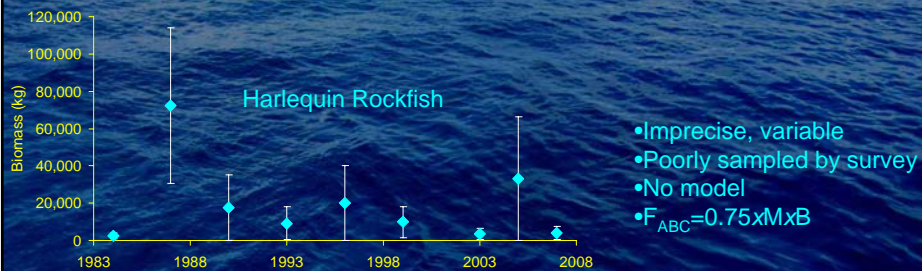


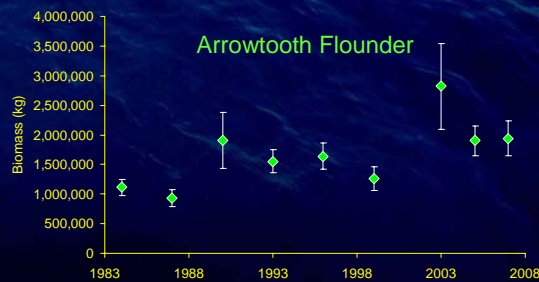
## What do we need for simple $P^*$ ?

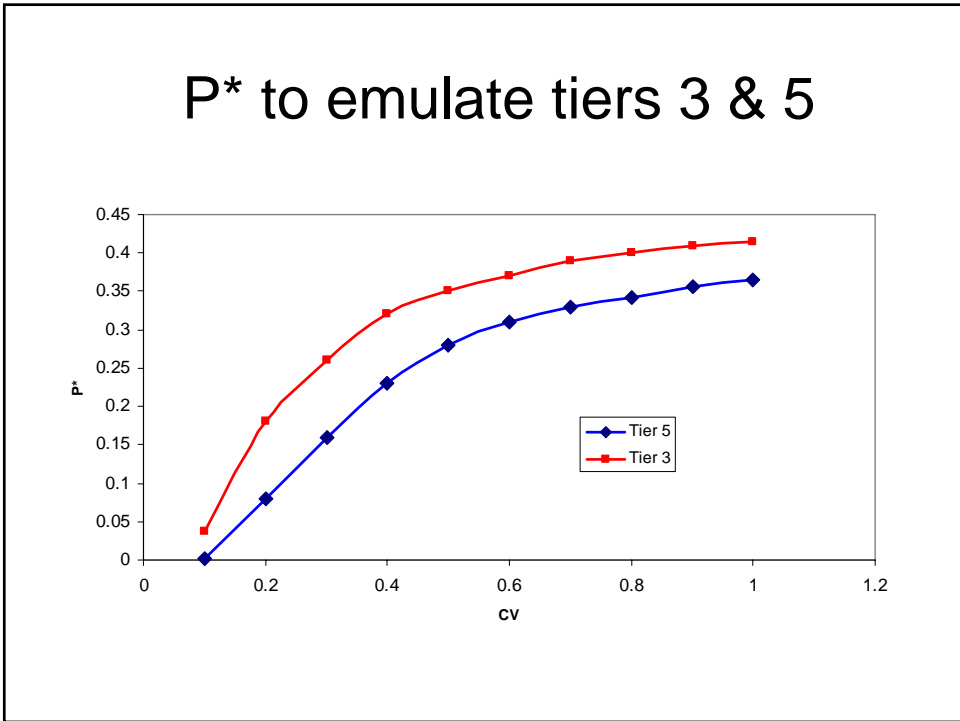
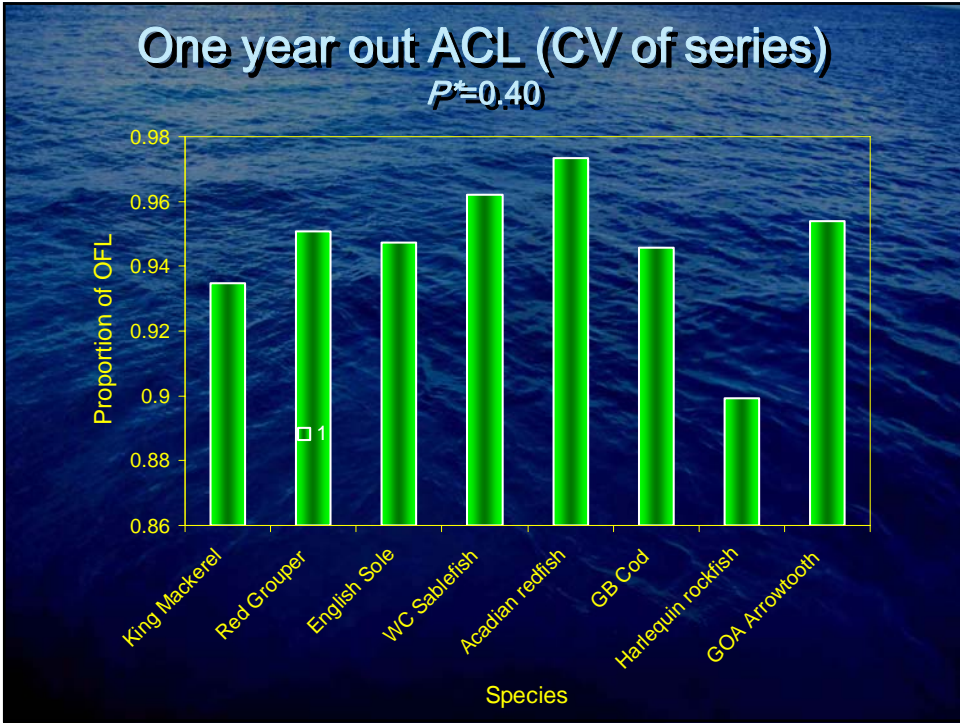
- Time series of biomass estimates
- $P^*$  (from someone)

