

American Samoa Model Checks

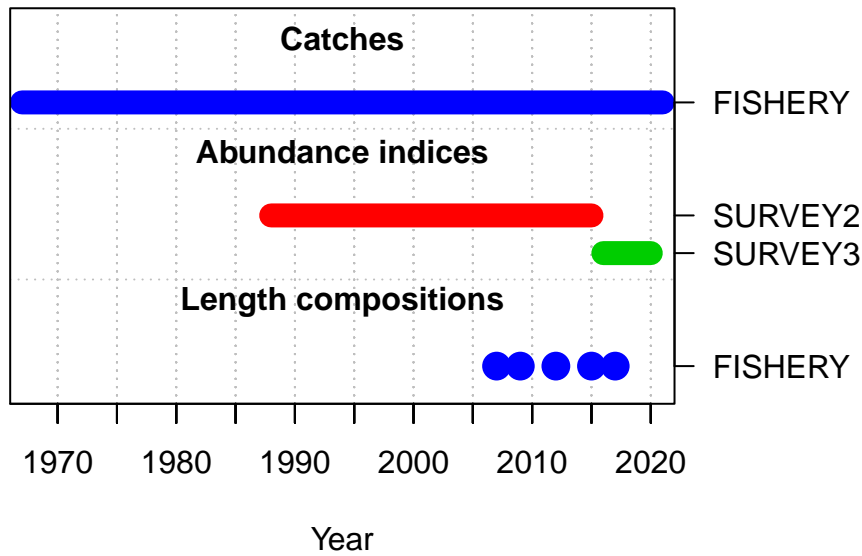
Marc Nadon and Meg Oshima

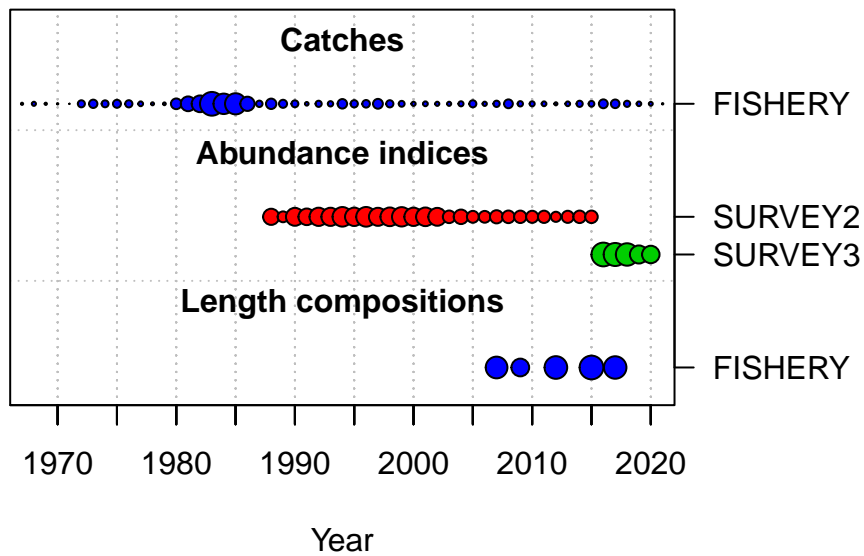
2023-02-14

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

Model Output

Input Data





Convergence Check

```

Converged      MaxGrad
1      TRUE 3.09463e-05

```

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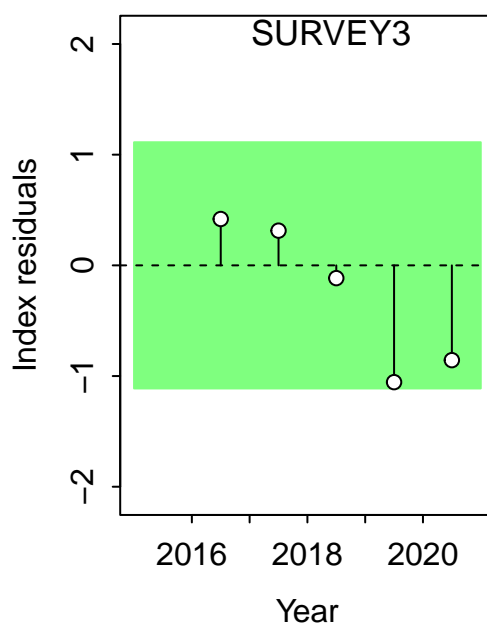
