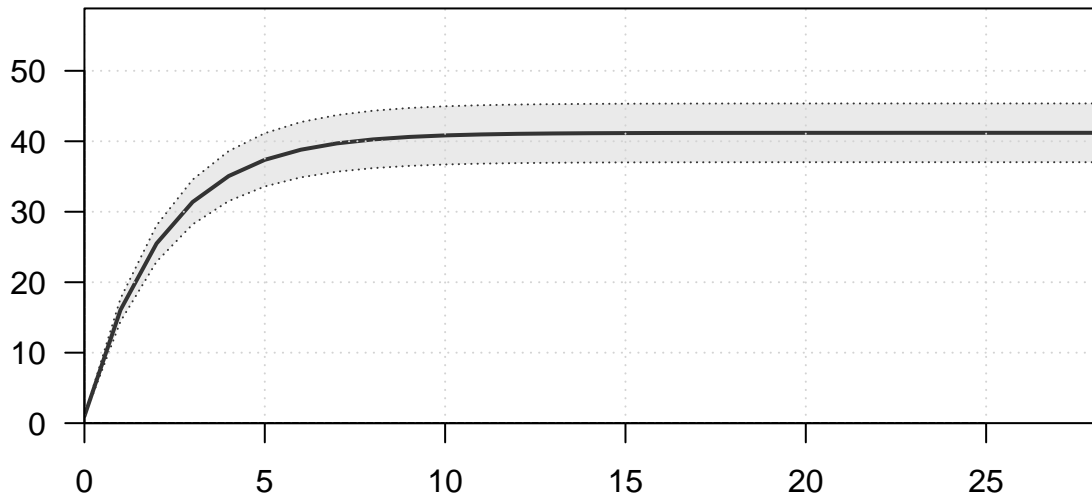
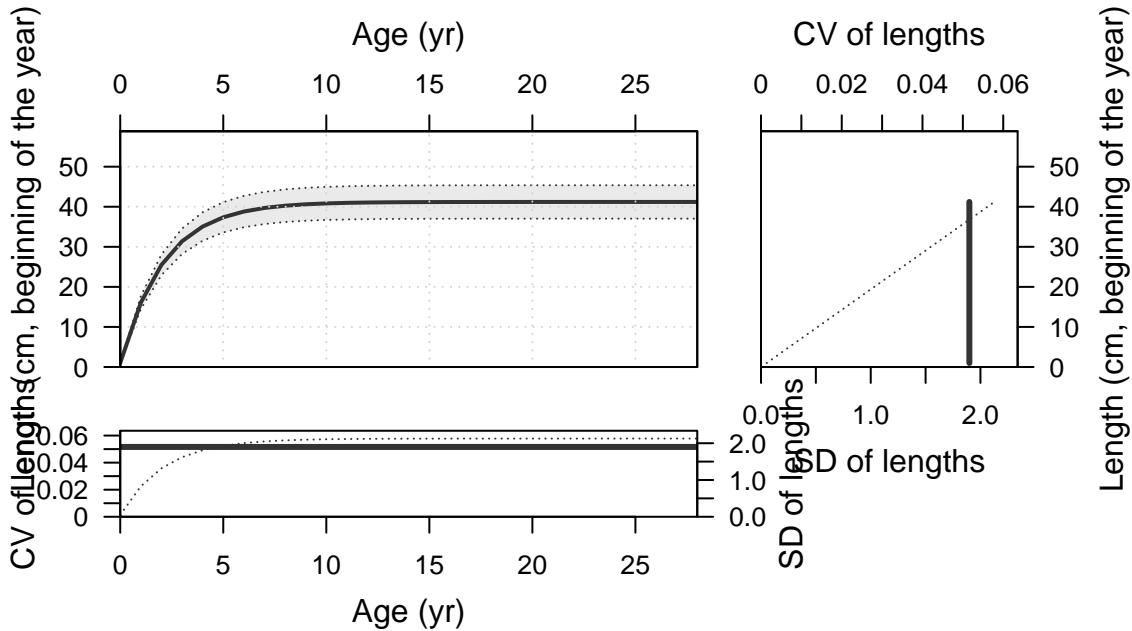


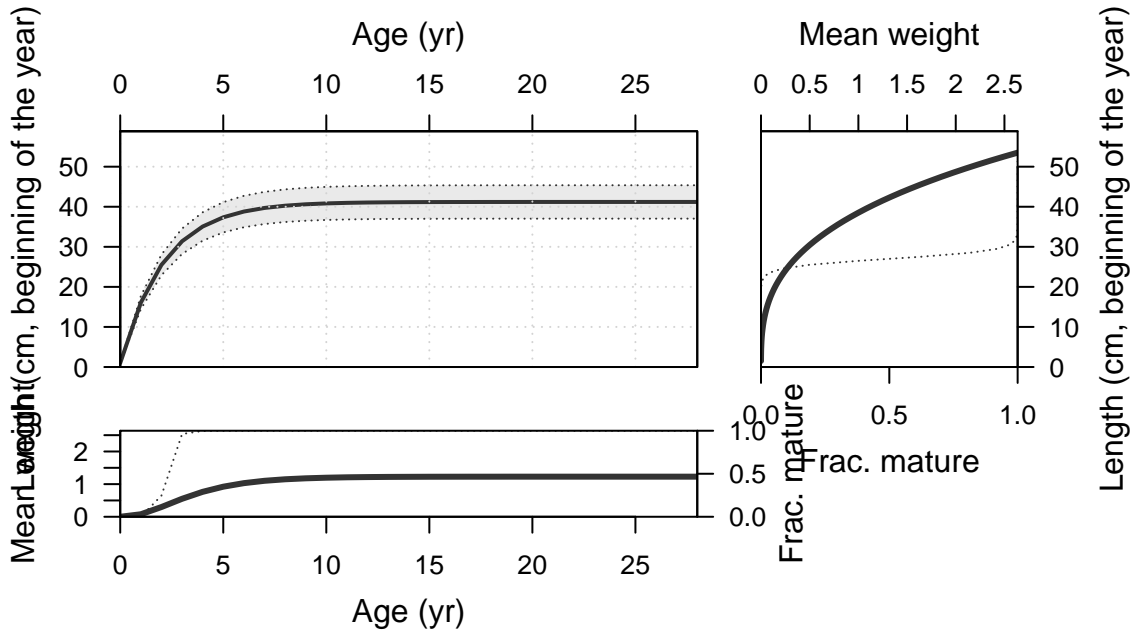
Plots created using the 'r4ss' package in R
Stock Synthesis version: 3.30.19.0
StartTime: Wed Aug 10 15:30:23 2022
Data_File: data.ss
Control_File: control.ss

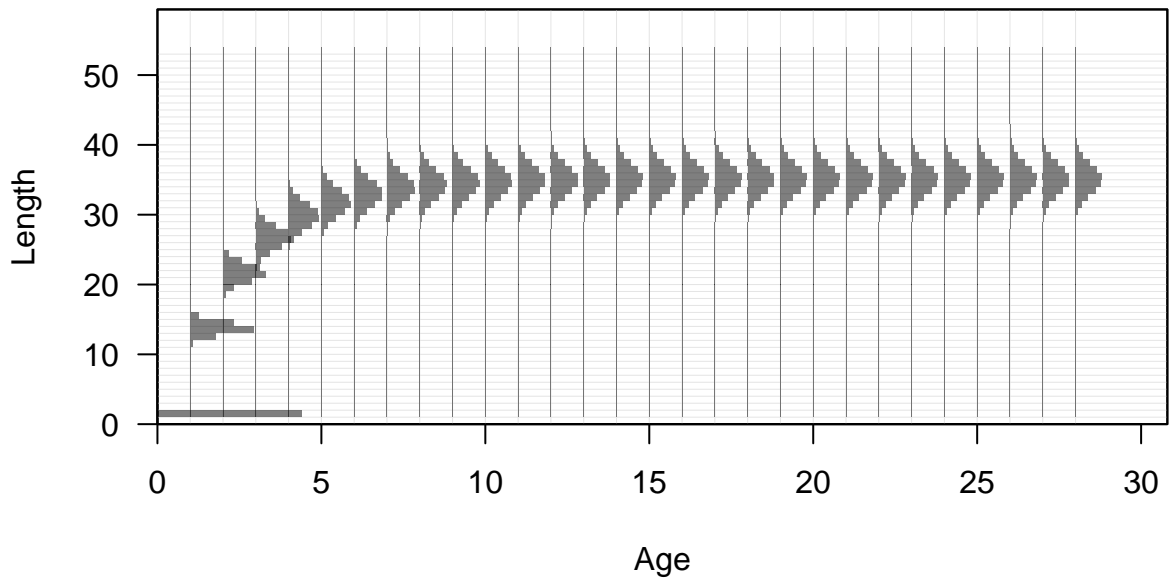
Length (cm, beginning of the year)

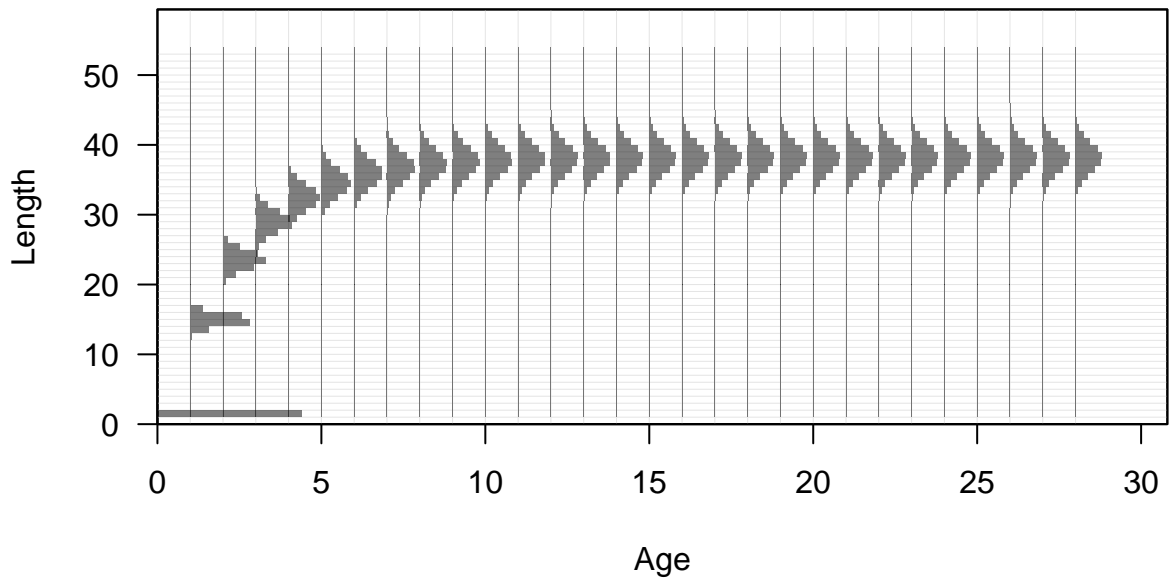


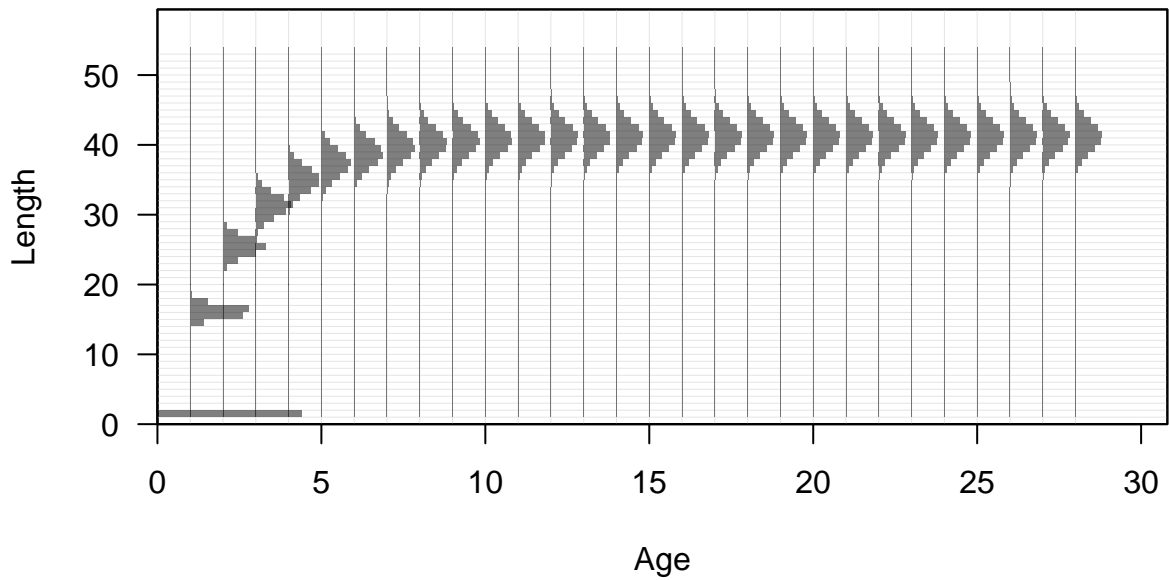
Age (yr)

