

American Samoa Model Checks

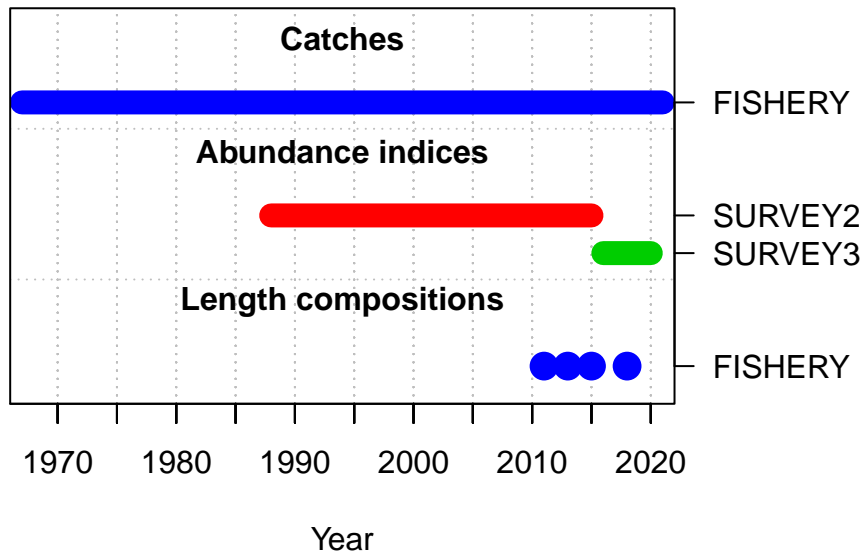
Marc Nadon and Meg Oshima

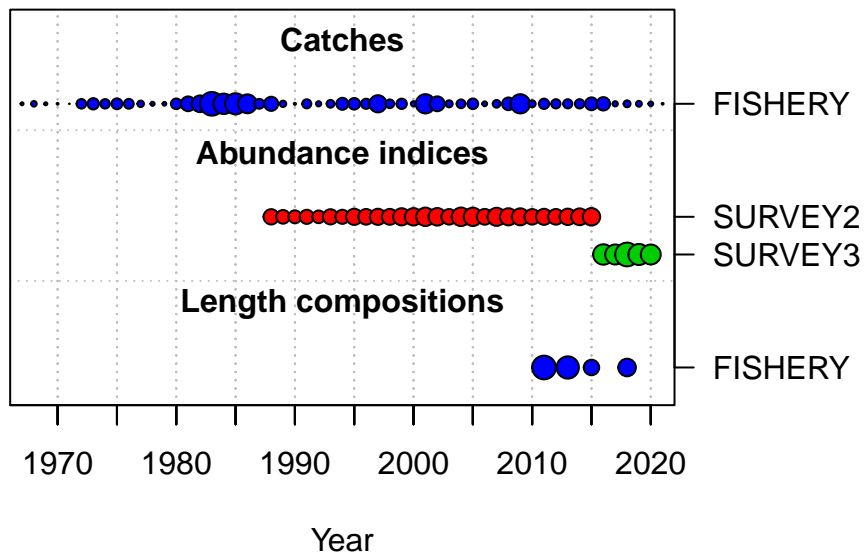
2023-02-14

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

Model Output

Input Data





Convergence Check

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Converged      MaxGrad
1      TRUE 4.28042e-05

```

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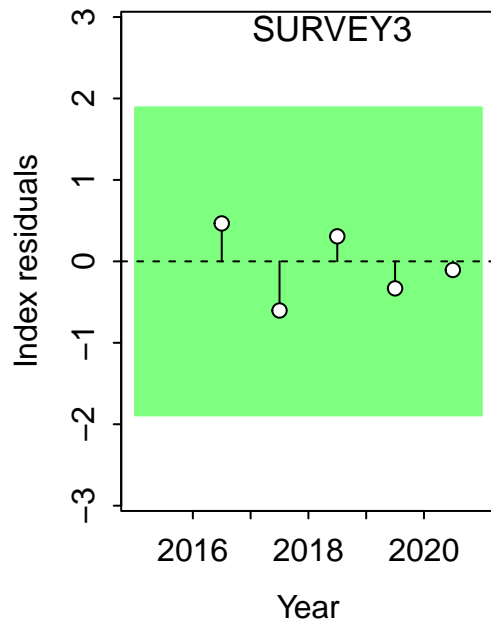