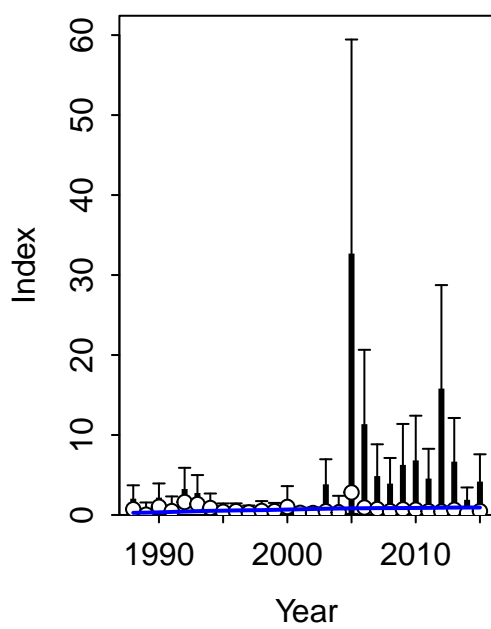
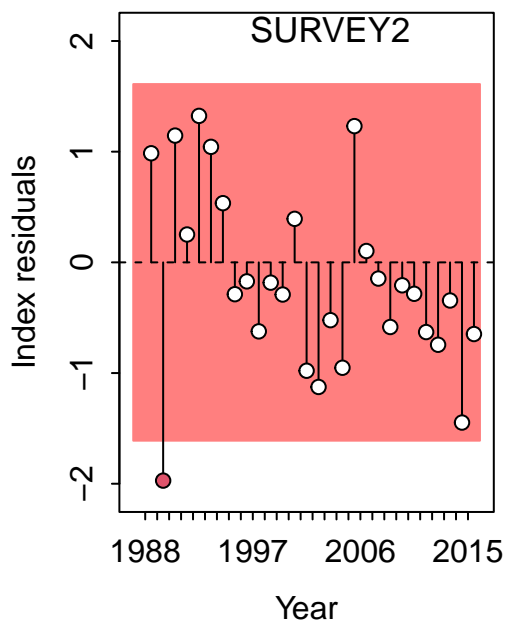
[1] "1 NOTE: Max data length bin: 40 < max pop len bins: 44; so will accumulate larger pop
[2] " N parameters are on or within 1% of min-max bound: 1; check results, variance may be s
[3] "N warnings: 1"

```

Fit to Model

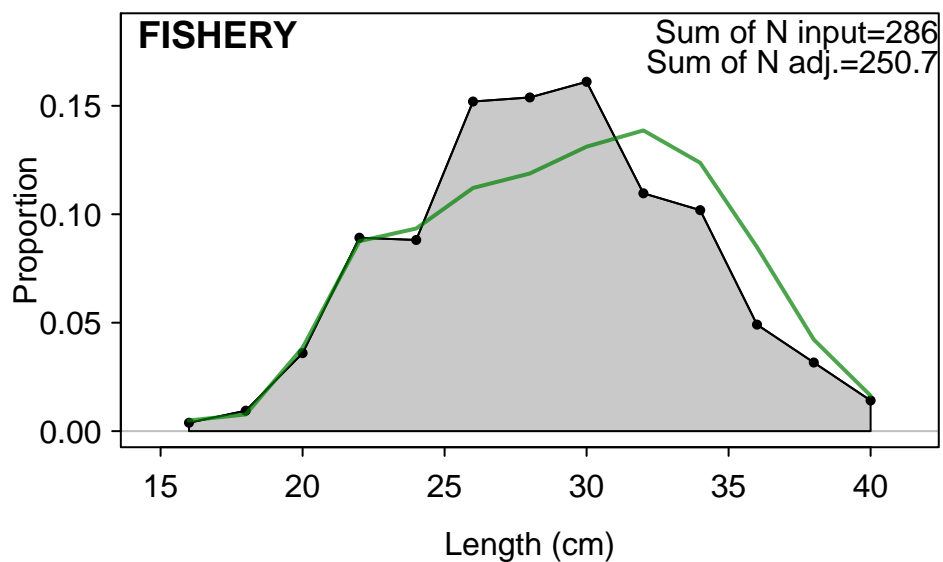
