

*Science, Service, Stewardship*



# SEDAR 31 Gulf of Mexico Red Snapper: Review workshop

May 1, 2013



**NOAA  
FISHERIES  
SERVICE**

NOAA



## Model weighting

- Increased the weight of the indices of abundance in the model by decreasing the se for each index
- Rescaled the se for each index to a mean of 0.1 but retained interannual variability in each index



## Model weighting

	BASE	Indices_DW
LIKELIHOOD	5219.62	9428.79
Component	logL*Lambda	logL*Lambda
TOTAL	5219.62	9428.79
Catch	15.743	61.5777
Equil_catch	0	0
Survey	-61.2549	3418.74
Discard	310.619	346.42
Age_comp	4857.27	5467.02
Recruitment	18.8845	29.8624
Forecast_Recruitment	0	0
Parm_priors	45.5837	56.97
Parm_softbounds	0.0285606	0.0333263
Parm_devs	32.7472	48.1645
Crash_Pen	0	0



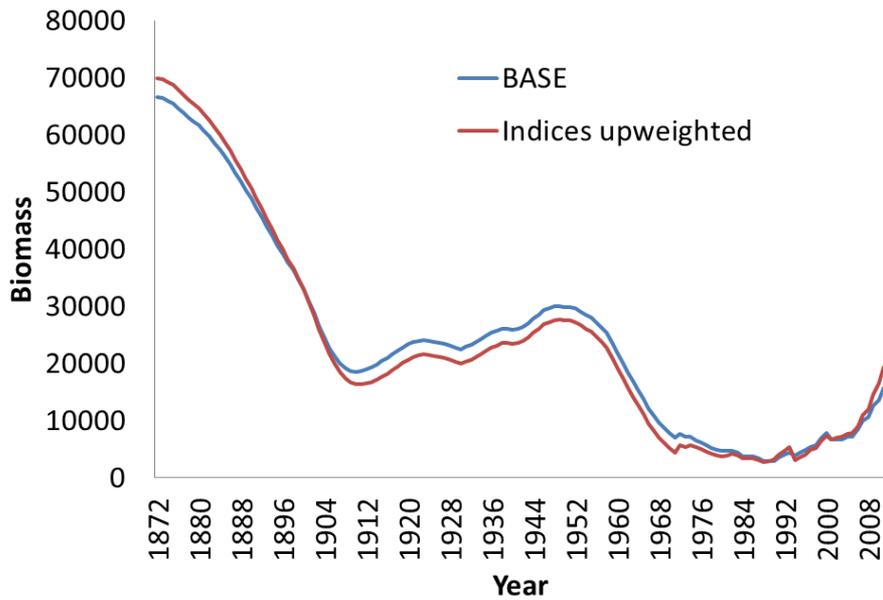
## Model weighting

	BASE	Indices_DW
SSB_Unfished	4.72E+12	5.02E+12
TotBio_Unfished	327341	347854
SmryBio_Unfished	327341	347854
Recr_Unfished	163405	173645
SSB_Btgt	1.42E+12	1.51E+12
SPR_Btgt	0.301768	0.301768
Fstd_Btgt	0.0607031	0.0638511
TotYield_Btgt	6184.56	6600.14
SSB_SPRtgt	1.22E+12	1.29E+12
Fstd_SPRtgt	0.0692612	0.0729343
TotYield_SPRtgt	6313.61	6731.6
SSB_MSJ	9.17E+11	1.00E+12
SPR_MSJ	0.196259	0.20172
Fstd_MSJ	0.0857313	0.0887113
TotYield_MSJ	6397.39	6807.1
RetYield_MSJ	4895.35	5278.1

