

# Protecting the Deep Sea Under International Law



Legal Options  
for Addressing  
High Seas  
Bottom Trawling

**GREENPEACE**

# Protecting the Deep Sea Under International Law: Legal Options for Addressing High Seas Bottom Trawling

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## *Table of Contents*

|   |           |
|---|-----------|
| <b>Executive Summary .....</b>  | <b>1</b>  |
| <b>Introduction: The Problem of Deep-Sea Bottom Trawling .....</b>                      | <b>3</b>  |
| Threat to deep-sea targeted fish stocks.....  | 5         |
| Threat to deep-sea biodiversity .....   | 6         |
| International expressions of concern .....  | 7         |
| <b>Current Regulation of Deep-Sea Bottom Trawling.....</b>                              | <b>8</b>  |
| The legal framework: international conventions .....                                    | 8         |
| Law of the Sea Convention   | 8         |
| UN Fish Stocks Agreement  | 11        |
| FAO Compliance Agreement  | 12        |
| Convention on Biological Diversity (CBD)  | 13        |
| Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) | 17        |
| Soft law instruments.....   | 20        |
| The FAO Code of Conduct for Responsible Fisheries                                       | 21        |
| The IPOA-IUU  | 22        |
| The Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem              | 23        |
| Agenda 21   | 24        |
| The Johannesburg Programme of Implementation (JPOI)                                     | 24        |
| Regional Fisheries Management Organisations (RFMOs).....                                | 24        |
| National regulation of deep-sea bottom trawling .....                                   | 29        |
| Problems with the current regime.....   | 31        |
| Case Study: the Southwest Indian Ocean.....   | 32        |
| <b>Current Options for Addressing Deep-Sea Bottom Trawling.....</b>                     | <b>33</b> |
| The option of a moratorium.....   | 33        |
| Objections to a moratorium.....   | 37        |
| The First Objection: A Global Moratorium is Unnecessarily Restrictive                   | 37        |
| The Second Objection: A Moratorium Would not Be Enforceable                             | 38        |
| The Third Objection: The Scope of the Proposed Moratorium                               | 39        |
| The Fourth Objection: Balancing States' Rights and Obligations on the High Seas         | 39        |
| The Fifth Objection: A Ban should be Part of a larger Regime, Including RFMOs           | 39        |

*Protecting the Deep Sea Under International Law:  
Legal Options for Addressing High Seas Bottom Trawling*

*Table of Contents*

|   |           |
|---|-----------|
| The Additional Objections: The Lack of Scientific Knowledge               | 39        |
| Conclusion  | 40        |
| Enforcement of a Moratorium.....  | 40        |
| Definition  | 40        |
| Enforcement   | 41        |
| Control of nationals  | 41        |
| RFMO actions  | 41        |
| Port State control measures   | 42        |
| Trade related measures  | 43        |
| Lessons from the Wellington Convention                                    | 43        |
| Other Options for Addressing the Problem of Deep-Sea Bottom Trawling..... | 44        |
| Action by RFMOs   | 44        |
| Unilateral enforcement on the high seas                                   | 45        |
| Dispute Resolution  | 45        |
| Establishing an International Regime for Deep-Water Fisheries             | 46        |
| Extending the Competence of RFMOs to Cover Deep-Sea Demersal Fisheries    | 47        |
| <b>Case Study: The Case of Driftnets .....</b>                            | <b>48</b> |
| Driftnet Resolutions .....  | 48        |
| The Treaty of Wellington.....   | 49        |
| Definitions   | 49        |
| Compliance  | 50        |
| Enforcement   | 50        |
| <b>Conclusion.....</b>  | <b>51</b> |

# **Protecting the Deep Sea Under International Law: Legal Options for Addressing High Seas Bottom Trawling<sup>1</sup>**

## **EXECUTIVE SUMMARY**

The recent expansion of fishing effort to the deep sea has given rise to increasing concern about the impacts of deep-sea fishing on the marine environment of the deep sea. Due to the demersal nature of most targeted deep-sea species, the extensive use of bottom trawling has had serious and probably irreversible effects, including destruction of coral reefs and associated vulnerable species. There is concern about the effect on the fish stocks targeted and about the impacts on the biodiversity of the deep-sea marine environment, including in particular the destructive effects of such fishing on the coral reefs, sponges and related biodiversity of seamounts. Such fishing not only adversely impacts on targeted species and on sedentary species attached to the coral reefs, but also impacts on mobile species dependent on the reefs for food and shelter.

The problem has highlighted gaps in the international legal regime of such fishing on the high seas. In addition, the limited coverage and lack of management action by regional fisheries management organizations (RFMOs), compounded by illegal, unregulated and unreported (IUU) fishing, as well as the vulnerability of target species and ecosystems damaged by the fishing, has led to serious depletion of deep-sea targeted species and damage to biodiversity.

The law of the sea has evolved to regulate fishing primarily within exclusive economic zones (EEZs) which generally extend 200 nautical miles from the shorelines. Where fishing takes place on the high seas, international regulation is vague, international governance is minimal or non-existent, and reporting is patchy. This gap in current international law is exacerbated by a focus on the target fisheries, whereas many of the immediate impacts of deep-sea bottom trawling are upon the coral and sedentary species on the ocean floor. While coastal states have sovereign rights to explore and exploit sedentary species on their continental shelf, they are given no ability to regulate fishing outside their EEZs which may impact on that continental shelf.

There are numerous relevant obligations under the United Nations Law of the Sea Convention and the United Nations Fish Stocks Agreement, and there are relevant principles set out in various 'soft law' documents which are discussed in this paper. The Law of the Sea Convention lays down the general duty to protect and preserve the marine environment and specifically requires measures to be taken to protect and preserve rare or fragile ecosystems, the habitat of depleted, threatened or endangered species and other forms of marine life. States are required to take into account the interdependence of stocks and effects on associated and dependent species when managing stocks, both in the EEZ, and on the high seas. The obligations also include taking, or cooperating with other States in taking, measures necessary for their nationals to conserve the living resources of the high seas.

The Fish Stocks Agreement applies to straddling stocks, which are often the subject of deep-sea bottom trawling. States are required to protect biodiversity in the marine environment. The precautionary approach is expressly required to be followed, as is an ecosystem approach. Specific duties include minimising the catch of non-target species, including non-fish species, and minimising impacts on associated or dependent species. Named measures specifically include the development and use of environmentally safe fishing gear and techniques. Plans should be developed to protect habitats of special concern, and, for new or exploratory fisheries, States are to adopt, cautious

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<sup>1</sup> The author is grateful to Karen Sack for her helpful suggestions on this paper. All errors are those of the author. All internet references are as at 28 September, 2004.

*Protecting the Deep Sea Under International Law:  
Legal Options for Addressing High Seas Bottom Trawling*

conservation and management measures. The failure of States to implement these provisions of the Fish Stocks Agreement in itself constitutes a breach of that Agreement where such fisheries involve straddling stocks.

The Fish Stocks Agreement places a great deal of reliance on the implementation of its provisions through regional fisheries management organisations, or RFMOs. The paper canvasses RFMOs, which notably are NAFO, NEAFC, CCAMLR and the new SEAFO. As the UN Secretary-General has reported, discrete high seas fish stocks generally remain outside existing regulatory frameworks. The coverage of RFMOs is very patchy, and even where RFMOs do have competence, measures addressing bottom trawling are extremely limited. Identified gaps in coverage by RFMOs include the southeast Pacific Ocean for all fish stocks, and the south-west Atlantic, south-east Pacific, west-central Pacific, Indian Ocean and the Caribbean for straddling fish stocks and discrete high seas fish stocks.

Without an international moratorium or similar broad-based measure, even if RFMOs were to implement appropriate conservation and management measures to address bottom trawling, without widespread coverage by RFMOs and without widespread adherence to RFMOs, the effect of such measures are likely to be patchy at best. RFMOs would need to be in place to cover all fished areas, there would need to be universal or at least widespread adherence by fishing States, measures would need to be implemented and enforced by RFMOs, there should be effective coordination among RFMOs, between RFMOs and States and between States, and States must indeed implement the measures and have taken enforcement monitoring and enforcement action themselves. None of this is likely to happen without strong international direction, such as that which would be given in a General Assembly resolution.

Among other relevant agreements, the United Nations Food and Agriculture Organisation's (FAO) Compliance Agreement requires flag states to authorise vessels to fish on the high seas and to give information to the FAO about such vessels. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) has relevance where species caught are listed on one of its Appendices.

The Convention on Biological Diversity also includes clear obligations for States to ensure that activities within their jurisdiction or control do not cause damage to areas beyond the limits of national jurisdiction, which include seamounts beyond the continental shelf, and requires States to cooperate for the conservation and sustainable use of biodiversity in areas beyond national jurisdiction.

A recent experience with a deep-water fishery in the Southwest Indian Ocean highlights both current gaps in the international regulation of high seas fishing and the need for urgent action. Even though experience had already shown that the targeted species had to be managed carefully to prevent depletion, fishing was carried out for three years with no active fisheries management and no reporting of catches by some usually responsible countries, with no apparent effort to sustainably manage the fishery, either on a national basis or through a RFMO or international arrangement. The result was that most of the stocks or populations of fish targeted appeared to have been depleted or to have collapsed by the end of the third year, and this is without taking into account collateral effects on the deep-sea ecosystem.

While currently a relatively small number of countries are involved in high seas bottom trawling, and the current total value of high seas bottom trawl fisheries is estimated at well below 1% of the fish catch worldwide, fishing effort appears likely to continue to move to the deep sea as stocks closer to shore become depleted. When taken into consideration with the known impacts on biodiversity and the gaps in scientific knowledge, there have increasingly been demands both for reform of international governance of the high seas and for a moratorium on the practice of deep-sea bottom trawling until such a regime is put in place.

This problem was addressed in 2002, when the United Nations General Assembly called upon intergovernmental organizations including the FAO, Secretariat of the CBD and the UN Secretariat to consider urgently ways to integrate and improve the management of risks to the marine biodiversity of seamounts and certain other underwater features within the framework of the Law of the Sea Convention. This call was repeated in 2003, with a request by the UN General Assembly for a report including a range of potential approaches and tools for protection and management.

The Parties to the Convention on Biological Diversity responded in February 2004, specifically calling on the General Assembly and other organizations to take the necessary short-term, medium-term and long-term measures to eliminate/avoid destructive practices. The resolution suggested, by way of example, an interim prohibition of destructive practices adversely impacting the marine biological diversity associated with the vulnerable marine areas of the deep sea: in effect, a moratorium on deep-sea bottom trawling. The same resolution also made a recommendation to individual States. It recommended that State parties also urgently take the necessary short-term, medium-term and long-term measures to respond to the loss or reduction of marine biological diversity associated with marine areas beyond the limits of national jurisdiction.

A moratorium on deep-sea bottom trawling was discussed at the United Nations Open-Ended Consultative Process on Oceans and the Law of the Sea (UNICPOLOS) in June 2004 which, however, failed to reach agreement on such a moratorium. This paper analyses the legal environment of such a moratorium and evaluates some of the arguments given against such a moratorium against applicable international law.

A United Nations General Assembly resolution establishing a moratorium on deep-sea bottom trawling could call on States not only to prohibit its nationals and vessels from engaging in bottom trawling on the high seas, but also not to assist or encourage bottom trawling on the high seas, and to take measures consistent with international law to restrict bottom trawling on the high seas, including and not limited to prohibiting the use of trawls designed to make contact with the sea bottom on vessels and in areas under its jurisdiction (to include the continental shelf). Enforcement possibilities include control of nationals, actions by RFMOs, port state control measures and trade related measures. The Treaty of Wellington, which banned driftnetting in the South Pacific, is examined to draw out examples of how a similar measure addressing a destructive fishing practice defined and addressed the problem.

## **INTRODUCTION: THE PROBLEM OF DEEP-SEA BOTTOM TRAWLING**

The deep sea is an important reservoir of biodiversity, with estimates of 100 million species inhabiting the deep seas, including 500,000 species of macrofauna.<sup>2</sup> The deep sea for the purposes of this paper refers to areas beneath the high seas outside the exclusive economic zones of coastal States. The corresponding area on the ocean floor is known as the sea-bed and ocean floor and subsoil beyond the limits of national jurisdiction, and is defined as “the Area”.<sup>3</sup> Since national jurisdiction extends to the outer edge of the continental margin, there is an area between the outer limit of the EEZ but inside the continental margin where the coastal State has jurisdiction over the seabed but not over the high seas

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<sup>2</sup> Butler, A.J., Koslow, J.A., Snelgrove, PVR, and Juniper, SK, “A review of the biodiversity of the deep sea,” Environment Australia, 2001, iii.

<sup>3</sup> United Nations Convention on the Law of the Sea, Article 1. Signed at Montego Bay, Jamaica, 10 December 1982, entered into force 16 November 1994, UN Doc. A/CONF.62/122 (1982), 21 I.L.M. 1261 (1982) (Law of the Sea Convention), at [http://www.un.org/Depts/los/convention\\_agreements/texts/unclos/closindx.htm](http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm).

*Protecting the Deep Sea Under International Law:  
Legal Options for Addressing High Seas Bottom Trawling*

above them.<sup>4</sup> This paper, in addressing the high seas, does include fishing over the continental shelf, which may be up to 150 nautical miles outside the EEZ.<sup>5</sup> The deep-sea therefore includes some of the continental margin (which comprises the continental shelf and the continental slope)<sup>6</sup> as well as the deep ocean basins and plains, trenches, seamounts (undersea mountains), ridges and plateaus. Its significance is clear: the area constitutes over 90% of the ocean bottom.<sup>7</sup> Deep-sea trawlers can fish in waters from 400 metres to 2000 metres in depth.<sup>8</sup> Deep-sea fisheries have recently been attracting fishing trawlers, as fish stocks elsewhere decline.<sup>9</sup>

In deep-sea bottom trawl fishing on the continental margin, trawl nets can contact the sea bottom almost continually, and can dig into the sea-floor 10-25 cm, depending on how hard the sea floor is.<sup>10</sup> Trawling on seamounts takes place with both bottom-trawl and mid-water gear, which involves dragging the trawl through the water column.<sup>11</sup> However since some fish such as orange roughy typically dive to escape trawl nets,<sup>12</sup> mid-water trawls can contact the seabed, and from a management perspective, “it is difficult to make any effective distinction between mid-water or bottom-trawl nets.”<sup>13</sup> In the process nets and associated gear such as trawl doors and cables can destroy deep-sea corals and associated ecosystems.<sup>14</sup> As such, deep-sea bottom trawling has been found to destroy up to 98% of the coral cover of seamounts<sup>15</sup> as well as cause the depletion of the targeted fish stocks. Bottom trawling removes large numbers of species from the food chain, leading to impacts on the relevant ecosystems, and by breaking the reef structure and killing the coral polyps physically impacts

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<sup>4</sup> The EEZ extends up to 200 miles (Law of the Sea Convention, Article 57) while the continental shelf is a minimum of 200 miles but may be up to 350 miles (Law of the Sea Convention, Article 57(1) and 57(6)).

<sup>5</sup> The continental shelf of a coastal State comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance. Law of the Sea Convention, Article 76(1).

<sup>6</sup> The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the sea-bed and subsoil of the shelf the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof. Law of the Sea Convention, Article 76(3).

<sup>7</sup> See Matthew Gianni, “High Seas Bottom Trawl Fisheries and their Impacts on the Biodiversity of Vulnerable Deep-Sea Ecosystems,” report prepared for IUCN, WWF and NRDC, 4, (referred to as “Gianni”) at <http://www.iucn.org/themes/marine/pdf/MattGianni-CBDCOP7-Impact-HS-BottomFisheries-Complete.pdf>.

<sup>8</sup> Gianni, 10, and ICES Advisory Committee on Fisheries Management, *Deepwater fisheries resources south of 63°N*, Overview, <http://www.ices.dk/committe/acfm/comwork/report/asp/acfmrep.asp>, extract at <http://www.ices.dk/committe/acfm/comwork/report/2003/oct/o-3-13.pdf>.

<sup>9</sup> See “Advance and Unedited Material to be issued as Report of the Secretary-General on Sustainable Fisheries,” A/59/298. The report was prepared in response to GA resolution 58/14 para. 57, para. 22. At [http://www.un.org/Depts/los/general\\_assembly/documents/fisheries04.pdf](http://www.un.org/Depts/los/general_assembly/documents/fisheries04.pdf) (“UN report A/59/298”), page 22. See further discussion of the report at note 184 below.

<sup>10</sup> UN report A59/298, above note 9, page 31.

<sup>11</sup> Gianni, 15.

<sup>12</sup> Gianni, 15.

<sup>13</sup> ICES “Report of the Study Group on Mapping the Occurrence of Cold Water Corals,” Advisory Committee on Ecosystems, International Council for the Exploration of the Sea, May 2002, at <http://www.ices.dk/reports/ACE/2002/SGCOR02.pdf>.

<sup>14</sup> Gianni, 15.

<sup>15</sup> Gianni, ii.

on the corals, sponges and other sedentary species attached to it. It also deprives mobile species dependent on the reef of food and shelter.<sup>16</sup>

The evolution of technology and recent expansion of fishing effort to the deep sea has given rise to concern about the impacts of deep-sea fishing on deep-sea ecosystems, and there is a lack of necessary scientific data on the impacts. There is particular concern about two significant impacts: the effects on the fish stocks targeted and impacts on the deep-sea biodiversity of the marine environment.

### **Threat to deep-sea targeted fish stocks**

A recent report has estimated that 95% of landed catch by weight in bottom trawl fisheries in the high seas are northern prawns, redfish, Greenland halibut, argentine, roundnose and roughhead grenadier, smoothheads, American plaice, and blue ling as well as orange roughy and alphonso.<sup>17</sup> Another report listed the main deep-sea stocks by region:<sup>18</sup>

- Southwest Pacific : orange roughy, black oreo, smooth oreo, blue grenadier;
- North Pacific: sablefish (pelagic armourhead having been fished to extinction);
- Northeast Atlantic: argentines, ling, blue ling, tusk, orange roughy, greater forkbeard, roundnose grenadier, black scabbardfish, and sharks;
- Southeast Atlantic: orange roughy;
- South-west Indian Ocean: orange roughy and alphonso;
- Southern Ocean : Patagonian toothfish.

Most deep-sea species are long lived, slow growing, and have low reproductive capacity, and are vulnerable to exploitation, being able to be rapidly depleted and slow to recover. Recovery often takes decades,<sup>19</sup> leading such stocks to be typically fished down to the point of commercial extinction or very low levels within five to ten years of the initiation of fishing effort. In the Northeast Atlantic, nearly all exploited deepwater species are being harvested outside safe biological limits.<sup>20</sup> In fisheries the United Nations has characterised as ‘relatively well managed’, off New Zealand, Australia and Namibia, orange roughy has been fished down to 15-30% of original biomass within five to ten years<sup>21</sup> and pelagic armourhead was fished to commercial extinction within ten years on a north Hawaiian ridge.<sup>22</sup>

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<sup>16</sup> See Gianni, 14.

<sup>17</sup> Gianni, 11, and see ICES *op. cit.*, 410. FAO has listed 62 deep water species and species items caught in deep-sea demersal or commercial fisheries. Luca Garibaldi and Luca Limongelli, *Trends in Oceanic Captures and Clustering of Large Marine Ecosystems - Two Studies Based on the FAO Capture Database*, FAO Fisheries Technical Paper No. 545, Rome, FAO, 1.2 Biological resources and their exploitation at <http://www.fao.org/DOCREP/005/Y4449E/Y4449E00.HTM>.

<sup>18</sup> Report by M. Lack, K. Short and A. Willock, *Managing Risk and Uncertainty in Deep-Sea Fisheries: Lessons from Orange Roughy by Traffic, Oceania and WWF Australia* (2003) at page 2, at <http://www.panda.org/downloads/marine/oranger0.pdf>.

<sup>19</sup> Large, P.A., C. Hammer, O. A. Bergstad, J.D.M. Gordon and P. Lorange, “Deep-water Fisheries of the Northeast Atlantic: II. Assessment and Management Approaches,” *Journal of Northwest Atlantic Fishery Science*, Vol, 31: 151-164, 159, at <http://www.nafo.ca/publications/journal/J31/session3/large.pdf>.

<sup>20</sup> *Ibid.*.

<sup>21</sup> UN Report A/59/298, above note 9, page 22.

<sup>22</sup> *Ibid.*

Fish stocks associated with seamounts in particular have been consistently exploited at unsustainable levels.<sup>23</sup>

### **Threat to deep-sea biodiversity**

Deep-sea or cold-water coral ecosystems are widespread.<sup>24</sup> Such corals are unique and differ from their warm-water counterparts in that they potentially found at all latitudes and could even exceed warm-water corals in their coverage, and are slower growing.<sup>25</sup> Coral on continental shelves have been dated to over 8,000 years old<sup>26</sup> and can reach heights of 35 metres.<sup>27</sup> Over 1300 species of marine life have been recorded in association with Lophelia reefs,<sup>28</sup> one type of such reef systems.<sup>29</sup> Such reef systems are rich sources of biodiversity, can produce biological material which are now or may very well be of pharmaceutical interest,<sup>30</sup> and they are believed to provide important sources of nourishment for pelagic species. Seamounts are believed to be sources of primary production of zooplankton, and thus are important sources of food for species feeding on the plankton, and are also valuable as shelter and nurseries for demersal species, and as ‘stepping stones’ for migratory species.<sup>31</sup> Impacts on benthic species and damage to the structures on the ocean floor can have effects throughout the food chain.<sup>32</sup>

Seamounts are themselves particularly high in biodiversity and are known to have high rates of endemism, which refers to the fact that species occur only in that location. Rates of 35% and even over 50% of endemism have been cited.<sup>33</sup> As sampling is only in its early stages, little is known, but recent research does make it clear that there are large quantities of undiscovered biodiversity located on seamounts. Recent estimates are that there may be up to 100,000 seamounts worldwide<sup>34</sup> and 30,000 in the Pacific Ocean.<sup>35</sup>

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<sup>23</sup> Gianni, 13, citing Koslow JA., Boehlert GW, Gordon JDM, Haedrich RL, Lorange P., Parin N, “Continental Slope and Deep-Sea Fisheries: Implications for a Fragile Ecosystem”, *ICES Journal of Marine Science*, 57:548-557 (2000).

