

American Samoa Model Checks

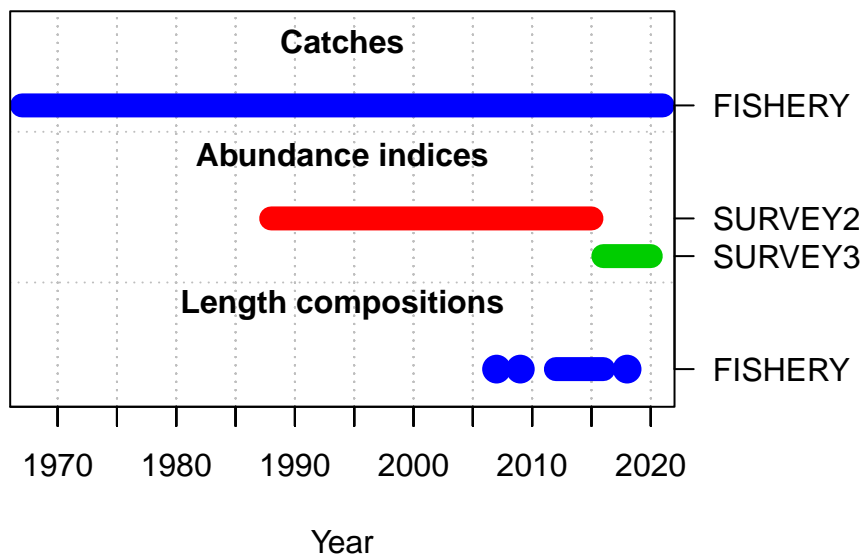
Marc Nadon and Meg Oshima

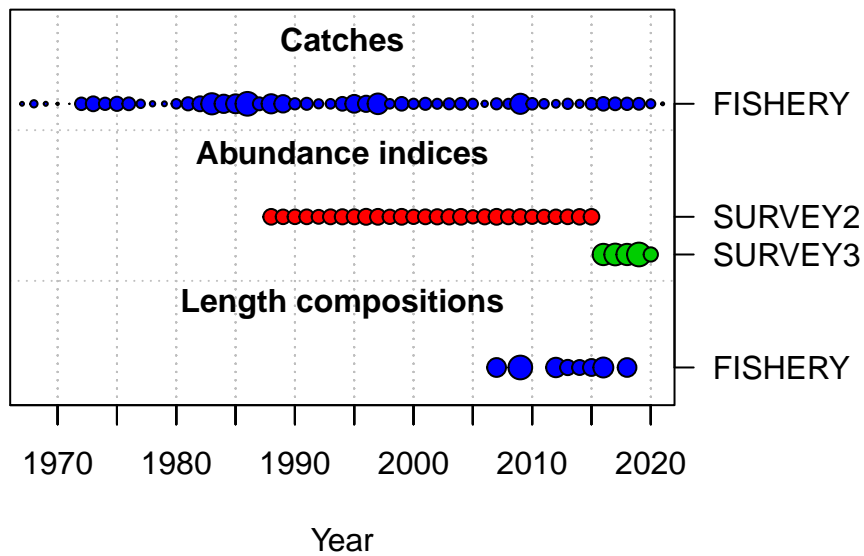
2023-02-14

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

Model Output

Input Data





Convergence Check

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Converged      MaxGrad
1      TRUE 7.74361e-06

```

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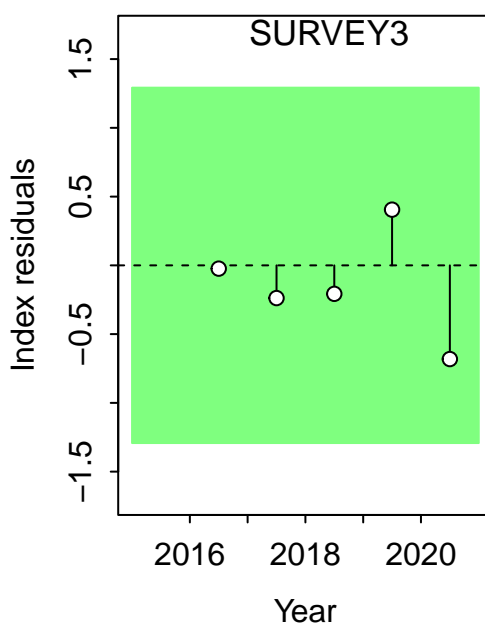
