

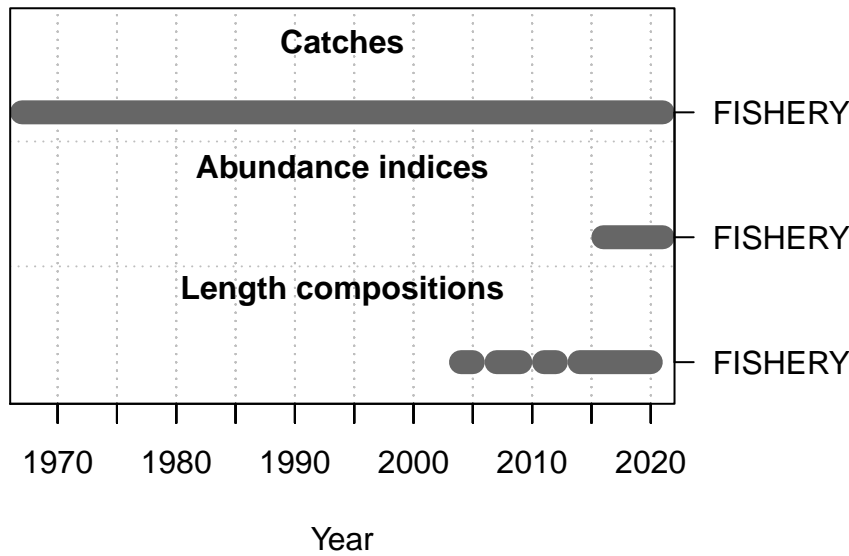
American Samoa Model Checks

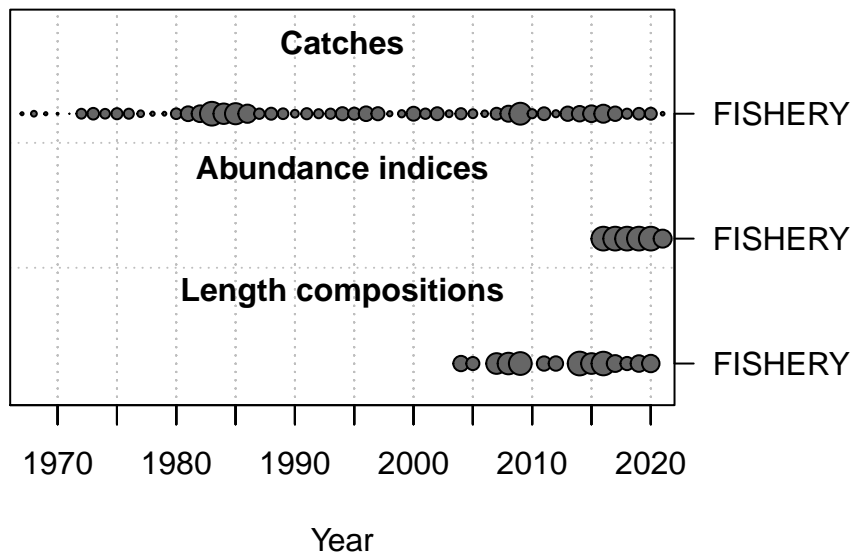
2022-08-26

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

Model Output

Input Data





Convergence Check

```

Converged      MaxGrad