<sup>24</sup> Gianni, ii.

<sup>25</sup> See comparison by UNEP, “Similarities and differences between cold-water and warm-water coral reefs,” at [http://www.unep.org/cold\\_water\\_reefs/comparison.htm](http://www.unep.org/cold_water_reefs/comparison.htm).

<sup>26</sup> Gianni, 4.

<sup>27</sup> Gianni, 4.

<sup>28</sup> Gianni, 6.

<sup>29</sup> Other coral species include *Madrepora oculata*, *Oculina varicose*, *Goniocorella dumosa* and *Solenosmilia variabilis*. Gianni, 6.

<sup>30</sup> Gianni, 6.

<sup>31</sup> UN Report A/59/298, above note 9, age 25.

<sup>32</sup> UN Report A/59/298, above note 9, age 26.

<sup>33</sup> Stone G., “Seamount Diversity, Exploitation and Conservation,” paper for Conservation International conference, May 29-June 3, 2003, 6, at [http://seamounts.sdsc.edu/Stocks/DOE\\_MS.pdf](http://seamounts.sdsc.edu/Stocks/DOE_MS.pdf).

<sup>34</sup> Gianni, 7, citing Rogers AD, *The Biology, Ecology and Vulnerability of Seamount Communities*, Paper for the IUCN/World Conservation Union, February 2004.

<sup>35</sup> Butler et al, note 2 above, ii.

Fishing on seamounts impacts not only on cold-water corals, a dominant seamount fauna, but also on benthic fauna such as sponges, hydroids, and ascidians, or ‘sea squirts’.<sup>36</sup> Bottom trawling has been described as the most immediate threat to seamount biodiversity.<sup>37</sup>

### **International expressions of concern**

These impacts have motivated 1,136 deep-sea scientists in a statement of concern<sup>38</sup> to state that “scientific studies around the world have shown that trawling is devastating to corals and sponges” and to urge the United Nations and appropriate international bodies to establish a moratorium on bottom trawling on the high seas. ICES has advised that the only proven method of preventing damage to deep-water biogenic reefs from fishing activities is through spatial closures to towed gear that potentially impacts the bottom.<sup>39</sup>

The overall amount and value of high seas bottom trawl fisheries is not great in percentage terms, amounting to approximately less than 0.025% of the global marine fisheries catch<sup>40</sup> or \$300-400 million USD annually. This is less than one-half percent of the total estimated value of the 2001 global marine fish catch.<sup>41</sup> A recent study found that fishing vessels flagged to one of eleven countries took around 95% of the reported high seas bottom-trawl catch in 2001:<sup>42</sup> Spain, Russia, Portugal, Norway, Estonia, Denmark/Faroe Islands, Japan, Lithuania, Iceland, New Zealand and Latvia, of which 40% was accounted for by Spain. The number of vessels likely to be engaged full time in high seas bottom trawling is estimated at no more than several hundred.<sup>43</sup>

The destructive impact of deep-sea bottom trawling on biodiversity has led to the Parties to the Convention on Biological Diversity<sup>44</sup> calling on the United Nations General Assembly to urgently take the necessary short-term, medium-term and long-term measures to eliminate/avoid destructive practices, and suggested an interim prohibition on destructive practices in areas beyond national jurisdiction, and also recommended that States urgently take the necessary short-term, medium-term and long-term measures to respond to the loss of marine biodiversity in these areas. The United Nations General Assembly last year called upon the international community to investigate urgently

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<sup>36</sup> UN Report A/59/298, above note 9, page 25. On ascidians, see <http://www.justblue.co.za/Ascidians/Introduction.htm> Hydroids are small, mostly colonial animals in the cnidarian Class Hydrozoa. See [http://www.afsc.noaa.gov/groundfish/HAPC/Hydroids\\_synopsis.htm](http://www.afsc.noaa.gov/groundfish/HAPC/Hydroids_synopsis.htm).

<sup>37</sup> Butler et al, i.

<sup>38</sup> Deep-sea Coral Statement, Scientists’ statement on protecting the world’s deep-sea coral and sponge ecosystems, at [http://www.mcibi.org/DSC\\_statement/sign.htm](http://www.mcibi.org/DSC_statement/sign.htm).

<sup>39</sup> ICES Cooperative Research Report No. 265, December 2002, Section 4.4.1, “Deep-water biogenic habitats”, 28, at <http://www.ices.dk/pubs/crr/crr256/ACME02.pdf>.

<sup>40</sup> Gianni, iii reported the high seas bottom trawl catch in 2001 was between 170,000 to 215,000 mt of fish, out of a total of 83.7 million tons of fish in 2001 as reported by the Food and Agriculture Organization (FAO).

<sup>41</sup> Gianni, ii and 54.

<sup>42</sup> Gianni, iii and 54-55 and see table at 55.

<sup>43</sup> Gianni, iii and 52.

<sup>44</sup> The Convention on Biological Diversity signed at Rio de Janeiro on 5 June 1992, entered into force 29 December 1993, 31 ILM (1992). Text at <http://www.biodiv.org/doc/legal/cbd-en.pdf> and the secretariat website is at [www.biodiv.org](http://www.biodiv.org). Decision VII/5, Marine and coastal biological diversity, Review of the programme of work on marine and coastal biodiversity, at <http://www.biodiv.org/convention/result.aspx?id=7742>. February 2004. See discussion on page 15 above.

how to better address the threats and risks to vulnerable and threatened marine ecosystems and biodiversity in areas beyond national jurisdiction, following an earlier expression of concern in 2002.

## **CURRENT REGULATION OF DEEP-SEA BOTTOM TRAWLING**

### **The legal framework: international conventions**

Deep-sea fishing activities are currently governed by several international and regional conventions, together with some non-binding instruments or ‘soft’ law as well as by some applicable national legislation. The overall framework on the law of the sea is provided by the Law of the Sea Convention,<sup>45</sup> and some more specific provisions relevant to high seas fishing activities are contained in the 1995 UN Fish Stocks Agreement,<sup>46</sup> which applies to straddling and migratory fish stocks.<sup>47</sup> Since deep-sea fishing activities affect biodiversity on the ocean floor as well as in the ocean itself, the Convention on Biological Diversity is also relevant. Additionally, there are relevant provisions of the 1993 FAO Compliance Agreement. The Compliance Agreement was negotiated under the auspices of the Food and Agriculture Organization (FAO)<sup>48</sup> and entered into force last year, but does not yet enjoy wide support. Finally since there have been moves to place some target species on CITES Appendices, and since some CITES listed species may be damaged in deep-sea trawling activities, CITES is also relevant. Taken together, while these international agreements provide a framework for action, there remain key gaps in the effective regulation of this type of fishing on the high seas.

### LAW OF THE SEA CONVENTION

The Law of the Sea Convention contains a comprehensive regime governing the world’s oceans and seas. It heavily emphasises cooperation between states, and is both in a sense a framework convention, in that it provides the framework for further development of specific areas of the law of the sea, and a legal order containing specific provisions. It aims at the promotion of the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment.<sup>49</sup> For States Party to the Law of the Sea Convention, that Convention supersedes (among others) the 1958 Convention on the High Seas,<sup>50</sup> the Convention on the Continental Shelf<sup>51</sup>; and the 1958 Convention on Fishing and Conservation of the Living Resources of the High Seas.<sup>52</sup> The Law of the Sea

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<sup>45</sup> See footnote 3 on page 3.

<sup>46</sup> 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, entered into force 11 December 2001, 1542 A/CONF.164/37, 34 *International Legal Materials* 1542. Text at [http://www.un.org/Depts/los/convention\\_agreements/convention\\_overview\\_fish\\_stocks.htm](http://www.un.org/Depts/los/convention_agreements/convention_overview_fish_stocks.htm).

<sup>47</sup> See Fish Stocks Agreement Articles 2 and 3.

<sup>48</sup> FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas. Rome, 24 November 1993. Entered into force on 24 April 2003, (“Compliance Agreement”), at <http://www.fao.org/waicent/faoinfo/fishery/agreem/complian/complian.htm>.

<sup>49</sup> Law of the Sea Convention, Preamble.

<sup>50</sup> 1958 Geneva Convention on the High Seas, Geneva, 29 April 1958, in force 30 September 1962. 450 UNTS 11, copy at <http://www.oceanlaw.net/texts/genevahs.htm>.

<sup>51</sup> 1958 Geneva Convention on the Continental Shelf, Geneva, 29 April 1958, in force 10 June 1964. 499 UNTS 311, copy at <http://www.oceanlaw.net/texts/genevacs.htm>.

<sup>52</sup> 1958 Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas, Geneva, 29 April 1958, in force 20 March 1966. 559 UNTS 285, copy at <http://www.oceanlaw.net/texts/genevafish.htm>.

*Protecting the Deep Sea Under International Law:  
Legal Options for Addressing High Seas Bottom Trawling*

Convention brings together the international law covering all the oceans, including territorial waters, the 200-mile exclusive economic zone (EEZ), which it introduced, the high seas and the seabed. The legal order it establishes for the seas and oceans promotes the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment.<sup>53</sup> The Law of the Sea Convention introduced important dispute resolution provisions, including the International Tribunal for the Law of the Sea (ITLOS).<sup>54</sup>

The Law of the Sea Convention, being completed in 1982, was naturally a product of its time, and its focus is very much on the EEZ, whereas as marine resources in the EEZ have become depleted, fishing effort is moving to the high seas. This demand-driven trend has been accompanied by changed technology and increased capacity, as migratory fish such as tuna and swordfish, and straddling stocks such as cod and turbot as well as deep-sea fish such as orange roughy have increasingly been targeted. Its reliance on the concept of the maximum sustainable yield (MSY) in managing fisheries<sup>55</sup> has been found wanting, and the precautionary principle and an ecosystem oriented approach have been increasingly adopted, most recently in the Fish Stocks Agreement. The Law of the Sea Convention also heavily relied on flag states for enforcement of its provisions, whereas many States have not in fact carried out their responsibilities.

With regard to the regulation of fisheries, the law of the sea has evolved to regulate fishing primarily within exclusive economic zones (EEZs) which generally extend 200 nautical miles from the shorelines. Where fishing takes place on the high seas, international regulation is vague, international governance is minimal or non-existent, and reporting is patchy. This gap in current international law is exacerbated by the focus on the target fisheries, whereas many of the immediate impacts of deep-sea bottom trawling are upon the coral and sedentary species on the ocean floor. As seen earlier on page 4, under the Law of the Sea Convention, coastal states have sovereign rights to explore and exploit sedentary species on their continental shelf,<sup>56</sup> yet are granted no corresponding ability to regulate fishing outside their EEZ which may impact on that continental shelf.<sup>57</sup> This is a significant gap in governance.

However, the Law of the Sea Convention establishes a general duty to protect and preserve the marine environment in Article 192 and clearly requires in Article 194(5) measures to be taken to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life. In the EEZ, and on the high seas, States are required to take into account the interdependence of stocks<sup>58</sup> and effects on associated and dependent species<sup>59</sup> when managing stocks.

Co-operation is a recurrent theme in the Law of the Sea Convention. Under Article 117, states also have a duty to take, or to co-operate with other States in taking, such measures for their respective

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<sup>53</sup> Law of the Sea Convention, Preamble.

<sup>54</sup> Law of the Sea Convention Annex VI establishes the Statute of ITLOS.

<sup>55</sup> See Law of the Sea Convention, Article 119 with respect to the high seas.

<sup>56</sup> Law of the Sea Convention, Articles 76, 77.

<sup>57</sup> Gianni has identified states vulnerable to this lacuna as including Canada, Brazil, Uruguay, Argentina, South Africa, Namibia, Angola, Mozambique, Mauritius, Seychelles, India, Norway, Iceland, Australia, New Zealand and several EU countries. Gianni, iv.

<sup>58</sup> Law of the Sea Convention, Article 119(1)(a) for the high seas and Article 61(4) in EEZs.

<sup>59</sup> Law of the Sea Convention, Article 119(1)(b) for the high seas and Article 61(3) in EEZs.

nationals as may be necessary for the conservation of the living resources of the high seas. Article 118 requires that States shall co-operate with each other in the conservation and management of living resources in the areas of the high seas, and that States whose nationals exploit identical living resources, or different living resources in the same area, shall enter into negotiations with a view to taking the measures necessary for the conservation of the living resources concerned. To this end, they are required to cooperate to establish subregional or regional fisheries organizations. This is a clear and specific obligation to co-operate incumbent on States whose vessels or nationals are engaging in deep-sea fishing.

The obligation to co-operate to conserve the marine environment is stipulated in Article 197. That article requires States to co-operate on a global and regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with the Law of the Sea Convention, for the protection and preservation of the marine environment.

The duty to co-operate is not an abstract exhortation but a specifically enforceable legal duty. The International Tribunal for the Law of the Sea has stated that the duty to cooperate is a “fundamental principle in the prevention of pollution of the marine environment under Part XII of the Convention and general international law and that rights arise therefrom which the Tribunal may consider appropriate to preserve under Article 290 of the Convention.”<sup>60</sup>

Article 119 lays down requirements for States in determining the allowable catch and establishing other conservation measures for the living resources on the high seas, including designing measures to produce the maximum sustainable yield and taking into consideration the effects on species associated with or dependent upon harvested species.

While the Law of the Sea Convention contains no specific provisions with respect to straddling stocks, Article 64 does require cooperation with relevant international organizations with respect to highly migratory stocks in the EEZ.

The coastal State has sovereign and exclusive<sup>61</sup> rights over the continental shelf for the purpose of exploiting its natural resources, which include sedentary species<sup>62</sup> such as those destroyed by deep-sea bottom trawling. There are no provisions specifically protecting such benthic communities from fishing activities.<sup>63</sup> However, under the Law of the Sea Convention, the sovereign right to exploit

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<sup>60</sup> Ireland v. United Kingdom (“MOX Plant Case Decision No. 3”), International Tribunal for the Law of the Sea (ITLOS) Order of 3 December 2001, para. 82, at <http://www.pca-cpa.org/PDF/MOX%20Order%20no3.pdf> and the proceedings at <http://www.pca-cpa.org/ENGLISH/RPC>.

<sup>61</sup> The rights are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the express consent of the coastal State. Law of the sea Convention, Article 77(2).

<sup>62</sup> Part VI includes in ‘natural resources’ living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the sea-bed or are unable to move except in constant physical contact with the sea-bed or the subsoil: Law of the Sea Convention, Article 77(4).

<sup>63</sup> While Article 145 requires necessary measures shall be taken “with respect to activities in the Area” to ensure effective protection for the marine environment from harmful effects which may arise from such activities, this appears only to apply to minerals activities. Under Article 1(1), ‘Area’ means the sea-bed and ocean floor and subsoil thereof beyond the limits of national jurisdiction, and under Article 1(3) “activities in the Area” means all activities of exploration for, and exploitation of, the resources of the Area. Under Article 133(a), “resources” means all solid, liquid or gaseous mineral resources in situ in the Area at or beneath the sea-bed, including polymetallic nodules.

natural resources is balanced by the duty to undertake such activities pursuant to their environmental policies and in accordance with the duty to protect and preserve the marine environment.<sup>64</sup>

#### UN FISH STOCKS AGREEMENT

The 1995 UN Fish Stocks Agreement<sup>65</sup> addresses straddling and highly migratory fish stocks.<sup>66</sup> It aims to ensure the long-term conservation and sustainable use of those stocks through the effective implementation of the Law of the Sea Convention,<sup>67</sup> and emphasises a precautionary and ecosystem based approach.<sup>68</sup> It applies to straddling fish stocks and highly migratory fish stocks beyond areas under national jurisdiction,<sup>69</sup> and introduces the objectives of long-term sustainability and optimum utilization,<sup>70</sup> as well as international cooperation, as key principles of international ocean governance.<sup>71</sup> The importance of cooperation is emphasised in the chapeau of Article 5, which states that the specific measures are necessary to give effect to their duty to cooperate in accordance with the Law of the Sea Convention. Its aim stated in the preamble is highly relevant to the damage caused to vulnerable ecosystems by bottom trawling, where the Parties state they are “Conscious of the need to avoid adverse impacts on the marine environment, preserve biodiversity, maintain the integrity of marine ecosystems and minimise the risk of long-term or irreversible effects of fishing operations.”

The Fish Stocks Agreement makes it clear that a precautionary approach is expressly required in fisheries management.<sup>72</sup> Articles 5 and 6 contain a suite of requirements relevant to deep-sea bottom trawling. Article 5(c) requires states to apply the precautionary principle, Article 5(d) requires states to assess the impacts of fishing on species belonging to the same ecosystem or associated with or dependent upon the target stocks, Article 5(e) requires states to adopt, where necessary, conservation and management measures for species belonging to the same ecosystem or associated with or dependent upon the target stocks, with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened. Article 5(f) requires states to minimise catch of non-target species, including non-fish species, and minimise impacts on associated or dependent species, in particular endangered species. Named measures specifically include, to the extent practicable, the development and use of selective, environmentally safe and cost-effective fishing gear and techniques. Article 5(g) specifically requires States to protect biodiversity in the marine environment. Articles 5(j) and (k) require states to gather information and conduct research, and Article 5(l) requires states to implement and enforce conservation and management measures through effective monitoring, control and surveillance.

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<sup>64</sup> Law of the Sea Convention, Article 193.

<sup>65</sup> Agreement for the Implementation of the Provisions of the United National 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, came into force on 11 December 2001, referred to here as the “Fish Stocks Agreement”. Also known as the Straddling Stocks Agreement or UN Fisheries Agreement. See text and list of ratifications at [http://www.un.org/Depts/los/convention\\_agreements/convention\\_overview\\_fish\\_stocks.htm](http://www.un.org/Depts/los/convention_agreements/convention_overview_fish_stocks.htm).

<sup>66</sup> See Fish Stocks Agreement Articles 2 and 3.

<sup>67</sup> Fish Stocks Agreement Article 2.

<sup>68</sup> Fish Stocks Agreement Article 5.

<sup>69</sup> Fish Stocks Agreement Article 3.

<sup>70</sup> Fish Stocks Agreement Article 5.

<sup>71</sup> Fish Stocks Agreement Articles 8, 9(2), 10(1).

<sup>72</sup> Fish Stocks Agreement Articles 5(c) and 6.

Article 6 specifically requires states to apply the precautionary approach, including in 6.3(d) adopting plans which are necessary to protect habitats of special concern. Article 6.6 states that for new or exploratory fisheries, which would undoubtedly include many deep-sea fisheries, States are required to adopt, as soon as possible, cautious conservation and management measures, including, inter alia, catch limits and effort limits. The failure of States to do so in itself constitutes a breach of this Agreement, at least where such fisheries involve straddling stocks.

Gianni has suggested that many of the stocks of species taken in high seas bottom trawl fisheries, including the majority taken, which are blue ling, roundnose grenadier and smoothheads, are straddling stocks, since such fishing often takes place in or near EEZs.<sup>73</sup> It appears that a majority of the fish taken in the Northeast Atlantic deep-sea trawls is taken near the Hatton Bank and Rockall Plateau, which straddle the EEZs and the high seas,<sup>74</sup> and many of the orange roughy fisheries on the South Chatham Rise and Northwest Challenger Plateau straddle the high seas and Australian and New Zealand EEZs.<sup>75</sup> It is therefore quite arguable that deep-sea bottom trawl fishing which has taken place on straddling stocks has taken place in breach of the provisions of the Fish Stocks Agreement mentioned above, particularly Articles 5 and 6, and that the dispute resolution provisions of the Law of the Sea Convention could be invoked by concerned States.<sup>76</sup>

#### FAO COMPLIANCE AGREEMENT

The FAO Compliance Agreement deals with reflagging and other flag of convenience issues, and focuses in particular on flag State responsibility. The Compliance Agreement requires that parties must control the activities of their flagged vessels on the high seas and must ensure that their vessels do not undermine international fishery conservation and management measures. It applies to all fishing on the high seas and is not limited to straddling and migratory stocks.

Specifically, the Compliance Agreement requires that:

- Each flag State must ensure that its vessels do not engage in any activity that undermines the effectiveness of international fisheries conservation and management measures;<sup>77</sup>
- No flag State shall allow any of its vessels to be used for fishing on the high seas without that State's authorization.<sup>78</sup>
- No Party may so authorise any fishing vessel unless it is satisfied that it is able to effectively exercise its responsibilities under the Compliance Agreement in respect of that vessel.<sup>79</sup>
- Parties must cooperate to ensure that fishing vessels flying the flags of non-parties do not engage in activities which undermine the effectiveness of international fisheries conservation and management measures.<sup>80</sup>

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<sup>73</sup> Gianni, 74.

<sup>74</sup> Gianni, 74.

<sup>75</sup> Gianni, 74.

