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Patagonian Toothfish - The Storm Gathers

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This paper has been prepared by Denzil G. M. Miller of CCAMLR, Tasmania, Australia.

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For further information, please contact:
Carl-Christian SCHMIDT (carl-christian.schmidt@oecd.org)

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PATAGONIAN TOOTHFISH - THE STORM GATHERS¹**ABSTRACT**

This paper documents the experiences of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) in managing marine living resources in the waters (i.e. south of about 45°S) for which it is responsible. Emphasis is given to legal and institutional aspects, particularly sovereignty issues and jurisdictional controls. Recent high levels of Illegal, Unreported and Unregulated (IUU) fishing for Toothfish (*Dissostichus* sp.) in the CCAMLR Area are used to illustrate the management and enforcement measures taken by this particular organisation to combat such fishing. While it is concluded that these measures have relied heavily on national (particularly Coastal State) enforcement to be effective, their clear affinity with other recent fisheries agreements is highlighted. Various factors are identified for further consideration.

1 INTRODUCTION

1. It has been stated that:

“An old spectre haunts fisheries management today: governance without government”².

2. Although challenging, this statement clearly demonstrates that something has gone horribly wrong with humankind's efforts to manage fishing on the high seas. These efforts have failed miserably despite expectations to the contrary flowing from general customary international law. Such expectations, first outlined in Principle 21 of the 1972 Stockholm Declaration³ and embodied in the 1982 United Nations Convention on the Law of the Sea (LOSC)⁴ were subsumed into Principle 2 of the 1992 Rio Declaration⁵. They clearly intimate that there is a general obligation on all States to ensure that “activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction”.

¹ Paper prepared by Dr. Denzil G. M. Miller of CCAMLR, Tasmania, Australia. Email: denzil@ccamlr.org. The opinions expressed in this paper are those of the authors and do not reflect the collective, or official, views of CCAMLR.

² See p. 157 in O.S. Stokke, "Governance of high seas fisheries: The role of regime linkages", in D. Vidas and W. Østreg (eds.), *Order for the Oceans at the Turn of the Century*. (Kluwer Law International, The Hague, 1999), p. 157-172.

³ Declaration of the United Nations Conference on the Human Environment. (United Nations Environment Programme, 1972). 5 pp.

⁴ *United Nations Convention on the Law of the Sea, 1982*. (United Nations, New York, 1983). 224 pp.

⁵ *Rio Declaration on Environment and Development*. (United Nations Environment Programme, 1992). 4 pp.

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3. In substantiating the Rio interpretation, Freestone⁶ asserts that the above obligation, although minimal, assumes generality when applied to the global commons of the high seas. However, he maintains that the extent to which it represents a clear invocation to avoid environmental damage not only applies to activities confined within State territory, “but also to activities under State jurisdiction (including State registered vessels)”. Arguably, therefore, the Rio interpretation is relevant to the extent that protection of the environment and certain activities are linked in the context of being subject to State jurisdiction (including over nationals [i.e. legal and natural persons]).

4. The dichotomy between the opening quotation’s “realism” and Freestone’s “idealism” has become alarmingly evident over the past decade. As more and more fisheries are affected by heavy exploitation, the search for new resources increases⁷. Irresponsible operators have taken advantage of prevailing circumstances to optimise their own economic advantages, often to the detriment of the stocks concerned and at the expense of their more responsible competitors. While the serious consequences of such behaviour have been clearly recognised by the international community^{8,9,10,11,12,13,14}, the extent of fishing activity violating applicable laws and regulations continues to increase dramatically. Such activity is essentially “irresponsible”, as it fails the acceptable standards of most international measures aimed at

⁶ See p. 104 in D. Freestone, "The Conservation of Marine Ecosystems under International Law", in C Redgewell and M. Bowman (eds.), *International Law and the Conservation of Biodiversity*. (Kluwer Law International, 1995), p. 91-107.

⁷ *The State of World Fisheries and Aquaculture, 2002*. (Food and Agriculture Organization of the United Nations, Rome, 2002), 150 pp.

⁸ There are a number of international instruments that set out provisions to address irresponsible fishing practices. These include the *LOSC*⁴, the *1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas*⁹ (the "FAO Compliance Agreement"), the *1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*¹⁰ (the "United Nations Fish Stocks Agreement - UNFSA") and the *1995 Code of Conduct for Responsible Fisheries*¹¹ (the "FAO Code of Conduct"). It must be emphasised that the *Code* was formulated as a practical framework to be applied in conformity with the other instruments listed and in light of, *inter alia*, the *1992 Declaration of Cancun*¹² and the *1992 Rio Declaration on Environment and Development*¹³, in particular Chapter 17 of Agenda 21¹⁴.

⁹ *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, 1993*. (Food and Agricultural Organization of the United Nations, Division for Ocean Affairs and the Law of the Sea, United Nations, New York, 1998), p. 41-49. The *Agreement* entered into force on 4 April 2003.

¹⁰ *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 1995*. (Food and Agricultural Organization of the United Nations, Division for Ocean Affairs and the Law of the Sea, United Nations, New York, 1998), p. 7-40. The *Agreement* entered into force on 11 December 2001.

¹¹ *Code of Conduct for Responsible Fisheries, 1995*. (Food and Agricultural Organization of the United Nations, Division for Ocean Affairs and the Law of the Sea, United Nations, New York, 1998), p. 56-78.

¹² *Cancun Declaration on Responsible Fishing, 1992*. <http://www.oceanlaw.net/txts/summaries/cancun/htm>.

¹³ See *Rio Declaration on Environment and Development, 1992, op.cit*, n. 5.

¹⁴ “Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and their protection, rational use and development of their living resources”, in *Report of the United Nations Conference on Environment and Development, Chapter 17*, (United Nations, New York, A/CONF. 151/26 Vol II, 1992).

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improving ocean governance and at ensuring sustainable management of living resources contained therein.

5. The Food and Agricultural Organization of the United Nations (FAO)¹⁵ has emphasised that irresponsible harvesting directly undermines effective management of marine fisheries. It impedes efforts to ensure stock sustainability and is "unfair", carrying, as it does, a heightened risk for lost economic and social opportunities. The potential for such losses has serious implications, in both long- and short-term, since it increases the risk of diminishing future food security.

6. Consequently, the recent proliferation of pernicious and potentially environmentally damaging fishing practices globally, particularly on the high seas, has come to pre-occupy many regional fishery management organizations (RFMOs). This concern has prompted the development of new terminology to describe fishing activities carried out in such a way as to circumvent regulatory controls. Having applied the term in the early 1990's, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)¹⁶, in 1997, became the first RFMO to formally designate these activities as "Illegal, Unreported and Unregulated" (IUU) fishing¹⁷.

7. Soon thereafter, the FAO Committee on Fisheries (COFI) took up the matter¹⁸ in 1999. COFI initiated a process to formally define the terminology (Box 1) and to combat the problem through an International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU)¹⁹. The attached Implementation Plan²⁰ provided various practical suggestions on actions aimed at ensuring the IPOA-IUU's overall success. Nevertheless, and notwithstanding the definitions in Box 1, some unregulated fishing may still occur without violating international law and/or may not require application of measures envisaged under the IPOA-IUU. This fishing would be apart from that addressed by the final provision in Box 1.

8. Like many regional bodies responsible for fisheries management (amongst other responsibilities²¹), CCAMLR has been particularly affected by IUU fishing for Patagonian Toothfish

¹⁵ FAO, *Implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. FAO Technical Guidelines for Responsible Fisheries No. 9*, (Food and Agriculture Organization of the United Nations, Rome, 2002), 122 pp.

¹⁶ The Commission established under Article VII of the *Convention for the Conservation of Antarctic Marine Living Resources, 1980 (CAMLR Convention)*. p. 7 of the *Basic Documents*, (CCAMLR, Hobart Australia, 2002), 129 pp. Some *Contracting Parties* (often termed "*Acceding States*") are not *Commission Members* as they do not qualify for such under the conditions outlined in Article VII. These States do not take part in the *Commission's* decision-making under Article XII.

¹⁷ Letter from the Executive Secretary of CCAMLR to FAO [Ref. 4.2.1.(I)] as cited by G. Lutgen, *A review of measures taken by Regional Marine Fishery Bodies to address contemporary fishery issues*, Footnote 135 on p. 35, *FAO Fisheries Circular No. 940*, (Food and Agriculture Organization of the United Nations, Rome, 1999), 97 pp.

¹⁸ COFI, *Report of the Twenty-Third Meeting of the Committee on Fisheries. FAO Fisheries Report No. 595*, (Food and Agriculture Organization of the United Nations, Rome, 1999), 70 pp.

¹⁹ FAO, *International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing*, (Food and Agriculture Organization of the United Nations, Rome, 2001), 24 pp.

²⁰ FAO, *op cit.*, n. 15.

²¹ Currently, there is considerable debate concerning CCAMLR's exact mandate and role. This is attributable to the fact that Article II of the *Convention* requires CCAMLR to manage both harvested species and the Antarctic marine ecosystem as a whole. Nevertheless, CCAMLR's fishery regulation functions do not differ

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(*Dissostichus eleginoides*) since the mid-1990s. In this paper, I use CCAMLR's experiences to illustrate some of the organisation's successes, and failures, in combating IUU Toothfish fishing. A brief history of the Toothfish IUU problem is provided. Some of CCAMLR's measures to combat the problem are documented, as are the organisation's efforts to develop, and ascribe to, international "best practice". Possible future action(s) are suggested.

2 THE CCAMLR CONVENTION

9. The boundaries of the CAMLR Convention Area (Fig. 1) are confined within the Antarctic Polar Front²² (APF) to the north and the Antarctic continental margin to the south (i.e. a major part of the "Southern Ocean"). Assignment of the APF as the Convention's northern boundary confines CCAMLR's area of responsibility within a hydrographic domain on which the underlying biogeography of the many marine species confined therein depends. For instance, the presence of deep-ocean basins south of the APF induces a high degree of species endemism, particularly for fish that inhabit the shallower Antarctic Continental shelf or areas close to the many oceanic islands that are a common feature of the Southern Ocean²³. As highlighted by Fischer and Hureau²⁴, endemism is comparably less for species inhabiting deeper water, although they still may be encountered in areas of high hydrographic variability such as immediately north and south of the APF.

10. With its entry into force on 7 April 1982, the CAMLR Convention was, and remains, one of the first, and only, regional marine agreements to explicitly balance conservation with rational (i.e. "sustainable") use. This is achieved through the implementation of a precautionary and holistic approach based on managing exploitation from an ecosystem²⁵ perspective (Box 2). In jurisdictional terms, CCAMLR has had to account for mixed sovereignty, and jurisdictional, imperatives²⁶, to ensure that regulation, monitoring, reporting and enforcement of fishing regulatory measures are coherent within the whole Convention Area. The Area itself comprises the high seas as well as areas under some form of national jurisdiction. South of 60°S, application of the Convention is subject to the sovereignty considerations of the Antarctic Treaty²⁷.

from those of many other marine fishery bodies with competency to manage fishing in the areas for which they are responsible. Therefore, for the purposes of this paper *CCAMLR* will be regarded as a *RFMO*.

²² The Antarctic Polar Front (*APF*) is the zone where colder, less saline waters flowing north from the Antarctic meet warmer, more saline waters flowing south in the Atlantic, Indian and Pacific Oceans. The term has effectively replaced that previously in common use - "the Antarctic Convergence". The latter term was used during negotiation of the *CAMLR Convention* and is referred to in Article I of the *Convention* (*op. cit.* n. 16). The mean position of the *APF* is between 45 and 60°S depending on longitude.

²³ K.-H. Kock, "*Antarctic Fish and Fisheries*". (Cambridge University Press, Cambridge, 1992), 359 pp.

²⁴ W. Fischer and J.-C. Hureau (eds.), "*FAO Species Identification Sheets for Fishery Purposes, Southern Ocean (CCAMLR Convention Fishing Areas 48, 58 and 88), Vol. II*", (Food and Agriculture Organization of the United Nations, Rome, 1985), 232 pp.

²⁵ For example see E.J. Molenaar, "CCAMLR and Southern Ocean Fisheries" (2001), *International Journal of Marine and Coastal Law* 16.(3): 465-499.

²⁶ See discussion in C. Joyner, "Maritime zones in the Southern Ocean: Problems concerning correspondence of natural and legal regimes" (1990), *Applied Geography* 10: 307-325, and the *Chairman's Statement* attached to the *CAMLR Convention* (*CCAMLR op. cit.*, n. 16, p. 23-24).

²⁷ See Article III of the *CAMLR Convention* in *CCAMLR, op. cit.*, n. 16, p. 5.

11. Article IX of the CAMLR Convention outlines CCAMLR's functions²⁸. Paragraph (1) empowers the Commission to collect data, facilitate research and develop measures necessary to ensure effective management of Antarctic marine living resources and the attached ecosystem. Such activities include the need to establish scientific procedures to estimate the yield of harvested stock(s). Article IX, paragraph (2) comprehensively lists management ("conservation") measures that could be applied. These include, inter alia, the setting of catch limits, designation of fishing areas and season, designation of protected species and various other input/output controls (e.g. effort limits, size limits etc.).

12. CCAMLR builds on the provisions of Article IX, paragraph (1) through the activities of its Scientific Committee²⁹ and associated specialist groups. It has instituted model-based procedures to estimate the sustainable yield of harvested stocks along with associated catch limits. The procedures themselves attempt to account for the life history characteristics, as well as the age/size distribution, of the species being harvested so as to provide realistic projections of stock status. They also attempt to allow for uncertainty in either the input data or estimation procedures³⁰.

