

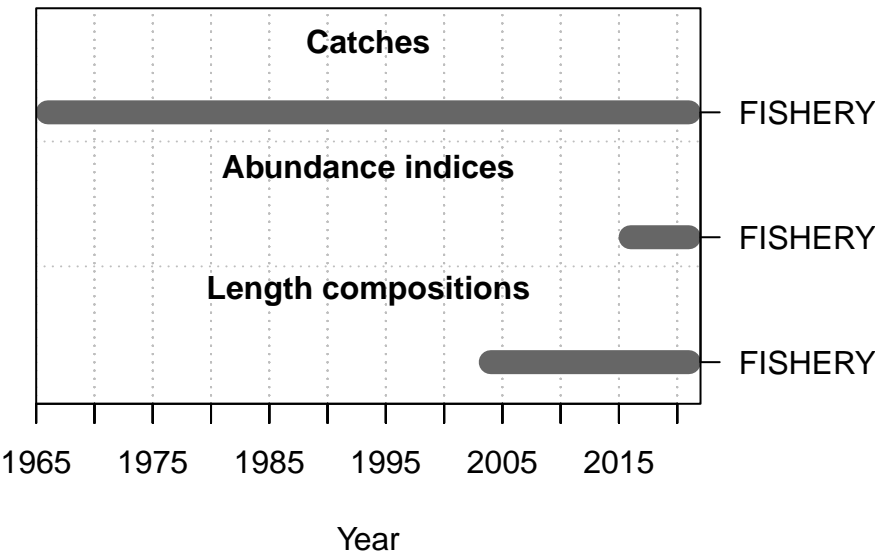
# American Samoa Model Checks

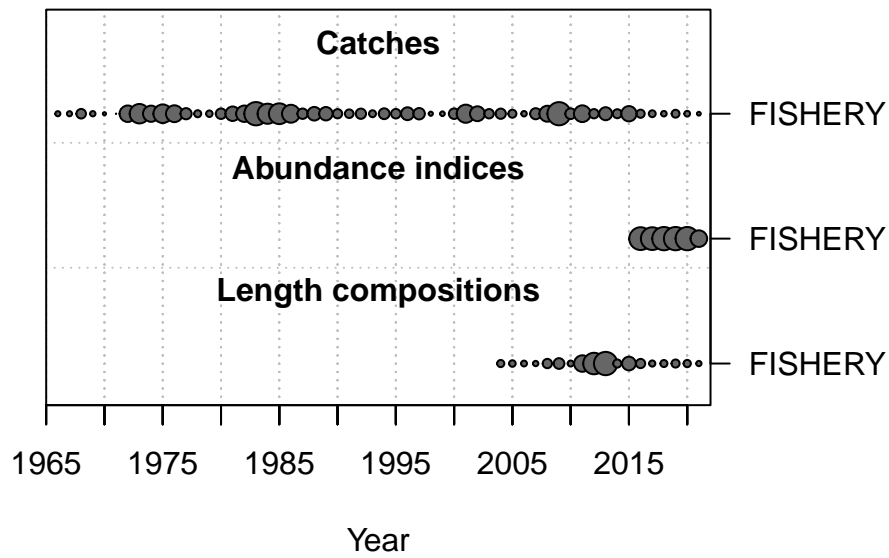
2022-10-20

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

## Model Output

### Input Data





### Convergence Check

```

Converged      MaxGrad
1      TRUE 5.37496e-05

