

American Samoa Model Checks

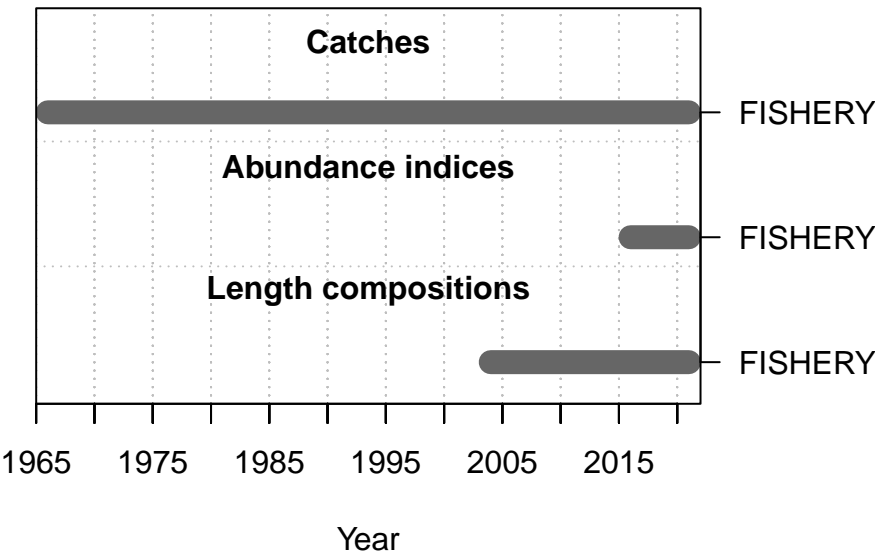
Marc Nadon and Meg Oshima

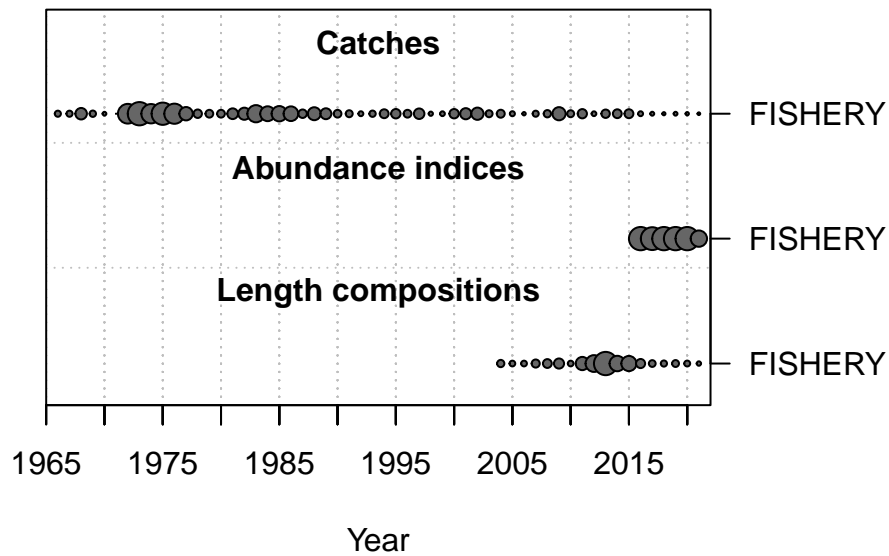
2023-01-10

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

Model Output

Input Data





Convergence Check

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Converged      MaxGrad
1      TRUE 2.53274e-05

```

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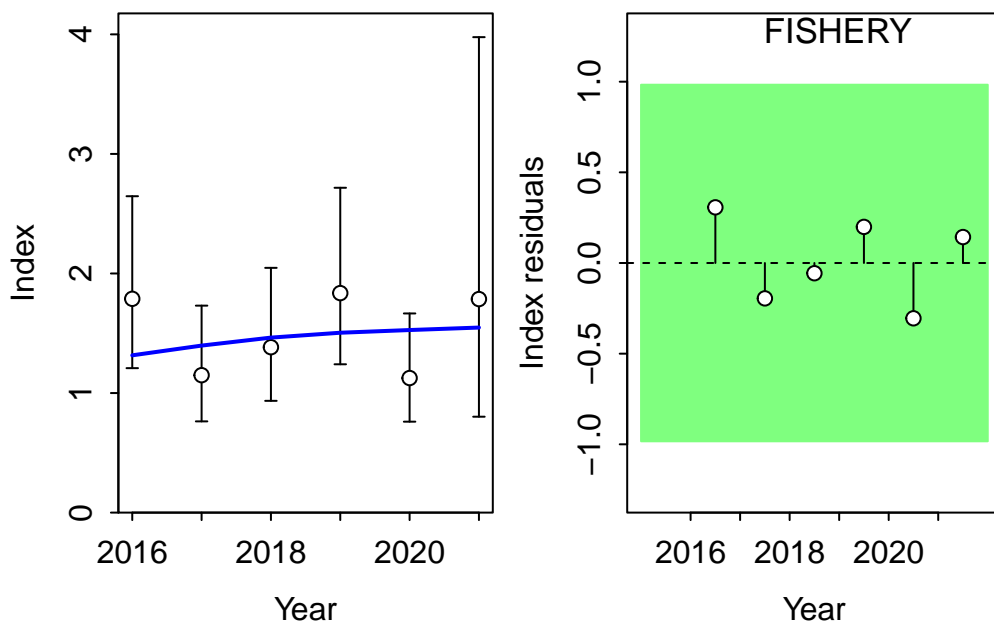
