

American Samoa Model Checks

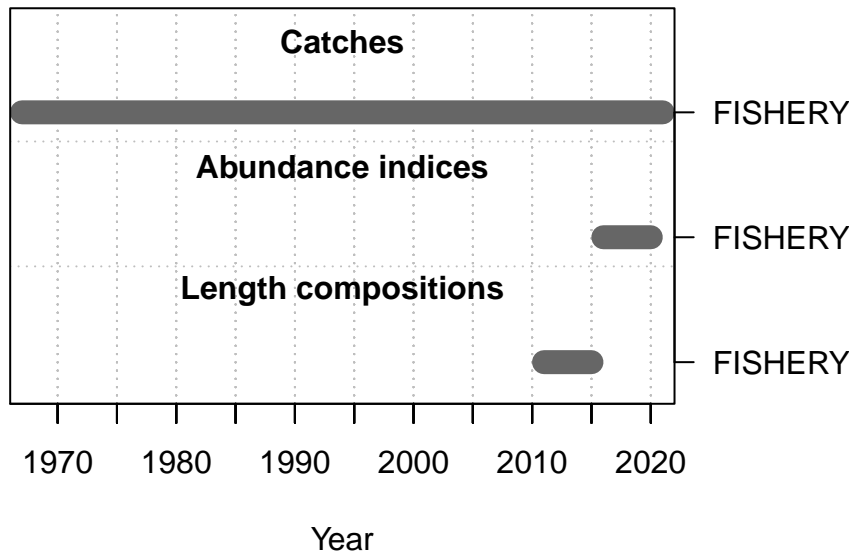
Marc Nadon and Meg Oshima

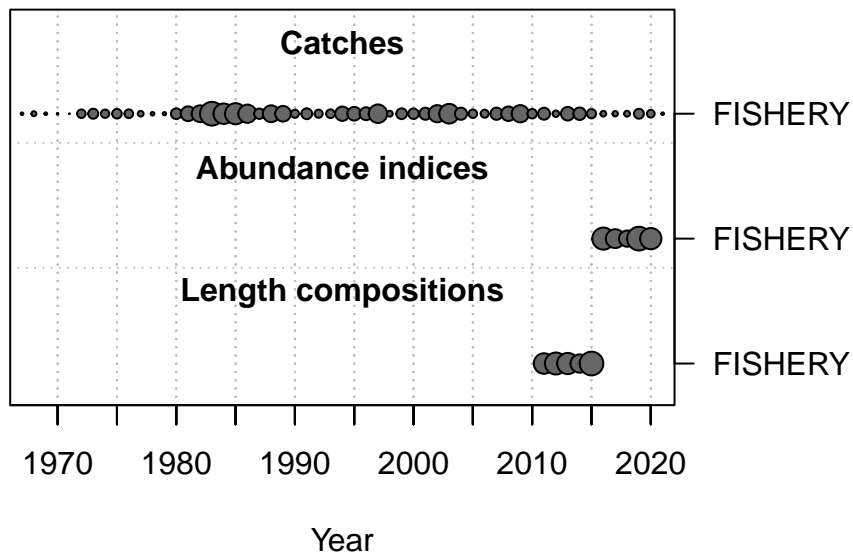
2023-02-05

This is a summary report for the VALO base model run.