```

```

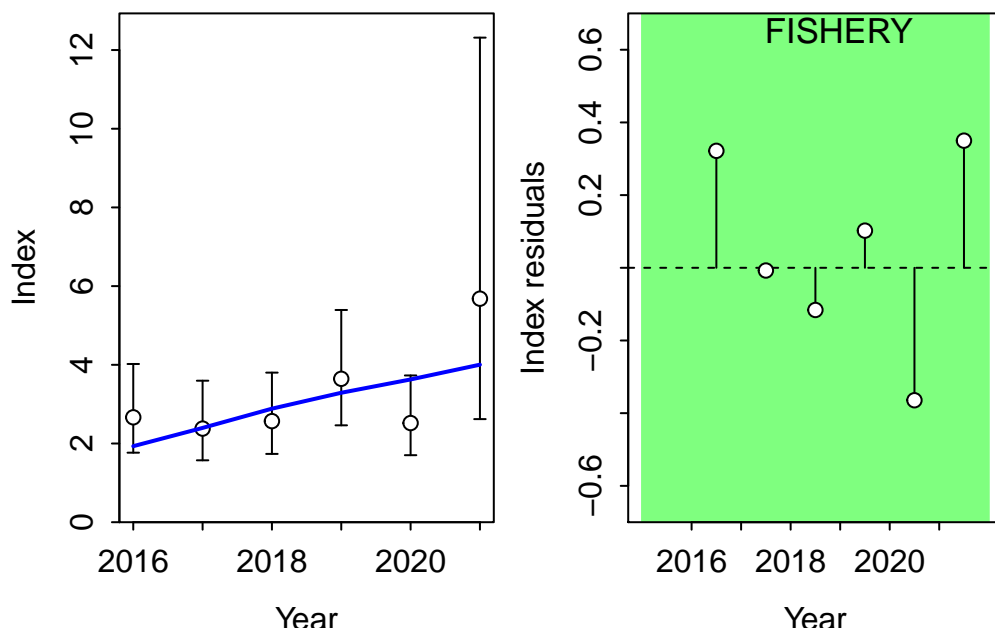
[1] "1 NOTE: Max data length bin: 38.5 < max pop len bins: 43; so will accumulate larger p
[2] "N warnings: 1"

```

### Fit to Model

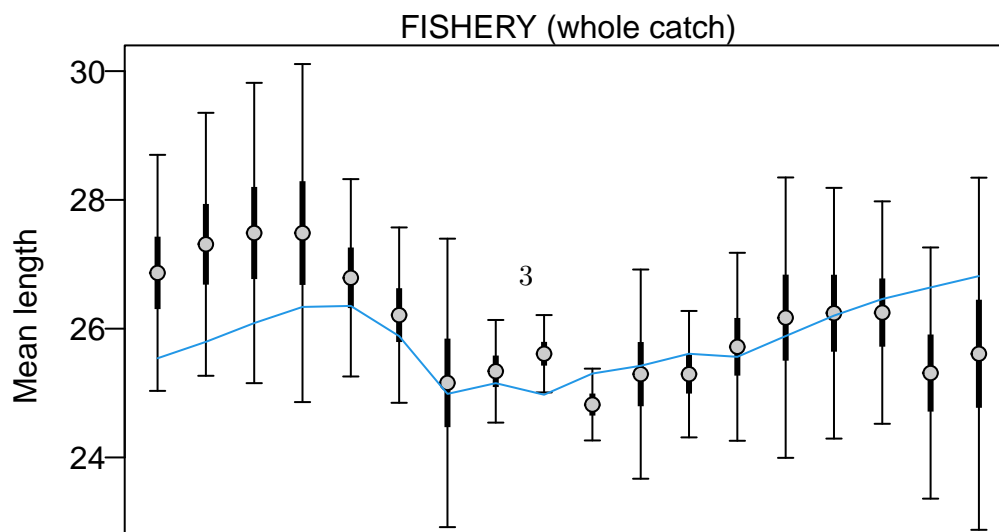
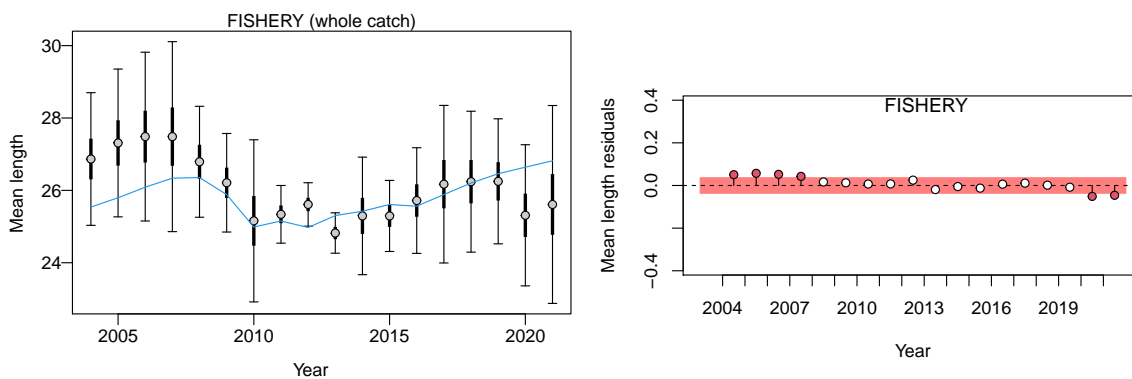
#### CPUE

