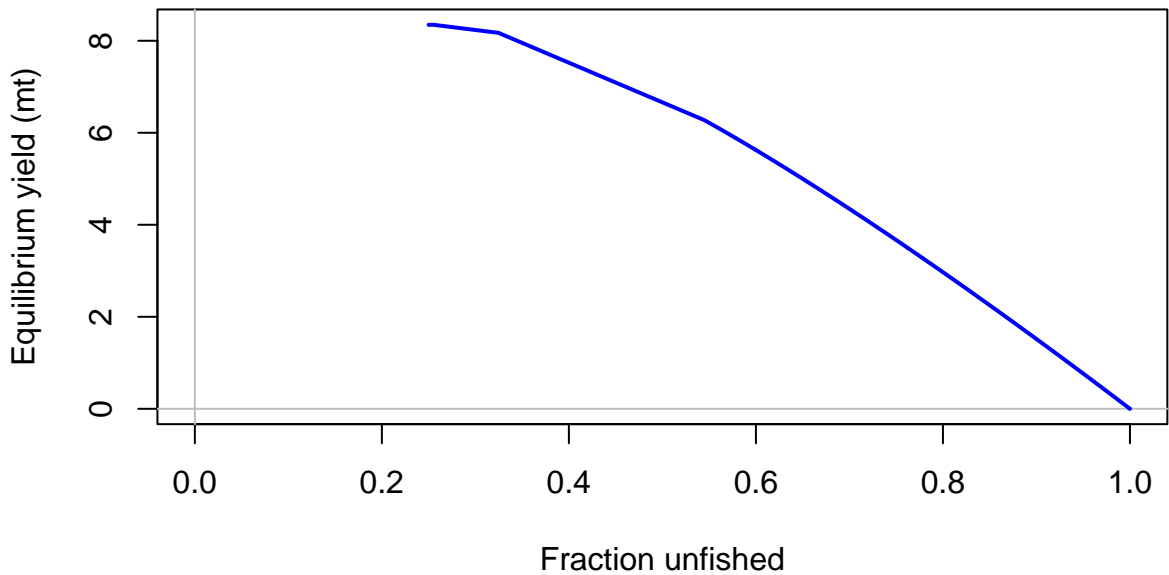
Proportion

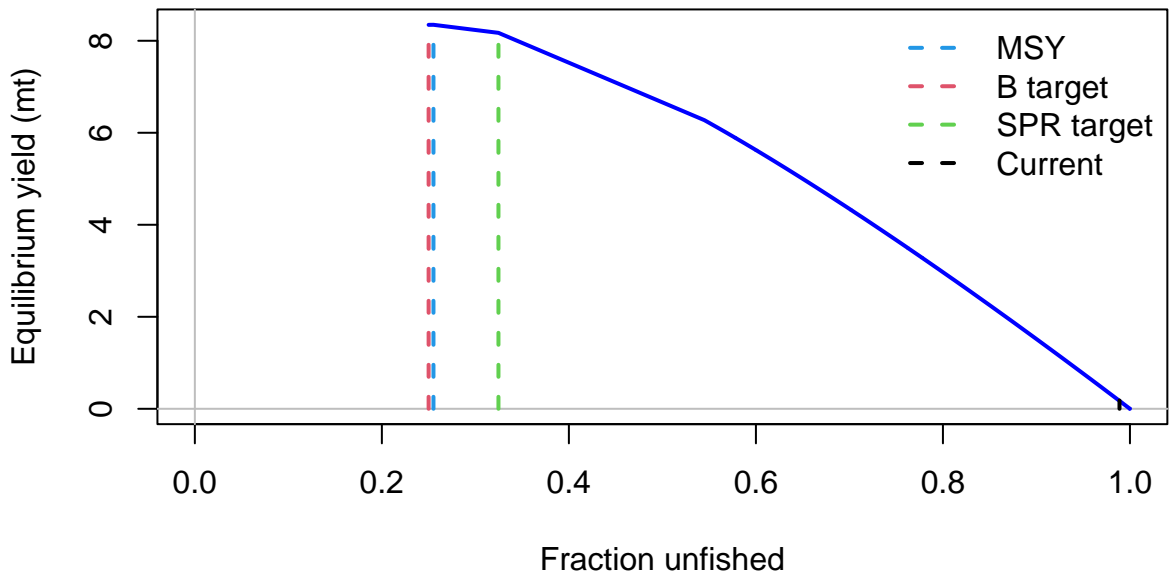