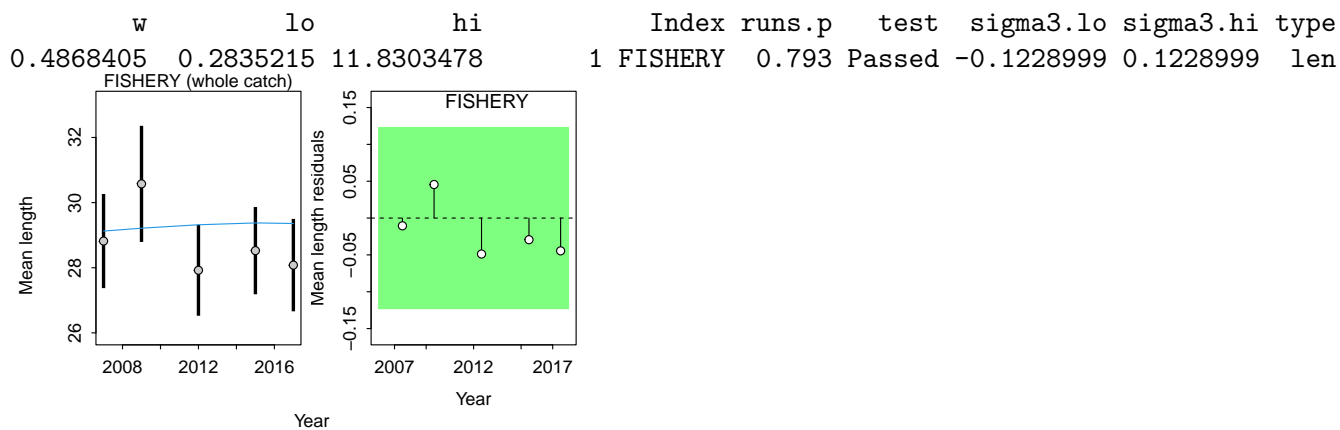
CPUE

Fleet	RMSE.perc	Nobs
SURVEY2	82.7	28
SURVEY3	65.3	5
Combined	80.3	33

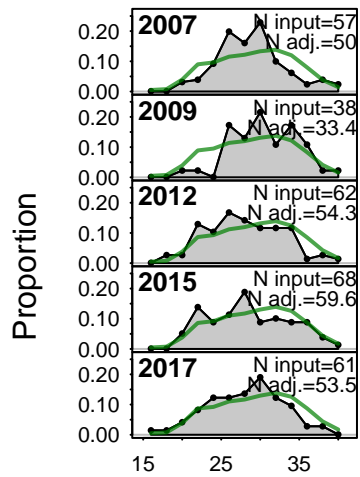


Length Comp

Fleet	RMSE.perc	Nobs
FISHERY	3.8	5
Combined	3.8	5



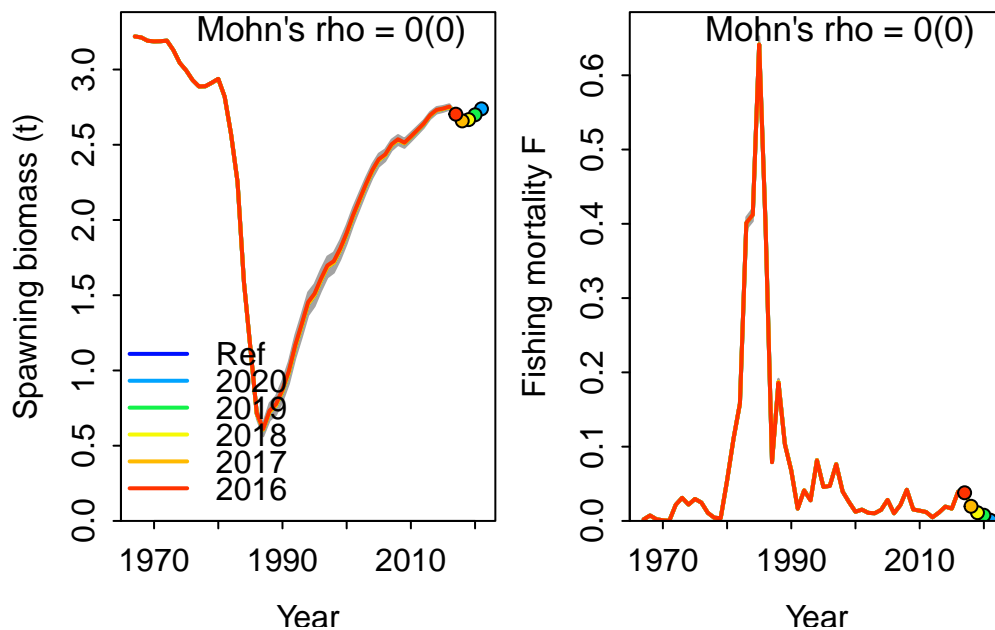
Retrospective and Hindcasting



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	0.000000e+00	0.000000e+00