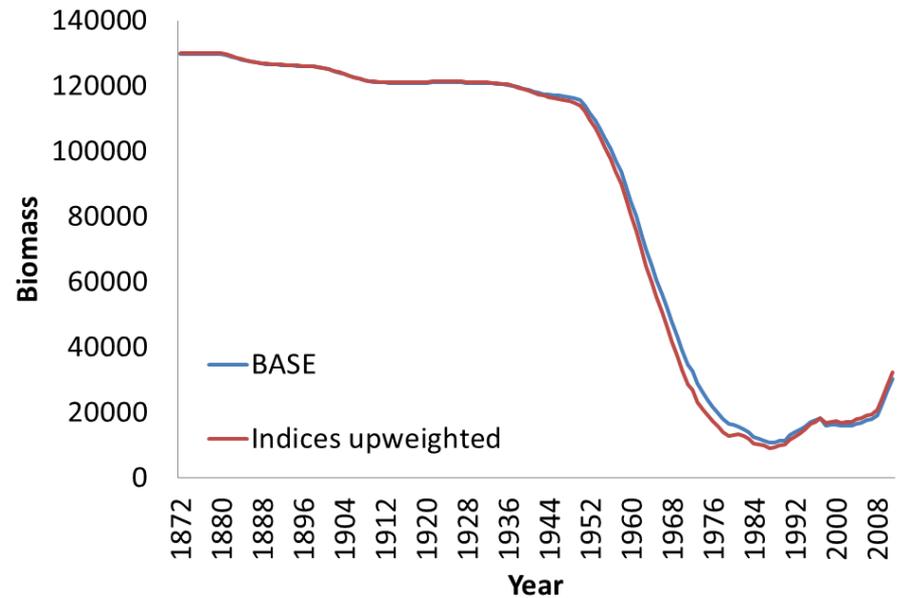


# Model weighting

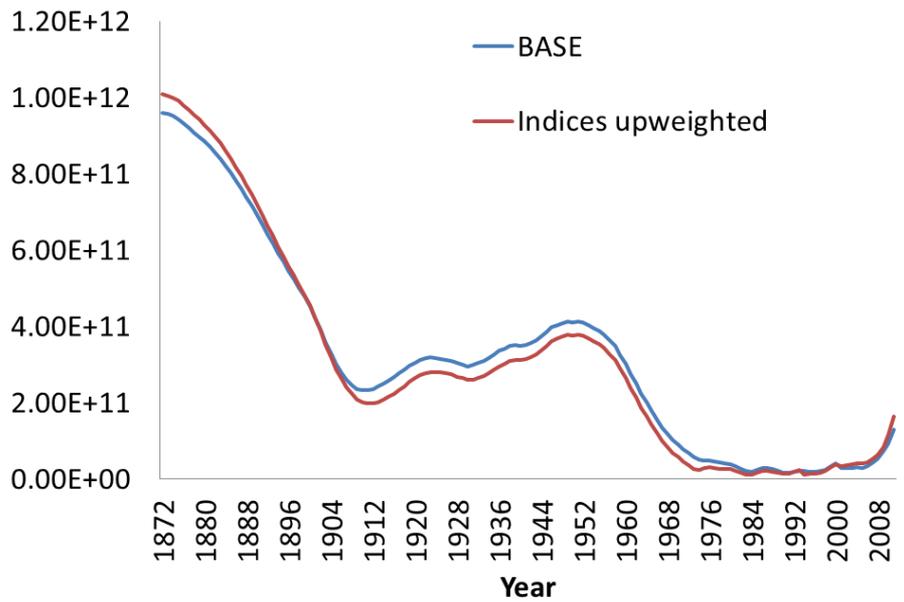
### Total Biomass - East



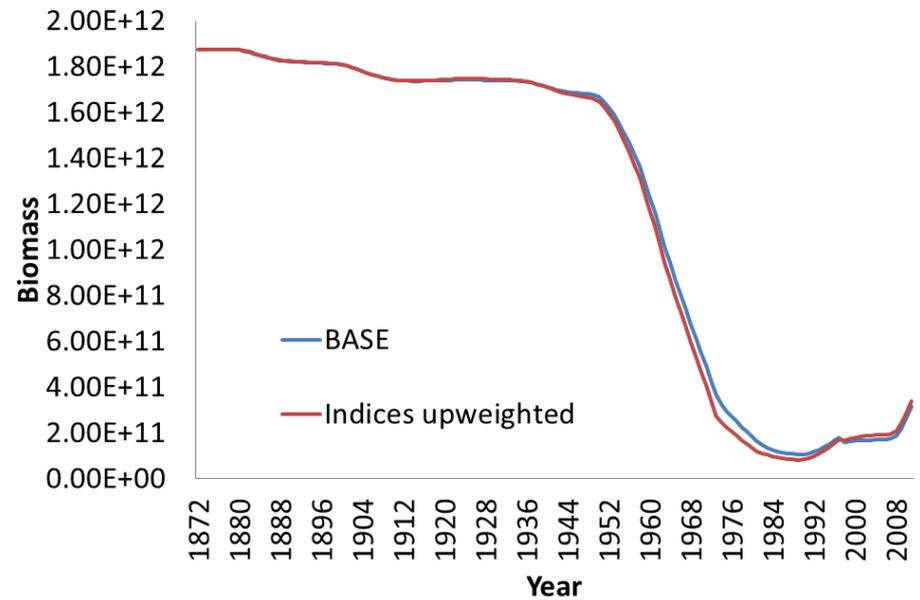
### Total Biomass - West



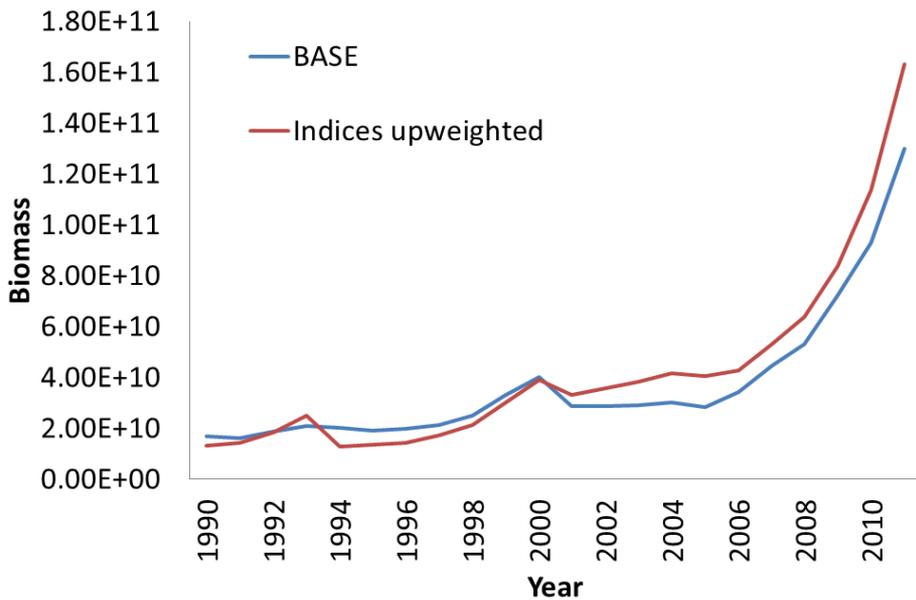
### Spawning Biomass - East



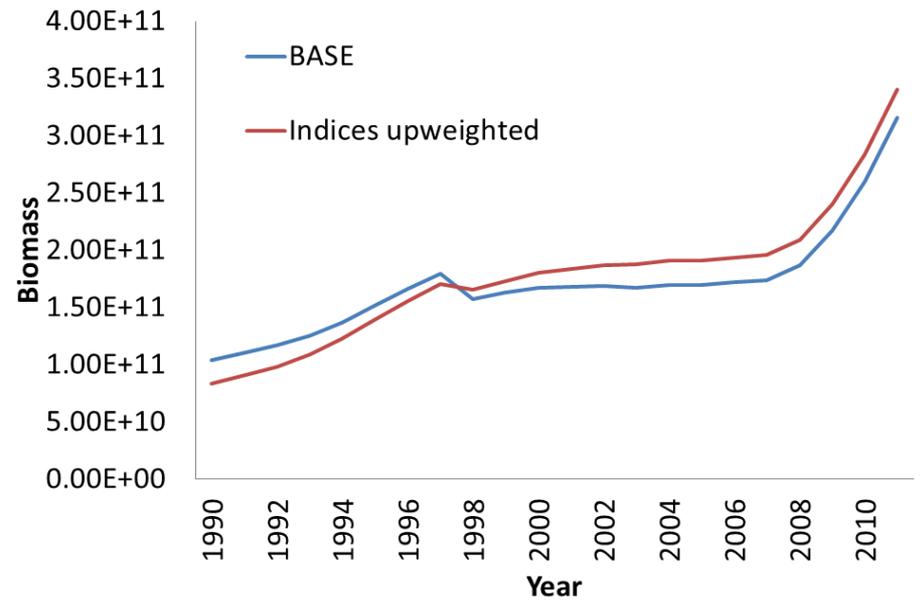
### Spawning Biomass - West



### Spawning Biomass - East



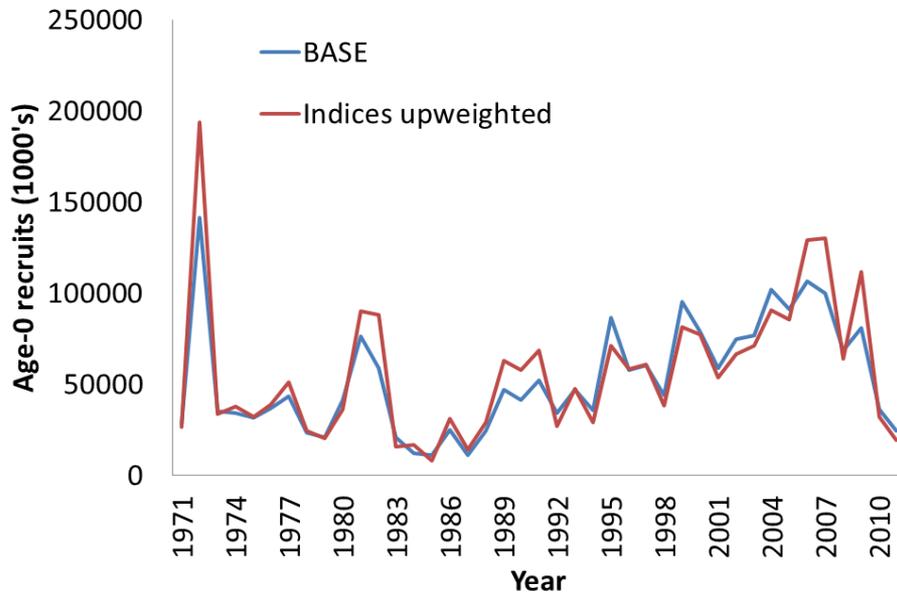
### Spawning Biomass - West



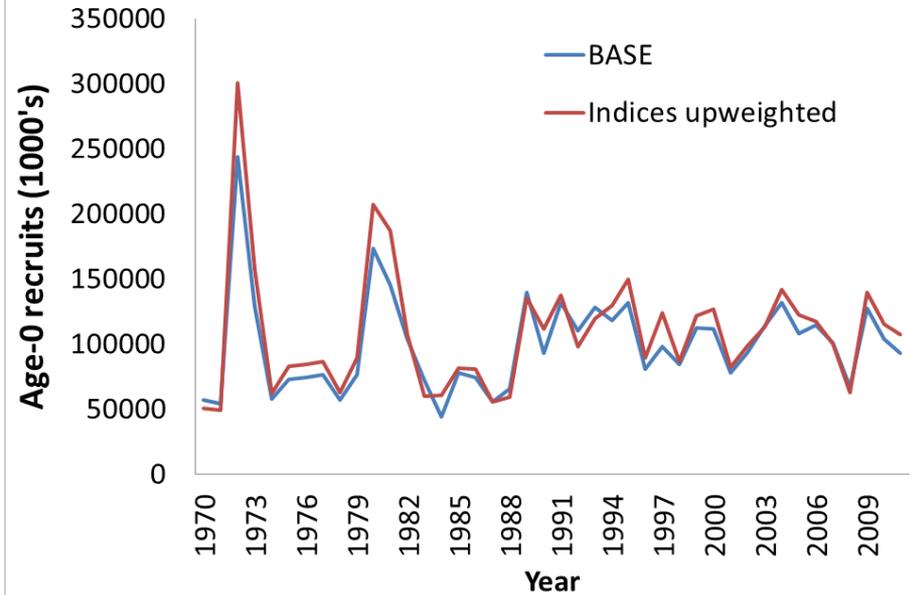


# Model weighting

### Recruitment - East

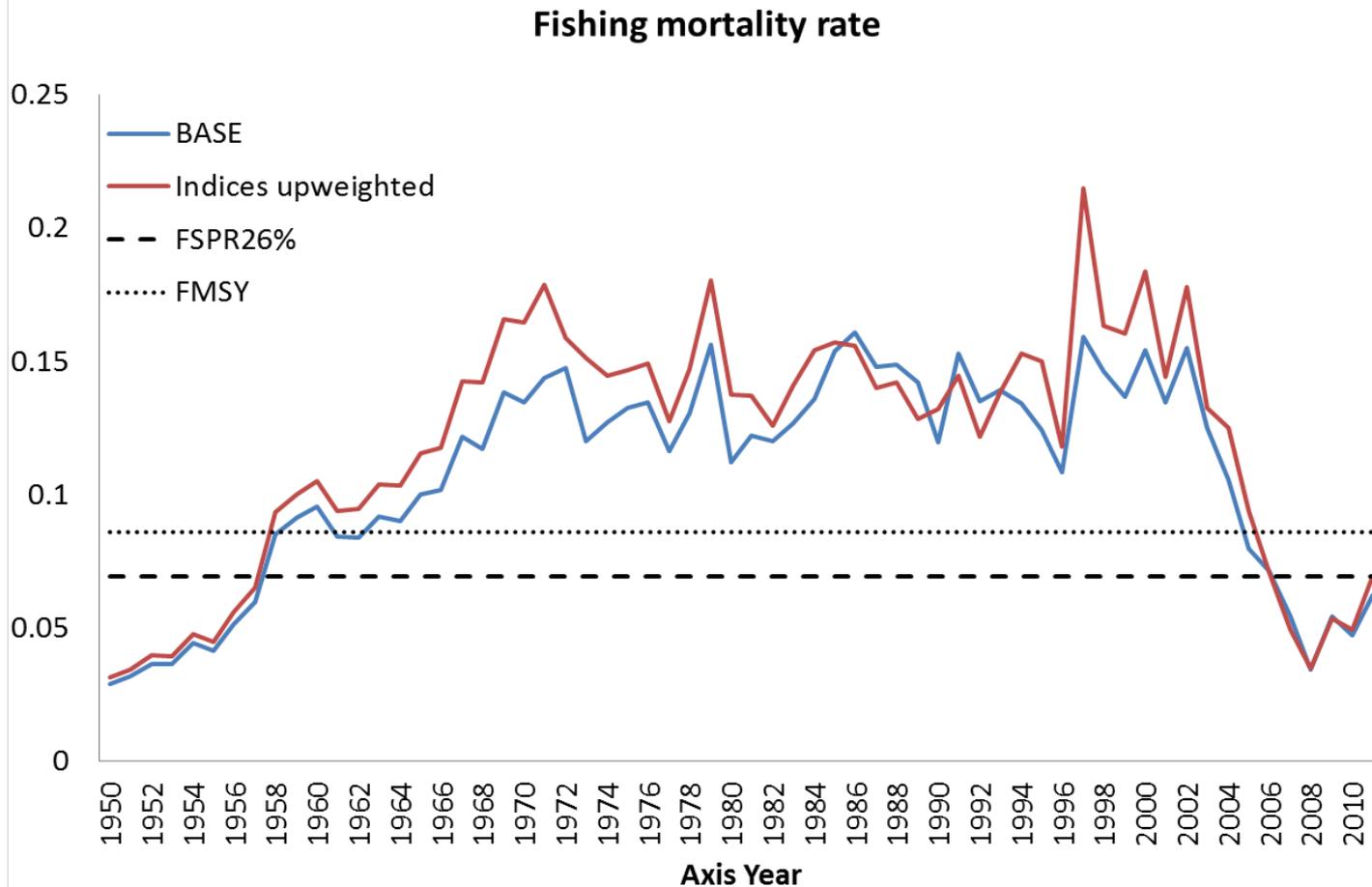


### Recruitment - West





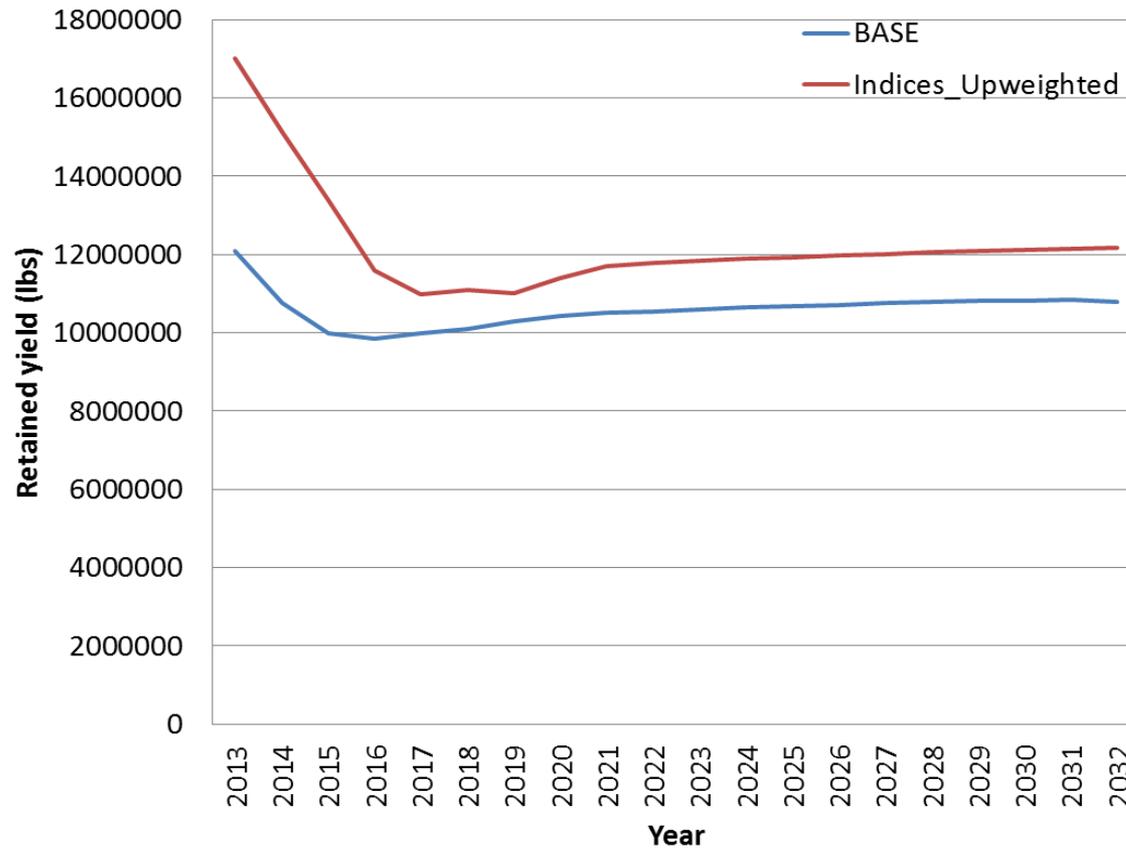
# Model weighting





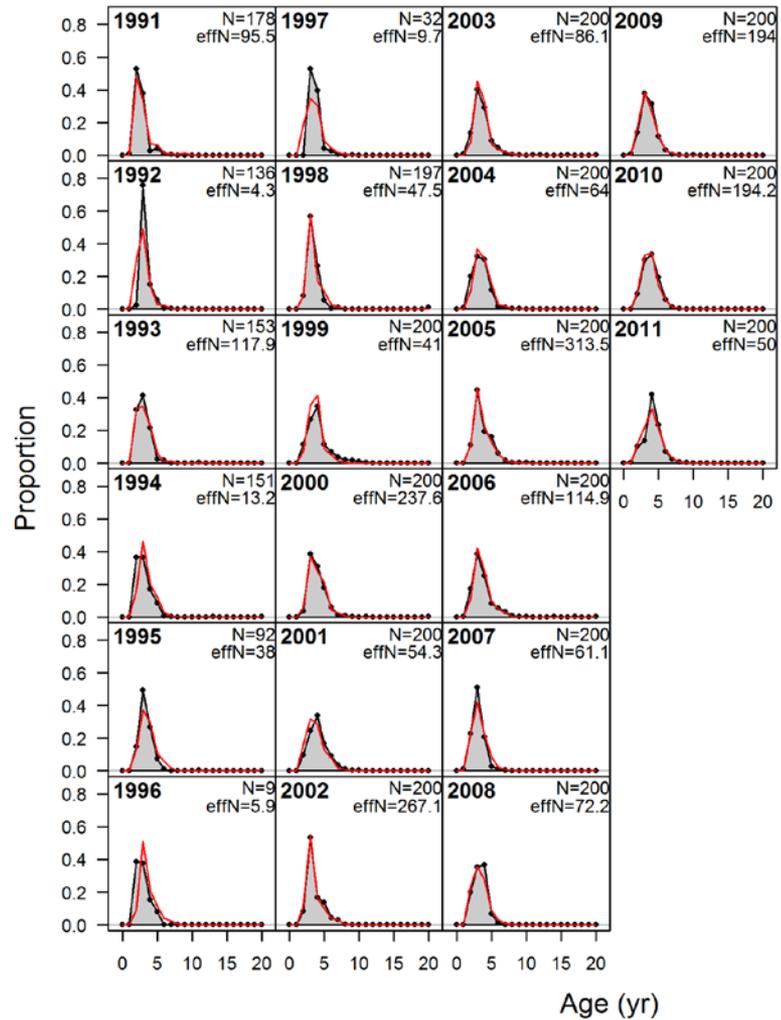
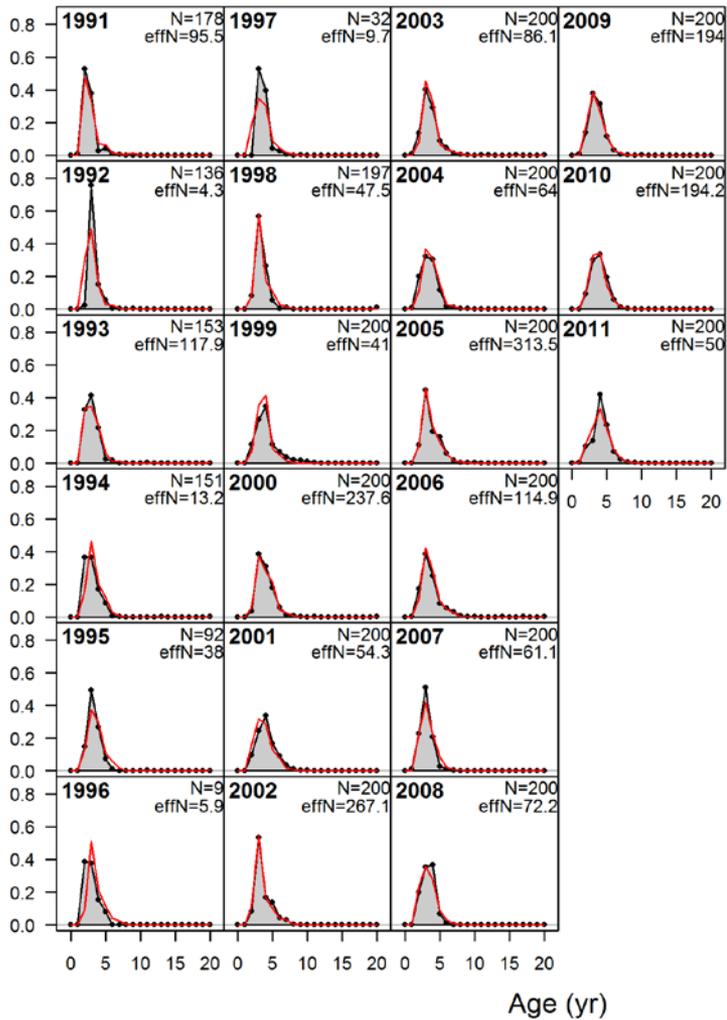
# Model weighting

Initial projections at FSPR26%



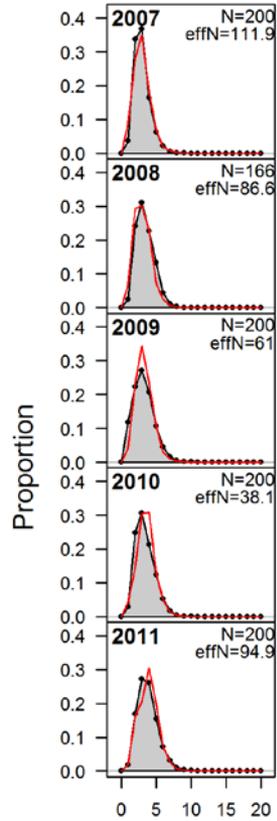
age comps, sexes combined, retained, HL\_E

age comps, sexes combined, retained, HL\_E

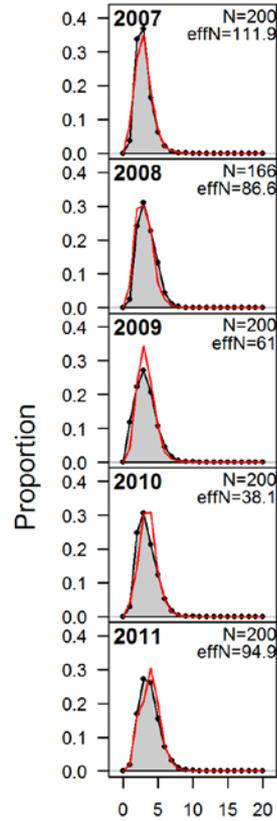


age comps, sexes combined, disc

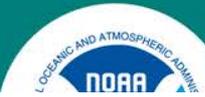
age comps, sexes combined, discard, HL\_E



Age (yr)

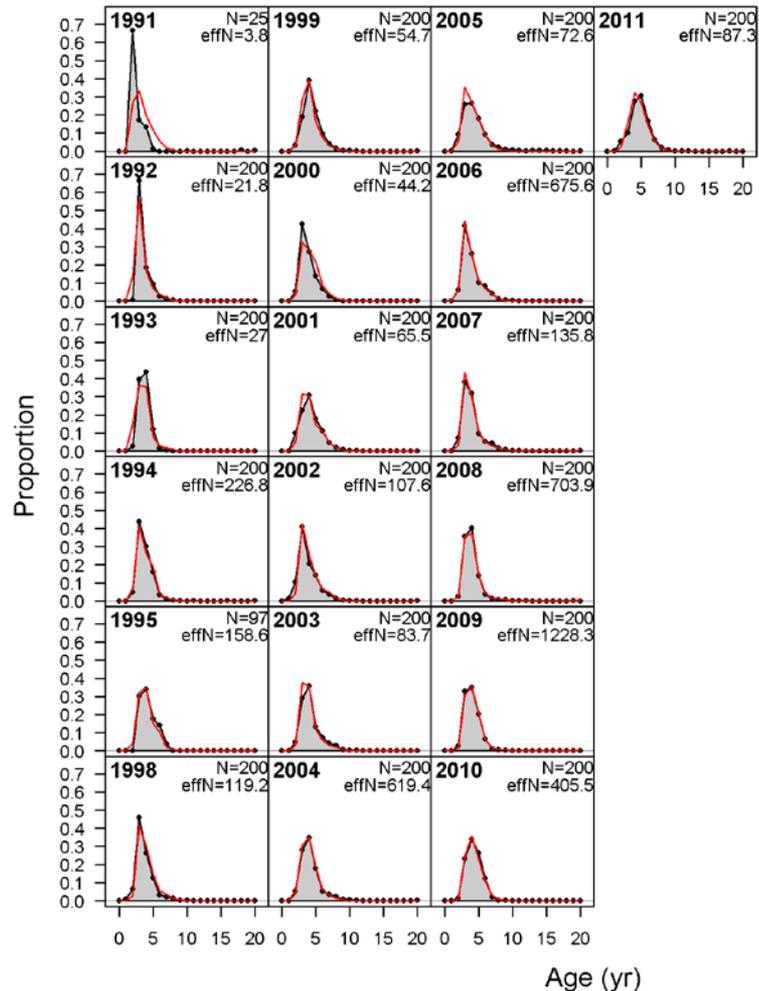
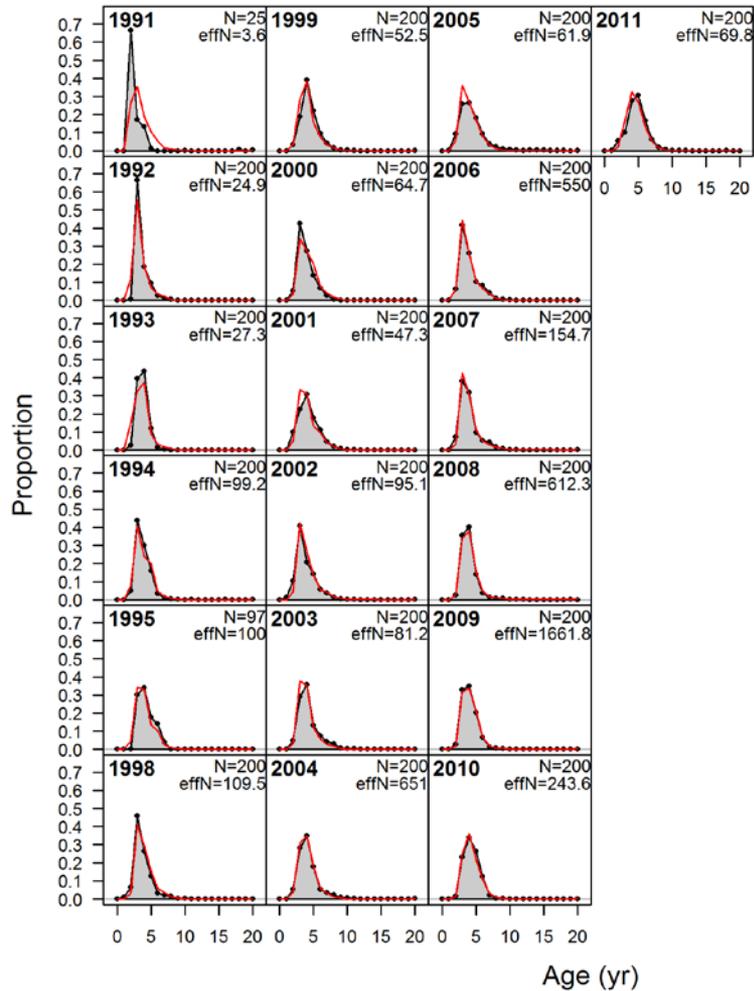


