

American Samoa Model Checks

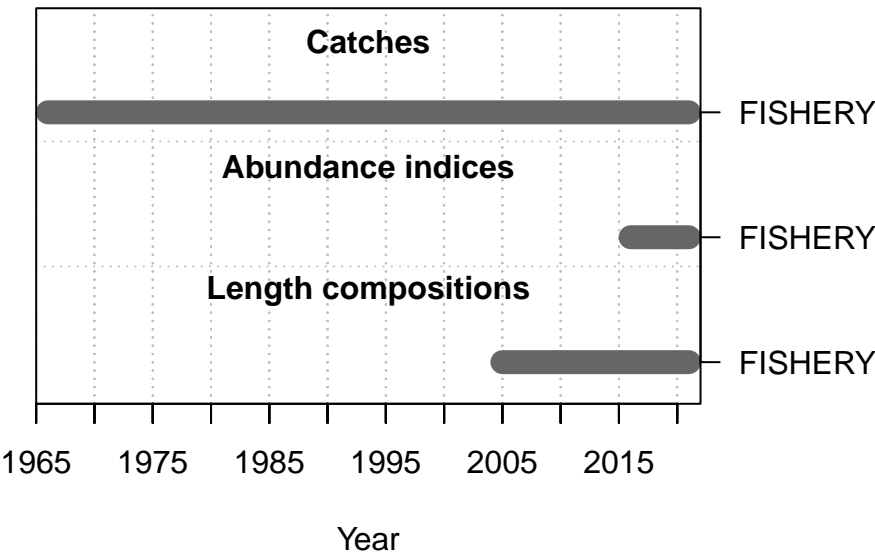
Marc Nadon and Meg Oshima

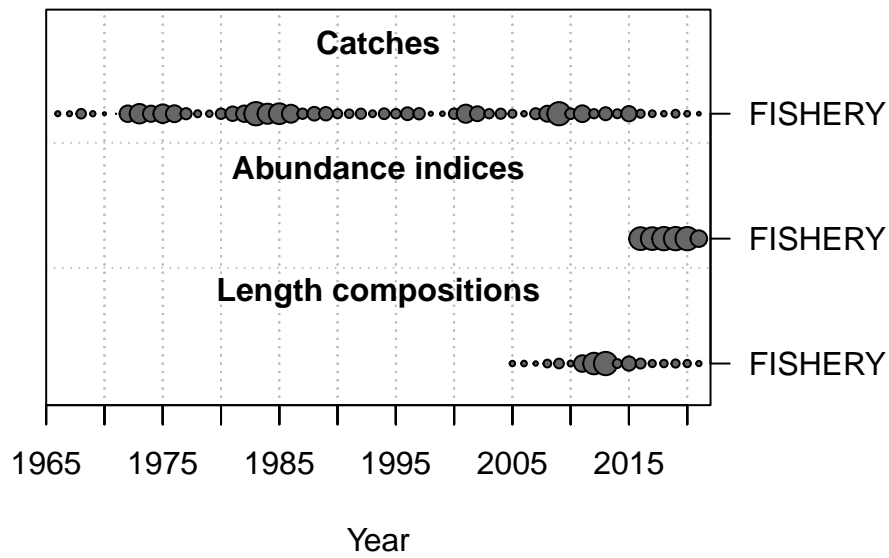
2023-02-05

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

Model Output

Input Data





Convergence Check

```

Converged      MaxGrad
1      TRUE 5.22358e-06

```

