

**FISHERY REPORT: EXPLORATORY FISHERY
FOR *DISSOSTICHUS* SPP. IN SUBAREA 48.6**

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1. Details of the fishery

The longline fishery for *Dissostichus* spp. in Subarea 48.6 began as a new fishery in 1996/97 (Conservation Measure 114/XV). In 1999, the Commission agreed that high levels of IUU fishing for *Dissostichus* spp. in the Convention Area had rendered it unrealistic to consider this fishery as 'new' (CCAMLR-XVIII, paragraph 10.14), and the fishery was re-classified as exploratory.

2. In 2005/06, the exploratory fishery for *Dissostichus* spp. in Subarea 48.6 was limited to Japanese and New Zealand flagged vessels using longlines only, and no more than one vessel per country was permitted to fish at any one time (Conservation Measure 41-04). The precautionary catch limit for *Dissostichus* spp. was 455 tonnes north of 60°S (SSRU A) and 455 tonnes south of 60°S (SSRUs B–F; see Figure 1). The catch limits for by-catch species were defined in Conservation Measure 33-03. The fishing season was from 1 December 2005 to 30 November 2006.

3. The Japanese-flagged vessel operating in this fishery has been using a new type of longline (WG-FSA-06/15; main report, paragraph 3.14; see also SC-CAMLR-XXIV, Annex 5, paragraphs 3.23 and 7.21).

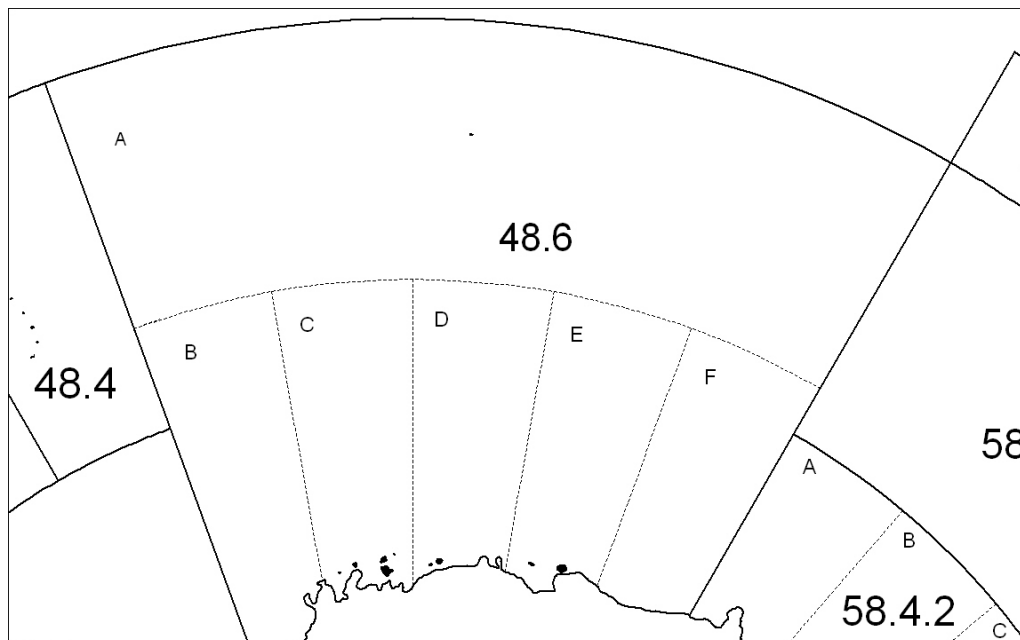


Figure 1: General map of Subarea 48.6 and location of SSRUs (A–F in that subarea).

1.1 Reported catch

4. Licensed longline vessels have fished the exploratory fishery for *Dissostichus* spp. in Subarea 48.6 since 2003/04, and the main species caught is *D. eleginoides* (Table 1(a)). In 2005/06, one vessel fished in SSRU A (Table 1(b), Figure 1) and reported a total catch of 137 tonnes of *Dissostichus* spp. The proportion of *D. mawsoni* in the catches has increased from 0% in 2003/04 to 46% in 2005/06.

5. Reported catches have increased markedly over the three seasons fished, and the total catch of *Dissostichus* spp. reported in 2005/06 represents 30% of the precautionary catch limit for *Dissostichus* spp. in SSRU A, and 15% of the precautionary catch limit for the fishery (CCAMLR-XXV/BG/3, Table 3).