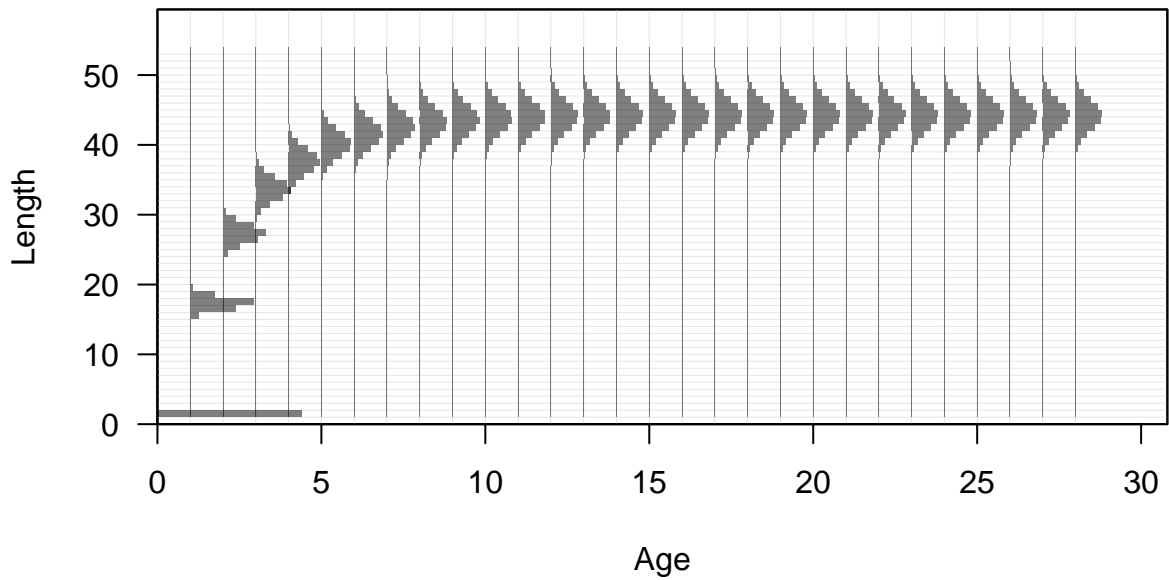


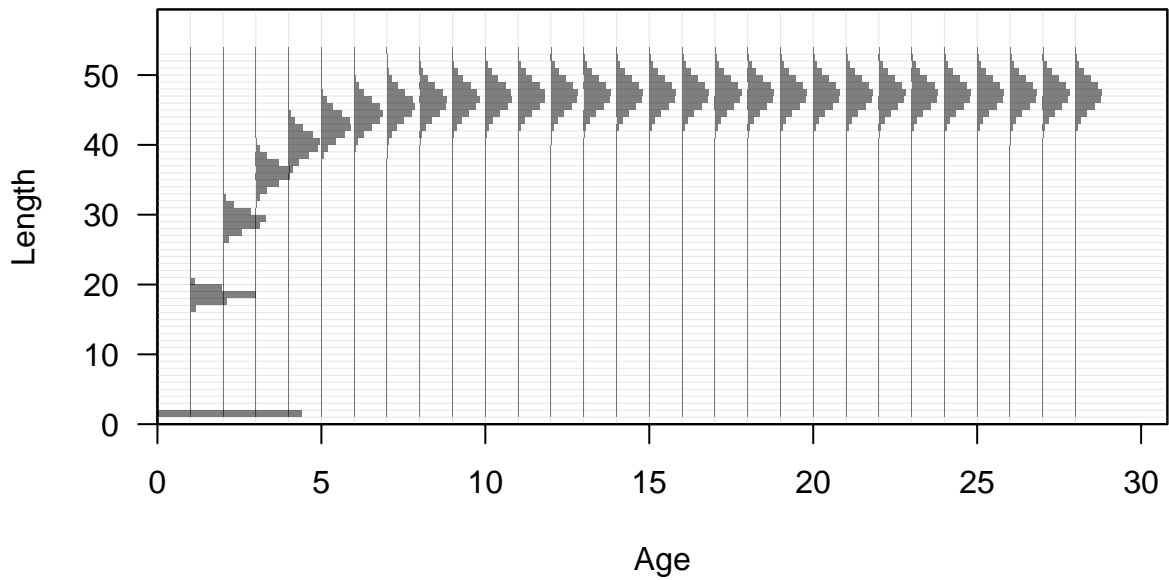


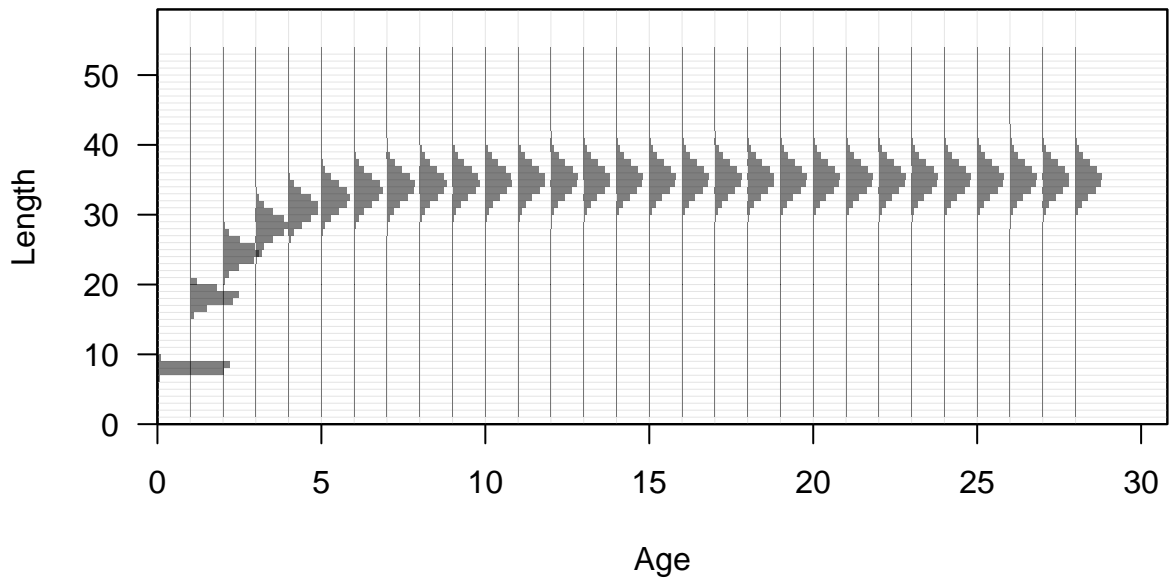


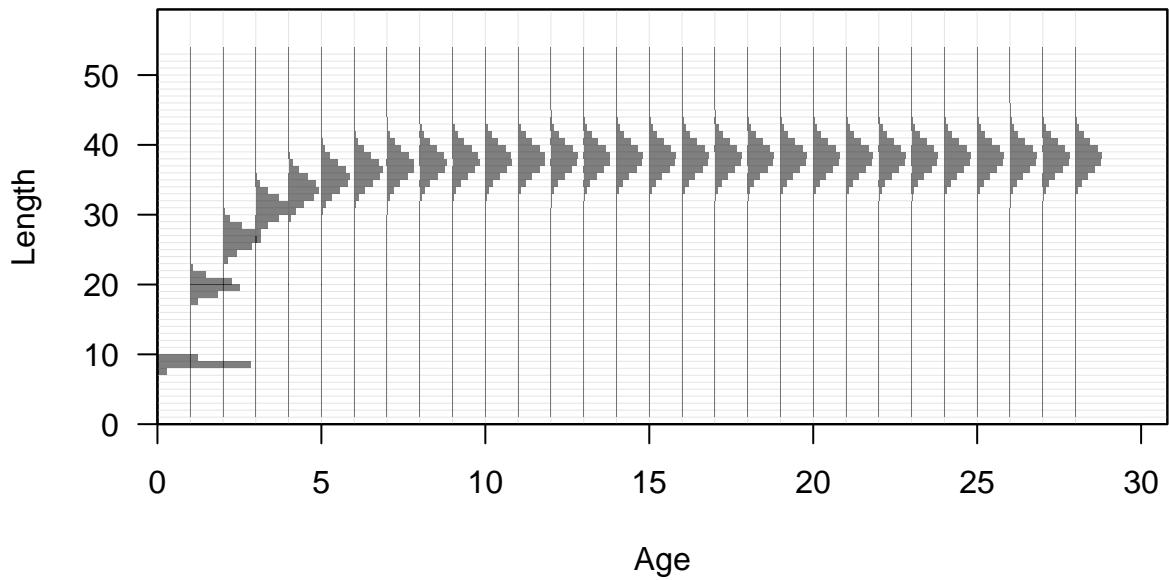


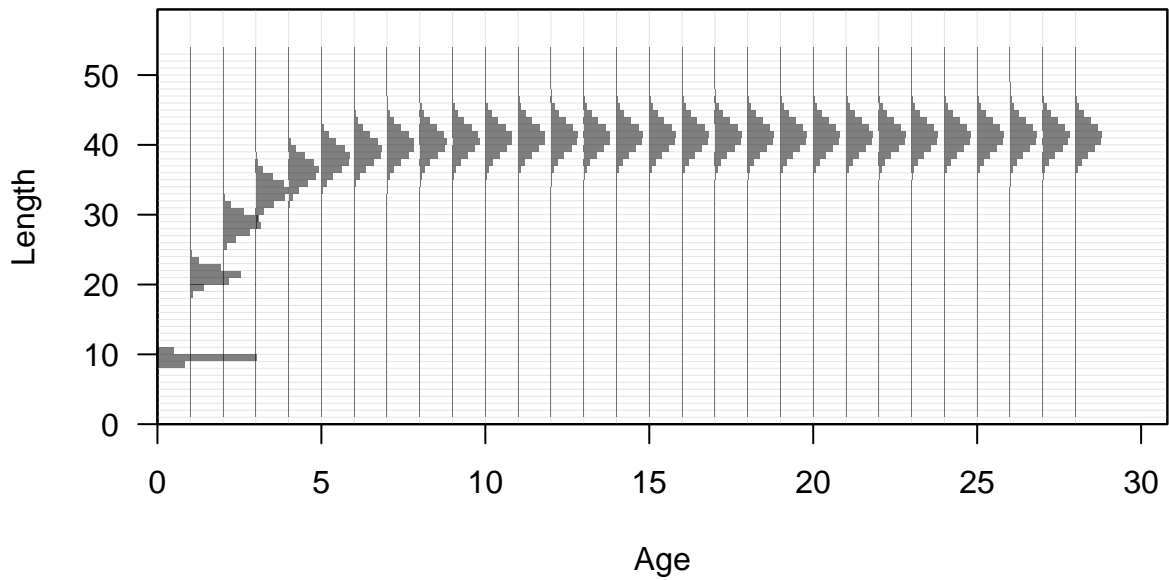


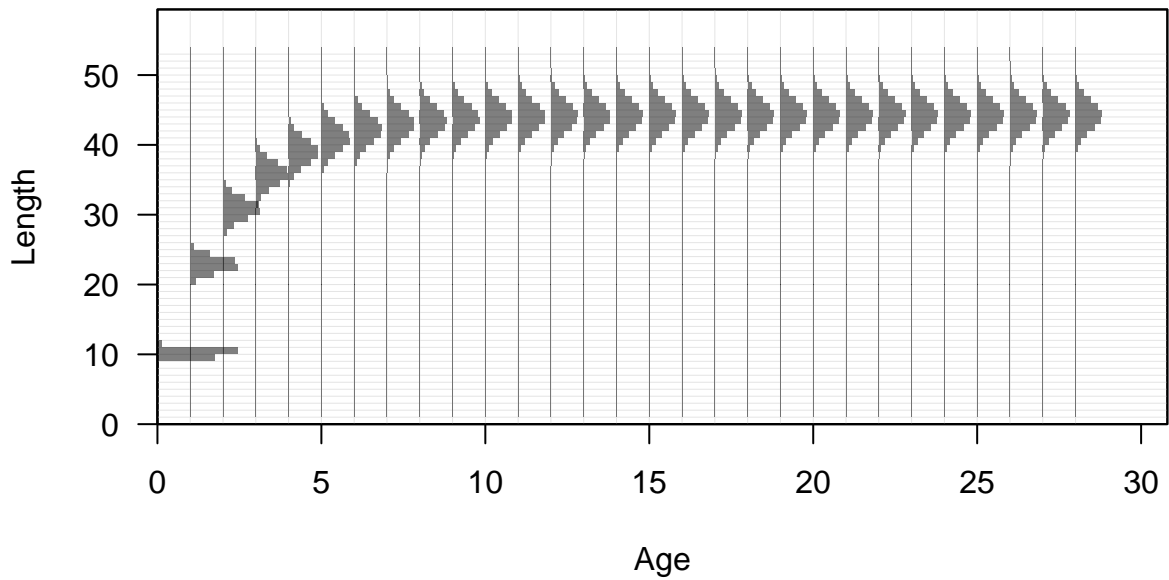


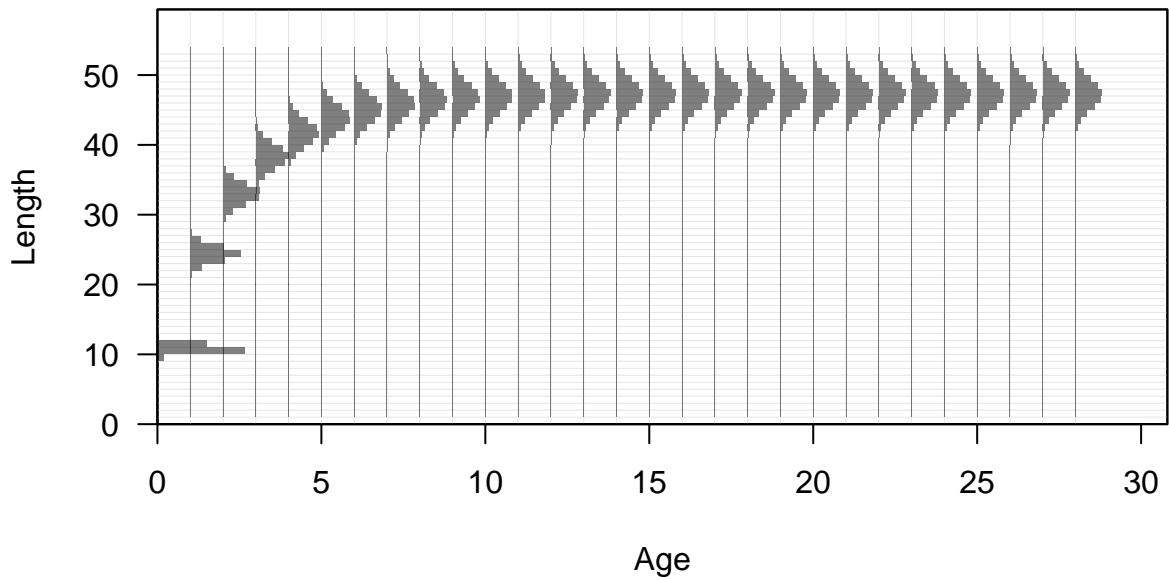


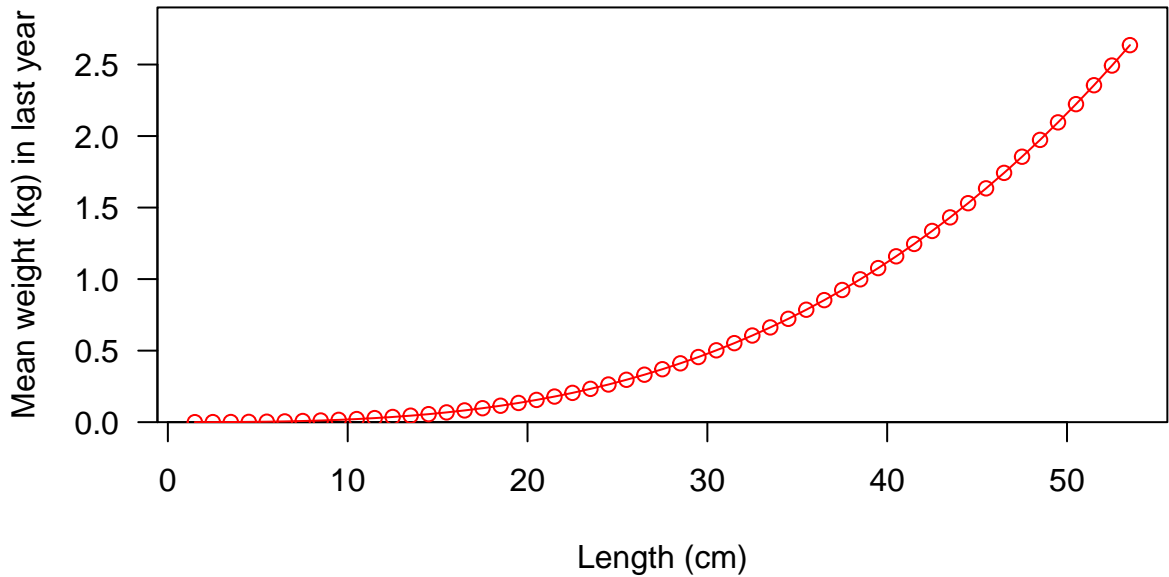


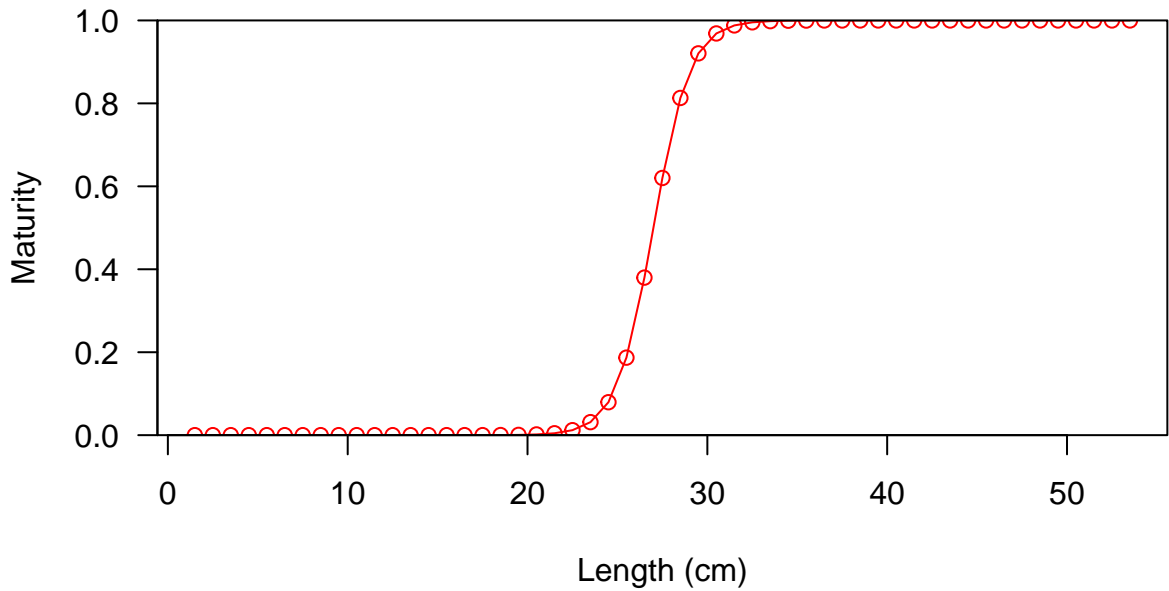


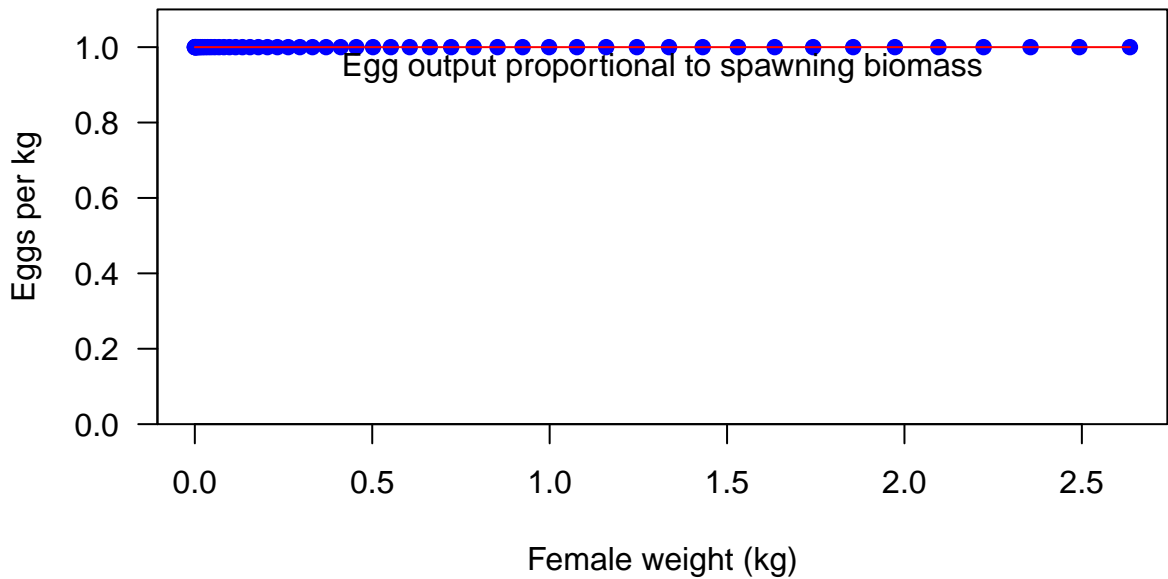


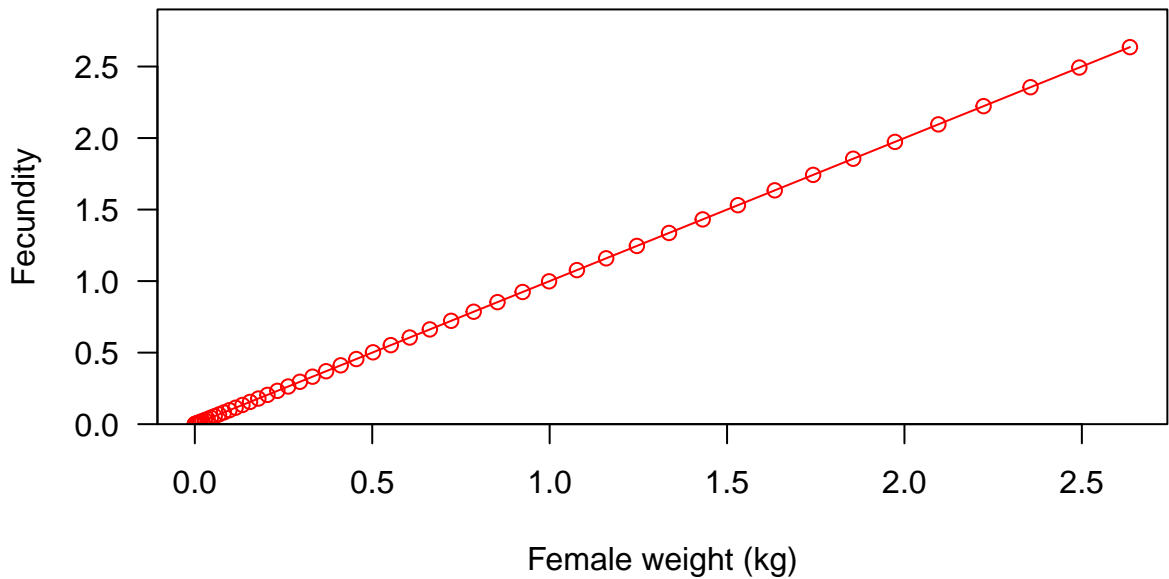


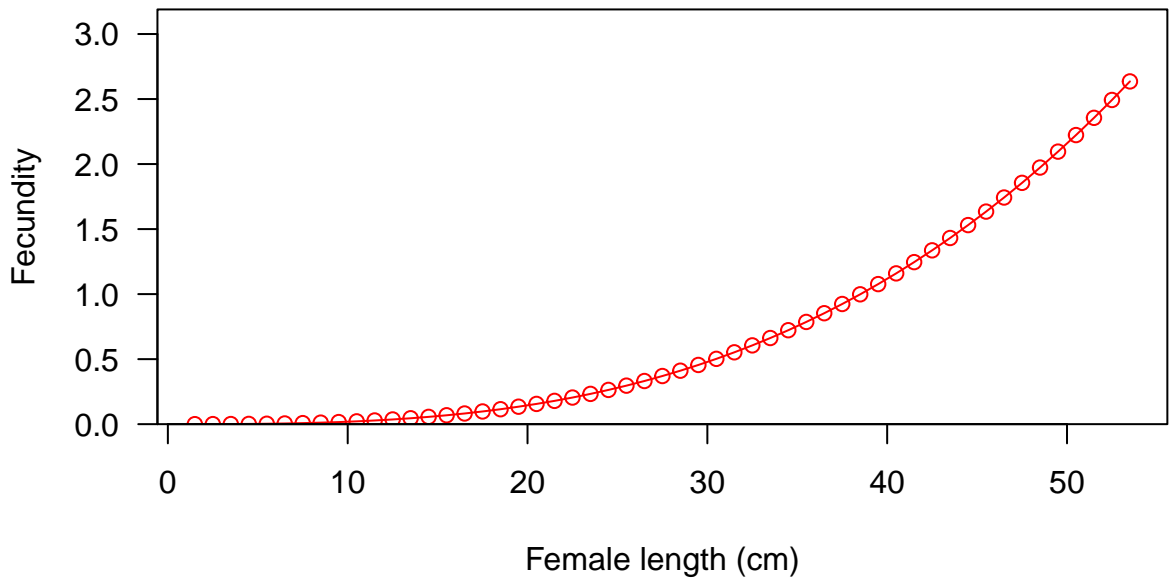


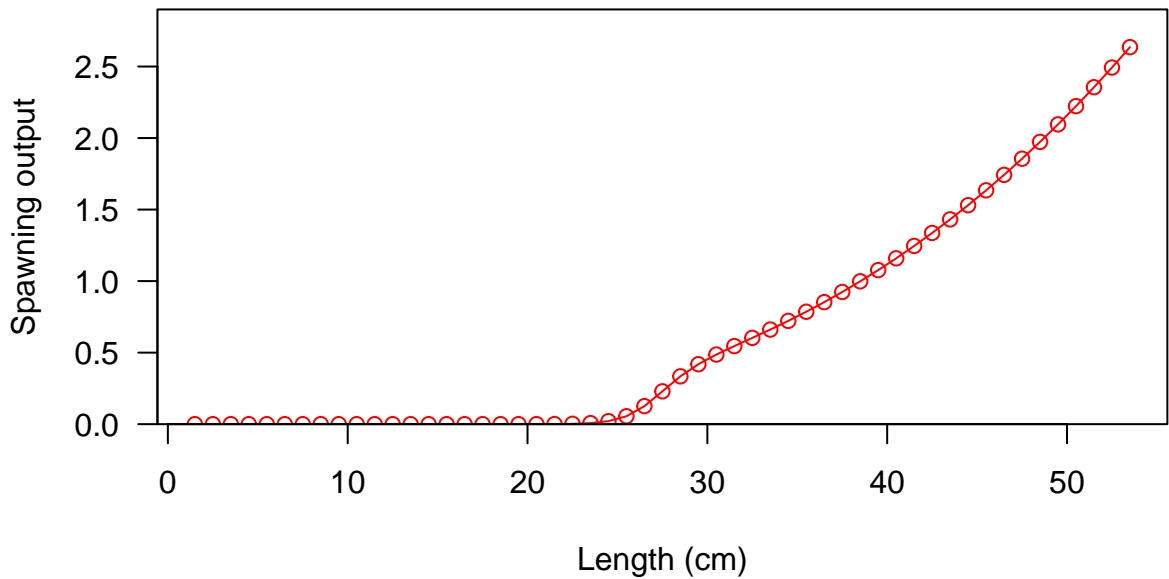


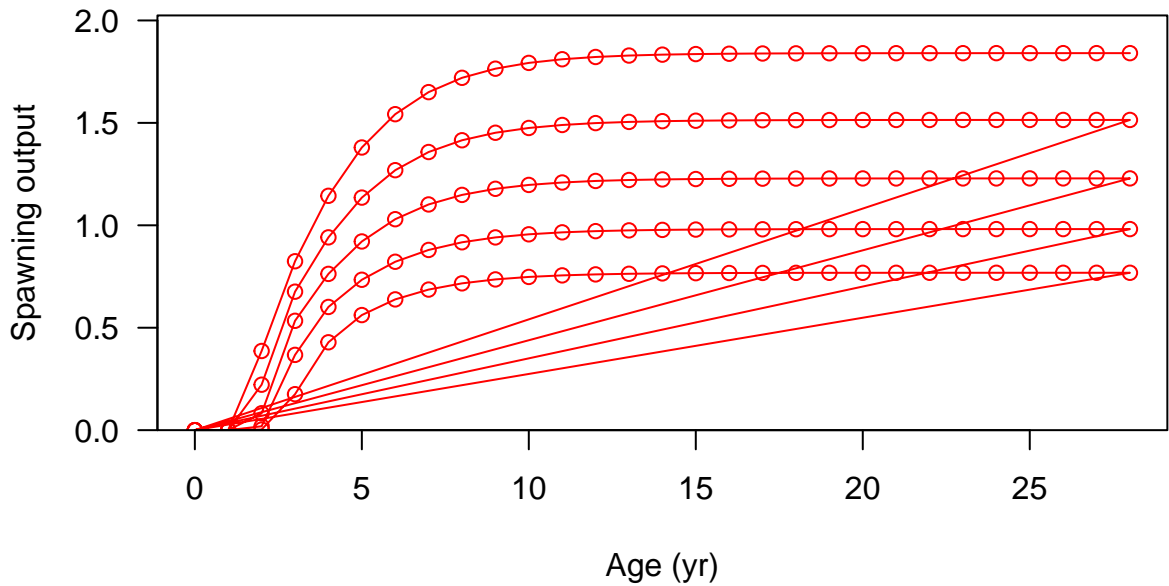




