Fishery Report: *Dissostichus eleginoides* Heard Island (Division 58.5.2)

1. Details of the fishery

1.1 Reported catch

5.184 The catch limit of *D. eleginoides* in Division 58.5.2 for the 2003/04 season was 2 873 tonnes (Conservation Measure 41-08) for the period from 1 December 2003 to 30 November 2004. The catch reported for this division as of 1 October 2004 was 2 269 tonnes. Reported catches along with the respective catch limits and number of vessels active in the fishery are shown in Table 5.34. In Division 58.5.2, the fishery was a trawl fishery from the 1996/97 to the 2001/02 season. For the last two seasons the fishery has been prosecuted by both trawlers and longliners. The longline fishery was active from 1 May to 14 September 2004 and the trawl fishery was active from 1 December 2003 to 30 November 2004.

Table 5.34: Catch series of *Dissostichus eleginoides* in Division 58.5.2 from 1989/90 to 2003/04. T – Trawler; LL – longliner; *season will finish on 30 November 2004.

Fishing season	Number vessels	Catch limit (tonnes)	Reported catch (tonnes)			IUU estimate (tonnes)	Total removals (tonnes)
			Total	Trawl	Longline		
1989/90			1	1	0	0	1
1990/91			0	0	0	0	0
1991/92			0	0	0	0	0
1992/93			0	0	0	0	0
1993/94			0	0	0	0	0
1994/95		297	0	0	0	0	0
1995/96		297	0	0	0	3000	3000
1996/97	2	3800	1927	1927	0	7117	9044
1997/98	3	3700	3765	3765	0	4150	7915
1998/99	2	3690	3547	3547	0	427	3974
1999/00	2	3585	3566	3566	0	1154	4720
2000/01	2	2995	2980	2980	0	2004	4984
2001/02	2	2815	2756	2756	0	3489	6245
2002/03	2T + 1LL	2879	2844	2574	270	1512	4356
2003/04	2T + 1LL	2873	2269*	1717*	552	637	2906*

1.2 IUU catch

5.185 Details of the IUU catches attributed to Division 58.5.2 are given in Table 3.3 and questions of the attribution of IUU catches reported in Areas 47 and 51 are considered in paragraphs 8.12 and 8.13.

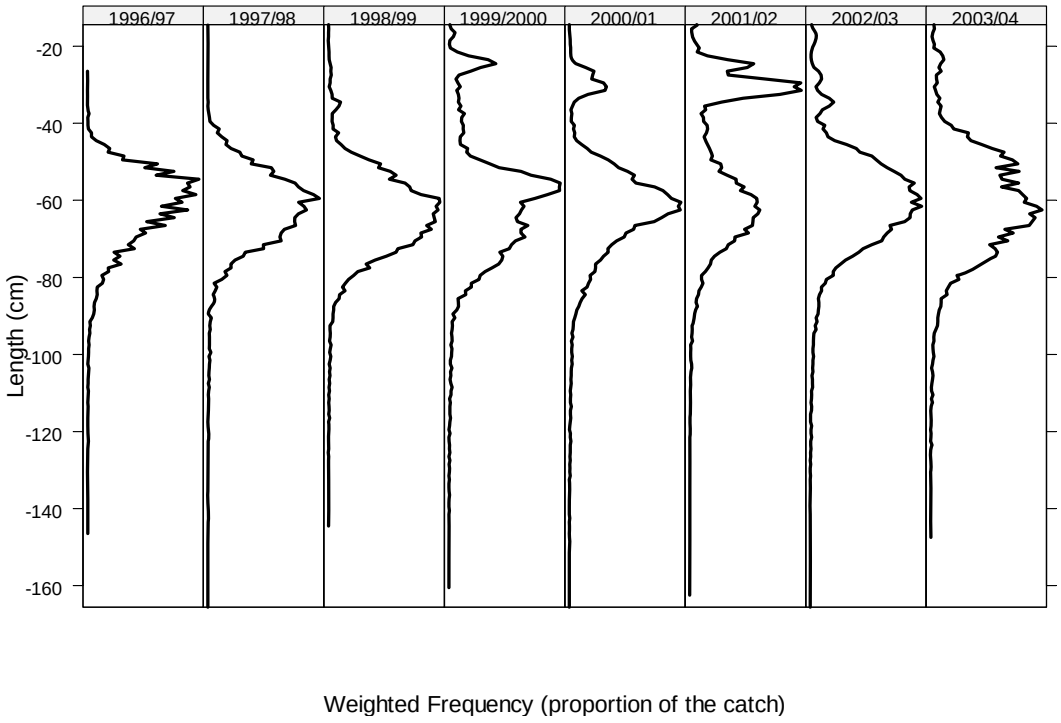

Figure 5.17: Catch-weighted length frequencies for *Dissostichus eleginoides* in Division 58.5.2 derived from observer, fine-scale and STATLANT data from the trawl fishery reported by 6 October 2004.

