

SC-CAMLR-XXI/BG/21

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**IMAF ASSESSMENT OF NEW AND EXPLORATORY FISHERIES
BY STATISTICAL AREA**

Ad Hoc Working Group on Incidental Mortality Arising from Fishing (WG-IMAF)

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IMAF ASSESSMENT OF NEW AND EXPLORATORY FISHERIES BY STATISTICAL AREA

These assessments were undertaken in response to concerns raised relating to the numerous proposals for new fisheries and the potential for these new and exploratory fisheries to lead to substantial increases in seabird incidental mortality (SC-CAMLR-XVI, Annex 5, paragraph 7.118). They are revised annually to incorporate new information made available at each meeting of the Working Group (SC-CAMLR-XXI/4, paragraphs 6.164 and 6.165).

2. For assessment purposes advice was requested on known and potential interactions with seabirds, relating to the:

- (i) timing of fishing seasons;
- (ii) need to restrict fishing to night time; and
- (iii) magnitude of general potential risk of by-catch of albatrosses and petrels.

3. In 1997 the Working Group undertook the first comprehensive assessment on this basis. It assessed new and exploratory fisheries for most subareas and divisions of the Convention Area. For comparison, it also undertook assessments of areas with established longline fisheries (Subarea 48.3 and Division 58.5.1) (SC-CAMLR-XVI, Annex 5, paragraphs 7.126 and 7.127).

4. In 1998 the Working Group reviewed and revised these assessments for areas for which new and exploratory fishery proposals were received for 1998 (SC-CAMLR-XVII, Annex 5, paragraph 7.116).

5. The Working Group stated that, ideally, all statistical subdivisions of the Convention Area should be subject to assessments of risk from longline fishing, so that prospective applicants for new and exploratory fisheries would have advance information on the nature of potential problems. Accordingly, Division 58.4.1, an area not assessed in 1997, was included in this process even though the 1998 proposal was for a trawl fishery.

6. In addition, in 1998 the Working Group, to maintain consistency overall, undertook interim revisions of all other assessments made in 1997 and made preliminary assessments for Subarea 48.5 and Division 58.4.2. The overall risk classifications of these and of the reassessments and interim assessments were summarised in SC-CAMLR-XVII, Annex 5, Figure 13.

7. In 1999 the Working Group reviewed and revised as necessary those assessments for areas for which new and exploratory fishing proposals were received for 1999 (SC-CAMLR-XVIII, Annex 5, paragraph 7.83). This entailed the first full assessments for Subarea 88.2 and also for Division 58.4.2, although the 1999 proposal was for a trawl fishery.

8. The Working Group indicated that it expected to undertake reassessments annually, on the basis of new data on seabird distribution and especially taking account of data on seabird by-catch obtained from the new and exploratory fisheries. Each year new information will be highlighted and assessments and advice that differ from previous years will be so identified. It was agreed that this document should be tabled and updated annually for the Scientific Committee (SC-CAMLR-XIX, Annex 5, paragraph 7.87).

9. In 1997, in addition to basic general reference material on the breeding and at-sea distribution of Southern Ocean seabirds, more specific information was provided on breeding, distribution and population sizes of albatrosses and petrels in WG-FSA-97/22, 97/23, 97/28 (now Gales, 1998) and on at-sea distribution from satellite-tracking studies in WG-FSA-97/56 (now Croxall, 1998). The species particularly at risk were assumed to be all species of albatross, both species of giant petrel and *Procellaria* petrels (in the Convention Area white-chinned petrel, *P. aequinoctialis* and, in some areas, grey petrel, *P. cinerea*). No further information on distribution at sea was tabled at the 1998 meeting. However, recently published information (Nicholls et al., 1998) indicated that the short-tailed shearwater, *Puffinus tenuirostris*, forages in CCAMLR waters. This species is now also considered to be at risk, together with the sooty shearwater, *P. griseus*.

10. The estimates of site-specific breeding populations and of total world breeding populations are principally derived from WG-FSA-97/22 and 97/28 (now Gales, 1998), together with data summarised in Croxall et al. (1984), Marchant and Higgins (1990) and Woehler et al. (1990).

