

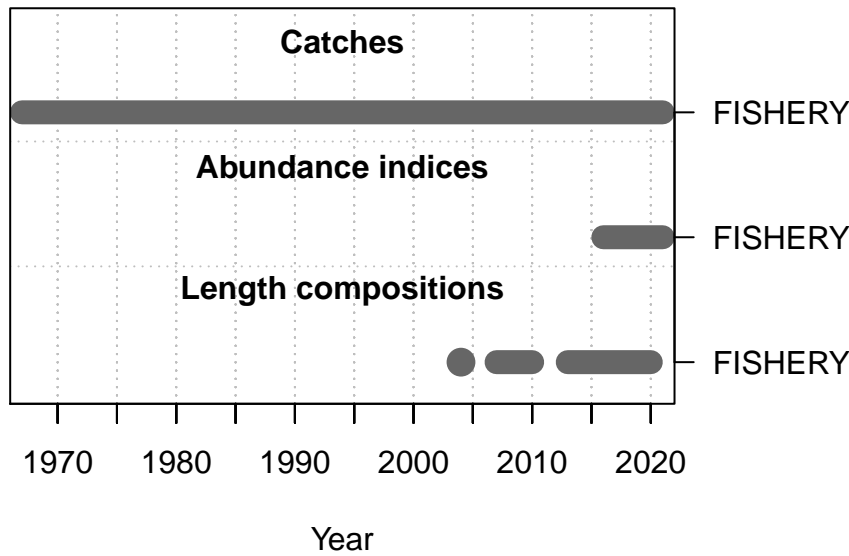
# American Samoa Model Checks

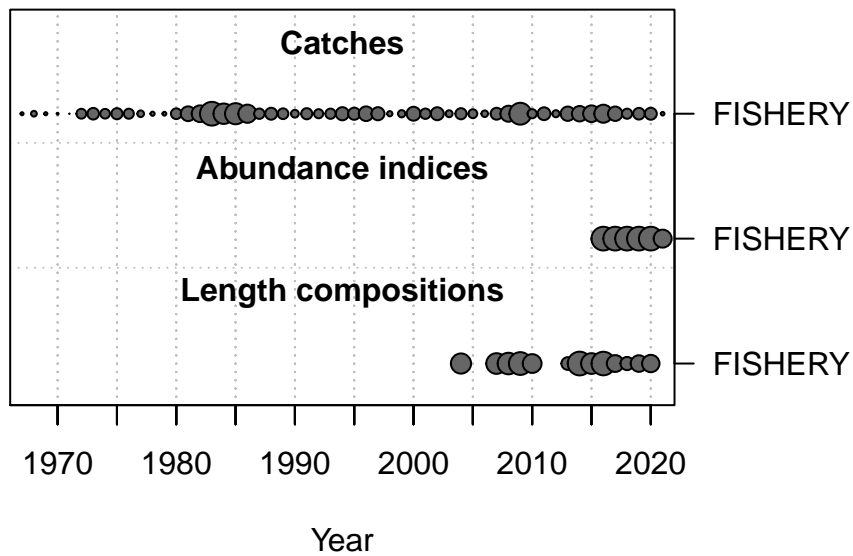
2022-09-02

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

## Model Output

### Input Data





### Convergence Check

```

Converged      MaxGrad