13. Like LOSC Article 63, the CAMLR Convention also applies to the management of so-called "transboundary stocks"³¹. Patagonian Toothfish is perceived as such a stock since it is distributed throughout, and occurs within, most of the waters falling under national jurisdiction inside the Convention Area. The species also occurs to the north of the APF on the high seas and in the maritime zones of a number of Coastal States adjacent to the Area, particularly around the southern tip of South America. CCAMLR has been long aware of the difficulties associated with managing transboundary stocks. In 1993, a Resolution was adopted to address management of stocks occurring both within and outside the Convention Area³². Interestingly, this Resolution foreshadowed many similar UNFSA provisions.

3 THE PATAGONIAN TOOTHFISH FISHERY

14. Exploratory fishing for Patagonian Toothfish began north of the APF in about 1955³³. The development of deepwater longlining in the early 1980s allowed a commercial fishery for the species to develop in Chilean waters, where annual catches between 5 000 and 10 000 tonnes have been taken since

²⁸ See Article IX of the *CAMLR Convention* in CCAMLR, *op. cit.*, n. 16, p. 8-10.

²⁹ Articles XIV and XV of the *CAMLR Convention* respectively establish a *Scientific Committee* to advise the *Commission* and outline the kinds of activities which the *Committee* will conduct at the direction of the *Commission* pursuant to the *Convention's* objectives (CCAMLR, *op. cit.*, n. 16, p. 12-14).

³⁰ See A.J. Constable, W.K. de la Mare, D.J. Agnew, I. Everson and D.G.M Miller, "Managing fisheries to conserve the Antarctic marine ecosystem: Practical implementation of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR)" (2000), *ICES Journal of Marine Science* 57: 778-791.

³¹ The *FAO Fisheries Glossary* defines "transboundary stocks" as those "stocks of fish that migrate across international borders", (Food and Agriculture Organization of the United Nations, Rome, 2002). From the *FAO Website*: <http://www.fao.org/fi/glossary/default.asp>; LOSC, *op. cit.*, n. 4.

³² *CCAMLR Resolution 10/XII* (adopted in 1993) addresses "Harvesting of Stocks Occurring Both Within and Outside the Convention Area". p. 121 of *CCAMLR Schedule of Conservation Measures in Force 2000/04*, (CCAMLR, Hobart Australia, 2003), 156 pp. The *Resolution* "reaffirms that *Members* should ensure that their flag vessels conduct harvesting of any stock or stocks of associated species to which the *Convention* applies in areas adjacent to the *Convention Area* responsibly and with due respect for *Conservation Measures* adopted under the *Convention*". It also pre-dated more detailed *UNFSA* provisions (especially Article 19) (*op. cit.* n. 8 and 9).

³³ D.J. Agnew, "The illegal and unregulated fishery for toothfish in the Southern Ocean, and the CCAMLR catch documentation scheme" (2000), *Marine Policy* 24: 361-374.

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about 1985³⁴. During the same period, and until the early 1990's, Toothfish catches were trawled in Argentine and Falkland (Malvinas) Island waters. Thereafter, both trawling and longlining were employed³⁵.

15. In both the CCAMLR Area and closely adjacent waters, Toothfish have been the target of a trawl fishery around the French Kerguelen Islands since the mid-1980's³⁶. The species has also been taken as a by-catch around South Georgia since the late 1970's³⁷. However, it was not until the Soviet Union developed a longline fishery in the South Georgia region in 1988/89, followed by Chile in 1991/92, that large scale commercial harvesting of Toothfish in CCAMLR waters developed. The fishery expanded in 1996/97 with nationally sanctioned, fisheries in the South African Exclusive Economic Zone (EEZ) at the Prince Edward Islands and in the Australian Fishing Zone (FZ) around Heard and McDonald Islands. Toothfish catches at various locations within the Convention Area are illustrated in Fig. 2.

4 HISTORY OF IUU FISHING FOR TOOTHFISH

16. The emergence and development of IUU fishing for Toothfish has been well documented³⁸ for the Southern Ocean in general, and for the CCAMLR Area in particular (Fig. 3). Consequently, I have only provided a brief summary here with focus being given to CCAMLR estimates of IUU catch levels.

17. Prior to 1996, CCAMLR used sightings of unlicensed fishing vessels in the Convention Area to determine IUU activities and attendant catch levels. However, with the expansion of legitimate fishing activities alluded to above, along with the simultaneous expansion of the IUU fleet, CCAMLR developed a standard methodology to assess IUU catches based on a variety of information (Box 3). Essentially, and as explained by Sabourenkov and Miller³⁹, CCAMLR calculates the IUU catch per vessel as a function of daily catch rate for the days fished per fishing voyage summed over the number of voyages per year. The calculation uses catch rate information from the geographically closest legitimate fishery. The total IUU catch per year is then summed over all the vessels identified.

³⁴ Table 1 in D.J. Agnew, *op. cit.* n. 33.

³⁵ From "FIFD, Fishery Department Fishery Statistics, Vol. 3 (1989-1998). (Falkland Islands Government, Stanley, Falkland Islands, 1999) and "Report of the Workshop on Methods for the Assessment of *Dissostichus eleginoides*", SC-CAMLR-XIV, (CCAMLR, Hobart, Australia, 1995), Annex. 5, Appendix E : 387-417.

³⁶ G. Duhamel, "Biologie et exploitation de *Dissostichus eleginoides* autour des Iles Kerguelen (Division 58.5.1)", CCAMLR *Selected Scientific Papers, Vol. SC-CAMLR-SSP/8*, (CCAMLR, Hobart, Australia, 1991), p. 85-106.

³⁷ CCAMLR *Statistical Bulletin, Vols 1 and 2 (1970-1979 and 1980-1989)*, (CCAMLR, Hobart, Australia, 1990).

³⁸ Various publications deal with Toothfish IUU. Reference is limited to: D.J. Agnew, *op. cit.* n. 33; K. Dodds, "Geopolitics, Patagonian Toothfish and living resource regulation in the Southern Ocean" (2000), *Third World Quarterly* 21.(2): 229-246.; J.A. Green and D.J. Agnew, "Catch Documentation Schemes to combat Illegal, Unreported and Unregulated fishing: CCAMLR's experience with the Southern Ocean Toothfish", (2002), *Ocean Yearbook* 16: 171-194.; G.P. Kirkwood and D.J. Agnew, "Deterring IUU Fishing" in A.I.L Payne, C.M. O'Brien and S.I. Rogers (eds.), *Management of Shared Fish Stocks*. (Blackwell, Oxford, 2004): 1-22; G. Lutgen, "The Rise and Fall of the Patagonian Toothfish - Food for Thought" (1997), *Environmental Policy and Law* 27.(5): 401-407. and E.N. Sabourenkov and D.G.M. Miller, "The Management of Transboundary Stocks of Toothfish, *Dissostichus* spp., under the Convention on the Conservation of Antarctic Marine Living Resources" in A.I.L Payne, C.M. O'Brien and S.I. Rogers (eds.), *Management of Shared Fish Stocks*. (Blackwell, Oxford, 2004): 68-94.

³⁹ Derived from E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.

18. Toothfish IUU catch estimates are reviewed annually by the CCAMLR Working Group on Fish Stock Assessment (WG-FSA) to estimate total removals for stock assessment purposes. Account is taken of any new information on IUU fishing derived from both catch and trade data. The latter usually come from the CCAMLR Toothfish Catch Documentation Scheme (CDS)⁴⁰ [see Section 5.(b).]. Fig. 4 illustrates CCAMLR's estimates of tannual IUU catch compared with legitimate catches during the period 1996/97 to 2002/03. The estimated value of these catches is illustrated in Fig. 5. It can be seen that cumulative financial losses arising from IUU fishing (US\$518 million) in the Convention Area are likely to be substantive, and at least in the order of benefits enjoyed by legitimate operators (US\$486).

19. Nevertheless, many recent publications on IUU fishing in the Convention Area have emphasised the high levels of uncertainty attached to such estimates when these are compared with regulated catch levels. The situation is complicated by the fact that CCAMLR estimates have undergone many revisions in light of new information at hand. As Sabourenkov and Miller⁴¹ indicate, estimates derived from trade statistics are often noticeably higher than direct CCAMLR estimates⁴² using the procedures outlined in Box 3. This is probably attributable to "double accounting" where reported trade levels for some countries may include both fish imported for processing and exported quantities of processed product(s). Further bias may arise from transshipments in port areas being recorded as imports or exports. Finally, there may be misclassification of other fish species (i.e. bass or sea bass) that resemble Toothfish or carry similar trade classifications.

20. The catch figures derived via the above procedures are likely to be incomplete as they are heavily dependant on the assumptions underlying the supporting analyses. Consequently, CCAMLR has recognised that estimates of IUU-caught Toothfish in the Convention Area are both coarse and probably only represent a crude limit approximation on the potential extent of such catches⁴³.

21. Compared with initial levels, there has been a noticeable decrease in the overall estimated IUU Toothfish catch over the past four seasons (Fig. 4). Although the underlying reasons for this trend are not entirely clear⁴⁴, there is some suggestion that any decrease in the level of IUU catch could be attributed to CCAMLR's introduction of measures to better identify fishing location(s) and to monitor Toothfish trade (see below). Thus the combined effects of CCAMLR measures with those of individual States, particularly Coastal States, may have worked in concert to deter IUU fishing through increasing costs attached to "doing business" in the face of more effective enforcement action and/or improved intelligence on IUU operations as a whole⁴⁵. In particular, the latter has allowed CCAMLR and its Members to focus better, and more directly, on the most persistent IUU vessels, their flags and their beneficial owners.

⁴⁰ Table 2 in SC-CAMLR, "*Report of the Twenty-First Meeting of the Scientific Committee for the Conservation of Antarctic Marine Living Resources - SC-CAMLR XXI*". (CCAMLR, Hobart, Australia, 2002), 524 pp. It should also be noted that the statistics compiled by CCAMLR on IUU Toothfish catches pool catches of both Toothfish species (*Dissostichus eleginoides* and *D. mawsoni*) found in the Convention Area, especially when these are compiled from CDS information [see Section 5.(b)].

⁴¹ E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.

⁴² M. Lack and G. Sant, "Patagonian Toothfish: Are conservation and trade measures working ?" (2001), *TRAFFIC Bulletin*, 19(1): 18 pp; E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.

⁴³ SC-CAMLR, "*Report of the Eighteenth Meeting of the Scientific Committee for the Conservation of Antarctic Marine Living Resources - SC-CAMLR XVIII*", (CCAMLR, Hobart, Australia, 1999), p. 1-107.

⁴⁴ D.J. Agnew, *op. cit.* n. 33; E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.

⁴⁵ G.P. Kirkwood and D.J. Agnew, *op cit.* n. 38; E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.

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22. Based on CCAMLR's experience the task of effectively bringing IUU fishing in one area under control has been complicated greatly by the fishery's ability to relocate elsewhere. Translocation is often accompanied by a change of flag, vessel name and/or ownership. The potential for obfuscation is compounded by the eastward progression of IUU fishing from the Atlantic Ocean sector of the Convention Area (CCAMLR Statistical Area 48) into the Indian Ocean (Area 58) since 1996/97. The fishery moved initially from the South African Prince Edward Islands to the French Crozets and Kerguelen Islands, and finally to the Australian Heard and McDonald Islands⁴⁶ (Fig. 3). A similar trend is evident from CCAMLR areal estimates of IUU catch over the past six seasons (Fig. 6). Since about 2000, the IUU fishery has probably penetrated into the higher latitudes of the Indian Ocean, most notably around Ob and Lena Banks (see Fig. 3), and possibly farther south into Prydz Bay.

5 CCAMLR'S MANAGEMENT OF TOOTHFISH IUU FISHING

A *General*

23. CCAMLR has long endorsed the notion that IUU fishing compromises sustainability of Toothfish stocks in the Convention Area. In turn, this seriously undermines the effectiveness of the organisation's management measures⁴⁷. There is deep concern that continued high levels of IUU fishing would also compromise CCAMLR's long-standing objective to reduce incidental seabird by-catch during longlining operations [Section 5.(b)]. In CCAMLR's view, the catching of seabirds by IUU longliners exerts an unacceptable and negative effect on many threatened seabird species of conservation concern⁴⁸.

24. Let us now look at the tools that CCAMLR has in its armoury, or has employed, to combat Toothfish IUU fishing in the Convention Area as a whole.

i) *System of Inspection*

25. CCAMLR's progressive development of fishery control measures provided for the collection of standard fisheries data as well as information on fish biology, ecology, demography and productivity. Such information is crucial to monitoring fishing activity and in assessing the status of various stocks.

26. In 1989, CCAMLR implemented a System of Inspection to formalise procedures for the at-sea inspection of Contracting Party vessels fishing in the Convention Area by designated inspectors from CCAMLR Member States. Details of the CCAMLR System of Inspection are provided in the CCAMLR Basic Documents⁴⁹. The System is nationally operated with inspectors being appointed by national authorities that in turn report via the Member State concerned to CCAMLR. Inspections may be carried out from vessels of the designating Member, or from on board vessels being inspected⁵⁰. Arrangements for

⁴⁶ D.J. Agnew, *op. cit.* n. 33.

⁴⁷ CCAMLR, "*Report of the Sixteenth Meeting of the Commission for the Conservation of Antarctic Marine Living Resources - CCAMLR XVI*", (CCAMLR, Hobart, Australia, 1997), p. 8-12 and 24-28.