2	F	2019	0.000000e+00	0.000000e+00
3	F	2018	0.000000e+00	0.000000e+00
4	F	2017	-7.914293e-06	-1.014945e-05
5	F	2016	1.013122e-05	6.331435e-05
6	F Combined		4.433862e-07	1.063298e-05

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

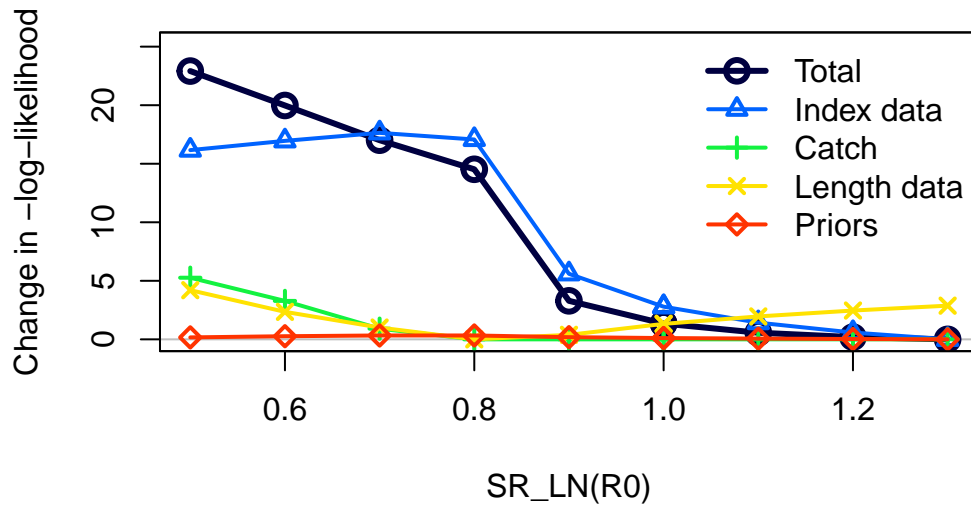
Recruitment Deviations

Likelihood Profile

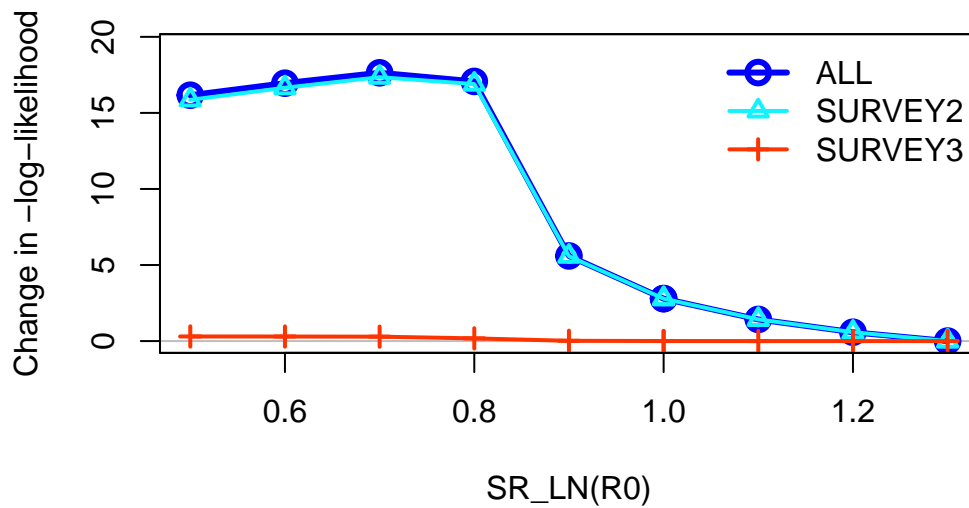