1      TRUE 6.21749e-06

```

```

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

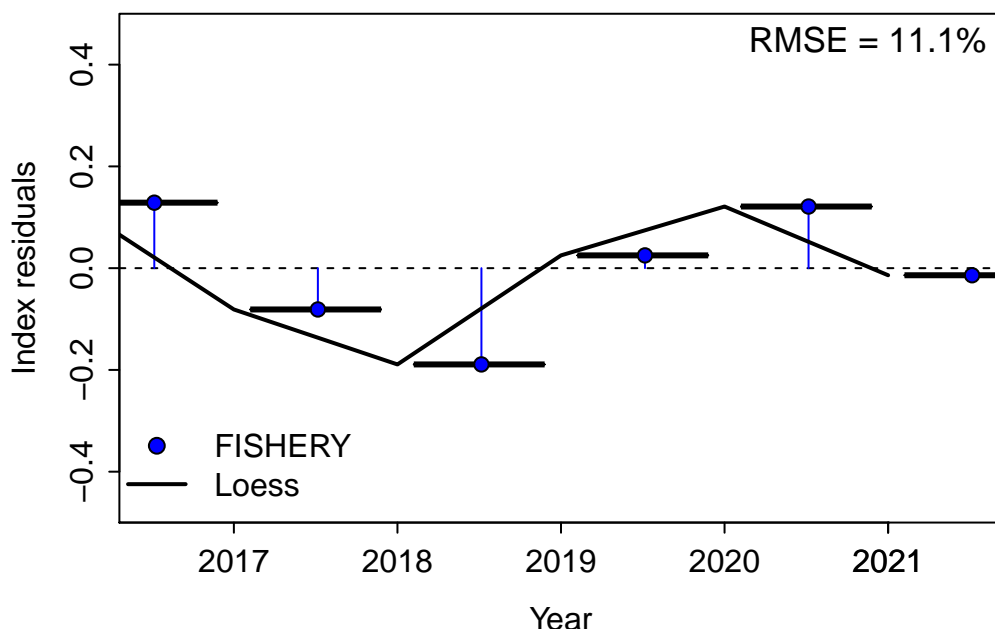
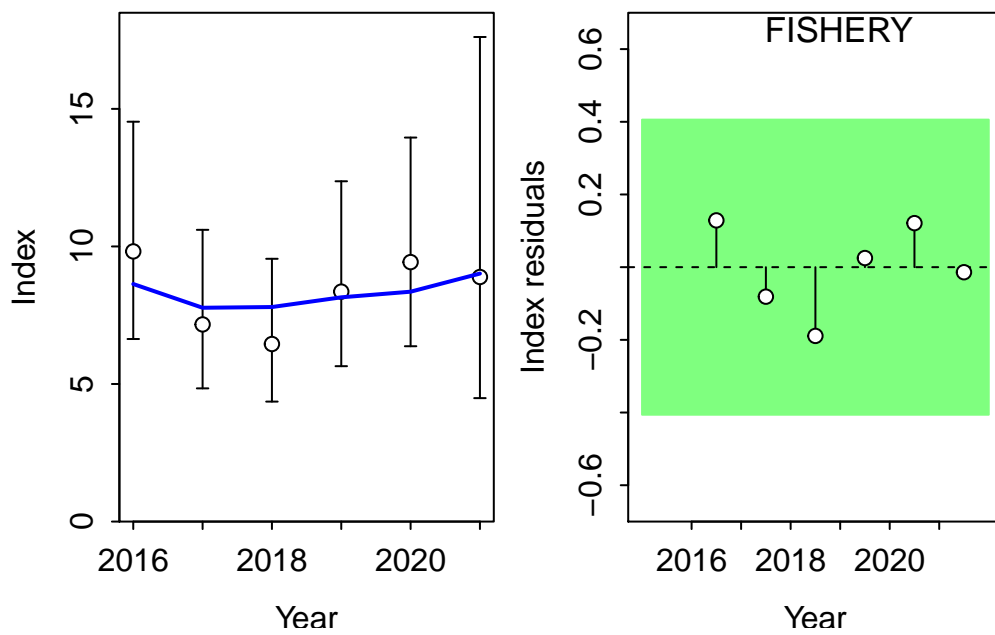
```

### Fit to Model

#### CPUE

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

RMSE stats by Index:



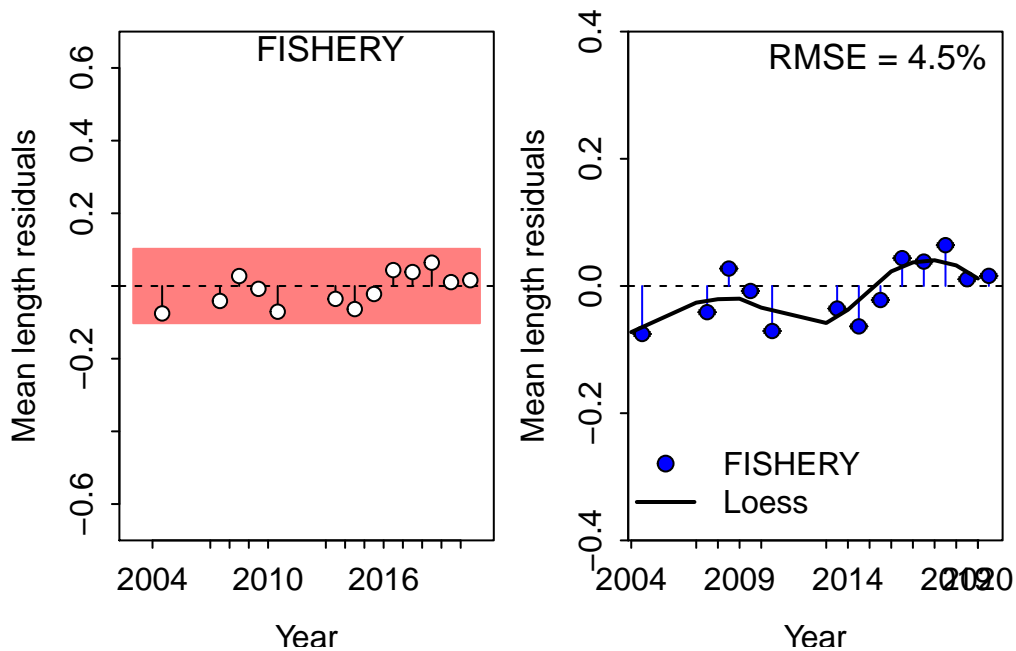
## Length Comp

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

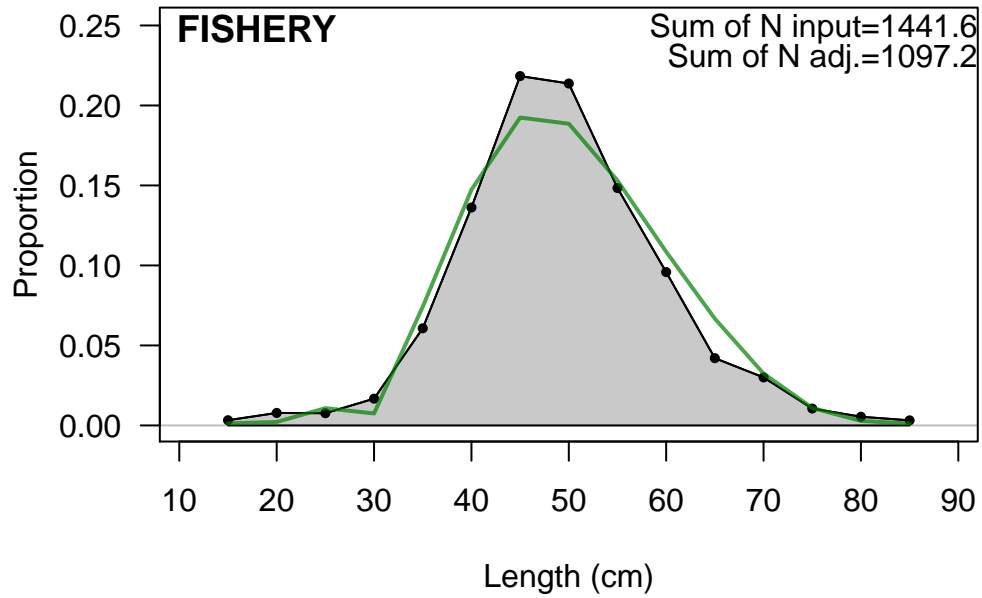
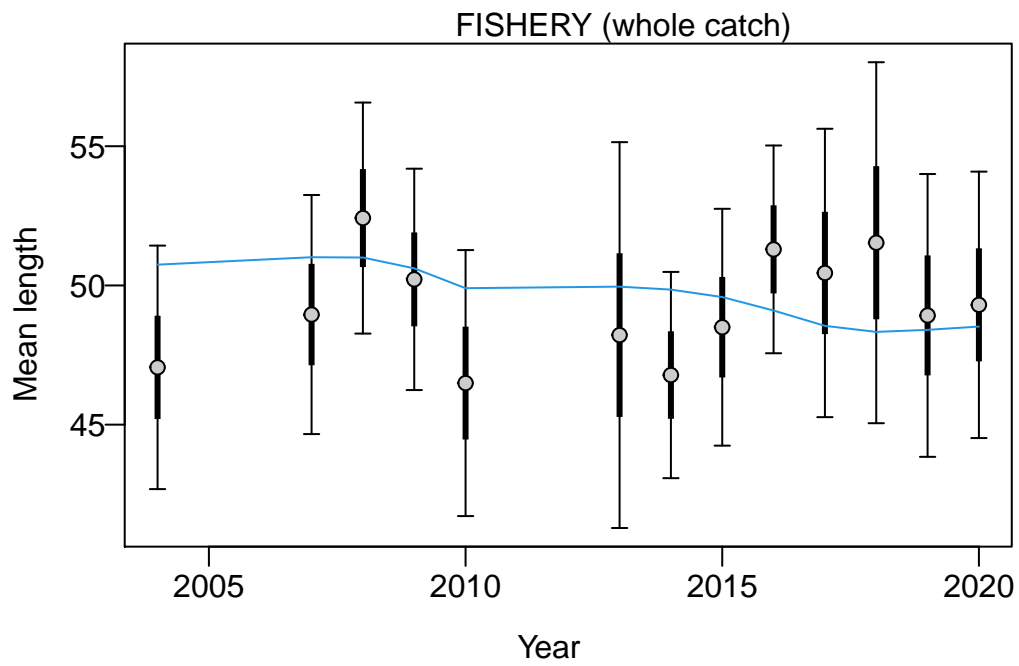
```
Index runs.p  test  sigma3.lo sigma3.hi type
1 FISHERY    0.022 Failed -0.1023295 0.1023295  len
```