⁴⁸ K.-H. Kock, "The direct influence of fishing and fishery-related activities on non-target species in the Southern Ocean with particular emphasis on longline fishing and its impacts on albatrosses and petrels - A review", (2001), *Reviews in Fish Biology and Fisheries*, 11: 31-56; CCAMLR, "*Report of the Twentieth Meeting of the Commission for the Conservation of Antarctic Marine Living Resources - CCAMLR XX.*", (CCAMLR, Hobart, Australia, 2001), p. 1-69.

⁴⁹ CCAMLR, "System of Inspection", *op. cit.* n. 16, p. 105-112; *CCAMLR Basic Documents*, CCAMLR, *op. cit.* n. 16.

⁵⁰ Article III of the *CCAMLR System of Inspection*, *op. cit.* n. 49.

scheduling inspections are a matter between the Flag and Designating State⁵¹. However, inspectors are permitted to board fishing, or fisheries research, vessels in the Convention Area at will on the proviso that such vessels are flagged to CCAMLR Contracting Parties⁵². The System also provides for reporting sightings of Non Contracting Party (NCP) flagged vessels fishing in the CCAMLR Area. While the total number of at-sea inspections undertaken annually in the CCAMLR Area is relatively small, inspection efforts have tended to concentrate on areas of most intensive fishing activity. The outcomes of such inspections have been comprehensively summarised elsewhere⁵³.

ii) *Scheme of International Scientific Observation*

27. In 1992, the CCAMLR Scheme of International Scientific Observation augmented the System of Inspection⁵⁴. Under this Scheme, observers are taken aboard vessels engaged in fisheries research or commercial fishing in the Convention Area. This is arranged bilaterally between the Designating Member (i.e. the Member wishing to place an observer aboard a vessel) and the Receiving Member (i.e. the Flag State of the vessel concerned)⁵⁵. The observer's primary task is to collect essential scientific data and to promote the Convention's objectives. To ensure scientific impartiality, observers designated under the Scheme are confined to the nationals of a CCAMLR Member other than the Flag State of the vessel on which the observer serves. A recent requirement has directed observers to provide factual data on sightings of activities by vessels other than those on which they are deployed⁵⁶. Application of the CCAMLR Observation Scheme is mandated for all CCAMLR-sanctioned Toothfish fisheries, particularly in areas outside national jurisdiction.

iii) *Management ("Conservation") Measures*

28. As indicated, the initial increase in Toothfish IUU fishing in the Convention Area coincided with expansion of legitimate fishing activity sanctioned either by CCAMLR or by Coastal States in the Indian Ocean. The level of the former was unprecedented with more than 40 IUU fishing vessels being sighted within the South African EEZ at the Prince Edward Islands⁵⁷ alone during the 1997/98 season. Since then, CCAMLR has been constantly developing and revising its management ("conservation") measures⁵⁸ in an

⁵¹ Article III.(c) of the *CCAMLR System of Inspection*, *op. cit.* n. 49.

⁵² CCAMLR, "*Report of the Fourteenth Meeting of the Commission for the Conservation of Antarctic Marine Living Resources - CCAMLR XIV*", (CCAMLR, Hobart, Australia, 1995), paragraph 7.25, p. 25. This particular paragraph should be read in conjunction with paragraph 7.26 which provides for the addition of a new Article (Article IX) to be added to the System of Inspection to provide a definition of activities assumed to comprise scientific research on, or harvesting of, marine living resources in the *Convention Area*.

⁵³ D.J. Agnew, *op. cit.* n. 33; E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.

⁵⁴ See p. 115-119 ("*CCAMLR Scheme of International Scientific Observation*"), CCAMLR *op. cit.* n. 16.

⁵⁵ Section B of the *CCAMLR Scheme of International Scientific Observation*, *op. cit.* n. 54.

⁵⁶ CCAMLR, "*Report of the Seventeenth Meeting of the Commission for the Conservation of Antarctic Marine Living Resources - CCAMLR XVII*". (CCAMLR, Hobart, Australia, 1998), p. 12-22.

⁵⁷ D.J. Agnew, *op. cit.* n. 33.

⁵⁸ CCAMLR ("*Schedule of Conservation Measures in Force, 2003/04*"), *op. cit.* n. 32. *Conservation Measures* are binding on all *Commission Members* (*op. cit.* n. 28). While one body of opinion does not accept that *Conservation Measures* are binding on all *CCAMLR Contracting Parties*, *Convention Article XXI.(1)* mandates each *Contracting Party* to take appropriate measures within its competence to ensure compliance with the *Convention's* provisions and with *Conservation Measures* adopted by the Commission to which the *Party* is bound under *Articles IX*. In contrast to *Conservation Measures*, *CCAMLR Resolutions* are not legally binding. The *Schedule* may be found on the CCAMLR Website: <http://www.ccamlr.org/pu/e/pubs/cm.drt.htm>.

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effort to eliminate IUU fishing (Box 4). Briefly, these measures promote co-operation between CCAMLR Contracting Parties to improve compliance, implement at-sea inspections of Contracting Party vessels, ensure marking of all vessels and fishing gear, and introduce satellite-based vessel monitoring systems (VMS) to verify catch location. Additional measures address mandatory Port State inspections by Contracting Parties of their vessels licensed to fish in the Convention Area and further aim to develop ties with NCPs involved in Toothfish fishing or trade. As already highlighted, scientific observers have been tasked with collecting and reporting factual information on fishing vessel sightings. Most recently, CCAMLR has established a vessel database to facilitate information exchange between Members on vessels known to have fished in contravention of the organisation's Conservation Measures. These Measures (Conservation Measures 10-06, 10-07 and Resolution 19/XXI) respectively set in place procedures to list Contracting Party and NCP vessels that have engaged in IUU fishing in the CCAMLR Area as well to take measures against vessels flying the flags of States deemed not to be complying with such Measures⁵⁹.

B CCAMLR Toothfish Catch Documentation Scheme (CDS)

29. Toothfish IUU fishing not only undermines CCAMLR's Conservation Measures, it also violates the principles of UNFSA Articles addressing Flag State duties (Article 18), the obligations of Non-Members, or Non-Participants, in regional fisheries arrangements (Article 17) and LOSC Articles 116-119. Given its relatively high economic value, the demand for Toothfish continues to attract significant prices internationally. As fishable stocks occur both within and outside the CCAMLR Area, IUU-caught fish in the Area have been difficult to trace through the trade cycle. This has resulted in a level of undetermined and non-restricted access to international markets by IUU fishing operators⁶⁰.

30. In 1998, CCAMLR began developing trade-based measures to monitor landings, and the access to international markets, of Toothfish caught in the Convention Area by its Members, as well as in waters under their jurisdiction⁶¹. At the time, other international initiatives to trace trade in specific fish species had been negotiated, or were being refined. The most prominent of these was the Bluefin Tuna Statistical Document (BTSD) introduced by the International Commission for the Conservation of Atlantic Tuna (ICCAT) in 1992⁶². The BTSD monitors trade in fresh and frozen tuna. A subsequent measure requires that ICCAT Members deny landings in their ports of tuna caught outside ICCAT measures or in the absence of a BTSD.

31. In contrast to ICCAT-type systems, CCAMLR Toothfish trade-related measures introduce a number of new and important elements. Agnew⁶³ has considered CCAMLR's development of the CDS in some detail. He, and others⁶⁴, stress that the design, adoption and implementation of the Scheme by far constitutes CCAMLR's most significant attempt to combat IUU fishing in the Convention Area.

⁵⁹ See also E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.; CCAMLR, *op. cit.* n. 32 and 58. It should be noted that, unlike the numbering system for *CCAMLR Conservation Measures* that for *Resolutions* was not changed in 2002.

⁶⁰ D.J. Agnew, *op. cit.* n. 33; E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.

⁶¹ D.J. Agnew, *op. cit.* n. 33; J. A. Green and D.J. Agnew, *op. cit.* n. 38.

⁶² ICCAT, "Recommendations Adopted by the Commission at its Eighth Meeting -Report for Biennial Period, 1992-1993, Part 1", (ICCAT, Madrid, Spain, 1993). Resolutions 92-1 and 92-3.

⁶³ D.J. Agnew, *op. cit.* n. 33.

⁶⁴ E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.

32. While a number of unique principles underpin the CDS (Box 5), it must be stressed that the CDS was never seen as a stand-alone measure but rather as an integral component in a suite of CCAMLR measures to combat IUU fishing. Thus, its two main objectives are best summarised as:

- To track global landings of, and trade in, Toothfish caught both within and outside the Convention Area, and
- To restrict access to international markets for Toothfish from IUU fishing in the Convention Area.

33. As a CCAMLR Conservation Measure, the CDS tracks Toothfish landings and requires both identification and verification of catch origin. This enables CCAMLR, through either landing or transshipment records, to identify the origin of Toothfish entering the markets of all CDS Parties. It also facilitates determination of whether Toothfish in the Convention Area have been caught in a manner consistent with CCAMLR Conservation Measures.

34. With the CDS' entry into force on 7 May 2000, CCAMLR was able to implement a comparatively robust mechanism to collect Toothfish data from areas both within, and adjacent to, the Convention Area. Such data are vital for estimating "total" Toothfish removals; a key input parameter to improve stock assessment and provide clearer insights into global catch levels and associated market forces⁶⁵.

C Other Considerations

35. The various measures outlined in Section 5.(a).(iii) are fully consistent with the provisions of LOSC⁶⁶ Articles 116 to 119, UNFSA⁶⁷ Articles 21 to 23 and Articles III to VIII of the Compliance Agreement⁶⁸. In reaction to UNFSA Articles 8 (particularly paragraphs 3 and 4) and 17, CCAMLR encourages its Members to accept and promote the entry into force of UNFSA⁶⁹ as well as the Compliance Agreement. Acceptance of the FAO Code of Conduct⁷⁰ has also been encouraged. Furthermore, CCAMLR has frequently acknowledged that both the UNFSA's and the Compliance Agreement's recent entries into force are likely to contribute significantly to the reduction, and ultimately elimination, of IUU fishing in the Convention Area⁷¹.

36. Many CCAMLR Members actively contribute to the FAO's work in implementing the above agreements. Most notably, both CCAMLR and its Members promoted development of the 1999 FAO International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries⁷² and the

⁶⁵ E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.

⁶⁶ LOSC, *op. cit.* n. 4.

⁶⁷ UNFSA, *op. cit.* n. 8.

⁶⁸ Compliance Agreement, *op. cit.* n. 8.

⁶⁹ UNFSA entered into force when the necessary 30 ratifications had been deposited (*op. cit.* n. 10). CCAMLR, *op.cit.* n. 47.

⁷⁰ FAO Code of Conduct, *op. cit.* n. 8 and 11; CCAMLR, *op. cit.* n. 47.

⁷¹ CCAMLR, *op. cit.* n. 47.

⁷² FAO, *International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries*. (Food and Agriculture Organization of the United Nations, Rome, 1999), 26 pp.

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IPOA-IUU⁷³. CCAMLR participates as an institutional observer at the biennial meetings of COFI and its attached sub-committees.

37. Institutionally, CCAMLR also co-operates with various other regional fisheries organizations, especially those managing fisheries in waters adjacent to the Convention Area (e.g. ICCAT, the Indian Ocean Tuna Commission [IOTC], the Commission for the Conservation of Southern Bluefin Tuna [CCSBT] and the recently formed South East Atlantic Fisheries Commission)⁷⁴. Inter alia, this includes the exchange of information on IUU fishing on the high seas and efforts to combat such fishing.

5. CCAMLR AND THE IPOA-IUU

38. The IPOA-IUU's major purpose is to provide a comprehensive and integrated global approach to combat IUU fishing through prevention, deterrence and elimination⁷⁵. Hence, the IPOA-IUU strives to address various key principles and strategies (Box 6). Taken together, these bound CCAMLR's efforts to combat IUU fishing and provide a basis against which these can be assessed.

39. The various steps already, or to be, taken by CCAMLR to address Toothfish IUU fishing (Section 5) are assessable in the context of the following statement⁷⁶:

- Providing all CCAMLR Contracting Parties with comprehensive, effective and transparent measures to combat IUU fishing within the Convention Area and for fish stocks for which CCAMLR is responsible.

40. Pursuant to the IPOA-IUU's general principles shown in Box 6 as well as the more practical steps outlined in the IUU Implementation Plan⁷⁷, CCAMLR has already implemented most of the Plan's necessary steps through its various Conservation Measures. From available information, it is clear that CCAMLR has developed a cohesive framework of measures to combat IUU Toothfish fishing that is fully compatible with international "best practice" as identified by the IPOA-IUU⁷⁸. To illustrate the point, it is worth working through an example.

41. The IPOA-IUU Implementation Plan prescribes 14 items to deal with - "Actions to Prevent, Deter and Eliminate IUU Fishing". All 14 have been directly addressed by CCAMLR. For example a suite of CCAMLR measures have focused on developing, implementing and maintaining records of vessels fishing in the Convention Area. These are clearly subject to Convention Articles XX and XXI⁷⁹ and provide specifically for the marking of vessels in the Convention Area (CCAMLR Conservation Measure 10-01), a requirement to license fishing vessels (Conservation Measure 10-02), the promotion of compliance with measures by Contracting Party vessels (Conservation Measure 10-06), the promotion of compliance with measures by NCP vessels (Conservation Measure 10-07) and the taking of measures in relation to flags of

⁷³ IPOA-IUU, *op. cit.* n. 19.