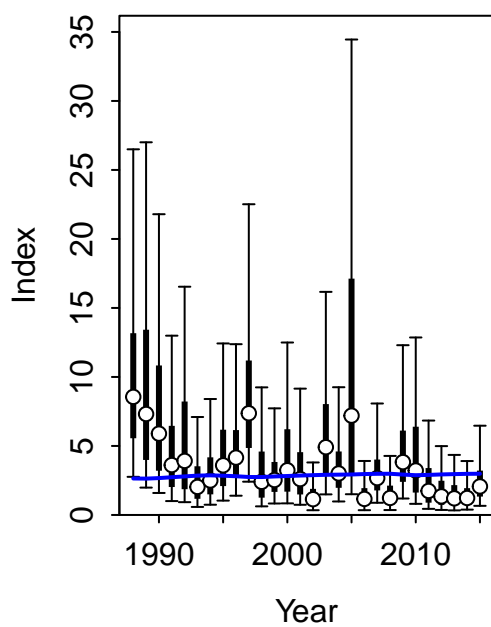
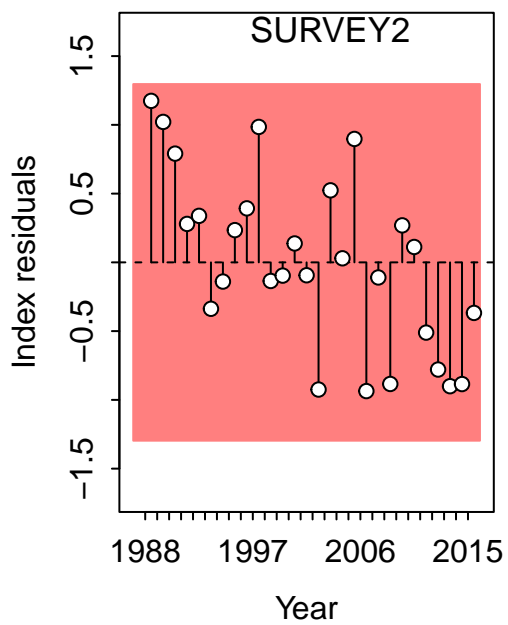
[1] "1 NOTE:  Max data length bin: 65  < max pop len bins: 72; so will accumulate larger pop
[2] "N warnings: 1"

```

Fit to Model

CPUE

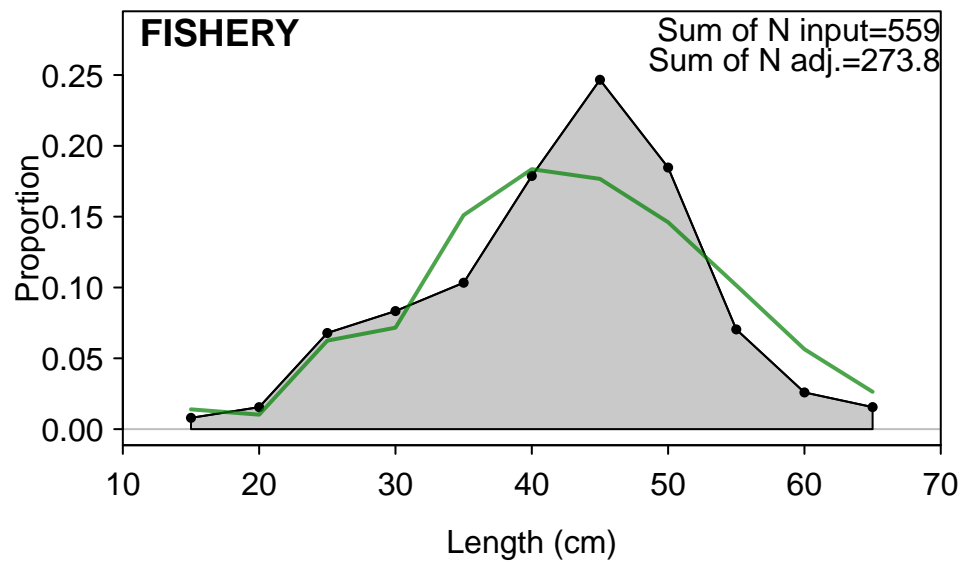
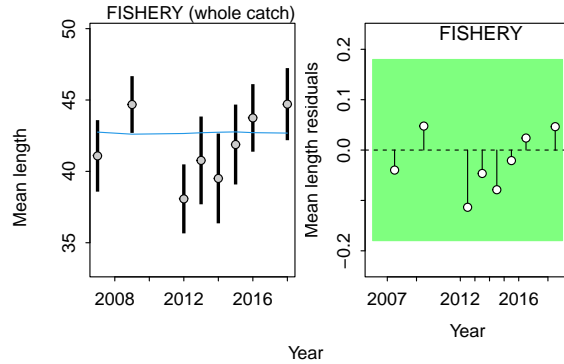
Fleet	RMSE.perc	Nobs
SURVEY2	62.4	28
SURVEY3	38.2	5
Combined	59.4	33