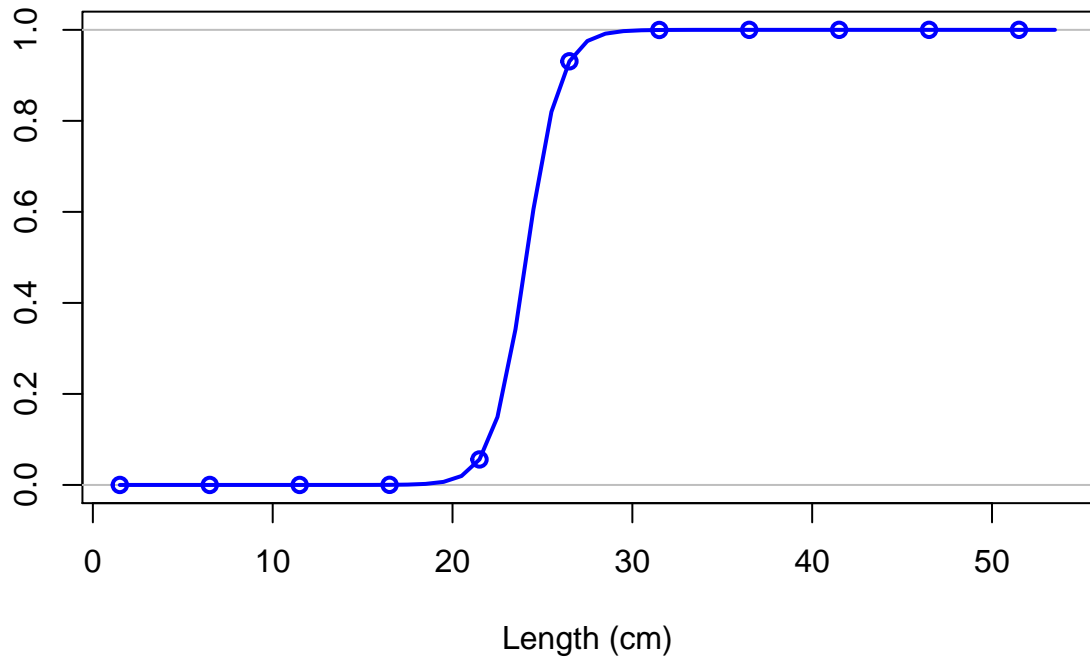




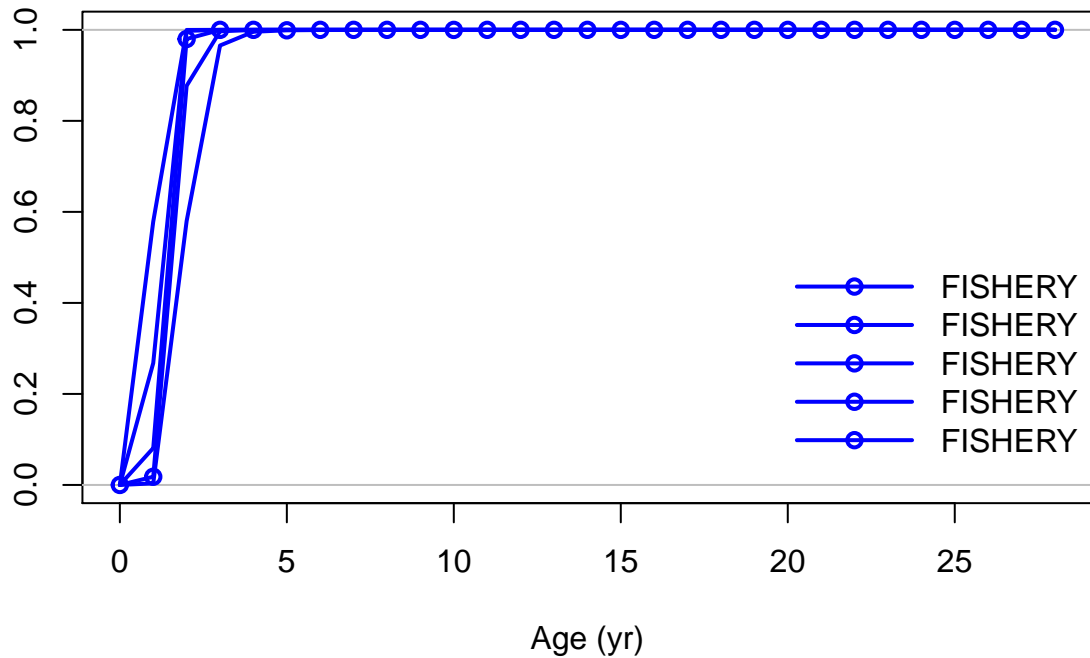




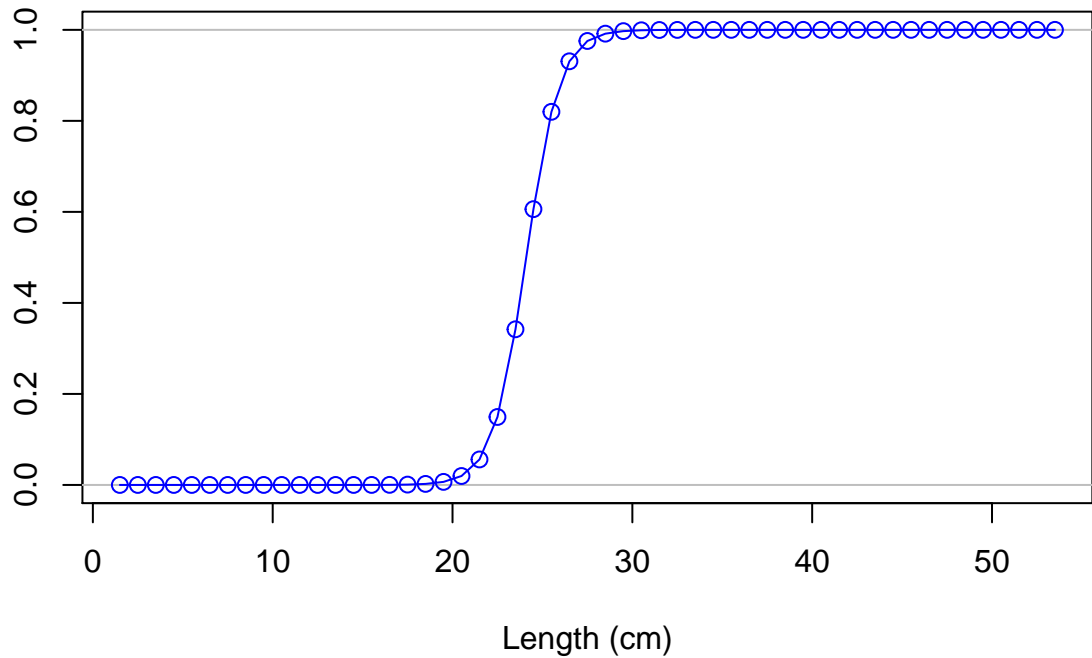
Selectivity

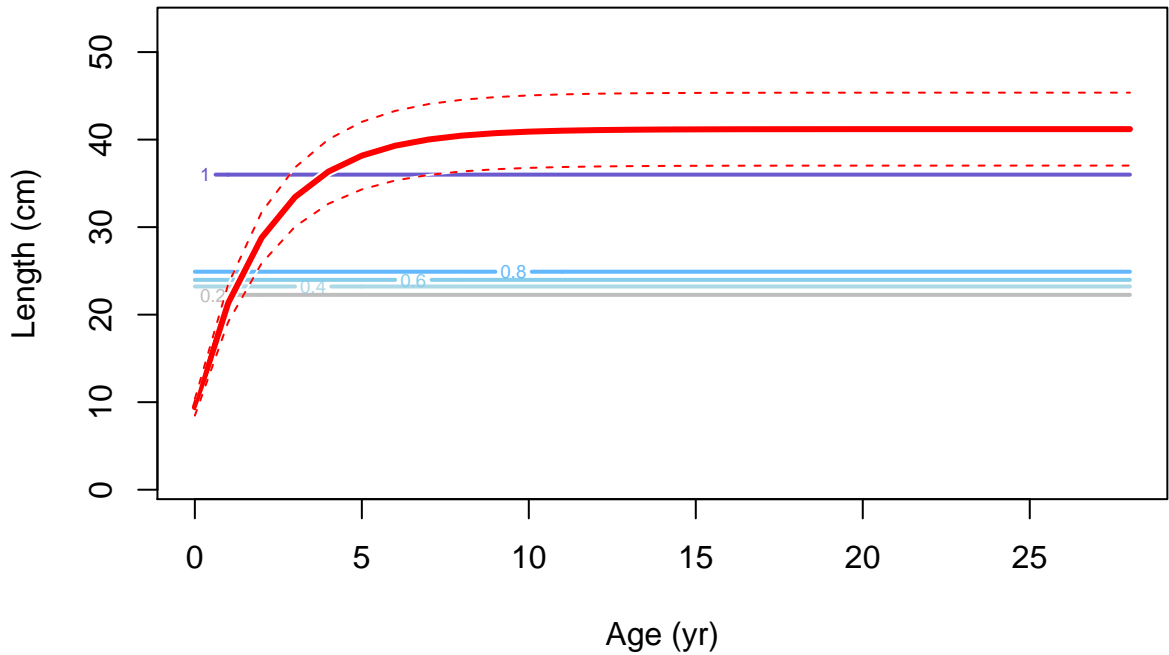


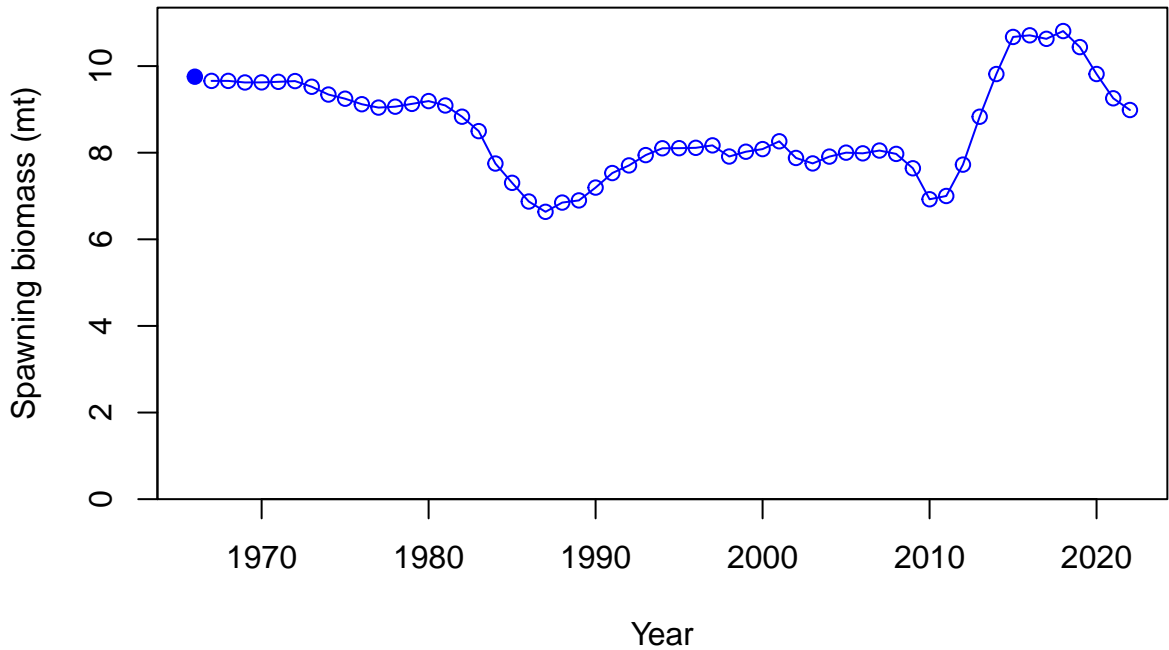
Selectivity

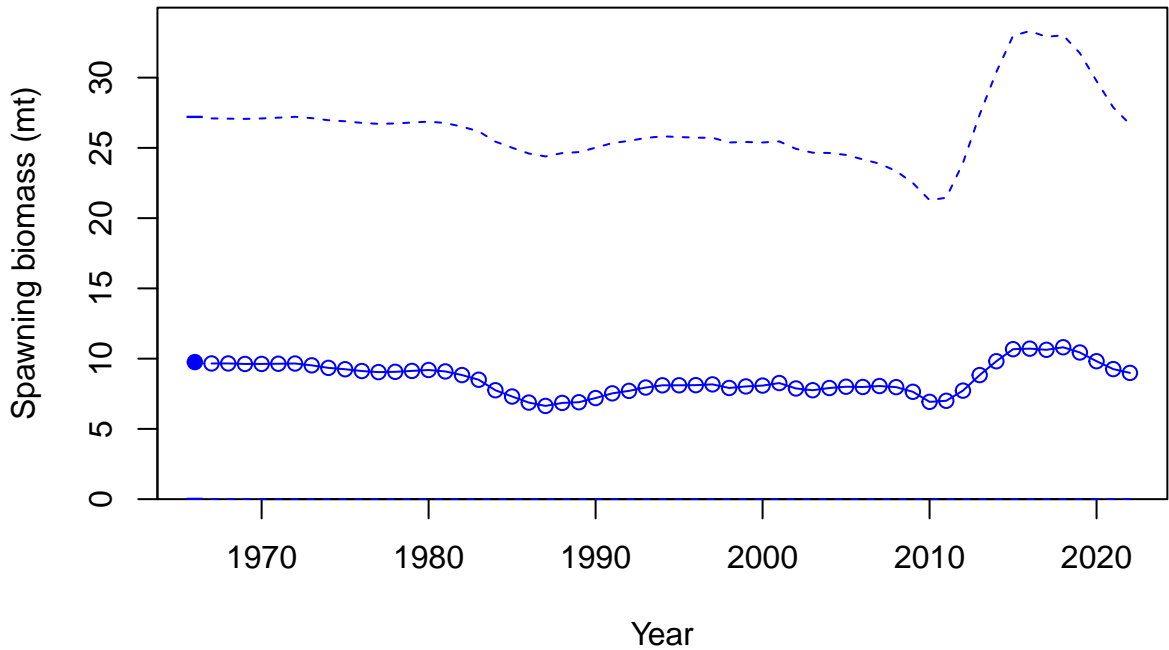


Selectivity

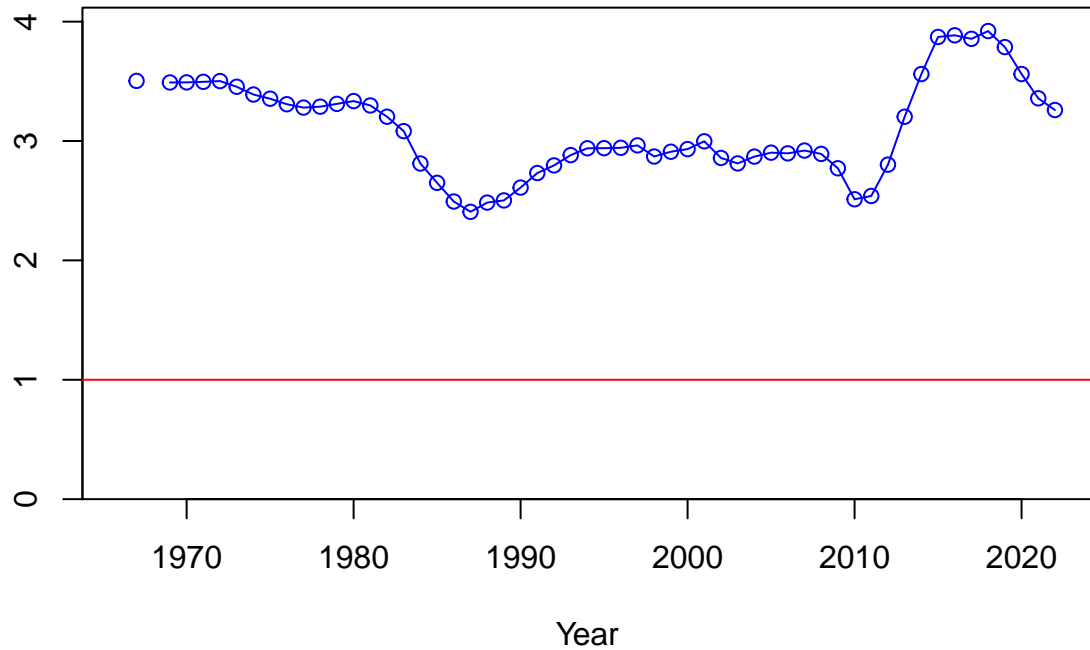




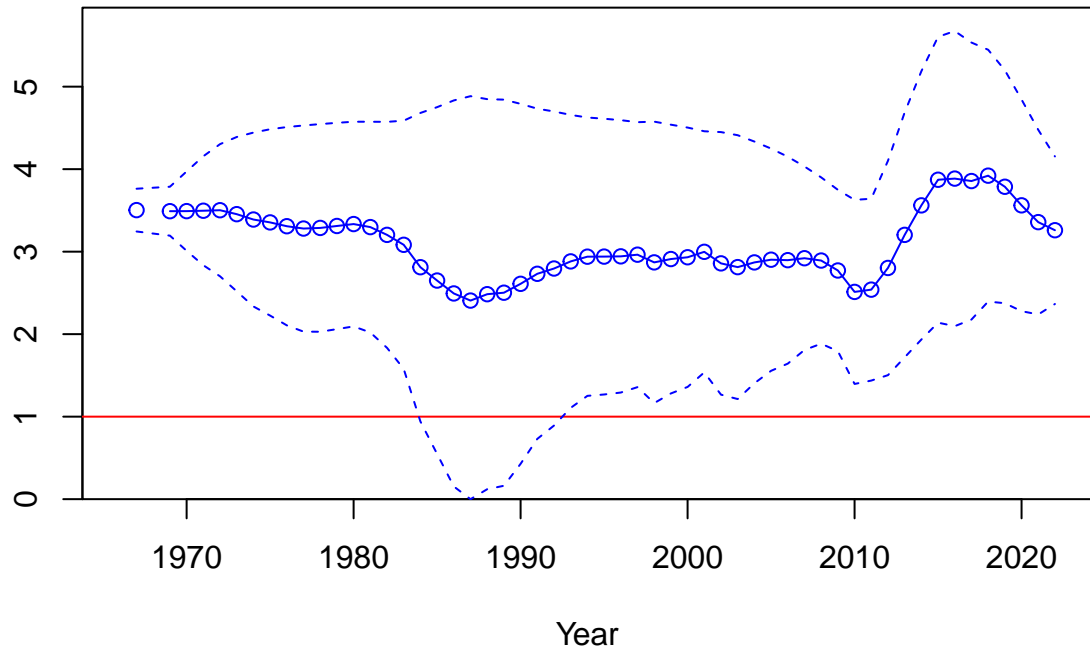


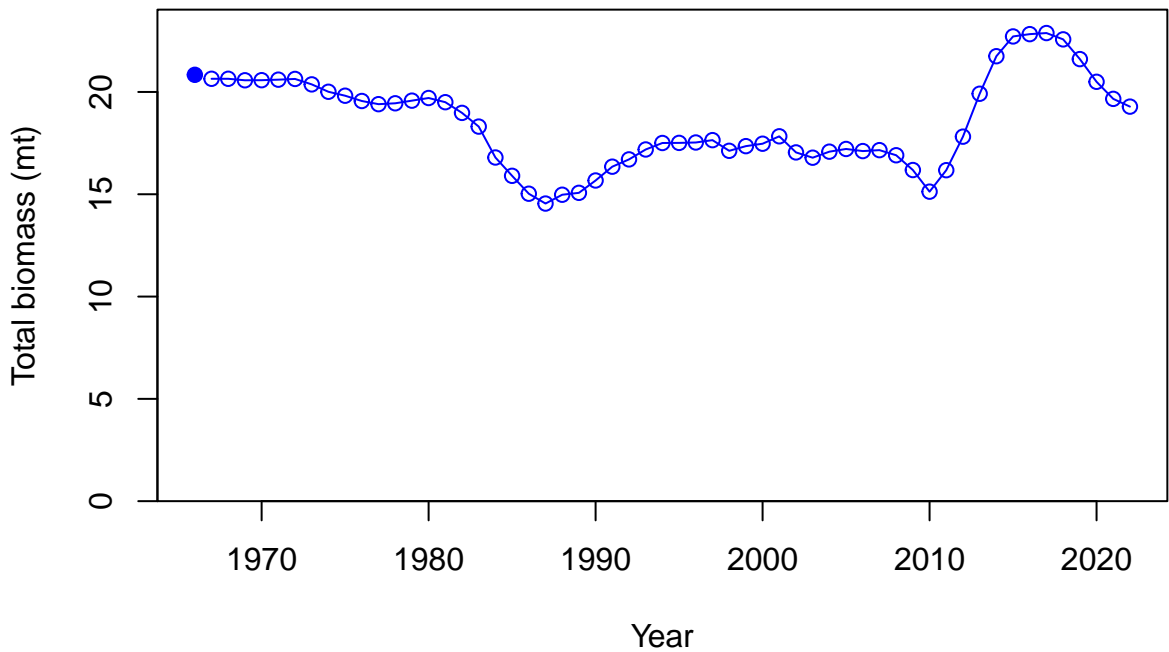


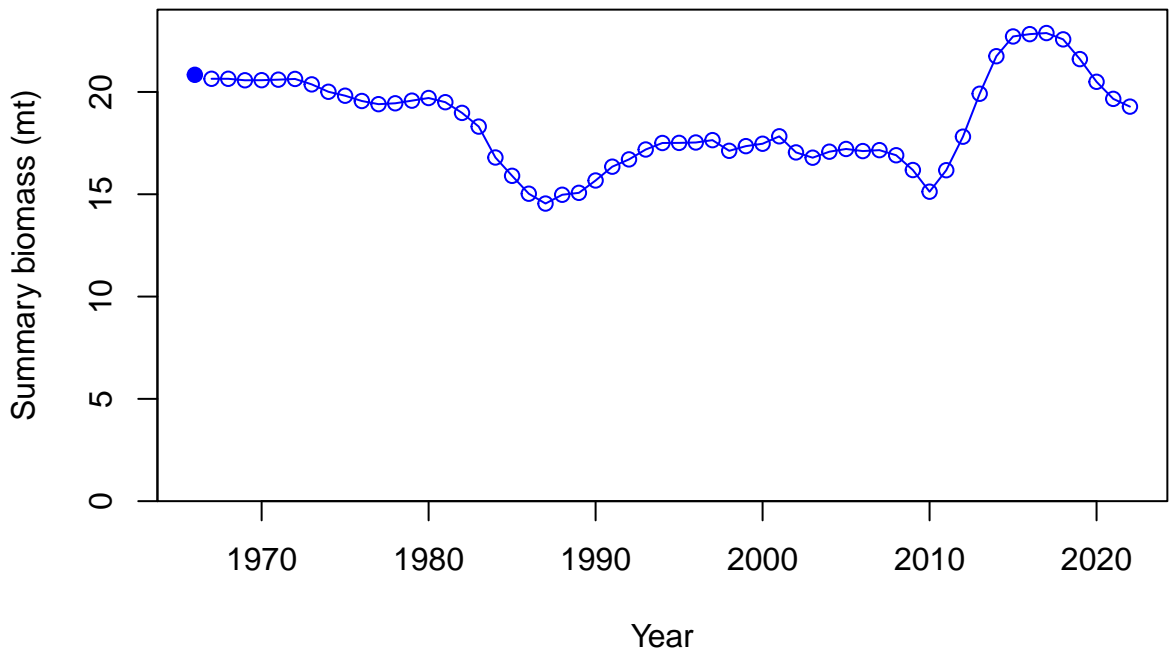
Relative spawning biomass: B/B_{MSY}

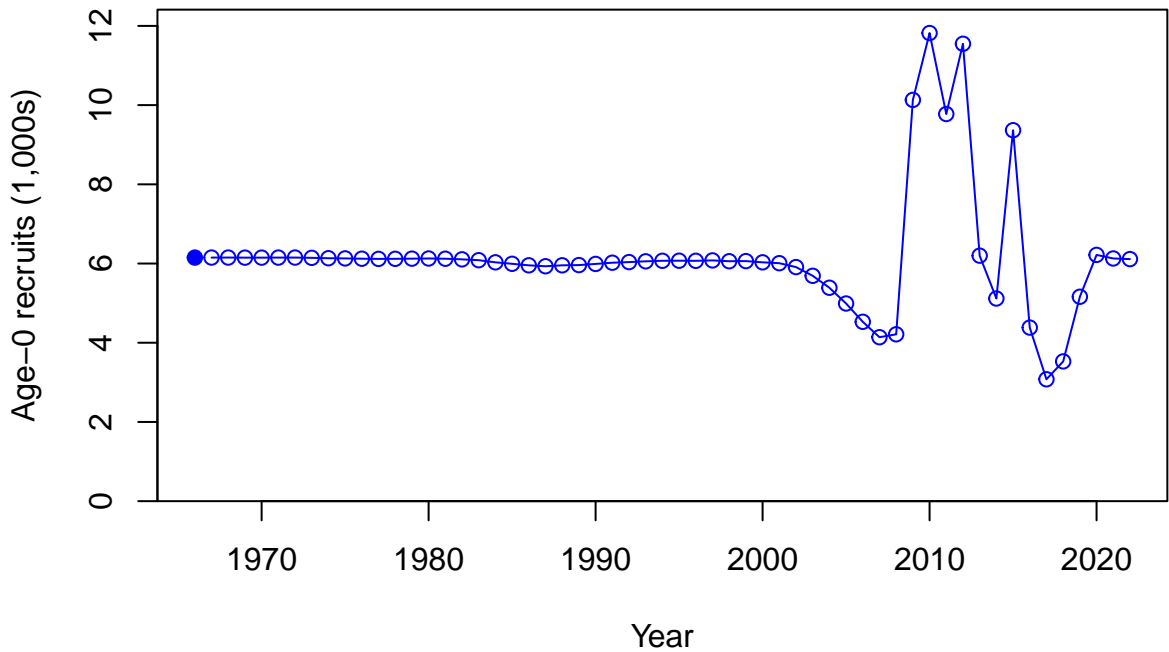


Relative spawning biomass: B/B_{MSY}

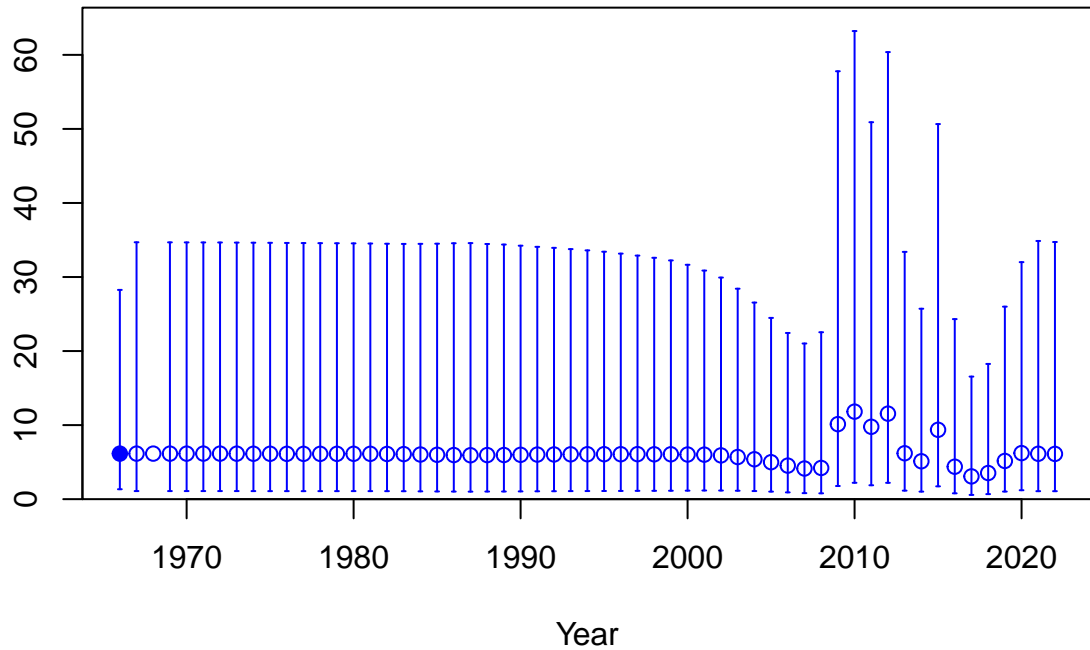




