

American Samoa Model Checks

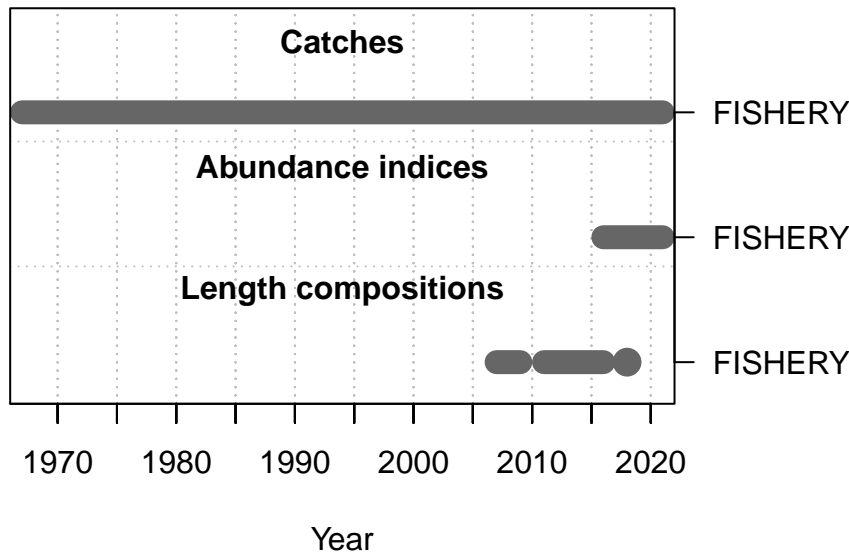
Marc Nadon and Meg Oshima

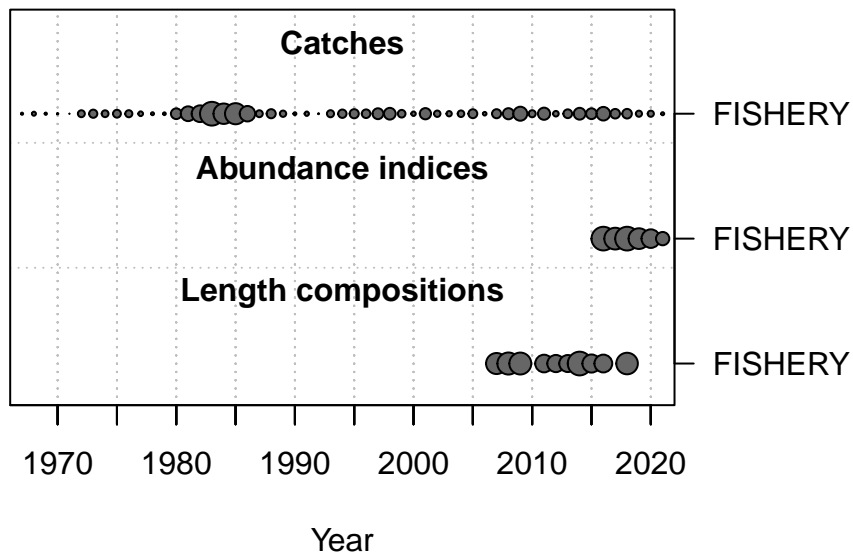
2023-01-05

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

Model Output

Input Data





Convergence Check

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Converged      MaxGrad
1      TRUE 1.90435e-05

```

