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STATE RESPONSIBILITY AND THE HIGH SEAS MARINE ENVIRONMENT: A LEGAL THEORY FOR THE PROTECTION OF SEAMOUNTS IN THE GLOBAL COMMONS

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Abstract: At its latest session, the United Nations General Assembly urged States to consider a temporary ban on bottom trawling on the high seas. Bottom trawling technology causes extensive damage both to the habitat of deep sea living marine resources (“LMRs”) and to the LMRs themselves. This damage is particularly acute at heavily fished undersea mountains known as seamounts. The pronouncement by the General Assembly, while certainly a positive step, is another unfortunate example of short-sighted fisheries management: instead of creating a legitimate protection regime—such as a moratorium or a system of High Seas Marine Protected Areas (“HSMPA”)—for these rare and fragile ecosystems, it leaves the door open for the continued degradation of the global commons.

This Comment begins with the assumption that such measures—namely, a system of HSMPAs—can lawfully be established, and turns to the question of enforcement. It presents a legal theory upon which a case against high seas trawling nations could be built, demonstrating that States have notice of the ecological consequences of trawling seamounts, have an affirmative duty to prevent such consequences by enacting and enforcing municipal legislation, and have breached that duty. This flag State malfeasance amounts to an internationally wrongful act, thus providing the possibility for responses by concerned States. These responses include the invocation of responsibility by non-injured States, and potential countermeasures.

I. INTRODUCTION

The ocean covers over seventy percent of Earth’s surface.¹ The majority of the ocean lies beyond the boundaries of national jurisdiction.² This area, known as the high seas,³ comprises eighty percent of the planet’s biosphere.⁴ Despite its vast size, the high seas, and in particular the deep

[†] The author would like to thank Professor Craig Allen and the editorial board of the Journal, in particular Doug Steding, Jen Schorr, Rebecca Jacobs, and Valentin Povarchuk for their valuable insight and guidance.

¹ ELISABETH MANN BORGESSE, *THE OCEANIC CIRCLE: GOVERNING THE SEAS AS A GLOBAL RESOURCE* 5 (1998).

² WWF—WORLD WILDLIFE FUND FOR NATURE, *COLD-WATER CORALS: FRAGILE HAVENS IN THE DEEP* 8 (2004), available at <http://www.panda.org/downloads/marine/cwcbrochure.pdf> (last visited Apr. 19, 2005) (stating that sixty-four percent of the ocean is beyond the jurisdiction of any State).

³ The term “high seas” will be used interchangeably with the term “global commons” throughout this Comment.

⁴ WWF—WORLD WILDLIFE FUND FOR NATURE ET AL., *HIGH SEAS: OCEAN TERRITORY UNDER THREAT* 1 (2003), available at <http://www.panda.org/downloads/marine/bro2005b.pdf> (last visited Apr. 19, 2005). Areas beyond national jurisdiction also represent the largest habitat on earth. See *The Need to*

ocean floor, remain almost completely unexplored.⁵ In fact, more is known about the topography of Mars than of the deep sea on Earth.⁶ Despite such vast gaps in knowledge, scientists have identified seamounts as among the deep ocean's most ecologically diverse and important phenomena. Seamounts support an immense number of marine species, many as yet unknown: researchers have estimated that an organism collected at depths below 2000 meters is fifty times more likely to be new to science than one collected at depths of fifty meters or less.⁷ For example, a recent expedition to the Tasman and Coral Seas in the South Pacific revealed that sixteen to thirty-six percent of the 921 species of fish and benthic⁸ macrofauna collected from twenty-four seamounts were new to science.⁹ This is not a surprising statistic given that only 0.0001% of the deep seabed has been subject to biological investigations.¹⁰

Unfortunately, among all underwater ecosystems, seamounts and their associated cold-water corals currently face the greatest risk from destructive fishing activities.¹¹ Bottom trawling at seamounts is depleting stocks of commercially targeted species and degrading the deep benthos, an environment that is host to the highest diversity of life in the marine environment.¹² Consequently, while very little is scientifically certain about

Protect and Conserve Vulnerable Marine Ecosystems in Areas Beyond National Jurisdiction, U.N. Open-ended Informal Consultative Process on Oceans and the Law of the Sea, Submitted by the Delegation of the Netherlands, 4th Mtg., at 6, U.N. Doc. A/AC.259/8 (2003).

⁵ BORGESSE, *supra* note 1 (noting that scarcely 1.5 percent of the seabed has been explored).

⁶ Press Briefing, U.N., Press Conference by Deep Sea Conservation Coalition (July 6, 2004), available at <http://www.un.org/News/briefings/docs/2004/deepseapc.doc.htm> (last visited Apr. 19, 2005) [hereinafter U.N. Press Conference by DSCC]. Similarly, marine scientists have stated that the surface of Venus has been better mapped than the world under the oceans. Tim Radford, *The Biggest Fishing Trip of All Time: \$1bn Survey Unravels Mysteries of the Deep*, THE GUARDIAN, Nov. 23, 2004, available at <http://www.guardian.co.uk/international/story/0,,1357271,00.html> (last visited Apr. 19, 2005).

⁷ Press Release, Census of Marine Life, Making Ocean Life Count (Nov. 23 2004), available at http://www.coml.org/medres/11-04/making_ocean_life_count_pr.pdf (last visited Apr. 19, 2005).

⁸ Benthic organisms are those located on the bottom of a body of water or in the bottom sediments (i.e. bottom dwelling). See generally *Oceans and the Law of the Sea: Report of the Secretary-General—Addendum*, U.N. GAOR, 59th Sess., Provisional Agenda Item 50(a), at 46, U.N. Doc. A/59/62/Add.1 (2004) [hereinafter 2004 U.N. S-G Report *Oceans and the Law of the Sea—Addendum*].

⁹ See *id.* at 47 (stating that “[m]any, if not most, of the estimated 100,000 or more oceanic seamounts may be unique islands of deep-sea biodiversity”).

¹⁰ *Id.* at 53.

¹¹ *Sustainable Fisheries, Including Through the 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, and Related Instruments: Report of the Secretary-General*, U.N. GAOR, 59th Sess., Provisional Agenda Item 50(b), at 26, U.N. Doc. A/59/298 (2004) [hereinafter 2004 U.N. S-G Report on Sustainable Fisheries].

¹² Donald K. Anton, *Law for the Sea's Biological Diversity*, 36 COLUM. J. TRANSNAT'L L. 341, 345-46 (1997).

seamount ecosystems, what is certain is that their inestimable biological value is in peril.

This Comment addresses the legal framework through which possible responses to destructive fishing practices on the high seas could arise, proceeding from the assumption that concerned States can lawfully establish a ban on bottom trawling through a High Seas Marine Protected Area (“HSMMPA”). Part II describes the physical and biological properties of seamounts and the threats posed thereto from bottom trawling. Next, Part III discusses the existing legal regime governing the high seas, centering principally on the 1982 U.N. Convention on the Law of the Sea (“LOS”); this section illustrates the primary rules and obligations of States relating to the protection, preservation, and conservation of the high seas marine environment and argues that States have an affirmative duty to protect seamount ecosystems from destructive fishing practices. Part IV addresses State responsibility for the breach of these obligations. Finally, the Comment concludes by describing some possible responses by concerned States that want to ensure compliance with a HSMMPA by all States.

II. NATURE OF SEAMOUNTS

The first biological sampling of seamounts in the Pacific Ocean was undertaken during the research vessel *Challenger* expedition of 1872-76.¹³ However, it was not until after World War II, during which newly developed naval sonar revealed their distribution, that interest in seamounts burgeoned.¹⁴ Since then, seamounts have experienced a steady increase in pressure from bottom trawling, especially over the last two decades.¹⁵ It is presently estimated that some forty percent of global trawling grounds lie in the deep ocean.¹⁶

The preservation of these ecosystems is of great importance for deep-sea biodiversity. More species live in benthic environments than in all other environments on Earth combined,¹⁷ and complex benthic habitat like that found at seamounts has been shown to increase survival rates of juvenile

¹³ ANDRE FRIEWALD ET. AL., UNITED NATIONS ENVIRONMENT PROGRAMME WORLD CONSERVATION MONITORING CENTRE, COLD-WATER CORAL REEFS: OUT OF SIGHT—NO LONGER OUT OF MIND 20 (2004), available at http://www.unep-wcmc.org/resources/publications/UNEP_WCMC_bio_series/22.htm (last visited Apr. 19, 2005) [hereinafter UNEP-WCMC REPORT].