1      TRUE 3.14944e-05

```

```

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

```

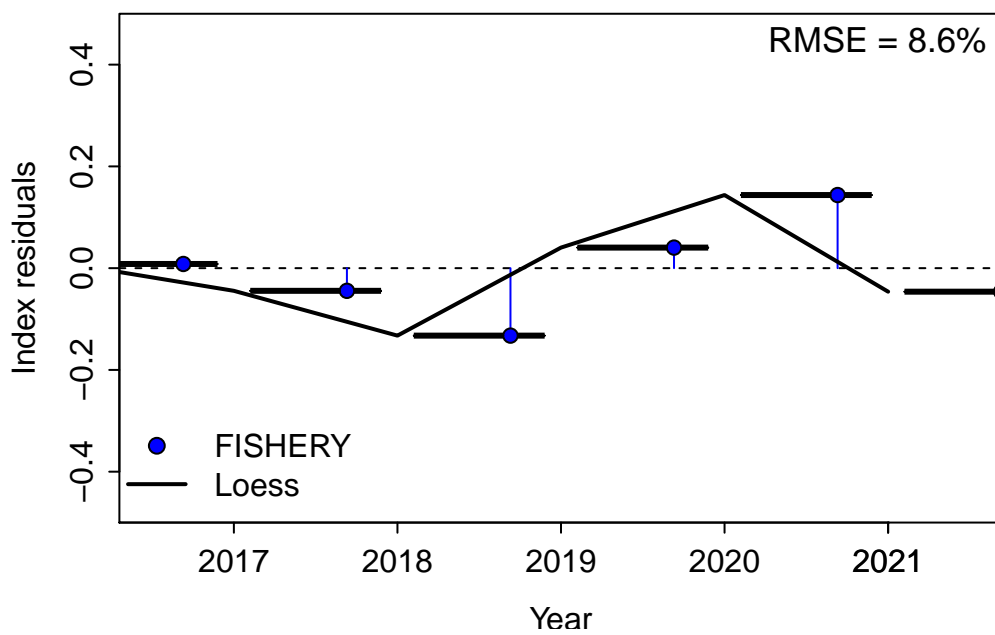
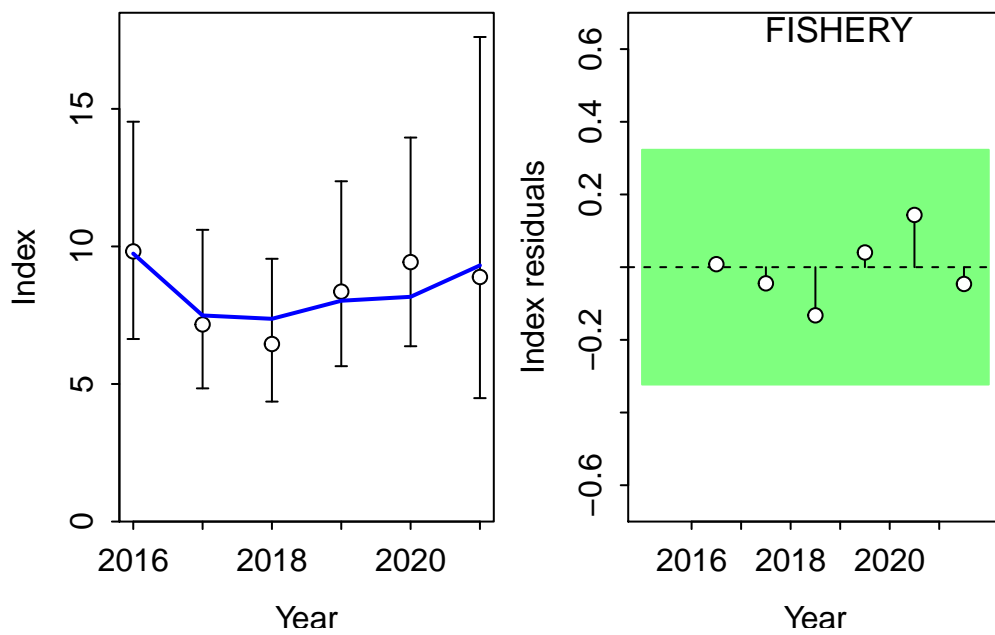
Fit to Model

CPUE

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

RMSE stats by Index:

Length Comp



#Factor	Fleet	New_Var_adj	Type	Name
4	1	0.132108	len	FISHERY

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

```

      Index runs.p  test  sigma3.lo sigma3.hi type
1 FISHERY      0 Failed -0.1132405 0.1132405  len

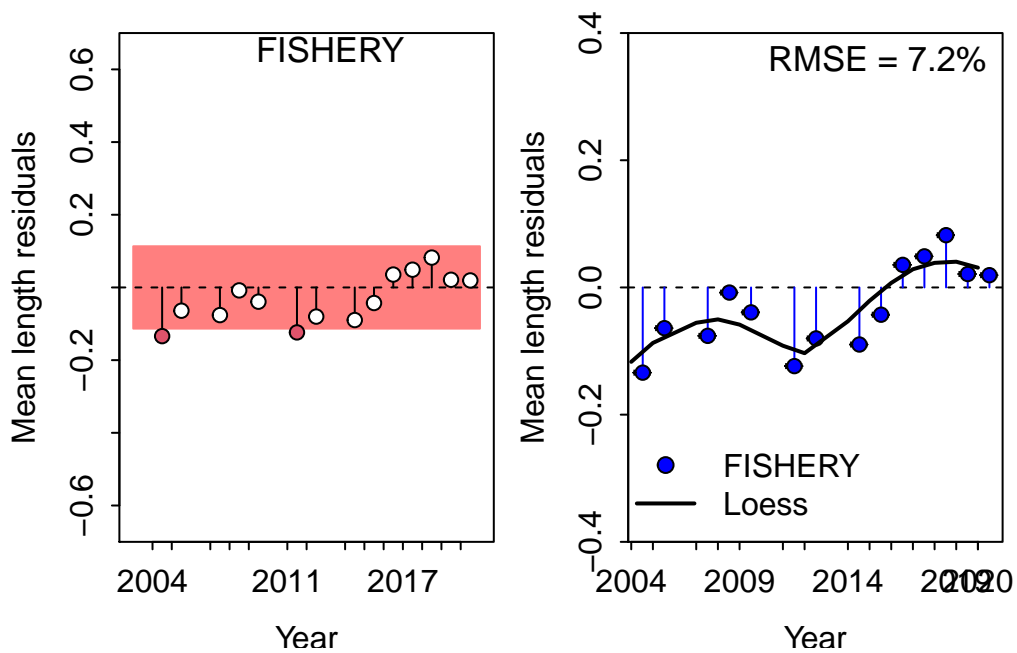
```

RMSE stats by Index:

