

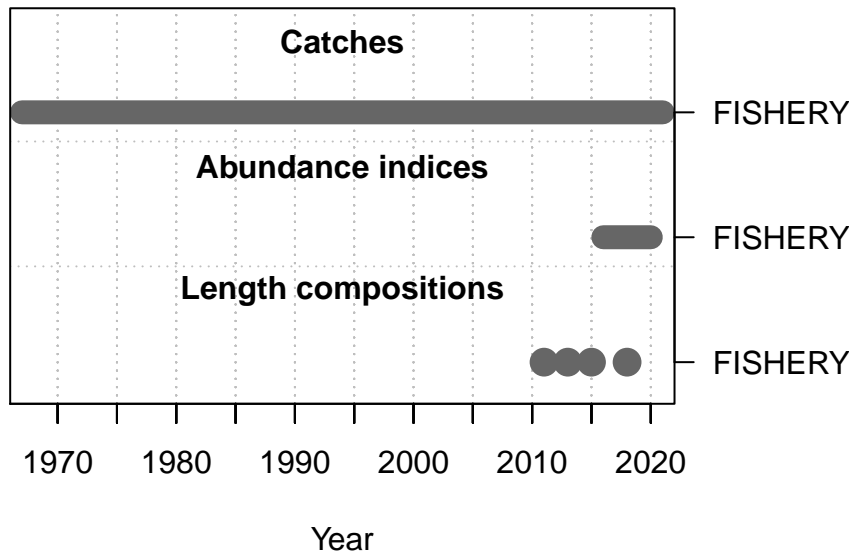
# American Samoa Model Checks

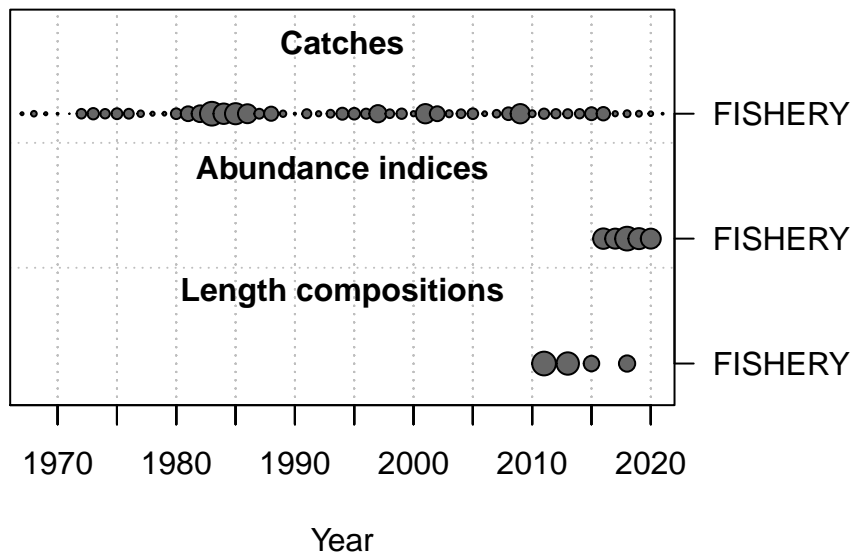
2022-10-07

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

## Model Output

### Input Data





### Convergence Check

```

Converged      MaxGrad
1      TRUE 4.55816e-05

