

## Inclusion of Patagonian Toothfish *Dissostichus eleginoides* and Antarctic Toothfish *Dissostichus mawsoni* in Appendix II. Proponent: Australia.

**Summary:** Patagonian Toothfish *Dissostichus eleginoides* is a valuable food fish harvested from the Southern Oceans. Over 90% of Patagonian Toothfish products enter international trade, mainly to Japan, China, the USA and Europe. Patagonian Toothfish are vulnerable to over-fishing because they are large, slow-growing, late-maturing and have relatively low fecundity. They are found in the Antarctic and sub-Antarctic waters covered by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), in the Exclusive Economic Zones (EEZs) of Chile, Argentina and Peru, and waters adjacent to sub-Antarctic Islands under the sovereignty of Australia, France, New Zealand, South Africa and the United Kingdom\*, and on the high seas outside these areas. The Patagonian Toothfish fishery is managed by CCAMLR (within its Convention Area) and by coastal range States. Fishing activity on the high seas outside CCAMLR's Convention Area is unmanaged, although CCAMLR Members or participating non-Members are obliged to comply with CCAMLR regulations wherever they operate. The fishery is subject to varying levels of Illegal, Unreported and Unregulated (IUU) fishing which threaten its future sustainability. To date, IUU fishing has caused declines to below CCAMLR management targets (50% of unexploited biomass) in three stocks (Marion & Prince Edward Islands, Crozet Islands and Macquarie Island). There is anecdotal evidence of population declines caused or exacerbated by IUU fishing in the EEZs of Chile, Argentina and Peru, and in other areas in CCAMLR waters including Ob and Lena banks. In 2000, CCAMLR instigated a Catch Documentation Scheme (CDS) to manage and control legal and illegal trade in Toothfish. Two years since its introduction, CCAMLR have stated that while the CDS may allow the opportunity for fraudulent activities, it is having a positive impact on addressing IUU fishing activities (CCAMLR, 2001). The controlling powers of the CDS are limited to States that are members of CCAMLR or have voluntarily agreed to co-operate with CCAMLR's conservation measures. All non-Member States known to be involved in IUU activity have been invited to participate in the CDS (CCAMLR, 2001). There is evidence that some non-Members, including Mauritius and the Seychelles, are partially implementing the CDS. There are nine States that have not responded to CCAMLR's invitation, but who are Parties to CITES, as well as three States who have not been invited to join the CDS but who are CITES Parties allegedly involved in IUU fishing. The involvement of CITES could complement CCAMLR's existing effort to control IUU fishing for Patagonian Toothfish by including 12 Parties to CITES who are involved in Toothfish trade, but are not currently implementing CCAMLR's CDS. The smaller, faster growing Antarctic Toothfish, *Dissostichus mawsoni*, which occurs in high latitudes around the Antarctic continent, is included in the proposal for reasons of similarity of appearance, as it is not readily distinguishable from Patagonian Toothfish. CCAMLR has estimated a steady decline in IUU catches (in all areas) over the period 1996 to 2000, from 68 234 tonnes to 8 413 tonnes. Over the same period, total catches declined from 100 970 tonnes to 33 660 tonnes (CCAMLR, 2000a). A TRAFFIC trade analysis, however, has estimated levels of IUU trade to be up to four times higher than CCAMLR's estimate (33 865 tonnes compared to 8 418 tonnes in 1999/00) (Lack and Sant, 2001). At least three stocks are currently below CCAMLR target levels, including one (Marion & Prince Edward Islands) that is below CCAMLR's threshold level of 20% of unexploited biomass. It is accepted by CCAMLR that continued illegal fishing holds serious implications for the long-term yield of Patagonian Toothfish (CCAMLR, 2000a). CCAMLR members have expressed concern that the CDS "...could be used to disguise illegal, unregulated and unreported (IUU) catches of *Dissostichus* spp. in order to gain legal access to markets." (CCAMLR, 2002). The CDS is providing new and valuable data to CCAMLR and fraudulent catch documents are being identified and acted upon, and seizures of possible IUU products are occurring (CCAMLR, 2001). The illegal trade in Toothfish is well documented, and there is no doubt that it is a serious threat to those populations of Toothfish that are targeted, and needs to be eliminated.