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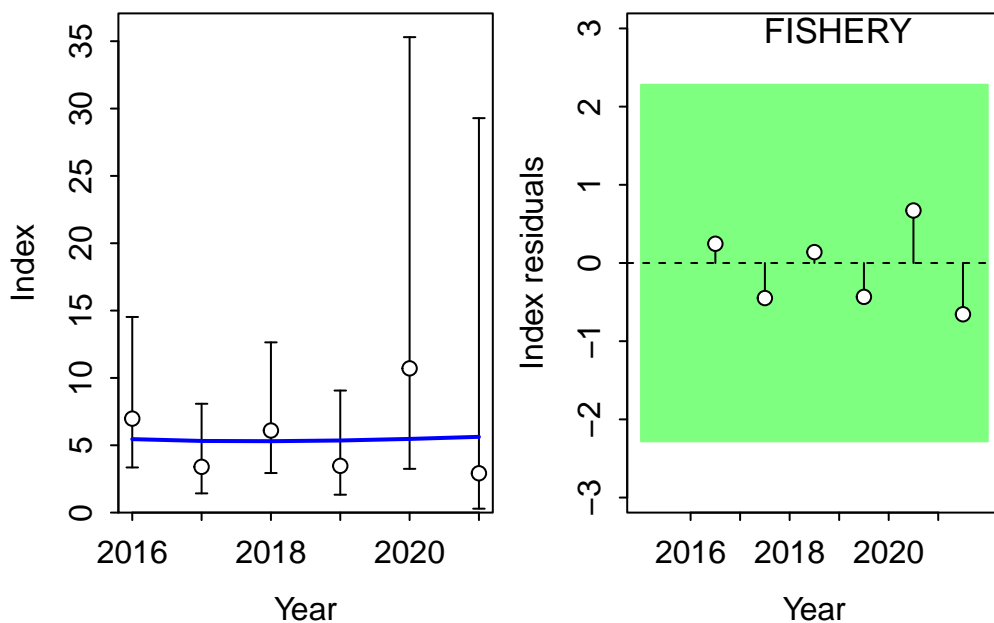
[1] "1 NOTE: Max data length bin: 90 < max pop len bins: 100; so will accumulate larger pop
[2] "N warnings: 1"

```

Fit to Model

CPUE

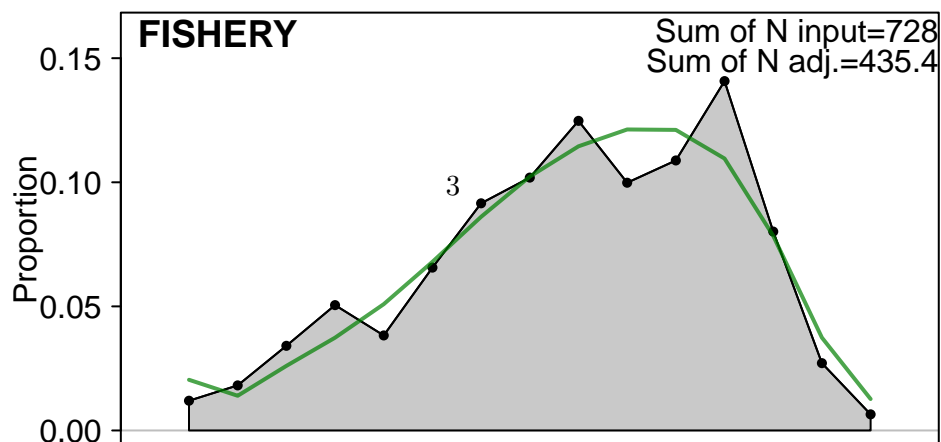
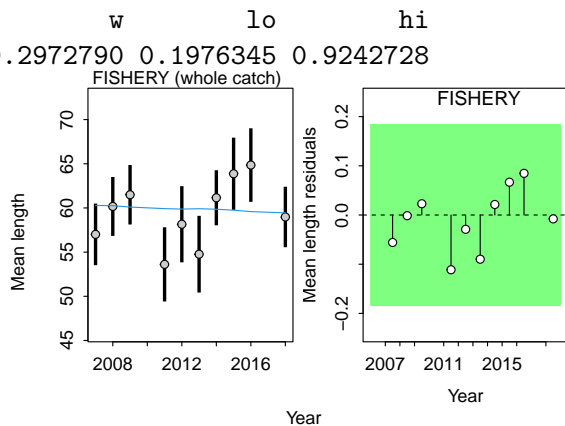
Fleet	RMSE.perc	Nobs
FISHERY	47.4	6
Combined	47.4	6