[1] "SR_LN"

	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.2297	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.7697	TRUE	Index data
Length_comp	0.1833	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	0.0145	TRUE	Priors
Parm_softbounds	0.0000	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

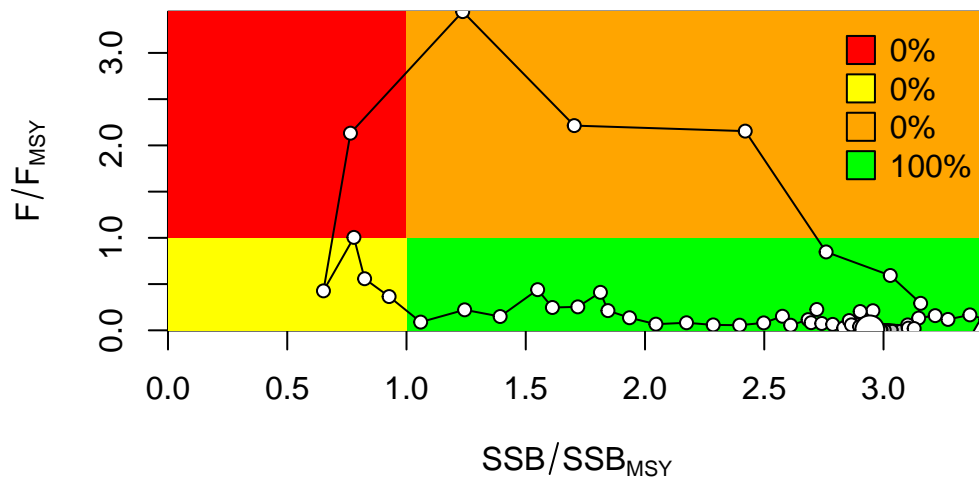