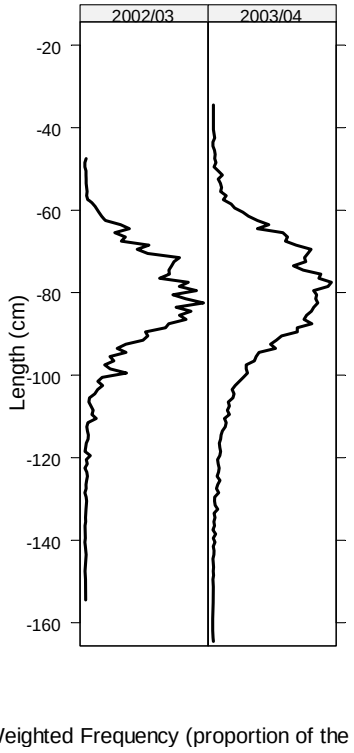

Figure 5.18: Catch-weighted length frequencies for *Dissostichus eleginoides* in Division 58.5.2 derived from observer, fine-scale and STATLANT data from the longline fishery reported by 6 October 2004.

1.3 Size and distribution of catches

5.186 Catch-weighted length frequencies are illustrated in Figures 5.17 (trawl fishery) and 5.18 (longline fishery). The Working Group noted that the modal size of fish caught in the longline fishery was greater than that in the trawl fishery.

2. Stocks and areas

5.187 *D. eleginoides* occurs throughout the Heard Island and the McDonald Islands Plateau, from shallow depths near Heard Island to at least 1 800 m depth around the periphery of the plateau. Annual random stratified trawl surveys conducted since 1997 have shown that younger fish (less than about 600 mm TL) predominate on the plateau in depths less than 500 m, but no areas of local abundance have been discovered. As fish grow, they move to deeper waters, and are recruited to the trawl fishery on the plateau slopes in depths of 450 to 800 m. Here there are several areas of local abundance that constitute the main trawling grounds where the majority of fish caught are between 500 and 750 mm TL (Figure 5.17). Older fish are seldom caught in the trawl fishery, and it is assumed that they move into deeper water (>1 000 m depth) where they are caught by the longline fishery. This fishery mostly operates between 1 000 and 1 200 m depth and catches larger fish than in the trawl fishery (Figure 5.17), but few fish >1 000 mm TL. It is assumed that the largest fish are at depths greater than 1 200 m.

5.188 Genetic studies have demonstrated that the *D. eleginoides* population at Heard Island and McDonald Islands is distinct from those at distant locations such as South Georgia and Macquarie Island (Appleyard et al., 2002), but that within the Indian Ocean sector there appears to be no distinction between fish at Heard, Kerguelen, Crozet or Marion/Prince Edward Islands based on genetic studies (WG-FSA-03/66). This, combined with results from tagging data which show movement of some fish from Heard Island to Kerguelen and Crozet Islands (Williams et al., 2002) suggests that a metapopulation of *D. eleginoides* may exist in the Indian Ocean sector (WG-FSA-03/72).

3. Parameter estimation

3.1 Parameter values

Fixed parameters

5.189 There were no updates to population parameters from last year used in the analysis of long-term annual yield. The input parameters used in the assessment are included in Table 5.35.

Table 5.35: Input parameters for the assessment of *Dissostichus eleginoides* in Division 58.5.2.

Component	Parameter	Value	Units
Natural mortality	M	0.13–0.2	y^{-1}
VBGF	K	0.29	y^{-1}
VBGF	t_0	–2.46*	y
VBGF	L_∞	2465	mm
Length to mass	'a'	2.59E-09	mm, kg
Length to mass	'b'	3.2064	
Maturity	L_{m50}	930	mm
Range: 0 to full maturity		780–1 080	mm

* Adjusted from estimated parameter of t_0 = –2.56 years to start of fishing season on 1 December.