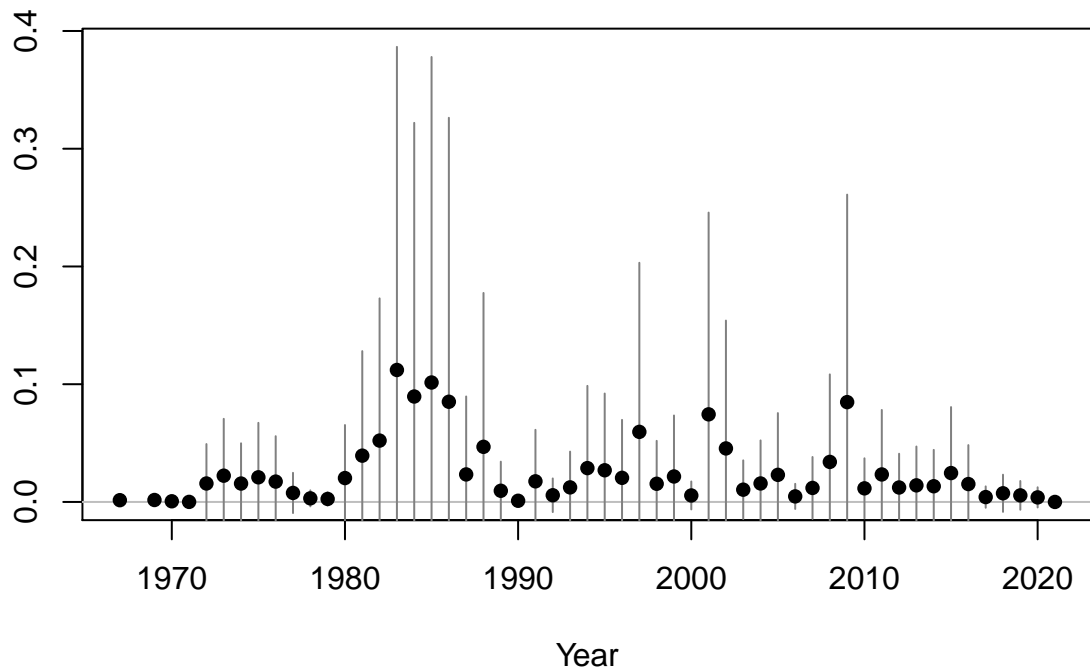


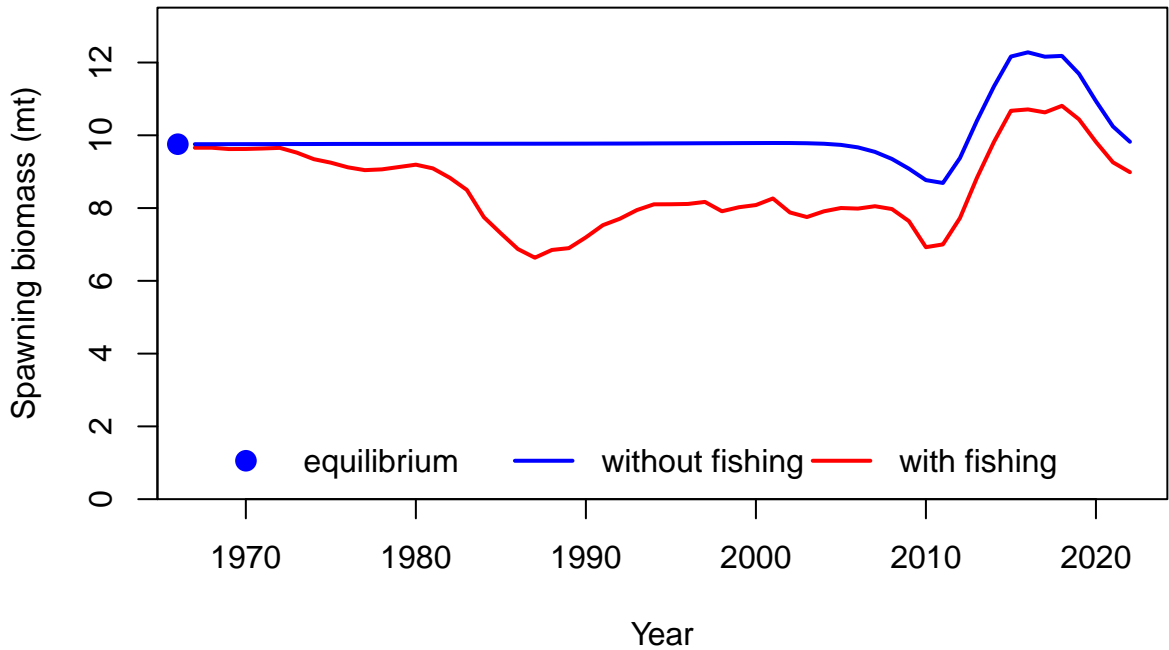


Age-0 recruits (1,000s)



Summary Fishing Mortality





Log recruitment deviation

0.5
0.0
-0.5

1970

1980

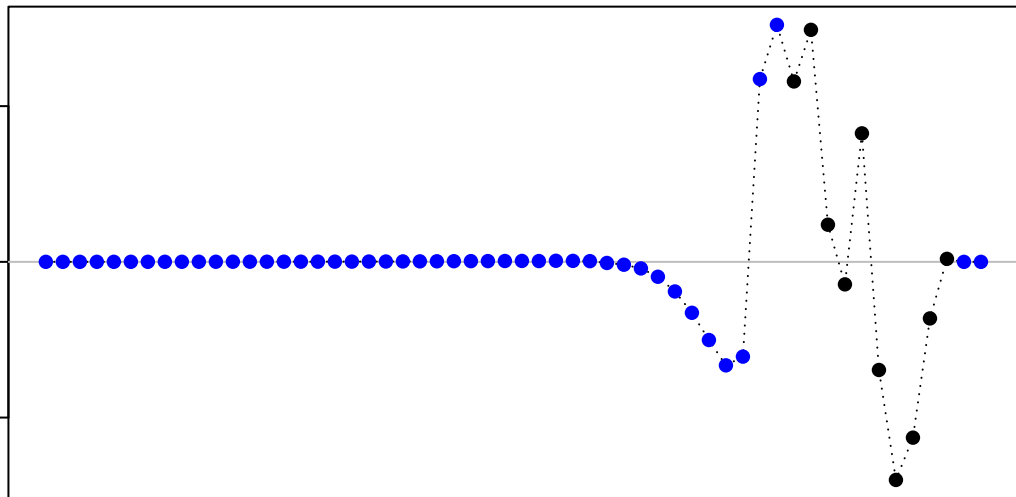
1990

2000

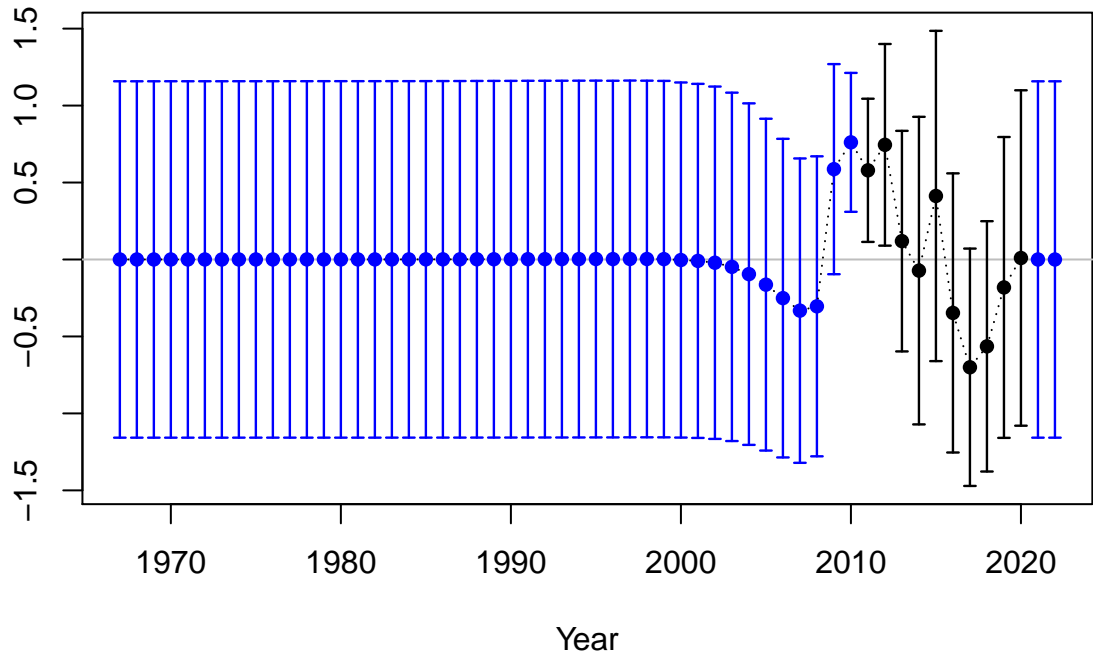
2010

2020

Year

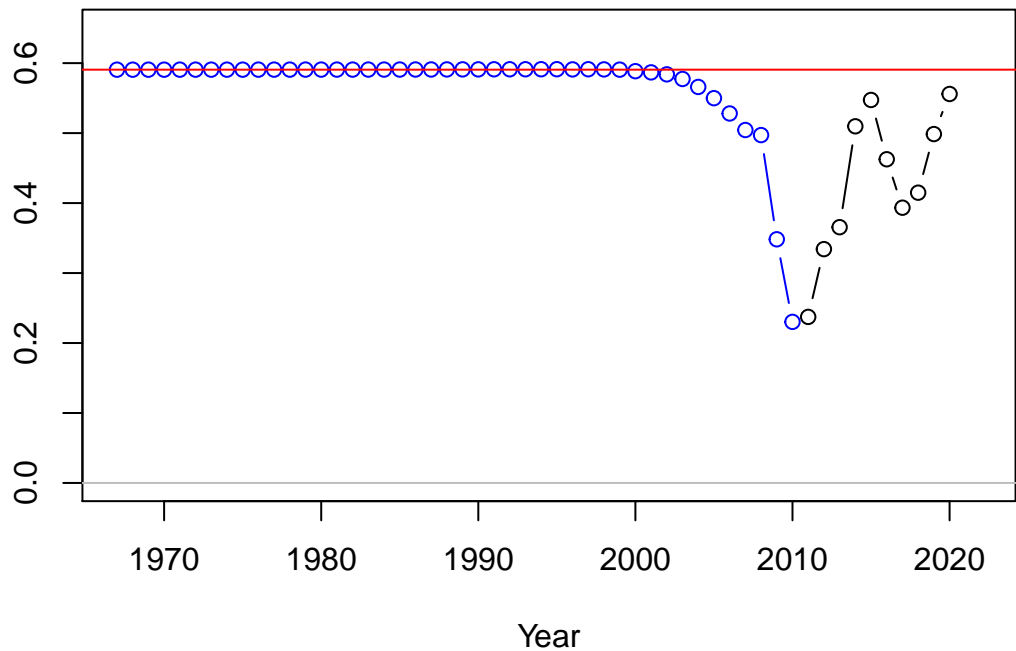


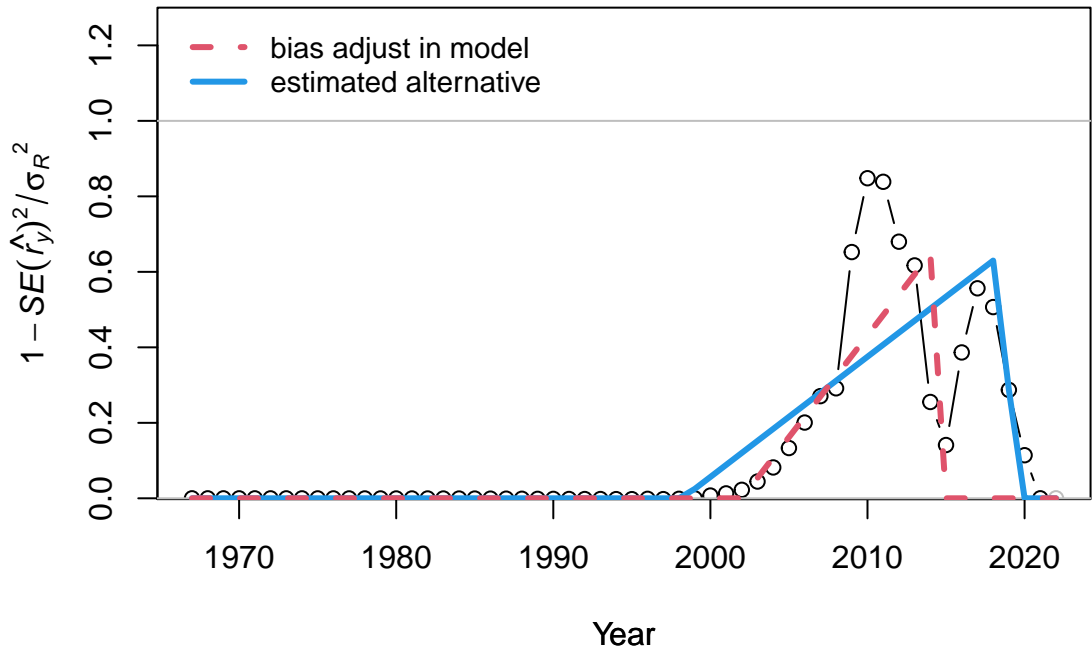
Log recruitment deviation

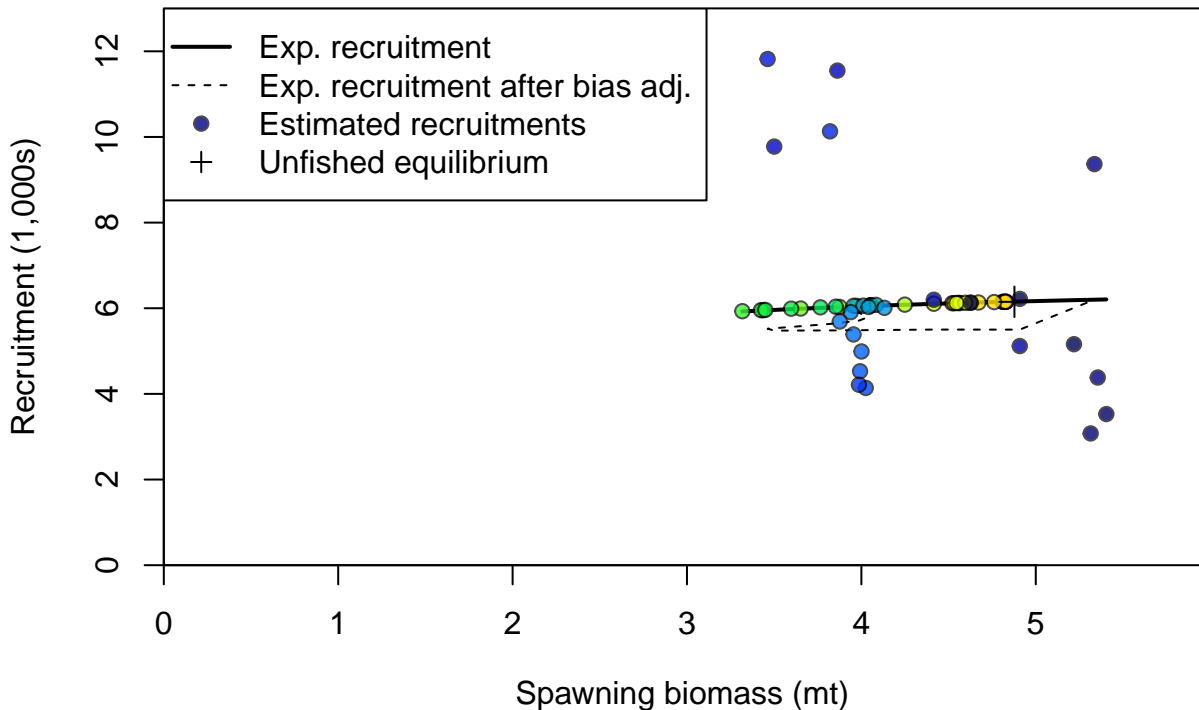


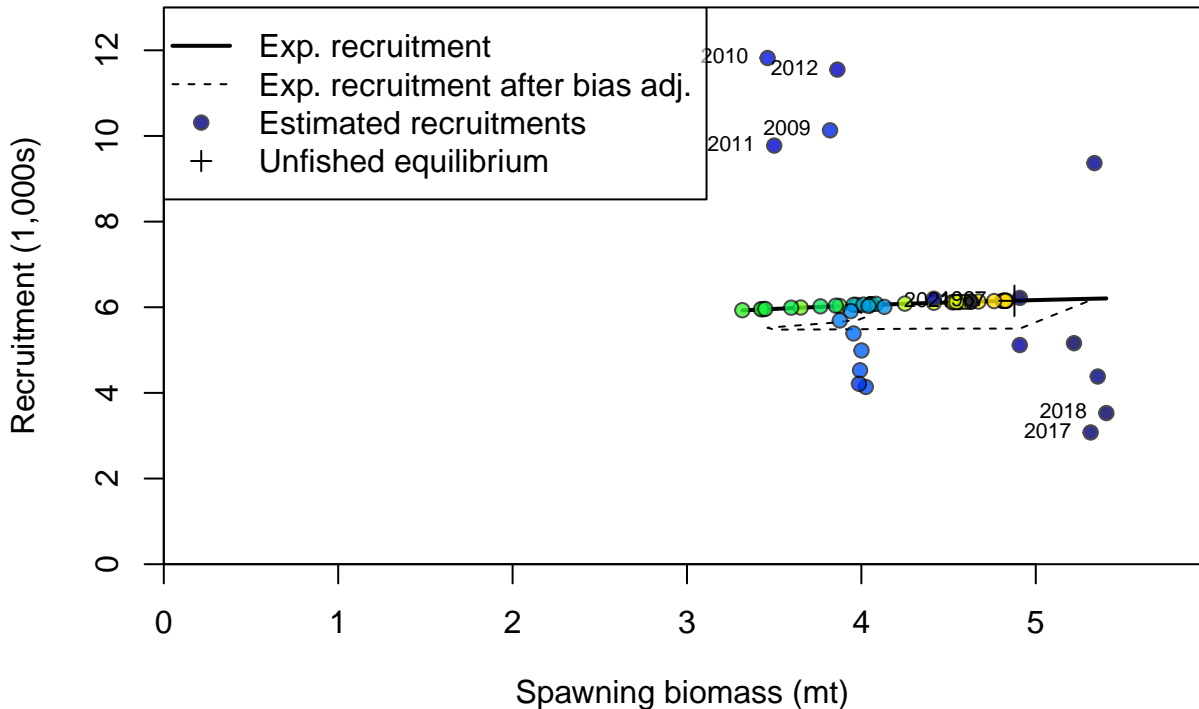
Recruitment deviation variance

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)