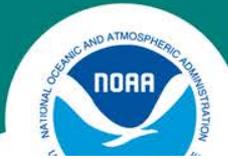
Age (yr)



age comps, sexes combined, retained, HL\_W

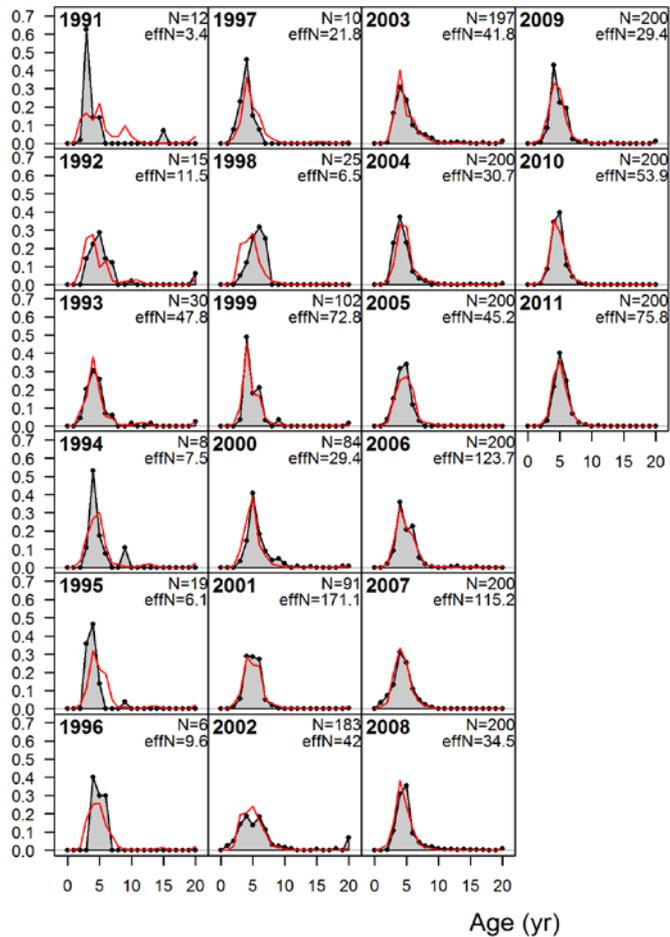
age comps, sexes combined, retained, HL\_W



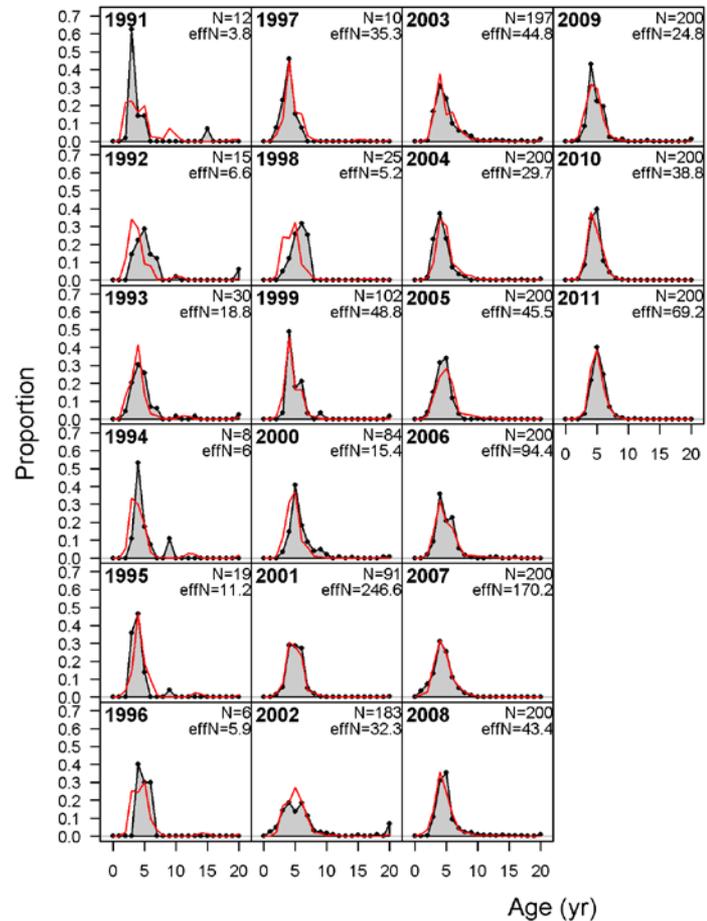


# Model weighting

age comps, sexes combined, retained, LL\_E

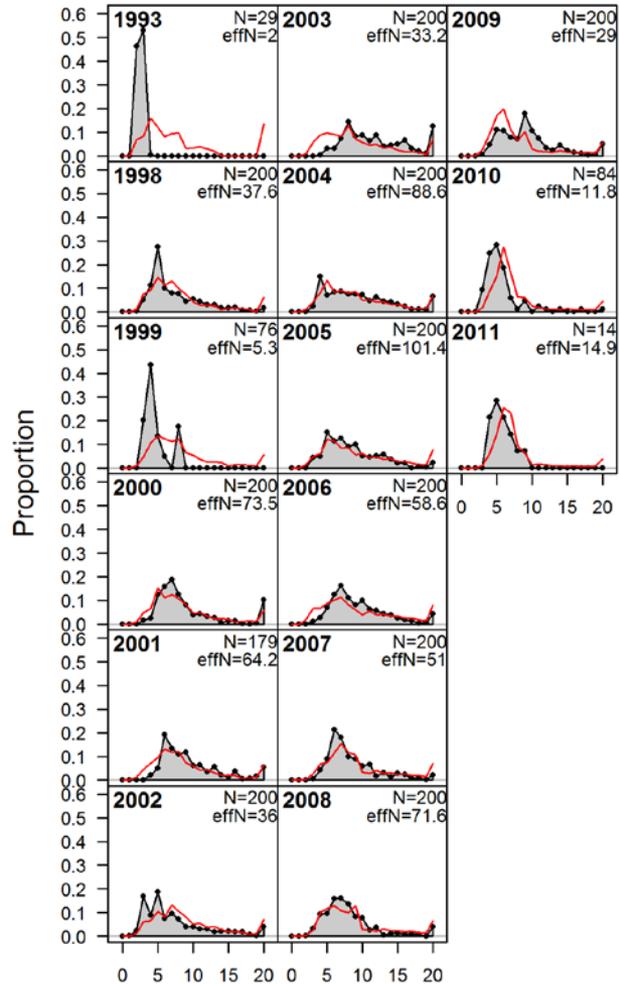


age comps, sexes combined, retained, LL\_E

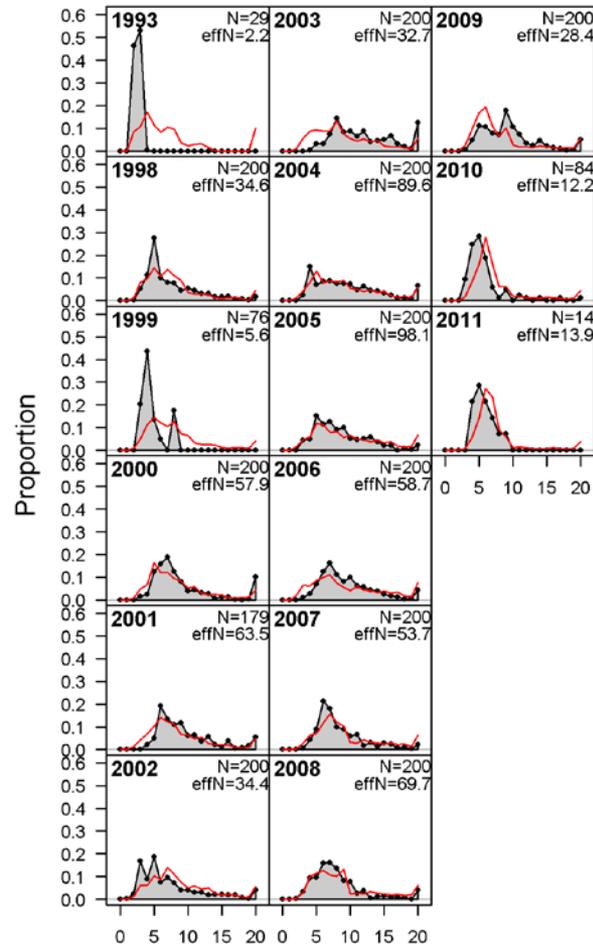


age comps, sexes combined, retaine

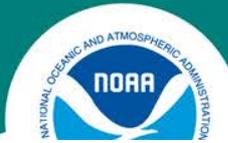
age comps, sexes combined, retained, LL\_W



Age (yr)

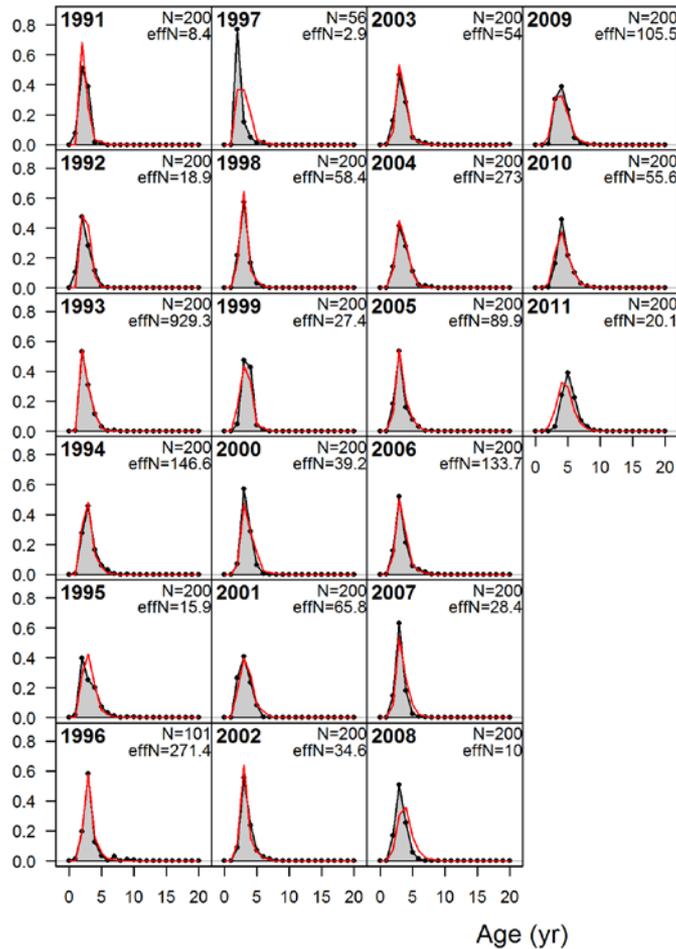


Age (yr)

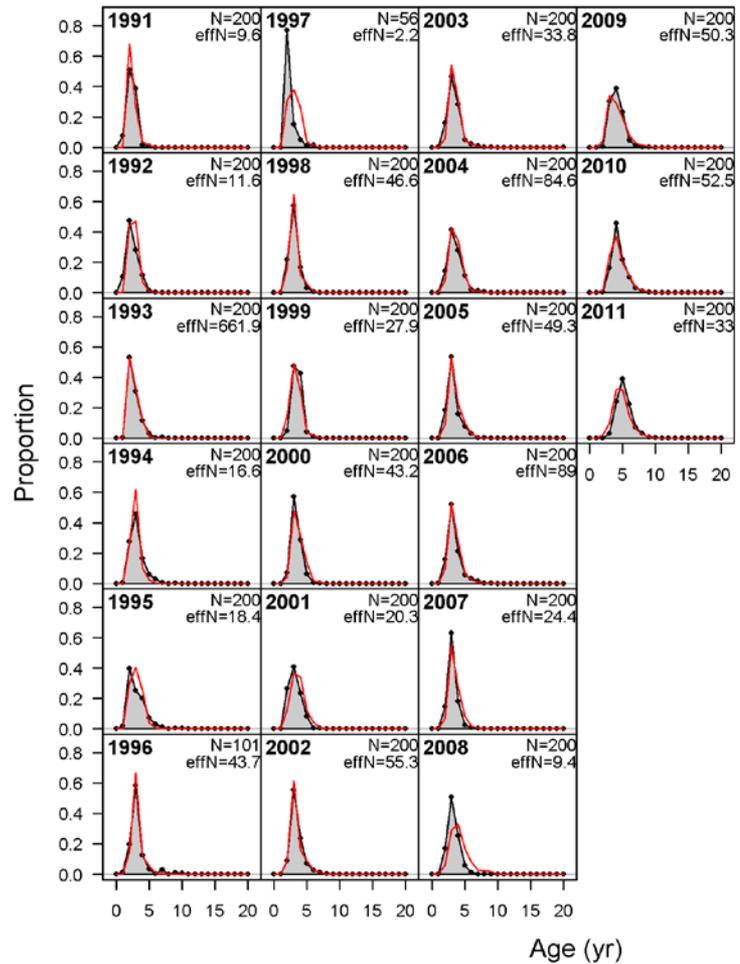


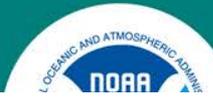
# Model weighting

age comps, sexes combined, retained, MRIP\_E



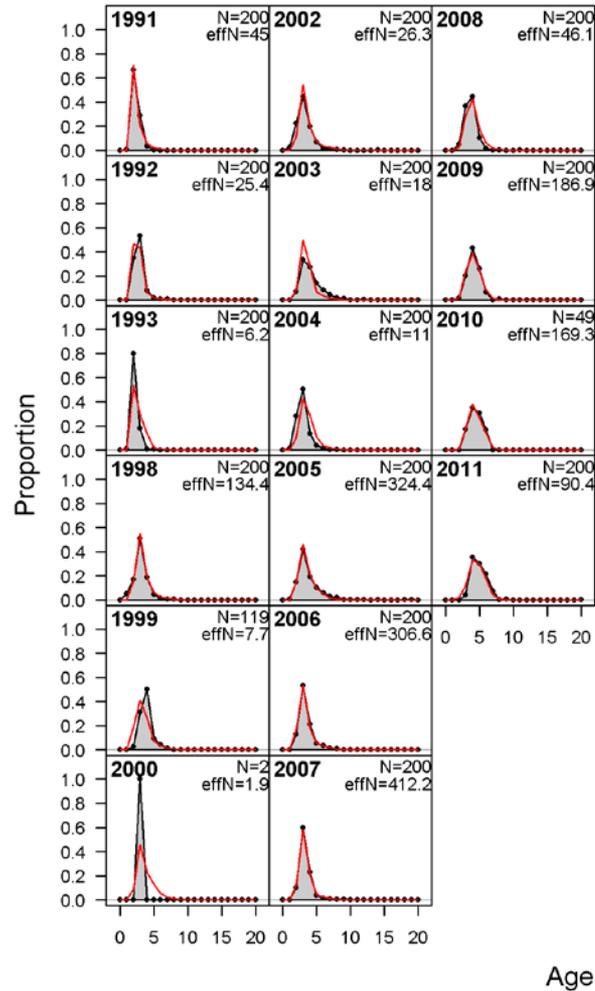
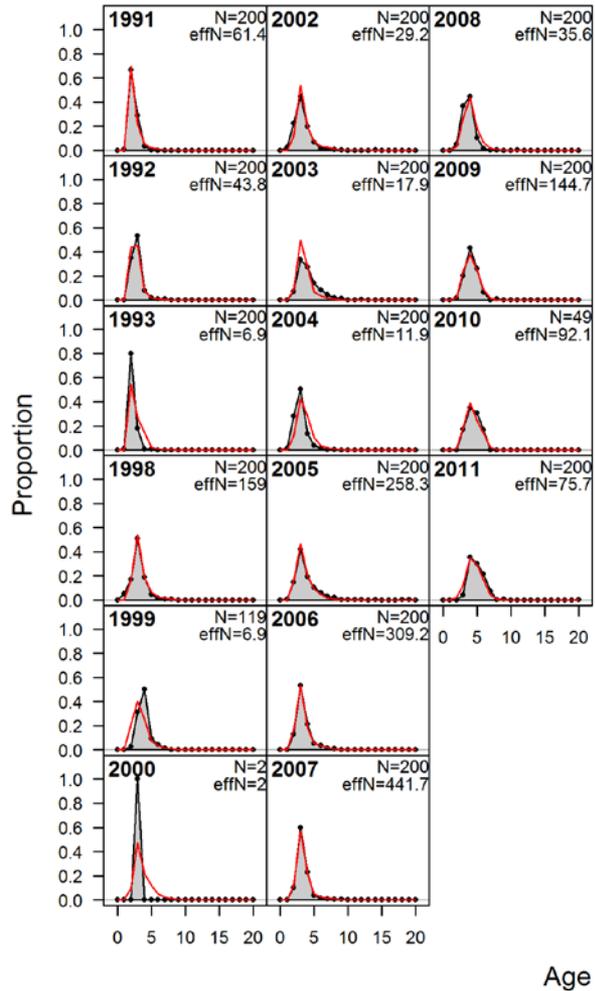
age comps, sexes combined, retained, MRIP\_E