[1] "1 NOTE: Max data length bin: 28 < max pop len bins: 31; so will accumulate larger pop
[2] "2 Forecast F capped by max possible F from control file: 2.9"
[3] "3 Forecast F capped by max possible F from control file: 2.9"
[4] "N warnings: 3"

```

Fit to Model

CPUE

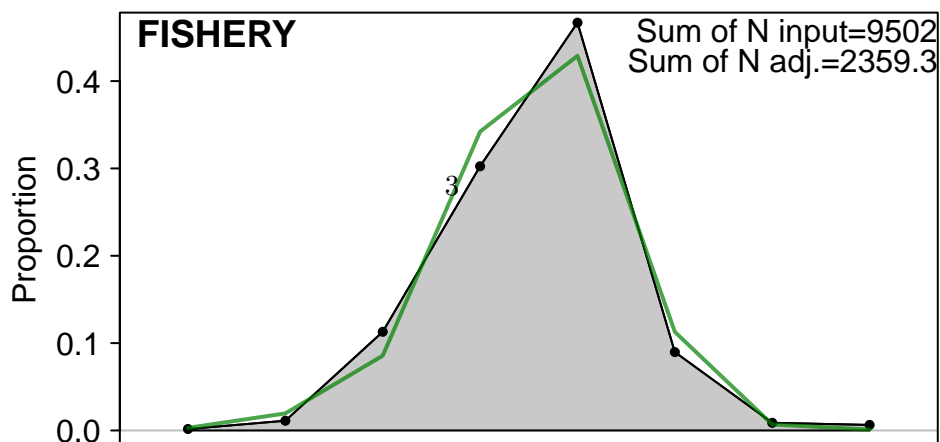
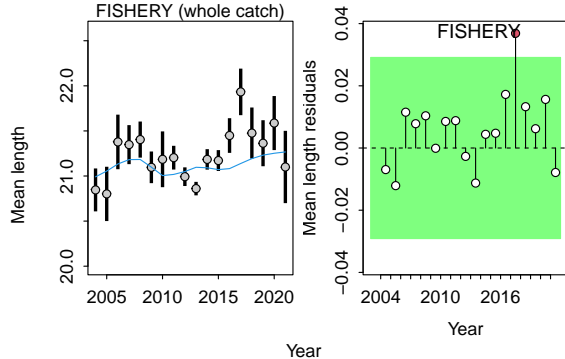
Fleet	RMSE.perc	Nobs
FISHERY	21.9	6
Combined	21.9	6