```

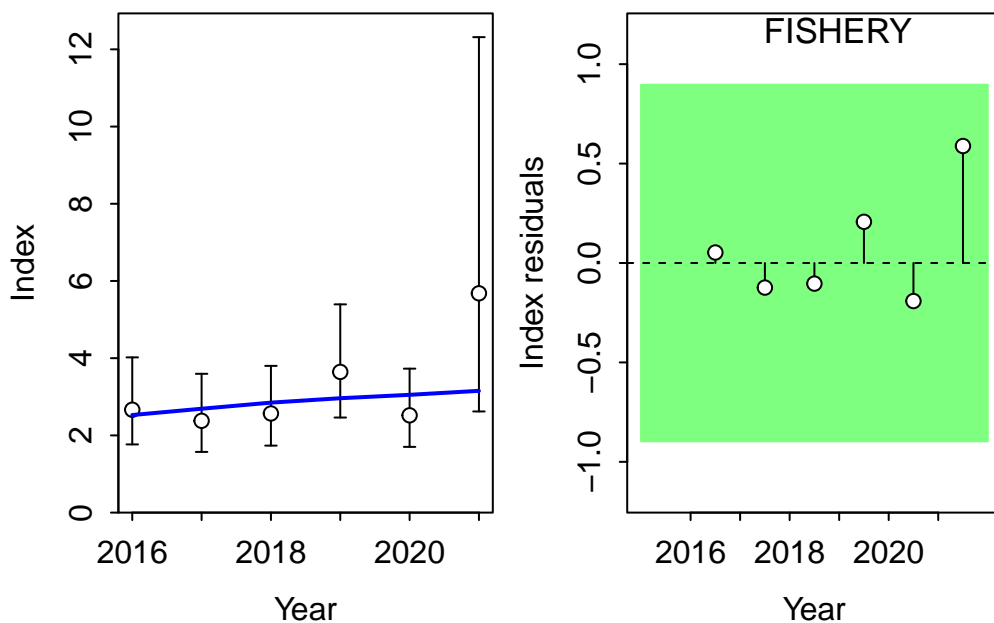
[1] "1 NOTE: Max data length bin: 38.5 < max pop len bins: 43; so will accumulate larger p
[2] "N warnings: 1"

```

Fit to Model

CPUE

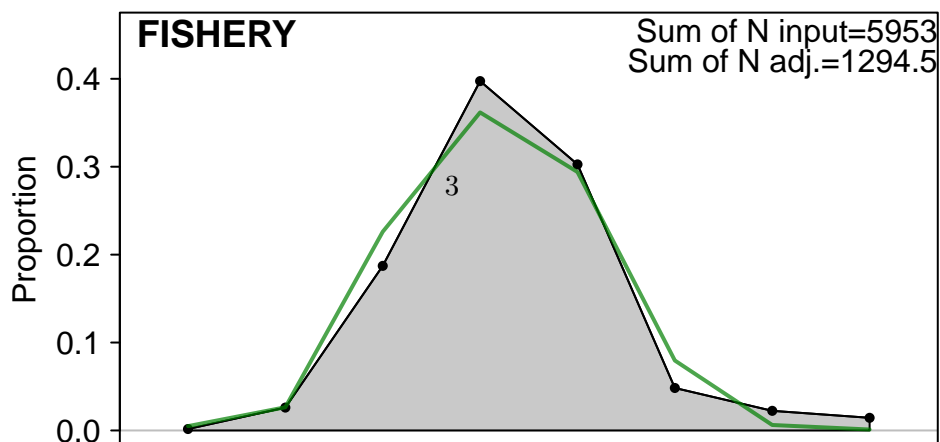
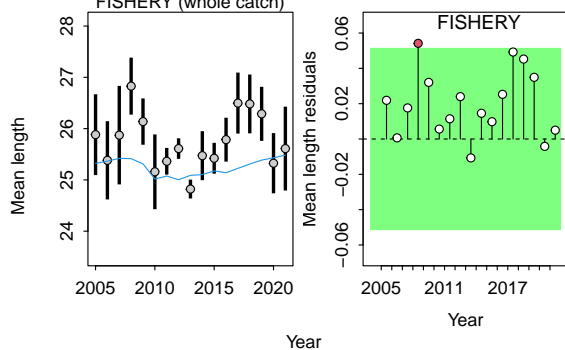
Fleet	RMSE.perc	Nobs
FISHERY	27.5	6
Combined	27.5	6

