

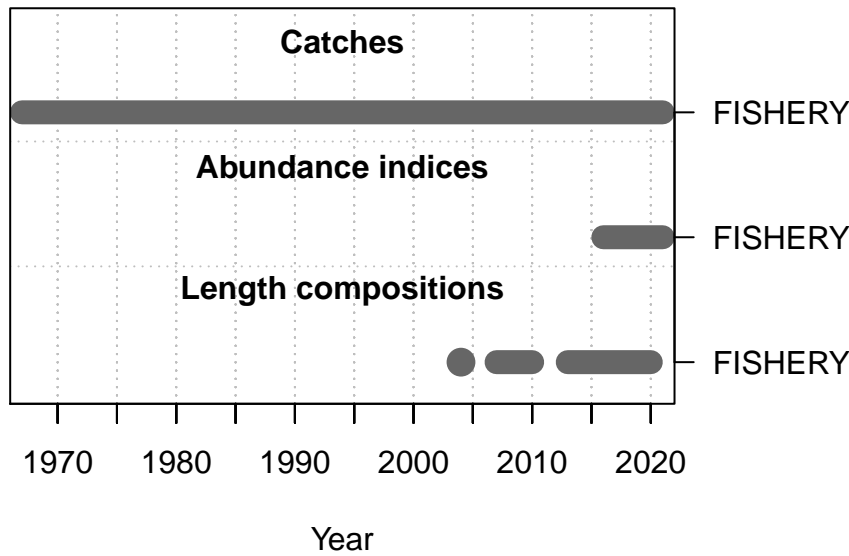
American Samoa Model Checks

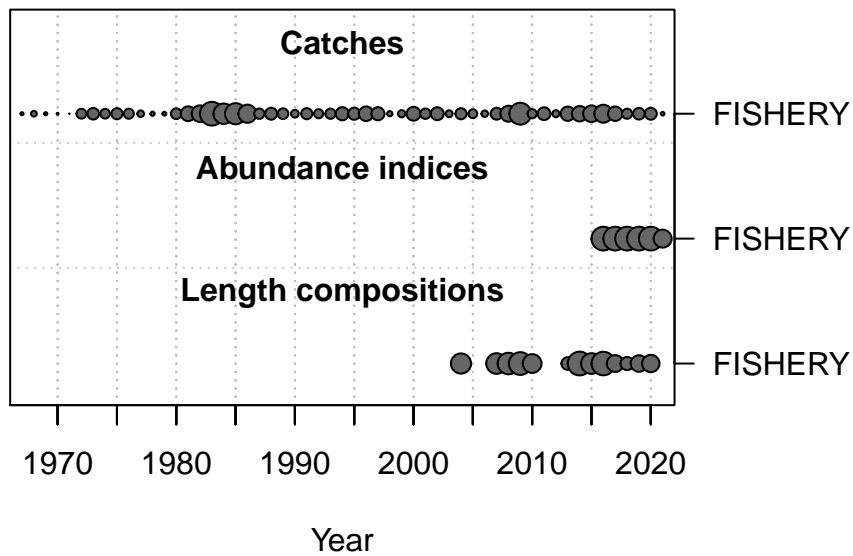
2022-08-29

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

Model Output

Input Data





Convergence Check

```

Converged    MaxGrad
1      TRUE 7.8774e-05

```

```

[1] "1 NOTE: Max data length bin: 85 < max pop len bins: 94; so will accumulate larger pop
[2] "N warnings: 1"

