

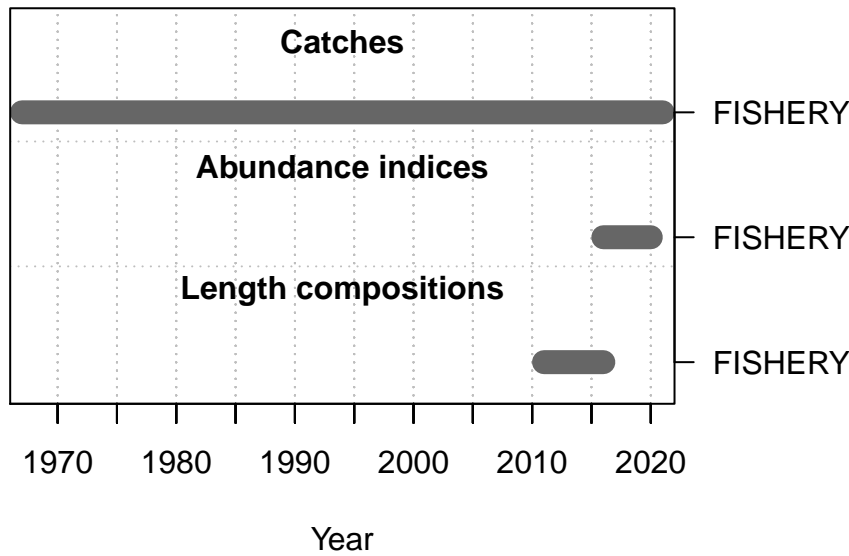
American Samoa Model Checks

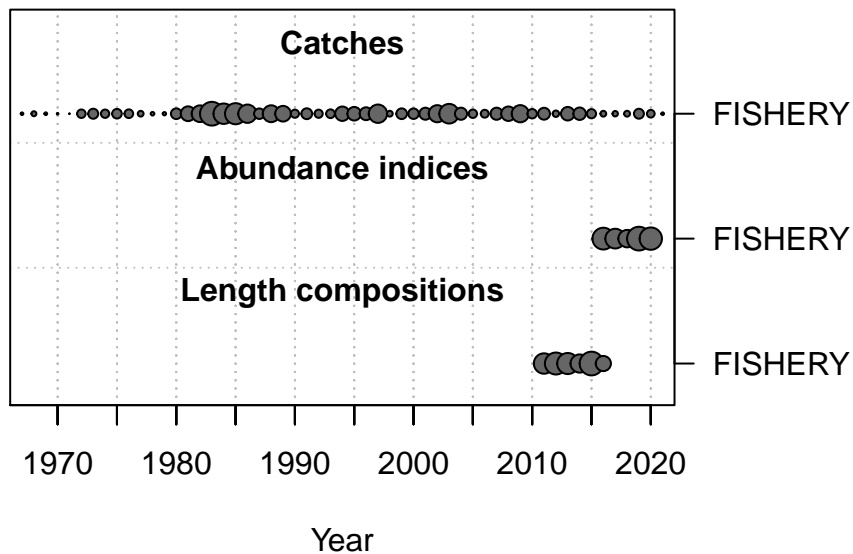
2022-08-30

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

Model Output

Input Data





Convergence Check

```

Converged      MaxGrad
1      TRUE 3.77589e-05