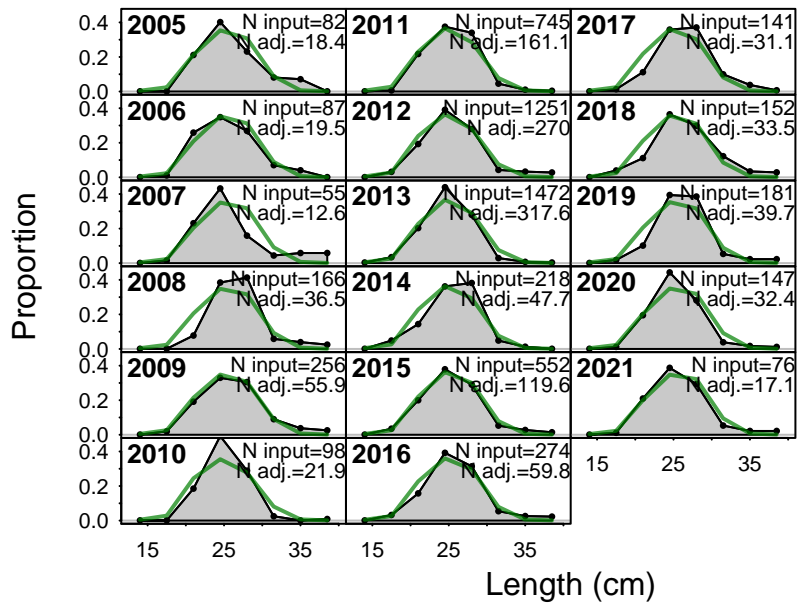


Length Comp

Fleet	RMSE.perc	Nobs
FISHERY	2.7	17
Combined	2.7	17

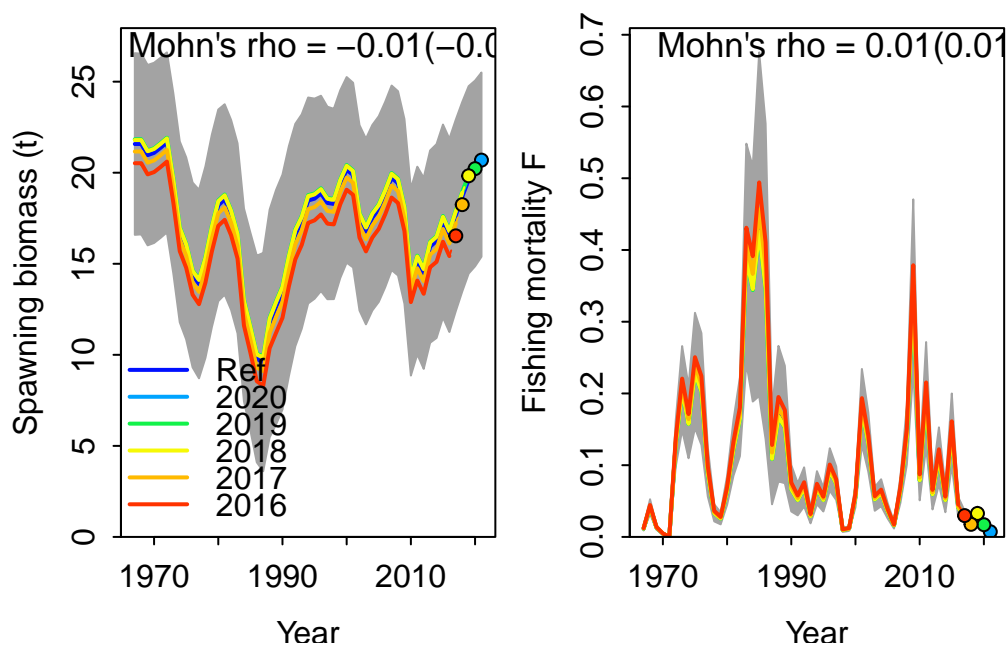
w lo hi Index runs.p test sigma3.lo sigma3.hi type
 0.1951562 0.1181354 0.4782826 1 FISHERY 0.736 Passed -0.05127245 0.05127245 len





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	-0.01306312	-0.01259173
2	F	2019	-0.01449232	-0.01402432
3	F	2018	-0.01269259	-0.01217343
4	F	2017	0.02677941	0.02518668
5	F	2016	0.07641056	0.07137451
6	F Combined		0.01258839	0.01155434