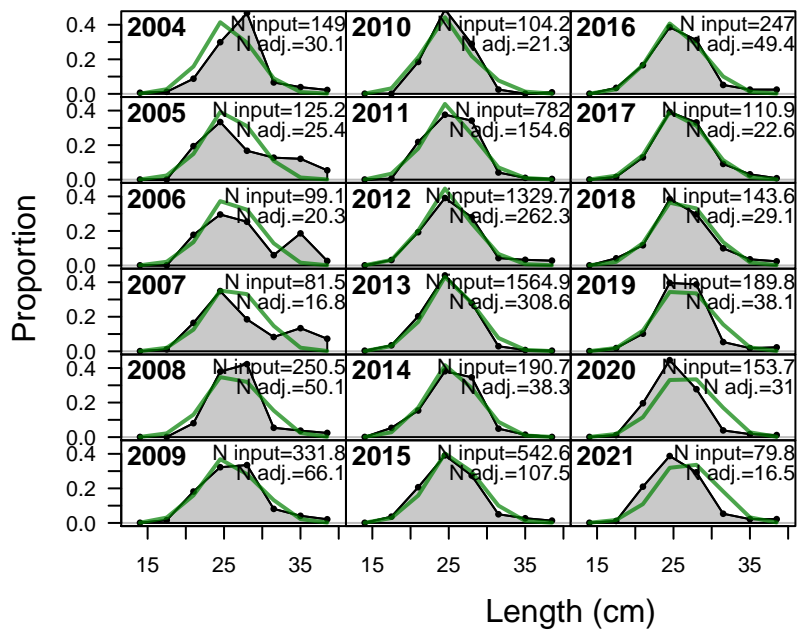
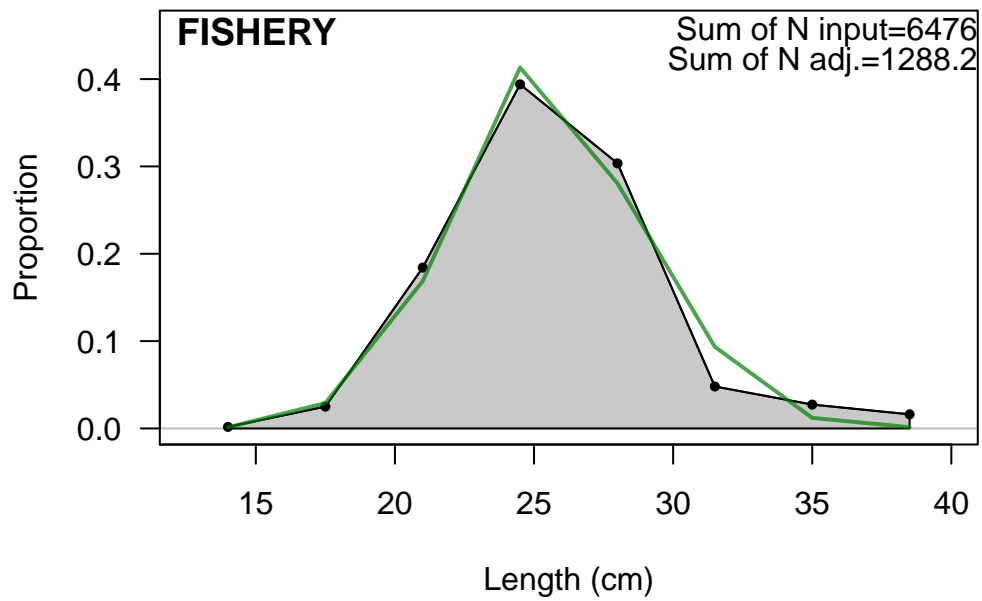
Fleet	RMSE.perc	Nobs
FISHERY	25.3	6
Combined	25.3	6