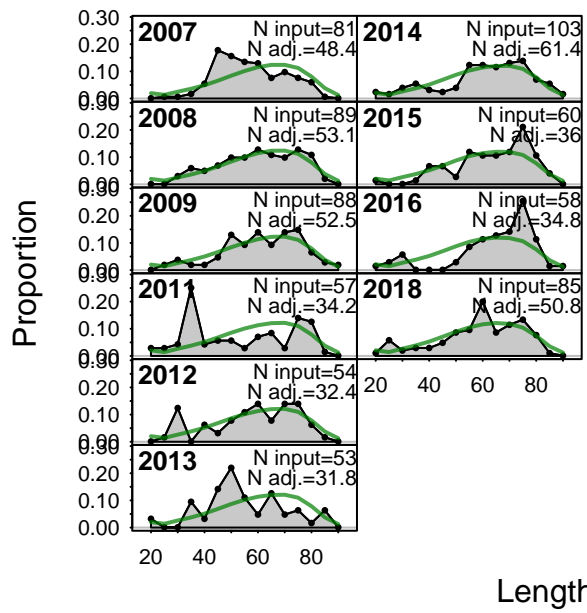


Length Comp

Fleet	RMSE.perc	Nobs
FISHERY	6.1	10
Combined	6.1	10

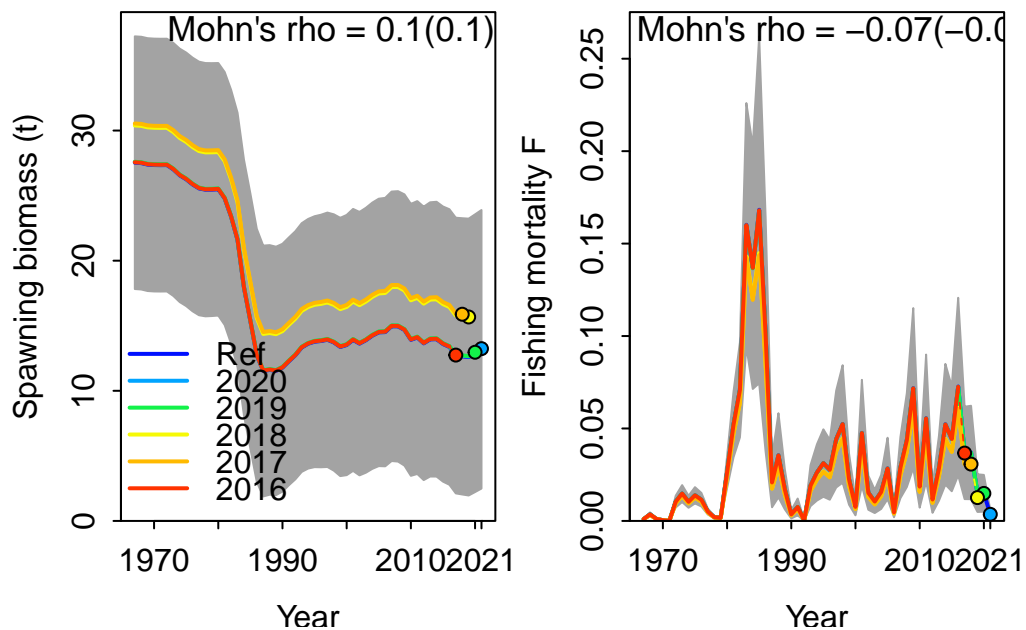
0.2972790 0.1976345 0.9242728 Index runs.p test sigma3.lo sigma3.hi type
1 FISHERY 0.287 Passed -0.1840901 0.1840901 len





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	-0.002915101	-0.002844565
2	F	2019	-0.004667553	-0.004579918
3	F	2018	-0.162330610	-0.161230053
4	F	2017	-0.168813379	-0.169465517
5	F	2016	-0.002238192	-0.002302087
6	F Combined		-0.068192967	-0.068084428