2010

2012

2011

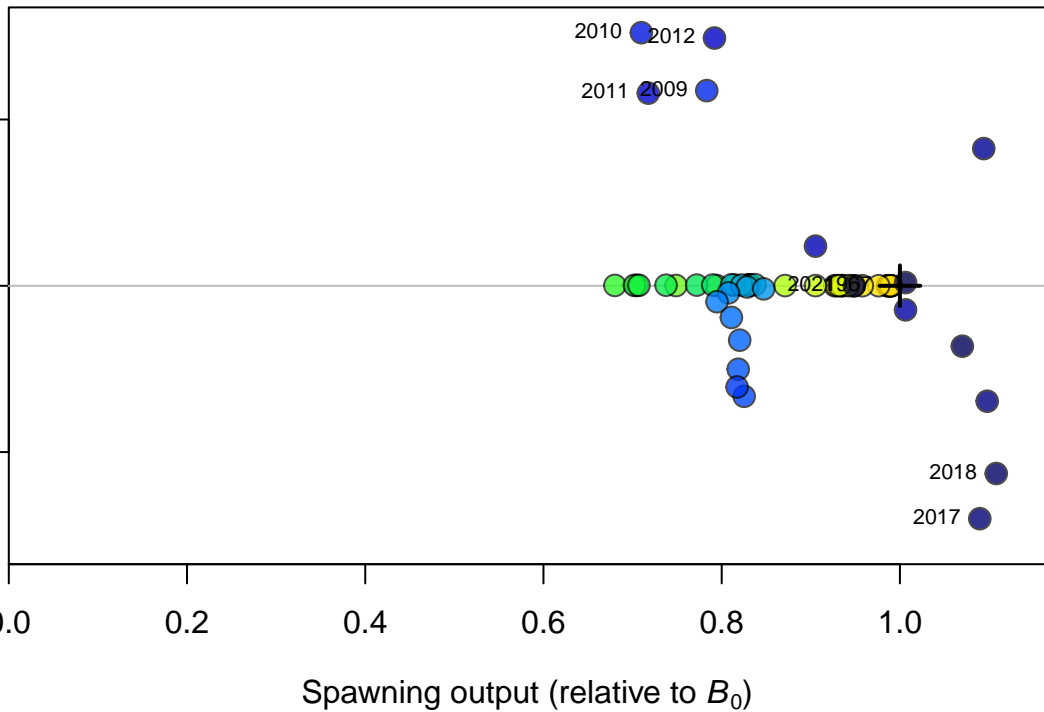
2009

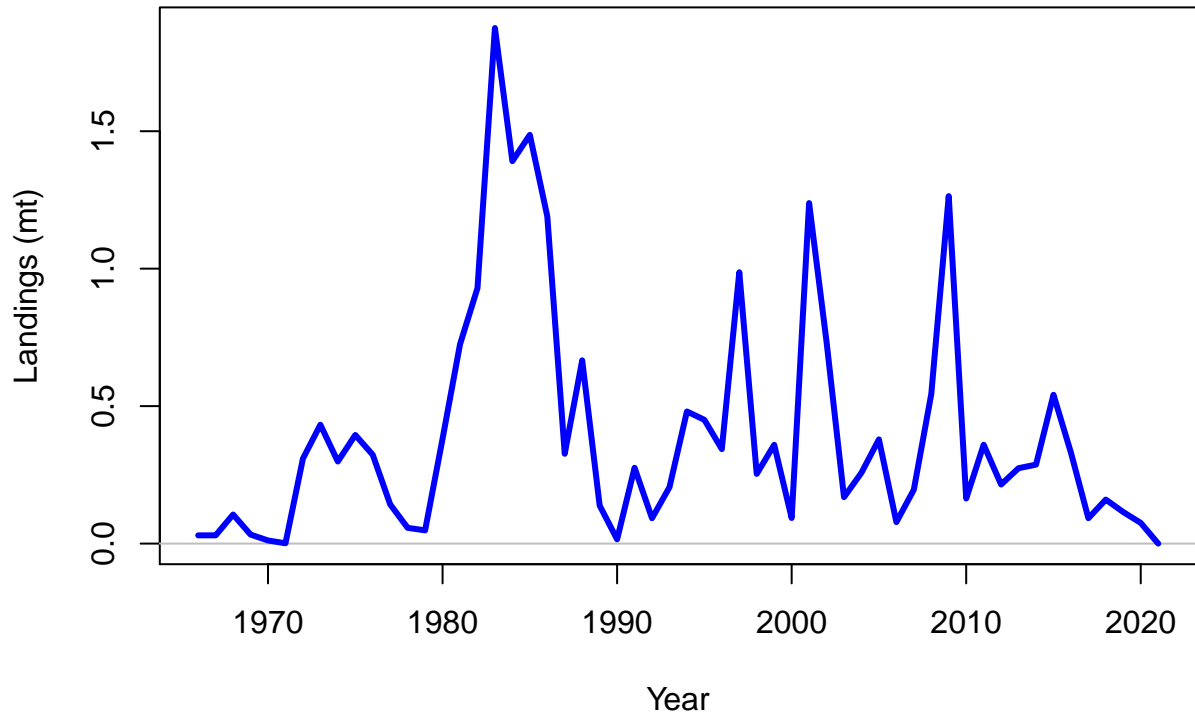
2020

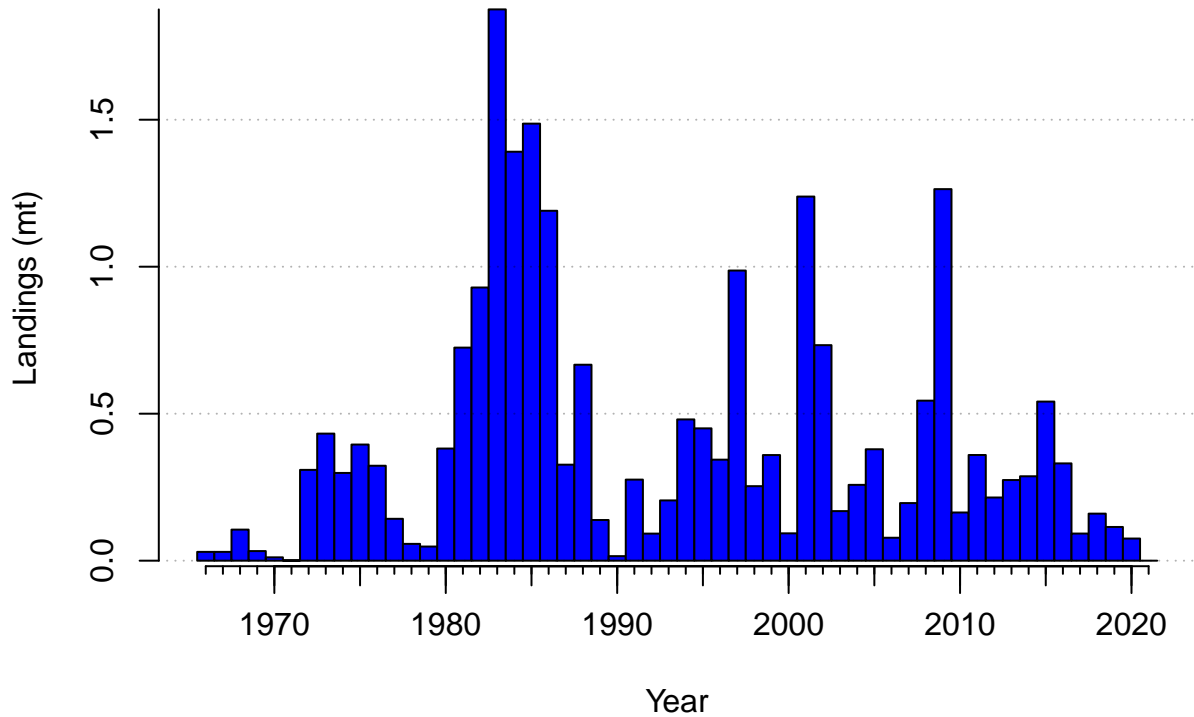
1997

2018

2017







Observed and expected Landings (mt)

FISHERY
FISHERY obs.

