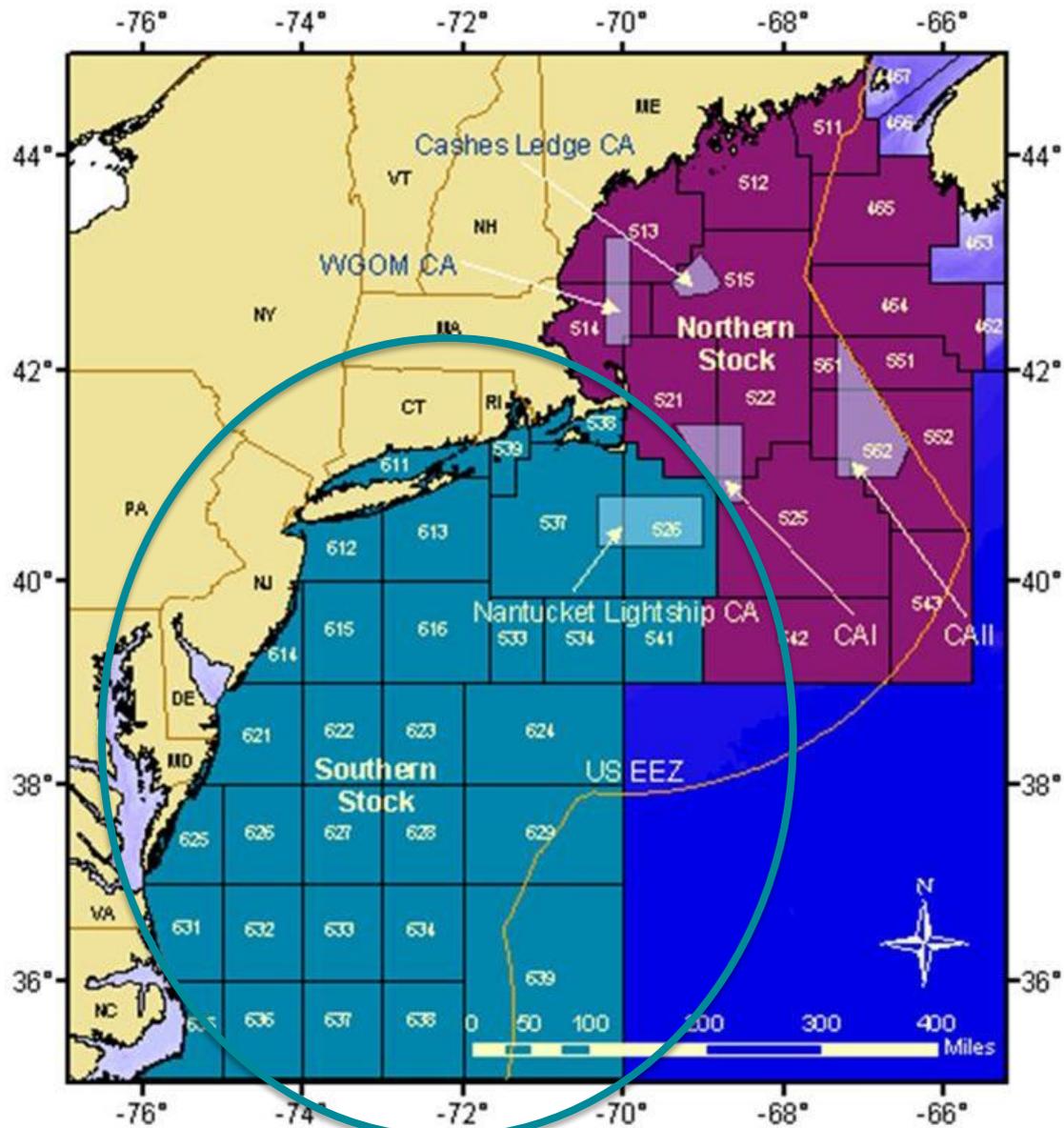




**NOAA**  
**FISHERIES**

# Southern Windowpane Flounder





# Previous assessment for southern windowpane : NE Groundfish 2012 update

**AIM** – an index-based model

Time series **1975 - 2010**

## Southern windowpane stock status for 2010:

2010 B index = 0.35,  $B_{\text{threshold}} = 0.12$

