

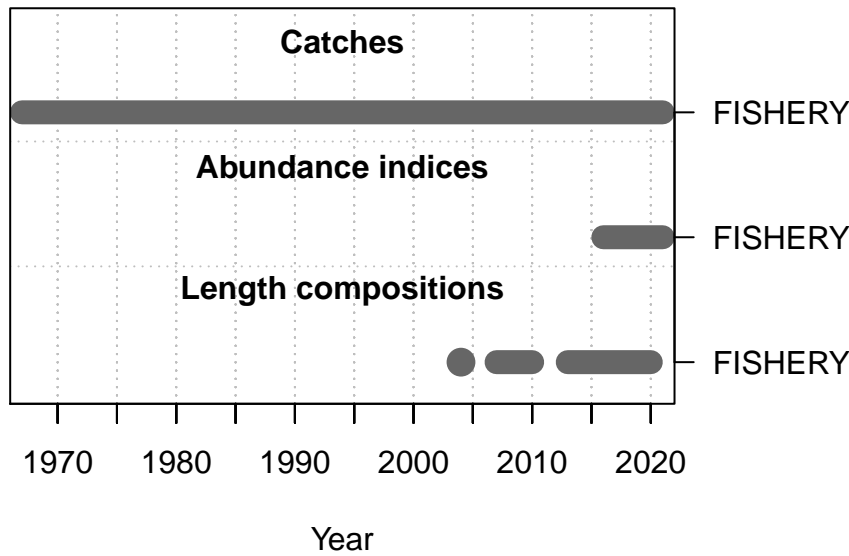
# American Samoa Model Checks

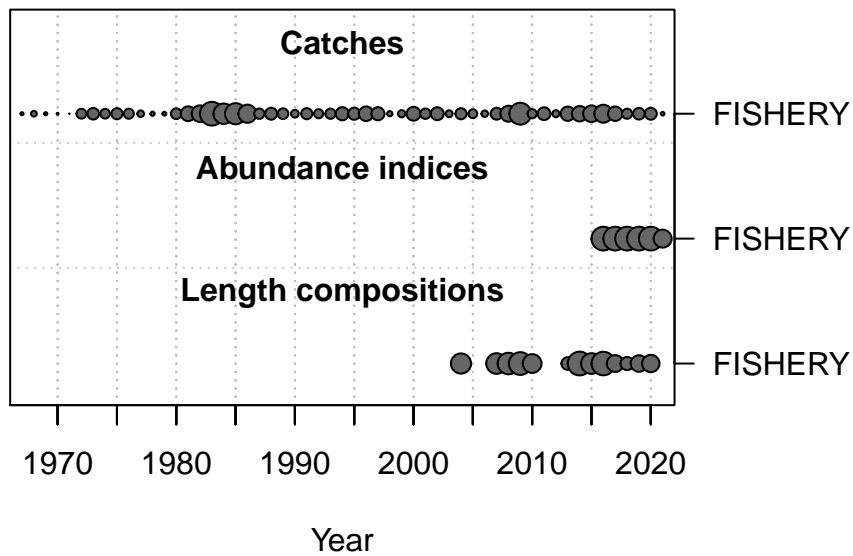
2022-08-30

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

## Model Output

### Input Data





### Convergence Check

```

Converged      MaxGrad
1      TRUE 1.41336e-05

```

```

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