<sup>76</sup> See discussion on page 35. Of the eleven States listed by Gianni, referred to above on page 7, Australia, Spain, Russia, Portugal, Norway, Denmark, Iceland, and New Zealand are party to the Fish Stocks Agreement, as is the European Union.

<sup>77</sup> FAO Compliance Agreement Article III(1).

<sup>78</sup> FAO Compliance Agreement Article III(2).

<sup>79</sup> FAO Compliance Agreement Article III(3).

*Protecting the Deep Sea Under International Law:  
Legal Options for Addressing High Seas Bottom Trawling*

- Flag States must give information to the FAO about high seas fishing vessels.<sup>81</sup> The FAO has established the High Seas Vessel Authorization Record (HSVAR) but to date only Canada, the US, Japan, Norway, and 13 EU countries have provided data so far.<sup>82</sup>

The Compliance Agreement has many weaknesses. Its limited application is first and foremost: with only 29 Parties,<sup>83</sup> about half of which are Party to the Fish Stocks Agreement, it has not gained widespread acceptance. Most flag of convenience and flag of noncompliance states are not party and therefore not bound by the Agreement. Further, its application is largely restricted to actions taken by flag States rather than port States. Nevertheless, its provisions are binding on Parties and enforceable.<sup>84</sup> Its relevance to the issue of deep-sea bottom trawling at the moment is limited, since there are few conservation and management measures in place for the Agreement to address. However it would be relevant where there are such measures, and does require flag states to authorise vessels to fish on the high seas and to give information to the FAO about such vessels.

#### CONVENTION ON BIOLOGICAL DIVERSITY (CBD)

The CBD<sup>85</sup> restates the precautionary principle in its preamble, noting that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimise such a threat. Marine ecosystems are included in its definition of biological diversity.<sup>86</sup>

In Article 3, the CBD restates the international obligation to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or areas beyond the limits of national jurisdiction.<sup>87</sup>

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<sup>80</sup> FAO Compliance Agreement Article VIII(2).

<sup>81</sup> FAO Compliance Agreement Article VI.

<sup>82</sup> <http://www.fao.org/figis/hsvar/index.jsp>.

<sup>83</sup> See Compliance Agreement ratifications at <http://www.fao.org/legal/Treaties/012s-e.htm> and see table of Fish Stocks Agreement ratifications at [http://www.un.org/Depts/los/reference\\_files/status2003.pdf](http://www.un.org/Depts/los/reference_files/status2003.pdf).

<sup>84</sup> Of the eleven States listed by Gianni, referred to above on page 7, the European Union (for Spain and Denmark), Japan, Norway are party to the Compliance Agreement.

<sup>85</sup> See note 44 on page 7.

<sup>86</sup> “Biological diversity” means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems: CBD Article 2.

<sup>87</sup> Principle 21 of the Stockholm Declaration provides for responsibility to ensure that activities do not cause damage to the environment of other states or areas beyond the limits of national jurisdiction. Declaration of the United Nations Conference on the Human Environment, U.N. Doc. A/CONF.48/14, 7, 11 I.L.M. 1416, 1420 (1972) 1416, 1420. See generally Louis Sohn, *The Stockholm Declaration on the Human Environment*, 15 Harv. J. Int'l. L.423 (1973), and Michael Akehurst, *International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law*, N.Y.J Int'l. L. 3 (1985). See also Principle 2 of the 1992 Rio Declaration on Environment and Development, June 14, 1992, U.N. Doc. A/CONF.151/5/Rev.1(1992), 31 I.L.M. 874 (1992), and *Restatement (Third) of Foreign Relations Law*, Section 601 (1987). Philippe Sands in *Principles of International Environmental Law I* at 186 (1995) concludes that taken together Principle 21 and Principle 2 “establish the basic obligation underlying environmental law and the source of its further elaboration in rules of greater specificity.” For consequences for States of the breach of obligations, see the International Law Commission, *Responsibility of States for Internationally Wrongful Acts*, G.A. Res. 56/83, U.N. GAOR, 56th Sess., U.N. Doc. A/RES/56/83 (18 January 2002). At [http://www.un.org/law/ilc/texts/State\\_responsibility/responsibilityfra.htm](http://www.un.org/law/ilc/texts/State_responsibility/responsibilityfra.htm).

This central element of state responsibility is clearly breached in the case of deep-sea bottom trawling. The provisions of the CBD apply, in the case of processes and activities, regardless of where their effects occur, carried out under a State Party's jurisdiction or control, beyond the limits of national jurisdiction.<sup>88</sup> Activities of nationals and flagged vessels would thus be covered by the CBD as well as the Law of the Sea Convention. Moreover, under Article 3, States that assist States in bottom trawling may also be liable for harm caused by such activities.<sup>89</sup>

Parties have an obligation to cooperate, albeit 'as far as possible' and 'as appropriate', with other Parties, directly or through competent international organisations, in respect of conservation and sustainable use of biodiversity in areas beyond national jurisdiction and other matters of mutual interest.<sup>90</sup> *In situ* protected areas are provided for in Article 8, in order to protect biodiversity, and parties are required by Article 10 to adopt measures relating to the use of biological resources to avoid or minimise adverse impacts on biological diversity.<sup>91</sup> Environmental impact assessments are required for projects that are likely to have significant adverse effects on biological diversity,<sup>92</sup> and States are to promote information exchange and consultation on activities that are likely to significantly affect adversely the biological diversity of areas beyond the limits of national jurisdiction by encouraging bilateral, regional and multilateral arrangements.<sup>93</sup>

Article 22 in effect provides that where rights and obligations under any international agreement would cause a serious damage or threat to biodiversity, the CBD provisions will prevail.<sup>94</sup> When taken together with Article 22(2), which provides that Contracting Parties shall implement the CBD with respect to the marine environment consistently with the rights and obligations of States under the Law of the Sea Convention, it is clear that the CBD is concerned with marine biodiversity and that Parties shall carry out their obligations accordingly.

In 1995, the Parties to the CBD adopted the Jakarta Mandate on Marine and Coastal Biological Diversity.<sup>95</sup> The Jakarta Mandate explicitly mandates the precautionary approach<sup>96</sup> and states that parties should prevent physical alteration, destruction and degradation of vital habitats.<sup>97</sup> The

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<sup>88</sup> CBD, Article 4.

<sup>89</sup> See Principle 13 of the ILC Draft Articles of State Responsibility, above at note 87, which provide that a state which aids or assist another State in the commission of an internationally wrongful act is internationally responsible for doing so if it does so with knowledge of the circumstances of the internationally wrongful act and the act would be internationally wrongful if committed by that State.

<sup>90</sup> CBD, Article 5.

<sup>91</sup> CBD, Article 10.

<sup>92</sup> CBD, Article 14(1)(a).

<sup>93</sup> CBD, Article 14(1)(c).

<sup>94</sup> Article 22 of the CBD provides that the provisions of the Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity.

<sup>95</sup> Adopted by the Second Conference of Parties to the CBD meeting in Jakarta (November, 1995). See <http://www.biodiv.org/programmes/areas/marine/>.

<sup>96</sup> Decision II/10, Conservation and Sustainable Use of Marine and Coastal Biological Diversity, Annex II, para. 3(a), at <http://www.biodiv.org/decisions/?lg=0&dec=II/10>.

<sup>97</sup> Decision II/10 Decision II/10: Conservation and Sustainable Use of Marine and Coastal Biological Diversity, Annex I, para. 2, at <http://www.biodiv.org/decisions/?lg=0&dec=II/10>.

Mandate emphasises an ecosystem approach<sup>98</sup> and states that the precautionary approach should be used as a guidance for all activities affecting marine and coastal biological diversity.<sup>99</sup> Protected areas are endorsed.<sup>100</sup>

Decision VII/5 of the 2004 Conference of the Parties to the CBD<sup>101</sup> specifically addressed the problem of the destruction of marine biodiversity. The Decision recalled paragraph 32 (a) and (c) of the Johannesburg Plan of Implementation that called on the international community to “maintain the productivity and biodiversity of important and vulnerable marine and coastal areas, including in areas within and beyond national jurisdiction”,<sup>102</sup> noted the relevant paragraphs of General Assembly resolution 58/240,<sup>103</sup> and stated that, the Conference, being “concerned about the serious threats to the biological diversity, stresses the need for rapid action to address these threats on the basis of the precautionary approach and the ecosystem approach, in marine areas beyond the limits of national jurisdiction,<sup>104</sup> in particular areas with seamounts, hydrothermal vents, and cold-water corals, other vulnerable ecosystems and certain other underwater features, resulting from processes and activities in such areas.” Of particular note is the stressed need for rapid action. The Decision then stated that it:

61. Calls upon the United Nations General Assembly and other relevant international and regional organizations, within their mandate, according to their rules of procedure, to urgently take the necessary short-term, medium-term and long-term measures to eliminate/avoid destructive practices, consistent with international law, on scientific basis, including the application of precaution, for example, consideration on a case by case basis, of interim prohibition of destructive practices adversely impacting the marine biological diversity associated with the areas identified in paragraph 60 above [in marine areas beyond the limits of national jurisdiction]; and

62. Recommends Parties to also urgently take the necessary short-term, medium-term and long-term measures to respond to the loss or reduction of marine biological diversity associated with the areas identified in paragraph 60 above.

This Decision then amounts not only to a clear mandate for action, addressed to two different subjects: the United Nations General Assembly, and other international organisations, in paragraph 61, and individual States, in paragraph 62. It clearly calls on the international bodies to take necessary measures, including as an example an interim prohibition: in other words, a moratorium.

Paragraph 62, when viewed in light of the obligations of the parties under the CBD, can be seen as identifying that Parties should under Article 3 take action to implement their obligation to ensure that

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<sup>98</sup> Decision IV/5 (1998), Conservation and sustainable use of marine and coastal biological diversity, including a programme of work, Annex, para. 4, at <http://www.biodiv.org/decisions/?lg=0&dec=IV/5>.

<sup>99</sup> Decision IV/5 (1998), Annex, para. 4.

<sup>100</sup> Decision IV/5 (1998), Annex, para. 1, 3.

<sup>101</sup> COP Decision VII/5, Marine and coastal biological diversity, Review of the programme of work on marine and coastal biodiversity, at <http://www.biodiv.org/convention/result.aspx?id=7742>. See background Secretariat paper, UNEP/CBD/COP/7/INF/25 Management of risks to the biodiversity of seamounts and cold water coral communities beyond national jurisdiction, at <http://www.biodiv.org/doc/meetings/cop/cop-07/information/cop-07-inf-25-en.doc>.

<sup>102</sup> Decision VII/5, para. 57.

<sup>103</sup> Decision VII/5, para. 58 and 59, recalling paragraphs 51 and 52 of UNGA resolution 58/240.

<sup>104</sup> Decision VII/5, para. 60.

*Protecting the Deep Sea Under International Law:  
Legal Options for Addressing High Seas Bottom Trawling*

activities within their jurisdiction or control do not cause damage to areas beyond the limits of national jurisdiction – and this action should be rapid, in light of the ongoing destruction - and under Article 5, should cooperate for the conservation and sustainable use of biodiversity in areas beyond national jurisdiction. In addition, paragraph 62 highlights the obligations that States that have jurisdiction over areas in question (such as continental shelves) are obliged to take, as far as possible and as appropriate, under Article 8 for *in situ* conservation, such as to establish a system of protected areas or areas where special measures have to be taken to conserve biological diversity.<sup>105</sup>

The Parties in Decision VII/5 also addressed marine protected areas beyond national jurisdiction, noting that there are increasing risks to biodiversity in marine areas beyond national jurisdiction and that marine and coastal protected areas are extremely deficient in purpose, numbers and coverage in these areas.<sup>106</sup> They agreed that there is an urgent need for international cooperation and action to improve the conservation and sustainable use of biodiversity in these areas, including the establishment of further marine protected areas including areas such as seamounts, hydrothermal vents, cold-water corals and other vulnerable ecosystems.<sup>107</sup> The Parties recognised that the law of the sea provides a legal framework for regulating activities in marine areas beyond national jurisdiction.<sup>108</sup> The Parties requested the Executive Secretary to urgently collaborate with the Secretary-General of the United Nations and relevant international and regional bodies and to support any work of the General Assembly in identifying appropriate mechanisms for the future establishment and effective management of marine protected areas beyond national jurisdiction.<sup>109</sup>

Where parties to the CBD breach their obligations, the dispute resolution provisions of Article 27 can be invoked. Article 27 requires negotiation, included through a third party, and, failing success of negotiations, to conciliation under Part 2 of Annex II, or to the International Court of Justice or arbitration under Part I of Annex II if states concerned accept either as compulsory. A Conciliation Commission would render a proposal for resolution of the dispute, which the parties shall consider in good faith.<sup>110</sup> An Arbitration award, where applicable, is binding on the Parties.<sup>111</sup>

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<sup>105</sup> Decision VII/5 para. 30 urged parties to make efforts to adopt a framework of marine and protected areas as a matter of high priority, while in areas beyond national jurisdiction, agreed that there is an urgent need for international cooperation and action to improve conservation and sustainable use of biodiversity in marine areas beyond the limits of national jurisdiction, including the establishment of further marine protected areas consistent with international law, and based on scientific information, including areas such as seamounts, hydrothermal vents, cold-water corals and other vulnerable ecosystems. It was recognized in para 31 that the law of the sea provides a legal framework for regulating activities in marine areas beyond national jurisdiction.

<sup>106</sup> Decision VII/5, para. 29.

<sup>107</sup> Decision VII/5, para. 30.

<sup>108</sup> Decision VII/5, para. 31.

<sup>109</sup> Decision VII/5, para. 31.

<sup>110</sup> CBD, Annex II, Part 2, Article 5.

<sup>111</sup> CBD, Annex II, Part 1, Article 16.

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA  
(CITES)

CITES<sup>112</sup> regulates trade in endangered species by including them on various appendices. Appendix I bans commercial trade in species threatened with extinction, requiring both an export and an import permit<sup>113</sup> and Appendix II regulates international trade in species which may be threatened with extinction if trade is not controlled, imposing conditions on the grant of export permits.<sup>114</sup> No import permit is required. Appendix III is a list of species included at the request of one Party that needs the cooperation of other countries to protect the species.<sup>115</sup> Australia in 2002, supported by a number of NGOs, sought to have Patagonian and Antarctic toothfish (*Dissostichus* spp.) listed on Appendix II<sup>116</sup> but withdrew its application in the face of opposition and following an agreement with Chile on monitoring of toothfish fisheries.<sup>117</sup> CITES listing of commercial fish species continues to be a controversial topic. The FAO Committee on Fisheries (COFI) Subcommittee on the Fish Trade in February 2004 agreed<sup>118</sup> to convene a panel to assess proposals for listing or delisting of commercially exploited species to the CITES CoP13, and a Memorandum of Understanding (MoU) between FAO and CITES addressing cooperation between FAO and CITES on the issue is under discussion,<sup>119</sup> but there are fundamental differences of opinion between the respective roles of CITES and the FAO.<sup>120</sup> Seahorses (*Hippocampus* spp.), whale sharks (*Rhincodontidae*) and basking sharks (*Cetorhinus maximus*) were listed on CITES Appendix II<sup>121</sup> in 2002. Fiji, Ireland (for the EU) and the United States have proposed the inclusion of humphead wrasse (*Cheilinus undulates*), a large reef fish, in

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<sup>112</sup> Convention on International Trade in Endangered Species of Wild Fauna and Flora, signed at Washington, D.C., 3 March 1973, entered into force 1 July 1975, amended at Bonn, 22 June 1979. 993 UNTS 243, copy as amended at <http://www.cites.org/eng/disc/text.shtml>.

<sup>113</sup> CITES, Article III.

<sup>114</sup> CITES, Article IV.

<sup>115</sup> CITES, Article V.

<sup>116</sup> CoP 12, Santiago, Chile, 3-15 November 2002. See Survival Species Network, ‘Patagonian and Antarctic Toothfish’, <http://www.speciessurvivalnetwork.org/factsheets/SSN%20Toothfish%20Fact%20Sheet1.pdf> and FAO document on Patagonian toothfish (*Dissostichus eleginoides*), for details of Australia’s CITES resolution, at <http://www.fao.org/DOCREP/006/Y5261E/y5261e09.htm>.

<sup>117</sup> See US Department of the Interior, ‘United States Leads Efforts to Conserve Seahorses and Patagonian Toothfish at CITES,’ November 13 2002, at <http://www.doi.gov/news/021115.htm>.

<sup>118</sup> See background paper, ‘CITES issues with respect to international fish trade and the CITES/FAO MoU’, [ftp://ftp.fao.org/fi/document/COFI/cofift\\_9/3e.pdf](ftp://ftp.fao.org/fi/document/COFI/cofift_9/3e.pdf) and Committee on Fisheries, ‘Report of the Ninth Session of the Subcommittee on Fish Trade of the Committee on Fisheries, 10-14 February 2004’, FIIU/R736 (Tri), report at <ftp://ftp.fao.org/docrep/fao/007/y5456t/y5456t00.pdf>. Issues emphasised by Norway and Japan include listing criteria, the application of the CITES phrase ‘introduction from the sea’ and the so-called ‘look-alike clause’, CITES Article II.2(b), which provides that other species may be subject to regulation so that trade in listed species may be brought under effective control: in other words, the argument is made that processed fish products may look alike, bringing the clause into effect. See CITES Notification to the Parties 2001/37 relating to look-alike species, at <http://www.cites.org/eng/notifs/2001/037.shtml> and <http://www.cites.org/eng/notifs/2001/037A.shtml>.

<sup>119</sup> See text in Annex E of COFI Report, note 118.

<sup>120</sup> See background paper, note 118, page 3, and CITES Summary Report SC49 on the 49<sup>th</sup> Meeting of the Standing Committee, 22-25 April 2003, at <http://www.cites.org/eng/cttee/SC/49/E49-SumRep.pdf>.

<sup>121</sup> See species of fish listed on CITES appendices at <http://www.cites.org/gallery/species/fish/fishes.html>. Appendices are at <http://www.cites.org/eng/append/appendices.shtml>.

Appendix II, and Australia and Madagascar have proposed the inclusion of the great white shark, *Carcharodon carcharias*, which is currently listed on Appendix III by Australia.<sup>122</sup>

Greenpeace has found evidence of black coral (*Antipatheria* spp.)<sup>123</sup> an Appendix II species, being discarded by deep-sea bottom trawlers.

CITES has one key aspect relevant to high seas fisheries, in its application to marine resources which have been caught from the high seas and then brought into a country, as opposed to imported by means of trade. Its definition of trade includes “introduction from the sea”,<sup>124</sup> and ‘introduction from the sea’ means “transportation into a State of specimens of any species which were taken in the marine environment not under the jurisdiction of any State.”<sup>125</sup> ‘Introduction from the sea’ is different from ‘import’. The introduction from the sea of a specimen of a species on Appendix I or II requires the prior grant of a certificate from a Management Authority of the State of introduction. Such a certificate may only be granted when strict conditions have been met.<sup>126</sup>

This would then cover, for instance, any CITES listed species caught in the high seas and brought into port, and any CITES listed sedentary bycatch such as black coral, which is listed on Appendix I, which has been caught on the high seas but not from a state’s continental shelf and brought into a port.

In the EEZ, the coastal state has the rights to exploit both sedentary and non-sedentary species. The jurisdiction of the coastal state over the EEZ is defined in the Law of the Sea Convention<sup>127</sup> to include the protection and preservation of the marine environment and marine scientific research.<sup>128</sup> The coastal state has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the sea-bed and of the sea-bed and its subsoil.<sup>129</sup> So it would seem that any sedentary species taken in the EEZ are not “taken in the marine environment not under the jurisdiction of any State.”

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<sup>122</sup> See CITES, “CITES proposals on wildlife trade address over-fishing, illegal logging and recovery of large charismatic animals,” 14 June 2004, at [http://www.cites.org/eng/news/press\\_release.shtml](http://www.cites.org/eng/news/press_release.shtml).

<sup>123</sup> Greenpeace, “Rainbow Warrior returns with evidence of deep-sea destruction”, 18 June 2004, at [http://www.greenpeace.org.nz/news/news\\_main.asp?PRID=715](http://www.greenpeace.org.nz/news/news_main.asp?PRID=715).

<sup>124</sup> CITES Article I(c).

<sup>125</sup> CITES Article I(e).

<sup>126</sup> CITES Article III(5) and Article IV(5) respectively. The conditions for Appendix I specimens are that a) a Scientific Authority of the State of introduction advises that the introduction will not be detrimental to the survival of the species involved; b) a Management Authority of the State of introduction is satisfied that the proposed recipient of a living specimen is suitably equipped to house and care for it; and c) a Management Authority of the State of introduction is satisfied that the specimen is not to be used for primarily commercial purposes. The conditions for Appendix II specimens are that a) a Scientific Authority of the State of introduction advises that the introduction will not be detrimental to the survival of the species involved; and b) a Management Authority of the State of introduction is satisfied that any living specimen will be so handled as to minimize the risk of injury, damage to health or cruel treatment.

In the case of Appendix II specimens, certificates may be granted on the advice of a Scientific Authority, in consultation with other national scientific authorities or, when appropriate, international scientific authorities, in respect of periods not exceeding one year for total numbers of specimens to be introduced in such periods.

<sup>127</sup> See Law of the Sea Convention, Article 55.

<sup>128</sup> Law of the Sea Convention, Article 56. Article 59 provides for resolution of disputes over jurisdiction over the EEZ.

<sup>129</sup> Law of the Sea Convention, Article 56.