**not overfished**

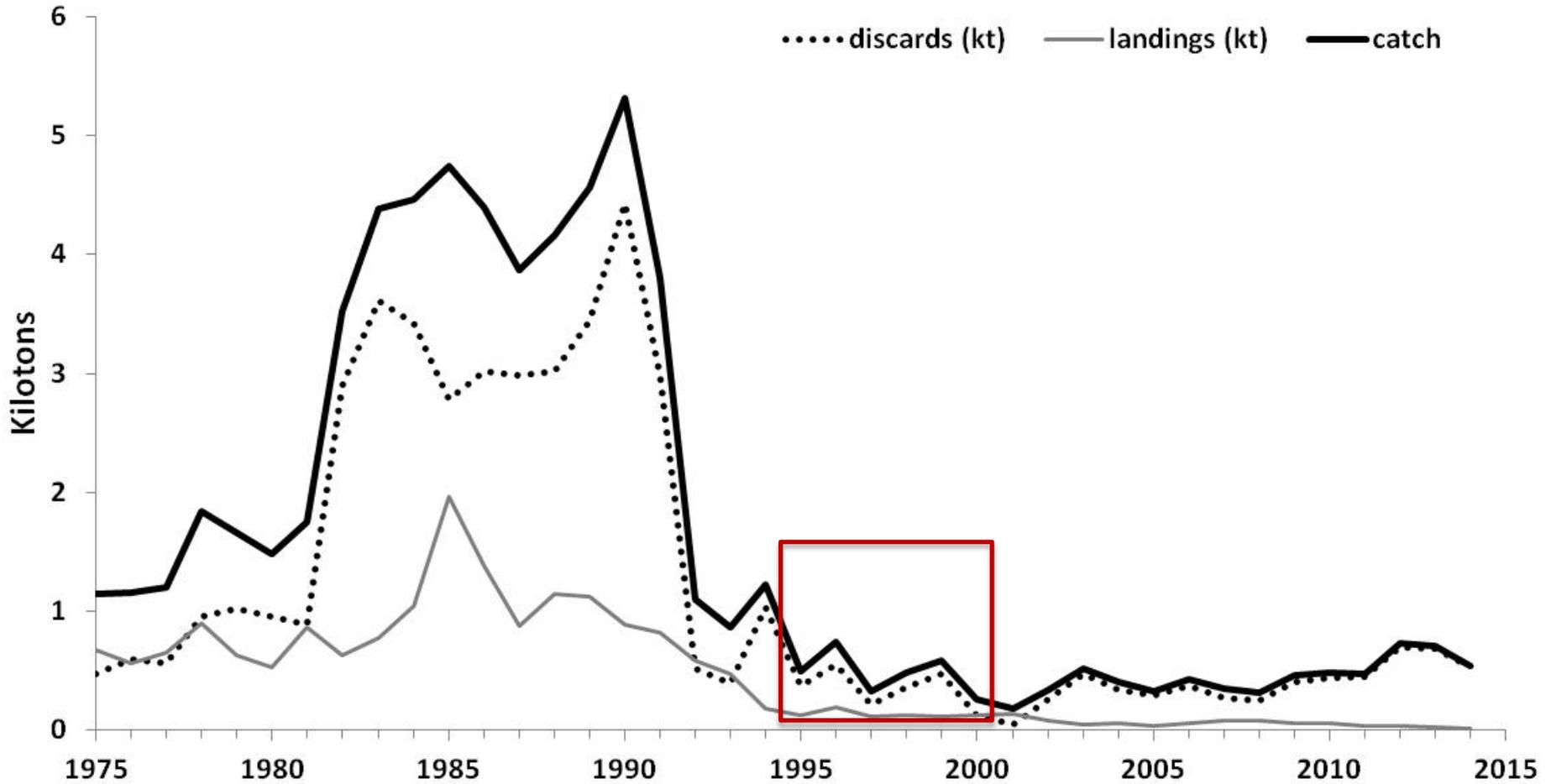
2010 relative F = 1.40,  $F_{\text{msy}} = 2.09$

**no overfishing**

# Southern windowpane 2015 assessment update

- All methods the same
- Time series 1975 – 2014, four new years of input data.
- Change from **SHG** to **TOGA** criteria for survey tow quality - biomass index for 2014 did not change

