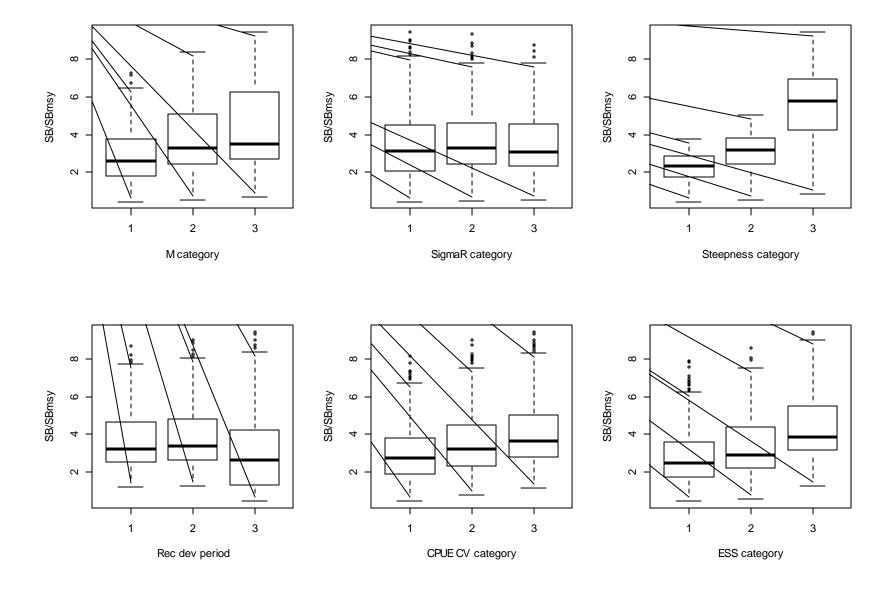
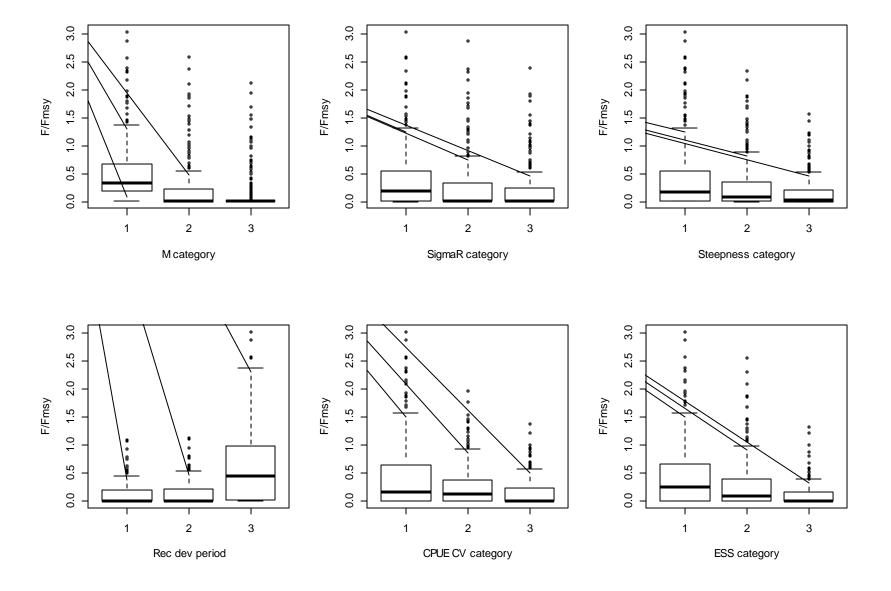
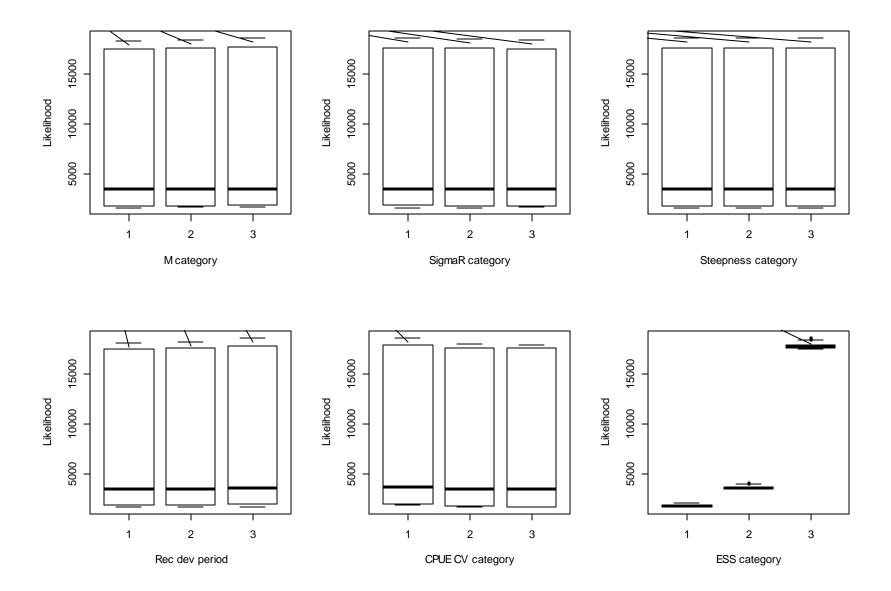
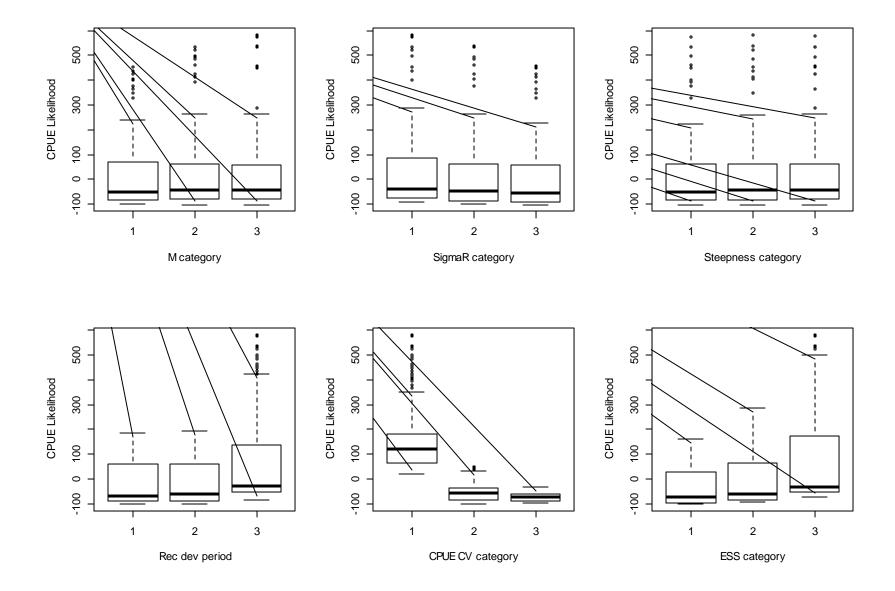
# **ALB SS3 Grid**