```

```

[1] "1 NOTE: Max data length bin: 51 < max pop len bins: 57; so will accumulate larger pop
[2] "2 warning: poor convergence in Fmsy, final dy/dy2= 0.00126125"
[3] "N warnings: 2"

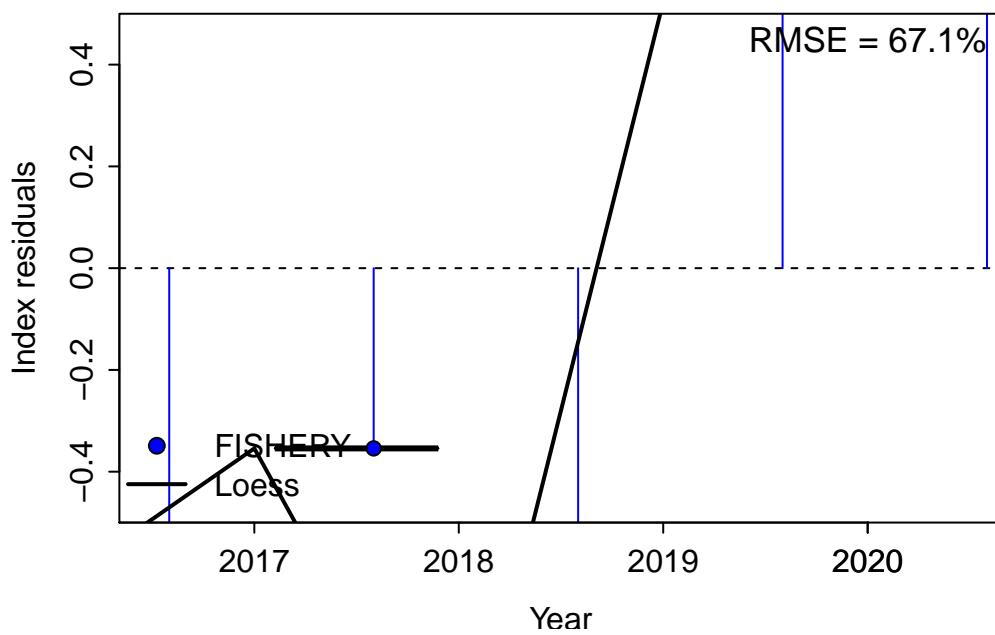
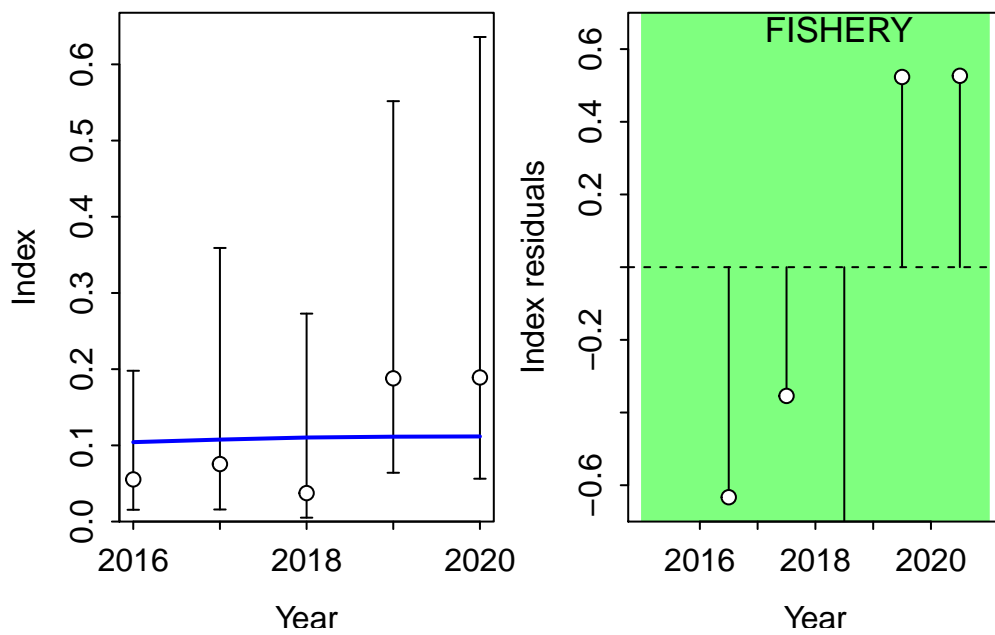
```