11. In 1999 additional information was provided on observed at-sea distribution of albatrosses and petrels in WG-FSA-99/59, and on at-sea distribution from satellite-tracking studies in WG-FSA-99/19 (Wood et al., 2000), 99/20 (Berrow et al., 2000), 99/21 (Prince et al., 1999), 99/25, 99/36, 99/38, 99/39 and 99/47 (Catard and Weimerskirch, 1999) and Weimerskirch et al. (1999).

12. In 2000 new data were available in WG-FSA-00/56 and in Terauds (2000), the updated assessments being set out in SC-CAMLR-XIX, Annex 5, paragraphs 7.88 and 7.89.

13. In 2001 new data were available in WG-FSA-01/10, 11, 12, 25, 26 and 67. The updated assessments for 2000 and 2001 were subsequently incorporated into SC-CAMLR-XX/BG/11 Rev. 2.

14. In 2002 new data were presented in WG-FSA-02/18 and the assessments incorporated into a revised comprehensive assessment (SC-CAMLR-XXI/BG/21).

15. In the assessments that follow, known potential for interaction was based exclusively on the known ranges of breeding birds determined by recent satellite-tracking studies. These are, therefore, minimum estimates of the home range of breeding populations. Many of these satellite-tracking studies are for relatively small samples of birds from single breeding sites for relatively restricted periods during the breeding season.

16. Inferred potential for interaction is based on:

- (i) ranges for breeding populations analogous to those determined by satellite-tracking at other breeding sites; and
- (ii) at-sea distributions derived from seabird at-sea sightings during the breeding season as published in distribution atlases.

17. To assess distributions for ‘other species’ (see definition below), the following references were used: Abrams (1983), Brothers et al. (1997), Marchant and Higgins (1990), Tickell (1993) and Woehler et al. (1990). Advice was also sought from Mr T. Reid, an experienced Australian fisheries and seabird observer. For the areas under review the distributions are as follows:

wandering albatross	all, but only northern part of Subarea 88.1
Gibson’s albatross	no data
royal albatross	Subareas 58.5, 58.6 and 58.7 only
black-browed albatross	all, but only northeast part of Subareas 48.6, 88.1; rare in Division 58.4.4
Campbell albatross	Subarea 88.1 and Division 58.4.1 only
grey-headed albatross	all, but only northern part of Subarea 48.6
Indian yellow-nosed albatross	Subareas 58.5, 58.7 and Division 58.4.1

Atlantic yellow-nosed albatross	no data
shy albatross	Subareas 58.6 and 58.7, Divisions 58.4.1, 58.4.3, 58.5.1 and 58.5.2
white-capped albatross	no data
Salvin's albatross	Subareas 58.6 and 88.1
Chatham albatross	Subarea 88.1
sooty albatross	Subareas 58.6 and 58.7, Divisions 58.4.1 and 58.4.4
light-mantled albatross	all
Amsterdam albatross	no data, no records for Division 58.4.1
Antipodean albatross	Subarea 88.1, no records for Division 58.4.1
southern giant petrel	all
northern giant petrel	all, but only northern half of Subareas 48.6 and 88.1,
white-chinned petrel	all, but only northeast half of Subarea 88.1; only extreme north of Subarea 48.6
grey petrel	all, but only northern part of Subareas 48.6 and 88.1
sooty shearwater	Subareas 48.6 and 88.1, Divisions 58.4.1, 58.4.2, 58.4.3 and 58.5.2
short-tailed shearwater	Subarea 88.1, Division 58.4.1, 58.4.2, 58.4.3 and 58.5.2.

18. The overall assessments were made against a five-point scale of potential risk of interaction between seabirds, especially albatrosses, and longline fisheries. The five levels are:

- (i) low (1);
- (ii) average-to-low (2);
- (iii) average (3);
- (iv) average-to-high (4); and
- (v) high (5).

19. For the purposes of these assessments the following definitions were applied:

- (i) 'Breeding species in this area' means those seabird species considered to be at risk and which breed within the relevant area, subarea or division under consideration;
- (ii) 'Breeding species known to visit this area' means seabird species which breed within CCAMLR waters and are considered to be at risk, and which are known to visit the relevant area, subarea or division under consideration, as determined by satellite-tracking studies;
- (iii) 'Breeding species inferred to visit this area' means seabird species which breed within CCAMLR waters and are considered to be at risk, and which are thought to visit the relevant area, subarea or division under consideration, as determined by at-sea distributions derived from either at-sea sightings during the breeding season, or as published in the scientific literature; and
- (iv) 'Other species' means seabird species which breed outside CCAMLR waters and are considered to be at risk, and are known to occur in significant numbers in the relevant area, subarea or division under consideration.