¹⁴ *Id.*

¹⁵ *Id.* at 38 (stating that the late 1980s saw a dramatic increase in deep-ocean bottom trawling).

¹⁶ Mirrella von Lindenfels, *High Seas Fishing on Seamounts Opposed*, OCEAN NEWS & TECHNOLOGY (2004).

¹⁷ 2004 U.N. S-G Report on Oceans and the Law of the Sea—Addendum, *supra* note 8. In addition, ninety-eight percent of known species live in the marine environment. *Id.*

commercially valuable pelagic species.¹⁸ Unfortunately, the ecological pressure from bottom trawling is likely to continue to grow in the coming years as deep-sea fish stocks within areas of national jurisdiction are depleted, and/or States place increasing restrictions on those fisheries.¹⁹

A. *Seamount Geology Contributes to Deep Ocean Biodiversity*

Despite the relative uniformity of the ocean's surface, oceanic topography is extremely diverse. As with terrestrial mountains, seamounts originate from volcanic and tectonic processes²⁰ and occur singly, in clusters, or in chains.²¹ Seamounts rise from the seabed to heights of 1000 meters or more²² and are generally steep-sided, with slope angles of up to sixty degrees.²³ While present in every ocean, the Pacific Ocean boasts the greatest concentration of seamounts: estimates indicate that it is home to at least 30,000.²⁴ The Pacific's seamounts are also impressive in range. The Emperor Seamounts, for example, extend in a chain for over 6000 kilometers in the North Pacific.²⁵

¹⁸ M.J. Kaiser et al., *Fishing Effects in Northeast Atlantic Shelf Seas*, 40 FISHERIES RESEARCH 195, 196 (1999) (discussing the impacts of beam trawling on seabed fauna). Pelagic species are those living in the open ocean and are not limited to the ocean bottom. See 2004 U.N. S-G Report on Oceans and the Law of the Sea—Addendum, *supra* note 8.

¹⁹ See generally Jeremy Jackson et al., *Historical Overfishing and the Recent Collapse of Coastal Ecosystems*, 293 SCIENCE 629 (2001). See also MATTHEW GIANNI, INTERNATIONAL UNION FOR CONSERVATION OF NATURE & NATURAL RESOURCES, THE BIOLOGY, ECOLOGY, AND VULNERABILITY OF SEAMOUNT COMMUNITIES, HIGH SEAS BOTTOM TRAWL FISHERIES AND THEIR IMPACTS ON THE BIODIVERSITY OF VULNERABLE DEEP-SEA ECOSYSTEMS: OPTIONS FOR INTERNATIONAL ACTION 54 (Nov. 2004), available at http://www.iucn.org/themes/marine/pdf/Gianni_HS-BottomTrawling_FullVersion.pdf (last visited Apr. 19, 2005). This contention is bolstered by the U.N. Food and Agriculture Organization, which reports continued deterioration in global marine fish stocks: forty-seven percent of major fish stocks are now fully exploited (i.e. at their maximum sustainable limits), eighteen percent are overexploited, and the remaining ten percent are significantly depleted. See *Oceans and the Law of the Sea: Report of the Secretary-General*, U.N. GAOR, 59th Sess., Agenda Item 51(a), at 53, U.N. Doc A/59/62 (2004) [hereinafter 2004 U.N. S-G Report on Oceans and the Law of the Sea].

²⁰ 2004 U.N. S-G Report on Oceans and the Law of the Sea—Addendum, *supra* note 8, at 47.

²¹ UNEP-WCMC REPORT, *supra* note 13.

²² Malcolm Clark, *Fisheries for Orange Roughy on Seamounts in New Zealand*, 22 OCEANOLOGICA ACTA 593, 594 (1999). Other names, such as mound and hill, are given to like features of lesser elevation.

²³ ALEX D. ROGERS, INTERNATIONAL UNION FOR CONSERVATION OF NATURE & NATURAL RESOURCES, THE BIOLOGY, ECOLOGY, AND VULNERABILITY OF SEAMOUNT COMMUNITIES 6 (2004), available at <http://www.iucn.org/themes/marine/pdf/AlexRogers-CBDCOP7-Seamounts-Complete1.pdf> (last visited Apr. 19, 2005).

²⁴ 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 25.

²⁵ R.W. Grigg, *Paleoceanography of Coral Reefs in the Hawaiian-Emperor Chain—Revisited*, 16 CORAL REEFS S33-S34 (Supp. 1997).

Seamounts provide immeasurably important habitat for both pelagic and benthic organisms.²⁶ The interplay between their geological structure and the surrounding water column serves to deflect major ocean currents, amplify tidal currents, and form upwellings of cool, nutrient rich water that cause an increase in biomass²⁷ and biological productivity in waters closer to the surface. This biomass results in high concentrations of prey organisms, fish, and marine mammals in waters surrounding seamounts.²⁸ Consequently, seamounts are sources of primary production for both fish and zooplankton, and refuge for migratory species that feed thereupon.²⁹

B. Seamounts Display Unique Biological and Ecological Characteristics

Due to the relationship between the geological features of seamounts and the overlying water column, species associated with seamounts are highly endemic.³⁰ As many as fifteen percent of species found at seamounts are found nowhere else; some are restricted to a seamount chain, and others to a single distinct seamount.³¹ Similarly, up to ten percent of all underwater species may occur only at seamounts.³²

The pelagic biomass found at seamounts is largely constituted of deep-water stocks.³³ Deep-water stocks typically have unique biological characteristics, such as late maturity and slow-reproduction rates, which increase their vulnerability to excessive fishing.³⁴ For example, the orange roughy, a commercially targeted deep-water fish, can live for up to 150

²⁶ S.J. Turner et al., *Fishing Impacts and the Degradation or Loss of Habitat Structure*, 6 FISHERIES MGMT. AND ECOLOGY 401, 402 (1999) (noting that the hard substrata of seamounts provides habitat for an array of benthic fauna and emergent structures like corals).

²⁷ Biomass is an estimate of the amount of living matter per some unit volume or area. See NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, CORAL REEF INFORMATION SYSTEM, GLOSSARY OF TERMINOLOGY (Mar. 10, 2003), at http://www.coris.noaa.gov/glossary/glossary_a_k.html (last visited Apr. 19, 2005).

²⁸ 2004 U.N. S-G Report on Oceans and the Law of the Sea—Addendum, *supra* note 8, at 47-48.

²⁹ 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 25.

³⁰ Endemic species are those whose distribution is restricted to a particular area. See NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NOAA'S CORAL REEF INFORMATION SYSTEM, GLOSSARY OF TERMINOLOGY (Mar. 10, 2003), at http://www.coris.noaa.gov/glossary/glossary_a_k.html (last visited Apr. 19, 2005).

³¹ ROGERS, *supra* note 23, at 10.

³² U.N. Press Conference by DSCC, *supra* note 6. In addition, some 600 species of invertebrates have been recorded in seamount ecosystems. 2004 U.N. S-G Report on Oceans and the Law of the Sea, *supra* note 19, at 60.

³³ Deep-water stocks are defined as those found deeper than 400 meters. 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 22.

³⁴ *Id.* See also 2004 U.N. S-G Report on Oceans and the Law of the Sea—Addendum, *supra* note 8, at 48.

years.³⁵ It has an exceptionally low mortality rate and maturity may be delayed for greater than twenty years.³⁶

Like pelagic species, seamount benthic faunas display relatively high levels of diversity and endemism.³⁷ For example, cold-water corals thrive at seamounts, creating biodiversity hotspots³⁸ and important habitat for species aggregation, mating, and spawning.³⁹ Beyond their contributions to marine biodiversity, numerous species of benthic fauna found at seamounts have also been shown to contain and/or produce antibiotics, immunosuppressive and anti-cancer agents, and compounds used to treat asthma and heart disease.⁴⁰

C. *Seamount Ecosystems in the Global Commons Are Being Rapidly Degraded by Destructive Fishing Practices*

The concentration of biomass at seamounts means that seamount-associated species are particularly vulnerable to intense and localized fishing activities.⁴¹ Commercial fishing traffic at high seas seamounts has increased in recent years⁴² as chronic over-fishing has depleted fish stocks in coastal zones and technological advancements now allow fishing vessels to easily ascertain the location of seamounts.⁴³

In 2001, eleven nations—including Japan, New Zealand and Russia—took ninety-five percent of the fish caught in bottom trawl fisheries on the

³⁵ 2004 U.N. S-G Report on Oceans and the Law of the Sea—Addendum, *supra* note 8, at 48.

