American Samoa Model Checks

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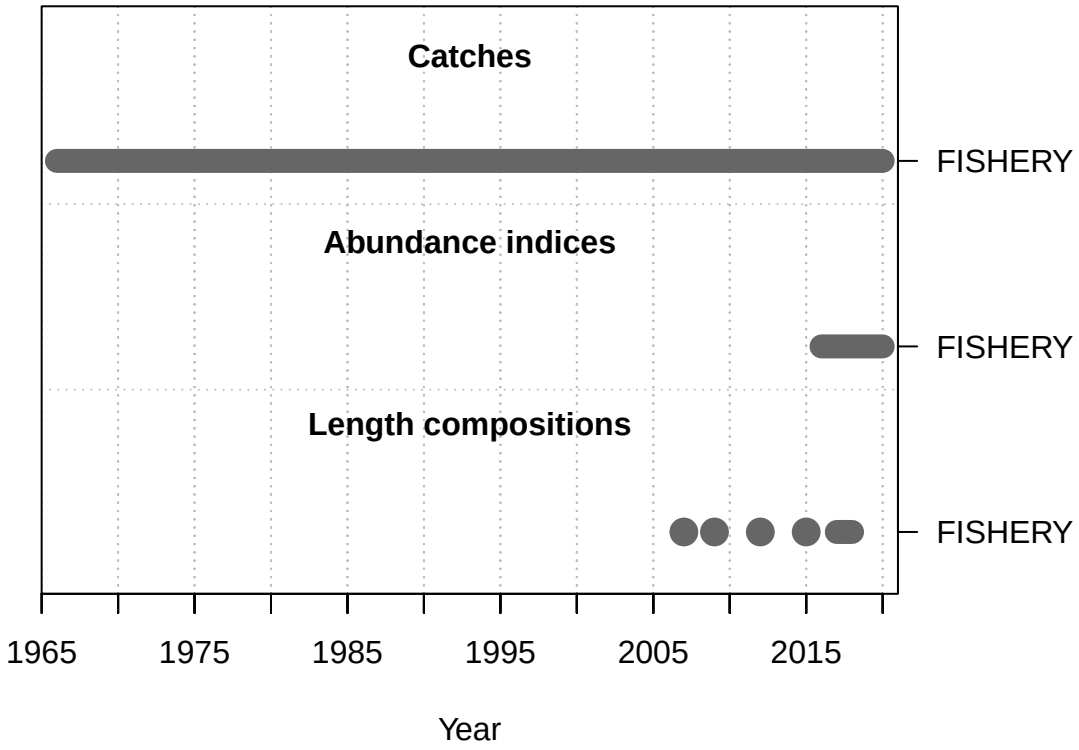
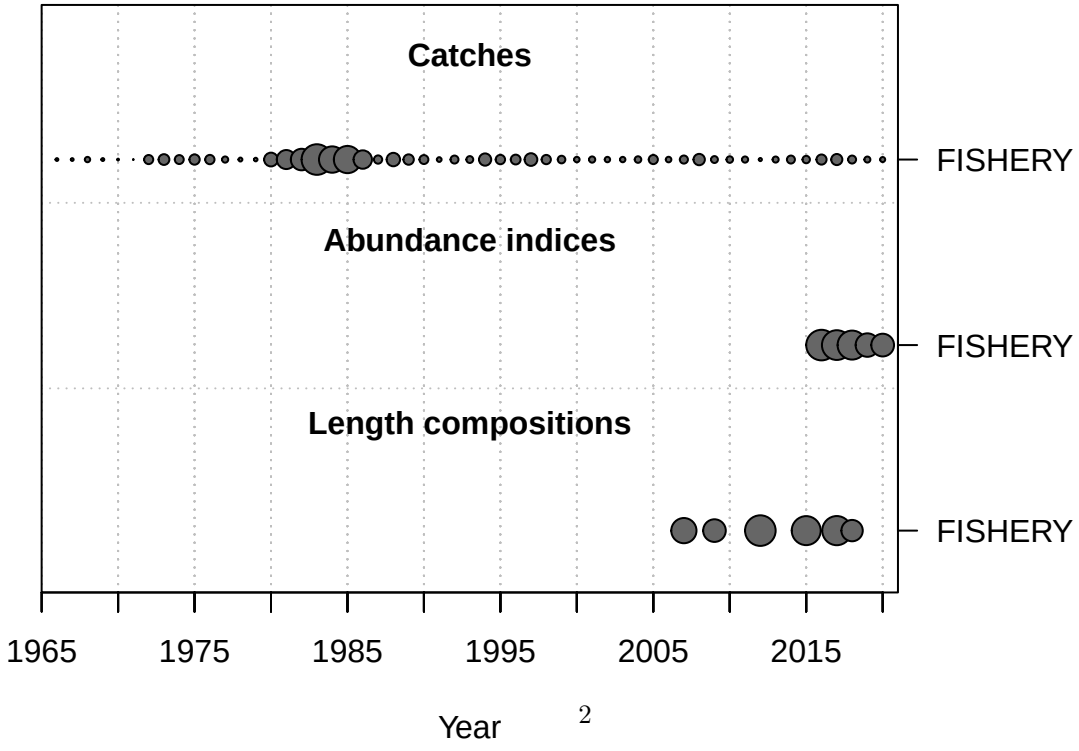
This is a summary report for the PRZO base model run.