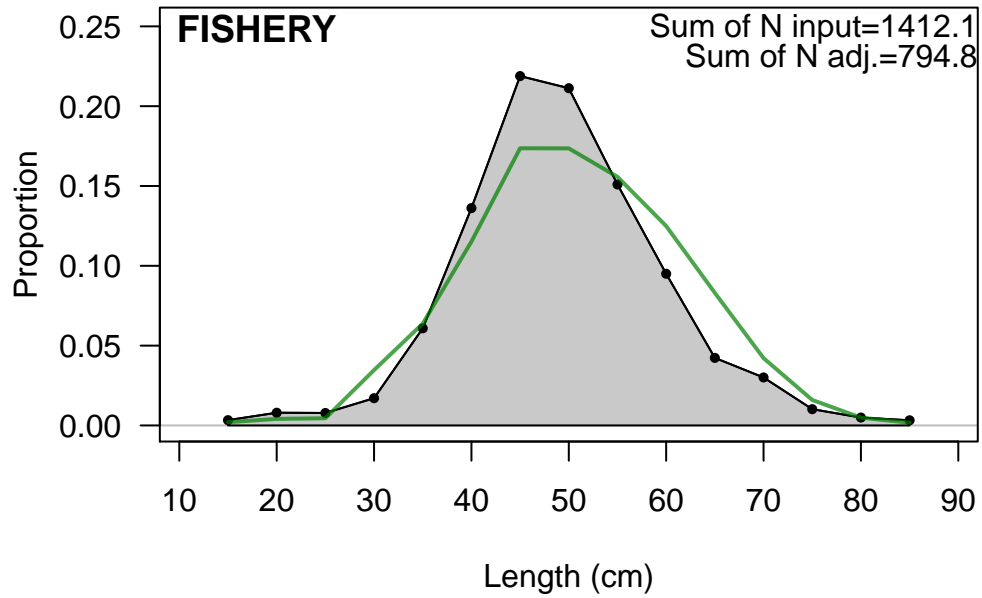
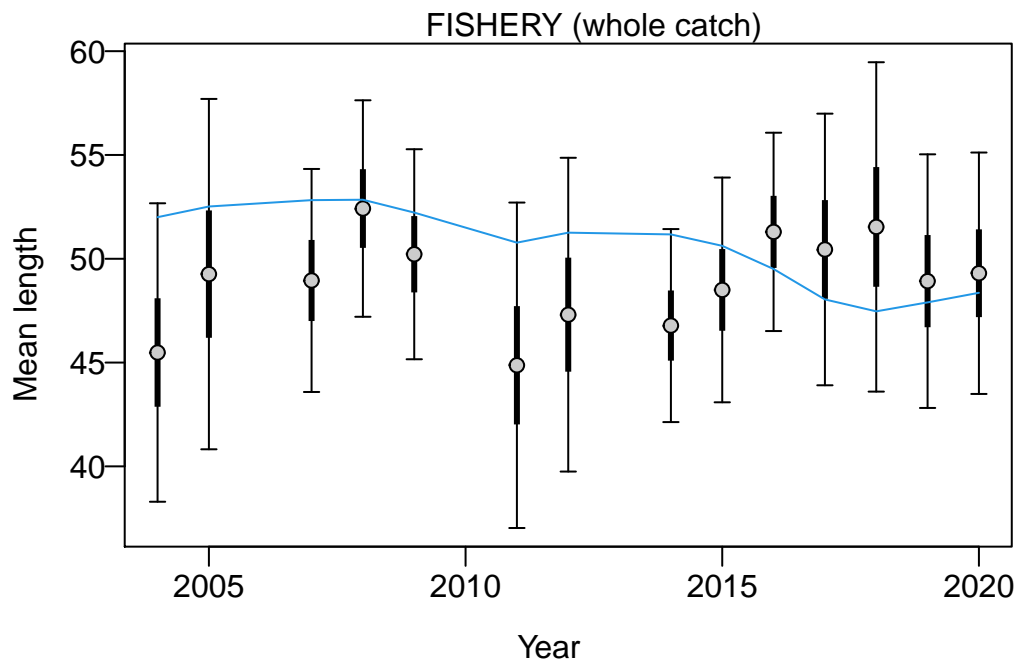
```

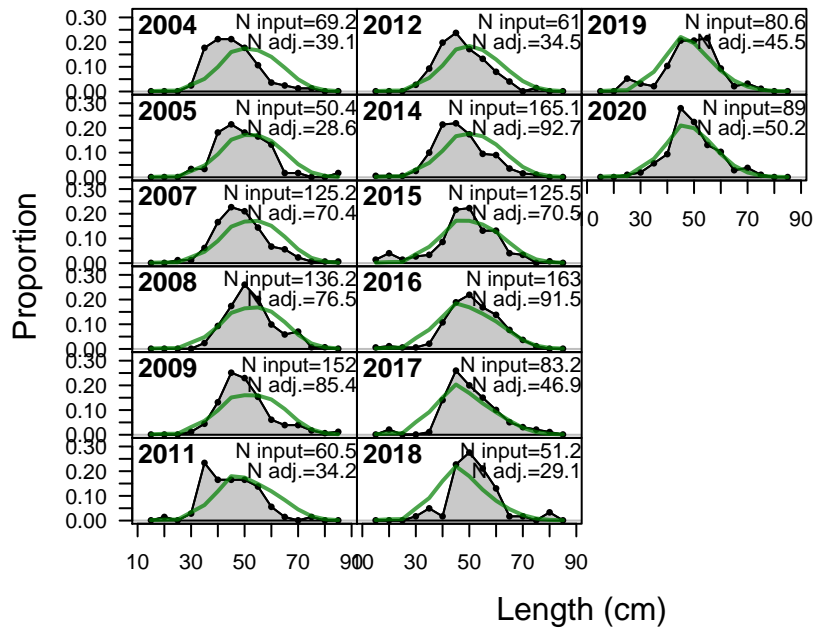
# A tibble: 2 x 3
  Fleet    RMSE.perc Nobs
  <chr>      <dbl> <int>
1 FISHERY      7.2    14
2 Combined      7.2    14