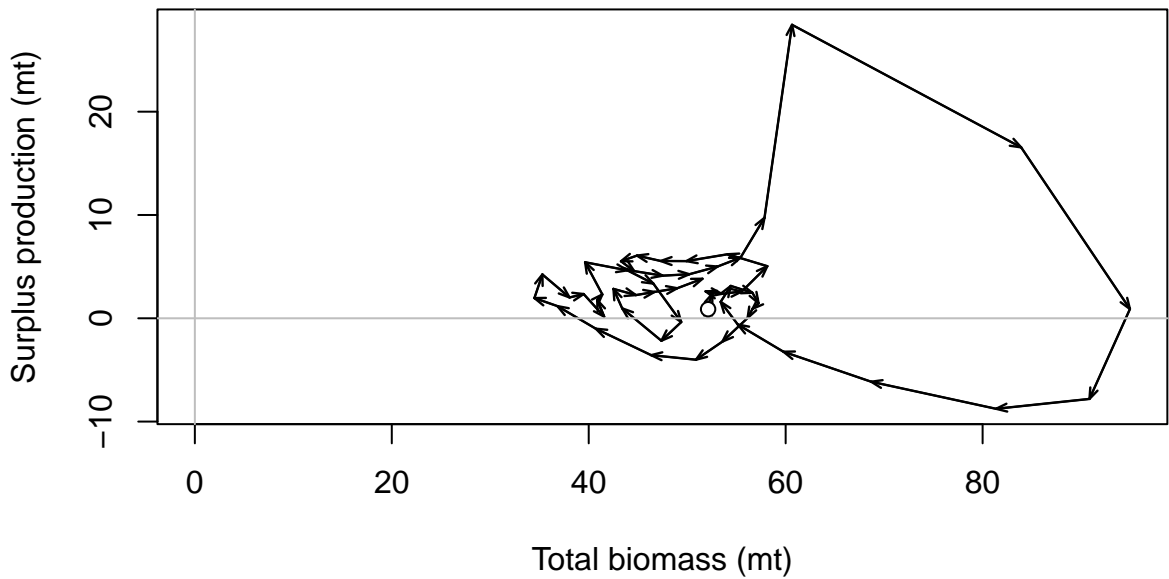


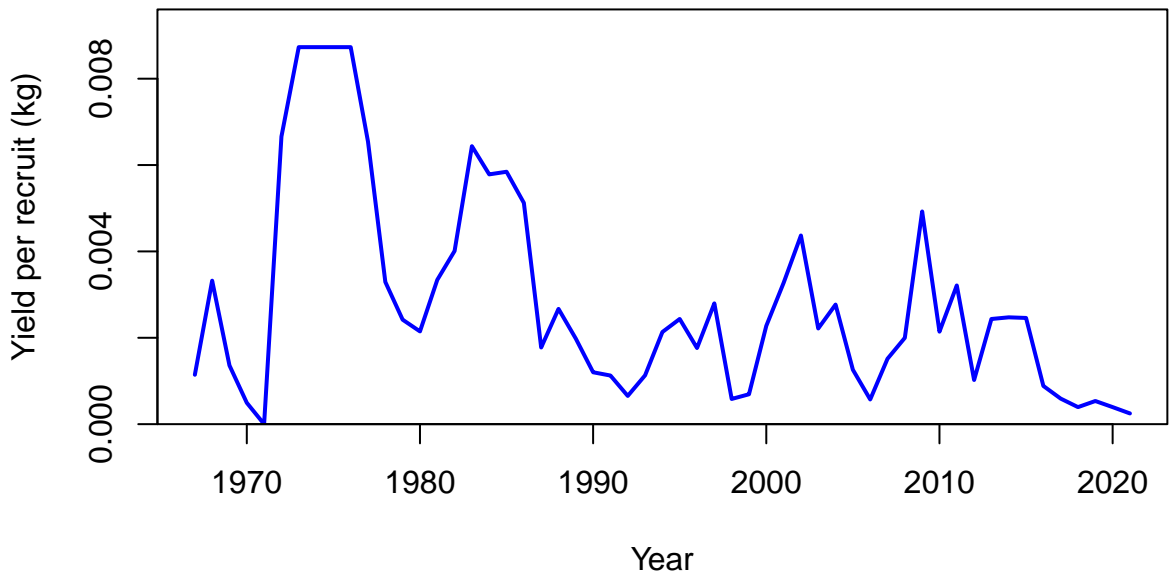
FISHERY (whole catch)