Model Output

Input Data





Convergence Check

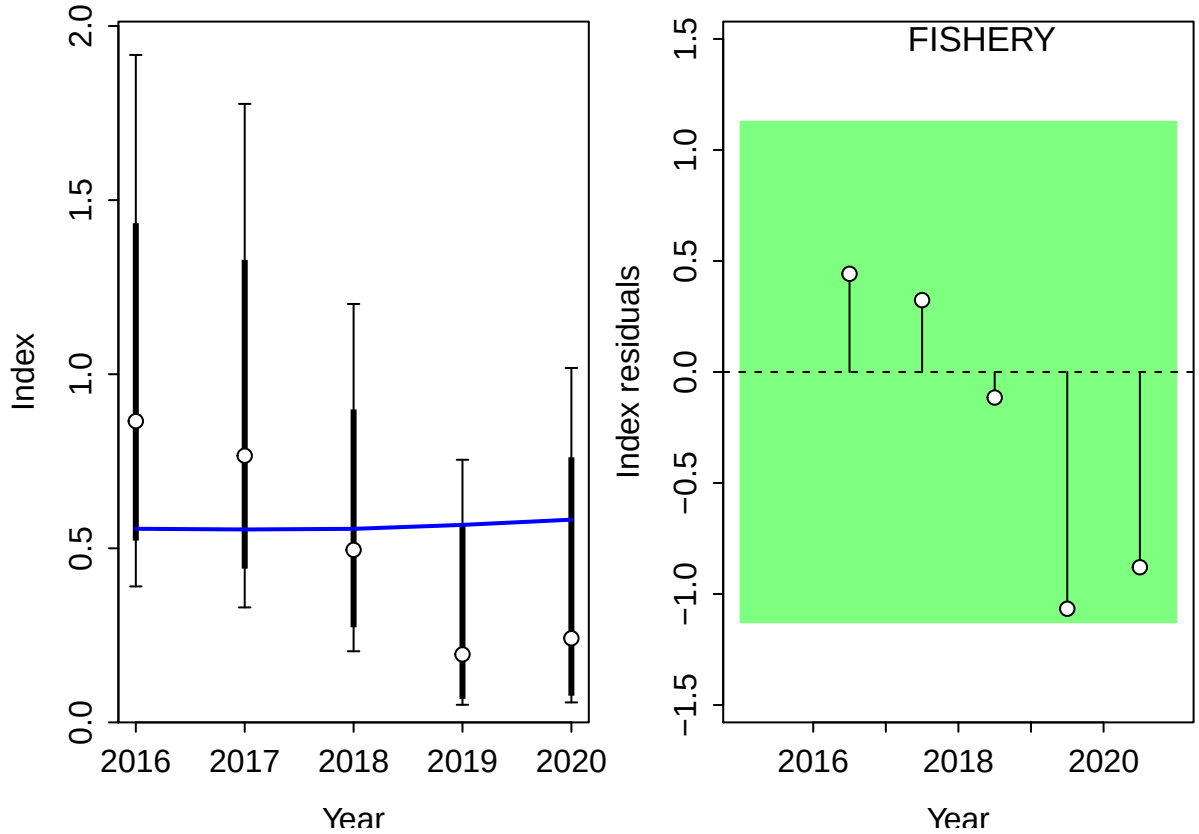
```
##   Converged     MaxGrad
## 1      TRUE 1.86942e-05
```

```
## [1] "1 catch is 0.0 in endyr; this can cause problem in the benchmark and forecast calculations"
## [3] "3 warning: poor convergence in Fmsy, final dy/dy2= -0.016767"
## [5] "N warnings: 3"
```

Fit to Model

CPUE

```
##
##  Running Runs Test Diagnosics for Index
## Plotting Residual Runs Tests
```

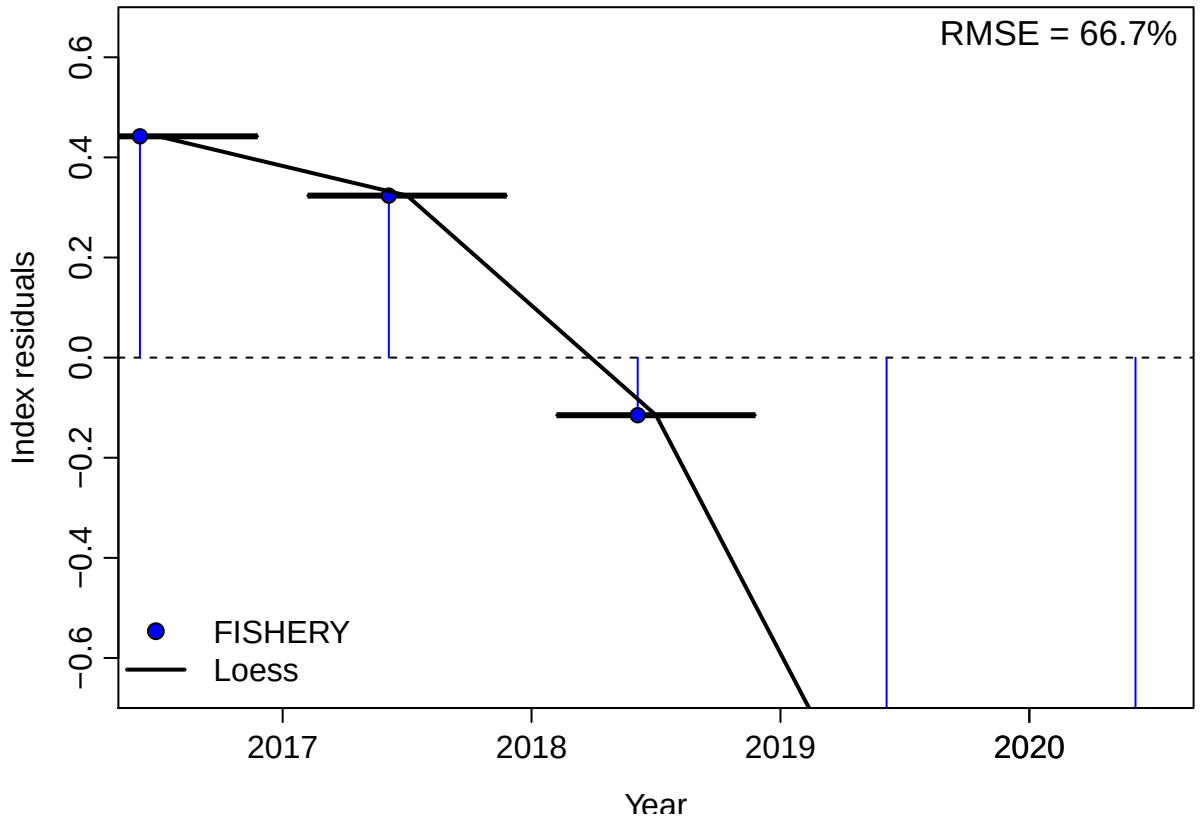



```
##
## Runs Test stats by Index:
## Plotting JABBA residual plot
```

```
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : span too small. fe
```

```
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : pseudoinverse used
```

```
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : neighborhood radius

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : reciprocal conditio

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : There are other nea
```



