

American Samoa Model Checks

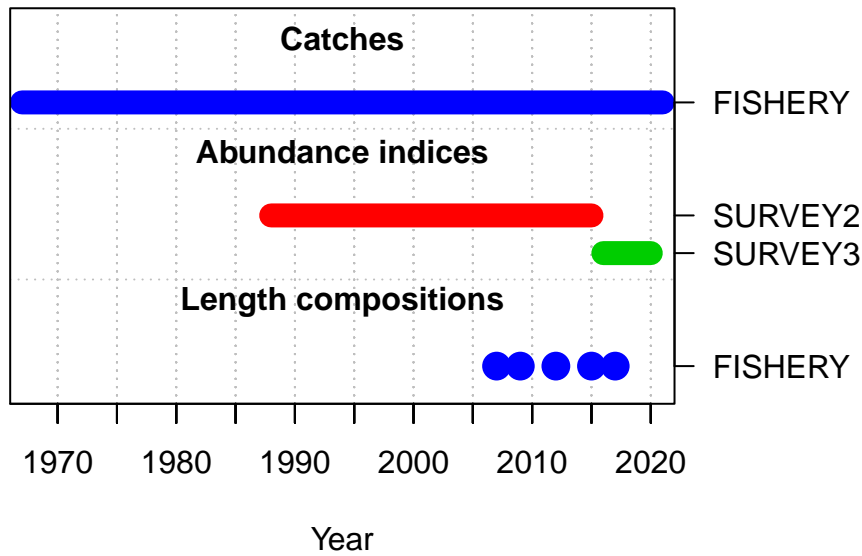
Marc Nadon and Meg Oshima

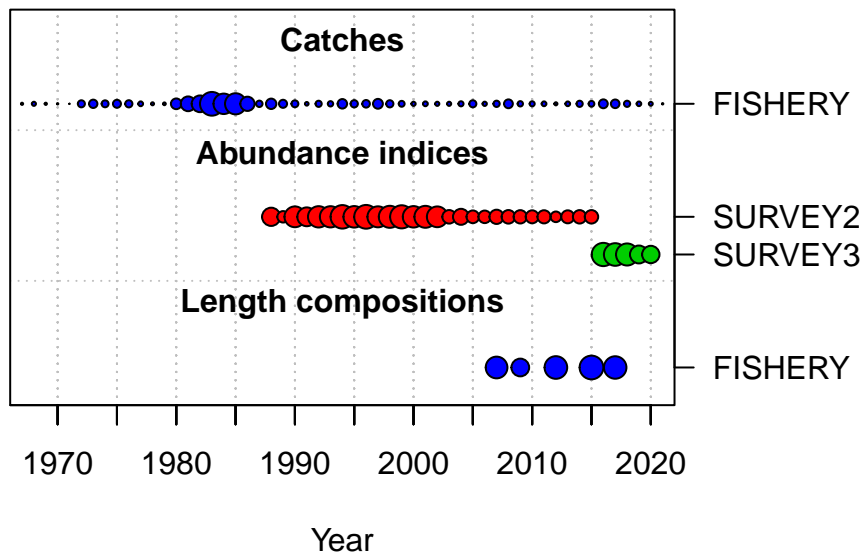
2023-02-15

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

Model Output

Input Data





Convergence Check

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Converged      MaxGrad
1      TRUE 4.90867e-05