```



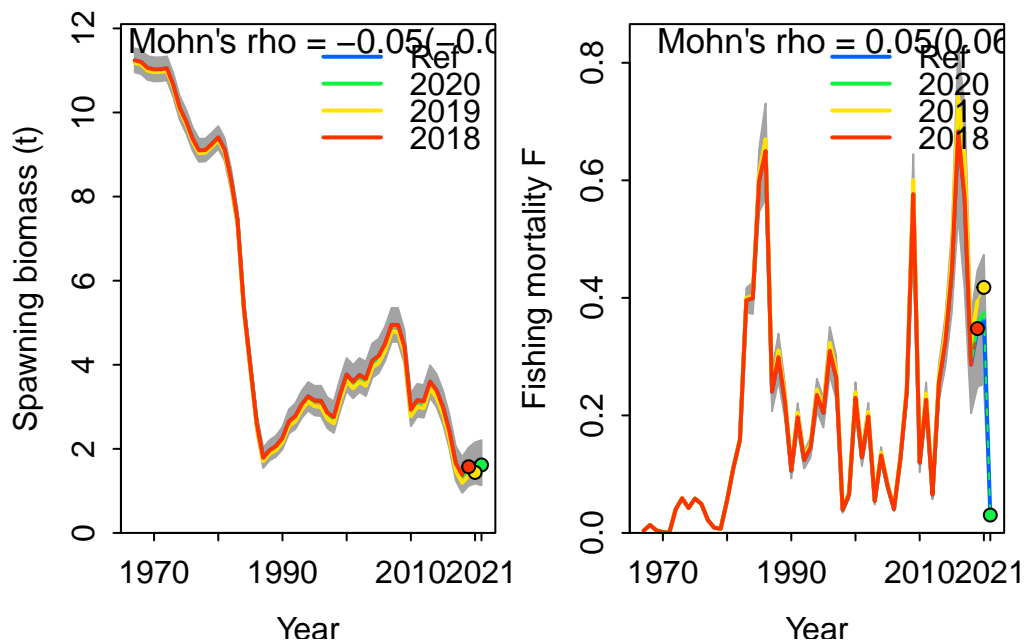
Retrospective and Hindcasting





Retrospective

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



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

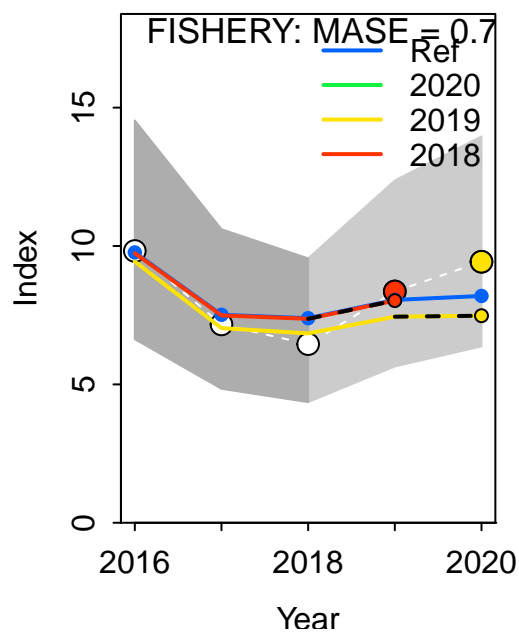
	type	peel	Rho	ForecastRho
1	F	2020	0.0288000044	0.0283587237
2	F	2019	0.1351276687	0.1498040554
3	F	2018	0.0006039174	0.0006014371
4	F Combined		0.0548438635	0.0595880721

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



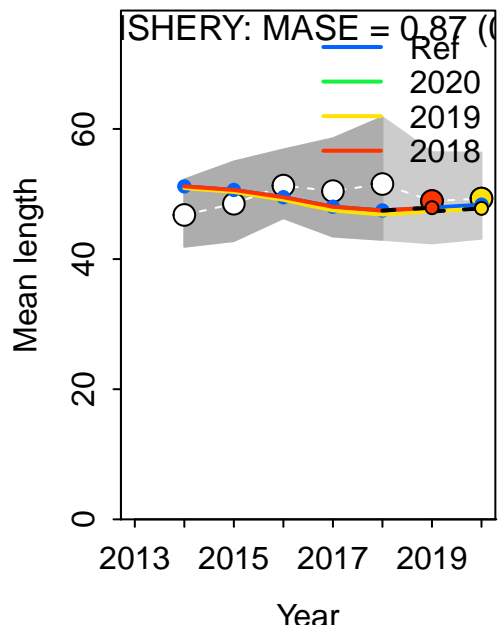
MASE stats by Index:

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:



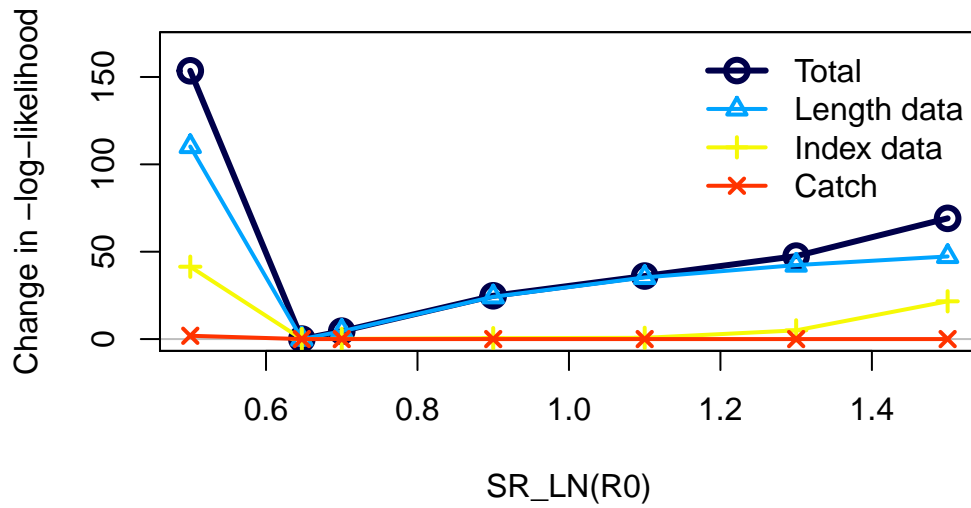
Recruitment Deviations

Likelihood Profile

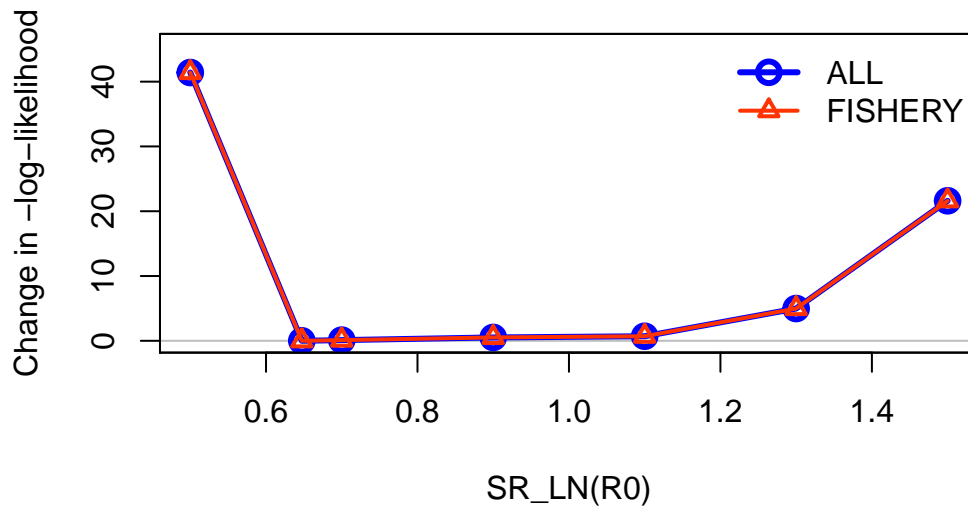
[1] "SR_LN"

	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.0124	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.2697	TRUE	Index data
Length_comp	0.7178	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	0.0013	FALSE	Priors

