

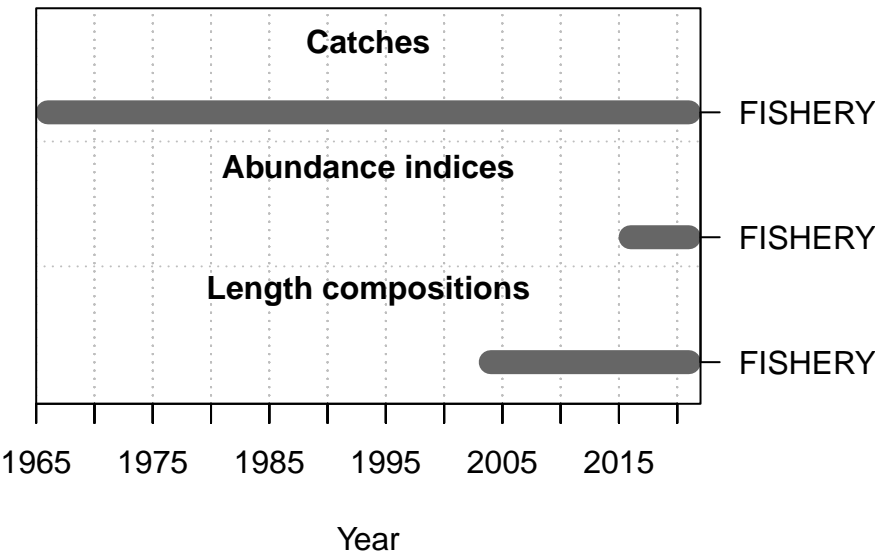
American Samoa Model Checks

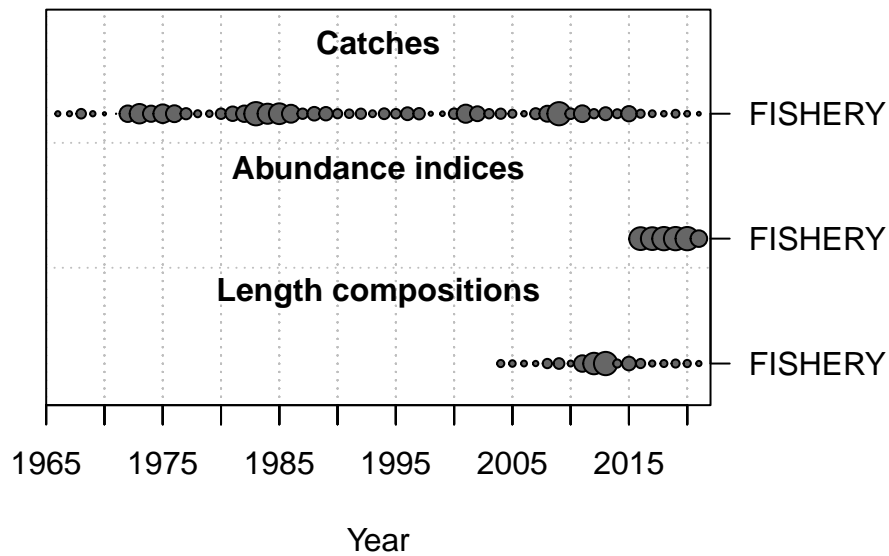
2022-10-07

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

Model Output

Input Data





Convergence Check

```

Converged      MaxGrad
1      TRUE 7.93385e-05