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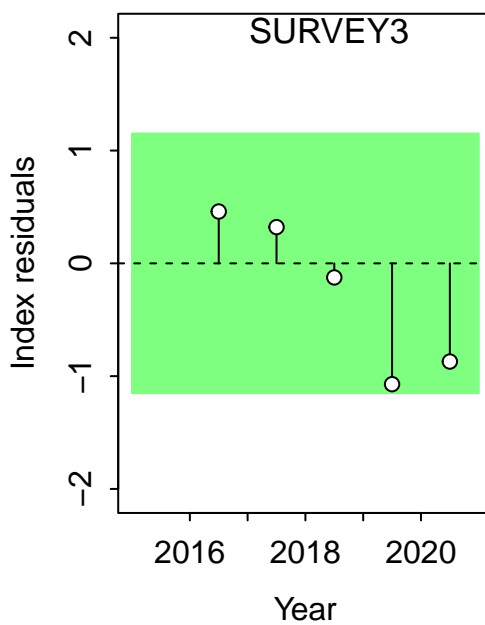
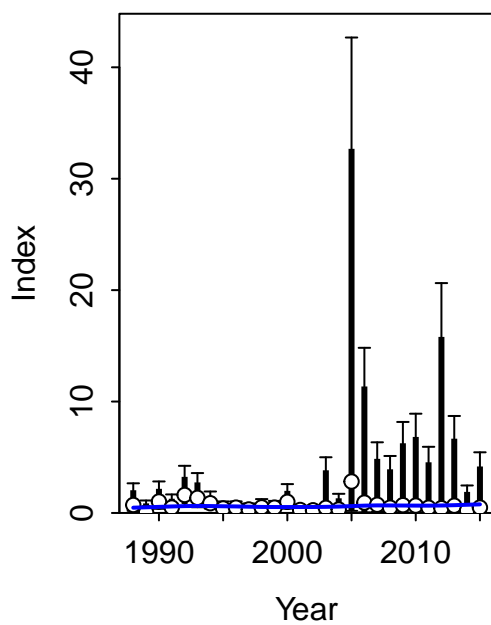
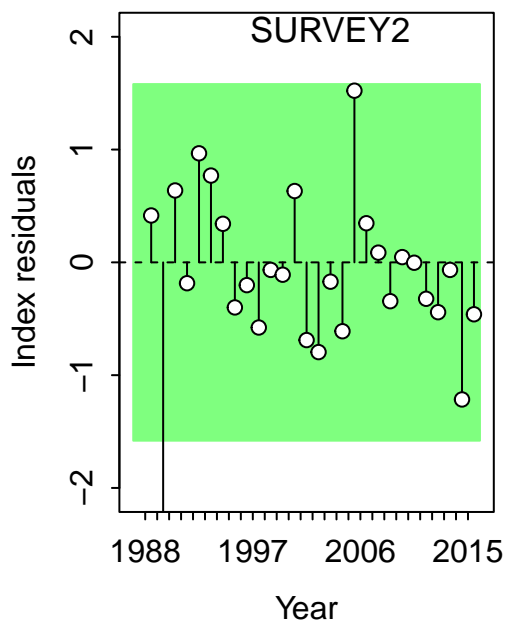
[1] "1 NOTE: Max data length bin: 40 < max pop len bins: 44; so will accumulate larger pop
[2] " N parameters are on or within 1% of min-max bound: 1; check results, variance may be s
[3] "N warnings: 1"

```

Fit to Model

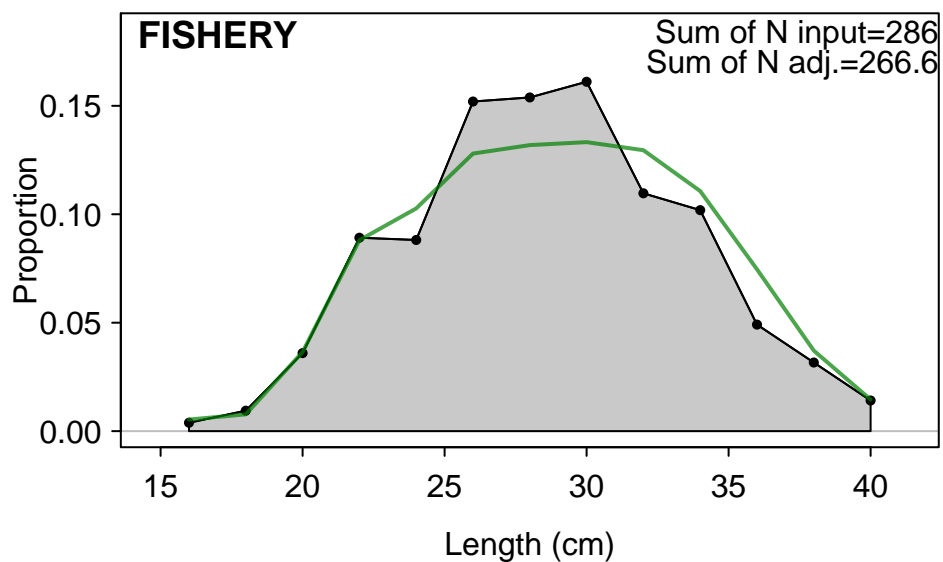