```

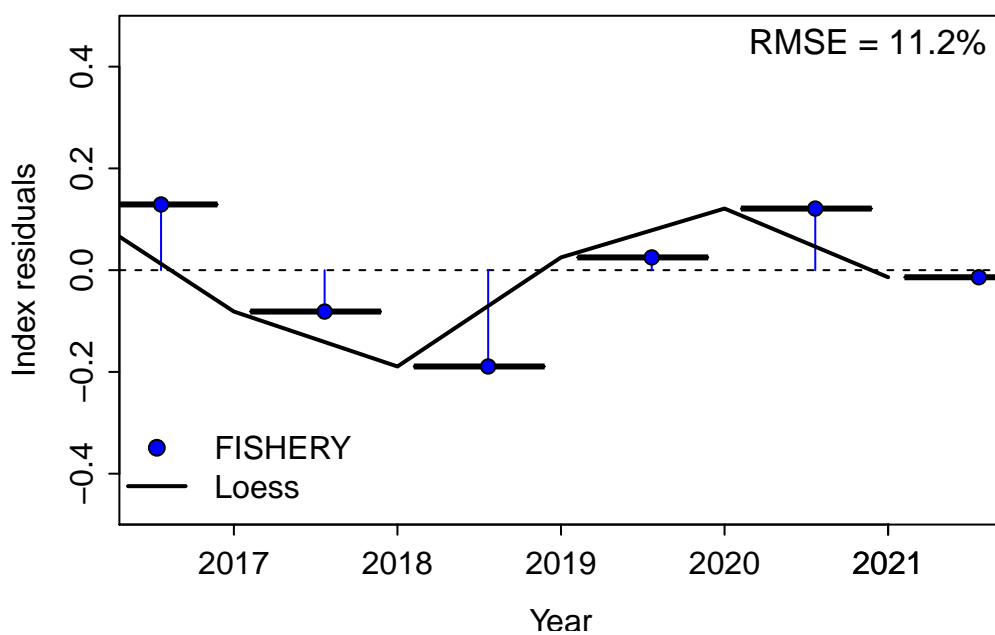
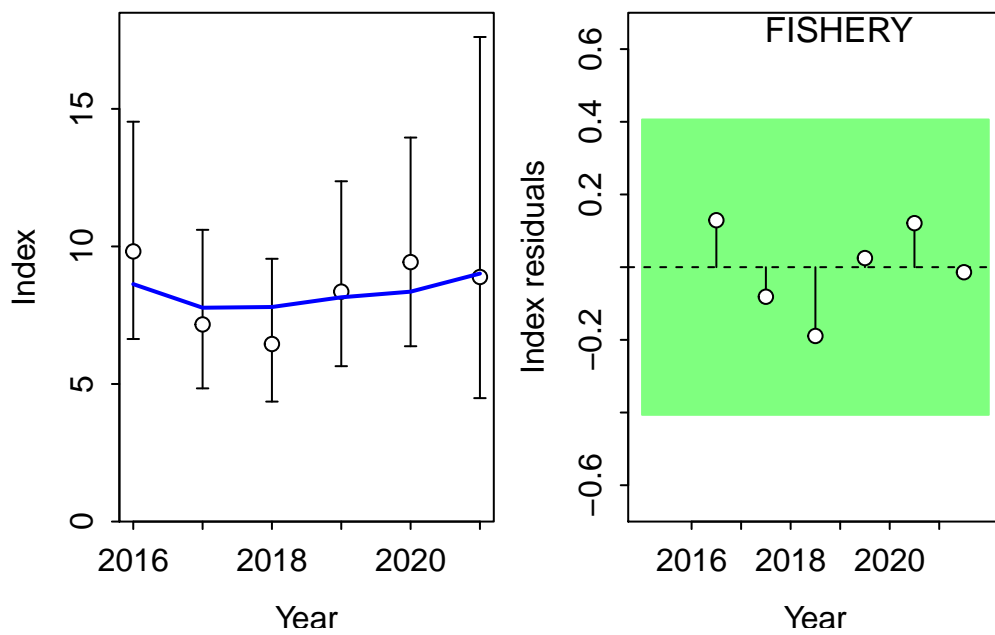
Fit to Model

CPUE

Residual Runs Test (/w plot) stats by Index:

RMSE stats by Index:

Length Comp



#Factor	Fleet	New_Var_adj	Type	Name
4	1	0.180055	len	FISHERY

Residual Runs Test (/w plot) stats by Mean length:

```

      Index runs.p  test  sigma3.lo sigma3.hi type
1 FISHERY  0.022 Failed -0.1023299 0.1023299  len

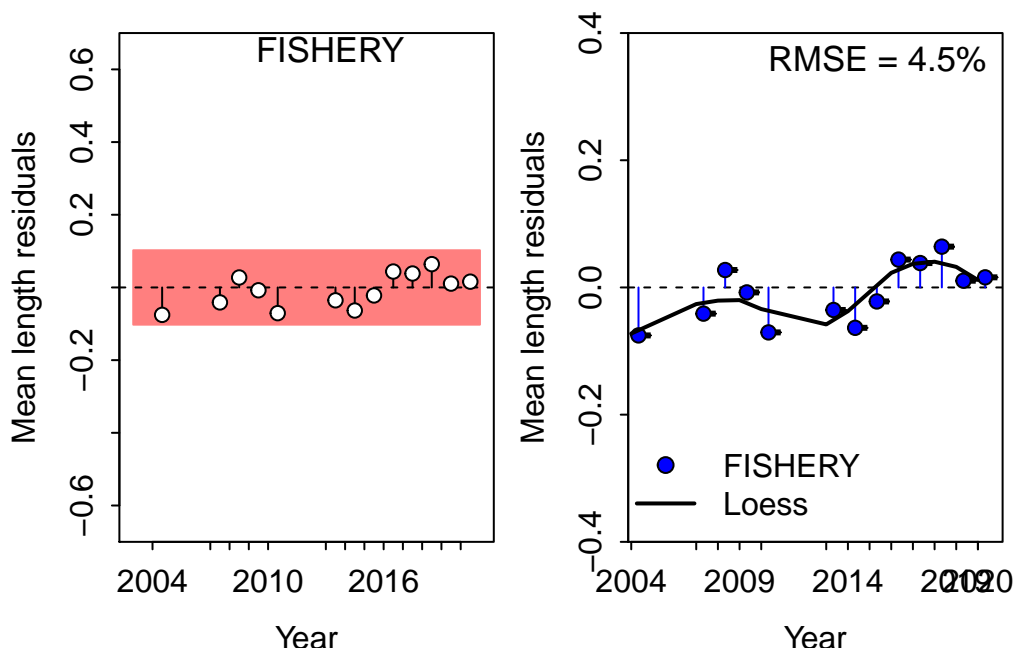
```

RMSE stats by Index:

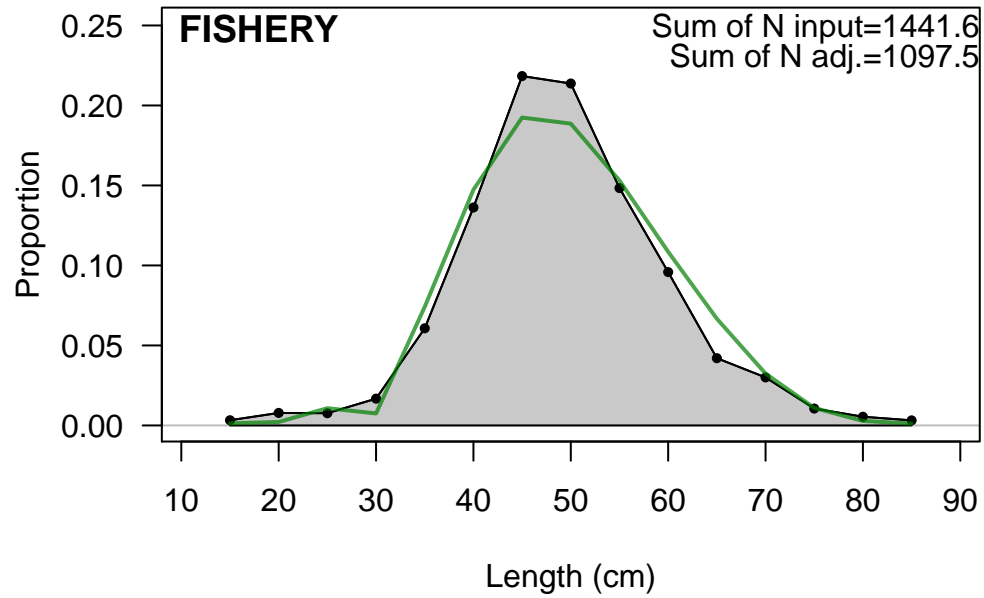
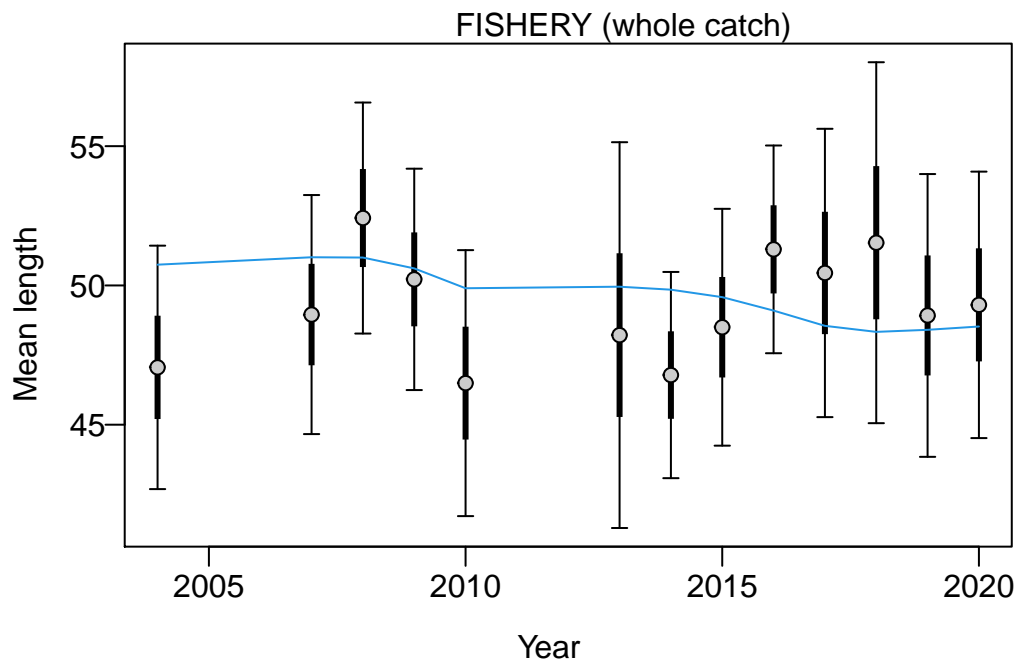
```

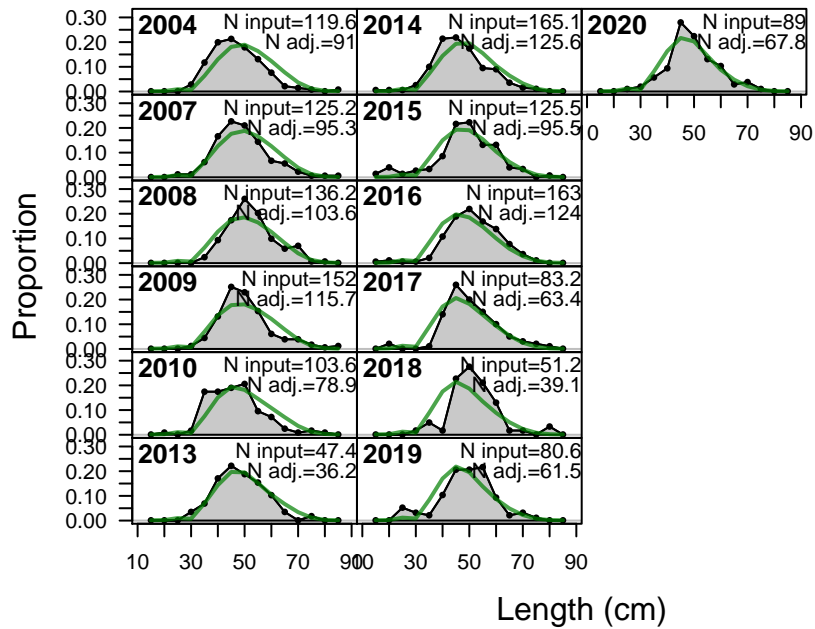
# A tibble: 2 x 3
  Fleet    RMSE.perc Nobs
  <chr>      <dbl> <int>
1 FISHERY      4.5     13
2 Combined      4.5     13