Parm_softbounds	0.0001	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

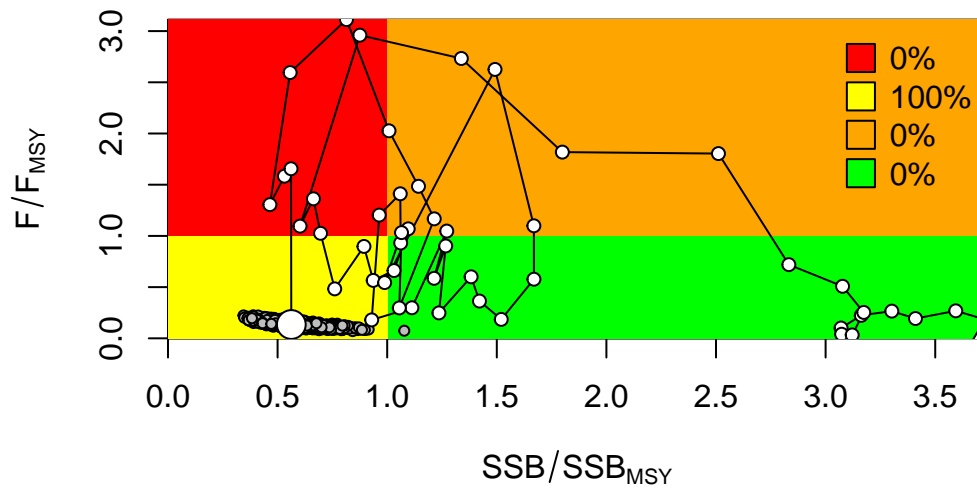


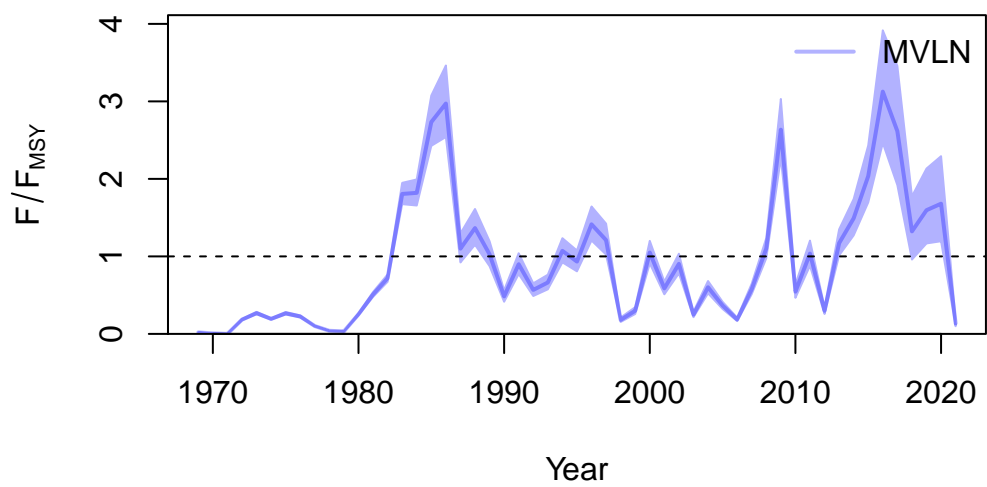
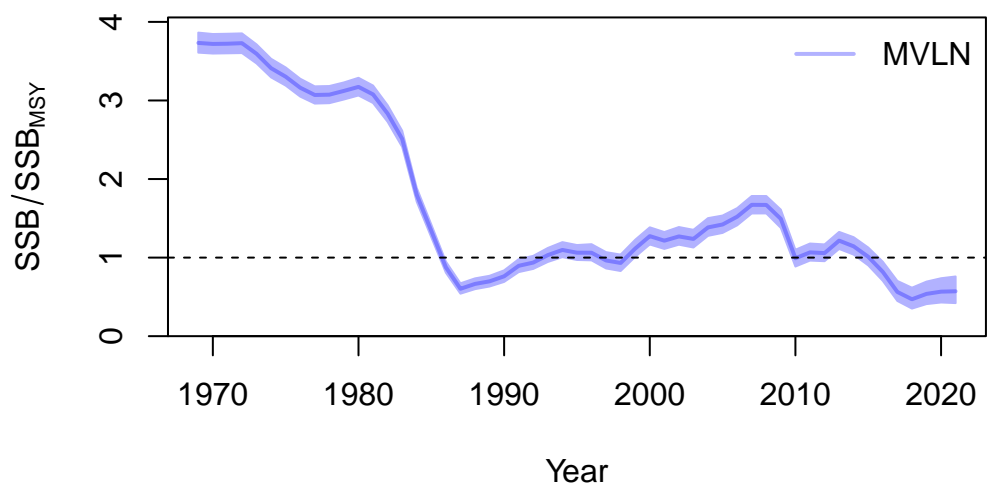
Changes in survey likelihood by fleet