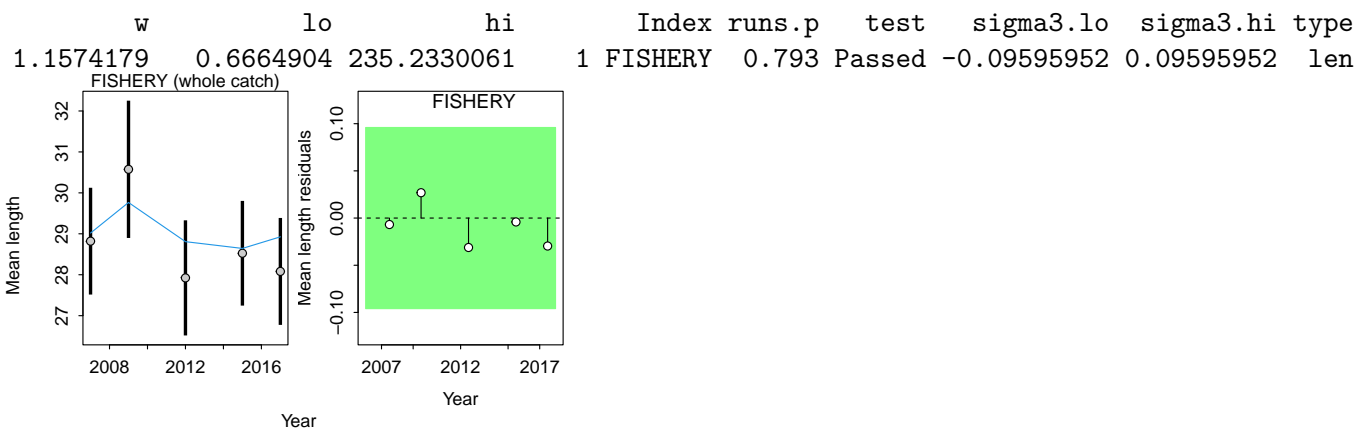
CPUE

Fleet	RMSE.perc	Nobs
SURVEY2	74.8	28
SURVEY3	66.9	5
Combined	73.6	33

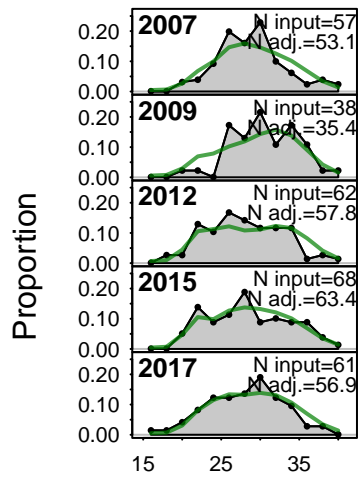


Length Comp

Fleet	RMSE.perc	Nobs
FISHERY	2.3	5
Combined	2.3	5



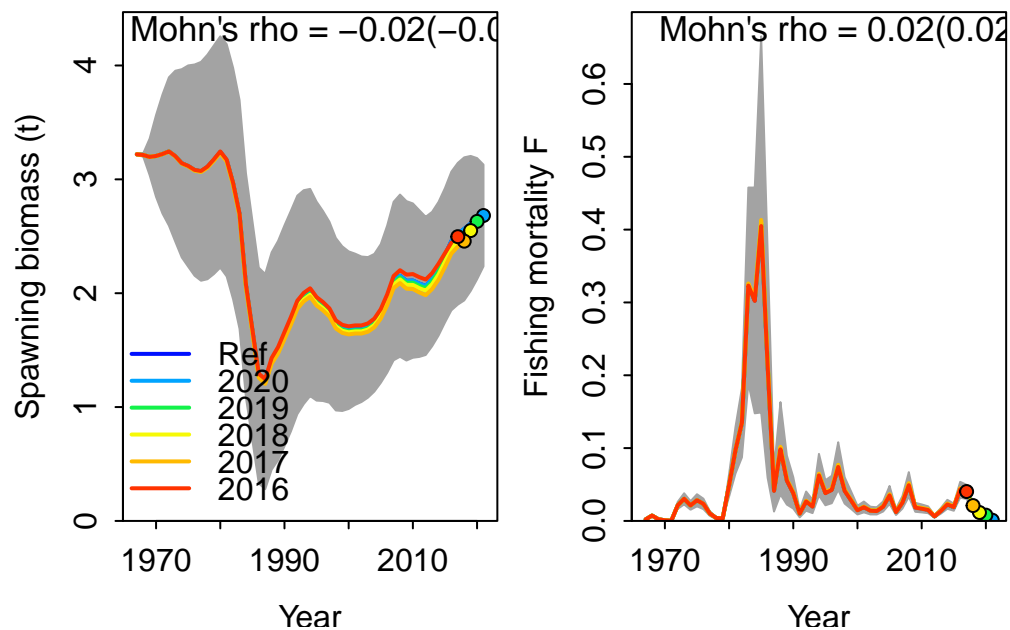
Retrospective and Hindcasting



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	0.000000000	0.000000000