However, there is a more difficult question: whether it would apply to the landing of specimens outside the EEZ and thus caught on the high seas but where it was found on the state of landing's continental shelf outside the 200 mile EEZ.<sup>130</sup> In such a case, were the specimens "taken in the marine environment not under the jurisdiction of any State?" The coastal State exercises sovereign rights over the continental shelf for the purpose of exploring it and exploiting its natural resources, including sedentary species.<sup>131</sup> In brief, the waters are not under the jurisdiction of the coastal state but the coastal state does enjoy sovereign rights for the purpose of exploiting sedentary species. When coupled with CITES Article XIV which is intended to preserve the primacy of the Law of the Sea Convention, and the reading that 'taken in' is distinct from 'taken from', so the sedentary species were, in common parlance, taken in the high seas, CITES may apply. This would also apply the rule that a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose,<sup>132</sup> being the protection of fauna and flora. Similarly, the Law of the Sea Convention refers to flora and fauna with respect to the Area as "the flora and fauna of the marine environment."<sup>133</sup>

However a contrary argument would be that the coastal state enjoys sovereign rights over sedentary species, and thus jurisdiction, since the sovereign rights over the seabed have been described by the International Law Commission as "all rights necessary for and connected with the continental shelf...[including] jurisdiction in connection with the prevention and punishment of violations of the law."<sup>134</sup> The Australian statute defines the "marine environment" as meaning "the sea... and includes the seabed and subsoil beneath the sea."<sup>135</sup>

The seabed and ocean floor outside the continental shelf are clearly not under "national jurisdiction:" Article 1 of the Law of the Sea Convention defines the Area to mean the seabed and ocean floor and subsoil thereof beyond the limits of national jurisdiction. The provision would also cover any catch of species in the high seas which are listed – for instance, if Patagonian or Antarctic toothfish had been listed on Appendix I or II. The Certificate must be issued before the catch is landed: CITES Articles IV and V both require a 'prior grant'. However, if the bycatch is discarded it would not be caught by the provision.

The next question is whether a particular species is sedentary. The test under Article 77 of the Law of the Sea Convention is whether, at the harvestable stage, they are either immobile on or under the seabed or are unable to move except in constant physical contact with the sea-bed or the subsoil.

Crabs and scallops have been the subject of dispute. Scallops were the subject of a dispute in 1994 between the United States and Canada, where US fishing boats were fishing on the Grand Banks beyond Canada's EEZ. Scallops can propel themselves by 'clapping' their shells together, forcing water out from the corners of the hinge. Eventually US officials conceded that the Icelandic scallops

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<sup>130</sup> CITES Article XIV provides that nothing in the Convention shall prejudice the codification and development of the law of sea by the UN Conference on the Law of the Sea, (being the conference that concluded the Law of the Sea Convention), nor the present or future claims and legal views of any State concerning the law of the sea and the nature and extent of coastal and flag State jurisdiction.

<sup>131</sup> Law of the Sea Convention, Article 77.

<sup>132</sup> Vienna Convention on the Law of Treaties, signed at Vienna 23 May 1969 entered into force 27 January 1980, UN Doc A/Conf 39/28, UKTS 58 (1980), 8 ILM 679, Article 31(1).

<sup>133</sup> Law of the Sea Convention, Article 145(b).

<sup>134</sup> *ILC Yearbook* 1956, Vol. II, p. 297.

<sup>135</sup> Australian Environment Protection and Biodiversity Conservation Amendment (Wildlife Protection) Act 2001.

in question were sedentary.<sup>136</sup> Similarly, in 1968 a dispute between France and Brazil over lobsters on the Brazilian continental shelf gave rise to the question as to whether lobsters were sedentary species, and similarly Japan has refused to recognise king crabs as a sedentary species.<sup>137</sup>

Under Article 68, Part V of the Law of the Sea Convention does not apply to sedentary species, so its provisions on conservation of living resources, for instance Article 61, do not apply to such species in the EEZ. While the Preamble confirms that the object of the Convention is to promote the conservation of living resources, there remains a gap in international law which must be filled. States' obligations on the conservation of such species are thus still drawn largely from the CBD and, where applicable, CITES.

A CITES listing can provide, for instance, an important complement to Catch Documentation Schemes, where both can assist in monitoring and controlling trade in species threatened by international trade, as well as enlist customs organisations in enforcing trade prohibitions.<sup>138</sup>

In summary,<sup>139</sup> CITES has relevance where listed species are caught on the high seas. However, it may not apply where species are caught by fishing vessels in the EEZ or territorial waters, thus circumventing CITES controls, and the definitional and procedural ambiguities under international law mean that the scope of its application is uncertain at best, and is likely to be opposed by some fishing nations.<sup>140</sup>

### **Soft law instruments**

There are a number of relevant 'soft law' instruments which are not legally binding, but which give important guidance as to international standards and consensus. This paper examines the relevant aspects of the FAO Code of Conduct for Responsible Fisheries, the FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) the FAO's Technical Guidelines on the Ecosystem Approach to Fisheries (2003 Supplement), and the Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem. In addition, Chapter 17 of Agenda 21 and the Johannesburg Plan of Implementation (JPOI) contain relevant provisions.<sup>141</sup>

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<sup>136</sup> See 10 *Int'l Jl. of Marine and Coastal Law* 221-2 (1995) and E. R. Buck, "CRS Report for Congress: UN Convention on the Law of the Sea: Living Resource Provisions," September 30 1993, 5.

<sup>137</sup> See Legal Aspects of Contemporary Marine Fisheries: Convention on the Continental Shelf, at [http://cdserver2.ru.ac.za/cd/011120\\_1/Aqua/Marine%20Fisheries/chap3/conv\\_cs.htm](http://cdserver2.ru.ac.za/cd/011120_1/Aqua/Marine%20Fisheries/chap3/conv_cs.htm).

<sup>138</sup> See a 2000 briefing paper by Traffic, IUCN and WWF "Marine fish and the twelfth meeting of the Conference of the Parties to CITES, Santiago, Chile, 2000," October 2000, <http://www.iucn.org/themes/ssc/citescop12/MarinefishCOP12EN.pdf>. The paper notes various advantages of a CITES listing, including that international trade under CITES Appendix II requires non-detriment findings, and there is scope for a CITES Animals Committee 'significant trade review' where volumes are significant; CITES provides a system for monitoring trade in listed species, improving identification of fish in trade; collaboration between parties is enhanced; the membership of CITES, being over 160 parties, far exceeds membership of any RFMO; and CITES has compliance mechanisms such as recommending suspension of trade in a CITES species with a country.

<sup>139</sup> CITES also has some at least theoretical implications for the taking of bycatch on the high seas, but these may be largely academic since most bycatch is likely to be discarded.

<sup>140</sup> In 2000, a proposal by Australia to define and set up a procedure for "specimens introduced from the sea", was rejected following a secret ballot vote due to strong opposition from fish producer and consumer countries, which argued these matters should be determined by the FAO. See summary of the discussions at the 11th Conference of the CITES parties Gigiri (Nairobi – Kenya) from 10 to 20 April 2000, at <http://www.wcoomd.org/ie/cites/en/html/11conference.html>.

<sup>141</sup> At <http://daccess-ods.un.org/access.nsf/Get?Open&DS=A/CONF.199/20&Lang=E> Paragraph 32 (a) and (c) of the Johannesburg Plan of Implementation called on the international community to "maintain the productivity and biodiversity

## THE FAO CODE OF CONDUCT FOR RESPONSIBLE FISHERIES

The FAO Code of Conduct for Responsible Fisheries<sup>142</sup> is a voluntary ‘soft law’ code, developed by the FAO in October 1995. The Code is to be interpreted to be consistent with the Law of the Sea Convention and the Fish Stocks Agreement, and in accordance with other applicable rules of international law.<sup>143</sup> Four International Plans of Action (IPOAs) have been developed pursuant to the Code:<sup>144</sup> on seabirds, sharks, managing fishing capacity, and IUU fishing.

The Code demands that States and users of living aquatic resources should conserve aquatic ecosystems, notes that the right to fish carries with it the obligation to do so in a responsible manner so as to ensure effective conservation and management of the living aquatic resources,<sup>145</sup> and requires that management measures should not only ensure the conservation of species belonging to the same ecosystem or associated with or dependent upon the target species.<sup>146</sup> A precautionary approach is mandated.<sup>147</sup>

The Code addresses selective and environmentally safe fishing gear in some detail. Selective and environmentally safe fishing gear and practices are to be further developed and applied, to the extent practicable, in order to maintain biodiversity and to conserve the population structure and aquatic ecosystems and protect fish quality. Where proper selective and environmentally safe fishing gear and practices exist, they should be recognised and accorded a priority in establishing conservation and management measures for fisheries. States and users of aquatic ecosystems should minimise waste, catch of non-target species, both fish and non-fish species, and impacts on associated or dependent species.<sup>148</sup>

Management measures by States and RFMOs are to provide that catch of non-target species, both fish and non-fish species, and impacts on associated or dependent species are minimised, through measures including, to the extent practicable, the development and use of selective, environmentally safe and cost-effective fishing gear and techniques.<sup>149</sup> The performance of all existing fishing gear, methods and practices should be examined and measures taken to ensure that fishing gear, methods and practices which are not consistent with responsible fishing are phased out and replaced with more acceptable alternatives.<sup>150</sup> States should require that fishing gear, methods and practices, to the extent

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of important and vulnerable marine and coastal areas, including in areas within and beyond national jurisdiction”.  
Johannesburg Plan of Implementation on Sustainable Development.

<sup>142</sup> FAO Code of Conduct for Responsible Fisheries, at <http://www.fao.org/fi/agreem/codecond/ficonde.asp>.

<sup>143</sup> FAO Code of Conduct Article 3. It is also to be interpreted in the light of the 1992 Declaration of Cancun, the 1992 Rio Declaration on Environment and Development, and Agenda 21 Chapter 17.

<sup>144</sup> See <http://www.fao.org/fi/ipa/ipae.asp>. International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries – 1999, International Plan of Action for the Conservation and Management of Sharks - 1999 and International Plan of Action for the Management of Fishing Capacity - 1999. All three of these texts can be found at: <http://www.fao.org/docrep/006/x3170e/X3170E00.HTM>.

<sup>145</sup> FAO Code of Conduct paragraph 6.1.

<sup>146</sup> FAO Code of Conduct paragraph 6.2.

<sup>147</sup> FAO Code of Conduct paragraph 6.5.

<sup>148</sup> FAO Code of Conduct paragraph 6.5.

<sup>149</sup> FAO Code of Conduct paragraph 7.2.2.

<sup>150</sup> FAO Code of Conduct paragraph 7.6.4.

practicable, are sufficiently selective so as to minimise catch of non-target species, both fish and non-fish species, and impacts on associated or dependent species, and international cooperation should be encouraged with respect to research programmes for fishing gear selectivity, and fishing methods and strategies, dissemination of the results of such research programmes and the transfer of technology.<sup>151</sup>

Where fish stocks are exploited by two or more States, the States concerned should cooperate to ensure effective conservation and management of the resources. This should be achieved, where appropriate, through the establishment of a bilateral, subregional or regional fisheries organization or arrangement.<sup>152</sup>

Flag States should ensure that no fishing vessels entitled to fly their flag fish on the high seas unless such vessels have been issued with a Certificate of Registry and have been authorised to fish by the competent authorities. Such vessels should carry on board the Certificate of Registry and their authorization to fish.<sup>153</sup>

### THE IPOA-IUU

The objective of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA- IUU)<sup>154</sup> is to prevent, deter and eliminate IUU<sup>155</sup> fishing.<sup>156</sup> Flag States are to ensure that only vessels that are authorised may fish on the high seas.<sup>157</sup> The IPOA is relevant to high seas fishing which is at present largely unregulated, with only very minor exceptions of some minimal regulations by a few RFMOs. It is particularly relevant to fishing using destructive practices where there are no applicable conservation or management measures,<sup>158</sup> or where there are measures under applicable RFMOs but where fishing is carried out by fishing boats flagged to non-members of RFMOs.<sup>159</sup> Both instances are regarded by the IPOA-IUU as unregulated fishing.

This paper will not spell out in detail the provisions of the IPOA-IUU, but does discuss some possibilities in a different section.<sup>160</sup> Measures such as control of nationals,<sup>161</sup> monitoring, control and surveillance (MCS),<sup>162</sup> flag state responsibilities,<sup>163</sup> port state measures,<sup>164</sup> and market-related

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<sup>151</sup> FAO Code of Conduct paragraph 8.5. See also para. 12.10.

<sup>152</sup> FAO Code of Conduct paragraph 7.1.3.

<sup>153</sup> FAO Code of Conduct paragraph 8.2.2.

<sup>154</sup> Food and Agriculture Organization “International Plan Of Action To Prevent, Deter And Eliminate Illegal, Unreported And Unregulated Fishing”, (IPOA-IUU) adopted by consensus at the Twenty-fourth Session of COFI on 2 March 2001 and endorsed by the Hundred and Twentieth Session of the FAO Council on 23 June 2001, at <http://www.fao.org/DOCREP/003/y1224e/y1224e00.HTM>.

<sup>155</sup> IUU Fishing refers to illegal, unreported and unregulated Fishing.

<sup>156</sup> IPOA-IUU III, para. 8.

<sup>157</sup> IPOA-IUU, IV para. 44-50.

<sup>158</sup> IPOA-IUU para. 3.3.2.

<sup>159</sup> IPOA-IUU para. 3.3.1.

<sup>160</sup> See page 35 below.

<sup>161</sup> IPOA\_IUU paras 18, 19.

<sup>162</sup> IPOA\_IUU paras 24-26.

<sup>163</sup> IPOA\_IUU paras 34-50.

measures<sup>165</sup> are all relevant. Although much fishing on the high seas is unregulated, some States may argue that the IPOA-IUU is inapplicable on the basis that it is not illegal. However the IPOA-IUU does address this issue, with paragraph 3.4 stating that certain unregulated fishing may take place in a manner which is not in violation of applicable international law, and may not require the application of measures envisaged under the IPOA. However, as seen in this paper, it is strongly arguable that deep-sea bottom trawling does violate applicable international law, including a number of provisions in the Law of the Sea Convention, Fish Stocks Agreement and CBD. Thus the IPOA-IUU is still applicable.

#### THE FAO'S TECHNICAL GUIDELINES ON THE ECOSYSTEM APPROACH TO FISHERIES

The FAO's Technical Guidelines on the Ecosystem Approach to Fisheries (2003 Supplement), forms part of the Code of Conduct framework.<sup>166</sup> The Guidelines focus on an ecosystem approach to fisheries. They observe that the CBD is compatible and convergent with the Law of the Sea Convention, which it complements and reinforces.<sup>167</sup> The Guidelines note that "[t]he impact of some fishing gear and methods on the bottom habitat (biotic and abiotic) can often have a negative impact on the ecosystem. There is limited knowledge about this impact, however, and more research is needed to examine the extent of the impact of various gear. For gear known to produce serious impacts, the introduction of restrictions may be necessary and, where possible, new technologies that mitigate any negative impact will need to be developed."<sup>168</sup> The report notes that "[f]ishing gear that touches or scrapes the bottom during fishing operations is likely to produce negative impact on the biotic and abiotic habitats. Because only limited knowledge exists about the long-term effect of such impact, a precautionary approach is recommended in the use of high-impact fishing methods in critical habitats. Use of towed gear with reduced bottom contact is a technical option in some areas. Prohibition of certain gear in some habitats is another, e.g. trawling in coral reef and seagrass areas. A third option is to replace a high-impact fishing method with one with less impact on the bottom, e.g. trapping, long-lining or gillnetting."<sup>169</sup>

The Guidelines also discuss Marine Protected Areas (MPAs) and note that MPAs can produce considerable benefit for fisheries, can protect sedentary species, preserve some stocks from the genetic selective effects of fishing, and act as refugia for pelagic species.<sup>170</sup>

#### THE REYKJAVIK DECLARATION ON RESPONSIBLE FISHERIES IN THE MARINE ECOSYSTEM

In the Reykjavik Declaration,<sup>171</sup> the participants acknowledged that it is necessary to take immediate action to address particularly urgent problems. They concluded that this has to be done on the basis of the precautionary approach. They also concluded that it is important to advance the scientific basis for incorporating ecosystem considerations, building on scientific knowledge, and to support research and

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<sup>164</sup> IPOA\_IUU paras 42-64.

<sup>165</sup> IPOA\_IUU paras 65-76.

<sup>166</sup> FAO Technical Guidelines for Responsible Fisheries 4, Suppl. 2 (2003). At [ftp://ftp.fao.org/docrep/fao/005/y4470e/y4470e00.pdf](http://ftp.fao.org/docrep/fao/005/y4470e/y4470e00.pdf).

<sup>167</sup> FAO Technical Guidelines, Annex 1, page 77.

<sup>168</sup> FAO Technical Guidelines, page 31.

<sup>169</sup> FAO Technical Guidelines, page 32.

<sup>170</sup> FAO Technical Guidelines, page 43.

<sup>171</sup> Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem, paragraph 5, at <http://www.fao.org/docrep/meeting/004/Y2211e.htm>.

technology developments of fishing gear and practices, to improve gear selectivity and to reduce adverse impacts of fishing practices on habitat and biological diversity.

#### AGENDA 21

Even in 1992, Chapter 17 of Agenda 21<sup>172</sup> noted that the management of high seas fisheries, including the adoption, monitoring and enforcement of effective conservation measures, is inadequate in many areas and some resources are overutilised. Agenda 21 called for emphasis on multi-species management and other approaches that take into account the relationships among species, especially in addressing depleted species.<sup>173</sup> Chapter 17 also noted the need to preserve habitats and other ecologically sensitive areas.<sup>174</sup> States were called upon to prohibit dynamiting, poisoning and other comparable destructive fishing practices.<sup>175</sup>

#### THE JOHANNESBURG PROGRAMME OF IMPLEMENTATION (JPOI)

The Johannesburg Programme of Implementation or 'JPOI' endorsed the ecosystem approach to fisheries management. The Plan resolved to encourage the application by 2010 of the ecosystem approach, noting the Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem and Decision V/6 of the Conference of Parties to the CBD.<sup>176</sup> The JPOI also asserted the need to develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, and the elimination of destructive fishing practices,<sup>177</sup> and to develop national, regional and international programmes for halting the loss of marine biodiversity, including in coral reefs.<sup>178</sup>

#### **Regional Fisheries Management Organisations (RFMOs)**

The Fish Stocks Agreement embued Regional Fisheries Management Organisations, or RFMOs, with important competence to regulate straddling and migratory high seas stocks. RFMOs provide an important mechanism through which States are to cooperate in fisheries management and conservation. In fact, only those States which are members of RFMOs or similar arrangements, or which agree to apply their conservation and management measures, are to have access to the fishery resources to which those measures apply.<sup>179</sup> Non-member States are not to authorise vessels flying their flags to engage in fishing operations for straddling fish stocks or highly migratory fish stocks which are subject to the conservation and management measures established by RFMOs or arrangements.<sup>180</sup> However, this applies only to States Party to the Fish Stocks Agreement, and even

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<sup>172</sup> Agenda 21, Chapter 17, Protection of the oceans, all kinds of seas, including enclosed and semi enclosed seas, and coastal areas and the protection, rational use and development of their living resources, at <http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter17.htm>.

<sup>173</sup> Agenda 21, Chapter 17, 17.45.

<sup>174</sup> Agenda 21, Chapter 17, 17.46.

<sup>175</sup> Agenda 21, Chapter 17, 17.53.

<sup>176</sup> World Summit on Sustainable Development Plan of Implementation, at [http://www.johannesburgsummit.org/html/documents/summit\\_docs/2309\\_planfinal.htm](http://www.johannesburgsummit.org/html/documents/summit_docs/2309_planfinal.htm) (JPOI), para. 29(d).

<sup>177</sup> JPOI para. 31(c).

<sup>178</sup> JPOI para. 31(c),

<sup>179</sup> Fish Stocks Agreement Article 8(4).

<sup>180</sup> Fish Stocks Agreement Article 17(2). This means no State should authorise its vessels to fish for stocks which are managed by RFMOs or arrangements to which it is not a member or participant.

where states are party, problems with IUU fishing and flags of non compliance mean that the effect of provisions are largely illusory.

The competence of RFMOs under the Fish Stocks Agreement itself is limited to straddling stocks and highly migratory fish stocks,<sup>181</sup> and the coverage of RFMOs leaves large areas of the world's oceans unregulated. The UN Secretary-General recently reported<sup>182</sup> the gaps in coverage by RFMOs as being: the southeast Pacific Ocean for all fish stocks, and the south-west Atlantic, south-east Pacific, west-central Pacific, Indian Ocean and the Caribbean for straddling fish stocks and discrete high seas fish stocks.<sup>183</sup> The report noted that discrete high seas fish stocks "generally remain outside existing regulatory frameworks."<sup>184</sup>

Significant relevant RFMOs that can exercise competence over deep-sea fisheries are the Northwest Atlantic Fisheries Organization (NAFO), Northeast Atlantic Fisheries Commission (NEAFC), the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) and the South East Atlantic Fisheries Organization (SEAFO). A brief survey of various ocean areas and relevant RFMOs will be undertaken here. These should be considered against the background of the obligation in Article 8(2) of the Fish Stocks Agreement to "enter into consultations in good faith and without delay" particularly where there is evidence that the straddling fish stocks and highly migratory fish stocks concerned may be under threat of over-exploitation or where a new fishery is being developed for such stocks.