```

```

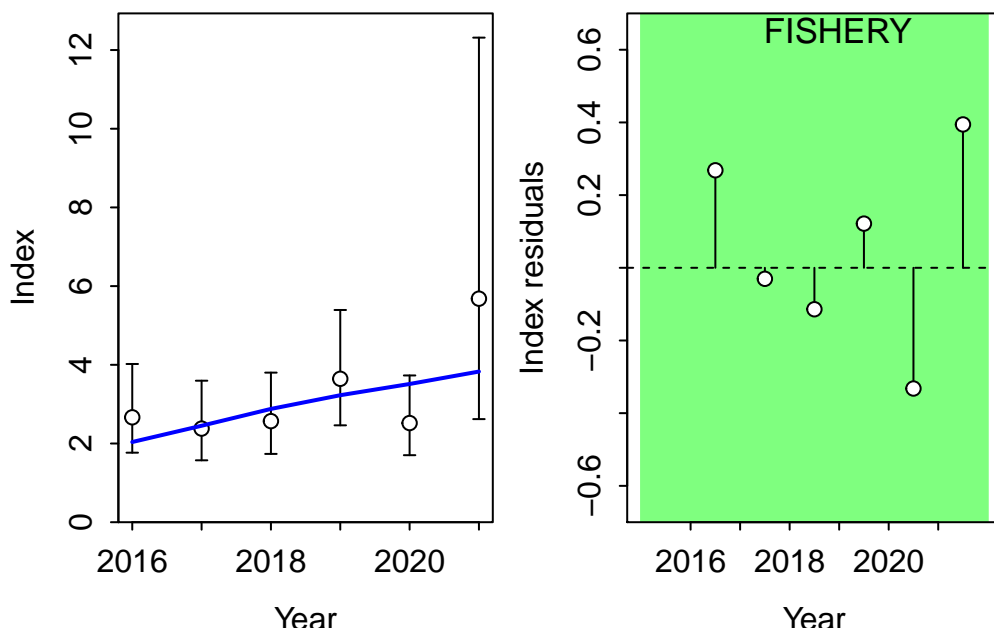
[1] "1 NOTE: Max data length bin: 38.5 < max pop len bins: 43; so will accumulate larger p
[2] "N warnings: 1"

```

Fit to Model

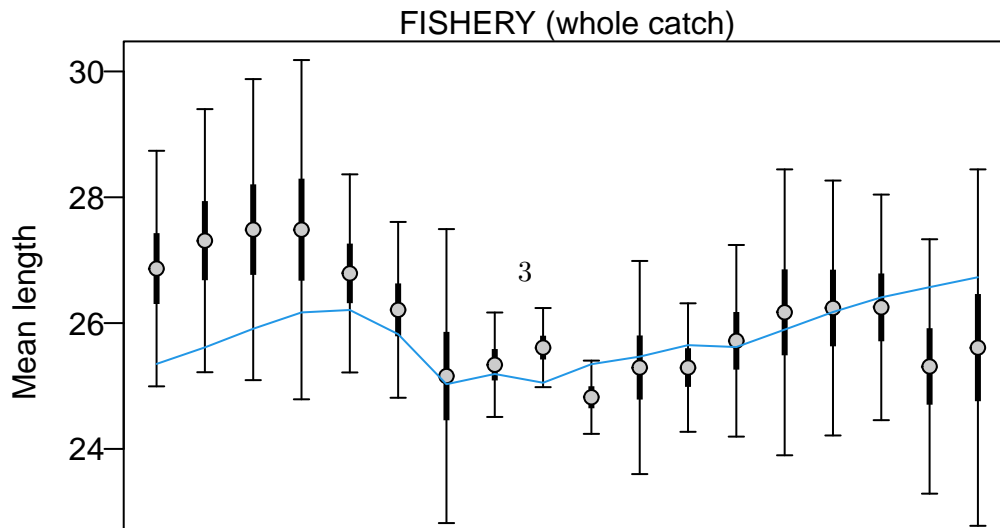
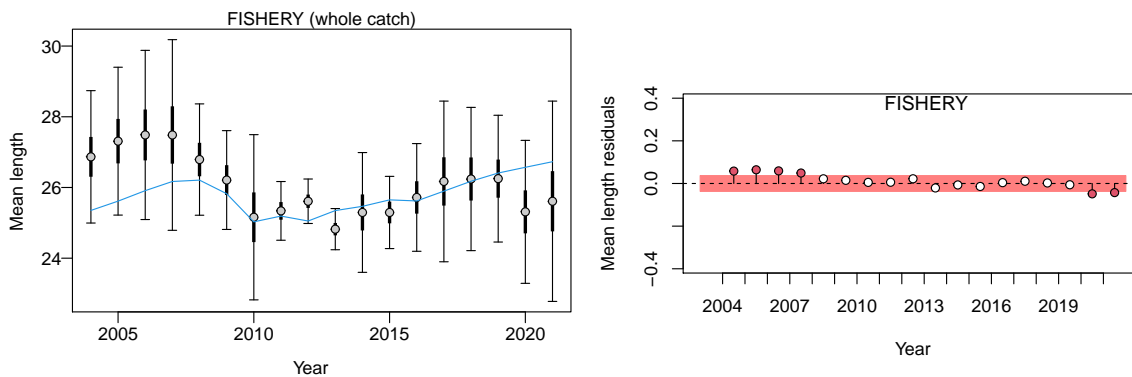
CPUE

