

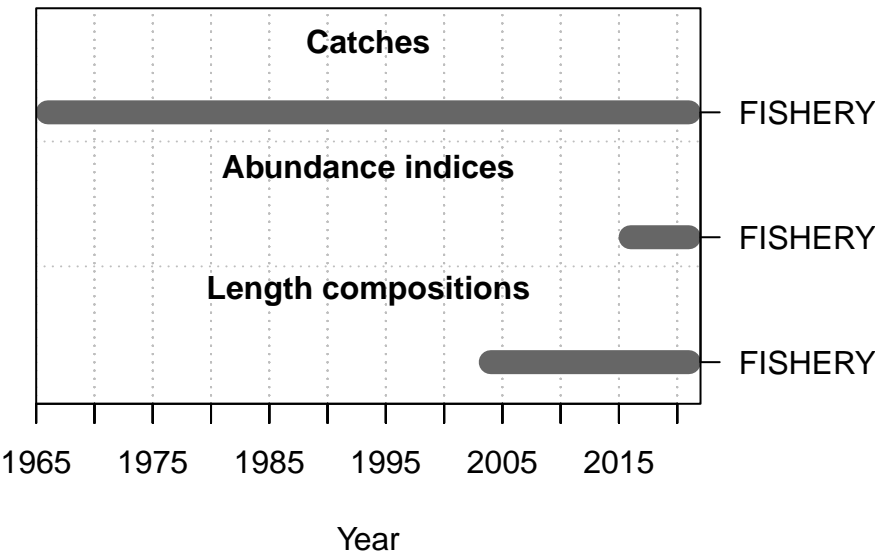
American Samoa Model Checks

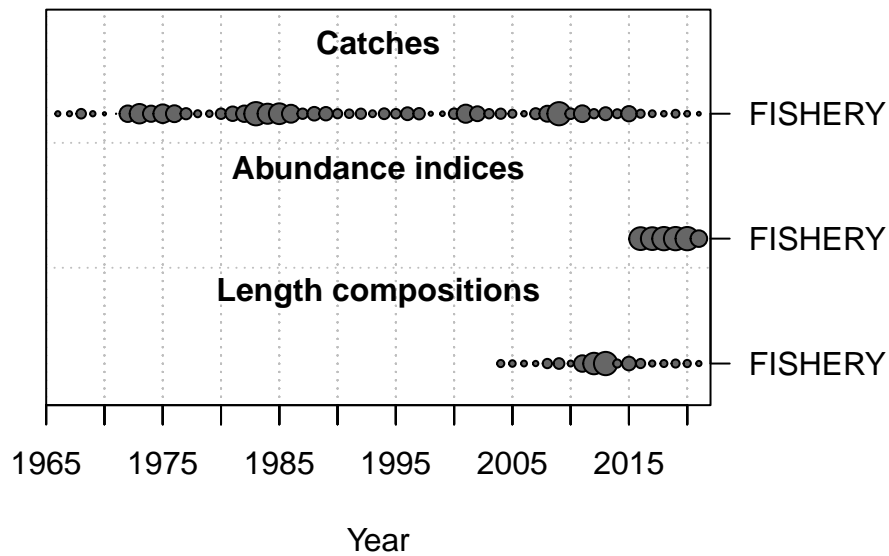
2022-08-30

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

Model Output

Input Data





Convergence Check

```

Converged      MaxGrad
1      TRUE 0.000199172