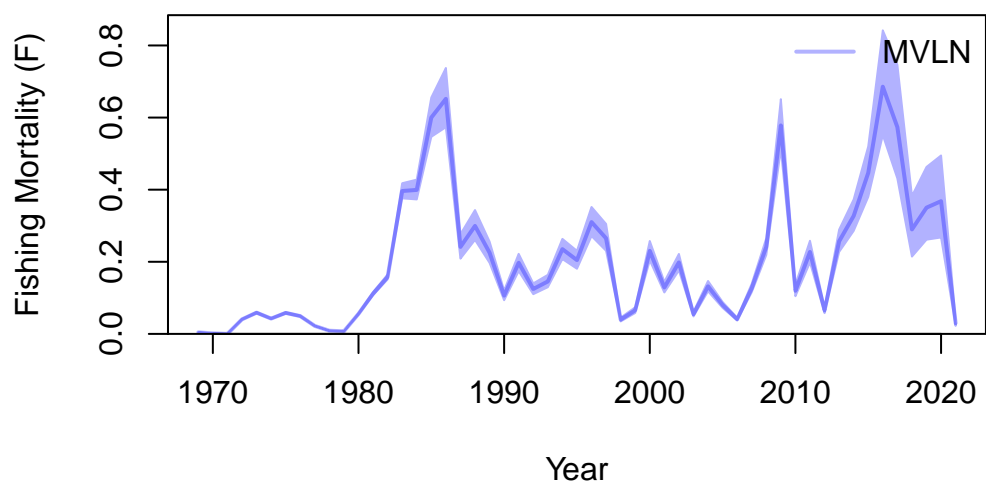
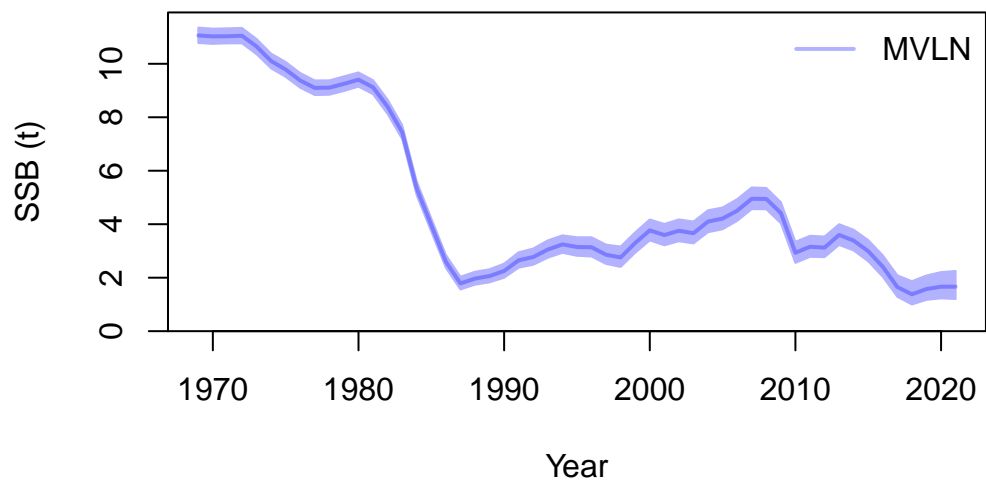


Management Quantities

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







null device
1

Jitter