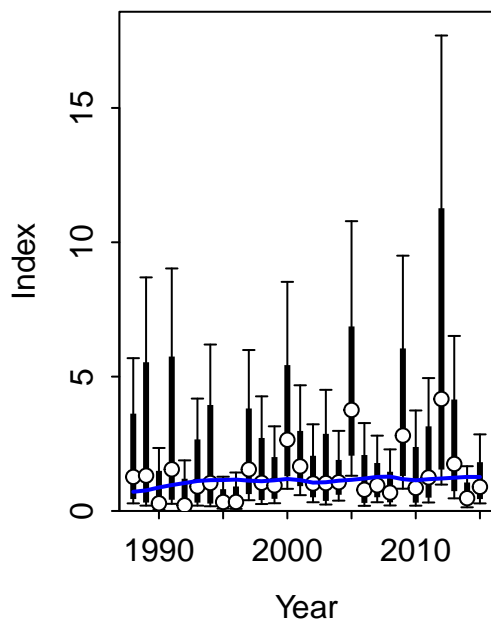
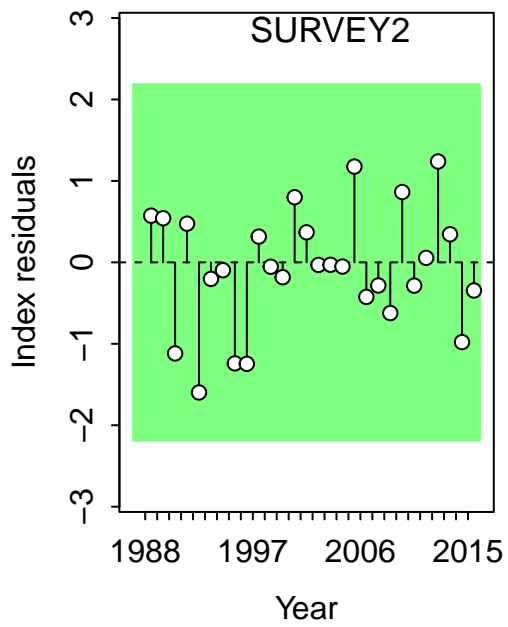
[1] "1 NOTE:  Max data length bin: 48 < max pop len bins: 53; so will accumulate larger pop
[2] " N parameters are on or within 1% of min-max bound: 1; check results, variance may be s
[3] "N warnings: 1"

```

Fit to Model

CPUE

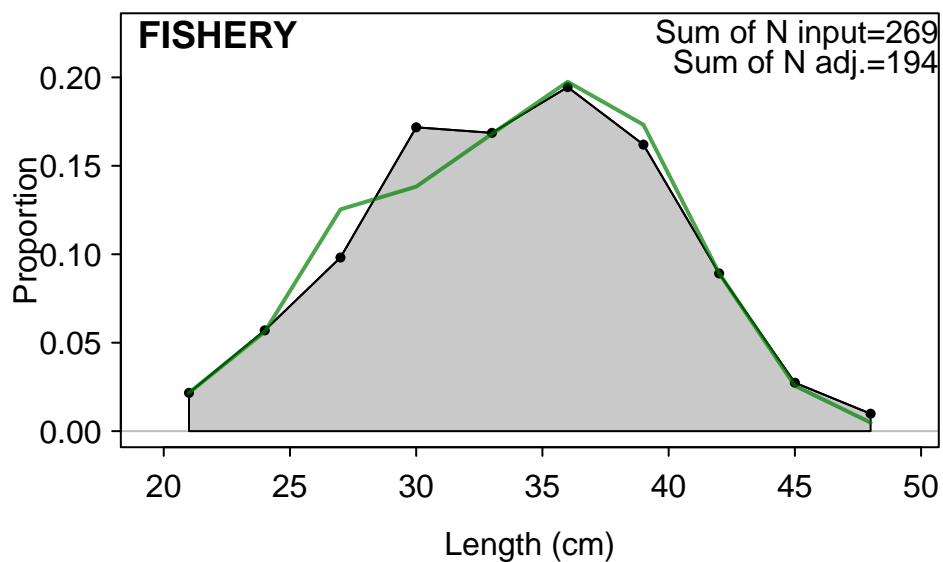
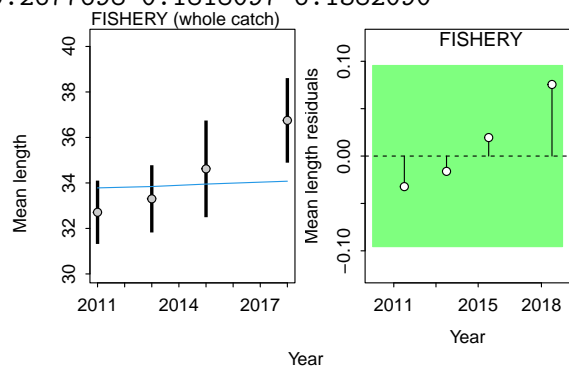
Fleet	RMSE.perc	Nobs
SURVEY2	71.5	28
SURVEY3	39.9	5
Combined	67.6	33