```

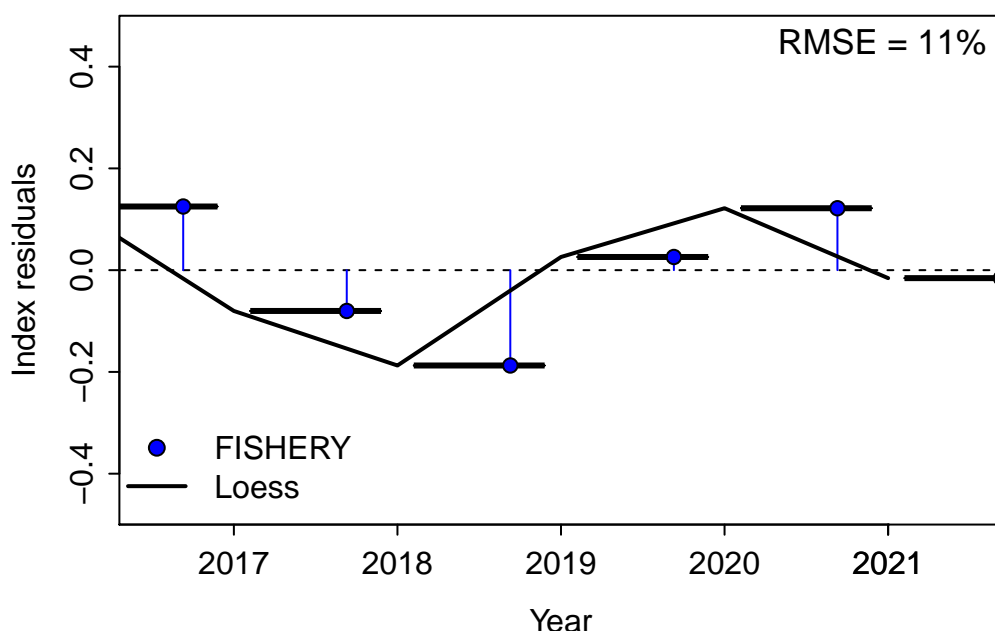
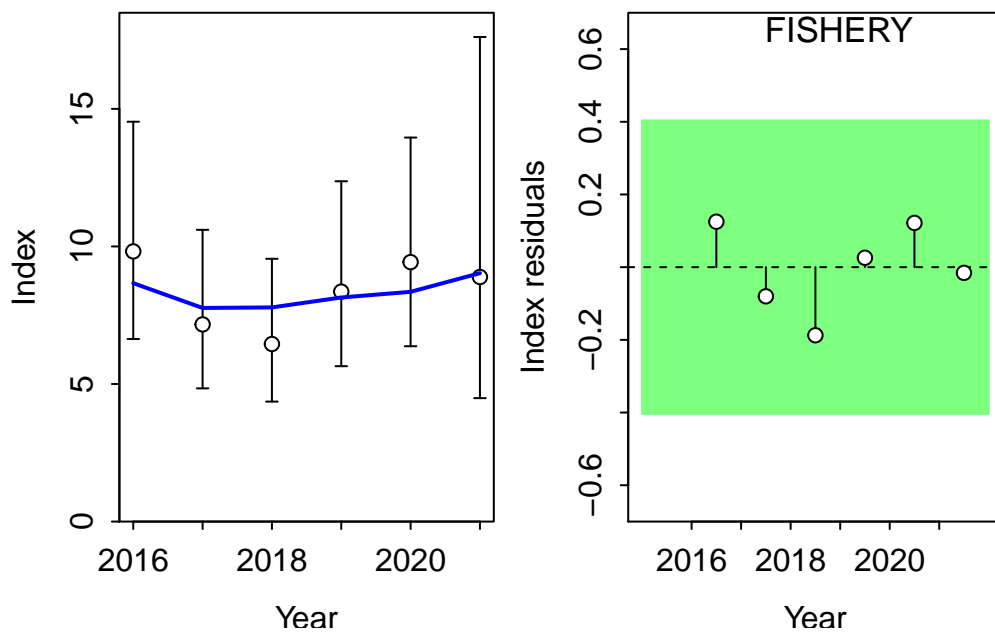
### Fit to Model

#### CPUE

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

RMSE stats by Index:

#### Length Comp



#Factor	Fleet	New_Var_adj	Type	Name
4	1	0.176722	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 -0.1021695 0.1021695  len

