



Update on Data Required for Planned Assessment-related Analyses for the South African Hake Resource in 2008

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The data required for the assessment-related analyses planned for the South African hake resource in 2008 are listed below. They are grouped by projects, in order of priority.

The task group needs to set initial deadlines for providing these data.

I. Routine assessment update and OMP application

Annual catches:

- Updated (to 2007) offshore trawl catches, disaggregated by species using survey proportion by depth relationship, for each coast
- Updated (to 2007) inshore trawl catches, south coast only, assuming all *M. capensis* (this assumption still ok?)
- Updated (to 2007) longline catches, for each coast (assumption all *M. capensis* on south coast and 30% *M. paradoxus* on the west coast still ok?)
- Updated (to 2007) handline catches, south coast only, assuming all *M. capensis* (this assumption still ok?)

GLM-standardised CPUE:

- Updated (to 2006) offshore trawl GLM-standardised CPUE, species disaggregated, coasts combined

Survey biomass estimates:

- West and south coast survey biomass estimates updated (to 2007) disaggregated by species

Commercial and survey CAA:

- Any further or updated (from newly developed ALKs?) commercial or survey CAA information

II. Sensitivities for in-depth assessment

II.1. Use of observer-based species splits of catches; check whether this has implications for plausible range of pre-1978 split formulae.

- Alternative offshore trawl catches, disaggregated by species using proportion by depth relationship based on observer data, for each coast
- Alternative offshore trawl CPUE series using proportion by depth relationship based on observer data
- Including offshore trawl CAL from observer data

II.2. Use of further CAA/CAL information: this includes a) the use of ALKs only when available for that year; otherwise use CAL data, b) use of further CAA, CAL data (e.g. pre-1975 and post-1996 for offshore trawl)

Commercial CAA/CAL

- West and south coasts offshore trawl CAL (species aggregated) to 2007 (including pre-1975)
- South coast inshore trawl CAL to 2007 (assuming all *M. capensis*)
- South coast (assuming all *M. capensis*) and west coast (species aggregated) longline CAL to 2007
- Any length data available for handline fishery?
- Why is the west coast winter *M. paradoxus* CAA not used in current assessment?

Survey CAA/CAL

- Species disaggregated survey CAL (south coast autumn and spring (0-500m) and west coast summer and winter (0-500m))

II.3. Longlining – use of further CAA, and possibly CPUE data

- What progress has been made in developing a longline CPUE series?

II.4. Impact of different proportions of trawlable ground in the various survey strata

- Estimates of proportion of trawlable ground in each survey station
- Use of survey biomass estimates for trawlable areas only, with different assumptions re untrawlable areas.

II.5. Impact of different assumptions for pre-1978 offshore trawl species disaggregation

- Assumptions pre-1978 re various disaggregations

II.6. Use of updated biological information

- Any update on length-weight, weight-at-age relationships, and their possible inter-annual variations?
- Any update on maturity-at-age, and its possible inter-annual variations?

III. Gender-disaggregated model

This model will be fit to species and gender disaggregated ALKs directly.

- Is there any information on gender-disaggregation from observer data?
- Is it possible to compute gender-disaggregated survey biomass estimates and CAL?
- Species and gender disaggregated ALKs

IV. Movement model

- Need to finalise zones: inshore/offshore (possible further, e.g. 100m depths?), west/south coasts (possible further e.g. divide each coasts further into 2/3 zones?)
- All data in I. disaggregated by zones.

V. Model with species interactions

- Analyse additional stomach content information (for the period 1995-2007) using an analogous method to that applied by Punt and Leslie (1995), including the average fraction of hake (of size?) in the diet of other hake (of size?)