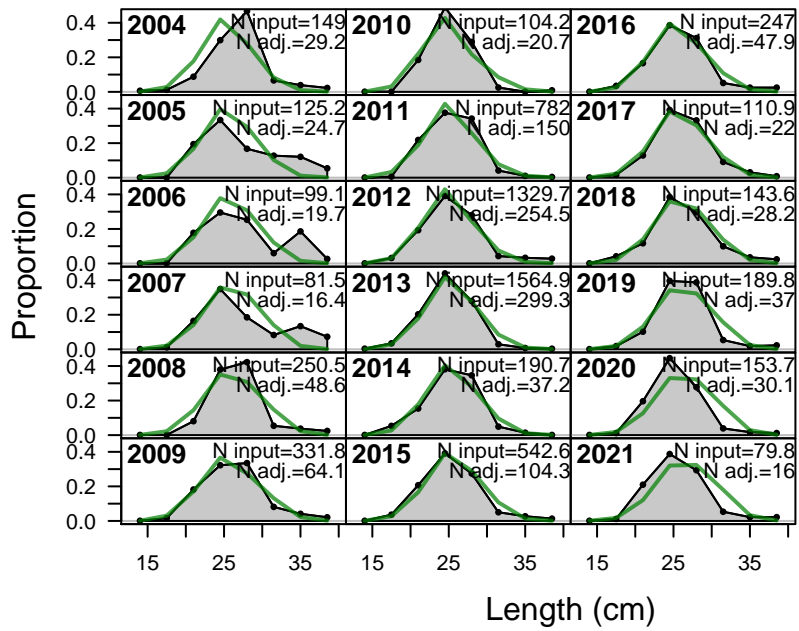
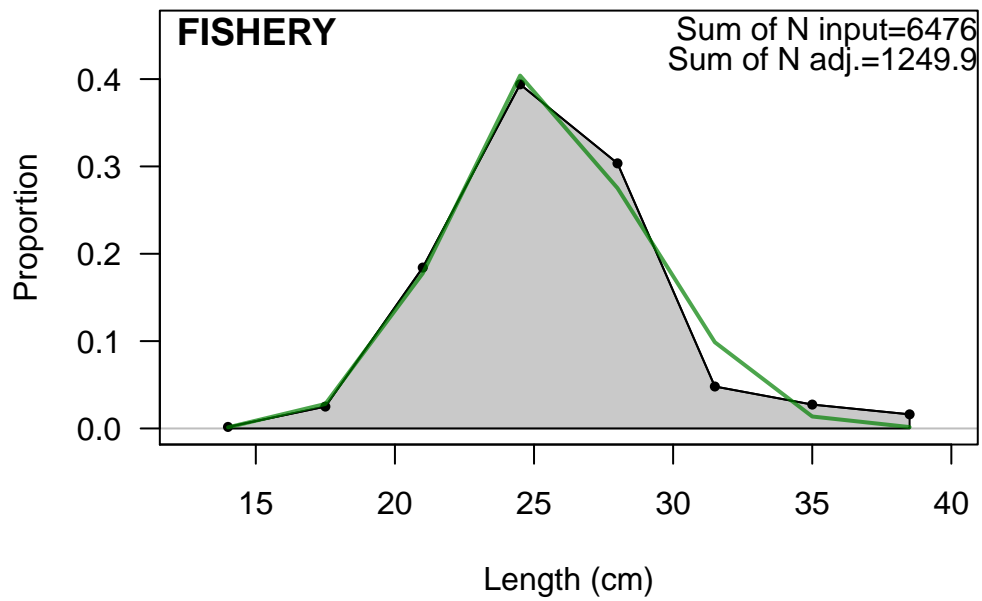
| Fleet | RMSE.perc | Nobs |
|----------|-----------|------|
| FISHERY | 24.7 | 6 |
| Combined | 24.7 | 6 |