2	F	2019	0.009408306	0.006543896
3	F	2018	0.024906974	0.018675796
4	F	2017	0.045390937	0.037338341
5	F	2016	0.011374558	0.013845655
6	F Combined		0.018216155	0.015280738

Hindcasting

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

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

MASE stats by Index:

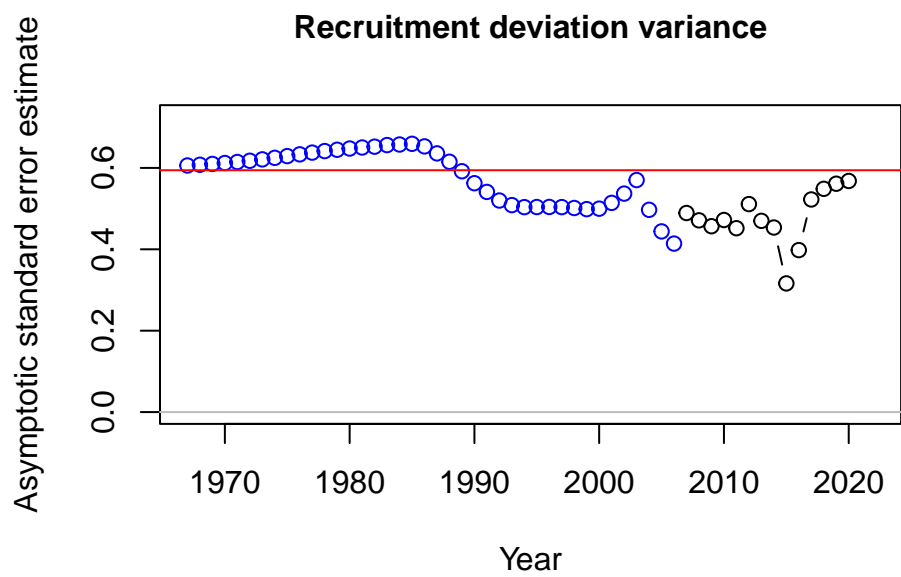
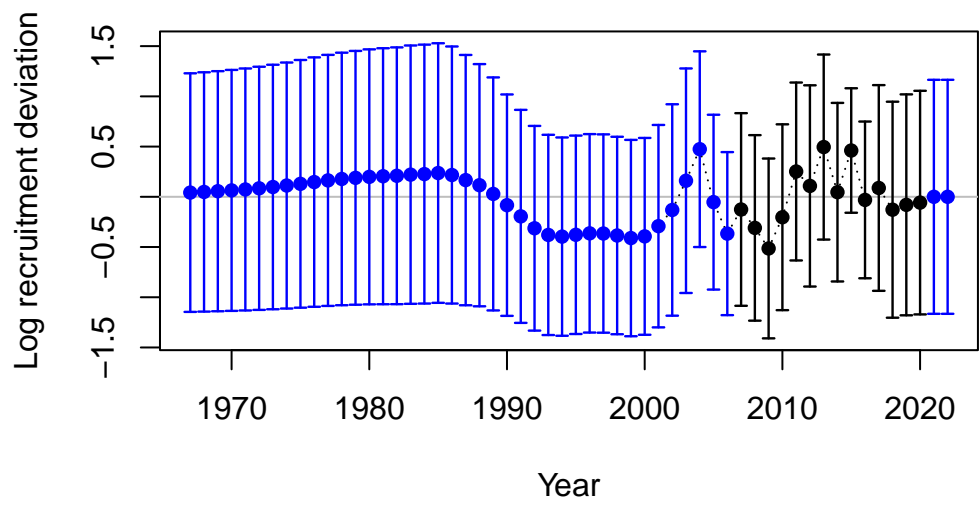