### Length Comp

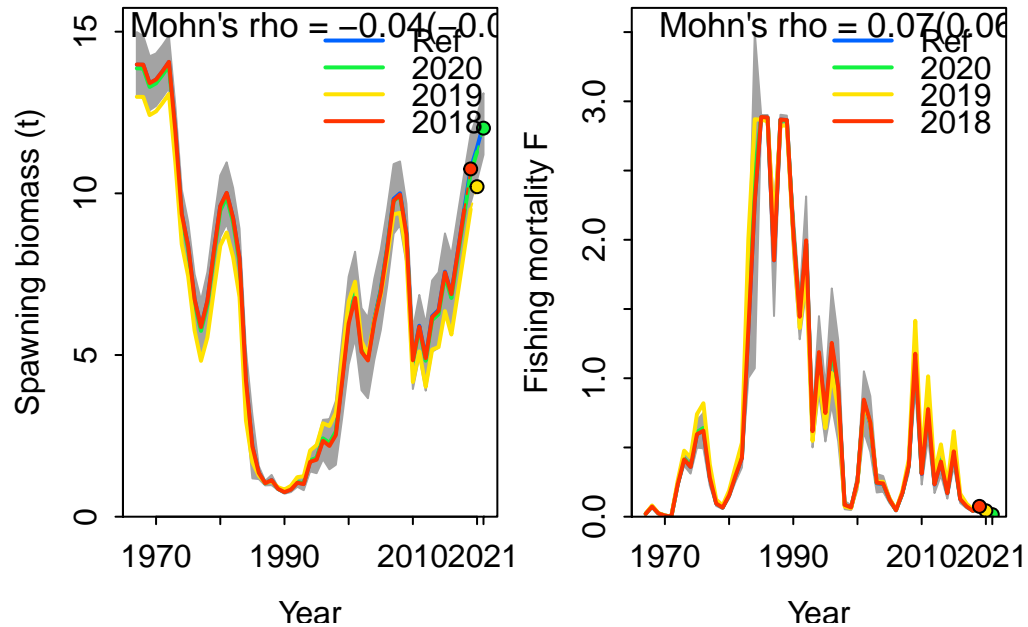
Fleet	RMSE.perc	Nobs
FISHERY	3.1	18
Combined	3.1	18





## Retrospective

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



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

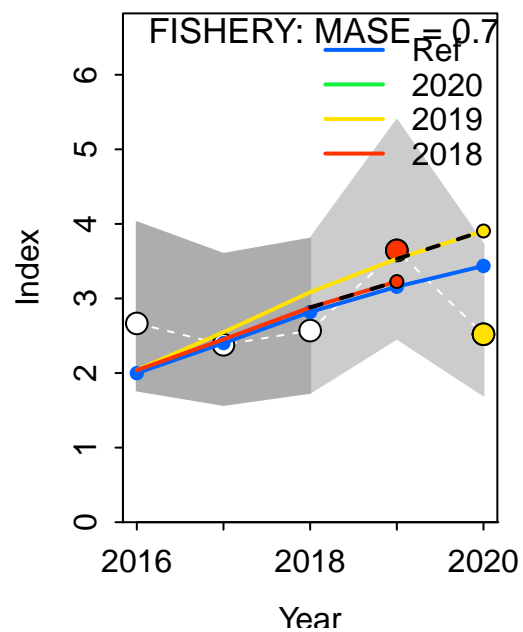
	type	peel	Rho	Forecast	Rho
1	F	2020	0.0183755682	0.016808086	
2	F	2019	0.1948462475	0.176169738	
3	F	2018	0.0007717129	0.000312617	
4	F	Combined	0.0713311762	0.064430147	