20. An additional criterion, used in the 1998 assessments, was the potential for longline fishing in an area, as deduced from inspection of bathymetric maps of the area in question. The map used (see Figure 1) was generally very helpful in making assessments. However, difficulties were encountered with areas with uneven distribution of potential fishing grounds. Areas which had been, or were being, considered as subdivided in respect of fishery assessments (e.g. Subareas 88.1 and 48.6) were therefore also assessed for seabird risk in relation to the subdivisions; comments on other areas are included as appropriate.

21. In 2001 the Commission changed the boundary between Division 58.4.1 and 58.4.3 (and divided the newly delimited 58.4.3 into two areas) in order to incorporate the whole of the BANZARE Bank into Division 58.4.3b. Figure 1 was revised to incorporate these new boundaries. The Working Group has not yet undertaken the necessary reassessment for Division 58.4.1; however, both parts of Division 58.4.3 should be treated as risk level 3 (average).

22. The advice section is based purely on consideration of reducing seabird by-catch by vessels operating under CCAMLR regulations (see SC-CAMLR-XVI, Annex 5, paragraphs 7.125 and 7.128).

23. In each assessment that follows, the subarea and division designation is preceded by the cross-reference to the most recent assessment in the reports of WG-FSA.
24. The assessments are summarised in Table 1 and illustrated in Figure 1.

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Table 1: Summary of assessments by WG-IMALF of new and exploratory fisheries.

Subarea/Division	Assessment ¹	Year	Risk Level ²	Recommended Open Season
48.1	10	1997	3	1 May to 31 August ³
48.2	11	1997	2	1 April to 30 September ³
48.3	12	1997	5	1 May to 31 August
48.4	13	1997	1	1 April to 30 September ³
48.5	14	2002	1	(None)
48.6	15	2001	2 (1 in S)	None
58.4.1	16	1998	3	None
58.4.2	17	1999	2	1 April to 30 September ³
58.4.3	18	1998	3	1 May to 31 August ³
58.4.4	19	2001	3	1 May to 31 August ³
58.5.1	20	2001	5	1 May to 31 August
58.5.2	21	2001	4	1 May to 31 August
58.6	22	2001	5	1 May to 31 August
58.7	23	2001	5	1 May to 31 August
88.1	24	2000	3 (2 in S)	None
88.2	25	2000	1	None
88.3	26	1997	1	None

¹ Page number in SC-CAMLR-XXI/BG/21

² 1: low; 2: average-to-low; 3: average; 4: average-to-high; 5: high. Values in parentheses represent preliminary assessments.

³ Derogation from seasonal restrictions may apply subject to the application of conservation measures similar to Conservation Measure 216/XX.

Figure 1: Assessment of the potential risk of interaction between seabirds, especially albatrosses, and longline fisheries within the Convention Area. 1: low, 2: average to low, 3: average, 4: average to high, 5: high. Shaded patches represent seabed areas between 500 and 1 800 m.

ASSESSMENTS

FSA-97

7.126(i) Subarea 48.1:

Breeding species in area: southern giant petrel (c. 7 000 pairs; 20% world population)

Breeding species known to visit area: wandering albatross from South Georgia, black-browed albatross from Chile, grey-headed albatross from South Georgia and Chile.

Breeding species inferred to visit area: black-browed albatross from South Georgia, Falklands/Malvinas; southern giant petrel from Chile, Argentina, Falklands/Malvinas; white-chinned petrel from South Georgia.

Assessment: potential interactions with substantial fraction of southern giant petrel population and a small proportion of populations of three albatross species (two threatened, one near-threatened), most notably grey-headed albatross from both of its two main breeding sites, and white-chinned petrel.

Advice: average risk; ensure strict compliance with Conservation Measure 29/XIX. Prohibit longline fishing during the breeding season of black-browed and grey-headed albatrosses, southern giant petrel and white-chinned petrel (i.e. September to April). Fishing at other times should only permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

FSA-97

7.126 (ii) Subarea 48.2:

Breeding species in area: southern giant petrel (c. 9 000 pairs; 26% world population).

Breeding species known to visit area: grey-headed albatross, black-browed albatross from South Georgia.