Hindcasting

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

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

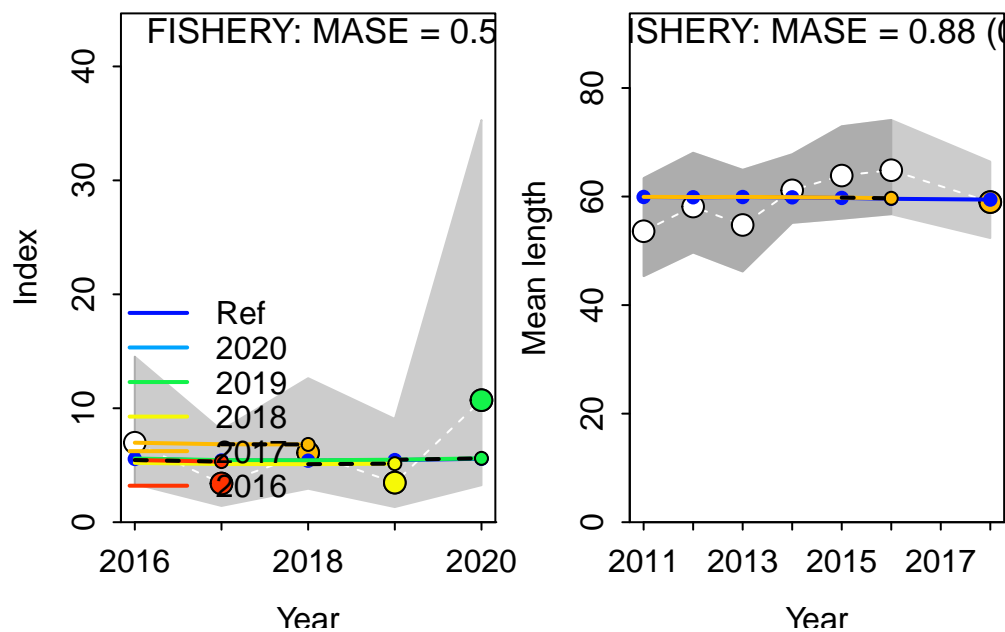
Warning: Unequal spacing of naive predictions residuals may influence the interpretation of

MASE stats by Index:

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

Computing MASE with only 1 of 5 prediction residuals for Index FISHERY

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



MASE stats by Index:

	Index	Season	MASE	MAE.PR	MAE.base	MASE.adj	n.eval
1	FISHERY	1	0.8753969	0.08310438	0.09493337	0.8310438	1