Model Output

Input Data





Convergence Check

```

Converged      MaxGrad
1      TRUE 2.44347e-05

```

```

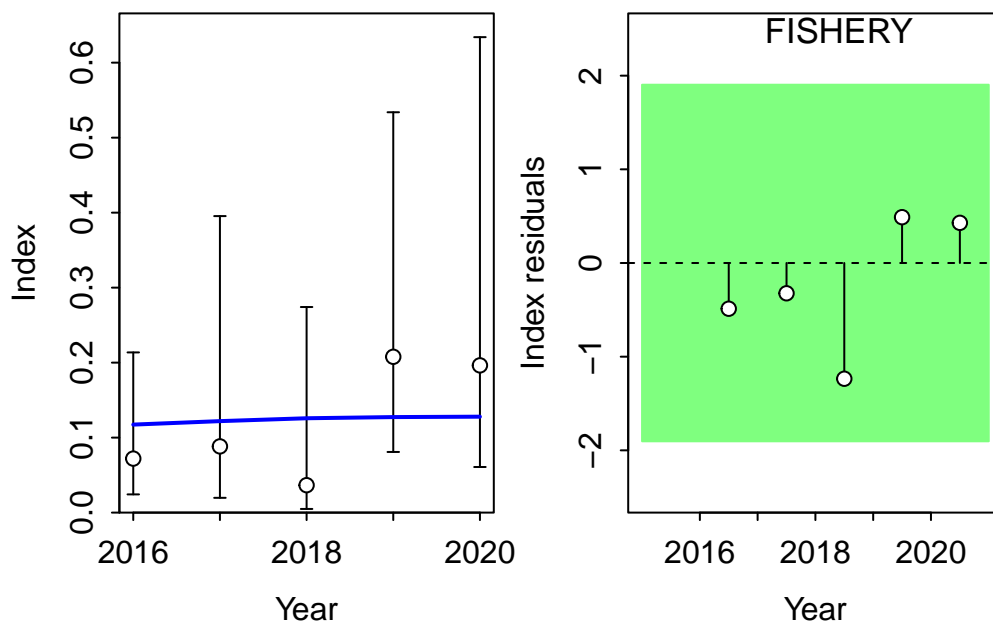
[1] "1 NOTE: Max data length bin: 51 < max pop len bins: 57; so will accumulate larger pop
[2] "2 warning: poor convergence in Fmsy, final dy/dy2= -0.00108324"
[3] "N warnings: 2"

```

Fit to Model

CPUE

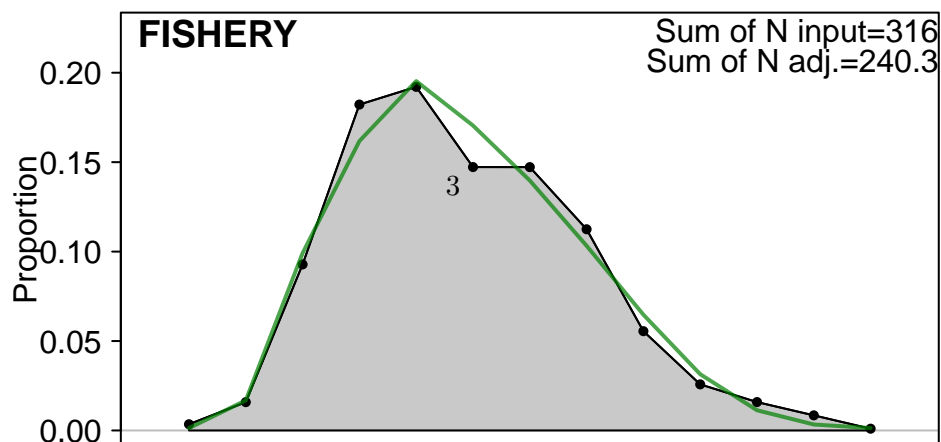
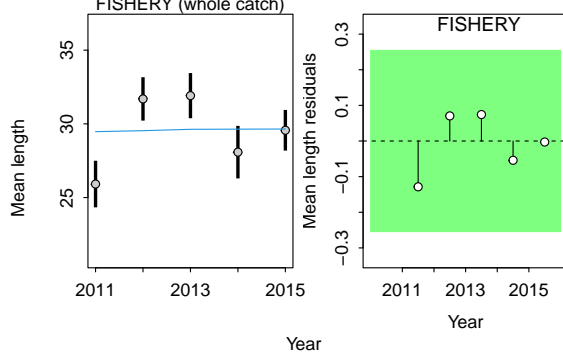
Fleet	RMSE.perc	Nobs
FISHERY	67.7	5
Combined	67.7	5