Hindcasting

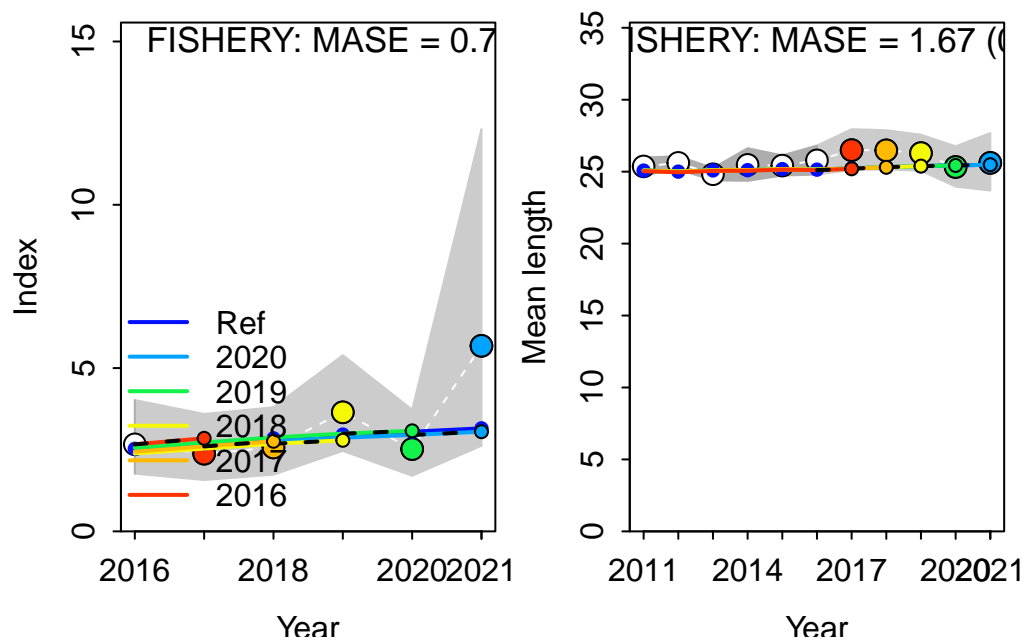
Plotting Hindcast Cross-Validation (one-step-ahead)

Computing MASE with all 5 of 5 prediction residuals for Index FISHERY

MASE stats by Index:

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

Computing MASE with all 5 of 5 prediction residuals for Index FISHERY



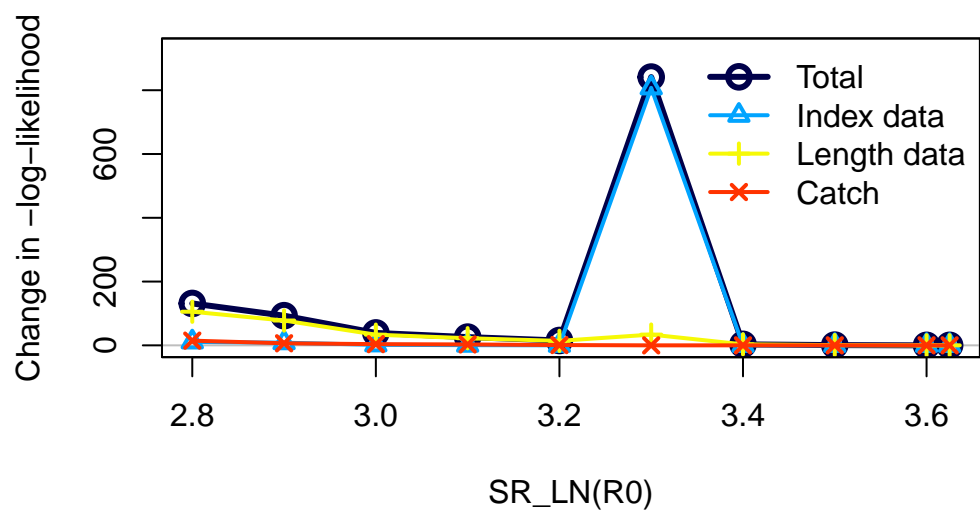
MASE stats by Index:

	Index	Season	MASE	MAE.PR	MAE.base	MASE.adj	n.eval
1	FISHERY	1	1.669881	0.02797187	0.01675081	0.2797187	5

