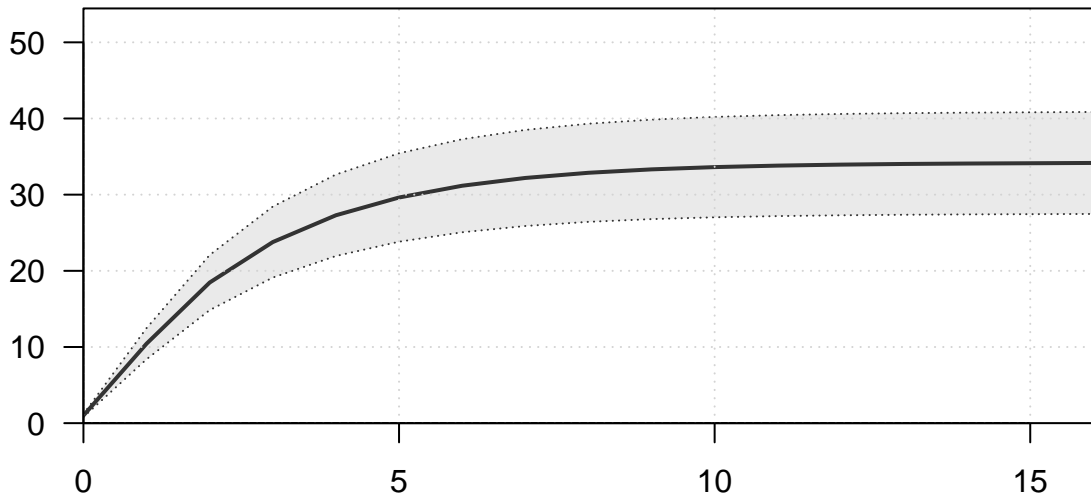
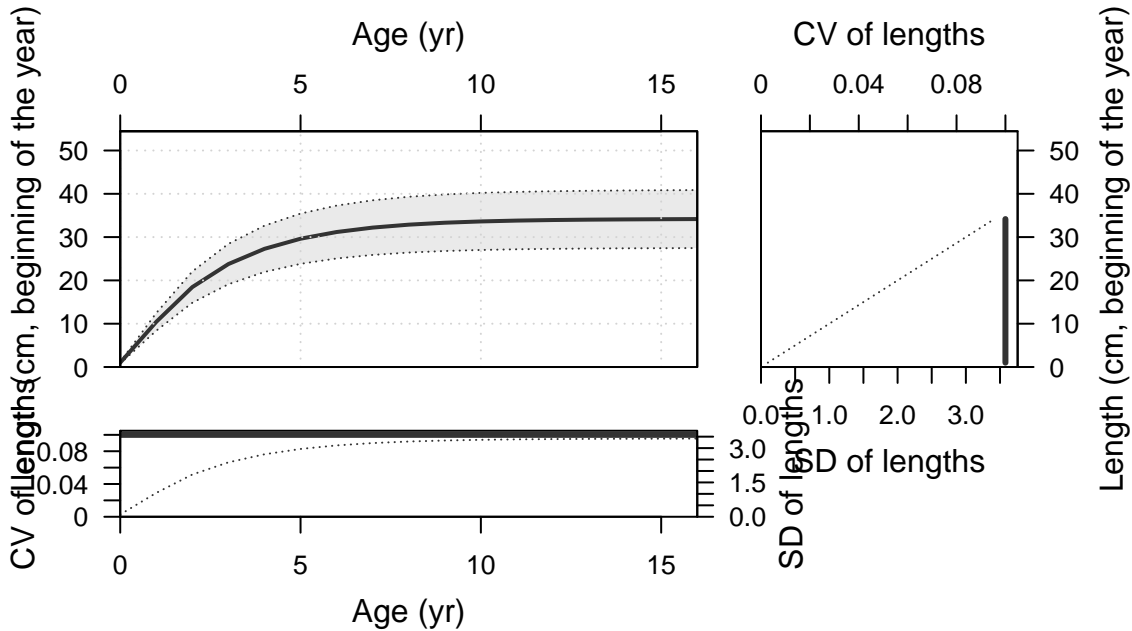


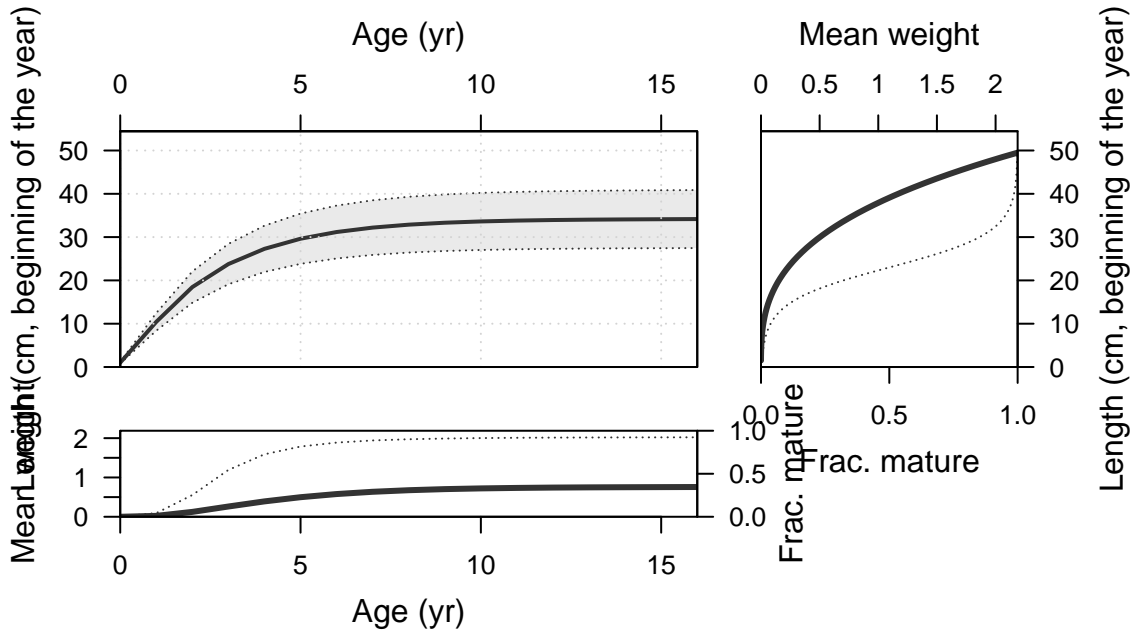
Plots created using the 'r4ss' package in R
Stock Synthesis version: 3.30.19.0
StartTime: Tue Jun 28 14:35:01 2022
Data_File: data.ss
Control_File: control.ss

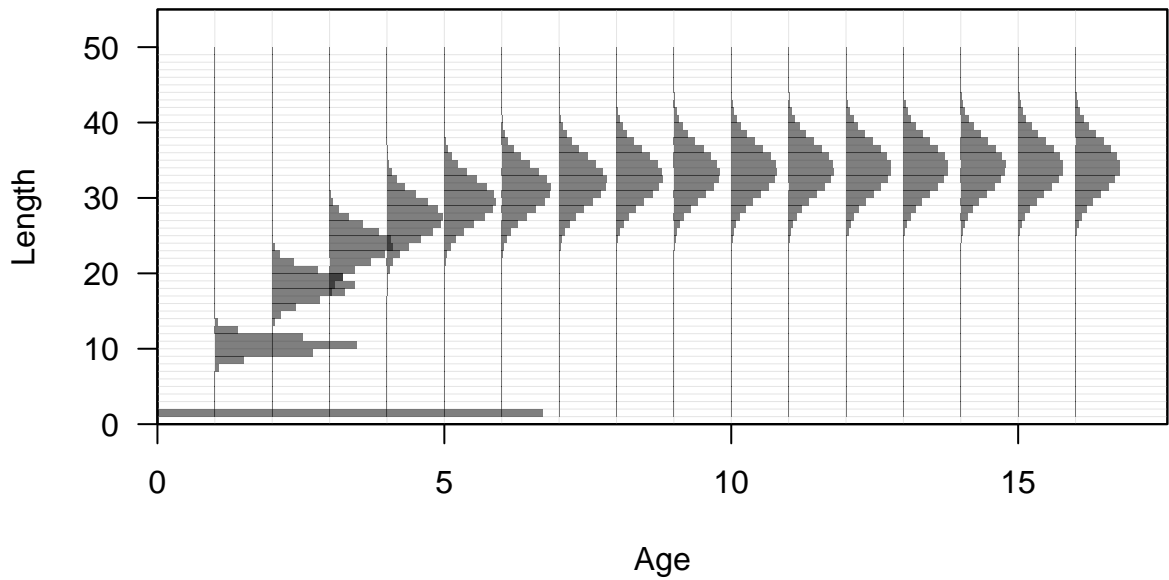
Length (cm, beginning of the year)

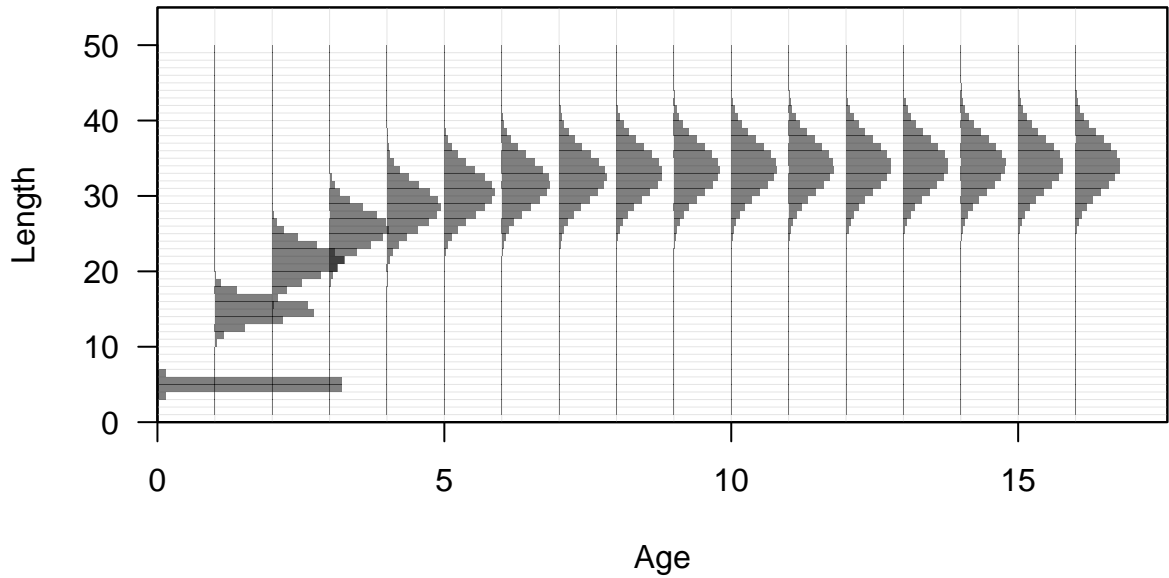


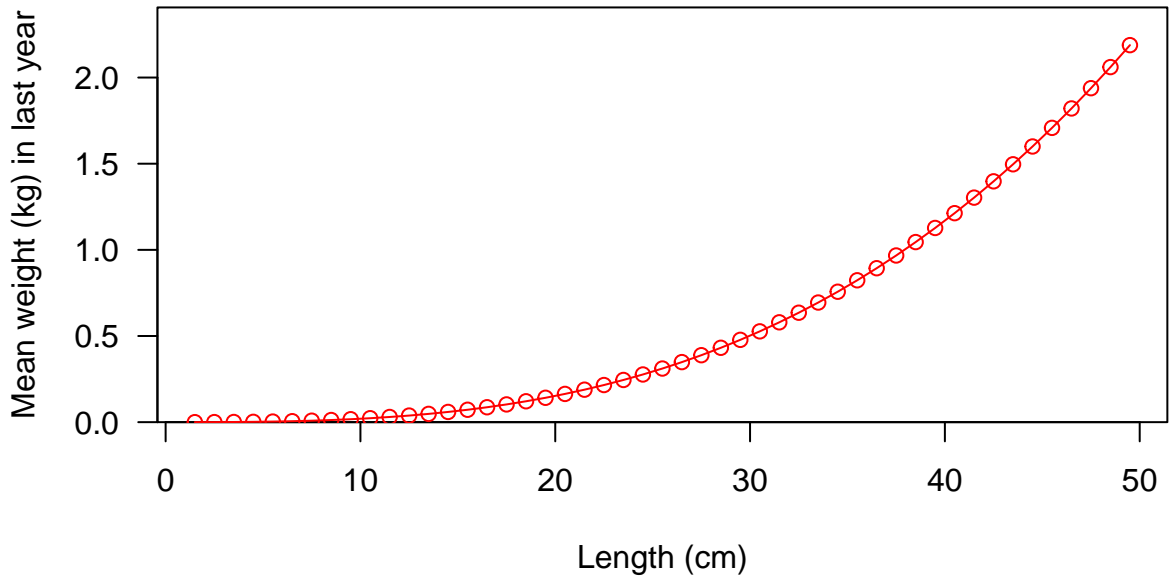
Age (yr)