1.5
1.0
0.5
0.0

1970

1980

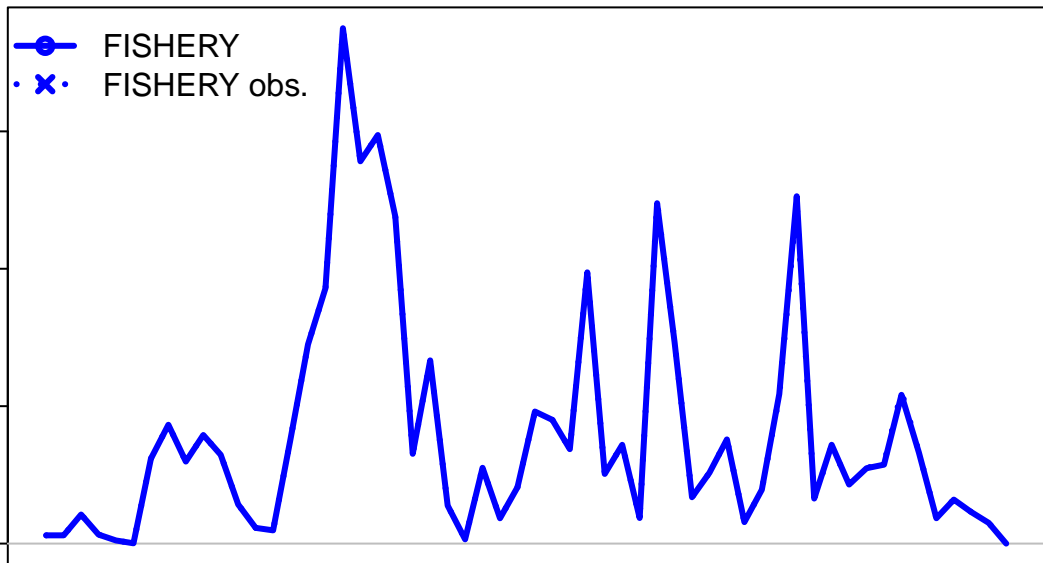
1990

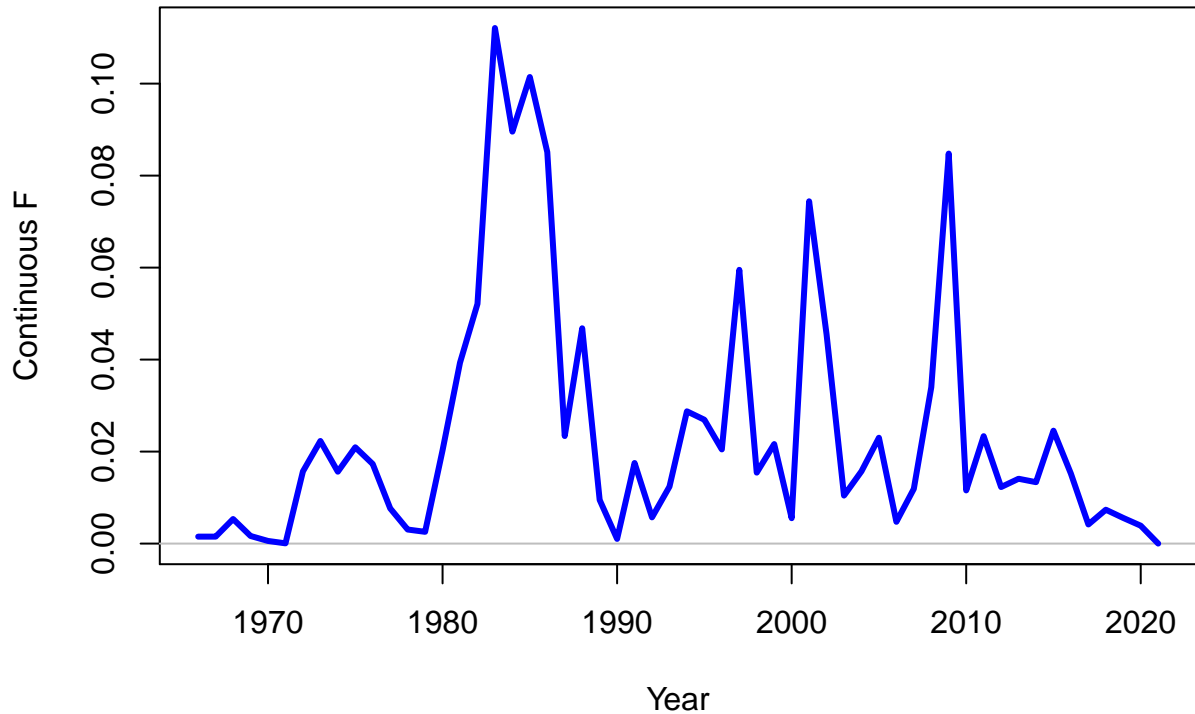
2000

2010

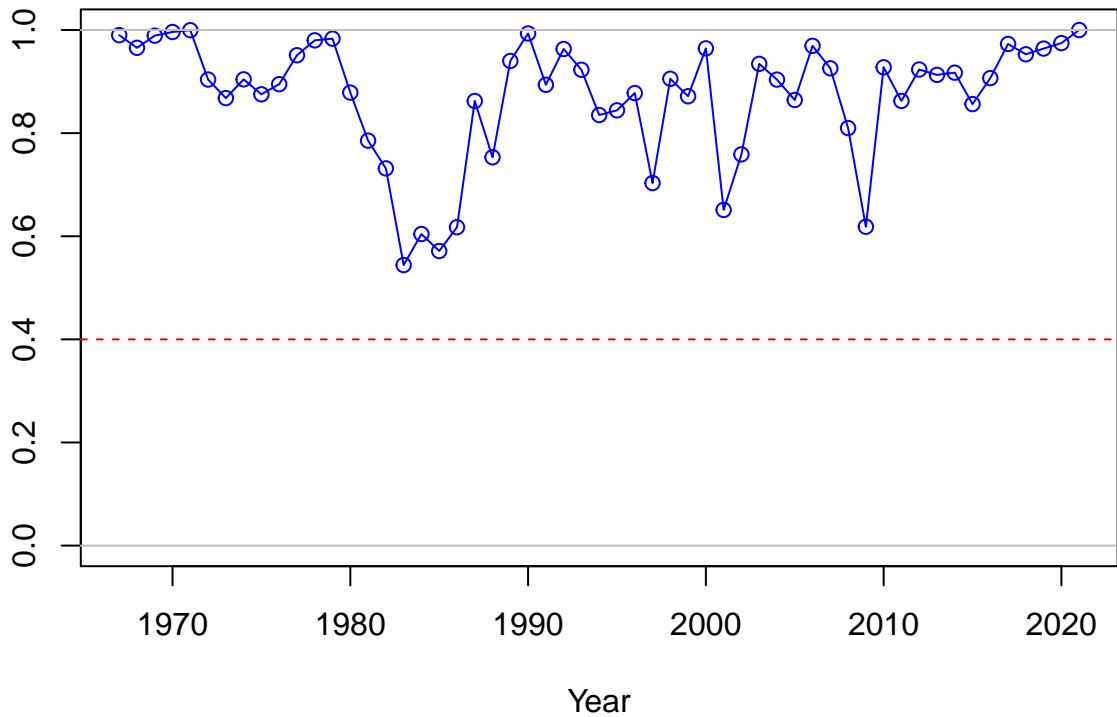
2020

Year

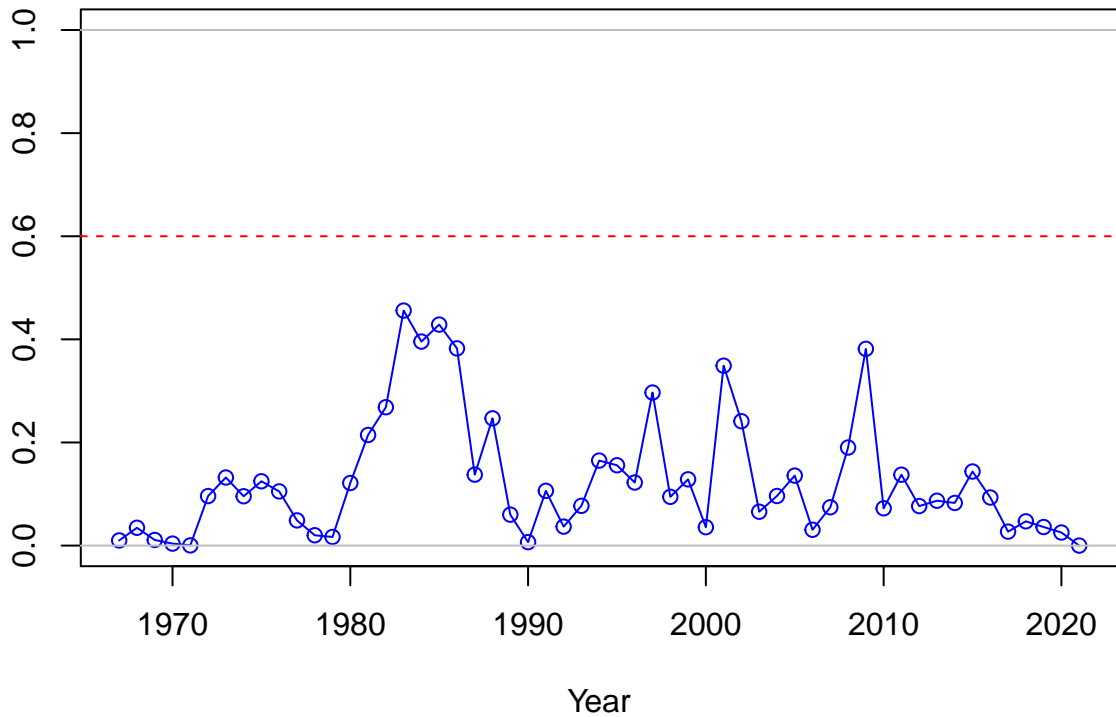




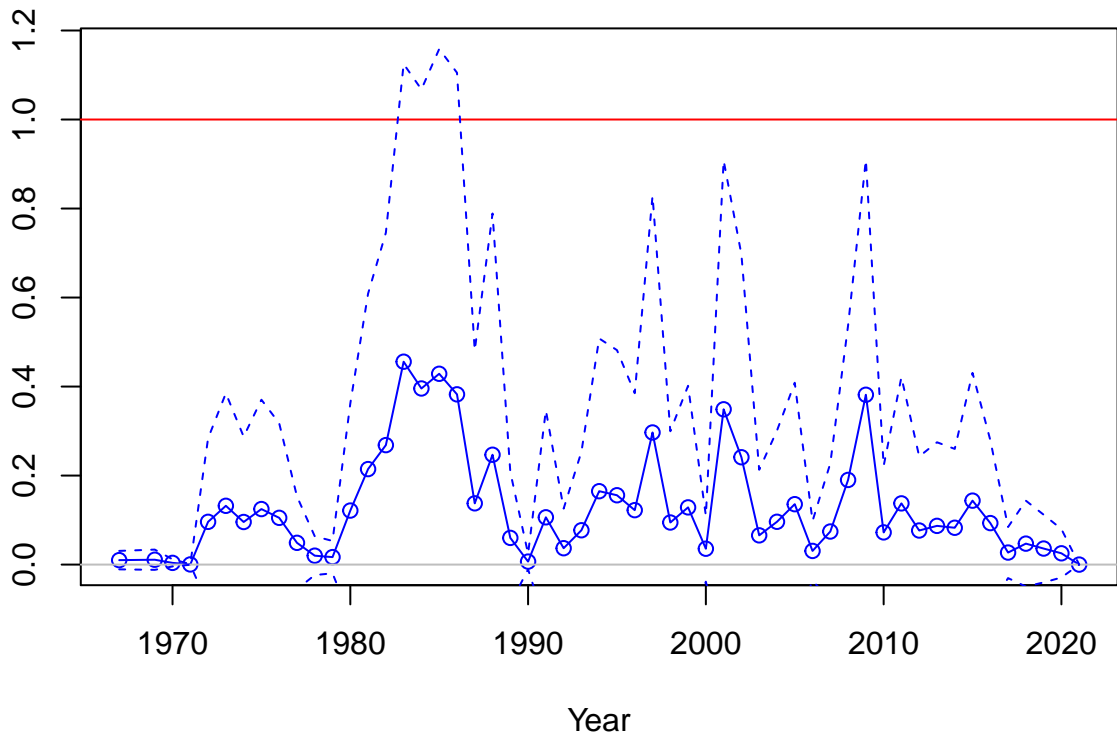
SPR



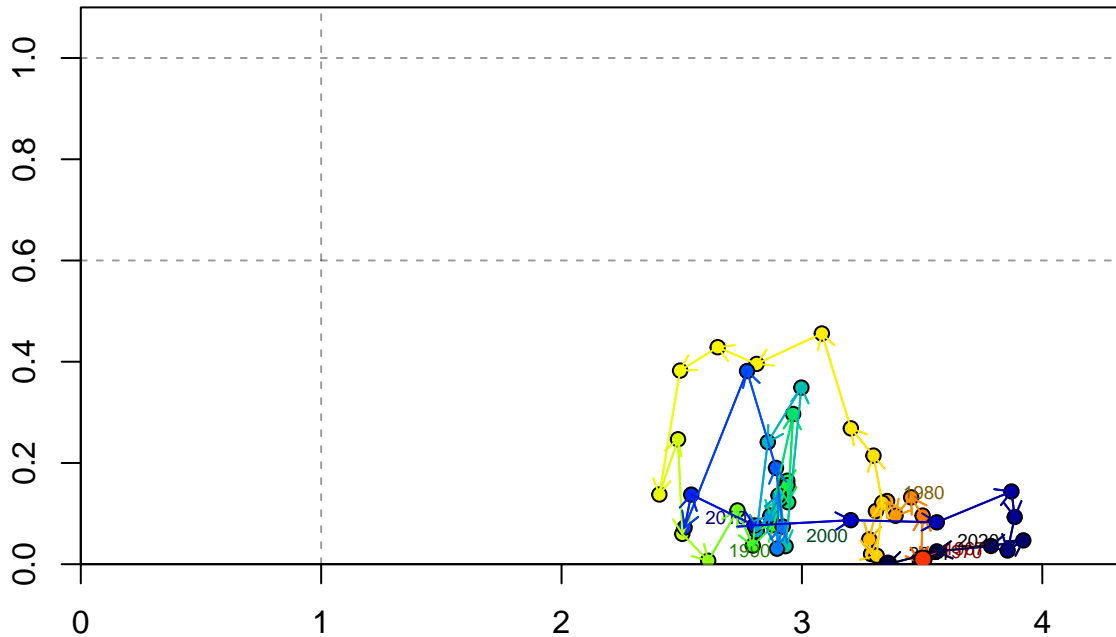
1-SPR



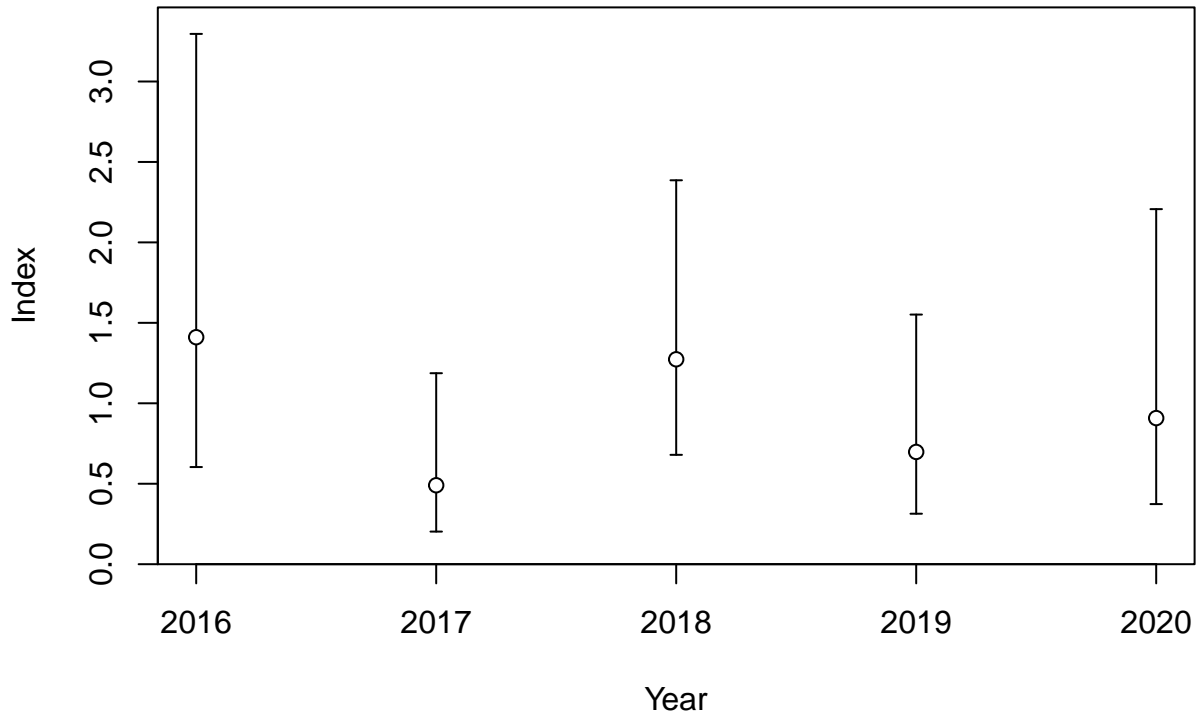
Fishing intensity: 1-SPR



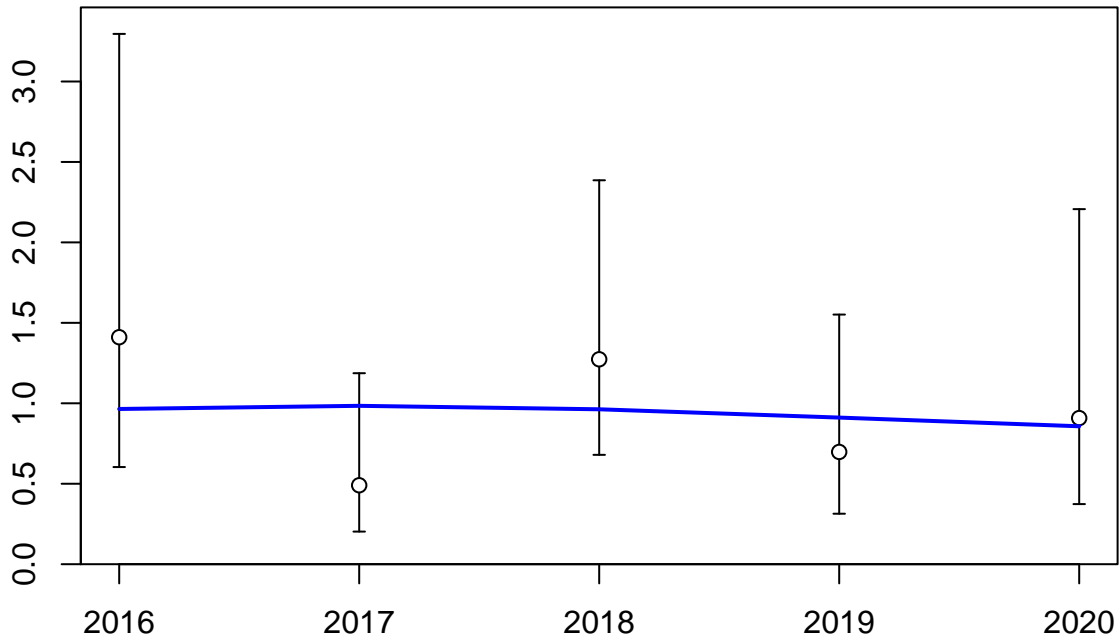
Fishing intensity: 1-SPR



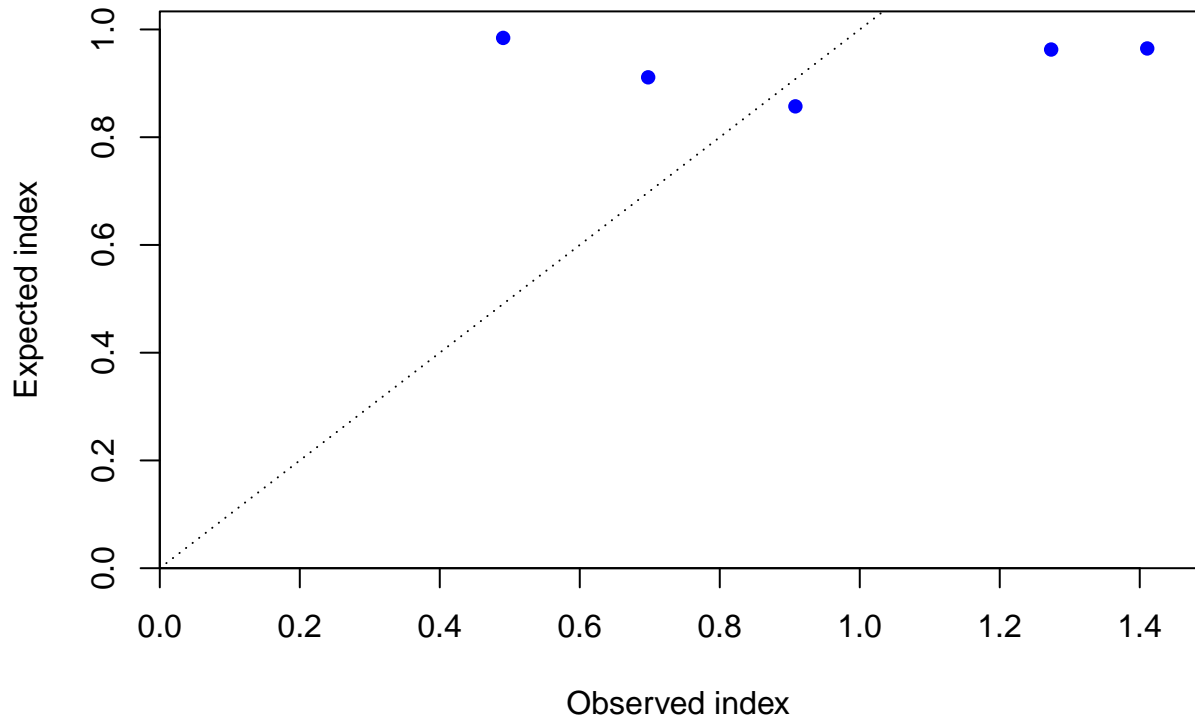
Relative spawning output: B/B_{MSY}

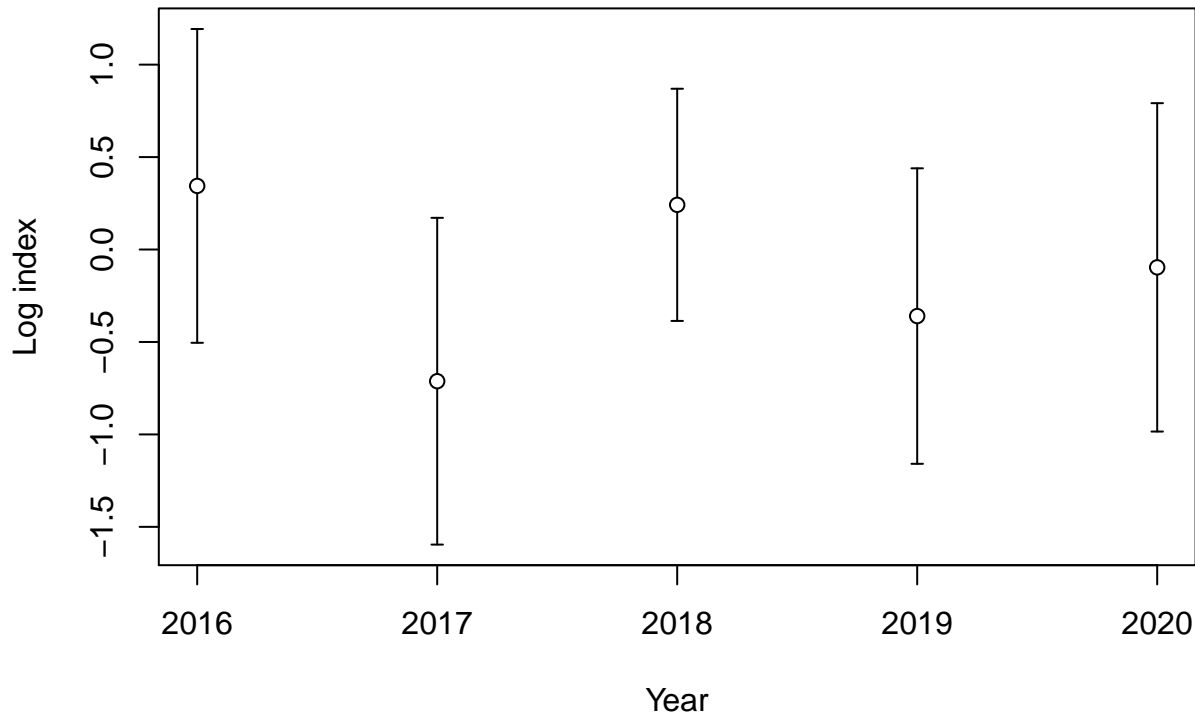


Index

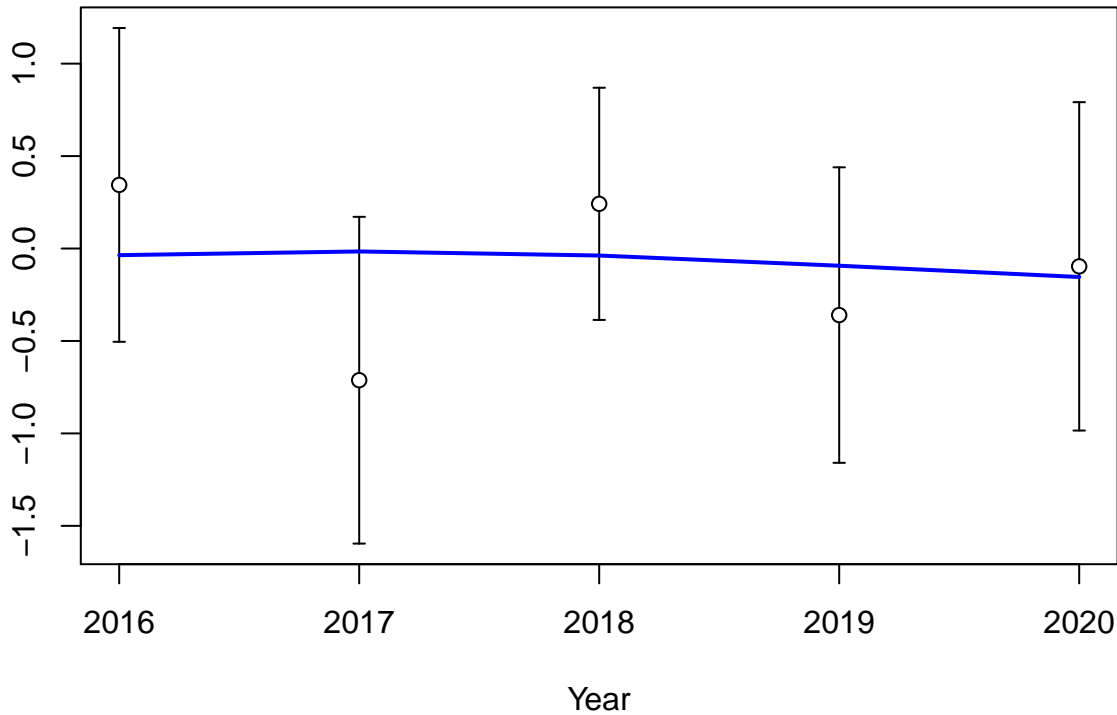


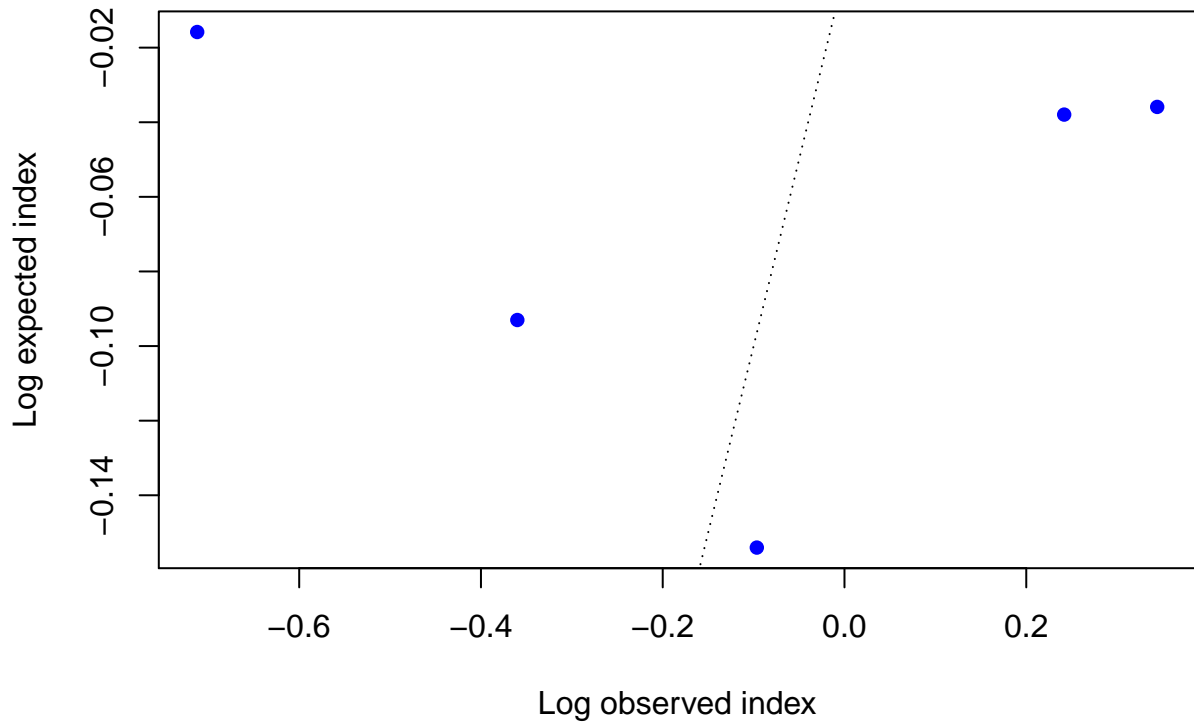
Year