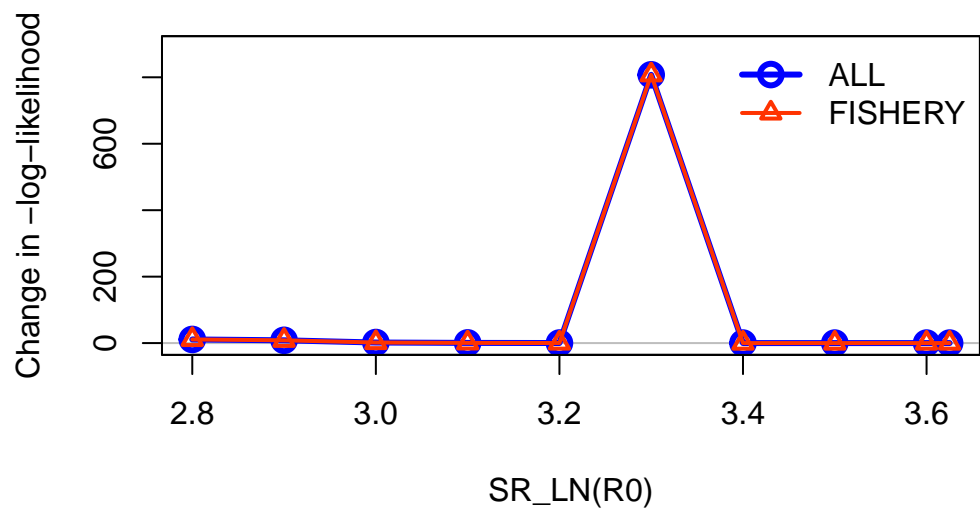
Recruitment Deviations

Likelihood Profile

[1] "SR_LN"	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.0175	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.9599	TRUE	Index data
Length_comp	0.1254	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	0.0004	FALSE	Priors
Parm_softbounds	0.0000	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

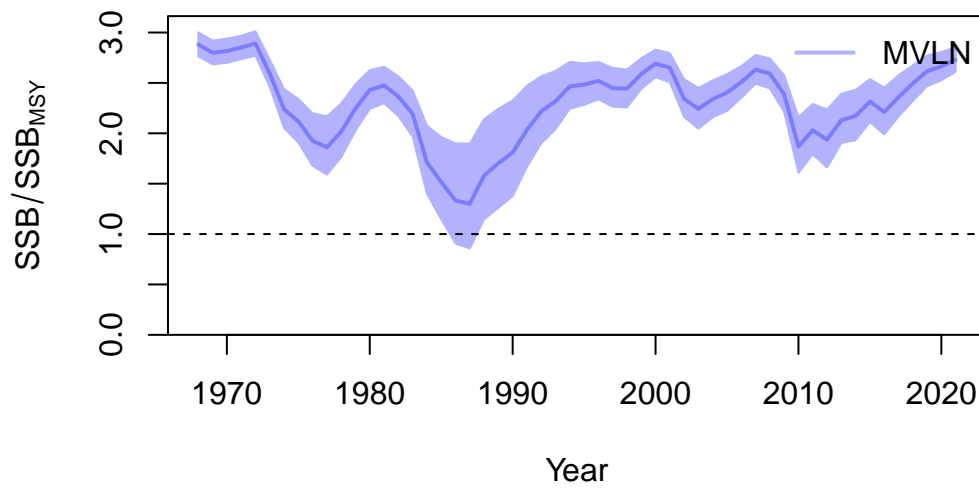
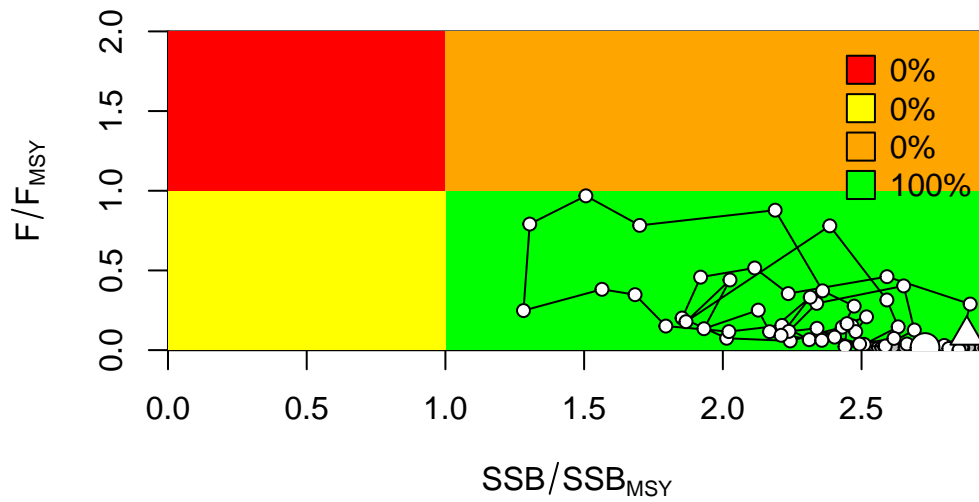


