

American Samoa Model Checks

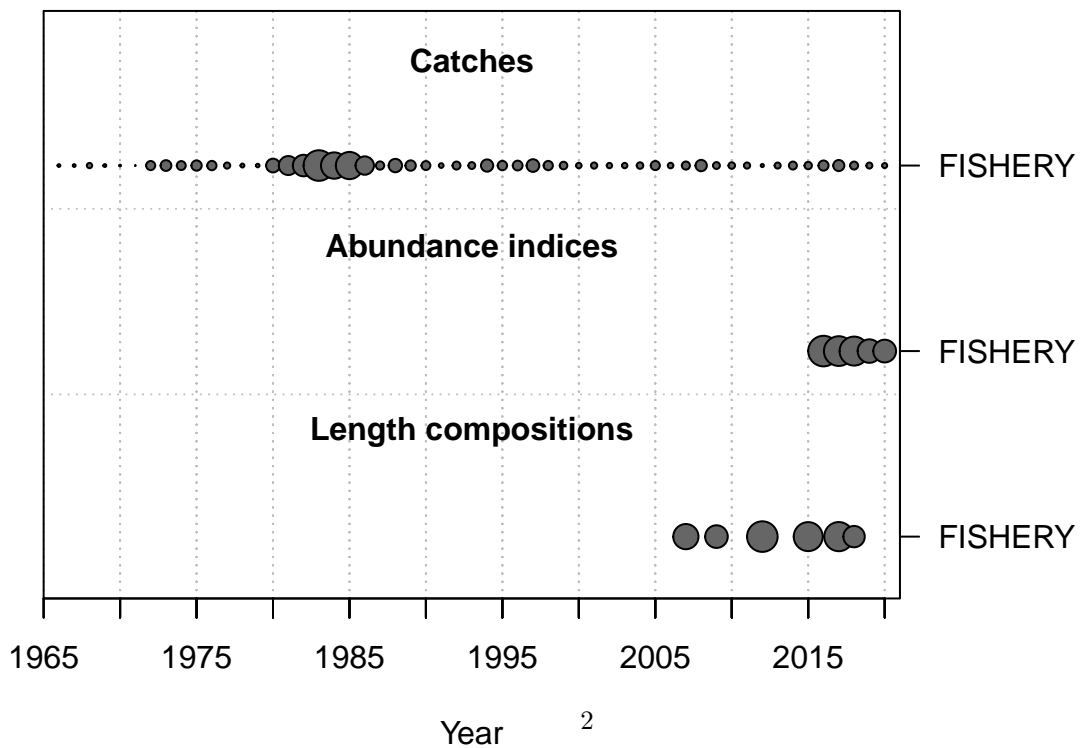
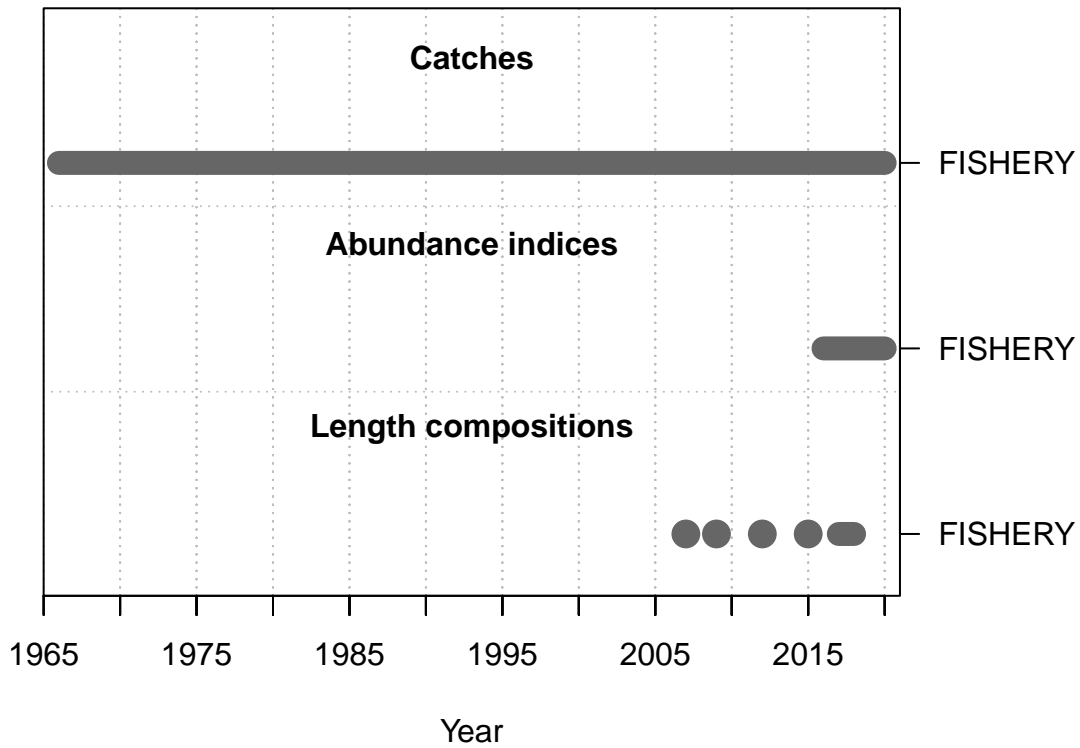
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This is a summary report for the PRZO base model run.