Breeding species inferred to visit area: white-chinned petrel from South Georgia.

Assessment: potential interactions with an important fraction of the southern giant petrel population and a small proportion of the population of two albatross species (one threatened, one near-threatened) and white-chinned petrel.

Advice: average risk; ensure strict compliance with Conservation Measure 29/XIX. Prohibit longline fishing during the breeding season of southern giant petrel (October to March). Fishing at other times should only be permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

FSA-97

7.127(i) Subarea 48.3:

Breeding species in area: wandering albatross (2 178 pairs; 26% world population – second most important site), grey-headed albatross (54 200 pairs; 59% world population), black-browed albatross (96 252 pairs; 14% world population – second most important site), light-mantled sooty albatross (c. 6 250 pairs; 29% world population – most important site), southern giant petrel (5 000 pairs; 15% world population), northern giant petrel (3 000 pairs; 28% world population – most important site), white-chinned petrel (c. 2 million pairs; perhaps 80% of world population) at South Georgia.

Breeding species known to visit area: wandering albatross, grey-headed albatross, black-browed albatross, light-mantled sooty albatross, white-chinned petrel from South Georgia.

Breeding species inferred to visit area: the remaining South Georgia breeding species.

Assessment: known interactions with four species of albatross (two threatened, one near-threatened), both species of giant petrel and white-chinned petrel, South Georgia being the world's most important breeding site for four of these.

Advice: high risk; prohibit longline fishing during the main albatross and petrel breeding season (i.e. September to April); ensure strict compliance with Conservation Measure 29/XIX.

FSA-97

7.126(iii) Subarea 48.4:

Breeding species in area: southern giant petrel (c. 800 pairs; 2% world population).

Breeding species known to visit area: none.

Breeding species inferred to visit area: wandering albatross, black-browed albatross, light-mantled sooty albatross, northern giant petrel, white-chinned petrel from South Georgia (see Ashford et al., 1994).

Assessment: little known/visited area so potential interactions probably underestimated. Nevertheless area, and especially shelf and shelf-slope, is small.

Advice: low risk (see also Ashford et al., 1994); Ensure strict compliance with Conservation Measure 29/XIX. Prohibit longline fishing during the breeding season of southern giant petrel (October to March). Fishing at other times should only permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

Subarea 48.5:

A preliminary assessment in 1998 suggested classification as a low-risk area (SC-CAMLR-XVII, Annex 5, Figure 13).

Note: assessment below made at 2002 meeting.

Advice: low risk; no obvious need for restriction of longline fishing season. Ensure strict compliance with Conservation Measure 29/XIX as a seabird by-catch precautionary measure. Fishing during daytime should only be permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

FSA-01

7.5.5 (i) Subarea 48.6:

Breeding species in this area: southern giant petrel (until c. 1981).

Breeding species known to visit this area: wandering albatross and grey-headed albatross from Marion Island.

Breeding species inferred to visit this area: wandering albatross, grey-headed albatross and light-mantled albatross from Prince Edward Island; light-mantled albatross from Marion Island; black-browed albatross, grey-headed albatross, sooty albatross, white-chinned petrel from elsewhere within the Convention Area.

Other species: shy albatross, sooty shearwater (Abrams, 1983).

Assessment: moderately well-known area in terms of visiting species. Its very large area, however, suggests interaction potential is probably underestimated. The northern part of the area (north of c. 55°S) contains extensive potential fishing grounds and is also the area in which most seabirds potentially at risk occur.

Advice: average to low risk – southern part of area (south of c. 55°S) of low risk; no obvious need for restriction of longline fishing season. Ensure strict compliance with Conservation Measure 29/XIX as a seabird by-catch precautionary measure. Fishing during daytime should only be permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

FSA-98

7.116(ii) Division 58.4.1:

Breeding species in this area: none.

Breeding species known to visit this area: light-mantled albatross.

Breeding species inferred to visit this area: all species breeding at Heard/McDonald Islands; wandering albatross, grey-headed albatross, yellow-nosed albatross, sooty albatross, light-mantled albatross, northern giant petrel, southern giant petrel, white-chinned petrel from Kerguelen; yellow-nosed albatross from Amsterdam Island.

Other species: short-tailed shearwater; sooty shearwater.