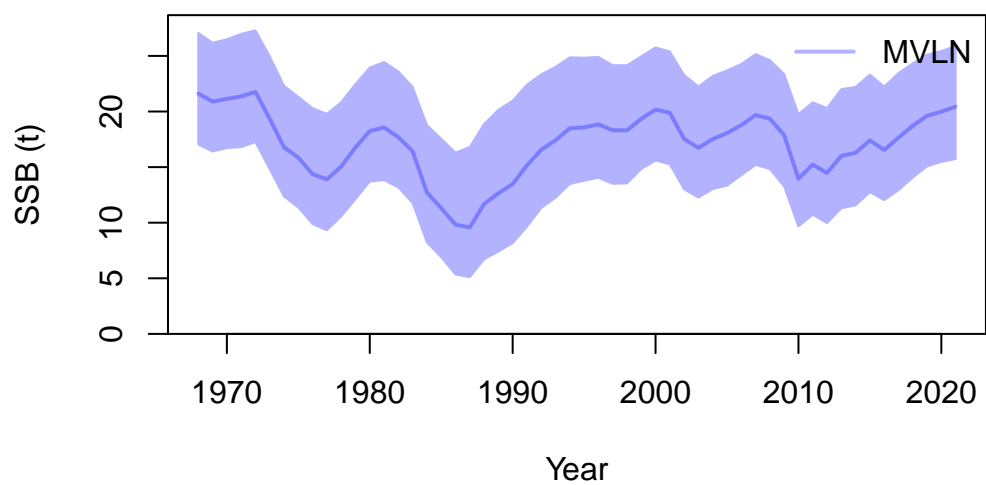
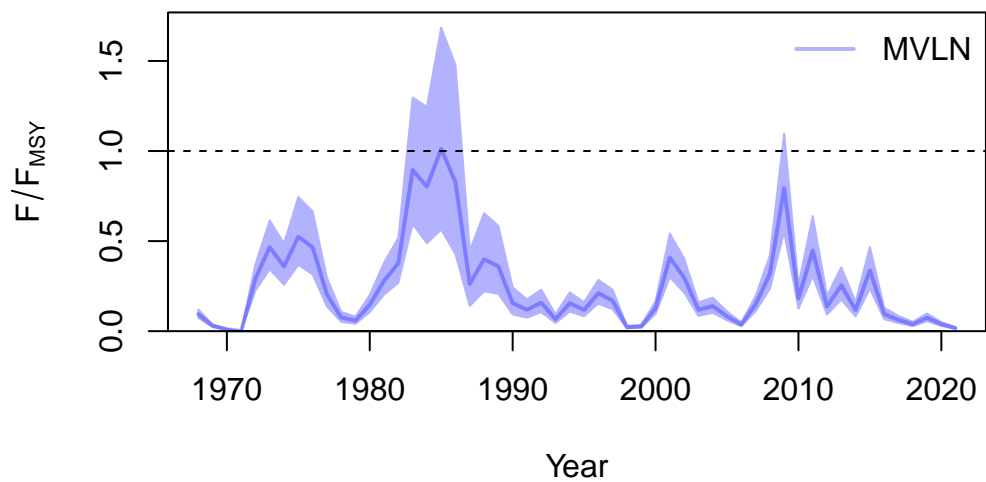
Changes in survey likelihood by fleet