# AIM input: southern windowpane catch



## Discards estimated from:

Large mesh bottom trawl

2014 = 61%

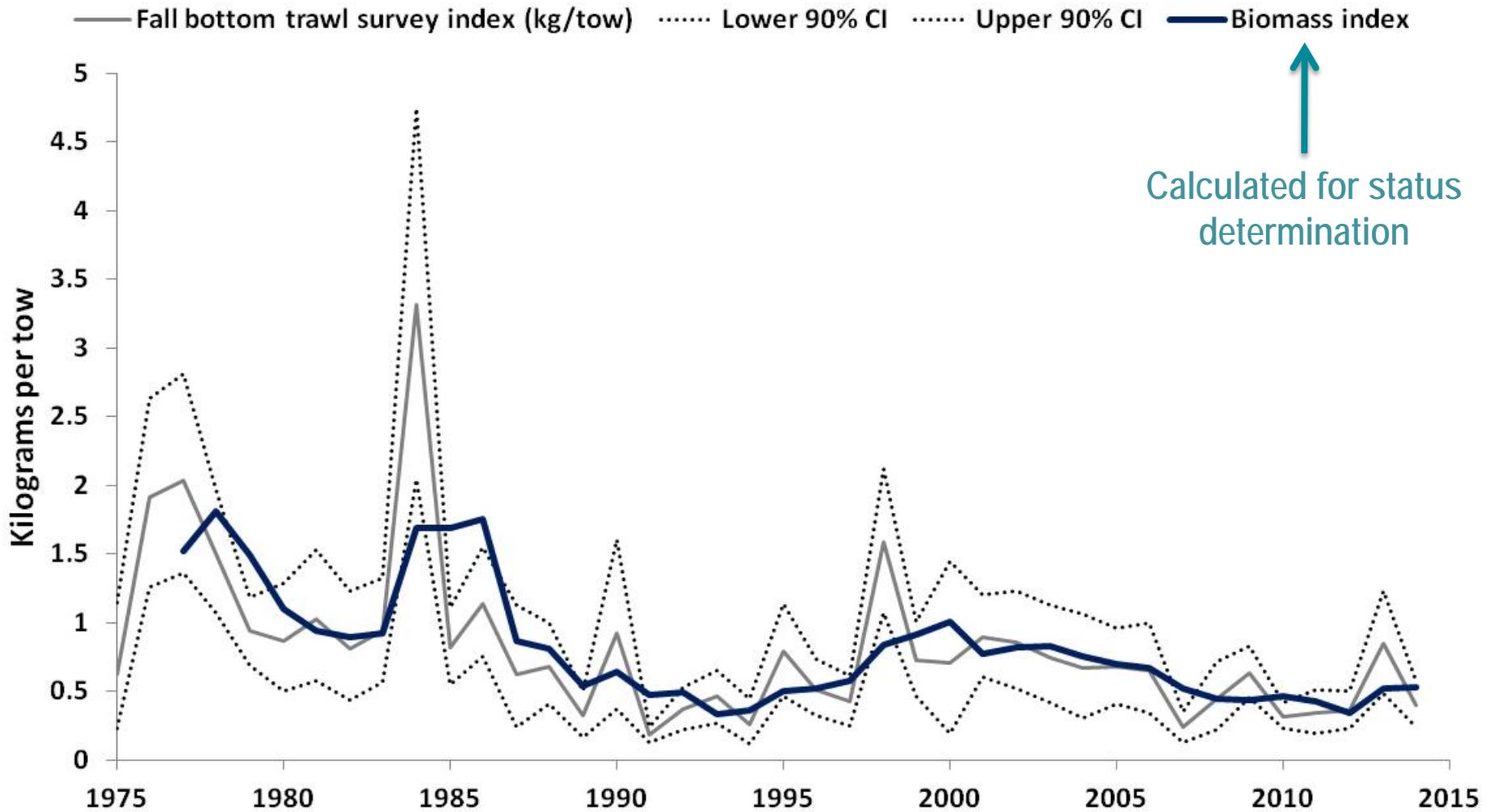
Small mesh bottom trawl

2014 = 11%

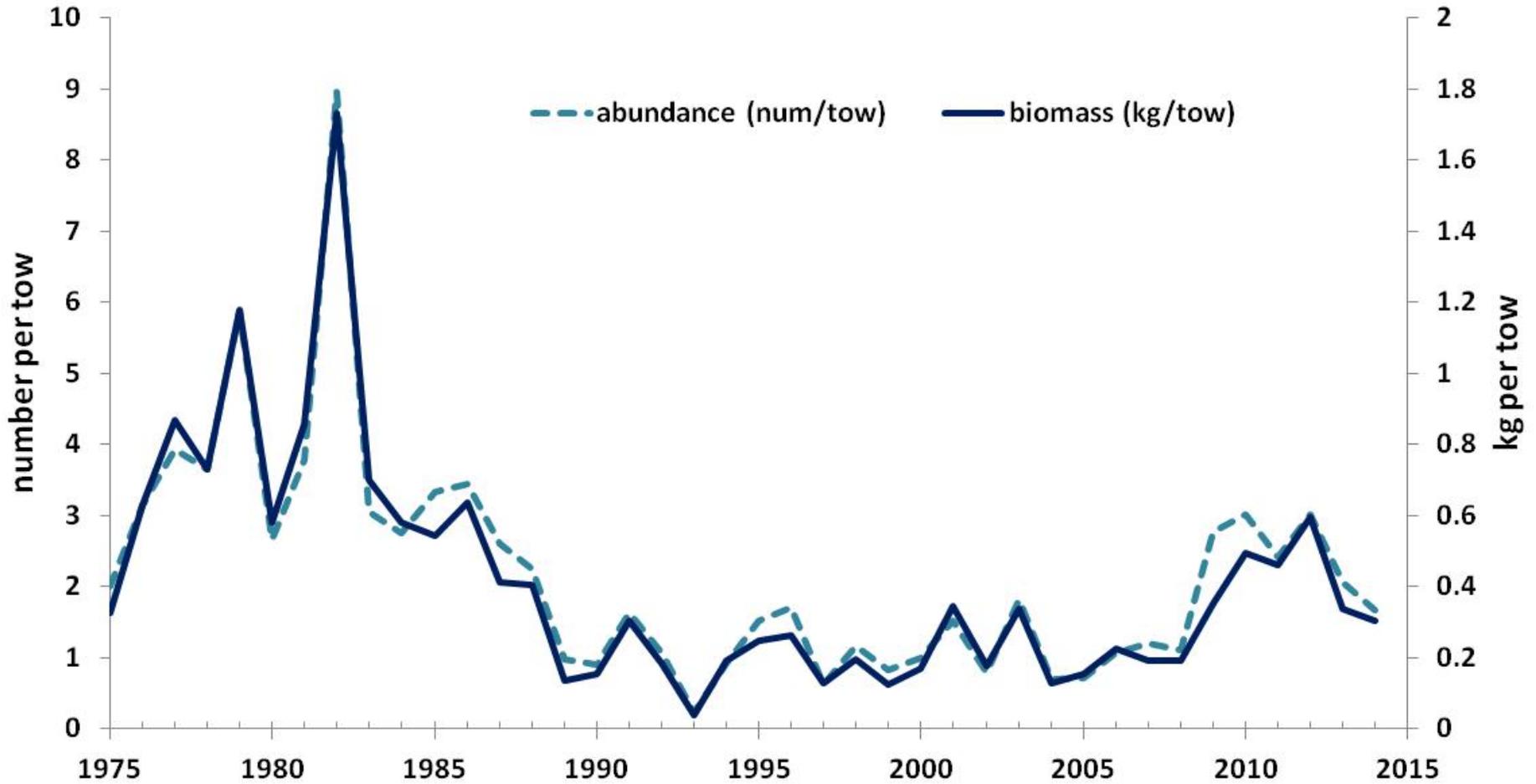
Limited access scallop dredge

2014 = 28%

# AIM input: S. windowpane fall BT survey index



# Southern windowpane fall BTS abundance and biomass



# CVs for model input

## Discard estimates:

(discard-windowpane/discard-all ratio)