**Analysis** It is evident that IUU fishing, driven by the valuable international market, is a threat to Patagonian Toothfish. Although accounted for in CCAMLR stock assessments, IUU fishing may be underestimated. The potential severity of the threat of IUU fishing and the unclear extent to which it is being controlled by CCAMLR's CDS, may indicate that Patagonian Toothfish qualify for Appendix II listing under criterion Bi), as harvest for the trade may exceed the level that can be taken in perpetuity.

An annotation to the proposal specifies that States party to CITES conducting trade in Patagonian Toothfish caught in compliance with CCAMLR measures (including the CDS) shall be regarded as having fulfilled their obligations under CITES, and that trade in Patagonian Toothfish caught outside the CCAMLR area shall be subject to the relevant provisions of CITES, and shall be regulated accordingly. However, CCAMLR point out that any Party (whether a member of CCAMLR or not) participating in the CDS is obliged to fulfil the requirements of the CDS whether they harvest Patagonian Toothfish from inside or outside the CCAMLR area

(Miller, 2002; CCAMLR, 2002). Therefore, the CDS is not currently restricted to Toothfish catches taken within the CCAMLR area, although its application is restricted to CCAMLR members and participating non-members. Implementation of a listing in the CITES Appendices would require close coordination between the two processes (CITES and CCAMLR) to avoid duplication of effort.

Supporting Statement (SS)	Additional information
<b><u>Taxonomy</u></b>	
	<p><i>Dissostichus amissus</i> is an old, invalid name for <i>D. eleginoides</i> (Kock, 2002).</p>
<b><u>Range</u></b>	
<p><i>Dissostichus</i> spp. have a widespread circumpolar distribution within Antarctic and Southern Ocean waters, and are found primarily within the area covered by CCAMLR, except for the distribution of Patagonian Toothfish (<i>D. eleginoides</i>) around southern South America, where the relevant coastal States (Chile and Argentina) are CCAMLR members.</p> <p>Patagonian Toothfish occurs in sub-Antarctic and cool temperate waters; Antarctic Toothfish occurs in high latitudes around the Antarctic continent. The extent of overlap between the two species is small, between 60°S and 65°S. Both species occur in waters to 3000 m in depth and are consequently restricted to shelf areas surrounding islands or continents as well as submarine banks. The northern limit for most populations of Patagonian Toothfish is 45°S, except along the Chilean and Argentinean coasts where these fish may extend further north in deeper colder water.</p>	<p><i>Significant populations of Patagonian Toothfish exist in the Exclusive Economic Zones (EEZs) of, and waters adjacent to, sub-Antarctic Islands under the sovereignty of Australia, France, New Zealand, South Africa and the United Kingdom*, and in the EEZs of Chile, Argentina and Peru (Lack and Sant 2001). Patagonian Toothfish can also be found in deep shelf slope waters off Peru and Uruguay (Agnew, 2002). A small proportion of the population occurs in high seas outside these areas. The Antarctic Toothfish is found exclusively in CCAMLR waters (Lack and Sant, 2001).</i></p> <p><i>The Falkland Islands Conservation Zones (which cover 1/3 of the Patagonian Shelf and Shelf slope) and shallow water areas to the east, which are overlooked in the SS, contain large Patagonian Toothfish populations that are, for the most part, well protected from the activities of IUU fishing (Agnew, 2002).</i></p> <p><i>There are distinct populations around South America (the east and west coasts are probably functionally distinct stocks). All the available evidence suggests the populations around subAntarctic islands including Bouvet, Prince Edward, Crozet, Kerguelen, Heard and Macquarie, and on ocean banks and seamounts are distinct and effectively separate stocks (Agnew, 2002; Holt et al., 2001).</i></p> <p><i>The estimate of the area of distribution given in the SS should also include the Chilean, Peruvian and Argentine EEZs, increasing the total area outside the CCAMLR Convention Area of juvenile Toothfish habitat from 471 000 km<sup>2</sup> to 1 341 000 km<sup>2</sup> (Agnew, 2002).</i></p>
<b><u>IUCN Global Category</u></b>	
	<p>Not Evaluated</p>