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	0.101589	len	FISHERY

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

```

Index runs.p  test  sigma3.lo sigma3.hi type
1 FISHERY    0.5 Passed -0.2497626 0.2497626 len

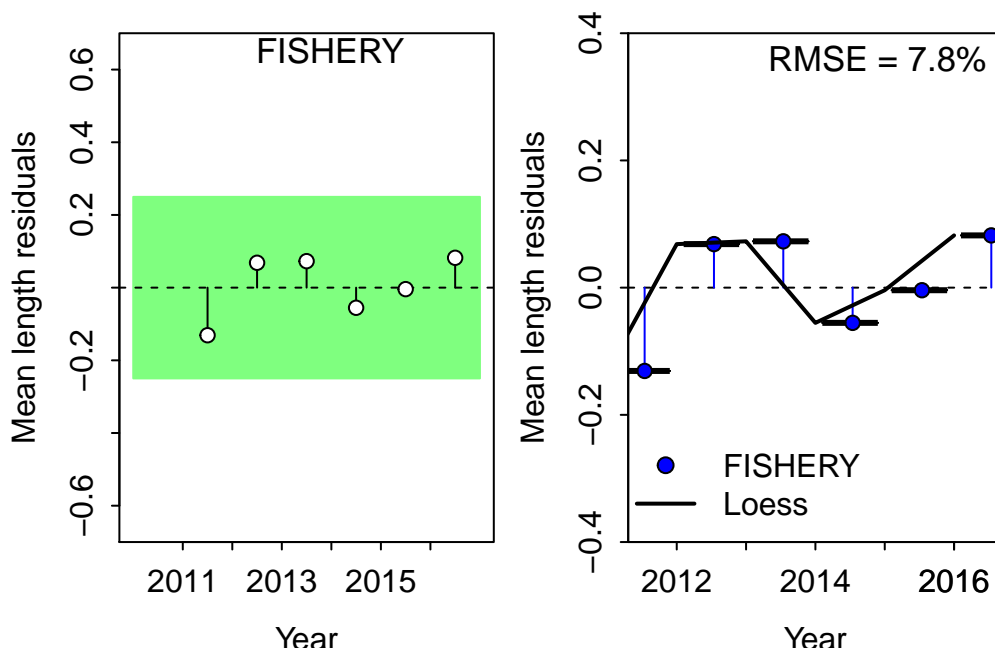
```

RMSE stats by Index:

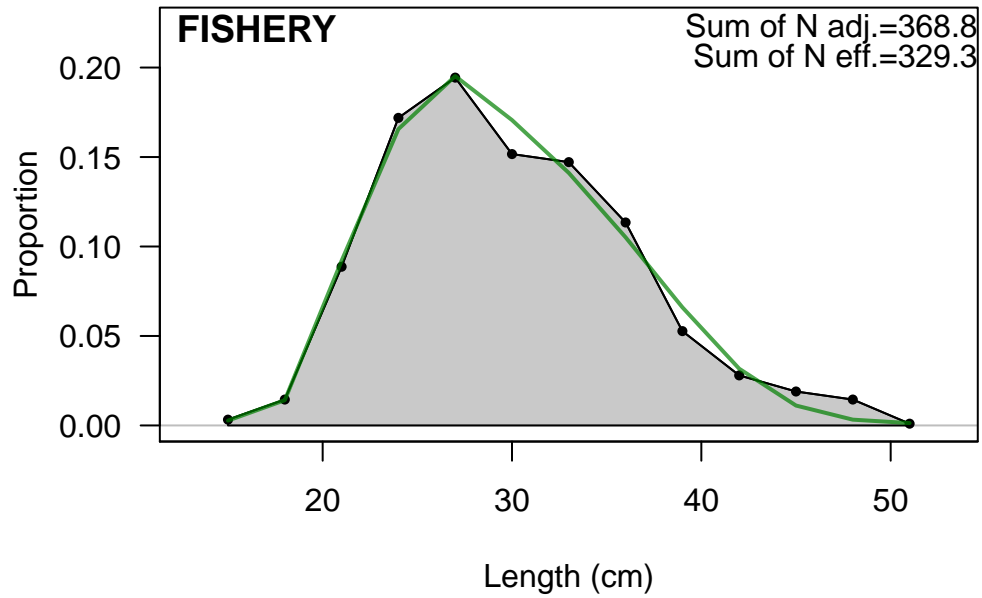
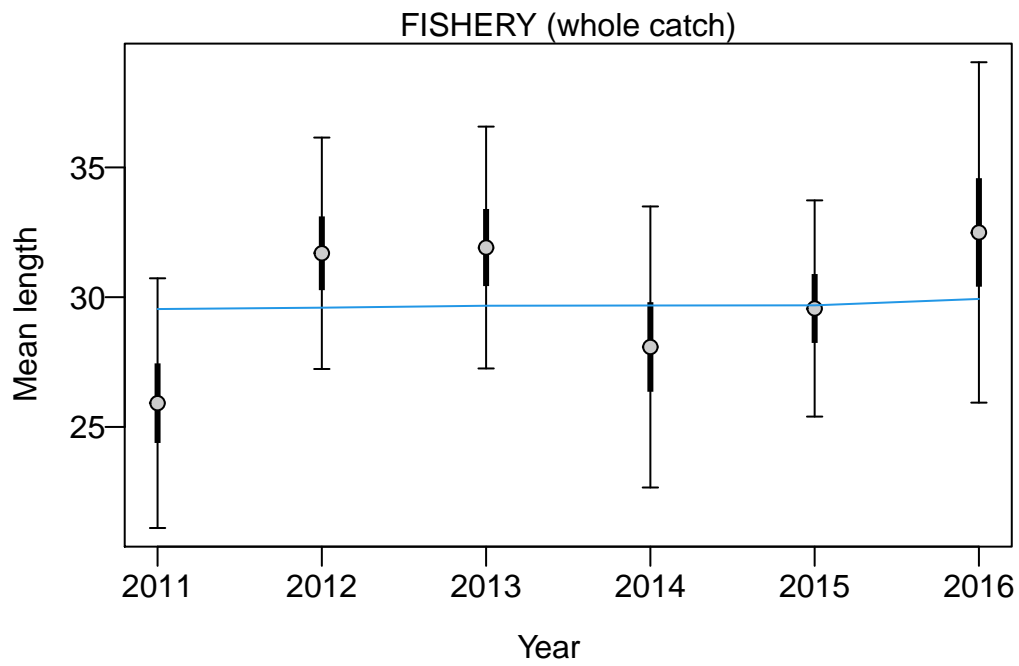
```

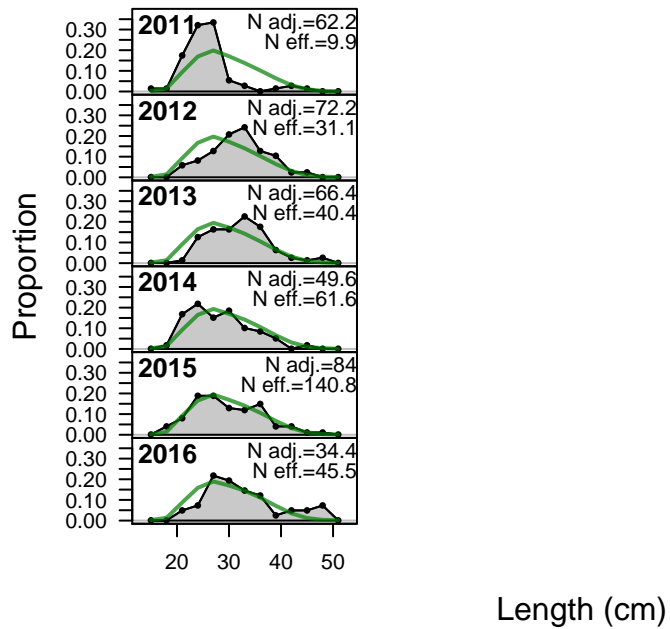
# A tibble: 2 x 3
  Fleet    RMSE.perc  Nobs
  <chr>      <dbl> <int>
1 FISHERY      7.8     6
2 Combined      7.8     6