```



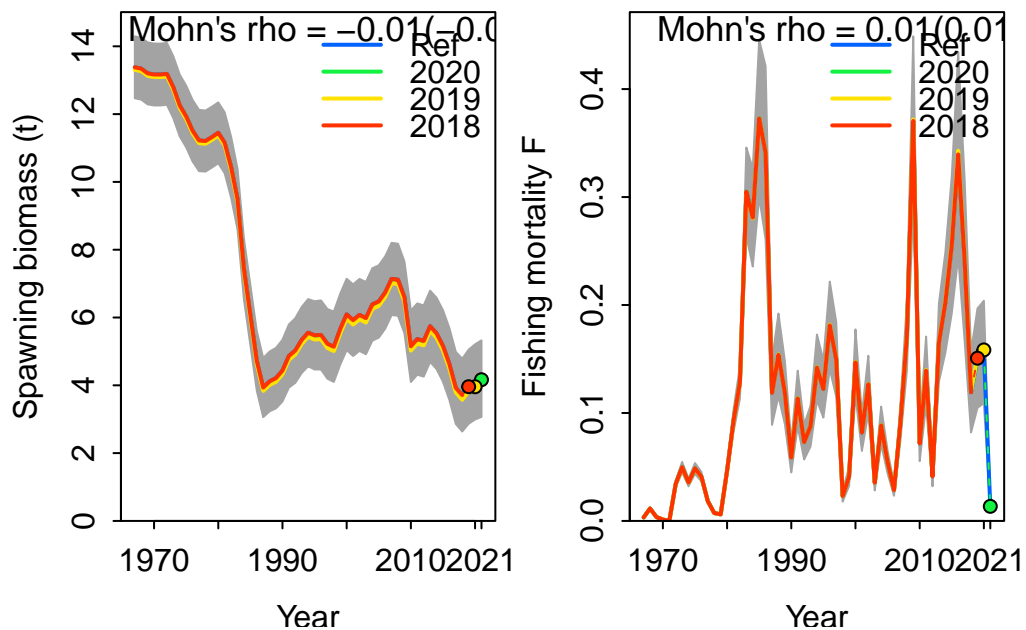
Retrospective and Hindcasting





Retrospective

Mohn's Rho stats, including one step ahead forecasts:



Mohn's Rho stats, including one step ahead forecasts:

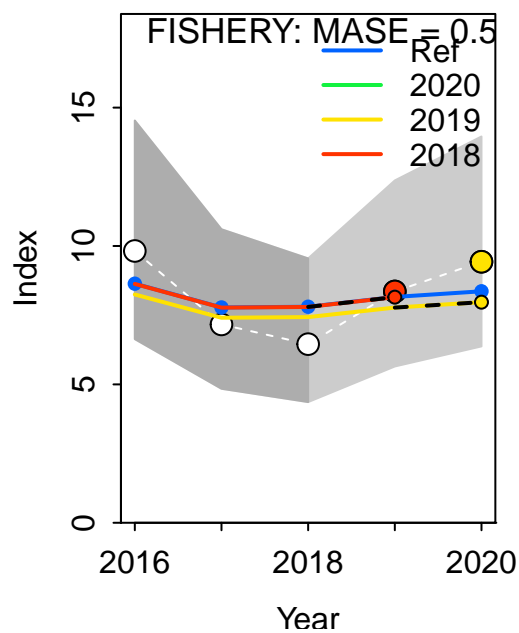
	type	peel	Rho	ForecastRho
1	F	2020	0.0047537202	0.0045694331
2	F	2019	0.0119136855	0.0118970794
3	F	2018	-0.0001257925	-0.0001260356
4	F Combined		0.0055138711	0.0054468256

Hindcasting

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

Computing MASE with only 2 of 3 prediction residuals for Index FISHERY

Warning: Unequal spacing of naive predictions residuals may influence the interpretation of