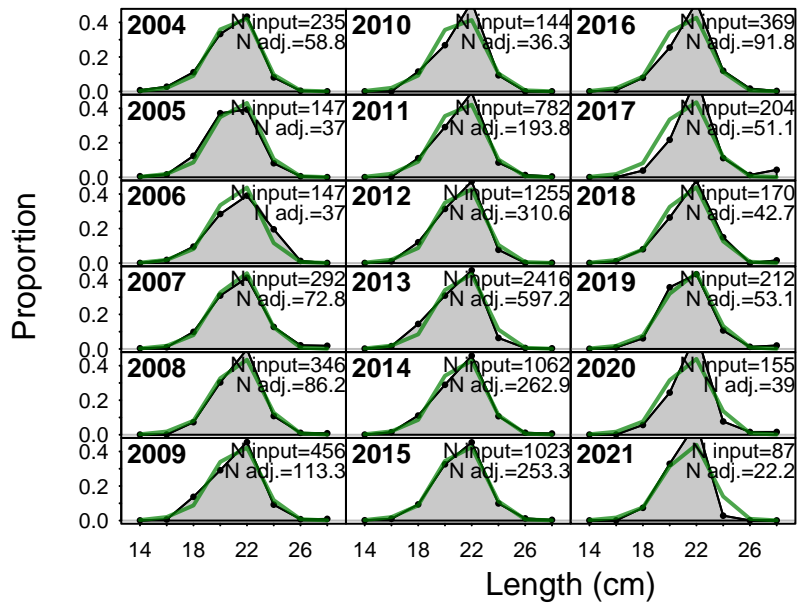


Length Comp

Fleet	RMSE.perc	Nobs
FISHERY	1.3	18
Combined	1.3	18

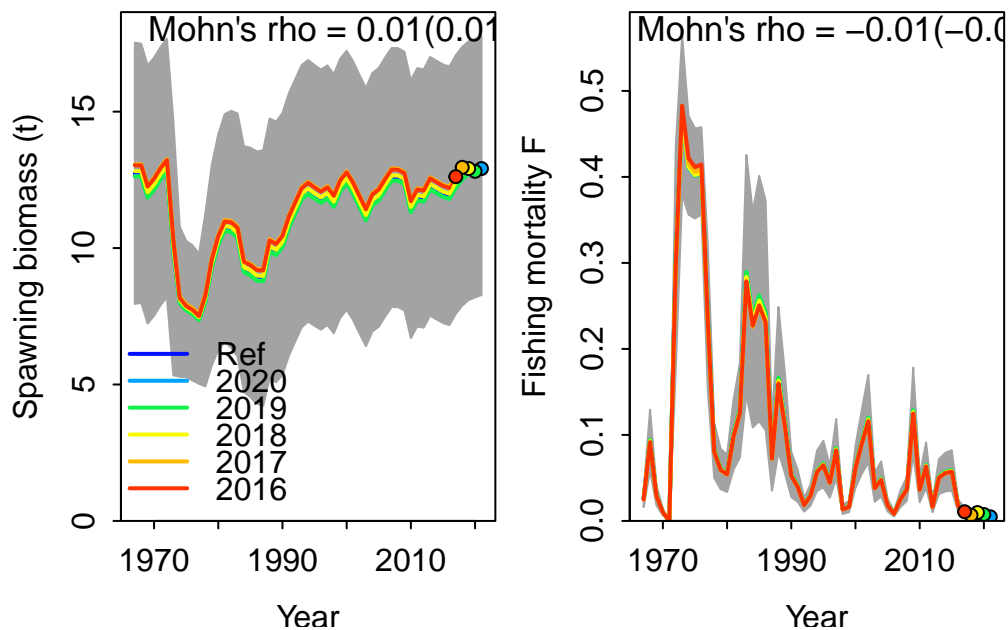
w lo hi Index runs.p test sigma3.lo sigma3.hi type
 0.14420929 0.07549627 0.54715738 1 FISHERY 0.135 Passed -0.02912284 0.02912284 len





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	0.006789257	0.006646285
2	F	2019	0.008074487	0.007887163
3	F	2018	-0.007193590	-0.007115374
4	F	2017	-0.026148578	-0.025358957
5	F	2016	-0.021370650	-0.020462910
6	F Combined		-0.007969815	-0.007680759