**Biological and trade criteria for inclusion in Appendix II**

**A) Trade regulation needed to prevent future inclusion in Appendix I**

Patagonian Toothfish is unlikely to meet the Appendix I criteria A (small population) or B (restricted distribution) in the near future due to its large population size and widespread circumpolar distribution.

The juvenile habitat for Toothfish is estimated to cover 603 382 km<sup>2</sup>, and the fishing grounds are estimated to cover 1 205 901 km<sup>2</sup>. Habitat availability or threats to habitat are not considered an issue for either

*Although the SS does not give an estimate of the overall population size for Patagonian Toothfish, the estimated annual catch of 33 660 tonnes in 1999/2000, suggests that the population is well over the suggested Appendix I criterion A threshold of 5 000 individuals (CCAMLR, 2000a).*

*Combining CCAMLR assessments with estimates for the Patagonian shelf, there may be between 200 000*

*Dissostichus* species.

Possible future inclusion of Patagonian Toothfish in Appendix I would be on the grounds of a declining wild population, caused by exploitation, particularly by IUU fishing. Several stocks have undergone rapid declines as a result of IUU fishing, however an overall decline of 50% in five years is unlikely given the measures in place to manage the fishery, despite the continued threat of IUU fishing.

and 400 000 t spawning stock biomass in the total world population, which could represent 20-40 million reproductively active individuals (Agnew, 2002; Prenske, 2000). Data quality, however, is poor.

## **B) Harvesting for international trade has, or may have, detrimental impact on population**

### **(i) exceeds sustainable yield; (ii) reduces population to potentially threatened level**

The levels of exploitation of Toothfish are discussed in detail in the Supporting Statement. Long-term yields are threatened by IUU fishing. In the mid-1990s, IUU fishing resulted in serious depletion of Prince Edward and Marion Islands stock. The assessments of population status show two stocks to be above target level (50% unexploited biomass; South Georgia and Heard and McDonald Islands), three stocks to be between target level and threshold level (20%-50% unexploited biomass; Crozet Islands and Macquarie Islands), and one stock (Marion and Prince Edward Islands) to be below threshold level (<20% unexploited biomass).

Over the past 4 years, around 243 282 tonnes of Toothfish were traded in international markets, with only 123 165 tonnes legally caught within and outside the CCAMLR area.

Current levels of legal catches of Toothfish are sustainable. However the additional catches of IUU fishing result in over-harvesting of this resource.

Patagonian Toothfish are slow-growing and long-lived rendering them particularly vulnerable to overexploitation. If depleted, Toothfish stocks are unlikely to recover for many decades because of their life history characteristics. A similar species, *Notothenia rossii*, remains at 5% of its pre-exploitation biomass around South Georgia after 20 years without fishing. The longline method of fishing used for Toothfish means that depleted stocks can still be exploited, further reducing their numbers. In addition, prices for Toothfish have increased as stocks have declined.