```

```

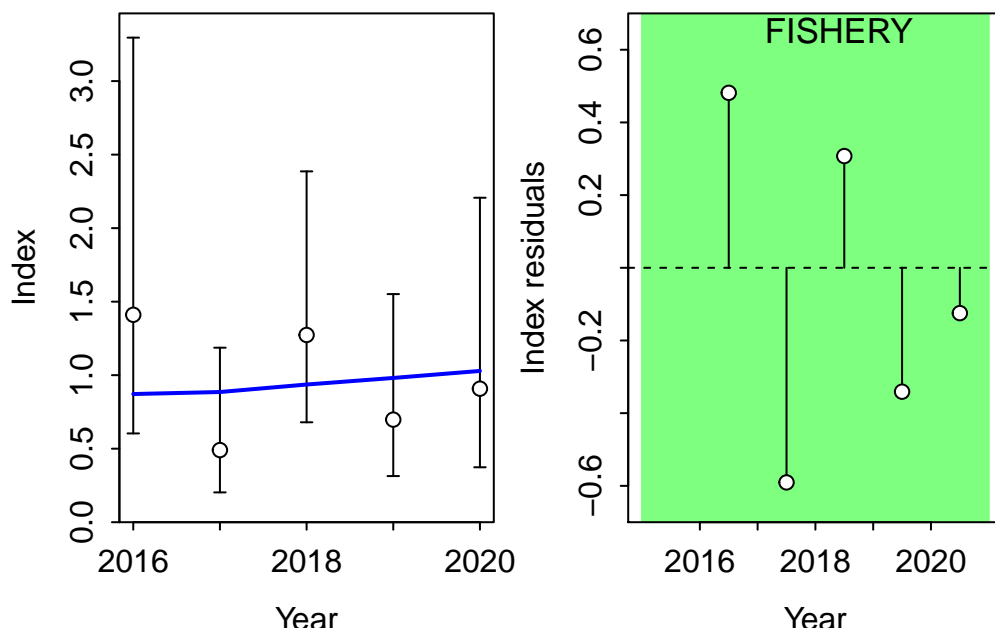
[1] "1 NOTE: Max data length bin: 48 < max pop len bins: 53; so will accumulate larger pop
[2] "N warnings: 1"

```

### Fit to Model

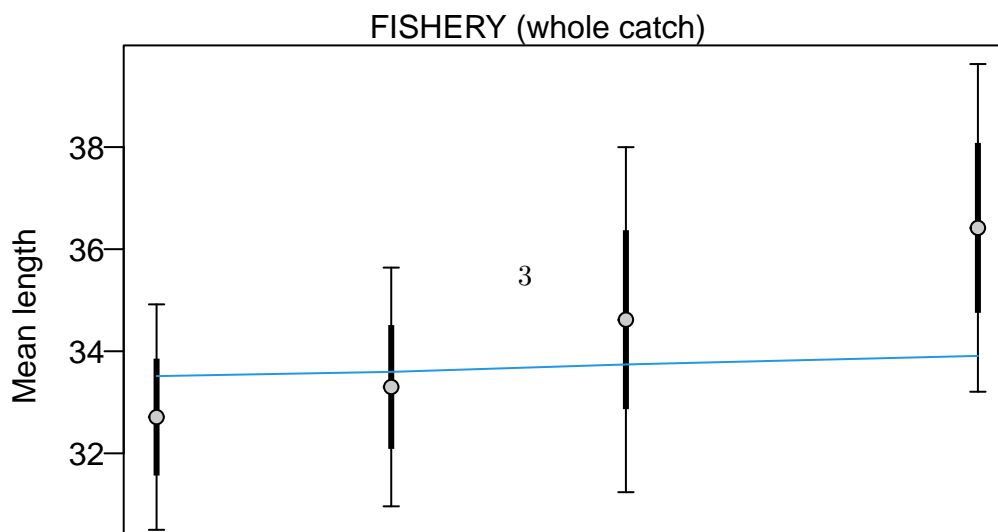
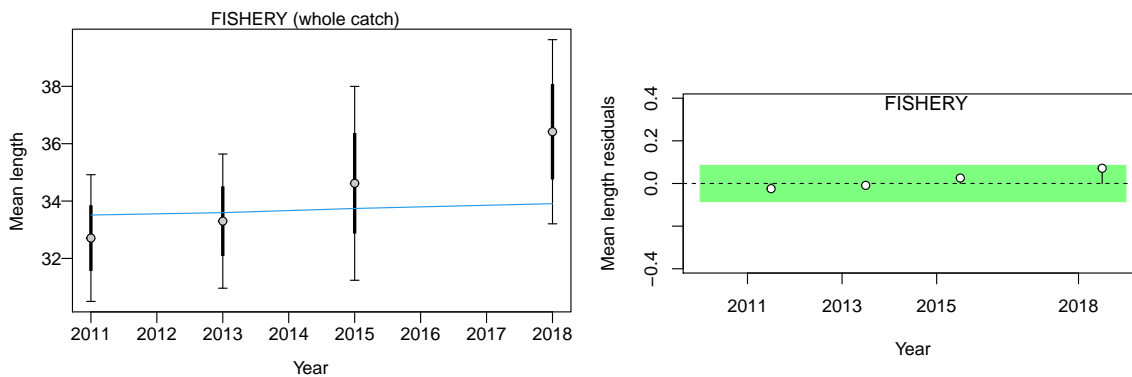
#### CPUE