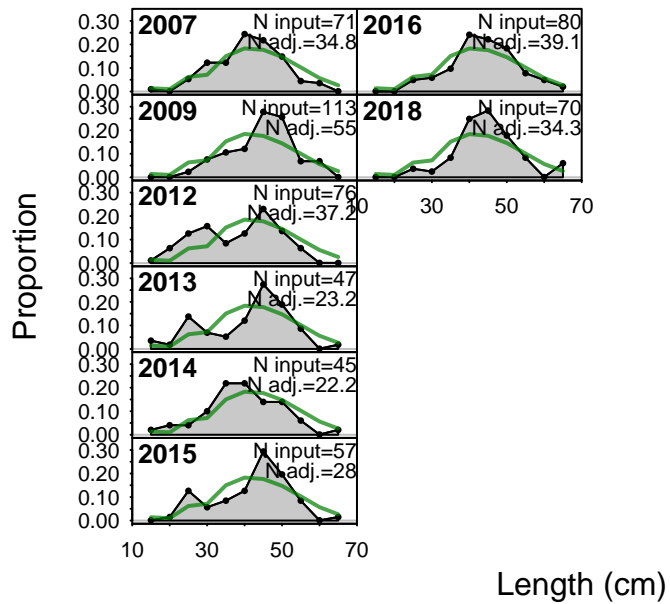
Length Comp

Fleet	RMSE.perc	Nobs
FISHERY	5.9	8
Combined	5.9	8

w lo hi Index runs.p test sigma3.lo sigma3.hi type
 0.2543034 0.1584944 0.9316065 1 FISHERY 0.268 Passed -0.1797695 0.1797695 len

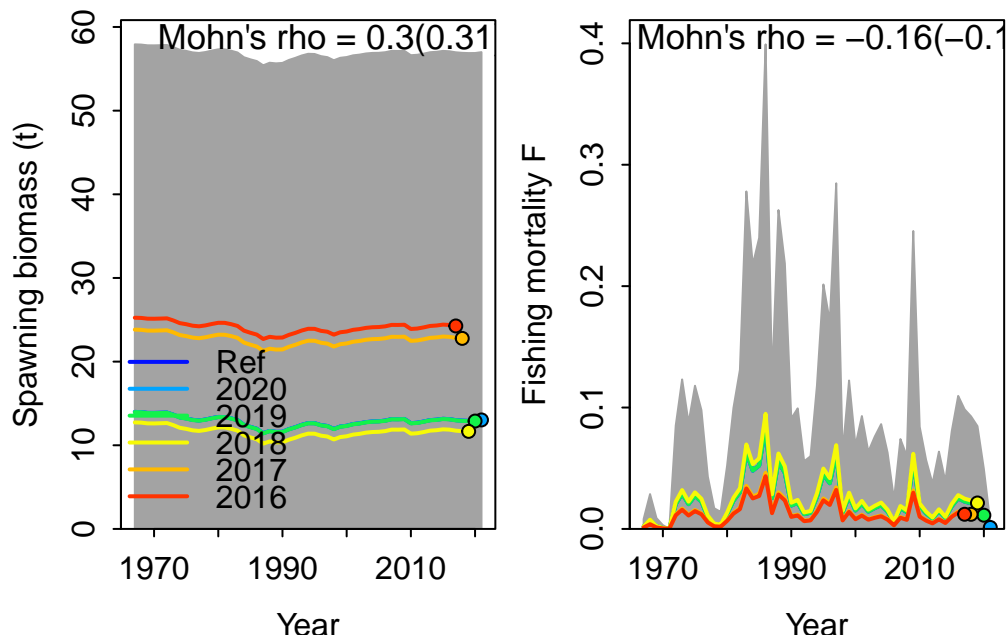


Retrospective and Hindcasting



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	0.002200123	0.002188998
3	F	2018	0.106723475	0.106801746
4	F	2017	-0.430807673	-0.431504067
5	F	2016	-0.462544892	-0.464121182
6	F Combined		-0.156885793	-0.157326901