*The status of Patagonian Toothfish stocks in Argentina is reported as being poorly understood, although it is clear that stocks of Patagonian Toothfish are declining, that the fishing fleet has excess capacity, and that the catches regularly exceed the Maximum Permissible Catch (MPC) set by the fishery management authority, which itself is based on a precautionary approach rather than solid biological data. Similarly, catches of Patagonian Toothfish in Chile have been declining since 1993, and the fishery is producing levels of mortality that exceed sustainable levels. Efforts to reduce levels of IUU fishing in Chilean waters include implementing the CDS and installing satellite Vessel Monitoring Systems (VMS) on each vessel (TRAFFIC América del Sur, in press). In addition, IUU activity is known to occur on the Ob and Lena banks.*

*The species vulnerability stems from its slow growth and late age at maturity. The SS estimates maturity to occur at 12-15 years. Other studies show that at South Georgia males mature on average at seven years and females at 12 years (Horn, 2002), while Cassia (1998) calculates six and nine years for males and females respectively, again at South Georgia. Fish usually live to 20-30 years, some up to 50 years (Agnew, 2002).*

*The SS states that IUU activities have resulted in catches that are unsustainable in the long term. Estimates of IUU catches are incorporated into the stock assessments made by CCAMLR, so quotas set for legal fishing should account for IUU take. However, the comparison of Toothfish trade data with the sum of CCAMLR's reported catches and estimates of unreported catch showed the CCAMLR figures to significantly underestimate IUU fishing. For example, the trade estimate of IUU fishing in 1999/00 is 33 865 t, compared with 8 418 t reported by CCAMLR (Lack and Sant, 2001).*

*Assessments of stock status and future projections of Patagonian Toothfish stocks do not currently include a stock-recruitment relationship, and do not, therefore account for the effect of reductions in spawning stock biomass (SSB) on future recruitment, therefore possibly underestimating the detrimental effect of population reductions on the population (CCAMLR, 2000b). Both these factors increase the likelihood that IUU fishing is occurring at levels that are unsustainable.*

## **Inclusion in Appendix II to improve control of other listed species**

**Specimens resemble other species and are difficult to distinguish, or most of taxon is already listed**

The Antarctic Toothfish, *Dissostichus mawsoni*, is included in the proposal for reasons of similarity of appearance to the Patagonian Toothfish.

**Other information**

**Threats**

Commercial exploitation of Toothfish began in the late 1980s. IUU fishing began in the 1990s, and represents a serious threat to the species' biological status and long-term yields. IUU fishing can cause dramatic declines of stocks in only a short period. Rapid declines in population ensue following IUU fishing. The population around Crozet Island was reduced by 45% within one year as a result of IUU fishing, and the population around Marion and Prince Edward Islands was reduced by 90% in three years. IUU fishing is sequentially depleting stocks from east to west. Less than 10% of IUU fishing takes place around South Georgia, due to fishery patrols.

The legal catch from within the CCAMLR area is likely to remain relatively stable over the coming years if IUU fishing is controlled.

*As the SS correctly states, some populations are subject to large amounts of IUU fishing, which is causing over-harvesting for those populations. The Prince Edward stock was seriously depleted because of unrestrained over-fishing caused by IUU activities. For other populations, IUU is negligible or at small levels, and is not causing substantial over-fishing. In particular, IUU fishing poses serious threats to some sub-populations of Toothfish, especially those around remote islands in the Sub/Antarctic, or in high seas waters. Where IUU fishing is serious, up to 50% of the population may be harvested through IUU activities. In other less affected areas IUU make take only 5% of the population (Agnew, 2002).*

*Although some stocks may not have been subject to extensive IUU fishing to date, there is evidence that vessels are being purpose-built to commence IUU fishing for Toothfish. Given this substantial investment, combined with the lucrative trade in Toothfish and continuing problems of enforcement regimes (both CCAMLR and coastal States), there is little basis to presume that once Indian Ocean populations have been depleted below commercially viable levels, the IUU fleet will not simply move on to other populations around the sub-Antarctic (TRAFFIC Oceania, 2002).*

*There have been anecdotal reports that illegal Toothfish unaccompanied by the CDS fetch a lower price (USD 6/kg) than documented fish (USD 8/kg). There are two points to consider however. First, IUU vessels have lower costs (crew, insurance, registration, licensing fees etc.) so are able to absorb a lower price per kg and maintain profitability. These particular operational economics mean that IUU vessels are capable of driving the population to dangerously low levels (Agnew, 2002). Second, there is evidence of laundering of illegal catch through the CDS, which means that such catch flows through trade with the correct documentation and there is therefore no price discrimination (TRAFFIC Oceania, 2002). The potential for catch laundering through the CDS is acknowledged by CCAMLR (CCAMLR, 2002).*