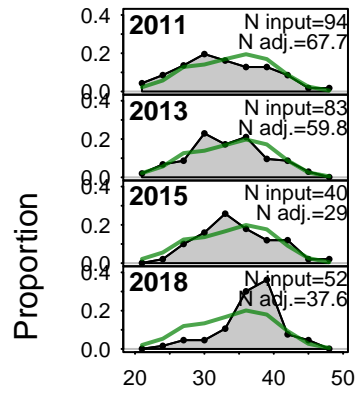
Length Comp

Fleet	RMSE.perc	Nobs
FISHERY	4.3	4
Combined	4.3	4

w lo hi Index runs.p test sigma3.lo sigma3.hi type
 0.2677698 0.1818097 6.1382090 1 FISHERY 0.11 Passed -0.09556441 0.09556441 len



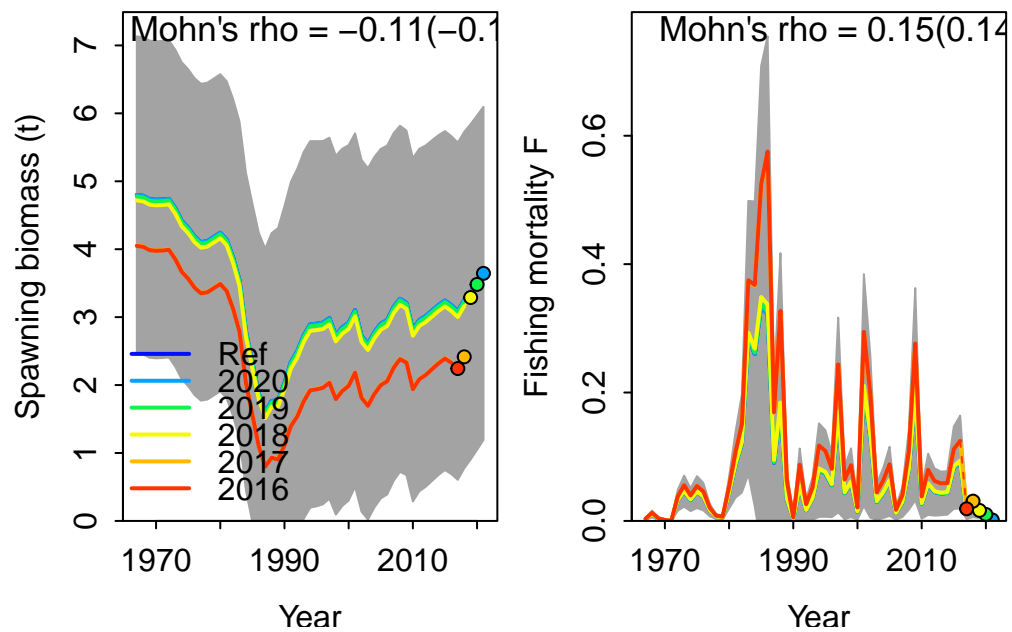
Retrospective and Hindcasting



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	0.000000000	0.000000000
2	F	2019	0.007414301	0.007124224
3	F	2018	0.026512445	0.025459724
4	F	2017	0.348269276	0.326216284
5	F	2016	0.359781432	0.352124867
6	F Combined		0.148395491	0.142185020