Hindcasting

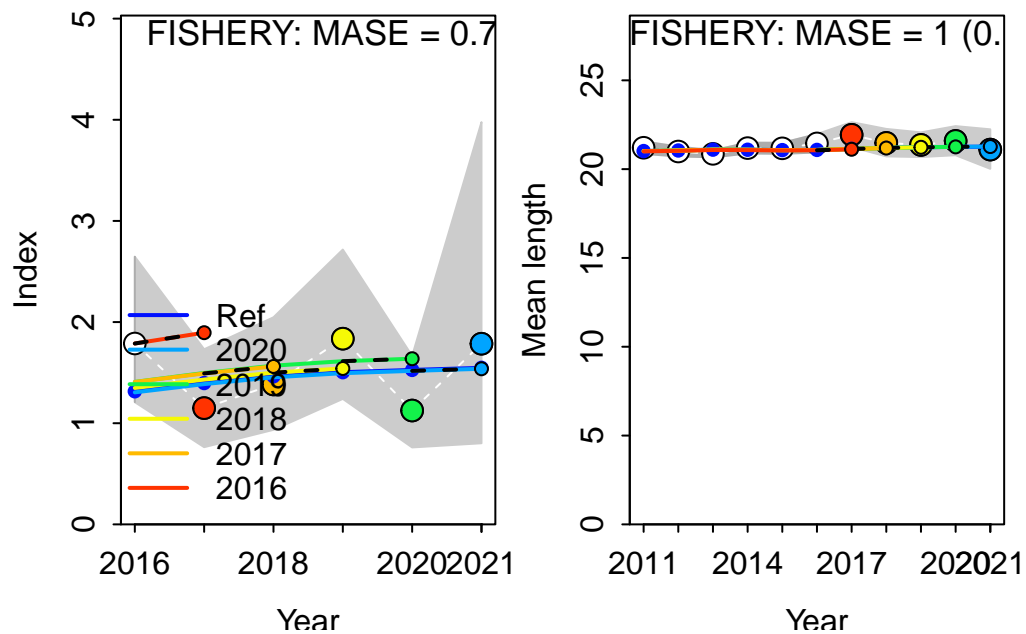
Plotting Hindcast Cross-Validation (one-step-ahead)

Computing MASE with all 5 of 5 prediction residuals for Index FISHERY

MASE stats by Index:

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

Computing MASE with all 5 of 5 prediction residuals for Index FISHERY



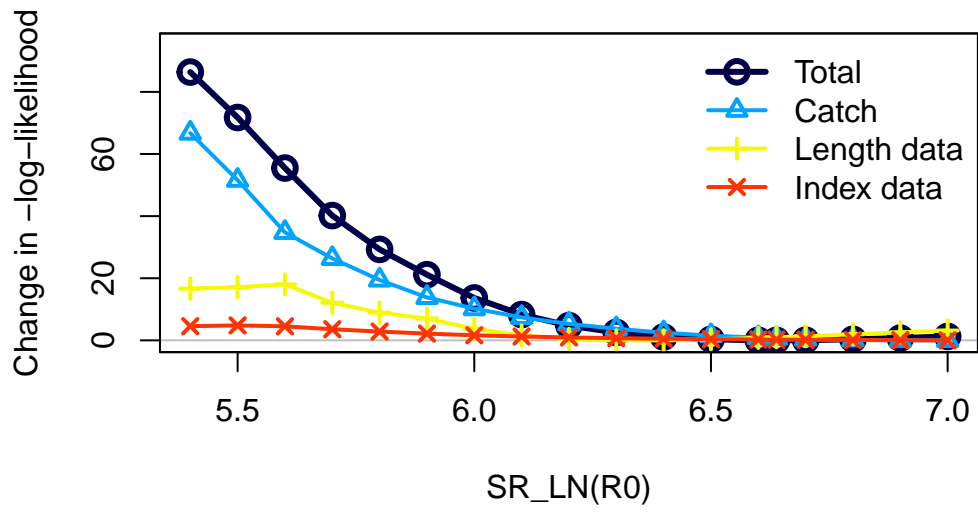
MASE stats by Index:

	Index	Season	MASE	MAE.PR	MAE.base	MASE.adj	n.eval
1	FISHERY	1	0.9954385	0.01629257	0.01636723	0.1629257	5