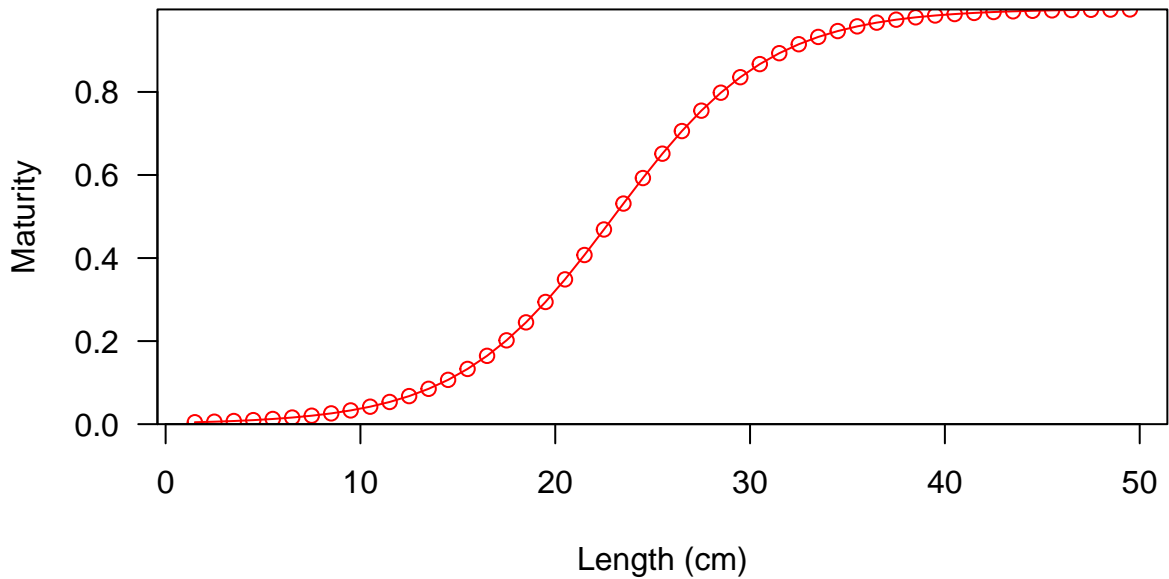


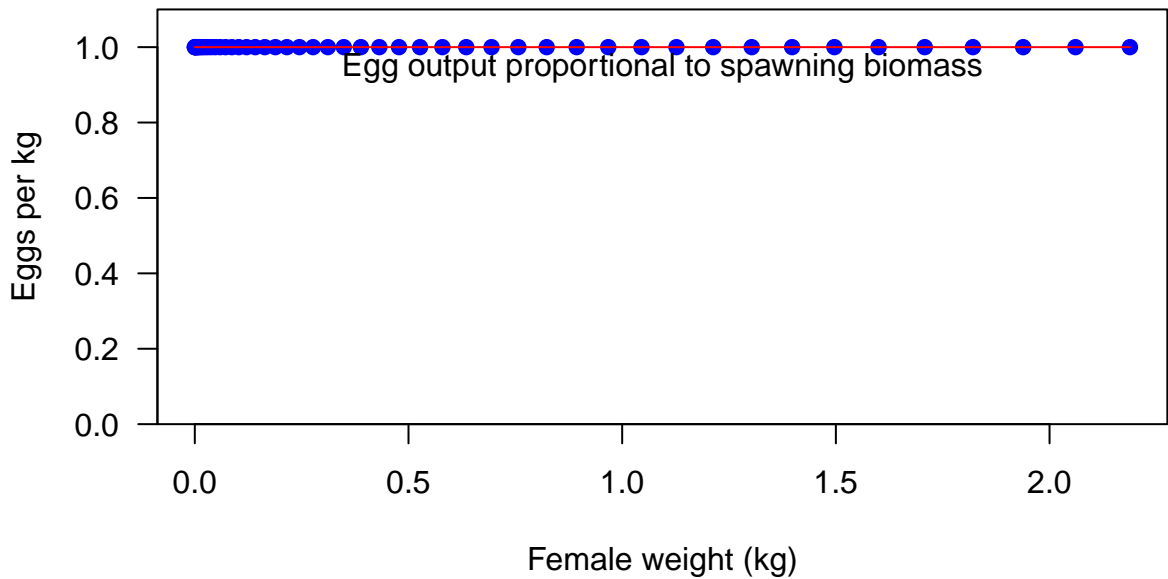


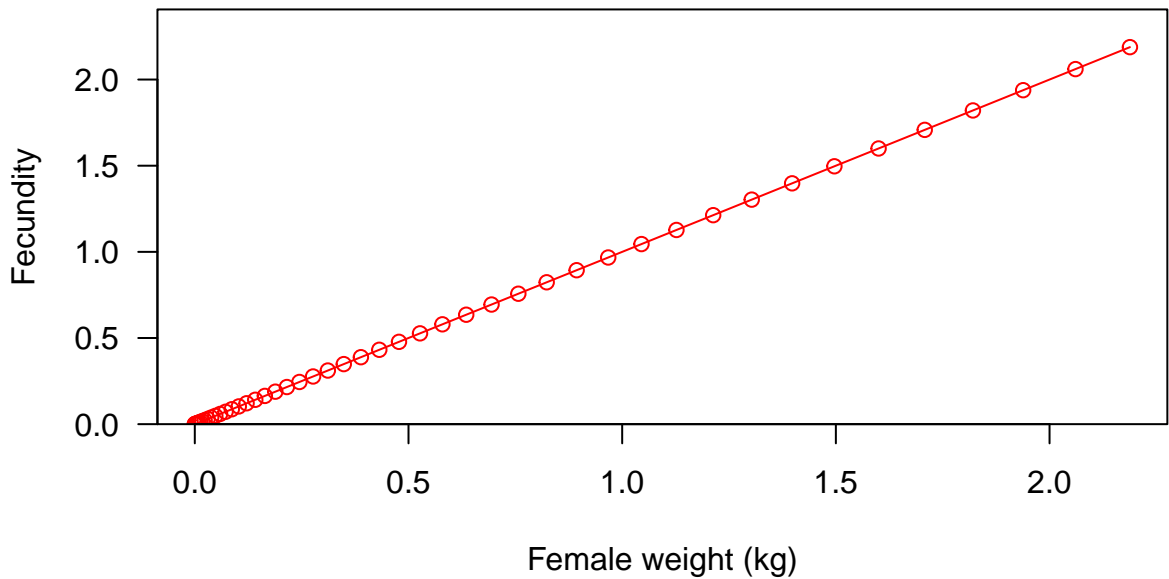


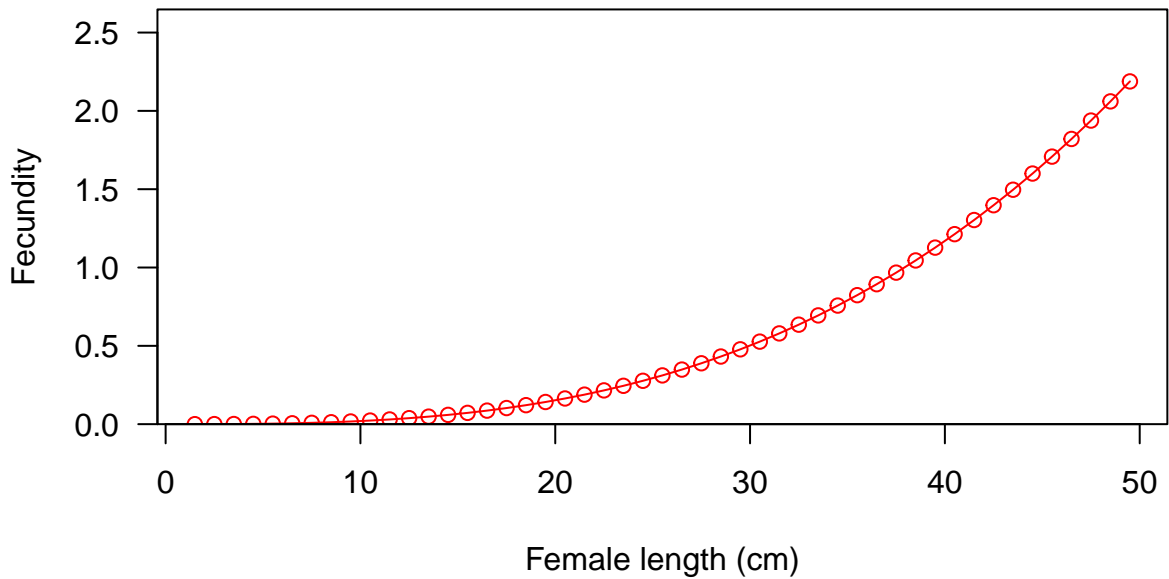


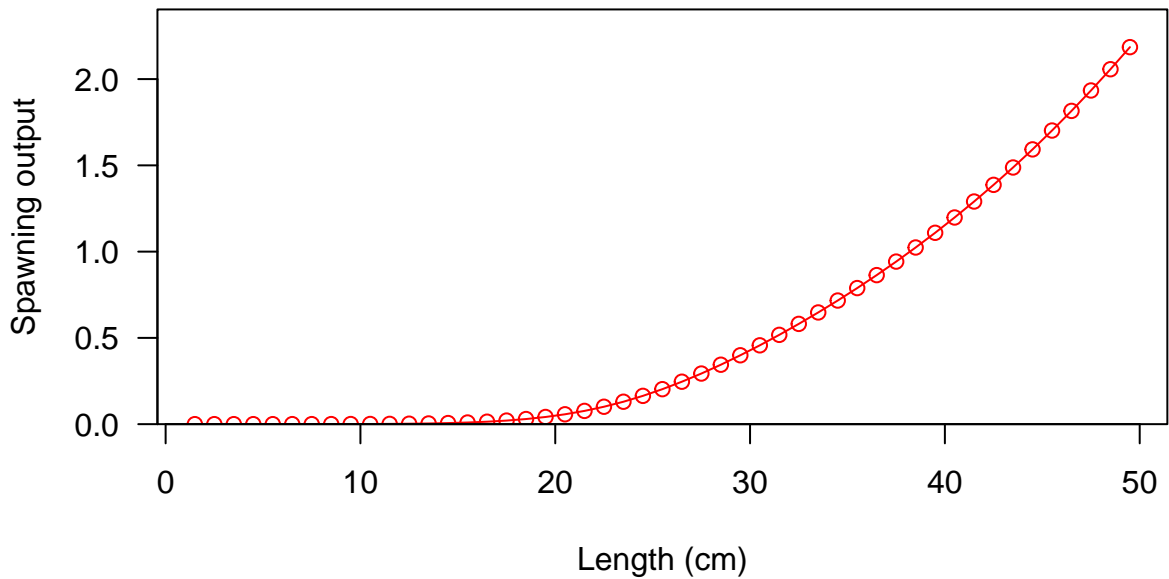


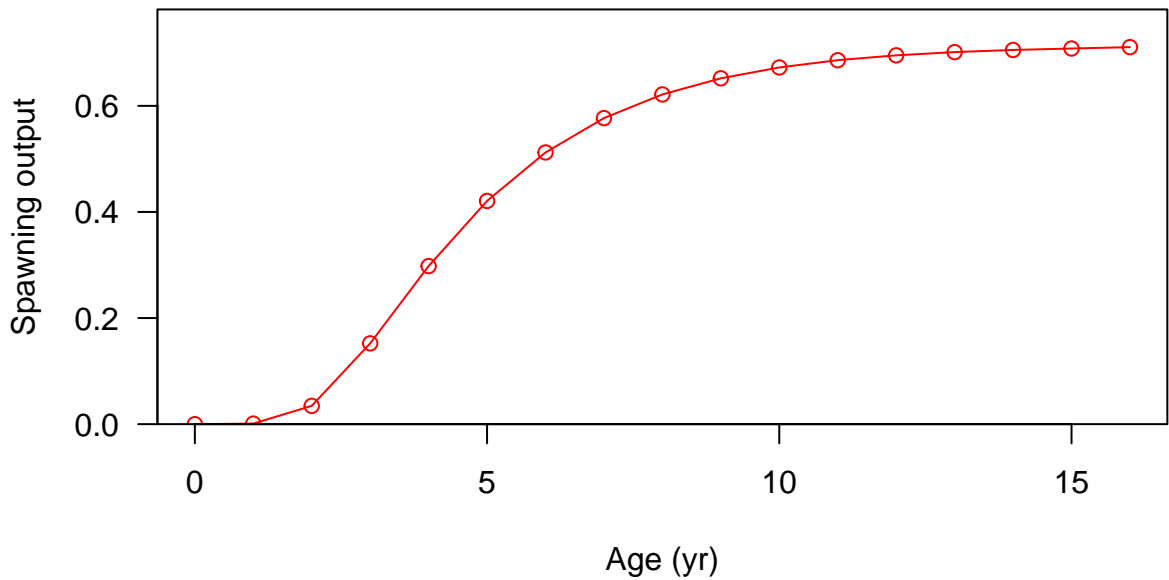




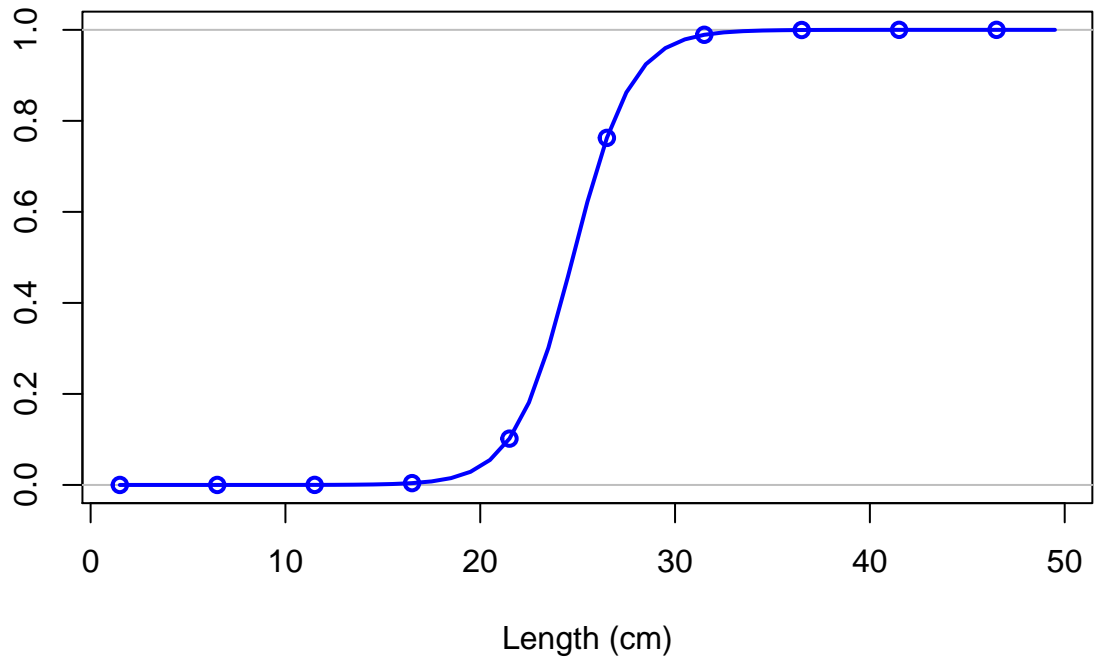




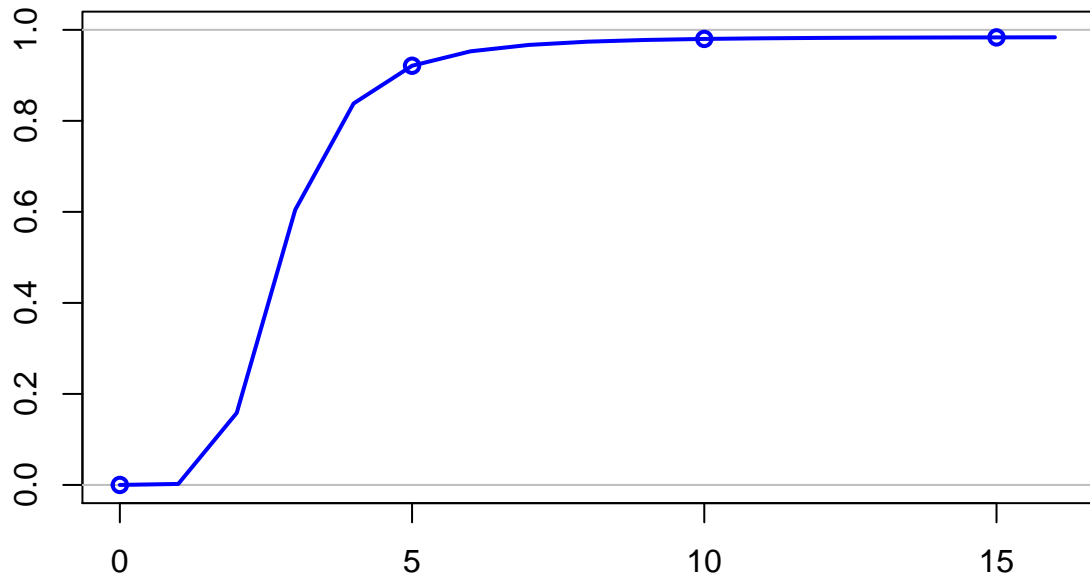




Selectivity

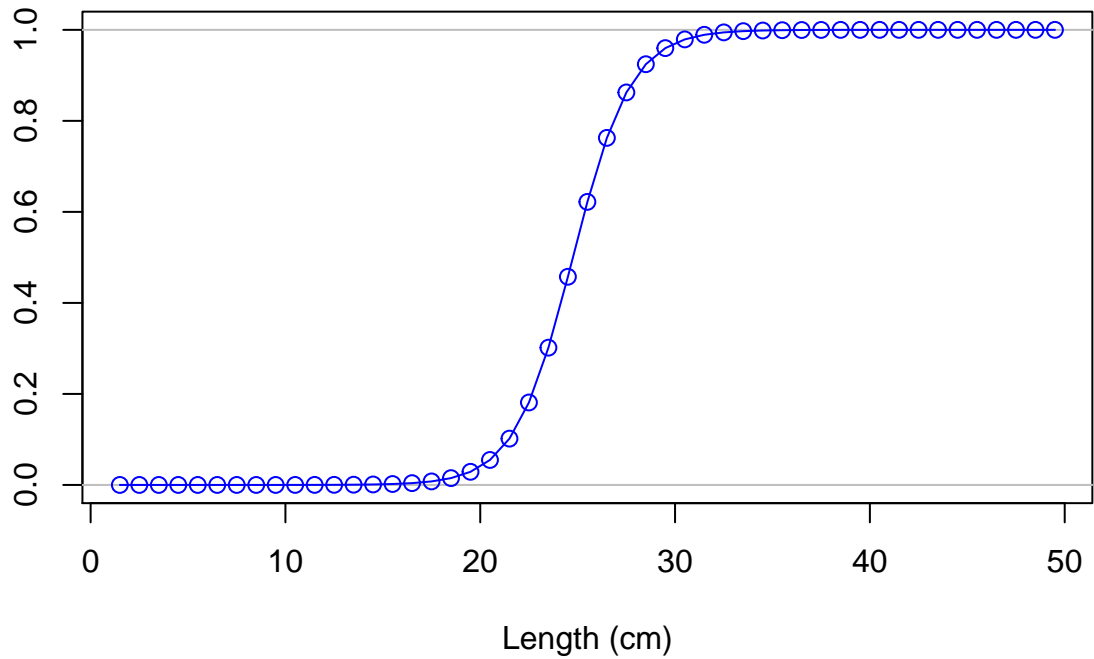


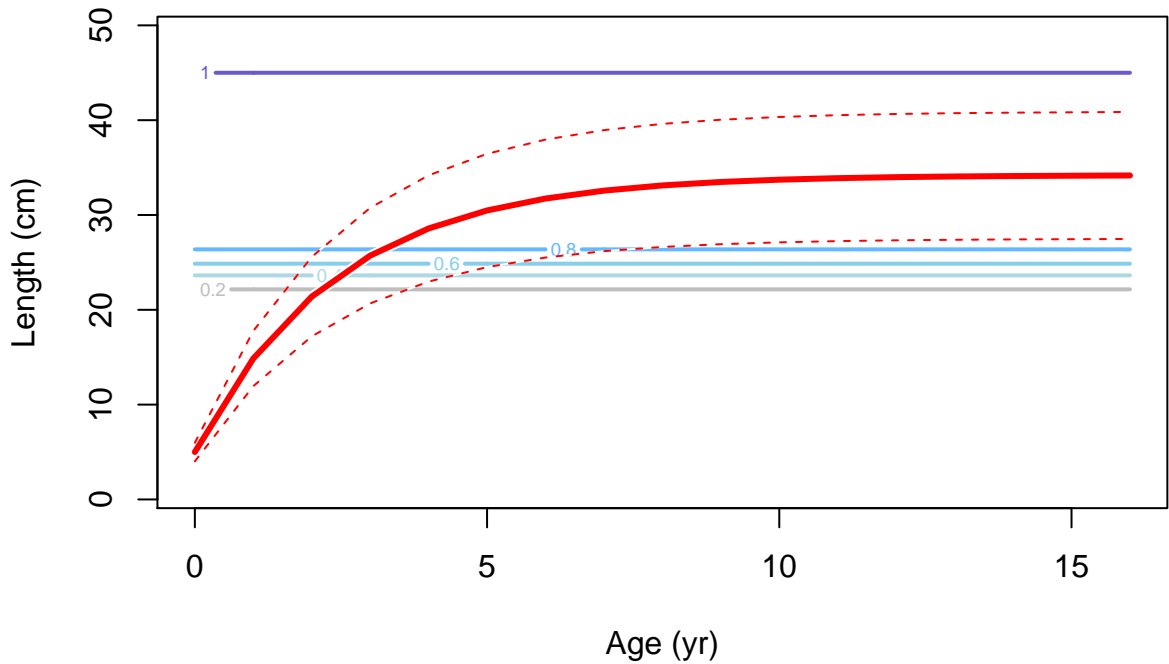
Selectivity

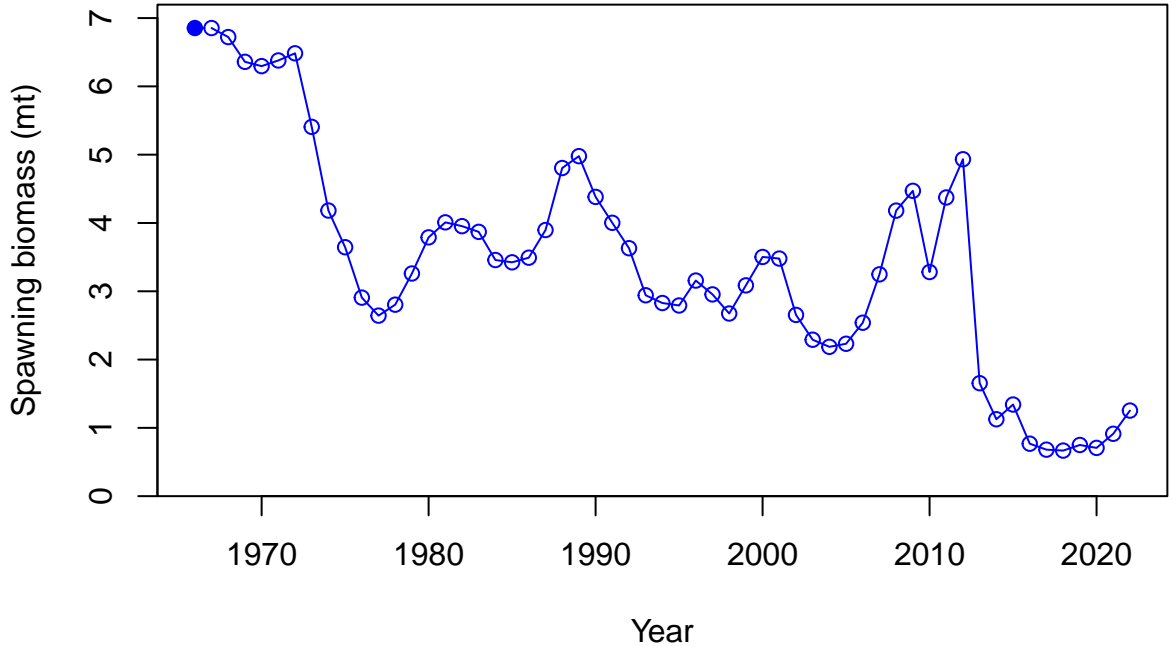


Age (yr)

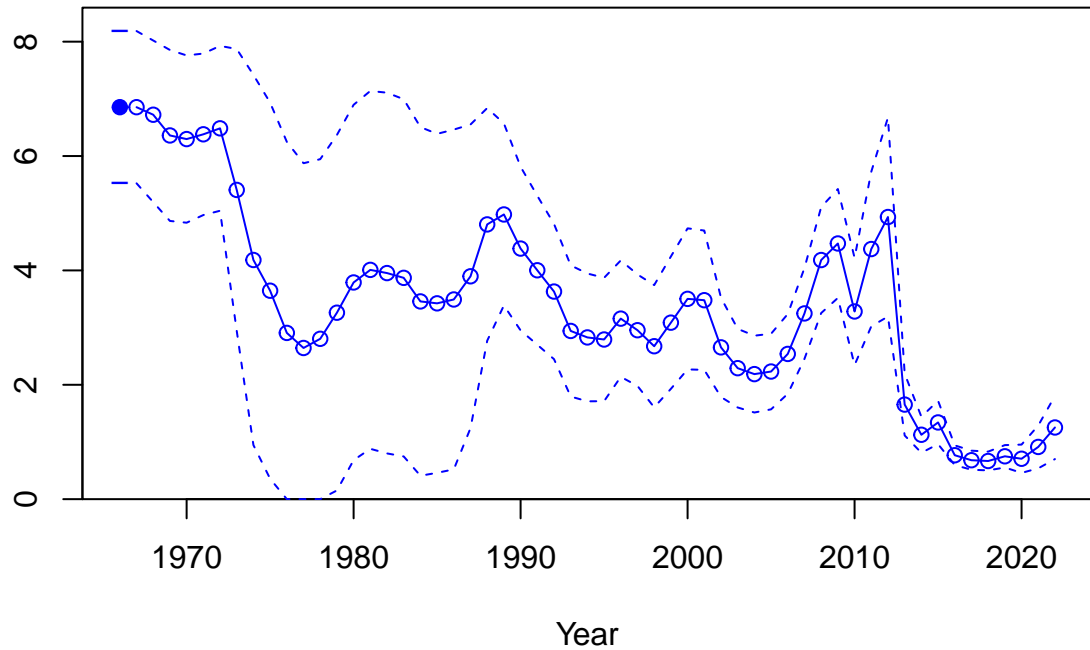
Selectivity



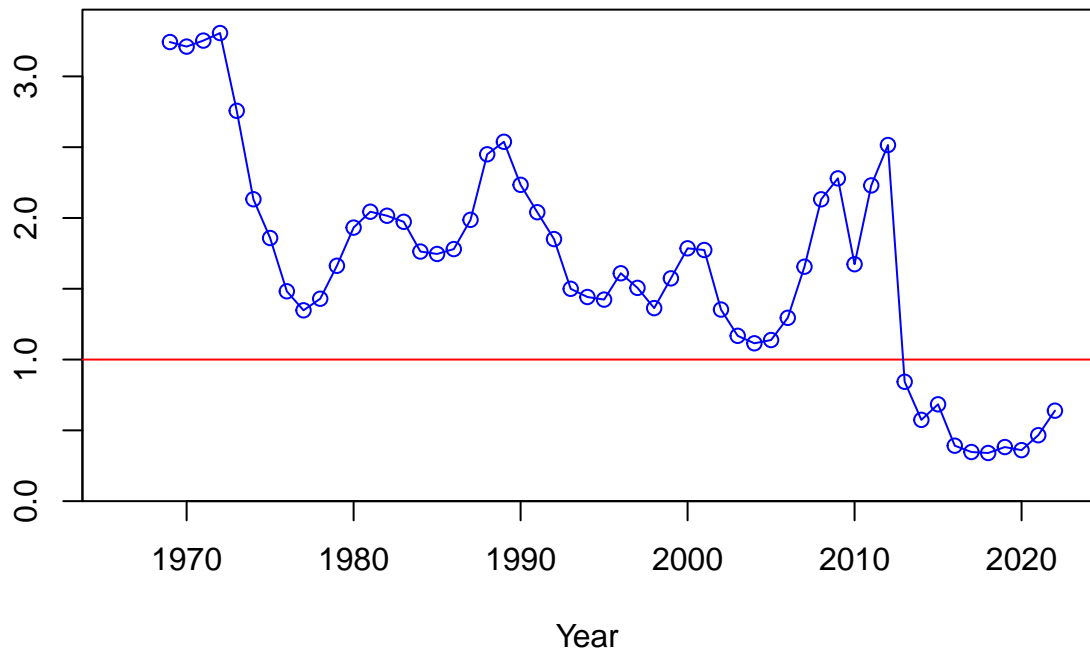




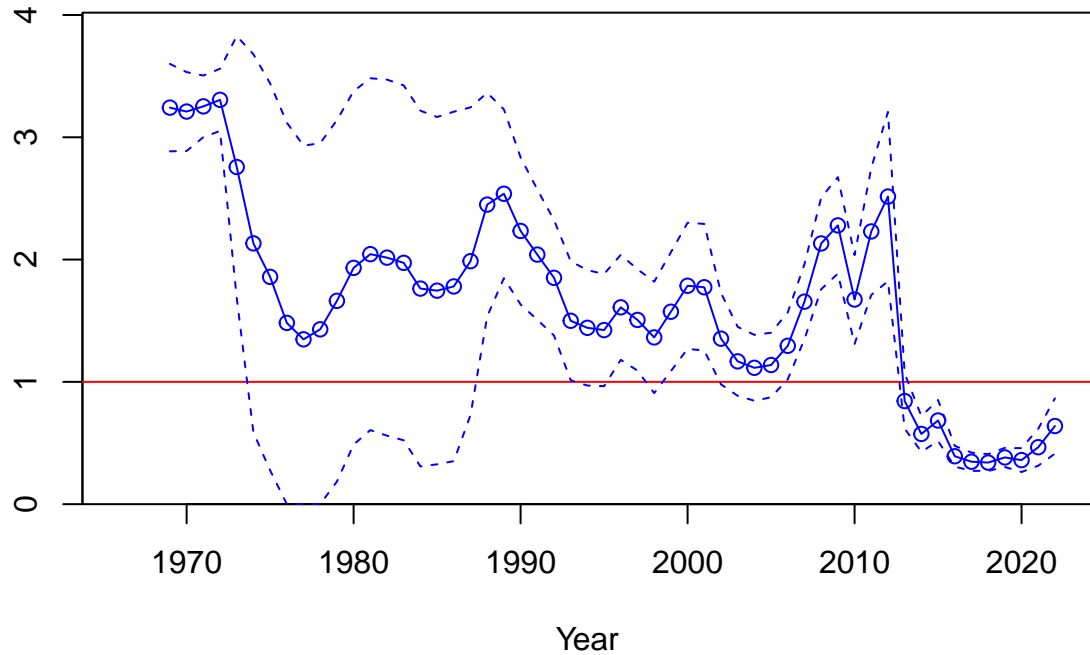
Spawning biomass (mt)