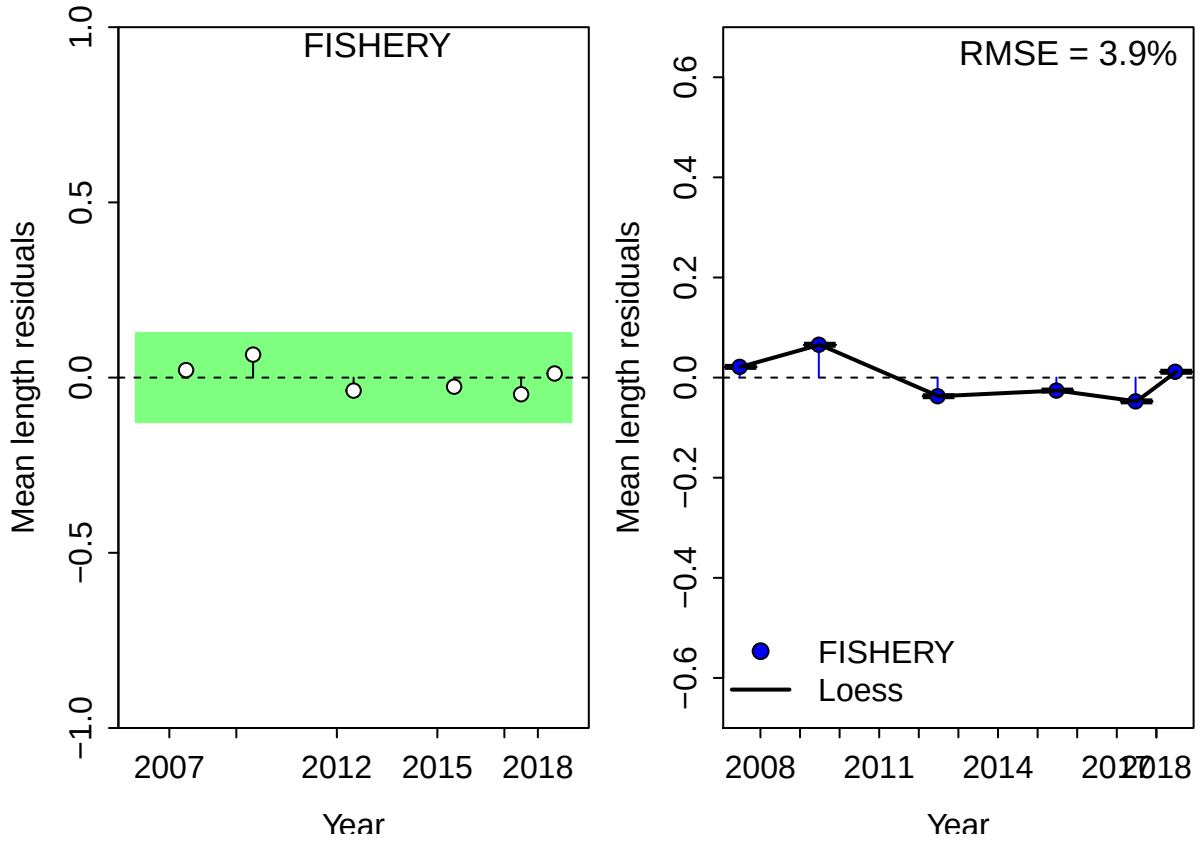

```
##
## RMSE stats by Index:
```

Length Comp

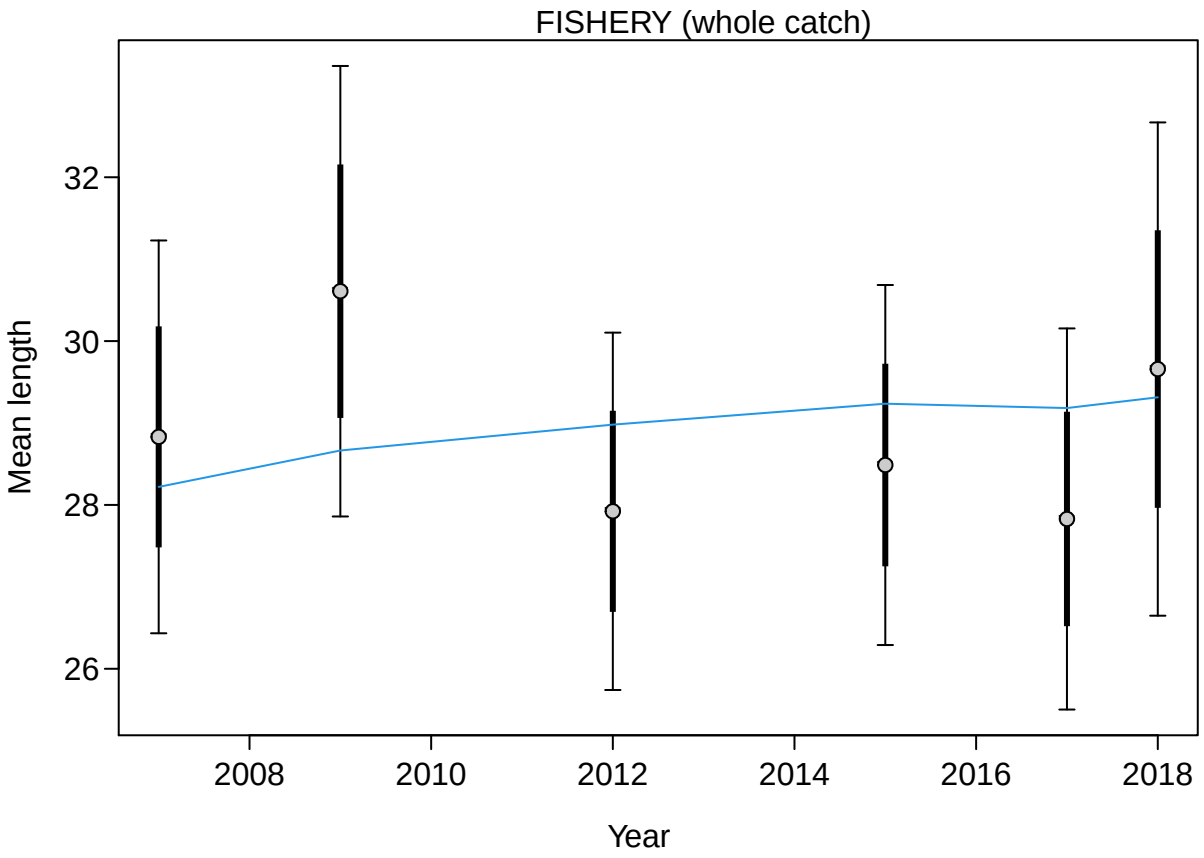
#Factor	Fleet	New_Var_adj	Type	Name
4	1	0.316569	len	FISHERY

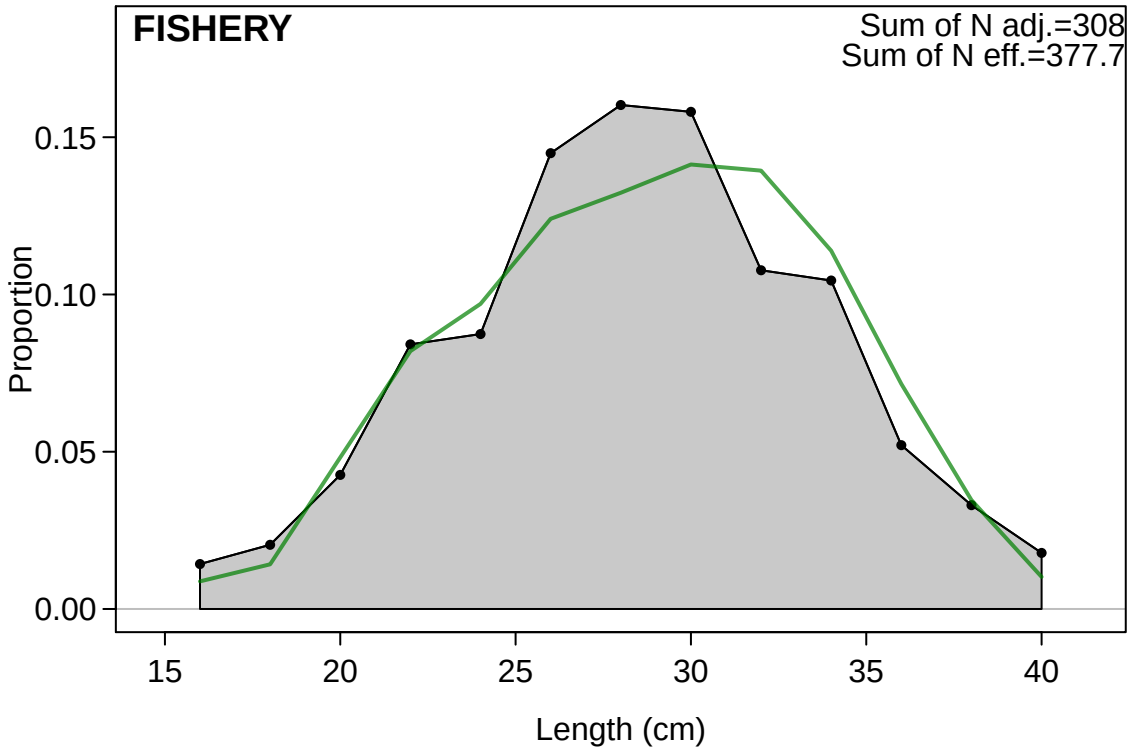
```
##
##  Running Runs Test Diagnosics for Mean length
## Plotting Residual Runs Tests

##
## Runs Test stats by Mean length:

##     Index runs.p   test  sigma3.lo sigma3.hi type
## 1 FISHERY  0.181 Passed -0.1271711 0.1271711  len
```