Length Comp

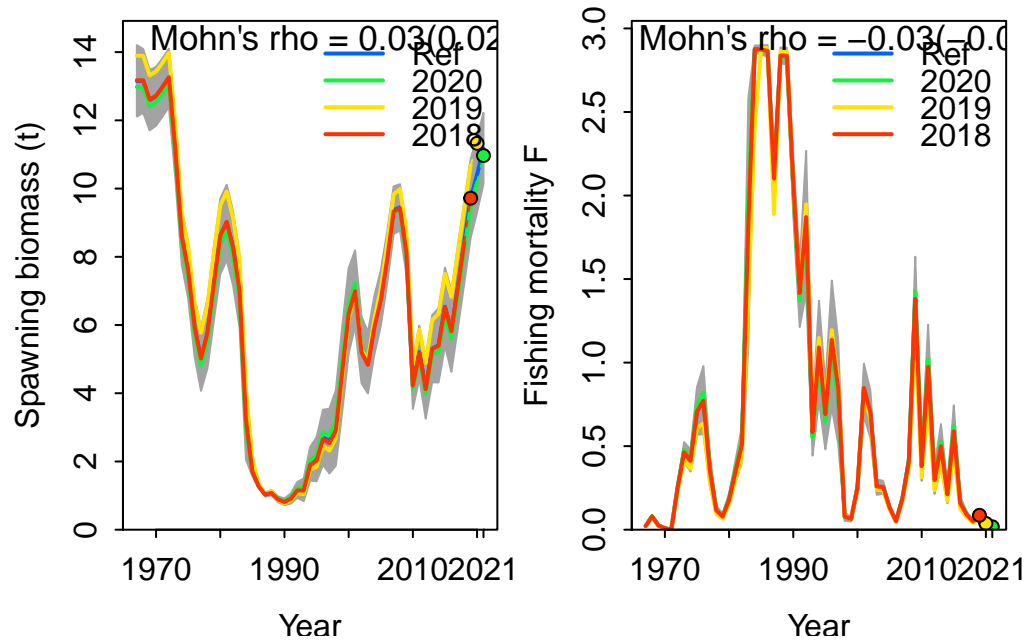
| Fleet | RMSE.perc | Nobs |
|----------|-----------|------|
| FISHERY | 3.3 | 18 |
| Combined | 3.3 | 18 |





Retrospective

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



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

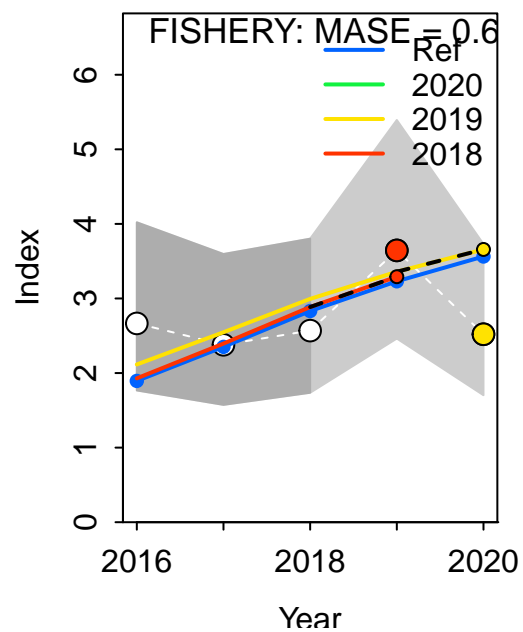
| | type | peel | Rho | Forecast | Rho |
|---|------------|------|-------------|-------------|-----|
| 1 | F | 2020 | 0.03260408 | 0.02948496 | |
| 2 | F | 2019 | -0.12421658 | -0.11324186 | |
| 3 | F | 2018 | -0.00164374 | -0.00184600 | |
| 4 | F Combined | | -0.03108541 | -0.02853430 | |