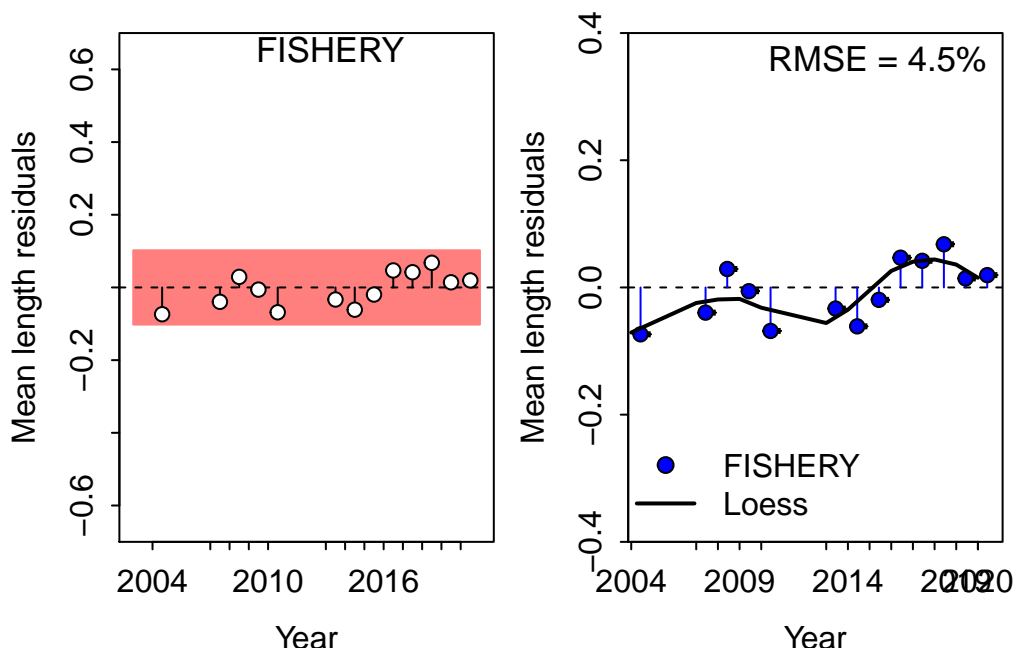
```

RMSE stats by Index:

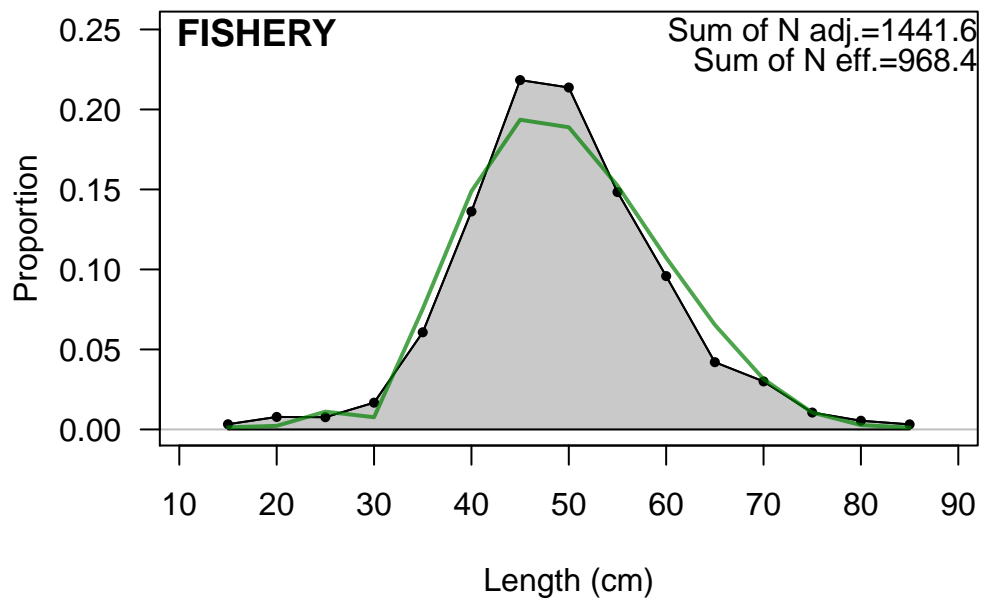
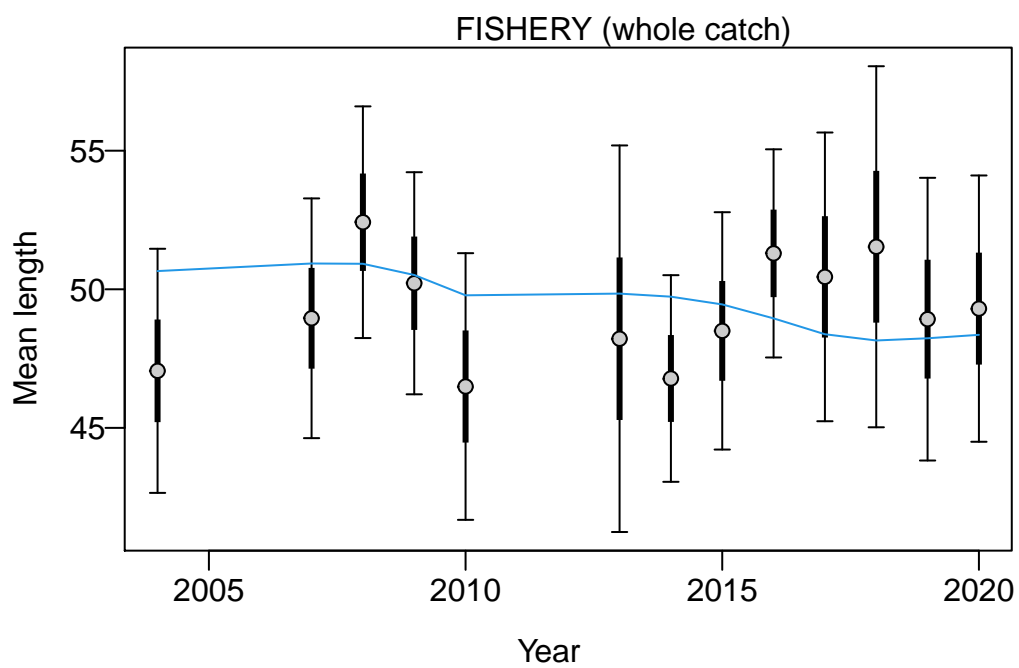
```