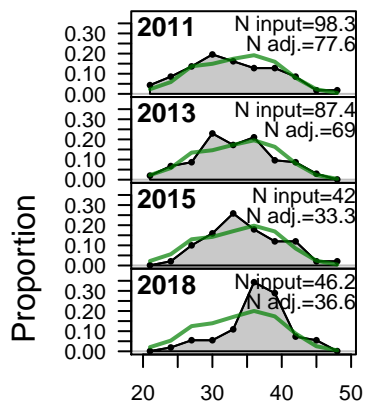
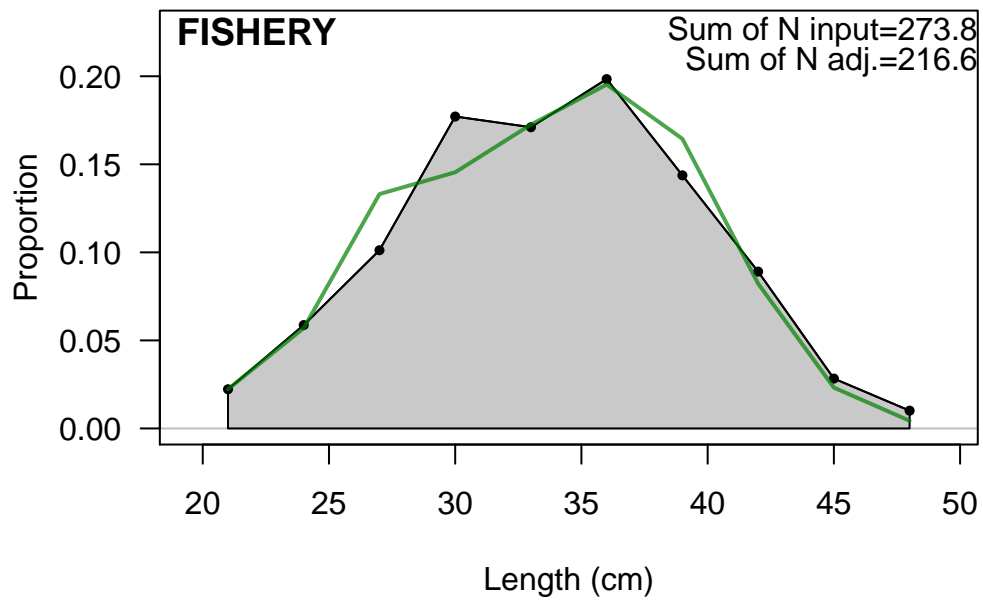
Fleet	RMSE.perc	Nobs
FISHERY	40.2	5
Combined	40.2	5