³⁶ J.A. Koslow et al., *Continental Slope and Deep-Sea Fisheries: Implications for a Fragile Ecosystem*, 57 ICES J. OF MARINE SCI. 548, 549 (2000).

³⁷ UNEP-WCMC REPORT, *supra* note 13. For example, a sample at seamounts in the Tasman and Coral Seas reported more than 850 macro and megafauna species.

³⁸ 2004 U.N. S-G Report on Oceans and the Law of the Sea—Addendum, *supra* note 8, at 48 (also stating that cold-water coral ecosystems are a “biological resource with intrinsic socio-economic value”). Notably, seamounts provide the primary habitat for cold-water corals in the Pacific. UNEP-WCMC REPORT, *supra* note 13, at 20.

³⁹ Turner, *supra* note 26, at 407. For example, at least twenty-three fish species have been observed in cold-water coral ecosystems. 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 25.

⁴⁰ Lindenfels, *supra* note 16.

⁴¹ 2004 U.N. S-G Report on Oceans and the Law of the Sea—Addendum, *supra* note 8, at 48; *see also* Koslow, *supra* note 36, at 549 (stating that the aggregation of deep-water species at seamounts means that they can be readily targeted by fishing vessels and provide high yields per unit of effort).

⁴² *See* Agenda 21: Programme of Action for Sustainable Development, Rio Declaration on Environment and Development Statement of Principles, Principle 17.44, U.N. GAOR, 46th Sess., Agenda Item 21, U.N. Doc. A/CONF.151/26 (1992) [hereinafter *Agenda 21*].

⁴³ *See* Turner, *supra* note 26, at 406 (noting that deep water fishing grounds are being increasingly exploited); *see also* Les Watling & Elliot A. Norse, *Disturbance of the Seabed by Mobile Fishing Gear: A Comparison to Forest Clearcutting*, 12 CONSERVATION BIOLOGY 1180, 1182-83 (Dec. 1998).

high seas.⁴⁴ The entire bottom trawl fishery accounted for just 0.5% of the roughly US \$75 billion total worldwide capture value.⁴⁵ Furthermore, the number of fishing vessels actually engaged in full-time deep-sea trawling is thought to be between one and two hundred, a small fraction of the estimated three million or more marine fishing vessels in operation worldwide.⁴⁶ As such, high seas trawling contributes only negligibly to both global food security⁴⁷ and the economic health of high seas fishing nations, while causing a disproportionate amount of harm to the marine environment.

The above-mentioned damage caused by bottom trawling reduces the biomass of target species, impacts non-target fisheries through by-catch⁴⁸ and habitat degradation, and influences other species through food chain effects and energy transfer.⁴⁹

1. *Bottom Trawling Decreases Target Species Biomass*

Bottom trawling can greatly diminish the populations of commercially valuable species. In fisheries off New Zealand and Australia, for example, the orange roughy presently exists at fifteen to thirty percent of initial biomass after just five to ten years of commercial exploitation.⁵⁰ Similarly, a species known as pelagic armourhead was fished to commercial extinction⁵¹ in only ten years on the north Hawaiian Ridge.⁵² Such statistics

⁴⁴ Lindenfels, *supra* note 16. The “most prolific” deep sea bottom trawling States are Russia, New Zealand and Spain. The other nations are Portugal, Norway, Estonia, Denmark/Faroe Islands, Lithuania, Iceland, and Latvia. *Id.*

⁴⁵ GIANNI, *supra* note 19, at 49; *see also U.N Urged to Ban Bottom Trawling for Fish*, REUTERS, June 8, 2004, at <http://msnbc.msn.com/id/5164523/> (last visited Apr. 19, 2005) (noting that bottom trawling sales, of which seamount trawling is just a portion, total approximately US\$ 300 million to US\$ 400 million per annum).

⁴⁶ GIANNI, *supra* note 19, at 47 (stating that the high seas bottom trawling fleet constitutes approximately 0.01% of the global fishing fleet).

⁴⁷ *See DEEP SEA CONSERVATION COALITION, THE DESTRUCTIVE POWER OF DEEP SEA BOTTOM TRAWLING ON THE HIGH SEAS* (Sept. 24, 2004), available at http://savethehighseas.org/publicdocs/DSCC_Bottom_trawling.pdf (last visited Apr. 19, 2005).

⁴⁸ By-catch is generally defined as incidental catch and discards (i.e. non-target species of lower commercial value than the target-species, juvenile fish, and non-fish species). 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 23.

⁴⁹ *Id.* at 20. *See also 2004 U.N. S-G Report Oceans and the Law of the Sea—Addendum*, *supra* note 8, at 75-77.

⁵⁰ 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 22. For a detailed discussion of the orange roughy fishery in New Zealand, see Malcolm R. Clark et. al., *The Effects of Commercial Exploitation on Orange Roughy from the Continental Slope of the Chatham Rise, New Zealand, from 1979 to 1997*, 45 FISHERIES RES. 217 (2000).

⁵¹ Commercial extinction refers to the population decline of a wild species, that is used as a resource, to a level at which it is no longer profitable to harvest the species. NATURAL RESOURCES DEFENSE COUNCIL, GLOSSARY OF ENVIRONMENTAL TERMS, at <http://www.nrdc.org/reference/glossary/c.asp> (last visited Apr. 19, 2005).

are indicative of the gap between existing scientific knowledge of fisheries impacts and the actual impacts: catch limits for these particular fisheries would not have been set so high had the science been correct.⁵³ Given that so little is known about deep-sea ecosystems, it is difficult to determine sustainable catch levels for deep-water species.⁵⁴ Furthermore, because of the extreme life-history characteristics of seamount-associated species (i.e. slow growth-rates and late maturation), fisheries regeneration of trawled seamounts is likely to be an equally slow process.⁵⁵

2. *Bottom Trawling Harms Non-Target Species and Degrades Deep Ocean Habitat*

Unfortunately, the relatively insignificant economic contribution from target-species fisheries at seamounts is overshadowing their biological importance. Because many deep-water species are associated with seamounts and cold-water corals, the impact of bottom trawling extends beyond target fisheries biomass to include habitat degradation and destruction.⁵⁶ Bottom trawling is a process whereby mobile fishing gear comprising massive cone-shaped nets armed with steel doors, chains, and heavy rollers is dragged across the ocean floor.⁵⁷ A single bottom trawling system can weigh up to five tons⁵⁸ and, depending on the substrate, trawling gear can dig ten to twenty-five centimeters into the sea floor.⁵⁹ High seas bottom trawlers can operate at depths of up to 1900 meters, and can cover thirty-three square kilometers of the seafloor in a “typical day’s drag.”⁶⁰ Consequently, trawling gear is recognized as among the most destructive and indiscriminate of fishing gears.⁶¹

⁵² 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 22; see also UNEP-WCMC REPORT, *supra* note 13, at 49-50 (describing the massive fishing efforts by Soviet, Japanese and Taiwanese vessels in the North Pacific).

⁵³ Cf. Koslow, *supra* note 36, at 550 (estimating that the sustainable yield for orange roughy is approximately one to two percent of pre-exploitation biomass).

⁵⁴ See 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 22.

⁵⁵ See Koslow, *supra* note 36, at 550.

⁵⁶ See 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 22.

⁵⁷ The doors generally have minimal contact with the seafloor. For a more detailed discussion of trawling gear and practice, see Watling & Norse, *supra* note 43, at 1181-83 & 1187-88.

⁵⁸ U.N. Press Conference by DSCC, *supra* note 6. Other reports indicate that the trawl doors alone can weigh up to six tonnes. UNEP-WCMC REPORT, *supra* note 13, at 38.