age comps, sexes combined, retained, MRIP\_v

age comps, sexes combined, retained, MRIP\_W

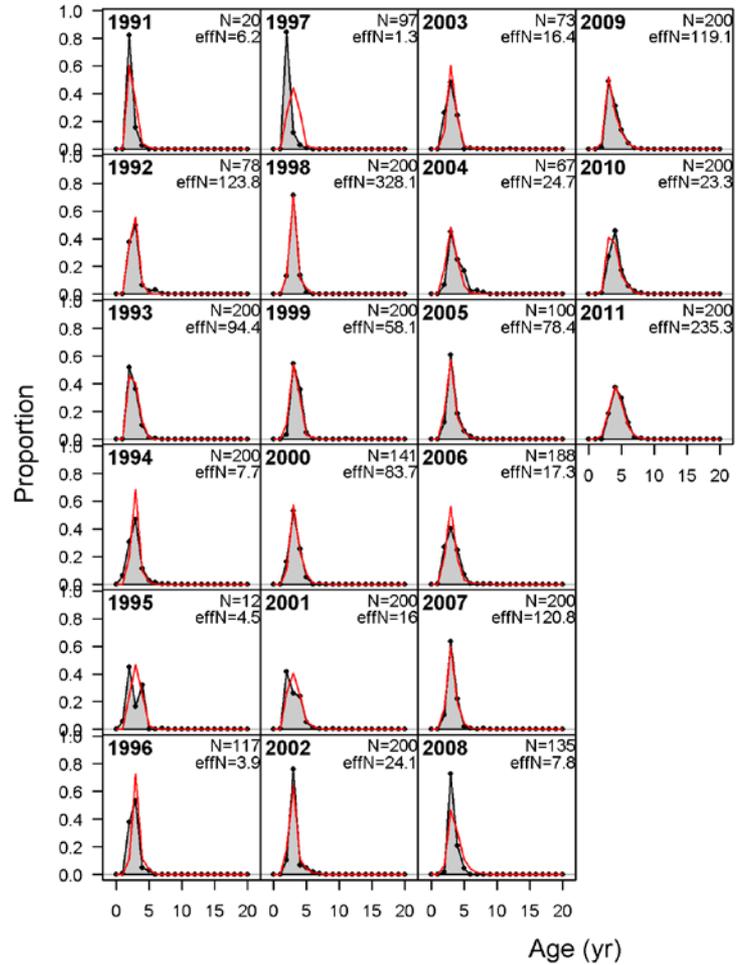
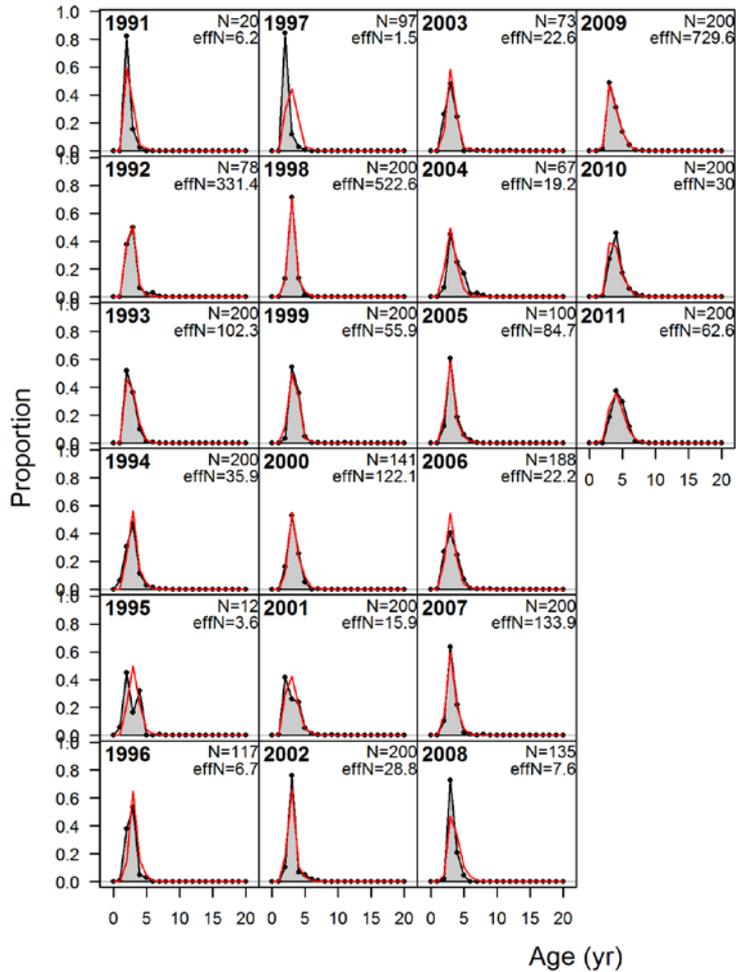


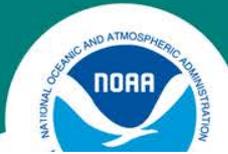


# Model weighting

age comps, sexes combined, retained, HBT\_E

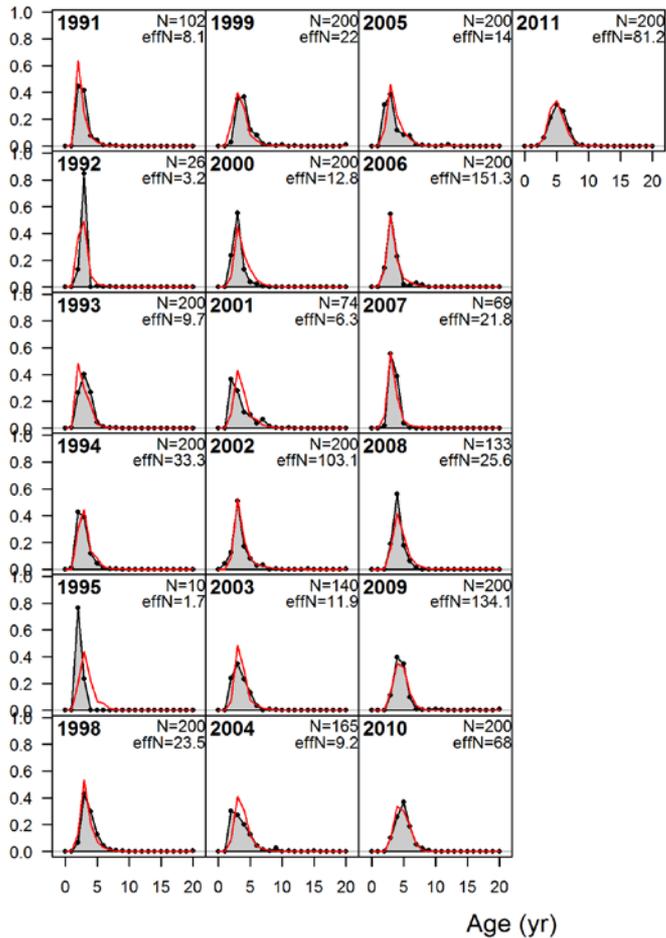
age comps, sexes combined, retained, HBT\_E



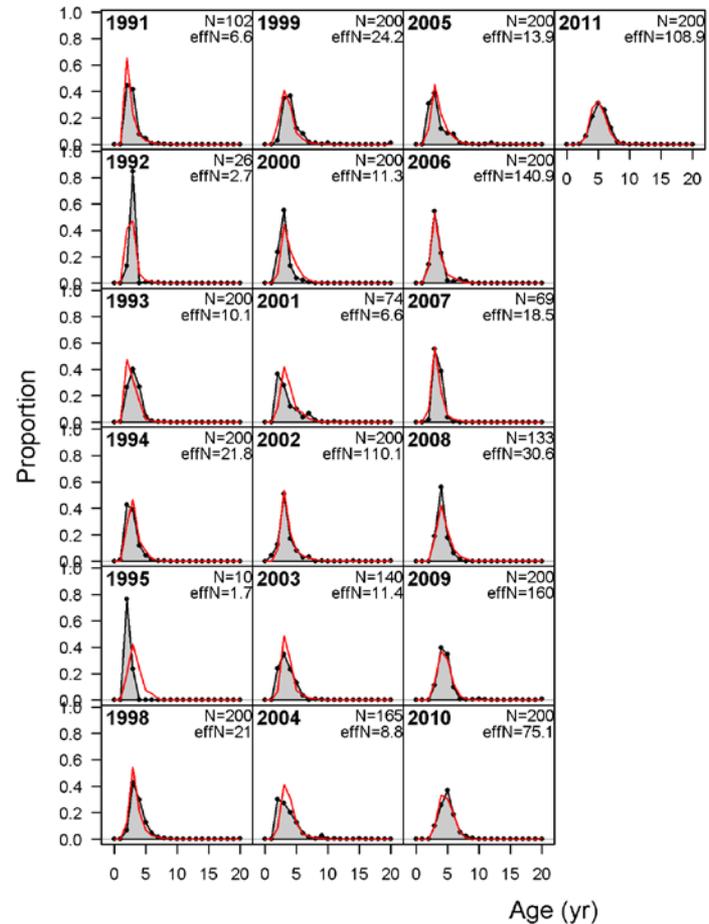


# Model weighting

age comps, sexes combined, retained, HBT\_W

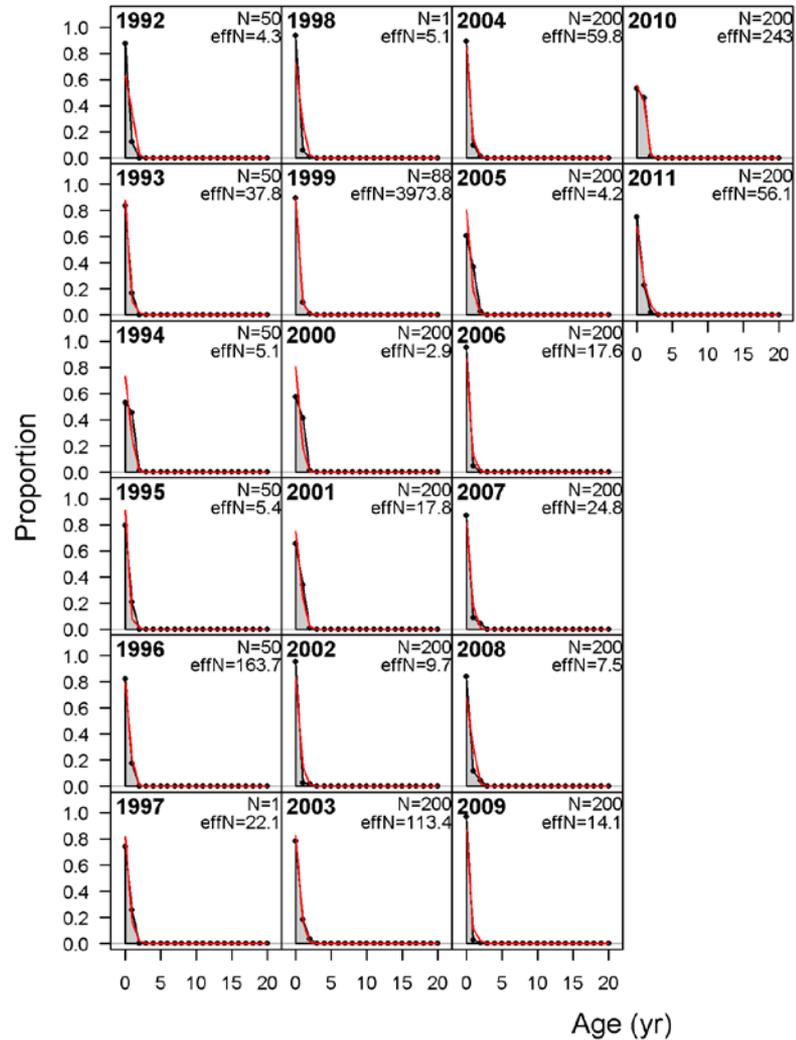
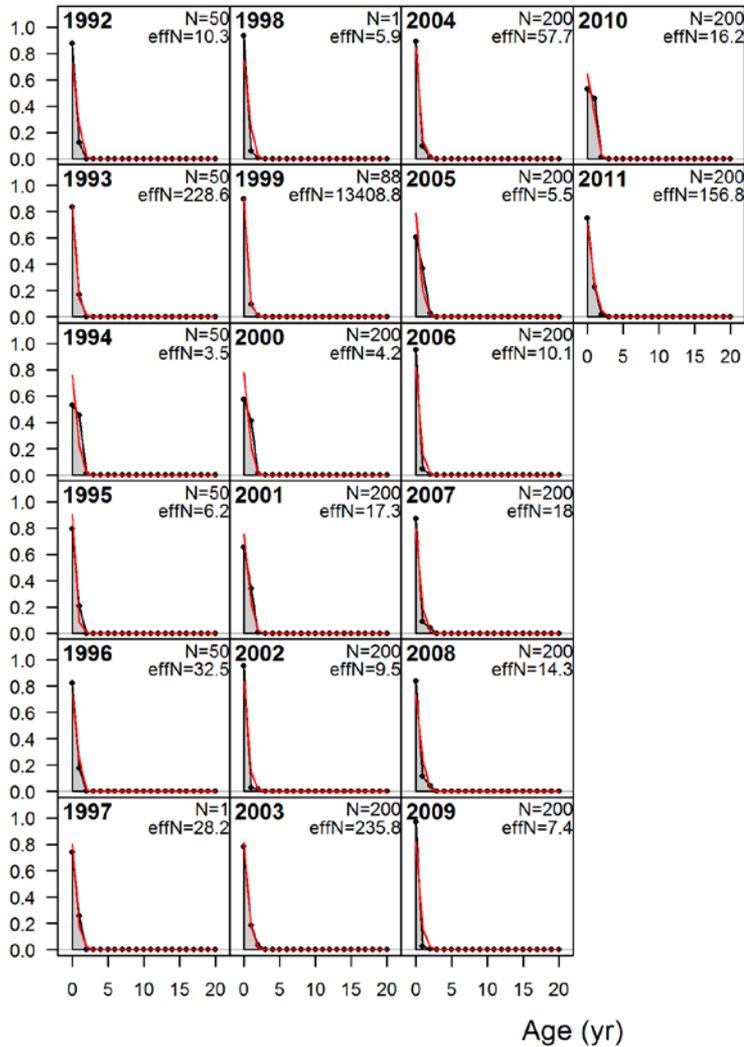