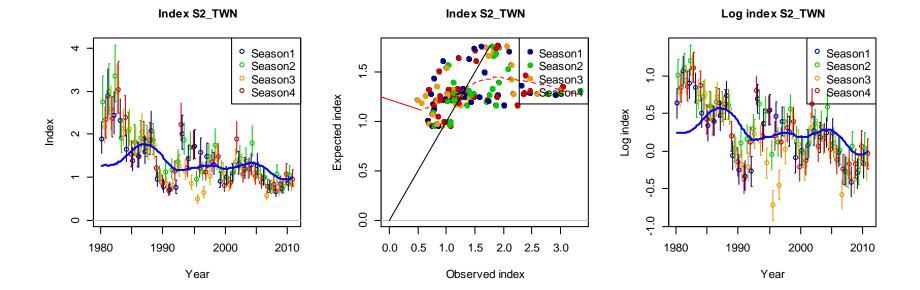
- Natural mortality (0.2, 0.3, 0.4).
- Sigma R 0.2, 0.4, 0.6
- Steepness 0.65, 0.80, 0.95
- Rec Dev period 1960-2005, 1970-2005, 1980-2005
- CPUE CV 10%, 20%, 30%
- ESS 10, 20, 100
- $3^6 = 729 \text{ runs}$ .