Model Output

Input Data



Convergence Check

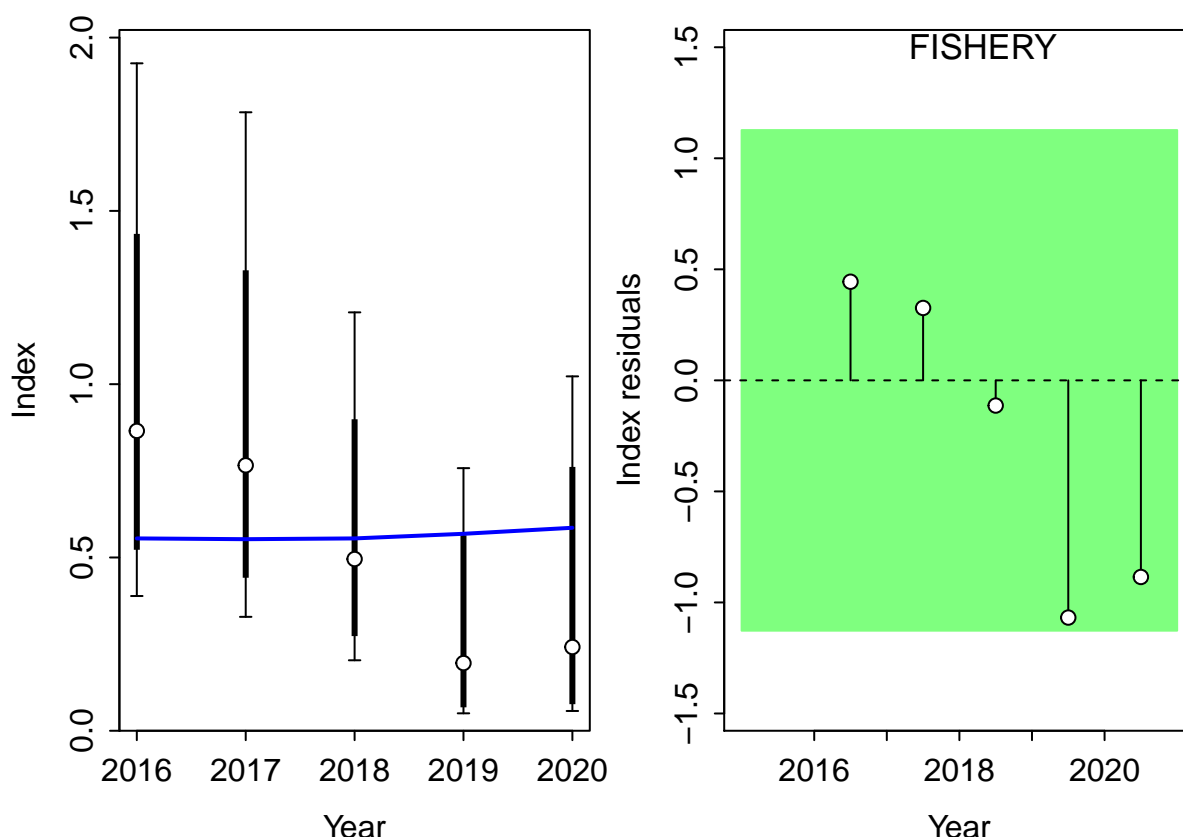
```
## Converged      MaxGrad
## 1      TRUE 5.46253e-05
```

```
## [1] "1 catch is 0.0 in endyr; this can cause problem in the benchmark and forecast calculations"
## [2] "2 NOTE: Max data length bin: 40 < max pop len bins: 44; so will accumulate larger pop len bins"
## [3] "3 warning: poor convergence in Fmsy, final dy/dy2= -0.0171042"
## [4] " N parameters are on or within 1% of min-max bound: 1; check results, variance may be suspect"
## [5] "N warnings: 3"
```

Fit to Model

CPUE

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



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

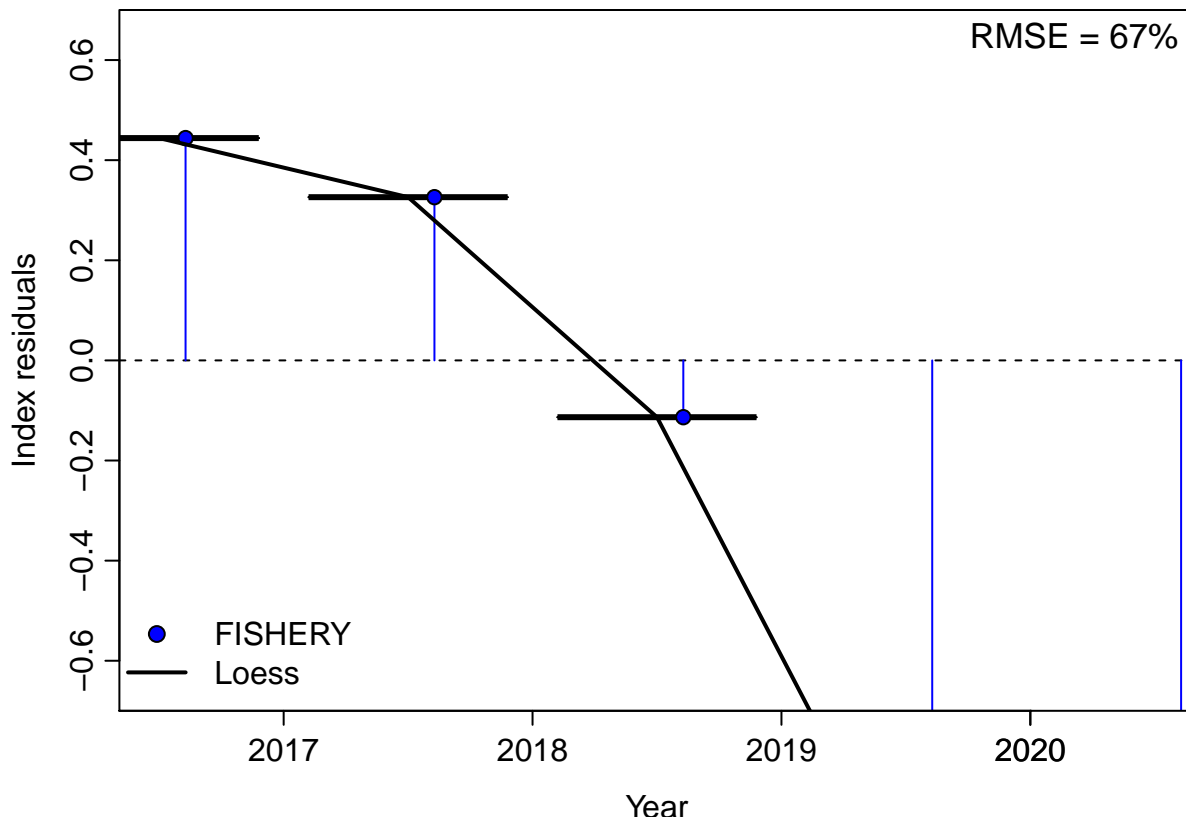
```
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : span too small.
## fewer data values than degrees of freedom.
```

```
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : pseudoinverse used
## at 2016.5

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : neighborhood radius
## 2.02

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : reciprocal
## condition number 0

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : There are other
## near singularities as well. 4.0804
```