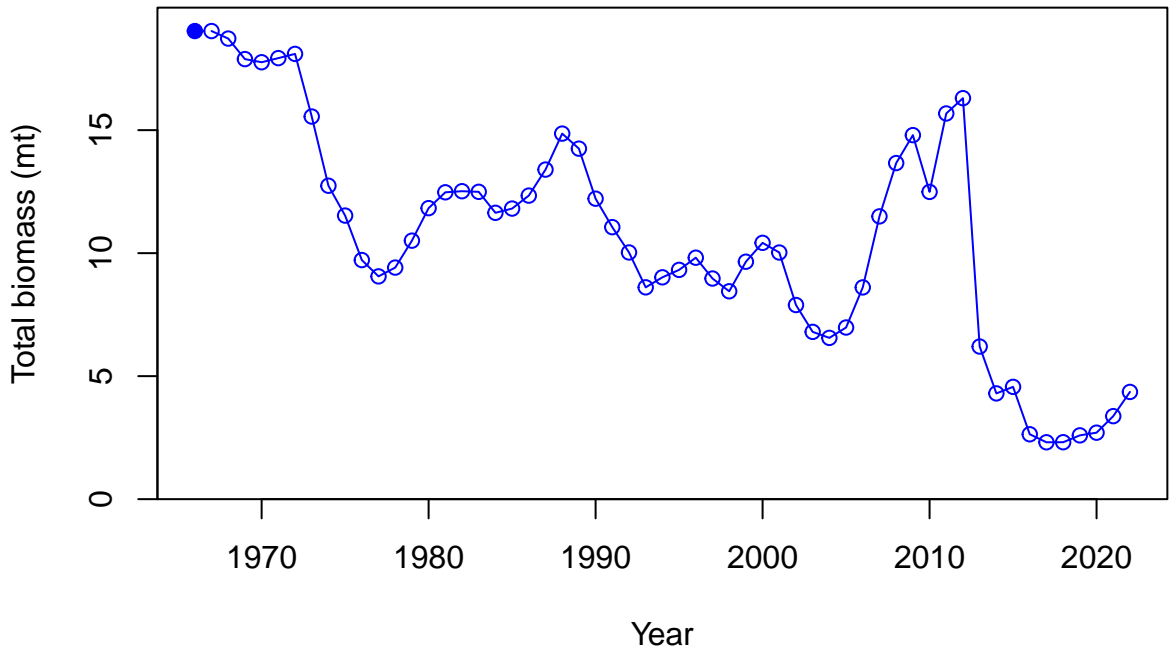


Relative spawning biomass: B/B_{MSY}

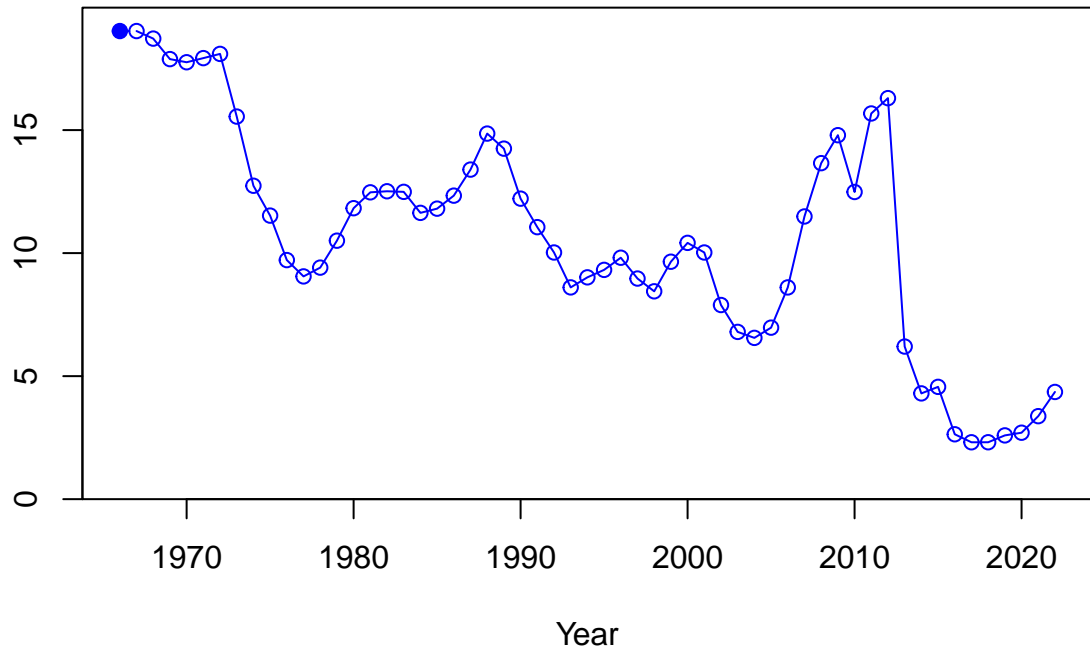


Relative spawning biomass: B/B_{MSY}

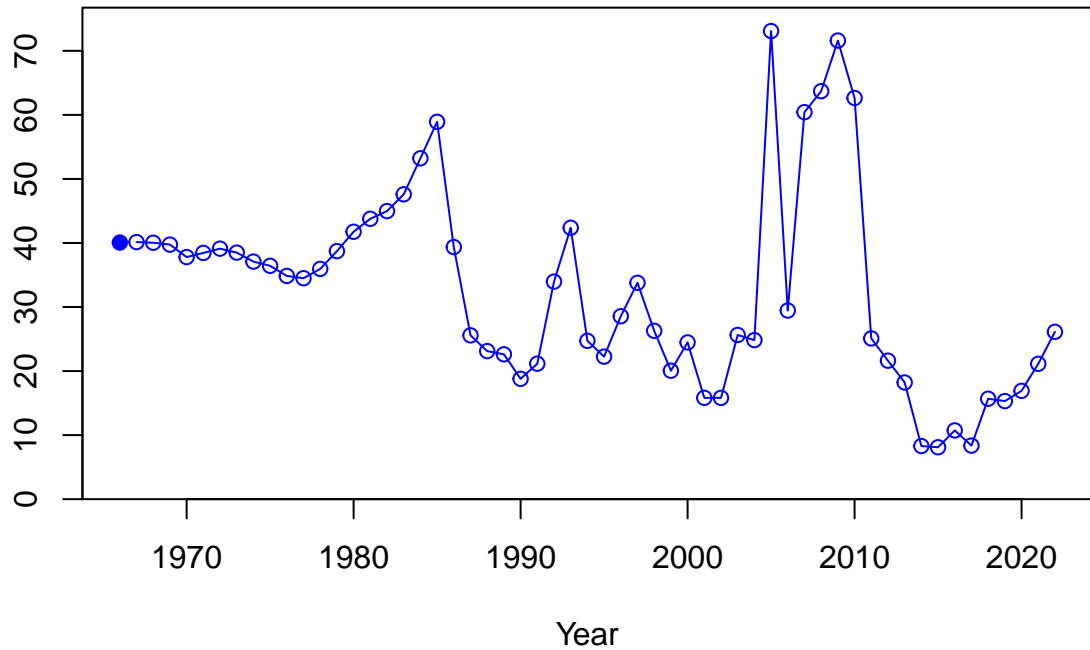


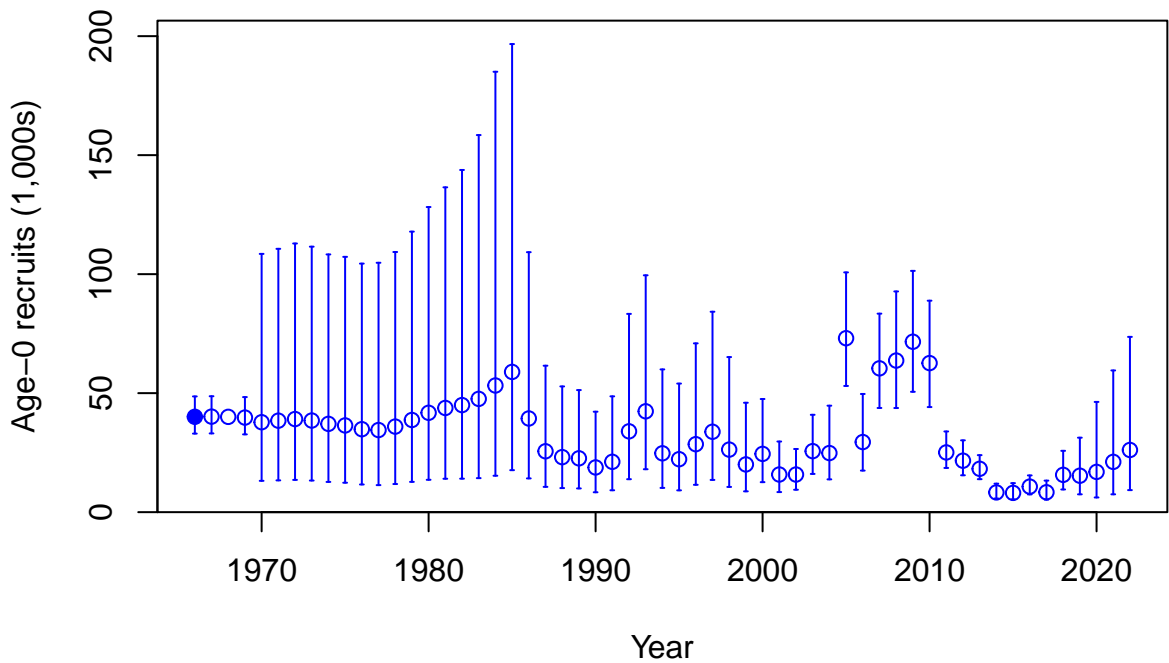


Summary biomass (mt)

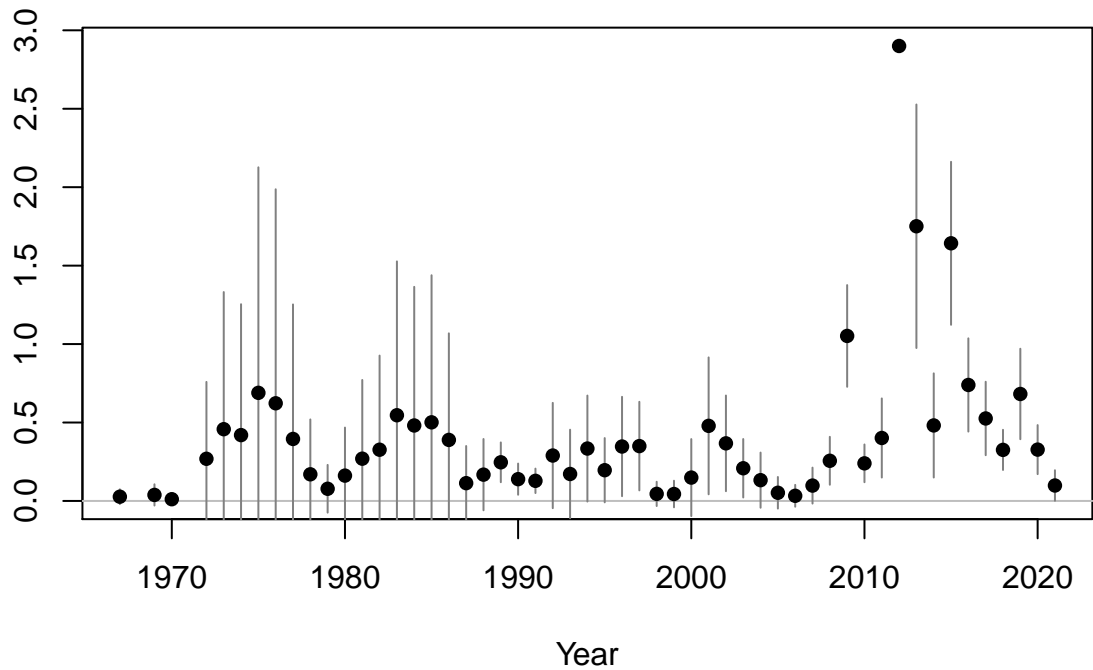


Age-0 recruits (1,000s)

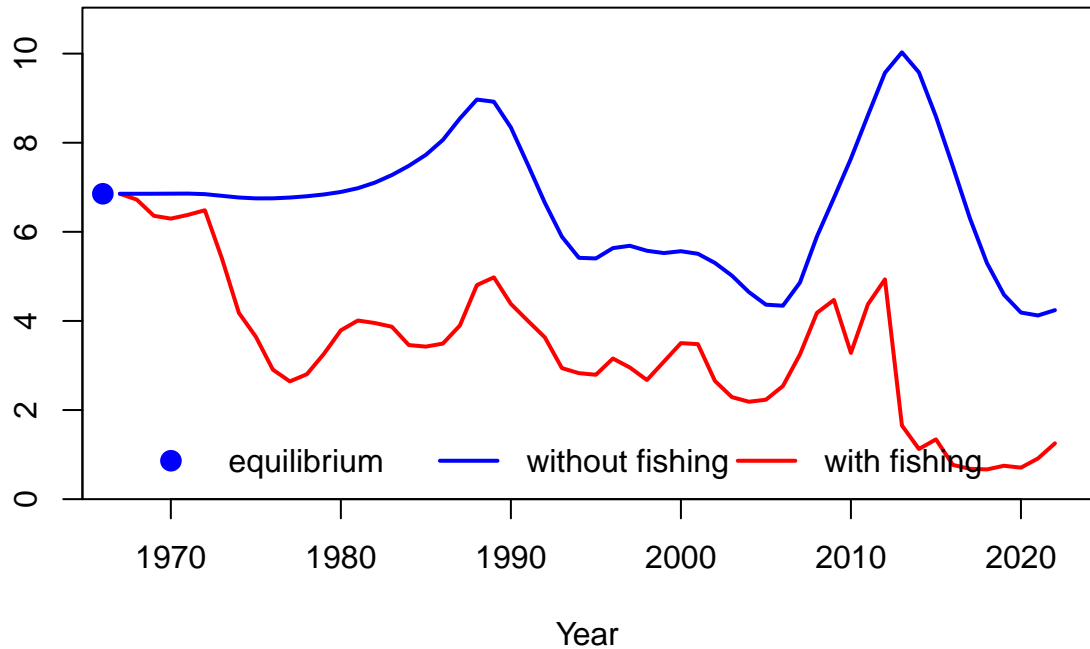




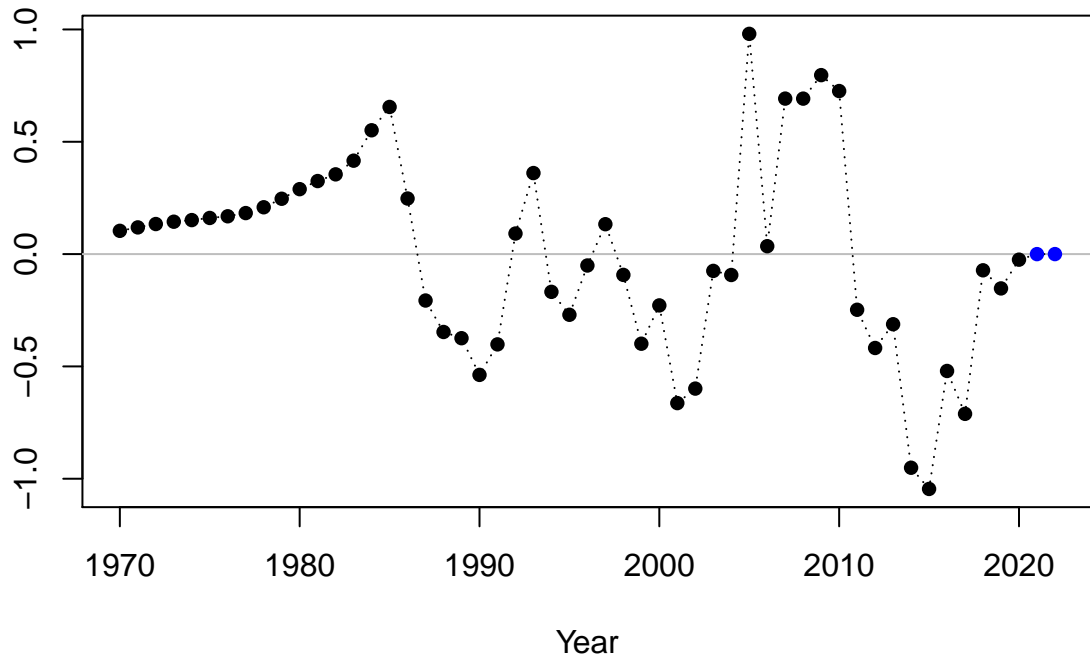
Summary Fishing Mortality



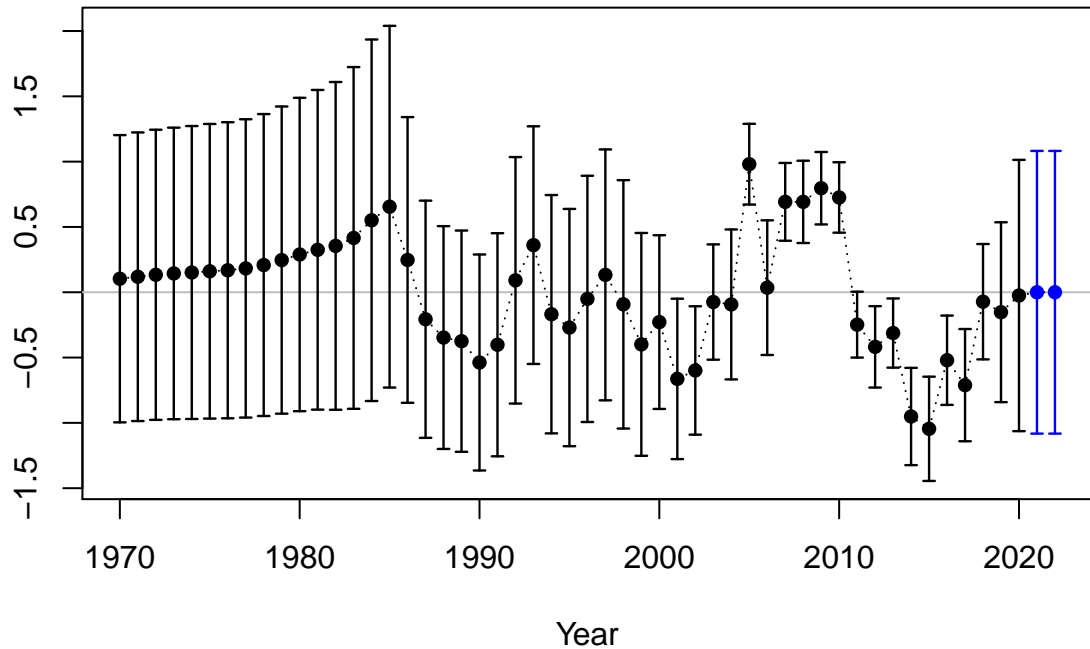
Spawning biomass (mt)



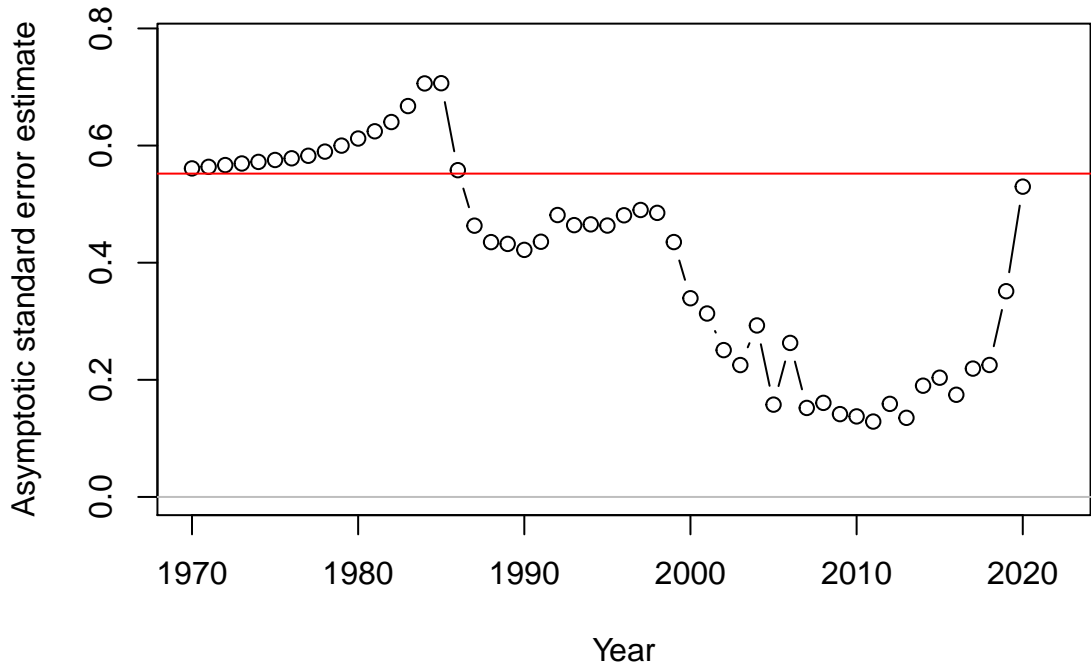
Log recruitment deviation

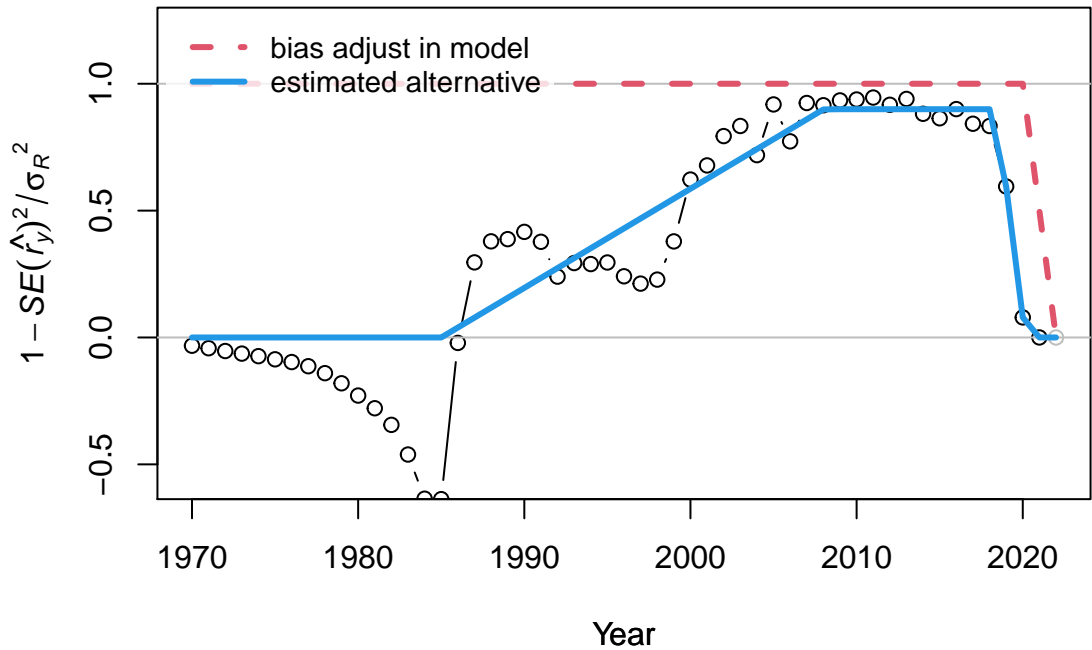


Log recruitment deviation

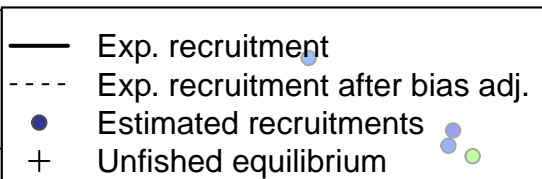


Recruitment deviation variance





Recruitment (1,000s)