Assessment: although no breeding populations are within the area, this is a potentially important foraging area for five albatross species (two threatened, one near-threatened), southern giant petrel, northern giant petrel, white-chinned petrel and short-tailed shearwater from important breeding areas for the species concerned.

Advice: average risk; Ensure strict compliance with Conservation Measure 29/XIX. Prohibit longline fishing during the breeding season of albatrosses, southern giant petrel and white-chinned petrel from Heard/McDonald Islands and Kerguelen (i.e. September to April). Fishing at other times should only be permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

Much of the risk to seabirds in this area arises in the region of the BANZARE Rise in the west of the region, adjacent to Division 58.4.3.

FSA-99

7.5.3.14(iii) Division 58.4.2

Breeding species in this area: southern giant petrel.

Breeding species known to visit this area: wandering albatross, light-mantled albatross and white-chinned petrel from Crozet Islands.

Breeding species inferred to visit this area: black-browed albatross, light-mantled albatross, grey-headed albatross, northern giant petrel, white-chinned petrel and grey petrel.

Other species: short-tailed shearwater, sooty shearwater.

Assessment: this is an important foraging area for four albatross species (two threatened), southern giant petrel and white-chinned petrel.

Advice: average-to-low risk; ensure strict compliance with Conservation Measure 29/XIX. Prohibit longline fishing during the breeding season of giant petrels (October to March). Fishing at other times should only permitted be under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

FSA-98

7.116(iii) Division 58.4.3:

Breeding species in this area: none.

Breeding species known to visit this area: wandering albatross from Crozet Islands.

Breeding species inferred to visit this area: black-browed albatross, light-mantled albatross, southern giant petrel from Heard/Macdonald Islands; grey-headed albatross, black-browed albatross, light-mantled albatross, northern giant petrel, white-chinned petrel, grey petrel from Kerguelen; white-chinned petrel, grey petrel from Crozet Islands.

Other species: short-tailed shearwater, sooty shearwater.

Assessment: although no breeding populations are within the area, this is a potentially important foraging area for four albatross species (two threatened, one near-threatened), southern giant petrel and white-chinned petrel from important breeding areas for the species concerned.

Advice: average risk; ensure strict compliance with Conservation Measure 29/XIX. Prohibit longline fishing during the breeding season of albatrosses, giant petrels and white-chinned petrels (September to April). Fishing at other times should only be permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

FSA-01

7.5.5(ii) Division 58.4.4:

Breeding species in this area: none.

Breeding species known to visit this area: wandering albatross, light-mantled albatross from Crozet, wandering albatross and grey-headed albatross from Marion Island.

Breeding species inferred to visit this area: grey-headed albatross, yellow-nosed albatross, southern giant petrel, white-chinned petrel, grey petrel from Crozet; wandering albatross, grey-headed albatross, yellow-nosed albatross, light-mantled albatross, southern giant petrel, white-chinned petrel, grey petrel from Prince Edward Islands.

Other species: short-tailed shearwater, sooty shearwater.

Assessment: although no breeding populations are within the area, this is a potentially important foraging area for four albatross species (three threatened, one near-threatened), southern giant petrel, white-chinned petrel and grey petrel from very important breeding areas for the species concerned.

Advice: average risk; ensure strict compliance with Conservation Measure 29/XIX. Prohibit longline fishing during the breeding season of albatrosses and petrels (September to April). Fishing at other times should only be permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

FSA-01

7.5.5(iii) Division 58.5.1:

Breeding species in this area: wandering albatross (1 455 pairs; 17% world population), grey-headed albatross (7 900 pairs; 9% world population), black-browed albatross (3 115 pairs; 0.5% world population), yellow-nosed albatross (50 pairs; 0.1% world population), sooty albatross (c. 5 pairs), light-mantled albatross (c. 4 000 pairs; 19% world population), northern giant petrel (1 800 pairs; 17% world population), white-chinned petrel (100 000+ pairs – second most important site), grey petrel (5 000–10 000 pairs) at Kerguelen.

Breeding species known to visit this area: wandering albatross from Crozet Islands, wandering albatross from Marion Island, black-browed albatross from Kerguelen, Amsterdam albatross from Amsterdam Island.

Breeding species inferred to visit this area: all the remaining species breeding at Kerguelen; most, if not all, species breeding at Heard/McDonald Islands; many species breeding at Crozet Islands, wandering albatross from Prince Edward Island.