## 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



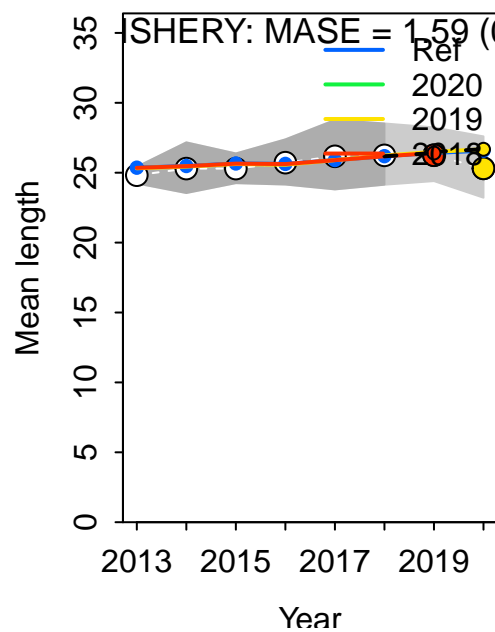
MASE stats by Index:

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

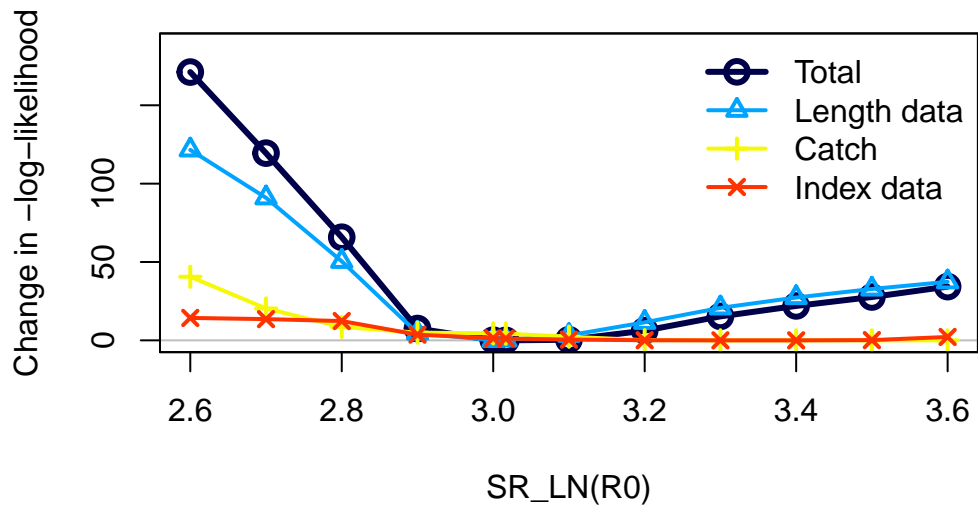
MASE stats by Index:



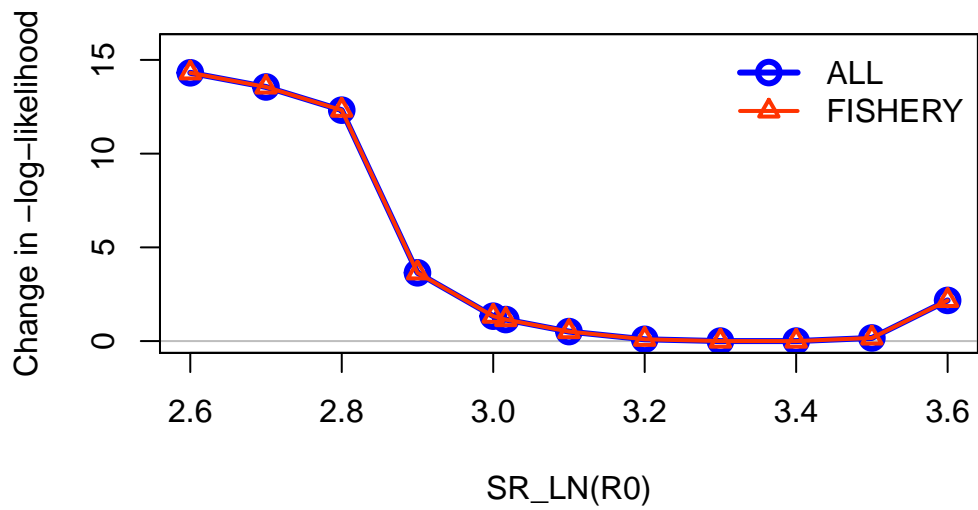
## Recruitment Deviations

## Likelihood Profile

[1] "SR_LN"			
	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.2371	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.0836	TRUE	Index data
Length_comp	0.7099	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	0.0027	FALSE	Priors
Parm_softbounds	0.0001	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty



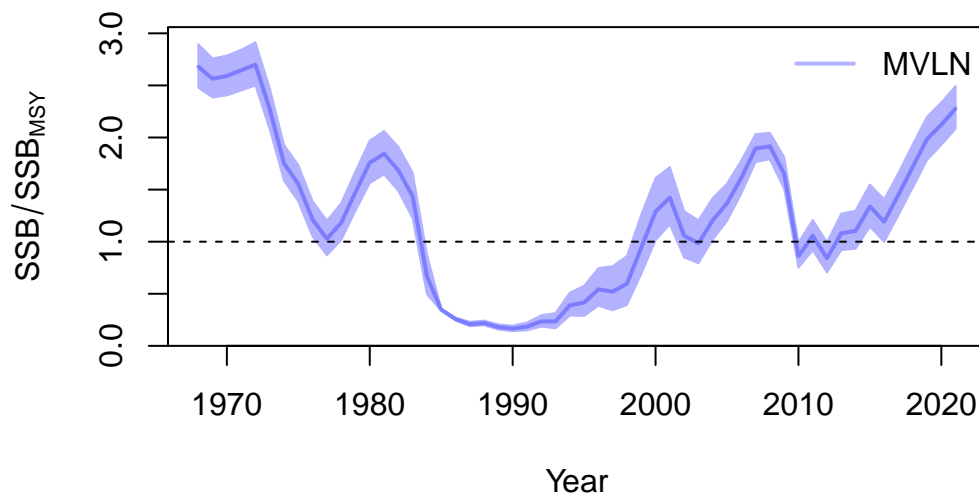
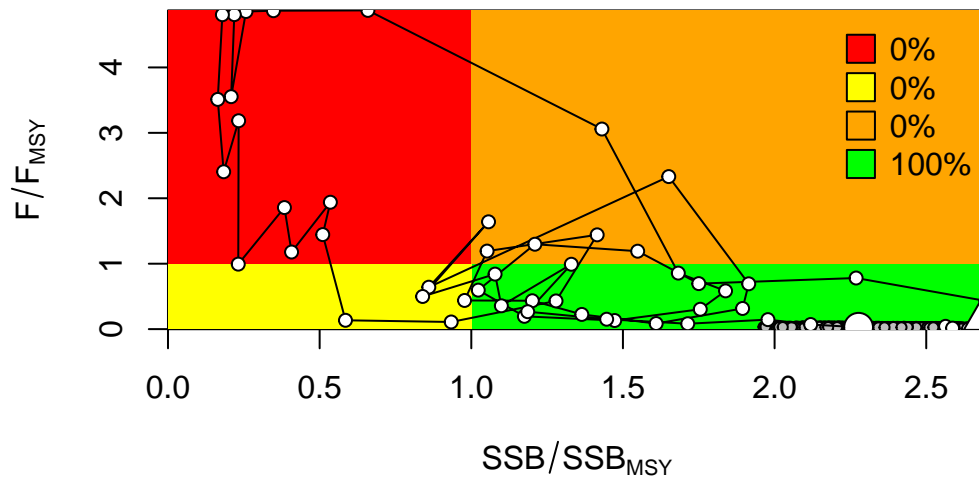
### Changes in survey likelihood by fleet