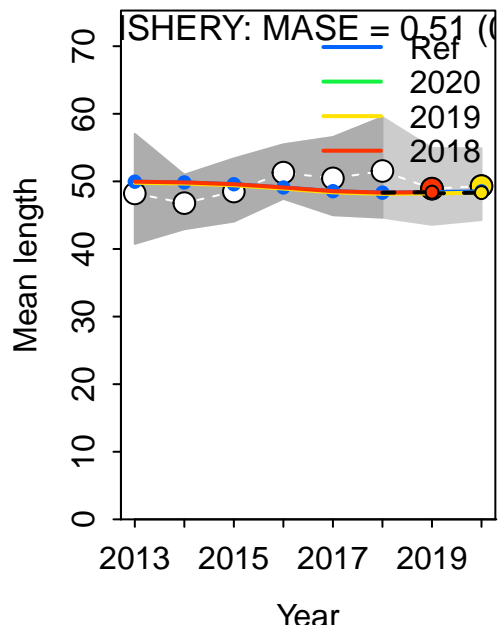
MASE stats by Index:

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

Computing MASE with only 2 of 3 prediction residuals for Index FISHERY

Warning: Unequal spacing of naive predictions residuals may influence the interpretation of

MASE stats by Index:



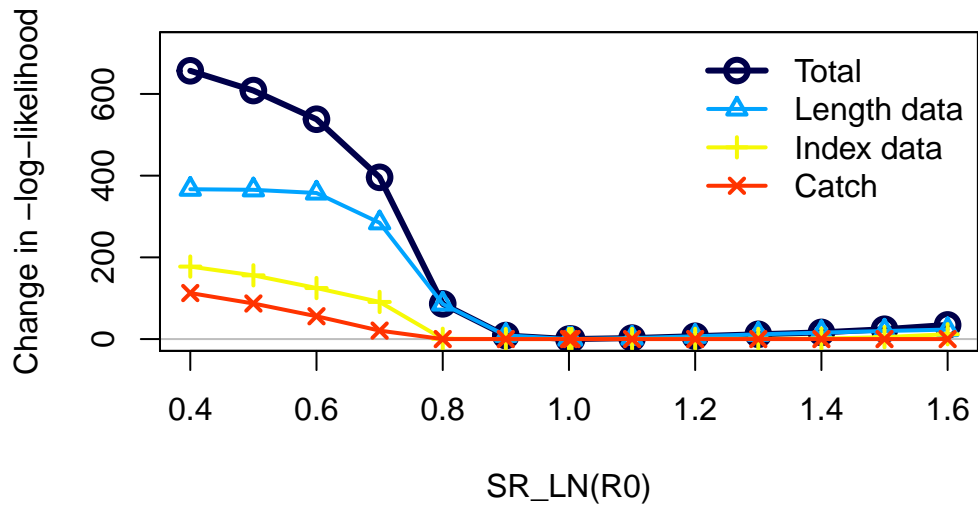
Recruitment Deviations

Likelihood Profile

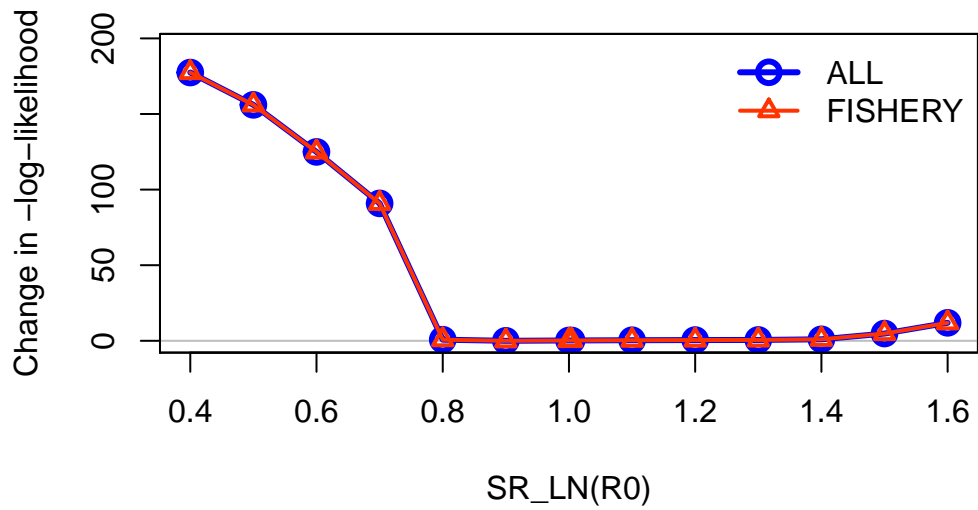
[1] "SR_LN"