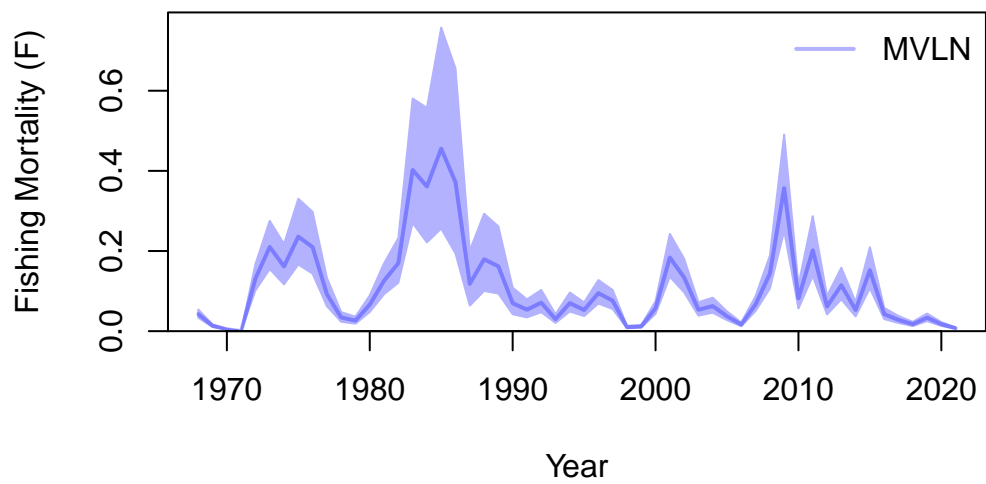


Management Quantities

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

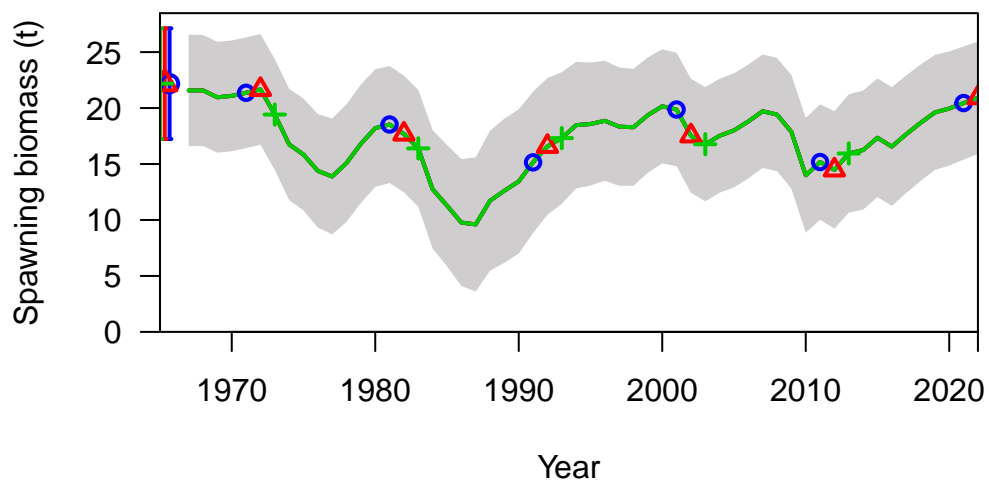
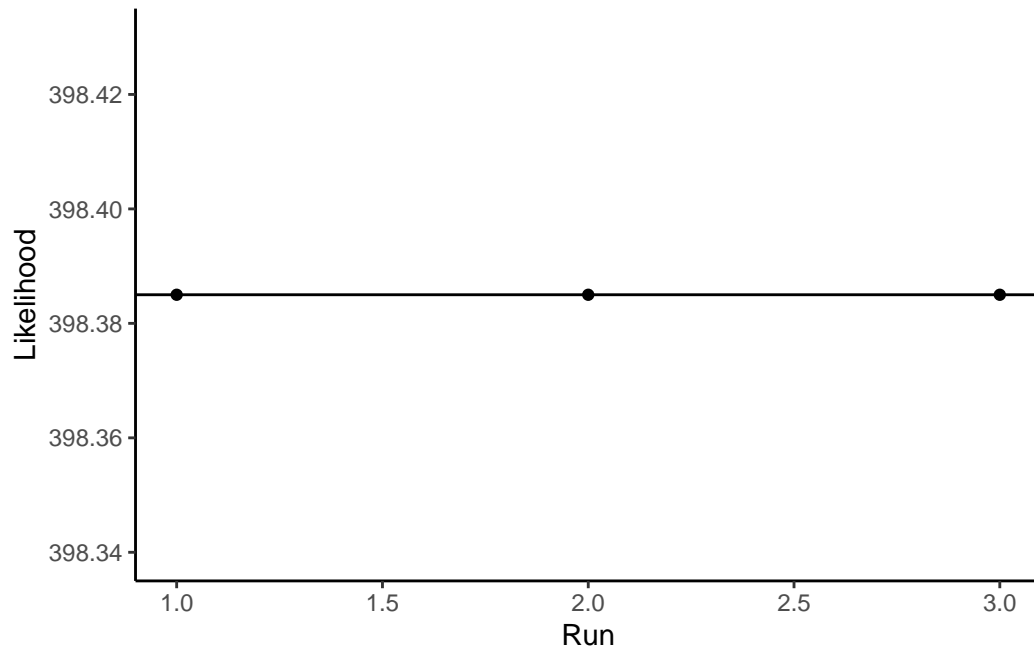