⁷⁴ The annual CCAMLR meeting considers its co-operation with other international organisations as a standing agenda item. It also considers such co-operation under other agenda items where appropriate, including during various discussions by the *Commission's* subsidiary bodies, particularly the *Scientific Committee*.

⁷⁵ See paragraphs 8 and 9 of the IPOA-IUU, *op. cit.* n. 19.

⁷⁶ D.G.M. Miller, E. Sabourenkov and N. Slicer, "Unregulated Fishing and the Toothfish Experience" in D. Vidas (ed.), *Antarctica 2000 and Beyond*. (Kluwer, In Press).

⁷⁷ IPOA-IUU, *op. cit.* n. 15.

⁷⁸ D.G.M. Miller, E. Sabourenkov and N. Slicer, *op. cit.* n. 76.

⁷⁹ CCAMLR, *op. cit.* n. 16.

non-compliance (Resolution 19/XXI). Space does not permit the inclusion here of similar details for other CCAMLR measures consistent with the activity categories addressed by the Implementation Plan. However, based on information presented elsewhere⁸⁰, these measures are equally comprehensive and substantive.

42. However, a possible CCAMLR failing has been that its IUU measures have evolved piecemeal and consequently have not necessarily been developed according to any plan or determined timetable. This shortcoming has been recognised by the Commission, which has recently initiated development of an organisational IUU implementation plan⁸¹ within the prescriptions of the IPOA-IUU Implementation Plan⁸².

6. SOME ANCILLARY THOUGHTS

43. When illustrating CCAMLR's effectiveness in combating IUU fishing in the Convention Area, it is necessary to highlight a few additional considerations. These relate as much to the organisation's successes as they do to its shortcomings.

A *International*

44. CCAMLR Article IV specifically binds its Parties to the sovereignty provisions of Antarctic Treaty Articles IV and VI. There is an added complication, however. By including all waters south of the APF, CCAMLR raises sovereignty issues that cannot be dealt with directly by the Treaty. As a result, a special statement made by the Chairman of the Conference on the Conservation of Antarctic Marine Living Resources was attached to the Convention⁸³. This sets out the conditions for the Convention's application in waters adjacent to any land (i.e. islands) where existence of sovereignty is recognised by all CCAMLR Contracting Parties.

45. The above arrangement provides for Coastal State enforcement within national waters inside the Convention Area in conformity with CCAMLR's needs. On balance, this has been the case⁸⁴ with most affected CCAMLR Members having endeavoured to ensure harmonisation between national and CCAMLR measures. In this context, it is interesting to note that no CCAMLR Member has ever voiced a reservation under the Chairman's Statement to significant Measures aimed at combating IUU fishing⁸⁵. These include Conservation Measures 10-04 (mandating deployment of Vessel monitoring systems [VMS]), 10-05 (the CDS), 10-06 (promoting compliance by Contracting Party vessels) and 10-07 (promoting compliance by NCP vessels).

46. By implication, therefore, it could be argued that the CCAMLR Members most likely to be affected by application of the Chairman's Statement view IUU fishing not only as a CCAMLR issue, but also as a priority concern for Coastal States with sovereign waters in the Convention Area. With the

⁸⁰ D.G.M. Miller, E. Sabourenkov and N. Slicer, *op. cit.* n. 76.

⁸¹ CCAMLR, "*Report of the Twenty First Meeting of the Commission for the Conservation of Antarctic Marine Living Resources - CCAMLR XXI*", (CCAMLR, Hobart, Australia, 2002), paragraph 8.15, p. 32.

⁸² See particularly paragraphs 80-82 in FAO, *op. cit.* n. 15, p. 101-102.

⁸³ CCAMLR, *op. cit.* n. 16.

⁸⁴ D.G. M. Miller, "The International Framework for the Management of Fishing in the Southern Ocean". *Paper Presented at the Outlook 2004 Conference*, (ABARE, Canberra, Australia – 2-3 March 2004)

⁸⁵ D.G. M. Miller, *op. cit.* n. 84.

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exception of South Africa (largely for technical reasons associated with a lack of enforcement capability⁸⁶), the depth of this concern has been visibly manifest for the CCAMLR Coastal States most affected. France and Australia, in particular, have devoted considerable time, effort and money to protect their waters from IUU activities. Despite their efforts, IUU fishing has impacted Toothfish stocks in the Indian Ocean⁸⁷, most notably, around the Prince Edward Islands, where the future sustainability of *D. eleginoides* has been seriously compromised⁸⁸.

47. An ancillary consideration is the extent to which the Convention's provisions (particularly Conservation Measures) can be effectively applied on the high seas within the CCAMLR Area⁸⁹. The situation is exacerbated by the Area's geographic extent (ca. 35 x 10⁶ sq. km) and by the remoteness of many fishing grounds⁹⁰. This tends to favour fishing outside CCAMLR's regulatory control, particularly by vessels flying the flags of CCAMLR NCPs⁹¹. While the list of specific Conservation Measures dealing with CCAMLR NCPs systematically grows, there is still a need to balance the implied regulatory provisions of such Measures with the rights of all States (CCAMLR Contracting and NCPs alike) to fish the high seas under LOSC Article 116⁹².

48. However, it needs to be recognised that when LOSC Article 116 is read in conjunction with Articles 117 to 119⁹³, there is a clear obligation on all States to co-operate in the conservation and management of marine living resources on the high seas and to take appropriate measures to ensure that this occurs. Together with the FAO Compliance Agreement⁹⁴ and UNFSA Articles 8, 19 to 23⁹⁵, these general provisions obligate States fishing on the high seas in the CCAMLR Convention Area to do so in cognisance of measures aimed at ensuring stock sustainability and in a manner not discharge them from co-operating with CCAMLR in the conservation and management of relevant fisheries resources.

49. Despite these positive associations and inferences, there is still scope to explore how effectively LOSC provisions, and especially those of UNFSA, can be aligned with CCAMLR's efforts to combat Toothfish IUU fishing⁹⁶ in the Convention Area and closely adjacent areas. The development of a

⁸⁶ A.D. Brandao, A., D.S. Butterworth, B.P. Watkins and D.G.M. Miller, "A first attempt at an assessment of the Patagonian Toothfish (*Dissostichus eleginoides*) resource in the Prince Edward Islands EEZ". (2004), *CCAMLR Science*. 9: 11-32.

⁸⁷ See discussion in paragraph 5.4 of CCAMLR, "Report of the Eighteenth Meeting of the Commission for the Conservation of Antarctic Marine Living Resources - CCAMLR XVIII", (CCAMLR, Hobart, Australia, 1999). This states - "The Scientific Committee drew the attention of the Commission to the potential similarities between the implications for future sustainability of *Dissostichus* spp. stocks as a consequence of IUU fishing and the collapse of *Notothernia rossii* stocks due to overfishing in the late 1970s".

⁸⁸ A.D. Brandao, A., D.S. Butterworth, B.P. Watkins and D.G.M. Miller, *op cit.* n. 86.

⁸⁹ See C.C. Joyner, "The Antarctic Treaty System and the Law of the Sea: Competing regimes in the Southern Ocean" (1995), *International Journal of Marine and Coastal Law*, 10(2):301-331 and M. Levy "The enforcement of Antarctic marine living resources claims" (1997), *Duke Development Clinic/Adcock*. 155 pp.

⁹⁰ G. P. Kirkwood and D. J. Agnew *op. cit.* n. 38

⁹¹ D. J. Agnew *op. cit.* n. 33

⁹² LOSC, *op. cit.* n. 4.

⁹³ LOSC, *op. cit.* n. 4.

⁹⁴ FAO, *op. cit.* n. 9.

⁹⁵ UNFSA, *op. cit.* n. 10.

⁹⁶ K. Dodds, *op. cit.* n. 38.

CCAMLR institutional plan to provide regional focus for the IPOA-IUU⁹⁷ is obviously a step in the right direction to address this particular problem⁹⁸.

B *The Toothfish Saga Revisited*

50. Like whaling, finfish fishing in the Southern Ocean has been characterised by "boom and bust" cycles⁹⁹, with successive discovery, exploitation and depletion of each new target stock taking place over progressively shorter time scales. In this context, we have seen that the cumulative value (Fig. 5) of the IUU fishery for Toothfish in the CCAMLR Area over the past eight years is close to that for the legitimate fishery. Figure 5 also illustrates that the profits enjoyed by IUU operators were nearly twice those of the legitimate fishery until about 1998/99, when a drop-off in IUU catches is observable. While considerable uncertainties are associated with estimating early IUU-catch levels¹⁰⁰, Kirkwood and Agnew¹⁰¹ suggest that a decline in IUU operations in 1998/99 may have occurred as a result of the CDS negotiations nearing finality. Therefore, it is difficult to say whether the observed reduction in IUU activities resulted from operators reducing fishing or whether they made efforts to legitimize their operations. Equally, as highlighted in Section 7.(a) above, stocks may have become so depleted as to defy profitable exploitation, even for IUU operators.

51. In contrast to its more modest success in combating the IUU problem directly, CCAMLR has had considerable success (Fig. 7) in reducing bird mortality associated with Toothfish longlining in the Convention Area through promulgation of measures specifically aimed at minimising incidental by-catch¹⁰². However, the take of seabirds by the IUU fishery in the CCAMLR Area and by longline vessels fishing on the feeding grounds of particular bird species farther north still raises considerable cause for concern¹⁰³ and is likely to be unsustainable for most of the species affected¹⁰⁴ despite CCAMLR's efforts to the contrary.

C *The CDS*

52. Initial evaluation of the CDS is encouraging¹⁰⁵. Not only is the Scheme unique in its scope and application, it became fully operational relatively quickly (within less than two years). It has also drawn in a number of CCAMLR NCPs and its overall coverage extends to more than 90% of the global world trade in Toothfish (Fig. 8).

53. The CDS' introduction has led to the Scheme's Parties denying Toothfish landings and/or shipments in the absence of the required documents. The absence of such documentation provides a rebuttable presumption that triggers enforcement action. It has also improved appreciation of Toothfish

⁹⁷ See FAO, *op. cit.* n. 15 and Section 6 above.

⁹⁸ See Paragraph 8.15 in CCAMLR, "*Report of the Twenty-First Meeting of the Commission for the Conservation of Antarctic Marine Living Resources – CCAMLR-XXI*", (CCAMLR, Hobart, Australia, 2002), 205 pp.

⁹⁹ K.-H. Kock, *op. cit.* n. 23.

¹⁰⁰ E. N. Sabourenkov and D. G. M. Miller, *op. cit.* n. 38.

¹⁰¹ G.P. Kirkwood and D.J. Agnew, *op. cit.* n. 38.

¹⁰² K. –H. Kock, *op. cit.* n. 48; IFF, "Second International Fishers Forum" (2002), *SPC Fisheries Newsletter*, No. 103: 32 pp.; D.G. Miller *et al.* *op. cit.* n. 76;

¹⁰³ K. –H. Kock, *op. cit.* n. 48

¹⁰⁴ *Conservation Measure 25-02* in CCAMLR, *op. cit.* n. 32 and 98.

¹⁰⁵ E.N. Sabourenkov and D. G. M. Miller, *op. cit.* n. 38.

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global catch levels and focused on incidents of malpractice or fraud. With evidence that introduction of the CDS has made trading in IUU-caught fish less profitable, it is notable that the Scheme also seems to restrict unfettered market access to IUU-caught products¹⁰⁶. While some of the improvements to the CDS suggested by Sabourenkov and Miller¹⁰⁷ are likely to make it even more effective in combating IUU fishing in the Convention Area, it is still worth asking:

“What would the consequences have been in the absence of the CDS?”

54. Based on current levels of IUU fishing for Toothfish in the CCAMLR, and closely adjacent, Areas the answer appears obvious – the IUU situation would be much worse by virtue of the fact that the CDS has had a noticeable impact on accessibility to global markets (particularly in the United States and Japan) thereby deterring IUU operators¹⁰⁸. A key illustration of such deterrence in the fact that IUU-caught fish fetch a significantly lower price (+20%) than fish with attached CDS accreditation¹⁰⁹.

55. With the CDS as a significant step, CCAMLR is able to promote multi-lateral co-operation to combat Toothfish IUU fishing. In contrast to other CCAMLR Conservation Measures that are limited to the Convention Area and to CCAMLR Members, the CDS is applicable globally. Furthermore, its implementation remains consistent with many of the provisions of UNFSA Articles 7, 8 and 17¹¹⁰. As the CDS is generally aimed at minimising any national bias¹¹¹, there is every expectation that its effectiveness will benefit from enhanced international co-operation. In this respect, and following a 2002 proposal to list Toothfish under Appendix II of the Convention on Trade of Endangered Species (CITES), the recent decisions by both CCAMLR and the Twelfth Conference of CITES Parties (COP-12)¹¹² to improve co-operation and the exchange of information between the two organisations is a gratifying development. It should also broaden the CDS' application globally. As highlighted by Miller et al.¹¹³, this should serve to reduce possible World Trade Organisation (WTO) scrutiny arising from the perception that relatively few parties participate in the Scheme. Consequently, the CDS would better qualify as a "multilateral solution based on international co-operation and consensus" aimed at combating a transboundary environmental problem, or one of a global nature – a status favoured by the WTO's Committee on Trade and Environment (CTE).

56. Finally, it is notable that Article 30 of the Vienna Convention on the Law of Treaties¹¹⁴ addresses application of successive treaties relating to the same, or similar, subject matter. In these terms the competency of relevant international law arrangements such as LOSC, UNFSA and CCAMLR need to be

¹⁰⁶ G. P. Kirkwood and D. J. Agnew, *op. cit.* n. 38.