1975 – 1988 values hindcast using ratio

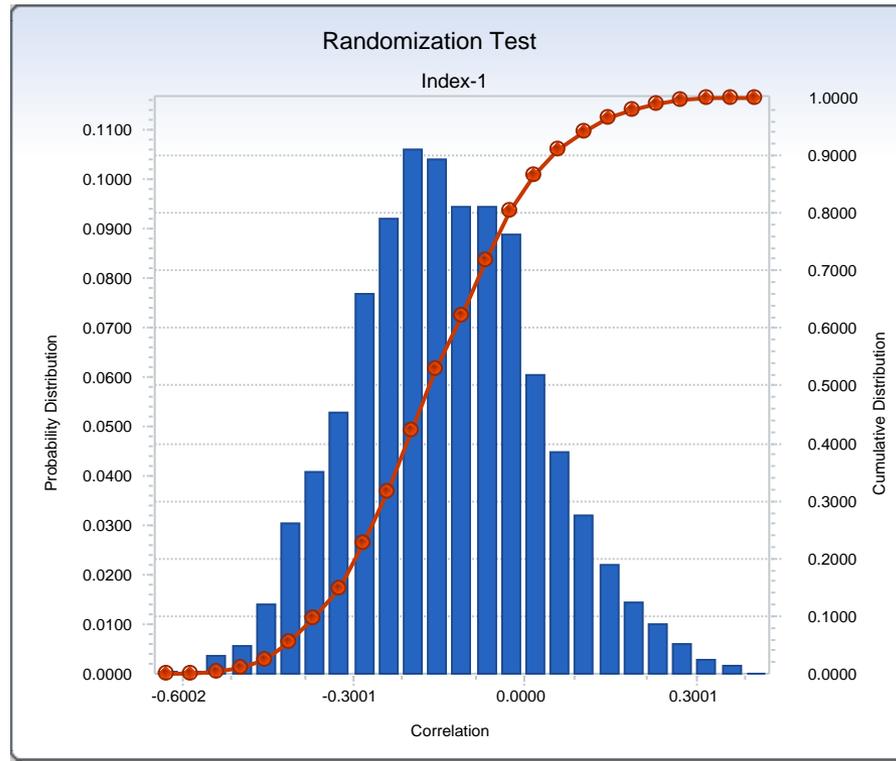
1989 - 2014 mean CV of **0.312**

## Survey indices:

1975 – 2014 mean CV of **0.261**

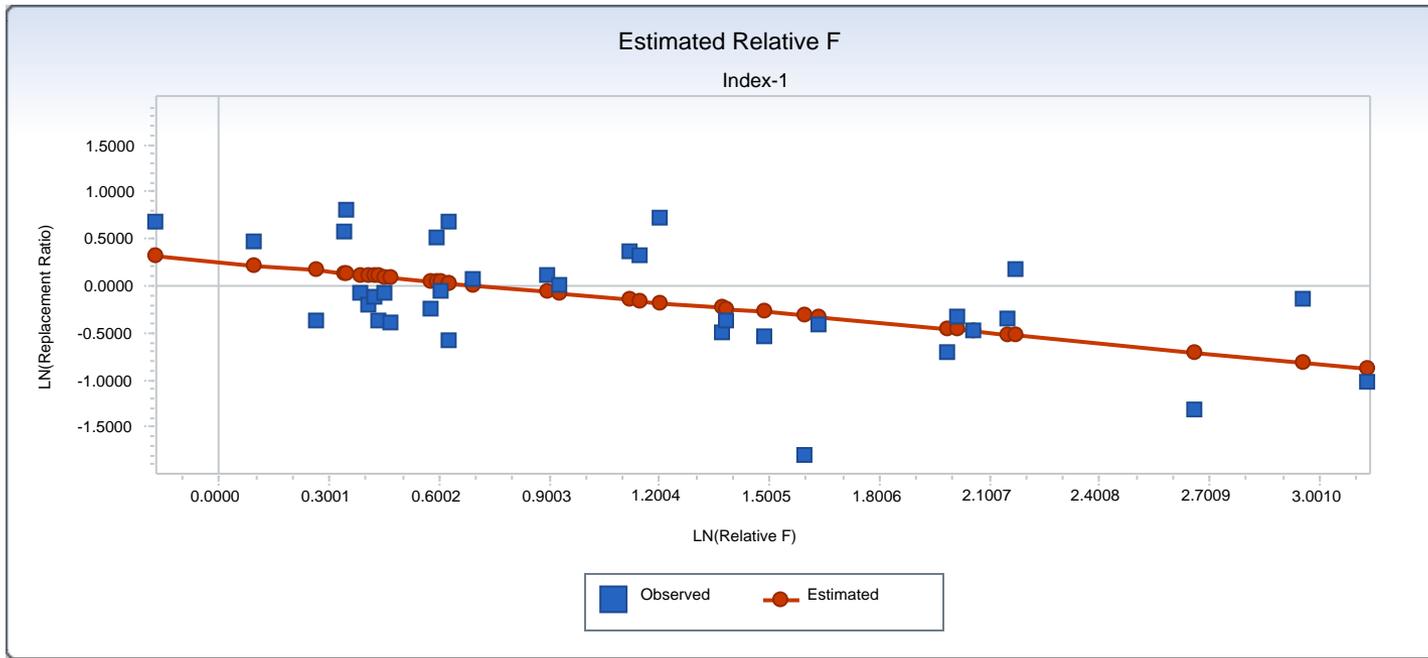