- In the Southwest Indian Ocean there is no RFMO with competence. Negotiations that began in 2001 are still ongoing.<sup>185</sup> Thus there currently are no international restrictions on the quantity of fish caught, methods of fishing or otherwise, in this area.<sup>186</sup>
- In the Pacific Ocean,<sup>187</sup> the Forum Fisheries Agency (FFA) provides fisheries management advice and services to member countries and oversees the sustainable management and development of tuna resources in the western and central Pacific Ocean.<sup>188</sup> It has no mandate for fisheries management as such, so is not an RFMO in the strict sense.
- Also in the Pacific, the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, the Convention of which

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<sup>181</sup> See Fish Stocks Agreement Articles 2 and 3.

<sup>182</sup> UN Report A/59/298, above note 9. See also Advance and unedited reporting material on oceans and the law of the sea (addendum to the Report of the Secretary-General, A/59/62/Add.1) at [http://www.un.org/depts/los/general\\_assembly/documents/addendum04.pdf](http://www.un.org/depts/los/general_assembly/documents/addendum04.pdf).

<sup>183</sup> UN Report A/59/298, above note 9, page 35.

<sup>184</sup> UN Report A/59/298, above note 9, page 22.

<sup>185</sup> See Third Intergovernmental Consultation on the Establishment of the South West Indian Ocean Fisheries Commission <http://www.fao.org/fi/meetings/safr/swio/2004/default.asp>.

<sup>186</sup> See case study on page 32.

<sup>187</sup> See Gianni, 60-61 for a description of deep-sea fishing in the Southwest Pacific Ocean.

<sup>188</sup> FFA website at [www.ffa.int](http://www.ffa.int). South Pacific Forum Fisheries Agency Convention, opened for signature at Honiara on 10 July 1979, entered into force 9 August 1979, at <http://svc098.bne147v.server-web.com/docs/convention.1979.pdf>. Web page is <http://www.ffa.int/www/index.cfm>. Members are Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa.

*Protecting the Deep Sea Under International Law:  
Legal Options for Addressing High Seas Bottom Trawling*

came into force this year,<sup>189</sup> addresses highly migratory fish stocks in the Western and Central Pacific Ocean, including skipjack, yellowfin, bigeye and Southern albacore tuna. But it does not cover deep-sea demersal stocks.<sup>190</sup> In the Southeast Pacific, the Galapagos Agreement<sup>191</sup> enjoys limited ratification and has for some time been the subject of proceedings before the International Tribunal for the Law of the Sea.<sup>192</sup> It could apply to species caught by bottom trawl fishing, as its objective is the conservation of living marine resources in the high seas zones of the Southeast Pacific, with special reference to straddling and highly migratory fish populations.<sup>193</sup>

- In the Tasman Sea, New Zealand and Australian vessels have been fishing for orange roughy on the high seas over the Louisville Ridge east of New Zealand since 1993, and the Northwest Challenger and Challenger Plateaus and Lord Howe Rise since 1988, with no international management in place except for the South Tasman Rise Orange Roughy Arrangement, a bilateral arrangement between Australia and New Zealand.<sup>194</sup> Fishing on the high seas has thus been largely unregulated except for the south Challenger Plateau and South Tasman Rise that are managed as straddling stocks.<sup>195</sup>
- In the Southeast Atlantic, SEAFO<sup>196</sup> was established following the Fish Stocks Agreement to address straddling stocks in high seas fisheries. SEAFO addresses stocks in the FAO's

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<sup>189</sup> Convention for the Conservation and Management of Highly Migratory Fish stocks in the Western and Central Pacific Ocean, signed at Honolulu on 5 September 2000, entered into force 19 June, 2004. Text at <http://www.ocean-affairs.com/pdf/text.pdf>.

<sup>190</sup> The definition of 'highly migratory fish stocks' in Article 1(f) means all fish stocks of the species listed in Annex 1 of the 1982 Convention occurring in the Convention Area, and such other species of fish as the Commission may determine. However, the objective of the Convention is stated in Article 2 to ensure, through effective management, the long-term conservation and sustainable use of *highly migratory fish stocks* in the western and central Pacific Ocean in accordance with the 1982 Convention and the Agreement.

<sup>191</sup> Framework Convention for the Conservation of Living Marine Resources on the High Seas of the Southeast Pacific. At <http://www.cpps-int.org/english/galapagosagreement.html>. Convention website is at <http://www.cpps-int.org/english/galapagosagreement.html>.

<sup>192</sup> In fact the only current pending case at time of writing at ITLOS is Case No. 7, *Chile v EU*, Case concerning the conservation and sustainable exploitation of swordfish stocks in the Southeast Pacific Ocean, documents at [http://www.itlos.org/cgi-bin/cases/case\\_detail.pl?id=6&lang=en](http://www.itlos.org/cgi-bin/cases/case_detail.pl?id=6&lang=en). The case was suspended for two years at the request of the parties by an order of 16 December 2003.

<sup>193</sup> Galapagos Agreement, Article 2.

<sup>194</sup> There is one bilateral arrangement between Australia and New Zealand which addresses deep-sea fisheries, being the South Tasman Rise Orange Roughy Arrangement between Australia and New Zealand. An arrangement is a cooperative mechanism established in accordance with the Law of the Sea Convention and the Fish Stocks Agreement by two or more States for the purpose of establishing conservation and management measures in a subregion or region for one or more straddling fish stocks or highly migratory fish stocks: Fish Stocks Agreement Article 1(d). See E.J. Molenaar, "The South Tasman Rise Arrangement of 2000 and other Initiatives on Management and Conservation of Orange Roughy," 16 *Int'l J. of Marine and Coastal Law* 77-118 (2001) and text at [http://www.dfat.gov.au/geo/new\\_zealand/roughy.pdf](http://www.dfat.gov.au/geo/new_zealand/roughy.pdf). Australia and New Zealand agreed to prohibit the vessels of any State which is not a signatory to the Arrangement from landing in their respective ports orange roughy caught on the high seas area of the South Tasman Rise.

<sup>195</sup> Report of the Second Ad Hoc Meeting on Management of Deepwater Fisheries Resources of the Southern Indian Ocean - Fremantle, Western Australia, 20-22 May 2002, Appendix III, Meeting Documents, Meeting Document 02/9 - Predictive modelling of demersal fish distribution in the southern Indian and Southern Oceans, at <http://www.fao.org/DOCREP/005/Y3992E/y3992e0p.htm#bm25.6>.

<sup>196</sup> Convention for the Conservation and Management of Fisheries Resources in the South East Atlantic Ocean (SEAFO Convention) signed at Windhoek, 20 April 2001. Signatories include Angola, South Africa, Namibia and the United

Statistical Area 47 in the high sea areas which straddle the EEZs of Angola, Namibia, South Africa and the United Kingdom. Species covered include alfonso, orange roughy, armourhead, wreckfish and deepwater hake. SEAFO held its first meeting early this year.<sup>197</sup> Currently, SEAFO has no measures in place to regulate any bottom trawl fisheries in its area of competence.

- In the Northeast Atlantic Ocean, NEAFC<sup>198</sup> covers the Northeast Atlantic Ocean and Arctic Ocean to the Arctic Circle, including dependent seas, except the Baltic Sea and Mediterranean Sea. NEAFC covers all fishery resources of the Convention Area, except marine mammals, sedentary species<sup>199</sup> and, insofar as they are dealt with by other international agreements, highly migratory species and anadromous stocks.<sup>200</sup> The NEAFC does have competence to regulate deep-sea bottom trawling activities but, like NAFO, its mandate explicitly excludes sedentary species, so conservation and optimum utilization of sedentary species is not within its mandate.<sup>201</sup> NEAFC has started regulating high seas bottom fisheries in the past two years<sup>202</sup> and has closed a small area to trawling for haddock intended to conserve haddock.<sup>203</sup> NEAFC has recently put into place a recommendation on limiting fishing effort on deep-sea species. That recommendation does not address damage from bottom trawling and merely caps fishing effort at effort put into deep-sea fishing in previous years for the species,<sup>204</sup> and it is unlikely to constitute a significant restraint on fishing effort.<sup>205</sup>
- Also in the Northeast Atlantic, OSPAR has included seamounts and Lophelia corals as habitats in its list of threatened and/or declining species and habitats in the Northeast Atlantic.<sup>206</sup>

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Kingdom (on behalf of St Helena and its dependencies of Tristan da Cunha and Ascension Island) and Iceland, Norway, Republic of Korea, United States of America and the European Community. Entered into force 13 April 2003. Text is at <http://www.mfmr.gov.na/seafo/seafo.htm>. <http://www.mfmr.gov.na/seafo/seafo.htm>.

<sup>197</sup> Meeting 9-13 March 2004. The EU acceded to SEAFO in December 2003.

<sup>198</sup> Convention on Future Multilateral Co-operation in North-East Atlantic Fisheries, signed on 18 November 1980, entered into force 17 March 1982, at <http://www.neafc.org/Convention.pdf>. Members are Denmark (in respect of Faroe Islands and Greenland), the European Community, Iceland, Norway, Poland and Russia.

<sup>199</sup> Sedentary species are defined as organisms which, at the harvestable stage, either are immobile or on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.

<sup>200</sup> NEAFC Convention Article 1(2).

<sup>201</sup> See for instance Article 4.

<sup>202</sup> See Gianni, 61-63.

<sup>203</sup> Recommendation IV from the 22<sup>nd</sup> Annual Meeting, effective 7 March 2004, at [http://www.neafc.org/measures/rockhall\\_2004.htm](http://www.neafc.org/measures/rockhall_2004.htm).

<sup>204</sup> Recommendation V from the 22<sup>nd</sup> Annual Meeting, effective 7 March 2004, at [http://www.neafc.org/measures/deep\\_sea\\_2004.htm](http://www.neafc.org/measures/deep_sea_2004.htm).

<sup>205</sup> See Gianni, 61-64.

<sup>206</sup> Ospar list of threatened and/or declining species and habitats, approved by Biodiversity Committee in January 2003, January 2003, adopted by OSPAR 2003, adopted under OSPAR Strategy on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area. See The Annual Report of the Oslo Commission, 2002, 2003 Volume 1, Chapter 2, Appendix 3, Reference no. 2003-15, Extract at [http://www.ospar.org/eng/doc/Chapter\\_2\\_\(BDC\)\\_Annual\\_Report\\_2002-03.doc](http://www.ospar.org/eng/doc/Chapter_2_(BDC)_Annual_Report_2002-03.doc).

Ministers have expressed particular concern about the threat to cold-water coral reefs and have pledged to ensure that steps are taken by 2005.<sup>207</sup>

- In the Northwest Atlantic, NAFO<sup>208</sup> covers all fishery resources of the Northwest Atlantic ocean area with the exception of cetaceans managed by the IWC, salmon, tuna and marlin and sedentary species of the Continental Shelf.<sup>209</sup> As such, NAFO is one of the few RFMOs which have the competence to regulate deep-sea bottom trawling activities, although its mandate explicitly excludes sedentary species.<sup>210</sup> According to Gianni, virtually all the deep-water species caught on the high seas of the Northwest Atlantic, except several thousand tons of pelagic redfish caught by mid-water trawling, are taken by bottom trawling,<sup>211</sup> and there are no regulations to protect corals or other deep-water species or habitats from bottom trawling.<sup>212</sup> The principal bottom trawl fishery for redfish is apparently unregulated, as are many other bottom trawl fisheries, particularly for roundnose and roughhead grenadier.<sup>213</sup>
- In the Southern Ocean, CCAMLR<sup>214</sup> applies to the Antarctic marine living resources of the area south of 60 degrees South latitude and to the Antarctic marine living resources of the area between 60 degrees South and the Antarctic Convergence which form part of the Antarctic marine ecosystem.<sup>215</sup> Antarctic marine living resources means the populations of fin fish, molluscs, crustaceans and all other species of living organisms, including birds, found south of the Antarctic Convergence.<sup>216</sup> The CCAMLR Convention features an ecosystem approach,<sup>217</sup> which, unlike the NEAFC and NAFO conventions, takes account of dependent and related species as well as target species. In recognition that bottom trawling not only stirs up the sediments but also destroys animals living on the sea floor, and that the effects are likely to be significant locally and long lasting, CCAMLR has banned bottom trawling for mackerel icefish

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<sup>207</sup> Bremen statement, Ministerial Meeting June 2003, para. 12, at [http://www.ospar.org/eng/html/md/Bremen\\_statement\\_2003.htm](http://www.ospar.org/eng/html/md/Bremen_statement_2003.htm).

<sup>208</sup> Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, done at Ottawa, 24 October 1978, entered into force on 1 January 1979, at [http://www.nafo.ca/About/MANDATE/Convention\\_2003.exe](http://www.nafo.ca/About/MANDATE/Convention_2003.exe). Members include Bulgaria, Canada, Cuba, Denmark (in respect of Faroe Islands and Greenland), European Community, Estonia, France (in respect of St. Pierre and Miquelon), Iceland, Japan, Korea (Rep. of), Latvia, Lithuania, Norway, Poland, Romania, Russia, Ukraine, and the United States.

<sup>209</sup> NAFO Convention Article I(4). Sedentary species are defined as organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or subsoil.

<sup>210</sup> See for instance NAFO Convention Article II and VII. Thus, the conservation of sedentary species as such is not within its mandate.

<sup>211</sup> Gianni, 65.

<sup>212</sup> Gianni, 65.

<sup>213</sup> Gianni, 64.

<sup>214</sup> Convention on the Conservation of Antarctic Marine Living Resources, done at Canberra, 20 May 1980, entered into force 7 April 1982. Text at <http://www.ccamlr.org/pu/e/pubs/bd/pt1.pdf>. Members include Argentina, Australia, Belgium, Brazil, Chile, European Community, France, Germany, India, Italy, Japan, Korea (Rep. of), New Zealand, Norway, Poland, Russia, South Africa, Spain, Sweden, Ukraine, United Kingdom, United States, and Uruguay.

<sup>215</sup> CCAMLR Article I(1).

<sup>216</sup> CCAMLR Article I(2).

<sup>217</sup> CCAMLR Article III(c) and IX(2)(i).

(*Champscephalus gunnari*) around South Georgia<sup>218</sup> as well as for a number of demersal fish that are taken only by bottom trawling.<sup>219</sup> CCAMLR also has measures in place limiting the number of bottom trawls in a location, requiring sampling of the benthos *in situ* and a comparison of it with benthos brought up in a trawl.<sup>220</sup> As such, it has been characterised as the most comprehensive measure in place in relation to bottom trawl fishing in the high seas.<sup>221</sup>

- In the Mediterranean, the General Fisheries Commission for the Mediterranean, or GFCM, applies to all marine living resources in the Mediterranean Sea, as well as, under the amended 1997 Agreement, the Black Sea.<sup>222</sup> It exists to promote the development, conservation and management of living marine resources and to formulate and recommend conservation measures and would have competence to regulate bottom trawling in the region.<sup>223</sup> However it has apparently not exercised this competence to date.

It is regrettable that the coverage of RFMOs is so limited, and that even where RFMOs do have competence, measures addressing bottom trawling are extremely limited.

### **National regulation of deep-sea bottom trawling**

A number of countries have taken action to address deep-sea trawling on seamounts within their own waters. In 2001, New Zealand closed 19 of an estimated 860 seamounts<sup>224</sup> in its EEZ<sup>225</sup> to bottom trawl fishing.<sup>226</sup> Australia<sup>227</sup> and Norway have closed areas of *Lophelia* coral reefs to bottom trawl

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<sup>218</sup> See Conservation Measure 42-01 (2003), "Limits on the Fishery for *Champscephalus gunnari* in Statistical Subarea 48.3 in the 2003/04 Season," stating that the use of bottom trawls in the directed fishery for *Champscephalus gunnari* is prohibited, at <http://www.ccamlr.org/pu/e/pubs/cm/03-04/42-01.pdf>, Conservation Measure.

<sup>219</sup> See CCAMLR, "CCAMLR's Ecosystem Approach in Practice," at <http://www.ccamlr.org/pu/E/pubs/am/manifest/p4.htm>.

<sup>220</sup> CCAMLR Conservation Measures 43-04 (2003), Annex 43-04/A, Research and Data Collection Plans, §4, at <http://www.ccamlr.org/pu/E/pubs/cm/03-04/43-04.pdf>.

<sup>221</sup> Gianni, 66.

<sup>222</sup> 1949 Agreement for the establishment of a General Fisheries Council for the Mediterranean, signed at Rome 24 September 1949, entered into force 20 February 1952, as amended in 1963, 1976 and 1997. 1997 Amendment entered into force 29 April 2004 for members accepting the amendment. Text at [http://www.fao.org/fi/body/rfb/GFCM/gfcm\\_basic.htm](http://www.fao.org/fi/body/rfb/GFCM/gfcm_basic.htm). See FAO webpage at [http://www.fao.org/fi/body/rfb/gfcm/gfcm\\_home.htm](http://www.fao.org/fi/body/rfb/gfcm/gfcm_home.htm).

<sup>223</sup> See GFCM 1997 Agreement, Articles III, V. The GFCM covers FAO Statistical Area 37. See [http://www.fao.org/fi/body/rfb/GFCM/gfcm\\_mandate.htm](http://www.fao.org/fi/body/rfb/GFCM/gfcm_mandate.htm).

<sup>224</sup> See Greenpeace New Zealand, "Setting the record straight – Greenpeace responds to Orange Roughy Management Company," 4 June 2004, at [http://www.greenpeace.org/nz/news/news\\_oceans\\_item.asp?PRID=706](http://www.greenpeace.org/nz/news/news_oceans_item.asp?PRID=706).

<sup>225</sup> Apparently one seamount is outside New Zealand's EEZ. See statement in Parliament of NZ Fisheries Minister David Benson-Pope on 1 September 2004, at <http://www.scoop.co.nz/mason/stories/PA0409/S00027.htm>. As such this may be the first example of a country exercising its competence to protect its sedentary species on its continental shelf outside its EEZ.

<sup>226</sup> See New Zealand Ministry of Fish press release 7 September 2000, "Safeguarding undersea mountains", at [www.fish.govt.nz/current/press/pr080900\\_2.htm](http://www.fish.govt.nz/current/press/pr080900_2.htm).

<sup>227</sup> Australia in 1999 designated an area south of Tasmania containing 12 seamounts off limits to bottom trawling. Gianni, 68.

*Protecting the Deep Sea Under International Law:  
Legal Options for Addressing High Seas Bottom Trawling*

fishing following extensive damage.<sup>228</sup> Canada closed areas off Nova Scotia to bottom trawling in May 2004,<sup>229</sup> the United States closed part of the Oculina Banks to bottom fishing in 1994 and extended the protected area in 2000.<sup>230</sup> Ireland<sup>231</sup> has surveyed its seamounts.<sup>232</sup>

The EU closed the Darwin Mounds off Scotland to bottom trawling in March 2004.<sup>233</sup> On the other hand, it has recently opened the seas in the Azores EEZ to deep-sea bottom trawling. In October 2003, the EU Fisheries Council adopted a regulation, known as the Western Waters Agreement,<sup>234</sup> which removed restrictions on gear type or limits on the types of activities allowed for fishing within the Azores and thus opened the area for bottom trawling starting on 1 August. However, the EU has acknowledged that the waters around the Azores include deepwater coral aggregations, thermal vents and carbonate mounds which give shelter and food to a highly diversified fauna and flora and that scientific evidence shows that such habitats are in need of special protection, especially against the physical damage caused by bottom trawls.<sup>235</sup> The EU has proposed a regulation<sup>236</sup> prohibiting deep-water bottom trawling in the waters around the Azores (as well as Madeira and the Canary Islands), but the regulation has been delayed and in August was proposed as an interim measure.<sup>237</sup>

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<sup>228</sup> See Marine Conservation Biology Institute, “International Approaches to Protection of Deep-Sea Corals,” [http://www.mcbi.org/destructive/International\\_DSC\\_Protections.pdf](http://www.mcbi.org/destructive/International_DSC_Protections.pdf), Norwegian Institute of Marine Research estimates that 30-50% of cold-water corals of the Norwegian continental shelf have been damaged by bottom trawling, at [http://www.imr.no/coral/fishery\\_impact.php](http://www.imr.no/coral/fishery_impact.php) and Gianni, 68.

<sup>229</sup> See Fisheries and Oceans Canada website on the Gully Marine Protected area at [http://www.dfo-mpo.gc.ca/media/infocus/2004/20040512\\_e.htm](http://www.dfo-mpo.gc.ca/media/infocus/2004/20040512_e.htm).

<sup>230</sup> See NOAA, “Deep water Corals”, at <http://www.coris.noaa.gov/about/deep/deep.html> and the NOAA Final Rule, Amendment 4 to the Fishery Management Plan for Coral, Coral Reefs and Live/Hard Bottom Habitats of the South Atlantic Regions (Coral FMP), Federal Register 65 No. 115, June 14, 2000.

<sup>231</sup> Ireland has mapped its deep-sea coral habitats and listed sites for future protected areas. Marine Conservation Biology Institute, *Ibid*.

<sup>232</sup> Gianni, 68. The United States has closed an area off the Atlantic coast to bottom trawling, following extensive destruction. Gianni, 68 and see NOAA, at <http://www.coris.noaa.gov/about/deep/deep.html>.

<sup>233</sup> Council Regulation (EC) No. 602/2004, amending Regulation (EC) No 850/98 as regards the protection of deepwater coral reefs from the effects of trawling in an area north west of Scotland, Article 1 (22 March 2004). OJ L 97/30 (1 April 2004), at <http://europa.eu.int/cgi-bin/eur-lex/udl.pl?REQUEST=Seek-Deliver&SERVICE=eurlex&COLLECTION=oj&LANGUAGE=en&DOCID=2004I097p00300031>. See discussion by Gianni of the process, 69.