0.0

0.5

1.0

1.5

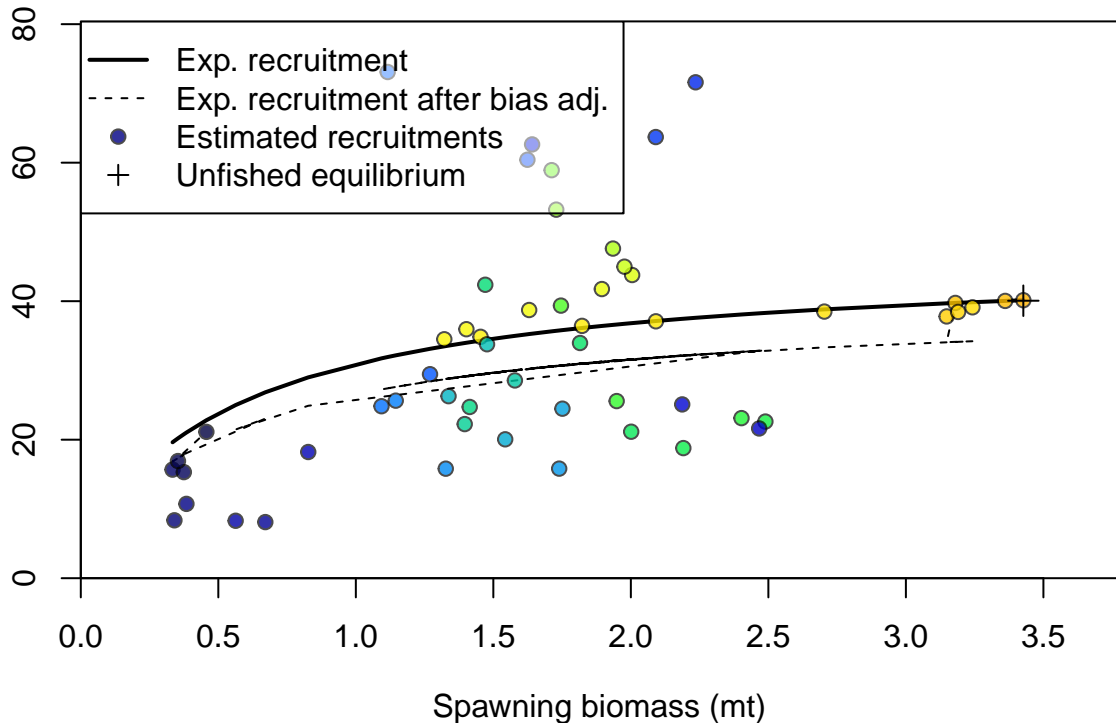
2.0

2.5

3.0

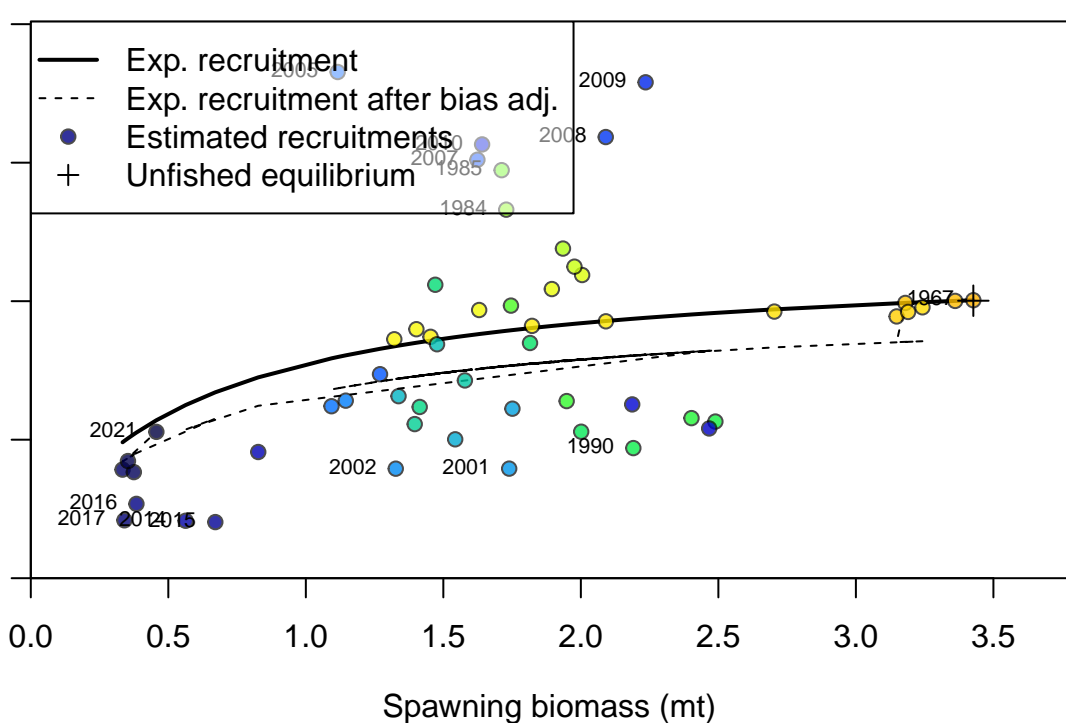
3.5

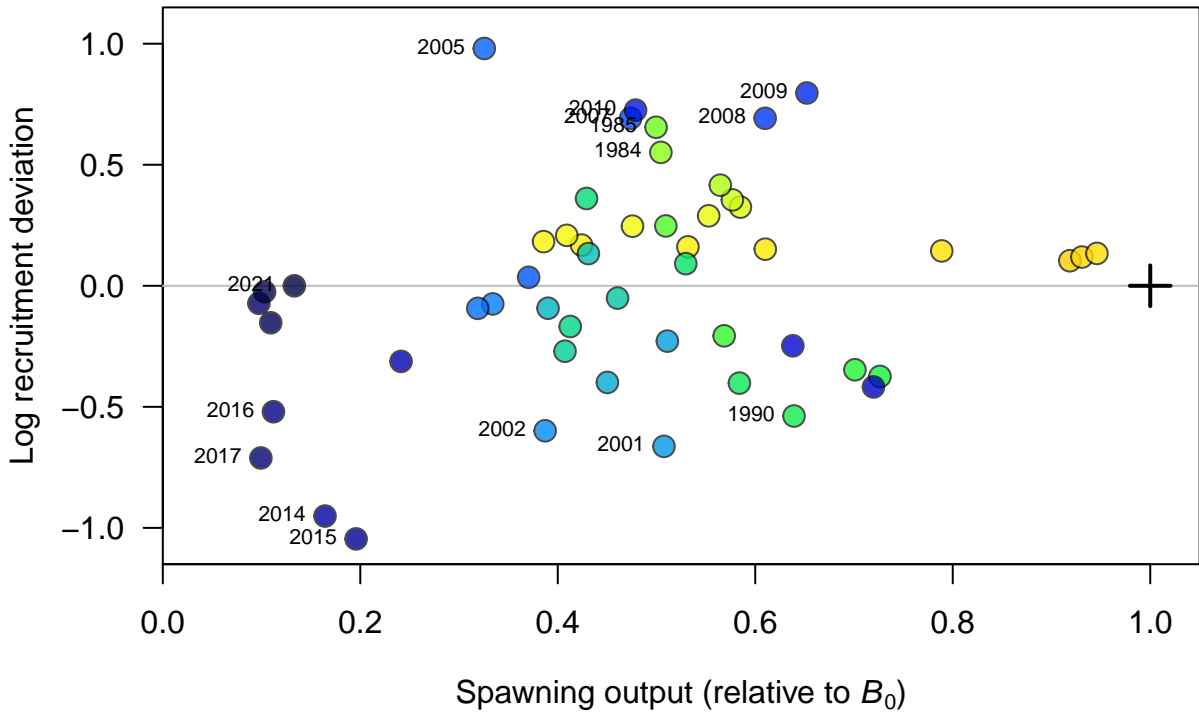
Spawning biomass (mt)

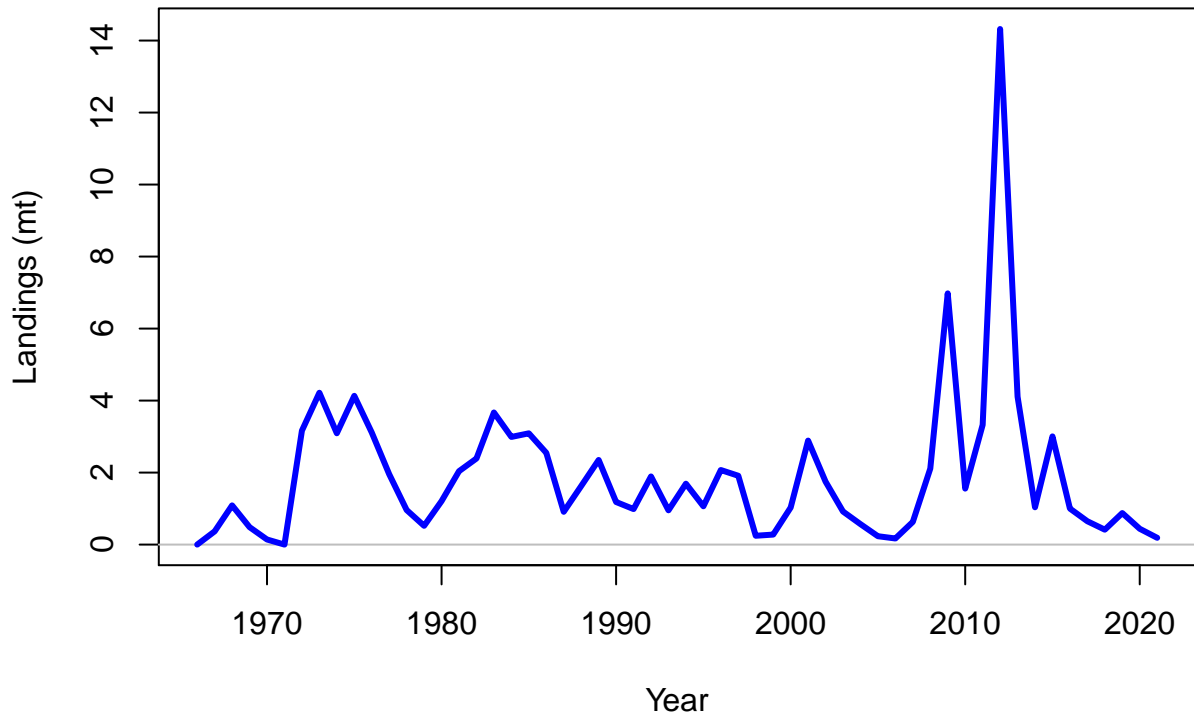


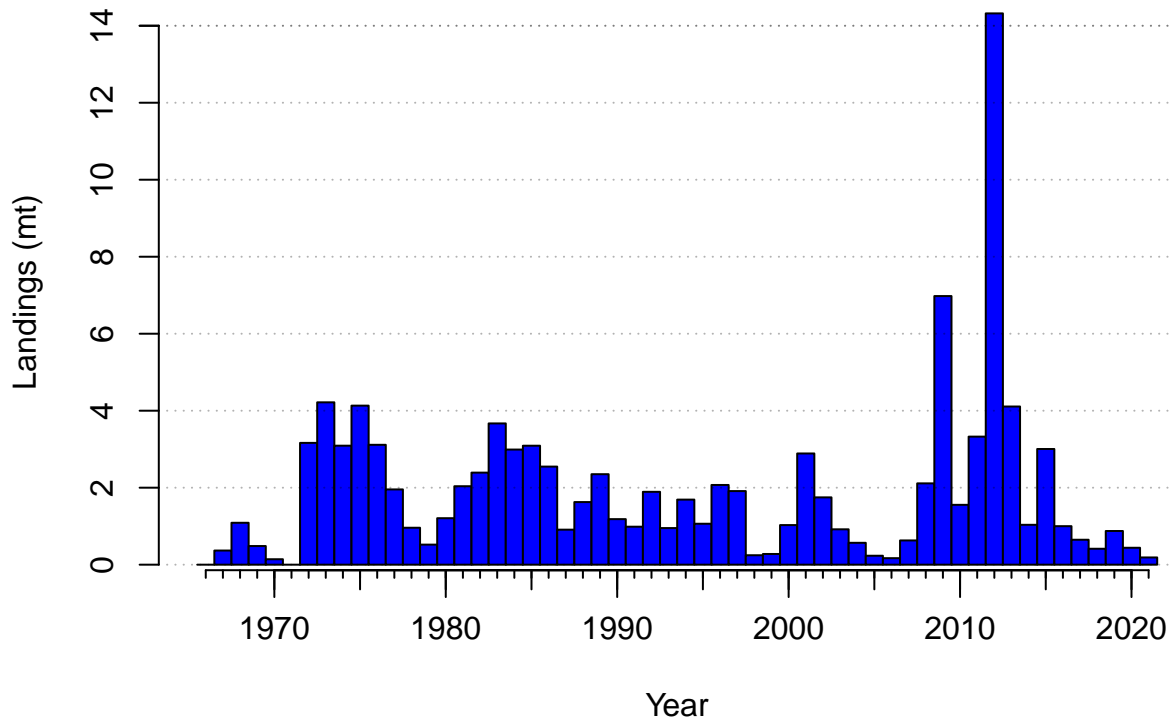
Recruitment (1,000s)

- Exp. recruitment
- - - Exp. recruitment after bias adj.
- Estimated recruitments
- + Unfished equilibrium









Observed and expected Landings (mt)

FISHERY
FISHERY obs.