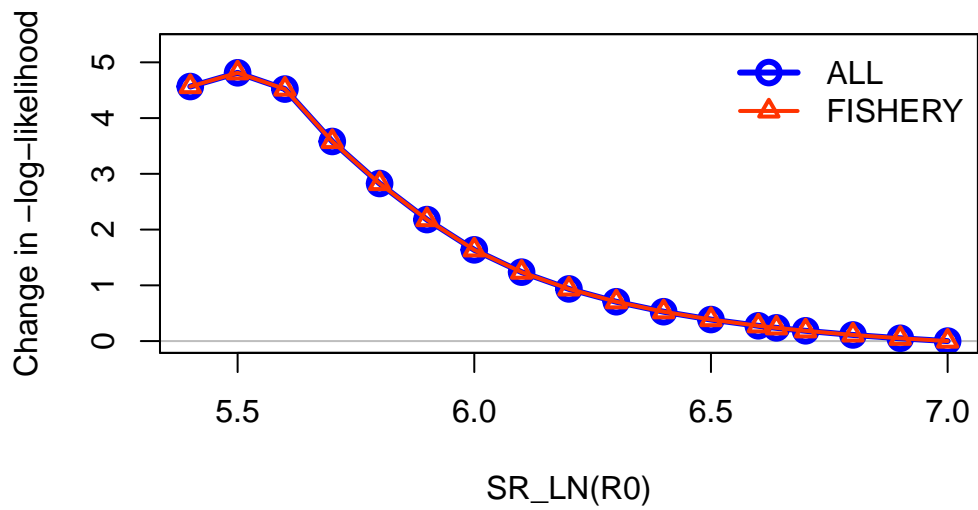
Recruitment Deviations

Likelihood Profile

[1] "SR_LN"	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.7725	TRUE	Catch
Equil_catch	0.0034	FALSE	Equilibrium catch
Survey	0.0557	TRUE	Index data
Length_comp	0.2089	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	0.0006	FALSE	Priors
Parm_softbounds	0.0000	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

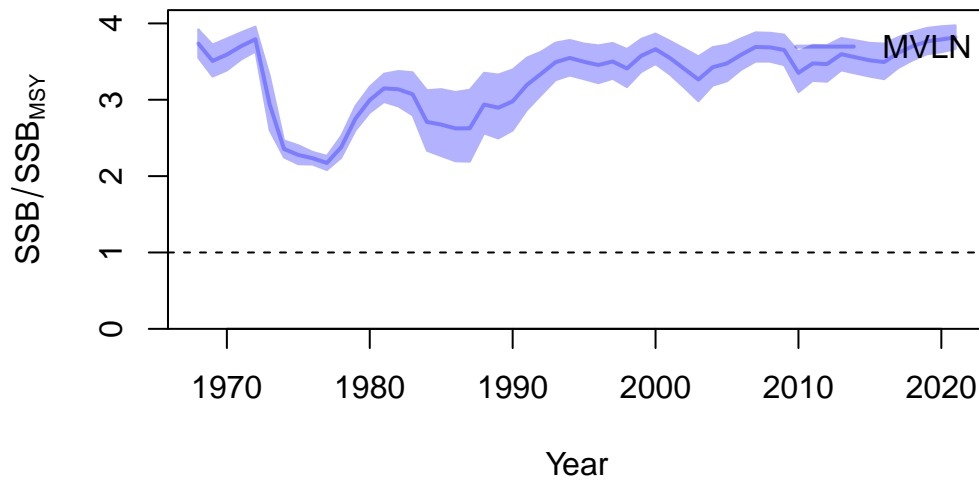
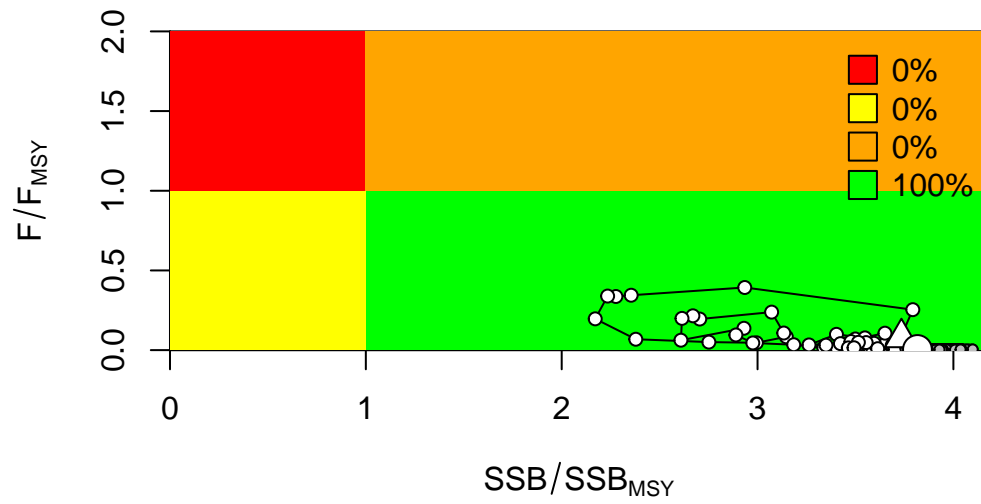