Hindcasting

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

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

MASE stats by Index:

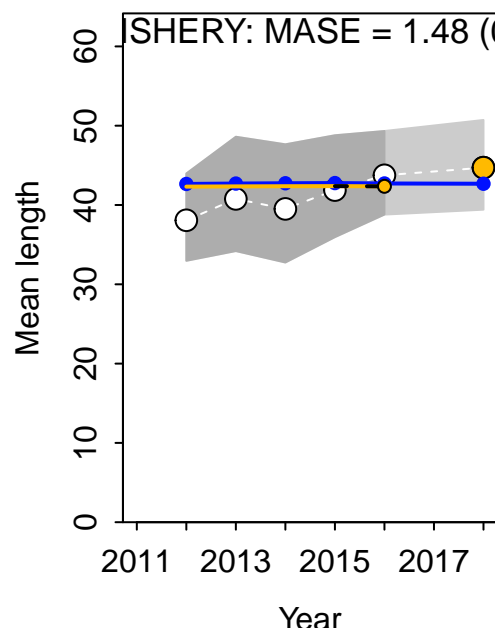
Plotting Hindcast Cross-Validation (one-step-ahead)

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:

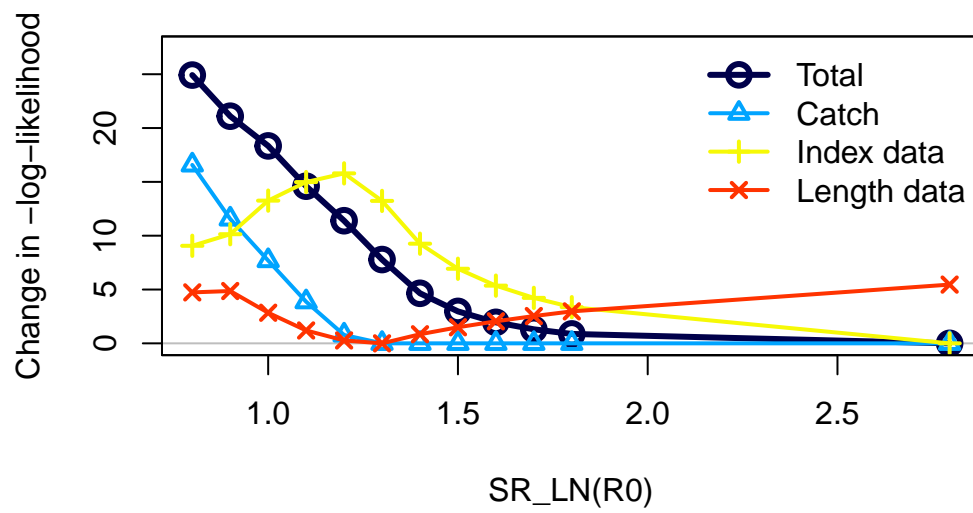
	Index	Season	MASE	MAE.PR	MAE.base	MASE.adj	n.eval
1	FISHERY	1	1.48212	0.03233578	0.02181726	0.3233578	1