*Evidence from CCAMLR on the CDS indicates that IUU fishing may be on the decline rather than increasing, as stated in the SS (Everson, 2002). The Chilean Toothfish industry have also said they have figures proving that the CDS has been effective in decreasing IUU levels (TRAFFIC América del Sur, in press).*

*In Australian territorial waters (Heard and Macdonald Island) the estimates of IUU fishing for 2001/02 are higher than last year. Given this, IUU levels are also likely to be higher on the Kerguelen plateau (French,*

Australian and high seas areas), as the Australian zone is a subset of the broader area (TRAFFIC Oceania, 2002).

### **Conservation, management and legislation**

The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) controls the Toothfish fishery that takes place within the waters covered by its Convention, and in CCAMLR member Coastal State waters.

*Dissostichus spp.* are primarily found within the area covered by CCAMLR, except around southern South America, where Chile and Argentina are CCAMLR members. Only 4% of fishing grounds fall outside of CCAMLR or Coastal State jurisdiction (all such coastal States are also Members of CCAMLR). Thirty-two percent of the fishing grounds are high seas within the CCAMLR area.

CCAMLR has developed a 'catch documentation scheme' (CDS) to better monitor trade in Toothfish amongst CCAMLR members. Non-Parties are encouraged to adopt the scheme, but so far few have done so.

The impact of CCAMLR's CDS on IUU fishing and the trade in illegally caught Toothfish is constrained by being binding only on members of CCAMLR. A large number of IUU fishing vessels are flagged to non-Contracting Parties who are not bound by management regulations but are Parties to the CITES Convention. Further, many countries involved in the trade of Toothfish products are not members of CCAMLR nor voluntarily implementing the CDS.

*The following countries have been identified as having past or current involvement in IUU fishing, either as flag States, countries of vessel ownership, nationality of master, or ports of landing: Argentina, Belize, Chile, Denmark, Mauritius, Namibia, Panama, Russia, Sao Tome and Principe, Seychelles, Spain, St. Vincent and the Grenadines, South Africa, Togo, United Kingdom, Uruguay and Vanuatu (Lack and Sant, 2001; CCAMLR, 2001).*

*All of these countries are Parties to CITES. Of these countries, Argentina, Chile, Namibia, Russia, South Africa, Spain, UK and Uruguay are CCAMLR members. Of the non-CCAMLR members, Belize, Mauritius, Seychelles and Vanuatu (acceding to CCAMLR) are complying with CDS regulations (in part). Denmark and Panama have been invited by CCAMLR to participate in the CDS, but have not yet complied. Sao Tome and Principe, Togo and St. Vincent and the Grenadines are non-CCAMLR members who have not yet been invited to participate in the CDS (CCAMLR, 2001).*

*In addition, CCAMLR has invited other non-Members to participate in the CDS. Of these, Bolivia, China, Indonesia, Portugal and Singapore have started to comply with CDS regulations, while Canada, Guinea, Bissau, Guyana, Honduras, Malaysia, Maldives, Mauritania and Taiwan POC have not responded. All of these countries except the Maldives and Taiwan POC are CITES Parties, although Taiwan POC voluntarily complies with CITES measures (CCAMLR, 2001; CITES, 2002).*

*Countries involved in IUU fishing are constantly changing. Most are registered to flag of convenience registries in developing countries that may not even be aware they have vessels catching Toothfish. This is one of the reasons why attempts to control IUU activity have failed, as flag States have not exerted control of their vessels on the high seas (TRAFFIC Oceania, 2002).*

*All range states have appropriate legislation regarding Toothfish stocks (Agnew, 2002).*