<sup>234</sup> Council Regulation (EC) No. 1954/2003, 4 November 2003, OJ L 289/1 on the management of the fishing effort relating to certain Community fishing areas and resources and modifying Regulation (EC) No 2847/93 and repealing Regulations (EC) No 685/95 and (EC) No 2027/95. At <http://europa.eu.int/cgi-bin/eur-lex/udl.pl?REQUEST=Seek-Deliver&LANGUAGE=en&SERVICE=eurlex&COLLECTION=oj&DOCID=2003I289p00010007>.

<sup>235</sup> See EU Commission press release of 3 February 2004, “Protecting deep-water coral reefs: Commission proposes ban on bottom-trawl fishing around Azores, Madeira and Canary Islands”, at [http://euro.eu.int/comm/fisheries/news\\_corner/press/inf04\\_04\\_en.htm](http://euro.eu.int/comm/fisheries/news_corner/press/inf04_04_en.htm).

<sup>236</sup> European Commission proposal on 3 February 2004, Com (2004) 58 Final, at [http://euro.eu.int/comm/fisheries/doc\\_et\\_publ/factsheets/legal\\_texts/doccom/en/com\\_04\\_58\\_en.pdf](http://euro.eu.int/comm/fisheries/doc_et_publ/factsheets/legal_texts/doccom/en/com_04_58_en.pdf).

<sup>237</sup> See EU “Commission proposal for protection of coral reefs around Azores, Madeira and Canary Islands and changes to North Sea Haddock rules,” 16 August 2004, at [http://euro.eu.int/comm/fisheries/news\\_corner/press/inf04\\_36\\_en.htm](http://euro.eu.int/comm/fisheries/news_corner/press/inf04_36_en.htm) and see <http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/04/1034&format=PDF&aged=0&language=EN&guiLanguage=en>.

The legislative process has been accompanied by litigation. The Autonomous Region of the Azores applied to the European Court of First Instance seeking the partial annulment of the Western Waters Regulation, as well as for interim measures to *inter alia* prevent bottom trawling.<sup>238</sup> The Court denied the application for interim measures,<sup>239</sup> on the grounds that the Azores could apply for emergency measures.<sup>240</sup> The President of the Court did acknowledge, and it was not contested, that bottom trawling can have significant negative consequences by destroying sensitive marine ecosystems such as coral reefs.<sup>241</sup> The Azores did apply for emergency measures, and the European Commission denied the request on 19 July. The case continues.

### **Problems with the current regime**

Whereas the vast majority of enforcement of fisheries regulations is carried out by coastal states, much deep-sea fishing is carried out on the high seas, where current international law gives coastal States no jurisdiction to regulate fisheries unilaterally.

While in theory, the ecosystem based management and precautionary approach of the Fish Stocks Agreement could enable appropriate management of such species, if it were to cover discrete stocks, this would require that:

- (a) RFMOs were in place to cover all fished areas,
- (b) there was universal or at least widespread adherence by fishing States,
- (c) measures were implemented and enforced by RFMOs,
- (d) there was effective coordination among RFMOs, between RFMOs and States and between States and
- (e) States did implement the measures and took enforcement monitoring and enforcement action themselves.

In practice, the limited coverage and application of RFMOs, IUU fishing, as well as the vulnerability of target species and ecosystem damaged by the fishing, has lead to serious depletion of such species and damage to biodiversity. Due to the demersal nature of most targeted deep-sea species, extensive use of bottom trawling has had serious and probably irreversible effects, including destruction of coral reefs and other vulnerable species.

These gaps in the regulatory framework have been exacerbated by lack of scientific information. Gianni cites gaps in knowledge that must be addressed before the sustainability of deep-sea fish stocks and the protection of vulnerable deep-sea habitats and biodiversity from bottom trawling on the high seas can be ensured.<sup>242</sup> These include:

- *Mapping and sampling*: mapping and sampling of seamount ecosystems, cold-water corals and other vulnerable deep-sea habitats along continental margins and deep ocean areas under the

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<sup>238</sup> Autonomous Region of the Azores v Council of the European Union Case T37/04 R.

<sup>239</sup> Decision 7 July 2004, at <http://curia.eu.int/jurisp/cgi-bin/form.pl?lang=en&Submit=Submit&docrequire=alldocs&numaff=T-37%2F04&datefs=&datefe=&nomusuel=&domaine=&mots=&resmax=100>. See European Court of First Instance Press Release No. 54/04, 8 July 2004, at <http://www.curia.eu.int/en/actu/communiqués/cp04/aff/cp040054en.pdf>.

<sup>240</sup> Case T37, para. 194.

<sup>241</sup> Case T37, pa. 147.

<sup>242</sup> Gianni, iv.

high seas, to enable further identification of biodiversity hotspots beyond the national EEZs.<sup>243</sup> However, should such work be carried out under the current regime, there would be little to stop trawlers exploiting the mapping and other information to go and fish in the areas.

- *Data on species*: Data on catch, bycatch and areas fished to provide information on high seas bottom fisheries and data on the biology of targeted and other species
- *Industry data*: Information on the vessels and states involved in high seas bottom fishing.

### **Case Study: the Southwest Indian Ocean**

An example of the consequences of the gap in international fisheries management for high seas fisheries is afforded by the recent experience in the Southwest Indian Ocean where there is no RFMO in place.<sup>244</sup> Orange roughy was found there by New Zealand and Australian vessels in 1999, and according to a 2002 FAO report,<sup>245</sup> vessels from several nations soon began to target the fishery and vessel numbers rapidly expanded from 7 in 1999 to more than 40 in 2000. These included vessels flagged to New Zealand, Australia, South Africa, Namibia, Japan, and the European Union.<sup>246</sup>

In early 2001, the fishery was yielding around 50,000 tonnes of fish, but by 2002, the FAO was reporting that recent catches had been low.<sup>247</sup> Catches by New Zealand vessels, for instance, plummeted from 17,000 tonnes in 2000 to 1400 in 2001,<sup>248</sup> and it has been concluded that most of the stocks or populations of fish targeted appear to have been depleted or to have collapsed by 2002.<sup>249</sup> As of 2002, no data for deepwater species taken by EU vessels had been reported to the Commission, despite the obligation to do so and the belief that EU trawlers had been operating in the study area.<sup>250</sup>

According to the FAO report, the remaining orange roughy is considered to be ecologically unproductive with little potential for rapid replacement of reduced biomass,<sup>251</sup> and sustainable catch rates for orange roughy are only 2 % of original biomass, which is much lower than for most shelf species.<sup>252</sup> Oreos, cardinal fish and ruby fish have the same characteristics, with similar implications - i.e. the sustainable harvest level of these stocks is likely to be relatively low.<sup>253</sup> It was noted that

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<sup>243</sup> Gianni, iv.

<sup>244</sup> See page 25 above.

<sup>245</sup> See FAO, Report of the Second Ad Hoc Meeting on Management of Deepwater Fisheries Resources of the Southern Indian Ocean - Fremantle, Western Australia, 20-22 May 2002, at <http://www.fao.org/DOCREP/005/Y3992E/y3992e00.htm>.

<sup>246</sup> See country reports in the FAO report, paras. 12-39.

<sup>247</sup> FAO report, Appendix III, Meeting Documents, Meeting Document 02/9 - Predictive modelling of demersal fish distribution in the southern Indian and Southern Oceans, at <http://www.fao.org/DOCREP/005/Y3992E/y3992e0p.htm#bm25.6>.

<sup>248</sup> FAO report, Meeting Recommendations, paras 31, 32.

<sup>249</sup> Gianni, page 60.

<sup>250</sup> FAO report, para. 30.

<sup>251</sup> FAO report, para. 50, reporting comments of Malcolm Clark.

<sup>252</sup> Ibid.

<sup>253</sup> FAO report, para. 80.

there is no active fisheries management in the area in question.<sup>254</sup> The FAO report on the issue concluded that “given the experience of management of fisheries for these deepwater species in other oceans of the world, i.e. the rapid depletion and commercial extirpation of many fisheries for these species, there is an **urgent** need to introduce effective management measures to prevent fisheries in the Southern Indian Ocean for these species from suffering the same fate”.<sup>255</sup>

In summary, although experience had already shown that the targeted species had to be managed carefully to prevent depletion, fishing had been carried out for some three years with no active fisheries management and no reporting of catches by some countries such as European Union countries. New Zealand has in fact stated that the lack of a RFMO means that it is legally restricted in its ability to provide fishing data to the FAO.<sup>256</sup> If true, this may place New Zealand in breach of the FAO Compliance Agreement, which does require States give FAO information about vessels fishing in the high seas.<sup>257</sup>

The Southwest Indian Ocean example is a disturbing example of the failure of fishing States regarded as being among the most responsible,<sup>258</sup> to sustainably manage fisheries, either on a national basis or through a RFMO or international arrangement. The fact that an RFMO has still not been agreed suggests that the States involved have not complied with their obligation in Article 8(2) of the Fish Stocks Agreement to enter into consultations in good faith and without delay, particularly where there is evidence that the straddling fish stocks and highly migratory fish stocks concerned may be under threat of over-exploitation or where a new fishery is being developed for such stocks.

#### **CURRENT OPTIONS FOR ADDRESSING DEEP-SEA BOTTOM TRAWLING**

Measures to address deep-sea bottom trawling are hampered by the lack of clear and enforceable international norms, by the lack of comprehensive scientific information and by lack of action by RFMOs and by coastal States.

##### **The option of a moratorium**

The urgent need to protect seamounts, cold water coral reefs and other vulnerable ecosystems in the deep-sea has been recognised by the international community. Failure to take effective urgent action is likely to cause the extinction of an unknown number of species, the irreversible destruction of vulnerable habitats, and depletion, possibly irreversibly, of fish stocks.

The international community has the responsibility to take appropriate action to protect the marine environment. Numerous expressions of opinion have made it clear that the problem is urgent. The UN General Assembly in 2003 called upon the international community urgently to investigate ways to address the risks to the vulnerable ecosystems and biodiversity of the deep-sea.

The Parties to the CBD in turn called on the United Nations to urgently take the necessary short-term, medium-term and long-term measures to eliminate or avoid destructive practices, consistent with international law, on scientific basis, including the application of precaution. They gave one example,

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<sup>254</sup> FAO report, para. 78.

<sup>255</sup> FAO report, Meeting Recommendations, para. 110.

<sup>256</sup> FAO report, Meeting Recommendations, paras 70.

<sup>257</sup> FAO Compliance Agreement, Article VI, and see page 13.

<sup>258</sup> See footnote 21 on page 5.

of a case by case basis, interim prohibition of destructive practices adversely impacting the deep-sea marine biological diversity.

Whether the solutions to the problems associated with deep-sea bottom fishing on the high seas, and the identified gaps in regulation of high seas fishing, including sustainability of the targeted stocks and the impact on biodiversity, will involve new governance regimes or adaptation of existing regimes such as the Fish Stocks Agreement, the solutions will take time. In the meantime, destruction is continuing, and may well accelerate. Therefore interim measures are clearly necessary to address the immediate threat posed to vulnerable ecosystems and to the sustainability of fish stocks by bottom trawl deep-sea fishing.

The statement of concern by over 1,000 deep-sea scientists in February 2004 urged the United Nations and appropriate international bodies to establish a moratorium on bottom trawling on the high seas,<sup>259</sup> and ICES has advised that the only proven method of preventing damage to deep-water biogenic reefs from fishing activities is through spatial closures to towed gear that potentially impacts the ocean floor.<sup>260</sup>

A moratorium was discussed at the United Nations Open-Ended Consultative Process on Oceans and the Law of the Sea (UNICPOLOS)<sup>261</sup> which reported<sup>262</sup> that a suggestion was made that the General Assembly should adopt a moratorium for high seas bottom trawling as an interim measure for the conservation of deep-sea biodiversity until a lasting solution could be devised by the international community, but that some delegations opposed such a global moratorium on high seas bottom trawling.

Such a moratorium under the auspices of the General Assembly would be a fulfilment of the obligation to co-operate under Article 5 of the CBD in respect of areas beyond national jurisdiction for the conservation and sustainable use of biological diversity. Such a moratorium would also be in fulfilment of the obligation under Article 118 of the Law of the Sea Convention to co-operate in the conservation and management of living resources in the areas of the high seas, and the obligation under Article 197 to co-operate on a global basis through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with the Law of the Sea Convention, for the protection and preservation of the marine environment.

Implementation and observance of such a moratorium would be in fulfilment of the responsibility under Article 3 of the CBD to ensure that activities within their jurisdiction or control do not cause damage to the environment of areas beyond the limits of national jurisdiction. Observance would also be in fulfilment of the duties under Article 117 of the Law of the Sea Convention of the duty to take, or to co-operate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas.

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<sup>259</sup> See footnote 38 on page **Error! Bookmark not defined.** above.

<sup>260</sup> See footnote 39 on page **Error! Bookmark not defined.** above.

<sup>261</sup> Website at [http://www.un.org/Depts/los/consultative\\_process/consultative\\_process.htm](http://www.un.org/Depts/los/consultative_process/consultative_process.htm).

<sup>262</sup> Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its fifth meeting: Letter dated 29 June 2004 from the Co-Chairpersons of the Consultative Process addressed to the President of the General Assembly, A/59/122 (1 July 2004) at [http://www.un.org/Depts/los/consultative\\_process/consultative\\_process.htm#A/59/122](http://www.un.org/Depts/los/consultative_process/consultative_process.htm#A/59/122) and <http://daccess-ods.un.org/access.nsf/Get?Open&DS=A/59/122&Lang=E>.

*Protecting the Deep Sea Under International Law:  
Legal Options for Addressing High Seas Bottom Trawling*

There are two clear precedents for such a moratorium: the driftnets moratorium in 1992, which is detailed below, and before that, the moratorium on seabed mining in 1969 in resolution 2574.<sup>263</sup> The latter resolution called for a conference to review the regimes of the high seas, continental shelf and other relevant regimes, and to arrive at a clear definition of the area of the seabed and ocean floor which lies beyond the limits of national jurisdiction. The resolution then declared that Pending the establishment of the aforementioned international regime:<sup>264</sup>

(a) States and persons, physical or juridical, are bound to refrain from all activities of exploitation of the resources of the area of the sea-bed and ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction;

(b) No claim to any part of that area or its resources shall be recognized.

While many northern States voted against the resolution, it was passed by sixty-two votes to twenty-eight, with twenty-eight abstentions.<sup>265</sup> Despite the split support of the resolution, the resolution was followed the next year by a Declaration of Principles Governing the Sea bed and Ocean Floor which was adopted by 108 votes to nil, with fourteen abstentions.<sup>266</sup> However it was not until 1982 that Part XI of the Law of the Sea Convention was concluded, it was not until 1994 that it entered into force, and it was not until 1996 that the Implementation Agreement entered into force.<sup>267</sup>

The United Nations General Assembly has laid the groundwork for measures addressing the destruction of biodiversity in its annual Oceans and the law of the sea resolutions. In 2002, the General Assembly called upon intergovernmental organizations including the FAO, Secretariat of the CBD and the UN Secretariat “to consider urgently ways to integrate and improve, on a scientific basis, the management of risks to marine biodiversity of seamounts and certain other underwater features within the framework of the [Convention on the Law of the Sea].”<sup>268</sup>

This was followed the following year in 2003, reiterating its 2002 call, and further inviting relevant international as well as regional bodies to<sup>269</sup>

investigate urgently how to better address, on a scientific basis, including the application of precaution, the threats and risks to vulnerable and threatened marine ecosystems and biodiversity in areas beyond national jurisdiction; how existing treaties and other relevant instruments can be used in this process consistent with

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<sup>263</sup> UN General Assembly Resolution 2574 (XVII) of 15 December 1989, at <http://www.dal.ca/~wwwlaw/kindred.intllaw/Res2574.htm>.

<sup>264</sup> GA Resolution 2574, Part D.

<sup>265</sup> States voting against included Australia, Canada, France, Japan, the Netherlands, Norway, the Soviet Union, the United Kingdom and the United States. See C. Hyslop, “Two major challenges to the creation of Non-Jurisdictional Marine Protected Areas: Freedom of the High Seas Doctrine and the Common Heritage Mankind Principle,” <http://www.utas.edu.au/government/APSA/CHislopfinal.pdf>, 15.

<sup>266</sup> UN General Assembly Resolution 2749 (XXV), Declaration of Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction, 17 December 1970, at <http://www.dal.ca/~wwwlaw/kindred.intllaw/Res2749.htm>. See R. R. Churchill and A. V. Lowe, *The Law of the Sea* (3<sup>rd</sup> Ed.), 1999, 227.

<sup>267</sup> The Agreement relating to the implementation of Part XI of the Convention entered into force on 28 July 1996.

<sup>268</sup> UN General Assembly Resolution on Oceans and the Law of the Sea, A/RES/57/151 (12 December 2002), at <http://daccess-ods.un.org/access.nsf/Get?Open&DS=A/RES/57/141&Lang=E>, para. 56.

<sup>269</sup> UN General Assembly Resolution on Oceans and the law of the sea, A/RES/58/240 (23 December 2003), at <http://daccess-ods.un.org/access.nsf/Get?Open&DS=A/RES/58/240&Lang=E>, § 51 and 52.

international law, in particular with the Convention, and with the principles of an integrated ecosystem-based approach to management, including the identification of those marine ecosystem types that warrant priority attention; and to explore a range of potential approaches and tools for their protection and management.

The General Assembly requested the Secretary-General to report in his 59<sup>th</sup> Session report on threats and risks to such marine ecosystems and biodiversity in areas beyond national jurisdiction, as well as details on any conservation and management measures in place at the global, regional, subregional or national levels addressing these issues.<sup>270</sup>

The Resolution also reaffirmed the efforts of States to develop and facilitate the use of diverse approaches and tools for conserving and managing vulnerable ecosystems, including the establishment of marine protected areas.<sup>271</sup>

Shortly before, in November 2003, the General Assembly had requested the UN Secretary-General, in his next report concerning fisheries to include a section outlining current risks from fishing to the marine biodiversity of vulnerable marine ecosystems including seamounts and coral reefs as well as detailing any conservation and management measures in place at the global, regional, subregional or national levels addressing these issues.<sup>272</sup>

This year, the United Nations Open-Ended Consultative Process on Oceans and the Law of the Sea (UNICPOLOS) reported that

“75. It was generally agreed that high seas bottom trawling was harmful to deep-sea marine biodiversity and had adverse effects on vulnerable marine ecosystems, such as seamounts and cold and deep water corals. The need for improved governance of deep-sea fisheries resources and better protection of deep-sea vulnerable marine ecosystems and associated biodiversity was underlined. It was pointed out that high seas bottom trawling represented also an immediate and pressing threat to marine biodiversity and ecosystems within EEZs, since almost half the seamounts and a substantial percentage of deepwater corals and other sensitive ecosystems occurred inside areas under national jurisdiction.”<sup>273</sup>

However, despite this consensus, no firm recommendation for a moratorium was made, due to an inability to reach consensus:

“77. With respect to the suggestion that the General Assembly should adopt a moratorium for high seas bottom trawling as an interim measure for the conservation of deep-sea biodiversity until a lasting solution could be devised by the international community, although some delegations and a number of nongovernmental organizations, were sympathetic to the suggestion, other delegations opposed a global moratorium on high seas bottom trawling.”

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<sup>270</sup> Ibid., § 52.

<sup>271</sup> Ibid., § 54.

<sup>272</sup> UN General Assembly Resolution 58/12 on Sustainable fisheries, A/RES/58/14 (24 November 2003), at <http://daccess-ods.un.org/access.nsf/Get?Open&DS=A/RES/58/14&Lang=E>.

<sup>273</sup> Ibid., para. 75.

According to this Report, the objections opposing a global moratorium on high seas bottom trawling were as follows:<sup>274</sup>

1. A global moratorium would put unnecessary restrictions on the interests of the fishing industry,
2. They raised questions regarding enforcement of the legal regime of the high seas.
3. They raised concerns regarding the scope of the proposed restrictive measures
4. They raised concerns about how those measures would be balanced with States' rights and obligations on the high seas.
5. They considered that any ban should be part of a larger regime for the conservation of high seas marine living resources, including the critical role of RFMOs in addressing bottom trawling.

In addition, there were some separate concerns:

1. Some delegations indicated that should a moratorium be retained, a timebound region-by-region ban, or an area-by-area ban would be preferable than a global moratorium on bottom-trawling to avoid unnecessary restrictions on areas where bans were not justified and to minimise hardship on fishers. Such bans could be lifted on a regional basis once efficient conservation and management measures were implemented.<sup>275</sup>
2. The same delegations pointed out that temporary closure for fisheries management purposes were already accepted widely as tools in sustainable fisheries management and were provided in the UN Fish Stocks Agreement.<sup>276</sup>
3. Other delegations said that the imposition of a global moratorium on high seas bottom trawling by the General Assembly was inappropriate before adequate marine scientific research could be conducted for a better understanding of the state of deep-sea marine ecosystems, especially vulnerable marine ecosystems such as seamounts. Those delegations emphasized instead the key roles that FAO and relevant RFMOs should play in the conservation and sustainable use of fishery resources and the protection of deep-sea biodiversity. In this respect, they suggested that a recommendation be forwarded to the General Assembly calling for a strengthening of collaboration between FAO and RFMOs, on the one hand, and States, on the other, to assess the impacts of bottom trawling on the biodiversity of vulnerable marine ecosystems and identify the areas that needed appropriate action.<sup>277</sup>

What is the General Assembly to do in the face of such conflicting recommendations?