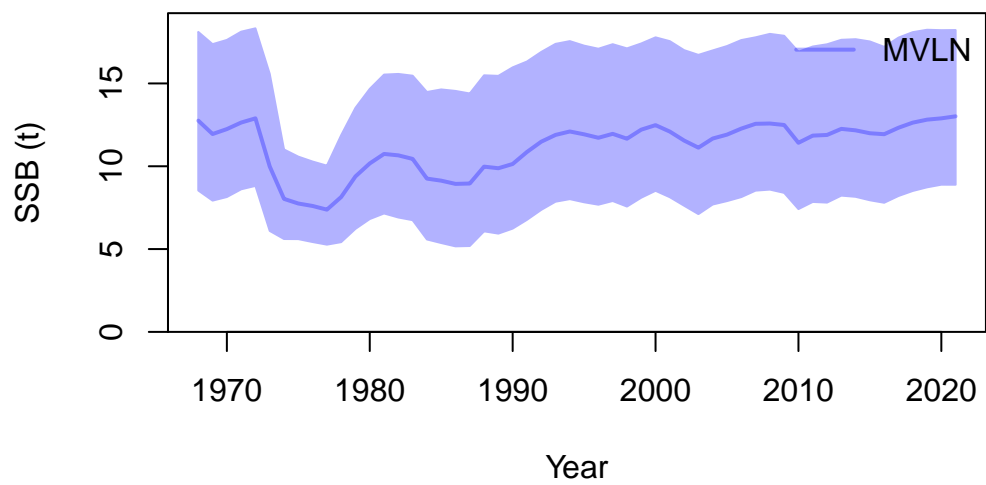
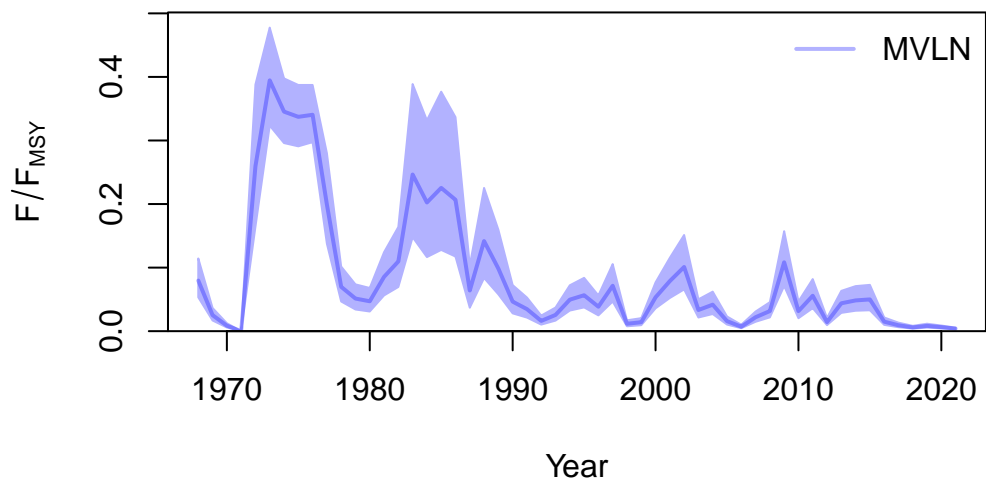
Changes in survey likelihood by fleet