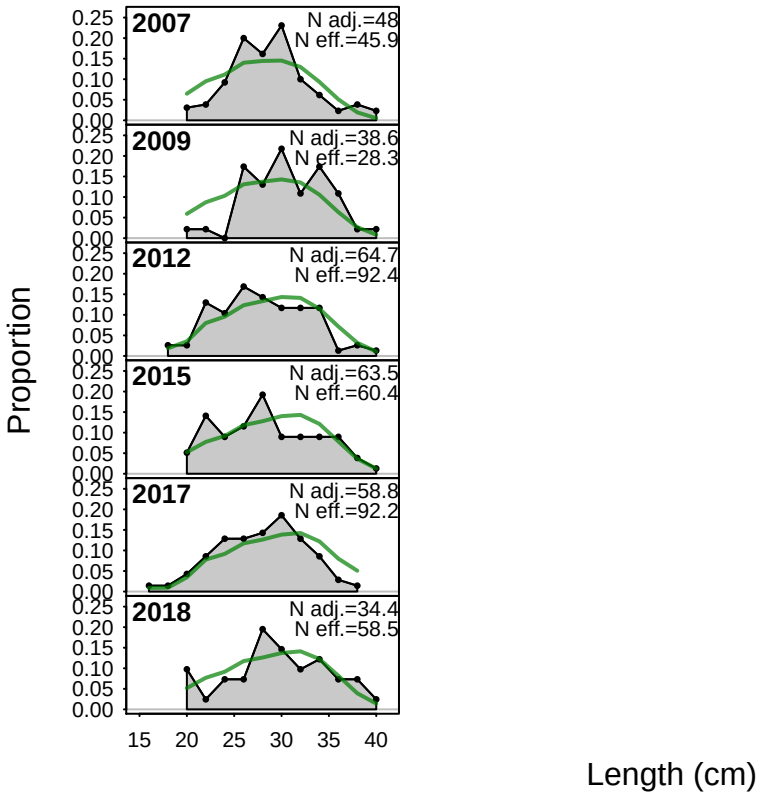
```
## Plotting JABBA residual plot

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : pseudoinverse used

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : neighborhood radius

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : reciprocal conditio
```




```
##
## RMSE stats by Index:

##    indices RMSE.perc nobs
## 1  FISHERY       3.9    6
## 2 Combined       3.9    6
```


FISHERY (whole catch)
Mean length
32
30
28
26
2008
2010
2012
2014
2016
2018
Year


FISHERY
Sum of N adj.=308
Sum of N eff.=377.7
Proportion
0.15
0.10
0.05
0.00
15
20
25
30
35
40
Length (cm)