*China is reported as being a growing market for Patagonian Toothfish. Industry reports that around 50% of the product going into mainland China is being sold on the domestic market, and for comparable prices as those in the USA and Europe. China is not a CCAMLR member, but is reportedly considering implementing the CDS voluntarily and perhaps becoming a CCAMLR member (TRAFFIC Oceania, 2002).*

*In areas where national legislation applies there is sufficient control of harvesting. In high seas waters, international and flag state legislation is ineffective against illegal fishers. In the Indian Ocean sector, the scale of IUU fishing overwhelms French and Australian surveillance capabilities. However, there are fishery*

patrols in all areas under national jurisdiction both in the CCAMLR zone and outside it (Agnew, 2002). While there may be sufficient control over legal operators, there is inadequate control over IUU activity. For example, in Australian waters, the Government estimated in 2000/01 that illegal catch represented 55% of the total allowable catch (Willock, 2002).

In South African waters there is inadequate control of harvesting, and fishery patrols do not take place in these waters. The lack of capacity to carry out patrols in South African waters resulted in the South African fishery becoming a year-round fishery, as this was the only means of ensuring a presence of legitimate boats in these waters (TRAFFIC East/Southern Africa – South Africa, 2002).

The CDS, initiated in 2000, has proved partially effective in regulating trade, and rather more effective in identifying trade quantities and pathways. It has considerable potential, when combined with other CCAMLR measures, to control a good proportion of trade. The effectiveness of implementation of the CDS is variable, and problems are currently being addressed by CCAMLR (Agnew, 2002).

#### **Similar species**

*Dissostichus mawsoni* resembles *D. elegendoides* and is therefore included in the proposal.

The genus *Dissostichus* is easily recognisable but the two species Patagonian Toothfish and Antarctic Toothfish are not easily distinguished by a non-specialist. It is not possible to visually identify each species in filleted form (Willock, 2002).

Antarctic Toothfish typically comprises less than 5% of the combined catch of Patagonian and Antarctic Toothfish in the CCAMLR area, and in the last 10 years, a total catch of 1 090 tonnes has been reported for Antarctic Toothfish (Lack and Sant, 2001).

The two *Dissostichus* species fulfil the same market demand, and are not distinguished in trade statistics when imported or exported, except by the USA and New Zealand (Willock, 2002).

#### **Other comments**

The annotation to the proposal provides for the application of CCAMLR conservation and management measures in respect of trade in Patagonian Toothfish harvested from within the CCAMLR Convention Area. Documentation issued by CCAMLR in accordance with the CDS will be taken to be equivalent to a Certificate of Introduction from the Sea or Export Permit issued under CITES.

The annotation also provides for the regulation of trade in Patagonian Toothfish harvested from waters that are outside the CCAMLR Convention Area (both high seas and waters under the jurisdiction of the coastal States). The regulation of trade in these specimens would occur in accordance with the normal operation of the relevant provisions of CITES (Article IV).

CCAMLR have drawn attention to an apparent erroneous assumption made in the annotation, which is that CCAMLR's CDS applies only to catches taken within the CCAMLR Convention Area. This assumption follows from the annotation proposal that CITES regulations should apply outside the CCAMLR area, while CCAMLR regulations should apply within. The CCAMLR conservation measure (Conservation Measure 170/XX; CCAMLR, 2002), aimed at monitoring the trade and origin of *Dissostichus* spp. harvested in the CCAMLR Convention Area is not confined to that Area. Consequently, both CCAMLR Parties and non-Parties who participate in the CCAMLR CDS for *Dissostichus* spp. agree to bind themselves to the provisions of the Scheme under the above measure (Miller, 2002).

This point affects the consideration of the proposal of

utilising a CITES Appendix II listing as a necessary tool in the monitoring of trade in Patagonian Toothfish. In addition, a statement made by several countries at FAO's COFI Trade Sub-Committee meeting indicated that where countries had CDSs in place (this includes non-CCAMLR members who have agreed to participate in the CDS), further schemes were undesirable because of the costs of duplication and possible confusion (Butterworth, 2002). The concern that a CITES listing would complicate the management and catch documentation of Patagonian Toothfish is echoed by Everson (2002) and Collins (2002).