Other species: unknown.

Assessment: important foraging area for six albatross species (four threatened, one near-threatened), southern giant petrel, white-chinned petrel and grey petrel, for several of which Kerguelen is a very important breeding site. Most albatross and petrel species breeding at Heard and McDonald Islands will also forage in this area, as will birds of many of the species breeding at Crozet.

Advice: high risk; prohibit longline fishing during the main albatross and petrel breeding season (i.e. September to April); ensure strict compliance with Conservation Measure 29/XIX.

FSA-01

7.5.5(vi) Division 58.5.2:

Breeding species in this area: black-browed albatross (750 pairs; 0.1% world population), light-mantled albatross (c. 350 pairs; 1.5% world population), southern giant petrel (2 350 pairs; 7% world population) at Heard/McDonald Islands.

Breeding species known to visit this area: wandering albatrosses from Crozet; wandering albatross from Marion Island; black-browed albatrosses from Kerguelen; Amsterdam albatross from Amsterdam Island.

Breeding species inferred to visit this area: all species breeding at Heard/McDonald Islands; wandering albatross, grey-headed albatross, yellow-nosed albatross, sooty albatross, light-mantled albatross, northern giant petrel, white-chinned petrel from Kerguelen; yellow-nosed albatross from Amsterdam Island; wandering albatross from Prince Edward Island.

Other species: short-tailed shearwater, sooty shearwater.

Assessment: important foraging area for six albatross species (four threatened, one near-threatened and including one of the only two albatross species which are critically endangered – Amsterdam albatross) and for both species of giant petrel and white-chinned petrels from globally important breeding sites at Kerguelen, Heard and Amsterdam Island.

Advice: average-to-high risk; prohibit longline fishing within the breeding season of the main albatross and petrel species (September to April). Ensure strict compliance with Conservation Measure 29/XIX.

Longline fishing is currently prohibited within the EEZ around Heard/McDonald Islands, although the Commission has received a proposal for longlining within this area (CCAMLR-XXI/10).

FSA-01

7.5.5(v) Subarea 58.6:

Breeding species in this area: wandering albatross (1 730 pairs; 20% world population), grey-headed albatross (5 950 pairs; 6% world population), black-browed albatross (1 000 pairs; 0.1% world population), Salvin's albatross (4 pairs), Indian yellow-nosed albatross (4 500 pairs; 12% world population), sooty albatross (1 200 pairs; 8% world population), light-mantled albatross (2 200 pairs; 10% world population), southern giant petrel (1 000 pairs; 3% world population), northern giant petrel (1 300 pairs; 13% world population), white-chinned petrel (thousands of pairs), grey petrel (thousands of pairs) at Crozet Islands.

Breeding species known to visit this area: wandering albatross, sooty albatross, light-mantled albatross from Crozet Islands; wandering albatross from Marion Island.

Breeding species inferred to visit this area: in addition to all the Crozet Islands breeding species, wandering albatross from Prince Edward Island and Kerguelen; wandering albatross from Prince Edward Islands and Kerguelen; black-browed, yellow-nosed, sooty, light-mantled albatrosses, northern giant petrel, southern giant petrel, white-chinned petrel, grey petrel from the Prince Edward Islands; grey-headed albatross, white-chinned petrel, grey petrel from Kerguelen.

Other species: unknown.

Assessment: known and potential interactions with seven species of albatross (five threatened, one near-threatened), for many of which Crozet is one of the most important world breeding sites, as it is for giant, white-chinned and grey petrels. Also substantial potential for fishery interactions with albatrosses and petrels from the Prince Edward Islands and albatrosses from a variety of other breeding sites in their non-breeding season. Even outside the French EEZ (within which commercial longline fishing is presently prohibited), this is one of the highest risk areas in the Southern Ocean.

Advice: high risk; prohibit longline fishing during the main albatross and petrel breeding season (i.e. September to April); ensure strict compliance with Conservation Measure 29/XIX.

FSA-01

7.5.5(vi) Subarea 58.7:

Breeding species in this area: wandering albatross (3 070 pairs, 36% world population – most important site), grey-headed albatross (7 720 pairs; 8% world population), yellow-nosed albatross (7 000 pairs; 19% world population), sooty albatross (2 750 pairs; 18% world population), light-mantled albatross (240 pairs; 1% world population), southern giant petrel (1 750 pairs; 5% world population), northern giant petrel (500 pairs; 5% world population), white-chinned petrel (10 000+ pairs), grey petrel (thousands of pairs) at Prince Edward Islands.