Retrospective and Hindcasting

Retrospective

```
## [1] "No retrospective runs were found"
```

Hindcasting

```
## [1] "No information for hindcast was found"
```

Recruitment Deviations

```
## Skipped SSplotrecdevs - no rec devs estimated
```

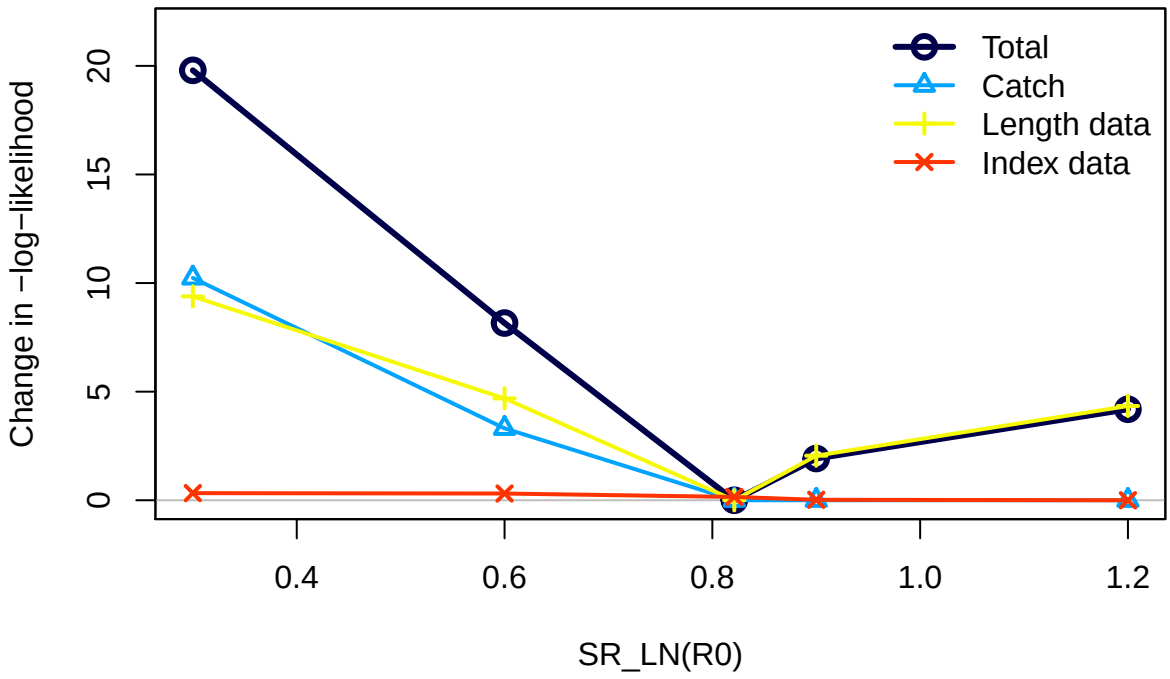
Likelihood Profile

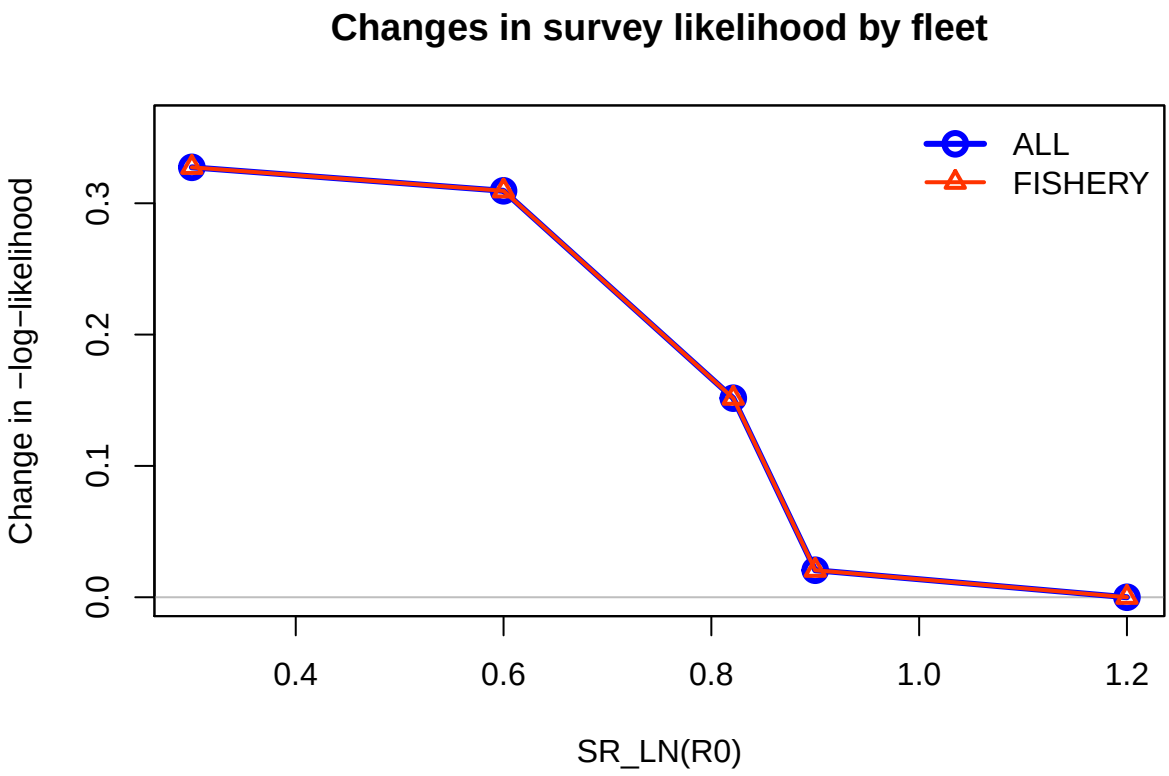
```
## [1] "SR_LN"
```

```
## Parameter matching profile.string=SR_LN: SR_LN(R0)
```

```
## Parameter values (after subsetting based on input 'models'): 0.3, 0.6, 0.9, 1.2, 0.821123
```

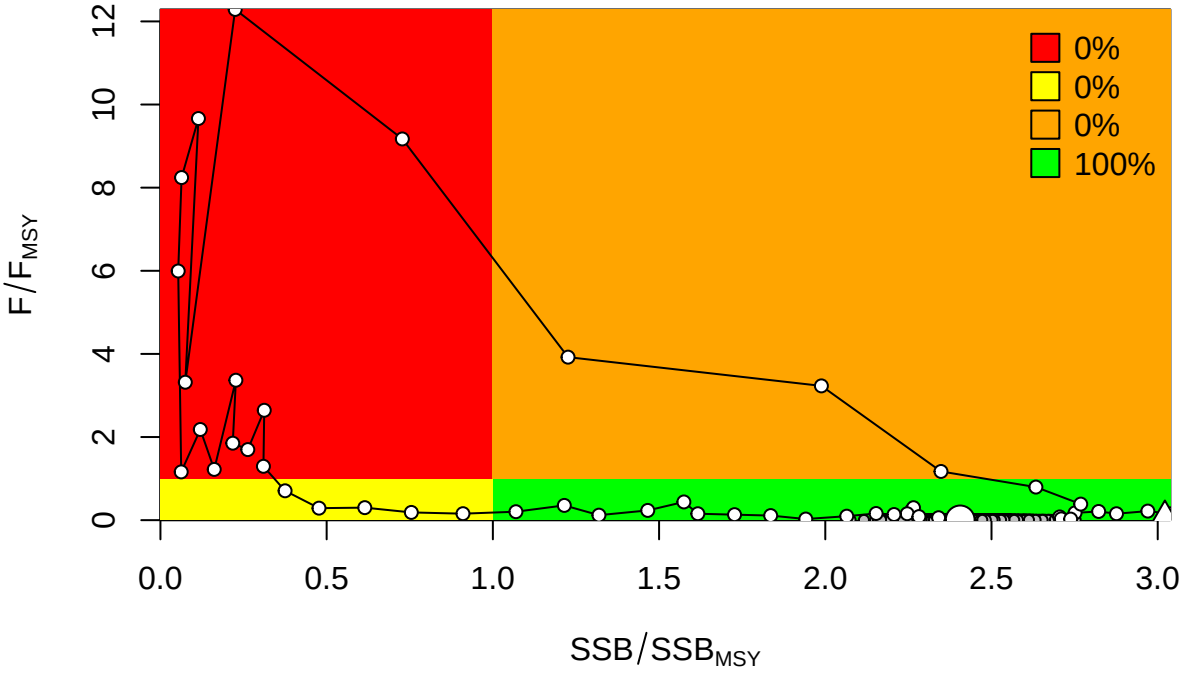
```
##
## Likelihood components showing max change as fraction of total change.
## To change which components are included, change input 'minfraction'.

##                       frac_change include                           label
## TOTAL                      1.0000    TRUE                           Total
## Catch                      0.5171    TRUE                           Catch
## Equil_catch                0.0001   FALSE                 Equilibrium catch
## Survey                     0.0165    TRUE                         Index data
## Length_comp                0.4741    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

## Parameter matching profile.string = 'SR_LN': 'SR_LN(R0)
## Parameter values (after subsetting based on input 'models'): 0.3, 0.6, 0.9, 1.2, 0.821123,

## Fleet-specific likelihoods showing max change as fraction of total change.
## To change which components are included, change input 'minfraction'.
##                         frac_change include
## prof.table....c.1.3..             1    TRUE
```