⁵⁹ 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 30. The substrate is the surface or medium upon which an organism lives or grows.

⁶⁰ *Id.* at 24. This number is for a fifty-five meter trawl net. *Id.*

⁶¹ *Id.*; see also Peter Etnoyer & Lance Morgan, *Occurrences of Habitat-forming Deep Sea Corals in the Northeast Pacific Ocean: A Report to NOAA’s Office of Habitat Conservation* 11 (2003), available at http://www.mcbl.org/destructive/DSC_occurrences.pdf (last visited Apr. 19, 2005) (stating that “[b]ottom trawling is considered to be the most ecologically damaging method of fishing”).

Habitat degradation or loss from destructive fishing practices is the least understood of the environmental impacts of fishing.⁶² However, the actual and potential impacts trawls have on benthic communities, particularly cold-water corals,⁶³ are readily apparent.⁶⁴ Complete removal of coral substrate has been observed at heavily fished seamounts.⁶⁵ Damage to corals from trawls includes the killing of coral polyps, breaking of reef structures, and the inhibition of growth from sediment displacement.⁶⁶ Such damage is particularly serious in the deep benthos given that, like deep-water fish stocks, cold-water corals are extremely slow growing: evidence suggests that, once destroyed, deep-water corals may take two to four hundred years to recover.⁶⁷

In terms of by-catch, trawling likely takes the largest ratio of by-catch among all other types of fishing gear.⁶⁸ Unlike many other pelagic species, the mortality rate for deep-sea by-catch species is usually one hundred percent.⁶⁹ Similarly, trawling gear frequently destroys non-commercial benthic faunas⁷⁰ such as sponges, hydroids (small colonial polyps), and ascidians (sea squirts).⁷¹ For example, at the Chatham Rise, a deep-water seamount fishery under the jurisdiction of New Zealand, a marked decline in the abundance, diversity, and biomass of corals, sponges and other invertebrates brought up in trawling nets has been observed as fishing has

⁶² Turner, *supra* note 26, at 404.

⁶³ UNEP-WCMC REPORT, *supra* note 13, at 38-39.

⁶⁴ Turner, *supra* note 26, at 402 (opining that, in addition to documented effects on sediment dynamics, chemistry, and nutrient fluxes, trawling has "the capability of altering, removing or destroying the complex, three-dimensional physical structure of benthic habitats by the direct removal of biological . . . and topographic . . . features").

⁶⁵ TELMO MORATO, INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA, SEAMOUNTS—HOTSPOTS OF MARINE LIFE (2004), available at <http://www.ices.dk/marineworld/seamounts.asp> (last visited Apr. 19, 2005); see also Lindenfels, *supra* note 16 (stating that "[m]ore than 90% of coral reefs can be removed from seamounts subject to trawling" and that "[b]are rock characterizes 95% of the seafloor in trawled areas, as opposed to only 10% on the most comparable undisturbed areas surveyed").

⁶⁶ 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 25; see also UNEP-WCMC REPORT, *supra* note 13, at 39 (describing the negative trend between coral growth rate and sedimentation).

⁶⁷ Turner, *supra* note 26, at 407; see also 2004 U.N. S-G Report on Oceans and the Law of the Sea—Addendum, *supra* note 8, at 48 (noting that fragments from a coldwater reef off the Norwegian coast have been dated as 8500 years old).

⁶⁸ William T. Burke, *Unregulated High Seas Fishing and Ocean Governance*, in FREEDOM FOR THE SEAS IN THE 21ST CENTURY 237 (Jon Van Dyke et al. eds., 1993) (using the term "trawling" as it applies to fishing both within and without areas of national jurisdiction). The amount of fish discarded through by-catch is estimated to be between 17.9 and 39.5 million tonnes per annum (approximately one-quarter of total world fish catch). 2004 U.N. S-G Report on Oceans and the Law of the Sea, *supra* note 19, at 56.

⁶⁹ 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 23.

⁷⁰ See, e.g., Turner, *supra* note 26, at 406 (noting that a fishery in Australia documented that ninety percent of epibenthic organisms became detached from the seabed after impact with trawl gear); see also Watling & Norse, *supra* note 43, at 1189 (describing how mobile trawls remove large epifaunal invertebrates like sponges).

⁷¹ 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 25.

progressed.⁷² Moreover, research demonstrates that bottom trawling reduces habitat complexity, which is particularly disturbing given that such complexity is positively correlated with species diversity and helps to ensure the survivorship of species.⁷³

3. *Bottom Trawling Negatively Impacts the Food Chain*

Scientific research addressing the food chain effects of bottom trawling has only recently begun.⁷⁴ However, given the high levels of endemism among seamount living marine resources (“LMRs”) and the fact that most of the species living in benthic environments are still undiscovered,⁷⁵ some commentators contend that bottom trawling has likely led to the extinction of numerous undiscovered species.⁷⁶ This disturbing trend has the potential for significant negative influences on the wider ocean ecosystem because the impacts of bottom trawling on the food chain are largely unknown.⁷⁷

D. *The International Community Has Taken Notice of the Harmful Effects of Bottom Trawls on Seamounts in the Global Commons*

Not surprisingly, the threats posed to seamounts by bottom trawling have attracted the attention of numerous States, international organizations, non-governmental organizations, and members of the scientific community.⁷⁸ The U.N. has been asked to declare a moratorium on bottom-

⁷² Turner, *supra* note 26, at 407.

⁷³ UNEP-WCMC REPORT, *supra* note 13, at 38.

⁷⁴ 2004 U.N. S-G Report *Oceans and the Law of the Sea—Addendum*, *supra* note 8, at 77.

⁷⁵ *Id.* at 46.

⁷⁶ GIANNI, *supra* note 19, at 17; *see also* Koslow, *supra* note 36, at 555 (opining that trawling poses a severe risk of depletion and extinction to elements of seamount benthic fauna due to their “highly specific habitat requirements, localized distribution and high levels of local endemism”).

⁷⁷ *See* Koslow, *supra* note 36, at 554 (stating that as of the year 2000, no studies have been conducted on the impact of deepwater fisheries on predator or prey population of the target species). These impacts are likely to be amplified in the deep ocean where ecosystem vulnerability can be especially high. *See* 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 26.

⁷⁸ *See, e.g.,* 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 21 (“States reported a wide range of fisheries management measures adopted in response to these problems, including designation of MPAs.”). One such example comes from New Zealand, which, in 2001, enforced a voluntary closure on an orange roughy fishery at a high seas seamount adjacent to its Exclusive Economic Zone because of substantial coral by-catch. *Id.* at 35. Similarly, the U.N. General Assembly, States, and other international organizations were asked to “urgently take the necessary . . . measures to eliminate/avoid destructive practices . . . for example . . . [the] interim prohibition of destructive practices adversely impacting the marine biological diversity associated with [seamounts].” *Report of the Seventh Meeting of the Conference of the Parties to the Convention on Biological Diversity*, at 141, paras. 61-62, U.N. Doc. UNEP/CBD/COP/7/21 (2004), available at <http://www.biodiv.org/convention/cops.asp> (last visited Apr. 19, 2005) [hereinafter *Report of the Seventh COP to the CBD*]. Agenda 21 provides, *inter alia*, that it is

trawl fishing, similar to that previously issued for large-scale pelagic drift nets.⁷⁹ A report from the U.N. Informal Consultative Process on the Law of the Sea (“UNICPOLOS”) has echoed these calls.⁸⁰

In apparent response to the foregoing, the U.N. General Assembly, at its 59th session in 2004, adopted a resolution urging States to consider a temporary ban on bottom trawling at vulnerable ecosystems in the global commons, including seamounts and cold-water corals.⁸¹ It also called upon States and international organizations to “urgently take action to address, in accordance with international law, destructive [fishing] practices that have adverse impacts on marine biodiversity and ecosystems, including seamounts . . . and cold water corals.”⁸² However, the General Assembly declined to go so far as declaring a moratorium on the practice.⁸³ While certainly a positive step, this resolution is indicative of an unfortunate historical trend in the management of fisheries: most management has been reactive in that enforcement measures—such as moratoria—generally arrive only after a fishery has reached a state of crisis.⁸⁴

necessary to protect and restore endangered marine species, preserve habitats and other ecologically sensitive areas, and promote the development and use of selective fish gear and practices that minimize waste in the catch of target species and minimize by-catch of non-target species. See *Agenda 21*, *supra* note 42, princ. 17.46.