Plotting Hindcast Cross-Validation (one-step-ahead)

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

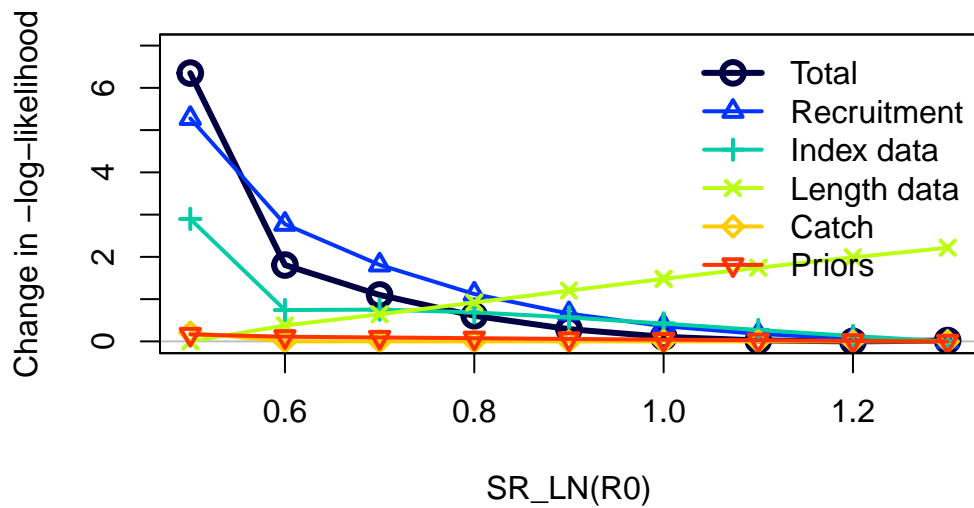
Recruitment Deviations



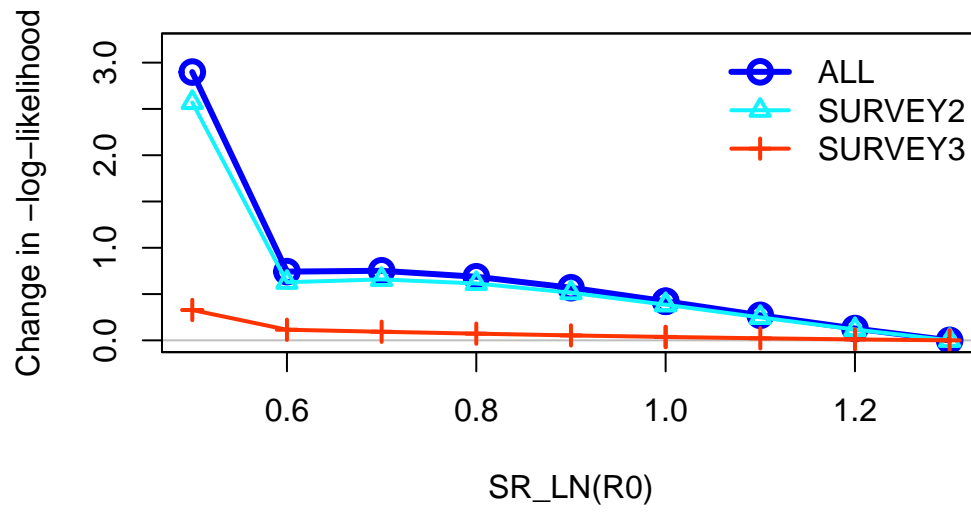
Likelihood Profile

[1] "SR_LN"

	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.0325	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.4565	TRUE	Index data
Length_comp	0.3491	TRUE	Length data