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

Length Comp

#Factor	Fleet	New_Var_adj	Type	Name
4	1	0.315361	len	FISHERY

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

```
##
## Runs Test stats by Mean length:

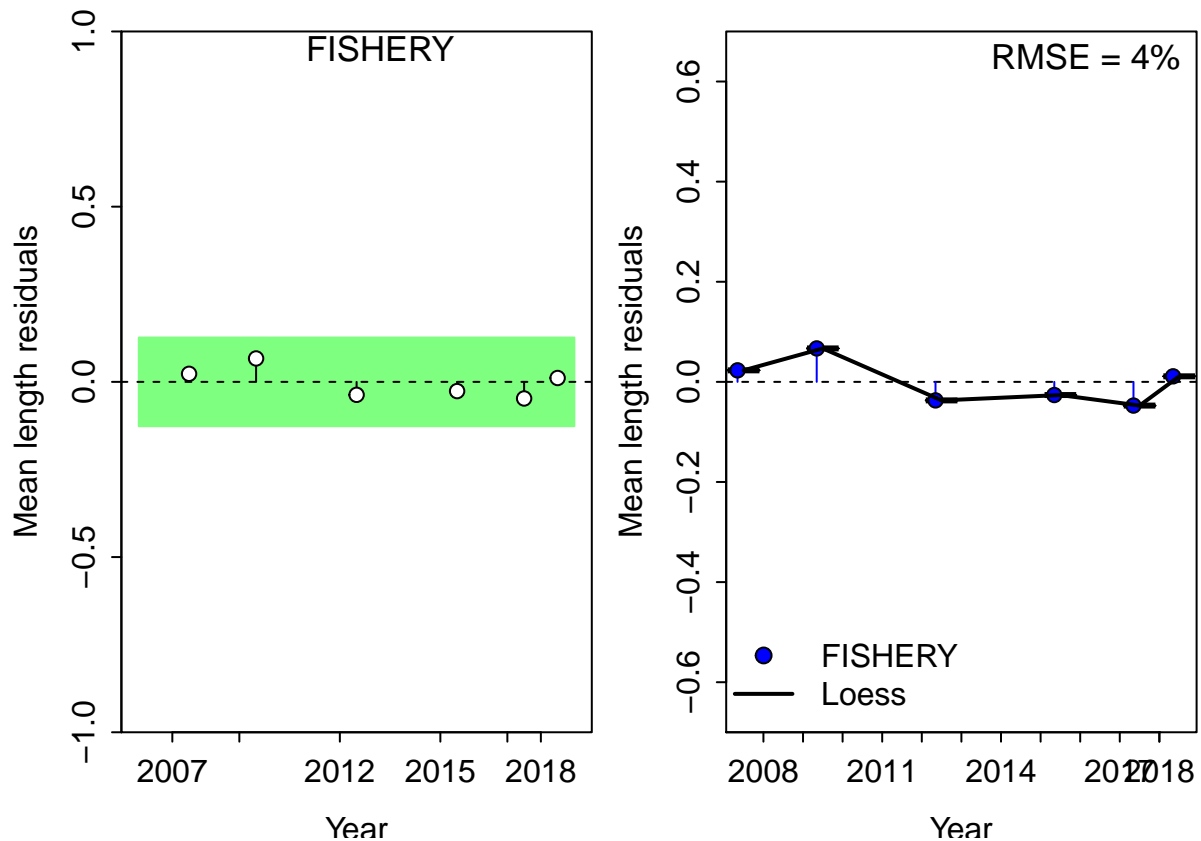
##      Index runs.p  test  sigma3.lo sigma3.hi type
## 1 FISHERY  0.181 Passed -0.1264672 0.1264672  len

## Plotting