⁷⁹ See U.N. Press Conference by DSCC, *supra* note 6; see also Montserrat Gorina-Ysern, *World Ocean Public Trust: High Seas Fisheries After Grotius—Towards a New Ocean Ethos?*, 34 *GOLDEN GATE U. L. REV.* 645, 654-55 (2004) (detailing the recommendation prepared at the Defying Ocean’s End Conference). The moratorium on large-scale pelagic drift nets was adopted through G.A. Res. 46/215, U.N. GAOR, 46th Sess., U.N. Doc. A/RES/46/215 (1991).

⁸⁰ *Letter Dated 24 May 2004 from the Permanent Representative of Australia to the United Nations Addressed to the Secretary-General*, U.N. Open-Ended Informal Consultative Process on Oceans and the Law of the Sea, 5th Mtg., Annex at 4, U.N. Doc. A/AC.259/12 (2004) [hereinafter *Letter from the Representative of Australia to the U.N.*].

⁸¹ G.A. Res. 59/L.23, U.N. GAOR, 59th Sess., at 13-14, U.N. Doc. A/59/L.23 (2004) (to be issued as A/59/25), para. 66 (Nov. 10, 2004).

⁸² G.A. Res. 59/L.22, U.N. GAOR, 59th Sess., at 13, U.N. Doc. A/59/L.22 (2004) (to be issued as A/59/24), para. 70 (Nov. 10, 2004).

⁸³ Press Release, U.N., General Assembly, Concerned About World’s Marine Ecosystems, Adopts Texts on Law of Sea, Sustainable Fisheries (Nov. 17, 2004), available at <http://www.un.org/News/Press/docs/2004/ga10299.doc.htm> (last visited Apr. 19, 2005).

⁸⁴ James Carr & Matthew Gianni, *High Seas Fisheries, Large Scale Drift Nets, and the Law of the Sea*, in *FREEDOM FOR THE SEAS IN THE 21ST CENTURY*, *supra* note 68, at 285; see also U.N. Convention on Biological Diversity, *Subsidiary Body on Scientific, Technical, and Technological Advice for the Convention on Biological Diversity, Report of the Ad Hoc Technical Expert Group on Marine and Coastal Protected Areas*, U.N. Environment Programme, Provisional Agenda Item 5.2, at 5, para. 9(d), U.N. Doc. UNEP/CBD/SBSTTA/8/INF/7 (2003) [hereinafter *SBSTTA Report*] (noting that environmental degradation in the marine environment is less easily observed than that on land, “making it more likely that degradation will need to reach a catastrophic level before it is recognized and addressed”); Burke, *supra* note 68, at 237 (suggesting that it makes little sense to single out pelagic drift nets for a moratorium when other types of fishing gear like trawls are at least as destructive to LMRs).

Among the long-term measures advocated for by concerned parties is a representative system of High Seas Marine Protected Areas (“HSMPAs”). Regardless of their location, marine protected areas vary widely in their prescriptive activity. They can, for instance, mandate that an area be entirely closed to all fishing, be closed only to certain fishing practices, or be closed only to certain depths.⁸⁵

Support for HSMPAs is now reflected in numerous international instruments and pronouncements. For example, the Seventh Conference of the Parties to the U.N. Convention on Biological Diversity⁸⁶ addressed the existing lacuna in the protection of LMRs at seamounts in the global commons.⁸⁷ It agreed that there is:

[A]n 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 . . . including areas such as seamounts [and] cold-water corals.⁸⁸

Presumably answering this call, the General Assembly issued Resolution 57/141 in 2002, calling upon States to establish representative networks of marine protected areas by 2012.⁸⁹ The Resolution also encourages relevant international and regional organizations to “consider urgently ways to integrate and improve . . . the management of risks to marine biodiversity of seamounts.”⁹⁰

The remainder of this Comment proceeds from the assumption that a system of HSMPAs prohibiting the use of bottom trawling technology at selected seamounts can be established consistent with existing international law. For example, imagine that as a concerned State, Australia hosts an

⁸⁵ 2004 U.N. S-G Report on Sustainable Fisheries, *supra* note 11, at 31. A marine protected area is “any defined area within . . . the marine environment, together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation or other effective means . . . with the effect that its marine . . . biodiversity enjoys a higher level of protection than its surroundings.” *SBSTTA Report*, *supra* note 84, at 10, para. 30.

⁸⁶ Convention on Biological Diversity, June 5, 1992, S. TREATY DOC. 20, 1760 U.N.T.S. 79 (entered into force Dec. 29, 1993) [hereinafter CBD].

⁸⁷ *Report of the Seventh COP to the CBD*, *supra* note 78, at 140, para. 60.

⁸⁸ *Id.* at 130, para. 30.

⁸⁹ G.A. Res. 57/141, U.N. GAOR, 57th Sess., Agenda Item 25(a), at 10, U.N. Doc. A/RES/57/141 (2002).

⁹⁰ *Id.* At its 59th Session, UNICPOLOS addressed these same questions. See *Report on the Work of the United Nations Informal Consultative Process on Oceans and the Law of the Sea at Its Fifth Meeting*, U.N. GAOR, 59th Sess., at 2-3, U.N. Doc. A/59/122 (2004).

international conference aimed at protecting high seas seamounts from bottom trawling.⁹¹ Parties to the conference produce a document creating a HSMPA governing certain seamounts. Non-parties to the agreement are obviously not bound by its terms. However, this analysis will attempt to demonstrate that the party States, using the existing international legal framework, can potentially enforce the HSMPA against non-party States and induce them to comply with the provisions of the protection regime.

HSMPAs will be of little practical use unless high seas fishing nations recognize them as legal limits on fishing practices that they are bound to observe and enforce. Thus, concerned States, like Australia in the hypothetical posed above, must prove the existence of an affirmative duty to protect and preserve certain aspects of the high seas marine environment. Therefore, this Comment will argue that pursuant to existing international treaties it is incumbent upon States to protect seamount ecosystems from destructive fishing practices and to enact and enforce municipal legislation to that end. States that violate these treaties should bear international responsibility and, because the breach is a concern of the international community as a whole, all States have standing to invoke that responsibility.

III. STATES ARE OBLIGATED TO PROTECT LMRS AT HIGH SEAS SEAMOUNTS

The international legal framework against which the living resources of the high seas are evaluated consists primarily of the 1982 U.N. Convention on the Law of the Sea ("LOSC"),⁹² which codifies many customary international law of the sea rules; the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas ("Compliance Agreement"),⁹³ and the Convention on Biological Diversity.⁹⁴ A collective analysis of these authorities reveals that States do not enjoy an absolute right to fish the high

⁹¹ Australia has in fact encouraged the development of a pilot HSMPA site. See *Letter from the Representative of Australia to the U.N.*, *supra* note 80, at 4. Other countries contend that any HSMPA would contravene existing international law. See *Protection and Conservation of Vulnerable Marine Ecosystems in Areas beyond National Jurisdiction*, United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea, Submitted by the Delegation of Norway, 4th Mtg., at 2, U.N. Doc. A/AC.259/10 (2003).

⁹² United Nations Convention on the Law of the Sea, *opened for signature* Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter LOSC]. The LOSC, which entered into force in 1994, currently has 148 parties. For a complete list of parties, see UNITED NATIONS DIVISION FOR OCEAN AFFAIRS AND LAW OF THE SEA, STATUS OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA, available at http://www.un.org/Depts/los/reference_files/status2005.pdf (last visited Apr. 19, 2005).

⁹³ United Nations Food and Agriculture Organization, *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas*, Res. 15/93, U.N. FAO Conference, 27th Sess., S. TREATY DOC. 103-24 (1993) [hereinafter *Compliance Agreement*].