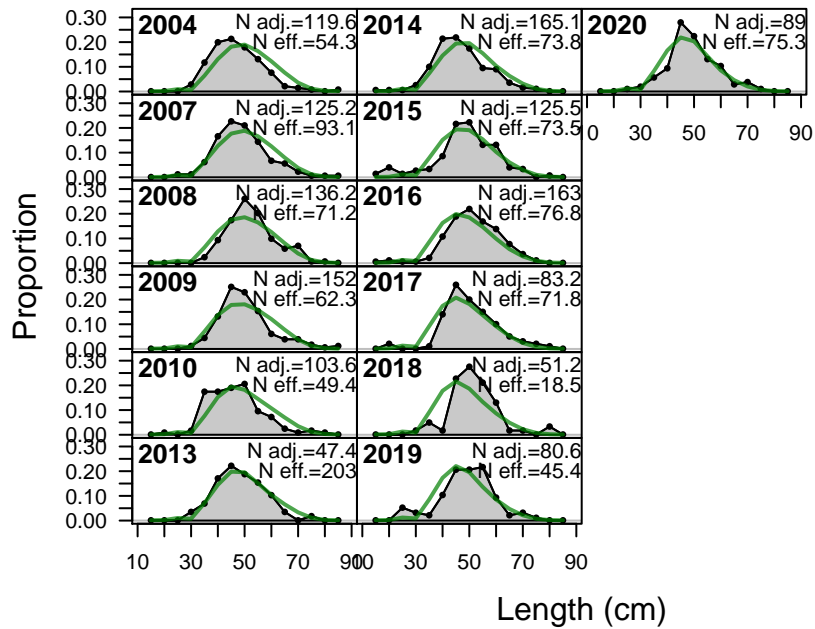
# A tibble: 2 x 3
  Fleet    RMSE.perc  Nobs
  <chr>      <dbl> <int>
1 FISHERY      4.5     13
2 Combined      4.5     13

```



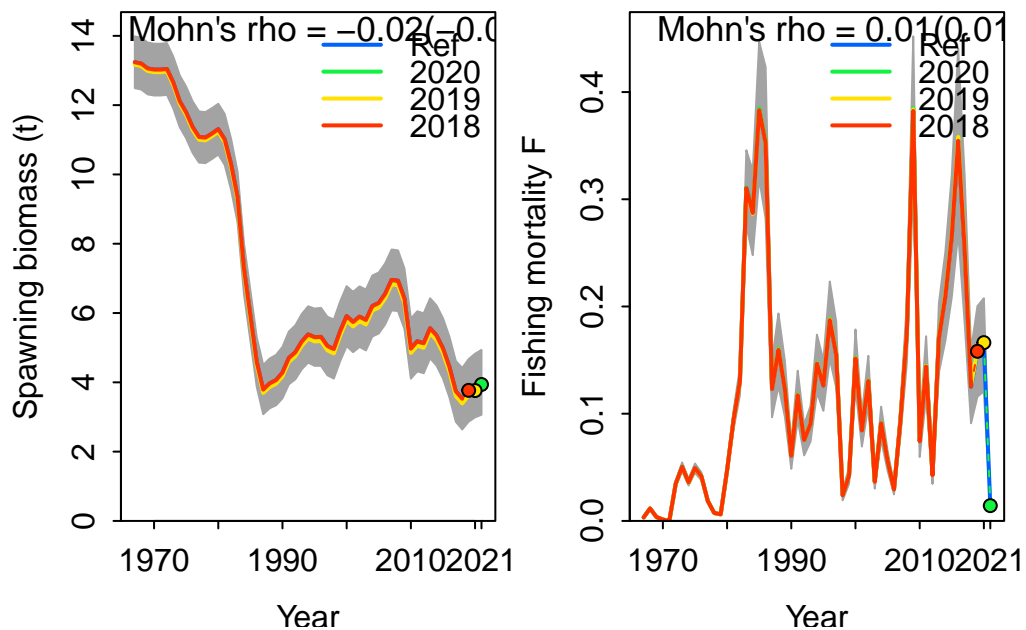
**Retrospective and Hindcasting**





## Retrospective

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



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

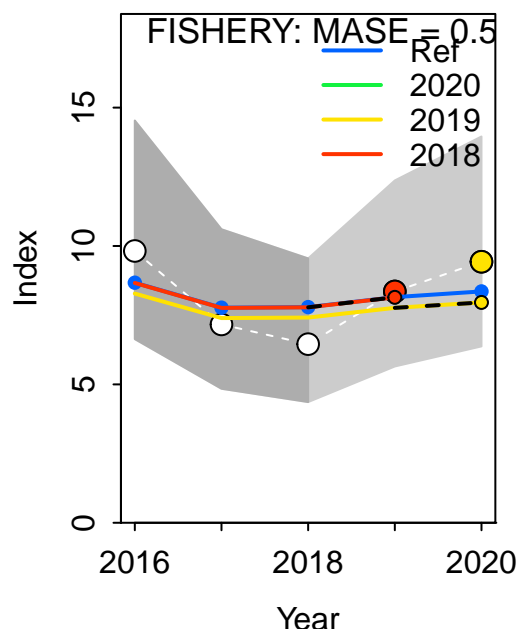