Recruitment survey

5.190 No report of the Australian research survey was tabled at the meeting, but brief details were available in WG-FSA-04/76. Full details of the survey are desirable for future assessments. Australia undertook a trawl survey of Division 58.5.2 in May 2004 to estimate density of juvenile toothfish (WG-FSA-04/76). The survey used the same strata as used in the 2000–2002 surveys, with all strata being sampled in the 2004 survey. The number of randomly located trawl stations per strata was based on a review of the survey design for estimating abundance of juvenile *D. eleginoides* presented to the 2004 meetings of WG-FSA-SAM (WG-FSA-SAM-04/19) and WG-FSA (WG-FSA-04/76) (Table 5.36). The increase in the total area of the survey between 2003 and 2004 reflects the fact that the 2003 survey did not include the three northern strata (WG-FSA-03/33). The five stations from the Shell Bank strata in the 2004 survey were excluded from the inputs to assessment as operational constraints prevented the random stations from being completed and the resulting stations were not well distributed across the stratum.

Table 5.36: Details of the 2004 Heard Island survey for *Dissostichus eleginoides*.

Name of area	Mean survey date (DOY)	Area (km^2)	Hauls allocated	Hauls completed	Valid hauls
Ground B	137.4	480.8	25	25	25
Gunnari Ridge	143.6	520.7	18	18	13
Plateau deep east	147.5	13 120	30	30	30
Plateau deep northeast	124.4	15 090	7	7	7
Plateau deep southeast	138.4	5 340	5	5	5
Plateau deep west	125.4	13 370	5	5	5
Plateau north	123.8	15 170	10	10	10
Plateau southeast	146.4	10 620	30	30	30
Plateau west	126.6	10 440	10	10	10
Shell Bank	155.8	1 758	5	5	5
All strata		**85 909**	**145**	**145**	**140**

Recruitment estimates

5.191 Survey data was not available from the CCAMLR Secretariat, as it had been submitted in fine-scale format, rather than research-survey format. The data was available directly from the Australian representatives. Length densities were estimated from the Heard Island survey in May 2004 using the CMIX program, with both mean length (estimated from von Bertalanffy growth parameters) and standard deviation of length fixed (Table 5.37). The standard deviations are calculated using a coefficient of variation of length-at-age of 0.12, which is estimated during the fitting of the growth curve to size-at-age. There are no clear modes present in the length-density data and the fitting relies entirely on the growth curve parameters, which are based on size-at-age data. The Working Group noted that, given the lack of defined modes in the length-density data, it would be useful to evaluate the relative benefits of age–length keys as an alternative method for estimating densities of cohorts and that this would best be done using simulated data.

Table 5.37: Input parameters for CMIX analysis of survey data to estimate length densities of *Dissostichus eleginoides* in Division 58.5.2 in May 2004.

Age class	Mean size (mm fixed)	SD (fixed)
2	326	39
3	387	46
4	447	53
5	504	60
6	560	67
7	615	74
8	668	80
9	719	86

Parameter	Value
Minimisation	Yes
Maximum number of function calls	10 000
Minimum reporting frequency	100
Stopping criteria	1.0E-10
Frequency for convergence testing	5
Fit quadratic surface	No
Simplex expansion coefficient	1

5.192 The CMIX analysis indicates that four main age classes were present in the sampled population (ages 4, 5, 6 and 9; Figure 5.19). The 9-year-old cohort was not used to estimate the recruitment series as it was considered not fully sampled by the survey.

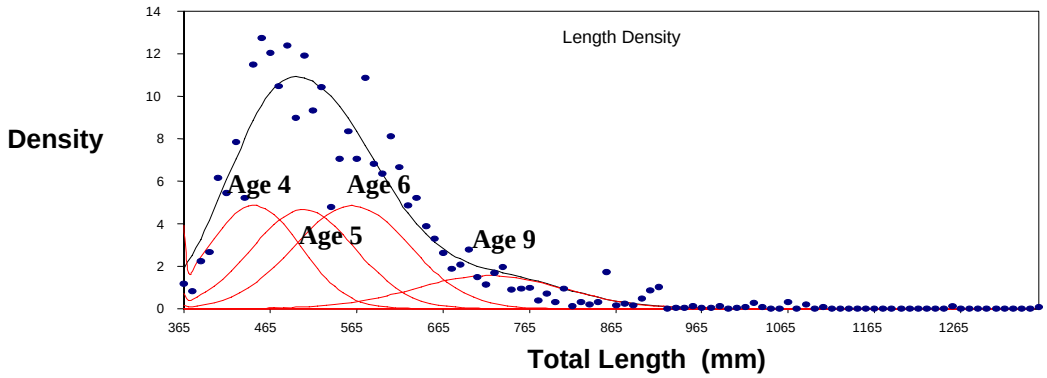

Figure 5.19: Results of CMIX analysis of survey data to estimate length densities of *Dissostichus eleginoides* in Division 58.5.2 in May 2004.