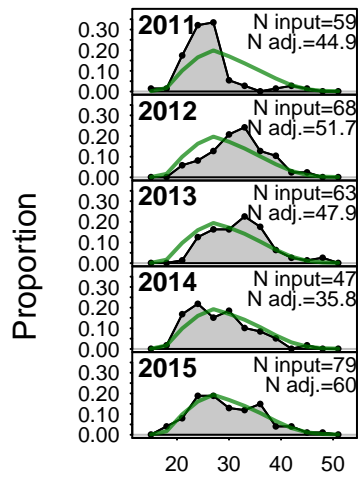


Length Comp

Fleet	RMSE.perc	Nobs
FISHERY	7.7	5
Combined	7.7	5

w lo hi Index runs.p test sigma3.lo sigma3.hi type
 0.09828613 0.06019436 0.53718000 1 FISHERY 0.331 Passed -0.2541492 0.2541492 len

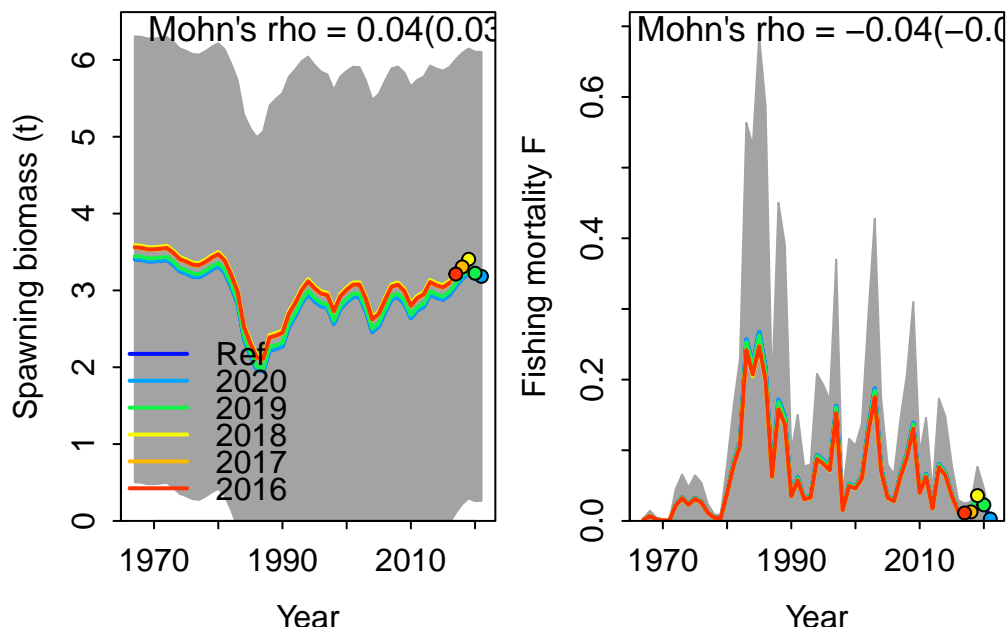




Length (cm)

Retrospective

Mohn's Rho stats, including one step ahead forecasts:



Mohn's Rho stats, including one step ahead forecasts:

	type	peel	Rho	ForecastRho
1	F	2020	0.00000000	0.00000000
2	F	2019	-0.01386552	-0.01378854
3	F	2018	-0.06052262	-0.05973102
4	F	2017	-0.05153535	-0.04996920
5	F	2016	-0.05581899	-0.05375202
6	F Combined		-0.03634850	-0.03544816

Hindcasting

Plotting Hindcast Cross-Validation (one-step-ahead)

Computing MASE with only 4 of 5 prediction residuals for Index FISHERY

Warning: Unequal spacing of naive predictions residuals may influence the interpretation of

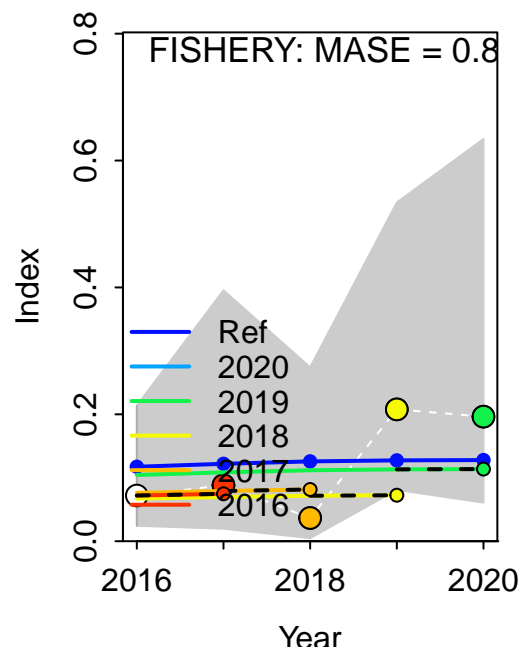
MASE stats by Index:

Plotting Hindcast Cross-Validation (one-step-ahead)

No observations in evaluation years to compute prediction residuals for Index FISHERY

MASE stats by Index:

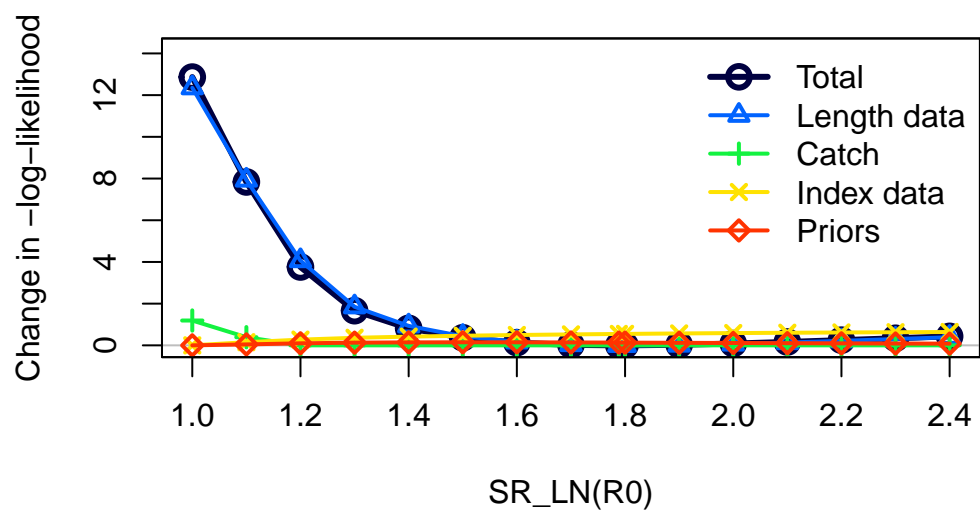
	Index	Season	MASE	MAE.PR	MAE.base	MASE.adj	n.eval
1	FISHERY	1	NA	NA	NA	NA	0



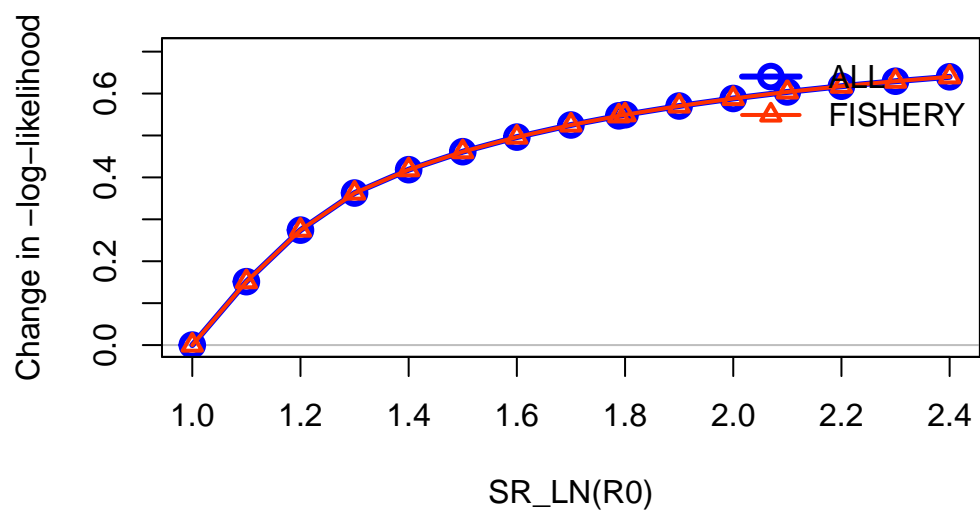
Recruitment Deviations

Likelihood Profile

[1] "SR_LN"			
	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.0926	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.0497	TRUE	Index data
Length_comp	0.9602	TRUE	Length data
Recruitment	0.0000	FALSE	Recruitment
InitEQ_Regime	0.0000	FALSE	Initital equilibrium recruitment
Forecast_Recruitment	0.0000	FALSE	Forecast recruitment
Parm_priors	0.0115	TRUE	Priors
Parm_softbounds	0.0000	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