	type	peel	Rho	ForecastRho
1	F	2020	0.0125327325	0.0119753253
2	F	2019	0.0127116769	0.0127641435
3	F	2018	-0.0001037742	-0.0001011372
4	F Combined		0.0083802117	0.0082127772

## 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



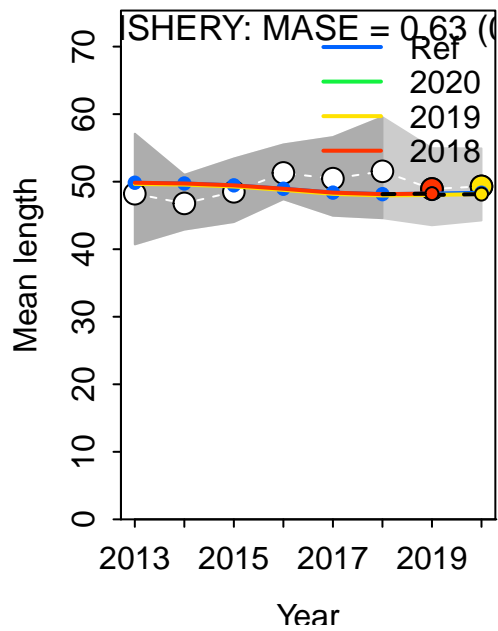
MASE stats by Index:

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

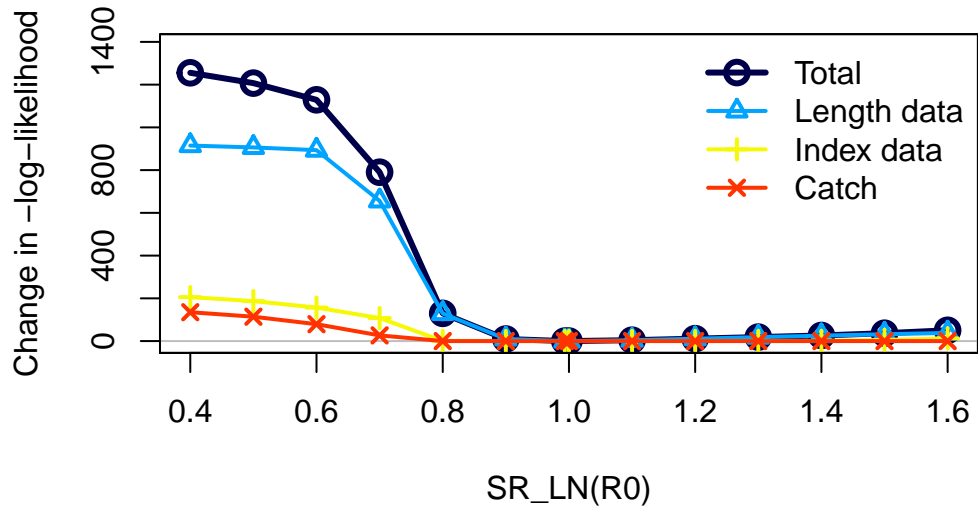
### Likelihood Profile

[1] "SR\_LN"