age comps, sexes combined, retained, HBT\_W

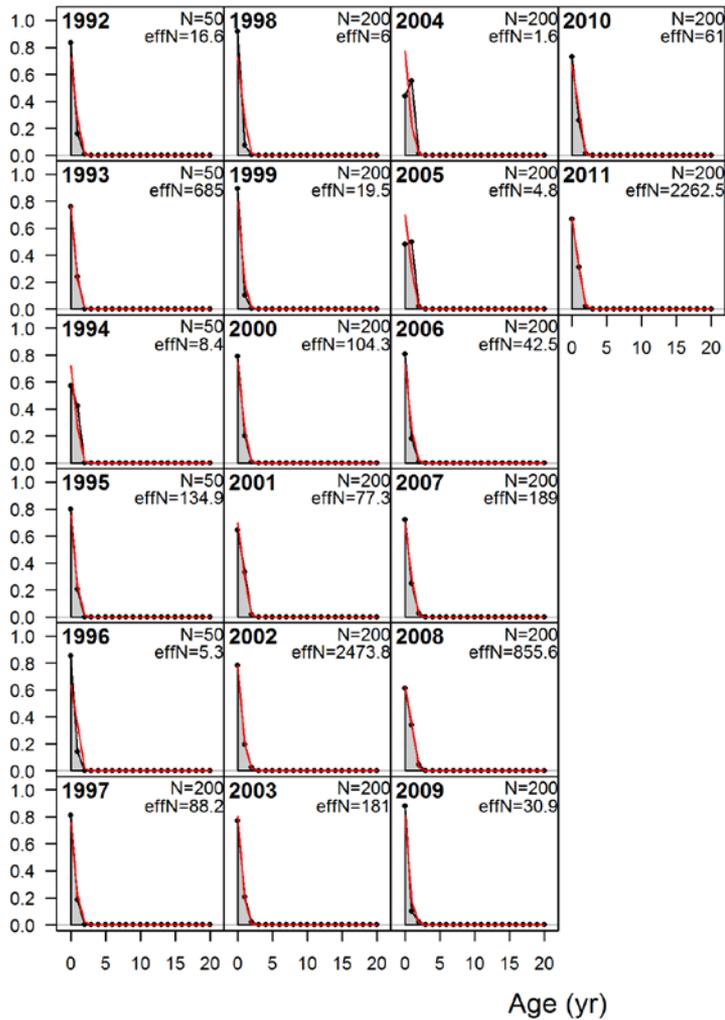


age comps, sexes combined, discard, Shr\_E

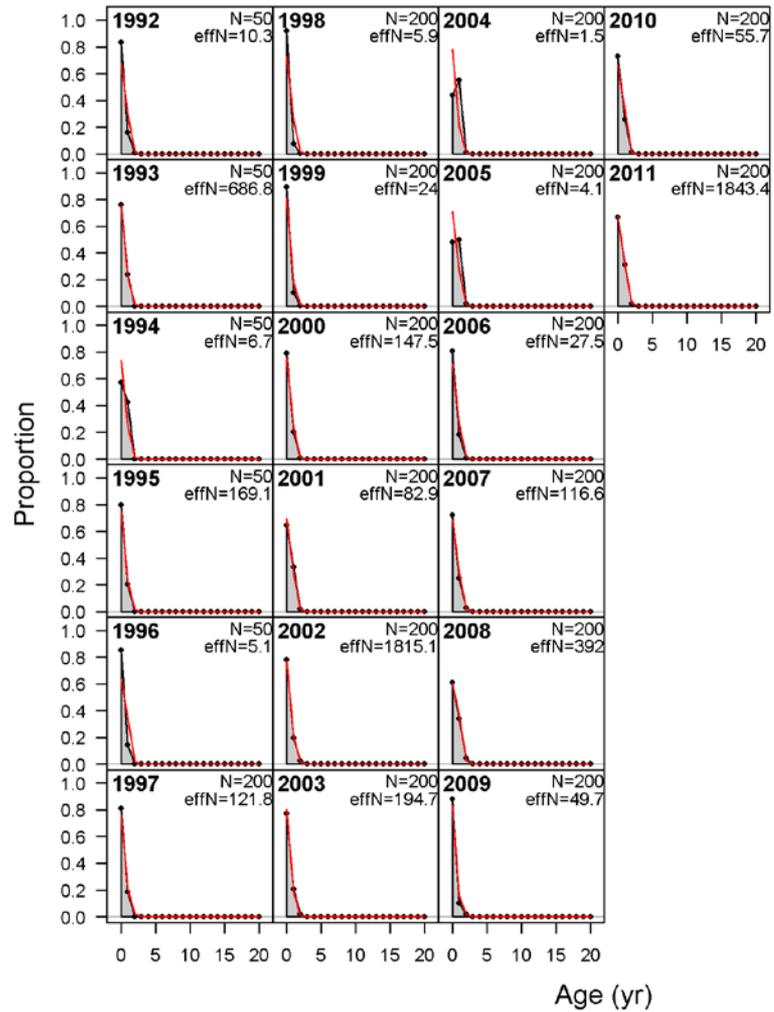
age comps, sexes combined, discard, Shr\_E



age comps, sexes combined, discard, Shr



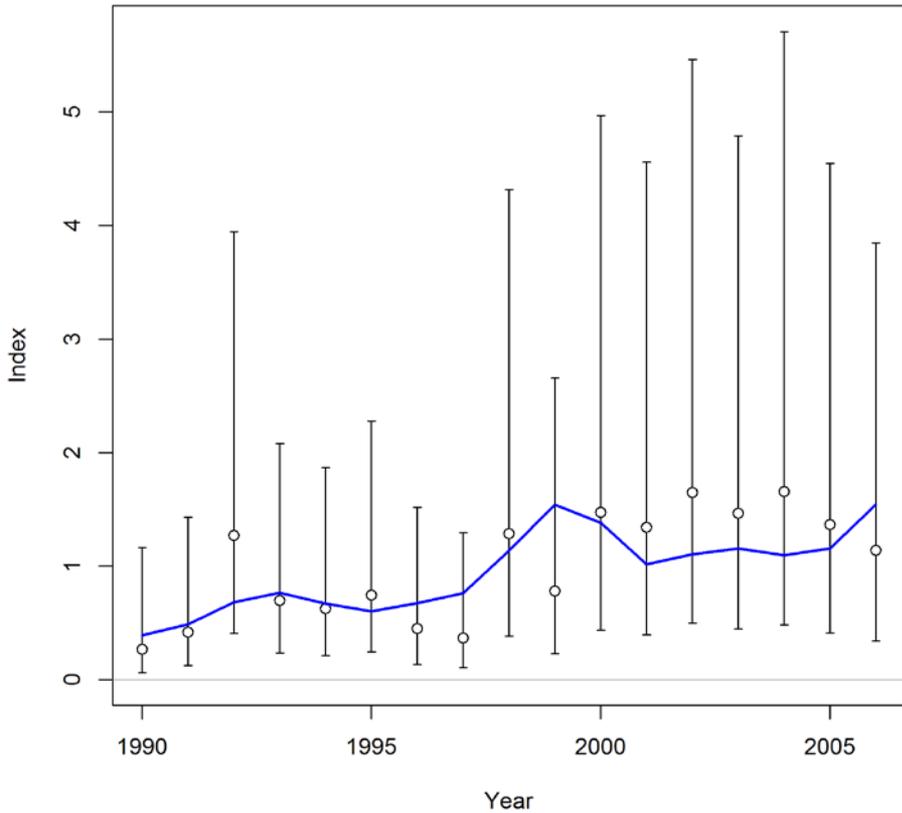
age comps, sexes combined, discard, Shr\_W