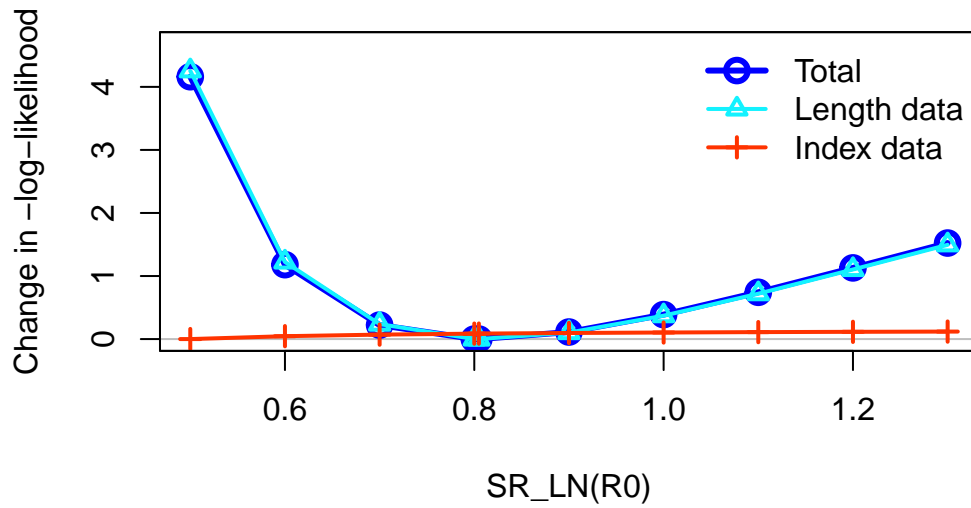
Recruitment Deviations

Likelihood Profile

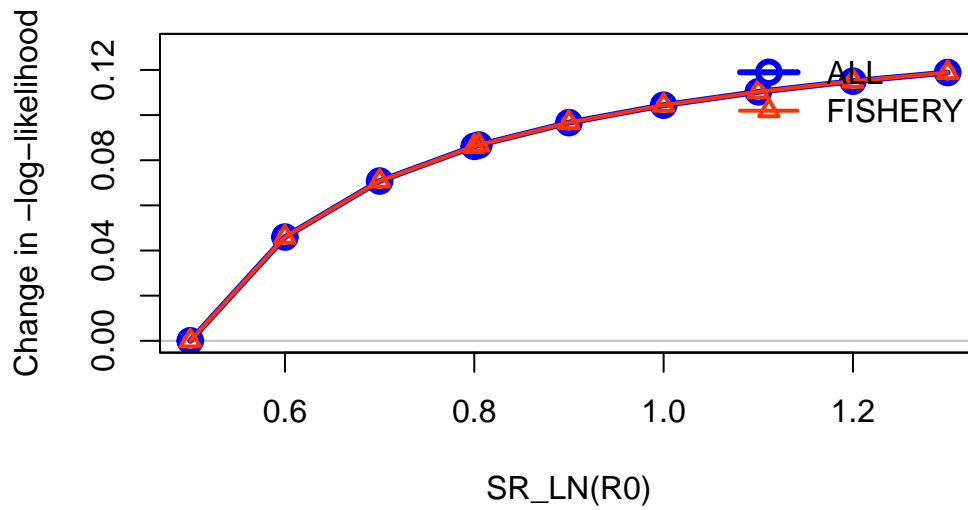
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[1] "SR_LN"
```

	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.0000	