### **Objections to a moratorium**

It is submitted that the starting point is the consensus that high seas bottom trawling is harmful to deep-sea marine biodiversity and has adverse effects on vulnerable marine ecosystems. Clearly this is a mandate for action. It is thus useful to assess the objections given to the proposed moratorium.

#### **THE FIRST OBJECTION: A GLOBAL MORATORIUM IS UNNECESSARILY RESTRICTIVE**

The first objection, that a global moratorium would put unnecessary restrictions on the interests of the fishing industry, is relatively straightforward. There is no authority that states can, let alone must, permit or condone activities which are harmful to the marine environment because action to prevent

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<sup>274</sup> Ibid., para. 77.

<sup>275</sup> UNICPOLOS, para. 78.

<sup>276</sup> UNICPOLOS, para. 78.

<sup>277</sup> UNICPOLOS, para. 78.

these actions will put ‘unnecessary’ restrictions on the fishing industry. The fact that there is a consensus that harm is being done itself answers the question as to whether restrictions are necessary. Without condition or qualification, States have the obligation to protect and preserve the marine environment.<sup>278</sup> States also have a clear obligation to co-operate on a global basis in formulating and elaborating international rules, standards and recommended practices and procedures consistent with the Law of the Sea Convention, for the protection and preservation of the marine environment.<sup>279</sup> There is no corresponding obligation, or even power, to protect the interests of the fishing industry. States, on the other hand, do have the sovereign right to exploit their natural resources, but only in accordance with their duty to protect and preserve the marine environment.<sup>280</sup> It is to be noted that only in the EEZ are fisheries ‘their natural resources,’ whereas the proposed moratorium addresses the high seas. In the high seas, States do have the freedom to fish, but that freedom shall be exercised by all States with due regard for the interests of other States in their exercise of the freedom of the high seas<sup>281</sup> and specifically subject to their treaty obligations, the rights and duties as well as the interests of coastal States, and the provisions of Section 2 of Part VII,<sup>282</sup> which includes the duty to take, or to co-operate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas<sup>283</sup> and the duty to co-operate with each other in the conservation and management of living resources in the areas of the high seas.<sup>284</sup>

#### THE SECOND OBJECTION: A MORATORIUM WOULD NOT BE ENFORCEABLE

Objecting states raised questions regarding enforcement of the legal regime of the high seas. This objection could be interpreted to mean either that the existing regime should be enforced, or, if expressed badly, that the proposed moratorium would not be enforceable.

The first objection is relatively straightforward. Certainly there are problems in the enforcement of the current legal regime of the high seas. The problem of IUU fishing is well known, and has been addressed in numerous General Assembly resolutions, as well as other *fori* such as the FAO and is currently being assessed in an OECD Working Group.<sup>285</sup> However, objections to enforcement of the current regime cannot be an obstacle to new measures to address a new problem. The Fish Stocks Agreement in Part VI included a suite of measures to aid enforcement. If these are not sufficient, which may very well be the case, then it is incumbent on states to implement their obligations to cooperate under the Law of the Sea Convention to put into place effective enforcement measures.

The second meaning of the objection, being that a moratorium would be not enforceable, flies in the face of experience of the driftnet resolutions. Nor is there any authority for the proposition that the international community should not implement measures because some states may not obey the

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<sup>278</sup> Law of the Sea Convention, Article 192.

<sup>279</sup> Law of the Sea Convention, Article 197.

<sup>280</sup> Law of the Sea Convention, Article 193.

<sup>281</sup> Law of the Sea Convention, Article 87(2).

<sup>282</sup> Law of the Sea Convention, Article 116.

<sup>283</sup> Law of the Sea Convention, Article 117.

<sup>284</sup> Law of the Sea Convention, Article 118.

<sup>285</sup> The OECD Committee for Fisheries hosted a Workshop on IUU fishing on 19 and 20 April 2004. See [http://www.oecd.org/document/5/0,2340,en\\_2649\\_33901\\_21007109\\_1\\_1\\_1\\_37401,00.html](http://www.oecd.org/document/5/0,2340,en_2649_33901_21007109_1_1_1_37401,00.html).

measures. That is a recipe for anarchy. If the concern is that non-state actors may not obey the measures, then the remedy for that is for the international community to cooperate to implement compliance and enforcement measures, as with all Law of the Sea measures. Moves to combat IUU fishing show the way towards such measures.

#### THE THIRD OBJECTION: THE SCOPE OF THE PROPOSED MORATORIUM

The third objection raised concerns over the scope of the proposed restrictive measures. Since the proposed moratorium was relatively simple - a moratorium for high seas bottom trawling as an interim measure for the conservation of deep-sea biodiversity until a lasting solution could be devised - this presumably is founded on a belief that not all high seas bottom trawling should be the subject of the moratorium. However the consensus was stated in unconditional terms: high seas bottom trawling was harmful to deep-sea marine biodiversity. The precautionary principle, which is implemented in the Fish Stocks Convention with respect to straddling and highly migratory stocks, holds that States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.

#### THE FOURTH OBJECTION: BALANCING STATES' RIGHTS AND OBLIGATIONS ON THE HIGH SEAS

The fourth objection features concerns about how those measures would be balanced with States' rights and obligations on the high seas. This can only be States' rights to engage in high seas bottom trawling, since this is all that would be banned by the moratorium. This raises issues similar to the first objection: States do have the right to fish on the high seas, but only subject to the conditions mentioned in Article 116, including the duty to take, or to co-operate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas<sup>286</sup> and the duty to co-operate with each other in the conservation and management of living resources in the areas of the high seas.<sup>287</sup> The balance of rights is provided in Article 116, which subjects the right of nationals to fish to their treaty obligations, the rights, duties and interests of coastal States and the provisions of Section 2 of Part VII of the Law of the Sea Convention.

#### THE FIFTH OBJECTION: A BAN SHOULD BE PART OF A LARGER REGIME, INCLUDING RFMOs

The fifth objection features concerns that any ban should be part of a larger regime for the conservation of high seas marine living resources, including the critical role of RFMOs in addressing bottom trawling. In other words, there should not be a moratorium, but that there should be a ban, but once a regime is agreed, and implemented, and such a regime should address the role of RFMOs. Simply put, there is no immediate concern and States should coordinate to agree and implement a regime. This approach then contemplates the delays of years that such a regime would take to agree and implement. This approach however must overcome both the precautionary principle and the recognition by States that damage to the marine environment is being caused now.

#### THE ADDITIONAL OBJECTIONS: THE LACK OF SCIENTIFIC KNOWLEDGE

The additional objections raised by other States both concern the precautionary principle. A suggestion that a timebound region-by-region moratorium be imposed presupposes that there are areas where current scientific knowledge provides sufficient certainty that bottom trawling on the high seas

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<sup>286</sup> Law of the Sea Convention, Article 117.

<sup>287</sup> Law of the Sea Convention, Article 118.

can be carried out without harm to the marine environment. There is no evidence cited in the UNIPOLOS report that substantiates this.

The second argument is that a moratorium is inappropriate before adequate marine scientific research could be conducted for a better understanding of the state of deep-sea marine ecosystems, especially vulnerable marine ecosystems such as seamounts. Otherwise stated, this argument suggests that bottom trawling should continue until scientific research confirms that it is causing damage. This is nothing more than a textbook case of a failure to apply the precautionary principle, which, as stated in Article 6 of the Fish Stocks Agreement, holds that States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.<sup>288</sup>

#### CONCLUSION

It is submitted that each of the arguments cited in the UNICPOLOS report are inconsistent with the Law of the Sea Convention and Fish Stocks Agreement. Since no other arguments are cited, the conclusion is inescapable that a moratorium would, in fact, be the course which is most in keeping with these two instruments.

#### **Enforcement of a Moratorium**

Some States have expressed concerns that a moratorium on high seas bottom trawling may not be enforceable. However, there are many measures that can be adopted to enforce a moratorium.

#### DEFINITION

The first question is the activity that is proscribed by the moratorium. The 1991 driftnet resolution<sup>289</sup> simply called on members to “[e]nsure that a global moratorium on all large-scale pelagic drift-net fishing is fully implemented on the high seas of the world's oceans and seas, including enclosed seas and semi-enclosed seas, by 31 December 1992.” The Wellington Convention<sup>290</sup> was more specific in prohibiting ‘driftnet fishing activities’ which included attempting to catch fish using a driftnet, and included engaging in any other activity which can reasonably be expected to result in the catching of fish with the use of a driftnet,<sup>291</sup> and defined ‘driftnet’ as “a gillnet or other net or a combination of nets which is more than 2.5 kilometres in length the purpose of which is to enmesh, entrap or entangle fish by drifting on the surface of or in the water.”<sup>292</sup>

The European Union in banning bottom trawling near the Darwin Mounds<sup>293</sup> defined bottom trawling as “using an bottom trawl or similar towed nets operating in contact with the bottom of the sea”.<sup>294</sup>

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<sup>288</sup> Fish Stocks Agreement Article 6(2).

<sup>289</sup> UN GA Resolution 46/215, paragraph 3(c).

<sup>290</sup> Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific (and Protocols), done at Noumea, 20 October 1990, entered into force 17 May 1991, at <http://www.oceanlaw.net/texts/wellington.htm>.

<sup>291</sup> Wellington Convention, Article 1.

<sup>292</sup> Wellington Convention, Article 1.

<sup>293</sup> Council Regulation (EC) No. 602/2004. See footnote 233 on page 30.

<sup>294</sup> Council Regulation (EC) No. 602/2004 Article 1.

## ENFORCEMENT

As well as a prohibition of the activity of bottom trawling itself, measures by any international treaty or by an RFMO can specifically target bottom trawling equipment.

Enforcement of a moratorium would give rise to issues that are currently actively being addressed in the context of IUU fishing generally. In the Wellington Convention, the Parties undertook to collaborate to facilitate surveillance and enforcement, and also to take measures leading to the withdrawal of good standing on the Regional Register of Foreign Fishing Vessels maintained by the FFA against any vessel engaging in driftnet fishing activities.<sup>295</sup> This type of direct sanction of depriving vessels of their right to apply for RFMO licences, if followed up by States refusing to grant licences to such vessels, could be very effective.

The problem of IUU fishing is well known, and has been addressed in numerous General Assembly resolutions, as well as other fori such as the FAO. It is currently being assessed in an OECD Working Group.<sup>296</sup> However, objections to enforcement of the current regime cannot be an obstacle to new measures to address a new problem. The Fish Stocks Agreement in Part VI included a suite of measures to aid enforcement. If these are not sufficient, which may very well be the case, then it is incumbent on states to implement their obligations to cooperate under the Law of the Sea Convention to put into place effective enforcement measures.

## CONTROL OF NATIONALS

Control of nationals and vessels is a key component of controlling illegal fishing. This should not be restricted to flagged vessels, but also nationals involved in beneficial ownership of vessels, captains and crew. Strict penalties for engaging in illegal fishing, combined with sanctions such as confiscation of catch and proceeds, if implemented and enforced by states whose nationals are involved in deep-sea trawling, would go a long way towards controlling these activities.

## RFMO ACTIONS

RFMOs can monitor fishing activities through Monitoring, Control and Surveillance (MCS) measures,<sup>297</sup> such as through the effective implementation of vessel monitoring systems (VMS) and observer programmes on their flag vessels and catch and trade certification programs. The effective and widespread use of VMS to monitor vessel activity is important,<sup>298</sup> particularly when monitoring for activities which may be proscribed in one area (the high seas) but not others (EEZs). If RFMOs and coastal States which grant licences to fish on the high seas required VMS equipment to be installed and maintained at all times as a condition of the licence, States and RFMOs would be a strong position to monitor the actions of vessels. Any vessel claiming to have fished in the EEZ where that is permitted can have its claims verified by the VMS data. NAFO, for instance, has VMS and

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<sup>295</sup> Treaty of Wellington Article 4.

<sup>296</sup> The OECD Committee for Fisheries hosted a Workshop on IUU fishing on 19 and 20 April 2004. See [http://www.oecd.org/document/5/0,2340,en\\_2649\\_33901\\_21007109\\_1\\_1\\_1\\_37401,00.html](http://www.oecd.org/document/5/0,2340,en_2649_33901_21007109_1_1_1_37401,00.html).

<sup>297</sup> See IPOA-IUU, IV para. 24. See the International MCS Network, an arrangement of national fisheries enforcement organizations and institutions which share information, coordinate and cooperate in order to prevent, deter and eliminate IUU fishing. The website is at <http://www.imcsnet.org/>.

<sup>298</sup> See, for instance, Kelly Rigg, Rémi Parmentier and Duncan Currie, "Halting IUU Fishing: Enforcing International Fisheries Agreements, at <http://europe.oceana.org/downloads/HaltingIUUFishingEnforcingInternationalFisheriesAgreements.pdf>, 24.

Observer schemes in place.<sup>299</sup> The vessels of Parties in its area must have onboard a VMS system which sends position reports every six hours to the Secretariat. Such vessels must have an observer onboard. As noted in the IPOA-IUU,<sup>300</sup> Observers are another important tool to monitoring the actions of vessels.

NAFO also has a scheme to promote compliance by non-party vessels<sup>301</sup> which includes inspections at sea and in ports, preventing transshipments and preventing such vessels from landing or transshipping fish in the ports of Contracting Parties.

When infringements are found, RFMOs can use measures such as deregistration of vessels, impose fines and impose trade related measures.<sup>302</sup>

The OECD Working Group<sup>303</sup> identified improving information sharing and cooperation among RFMOs, particularly in linking and integrating data on IUU fishing activities. A global register, for instance, of vessels fishing on the high seas or even of vessels that are technically capable of doing so would assist monitoring and enforcement, for instance.

#### PORT STATE CONTROL MEASURES

Port state control measures such as the rigorous inspection of vessels and catches, refusal to allow the landing of catches where IUU fishing is apparent, refusal to allow transshipment activities under a state's jurisdiction, and severe penalties for fisheries violations are all highly desirable to combat IUU fishing in general.<sup>304</sup> High seas bottom trawling poses somewhat different challenges from IUU

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<sup>299</sup> See NAFO, NAFO Fisheries Management, at <http://www.nafo.ca/Activities/FRAMES/AcFrFish.html>.

<sup>300</sup> IPOA-IUU para 24.

<sup>301</sup> NAFO, "Scheme To Promote Compliance By Non-Contracting Party Vessels", at <http://www.nafo.ca/Activities/Fisheries/CEM/chapter6.html>.

<sup>302</sup> See report of Judith Swan, FAO Fisheries Circular 980, "Fishing Vessels Operating under Open Registers and the Exercise of Flag State Responsibilities - Information and Options," FIPL/C980, at <http://www.fao.org/fi/projects/fishcode/publicationpdffiles/Other/C980-Open%20Register.pdf>, 37.

<sup>303</sup> OECD, Key Observations and Findings by the Workshop Chairs, at <http://www.oecd.org/dataoecd/55/6/31603545.PDF>.

<sup>304</sup> See FAO, "Implementation of the International Plan of Action to Deter, Prevent and Eliminate Illegal, Unreported and Unregulated Fishing", at <http://www.fao.org/DOCREP/005/Y3536E/y3536e00.htm#Contents>, 11. checklist of recommended actions by port States, at <http://www.fao.org/DOCREP/005/Y3536E/y3536e0e.htm>.

1. A port State should require foreign fishing vessels (and similarly with related vessels) seeking port access to provide at a minimum: reasonable advance notice of their entry into port; a copy of their authorization to fish; and details of their fishing trip and quantities of fish on board.
2. Inspections should include the flag State of the vessel and identification details; name, nationality, and qualifications of the master and the fishing master; fishing gear; catch on board, including origin, species, form, and quantity; where appropriate, other information required by a RFMO or international agreement; and total landed and transshipped catch.
3. If a State has reasonable grounds for suspecting that a vessel in its port has engaged in or supported IUU fishing, the port State should not to allow the vessel to land or transship fish in its port; immediately to report the matter to the flag State; and if the suspected IUU fishing may have taken place in waters in waters under the purview of a RFMO, immediately report the matter to the RFMO as well.
4. Port States, acting in cooperation and in particular through RFMOs, should adopt and/or strengthen schemes to prevent landings and transshipments of fish harvested through IUU fishing.

fishing in general, since the concern is with destructive fishing equipment and methods and their impacts on biodiversity as well as with the impact on targeted stocks. As such, other tools are available, such as checking and interdicting equipment as well as monitoring vessels through licensing, inspections and VMS equipment. However an effective enforcement regime requires both clear applicable laws as well as the ability to detect violations and the ability and willingness to enforce the law. In the case of international law, international co-operation is an important factor. At present, the majority of RFMOs do not prohibit deep-sea bottom trawling at all, and many areas are not regulated by any RFMO. Once international norms, including for instance an international moratorium, as well as RFMO and national regulations, are in place, inspection of vessels and fishing gear, coupled with VMS and where possible observers, together with improved international cooperation, will be able to enforce such norms and regulations.

Without an international moratorium or similar measure, even if RFMOs were to implement appropriate conservation and management measures to address bottom trawling, without widespread coverage by RFMOs and without widespread adherence to RFMOs, the effect of such measures are likely to be patchy at best.

#### TRADE RELATED MEASURES

Effective catch documentation schemes which are reliant not only on reporting by vessel captains but which are backed up by verification and inspection protocols and associated trade documentation schemes, can be effective but, as with port state controls, only when associated with international norms and national regulations. Market related measures may be subject to challenge in the WTO and thus must be implemented in a fair, transparent and non-discriminatory manner. When such measures are in place, states will be able to prevent fish caught by prohibited fishing practices from being traded through or imported into their territories, and states could enact legislation making it a violation to conduct IUU fishing and trade in fish products derived from IUU fishing.<sup>305</sup>

However, if international norms are not in place against high seas bottom trawling, there is likely to be no foundation or support for such trade measures. They can be effective and defensible only when clearly defined and articulated international norms are put in place.

#### LESSONS FROM THE WELLINGTON CONVENTION

The Wellington Convention did not restrict its ambit to nationals and vessels under its jurisdiction. It did direct itself to those matters: each Party undertook to prohibit its nationals and vessels documented under its laws from engaging in driftnet fishing activities within the Convention Area.<sup>306</sup> However, in addition to this, the Parties undertook:<sup>307</sup>

- (a) not to assist or encourage the use of driftnets within the Convention Area; and
- (b) to take measures consistent with international law to restrict driftnet fishing activities within the Convention Area, including but not limited to:

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5. Port States, acting through RFMOs, should strengthen schemes for addressing non-member fishing by adopting a presumption against landings by non-member vessels that are *identified* as having engaged in IUU fishing (and not only against vessels that are actually *sighted* while engaging in IUU fishing).

<sup>305</sup> See IUU Checklist of Recommended Actions, at <http://www.fao.org/DOCREP/005/Y3536E/y3536e0e.htm>.

<sup>306</sup> Wellington Convention, Article 2.

<sup>307</sup> Wellington Convention, Article 3(1).

- i) prohibiting the use of driftnets within areas under its fisheries jurisdiction; and
- ii) prohibiting the transshipment of driftnet catches within areas under its jurisdiction.

A high seas bottom trawling moratorium resolution could be specific in calling on States not only to prohibit its nationals and vessels from engaging in bottom trawling on the high seas, but also not to assist or encourage bottom trawling on the high seas, and to take measures consistent with international law to restrict bottom trawling on the high seas, including and not limited to prohibiting the use of trawls designed to make contact with the sea bottom on vessels and in areas under its jurisdiction (to include the continental shelf). Other measures used in the Wellington Convention are equally applicable. States could be called on to:

- (a) prohibit the landing of catches caught with high seas bottom trawls within their territory;
- (b) prohibit the processing of catches caught with high seas bottom trawls in facilities under their jurisdiction;
- (c) prohibit the importation of any fish or fish product, whether processed or not, which was caught using a bottom trawl on the high seas;
- (d) restrict port access and port servicing facilities for high seas bottom-trawl fishing vessels; and
- (e) prohibit the possession of bottom trawl gear on board any fishing vessel under their jurisdiction licensed to fish on the high seas.<sup>308</sup>

It can also be made clear that Parties could take measures against high seas bottom trawl fishing activities which are stricter than those required by the Resolution.<sup>309</sup>

### **Other Options for Addressing the Problem of Deep-Sea Bottom Trawling**

#### **ACTION BY RFMOs**

There are serious structural difficulties that hamper the ability of RFMOs to address the problem of deep-sea high seas bottom trawling. First is the lack of a coherent international management structure. The Fish Stocks Agreement does not cover discrete stocks as such. Second is the lack of RFMOs with competence to address discrete demersal stocks on the high seas, as has been seen on page 24, with the principal RFMOs being NAFO, NEAFC, CCAMLR, and SEAFO. The Conventions of NAFO and the NEAFC both exclude sedentary species from their mandates. The practical difficulty has been the failure of RFMOs which can address straddling stocks to do so: no comprehensive measures to address the problem have been implemented by NAFO or NEAFC.

Certainly RFMOs have their own role to play in the enforcement of fisheries norms. As is seen in the discussion of enforcement of a moratorium, they can collect and disseminate information relating to IUU fishing, identify vessels that are engaging in IUU fishing, coordinate measures against them, and identify States whose vessels are engaged in IUU fishing.<sup>310</sup> They can develop, implement and

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<sup>308</sup> Wellington Convention, Article 3.2(e).

<sup>309</sup> Wellington Convention, Article 3.3.