```

```

[1] "1 NOTE:  Max data length bin: 38.5  < max pop len bins: 43; so will accumulate larger p
[2] "2 Final gradient: 0.000199172 is larger than final_conv: 0.0001"
[3] "N warnings: 2"

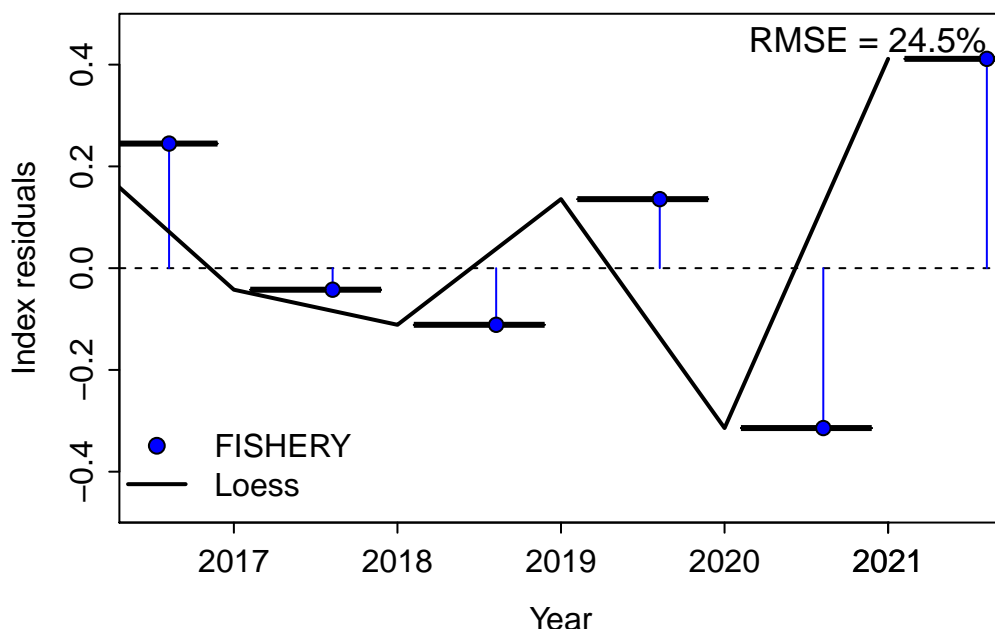
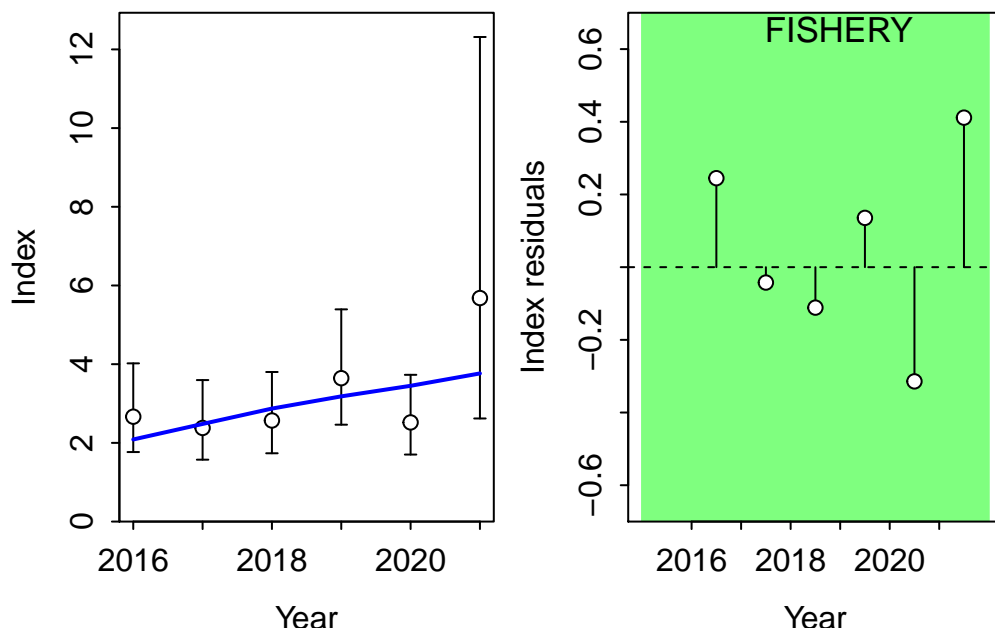
```