1.2 IUU catch

6. There is no information to derive an estimate of the level of IUU fishing in Subarea 48.6 (Table 1(a), see also WG-FSA-06/11 Rev. 2).

Table 1(a): Catch history for *Dissostichus* spp. in Subarea 48.6 (source: STATLANT data to 2004/05, and catch and effort reports in 2005/06).

Season	Regulated fishery						Estimated IUU catch (tonnes)	Total extraction (tonnes)
	Effort (number of vessels)		Catch limit (tonnes)	<i>Dissostichus</i> spp.				
	Limit	Reported		Reported catch (tonnes)				
				<i>D. eleginoides</i>	<i>D. mawsoni</i>	Total		
2003/04	6	1	910	7	0	7	-	7
2004/05	3	2	910	49	2	51	-	51
2005/06	2	1	910	74	63	137	-	137

Table 1(b): Catch of *Dissostichus* spp. in Subarea 48.6 reported by SSRU (source: reported catch in Table 1(a) pro-rated using fine-scale data to 2005/06).

Season	SSRU				
	A	B	C	D	E
2003/04	7				
2004/05	49				2
2005/06	137				

1.3 Size distribution of catches

7. Most *D. eleginoides* caught in the fishery ranged from 60 to 170 cm in length, with a broad mode at approximately 70–120 cm in 2005/06 (Figure 2). Most *D. mawsoni* ranged from 100 to 180 cm in length, with a broad mode at approximately 140–160 cm in 2005/06. The length-frequency distributions of both species indicate an increasing trend in the size of fish caught.

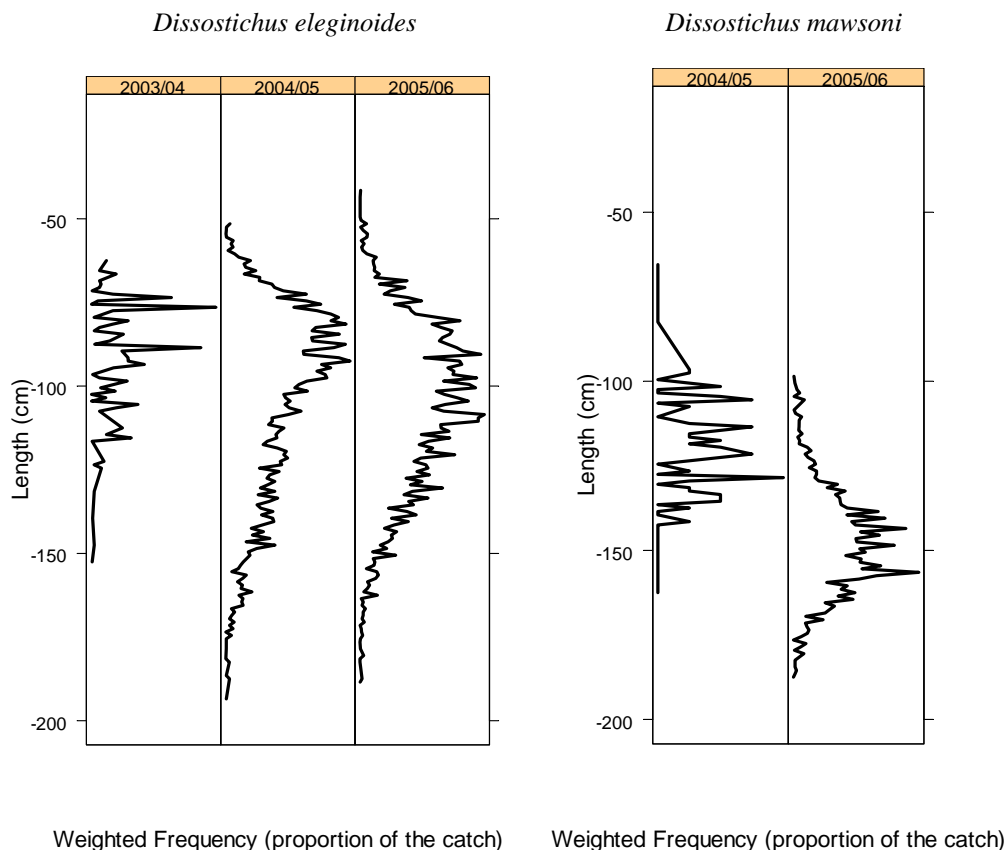


Figure 2: Catch-weighted length frequencies for *Dissostichus eleginoides* and *Dissostichus mawsoni* in Subarea 48.6 derived from observer, fine-scale and STATLANT data reported by 5 October 2005. (The length–weight relationships used in these plots were taken from observations on *D. eleginoides* in Subarea 48.3 and *D. mawsoni* in Subarea 88.1.)