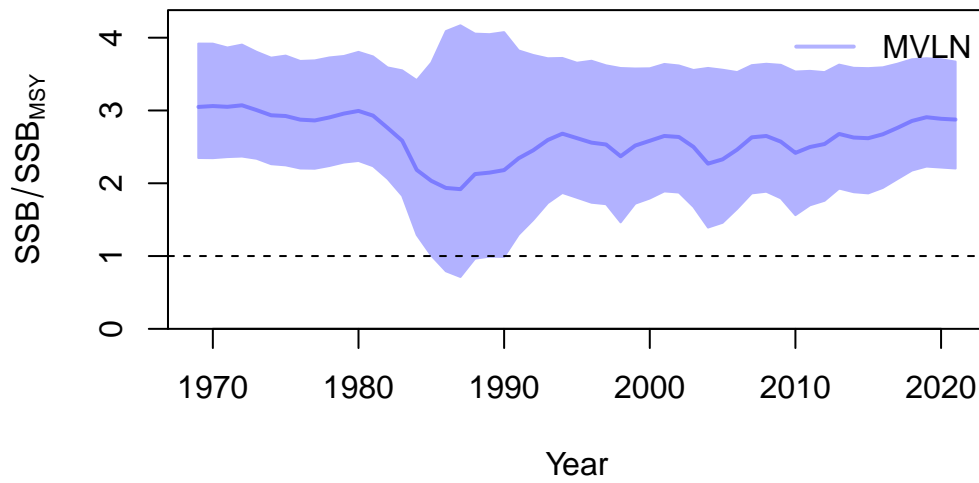
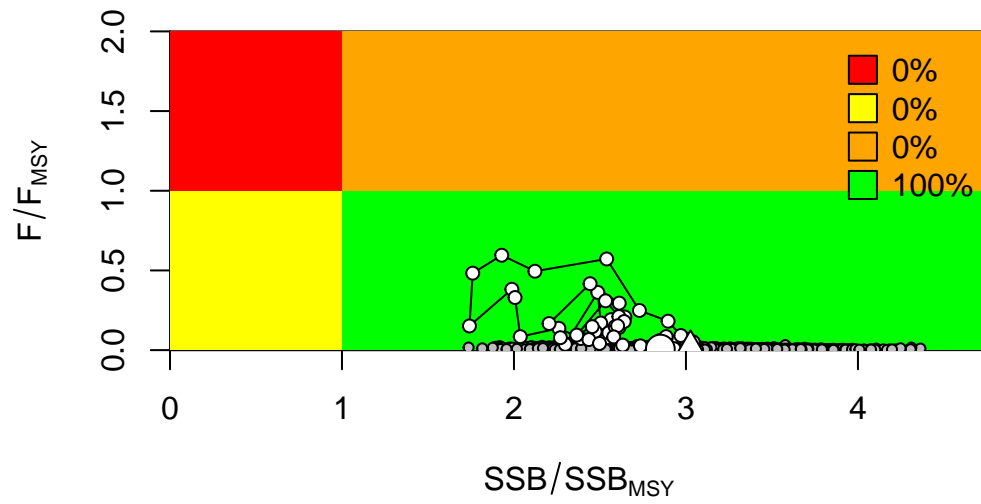