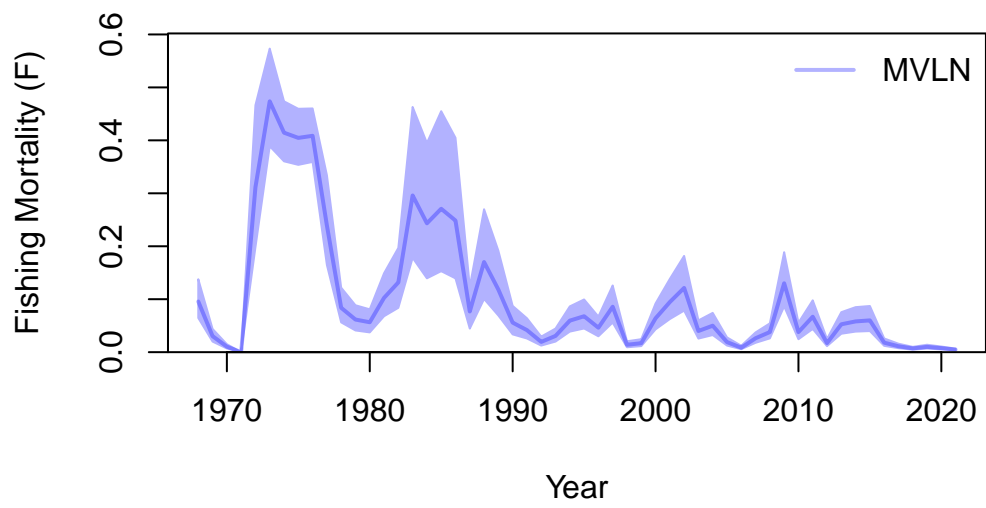


Management Quantities

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

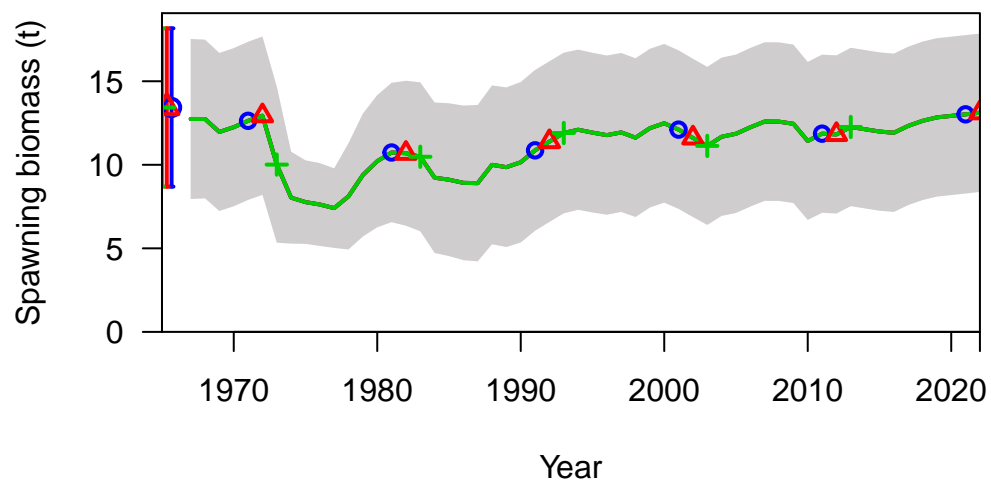
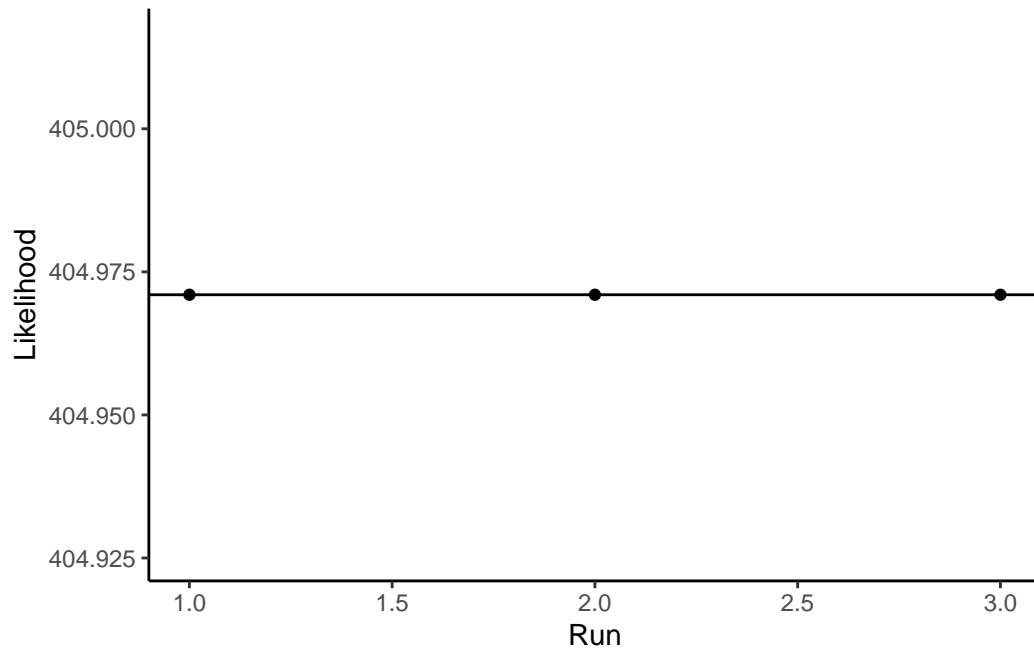