Hindcasting

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

No observations in evaluation years to compute prediction residuals for Index SURVEY2

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

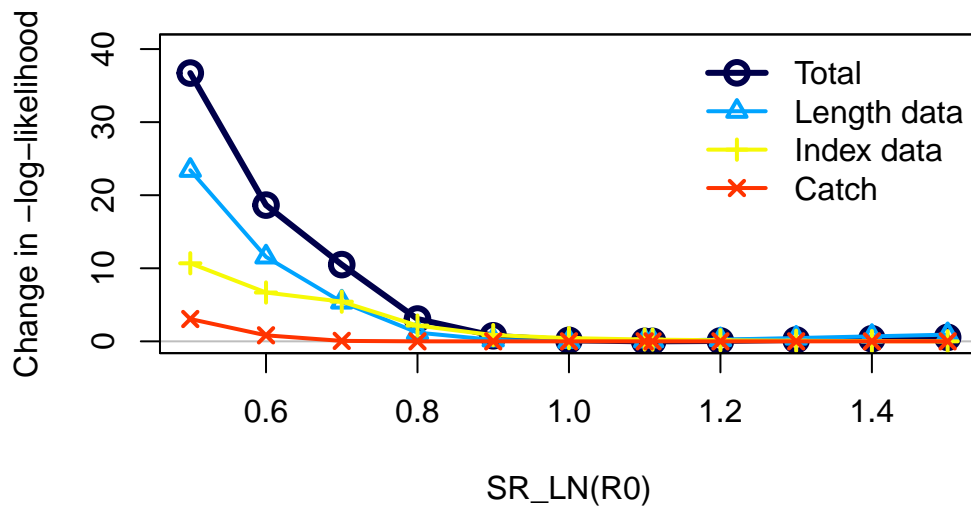
Recruitment Deviations

Likelihood Profile

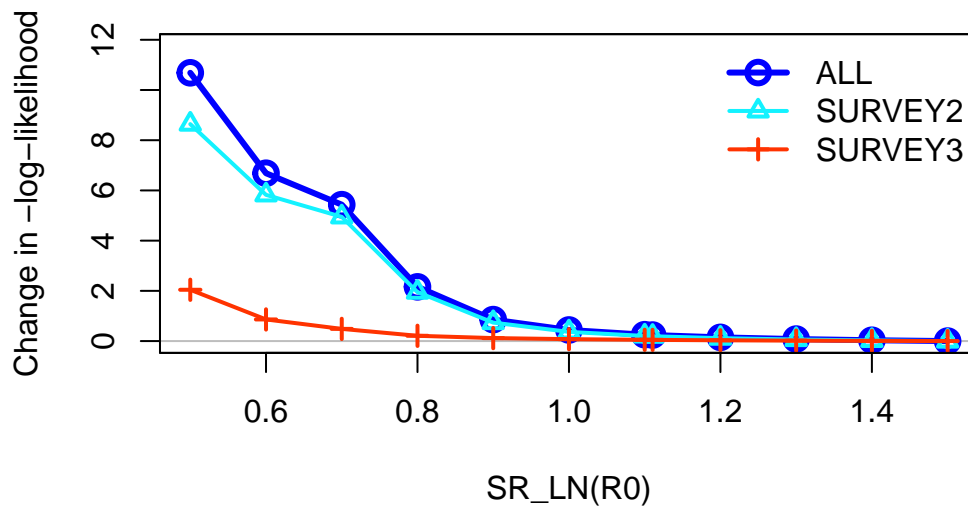
[1] "SR_LN"

	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.0832	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.2910	TRUE	Index data
Length_comp	0.6377	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	0.0042	FALSE	Priors
Parm_softbounds	0.0003	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