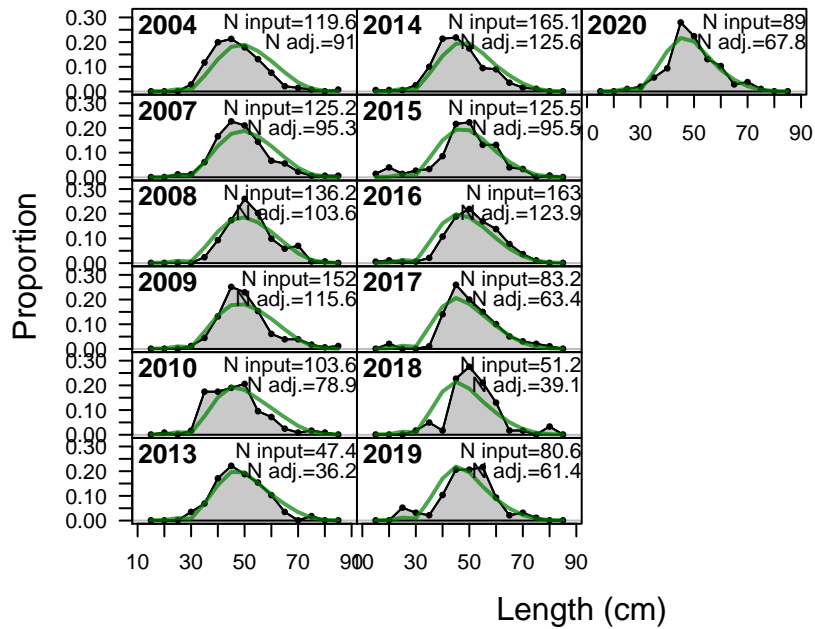
RMSE stats by Index:

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



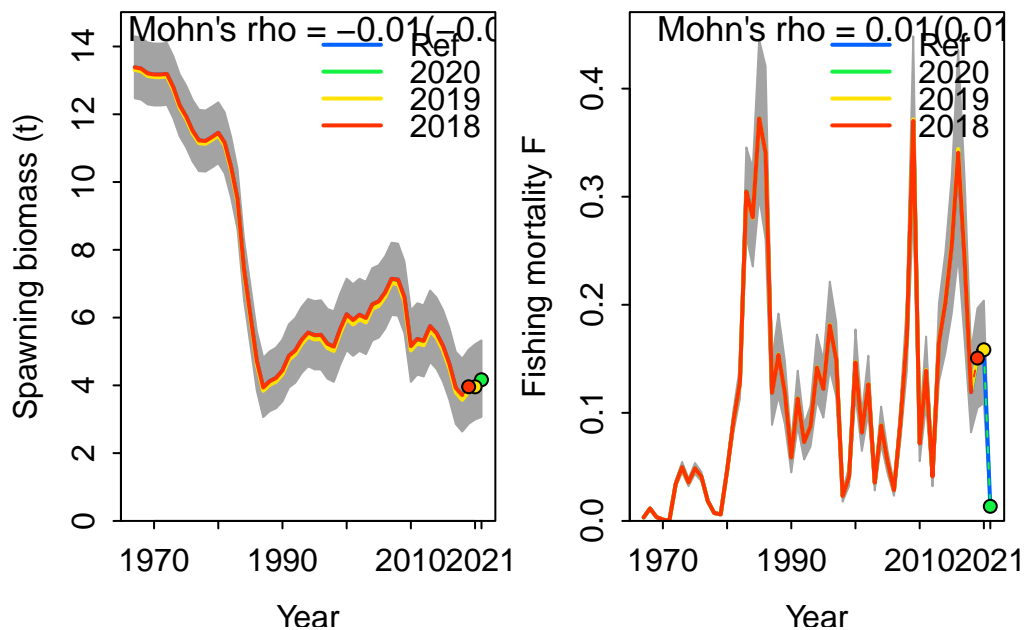
## Retrospective and Hindcasting





## Retrospective

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



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

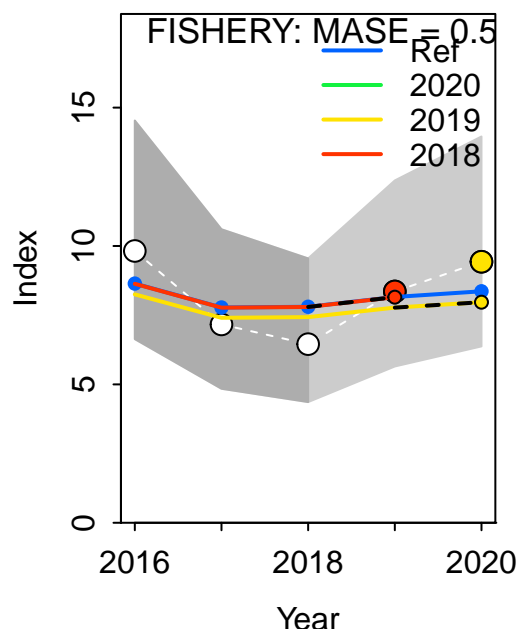
	type	peel	Rho	ForecastRho
1	F	2020	0.0048189383	0.0046303178
2	F	2019	0.0122414045	0.0122199072
3	F	2018	-0.0001258146	-0.0001260632
4	F Combined		0.0056448427	0.0055747206

## 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



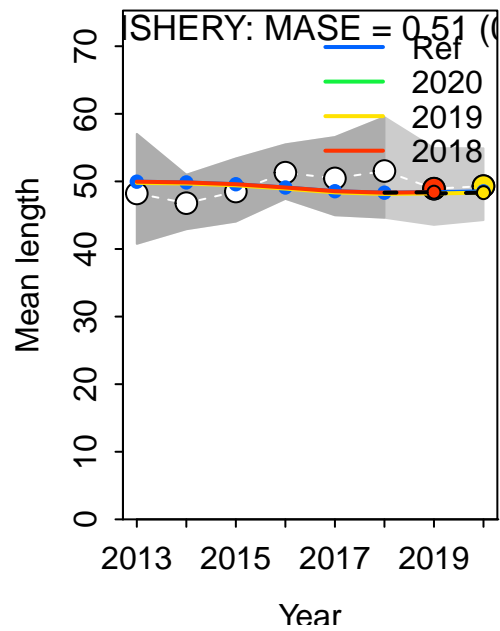
MASE stats by Index:

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:



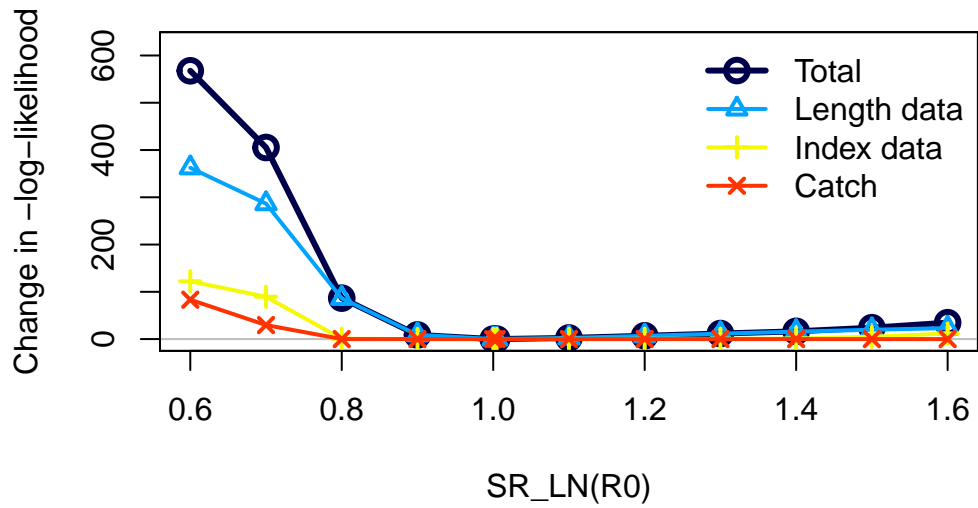
## Recruitment Deviations

### Likelihood Profile

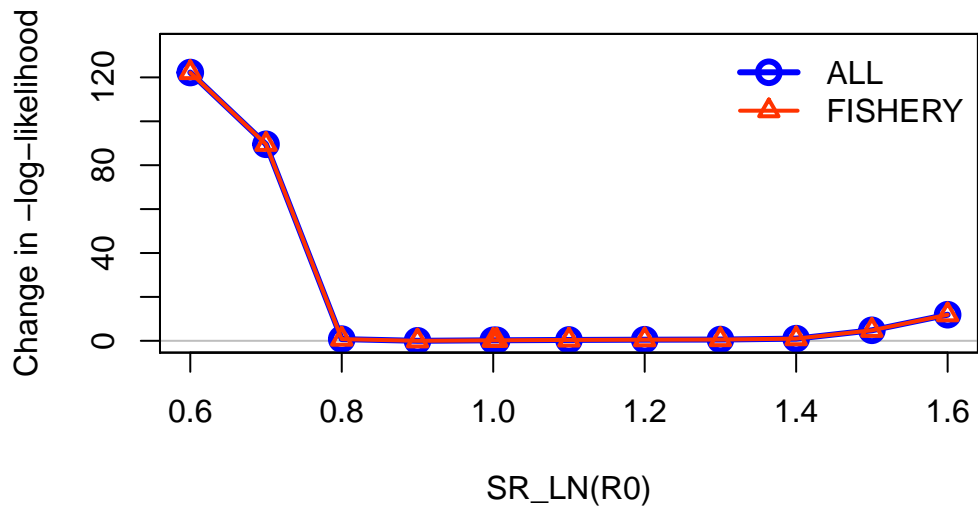
[1] "SR_LN"				
	frac_change	include		label
TOTAL	1.0000	TRUE		Total
Catch	0.1468	TRUE		Catch
Equil_catch	0.0000	FALSE	Equilibrium catch	
Survey	0.2153	TRUE		Index data
Length_comp	0.6384	TRUE		Length data
Recruitment	0.0000	FALSE		Recruitment
InitEQ_Regime	0.0000	FALSE	Initital equilibrium	recruitment
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