```



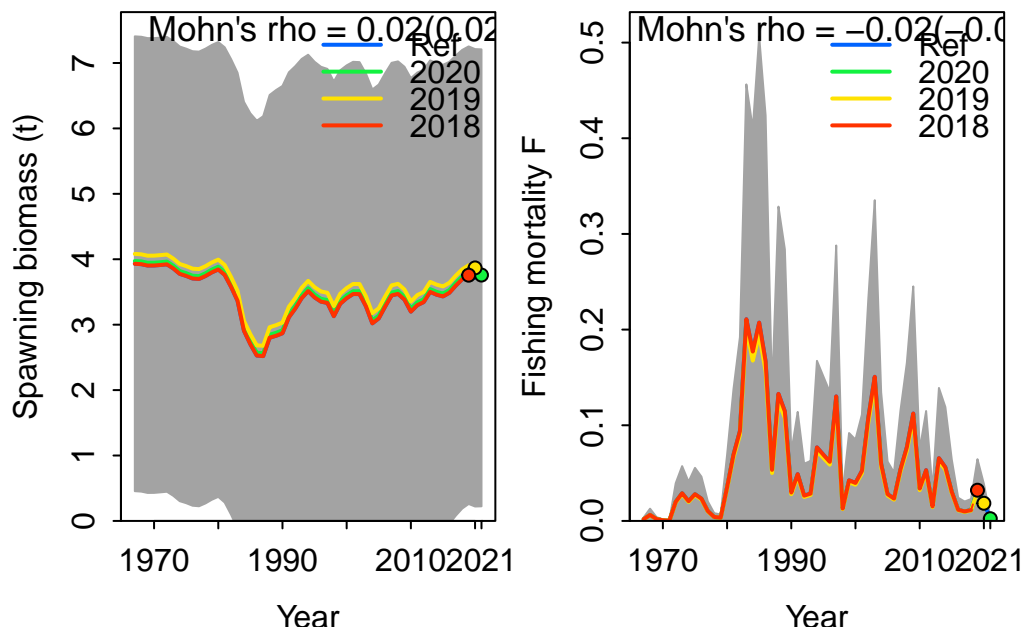
Retrospective and Hindcasting





Retrospective

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



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

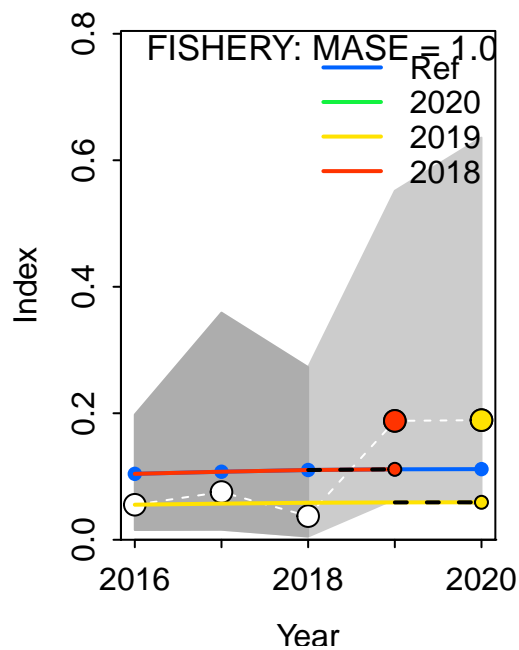
	type	peel	Rho	ForecastRho
1	F	2020	-0.01205738	-0.01187200
2	F	2019	-0.04186735	-0.04171075
3	F	2018	0.00000000	0.00000000
4	F Combined		-0.01797491	-0.01786092