### Length Comp

Fleet	RMSE.perc	Nobs
FISHERY	4	4
Combined	4	4

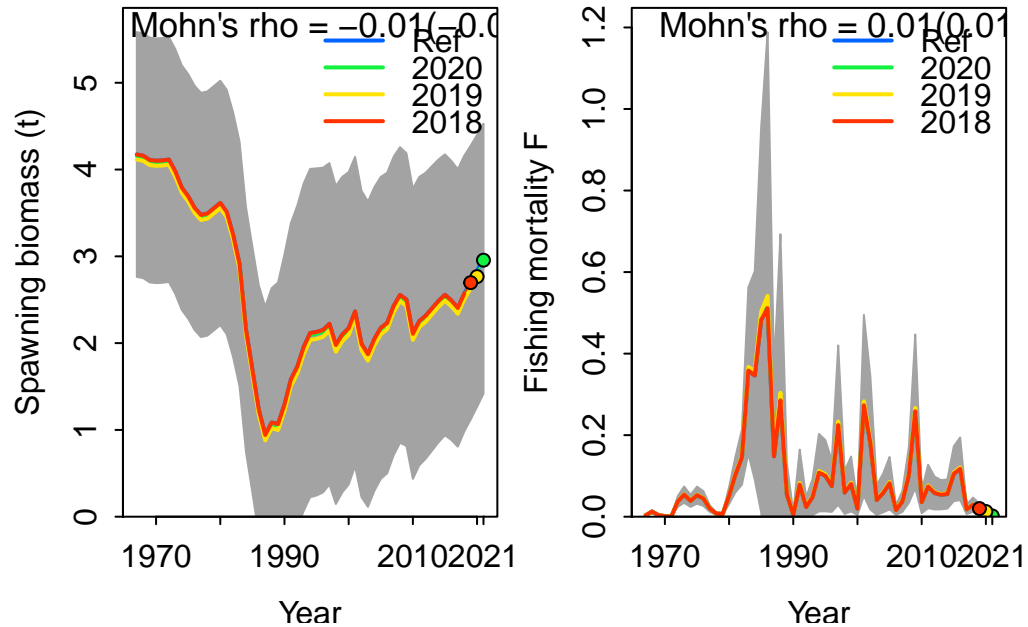




Length (cm)

## Retrospective

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



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

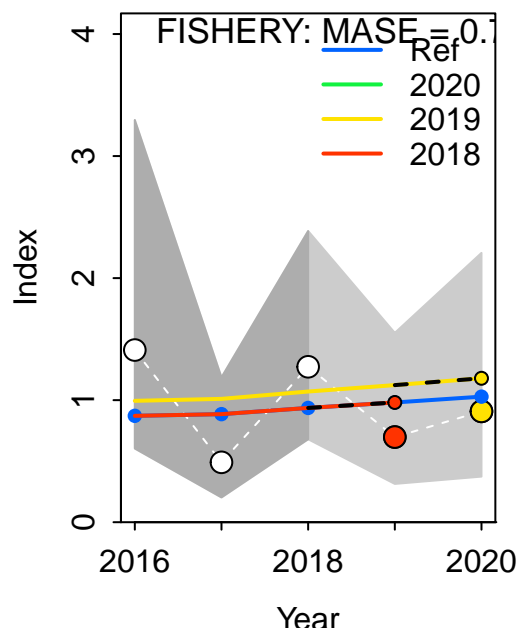
	type	peel	Rho	Forecast	Rho
1	F	2020	0.006184841	0.005843990	
2	F	2019	0.024479639	0.023139147	
3	F	2018	0.000000000	0.000000000	
4	F Combined		0.010221493	0.009661046	

## 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)

No observations in evaluation years to compute prediction residuals for Index FISHERY

MASE stats by Index:

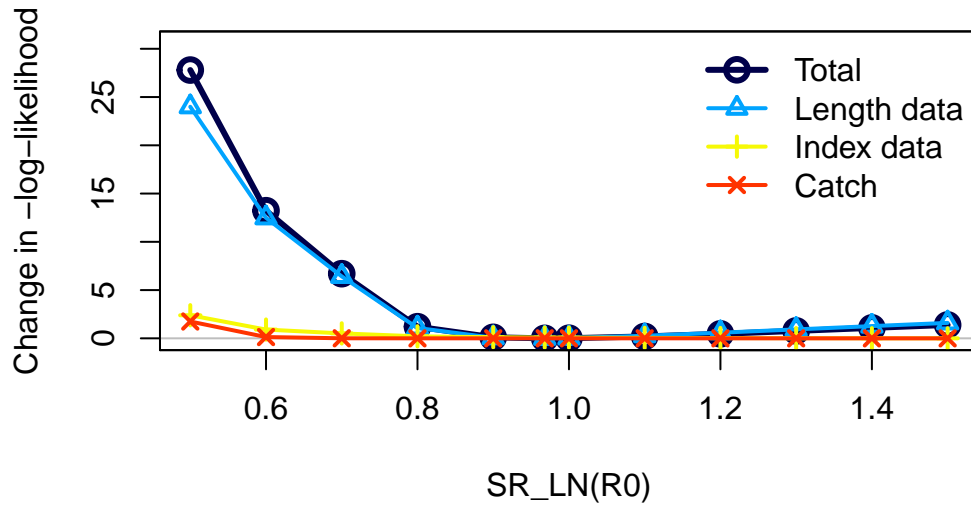
## Recruitment Deviations

## Likelihood Profile

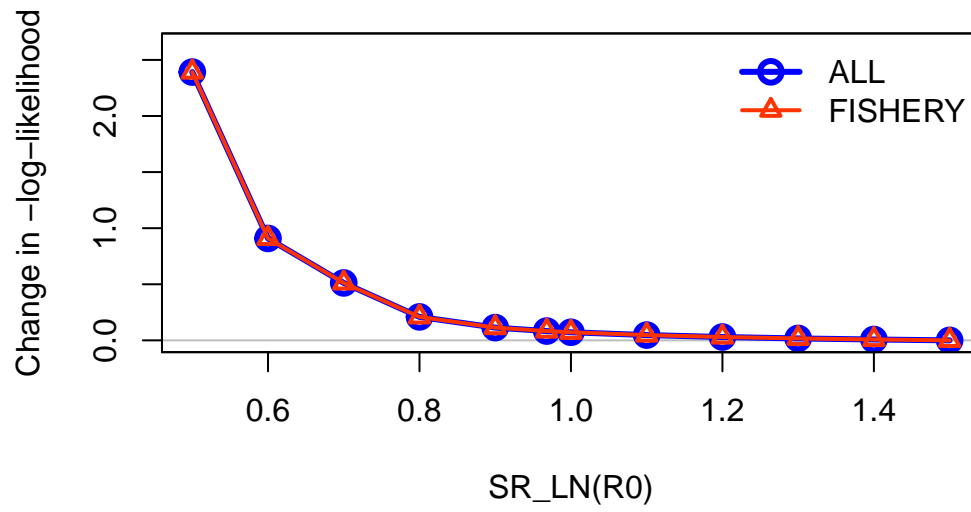
[1] "SR\_LN"

	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.0627	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.0860	TRUE	Index data
Length_comp	0.8632	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	0.0099	FALSE	Priors
Parm_softbounds	0.0004	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty



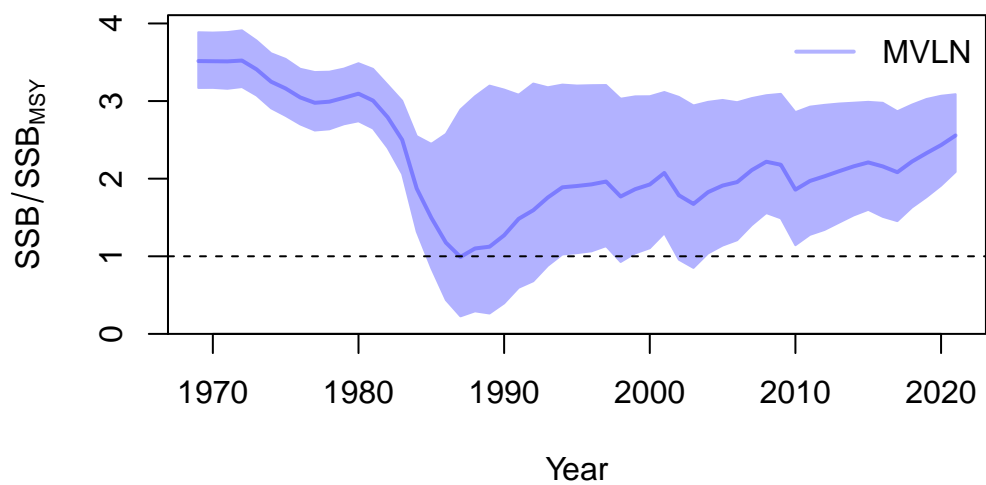
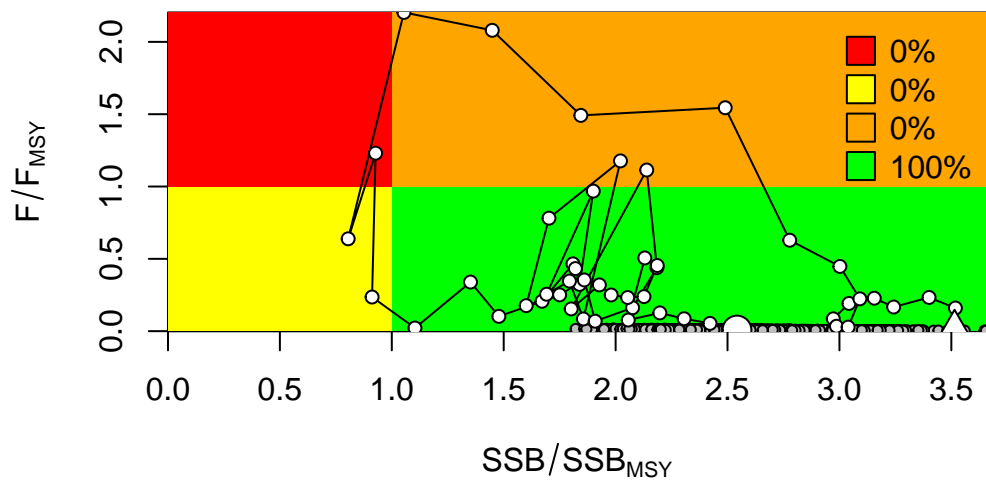
## Changes in survey likelihood by fleet