¹⁰⁷ E.N. Sabourenkov and D. G. M. Miller, *op. cit.* n. 38.

¹⁰⁸ E.N. Sabourenkov and D. G. M. Miller, *op. cit.* n. 38.

¹⁰⁹ E.N. Sabourenkov and D. G. M. Miller, *op. cit.* n. 38.

¹¹⁰ UNFSA, *op. cit.* n. 10.

¹¹¹ K. Larson, “Fishing for a compatible solution: Toothfish conservation and the World Trade Organization” (2000), *The Environmental Lawyer*, 7(3): 123-158.

¹¹² Need for co-operation between CCAMLR and CITES was addressed in paras 10.72 to 10.75 of CCAMLR, *op. cit.* n. 98 and by CITES COP-12 Conference Resolution 12.4 and Decisions 12.57 to 12.59 CITES, “*Report of the Twelfth Conference of Parties*”, (CITES, Geneva), Website: <http://www.cites.org>.

¹¹³ D. G. M. Miller, E. N. Sabourenkov and D. Ramm, “CCAMLR's approach to managing Antarctic Marine Living Resources, (*In Press*), *Deep Sea 2003 Conference Proceedings*. (Food and Agriculture Organization of the United Nations, Rome).

¹¹⁴ Vienna Convention on the Law of Treaties, (1969). Website: <http://www.un.org/law/ilc/texts/treaties>.

carefully considered in relation to the potential, and added, involvement of such instruments as CITES in their day-to-day affairs. Every effort needs to be made to ensure that essential provisions/competencies are not undermined or over ridden. This clearly implies that initiatives to harmonize application of more than one international instrument (say in response to IUU fishing) must not violate the rights, obligations and duties of any Party under any other instrument to which it is specifically contracted.

D National Enforcement

57. Apart from the CDS, it is probably true to say that deterrence of Toothfish IUU fishing in the Convention Area has been most effectively addressed by Coastal State action rather than by the direct application of specific CCAMLR Conservation Measures alone¹¹⁵. There appear to be two primary reasons for this. First, the levels of punitive fines imposed (in some cases in excess of US\$1 million) for IUU fishing within sovereign waters inside the CCAMLR Area (combined with the seizure of vessels, and/or catch and increased risk of apprehension) by Coastal States have undoubtedly contributed to enhancing deterrence. A clear example of this is the recent ruling by the International Tribunal for the Law of the Sea (ITLOS)¹¹⁶ on Australia's prosecution of the Russian flagged *Volga* for fishing in its FZ around Heard and McDonald Islands¹¹⁷ (Table 1). Second, combined with recent strong statements by the Australian Government on deployment of armed patrols, enhanced co-operation between Australia, South Africa and France, and the building of specially-designated patrol vessels by both South Africa and Australia, there appears to be growing political will to combat IUU fishing in the CCAMLR Area. Such developments are clearly evident in a number of recent, and successful, prosecutions of IUU fishing vessels in the CCAMLR Area, particularly by Coastal States in the Indian Ocean (Table 1).

58. The comparability or equivalence of imposed sanctions¹¹⁸ is another issue closely linked to effective deterrence. This is a complex matter that depends on factors such as the equivalence of judicial, or regulatory, procedures between States as well as currency exchange conversion rates. In its broadest interpretation, Article XI of the CAMLR Convention may be seen as implying that any harmonisation of conservation measures for species occurring in both the Convention Area and in adjacent areas under national jurisdiction could also include consideration of equivalence in the imposition of sanctions. However, CCAMLR has never specifically discussed the matter and there may be some merit in pursuing a similar course of action to that outlined in Article 8.4.(b) of the Southern African Development Community (SADC) Protocol on Fisheries where SADC Parties are urged to co-operate in:

"Establishing region-wide comparable levels of penalties imposed for illegal fishing by non-SADC vessels and with respect to illegal fishing by SADC vessels in the waters of other State Parties"¹¹⁹.

59. It is not difficult to envisage the potential benefits of such an approach being applied consistently by CCAMLR Contracting Parties.

60. From this discussion, it should be clear that any significant reduction in (i.e. deterrence of) IUU fishing is the key to assessing the effectiveness of any attached enforcement action¹²⁰. Clearly, the absence

¹¹⁵ G. P. Kirkwood and D. J. Agnew, *op. cit.* n. 38.

¹¹⁶ ITLOS ruled on 23 December 2002 that Australia should release the *Lena* on the posting of a bond of A\$1,920,000. For details, see Website - <http://www.itlos.org>.

¹¹⁷ G. P. Kirkwood and D. J. Agnew, *op. cit.* n. 38.

¹¹⁸ C.C. Joyner, "Compliance and enforcement in new fisheries law" (1998), *Temple International and Comparative Law Journal* 10(2): 301-331.

¹¹⁹ SADC Fisheries Protocol, Website: <http://www.sadc.int/english/protocol>.

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of severe penalties, combined with limited enforcement (for whatever reason) only serves to enhance the lucrative rewards of IUU fishing with profits outweighing penalties. Fishing thus becomes more cost-effective¹²¹. It follows, therefore, that effective enforcement action must take account of where, and by whom, IUU fishing benefits are being enjoyed. However, as highlighted by Rayfuse¹²², certain potential shortcomings inherent in Flag State enforcement need to be effectively addressed as a first step, particularly the use of "flags of convenience"¹²³. Inadequate, Flag State enforcement is compounded by the apparent unwillingness, or inability, of many national authorities to focus enforcement action on individuals (i.e. nationals) or companies¹²⁴ that benefit from the proceeds of IUU fishing. Such considerations become even more important in the face of general reluctance to extend State jurisdiction through additional application of Coastal State rights to the high seas¹²⁵. Taking that RFMOs, like CCAMLR, are generally recognised as being responsible for fisheries governance at a regional level, then establishing specific multi-lateral arrangements to boost enforcement certainly appears worthy of consideration. This would have implications not only for the daily business of RFMOs, but also for exploring Non-Flag State enforcement powers to be applied in the event that the primacy of Flag State responsibilities are not being fulfilled.

61. While it may be argued that references to "nationals" in the LOSC¹²⁶ are perfunctory rather than obligatory, there is growing appreciation that some control is necessary over natural and legal persons to facilitate fulfilment by States of their obligations to co-operate in the taking of necessary measures for the conservation of high seas living resources. Clear evidence of this intent can be found in LOSC Articles 117-118, UNFSA Article 10.(1)¹²⁷ and in various initiatives by States to exert direct control over the activities of their nationals to enhance compliance with third party and international fisheries management measures¹²⁸.

¹²⁰ G. P. Kirkwood and D. J. Agnew, *op. cit.* n. 38.

¹²¹ M. Levy, *op. cit.* n. 89.

¹²² R. Rayfuse, "Enforcement of high seas fisheries agreements: Observation and inspection under the Convention on the Conservation of Antarctic Marine Living Resources" (1998), *International Journal of Marine and Coastal Law* 13(4): 579-605.

¹²³ B. Vukas and D. Vidas, "Flags of Convenience and High Seas Fishing: The Emergence of a Legal Framework", in O.S. Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Regional Regimes*. (Oxford University Press, Oxford, 2001). 53-90.

¹²⁴ D. G. M. Miller, E. N. Sabourenkov and D. Ramm, *op. cit.* n. 113.

¹²⁵ G. P. Kirkwood and D. J. Agnew, *op. cit.* n. 38.

¹²⁶ Various LOSC Articles make reference to the obligations of "nationals" to comply with, or co-operate in, the implementation of conservation measures governing marine living resource utilisation. The most prescriptive of these include Articles 62.(4) and 117. LOSC, *op. cit.* n. 3.

¹²⁷ See UNFSA Article 11.(1) which states - "ensure the full cooperation of their relevant national agencies and industries on implementing the recommendations and decisions of the or organization of arrangement". UNFSA, *op. cit.* n. 10.

¹²⁸ Various States have introduced regulatory provisions to ensure their nationals comply with international conservation and management measures inside or outside national waters. Notable examples include Australia under the *Fisheries Management Act, 1991* (Act No. 162 of 1991); New Zealand subject to Part 6A of the *New Zealand Fisheries Act, 1996*; Norway in application of *Article 6 of the Regulations Relating to Fishing and Hunting Operations by Foreign Nationals in the Economic Zone of Norway, 1977*; South Africa in application of the *Marine Living Resources Act, 1998* (Act. No. 18 of 1988 - *South Government Gazette Notice No. 189630 of 27 May 1998*) and Spain under *Directive 1134/2001 of 31 October 2002*. A recent and interesting development has been the indictment by United States authorities of a number of South African citizens and joint South African-United States nationals under the United States *Lacey Act*

62. Bearing these considerations in mind, there is little doubt that control of "nationals" is a question worth exploring in any agenda or global effort to combat IUU fishing. Furthermore, and following 11 September 2001, globally heightened sensitivity to trans-national crime provides an opportunity to address contrary behaviour by natural persons in the international arena. In these terms, the environmentally, as well as economically, damaging practice of IUU fishing is likely to be viewed as contrary behaviour, even if the generally perceived criminal intent is often seen as relatively minor compared with other criminal acts.

8 DISCUSSION

A General

63. Apart from the CAMLR Convention, other international agreements outside the Antarctic Treaty System are relevant to the on-going, and environmentally sustainable, management of Antarctic marine living resources. The most recent, and noticeable of these, is the 1992 Convention on Biological Diversity (CBD)¹²⁹. With its attached 1994 Jakarta Mandate, the CBD may be linked to relevant marine management institutions. However, the details of its potential interactions with CCAMLR in particular, remain unclear.

64. Probably more relevant, Article XIII of the recent Agreement on the Conservation of Albatrosses and Petrels¹³⁰ explicitly references the rights and obligations of its Parties under the CAMLR Convention. This clearly, and directly, links the common subject matter of the two agreements insofar that the species subject to the former are also directly of concern to the latter (particularly in terms of their incidental mortality in the Toothfish longline fishery).

65. On a different matter, it is premature to assess the extent to which, in combination with other related CCAMLR measures, the CDS - (a) will prove indispensable in the battle against Toothfish IUU fishing, or whether (b) it is particularly effective in managing exploitation of trans-boundary stocks within, and outside, the Convention Area. For this to be so, all international Toothfish trade should be limited only to fish taken legally, or in a regulated manner compatible with CCAMLR's approach. Consequently, IUU-taken fish should not enter world markets. This is something with which the CDS has had considerable circumstantial success, but which remains to be universally realized¹³¹. In these terms, the question of how effectively RFMOs like CCAMLR, uphold the long-held legal precedent of 'Flag State control' assumes prominence. As the issue presents itself, it provides motivation to consider how such control may be enhanced by utilizing more widely focused, and/or trade-based, agreements such as CITES and associated measures under the WTO. Given the interesting ancillary questions proposed, and as already highlighted, the issue is unlikely to be easily, or quickly, resolved. A key consideration remains the definition of

on 21 counts for various offences, including alleged illegal harvesting of South Coast Rock Lobster and Patagonian Toothfish, in defiance of, South African statutes and *CCAMLR Conservation Measures*. See "*Conspiracy to Violate the Lacey Act and to Commit Smuggling*" (2003), United States District Court, Southern District of New York. *Indictment S1 03 Crim. 308 (LAK)*: 36 pp. The principals charged in this case have recently pleaded guilty and stand to forfeit at least US\$5 million worth of assets.

¹²⁹ CBD, "Convention on Biodiversity, 1992", Website: <http://www.biodiv.org/default.aspx>. The *Convention's* aims to develop and implement strategies for the sustainable use, and protection, of biodiversity. The *Jakarta Mandate* specifically applies this objective to marine and coastal biodiversity. Article 22 of the *Convention* makes general reference to, and recognises, "rights and obligations" under, other international agreements. The *CBD* entered into force on 29 December 1993.

¹³⁰ "Agreement on the Conservation of Albatrosses and Petrels, 2001". The *Agreement* entered into force on 1 February 2004, Website: <http://www.aad.gov.au/default.asp?casid=13504>.

¹³¹ Larson, *op. cit.* n. 111; G. P. Kirkwood and D. J. Agnew, *op. cit.* n. 38.

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boundaries between organizational competencies in terms of designating common standards across organizations addressing similar matters but subject to different international arrangements.

66. Equally, CCAMLR should continue to expand the rôle of ‘Port’ and ‘Market’ States to discourage IUU-caught Toothfish trade. Without diminishing Flag State responsibilities, CCAMLR’s recent efforts have brought into focus the need for NCPs to assume heightened responsibility in not encouraging trade of Toothfish taken in a manner undermining CCAMLR Conservation Measures. The question of effectively including NCP co-operation remains at the heart of improving CCAMLR’s ability to combat IUU fishing directly. To be effective, such co-operation needs to be fully consistent with the obligations set out in UNFSA Articles 20, 21 and 23.

67. Any trade-based regime like the CDS should remain dynamic so as to respond appropriately to changing circumstances. Thus, the CDS must undergo periodic, and regular, review. Consequently, every effort should be applied to the comparable tightening of associated measures to ensure successful realization of CCAMLR’s overall objectives in, and approach to, combating IUU fishing¹³². Not only should such review be transparent, it is essential that worthwhile incentives are provided to economically-disempowered Developing States, where these may perceive greater economic benefits from being linked to IUU operations, either as Flags, or Ports, of convenience. In particular, there is a need for future, and further, consideration of the attendant economic insecurities experienced by some developing countries (such as Kenya, Mozambique and Mauritius¹³³) that have become involved in the trade of IUU-caught Toothfish. Therefore, any effort to improve application of relevant LOSC Article 140 and UNFSA Articles 24-26 should be boosted with the particular aim of providing these countries with alternative incentives to counteract the economic benefits accrued from IUU fishing and to enhance their commitment to responsible fishing practices.