Biomass check

5.193 The estimated length densities from the CMIX program were converted to a biomass estimate using the length–weight relationship, the seafloor area and the mean size at age. This biomass was checked against the Trawl CI estimate from the survey (Table 5.38), and produced a similar estimate of biomass.

Table 5.38: Biomass check for the estimated densities generated by CMIX.

Age	4	5	6	9	
Density (numbers km^{-2})	64.62	70.2726	81.61	33.44	a = 2.59E-09
Area (km^2)	85 909	85 909	85 909	85 909	b = 3.20640
Numbers	5 551 440	6 037 049	7 011 033	2 872 797	
Mean size (mm)	447	504	560	719	
Mean weight (kg)	0.815	1.198	1.679	3.742	
Biomass (tonnes)	4 525.342	7 230.989	11 772.59	10 750.29	34 279.21
Trawl CI					34 733

CPUE series

5.194 The CPUE series was not updated at the 2004 meeting. The series was updated in 2003 (Candy, 2003). The CPUE series is not used in the assessment procedure as the trawl fishery is confined to a relatively small proportion of the area occupied by the stock, and therefore trends in commercial CPUE are not expected to reflect trends in stock status.

Tagging studies

5.195 A tagging study was undertaken at Heard Island from 1998 to 2001 (Williams et al., 2002). There was no time to consider this study in relation to the assessment at the meeting.

Table 5.39: Estimated cohort strengths of *Dissostichus eleginoides* from surveys undertaken in Division 58.5.2 since 1990. Only values in boxes were included in the assessment (see text for details). Observed and expected data are from the mixture analyses, the closeness of which indicates the quality of the fit. The time of the survey is relative to 1 December. Zero density values for age-3 and age-7 fish from the 2004 survey are included in the table and the assessment as 0.001, with standard error (SE) of 0.001.

Survey year	Time	Area (km^2)	Observed	Expected		Density (n km^{-2})					
						Age 3	Age 4	Age 5	Age 6	Age 7	Age 8
1990	0.50	97 106	107.2	108.1	Mean	8.080	33.508	20.208	0.827	25.226	
					SE	*5.897*	*13.552*	*11.251*	*11.505*	*14.082*	
1992	0.17	70 271	51.7	51.8	Mean	14.117	13.200	14.501	3.430	0.019	2.117
					SE	*5.156*	*7.036*	*7.845*	*4.473*	*5.449*	*3.342*
1993	0.77	71 555	97.4	114.7	Mean	13.567	38.259	8.191	16.961	3.066	20.884
					SE	*8.804*	*18.172*	*13.483*	*12.606*	*30.294*	*16.333*
1999	0.33	85 428	366.2	357.9	Mean	17.741	16.206	138.11	56.785	60.897	40.323
					SE	*7.862*	*13.323*	*42.657*	*55.348*	*50.870*	*38.189*
2000	0.47	41 144	185.0	179.5	Mean	28.124	21.969	47.817	59.121	7.565	10.989
					SE	*5.298*	*7.996*	*14.885*	*20.578*	*15.142*	*11.383*
2001	0.48	85 169	247.5	252.4	Mean	19.542	34.018	38.172	45.538	32.165	16.738
					SE	*7.798*	*12.849*	*20.534*	*30.762*	*42.367*	*41.086*
2002	0.48	85 910	208.5	204.8	Mean	18.590	29.333	59.400	20.726	53.199	
					SE	*6.722*	*11.475*	*21.202*	*21.993*	*17.117*	
2003	0.42	42 280	116.8	115.6	Mean	15.798	17.298	22.452	45.041		
					SE	*13.552*	*29.967*	*43.976*	*36.105*		
2004	0.43	85 909	242.8	246.0	*Mean*	0.001	64.620	70.727	81.601	0.001	
					SE	*0.001*	*38.548*	*67.242*	*40.211*	*0.001*	