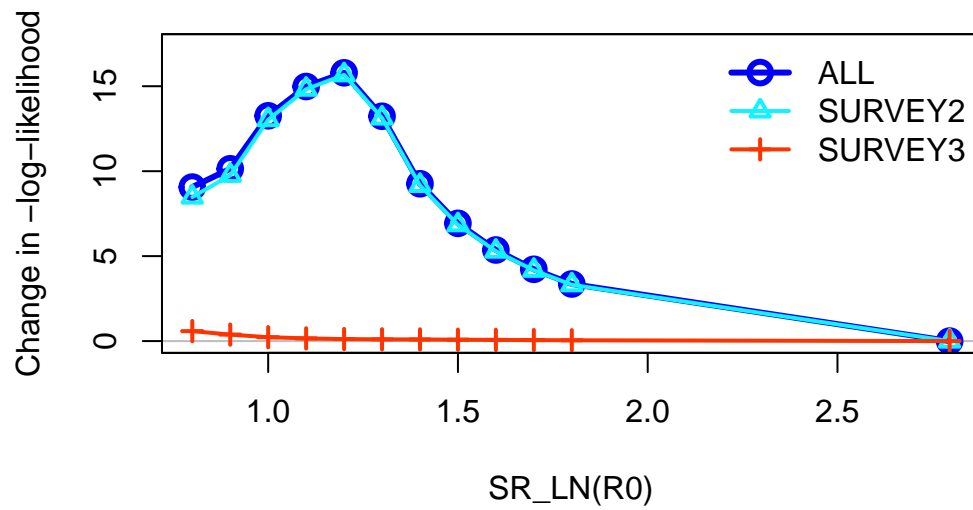
Recruitment Deviations

Likelihood Profile

[1] "SR_LN"			
	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.6651	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.6336	TRUE	Index data
Length_comp	0.2190	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

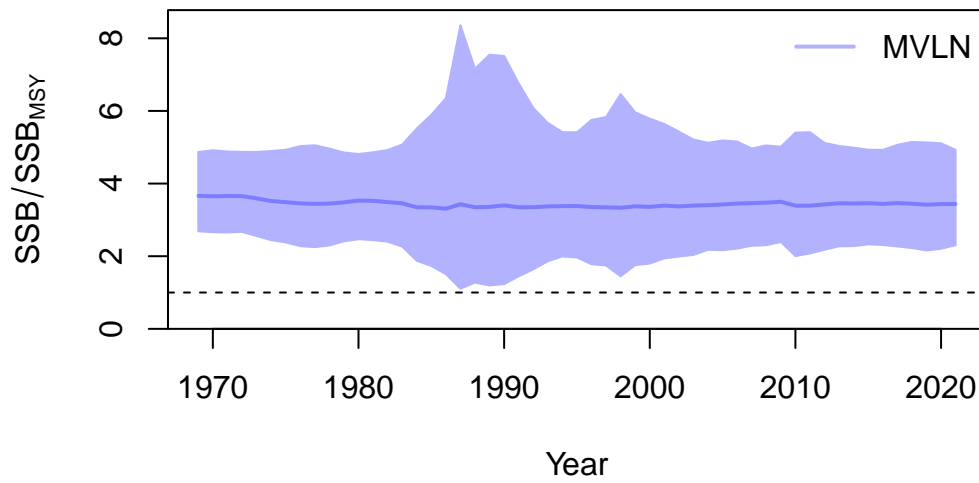
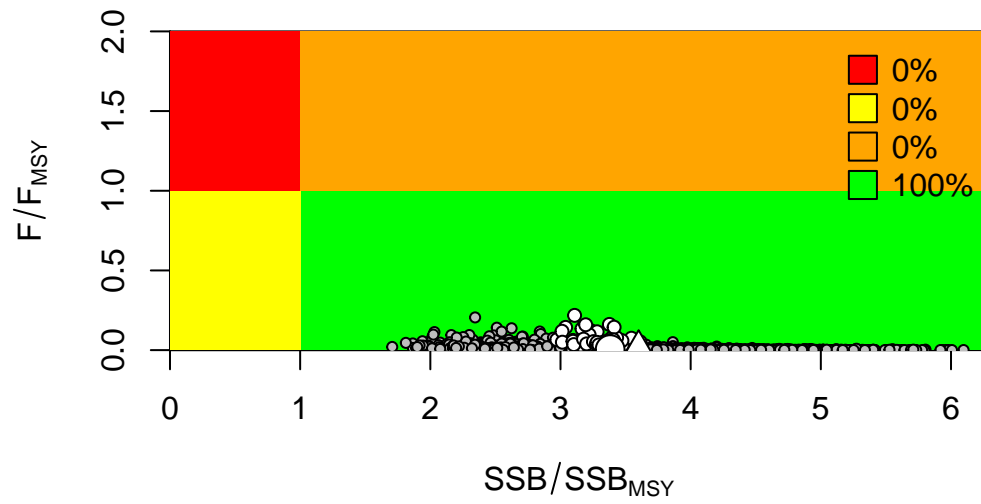