# Southern windowpane AIM model output



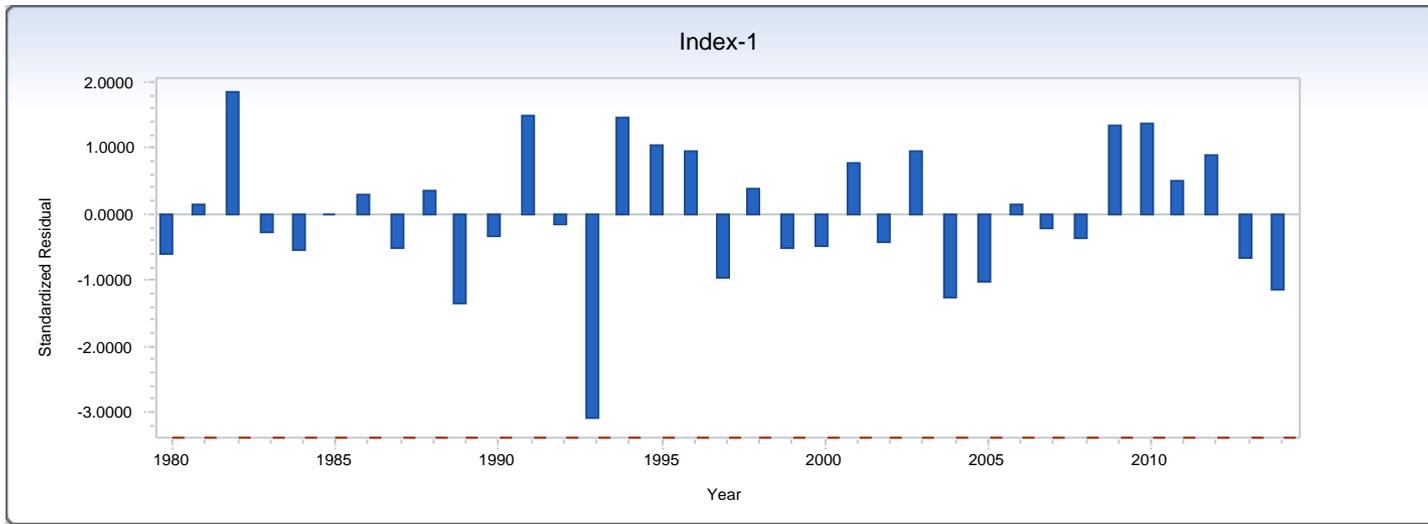
**Randomization test: Correlation between  $\ln(\text{replacement ratio})$  and  $\ln(\text{relative } F)$  ---  $p = 0.002$  (0.006 in 2010)  
Critical value = -0.530**