14
12
10
8
6
4
2
0

1970

1980

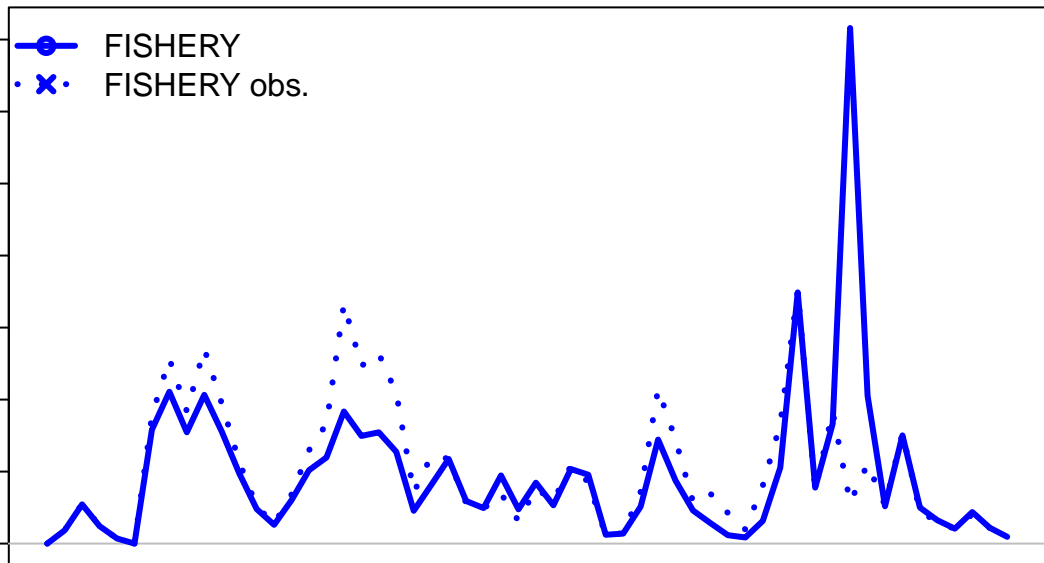
1990

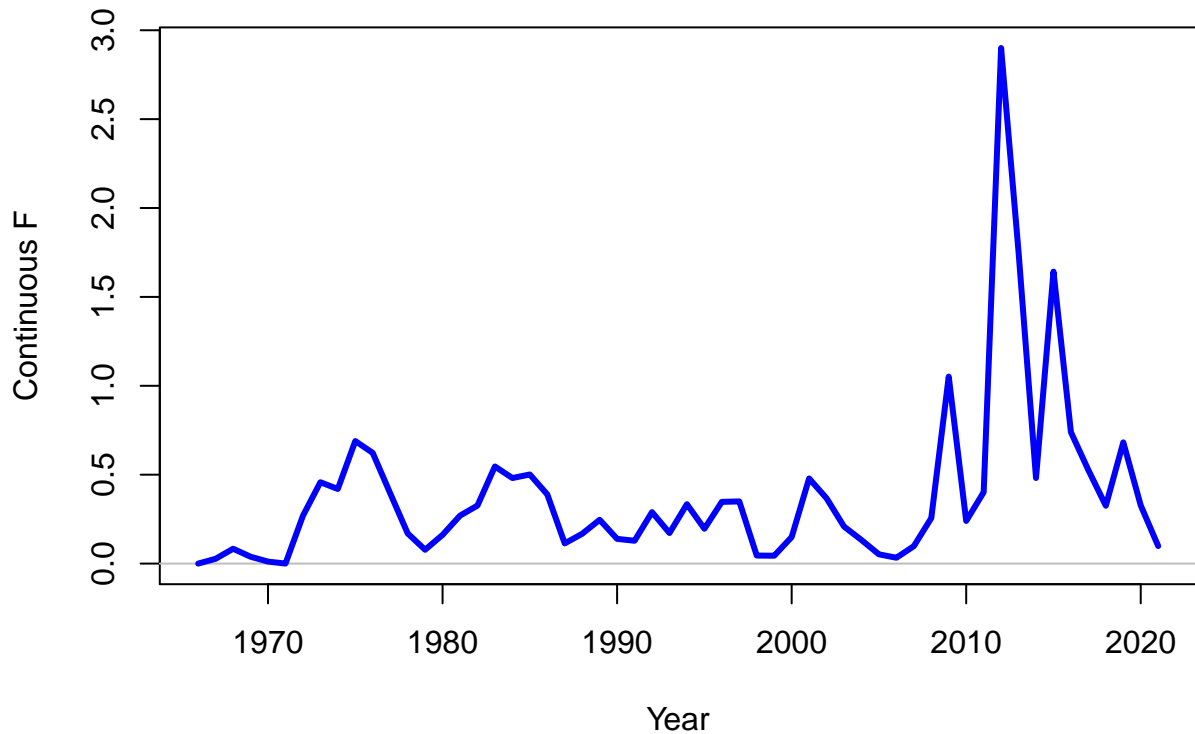
2000

2010

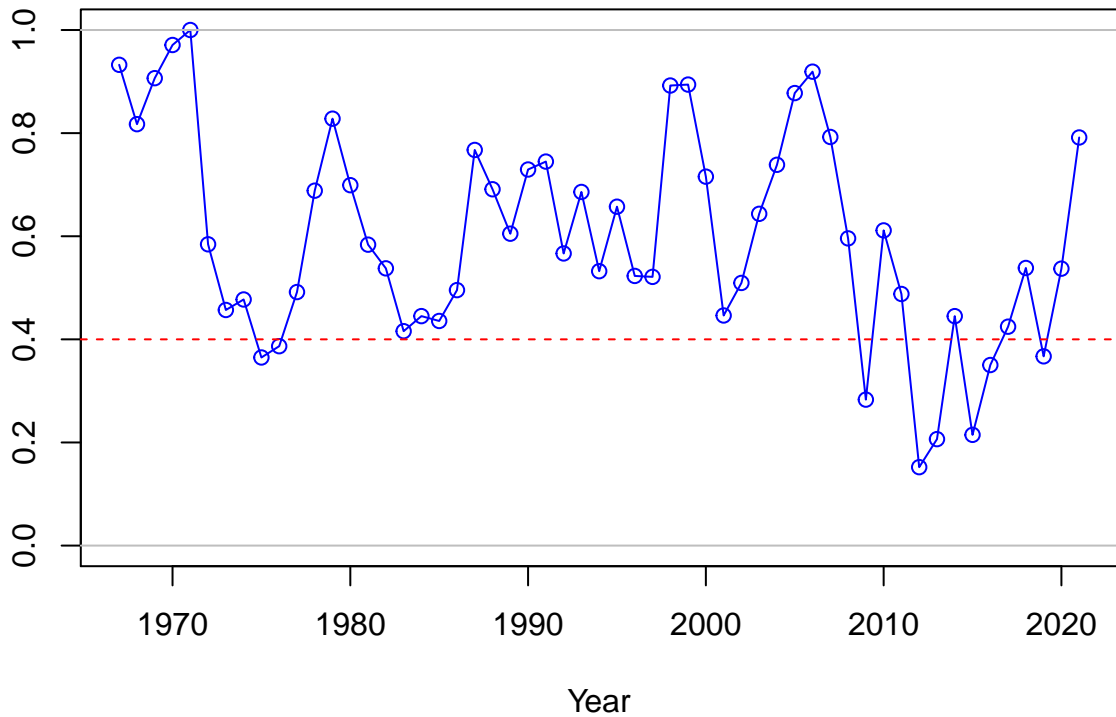
2020

Year

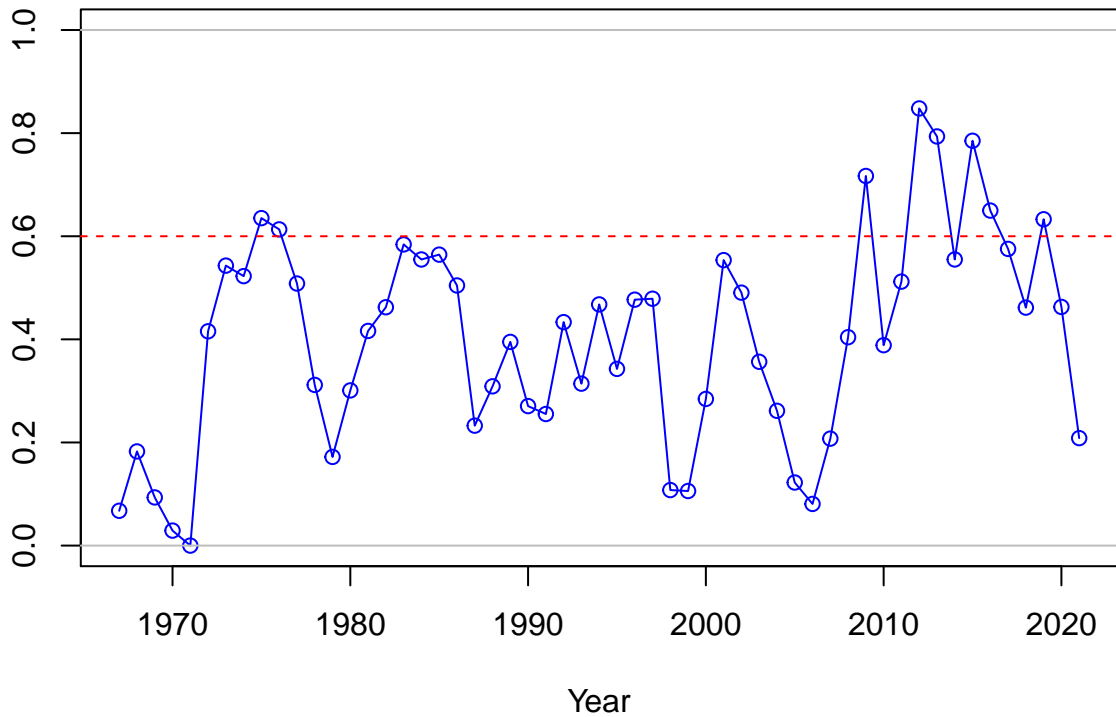




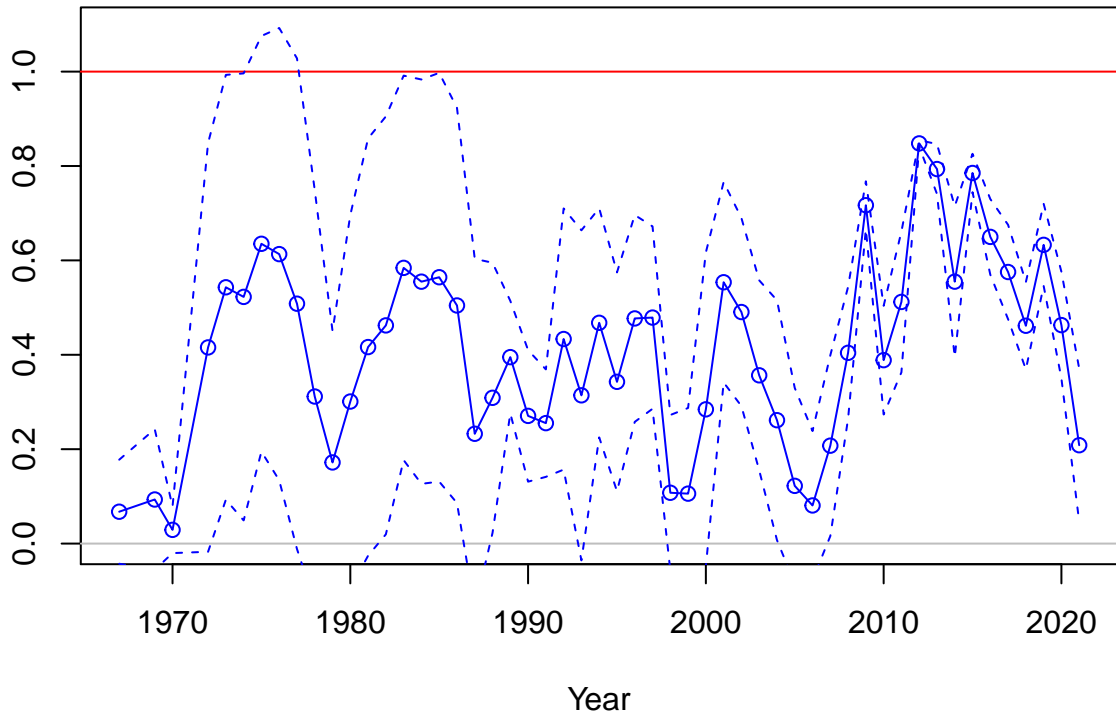
SPR



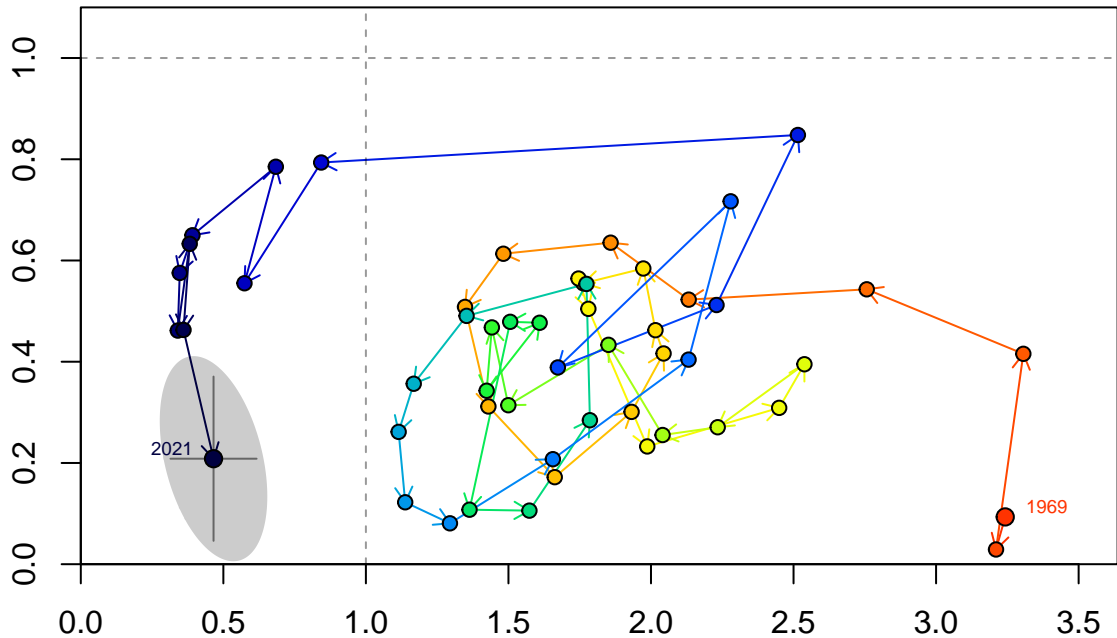
1-SPR



Fishing intensity: 1-SPR

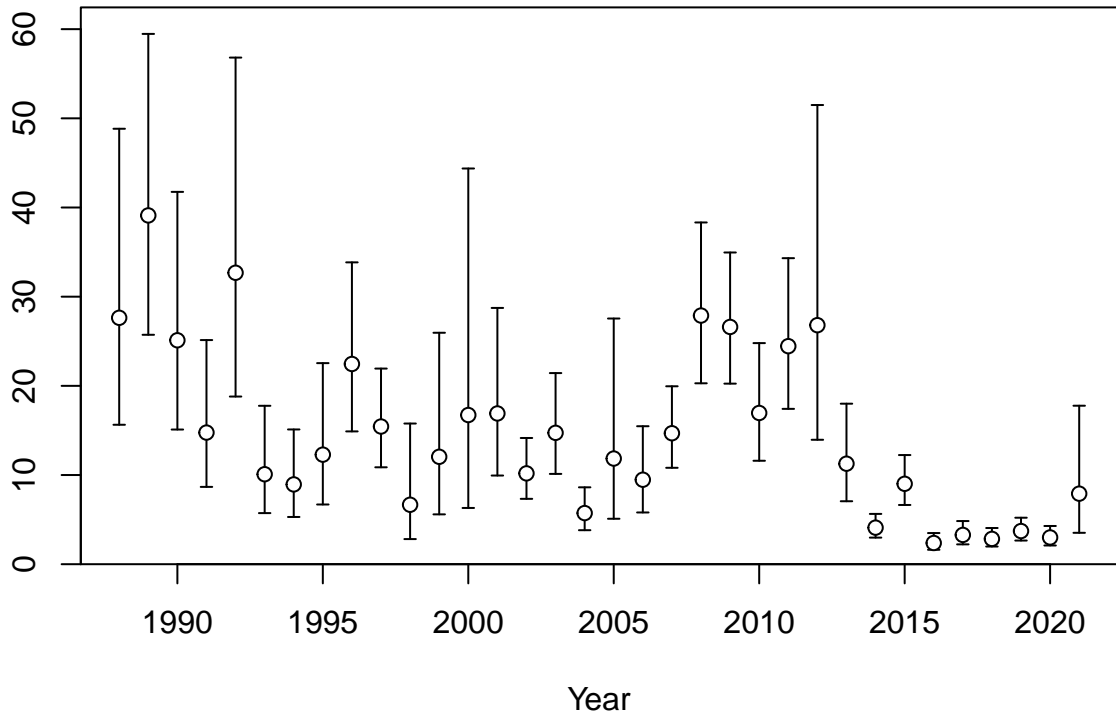


Fishing intensity: 1-SPR

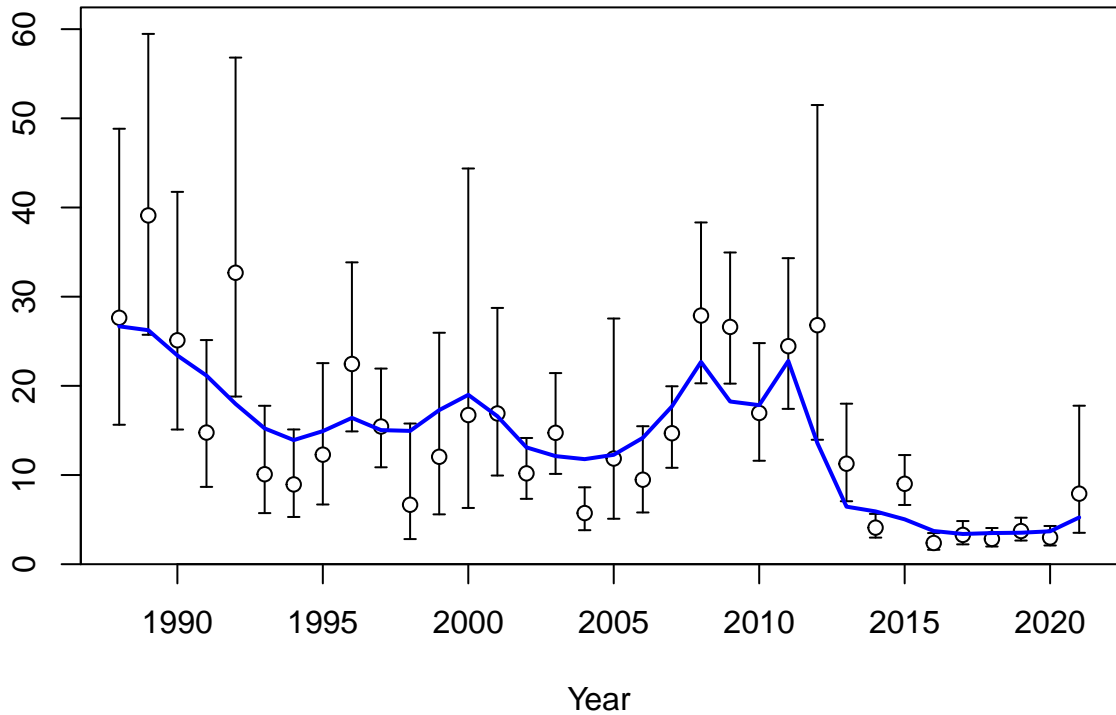