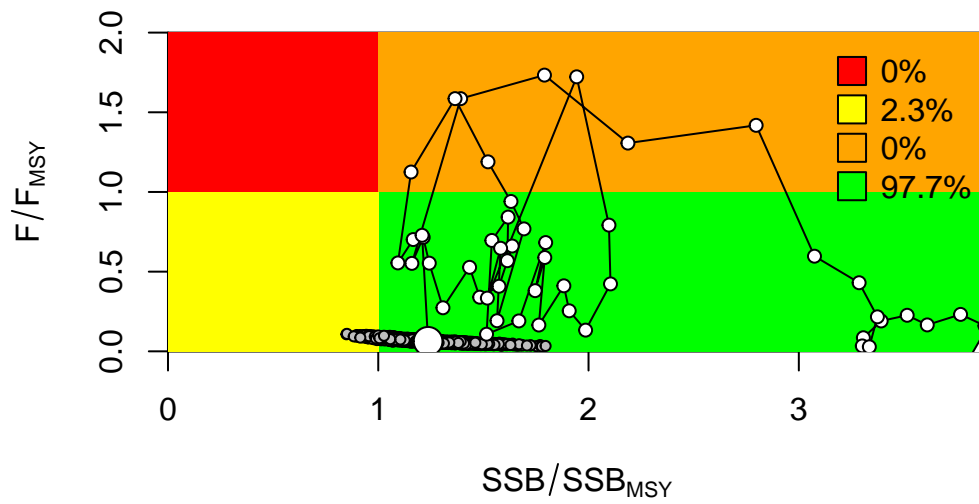


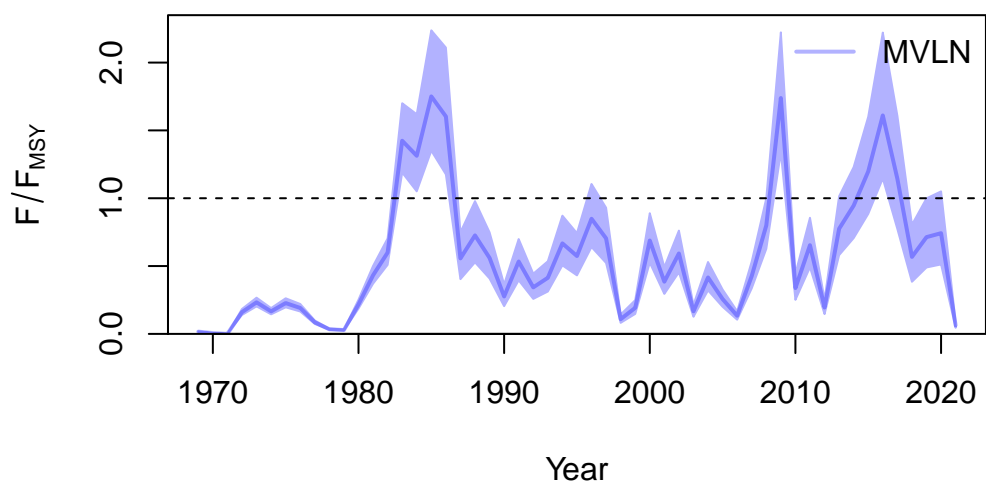
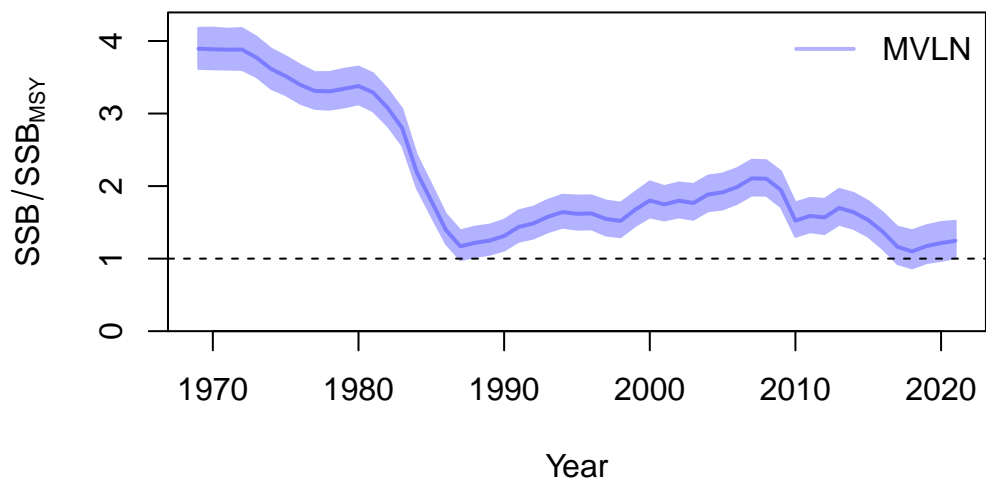
### Changes in survey likelihood by fleet