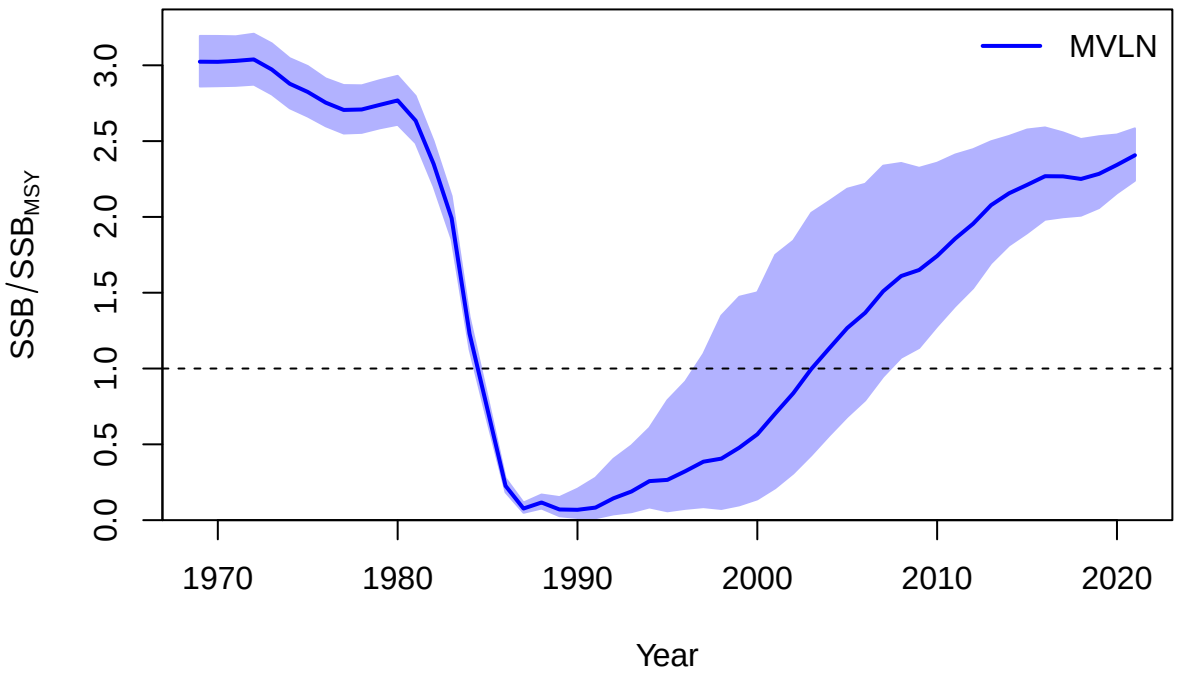


Management Quantities

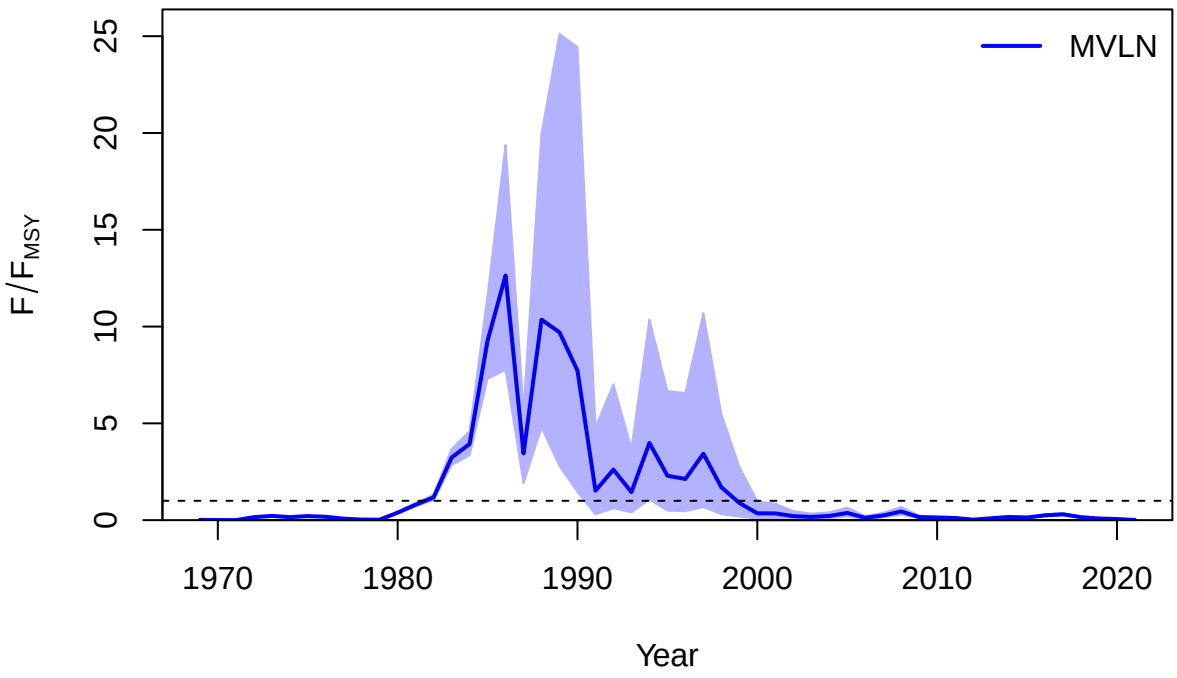
```
##
##  starter.sso with Bratio: SSB/SSBMSY and F: _abs_F
##
```