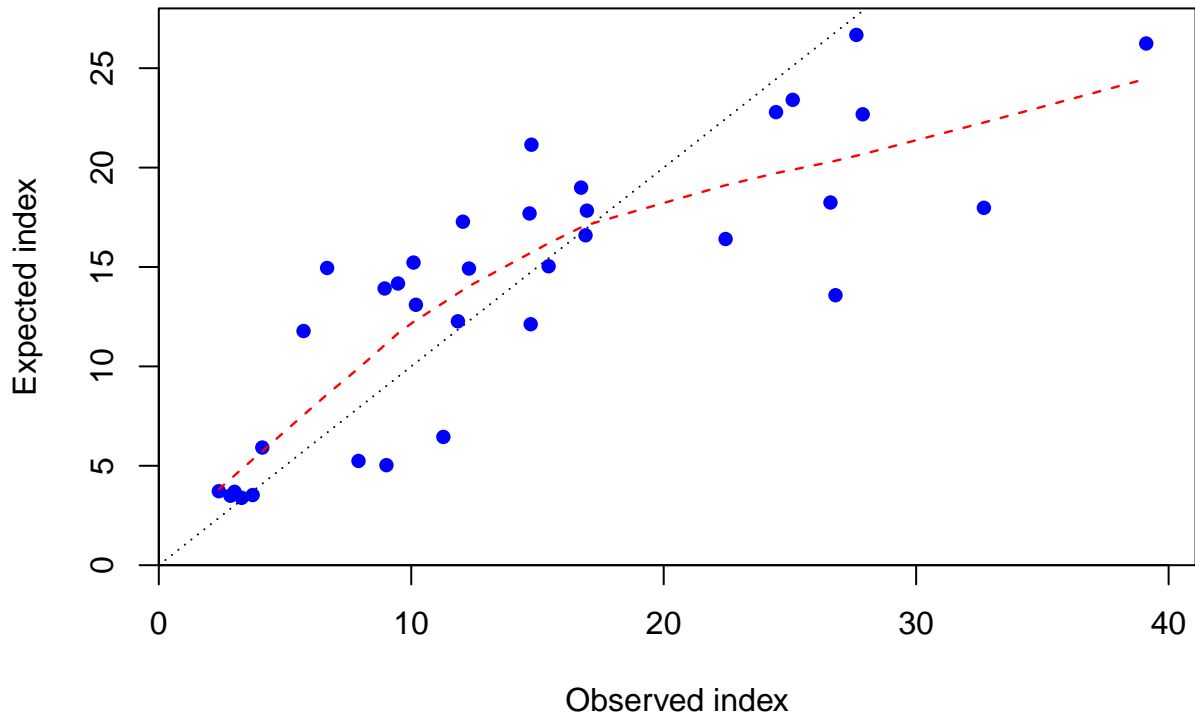
Relative spawning output: B/B_{MSY}

Index

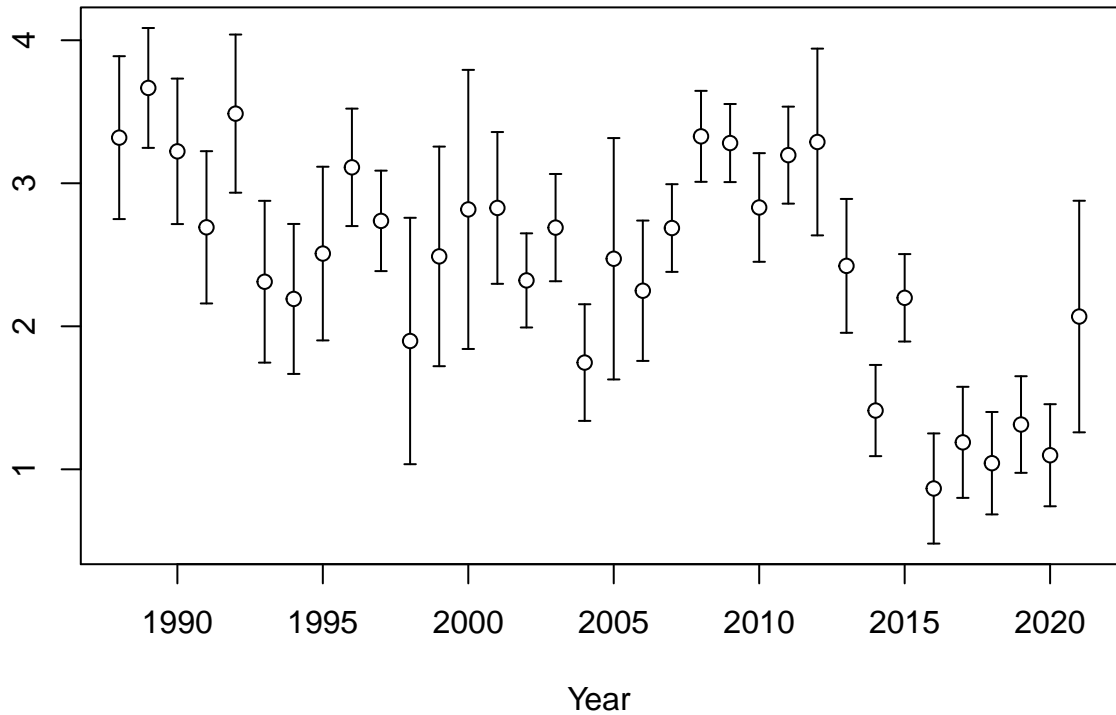


Index

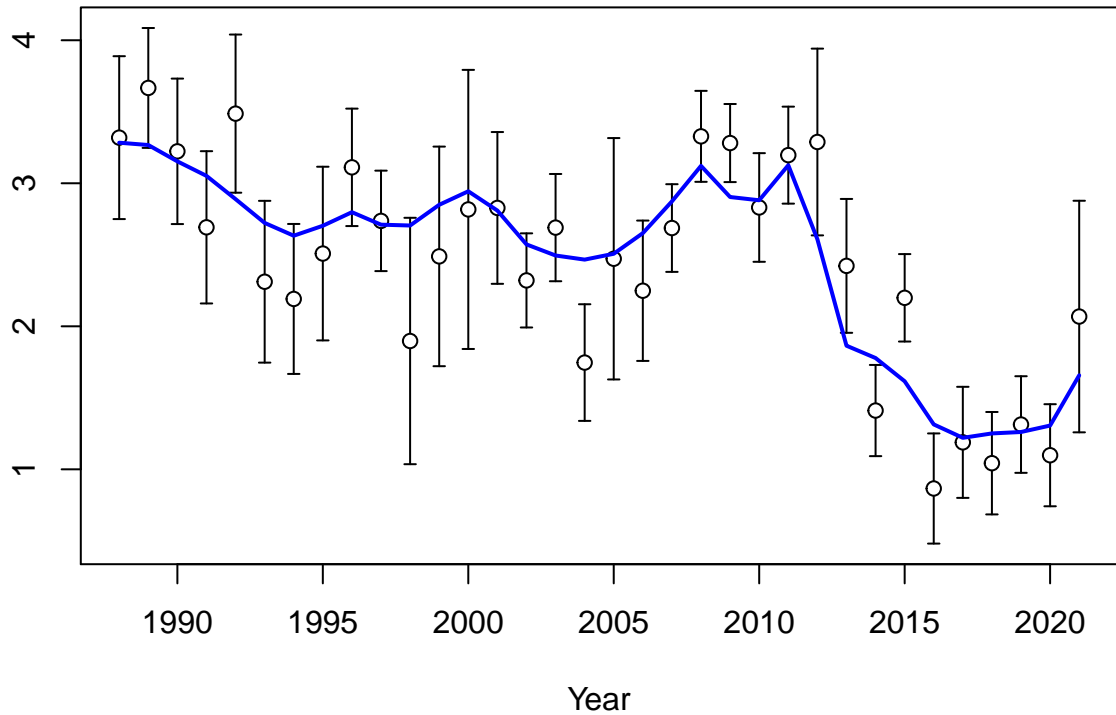


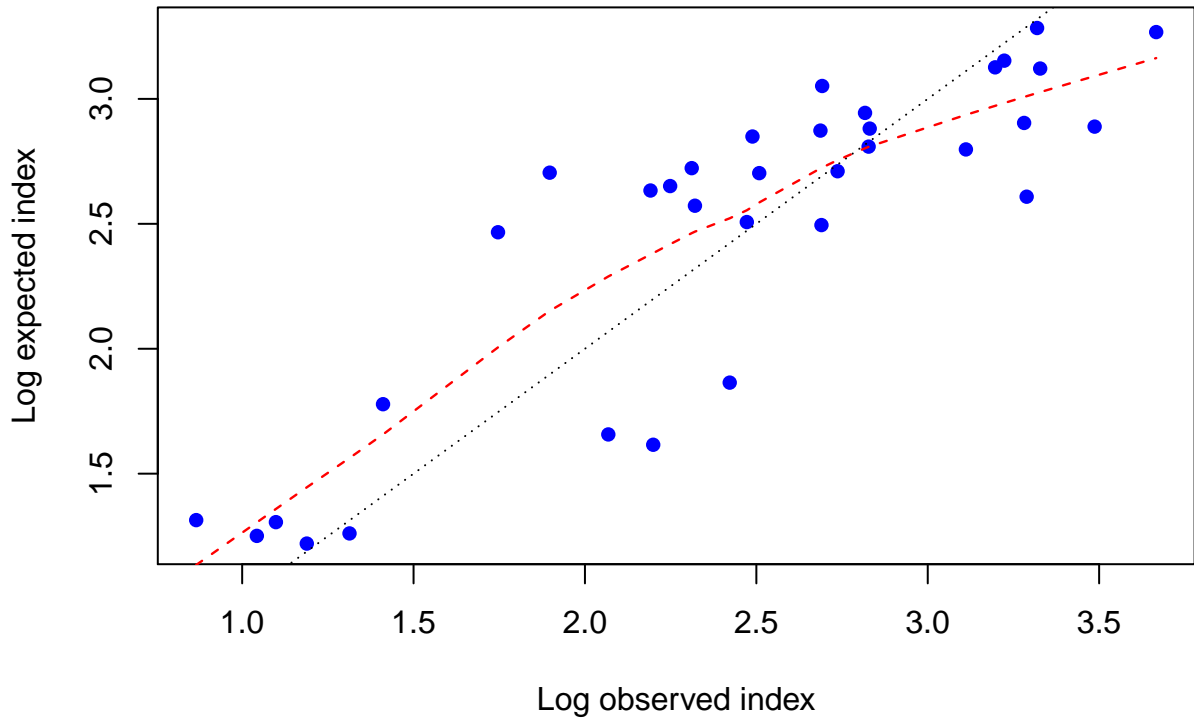


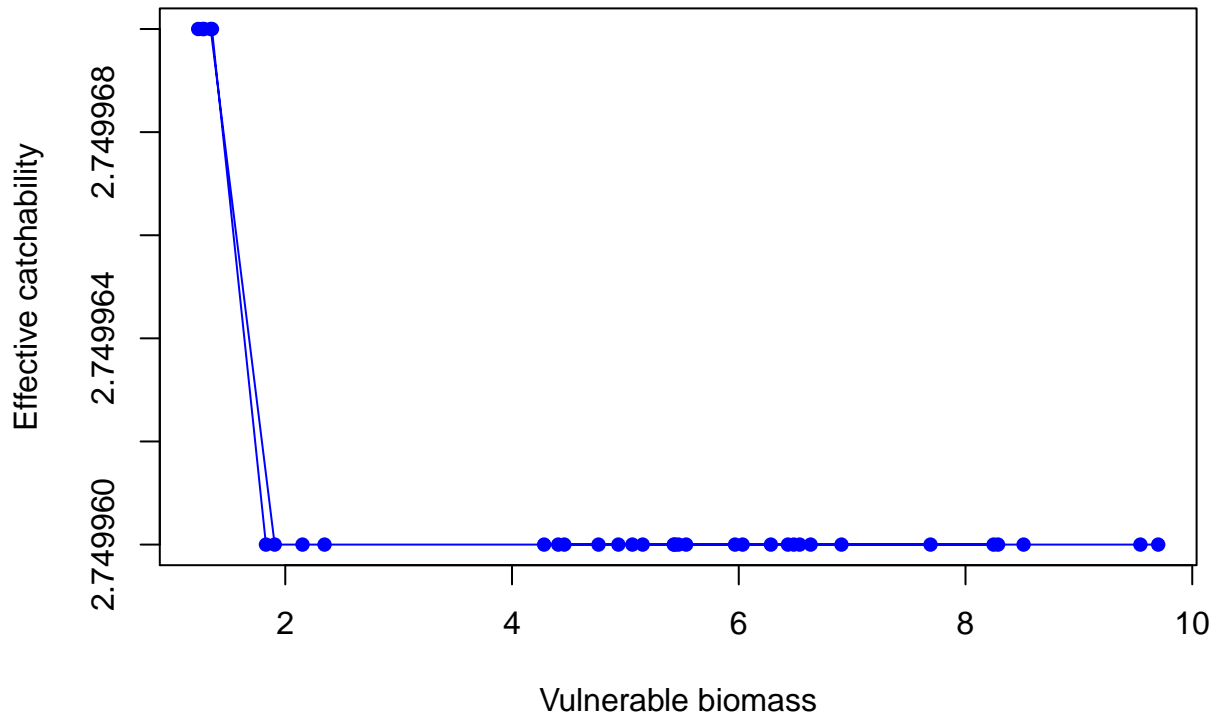
Log index

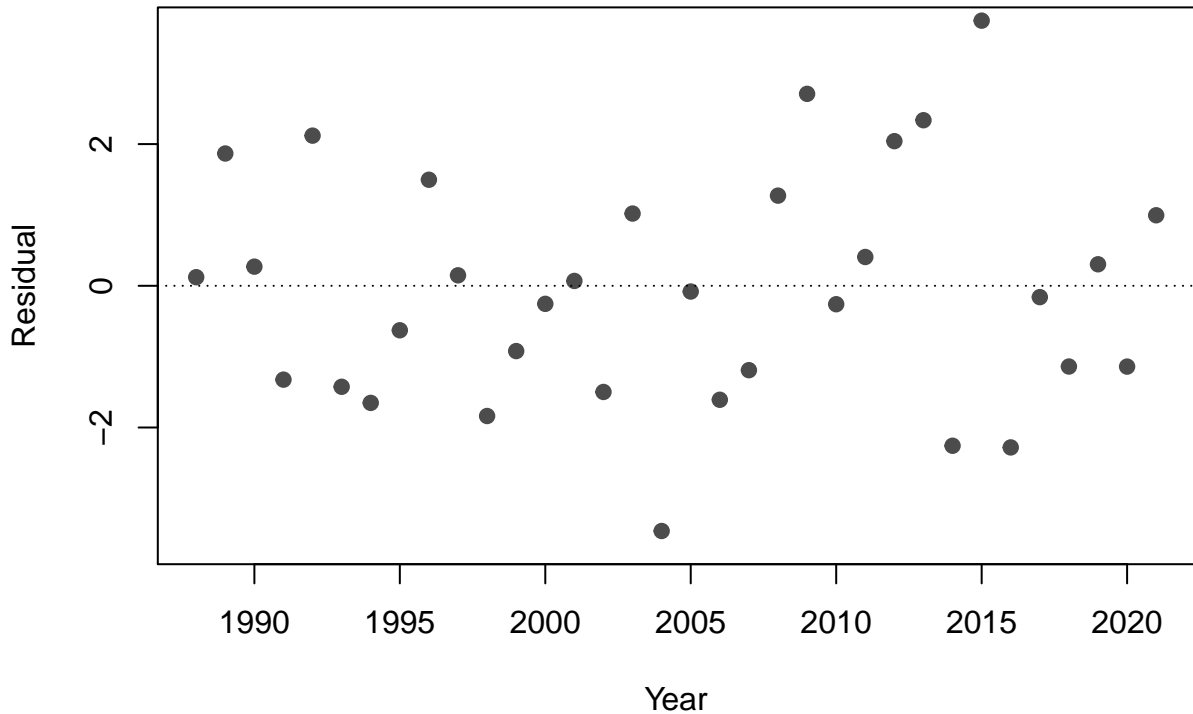


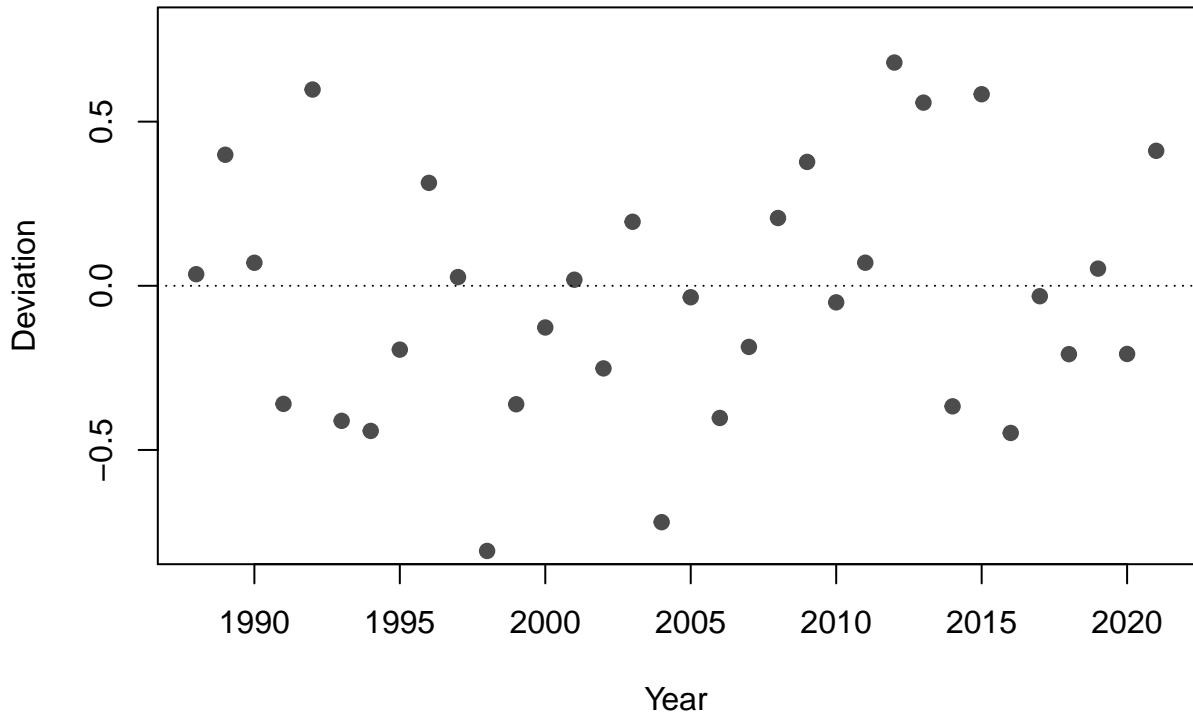
Log index

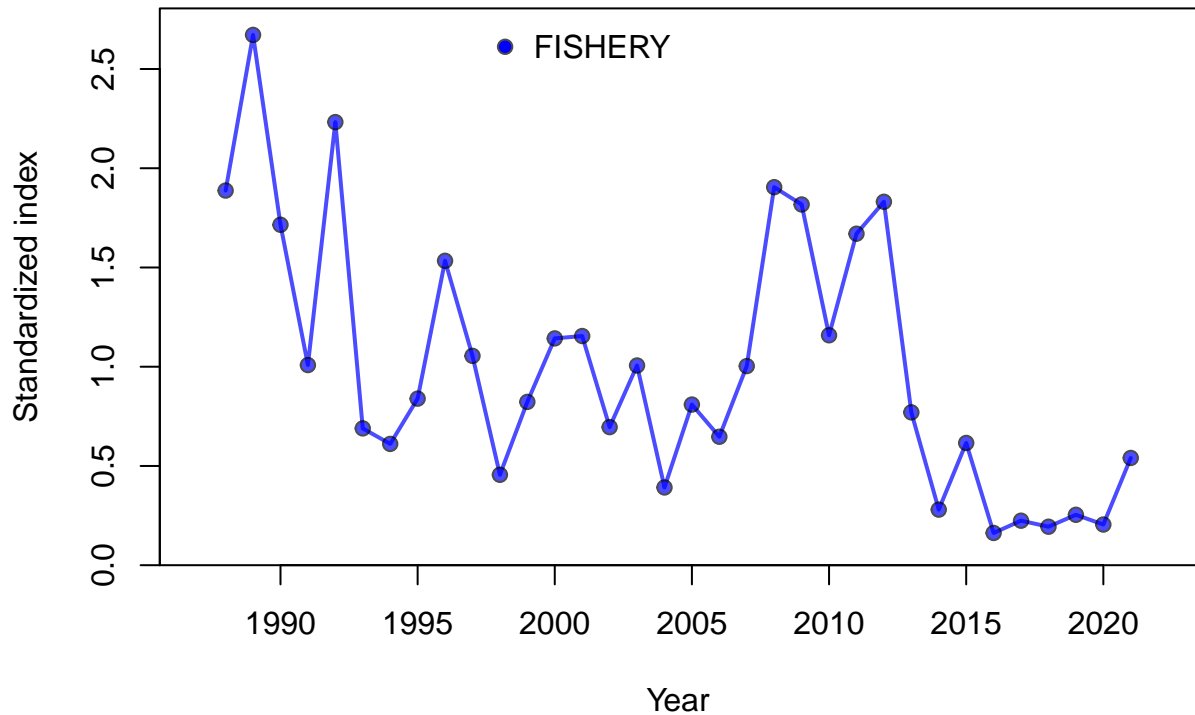


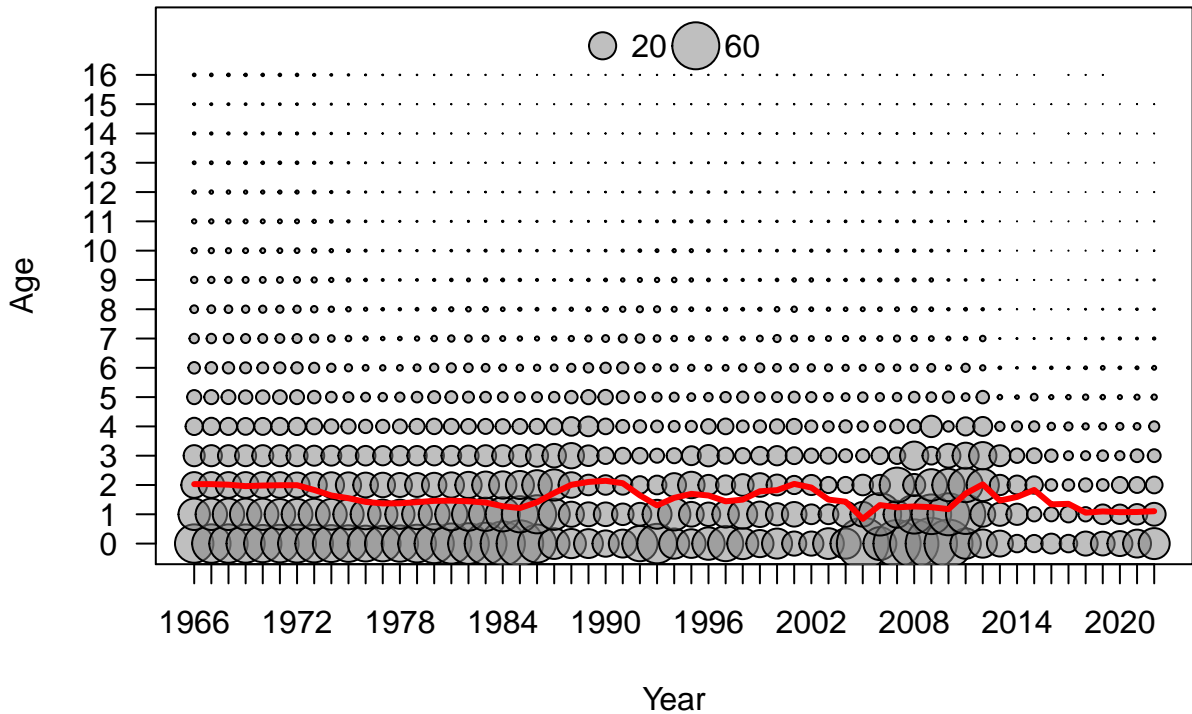


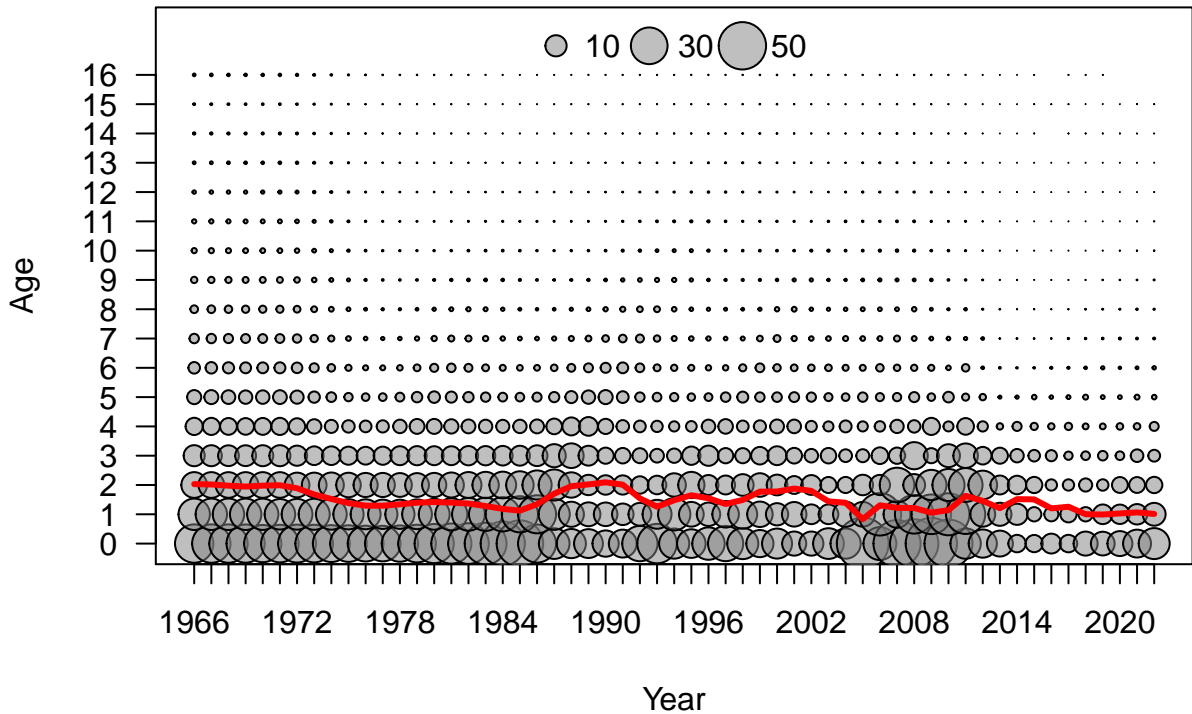