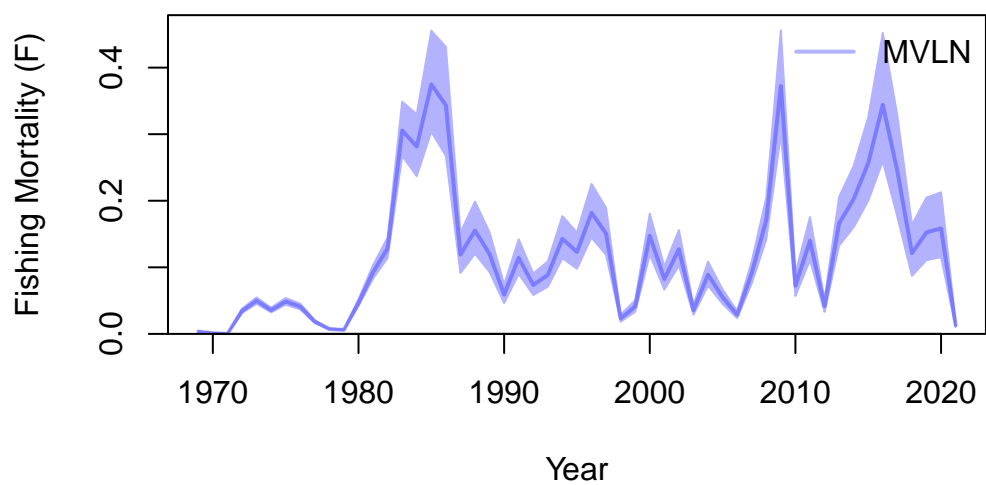
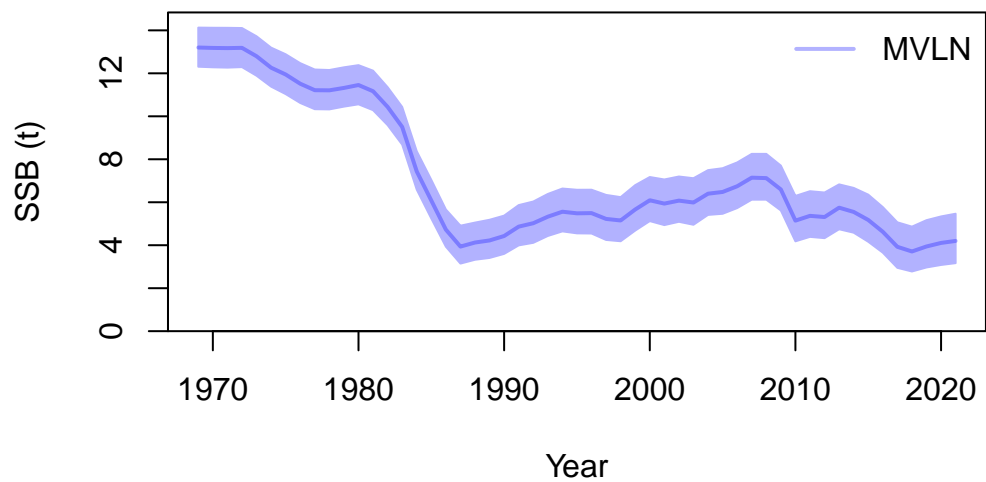


## Management Quantities

starter.sso with Bratio: SSB/SSB<sub>MSY</sub> and F: \_abs\_F







null device  
1

## Jitter