68. While there is little doubt that the CDS is a vital component in CCAMLR’s “toolbox” of regulatory measures, it cannot be implemented and evaluated in isolation¹³⁴. This is clearly recognized by CCAMLR through its development of a wide variety of Conservation Measures (e.g. Measures 10-02, 10-03, 10-04, 10-06, 10-07) and Resolutions (14/XIX, 15/XXIII, 16/XIX and 17/XX) augmenting the CDS’s application and efficacy¹³⁵.

69. It is noticeable that, in keeping with the Antarctic Treaty’s key provisions, international co-operation has been carried over to the CAMLR Convention¹³⁶. Practically, CCAMLR has done much to advance co-operation, again in the form of the CDS and its growing involvement with various organs of the FAO. Furthermore, various CCAMLR Conservation Measures are dependent on institutionalising

¹³² M. Lack and G. Sant, *op. cit.* n. 42.

¹³³ G. Mills, “Insecurity and the Developing World”, in G. Mills (ed.), *Maritime Policy for Developing Nations*. (SAIIA, Johannesburg, 1995), pp. 12-37.

¹³⁴ D. G. M. Miller, E. N. Sabourenkov and D. Ramm, *op. cit.* n. 113

¹³⁵ CCAMLR, *op. cit.* n. 32.

¹³⁶ Article XXII of the *CAMLR Convention* (CCAMLR, *op. cit.* n. 16) strives to build co-operative relationships between CCAMLR and relevant inter-governmental and non-governmental organisations. Article XXIII specifically mandates co-operation with other elements of the *Antarctic Treaty System* and the Scientific Committee for Antarctic Research (SCAR). F.O. Vicuna, “Antarctic conflict and international cooperation,” in *Antarctic Treaty System: An Assessment*. (Polar Research Board, National Academy of Press, Washington, 1986). 55-64.

international co-operation at a global level¹³⁷ to combat IUU fishing in the Convention Area. Therefore, with UNFSA's recent entry into force¹³⁸, there is every expectation that CCAMLR will benefit from enhanced international co-operation to the extent that its capacity to meet the Convention's objectives will be improved¹³⁹.

70. CCAMLR has frequently acknowledged that both UNFSA and the FAO Compliance Agreement¹⁴⁰ are likely to contribute significantly to the Commission's work in general and to reducing, and hopefully eliminating, IUU fishing in the Convention Area in particular¹⁴¹. Again involvement of both CCAMLR and its Members in the FAO's work is important and should be encouraged.

71. To summarise, and as matters now stand, effective application of the CAMLR Convention, like many other fisheries-related instruments, on the high seas (i.e. outside national territorial jurisdiction) is confounded by inadequate exercise of Flag State control (a la UNFSA Articles 18 and 19)¹⁴² over IUU vessels. The situation is further compounded by deliberate deployment of Flags of Convenience to circumvent fisheries management measures¹⁴³.

B Conclusions

72. With the exception of the CDS, we have seen that enforcement of CCAMLR Toothfish Conservation Measures has generally met with limited success outside areas where national jurisdiction is vigorously applied. Consequently, much still needs to be done to ensure compatibility between various relevant legal instruments in order to provide for more effective management of Antarctic marine living resources in the broadest sense. Obvious topics for consideration include:

- Improving enforcement of regulatory measure to enhance the management and well being of the environment in which Antarctic marine living resources are found (i.e. facilitate effective implementation of the CAMLR Convention Article II elements in particular);
- Developing legal mechanisms to ensure compatibility between national and international instruments applicable to Antarctic marine living resources issues (e.g. sovereignty/jurisdictional disputes must be resolved to minimise potential political, legal and administrative conflicts). Active steps also should be taken to harmonise application of regulatory measures in areas under national jurisdiction and on the high seas;
- Improving co-operation on issues related to enforcement and sanction of perceived transgressions. This implies a need to reinforce international co-operation, and information exchange to invoke a cult of responsible fishing activity. Instruments such as the FAO Code of

¹³⁷ G. Lutgen, "A review of measures taken by Regional Fishery Bodies to address contemporary issues" (1999), *FAO Fisheries Circular* 940: 97 pp; G. Lutgen, "Cooperation and regional fisheries management" (2000), *Environmental Policy and Law* 30/5: 251-257.

¹³⁸ UNFSA Part III (Articles 8 to 16) (UNFSA, *op. cit.* n. 10) outlines various mechanisms for international co-operation in the management of the resources concerned. These complement similar sentiments implicit in LOSC Articles 61, 63, 64 and 117-119 (LOSC *op. cit.* n. 4).

¹³⁹ K. Dodds, *op. cit.* n. 38.

¹⁴⁰ FAO, *op. cit.* n. 9.

¹⁴¹ For example see Paragraphs 5.11 and 5.32 in CCAMLR *op. cit.* n. 47.

¹⁴² R. Rayfuse, *op. cit.* n. 122.

¹⁴³ B. Vukas and D. Vidas, *op. cit.* n. 123.

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Conduct and the Compliance Agreement¹⁴⁴ go some way to formalising these responsibilities. Implementation of the FAO IPOA-IUU should be particularly encouraged and it appears worthwhile exploring how the provisions of instruments like CITES and the CBD may be used to augment current CCAMLR management initiatives such as the CDS;

- Giving additional, and serious, consideration to the rôle of NCPs in RFMO arrangements. In this regard the CDS is an especially welcome initiative as is the UNFSA's entry into force (especially the provisions of Article 17 which do not discharge non-RFMO participants from their obligations to co-operate in the conservation and management of relevant straddling fish stocks and highly migratory fish stocks), and
- Elaborating operational definitions, and practical application, of certain key LOSC provisions. Particular attention should be given to further developing co-operative management and conservation regimes on the high seas in accordance with LOSC Article 116-119 and to improving Flag State controls through the establishment of genuine links between fishing vessels and their flags¹⁴⁵. The responsibilities/obligations of nationals may be best suited for examination in this light.

73. Together, the above considerations imply a need for a robust, and collective, political will aimed at promoting¹⁴⁶:

- A steadfast commitment to combating IUU fishing;
- International engagement to take strong action in all relevant fora;
- Continued strengthening and testing of international law;
- Building co-operative alliances between "like-minded" countries, and
- Maintaining effective on-the-water patrols.

74. Mills¹⁴⁷ has emphasised that the co-operative elements of "political will" are the key to promoting economically fair and sustainable use of any resource as far as they reduce regional economic insecurity arising from irresponsible fishing practices¹⁴⁸. In Freestone's¹⁴⁹ words, the CAMLR Convention has been described as "**a model of the ecological approach**". While this paper, on balance, judges CCAMLR to have notably faced up to its obligations, only time and history will show how successful and effective it has been.

¹⁴⁴ FAO, *op. cit.* n. 11 and 9.

¹⁴⁵ B. Vukas and D. Vidas, *op. cit.* n. 123.

¹⁴⁶ From Senator the Hon. Ian Macdonald (Australian Minister for Fisheries, Forestry and Conservation), "Statement to the Australian Press Club", (Canberra, 19 August 2003). Website: <http://www.affa.gov.au/ministers/macdonald/speeches/2003/pressclubfishing.html>.

¹⁴⁷ G. Mills, *op. cit.* n. 132.

¹⁴⁸ G. Mills, *op. cit.* n. 132.

¹⁴⁹ D. Freestone, *op. cit.* n. 6.

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75. I wish to thank the organisers of OECD Workshop on Illegal, Unreported and Unregulated Fishing Activities for inviting and sponsoring me to attend this important event. I also thank my colleague, Dr Eugene Sabourenkov, for his assistance with the figures and his sage advice. This paper is dedicated to all responsible fishers.

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ANNEX

BOX 1: FAO IPOA-IUU¹⁵⁰ definition of illegal, unreported and unregulated fishing.

- ILLEGAL FISHING

Activities conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations;

Activities conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the States are bound, or relevant provisions of the applicable international law; or

Activities conducted in violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organization.

- UNREPORTED FISHING

Fishing activities that have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or

Fishing activities undertaken in area of competence of a relevant regional fisheries management organization that have not been reported or have been misreported, in contravention of the reporting procedures of that organization.

- UNREGULATED FISHING

Fishing activities carried out in area of application of a relevant regional fisheries management organization by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization; or

Fishing activities carried out in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.

¹⁵⁰ Paragraph 3 of the IPOA-IUU – FAO, *op. cit.* n. 19.

BOX 2: Summary of the general provisions of CAMLR Convention Article II ¹⁵¹.

<ul style="list-style-type: none">• <u>CONVENTION OBJECTIVE</u> <p>Conserve Antarctic Marine Living Resources</p> <ul style="list-style-type: none">• <u>CONSERVATION AND RATIONALE USE</u> <p>Conservation Includes Rational Use</p> <ul style="list-style-type: none">• <u>CONSERVATION PRINCIPLES</u> <p>Harvesting and Associated Activities According to Conservation Principles Below:</p> <ul style="list-style-type: none">• <u>HARVESTED SPECIES</u> <p>Prevent Decrease of Harvested Population to Levels Below those Ensuring Stable Recruitment (i.e. Not Below Level Close to that Ensuring Greatest Net Annual Increment)</p> <ul style="list-style-type: none">• <u>ECOSYSTEM CONSIDERATIONS</u> <p>Maintain Ecological Relationships Between Harvested, Dependent and Related Species Restore Depleted Populations</p> <ul style="list-style-type: none">• <u>PRECAUTIONARY APPROACH</u> <p>Minimize Risks of Change Not Reversible in 20-30yrs</p> <ul style="list-style-type: none">• <u>Take Account Of</u> <p>Harvesting Effects (Direct/Indirect) Alien Introduction Effects of Associated Activities Effects of Environmental Change</p>
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¹⁵¹ See Article II of the *CAMLR Convention* in *CCAMLR, op. cit.*, n. 16, p. 4-5.

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BOX 3: Information used by CCAMLR to estimate IUU Toothfish fishing activities¹⁵².

<ul style="list-style-type: none"> • <u>CCAMLR LICENSED VESSELS</u> <p>Type, Size, Catch, Fishing Effort & Fishing Trip Duration</p> <ul style="list-style-type: none"> • <u>IUU VESSELS SIGHTED FISHING</u> <p>Number, Type & Size</p> <ul style="list-style-type: none"> • <u>RECOVERED LONGLINE GEAR FROM ILLEGAL FISHING</u> • <u>TOOTHFISH LANDINGS</u> <p>CCAMLR Members' Ports Other States' Ports (Where Known)</p> <ul style="list-style-type: none"> • <u>CATCH & EFFORT INFORMATION</u> <p>Vessels Apprehended for IUU Fishing by Coastal States in Convention Area</p> <ul style="list-style-type: none"> • <u>VERIFIED INFORMATION FROM THE INTERNATIONAL MEDIA</u> • <u>CATCH & TRADE STATISTICS</u> <p>Various Sources (e.g. Published Trade Information, Customs Declarations)</p>

¹⁵²D.J. Agnew, *op. cit.* n. 33 and E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38 in particular.

BOX 4: CCAMLR Toothfish Conservation Measures (CM) aimed at eliminating IUU Fishing in the Convention Area.

Measures have been developed since 1996/97 and are referenced as CMs currently in force¹⁵³.

Measure	Conservation Measure
<u>Fishery Regulatory Measures</u>	
Prohibition of directed Toothfish fishing in the Convention Area except in accordance with CMs	CM 32-09
Advance notification of new fisheries.	CM 21-01
Advance notification and conduct of exploratory Toothfish fisheries, including data collection and research plans	CMs 21-02 & 41-01
Reporting catch and effort, and biological data, including reporting of fine-scale data	CMs 23-01, 23-02, 23-03, 23-04 & 23-05
Placement of international scientific observers on vessels targeting Toothfish	CM 41-01 Various area-specific measures
Reducing seabird mortality during longline and trawl fishing	CMs 25-02 & 25-03
<u>Flag State Measures</u>	
<i>Contracting Party</i> licensing and inspection obligations for fishing vessels under their flag operating in the Convention Area	CM 10-02
At-sea inspections of <i>Contracting Party</i> fishing vessels	System of Inspection
Marking of fishing vessels and fishing gear	CM 10-01
Compulsory deployment of satellite-based VMS on all vessels (except the krill fishery) licensed by CCAMLR Members to fish in the Convention Area	CM 10-04
Toothfish Catch Documentation Scheme	CM 10-05
<u>Port State Measures</u>	
Port inspections of vessels intending to land Toothfish to ensure compliance with CCAMLR conservation measures	CM 10-03
Scheme to promote compliance by <i>Contracting Party</i> vessels with CCAMLR conservation measures	CM 10-06
Scheme to promote compliance by <i>Non-Contracting Party</i> vessels with CCAMLR conservation measures	CM-10-07

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CCAMLR, *op. cit.* n. 32 & 58; E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38 .

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BOX 4/cont.