Recruitment series

5.196 The recruitment series was updated with the recruitment estimates from the 2004 survey (Table 5.39). At WG-FSA-03 it was agreed that recruitment data from two trawl surveys (1992 and 2000 in Table 5.39) should be excluded from the GYM. The 1992 survey was excluded because it did not sample below 500 m and the Working Group felt that it did not adequately cover the depth distribution of fish in the age range 3 to 8 years used from other surveys (see WG-FSA-96/38). The 2000 survey was also excluded because of Working Group concerns about the sampling design. The 2000 survey specifically targeted *C. gunnari*, and did not sample strata where *D. eleginoides* were known to occur in greater densities. Thus, it is likely this survey underestimated the density of some cohorts. The Working Group considered that fish younger than age 3 were not adequately sampled by the trawl survey. Cohorts older than age 6 may be underestimated due to fishing on these cohorts. However, the process of mixture analysis can result in incorrectly assigning cohorts at older ages and inclusion of age-7 fish would potentially mitigate this possibility. The Working Group agreed that the 2003 survey did not adequately sample age-7 fish, and so these were not included in the series. The Working Group further agreed to include the estimate of the age-8 cohort from the 1999 survey. The 1999 survey targeted *D. eleginoides*, included intensive sampling in areas where fish ages 5 and above were known to occur, and provided the only estimate of recruitment for this cohort. Estimates of recruitments based on a mean natural mortality rate of 0.165 year^{-1} are provided in Table 5.40.

Table 5.40: Updated recruitment series used in the assessment of *Dissostichus eleginoides* in Division 58.5.2. Based on a natural mortality of 0.165 yr^{-1}.

Year at age 4 birthday	WG-FSA-04
1986	4.3273
1987	0.1207
1988	2.4920
1989	3.7900
1990	1.1200
1991	0.6690
1992	2.7427
1993	0.8248
1994	7.2051
1995	9.2260
1996	7.2946
1997	14.171
1998	6.5321
1999	2.3324
2000	4.5859
2001	3.2006
2002	1.9120
2003	3.0936
Mean	4.2022
CV	0.8464

Fishing vulnerabilities (FV)

5.197 In Division 58.5.2, the fishery was a trawl fishery for the period 1996/97 until the 2001/02 season. For the last two seasons both trawlers and longliners have prosecuted the fishery. Age-based fishing vulnerabilities have been applied since 1996/97 (Table 5.41). Note the same trawl-based vulnerabilities are applied to both the trawl and longline fisheries. This will result in a more conservative estimate of yield than applying longline vulnerabilities.

5.198 In the 1995/96 season a length-based vulnerability function was applied, with vulnerability starting at 550 mm TL, 50% vulnerability at 670 mm TL and full vulnerability at 790 mm TL.

Table 5.41: Fishing vulnerabilities for *Dissostichus eleginoides* in the trawl and longline fishery in Division 58.5.2.

Fishing season	Ages over which FV = 0	Ages over which FV = 1	Ages over which FV = 0
1995/96	Length based (see text)		
1996/97	0–6.9	7–7.9	8–max
1997/98	0–6.0	6.1–10.0	12–max
1998/99	0–5.5	6.0–13.0	15–max
1999/00	0–4.0	4.0–14.0	15–max
2000/01	0–7.9	8.0–14.0	15–max
2001/02	0–7.9	8.0–14.0	15–max
2002/03	0–7.9	8.0–14.0	15–max
2003/04	0–7.9	8.0–14.0	15–max

4. Stock assessment

4.1 Model structure and assumptions

5.199 The GYM, using input data from paragraphs 5.189 to 5.198, was used to estimate the constant catch that would satisfy the CCAMLR decision rules. These are:

1. Depletion rule: Determine the catch that results in a probability of the spawning stock biomass falling below 20% of its estimated pre-exploitation level of not more than 10% over the 35-year projection period.

2. Escapement rule: Calculate the catch that results in a median escapement of 50% of the spawning stock biomass in the final year of the 35-year projection.

3. Choose the lower of the two estimates of long-term yield.

Model configuration

5.200 The GYM was run according to the configuration detailed in Table 5.42.

Table 5.42: GYM model configuration for the assessment of *Dissostichus eleginoides* in Division 58.5.2.