There are only a few information requirements relating to the specifics of a CITES listing that are not required by the CDS documents (Willock, 2002).

**Reviewers:** D. Agnew, D. Butterworth, M. Collins, I. Everson, S. Hanchet, K.H. Kock, L. Prenski, TRAFFIC East Asia, TRAFFIC East/Southern Africa – South Africa, 2002, TRAFFIC Oceania, TRAFFIC South America.

#### References:

- Agnew, D., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Butterworth, D., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Cassia, M.C., 1998. Comparison of age readings from scales and otoliths of the Patagonian Toothfish from South Georgia. *CCAMLR Science* 5: 191-203.
- CCAMLR. 2002. Schedule of Conservation Measures in Force 2001/2002. [http://www.ccamlr.org/English/e\\_cds\\_1999/resolution%2017-XX.pdf](http://www.ccamlr.org/English/e_cds_1999/resolution%2017-XX.pdf). Viewed August 2002.
- CCAMLR, 2001. Report of the Standing Committee on Observation and Inspection (SCOI) - Annex 5 in the Report of the Twentieth Meeting of the Commission, Hobart, Australia.
- CCAMLR. 2000a. Report of the Eighteenth Meeting of the Scientific Committee. Hobart, Australia.
- CCAMLR. 2000b. Statistical Bulletin Volume 12. [http://www.ccamlr.org/English/e\\_pubs/](http://www.ccamlr.org/English/e_pubs/). Viewed April 2000.
- CITES, 2002. List of Parties. <http://www.cites.org/eng/parties/alphabet.shtml>. Viewed September 2002.
- Collins, M.A., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Everson, I., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Holt, T., Medley, P., Rice, J., Cooper, J. and Hough, A., 2001. *Certification report for South Georgia Patagonian Toothfish Longline Fishery*. Report prepared by Moody Marine Ltd. for the Government of South Georgia and the South Sandwich Islands, October 2001.
- Horn, P.L., 2002. Age and growth of Patagonian Toothfish (*Dissostichus eleginoides*) and Antarctic Toothfish (*Dissostichus mawsonii*) in waters from the New Zealand subAntarctic to the Ross Sea, Antarctica. *Fisheries Research* 56(3): 275-287.
- Kock, K.H., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Lack, M. and Sant, G., 2001. Patagonian Toothfish: Are Conservation and Management Measures Working? *TRAFFIC Bulletin* 19(1): 15-32.
- Miller, D. G. M., 2002. Letter from Dr. D. Miller, CCAMLR Executive Secretary to CITES Fisheries Department regarding CITES COP-12 Proposal 39 – Inclusion in Appendix II of *Dissostichus eleginoides* and *D. mawsoni*. 4<sup>th</sup> September 2002.
- Prenski, L., 2000. Patagonian Toothfish (*Dissostichus eleginoides*). In: Bezzi, S., Akselman, R. and Boschi, E. (Eds). *Sintesis del estado de las pesquerias maritimas argentinas y de la Cuenca del Plata. Anos 1997-1998, con una actualizacion de 1999*. INIDEP Publ. 1129, INIDEP Mar del Plata.
- TRAFFIC América del Sur. (In press). *La pesca y el comercio de bacalao de profundidad Dissostichus eleginoides en América del Sur*. TRAFFIC América del Sur, Quito, Ecuador.
- TRAFFIC East/Southern Africa – South Africa, 2002. *in litt.* to TRAFFIC International, Cambridge, UK.
- TRAFFIC Oceania. 2002. *in litt.* to TRAFFIC International, Cambridge, UK.
- Willock, A. 2002. Unchartered waters. Implementation issues and potential benefits of listing Toothfish in Appendix II of CITES. TRAFFIC. Cambridge, UK.