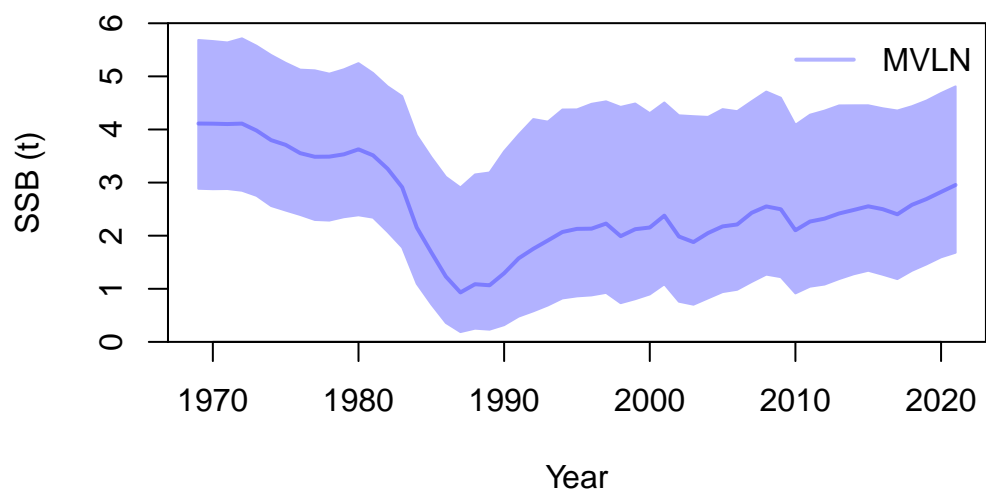
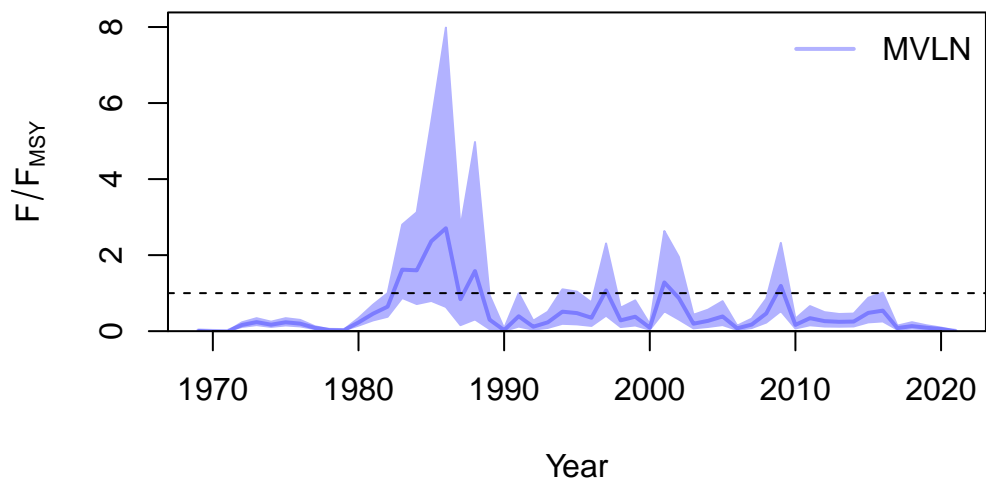


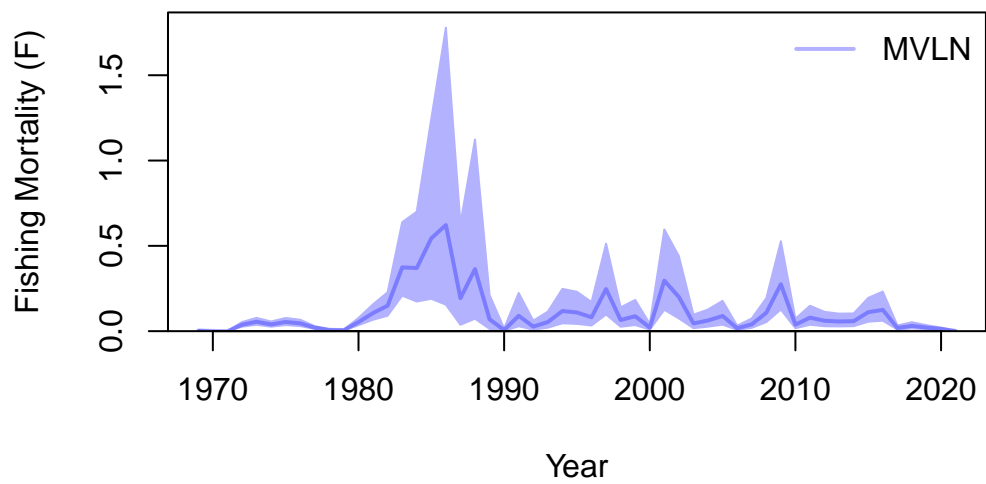
## Management Quantities

starter.sso with Bratio:  $SSB/SSB_{MSY}$  and F:  $_{abs\_F}$









null device  
1

**Jitter**