FALSE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.0286	TRUE	Index data
Length_comp	1.0226	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	0.0020	FALSE	Priors

Parm_softbounds	0.0001	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

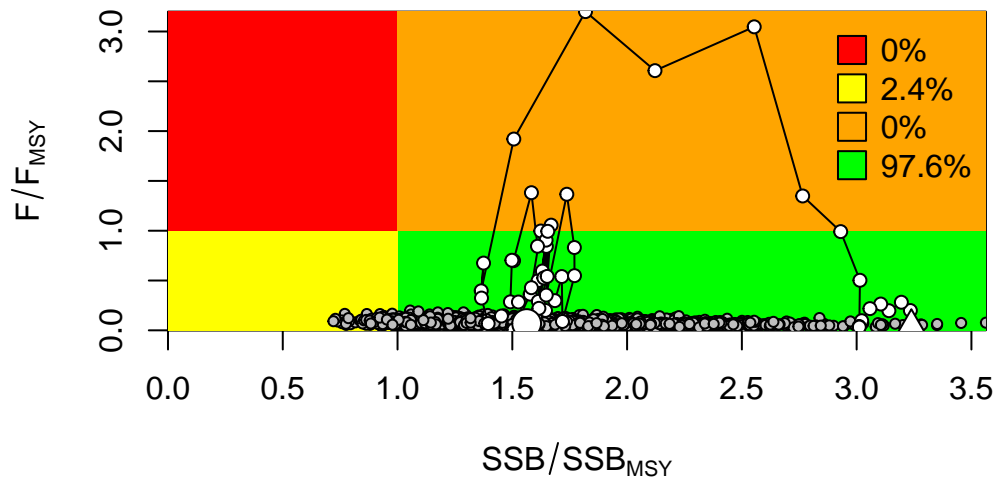


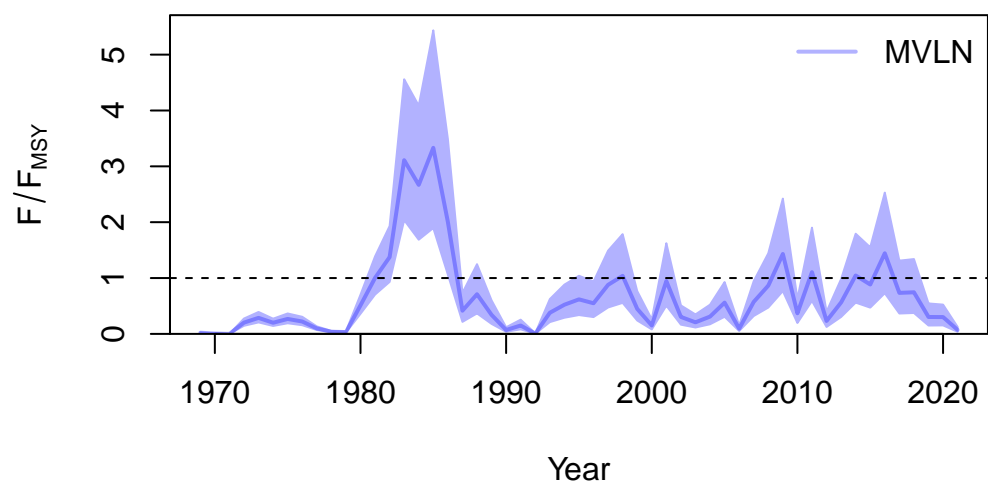
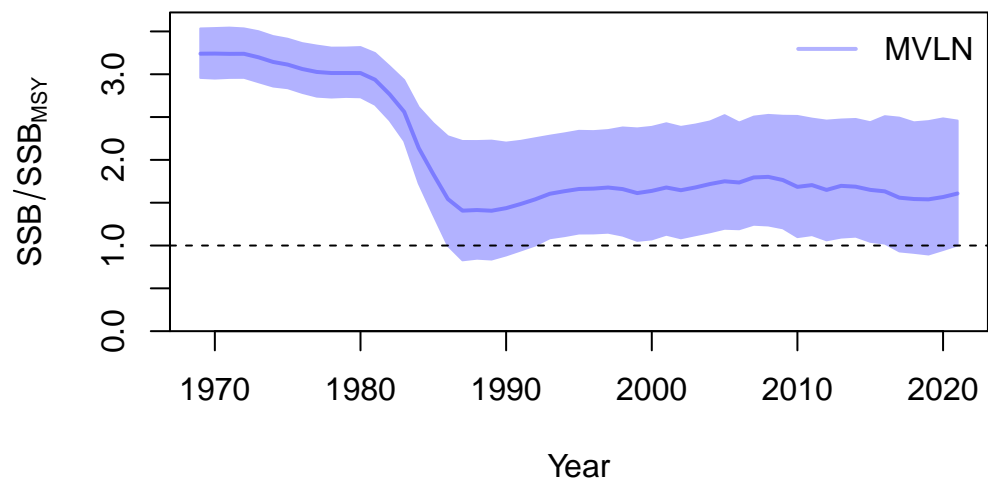
Changes in survey likelihood by fleet

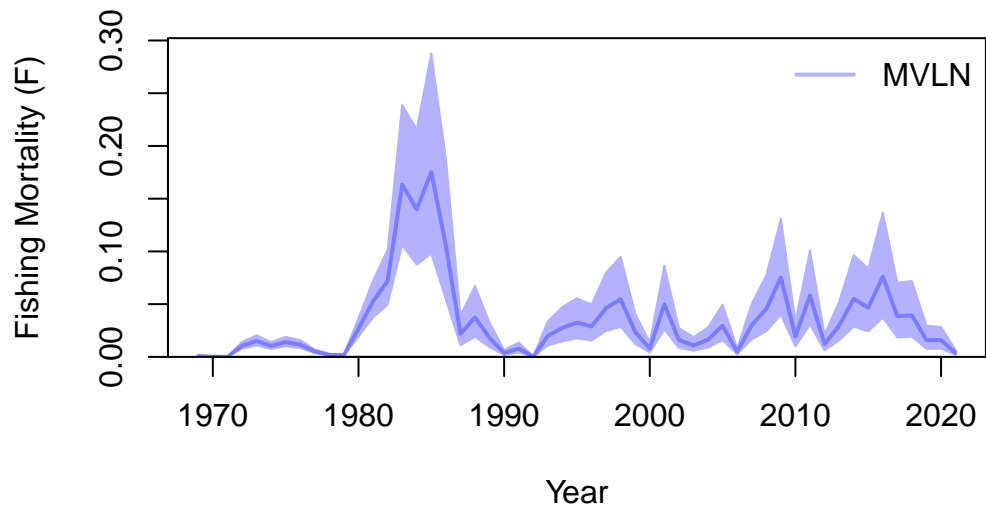
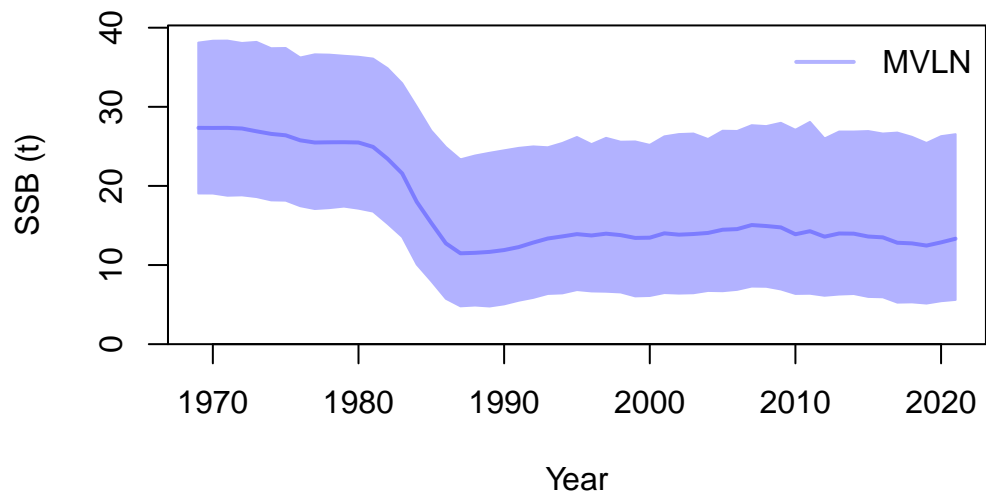


Management Quantities