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

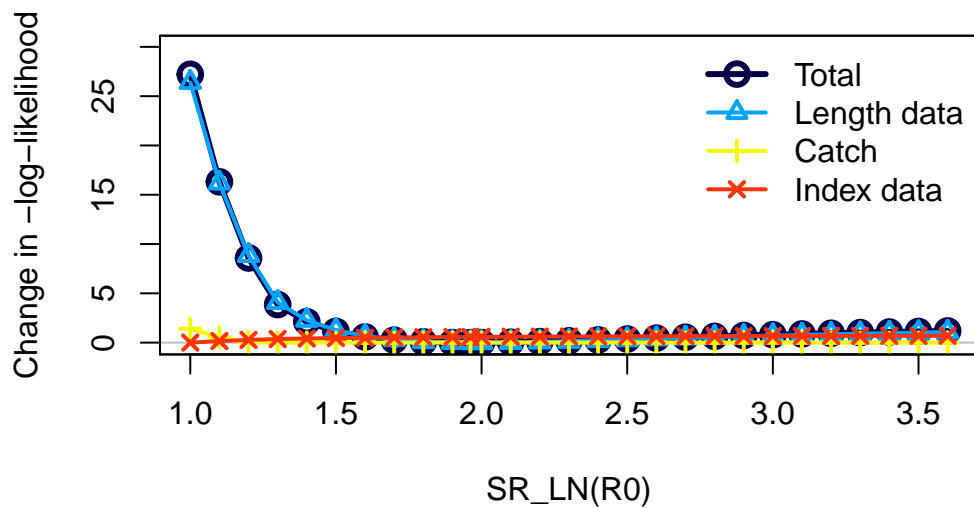
MASE stats by Index:

Recruitment Deviations

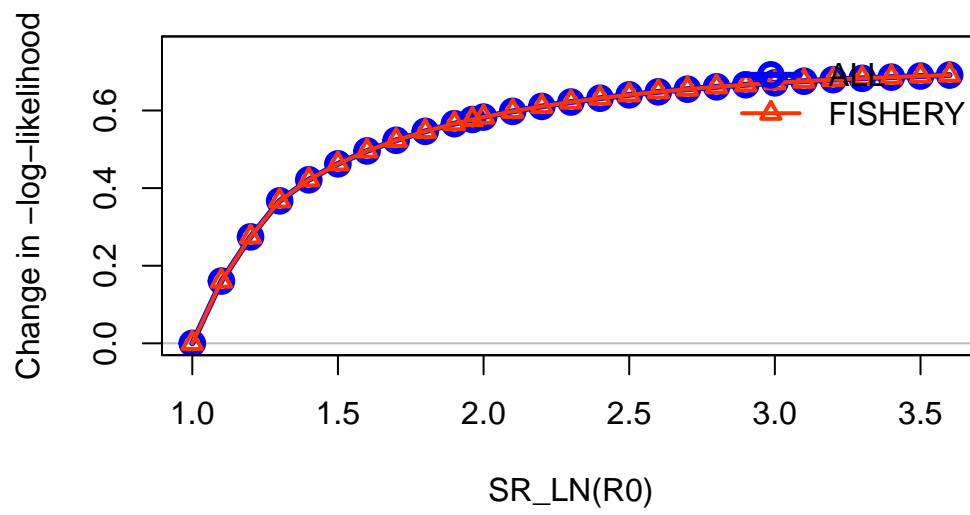
Likelihood Profile

[1] "SR_LN"

	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.0517	TRUE	Catch
Equil_catch	0.0000	FALSE	Equilibrium catch
Survey	0.0254	TRUE	Index data
Length_comp	0.9696	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	0.0001	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