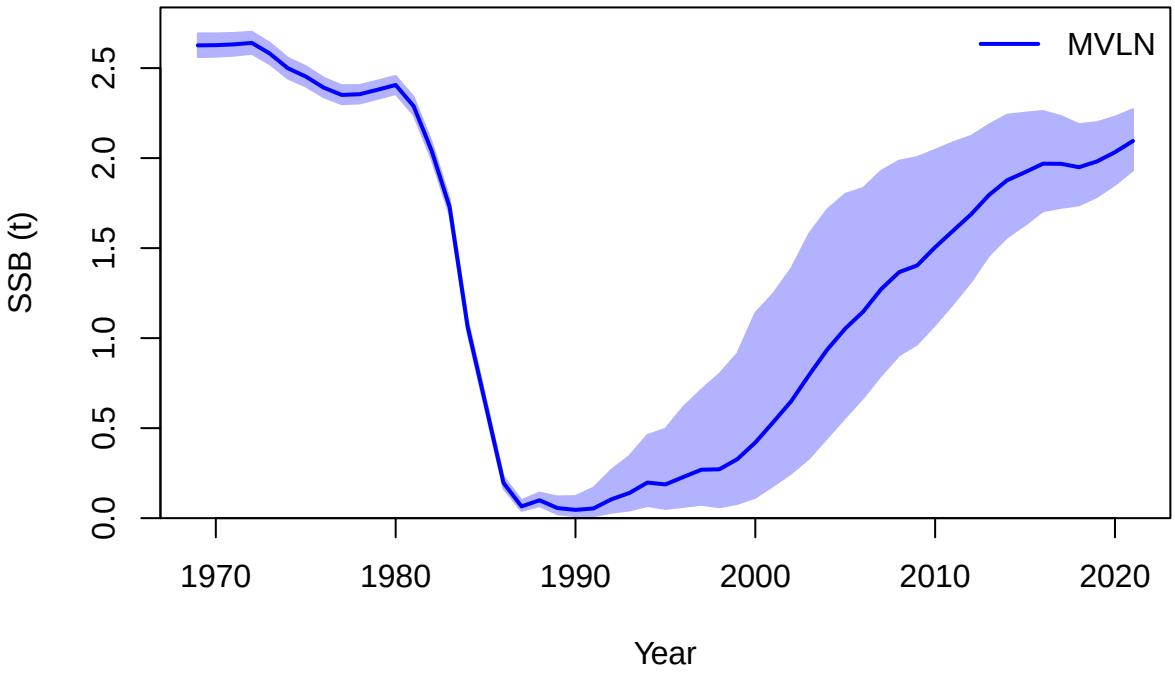

```
##
## Plot Comparison of stock
```



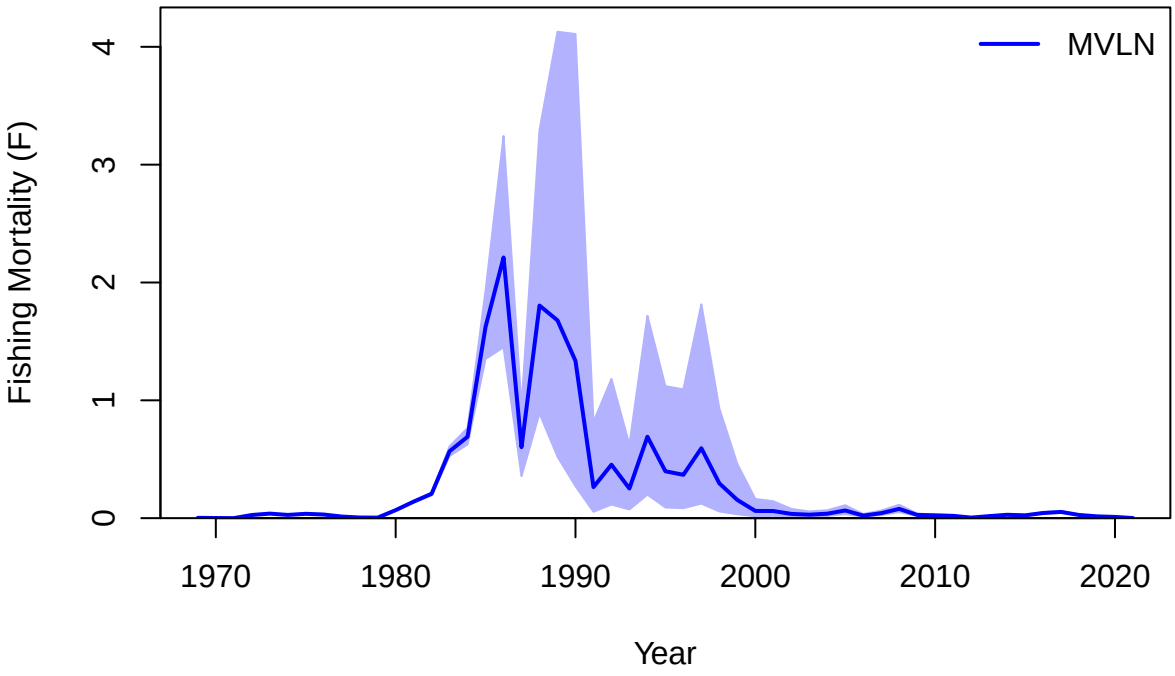

```
##
## Plot Comparison of harvest
```




```
##
## Plot Comparison of SSB
```




```
##
## Plot Comparison of F
```




```
## RStudioGD
##         2
```

Jitter

```
## [1] "No jitter runs were found."
```