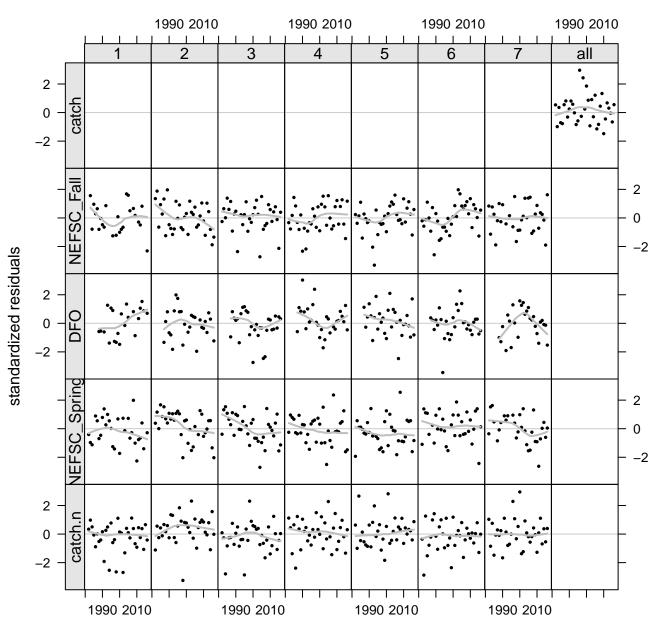
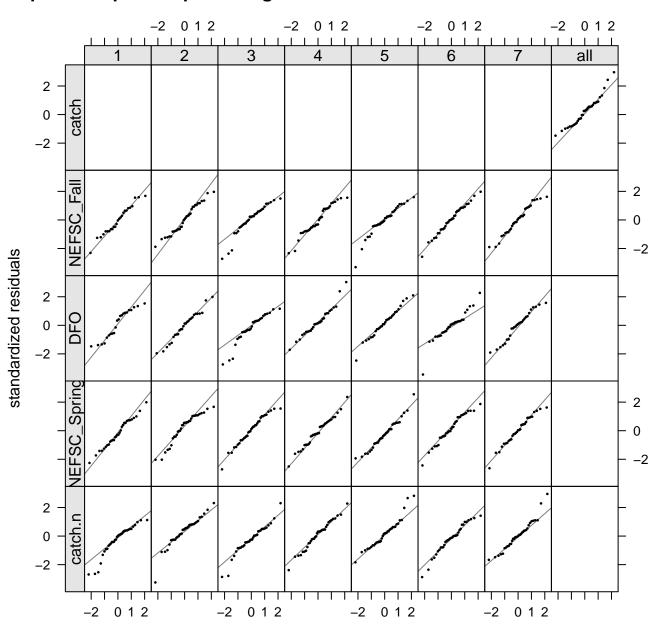
# log residuals of catch and abundance indices by age



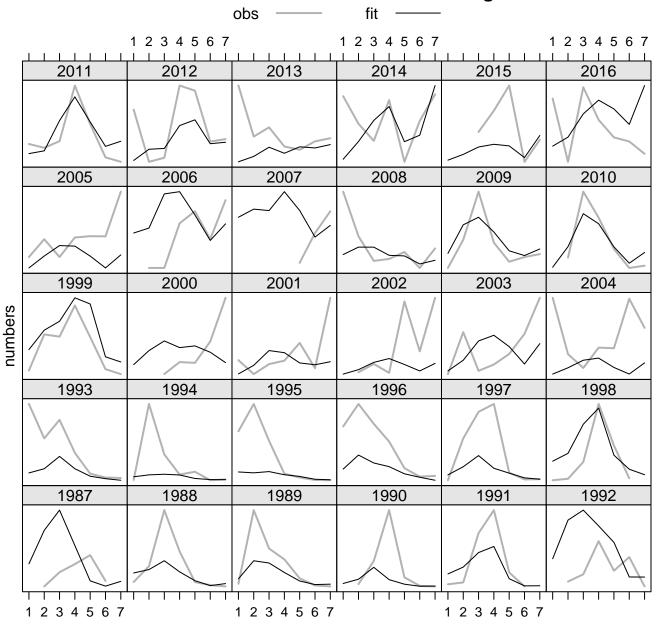
# quantile-quantile plot of log residuals of catch and abundance indices



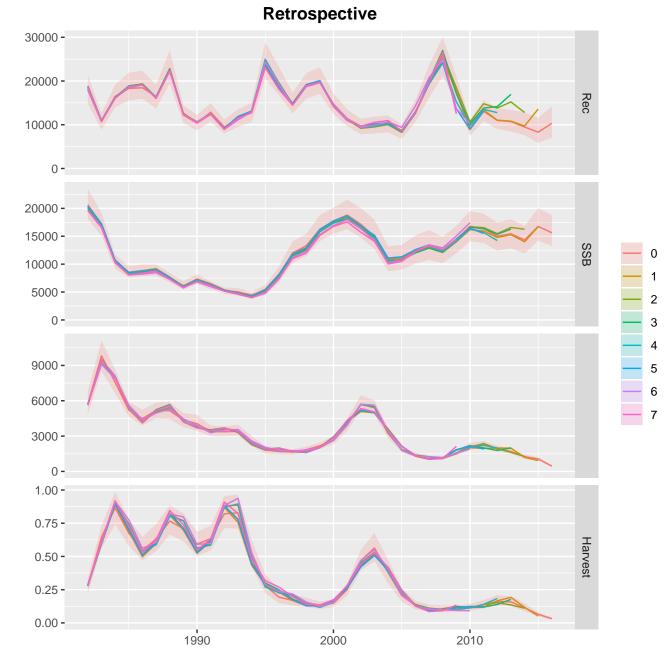
#### fitted and observed catch-at-age obs fit 1 2 3 4 5 6 7 1 2 3 4 5 6 7 numbers 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6 7

#### NEFSC\_Spring: fitted and observed index-at-age obs fit 1 2 3 4 5 6 7 1 2 3 4 5 6 7 numbers 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6 7

### DFO: fitted and observed index-at-age



#### NEFSC\_Fall: fitted and observed index-at-age obs fit 1 2 3 4 5 6 7 1 2 3 4 5 6 7 numbers 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6 7



**Stock summary** 30000 -20000 -10000 -0 -20000 -15000 -SSB 10000 -5000 -0 -9000 -6000 **-**3000 -0 -1.00 -0.75 -0.50 -0.25 -0.00 -2000 2010 1990

# **Abundance indices predictions**

