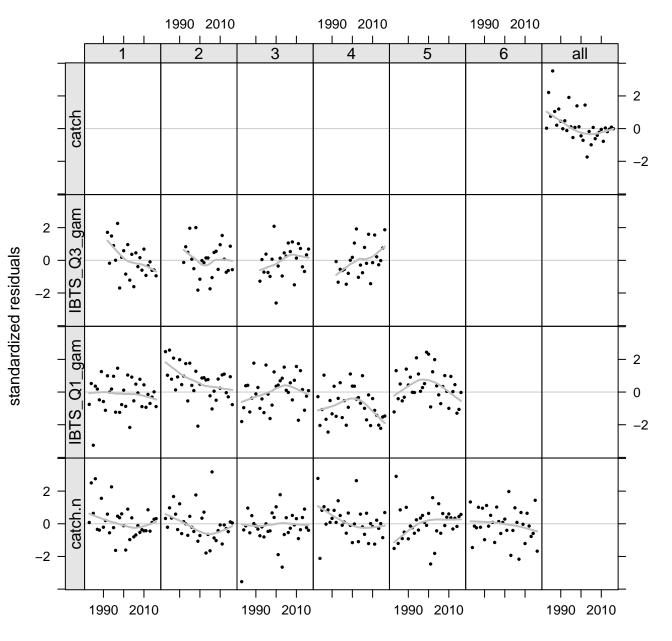
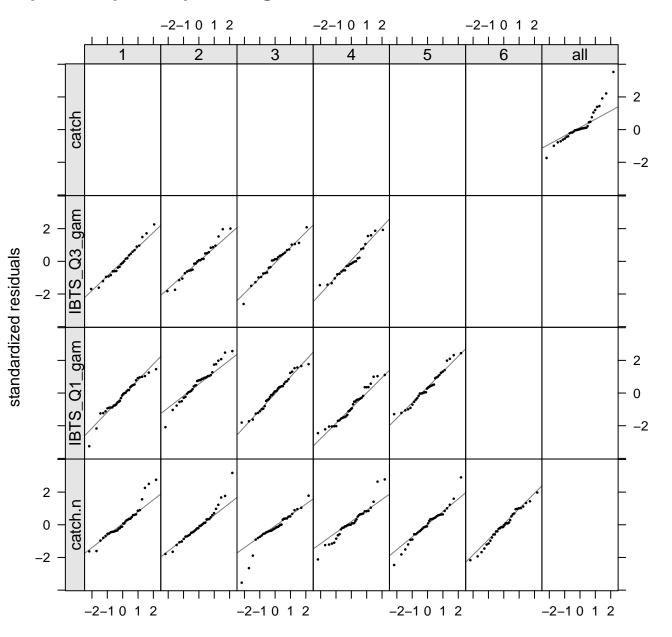
# log residuals of catch and abundance indices by age



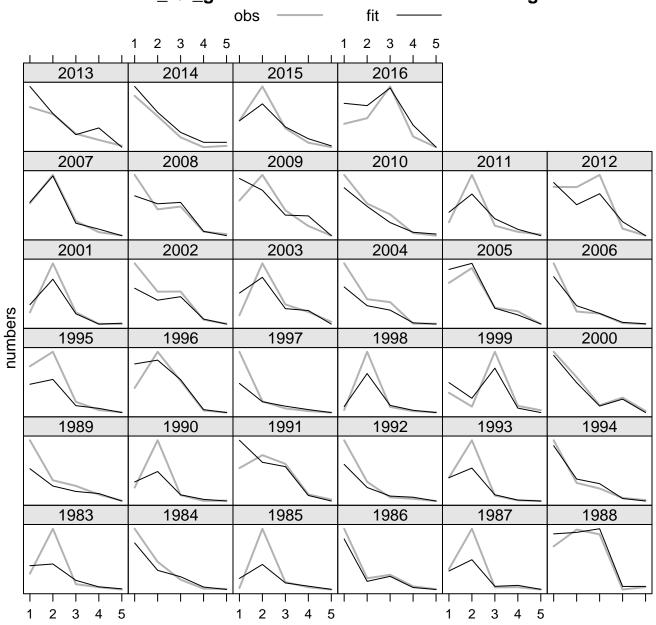
## quantile-quantile plot of log residuals of catch and abundance indices



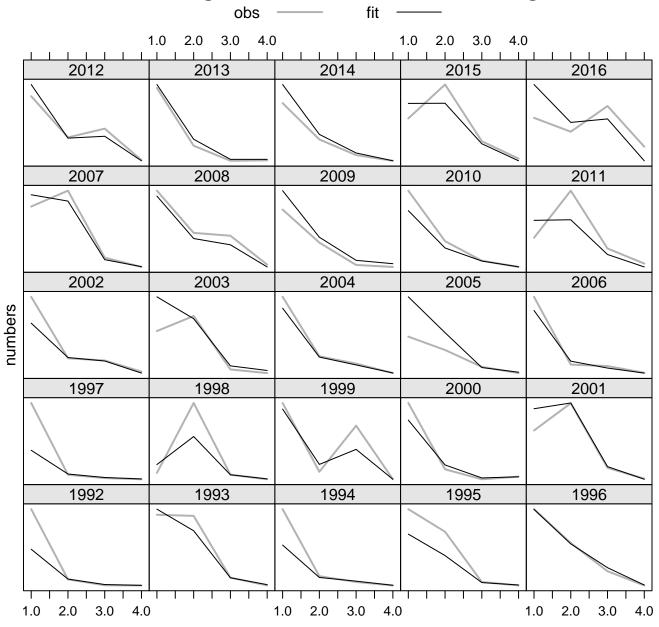
#### fitted and observed catch-at-age obs fit 1 2 3 4 5 6 1 2 3 4 5 6 numbers 4 5 6 4 5 6

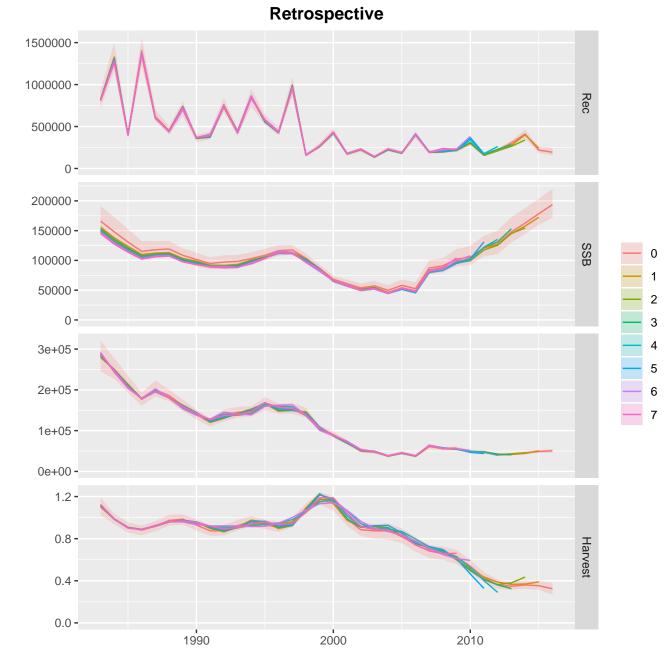
age

#### IBTS\_Q1\_gam: fitted and observed index-at-age



### IBTS\_Q3\_gam: fitted and observed index-at-age





**Stock summary** 1500000 -1000000 -500000 -0 -200000 -150000 -SSB 100000 -50000 -0 -3e+05 -2e+05 -1e+05 -0e+00 -1.2 -0.8 -0.4 -

2000

2010

0.0 -

1990

# Abundance indices predictions