⁹⁴ See CBD, *supra* note 86.

seas. Rather, this right is qualified by a duty to protect and preserve certain seamount ecosystems and LMRs. Therefore, the failure of States to guard against the indiscriminate use of bottom trawling technology at seamounts in the global commons constitutes a breach of treaty obligations.

A. *The 1982 U.N. Convention on the Law of the Sea*

The preamble to the LOSC reflects a “desirability to establish . . . a legal order . . . which will promote . . . the conservation of [the ocean’s] living resources, and the study, protection and preservation of the marine environment.”⁹⁵ Specific attention to the marine environment in areas beyond national jurisdiction is provided principally in Part VII and Part XII of the LOSC. It is the relationship between these two Parts that largely dictates what habitat protection measures exist for living marine resources in the global commons and what legal limits on traditional high seas fishing freedoms should be recognized. This relationship indicates that States—regardless of the accession to a HSMPA regime—are bound to protect seamount ecosystems from destructive fishing practices by executing their LOSC obligations within their respective municipal law systems.

1. *Part XII of the LOSC Obligates States to Protect and Preserve the Marine Environment*

Pursuant to Part XII of the LOSC, all parties have the general obligation to protect and preserve the marine environment.⁹⁶ While the LOSC does not define the term “marine environment,” it is generally understood to comprise the surface of the sea, the water column, the seabed beyond the high tide mark, and the biosystems included therein or dependent thereon.⁹⁷ Consequently, the marine life at seamounts falls under the ambit of the LOSC.⁹⁸

The general obligation to protect and preserve the marine environment is honored when States use the “best practicable means at their disposal and in accordance with their capabilities” to protect that environment.⁹⁹ This

⁹⁵ LOSC, *supra* note 92, pmb1.

⁹⁶ *Id.* art. 192. This is properly seen as a general principle of international law and carries with it the negative implication that States are obligated not to deliberately, or perhaps even carelessly, degrade the marine environment. 4 UNITED NATIONS CONVENTION ON THE LAW OF THE SEA: A COMMENTARY 41-42 (Myron H. Nordquist et al. eds., 1991) [hereinafter LOSC COMMENTARY VOL. IV].

⁹⁷ LOSC COMMENTARY VOL. IV, *supra* note 96, at 42.

⁹⁸ *See id.* at 43 (noting that the marine environment includes marine life).

⁹⁹ 1 E.D. BROWN, THE INTERNATIONAL LAW OF THE SEA: INTRODUCTORY MANUAL 341 (1994); *see also* LOSC, *supra* note 92, art. 194.

rather porous standard is supplemented by the more specific requirement to adopt the necessary measures “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.”¹⁰⁰ The LOSC does not define “ecosystem,” nor does it offer a standard by which to determine what ecosystems qualify as rare and fragile, or what species are depleted, threatened, or endangered. However, guidance can be found in the Convention on Biological Diversity, which defines ecosystem as “a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.”¹⁰¹ The remaining terms contained in article 194(5) of the LOSC (i.e. “rare and fragile” and “the habitat of depleted, threatened, or endangered species and other forms of marine life”) are understood to be “self-explanatory.”¹⁰² Thus, based on the foregoing definition of “ecosystem,” and the ordinary meaning¹⁰³ of the remaining terms, certainly at least some seamounts and their associated LMRs meet criteria of article 194(5) of the LOSC.

The minutes from the 58th session of UNICPOLOS, held in 2003, bolster this conclusion. Therein, vulnerable marine ecosystems are defined “as those particularly susceptible to disruption or damage by adverse impacts of human activities, such as . . . destructive fishing practices Vulnerable marine ecosystems include . . . seamounts.”¹⁰⁴ This lends support to the conclusion that seamounts are properly classified as within the domain of LOSC article 194(5). It follows that States have a treaty obligation to protect them.

2. *States' Rights to Fish the Global Commons Are Qualified with Regard to Seamount Bottom Trawling*

At first blush, the duty to protect rare and fragile ecosystems under Part XII of the LOSC may appear inapposite to the high seas freedoms as

¹⁰⁰ LOSC, *supra* note 92, art. 194(5). The LOSC also mandates that parties shall cooperate on a global or regional basis—directly or through competent international organizations—to achieve necessary protection and preservation measures. *Id.* arts. 118, 197.

¹⁰¹ CDB, *supra* note 86, art. 2. Similarly, the International Law Commission (“ILC”) asserts that the term “ecosystem” generally refers “to an ecological unit consisting of living and non-living components that are interdependent and function as a community.” LOSC COMMENTARY VOL. IV, *supra* note 96, at 68.

¹⁰² LOSC COMMENTARY VOL. IV, *supra* note 96, at 68.

¹⁰³ For guidance in resolving textual ambiguities in treaties, see generally Vienna Convention on the Law of Treaties, *opened for signature* May 23, 1969, arts. 31-32, 1155 U.N.T.S. 331 (1969).

¹⁰⁴ *Report on the Work of the United Nations Informal Consultative Process on Oceans and the Law of the Sea*, U.N. GAOR, 58th Sess., Preliminary List Item 53, at 22, para. 80, U.N. Doc. A/58/95 (June 26, 2003).

described in Part VII.¹⁰⁵ The high seas include all parts of the sea not subject to national jurisdiction,¹⁰⁶ with the exception of the seabed, ocean floor and subsoil thereof.¹⁰⁷ Accordingly, seamount LMRs are also subject to the provisions of Part VII of the LOSC.¹⁰⁸ The LOSC recognizes the right to fish as among the high seas freedoms;¹⁰⁹ consequently, high seas LMRs are considered common property, subject to the rule of capture. It would appear, then, that all States enjoy the right to bottom trawl at seamounts in the global commons, provided that they do so “with due regard for the interests of other States.”¹¹⁰

However, high seas fishing is also subject to the provisions of Part VII relating to the conservation and management of high seas LMRs.¹¹¹ These provisions hold that States must cooperate in the conservation and management of high seas LMRs.¹¹² For instance, when determining appropriate catch levels and establishing other LMR conservation measures, States must consider the effects on those species associated with, or dependent upon, target stocks.¹¹³ This provision is designed to ensure that non-targeted species are not seriously threatened. Most importantly, however, States have an affirmative duty under LOSC article 117 “to take . . . such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas.”¹¹⁴

¹⁰⁵ See LOSC, *supra* note 92, art. 87.

¹⁰⁶ *Id.* art. 86.

¹⁰⁷ *Id.* art. 1. This region is known as “The Area.” The Area is subject to the governance of the International Seabed Authority (“ISA”), a body created by LOSC to regulate the exploration and exploitation of the non-living mineral resources of the deep seabed; however, the ISA has no jurisdiction over the LMRs of the seabed. *Id.* art. 133.

¹⁰⁸ See Craig H. Allen, *Protecting the Oceanic Gardens of Eden: International Law Issues in Deep-Sea Vent Resource Conservation and Management*, 13 GEO. INT’L ENVTL. L. REV. 563, 634-36 (2001). LMRs subject to Part VII, as defined by LOSC articles 116-19, include both pelagic and benthic species, notwithstanding the fact that most are not targeted for catch by bottom trawlers. *Id.*

¹⁰⁹ LOSC, *supra* note 92, art. 87. Notably, all rights described in LOSC, including high seas freedoms, are bestowed exclusively upon States, and not upon private individuals. See *id.*, pt. VII. In turn, States can confer nationality upon vessels of private persons so that they may enjoy the States’ high seas rights.

¹¹⁰ *Id.* art. 87(2) (emphasis added). High seas fishing freedoms are also subject to any applicable rules of international law, described *infra* Part III.B. The “due regard” standard appeared in the *Fisheries Jurisdiction* case, wherein the International Court of Justice held that the “laissez-faire treatment of the living resources of the sea in the high seas has been replaced by a recognition of a duty to have due regard to the rights of other states and the needs of conservation for the benefit of all.” *Fisheries Jurisdiction* (U.K. v. Ice.) 1974 I.C.J. 4, 31 (July 25). One commentator has suggested that the ill-defined “due regard” standard can be regarded as a “recognition by states of a common interest in preserving a shared global resource, and a way of attempting to reconcile very divergent interests, goals, and expectations in connection with marine resources.” Anton, *supra* note 12, at 361.

¹¹¹ LOSC, *supra* note 92, art. 87(1)(e).