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	0.09186	len	FISHERY

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

```

Index runs.p  test  sigma3.lo  sigma3.hi  type
1 FISHERY    0.003 Failed -0.02835243 0.02835243  len

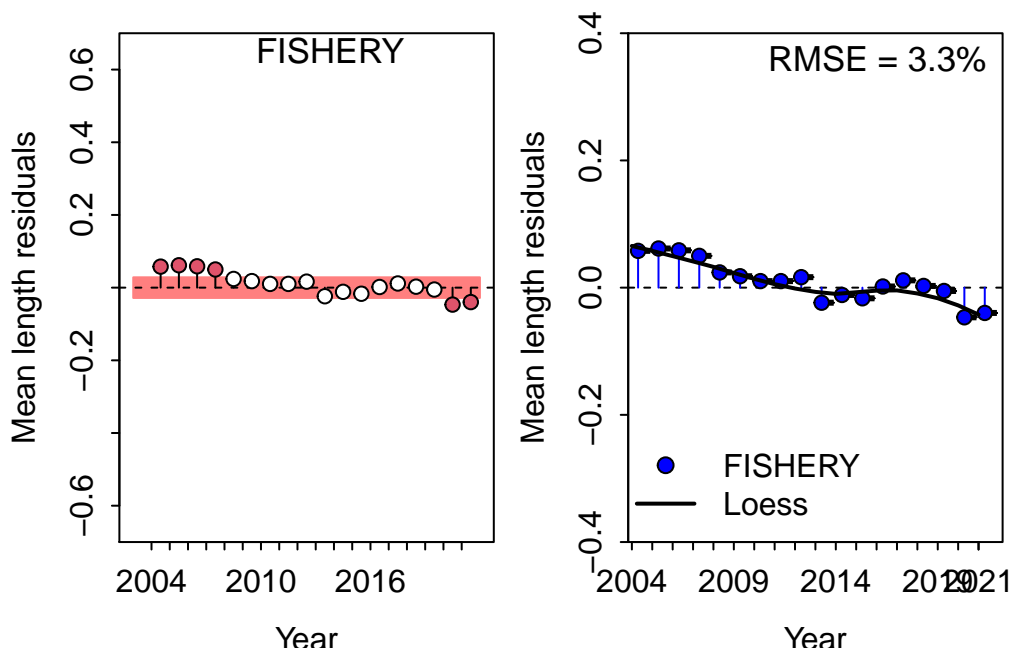
```

RMSE stats by Index:

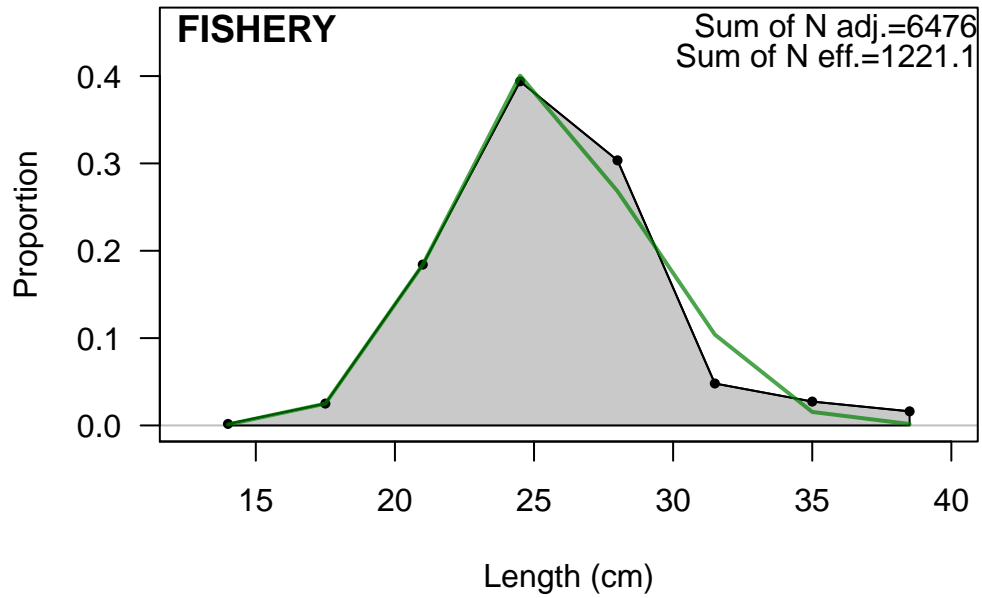
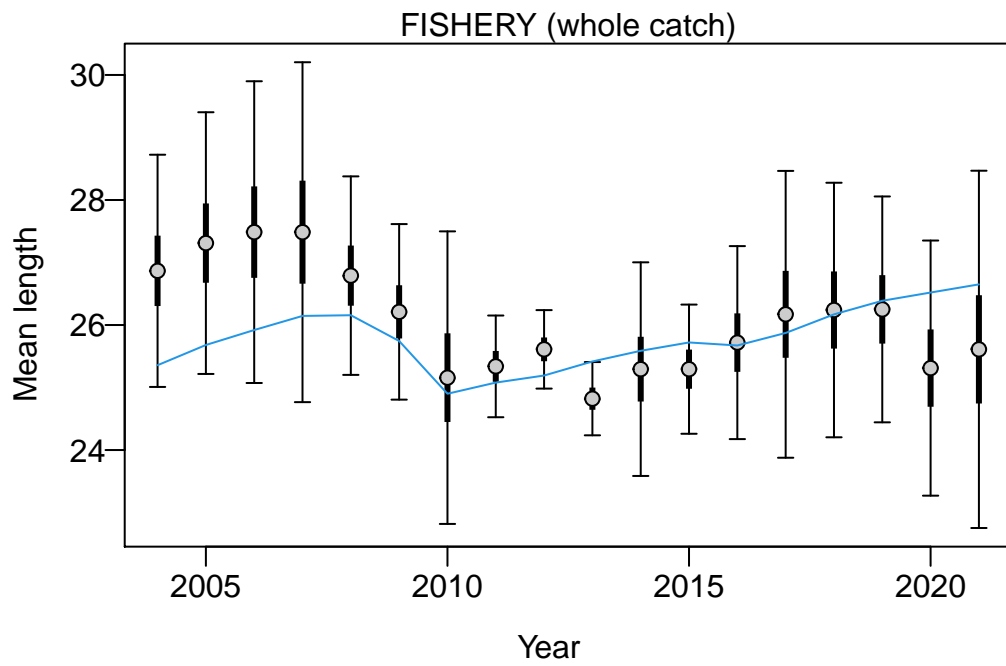
```

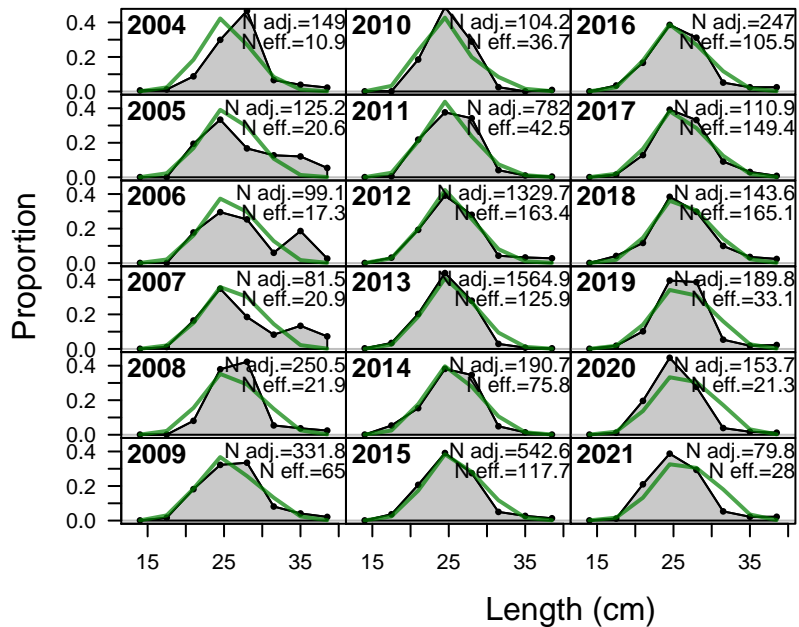
# A tibble: 2 x 3
  Fleet    RMSE.perc  Nobs
  <chr>      <dbl> <int>
1 FISHERY      3.3     18
2 Combined      3.3     18