# Southern windowpane AIM model output



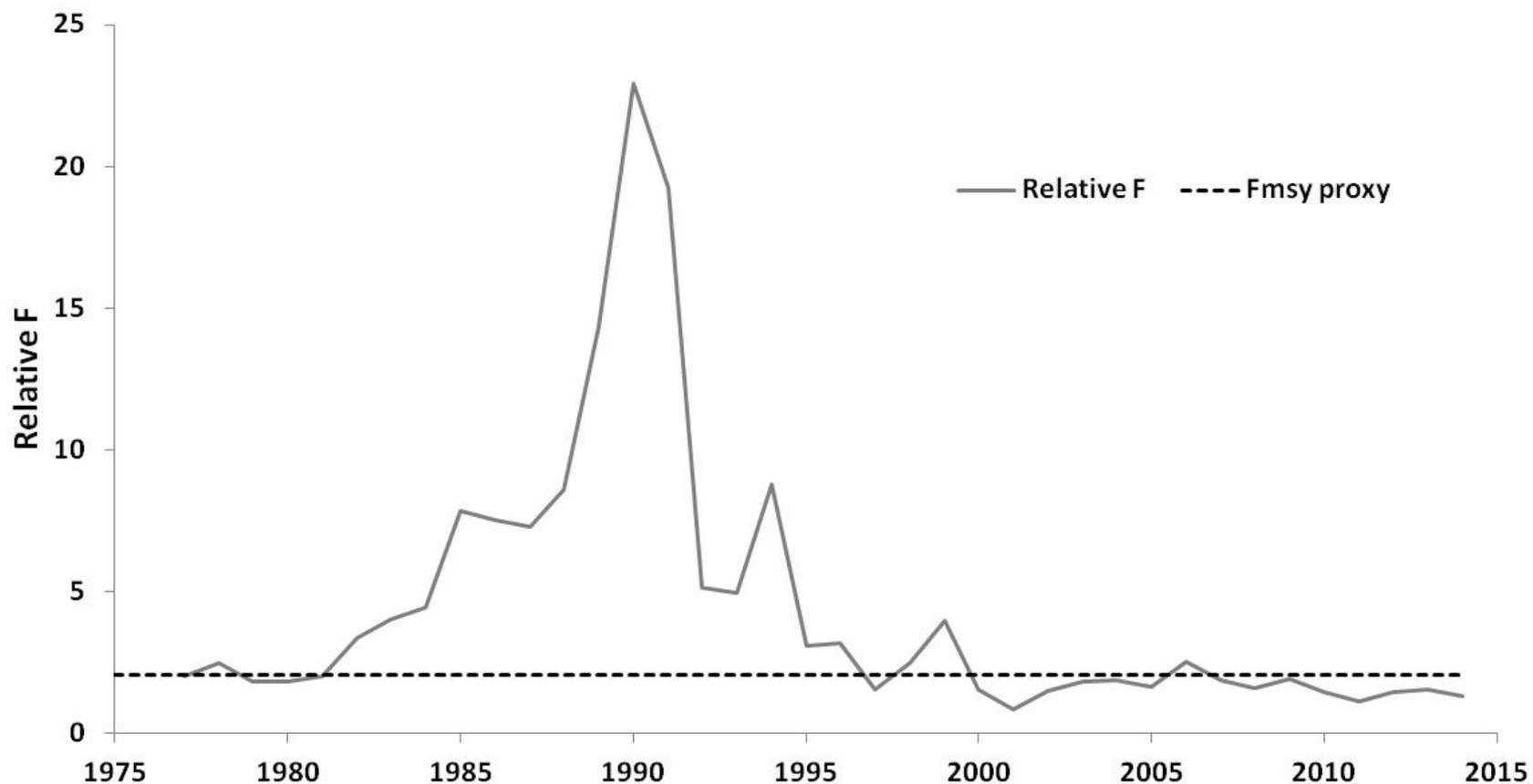
$F_{msy}$  proxy occurs where the regression line crosses zero (replacement ratio is 1.0)