Category	Parameter	Value
Recruitment age	Start	4 years
	Fully selected	8 years
Plus class accumulation		35 years
Oldest age in initial structure		55 years
Simulation specification	Number of runs	10 001
	Depletion level	0.2
	Seed for random number generator	–24 189
Individual trial specification	Years to remove initial age structure	1
	Observations to use in median SB_0	1 001
	Year prior to projection	1985
	Reference start date	01/12
	Increments in year	24
	Years to project stock in simulation	35
	Reasonable upper bound for annual *F*	5.0
	Tolerance for finding *F* in each year	0.000001

4.2 Model estimates

5.201 The constant catch for which there was median escapement of 50% of the median pre-exploitation spawning biomass level at the end of the 35-year projection period was 2 787 tonnes. The yield at which there is a less than 10% chance of spawning biomass dropping to less than 20% of the initial biomass was 3 091 tonnes. Following the third part of the CCAMLR rule, the lower yield of 2 787 tonnes is recommended.

4.3 Sensitivity analyses

5.202 Three sensitivity trials were run at WG-FSA-03 to investigate the effects of the alternative vulnerabilities, and of excluding older age classes from the estimation of the recruitment series (SC-CAMLR-XXII, Annex 5, paragraphs 5.138 to 5.140). In a preliminary assessment, contained in WG-FSA-04/76, the assessment was run with the updated recruitment series and with just ages 3–7 (i.e. excluding the 8 year olds in the 1999 survey) and with the catch series used prior to the 2003 meeting (WG-FSA-03/33). The alternative scenarios produced minor differences in the projected catch.

5. By-catch

5.1 By-catch removals

5.203 By-catch removals for the toothfish fisheries (longline and trawl) are detailed in Table 5.43. By-catch will also arise from the directed fishery for *C. gunnari* in the same

division. In trawls targeting *D. eleginoides*, 25 by-catch species were recorded, with the target species comprising of 98.6% of the total catch by weight, followed by *B. eatonii* (0.3%) and *C. gunnari* (0.3%).

Table 5.43: By-catch limits and associated removals (in tonnes) from the toothfish fisheries in Division 58.5.2. OT – otter trawl, LLS – set longlines, LIC – *Channichthys rhinoceratus*, NOS – *Lepidonotothen squamifrons*, GRV – *Macrourus* spp., SRX – rajids.

Fishing season	LIC – OT	LLS	Limit	NOS – OT	LLS	Limit	GRV – OT	LLS	Limit	SRX – OT	LLS	Limit	Other – OT	LLS	Limit
1995/96	0	0		0	0		0	0		0	0		0	0	5%*
1996/97	0	0		0	0		0	0		2	0		5	0	50**
1997/98	0	0	80	0	0	325	0	0		4	0	120	36	0	50
1998/99	0	0	150	8	0	80	1	0		2	0		3	0	50
1999/00	0	0	150	0	0	80	4	0		7	0		4	0	50
2000/01	0	0	150	5	0	80	1	0	50	5	0	50	7	0	50
2001/02	1	0	150	1	0	80	4	0	50	4	0	50	54	0	50
2002/03	0	0	150	0	0	80	1	3	465	8	5	120	5	0	50
2003/04	0	0	150	2	0	80	2	42	360	5	62	120	6	3	50

* 5% move-on rule if individual haul exceeds 5%, limit not specified.
** Move-on rule if catch of any by-catch species exceeds 5% of target species.

5.2 Assessments of impact on affected populations

5.204 No stock assessments of individual by-catch species were undertaken in 2004. By-catch limits of *C. rhinoceratus* and *L. squamifrons* are based on assessments carried out in 1998 (SC-CAMLR-XVII, Annex 5, paragraphs 4.204 to 4.206) and by-catch limits of the grenadier *Macrourus carinatus* are based on assessments carried out in 2002 and 2003 (SC-CAMLR-XXII, Annex 5, paragraphs 5.245 to 5.249).

5.3 Mitigation measures

5.205 The fishery operates under Conservation Measure 33-02.

5.206 The Working Group recommended that, where possible, all rajids should be cut from the line while still in the water, except on the request of the scientific observer (paragraph 6.75).

6. By-catch of birds and mammals

5.207 No seabird mortality has been reported in the two years to date of longline fishing in Division 58.5.2 (paragraph 7.13). In the trawl fishery in this area, six seabirds were killed in 2003. Seabirds were released alive in 2002 (1), 2003 (11) and 2004 (7) (Table 7.18).