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



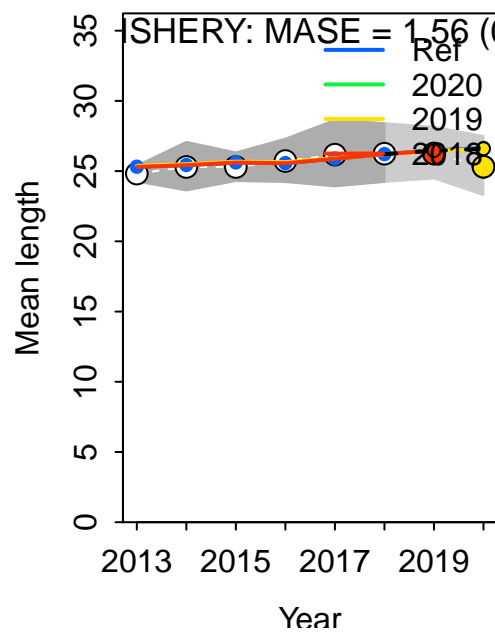
MASE stats by Index:

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:

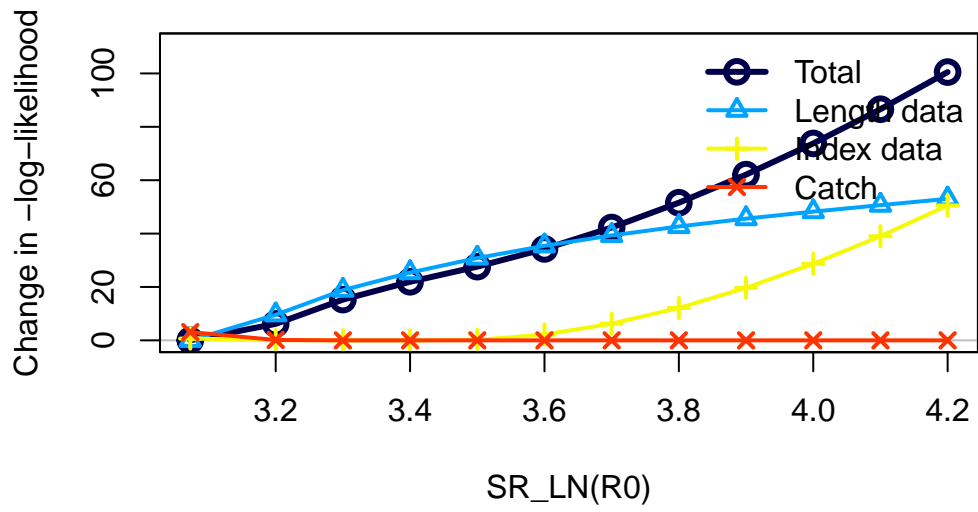


Recruitment Deviations

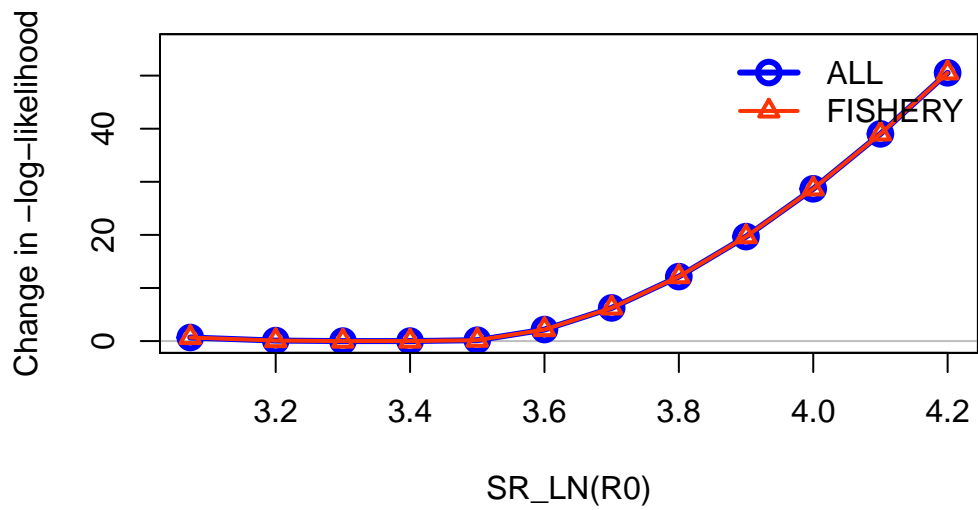
Likelihood Profile

[1] "SR_LN"

| | frac_change | include | label |
|----------------------|-------------|---------|----------------------------------|
| TOTAL | 1.0000 | TRUE | Total |
| Catch | 0.0308 | TRUE | Catch |
| Equil_catch | 0.0000 | FALSE | Equilibrium catch |
| Survey | 0.5027 | TRUE | Index data |
| Length_comp | 0.5274 | 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 | 0.0074 | FALSE | Priors |
| Parm_softbounds | 0.0000 | FALSE | Soft bounds |
| Parm_devs | 0.0000 | FALSE | Parameter deviations |
| Crash_Pen | 0.0000 | FALSE | Crash penalty |