2. Stocks and areas

8. No data are available on the stock structure of fish in this fishery.

3. Parameter estimation

3.1 Observations

9. Vessels operating in this fishery are required to conduct fishery-based research in accordance with Conservation Measure 41-01. This includes the collection of detailed catch, effort and biological data (Annex 41-01/A), the setting of research lines (Annex 41-01/B) and participation in the tagging program (Annex 41-01/C).

10. Vessels, on first entry into an SSRU, are required to make 10 research longline hauls. A further 10 research hauls are required during the course of fishing. The number of research hauls reported in fine-scale data are summarised in Table 2.

11. Vessels are also required to tag and release *Dissostichus* spp. at a rate of one fish per tonne of green-weight catch, and vessels may discontinue tagging once 500 fish have been tagged. A total of 205 *D. eleginoides* and 7 *D. mawsoni* (total 212 fish) have been tagged and released and 3 fish (all *D. eleginoides*) have been recaptured (Table 3). Of the fish tagged and released, 207 fish were in SSRU A and 5 fish were in SSRU E.

Table 2: Research (R) and commercial (C) longline hauls reported by vessels operating in the exploratory fishery for *Dissostichus* spp. in Subarea 48.6 (source: fine-scale data to October 2006).

Season	Flag State	Vessel name	SSRU	Number of hauls		
				R	C	Total
2003/04	Japan	<i>Shinsei Maru No. 3</i>	486A	*	29	29
2004/05	Japan	<i>Shinsei Maru No. 3</i>	486A	32	86	118
	Korea, Republic of	<i>Bonanza No. 707</i>	486E	6		6
2005/06	Japan	<i>Shinsei Maru No. 3</i>	486A	20	204	224

* Research hauls were not identified in the data.

Table 3: Number of individuals of *Dissostichus* spp. tagged and released and the tagging rate (fish per tonne of green weight caught) reported by vessels operating in the exploratory fishery for *Dissostichus* spp. in Subarea 48.6. The number of *D. eleginoides* is indicated in brackets. The total number of tagged fish recaptured to date in Subarea 48.6 is also included. (Source: observer data and catch and effort reports to October 2006.)

Season	Flag State	Vessel name	<i>Dissostichus</i> spp. tagged and released	
			Number of fish	Tagging rate
2003/04	Japan	<i>Shinsei Maru No. 3</i>	4	(4) 0.61
2004/05	Japan	<i>Shinsei Maru No. 3</i>	57	(57) 1.21
	Korea, Republic of	<i>Bonanza No. 707</i>	5	(0) 2.17
2005/06	Japan	<i>Shinsei Maru No. 3</i>	146	(144) 1.07
Total number of fish tagged and released			212	(205)
Total number of tagged fish recaptured in Subarea 48.6			3	(3)

3.2 Fixed parameter values

12. None available for this fishery.

4. Stock assessment

13. The catch limits in this fishery were agreed by the Commission based on advice provided by the Scientific Committee.

5. By-catch of fish and invertebrates

5.1 By-catch removals

14. Catches of by-catch species groups (macrourids, rajids and other species) reported in fine-scale data and their respective catch limits, are summarised in Table 4. The by-catch in this fishery consists predominantly of macrourids (up to 8 tonnes per season). The total reported catch of rajids has been low (<100 kg; note that rajids cut from lines and released are not included in these estimates).

Table 4: Catch history for by-catch species (macrourids, rajids and other species) and catch limits in Subarea 48.6. Rajids cut from lines and released are not included in these estimates. Catch limits are for the whole fishery (see Conservation Measure 33-03 for details). (Source: fine-scale data to October 2006.)