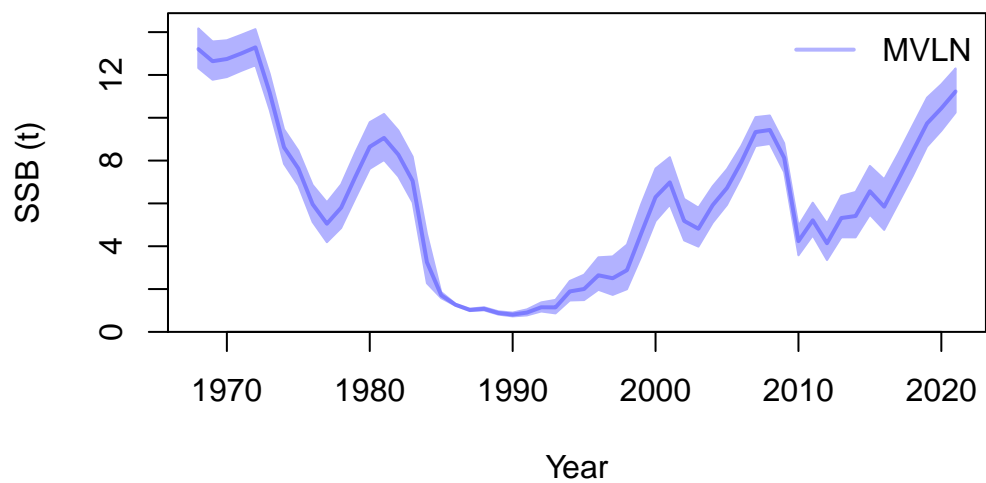
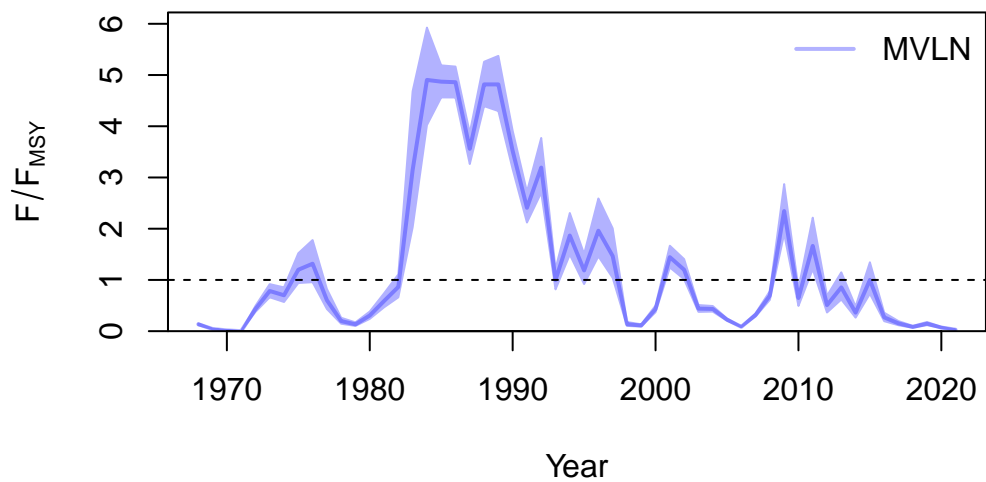


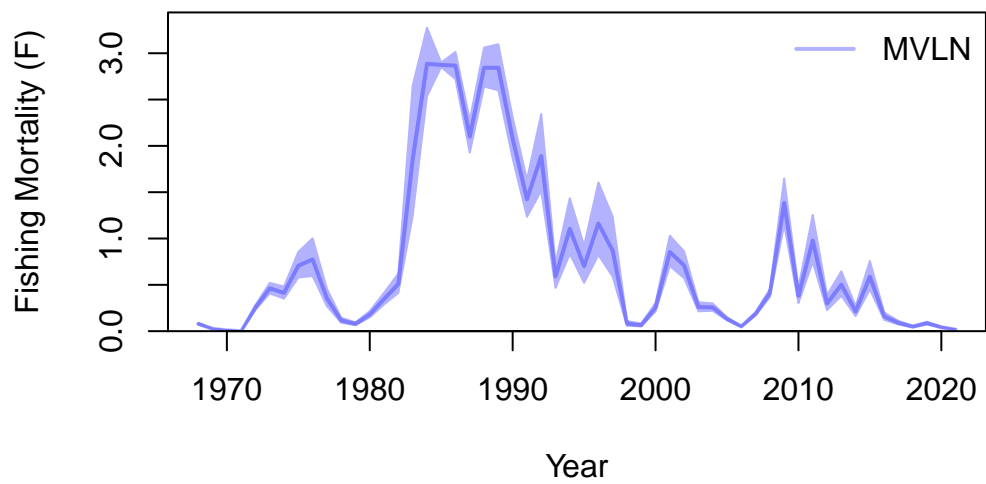
Management Quantities



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







null device  
1

**Jitter**