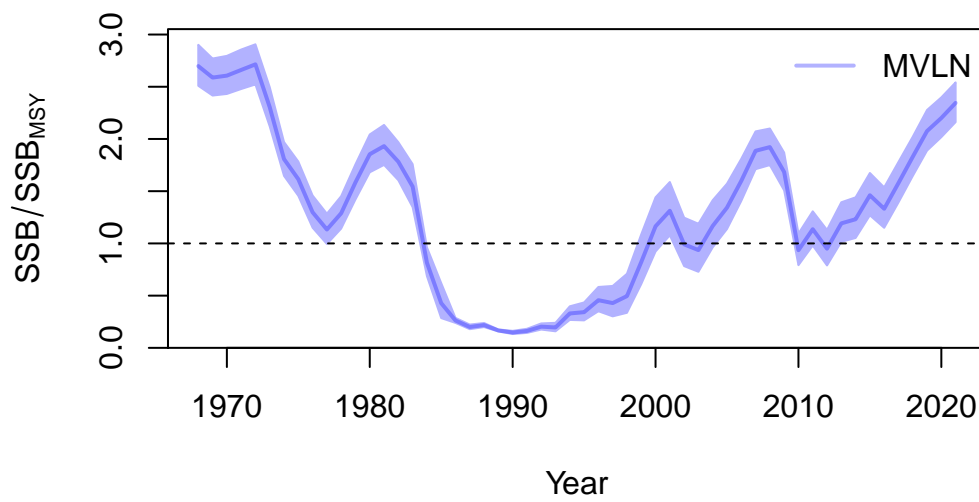
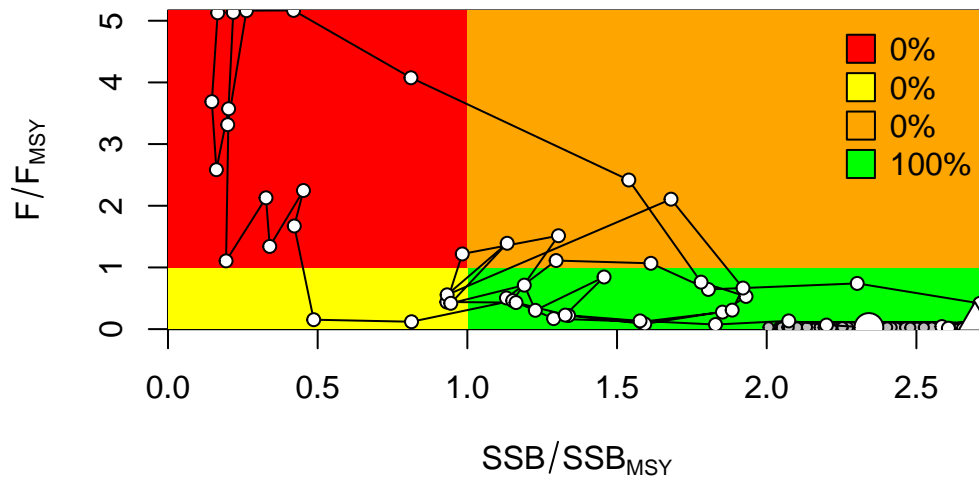