Measure	Conservation Measure
<u>Resolutions</u>	
Harvesting stocks occurring both within, and outside, the Convention Area, paying due respect to CCAMLR CMs	Resolution 10/XII
Implementation of the Catch Documentation Scheme by Accessing States and Non-Contracting Parties	Resolution 14/XIX
Use of ports not implementing Toothfish Catch Documentation Scheme	Resolution 15/XIX
Application of VMS in Catch Documentation Scheme	Resolution 16/XIX
Use of VMS and other measures to verify CDS catch data outside the Convention Area, especially in FAO Statistical Area 51	Resolution 17/XX
Harvesting of Patagonian Toothfish outside areas of Coastal State jurisdiction adjacent to the Convention Area in FAO Statistical Areas 51 and 57	Resolution 18/XXI
Flags of Non-Compliance	Resolution 19/XXI

BOX 5: Key principles underpinning the Toothfish CDS¹⁵⁴.

- Ascertain Catch Origin for all Toothfish Transhipped/Landed/Imported/Exported
- Require Authorization to Fish for Toothfish
- Apply to IUU Fishing by Both CCAMLR Contracting & Non-Contracting Parties
- Aim to Prohibit Toothfish Entering World Markets Without Valid/Verified Catch Documents
- Non-Discriminatory, Fair & Transparent
- Practical & Capable of Easy/Rapid Implementation
- Applies to Fishing Within & Outside, *the CCAMLR Area*
- (e.g. Recognition Given to "Transboundary" Nature of Toothfish Distribution)
- Conducive to CCAMLR Non-Contracting Party Participation
- Includes Validation & Verification Procedures to Ensure Confidence in Information Produced
- Indicates Responsibilities &/or Obligation of All Participants

¹⁵⁴ G.P. Kirkwood and D.J. Agnew, *op cit.* n. 38; K. Larson, *op. cit.* n. 111; E.N. Sabourenkov and D.G.M Miller, *op. cit.* n. 38.

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BOX 6: FAO IPOA-IUU's key principles and strategies¹⁵⁵ (RFMO - Regional Fisheries Management Organization).

- PARTICIPATION & CO-ORDINATION

IPOA-IUU Implemented Directly by All States or in Co-Operation with Other States, or Indirectly Through RFMOs or Through FAO/Other Appropriate International Organisations. Close Co-Operation & Full Stakeholder Participation (e.g. By the Fishing Industry, Non-Governmental Organisations & Other Interested Parties) are Important to the Plan's Successful Implementation

- PHASED IMPLEMENTATION

Measures to Prevent, Deter & Eliminate IUU Fishing to be Based on Urgent & Phased Approach Taking Account of National as Well as Regional & Global Actions in Accordance with IPOA-IUU

- COMPREHENSIVE AND INTEGRATED APPROACH

Measures to Prevent, Deter & Eliminate IUU Fishing Should Address Factors Affecting All Capture Fisheries. Approach Taken Should Build on Flag State Responsibility & Use All Available Jurisdiction Consistent with International Law. Latter Includes Port State Measures, Coastal State Measures, Market-Related Measures & Measures to Ensure Nationals do not Support, or Engage in, IUU Fishing

States Encouraged to Use All IUU-Directed Measures Where Appropriate & to Co-Operate to Ensure That These are Applied in Coherent & Integrated Manner. IPOA-IUU Should Address All Economic, Social & Environmental Impacts of IUU Fishing

- CONSERVATION

Measures to Prevent, Deter & Eliminate IUU Fishing to be Consistent with Conservation & Long-Term Sustainable Use of Fish Stocks & Protection of the Environment

- TRANSPARENCY

IPOA-IUU to be Implemented in Transparent Manner in Accordance with Article 6.13 of Code of Conduct

- NON-DISCRIMINATION

IPOA-IUU to be Developed & Applied Without Discrimination in Form or in Fact Against Any State or Its Fishing Vessels

¹⁵⁵ See paragraphs 9.1 to 9.6 of the *IPOA-IUU*, *op. cit.* n. 19.

TABLE 1: Recent action against IUU Toothfish fishing

(HIMI - Heard and McDonald Islands; FZ – Fishing Zone; ITLOS – International Tribunal for the Law of the Sea; t - tonnes; RSA – Republic of South Africa; AFMA- Australian Fisheries Management Act, 1991; MLRA – South African Marine Living Resources Act, 1998; UK – United Kingdom; USA – United States)¹⁵⁶.

VESSEL/ COMPANY	FLAG/ NATIONALITY	ACTION	OUTCOME(S)
SouthTomi	Togo	<u>March 2001</u> Illegal Fishing HIMI FZ >100t Toothfish Australian Arrest Off RSA Coast RSA Assistance	AUD136 000 Fine Under AFMA Largest Fine to Date Catch/Vessel Confiscated Failure Secure Release Bond Vessel to be Sunk Winter 2004
Volga	Russian Federation	<u>February 2002</u> Illegal Fishing HIMI FZ 126t Toothfish Australian Arrest in FZ	Prosecuted Under AFMA Vessel/Catch Confiscated ITLOS Bond AUD2 million Bond Close Commercial Value Bond not Paid Vessel Dispatched for Scuttling 14/4/2003
Lena	Russian Federation	<u>February 2002</u> Illegal Fishing HIMI FZ/CCAMLR 80t Toothfish Previously Sighted HIMI Area Australian Arrest	Prosecuted Under AFMA 3 Crew Fined AUD100 000 Each Catch/Vessel Confiscated Vessel Scuttled 19/11/2003
Viarsa	Uruguay	<u>August 2003</u> Illegal Fishing HIMI FZ 85t Toothfish Australian Arrest Mid- Atlantic 3900 n. ml. (21-day) Hot Pursuit RSA/UK Assistance	Catch/Vessel Confiscated AUD5 m Bond All Crew Charged Legal Process On-Going
Maya V	Uruguay	<u>January 2004</u> Illegal Fishing HIMI FZ 202t Toothfish Australian Arrest	Charged Under AFMA Legal Action Pending AUD550 k Charge All Crew Charged Catch/Vessel Confiscated

¹⁵⁶

From various sources.

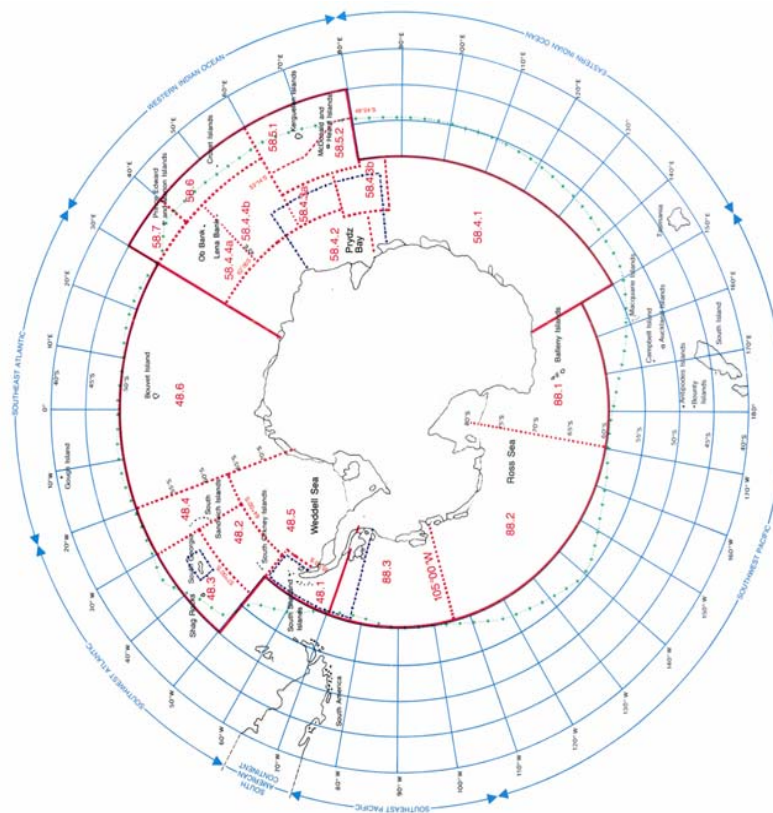
NOT FOR QUOTATION

Table 1/cont.

VESSEL/ COMPANY	FLAG/ NATIONALITY	ACTION	OUTCOME(S)
Hout Bay Fishing	South Africa	<u>June 2001</u> Illegal/Possession/Trade Toothfish RSA <u>June 2003</u> Smuggling Conspiracy USA	Prosecuted Under MLRA Fined R40 m (\$A8 m) Licenses Revoked Closed Down Indicted US Lacey Act 21 Counts Charges pending Fines to US\$250k /Count Asset Forfeiture US\$11.5 mil Possible Jail Time 5 Years/Count <u>March 2004</u> Key Defendants Plead Guilt US\$5 m Asset Forfeiture

Figure 1. The CCAMLR Area

Statistical Areas, Subareas and Divisions are shown

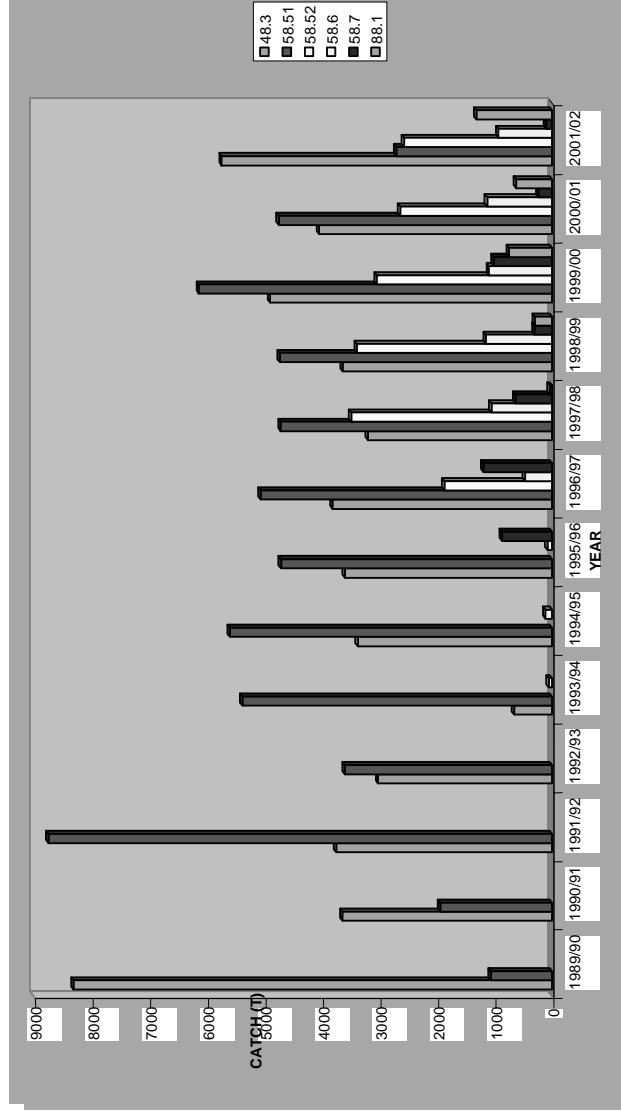


Source: <http://www.ccamlr.org>

NOT FOR QUOTATION

Figure 2. Toothfish (*Dissostichus* spp.) catches in CCAMLR Statistical Subareas/Divisions.

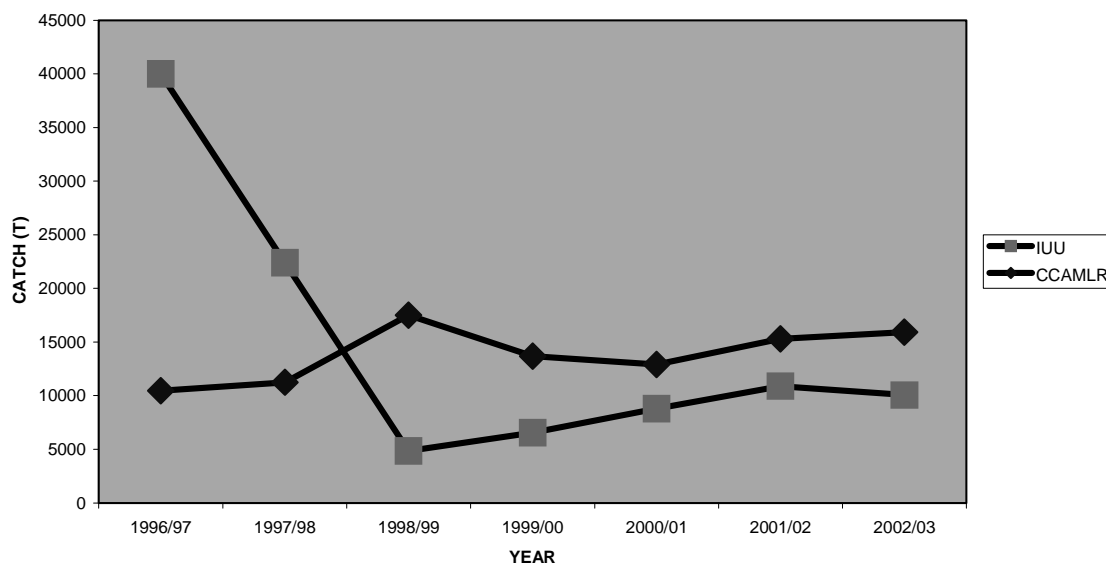
Catches reported by split-year, beginning 1 July one year and ending 30 June the next (e.g. 1988/89 split year). Statistical Areas are “48” – Southwest Atlantic Ocean; “58” – Indian Ocean; “88” – Pacific Ocean – Ross Sea (Predominantly *D. mawsoni* catches).