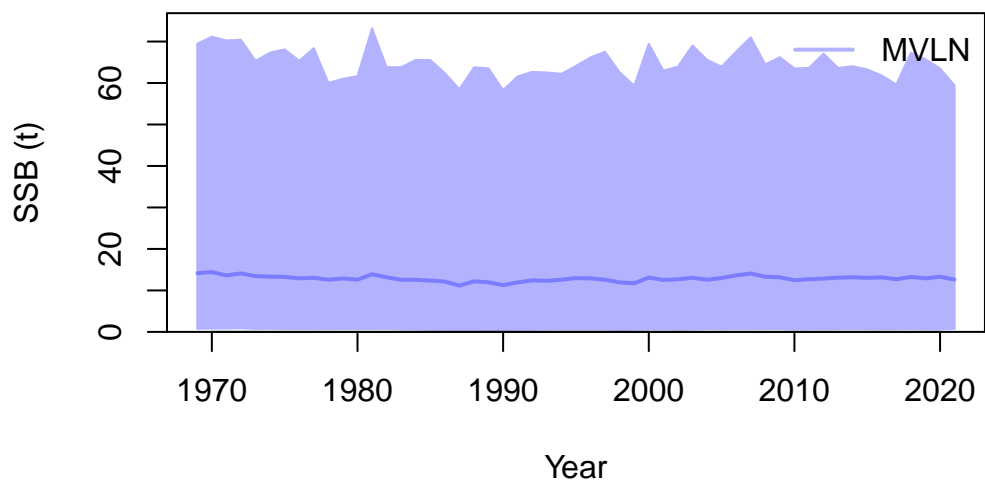
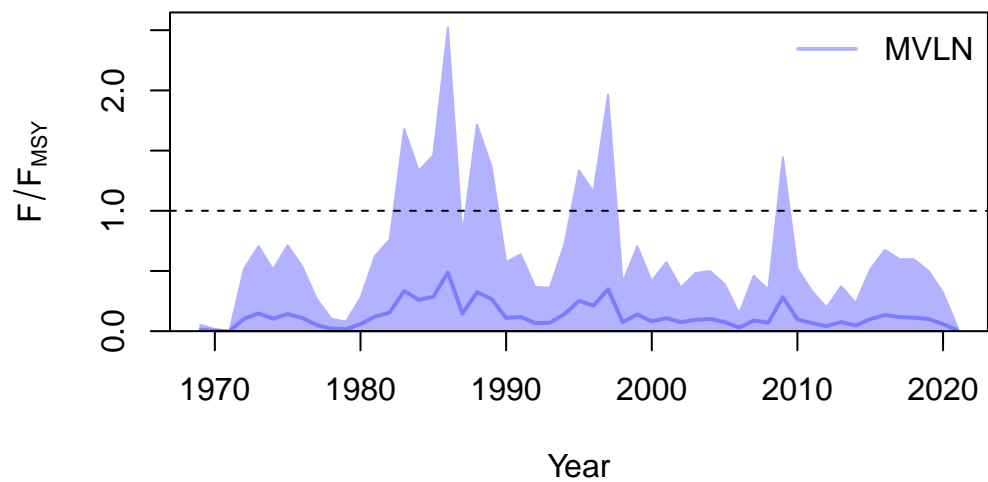
Changes in survey likelihood by fleet