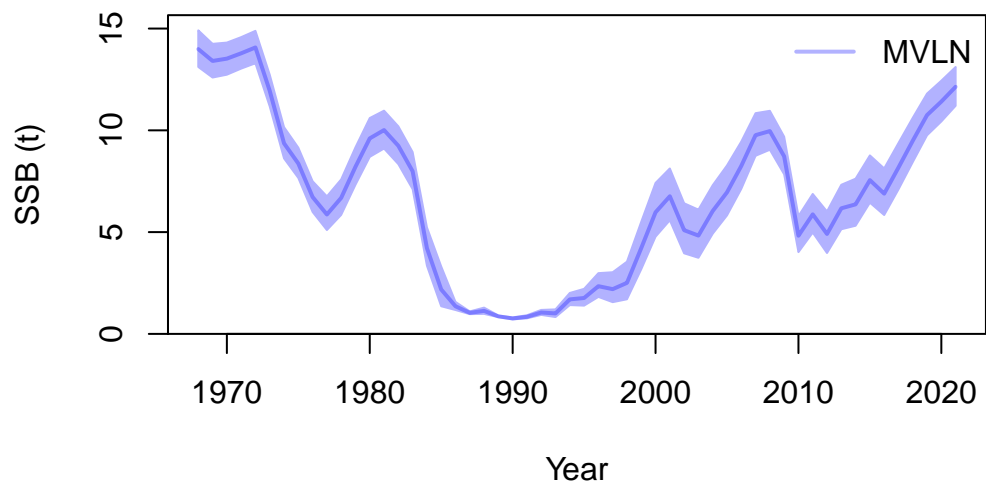
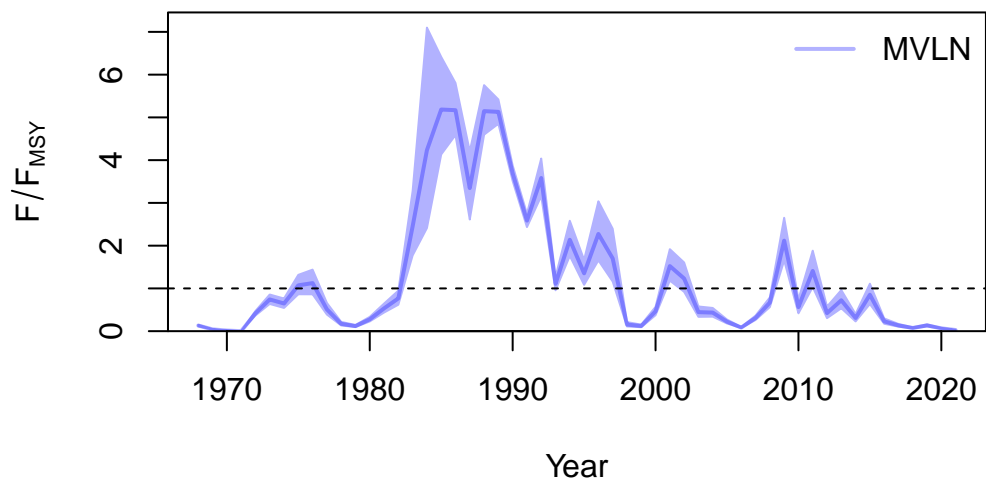
Changes in survey likelihood by fleet

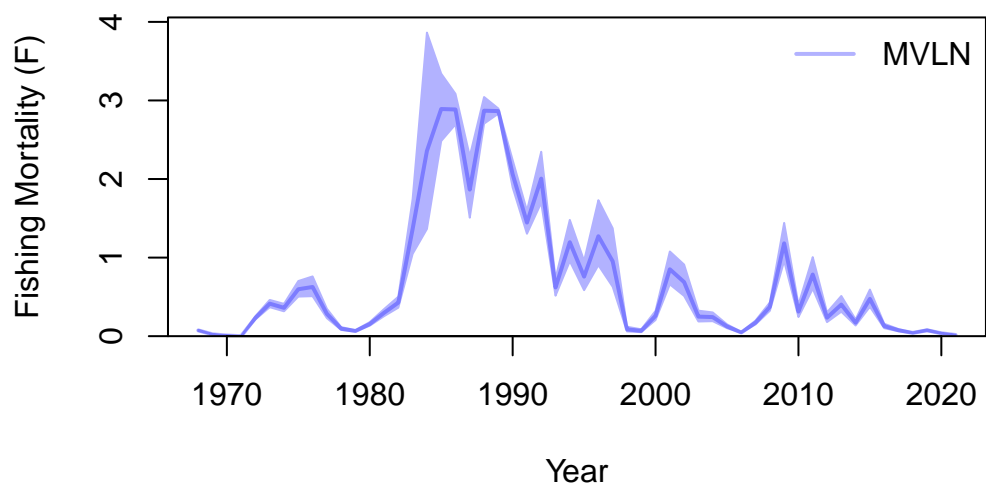


Management Quantities

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







null device
1

Jitter