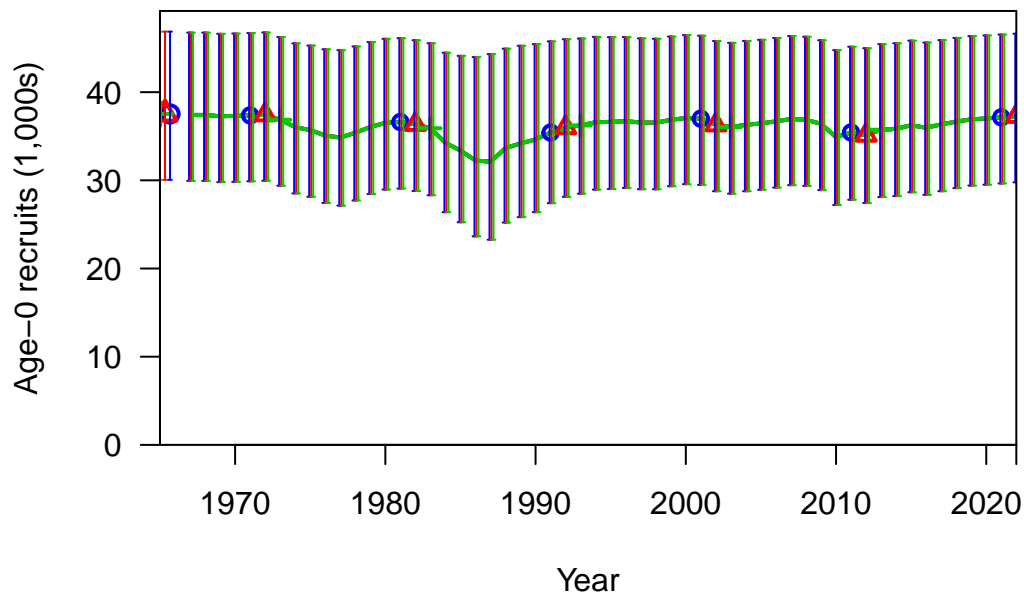
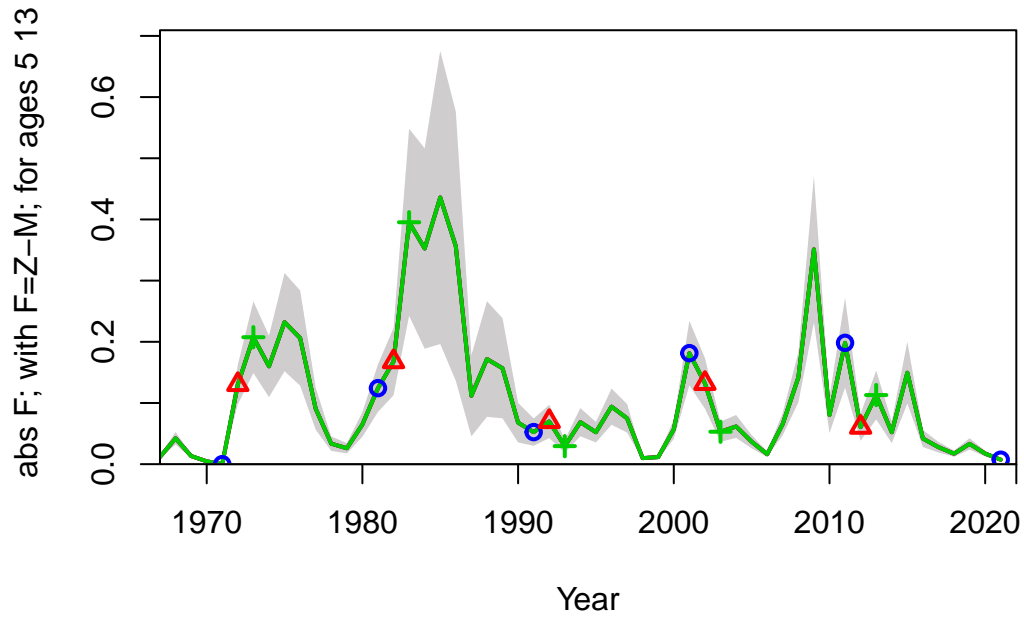




null device
1

Jitter





Selectivity and Maturity