JABBA residual plot

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : pseudoinverse used
## at 2015.5

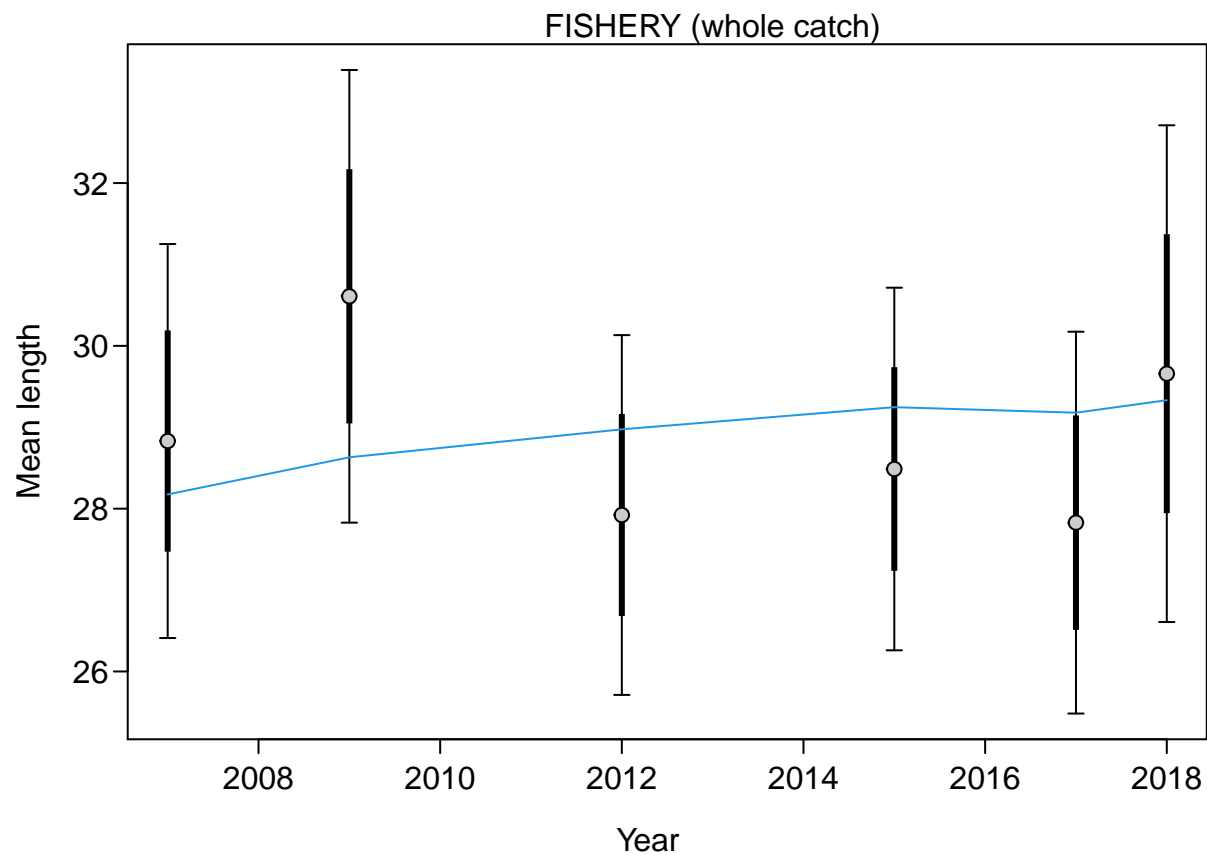
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : neighborhood radius
## 3

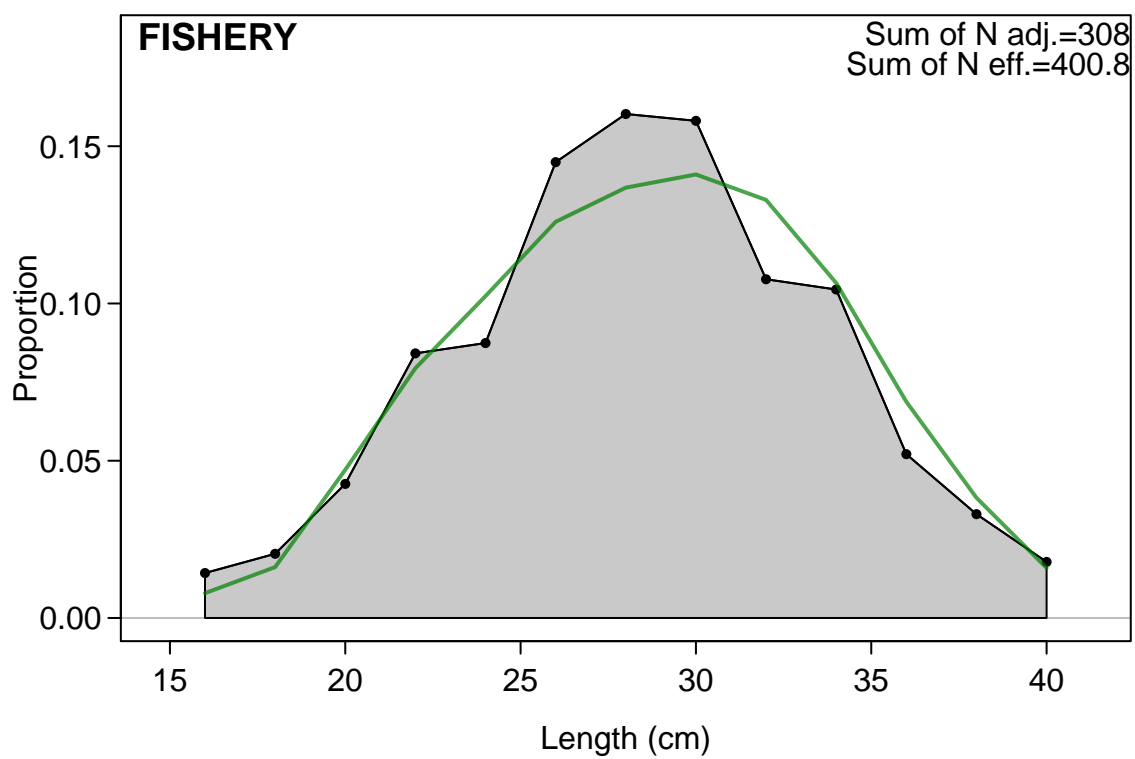
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric = parametric, : reciprocal
## condition number 0
```