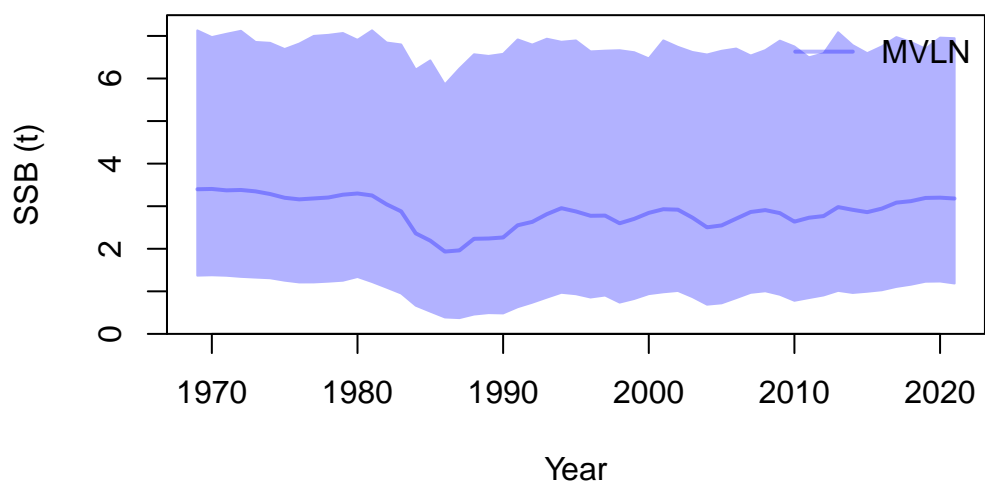
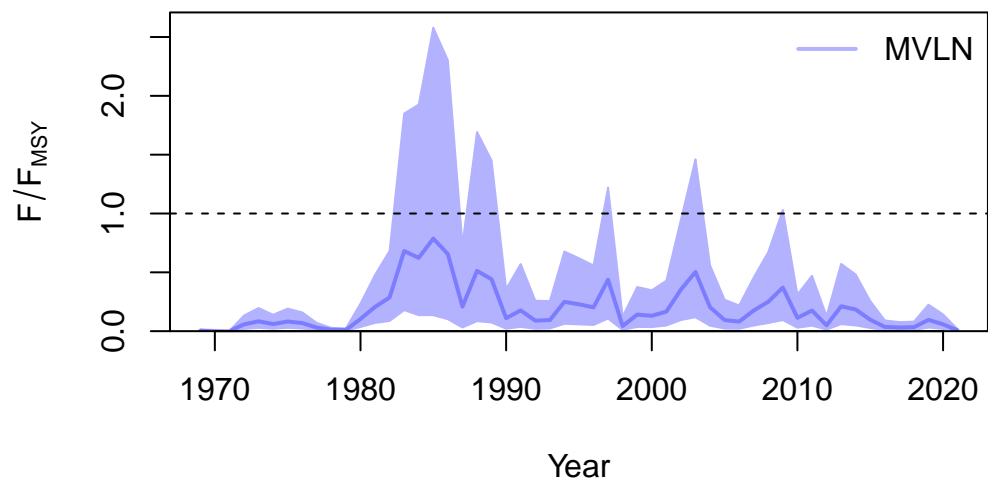
Changes in survey likelihood by fleet