# Southern windowpane AIM model output

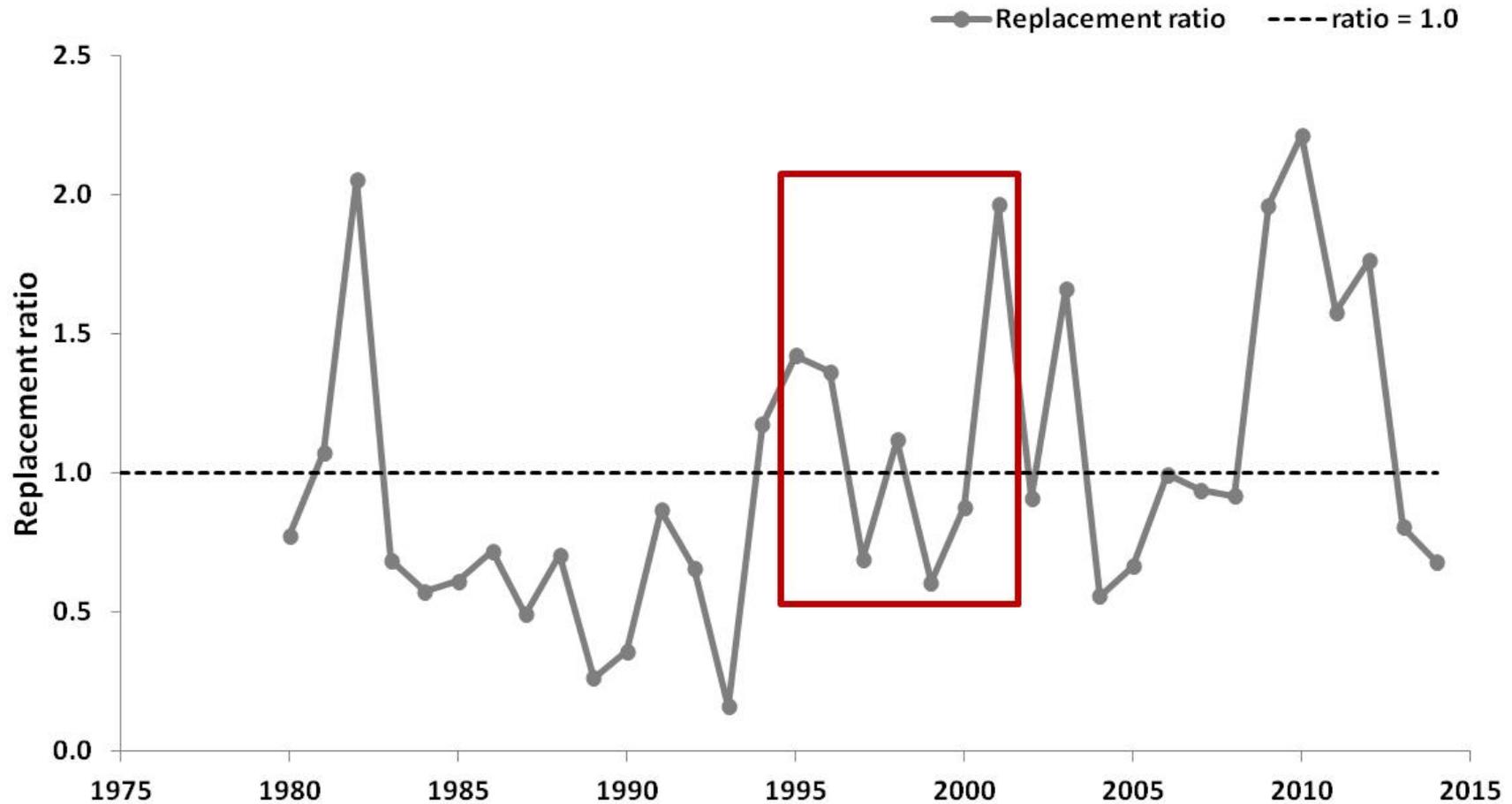


**Standardized residuals by year - regression of  $\ln(\text{relative } F)$  and  $\ln(\text{replacement ratio})$**

# Southern windowpane AIM model output -- $F_{msy}$ proxy estimate and relative F



# Southern windowpane AIM model output – replacement ratio



(Median catch 1995 – 2001 is MSY proxy)

## Southern windowpane previous and re-estimated reference points

	2010	2014	units
<b>MSY proxy</b>	<b>0.500</b>	<b>0.500</b>	<b>kt</b>
<b>F<sub>msy</sub> proxy</b>	<b>2.09</b>	<b>2.027</b>	<b>kt per kg/tow</b>
<b>B<sub>msy</sub> proxy</b>	<b>0.24</b>	<b>0.247</b>	<b>kg/tow</b>
<b>B<sub>threshold</sub></b>	<b>0.12</b>	<b>0.123</b>	<b>kg/tow</b>



# Southern windowpane stock status for 2014

2014 B index = 0.413,  $B_{\text{threshold}} = 0.123$

**not overfished**

2014 relative F = 1.308,  $F_{\text{msy}} = 2.027$

**no overfishing**



# Uncertainty

**Since 2002, average of 8% of additional estimated discards (1% - 19%, 5 – 65 mt) have come from the general category scallop dredge fleet. These should be added to catch for model input. The general category dredge fleet is more active in the southern windowpane stock area.**