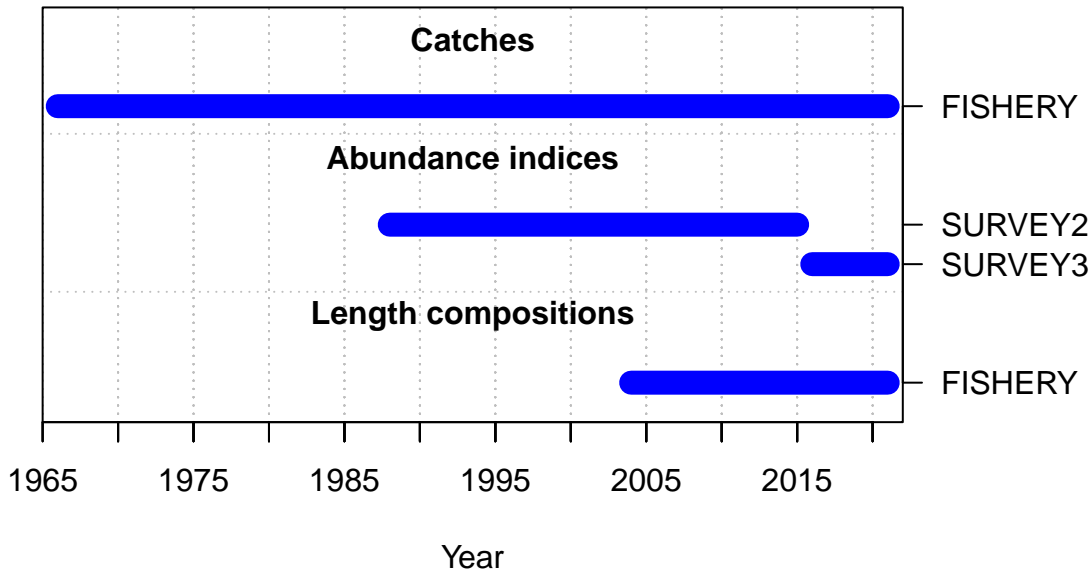


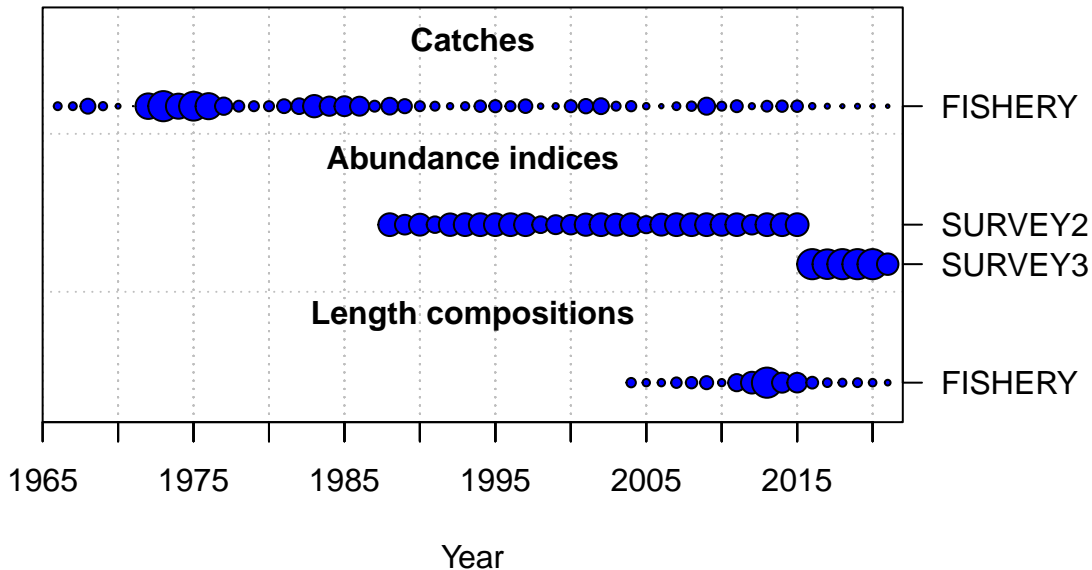




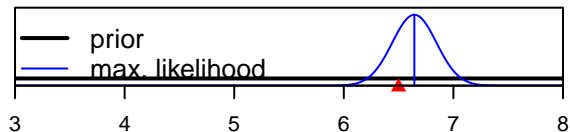




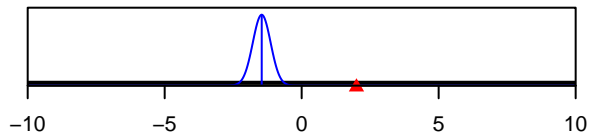




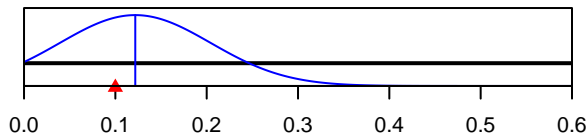
SR_LN(R0)



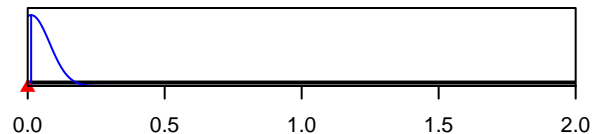
LnQ_base_SURVEY3(3)



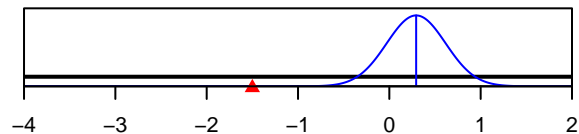