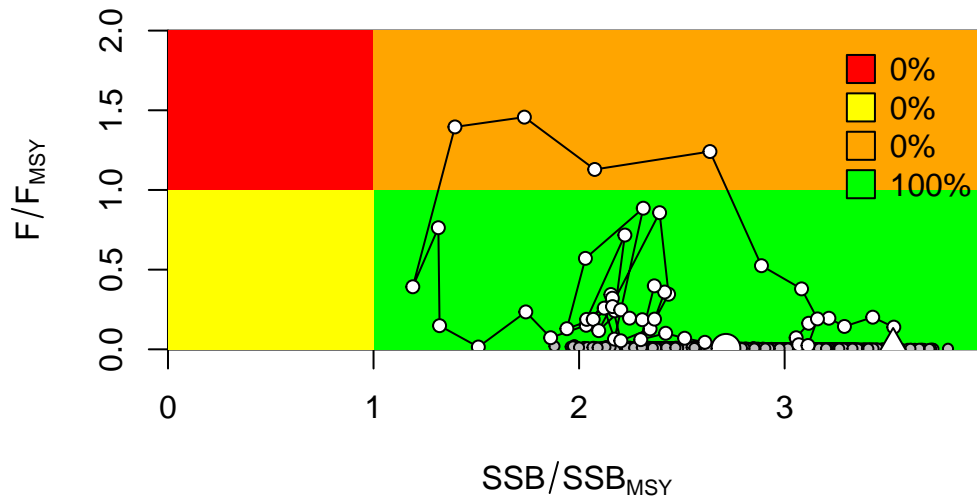


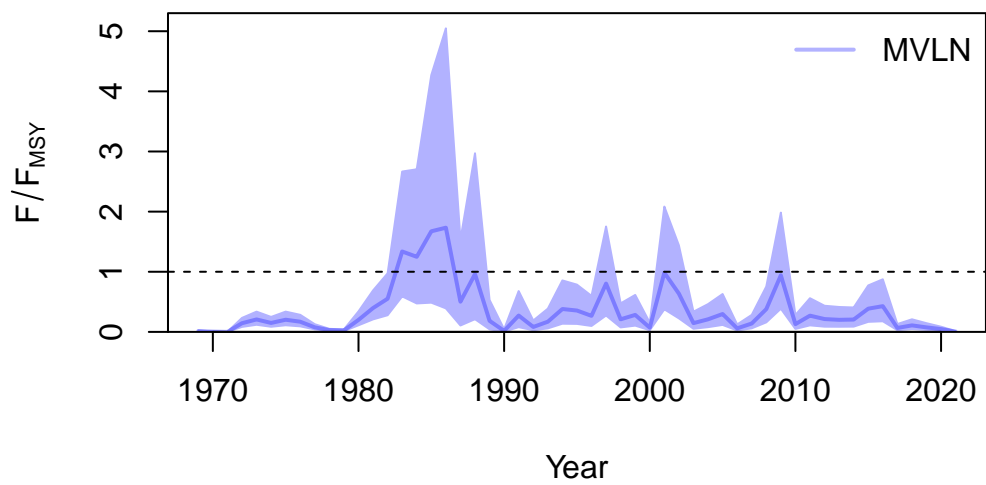
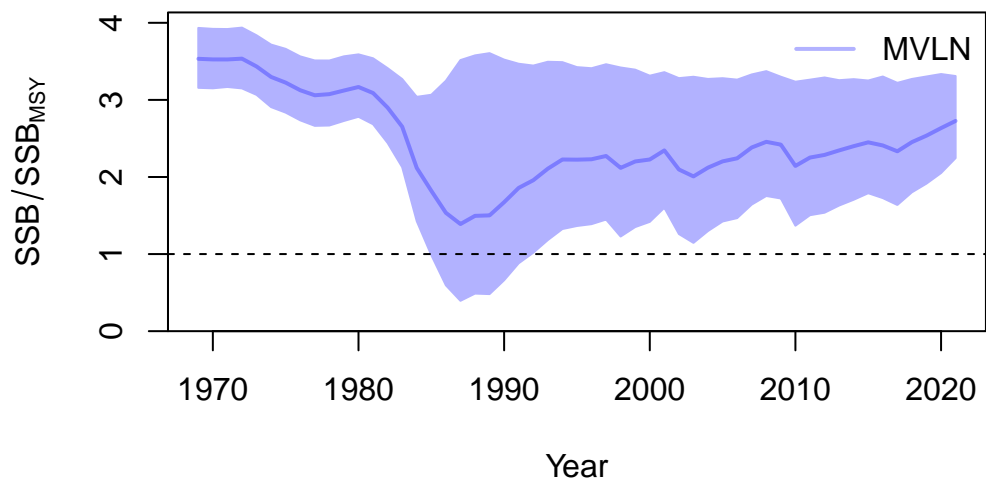
Changes in survey likelihood by fleet