Breeding species known to visit this area: wandering albatrosses from Crozet Islands; wandering albatross from Marion Island.

Breeding species inferred to visit this area: all species breeding at the Prince Edward Islands; grey-headed albatross, black-browed albatross, yellow-nosed albatross, southern giant petrel, northern giant petrel, white-chinned petrel, grey petrel from Crozet Islands.

Other species: unknown.

Assessment: known and potential interactions with five species of albatross (four threatened), for most of which the Prince Edward Islands is one of the most important world breeding sites, as it is for giant petrels. Also substantial potential for fishery interactions with albatrosses and petrels from the Crozet Islands and albatrosses from various other breeding sites in their non-breeding season. This small area is one of the highest risk areas in the Southern Ocean. It should be noted that within South Africa's EEZ, commercial longline fishing is currently permitted all year.

Advice: high risk; prohibit longline fishing during the main albatross and petrel breeding season (September to April); ensure strict compliance with Conservation Measure 29/XIX.

FSA-00

7.88(i) Subarea 88.1:

Breeding species in this area: none.

Breeding species known to visit this area: Antipodean albatross from Antipodes Island, black-browed albatross, grey-headed albatross and light-mantled albatross from Macquarie Island, black-browed albatross and grey-headed albatross from Chile.

Breeding species inferred to visit this area: light-mantled albatross from Auckland, Campbell and Antipodes Islands; sooty albatross from Indian Ocean populations; grey-headed albatross and Campbell albatross from Campbell Island; wandering albatross from Macquarie Island; Chatham albatross from Chatham Islands; northern giant petrel from Macquarie Island, Auckland Island and Campbell Island; southern giant petrel from Macquarie Island and grey petrel from Macquarie Island and New Zealand populations.

Other species: short-tailed shearwater, sooty shearwater.

Assessment: the northern part of this area lies within the foraging range of three albatross species (two threatened) and is probably used by other albatrosses and petrels to a greater extent than the limited available data indicate. The southern part of this subarea has potentially fewer seabirds at risk.

Advice: average risk overall. Average risk in northern sector (*D. eleginoides* fishery), average to low risk in southern sector (*D. mawsoni* fishery). Longline fishing season limits of uncertain advantage. Ensure strict compliance with Conservation Measure 29/XIX as a seabird by-catch precautionary measure. Fishing during daytime should only be permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

FSA-00

7.88(ii) Subarea 88.2

Breeding species in this area: none.

Breeding species known to visit this area: light-mantled albatross from Macquarie Island.

Breeding species inferred to visit this area: light-mantled albatross from Auckland, Campbell and Antipodes Islands; Antipodean albatross from Antipodes Island; grey-headed albatross and Campbell albatross from Campbell Island; wandering albatross, black-browed albatross and grey-headed albatross from Macquarie Island, grey petrel and white-chinned petrel from New Zealand populations.

Other species: sooty shearwater.

Assessment: although there are few observational data from this area, the northern part of this area lies within the suspected foraging range of six albatross species (four threatened) and is probably used by other albatrosses and petrels to a greater extent than the limited available data indicate. The southern part of this subarea has potentially fewer seabirds at risk.

Advice: low risk. No obvious need for restriction of longline fishing season. Ensure strict compliance with Conservation Measure 29/XIX as a seabird by-catch precautionary measure. Fishing during daytime should only be permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.

FSA-97

7.126(xii) Subarea 88.3:

Breeding species in area: none.

Breeding species known to visit area: grey-headed albatross from South Georgia.

Breeding species inferred to visit area: grey-headed albatross from Chile.

Assessment: few relevant data from most of this large area. In the regions closer to the Antarctic Peninsula/South America there is considerable potential for interactions with albatrosses.

Advice: low risk; restrictions on timing of longline fishery probably inappropriate. Ensure strict compliance with Conservation Measure 29/XIX at least until further data on seabird–fishery interactions are available. Fishing during daytime should only be permitted under the provisions currently prescribed under Conservation Measure 216/XX. In addition, vessels that catch a total of three (3) birds shall revert to night setting.