InitF_seas_1_flt_1FISHERY



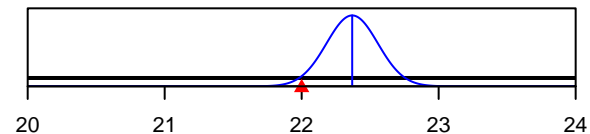
Q_extraSD_SURVEY3(3)



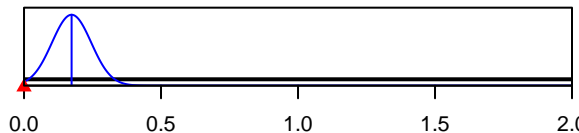
LnQ_base_SURVEY2(2)



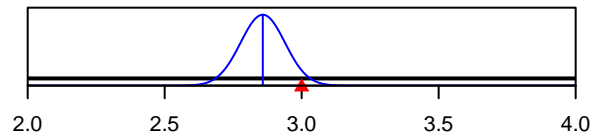
Size_inflection_FISHERY(1)



Q_extraSD_SURVEY2(2)

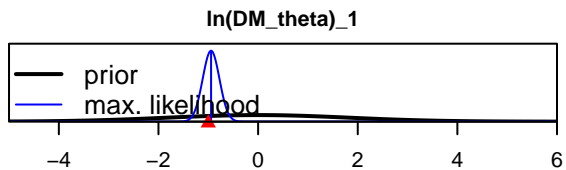


Size_95%width_FISHERY(1)



Parameter value

Density



Parameter value