```



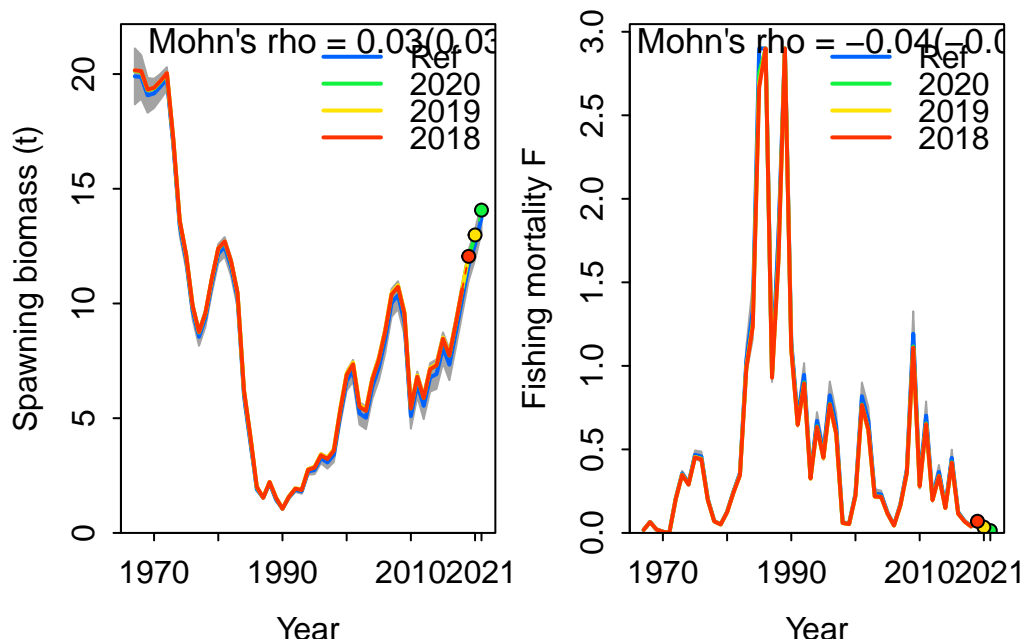
Retrospective and Hindcasting





Retrospective

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



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

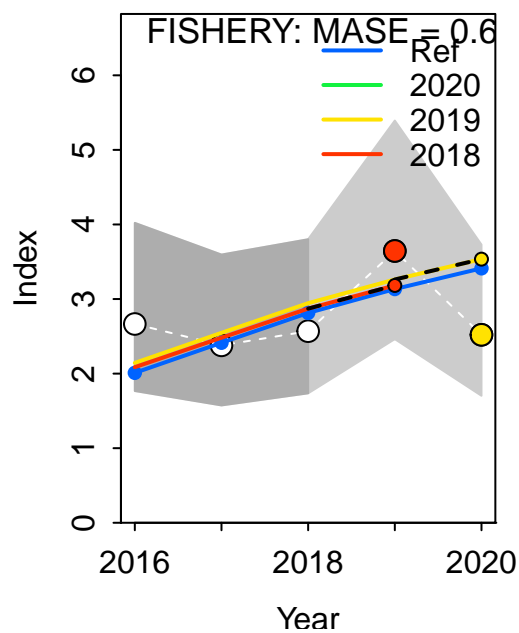
	type	peel	Rho	ForecastRho
1	F	2020	-0.03279372	-0.02902567
2	F	2019	-0.04206809	-0.03777646
3	F	2018	-0.04689102	-0.04222288
4	F Combined		-0.04058428	-0.03634167

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



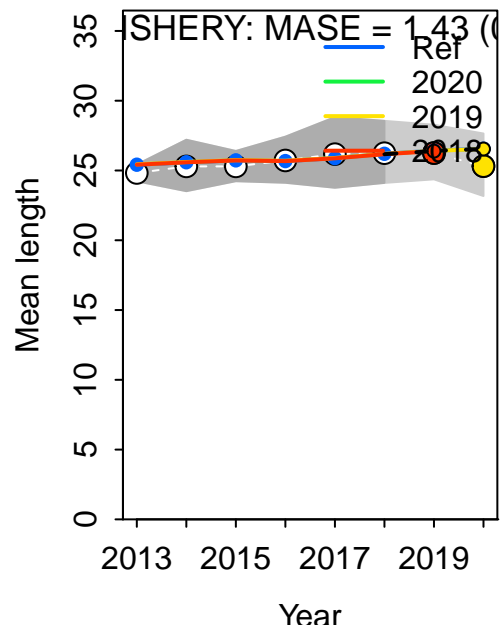
MASE stats by Index:

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:

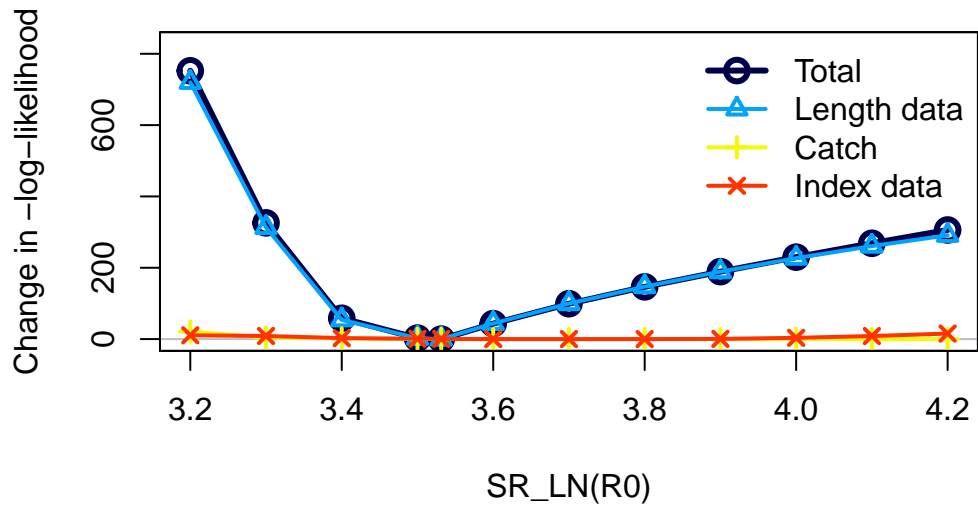


Recruitment Deviations

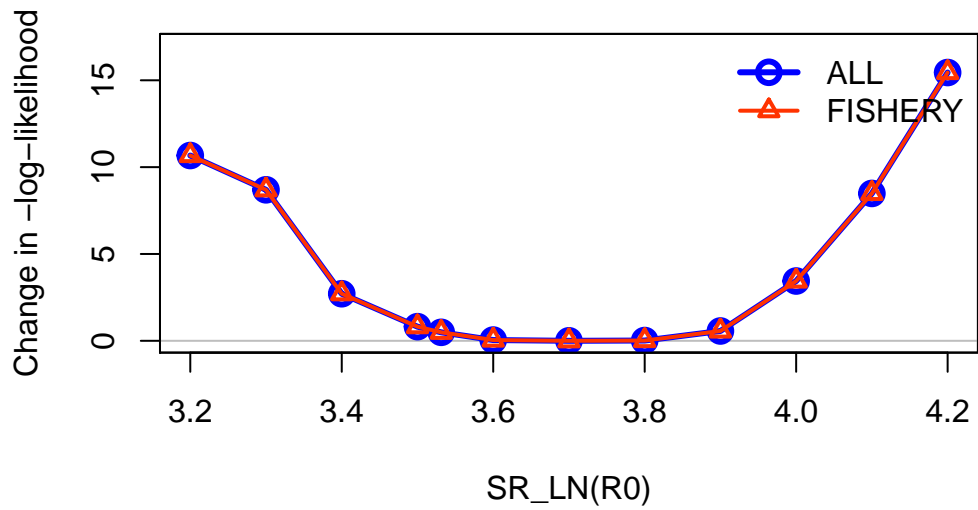
Likelihood Profile

[1] "SR_LN"			
	frac_change	include	label
TOTAL	1.0000	TRUE	Total
Catch	0.0280	TRUE	Catch
Equil_catch	0.0016	FALSE	Equilibrium catch
Survey	0.0205	TRUE	Index data
Length_comp	0.9570	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	0.0000	FALSE	Soft bounds
Parm_devs	0.0000	FALSE	Parameter deviations
Crash_Pen	0.0000	FALSE	Crash penalty