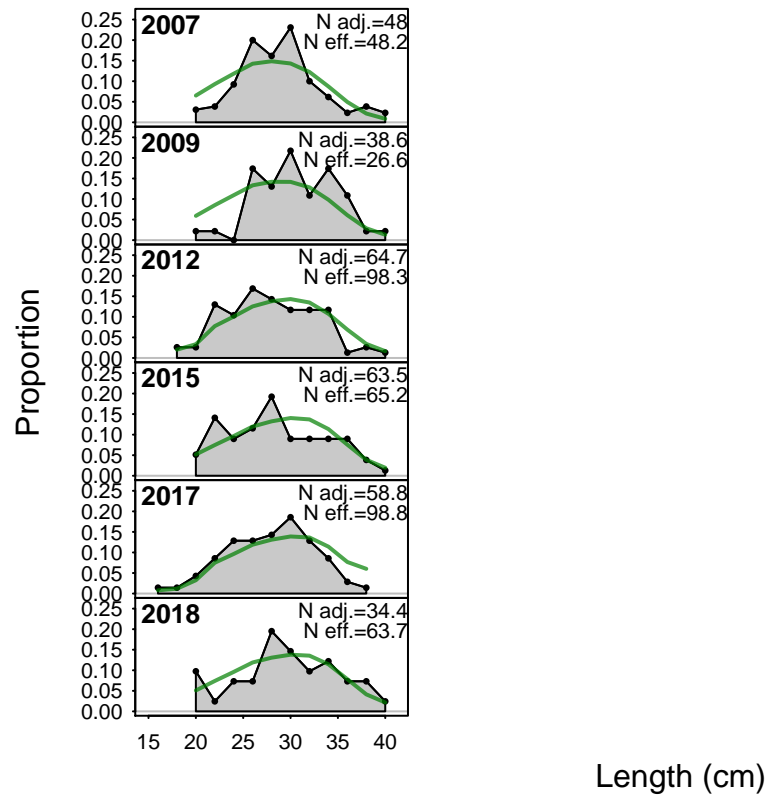


```
##
## RMSE stats by Index:

##      indices RMSE.perc nobs
## 1 FISHERY      4      6
## 2 Combined      4      6
```







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, 0.5, 0.7, 0.9, 1.1, 0.725278
```



```

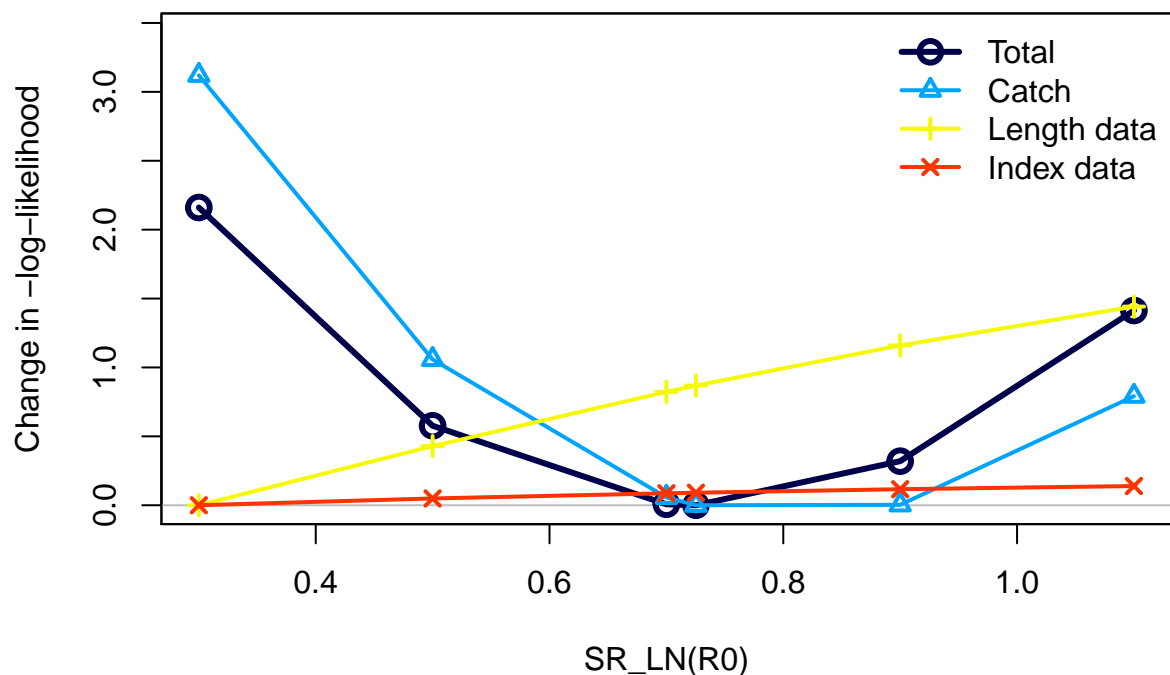
##
## Likelihood components showing max change as fraction of total change.
## To change which components are included, change input 'minfraction'.