	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.1716	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.2702	TRUE	Index data
Length_comp	0.5586	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	0.0003	FALSE	Priors

Parm_softbounds	0.0000	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

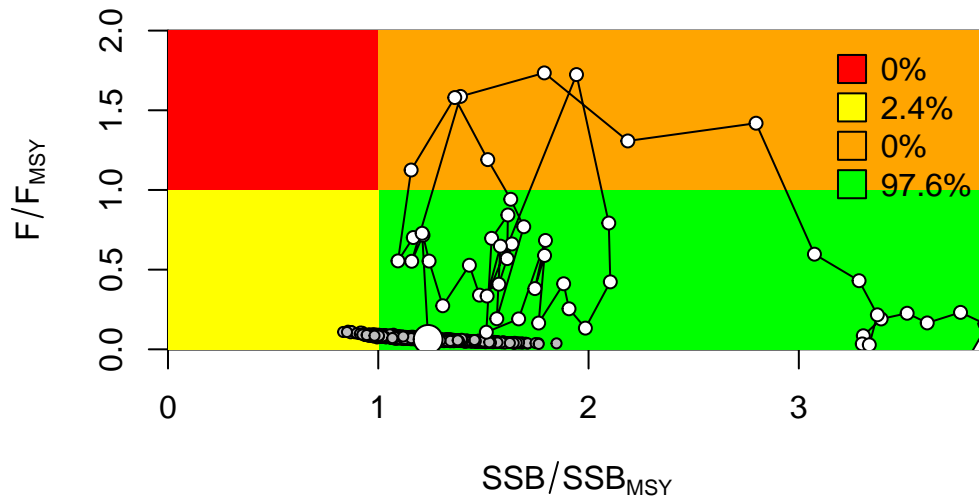


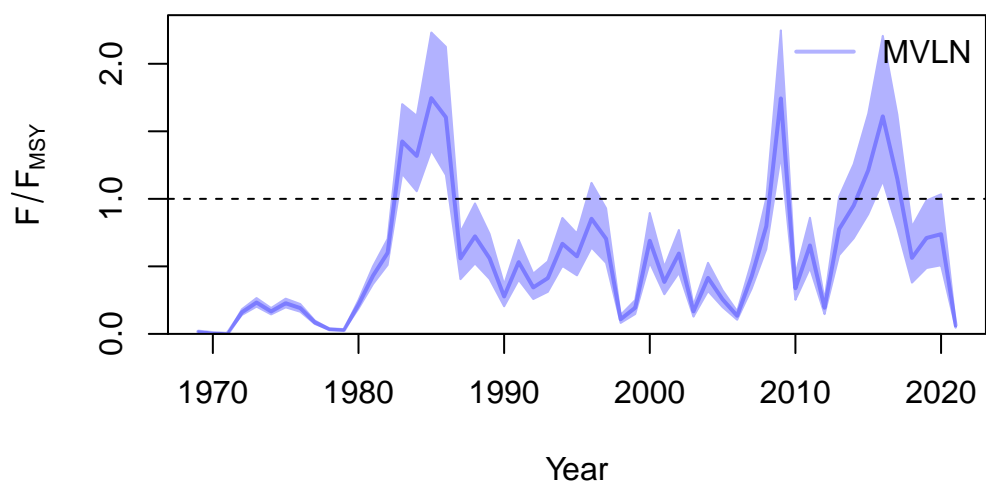
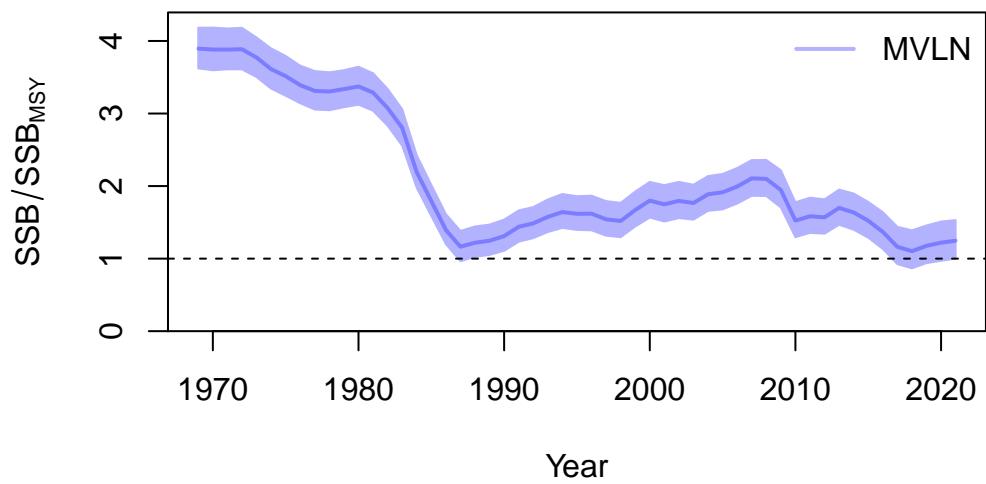
Changes in survey likelihood by fleet