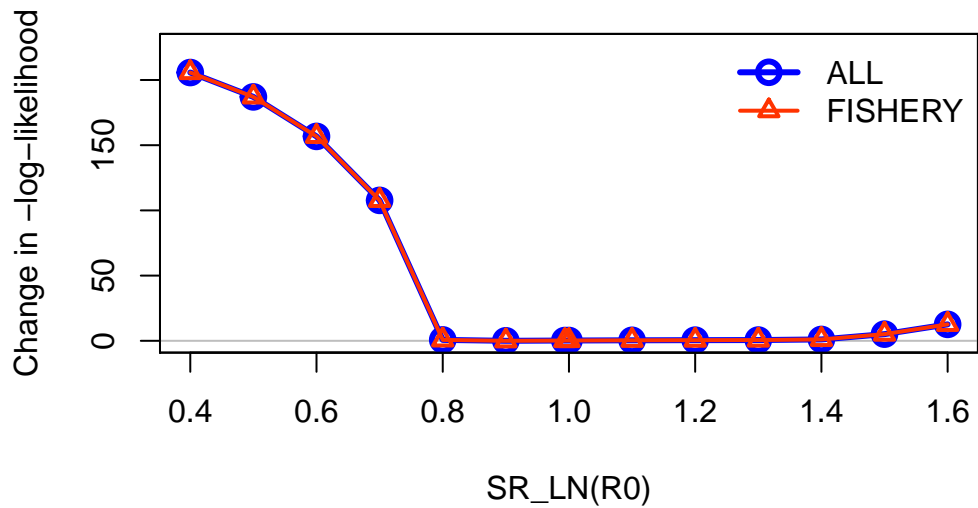
	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.1076	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.1639	TRUE	Index data
Length_comp	0.7287	TRUE	Length data
Recruitment	0.0000	FALSE	Recruitment
InitEQ_Regime	0.0000	FALSE	Initital equilibrium recruitment
Forecast_Recruitment	0.0000	FALSE	Forecast recruitment
Parm_priors	0.0000	FALSE	Priors