Season	Macrourids		Rajids		Other species	
	Catch limit (tonnes)	Reported catch (tonnes)	Catch limit (tonnes)	Reported catch (tonnes)	Catch limit (tonnes)	Reported catch (tonnes)
2003/04	146	0	100	0	120	0
2004/05	146	6	100	0	120	0
2005/06	146	8	100	0	120	2

5.2 Assessment of impacts on affected populations

15. None available for this fishery.

5.3 Identification of levels of risk

16. None available for this fishery.

5.4 Mitigation measures

17. The Commission has agreed that, where possible, vessels should release rays from the lines by cutting the snoods when the rays are still in the water, unless requested not to do so by the scientific observer during the biological sampling period (CCAMLR-XXIV, paragraph 4.51).

6. By-catch of birds and mammals

6.1 By-catch removals

18. Details of seabird by-catch are summarised in Table 5.

Table 5: Seabird by-catch limit, observed mortality rate and total estimated mortality of seabird by-catch in Subarea 48.6 (from Appendix D, Table 3).

Season	By-catch limit (number of birds)	Mortality rate (birds per thousand hooks)	Total estimated mortality (number of birds)
2003/04	3*	0	0
2004/05	3*	0	0
2005/06	3*	0	0

* Per vessel during daytime setting

19. No marine mammal interactions or mortalities were reported.

20. Ad hoc WG-IMAF assessed the risk level of seabirds in this fishery in Subarea 48.6 as category 1 (low) south of 55°S, and category 2 (average to low) north of 55°S (Appendix D, Table 19).

6.2 Mitigation measures

21. Conservation Measure 25-02 applies to this fishery and in recent years has been linked to an exemption for night setting in Conservation Measure 24-02 and subject to a seabird by-catch limit. Offal and other discharges are regulated under annual conservation measures (e.g. Conservation Measures 41-09 and 41-10).

7. Ecosystem implications/effects

22. No evaluation available for this fishery.

8. Harvest controls for 2005/06 and advice for 2006/07

8.1 Conservation measures

23. The limits on the exploratory fishery for *Dissostichus* spp. in Subarea 48.6 are defined in Conservation Measure 41-04. The limits in force in 2005/06 and the Working Group's advice to the Scientific Committee for the forthcoming 2006/07 season are summarised in Table 6.

Table 6: Limits on the exploratory fishery for *Dissostichus* spp. in Subarea 48.6 in 2005/06 (Conservation Measure 41-04) and advice to the Scientific Committee for 2006/07.

Element	Limit in 2005/06	Advice for 2006/07
1. Access	No more than one vessel per country at any one time.	Carry forward
2. Catch limit	Precautionary catch limit for <i>Dissostichus</i> spp. was 455 tonnes north of 60°S and 455 tonnes south of 60°S.	Carry forward
3. Season	1 December to 30 November	Same period
4. By-catch	Regulated by CM 33-03.	Carry forward
5. Mitigation	In accordance with CM 25-02, except paragraph 4 if requirements of CM 24-02 are met.	Carry forward
	Limit of three (3) seabirds per vessel during daytime setting.	Carry forward
	No offal discharge.	Carry forward
6. Observers	At least two (2) scientific observers, one of whom shall be appointed in accordance with the CCAMLR Scheme.	Carry forward
7. Data	Five-day catch and effort reporting	Carry forward
	Haul-by-haul catch and effort data	Carry forward
	Biological data reported by the CCAMLR scientific observer	Carry forward
8. Research	Fishery-based research in accordance with CM 41-01, including the collection of detailed catch, effort and biological data (Annex 41-01/A), setting of research hauls (Annex 41-01/B) and tagging (Annex 41-01/C).	Carry forward
9. Discharge	South of 60°S, prohibition from discharging oil or fuel products, oily residues, garbage, food wastes > 25 mm, poultry products, sewage within 12 n miles of land or ice shelves or while travelling <4 knots, and incineration ash.	Carry forward
10. Other	Live poultry or other living birds shall not be brought into areas south of 60°S, and any dressed poultry not consumed shall be removed from those areas 60°S.	Carry forward

8.2 Management advice

24. The Working Group recommended that all the requirements of the fishery, including fishery-based research (Conservation Measure 41-01), by-catch limits (Conservation Measure 33-03) and associated measures be carried forward to the 2006/07 season.