##          frac_change include          label
## TOTAL          1.0000    TRUE          Total
## Catch          1.4439    TRUE          Catch
## Equil_catch    0.0001  FALSE    Equilibrium catch
## Survey         0.0645    TRUE          Index data
## Length_comp    0.6673    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

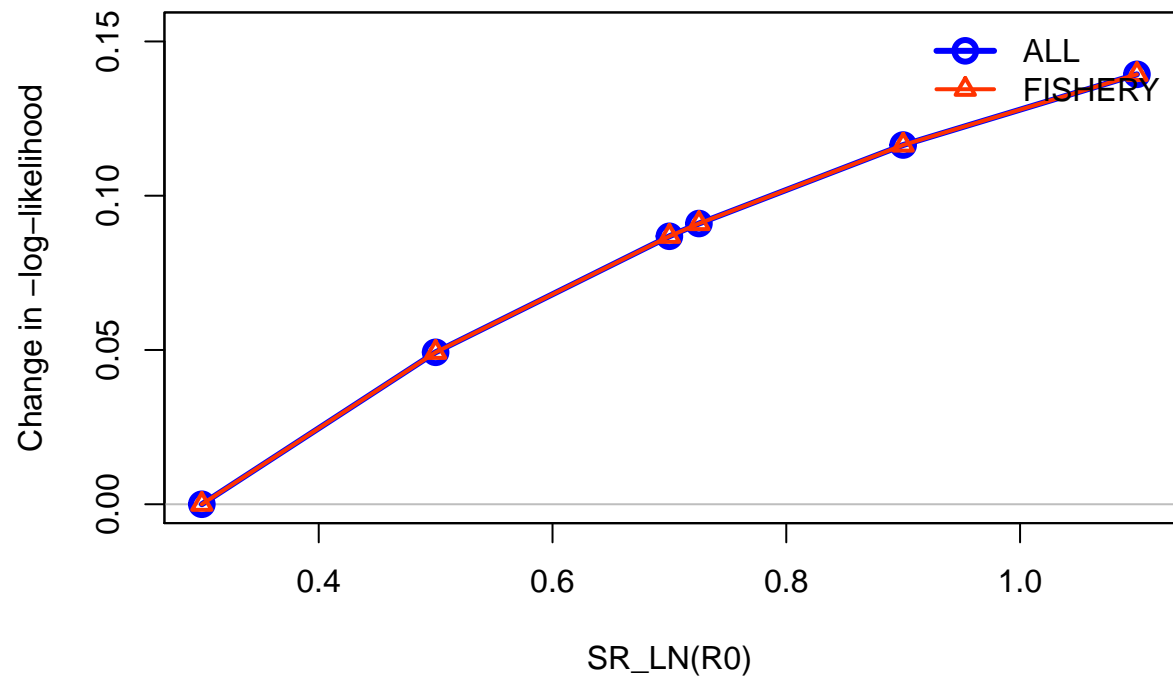
## Parameter matching profile.string = 'SR_LN': 'SR_LN(R0)'
## Parameter values (after subsetting based on input 'models'): 0.3, 0.5, 0.7, 0.9, 1.1, 0.725278,