¹¹² *Id.* art. 118.

¹¹³ *Id.* art. 119(1)(b).

¹¹⁴ *Id.* art. 117.

In order to satisfy the requirements of article 117, each State is required to fix the conditions for the grant of its nationality to ships.¹¹⁵ States are free to condition the grant of their nationality as they see fit, as long as they live up to their obligation to conserve high seas LMRs. In addition, each fishing vessel on the high seas is subject to the exclusive jurisdiction of its flag State.¹¹⁶ Consequently, the flag State must ensure that its jurisdiction and control are effectively exercised.¹¹⁷ Part VII of the LOSC thus establishes the link between municipal and international law¹¹⁸ in that it requires States to enact and enforce domestic legislation that will satisfy its LOSC conservation and management obligations. Based on the depletion of fish stocks and the habitat destruction documented at seamounts,¹¹⁹ the restraints placed on high seas fishing contained in Part VII are not frequently observed.

B. In Addition to the Protection and Preservation Provisions of the LOSC, the Freedom to Fish the High Seas Is Restrained by States' Other Relevant Treaty Obligations

The LOSC does not expressly state that in the event of a textual conflict the protection and preservation obligations supersede high seas fishing freedoms. Nevertheless, the Convention's language is indicative of this conclusion. This is so despite the principle of *lex specialis derogat lex generali*, which would seem to dictate that the more specific provision contained in article 119(1)(b)¹²⁰ of the LOSC controls over the more general protection and preservation requirements described in articles 192 and 194(5). However, article 116 provides that high seas fishing is subject to the treaty obligations of the State,¹²¹ which include those contained in the

¹¹⁵ *Id.* art. 91.

¹¹⁶ *Id.* art. 92. An exception to this principle exists for certain enforcement actions against vessels that pollute the high seas. *See id.* arts. 218, 220.

¹¹⁷ *Id.* art. 94. The LOSC is not a self-executing treaty in terms of State responsibility to the high seas marine environment; flag States must enact municipal legislation in order to give effect to the provisions relating to the protection and preservation measures.

¹¹⁸ BROWN, *supra* note 99, at 294.

¹¹⁹ *See supra* Part II.

¹²⁰ This article provides: "In determining the allowable catch and establishing other conservation measures for the living resources of the high seas, States shall . . . take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened." LOSC, *supra* note 92, art. 119(1)(b).

¹²¹ *Id.* art. 116(a).

LOSC,¹²² the Convention on Biological Diversity, and the Compliance Agreement.¹²³ Therefore, the text of the LOSC requires that the provisions of Part VII, including article 119(1)(b), give way to those of LOSC Part XII, and, if applicable, the Convention on Biological Diversity and the Compliance Agreement.

Analysis of these authorities reveals that the obligation to protect and preserve rare and fragile seamount ecosystems in the global commons controls over LOSC high seas fishing rights, notwithstanding the specificity of article 119(1)(b). This obligation operates as a legal limit on destructive fishing practices at seamounts in areas beyond national jurisdiction. It follows that bottom trawling which results in the degradation of rare and fragile ecosystems and the widespread loss of marine biodiversity is a violation of the LOSC.

1. The High Seas Fishing Compliance Agreement Tempers High Seas Fishing Rights

As mentioned above, article 116 of the LOSC provides that high seas fishing rights are subject to the treaty obligations of the State. One such treaty is the Compliance Agreement. The Compliance Agreement, approved by the U.N. Food and Agriculture Organization at its 27th Session, entered into force on April 23, 2003, and currently has twenty-nine parties, including Japan.¹²⁴ Its scope extends to all fishing on the high seas, as opposed to, for example, only highly migratory stocks or straddling stocks, as is the case with the two complementary agreements to the LOSC. Like the LOSC, the Compliance Agreement demonstrates that high seas fishing is not an absolute right. Instead, the Agreement tempers fishing rights against conservation and management measures.

The Compliance Agreement contains important provisions relating to flag state responsibility respecting agreed-upon high seas conservation and management measures. Specifically, it requires each party to “take such measures as may be necessary to ensure that fishing vessels entitled to fly its

¹²² 3 UNITED NATIONS CONVENTION ON THE LAW OF THE SEA: A COMMENTARY 286 (Myron H. Nordquist et al. eds., 1995) (stating that a party’s treaty obligations “includes their obligations under the 1982 Convention”).

¹²³ See *infra* Part III.B.1-2, assuming that the State in question is party to the CBD and/or the Compliance Agreement.

¹²⁴ For a complete list of parties, see FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, AGREEMENT TO PROMOTE COMPLIANCE WITH INTERNATIONAL CONSERVATION AND MANAGEMENT MEASURES BY FISHING VESSELS ON THE HIGH SEAS, *available at* <http://www.fao.org/Legal/treaties/012s-e.htm> (last visited Apr. 19, 2005). Japan is the only party that frequently engages in high seas bottom trawling.

flag do not engage in any activity that undermines the effectiveness of international conservation and management measures.”¹²⁵ It also requires States to adopt effective enforcement mechanisms, including “making the contravention of such provisions an offence under national legislation.”¹²⁶ The associated sanctions must be of sufficient gravity to ensure compliance in that they must outweigh the benefits accrued to the offenders from their illegal fishing activities.¹²⁷ Finally, the Compliance Agreement provides that “[n]o Party shall authorize any fishing vessel entitled to fly its flag to be used for fishing on the high seas unless the Party is satisfied that it is able . . . to exercise effectively its responsibilities under this Agreement in respect of that fishing vessel.”¹²⁸ That is, it requires States to properly condition the grant of their nationality to fishing vessels and to exercise effective jurisdiction and enforcement over those vessels. Consequently, as with the provisions contained in the LOSC, the Compliance Agreement indicates that high seas fishing freedoms are largely limited by measures necessary to protect the marine environment and that a failure to live up to conservation obligations constitutes a treaty violation.

2. *The Convention on Biological Diversity Provides that States Have an Obligation to Prevent Damage to the Global Commons*

The right to fish the high seas is also subject to the treaty obligations contained in the Convention on Biological Diversity (“CBD”), assuming the State in question is a party. The CBD is the “first comprehensive agreement to address all aspects of biodiversity”¹²⁹ and is designed to complement existing conventions, including the LOSC.¹³⁰ Almost all of the world’s States have ratified this convention,¹³¹ thus reflecting the global recognition of the intrinsic value of biological diversity.¹³² The conservation of biological diversity is considered to be a “common concern of human

¹²⁵ *Compliance Agreement*, *supra* note 93, para. 1(a).

¹²⁶ *Id.* para. 8.

¹²⁷ *Id.*

¹²⁸ *Id.* para. 3.

¹²⁹ Allen, *supra* note 108, at 601.

¹³⁰ See CBD, *supra* note 86, art. 22, para. 2.

¹³¹ A complete list of parties is available at SECRETARIAT OF THE CONVENTION OF BIOLOGICAL DIVERSITY, PARTIES TO THE CONVENTION OF BIOLOGICAL DIVERSITY/CARTAGENA PROTOCOL ON BIOSAFETY, available at <http://www.biodiv.org/world/parties.asp> (last visited Apr. 19, 2005). The U.S. has signed, but not yet ratified the CBD. *Id.*

¹³² CBD, *supra* note 86, pmb., para. 1. The CBD defines biological diversity as “the variability among living organisms from all sources . . . and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems.” *Id.* art. 2.

kind.”¹³³ Codifying a basic principle of international environmental law, the CBD holds that States have “the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment . . . of areas beyond the limits of national jurisdiction.”¹³⁴ The scope of the CBD therefore extends to all processes and activities carried out under the regulatory jurisdiction of a State, even if done so beyond the limits of the State’s territorial jurisdiction.¹³⁵ Accordingly, given that the LOSC grants near exclusive jurisdiction over high seas fishing vessels to the flag State,¹³⁶ there is the potential for CBD obligations to arise for flag States whose vessels operate in the global commons.