<sup>310</sup> For these and other steps see IUU Checklist of Recommended actions, <http://www.fao.org/DOCREP/005/Y3536E/y3536e0e.htm>.

harmonise VMS arrangements, can devise port inspection schemes and can set restrictions on transshipment at sea and on the landing of unauthorised catches in ports. They have an important role to play in adopting effective catch certification and trade documentation schemes, and in assisting states to adopt their own trade measures. They can limit or deny access to fisheries resources to fishing vessels of non-complying members and can devise and implement schemes for boarding and inspecting fishing vessels on the high seas.

However, all of these measures are dependent on their being norms in place to implement. If there are no overarching international measures in place addressing deep-sea trawling, then RFMOs will not be able to, or may be reluctant to, bring their resources to bear on the problem. Also, RFMOs' abilities depend on their geographical competence. As seen, only four such organisations have this competence. Where there are no RFMOs in place, as with the Southwest Indian Ocean, no measures can be taken and fisheries are open to unsustainable exploitation.

#### UNILATERAL ENFORCEMENT ON THE HIGH SEAS

Under Article 77 of the Law of the Sea Convention, the coastal state has sovereign rights for the purpose of exploring and exploiting its natural resources, including sedentary species. These rights are exclusive in that no one may undertake these activities without the express consent of the coastal State. This gives competence to coastal states to take action with respect to activities not only in the EEZ but on the high seas, above the continental shelf outside the EEZ. However, while this gives coastal states unique ability to enforce international norms on the high seas,<sup>311</sup> it is unlikely that these powers would be used against deep water fishing states where there are no clear international norms that the coastal states are enforcing. Gianni cites coastal states most likely to be vulnerable as Canada, Brazil, Uruguay, Argentina, South Africa, Namibia, Angola, Mozambique, Mauritius, Seychelles, India, Norway, Iceland, Australia, New Zealand and several EU States.<sup>312</sup>

Coastal States can also take action against their own flagged vessels and their own nationals, including national companies, as well as against foreign vessels in their own ports. However, it is unlikely many will do so, particularly in the case of small coastal states against large deep water fishing vessels, unless there are common international norms and consensus to enforce, lest those states retaliate or withdraw foreign aid. States would be on much firmer ground where there is an international norm to enforce.

#### DISPUTE RESOLUTION

Part XV of the Law of the Sea Convention contains robust dispute resolution provisions. Any dispute concerning the interpretation or application of the Convention may be submitted by any party to the appropriate Court or Tribunal. Under Article 287 of the Convention, each Contracting Party may choose one or more of four possible means for the settlement of disputes, the International Tribunal for the Law of the Sea (ITLOS), based in Hamburg, the International Court of Justice (ICJ), a five-member arbitral tribunal established pursuant to Annex VII of the Convention, or a "special arbitral tribunal" established pursuant to Annex VIII (designed for specialised disputes requiring scientific expertise, including "protection and preservation of the marine environment" and "navigation, including pollution from vessels and by dumping"). If a Contracting Party does not indicate its preference, it shall be deemed to have accepted the Annex VII arbitral tribunal.<sup>313</sup> If the parties to a

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<sup>311</sup> Note that Part V on the EEZ does not apply to sedentary species: Law of the Sea Convention, Article 68. See note 137 on page 20 above.

<sup>312</sup> Gianni, iv and 83.

<sup>313</sup> Law of the Sea Convention, Article 287(3).

dispute have not accepted the same procedure for the settlement of the dispute, it may be submitted only to Annex VII arbitration, unless the parties otherwise agree.<sup>314</sup> A court or tribunal can prescribe any provisional measures pending a final outcome, where necessary to preserve the respective rights of the parties to the dispute or to prevent serious harm to the marine environment.<sup>315</sup>

In selecting the dispute resolution mechanisms of the Law of the Sea Convention, the eleven countries<sup>316</sup> taking the vast majority of the high seas bottom trawl catch in 2001 have variously selected<sup>317</sup> the ICJ and/or ITLOS or have made no declaration. However, useful as ITLOS is as a mechanism for resolving disputes between States, it cannot be a substitute for positive action by the international community to take remedial action. Dispute resolution mechanisms may be useful for addressing abuses carried on by some States in breach of international law, but they are less well suited to relatively widespread activities such as high-seas bottom trawling which are carried out by a significant number of countries.

#### ESTABLISHING AN INTERNATIONAL REGIME FOR DEEP-WATER FISHERIES

An international regime specifically addressing deep water fisheries which incorporates the essential principles of the Fish Stocks Agreement is a likely medium to long term solution to the problem of deep-sea bottom trawling. Such a regime would be likely to either draw on the relevant provisions of the Fish Stocks Agreement and stand beside the Fish Stocks Agreement or constitute an amendment to the Agreement, whereby discrete stocks as well as straddling stocks would be covered by the Agreement. At the 2004 Informal Consultations<sup>318</sup> a number of States did suggest measures built on the Fish Stocks Agreement,<sup>319</sup> citing its strength in the precautionary principle, ecosystems approach and exchange of data provisions. Whether other issues such as IUU fishing and flag State compliance would be addressed at the same time is an open question. With respect to deep-sea trawling, the report noted that

“In addition, attention was drawn to the growing problem of “high seas bottom-trawling”, and the need for RFMOs to address this issue. In particular, it was noted that some RFMOs did not cover fishing activities associated with discrete high seas species located, for example, on seamounts. The practice of “bottom-trawling” generally involves fishing vessels that haul heavy, metal-weighted nets across the ocean floor in order to catch the greatest possible amount of bottom-dwelling marine life. Though viewed by some as a generally efficient method for harvesting large amounts of an intended target or a particular fish stock, the practice was fundamentally destructive and non selective. The unwanted or unintended species, taken as “by-catch”, which were later discarded, often include endangered or critically over-fished species. Moreover, the heavy steel equipment used by bottom

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<sup>314</sup> Law of the Sea Convention, Article 287(5).

<sup>315</sup> Law of the Sea Convention, Article 290.

<sup>316</sup> See page 7 above.

<sup>317</sup> See Table at [http://www.un.org/Depts/los/settlement\\_of\\_disputes/choice\\_procedure.htm](http://www.un.org/Depts/los/settlement_of_disputes/choice_procedure.htm) and details of declarations at <http://untreaty.un.org/ENGLISH/bible/englishinternetbible/partI/chapterXXI/chapterXXI.asp> (password needed).

<sup>318</sup> Third Informal Consultations were held on 8-9 July 2004. See Report at [http://www.un.org/Depts/los/convention\\_agreements/FishStocksMeetings/UNFSTA\\_ICSP2004\\_Rep.pdf](http://www.un.org/Depts/los/convention_agreements/FishStocksMeetings/UNFSTA_ICSP2004_Rep.pdf).

<sup>319</sup> Third Informal Consultations Report, para. 33.

trawling vessels was known to have damaged deep-sea ecosystems, including cold water coral reefs.”<sup>320</sup>

If not addressed by then, the issue may thus arise at the next informal consultations in 2005, as well as the Fish Stocks review conference in 2006 which is likely to be held in the first half of 2006 under Article 36 of the Agreement.<sup>321</sup>

However, the very nature of international negotiations, particularly on matters of widespread interest and significance, such as matters involving the seabed and continental shelf, means that any governance reforms will take years. As noted below,<sup>322</sup> disputes which arose in the 1960s about seabed mining were not resolved until the negotiation of the Convention in 1982, and even then a further Implementation Agreement did not enter into force until 1996.

Even if significant discussions were held at the 2006 Fish Stocks review conference, any amendment or agreement could not reasonably be expected to be agreed, enter into force and implemented even by 2008. In the face of lack of scientific data, it is impossible to assess the irreversible damage that three years of deep-sea bottom trawling may cause to the biodiversity of the deep sea.

#### EXTENDING THE COMPETENCE OF RFMOs TO COVER DEEP-SEA DEMERSAL FISHERIES

As seen above, few RFMOs address deep-sea demersal fisheries. NAFO,<sup>323</sup> NEAFC<sup>324</sup> and CCAMLR<sup>325</sup> are the principal ones at present that have competence over such areas. Where bottom trawl fisheries are straddling stocks RFMOs which do have the competence to regulate deep-sea fisheries should do so, consistent with the Fish Stocks Agreement principles. However, where they are not straddling stocks, while it is certainly desirable that RFMOs that are able to, do in fact apply similar principles to the fisheries they can manage, the gaps in the management regime noted above mean that without direction from the international community, harmonised and consistent application of principles by the RFMOs that do have competence may be difficult to achieve.

Similarly, it has been suggested that new RFMOs should be established where there are currently no RFMOs with competence. While this is clearly desirable, consistency in the application of principles and harmonization, as well as international cooperation mandated by the Law of the Sea Convention, needs direction from the international community. While the Western Pacific Tuna Convention<sup>326</sup> which established a management regime for highly migratory fish stocks of the western and central Pacific Ocean is an interesting example of the extrapolation of the Fish Stocks Agreement provisions, it is perhaps as much a product of the mutual interests of the Pacific States and the fisheries states than an application of international interest in conserving migratory stocks on the high seas. If the international community is to see its interest in preserving deep-seas fish stocks and biodiversity implemented, it would seem dangerous to rely on *ad hoc* regional agreements to do so.

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<sup>320</sup> Third Informal Consultations Report, para. 35.

<sup>321</sup> Third Informal Consultations Report, paras. 41-50.

<sup>322</sup> See page 35 above.

<sup>323</sup> See text accompanying footnote 208 on page 28.

<sup>324</sup> See text accompanying footnote 198 on page 27.

<sup>325</sup> See text accompanying footnote 214 on page 28.

<sup>326</sup> Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, Article 2.

## **CASE STUDY: THE CASE OF DRIFTNETS**

The issue of large scale pelagic driftnet fishing in the 1980s is an instructive case study. Fishing for albacore (*Thunnus alalunga*) using fine, small mesh nylon nets up to 40 kilometres in length, known as ‘walls of death’, was causing considerable concern by the late 1980s, due to overfishing, bycatch of non-target fish species such as salmon, seabirds, and marine mammals, loss of fish dropping out of the net, and continued ghost fishing by lost or abandoned nets and navigational hazards. A rapid series of resolutions developed an international consensus, which culminated in a moratorium by the General Assembly and a prohibition under the Treaty of Wellington.

### **Driftnet Resolutions**

- In July 1989, the South Pacific Forum in Kiribati issued the Tarawa Declaration,<sup>327</sup> which decided to convene an urgent meeting of regional diplomatic, legal and fisheries experts to develop a Convention to create a South Pacific zone free of drift-net fishing, called on the international community to support the ban and resolved that member States of the Forum would take all possible measures in the interim to prevent drift-net fishing within their waters and otherwise actively to discourage the operations of drift-net fishers. The Declaration called on Japan and Taiwan to immediately abandon their driftnet operations.
- In September 1989, a joint assembly of the Association of Caribbean and Pacific States (ACP) and the EEC adopted a resolution urging all members States to ban driftnet tuna fishing in their own waters.<sup>328</sup>
- In October 1989, the Commonwealth Heads of Government (CHOGM) meeting adopted the Langkawi Declaration on the Environment,<sup>329</sup> which committed member States to seek to ban pelagic drift net fishing;
- In November 1989, the Castries Declaration<sup>330</sup> of the Organisation of Eastern Caribbean States (OECS) resolved to establish a regional regime to outlaw the use of drift nets in the Lesser Antilles and that OECS member States would take all possible measures prevent the use of indiscriminate fishing methods in their EEZs, and that member States would act within relevant regional and international organizations to contribute to the global restriction of harmful fishing practices;
- Also in November 1989, the Convention for the Prohibition of Fishing with Long Drift-nets in the South Pacific (Wellington Convention) was agreed, and entered into force in May 1991. Protocols I and II were adopted and opened for signature on 20 October 1990. The depository for the Convention is the Government of New Zealand.

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<sup>327</sup> Tarawa Declaration of the South Pacific Forum (as it then was), 11 July 1989, at [http://www.vanuatu.usp.ac.fj/pacttreaties/Treaties\\_etc/treaties\\_Tarawa\\_Declaration.html](http://www.vanuatu.usp.ac.fj/pacttreaties/Treaties_etc/treaties_Tarawa_Declaration.html).

<sup>328</sup> “International Law Governing Driftnet Fishing on the High Seas,” at <http://www.earthtrust.org/dnpaper/intllaw.html>. ACP EU Minutes at [http://www.europarl.eu.int/intcoop/acp/60\\_00/default\\_en.htm](http://www.europarl.eu.int/intcoop/acp/60_00/default_en.htm).

<sup>329</sup> The Langkawi Declaration on Environment, adopted at Langkawi, Malaysia, 21 October 1989, at <http://www.mekonglawcenter.org/download/2/langkawi.htm>.

<sup>330</sup> OECS The Authority at Castries, St Lucia, 20-24 November 1989, <http://www.intfish.plus.com/treaties/castries.htm>. The OECS website is at <http://www.oecs.org/>.

- In December 1989, the General Assembly adopted resolution 44/225,<sup>331</sup> which recommended a conditional moratorium by June 1992, a progressive cessation of driftnet fishing in the South Pacific by July 1991, and cessation of expansion of driftnet fishing elsewhere.
- In 1990, CCAMLR agreed there would be no expansion of large scale pelagic driftnet fishing into the Convention Area.<sup>332</sup>
- In December 1990, the General Assembly passed resolution 45/197<sup>333</sup> reaffirming its 1989 resolution.
- In December 1991, the General Assembly passed resolution 46/215<sup>334</sup> calling for a phase-out on all large-scale pelagic driftnet fishing and a global moratorium on the high seas by 31 December 1992.<sup>335</sup>

### **The Treaty of Wellington**

As an example of an earlier ban on destructive fishing practices, the Treaty of Wellington, which banned driftnet fishing in the South Pacific, shows some very simple examples of defining, legislating and enforcing a destructive fishing practice.

#### DEFINITIONS

The Convention covered the South Pacific, and “all waters under the fisheries jurisdiction of any Party to this Convention”, thus including internal and territorial waters and the EEZ of member States.<sup>336</sup> The treaty banned ‘driftnet fishing activities’ which included attempting to catch fish using a driftnet, and included engaging in any other activity which can reasonably be expected to result in the catching of fish with the use of a driftnet, including searching for and locating fish to be taken by that method, and operations at sea in support of these activities, including placing, searching for or recovering fish aggregating devices or associated electronic equipment such as radio beacons, and related aircraft activities. It also covered transporting, transshipping and processing any driftnet catch, and cooperation in the provision of food, fuel and other supplies for vessels equipped for or engaged in driftnet fishing.<sup>337</sup>

The Treaty simply defined ‘driftnet’ simply as “a gillnet or other net or a combination of nets which is more than 2.5 kilometres in length the purpose of which is to enmesh, entrap or entangle fish by drifting on the surface of or in the water.”<sup>338</sup> Similarly, in the case of a moratorium on high seas

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<sup>331</sup> At General Assembly resolution 44/225, approved 22 December 1989, copy at [http://www.oceanlaw.net/texts/ga44\\_225.htm](http://www.oceanlaw.net/texts/ga44_225.htm).

<sup>332</sup> CCAMLR Resolution 7/IX, at <http://www.ccamlr.org/pu/E/pubs/cm/02-03/res%2007-IX.pdf>.

<sup>333</sup> General Assembly resolution 45/197, approved 21 December 1990, at <http://www.un.org/documents/ga/res/45/a45r197.htm>.

<sup>334</sup> General Assembly resolution 46/215, approved 20 December 1990, at <http://www.un.org/documents/ga/res/46/a46r215.htm>.

<sup>335</sup> Subsequent UN resolutions included 47/443 of 22 December 1992, 48/445 of 21 December 1993, 49/436 of 19 December 1994, 50/25 of 5 December 1995, 51/36 of 9 December 1996, 52/29 of 26 November 1997, 53/33 of 24 November 1998 and 55/8 of 30 October 2000.

<sup>336</sup> Wellington Convention, Article 1.

<sup>337</sup> Wellington Convention, Article 1.

<sup>338</sup> Wellington Convention, Article 1.

bottom trawling, the definition of the banned practice could read, following the EU definition, “using any bottom trawl or similar towed nets operating in contact with the bottom of the sea.”

#### COMPLIANCE

Parties to the Treaty of Wellington agreed not to assist or encourage the use of driftnets within the Convention Area, and to take measures consistent with international law to restrict driftnet fishing activities within the Convention Area, including prohibiting the use of driftnets within areas under its fisheries jurisdiction and prohibiting the transshipment of driftnet catches within areas under its jurisdiction.<sup>339</sup>

Parties could also take measures consistent with international law to prohibit the landing of driftnet catches within its territory, prohibit the processing of driftnet catches in facilities under its jurisdiction, prohibit the importation of any fish or fish product, whether processed or not, which was caught using a driftnet, restrict port access and port servicing facilities for driftnet fishing vessels, and prohibit the possession of driftnets on board any fishing vessel within areas under its fisheries jurisdiction.<sup>340</sup> It should be added that these measures were taken well before the FAO Code or IPOA-IUU was developed.

Parties undertook to prohibit nationals and vessels documented under their laws from engaging in driftnet fishing activities within the Convention Area.<sup>341</sup> In the case of a high seas bottom trawling moratorium, States could undertake to prohibit nationals and vessels documented under their laws from engaging in high seas bottom trawling anywhere in the high seas.

#### ENFORCEMENT

In the Wellington Convention, each Party agreed to take appropriate measures to ensure the application of the provisions of the Convention, and undertook to collaborate to facilitate surveillance and enforcement of measures taken by Parties, as well as to take measures leading to the withdrawal of good standing on the Regional Register of Foreign Fishing Vessels maintained by the FFA against any vessel engaging in driftnet fishing activities.<sup>342</sup> Similarly, every State can be called upon to take appropriate measures to ensure the effectiveness of the moratorium, and to collaborate to facilitate surveillance and enforcement of measures taken by States, as well as to take measures leading to the withdrawal of good standing on any Regional Fisheries Management Organisations against any vessel engaging in high seas bottom trawling activities.

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<sup>339</sup> Wellington Convention, Article 3.

<sup>340</sup> Wellington Convention, Article 3.

<sup>341</sup> Wellington Convention, Article 2.

<sup>342</sup> Wellington Convention, Article 4.

## CONCLUSION

There is growing scientific evidence that high seas bottom trawling is harmful to deep-sea marine biodiversity and that it has adverse effects on vulnerable marine ecosystems, such as seamounts and cold and deep water corals. The clear acknowledgement in UNICPOLOS that it was generally agreed that this is the case, together with the statements of concern of the General Assembly and the recent CBD Decision VII/5 leads the conclusion that it is incumbent on States to take urgent action.

Both the CBD and the Law of the Sea Convention contain strong obligations to cooperate and require specific measures to be taken. The necessity to cooperate to protect the deep-sea marine environment arises in the CBD in the context of the obligation to co-operate for the conservation and sustainable use of biological diversity in respect of areas beyond national jurisdiction, and in the Law of the Sea Convention to co-operate in the conservation and management of living resources in the areas of the high seas, and to cooperate for the protection and preservation of the marine environment.

The need to take urgent action arises in the context of the specific obligations of Parties to the CBD, which include the duty to take action to ensure that activities within Parties' jurisdiction or control do not cause damage to areas beyond the limits of national jurisdiction. Similarly, it arises in the context of the Law of the Sea Convention requirements to protect and preserve the marine environment and to take measures to protect and preserve rare or fragile ecosystems, and the habitat of depleted, threatened or endangered species and other forms of marine life. Similar duties, both to cooperate and to take action, are contained in the Fish Stocks Agreement, which implements the precautionary approach and adopts an ecosystem approach towards fisheries management.

In CBD Decision VII/5, the Parties stressed the need for rapid action to address the problem and called upon the General Assembly and others to urgently take short-term, medium-term and long-term measures. The Parties to the CBD are also Members of the United Nations, and thus by their resolution have named the General Assembly as a means of the fulfilment of their obligation to cooperate. They have also by the Decision acknowledged their own responsibility to take action as individual States. In their Decision, they gave the example of a moratorium on deep-sea bottom trawling.

There are two clear precedents for such a moratorium: the driftnets moratorium in 1992 and the seabed mining moratorium in 1969. Both issues have parallels with the bottom trawling issue, as well as differences from it. Obvious parallels include the recognition of a pressing problem, a determination to address it urgently and in the General Assembly, and the necessity to act on a global basis to ensure compliance and enforcement. Differences include the added dimension in the current problem of a necessity to address governance issues, which were at issue in the seabed mining moratorium, and which took decades to resolve. With the two moratoria, there are clear precedents for action by the General Assembly to address an issue of urgency relating to the deep sea in this way.

Various arguments against such a moratorium have been advanced, as they were at UNICPOLOS, including that a global moratorium would put unnecessary restrictions on the interests of the fishing industry, questions on enforcement of the legal regime, concerns on the scope of the proposed measures and questions about balancing such measures with States' rights and obligations on the high seas, and concern that any ban should be part of a larger regime for the conservation of high seas marine living resources, including the role of RFMOs. These objections were considered in this paper, and it was concluded that in light of the obligations and provisions of the Law of the Sea Convention, Fish Stocks Agreement and CBD, each of the arguments cited in the UNICPOLOS report are unfounded as objections to such a moratorium. The conclusion is inescapable that a moratorium on high seas bottom trawl fishing would, in fact, be the course which is most consistent with the obligations of the Parties under applicable international law to address the issue of the destruction of biodiversity from deep-sea bottom trawling on a short term basis.