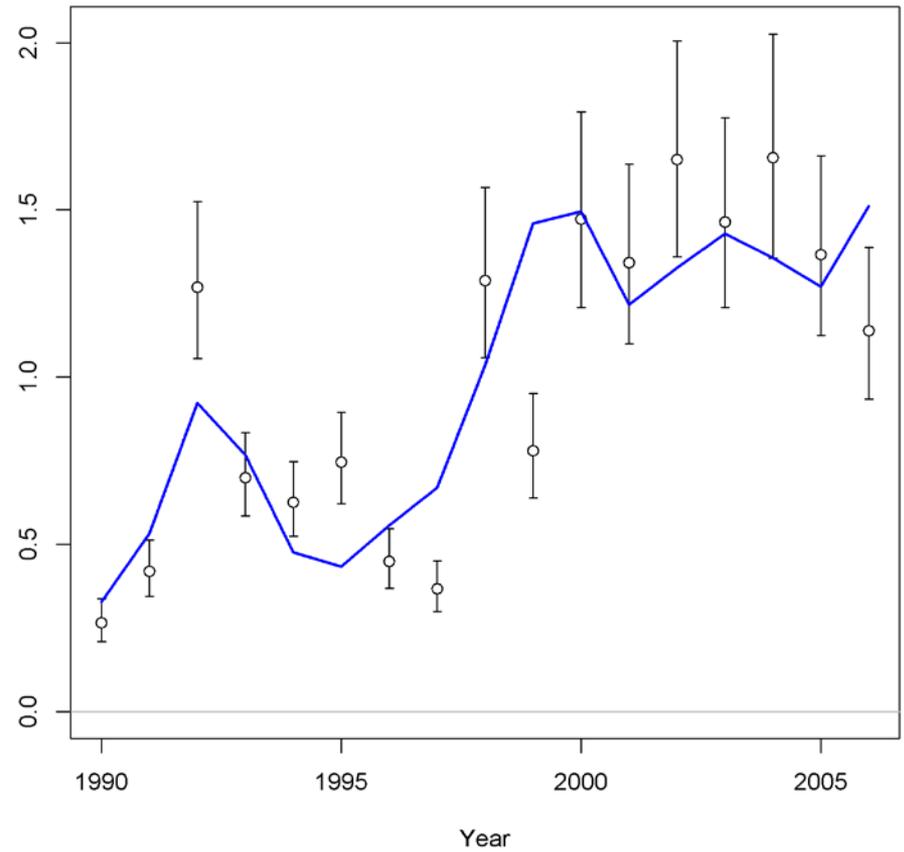


# Model weighting

Index HL\_E



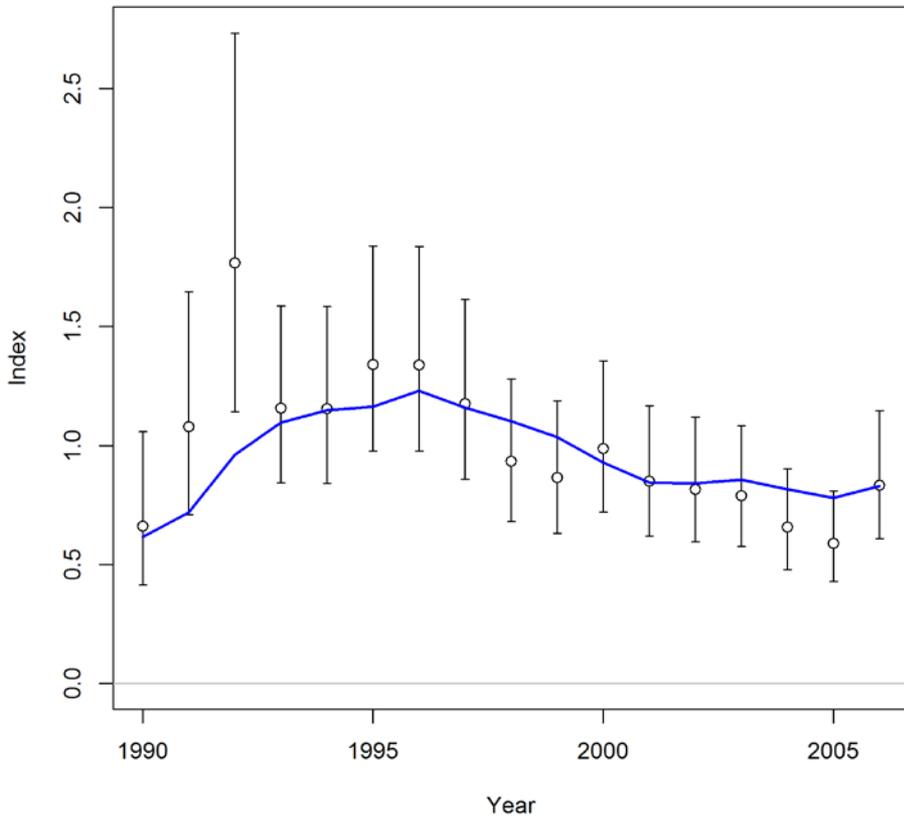
Index HL\_E



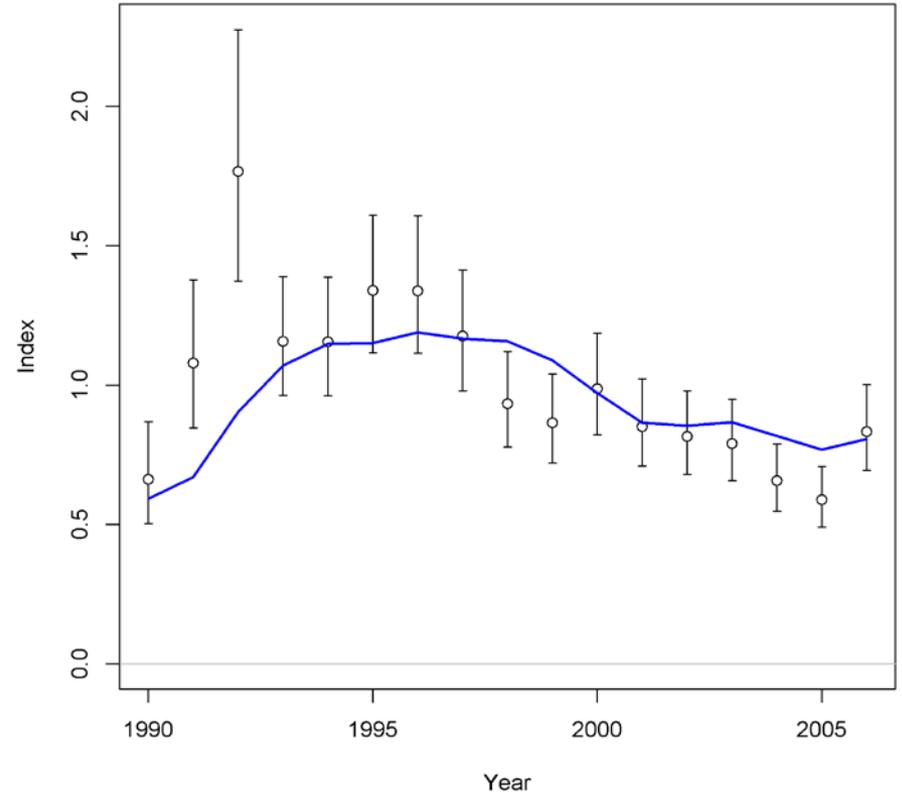


# Model weighting

Index HL\_W



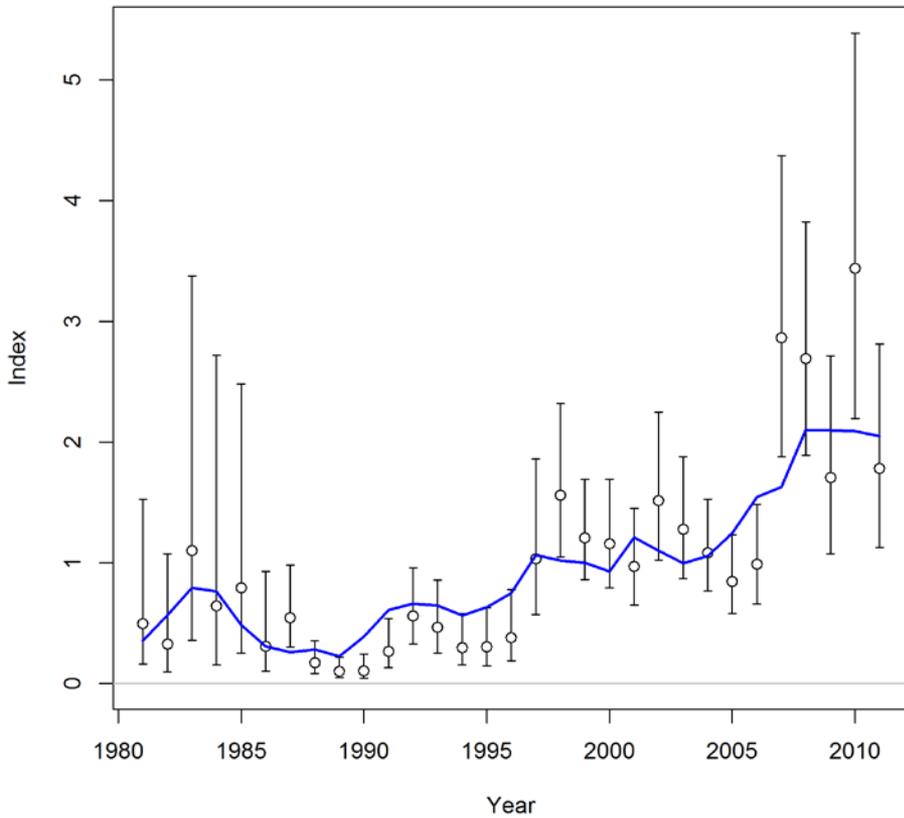
Index HL\_W



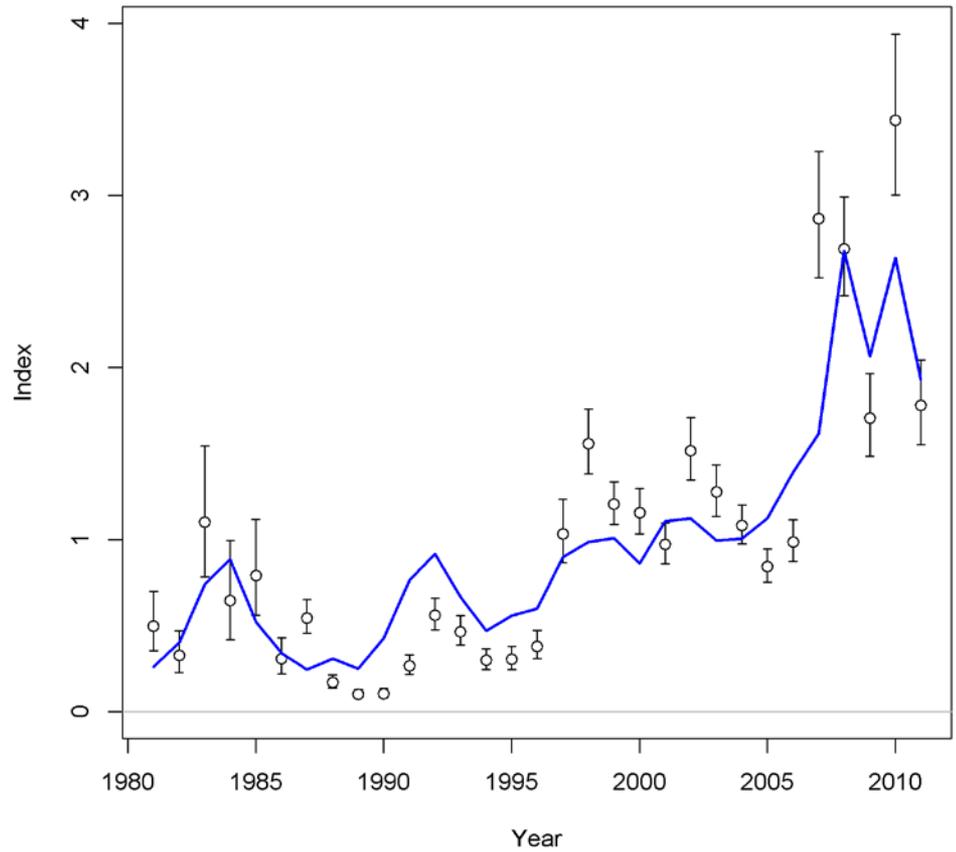


# Model weighting

Index MRIP\_Index\_E



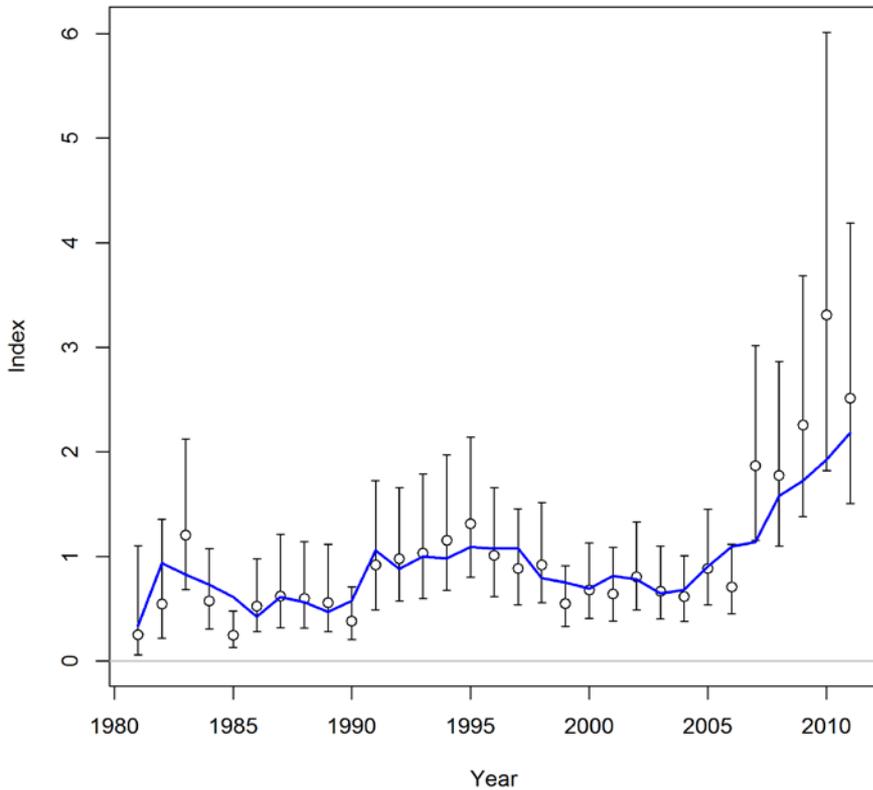
Index MRIP\_Index\_E



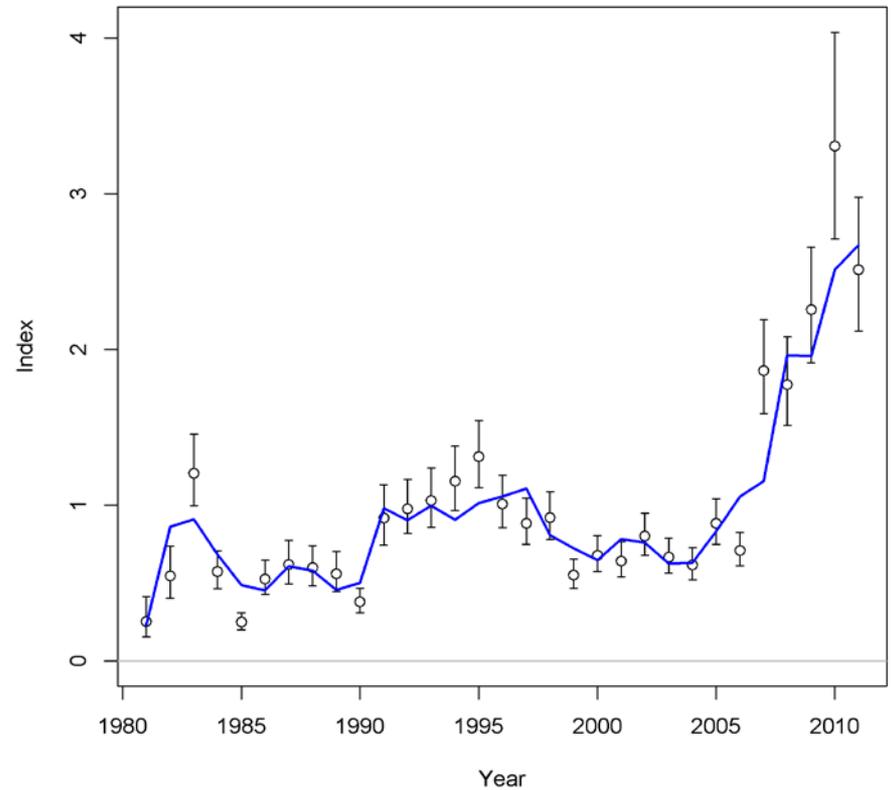


# Model weighting

Index MRIP\_Index\_W



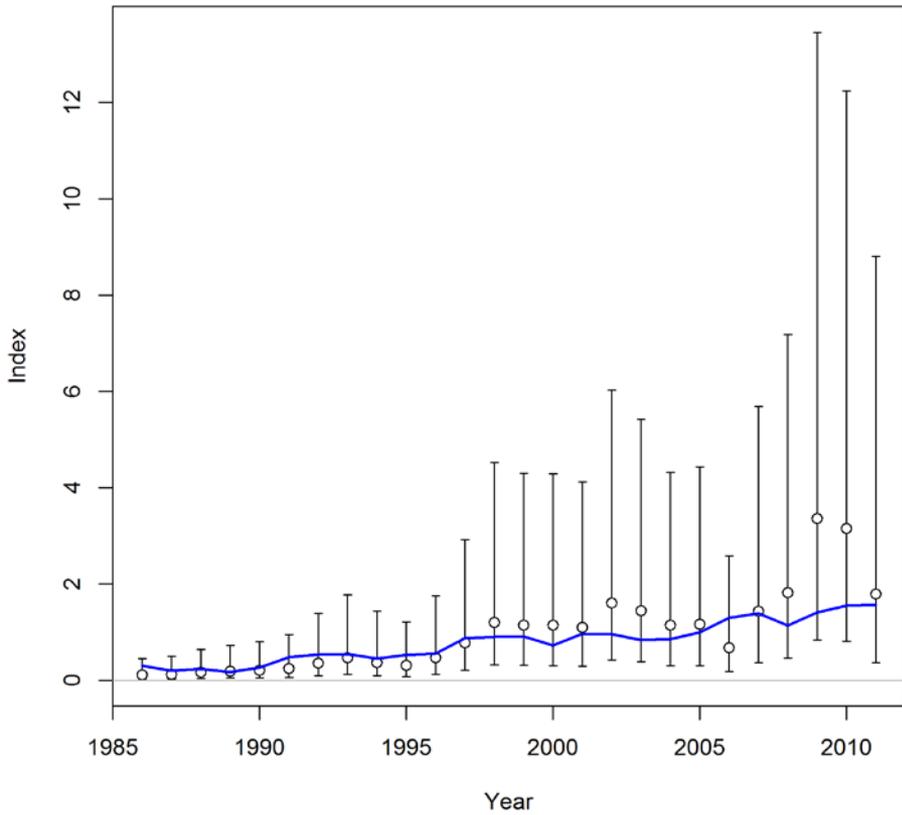
Index MRIP\_Index\_W



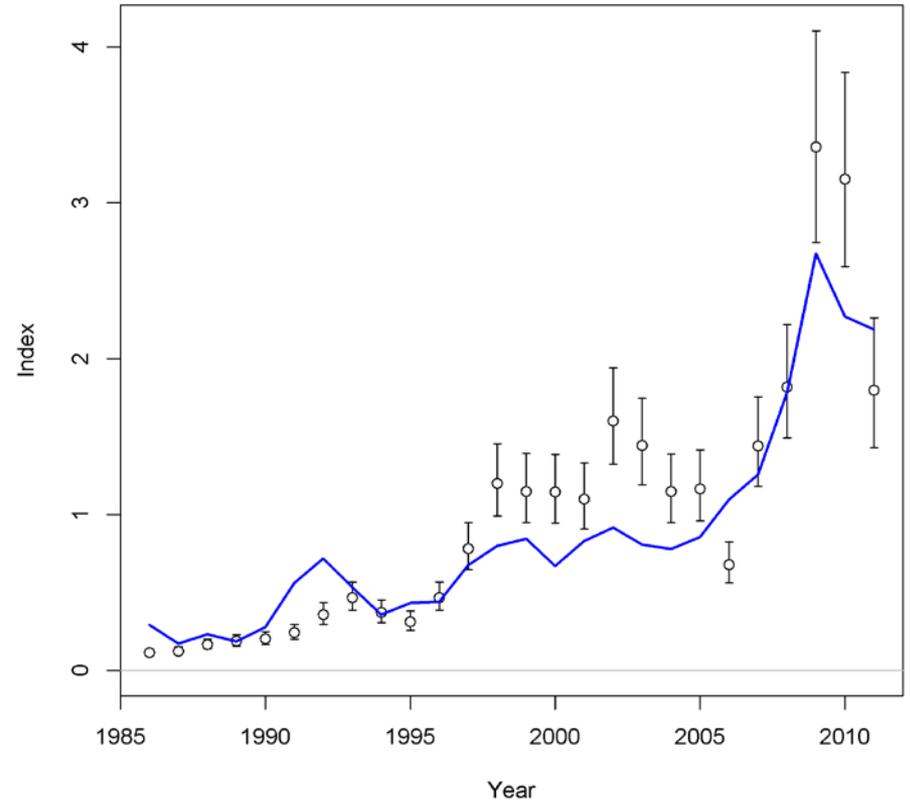