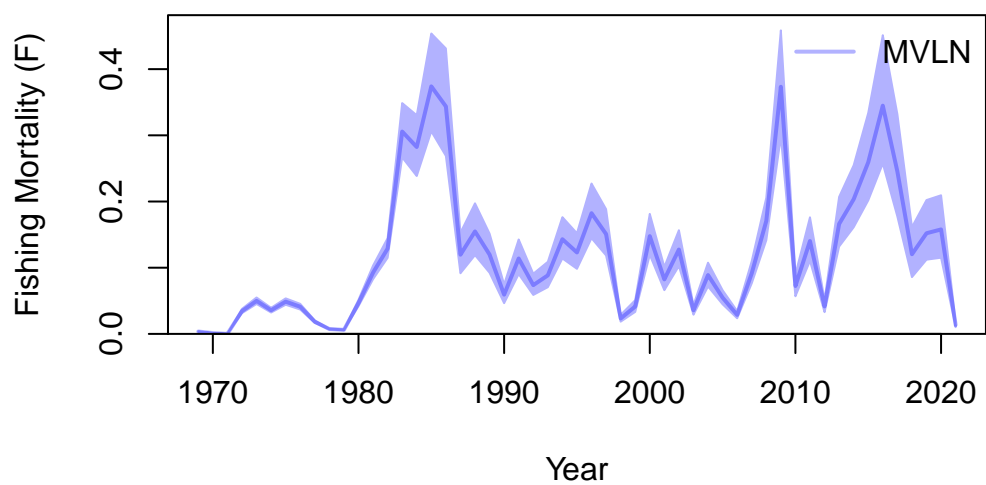
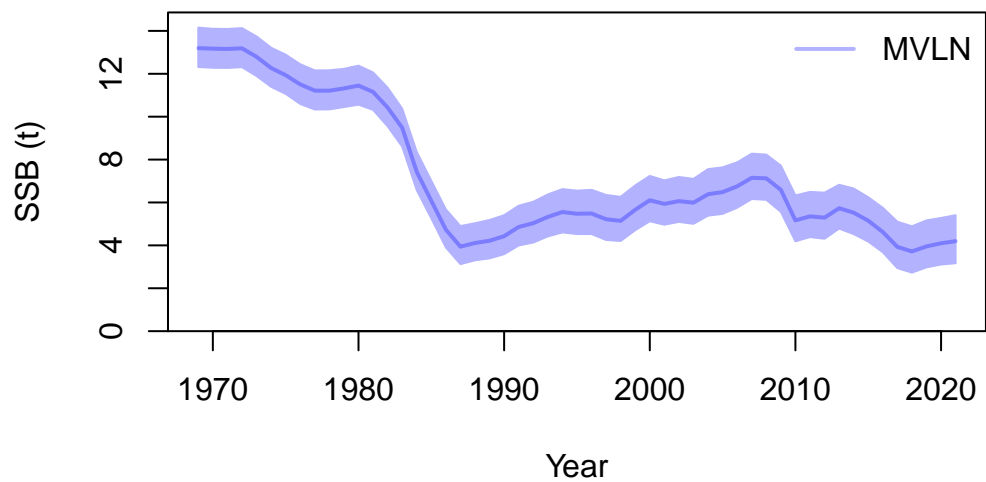


Management Quantities

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







null device
1

Jitter