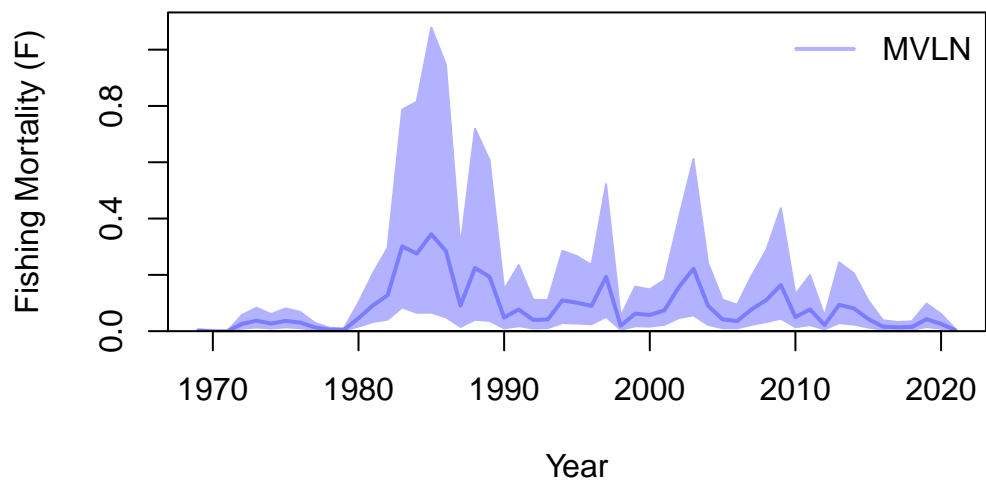


Management Quantities

starter.sso with Bratio: SSB/SSB_{MSY} and F: _abs_F

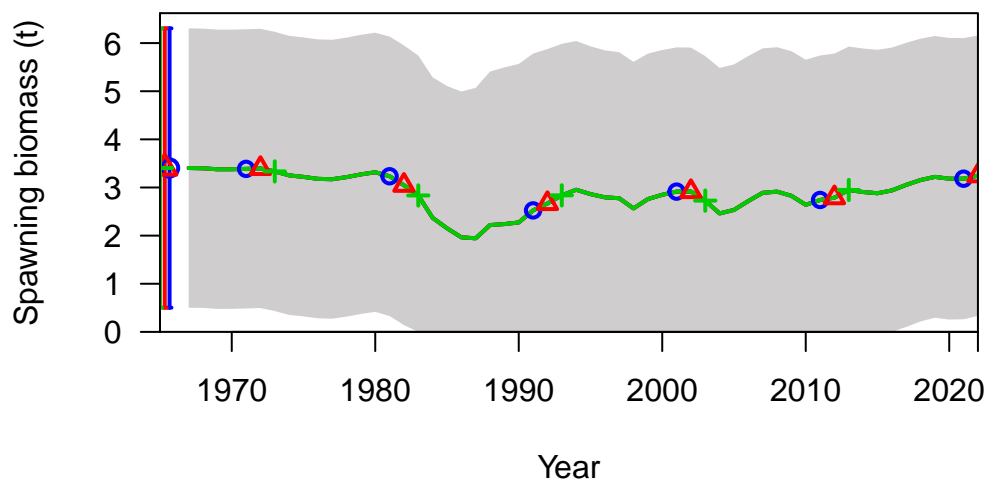
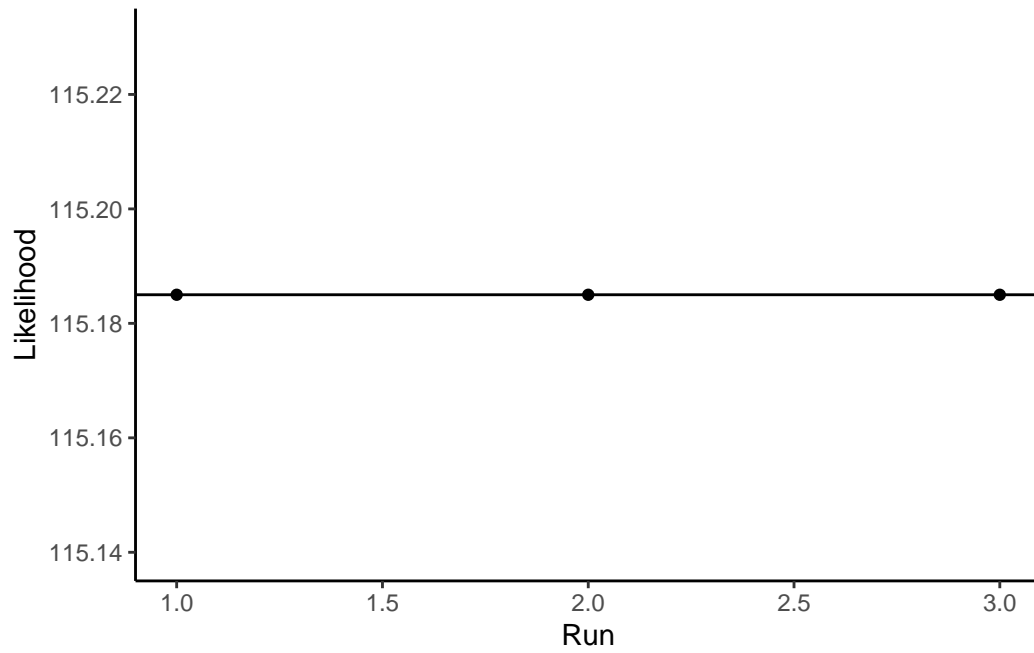