## 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

```

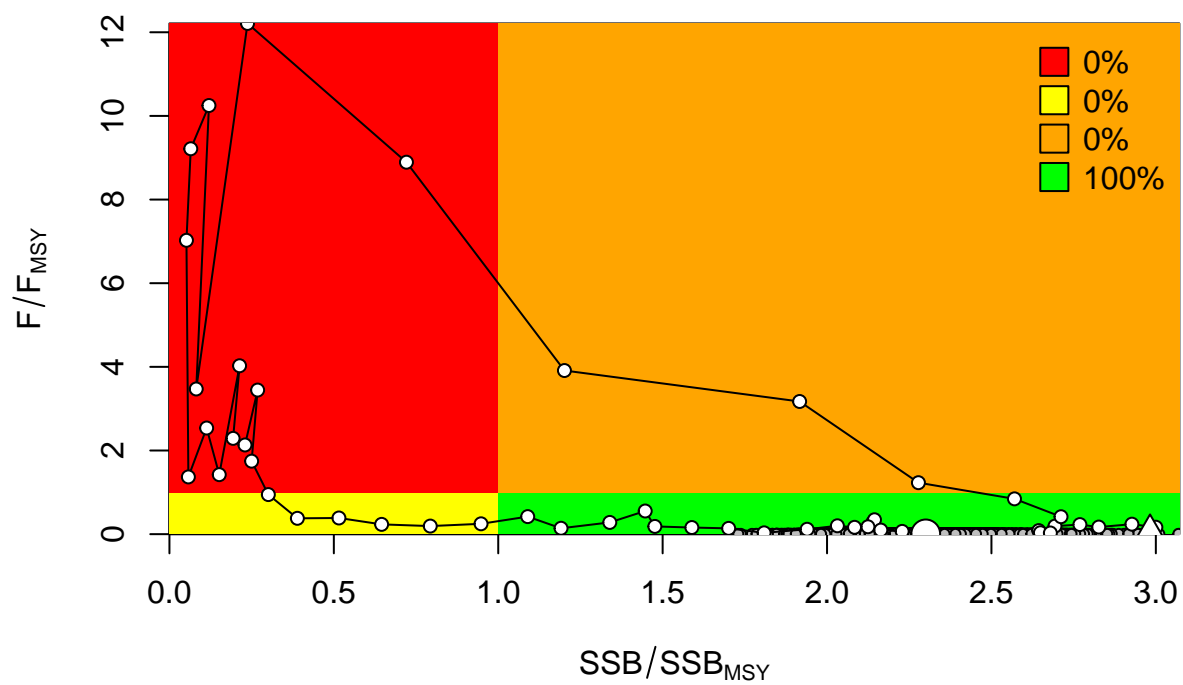


Changes in survey likelihood by fleet

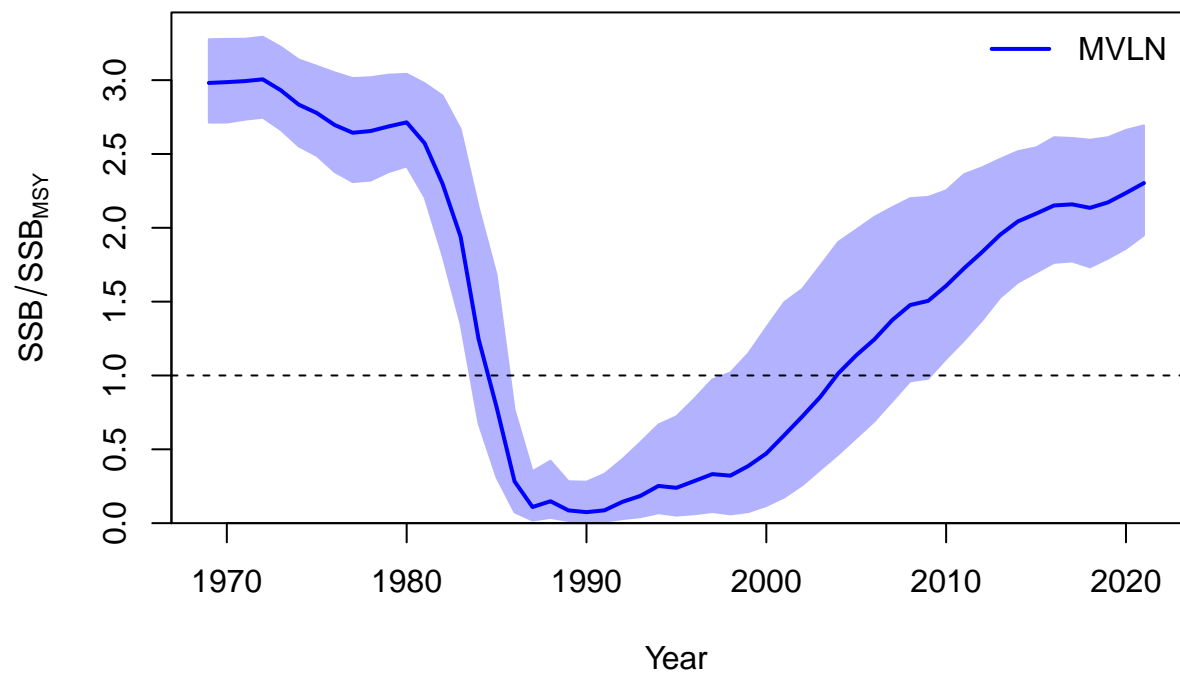


Management Quantities

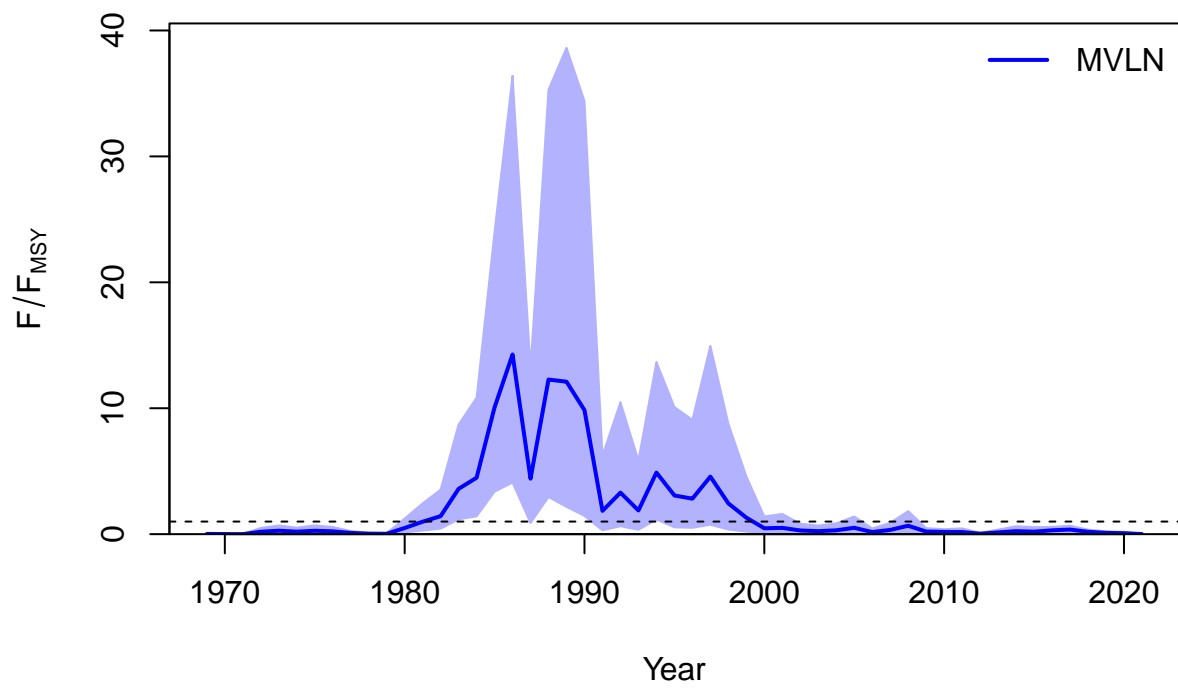
```
##  
## starter.sso with Bratio: SSB/SSBMSY and F: _abs_F  
##
```