# Model weighting

Index HBT\_Index\_E



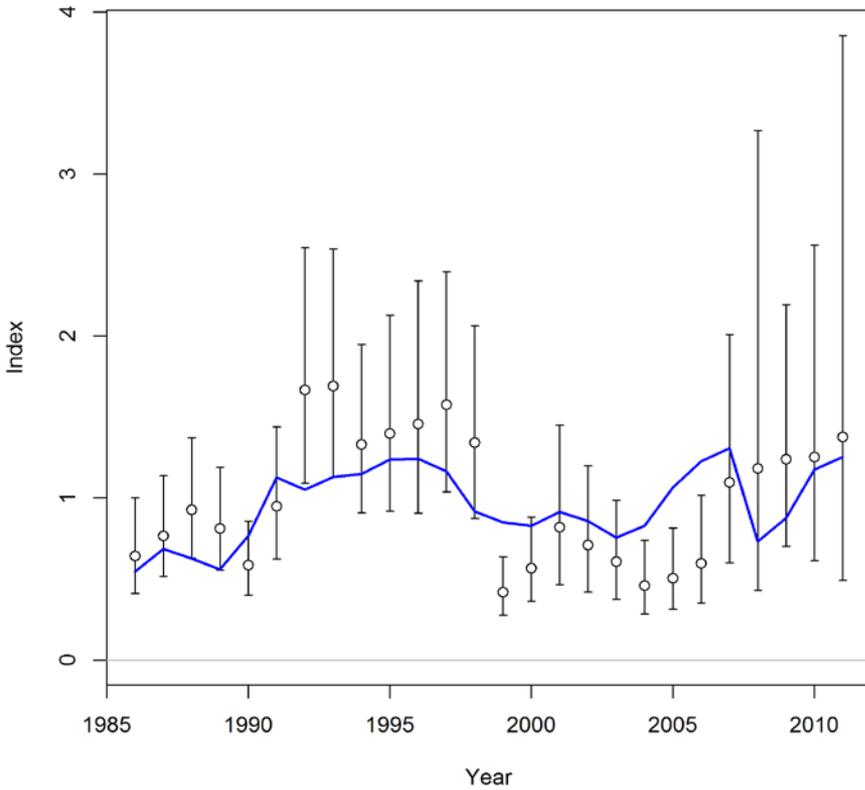
Index HBT\_Index\_E



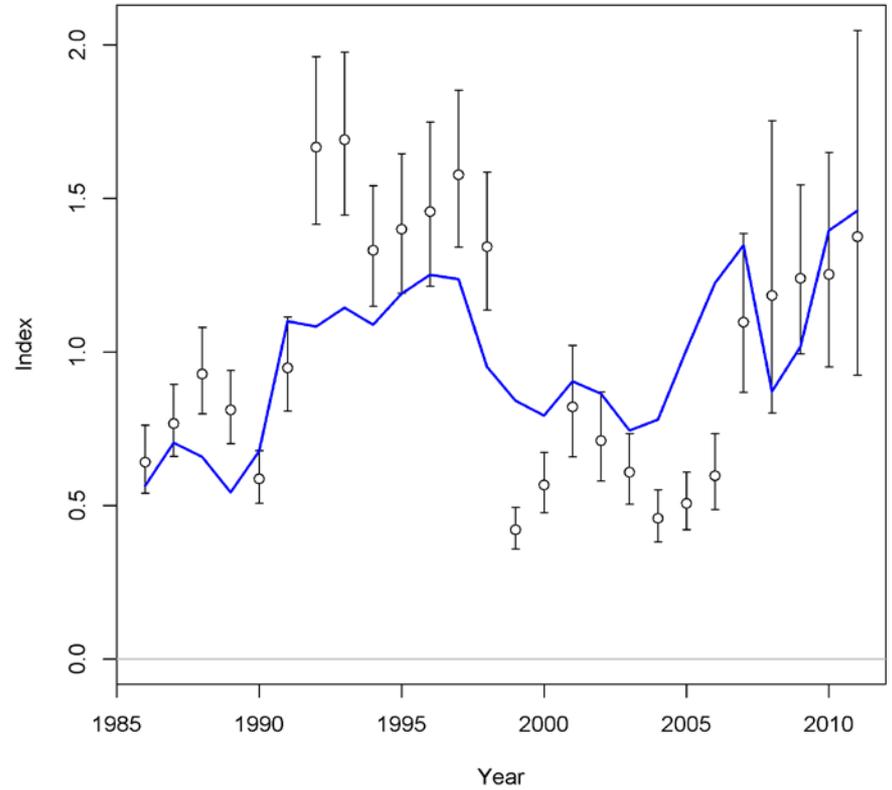


# Model weighting

Index HBT\_Index\_W



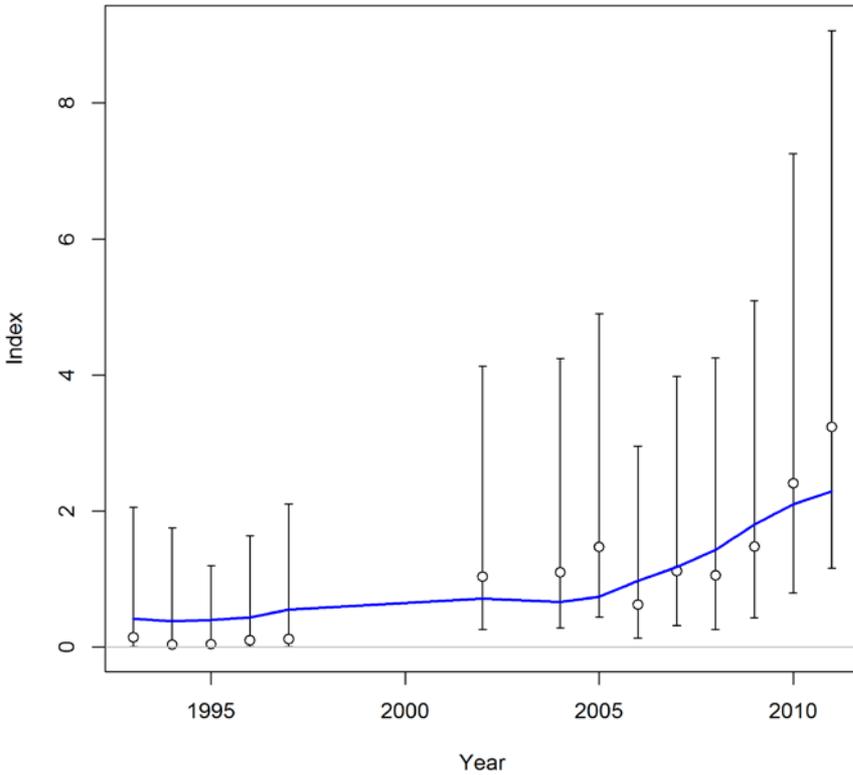
Index HBT\_Index\_W



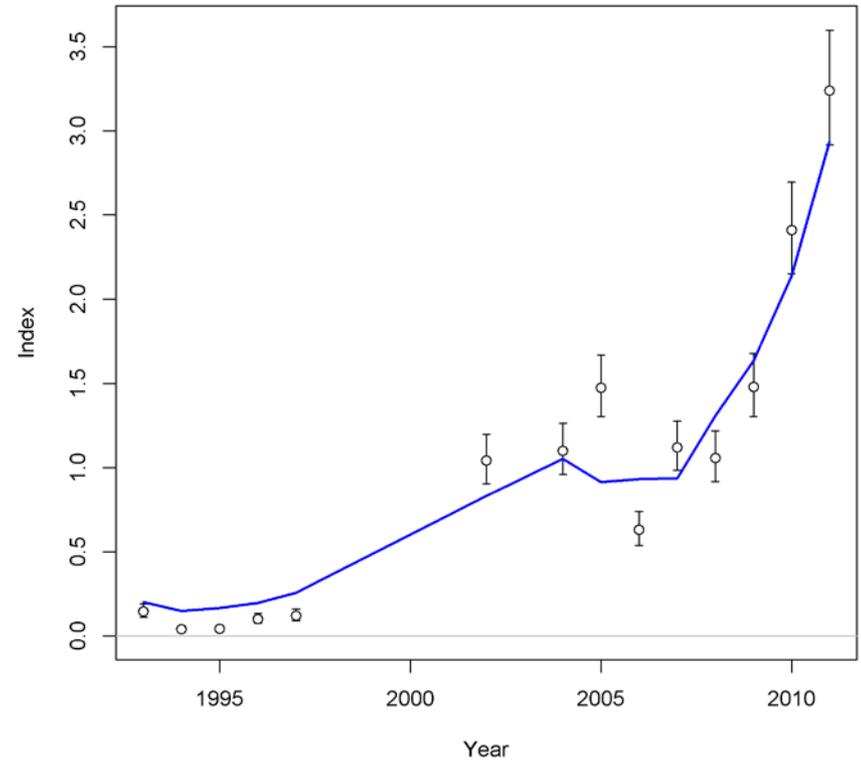


# Model weighting

Index Video\_E



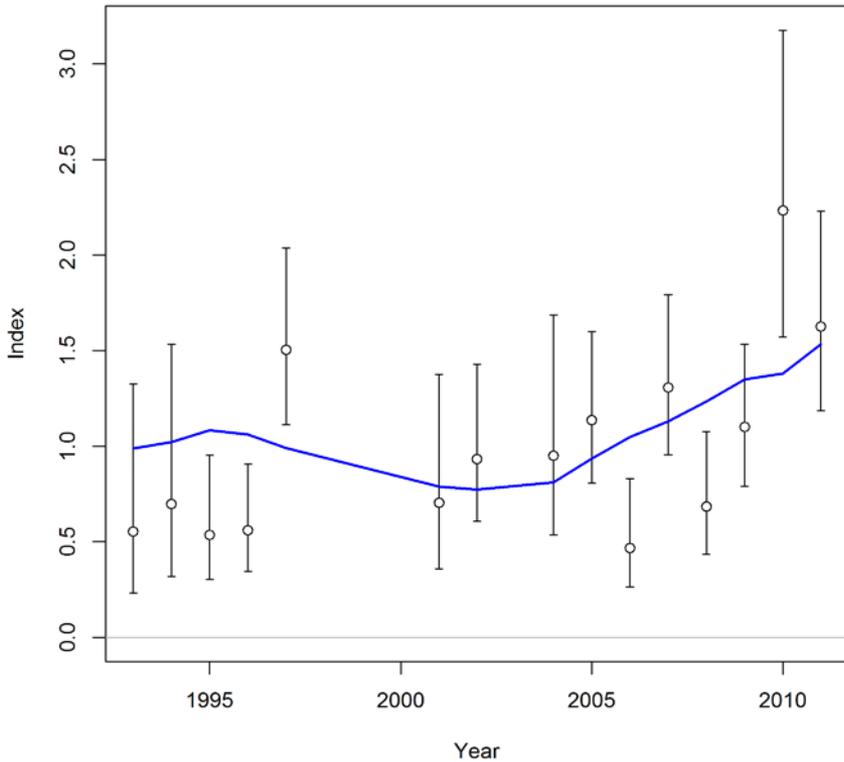
Index Video\_E



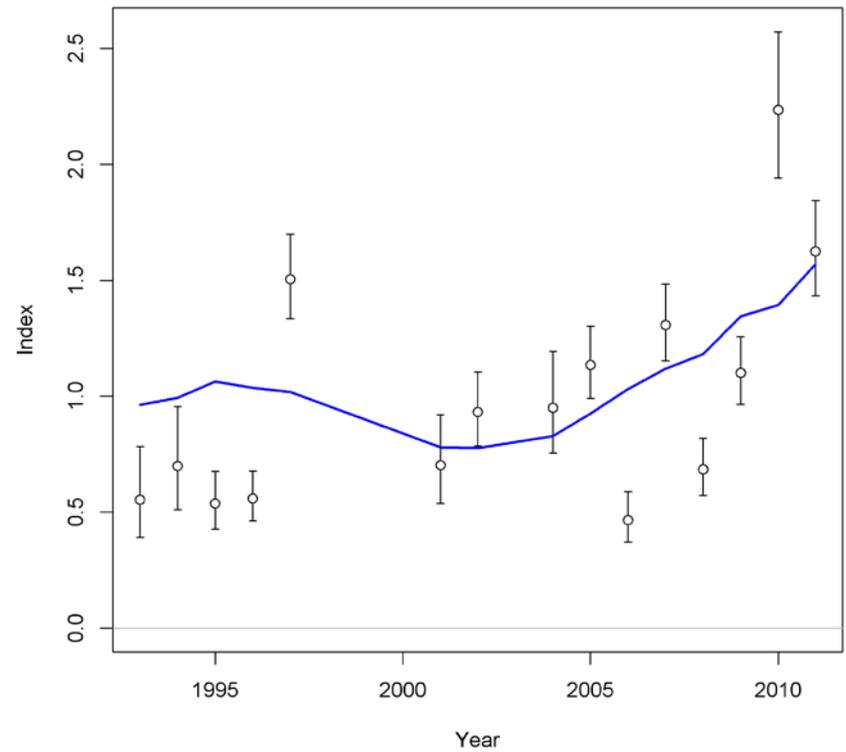


# Model weighting

Index Video\_W



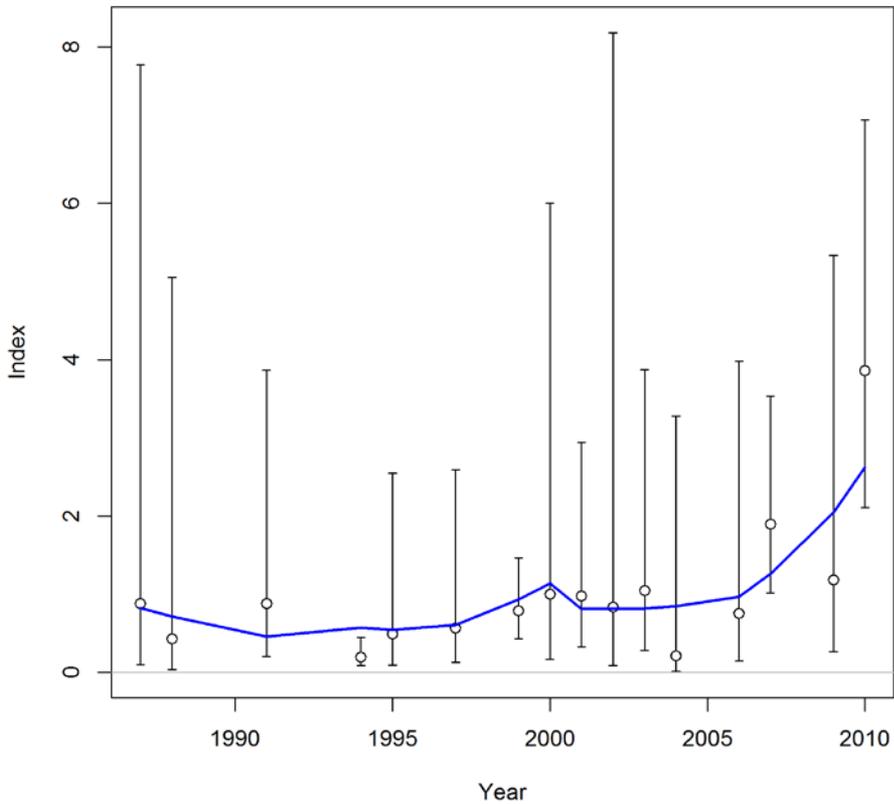
Index Video\_W



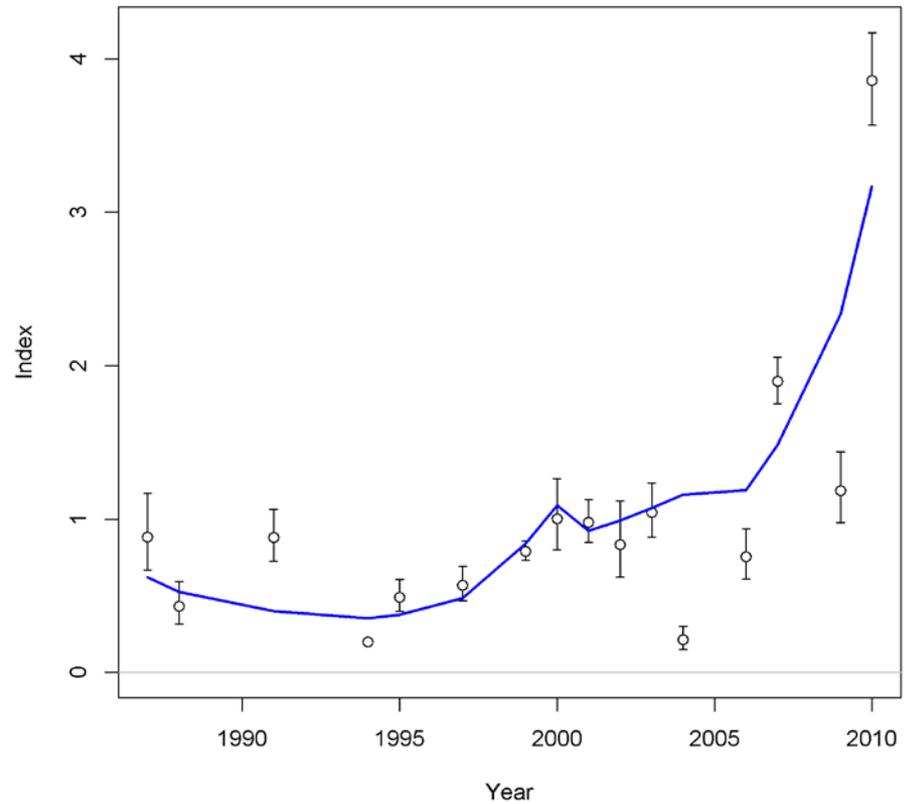


# Model weighting

Index Larv\_E



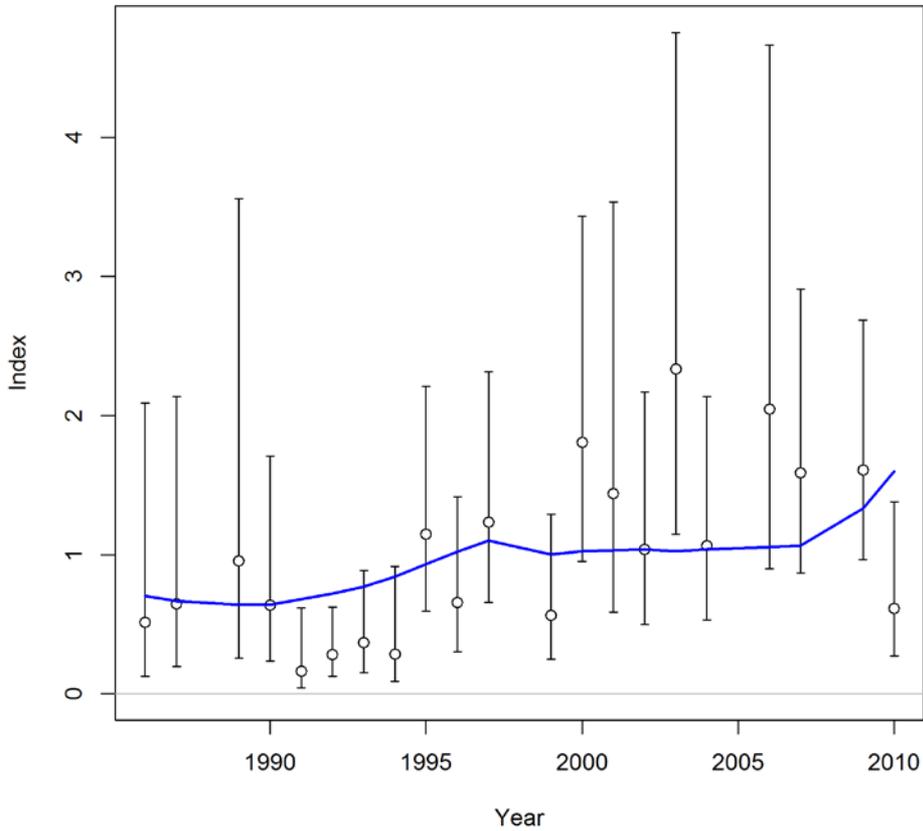