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

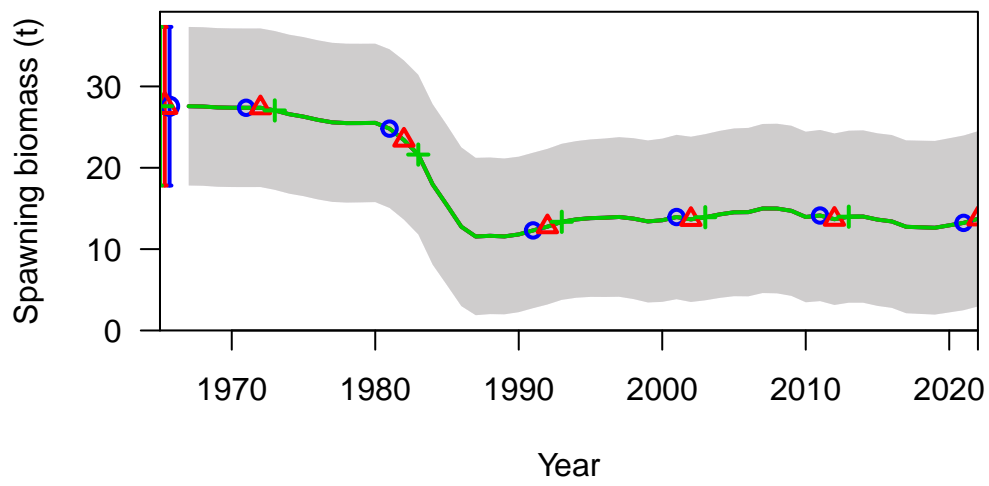
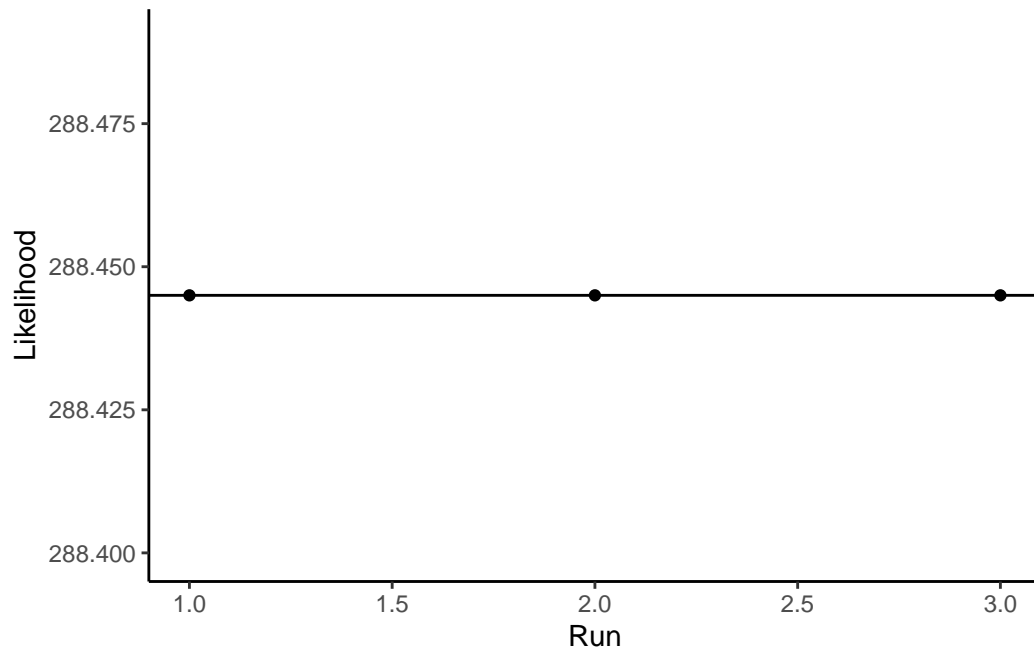


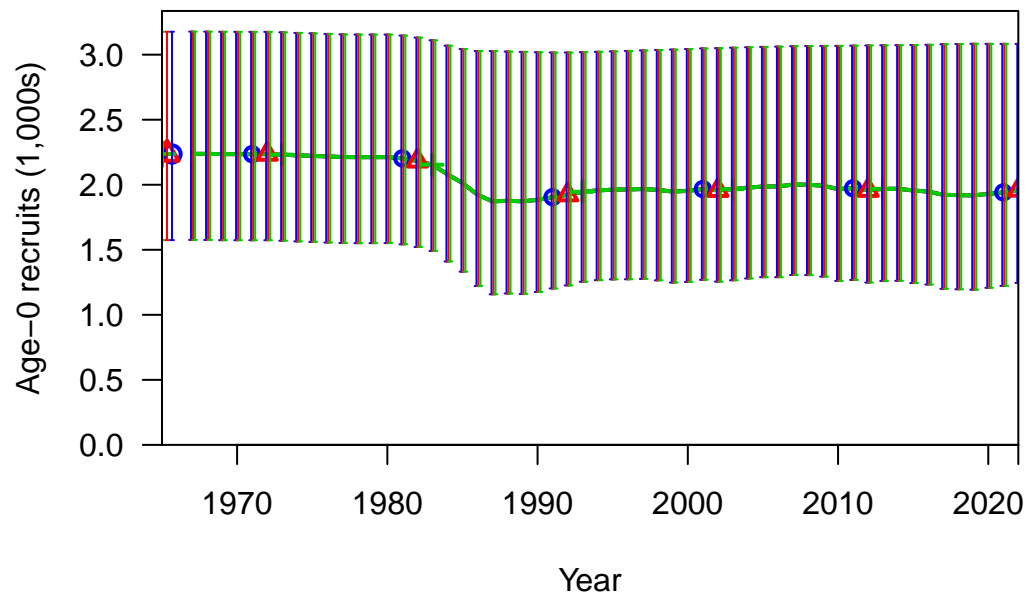
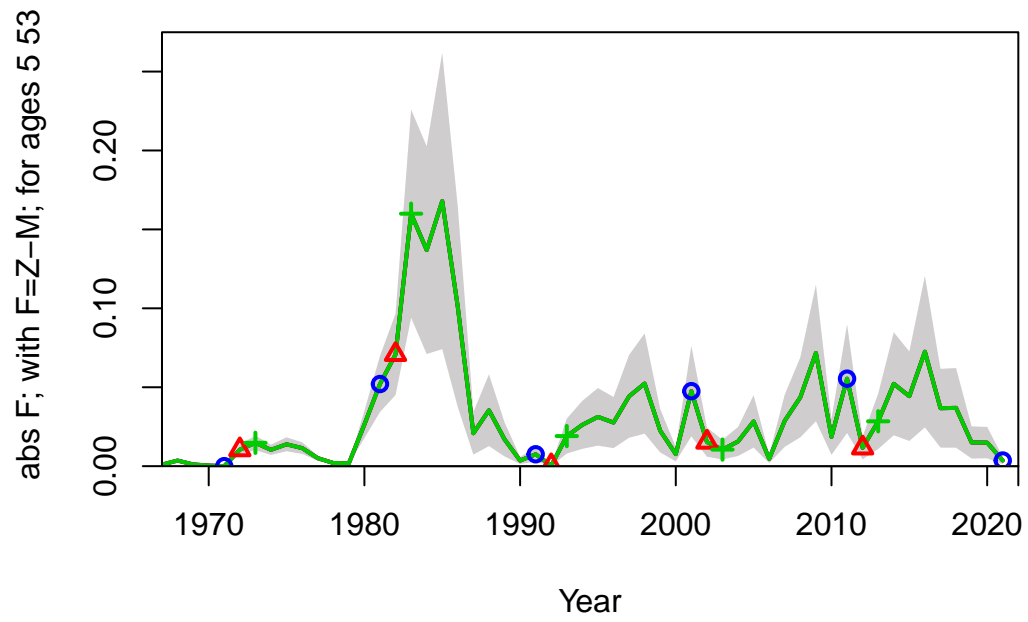




null device
1

Jitter





Selectivity and Maturity