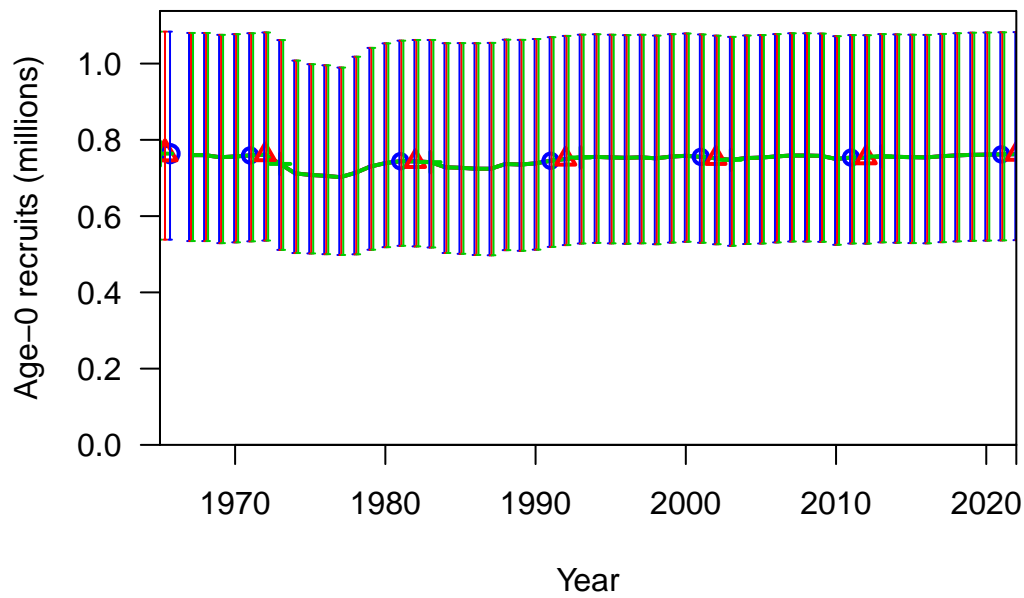
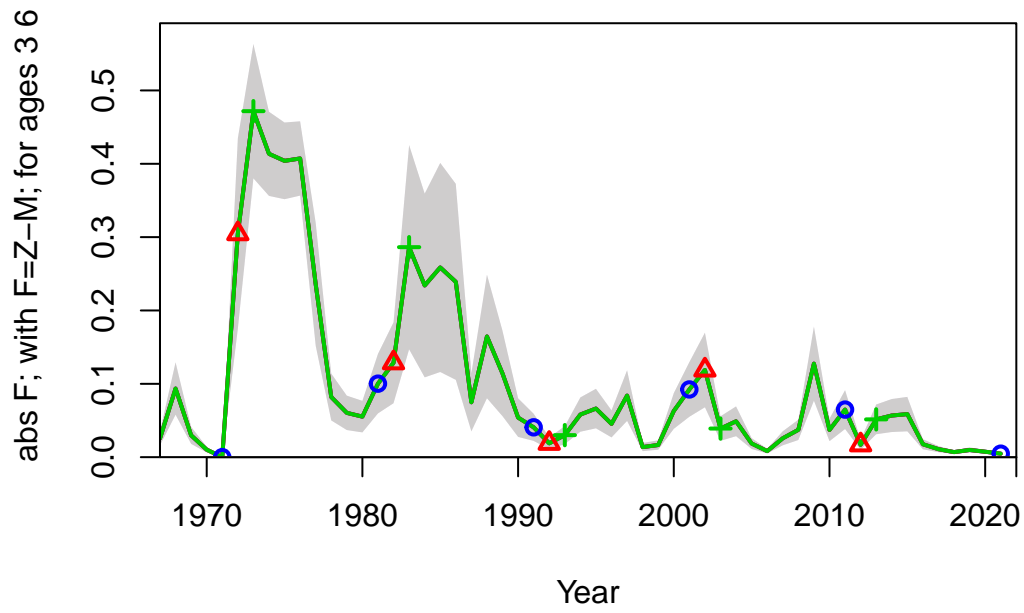




null device
1

Jitter





Selectivity and Maturity