Index Larv\_E



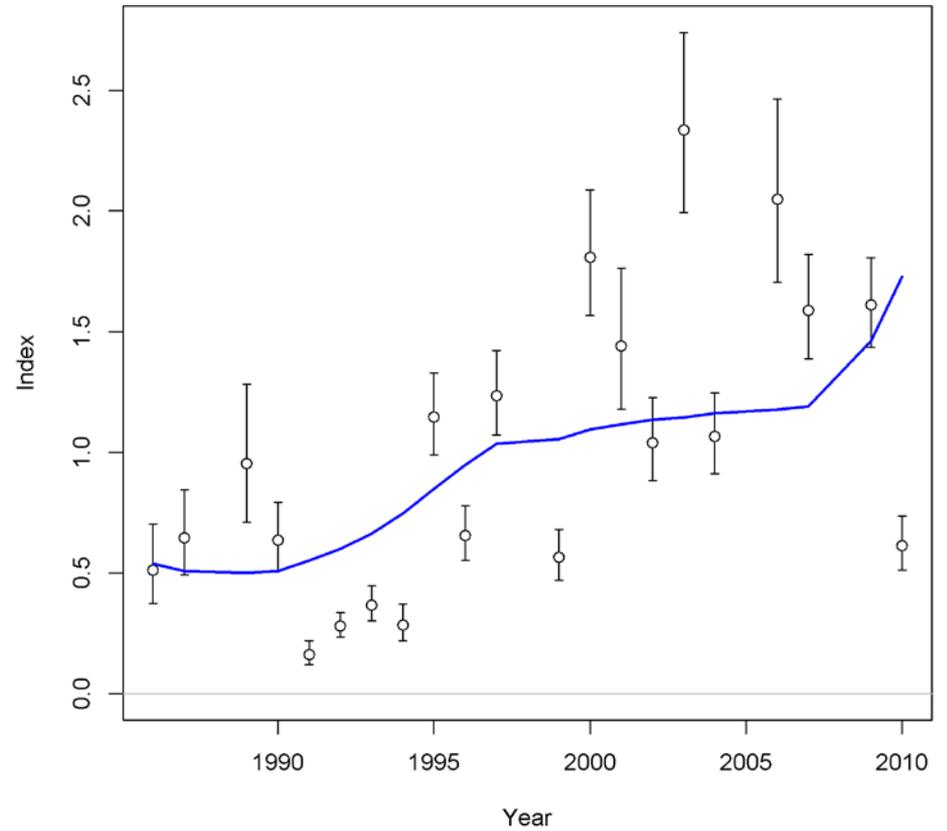


# Model weighting

Index Larv\_W



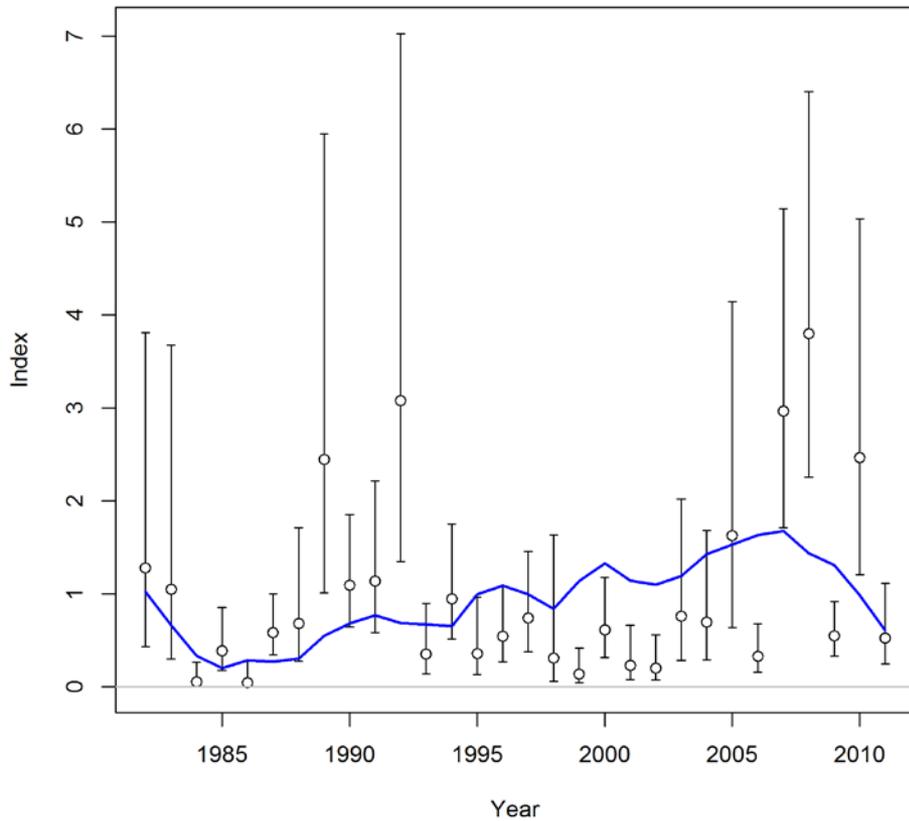
Index Larv\_W



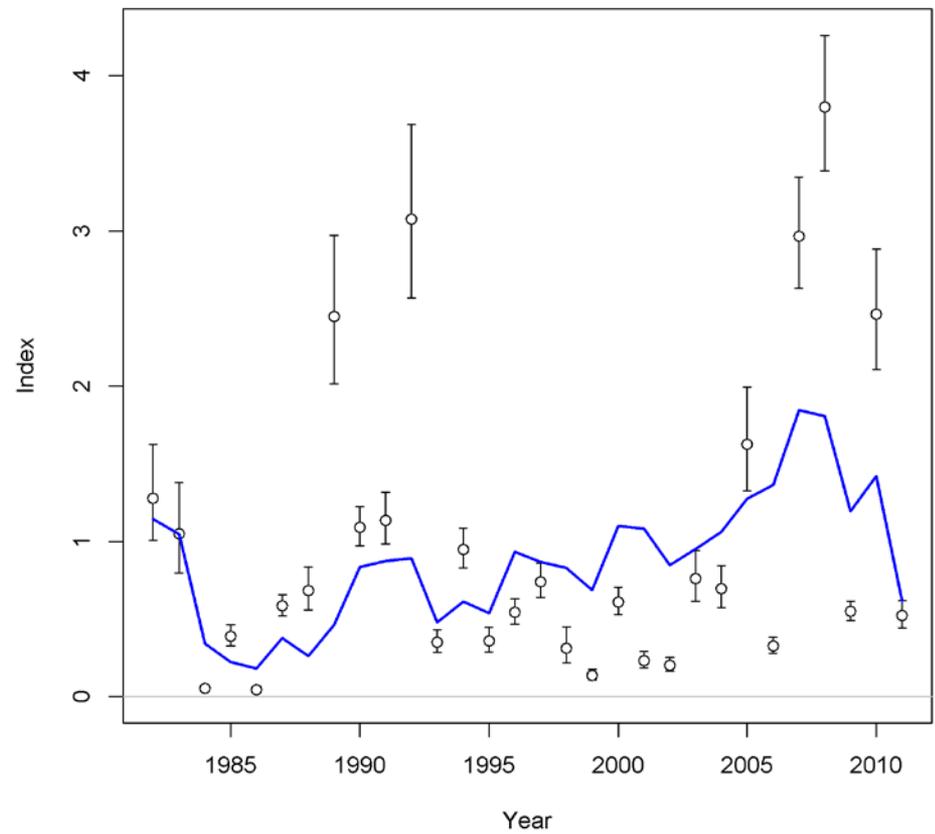


# Model weighting

Index Sum\_E



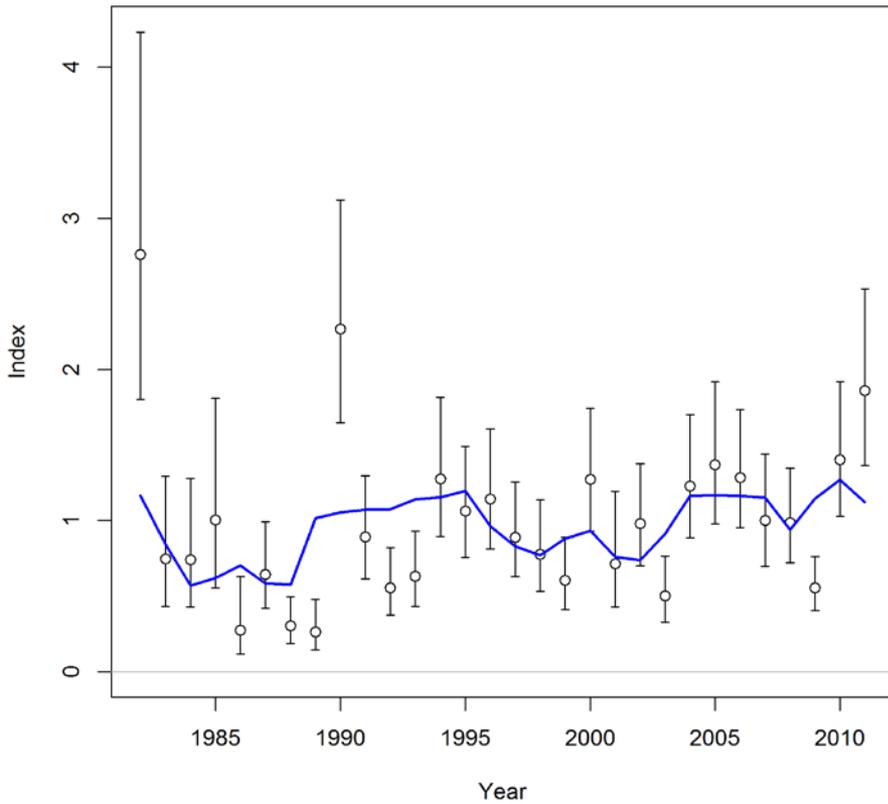
Index Sum\_E



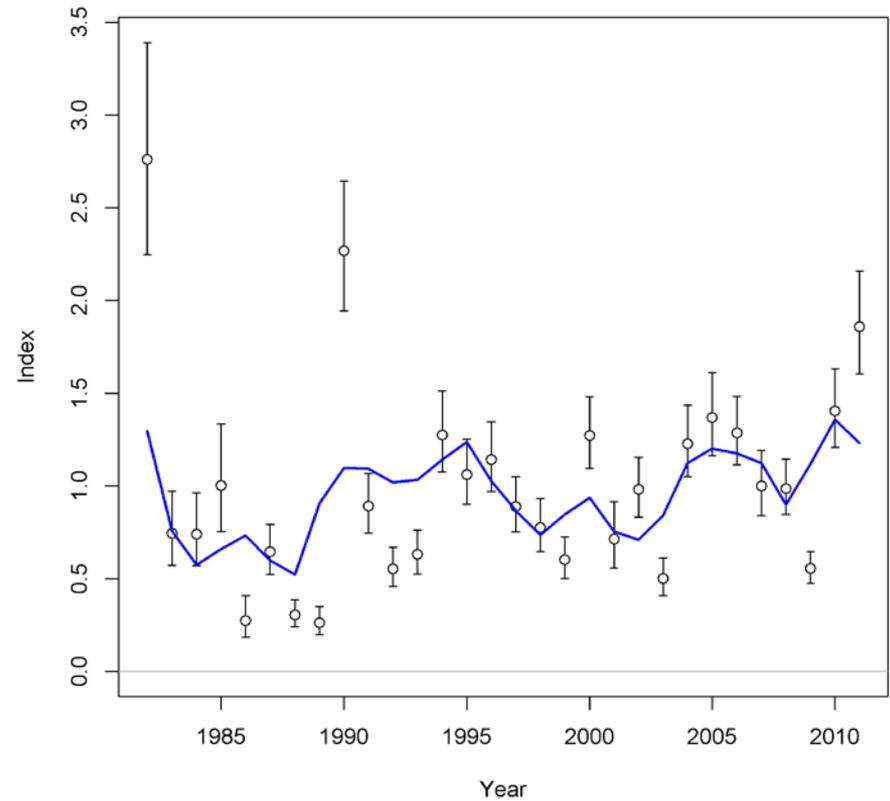


# Model weighting

Index Sum\_W



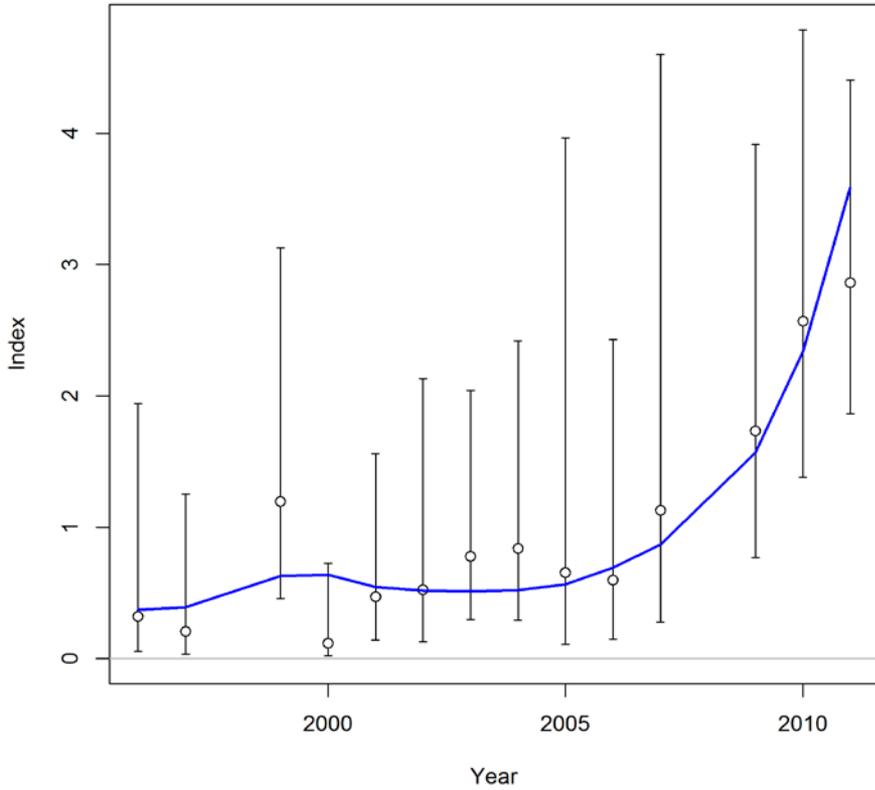
Index Sum\_W



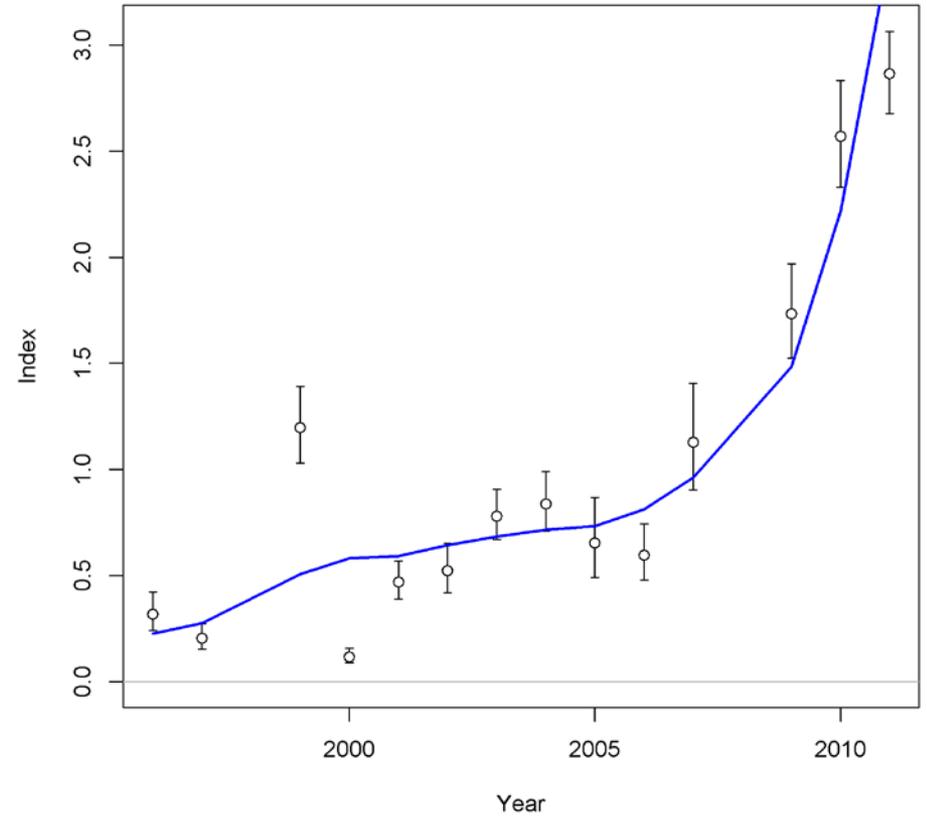


# Model weighting

Index BLL\_E



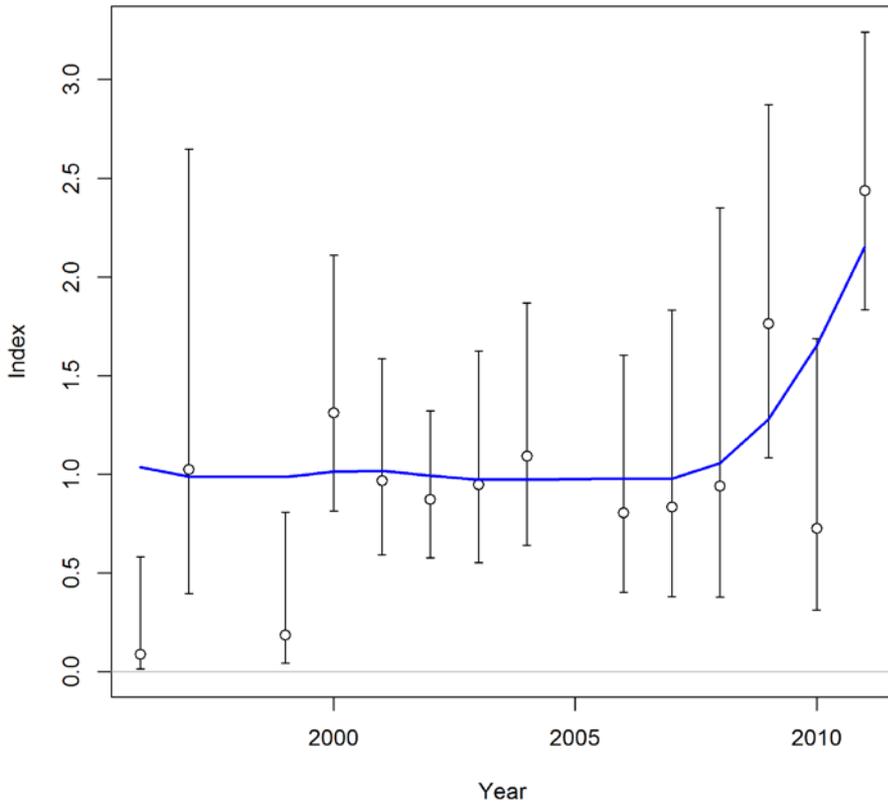
Index BLL\_E





# Model weighting

Index BLL\_W



Index BLL\_W