Recruitment	0.8312	TRUE	Recruitment
InitEQ_Regime	0.0000	FALSE	Initital equilibrium recruitment
Forecast_Recruitment	0.0000	FALSE	Forecast recruitment
Parm_priors	0.0258	TRUE	Priors
Parm_softbounds	0.0000	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

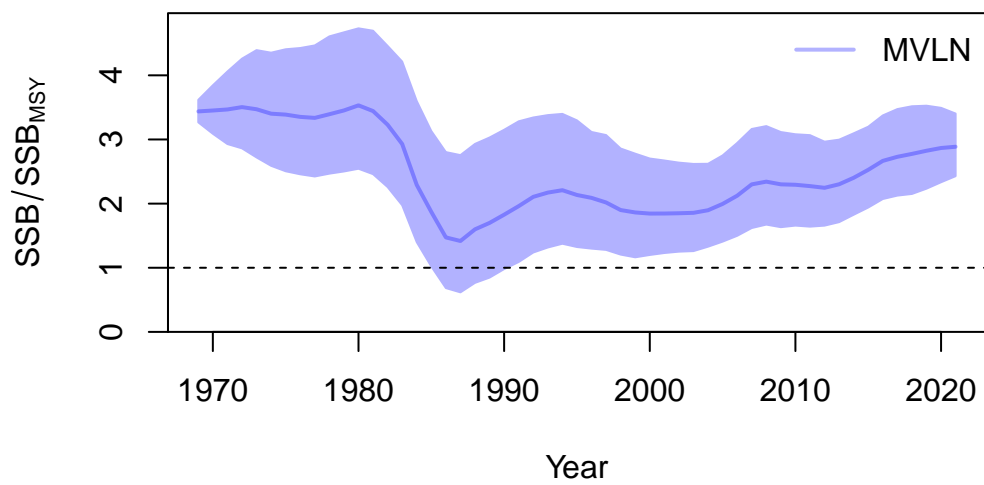
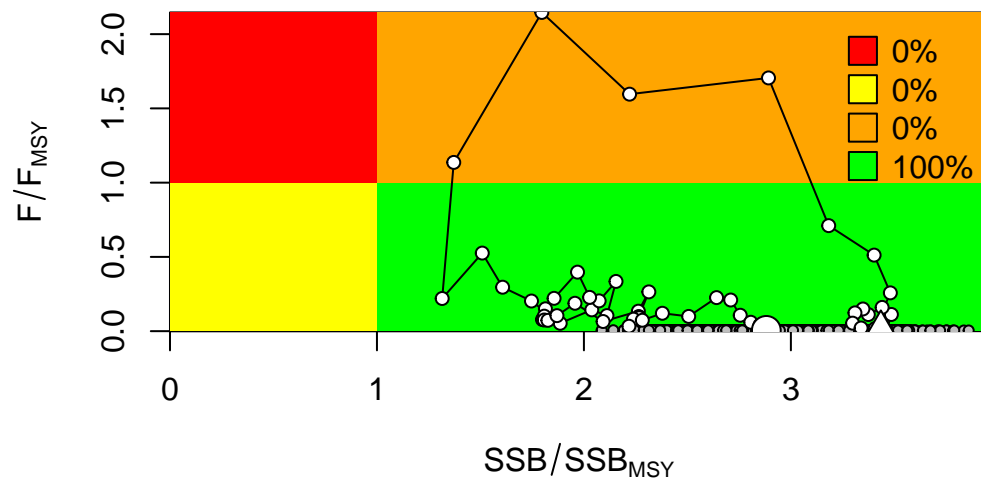


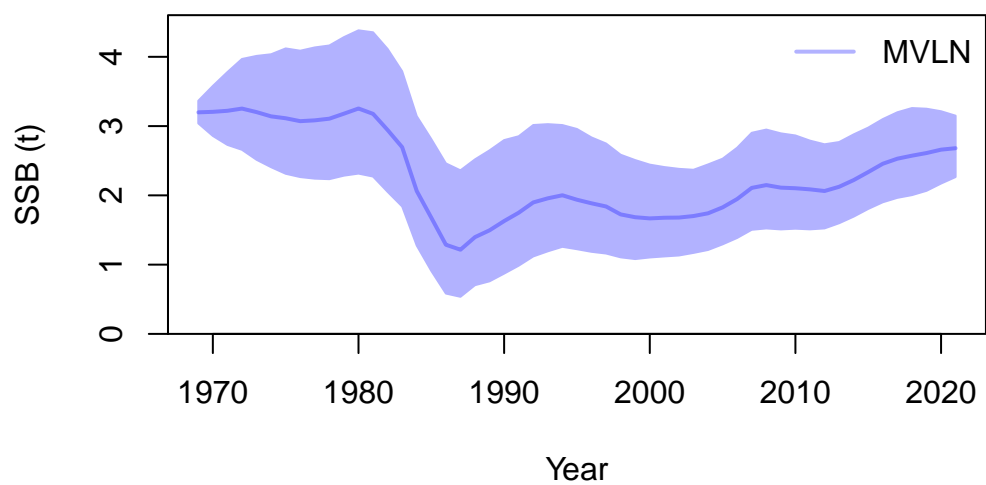
