A list of possible data that could be extracted for use in future assessments of the South African horse mackerel resource

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A. Length Frequency information

a) Survey data – from demersal swept area surveys

Length frequency data have been collected during all trawl surveys since the start of the surveys.

b) Commercial demersal

To be confirmed by MCM.

c) Commercial Mid-water

Length frequencies for all commercial midwater trawls since August 2002 are currently available. Earlier data exist, but have to be accessed from MCM.

d) Commercial Pelagic data

These data are available from 1950-1998. For 1950-1995 the length frequency data are for caudal lengths. Length frequencies for 1996-1998 are for total lengths. The raw data are from Marine and Coastal Management data files. Mariana Horsten (pers. commn) wrote software that could produce length frequencies for each year where data are available, from the raw data files. Note that there are several years for which no data are available, i.e. for the period 1950-1998 (a 49 year period), length frequency data are available for 35 of those years.

Horsten (pers commn) also provides catch-at-age proportions for 1950-1983, and 1996-1998. Length-frequency data for 1984-1995 were only available from already constructed length-frequency distributions, i.e. not from raw data, and thus Horsten was unable to produce catch-at-ages for these years. The growth curve used for converting length-frequency data into catch-at-age data is not known.

e) Commercial Historic data

Punt and Leslie (1990) provide a list of the available length frequencies for the South African horse mackerel for the period 1964-1989 for the west coast and for the period 1981-1989 for the south coast. Information recorded is:

- Year
- Country
- Land or sea collected samples

- Commercial or research samples
- Length of measurement (caudal length, fork length, total length)
- Gear type including mesh size.

Punt and Leslie (1990) made no effort to estimate catch-at-age from these data as there are substantial gaps in the length frequency data and because for most years length frequencies are constructed from a few samples only. They summarised the sampling intensity from the south coast as follows (South African vessel information only):

Number of fish measured

Year	Division 2.1		Division 2.2	
	75mm	110mm	75mm	110mm
1981	3333	3016	0	0
1982	4684	2594	0	0
1983	6640	2802	0	0
1984	6162	3083	828	407
1985	8347	1254	579	220
1986	4216	1000	0	146
1987	15402	946	631	633
1988	15599	685	0	199
1989	21961	4972	624	0

Number of samples taken

Year	Division 2.1		Division 2.2	
	75mm	110mm	75mm	110mm
1981	19	31	0	0
1982	35	21	0	0
1983	35	5	0	0
1984	30	35	4	5
1985	34	17	2	3
1986	27	20	0	2
1987	61	9	3	4
1988	92	5	0	1
1989	122	30	5	0

Table 1 provides a summary of these length frequency data. Here only data collected from the South African vessels and those which report total length are summarised.

References

Punt, A.E. and R.W. Leslie. 1990. Data for Cape horse mackerel *Trachurus trachurus capensis*. MCM document, WG/OCT/90/D/14. 64pp.

Table 1: Summary of length frequency data available from the historic commercial catches (from Punt and Leslie 1990). Only records from South African vessels and those recording total lengths are reported here.

West Coast ICSEAF division (1.6)

Year	Land/sea	Mesh-size
1981	Sea	110
1981	Sea	75
1988	land	110

South Coast ICSEAF division (2.1)

Year	Land/sea	Mesh-size
1981	sea	110
1981	sea	75
1982	sea	75
1983	sea	110
1984	land	110
1984	sea	110
1984	land	75
1985	land	75
1985	sea	110
1986	land	75
1986	sea	110
1987	land	75
1987	land	110
1987	sea	110
1988	land	110
1989	land	110
1989	sea	110
1989	land	75
1989	sea	75

South Coast ICSEAF division (2.2)

Year	Country	Land/sea	Mesh-size
1984	SA	land	75
1984	SA	land	110
1984	SA	sea	110
1985	SA	land	75
1985	SA	sea	110
1986	SA	sea	110
1987	SA	land	75
1987	SA	sea	110
1988	SA	land	110
1989	SA	land	75
1989	SA	sea	75