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

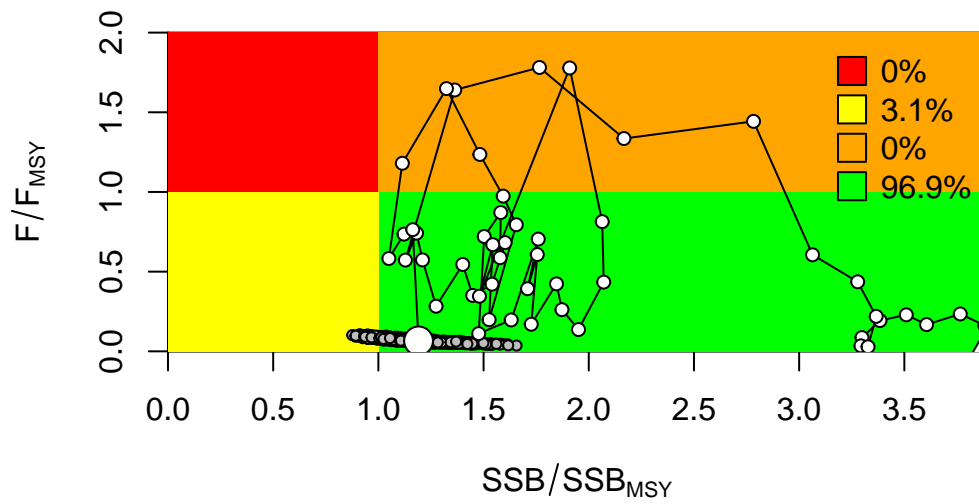


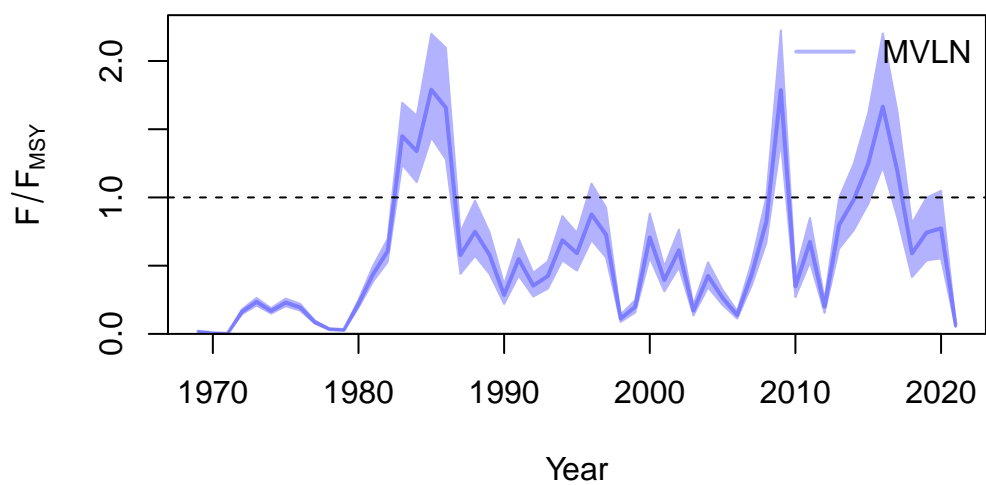
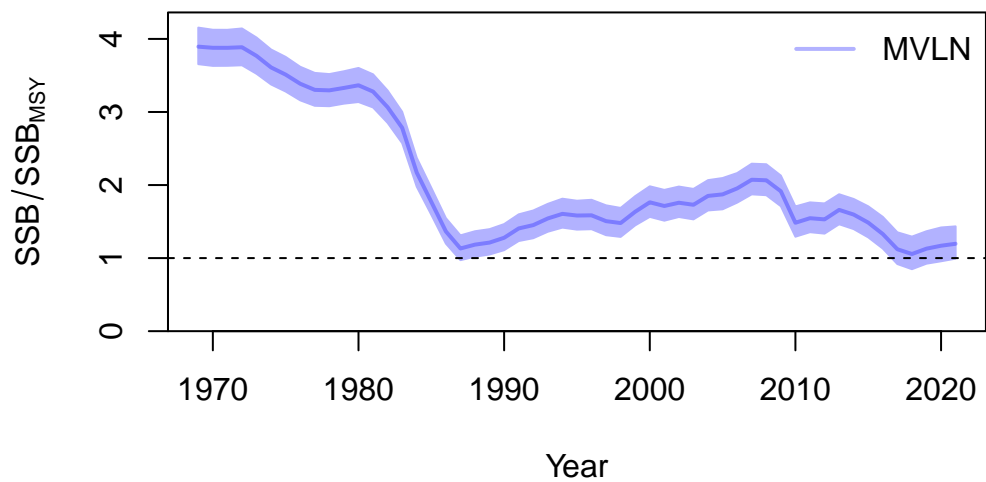
### Changes in survey likelihood by fleet

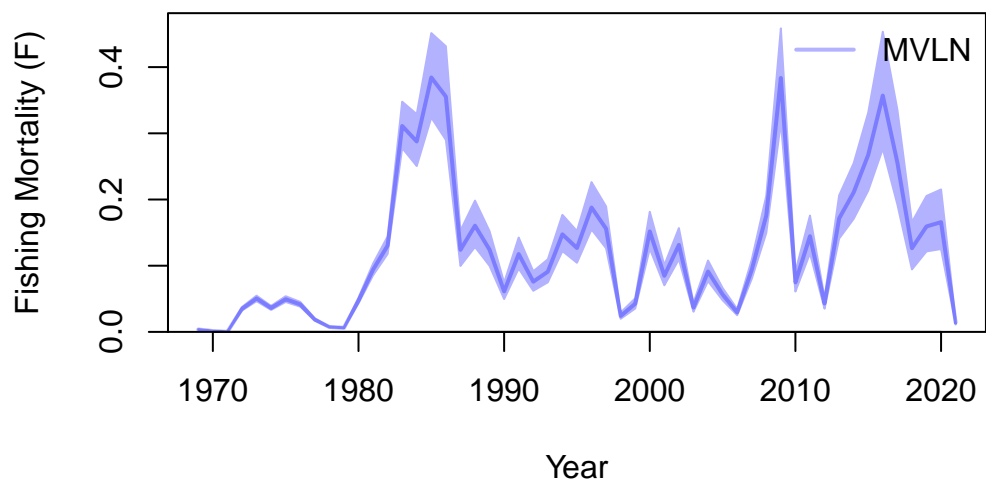
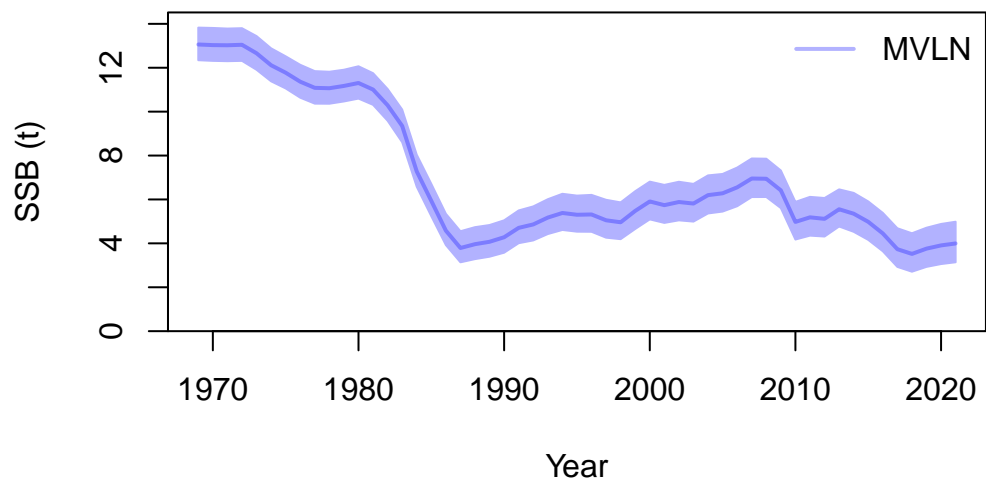


## Management Quantities

starter.sso with Bratio: SSB/SSB<sub>MSY</sub> and F: `_abs_F`







null device  
1

### Jitter