Source: All data from CCAMLR Statistical Bulletins 1990-2003 (<http://www.ccamlr.org>)

NOT FOR QUOTATION

Figure 4. Catches (Tonnes "T") of Toothfish (*Dissostichus*) in regulated ("CCAMLR") and unregulated ("IUU") fisheries in the CCAMLR Area.

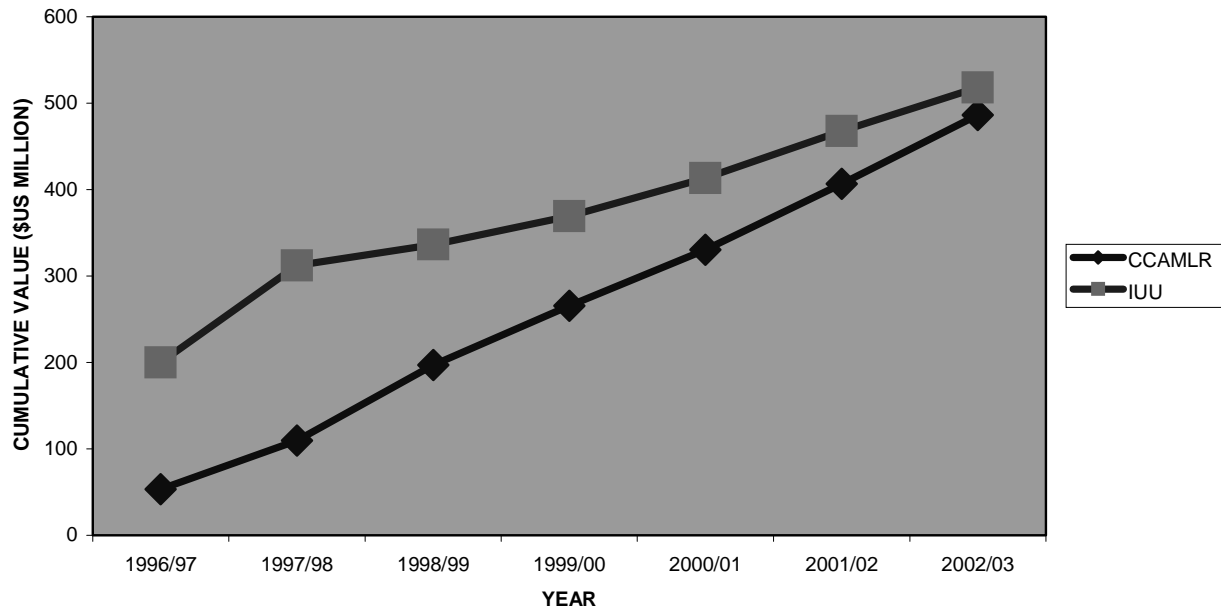


Source: Data from CCAMLR Commission Reports 1997-2003 (<http://www.ccamlr.org>)

NOT FOR QUOTATION

Figure 5. Estimated cumulative financial values (\$US million) of “CCAMLR” and “IUU” based Toothfish (Dissostichus spp.) fisheries.

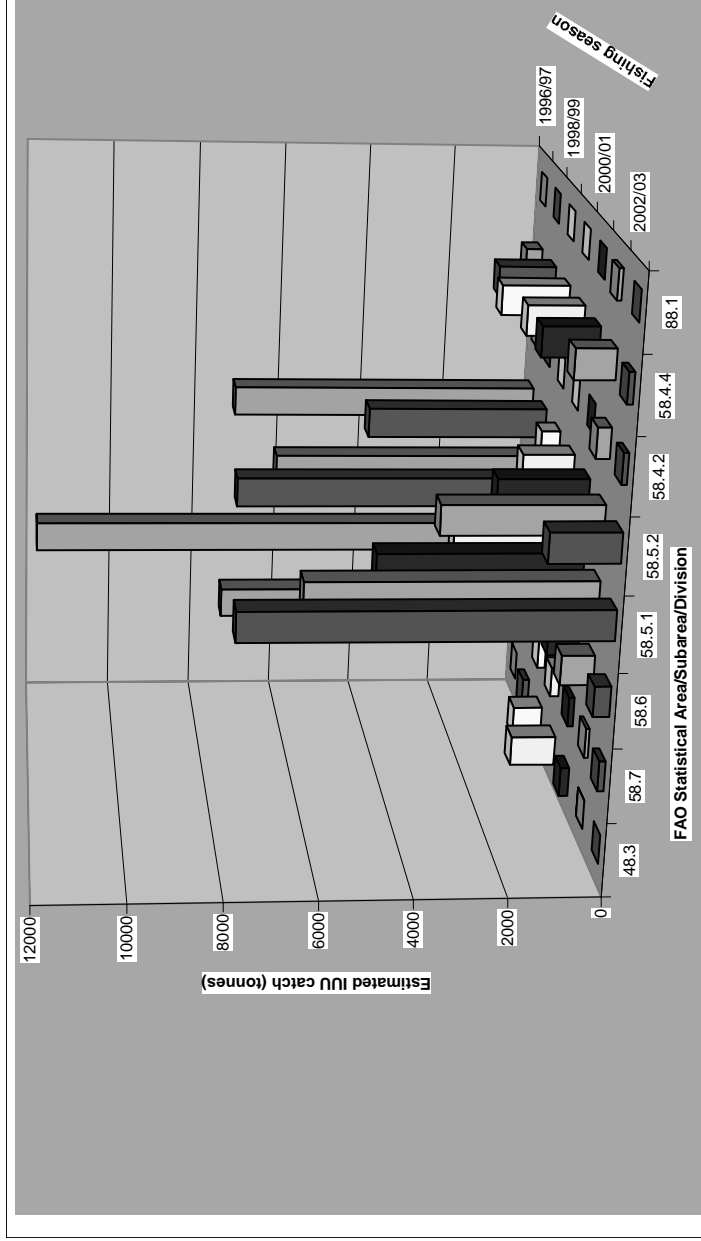
Estimates are based on a landed value of US\$5000/tonne of H&G product.



NOT FOR QUOTATION

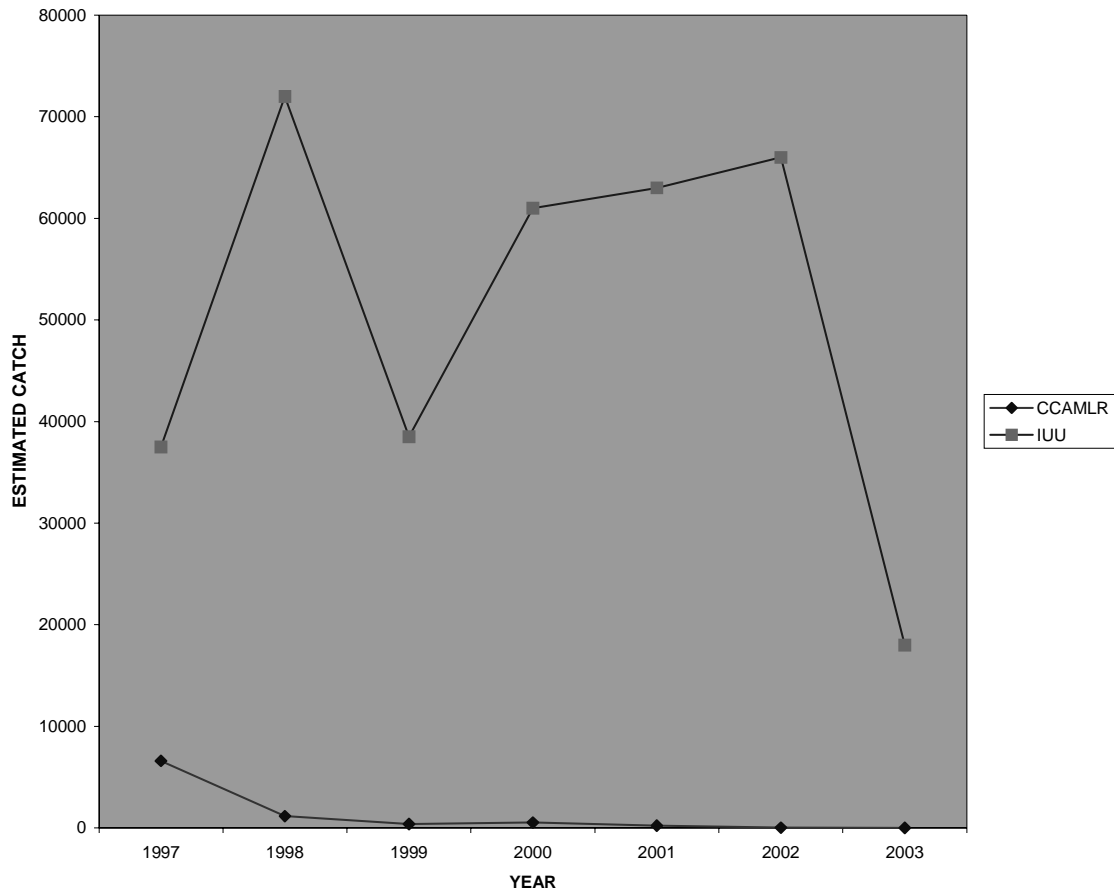
Figure 6. IUU Toothfish catches in CCAMLR Statistical Subareas/Divisions

Catches reported by split-year, beginning 1 July one year and ending 30 June the next (e.g. 1988/89 split year). Statistical Areas are "48" – Southwest Atlantic Ocean; "58" – Indian Ocean; "88" – Pacific Ocean – Ross Sea (Predominantly D. mawsoni catches).



Source: All data from CCAMLR Statistical Bulletins 1990-2003 (<http://www.ccamlr.org>)

Figure 7. CCAMLR estimated seabird by-catch as a consequence of IUU fishing in the Convention Area

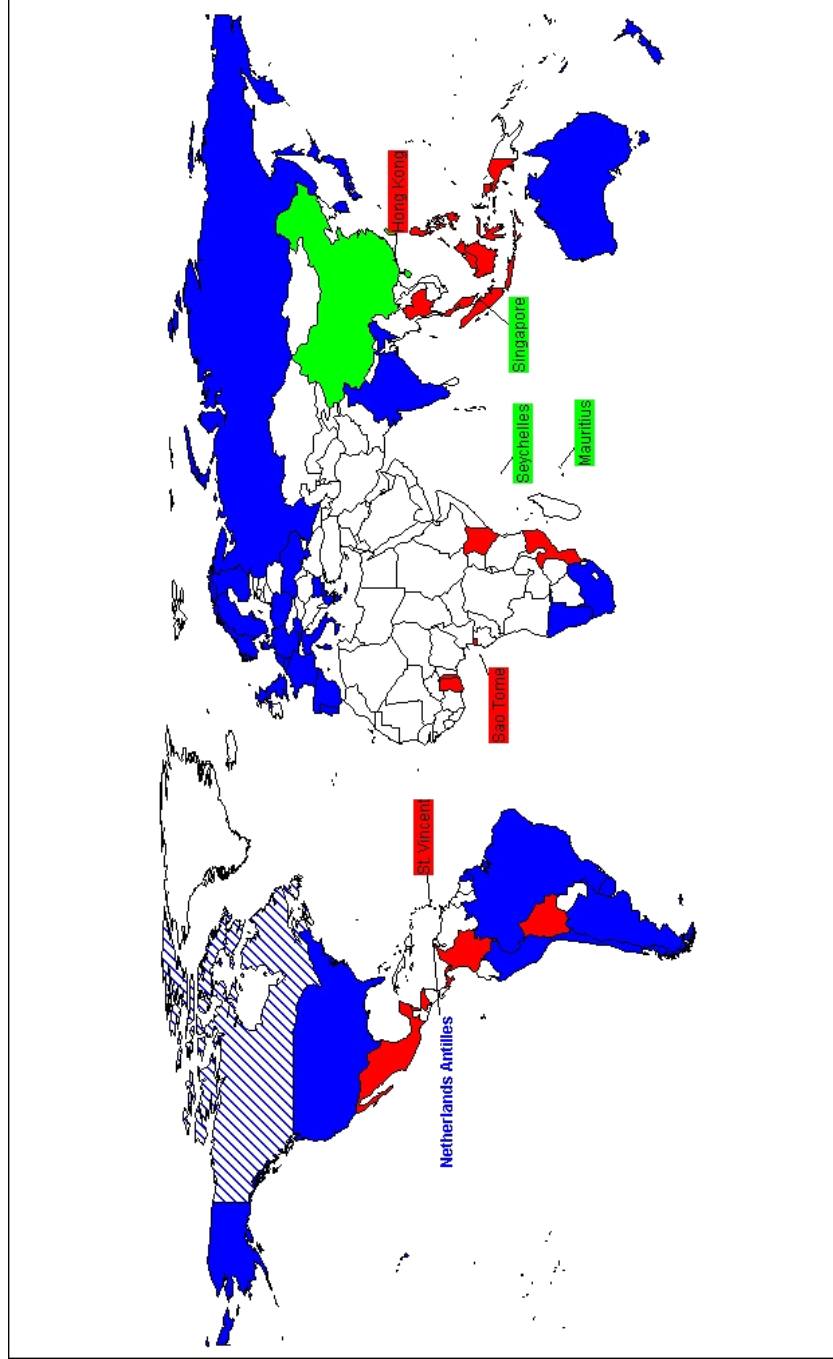


Source: From Miller, Sabourenkov and Ramm op. cit. n. 113).

NOT FOR QUOTATION

Figure 8. Geographic area of application of the CCAMLR CDS

[Blue – CCAMLR Parties; Green – CDS Users; Red – Exporters Outside CDS]



Source: (from Miller, Sabourenkov and Ramm op. cit. n. 113)