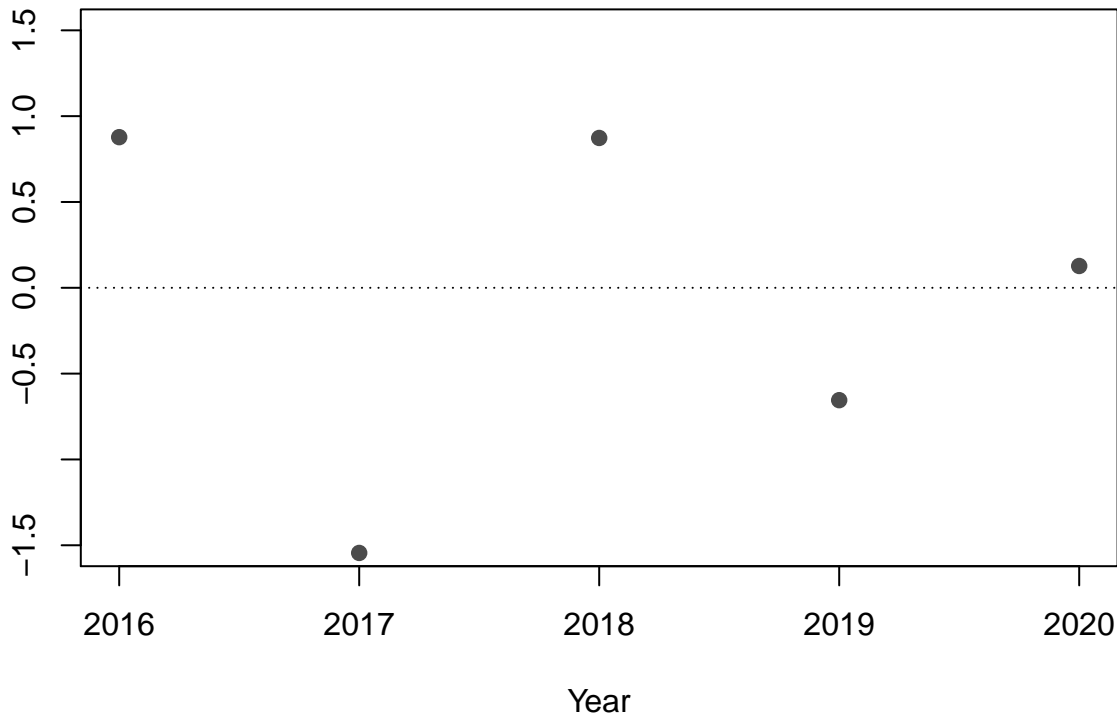


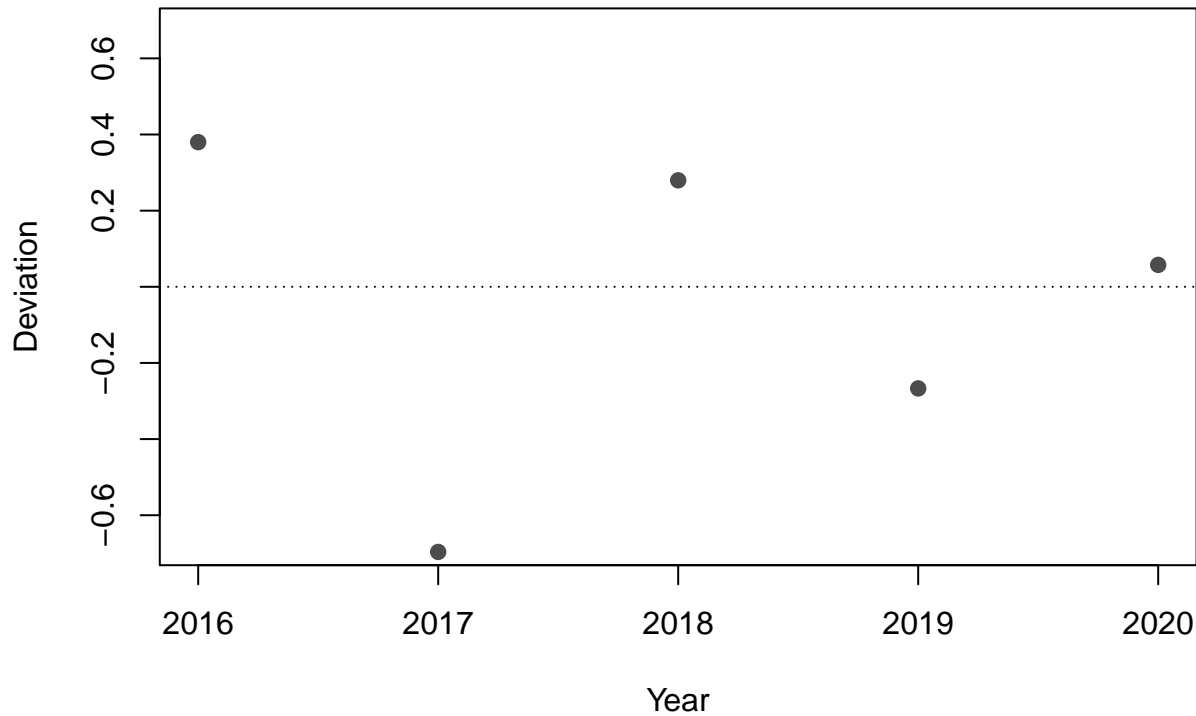
Log index

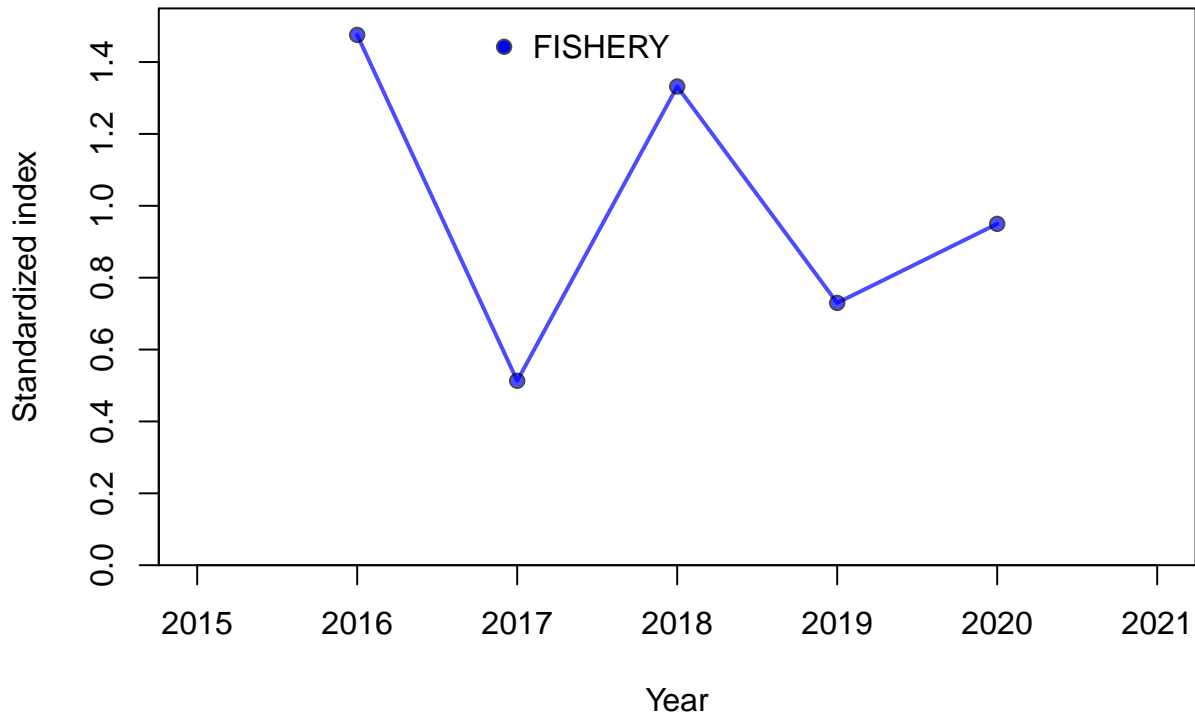


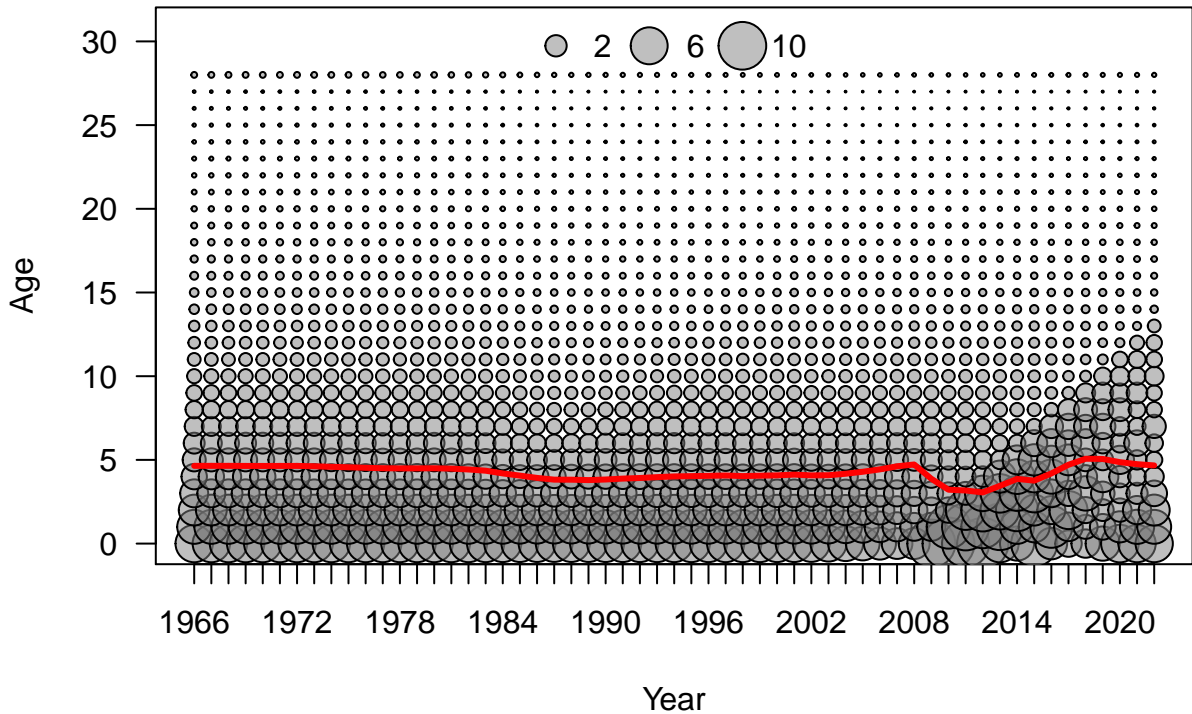


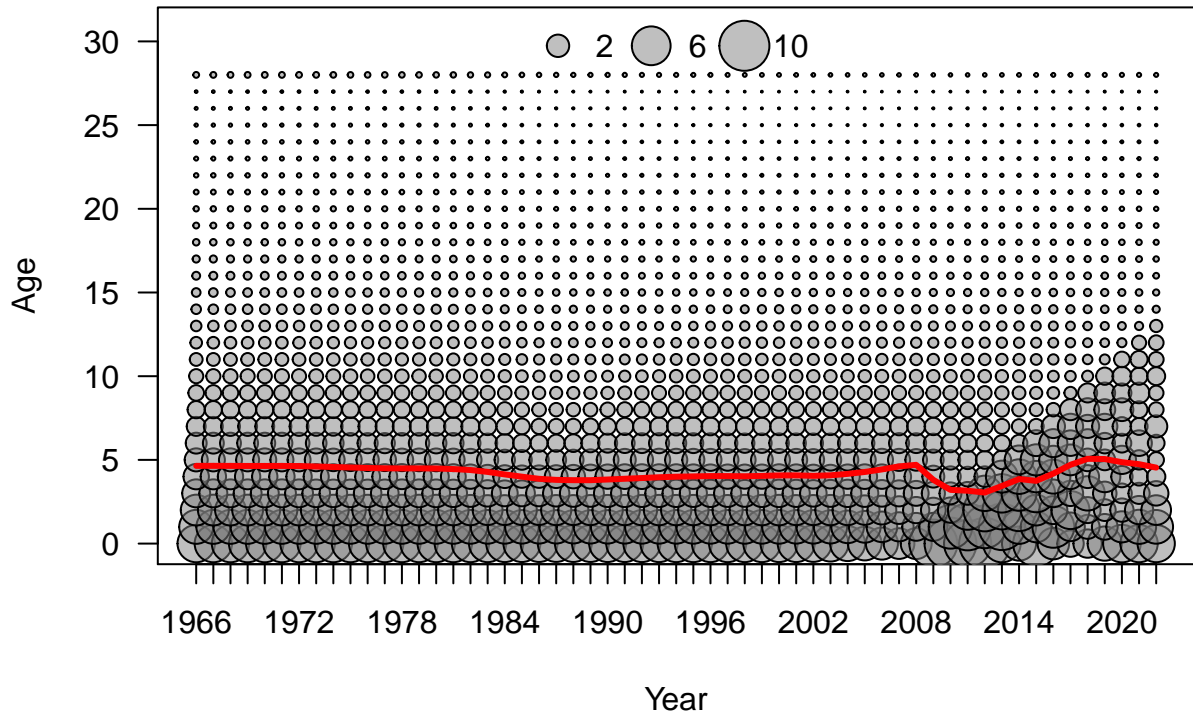
Residual

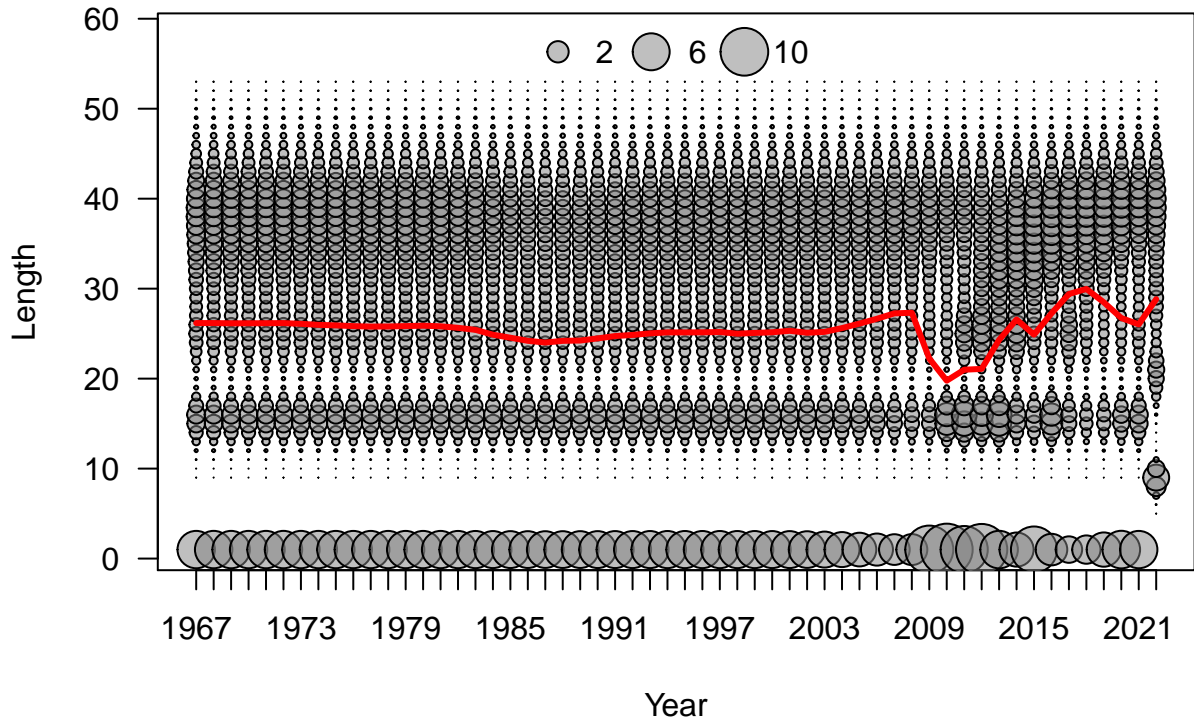


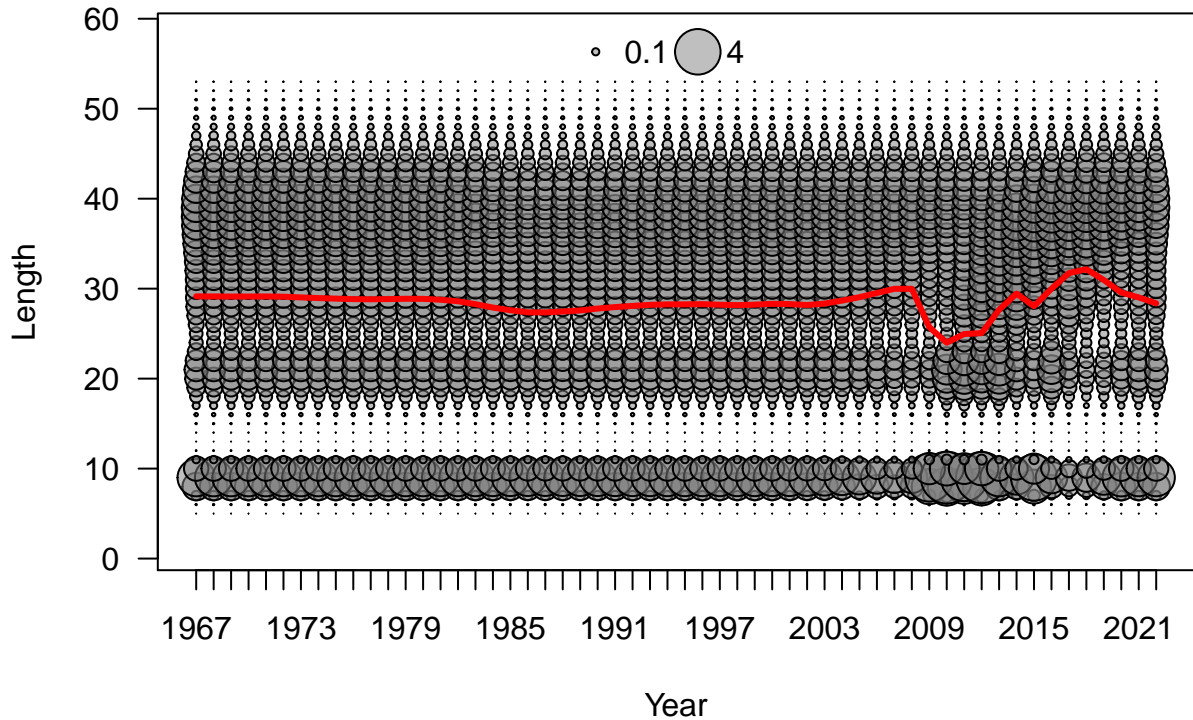


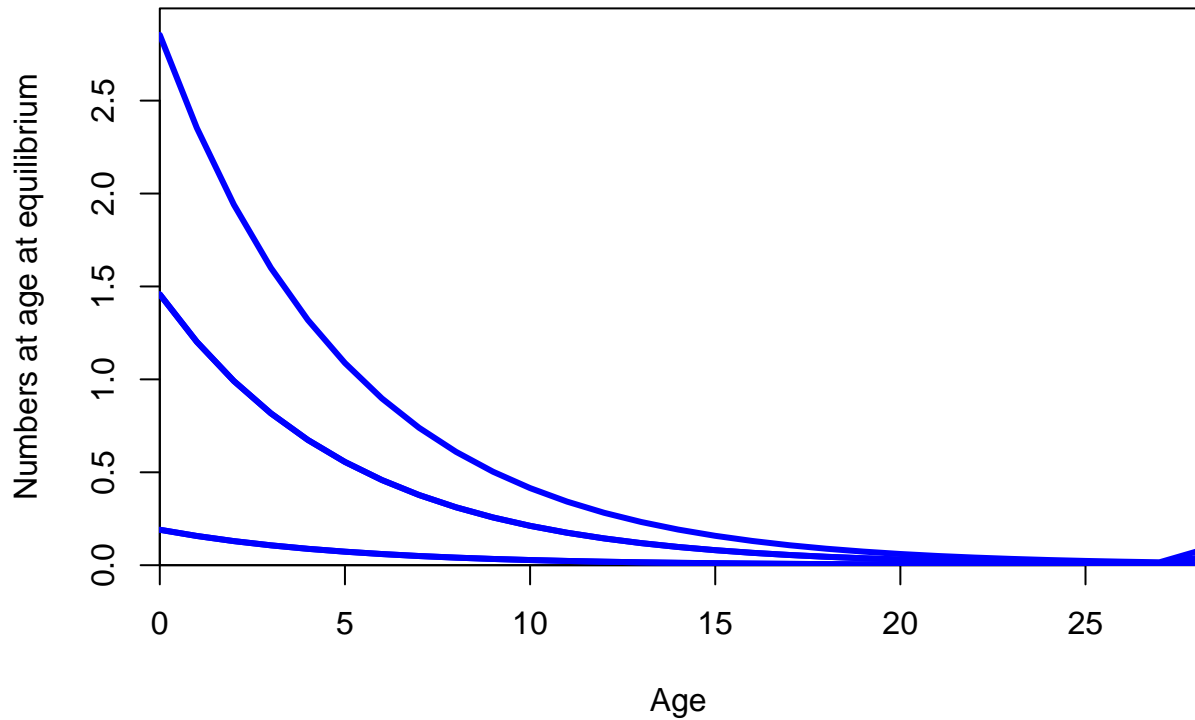


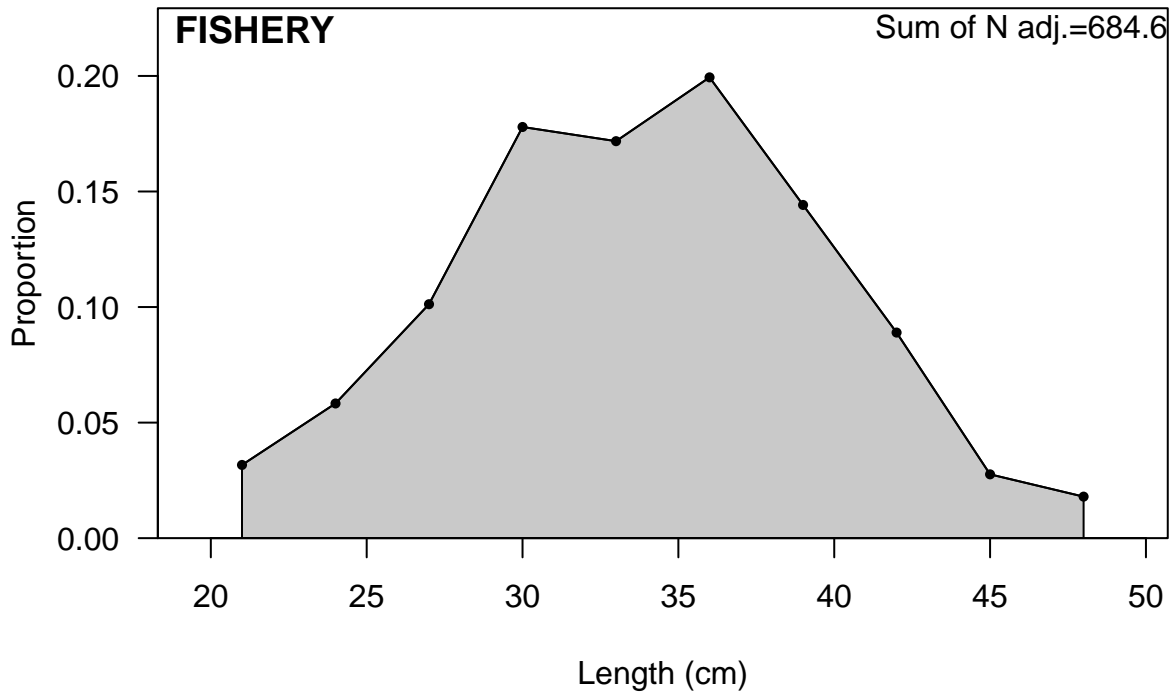


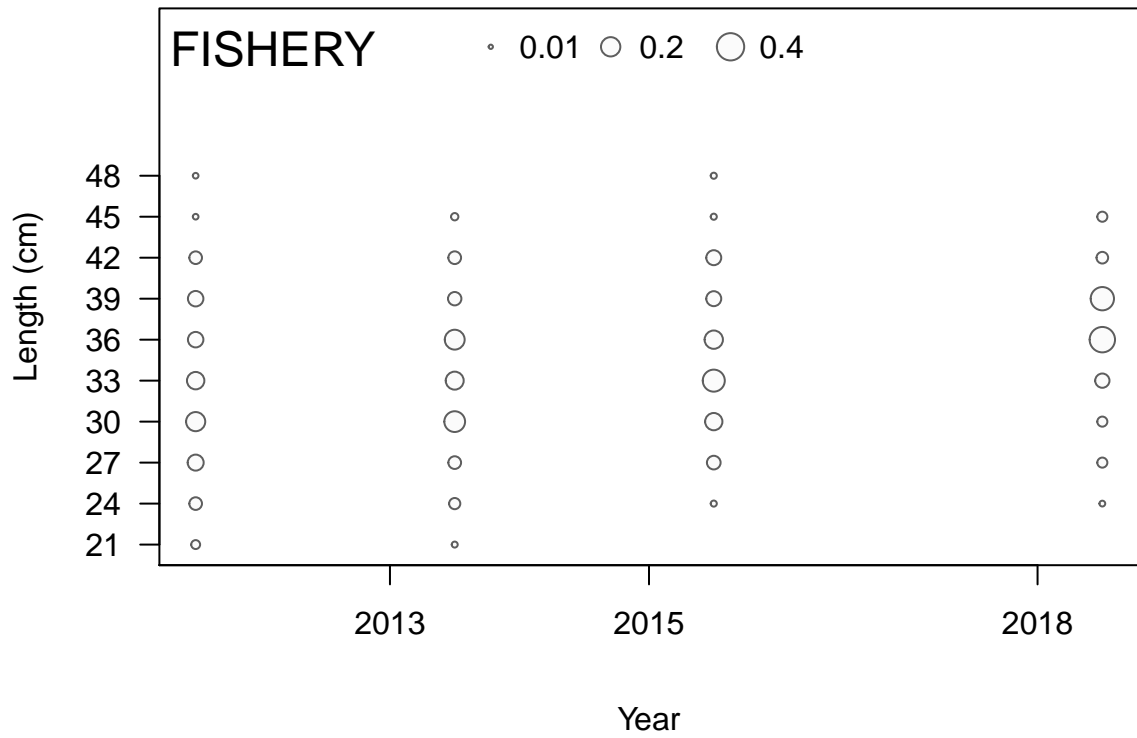




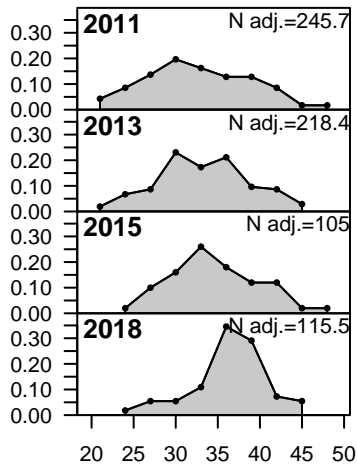




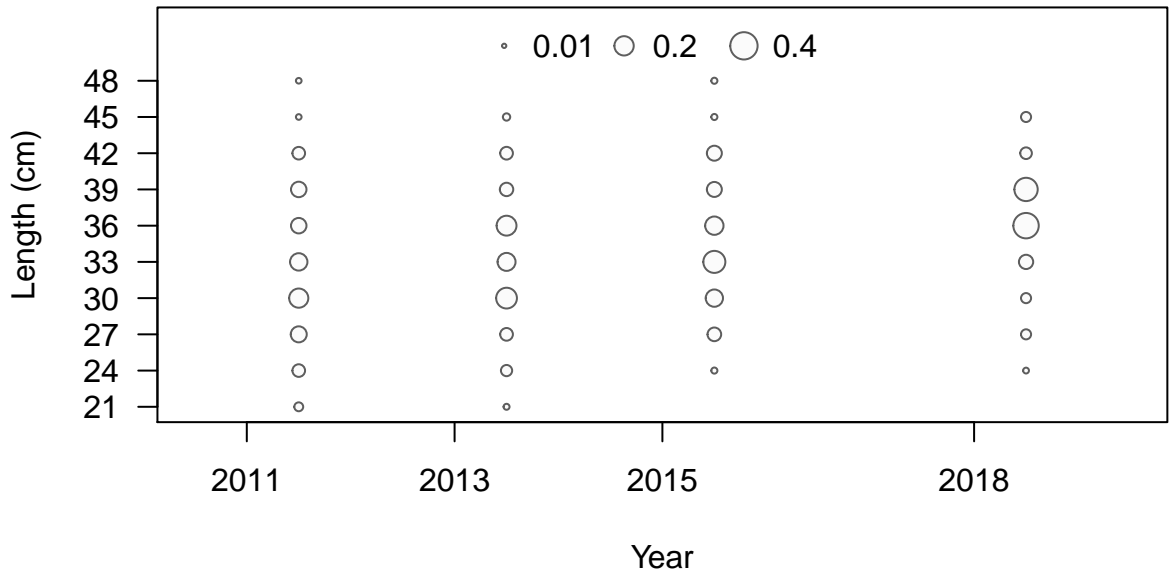




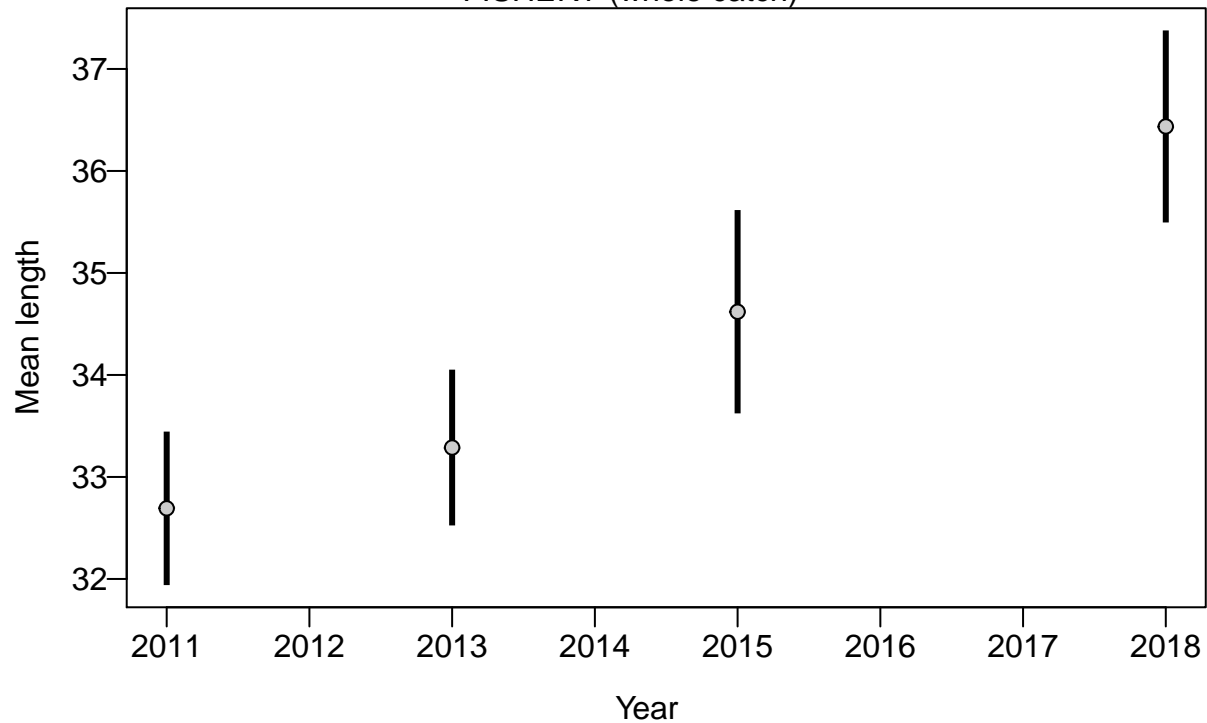
Proportion

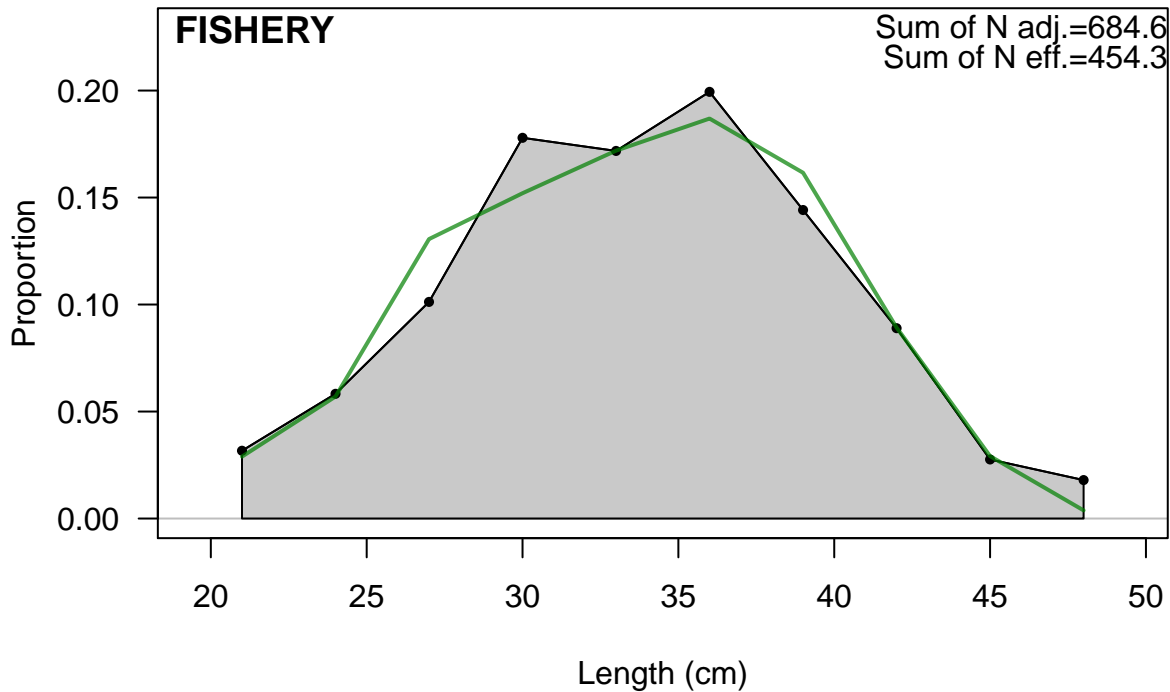


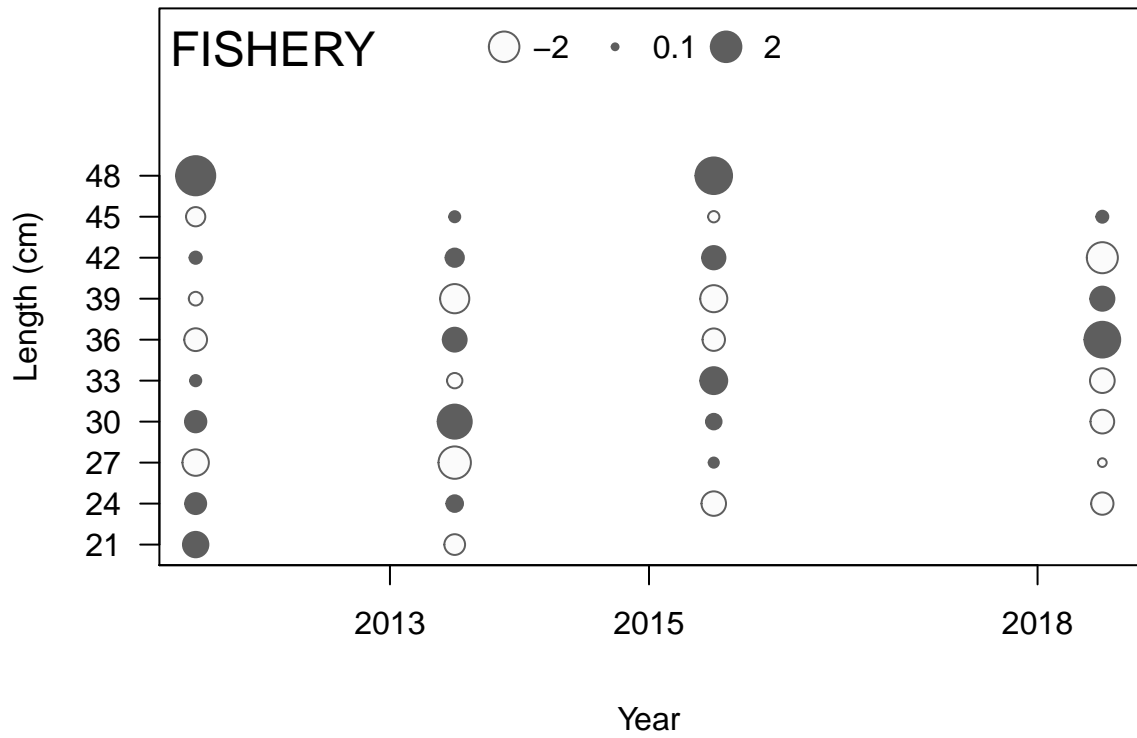
Length (cm)