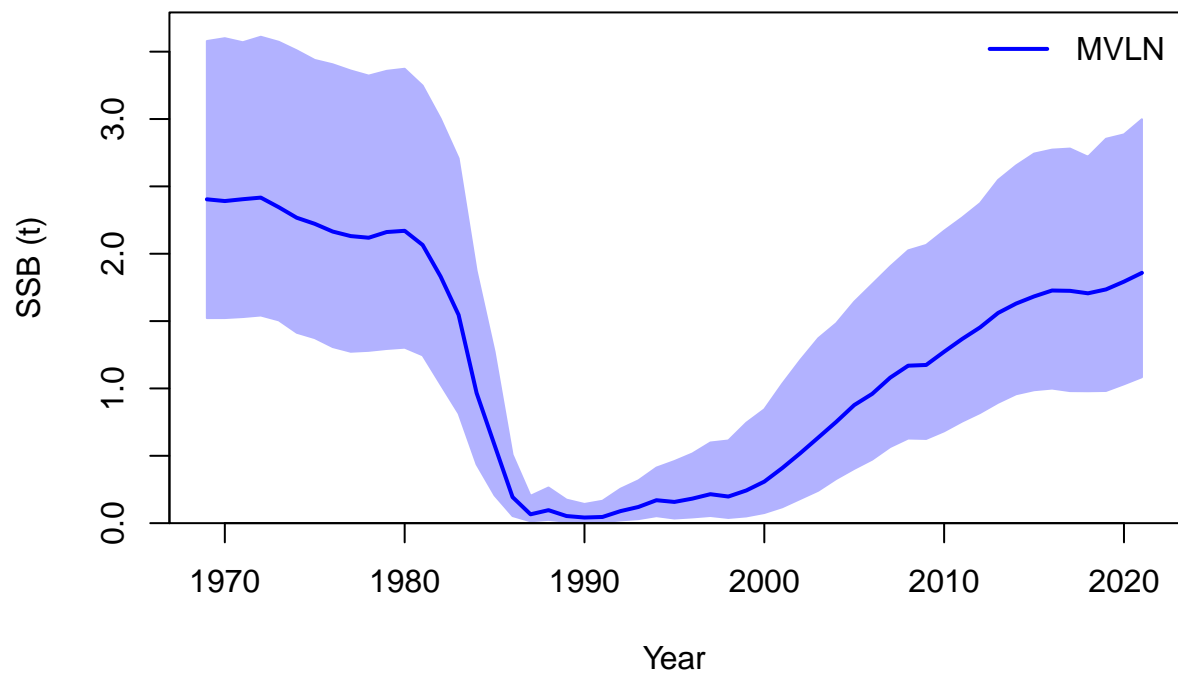
Plot Comparison of stock



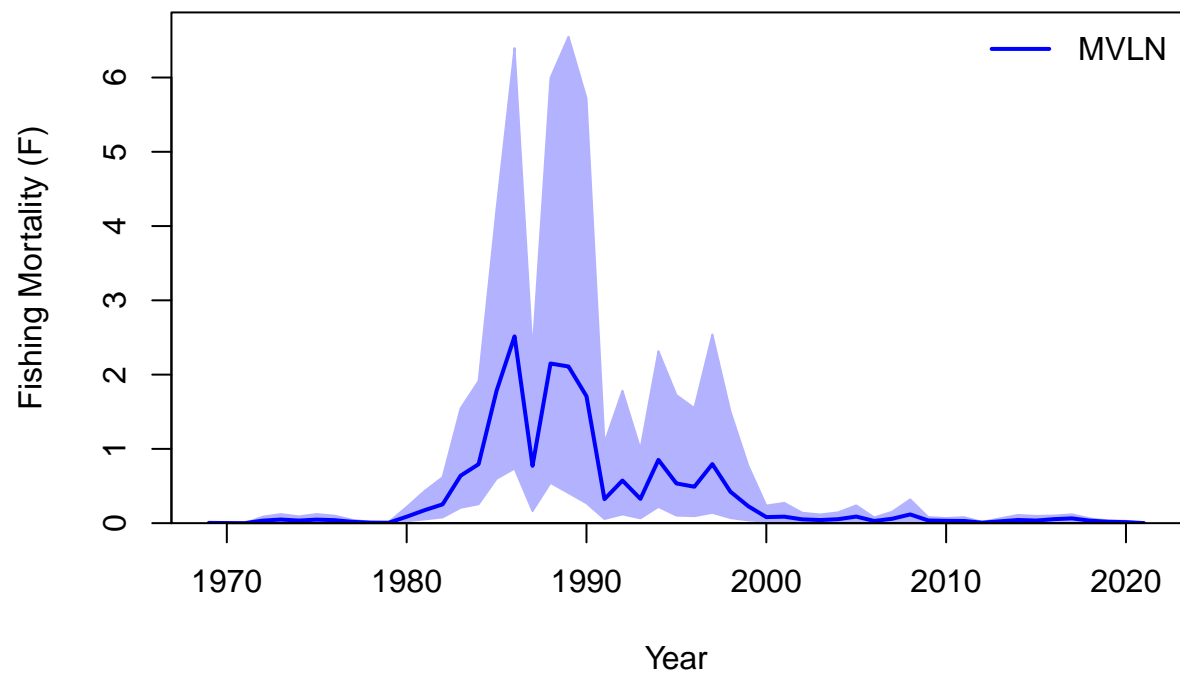
```
##  
## Plot Comparison of harvest
```



Plot Comparison of SSB



Plot Comparison of F



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

Jitter

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