A summary of the pro's and con's of area-aggregated *vs* area-disaggregated assessment approaches for the west coast rock lobster resource

S.J. Johnston and D.S. Butterworth

MARAM
Department of Mathematics and Applied Mathematics
University of Cape Town
Rondebosch, 7701

Pro's for an area-aggregated approach

- Fewer gaps in data series
- Greater simplicity

Con's for an area-aggregated approach

- A single somatic growth data series has to be used for the overall area, despite indications of substantial differences in somatic growth trends between super-areas (particularly for A1-2 compared to the others)
- Difficult to consider different management objectives for different super-areas
- As the past patterns of catches have differed greatly between areas, an aggregated evaluation may introduce substantial bias

Pro's for an area-disaggregated approach

- Potentially better reflects the population dynamics at a smaller spatial scale, when there seem likely to be important differences at this scale
- Allows for different management objectives for different super-areas

Con's for an area-disaggregated approach

- More gaps in the data series
- Egg production output from each super-area is assumed to remain in that area (at least for the current model implementation)
- Coarse assumptions are needed to break-down the historic catch record among the super-areas
- Considerably more time-consuming to develop and test assessment models and OMPs for a number of areas in contrast to a single area