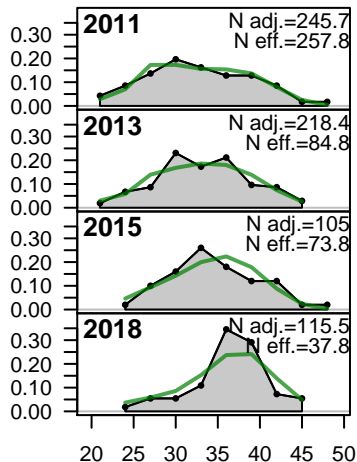
FISHERY (whole catch)



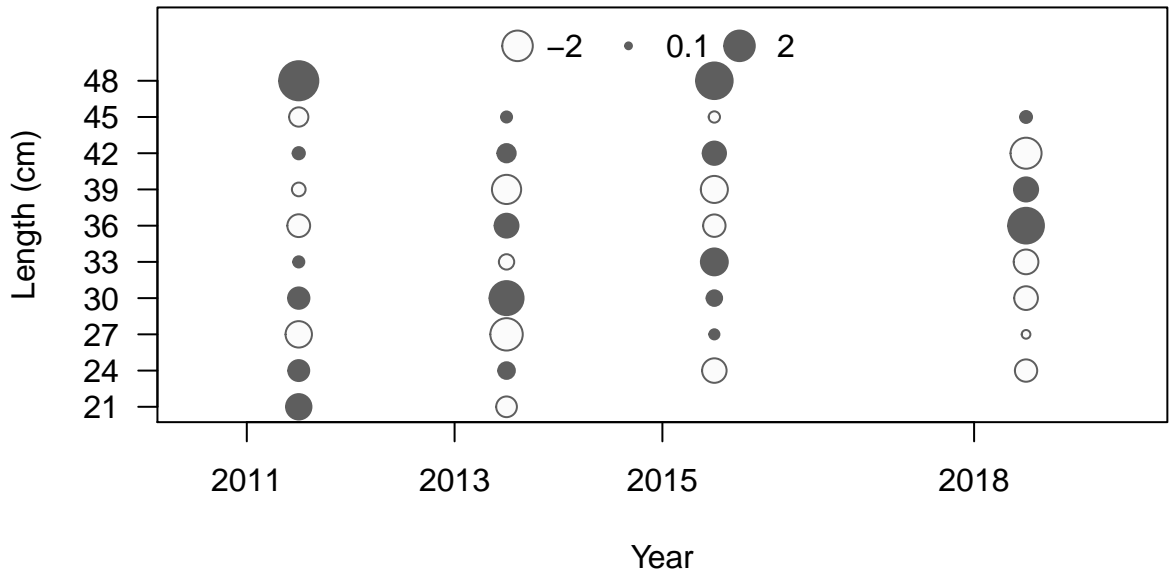




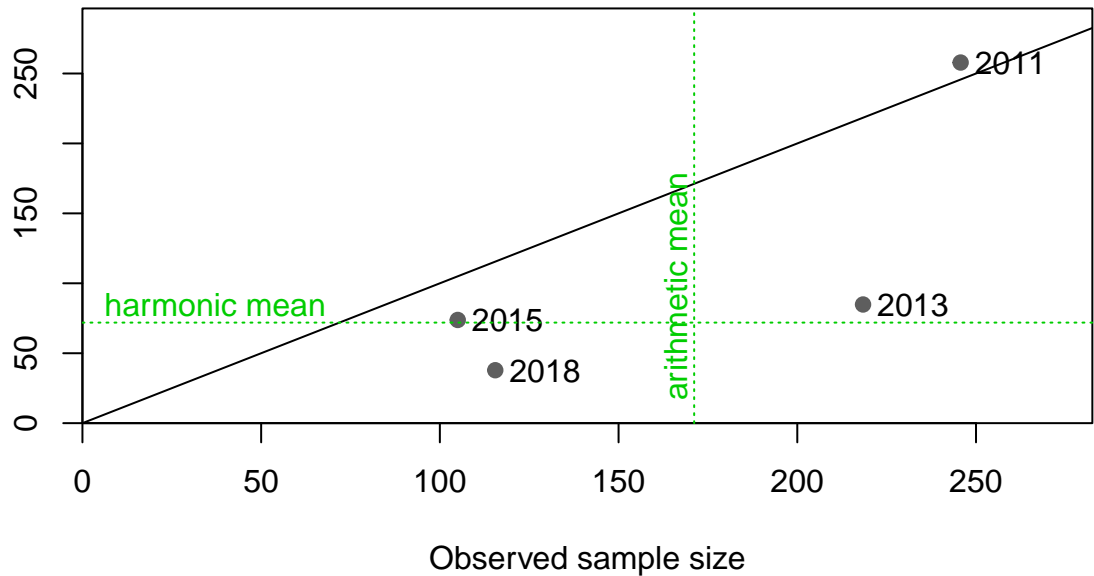
Proportion



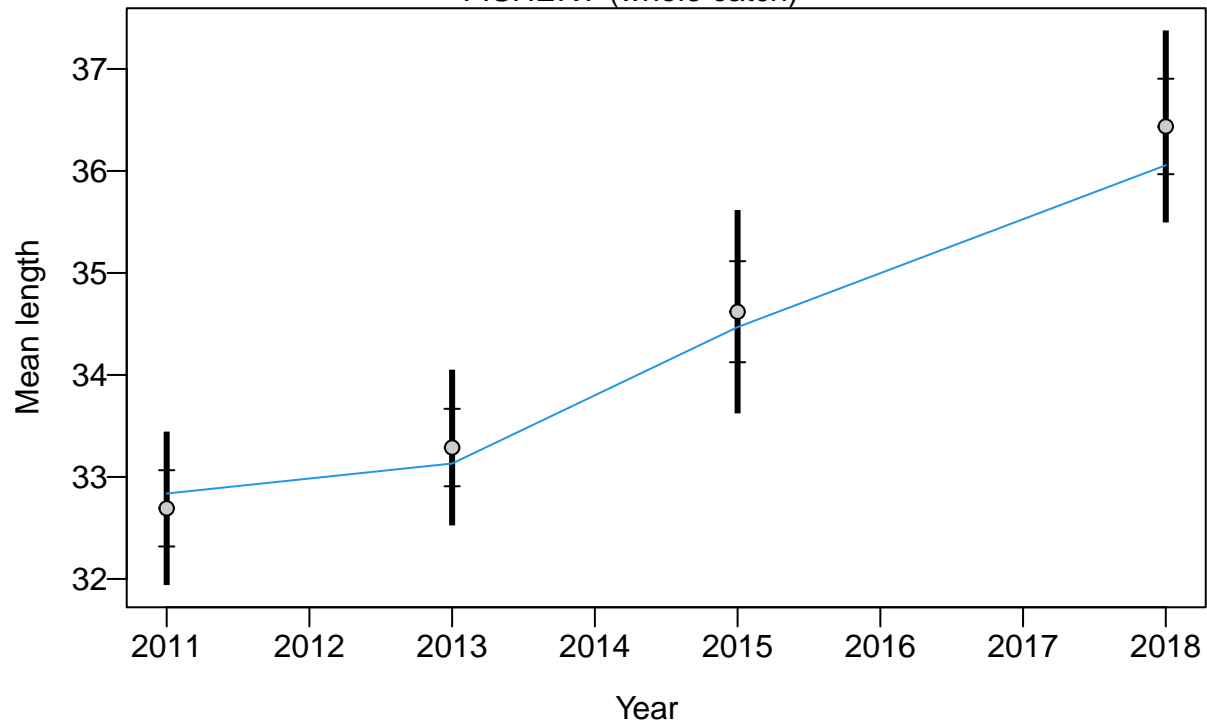
Length (cm)

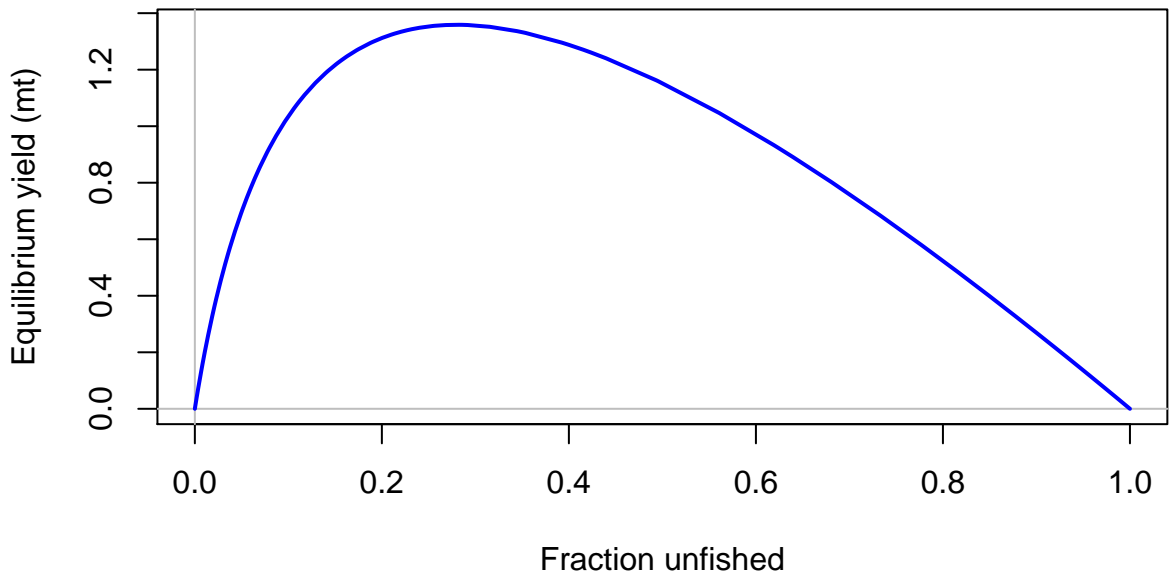


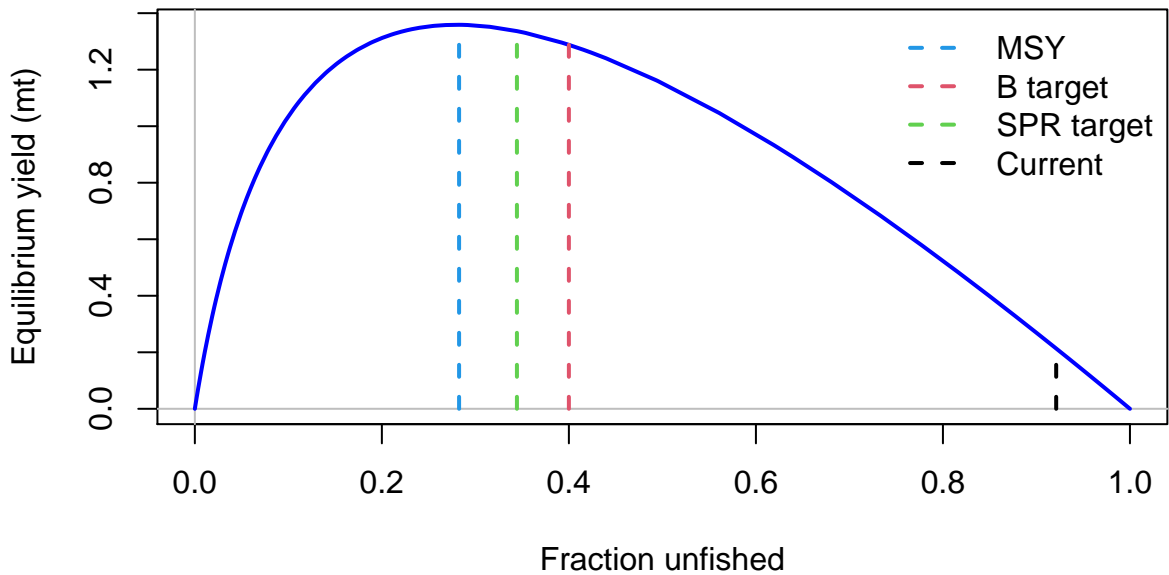
Effective sample size

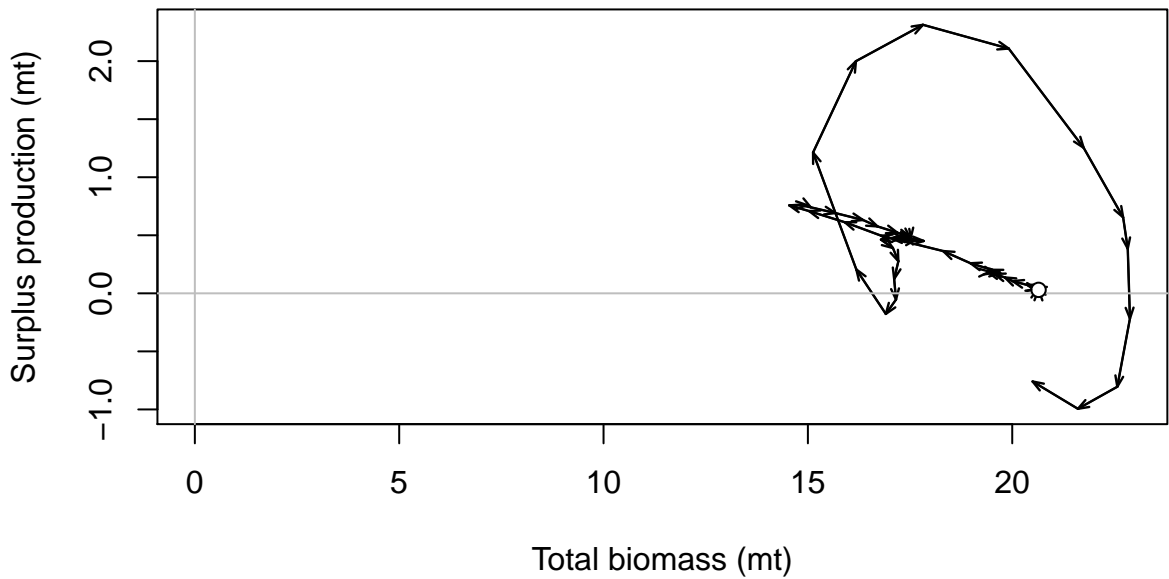


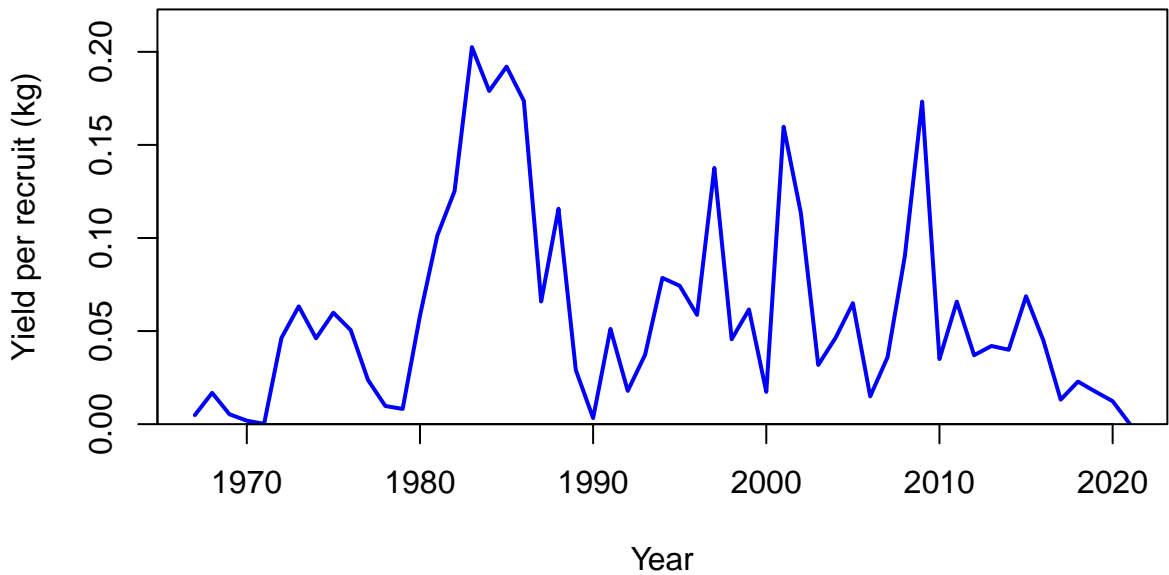
FISHERY (whole catch)

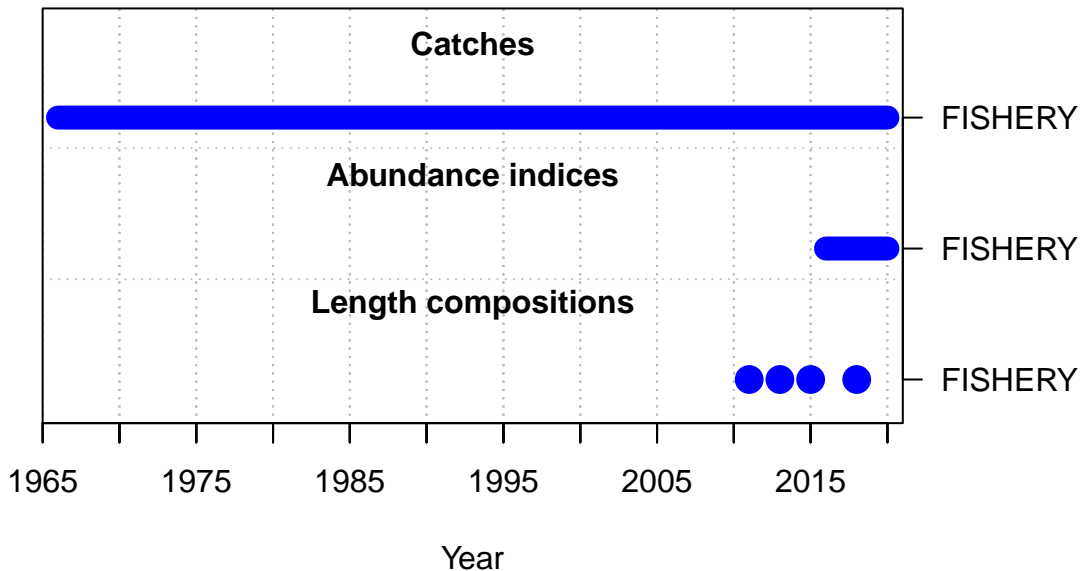


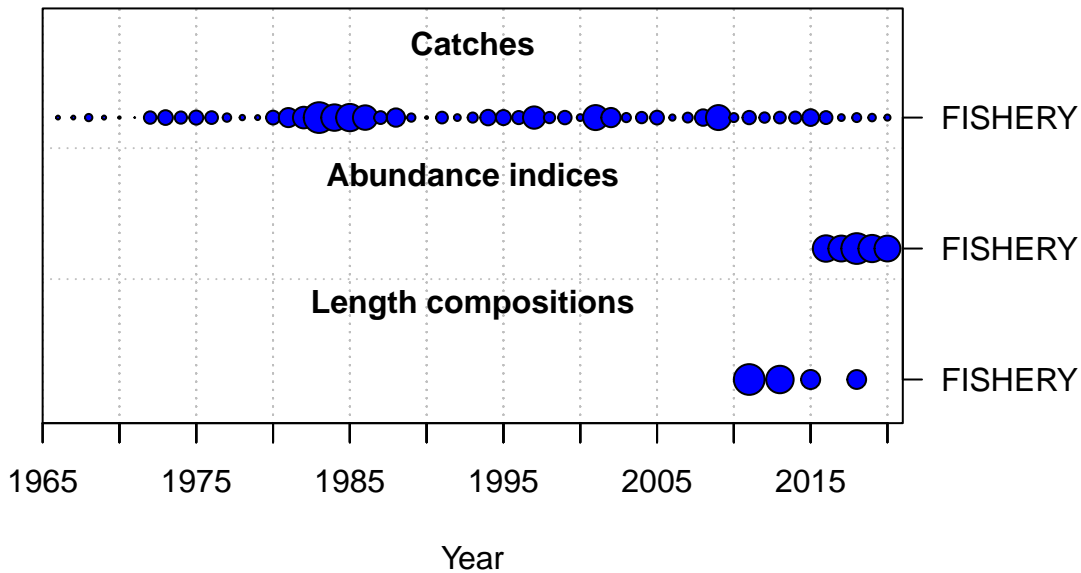




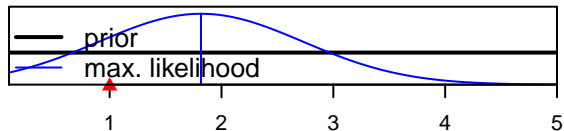




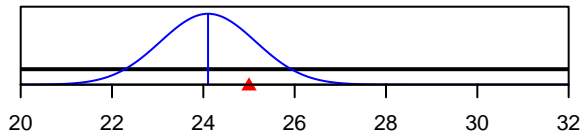




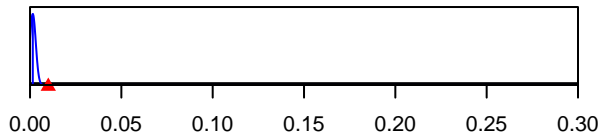
SR_LN(R0)



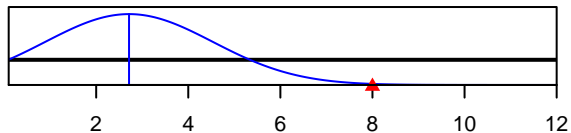
Size_inflection_FISHERY(1)



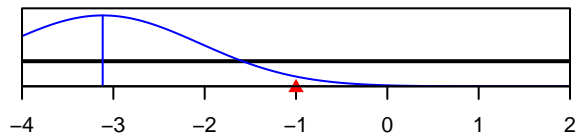
InitF_seas_1_flt_1FISHERY



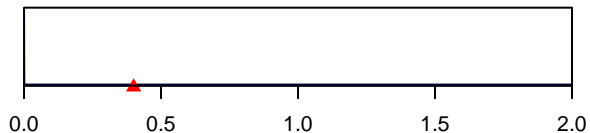
Size_95%width_FISHERY(1)



LnQ_base_FISHERY(1)



Q_extraSD_FISHERY(1)



Parameter value