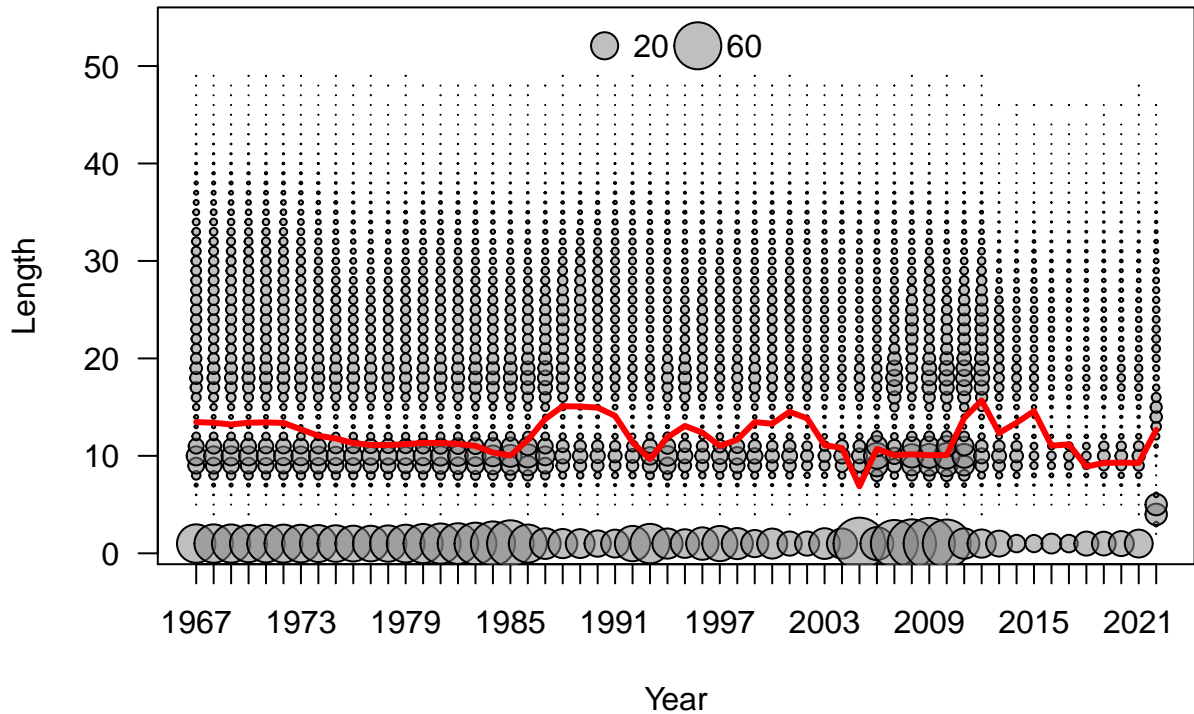


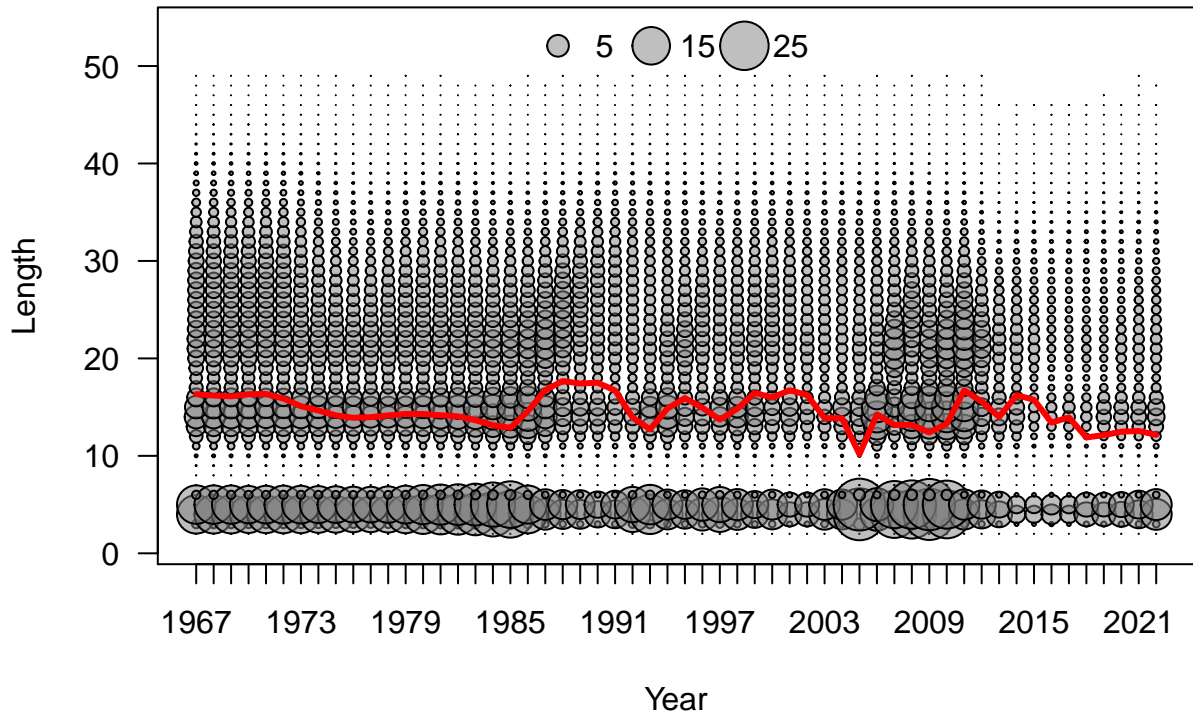


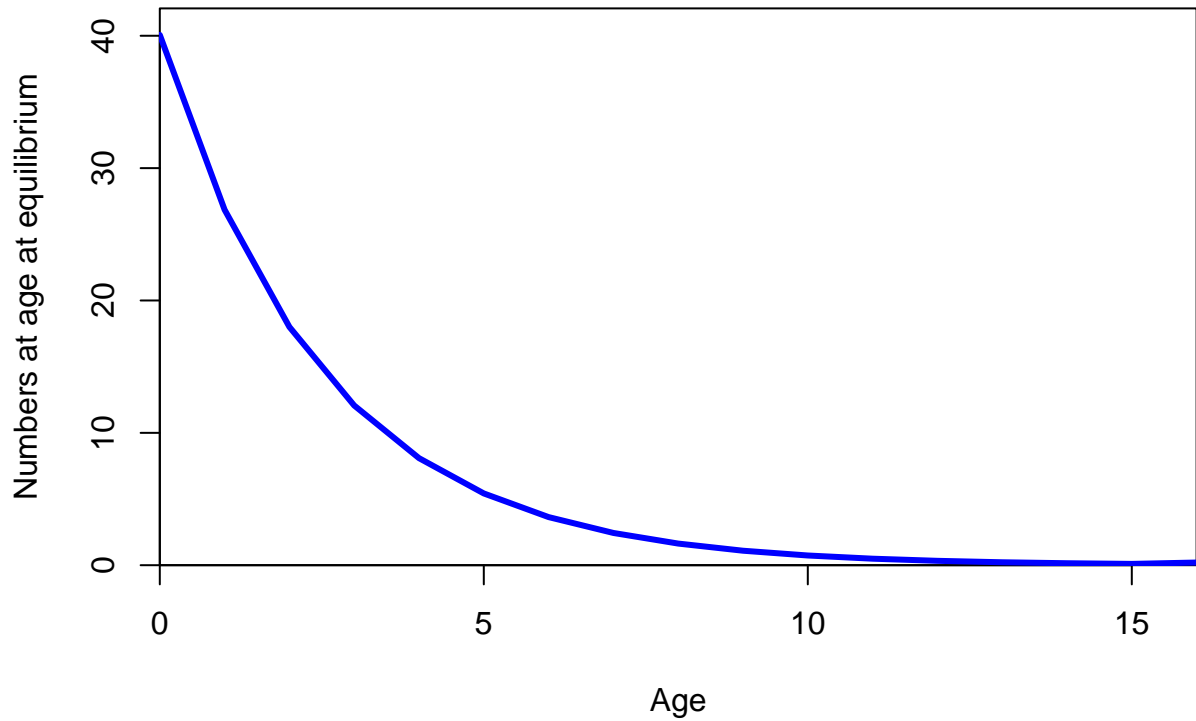


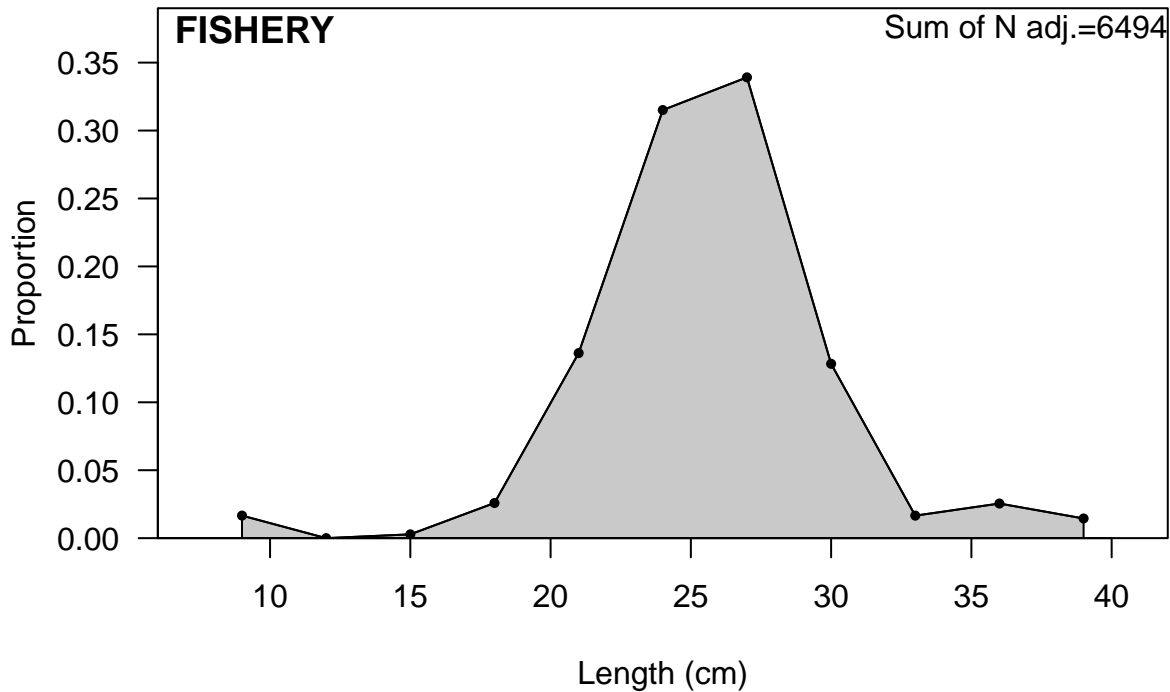


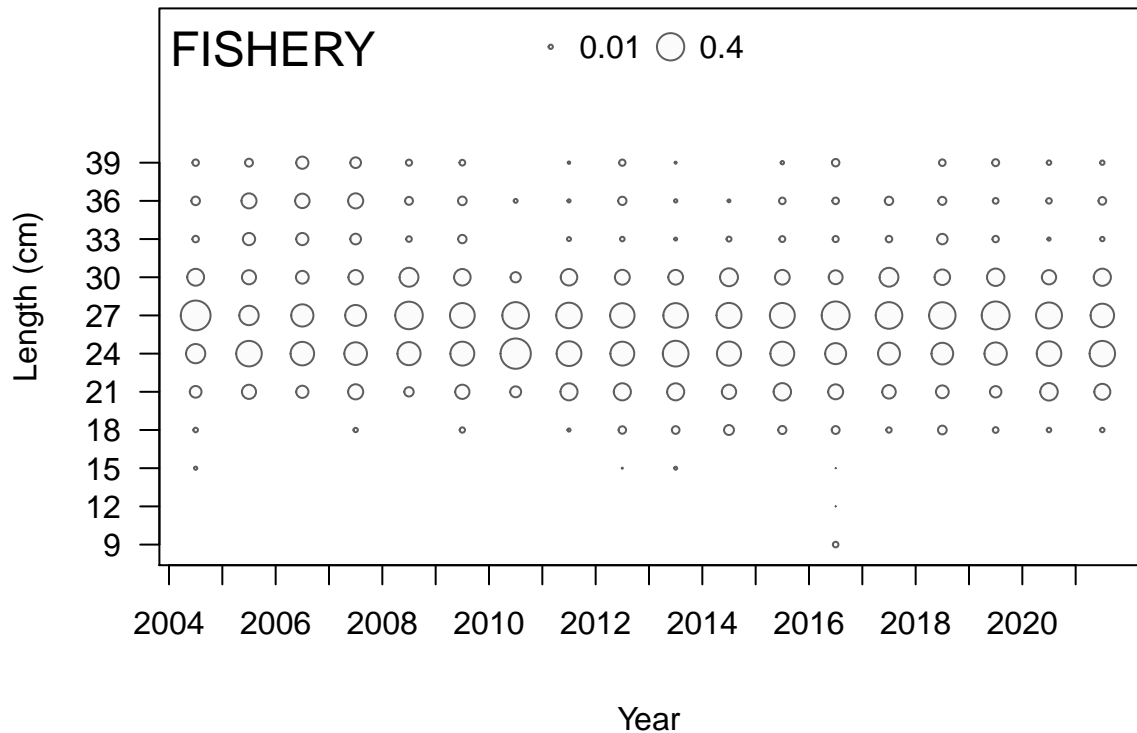




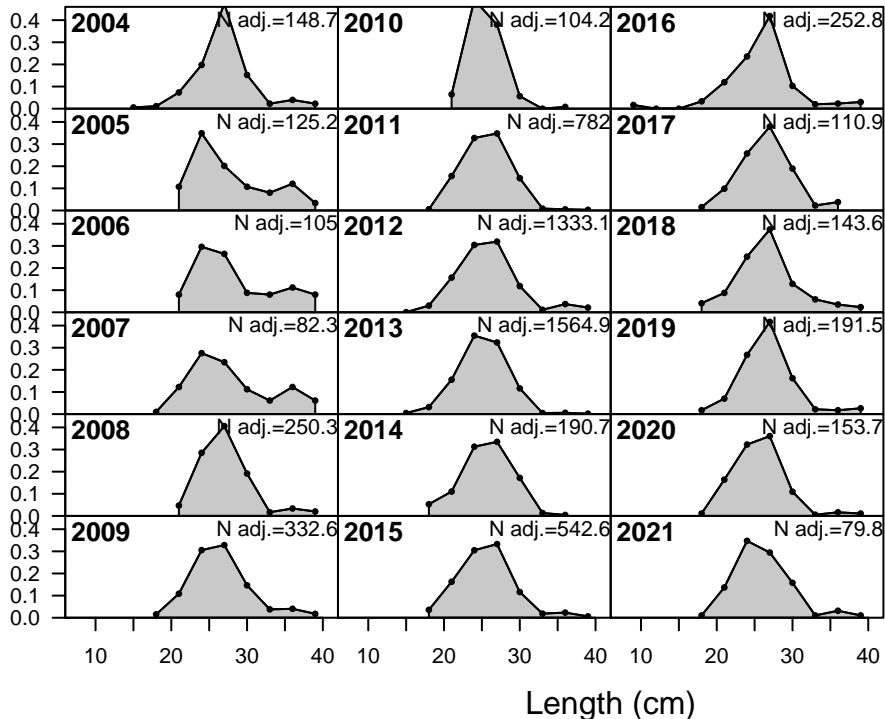


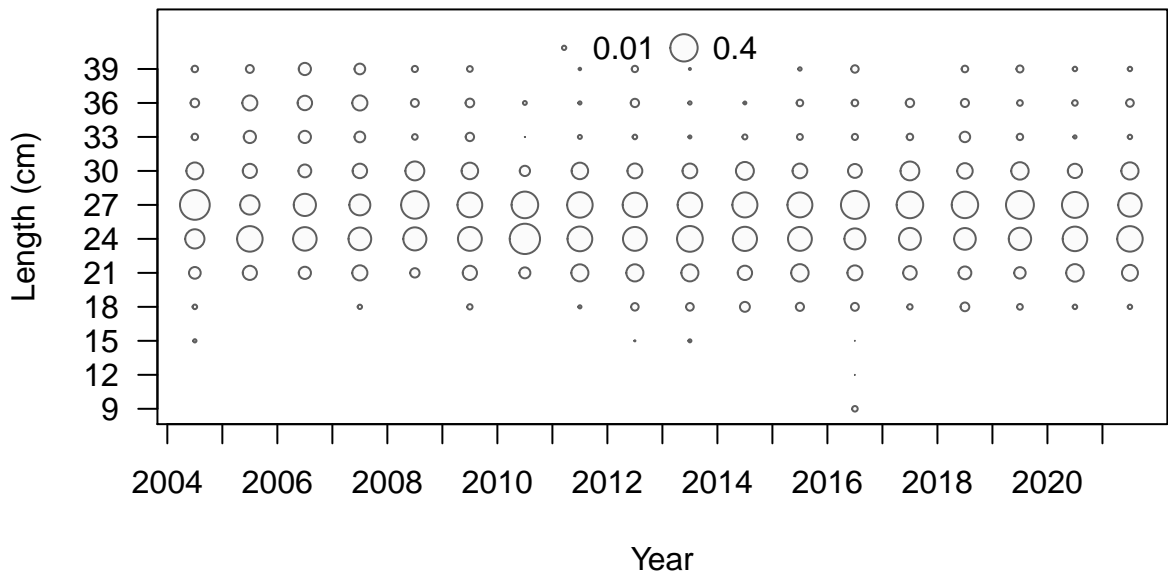




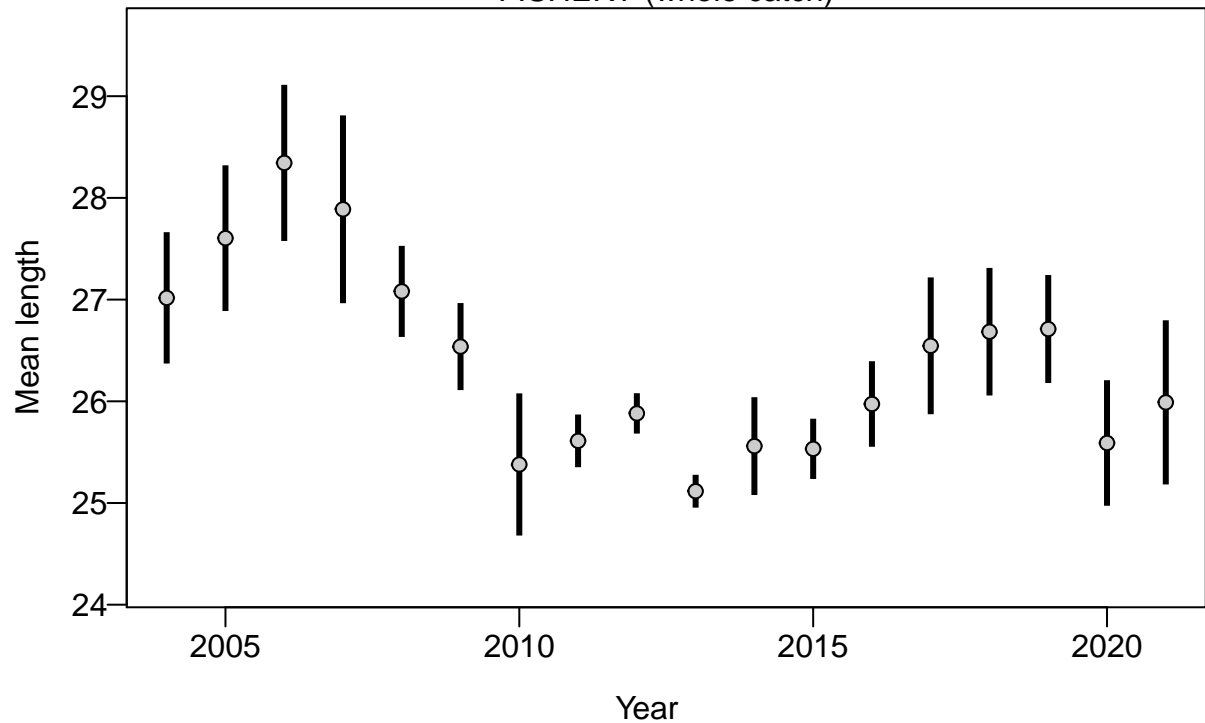


Proportion



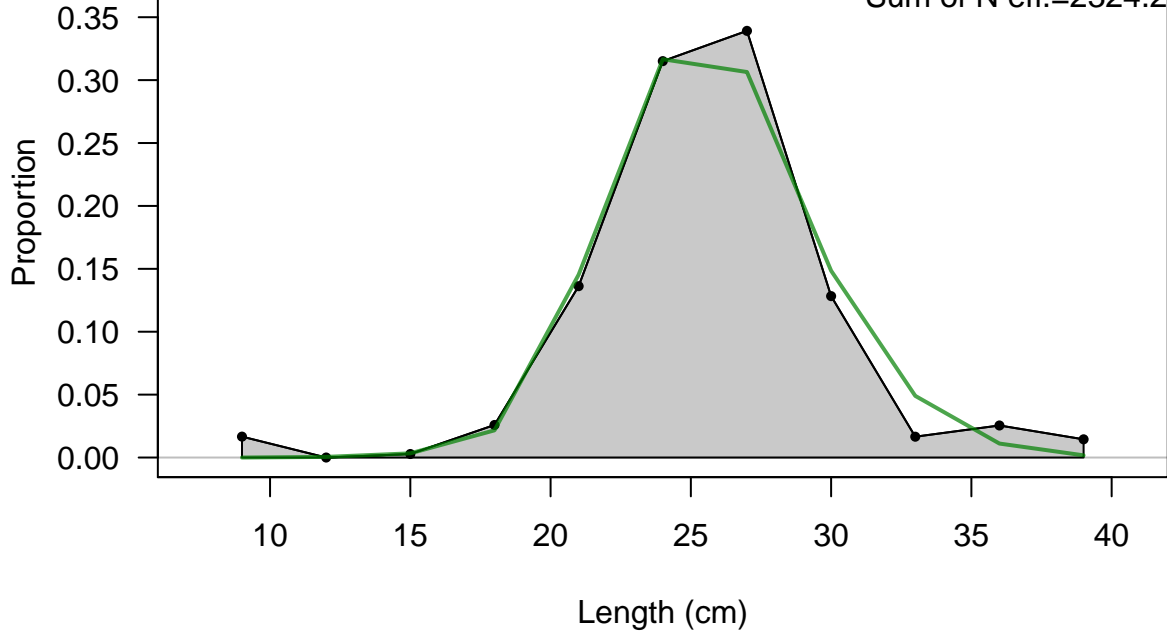


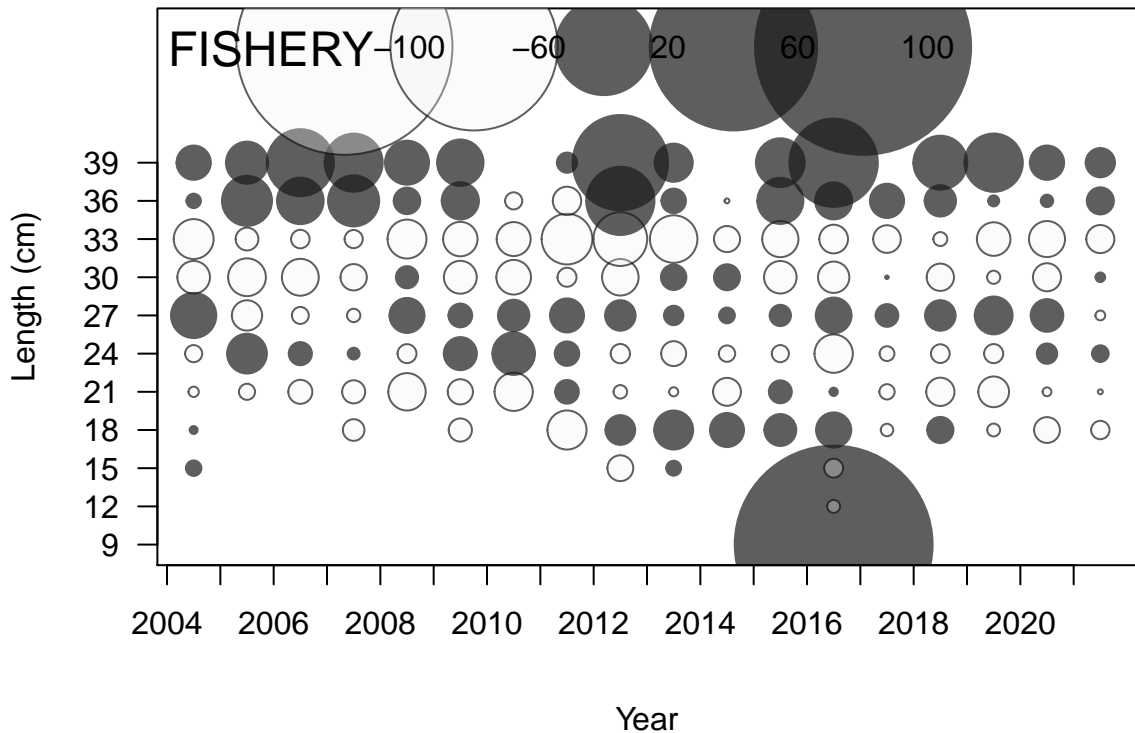
FISHERY (whole catch)