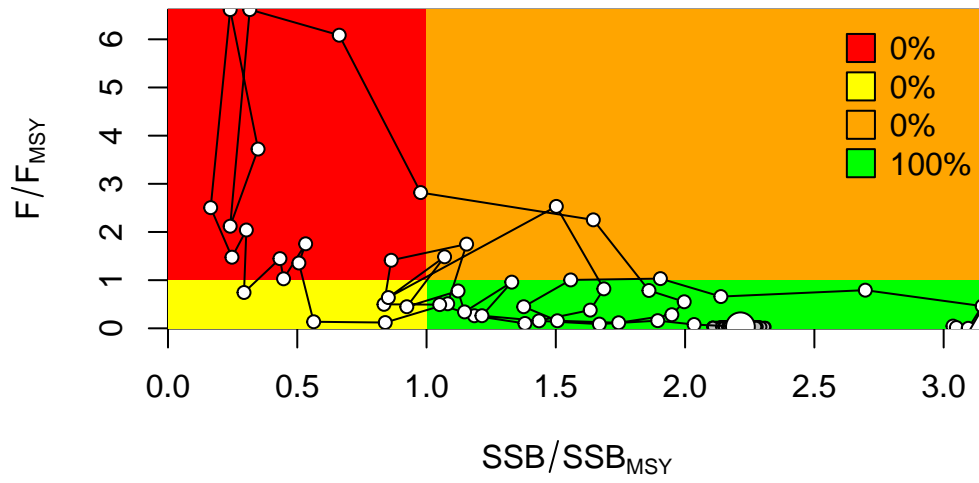


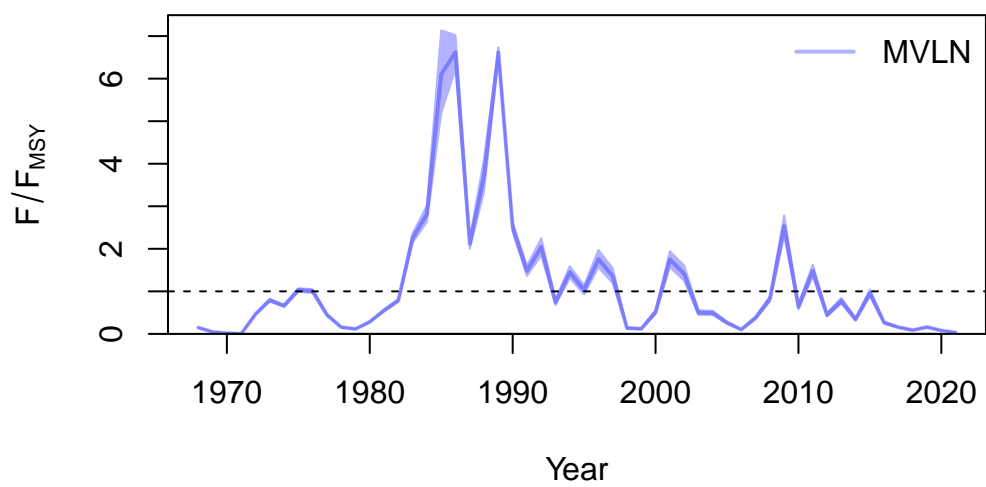
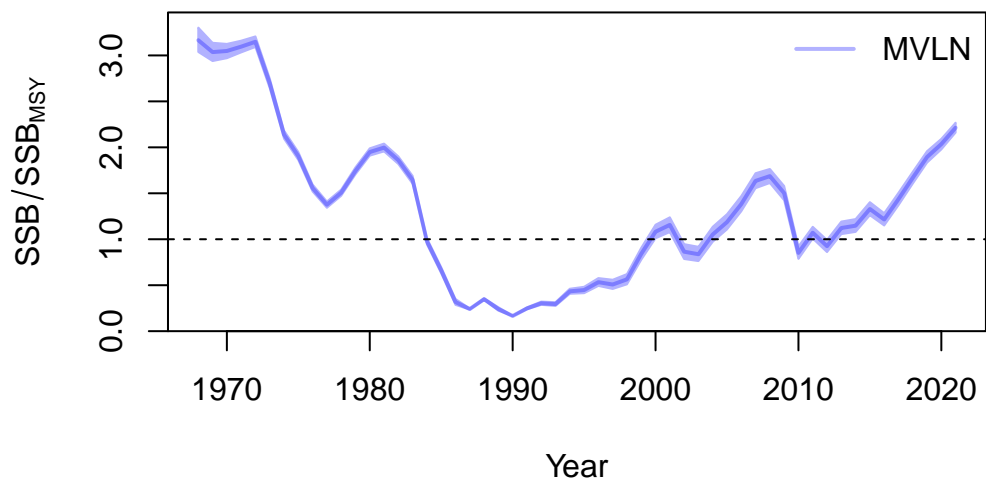
Changes in survey likelihood by fleet