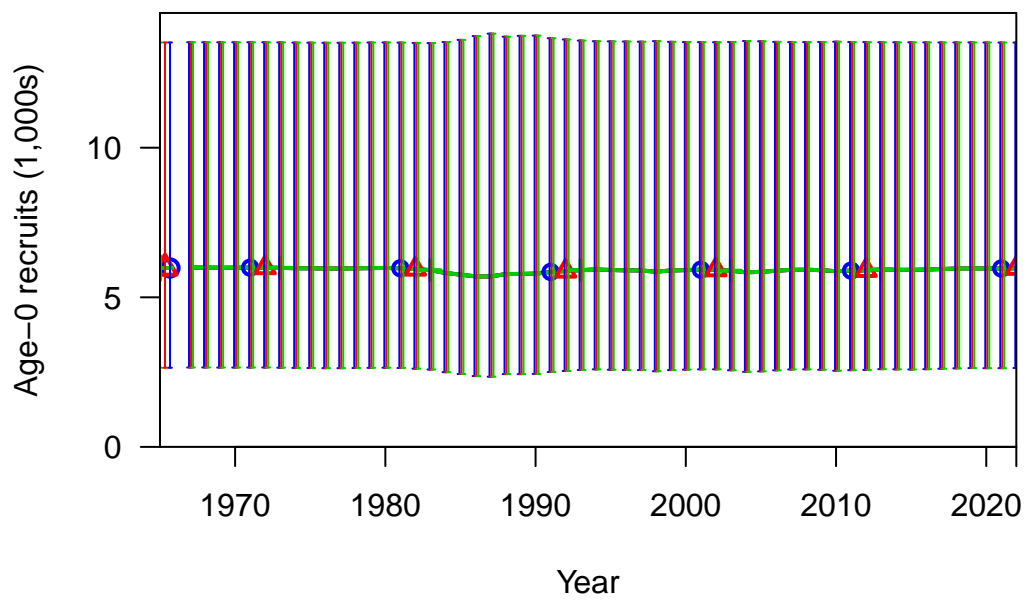
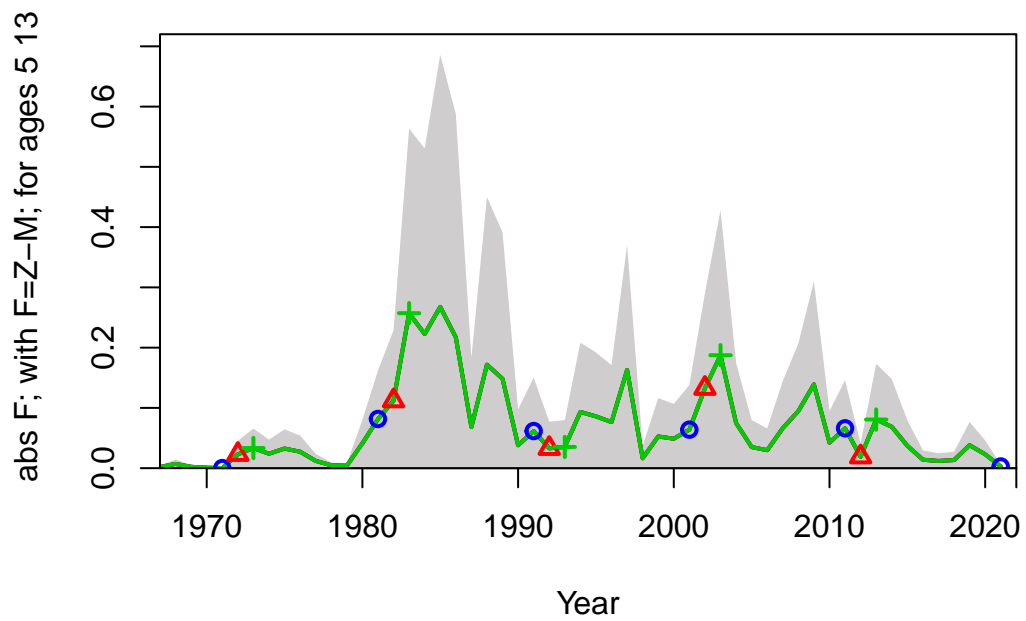




null device
1

Jitter





Selectivity and Maturity