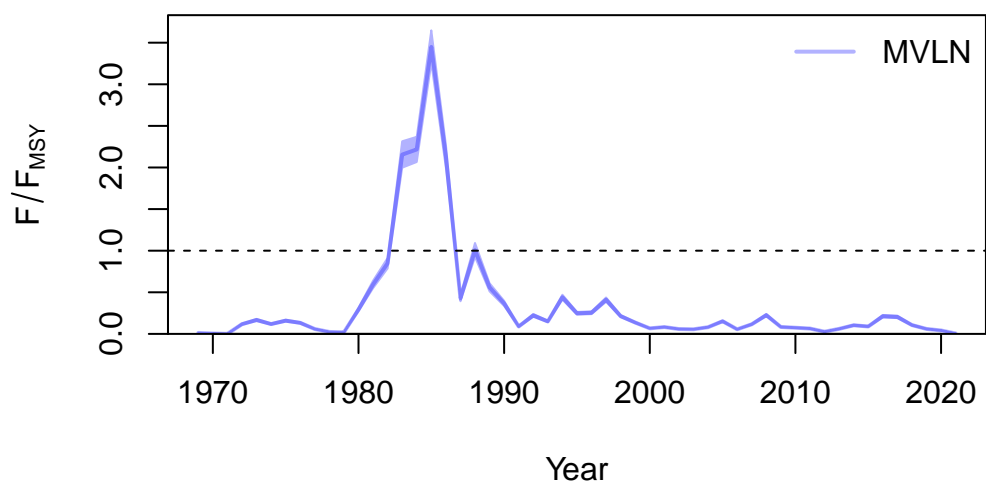
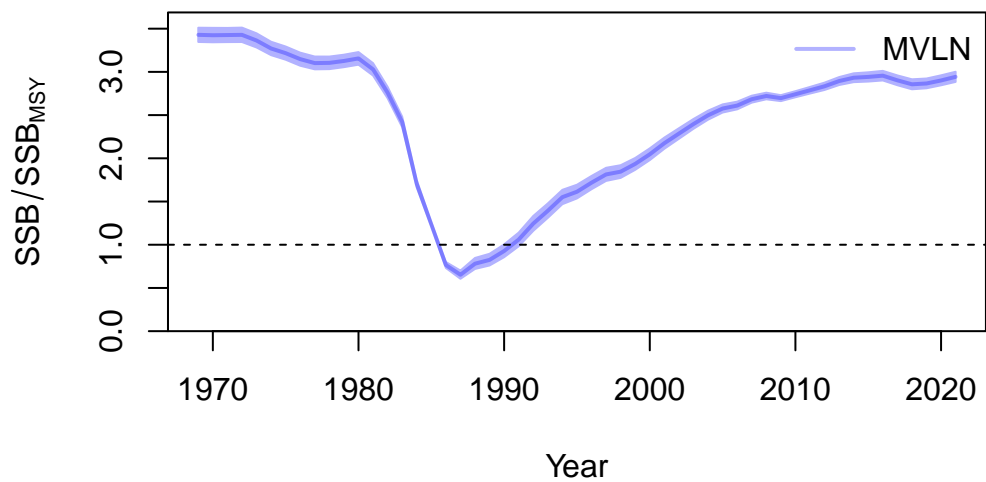
Changes in survey likelihood by fleet

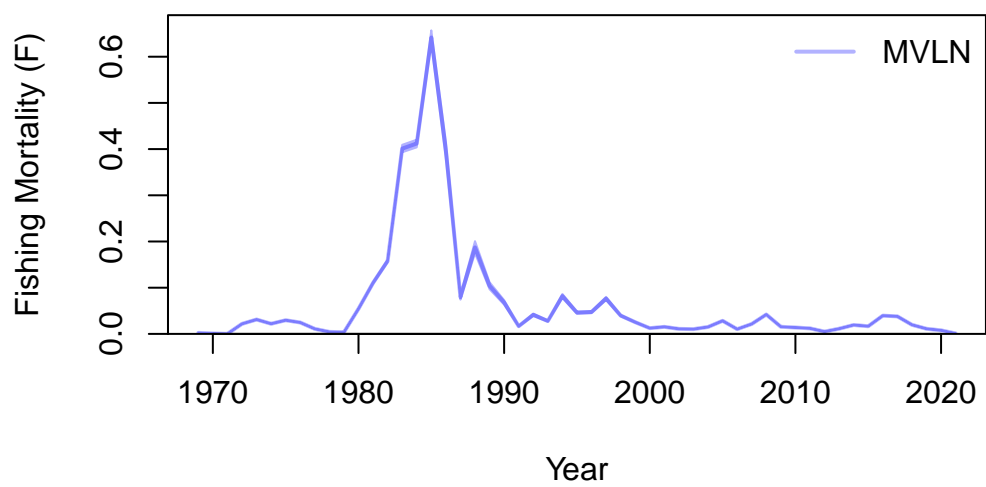
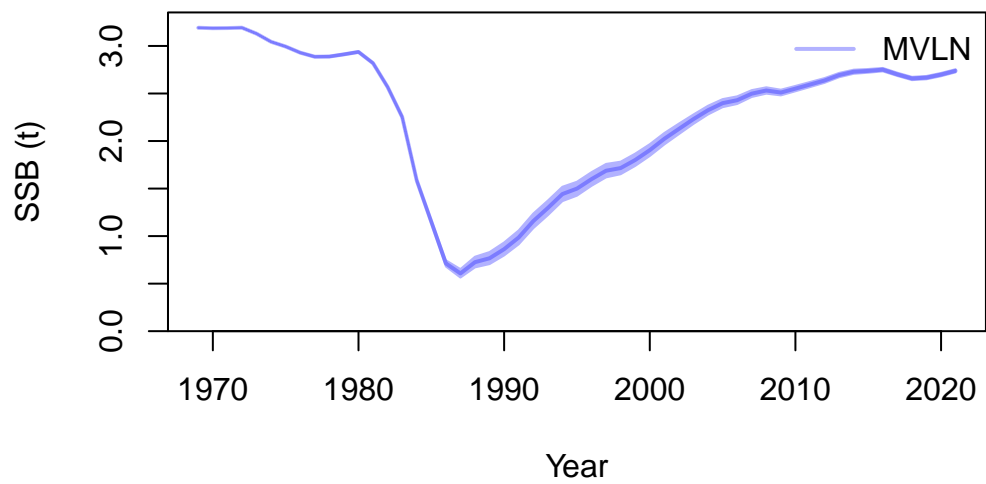


Management Quantities

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







null device
1

Jitter

```
[1] "No jitter runs were found."
```

Selectivity and Maturity