## Different data quantity/quality

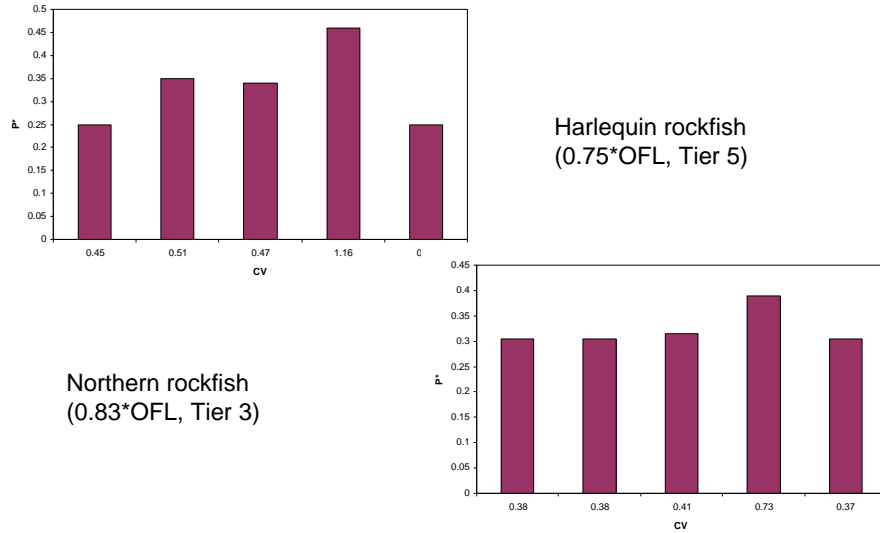


- Precise
- Increasing trend
- Well-sampled by survey
- Age-structured model
- $F_{ABC} = F_{40\%}$

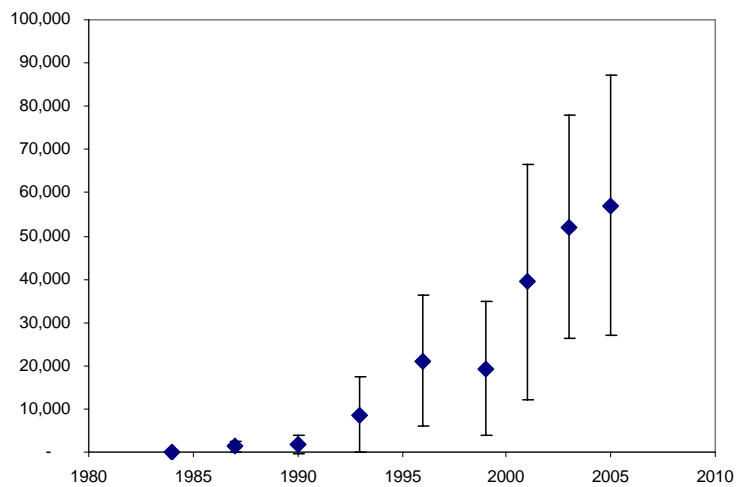




## Two species, two tiers current ABC



## GOA Sleeper shark (Tier 6)



Pacific sleeper shark ( $P^*=0.25$ )  
buffer\*max\_catch (608 t)