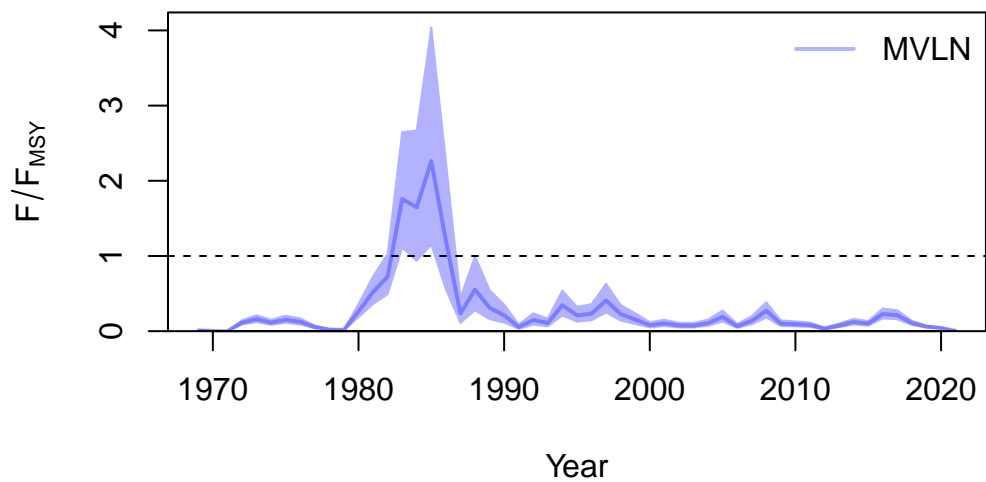
Changes in survey likelihood by fleet

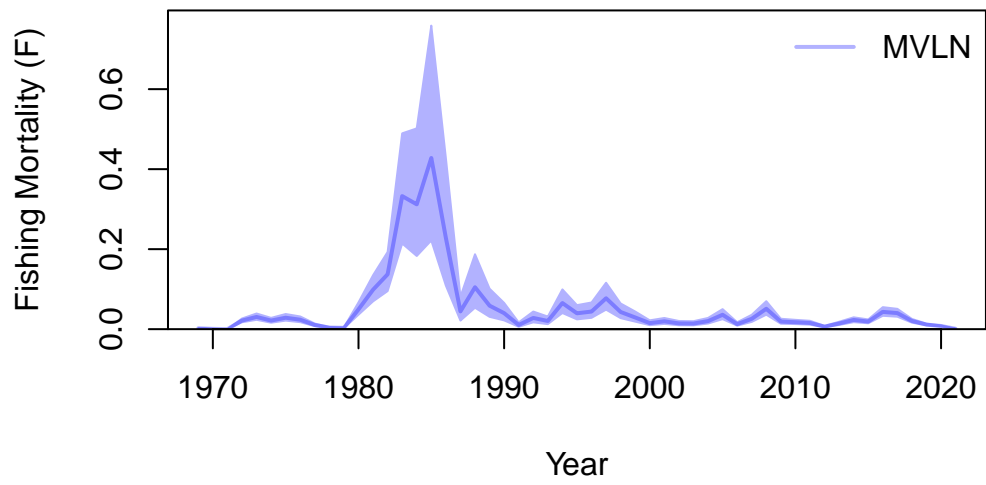


Management Quantities

starter.sso with Bratio: SSB/SSB_{MSY} and F: $_{abs_F}$







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null device
1
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Jitter

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