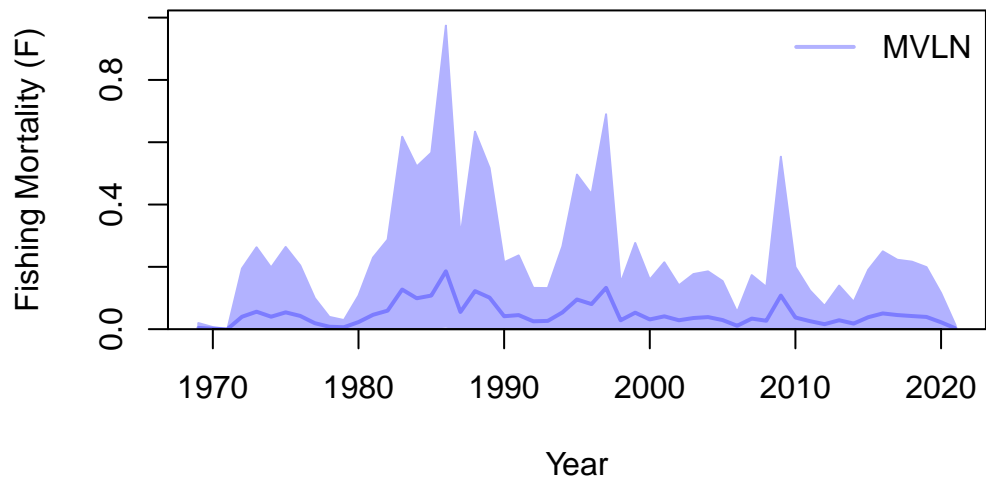


Management Quantities

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

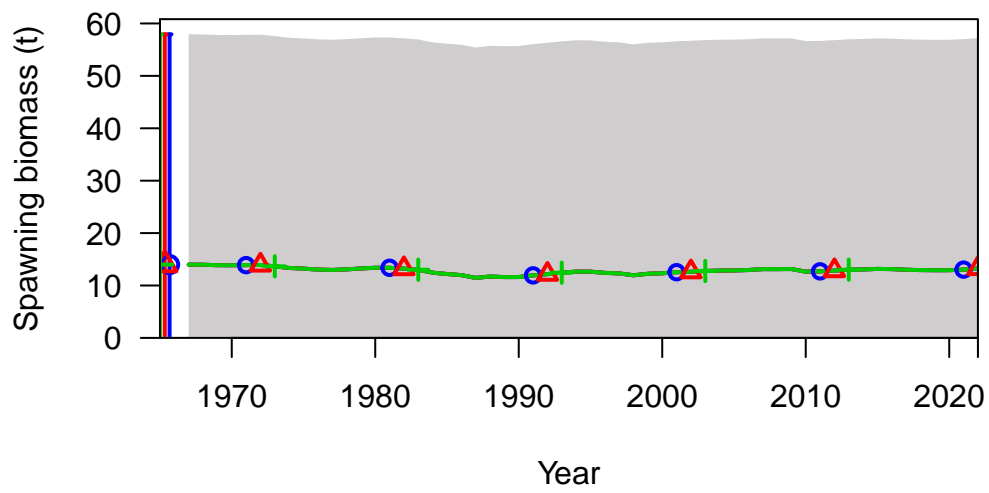
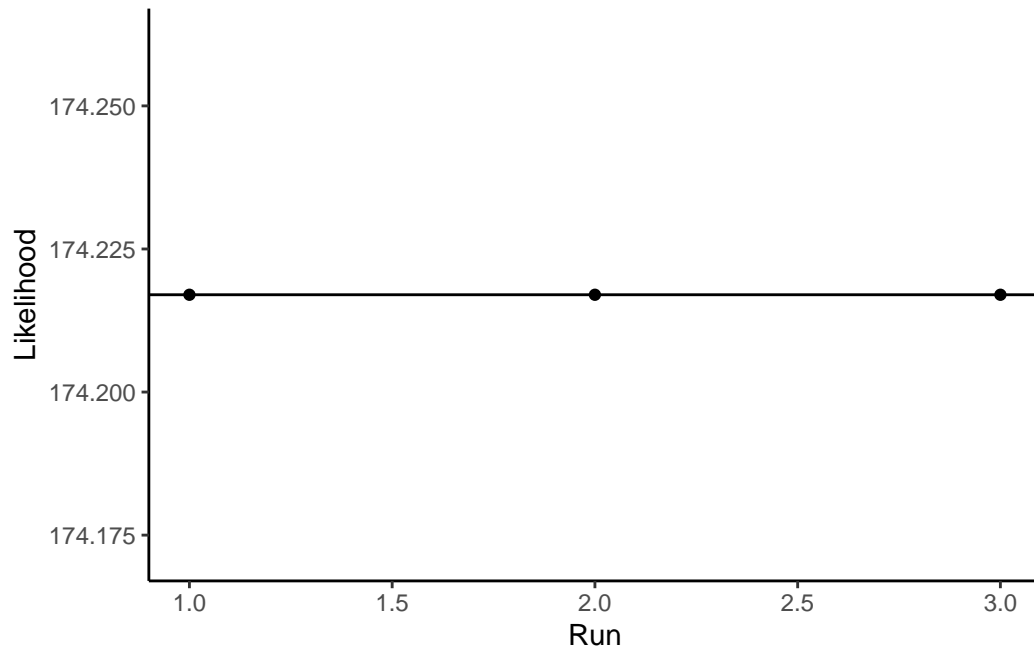