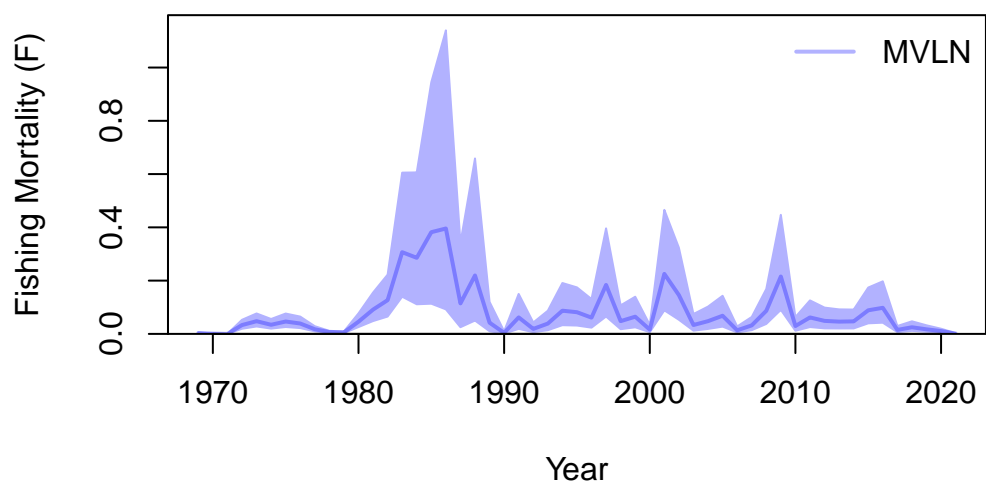
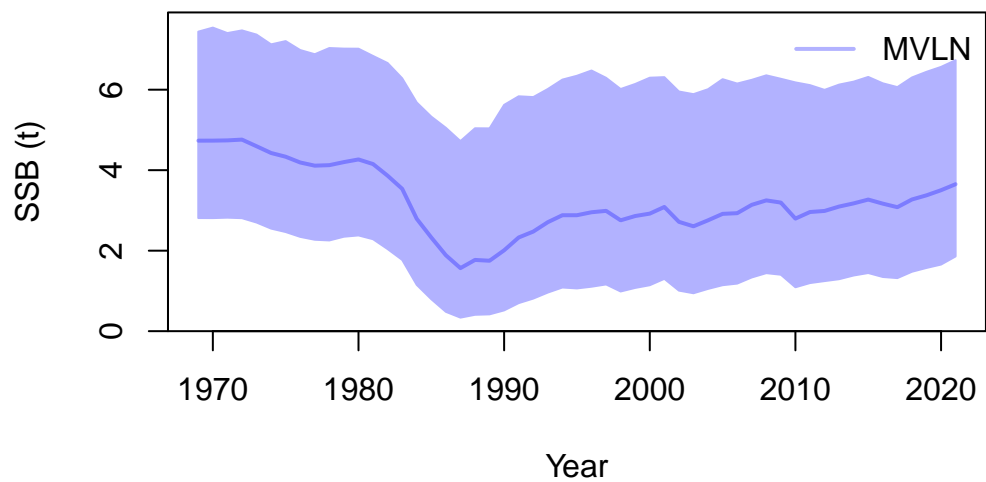


Management Quantities

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







null device
1

Jitter

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[1] "No jitter runs were found."
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Selectivity and Maturity