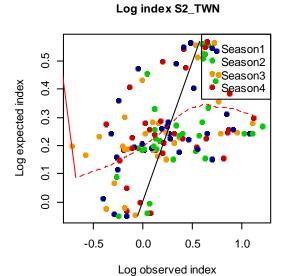


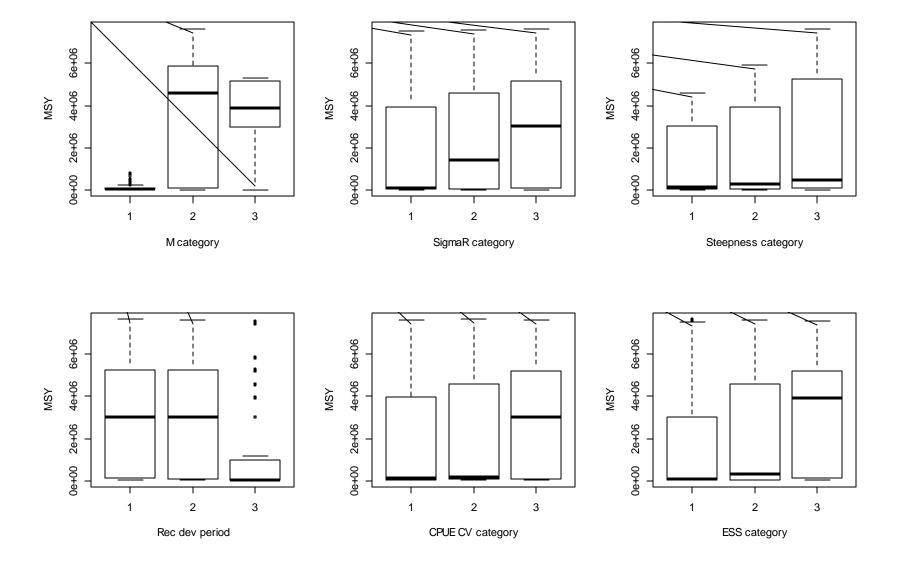




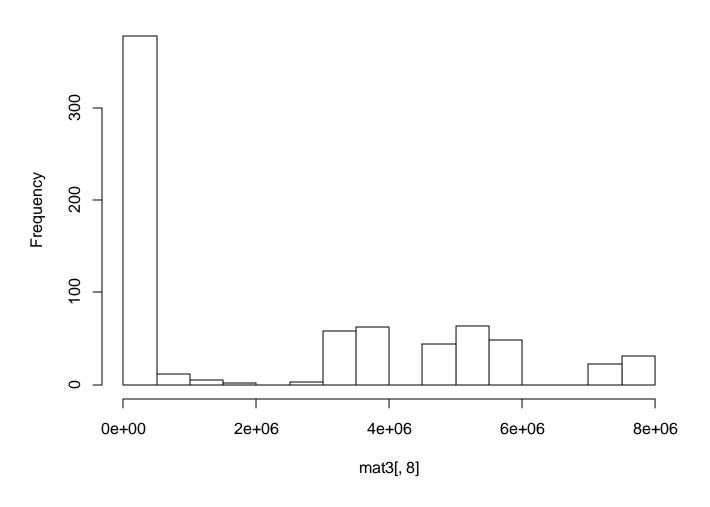








#### Histogram of mat3[, 8]

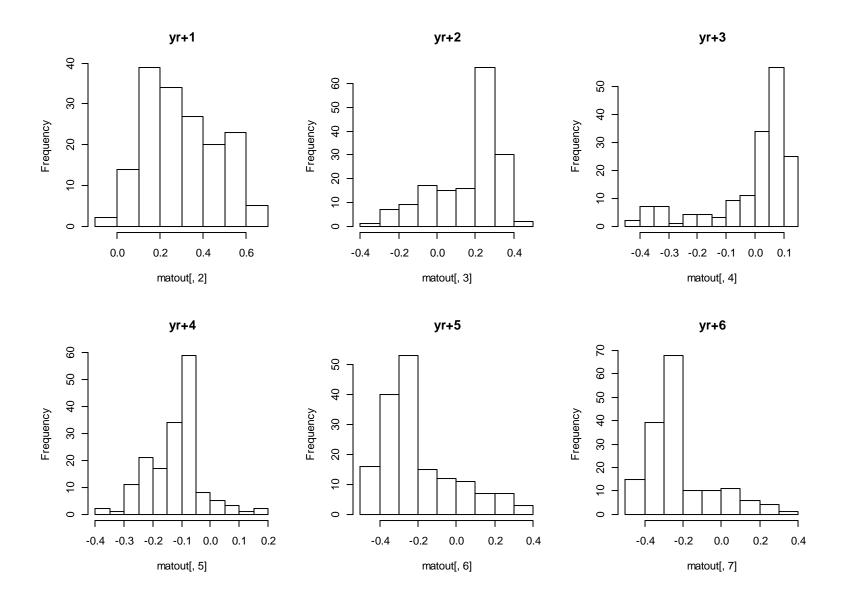


# High (100+ kmt) MSY scenarios

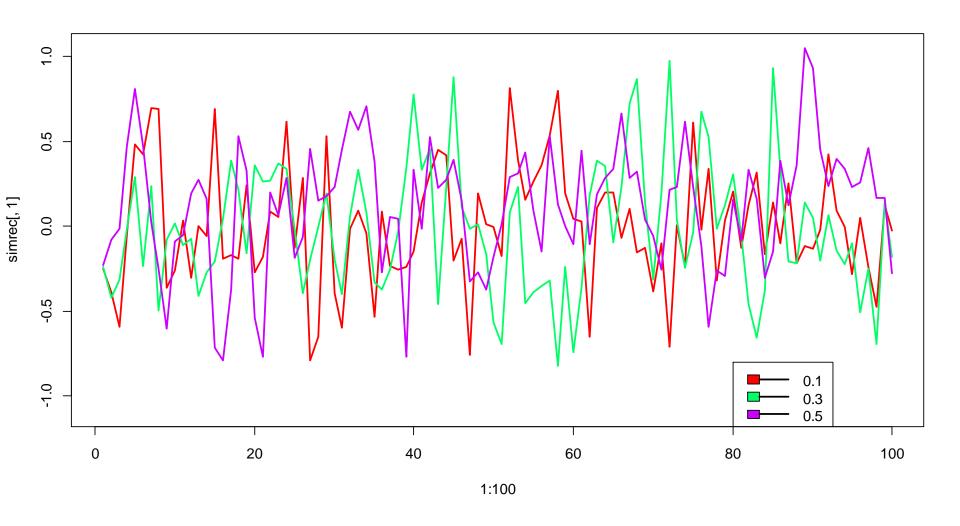
 Estimate early recruitment devs (pre 1980) [long term decline in recruitment from high R0 – signal in length data?].

### And/or

- High ESS for length data (100) and high CPUE CV [size data is consistent with very low exploitation rate, deviates from CPUE trend].
- Contraditictory? Nope
- Inconsistent patterns in JP and TW LL length data.
- Exclude those scenarios. Reduces candidates from 729 to 162.



 $simrec[i,j] \leftarrow coef * simrec[(i-1),j] + sqrt(1-coef^2) * rnorm(1, 0, stdev^2)$ 



## ALB Grid 2

- Natural mortality (0.2, 0.3, 0.4).
- Sigma R 0.2, 0.4, 0.6
- Steepness 0.65, 0.80, 0.95
- Rec Dev period 1980-2005
- CPUE CV 10%, 20%, 30%
- ESS 10, 20
- LL catchability, 0%, 1% per annum
- TW LL Selectivity double-normal, logistic
- 648 runs.