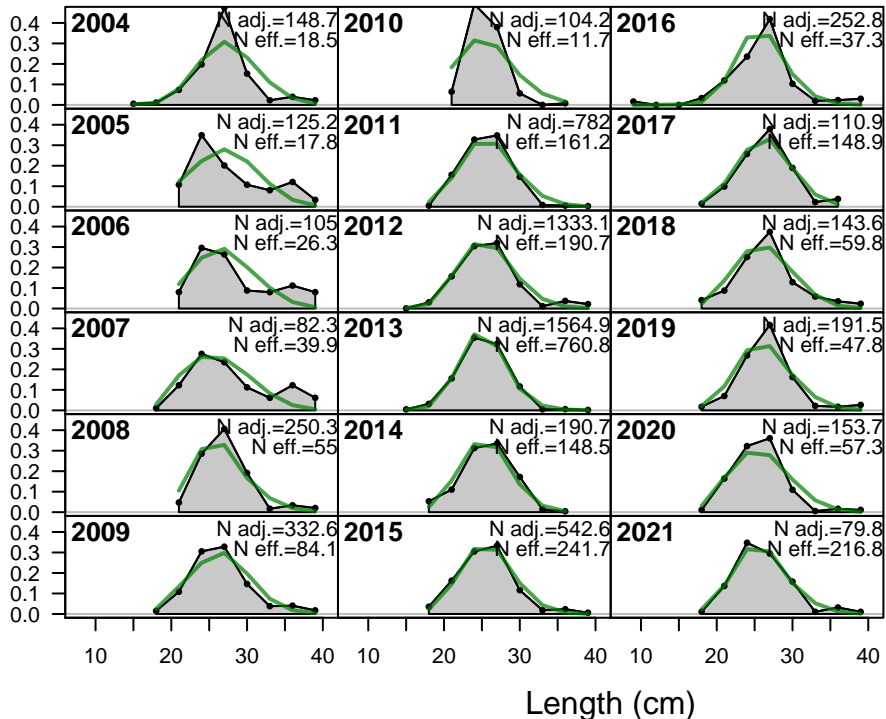
FISHERY

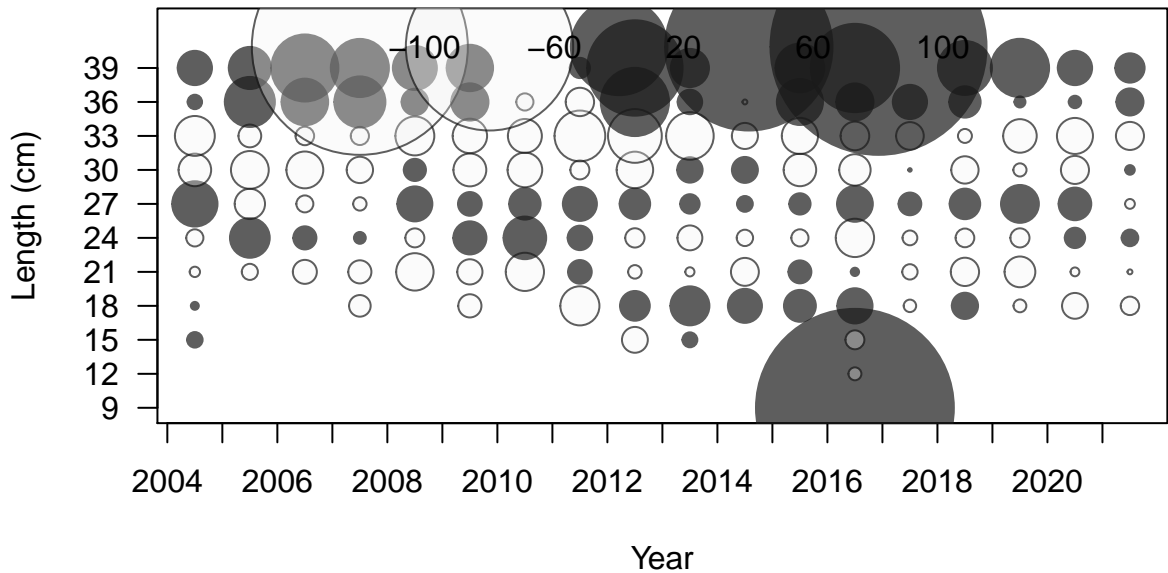
Sum of N adj.=6494
Sum of N eff.=2324.2



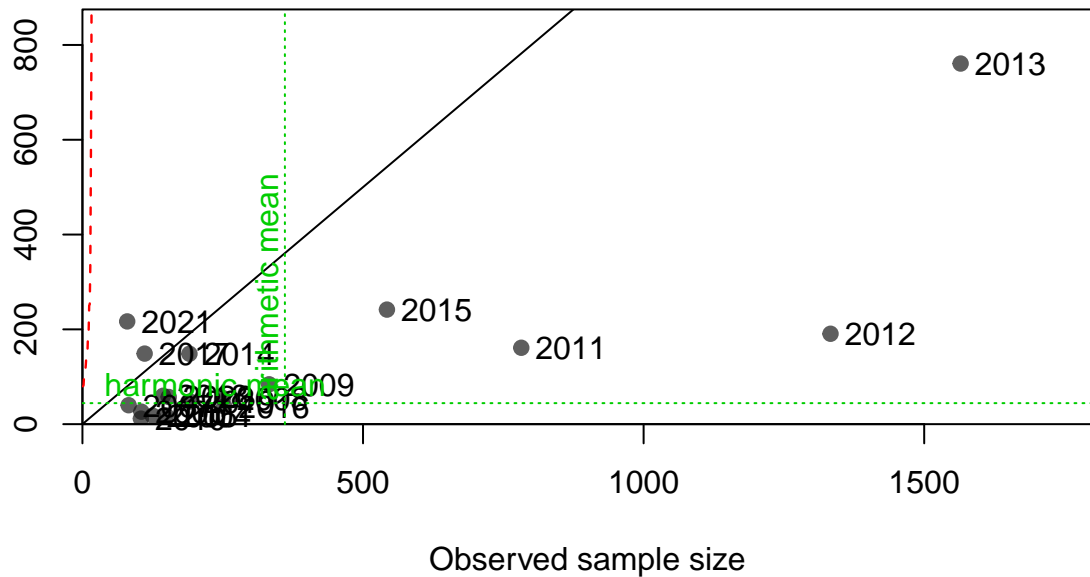


Proportion

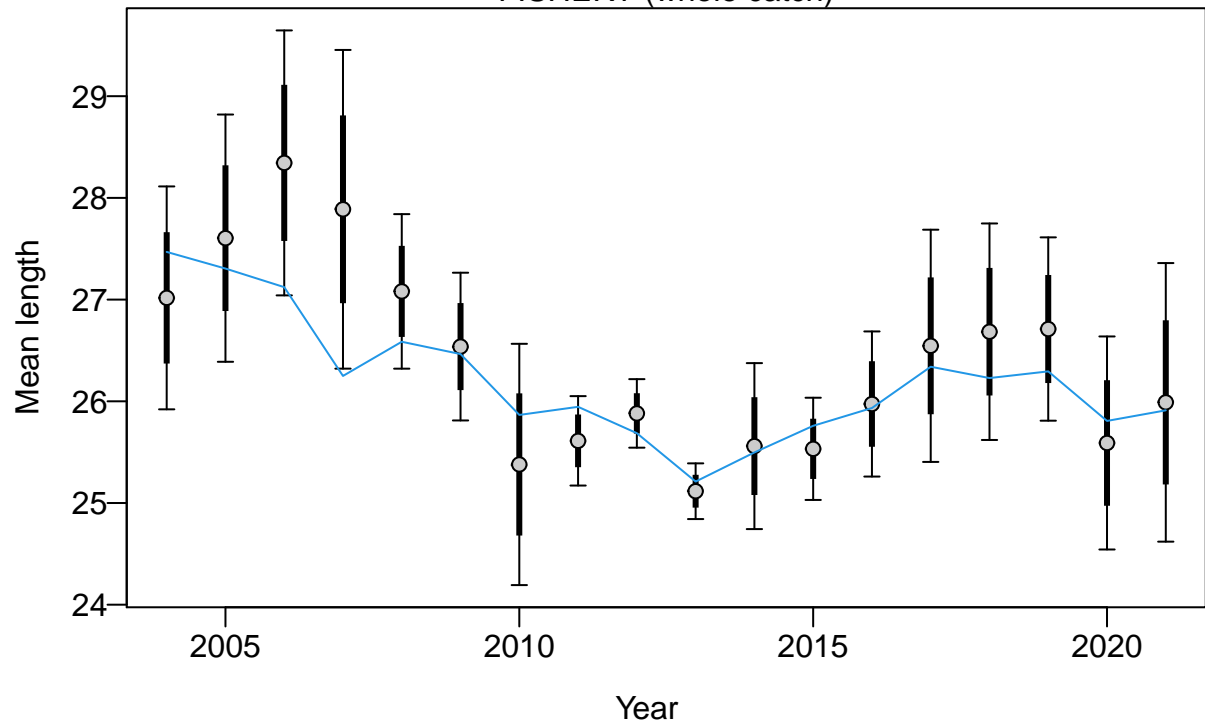


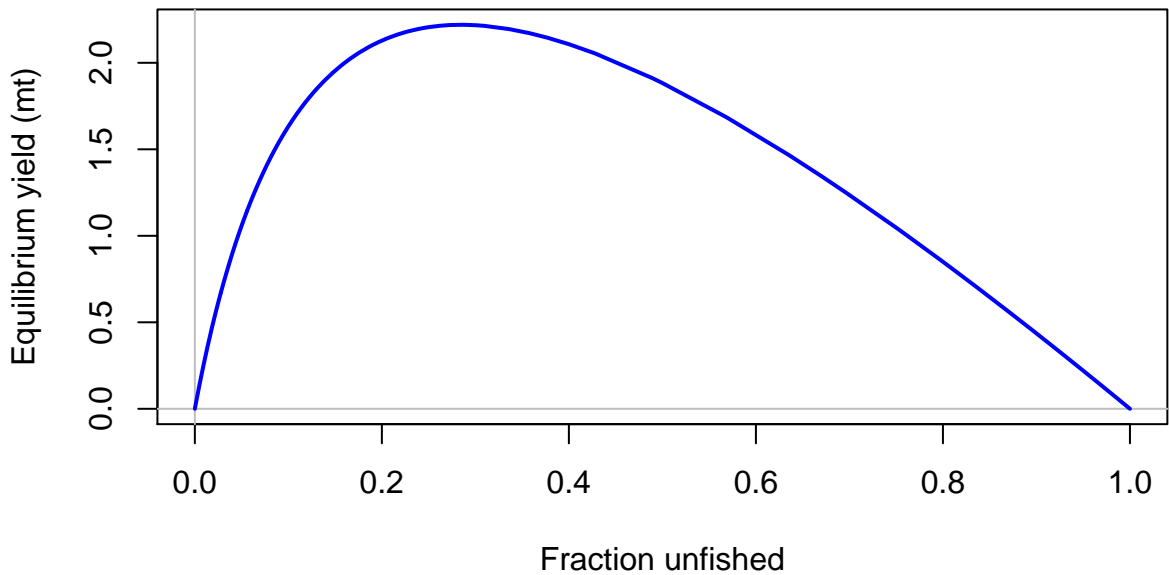


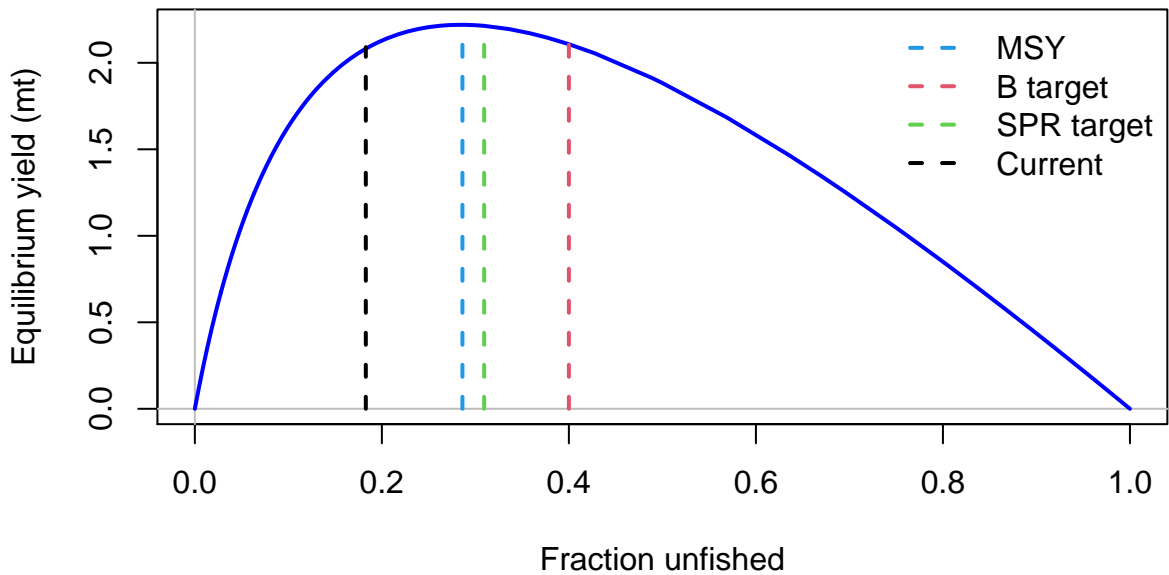
Effective sample size

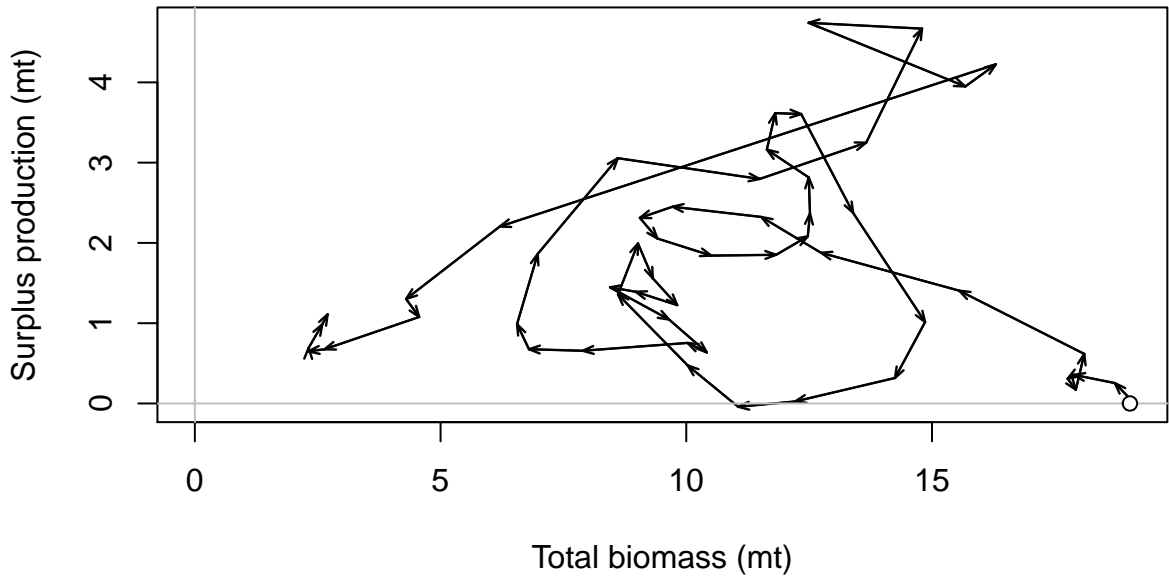


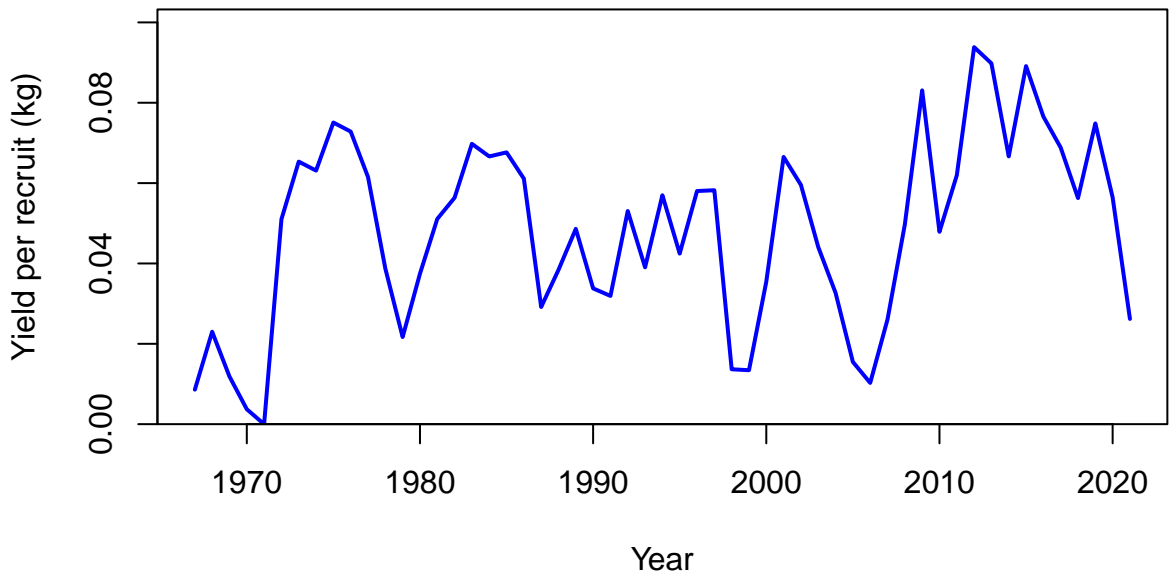
FISHERY (whole catch)

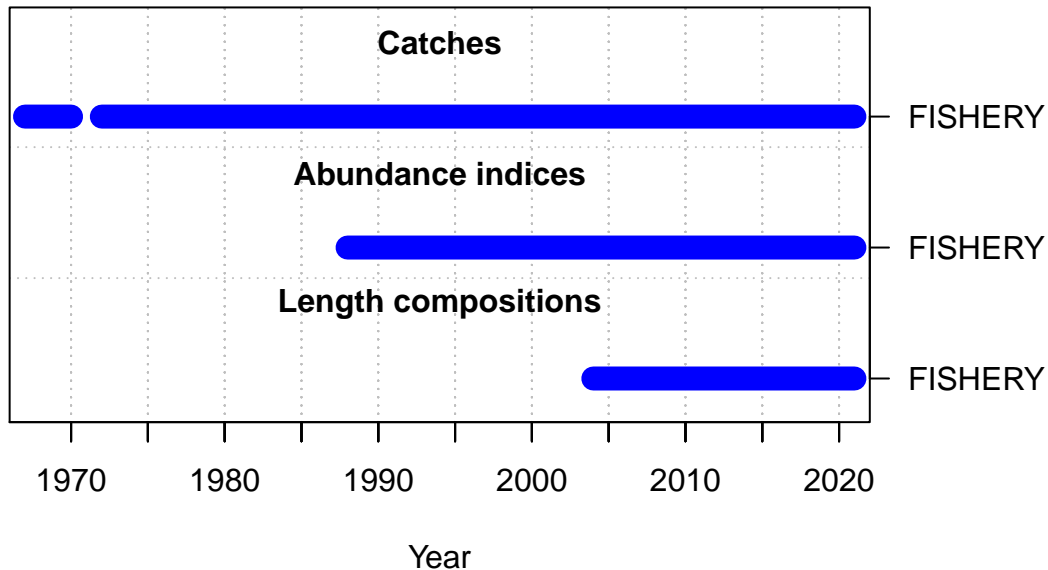


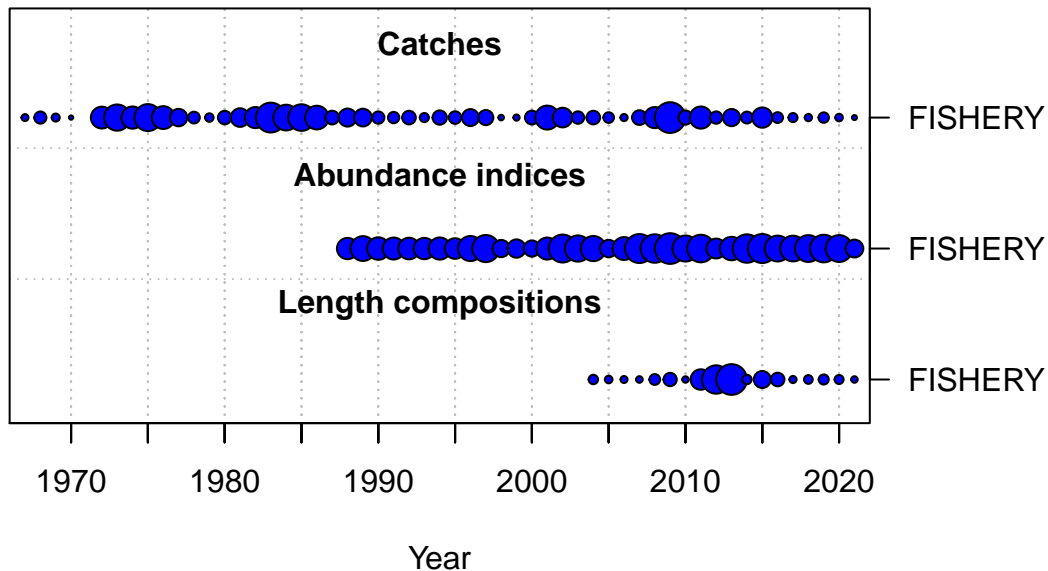




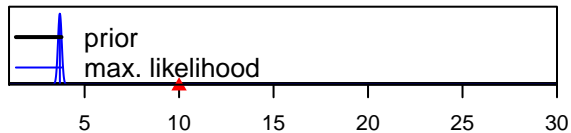




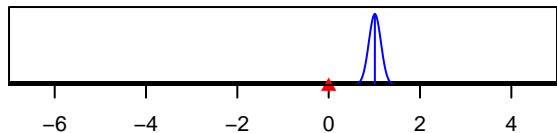




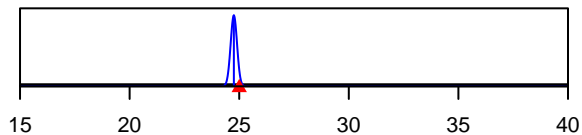
SR_LN(R0)



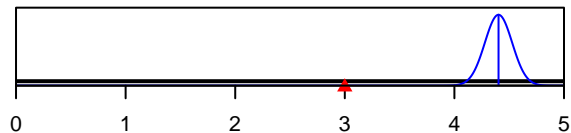
LnQ_base_FISHERY(1)



Size_inflection_FISHERY(1)



Size_95%width_FISHERY(1)



Parameter value