5.208 In 2003/04 three fur seals were killed when the *Austral Leader* (trawl fishery) was targeting toothfish.

6.1 Mitigation measures

5.209 Longline fishing is conducted in accordance with Conservation Measures 24-02 and 25-02; trawl fishing in accordance with Conservation Measure 25-03.

5.210 During 2003/04 the longline fishery was restricted to the winter months with day setting of lines prohibited. As part of an adaptive approach to management, and in view of the absence of any seabird by-catch in the 2003/04 fishery, a proposal has been submitted to modify Conservation Measure 25-02 to allow setting by autoline vessels at any time in the day/night cycle (paragraphs 7.84 to 7.86). Ad hoc WG-IMAF has assessed the risk level of seabirds in this fishery in Division 58.5.2 as category 4 (SC-CAMLR-XXIII/BG/21) and supported the proposed recommendations (paragraph 7.86) with respect to autoline vessels in Division 58.5.2:

(i) restrict fishing to the period from 1 May to 14 September;

(ii) use paired streamer lines during all sets of longlines;

(iii) retain on board fish offal and discards;

(iv) be permitted to set longlines at any time in the day/night cycle;

(v) comply with the provisions of Conservation Measure 24-02 or use longlines containing 50 g lead/m integrated weight such that lines sink to 10 m depth at no less than 0.2 m/s, with a preferred average rate of no less than 0.24 m/s;

(vi) abide by all other seabird conservation provisions in Conservation Measure 25-02;

(vii) in the event that three seabirds are caught during daylight setting of lines, vessels must revert to night setting of longlines (as currently applies under Conservation Measure 24-02).

7. Ecosystem implications/effects

5.211 Fishing gear deployed on the seabed can have negative effects on sensitive benthic communities. The potential impacts of fishing gear on the benthic communities in Division 58.5.2 are limited by the small size and number of commercial trawl grounds and the protection of large representative areas of sensitive benthic habitats from direct effects of fishing in an IUCN category Ia marine reserve (SC-CAMLR-XXI/BG/18). The Marine Reserve and associated conservation zone comprises around 17% of the area of the Australian EEZ around Heard Island and McDonald Islands and falls entirely within CCAMLR Division 58.5.2.

5.212 Dr Davies indicated that by-catch of benthos was monitored by observers in the early stages of the development of the fishery and that by-catch of benthos was much lower in areas that have subsequently become the main fishing grounds.

8. Harvest controls for the 2003/04 season and advice for 2004/05

8.1 Conservation measures

Table 5.44: Summary of provisions of Conservation Measure 41-08 for *Dissostichus eleginoides* in Division 58.5.2 and advice to the Scientific Committee for the 2004/05 season.

	Paragraph and topic	Summary of CM 41-08	Advice for 2004/05	Paragraph reference
1.	Access (gear)	Trawls or longlines		
2.	Catch limit	2 873 tonnes west of 79°20'E (see CM 32-14)	Revise catch to 2 787 tonnes	5.201
3.	Season: trawl	1 December 2003 to 30 November 2004		
3.	Season: longline	1 May to 31 August 2004, with possible extension to 14 September for any vessel that has demonstrated full compliance with CM 25-02 in the 2002/03 season.		
4.	By-catch	Fishing shall cease if the by-catch limit of any species, as set out in CM 33-02, is reached.		
5.	Mitigation	In accordance with CMs 24-02, 25-02 and 25-03.	Exemption from paragraph 4 of CM 25-02 and modification of CM 24-02	7.86
6.	Observers	Each vessel to carry at least one scientific observer and may include one additional CCAMLR scientific observer.		
7.	Data: catch and effort	(i) Ten-day reporting system as in Annex 41-08/A (ii) Monthly fine-scale reporting system as in Annex 41-08/A on haul-by-haul basis.		
8.	Target species	For the purpose of Annex 41-08/A, the target species is *Dissostichus eleginoides* and the by-catch is any species other than *D. eleginoides.*		
9.	Jellymeat	Number and weight of fish discarded, including those with jellymeat condition, to be reported. These catches count towards the catch limit.		
10.	Data: biological	Fine-scale reporting system as in Annex 42-02/B. Reported in accordance with the Scheme of International Scientific Observation.		