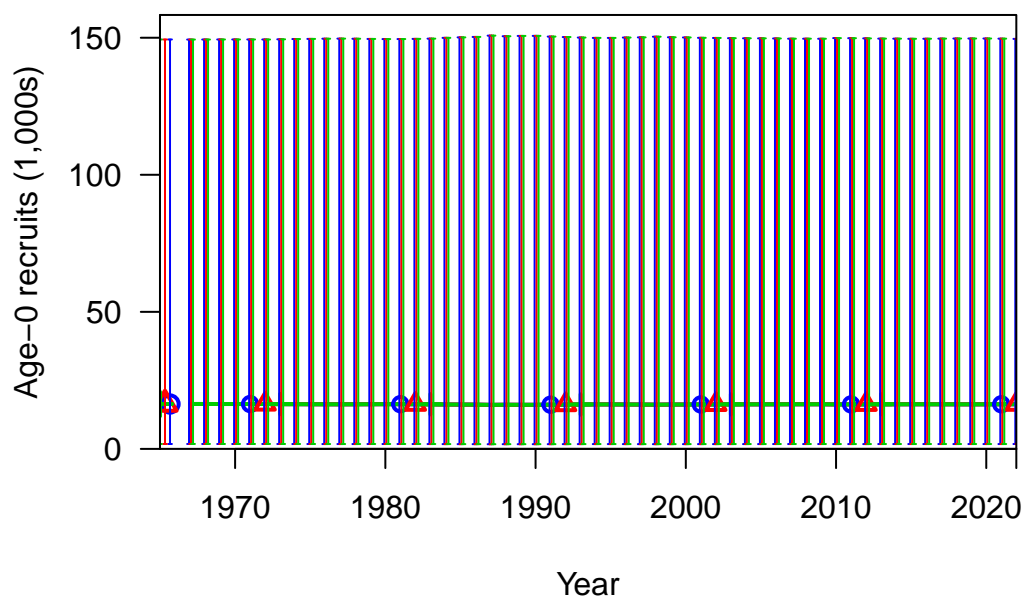
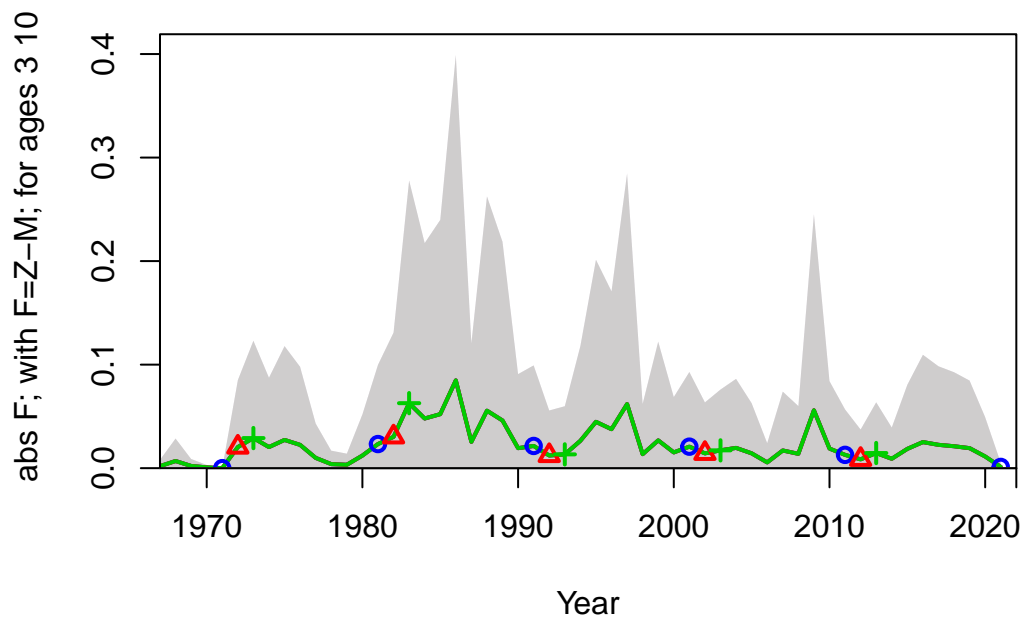




null device
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Jitter





Selectivity and Maturity