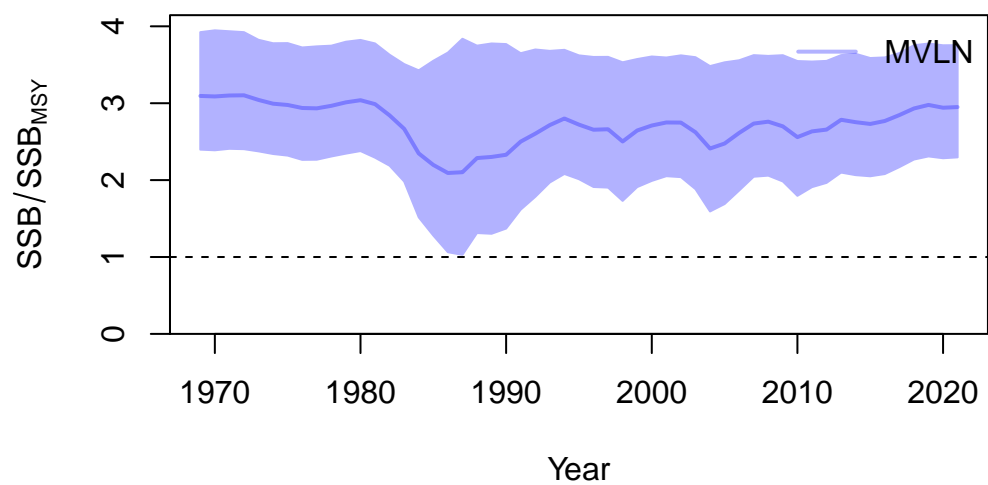
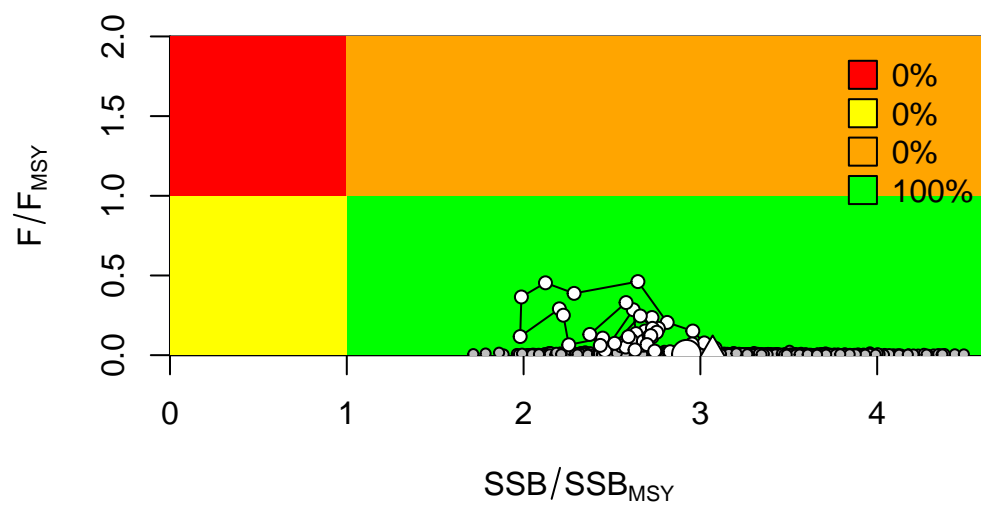