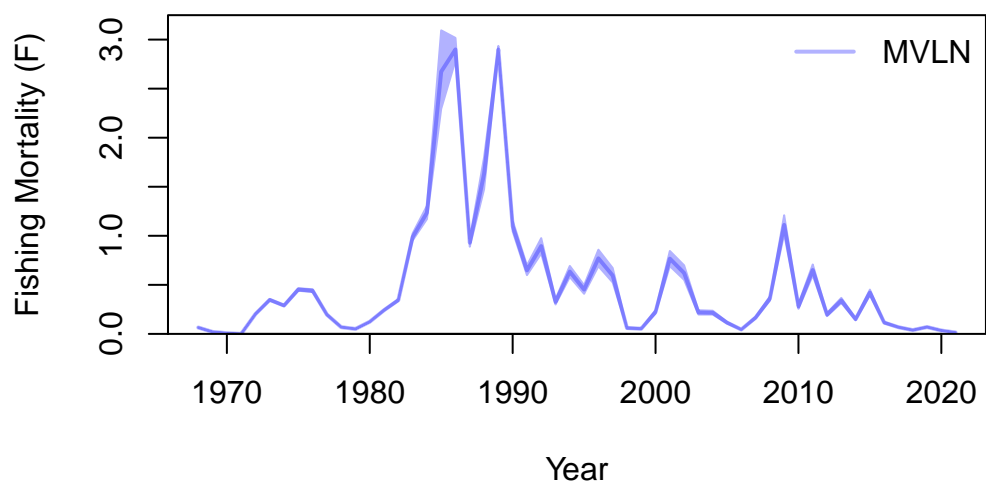
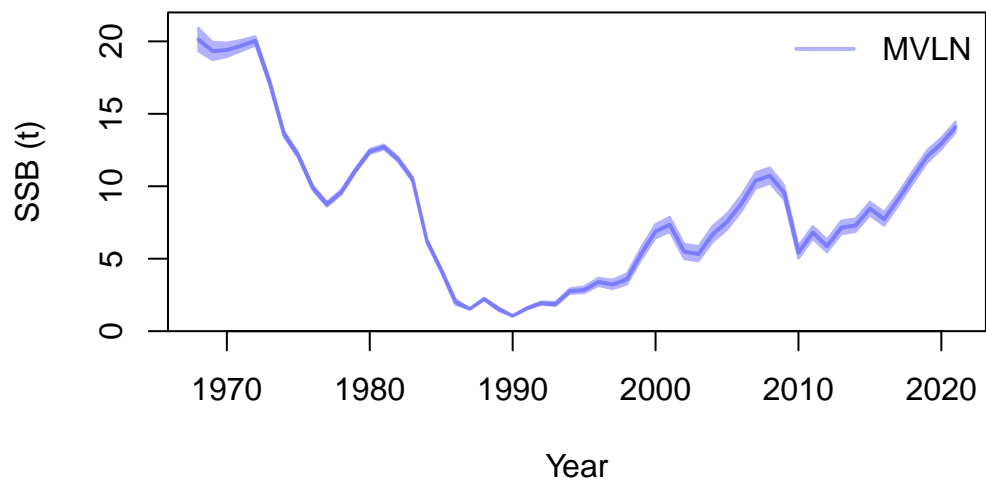


Management Quantities

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







null device
1

Jitter