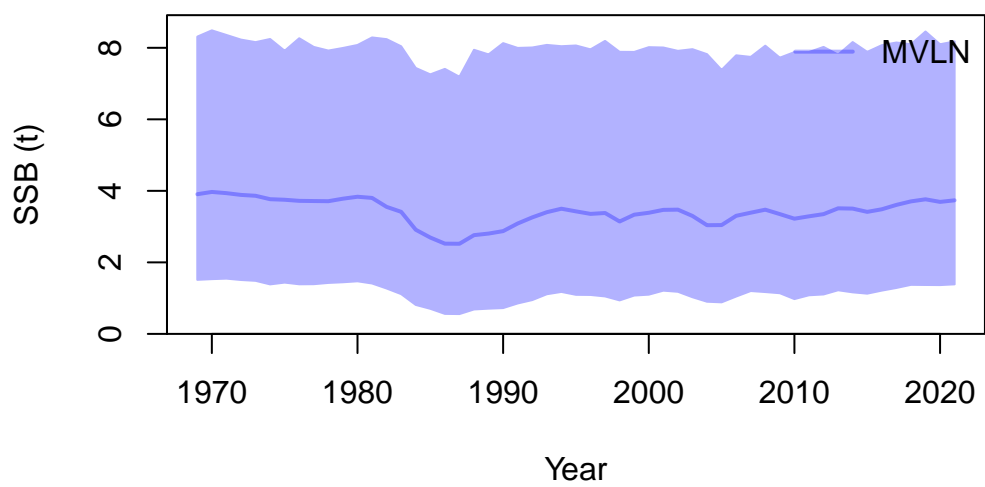
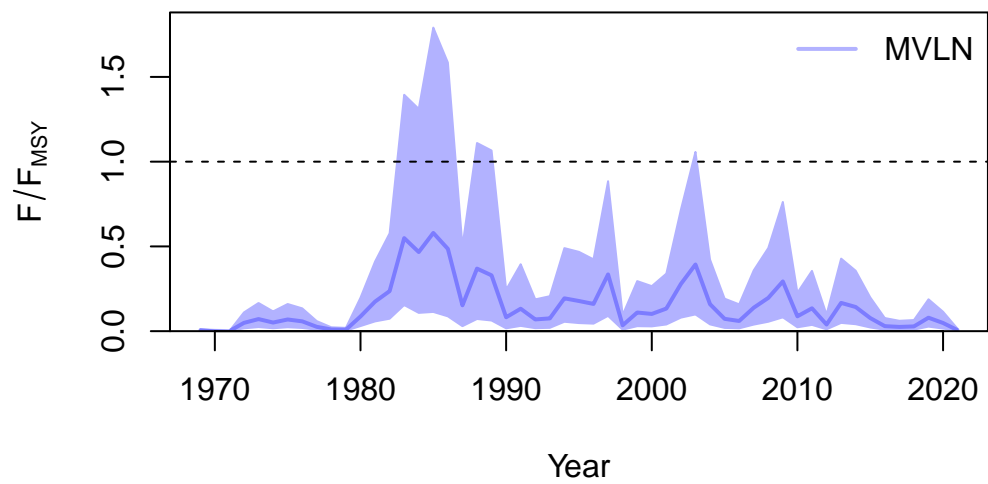
Changes in survey likelihood by fleet

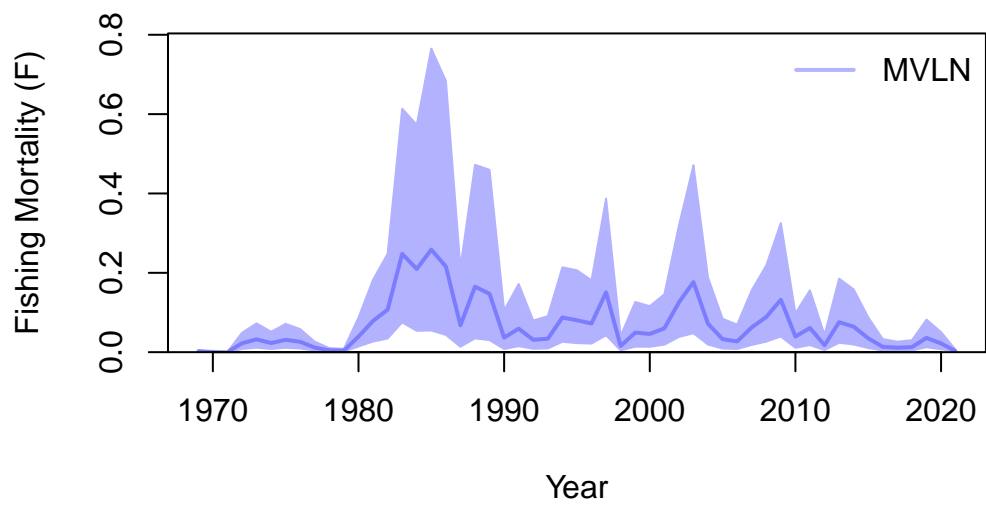


Management Quantities

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







null device
1

Jitter