The CBD requires each contracting party to regulate or manage, as far as possible, biological resources beyond national jurisdiction that are important for the conservation of biological diversity, “with a view to ensuring their conservation and sustainable use.”¹³⁷ States are also obligated to promote the protection of ecosystems and natural habitats, rehabilitate and restore degraded ecosystems, and promote the recovery of threatened species.¹³⁸ In addition, they must incorporate considerations of conservation and sustainable use of biological resources into national decision-making and adopt measures that avoid or minimize negative impacts on biological diversity.¹³⁹

Bottom trawling disregards both the language and the spirit of these treaty obligations. As Part II of this Comment illustrates, LMRs found at seamounts are tremendously important components of high seas biodiversity. Moreover, given that seamounts provide habitat for rare, depleted, and threatened species, they are recognized as being among vulnerable ecosystems warranting increased protection. Consequently, a fishing practice that substantially damages and degrades seamount ecosystems runs contrary to the provisions of the CBD. Further, as indicated above, States are bound to ensure that activities within their jurisdiction, such as bottom trawling, do not cause damage to the high seas marine environment. States are in breach of this obligation when they flag vessels that use bottom trawling gear at seamounts in the global commons.

¹³³ *Id.* pmb., para. 3.

¹³⁴ *Id.* art. 3. In addition, as with LOSC article 117, the CBD requires all contracting parties to cooperate in the sustainable use and conservation of the living resources of the global commons. *Id.* art. 5.

¹³⁵ *Id.* art. 4(b).

¹³⁶ LOSC, *supra* note 92, art. 92.

¹³⁷ CBD, *supra* note 86, art. 8(c).

¹³⁸ *Id.* art. 8(d), (f).

¹³⁹ *Id.* art. 10.

C. *The LOSC, the Compliance Agreement, and the CBD Demonstrate that States' Rights to Fish the High Seas Are Secondary to Their Obligations to Protect and Conserve the High Seas Marine Environment*

Despite the fact that the LOSC does not spell out a detailed regime aimed at promoting the sustainable use of marine life,¹⁴⁰ its provisions, coupled with those contained in the Compliance Agreement and the CBD, highlight the fact that fishing the high seas is a qualified right rather than an absolute right.¹⁴¹ Moreover, they indicate that the international community—at least theoretically—considers biodiversity and the conservation of rare and little known ecosystems to be of greater global value than unrestrained high seas fishing freedoms. The right to fish the global commons is properly exercised when, in addition to the obligations contained in LOSC articles 117-19, States live up to their obligations under Part XII of the LOSC, the CBD and, if applicable, the Compliance Agreement. Therefore, while not a *per se* treaty violation, the failure of States in municipal legislative and executive fora to prevent destructive fishing practices at vulnerable seamount ecosystems and to effectively exercise jurisdiction and control over their vessels is properly understood as a breach of LOSC obligations.

The International Law Commission's ("ILC") Draft Articles on the Responsibility of States for Internationally Wrongful Acts ("Draft Articles on State Responsibility")¹⁴² contain customary international law rules that support this conclusion.¹⁴³ The Draft Articles on State Responsibility provide that a breach of an international obligation occurs when conduct attributed to a State equates with a failure by that State to comply with its international obligations.¹⁴⁴ Like a traditional negligence tort, a breach is found in the discontinuity "between the conduct required of the State . . . and

¹⁴⁰ Anton, *supra* note 12, at 363.

¹⁴¹ See Gorina-Ysern, *supra* note 79, at 675 (listing the provisions of the LOSC that qualify high seas fishing freedoms).

¹⁴² *Report of the International Law Commission, Draft Articles on the Responsibility of States for Internationally Wrongful Acts*, U.N. GAOR, 56th Sess., Supp. No. 10, U.N. Doc. A/56/10 (2001) [hereinafter *Draft Articles on State Responsibility*]. The Draft Articles were adopted by the ILC at its 53rd Session.

¹⁴³ Daniel Bodansky & John R. Cook, *Symposium: The ILC's State Responsibility Articles, Introduction and Overview*, 96 AM. J. INT'L L. 773, 790 (2002) (opining that the Draft Articles on State Responsibility, for the most part, can be seen as a codification of customary law).

¹⁴⁴ *Draft Articles on State Responsibility, supra* note 142, art. 12.

the conduct actually adopted.”¹⁴⁵ Applying these rules to high seas bottom trawling again reveals that States are in breach of their international duties. The conduct required by the foregoing international instruments is that necessary to protect and preserve the biodiversity of the marine environment, conserve and manage seamount LMRs, and promulgate municipal laws to that end. Moreover, States must effectively exercise jurisdiction and control over fishing vessels. The conduct actually adopted, on the other hand, is a fishing practice that can severely damage rare ecosystems and a failure to enact and enforce effective national legislation. Therefore, States party to a HSMFA regime could make a case that high seas fishing nations are in violation of their international treaty obligations when vessels flying their flags engage in bottom trawling at a HSMFA.

Unfortunately, the LOSC has “surprisingly little to say” about responsibility and liability for breaching its provisions.¹⁴⁶ Article 235, the lone provision addressing liability in Part XII of the Convention,¹⁴⁷ imposes responsibility on States for failure to fulfill the LOSC’s environmental protection provisions and promulgate national laws to that end. It dictates that States are liable for failure to prevent degradation of seamount ecosystems in the global commons “in accordance with international law.”¹⁴⁸ Notably, article 235 is without prejudice to the application of existing rules and the development of further rules regarding responsibility and liability under international law.¹⁴⁹

IV. STATES BEAR INTERNATIONAL RESPONSIBILITY FOR THE BREACH OF DUTIES OWED TO THE HIGH SEAS MARINE ENVIRONMENT

As indicated above, LOSC article 235 provides that States shall be responsible for the fulfillment of their obligations concerning the protection and preservation of the marine environment in accordance with international law.¹⁵⁰ Consequently, possible avenues of enforcement against offending States come principally from customary law, which is largely codified in the Draft Articles on State Responsibility.¹⁵¹ The Draft Articles could confer

¹⁴⁵ *Report of the International Law Commission, Commentaries to the Draft Articles on the Responsibility of States for Internationally Wrongful Acts*, U.N. GAOR, 56th Sess., Supp. No. 10, at 125, U.N. Doc. A/56/10 (2001) [hereinafter *Commentary to the Draft Articles on State Responsibility*].

¹⁴⁶ BROWN, *supra* note 99, at 343. It does, however, require that States execute their LOSC obligations in good faith and in a manner that does not constitute an abuse of rights. LOSC, *supra* note 92, art. 300.

¹⁴⁷ See LOSC, *supra* note 92, pt. XII (containing a total of forty-six articles).

¹⁴⁸ *Id.* art. 235.

¹⁴⁹ *Id.* art. 304.

¹⁵⁰ *Id.* art. 235.

¹⁵¹ Bodansky & Cook, *supra* note 143.

standing on concerned States, and the LOSC describes the venues in which enforcement could be sought,¹⁵² thus providing parties to the HSMPA regime an opportunity to enforce it against non-parties.

A. *The Draft Articles on State Responsibility Demonstrate that the Failure of States to Enact and Enforce Effective Domestic Legislation to Protect High Seas Seamounts Gives Rise to International Liability*

With notable exceptions,¹⁵³ the Draft Articles on State Responsibility can be viewed as a “consolidation and clarification” of the secondary rules of state responsibility rather than as a forward-looking innovation.¹⁵⁴ Importantly, their scope extends to the environmental provisions contained in treaties like the LOSC.¹⁵⁵ The Draft Articles on State Responsibility do not purport to define the rules that obligate States, but rather those principles that determine whether an obligation has been violated and what consequences flow from the violation.¹⁵⁶ That is, they engage the secondary rules relating to liability for breach of the primary rules contained, for example, in the LOSC.¹⁵⁷

A basic premise of the Draft Articles on State Responsibility is that every internationally wrongful act or omission of a State entails responsibility of that State.¹⁵⁸ This premise reflects the fundamental notion that a breach of an international obligation—such as the obligation to protect rare and fragile ecosystems—gives rise to a new legal regime containing its own set of rights and duties.¹⁵⁹ Included under the umbrella of

¹⁵² See LOSC, *supra* note 92, pt. XV.

¹⁵³ See Bodansky & Cook, *supra* note 143 (describing forward-looking provisions contained in the Draft Articles on State Responsibility).

¹⁵⁴ See Bodansky & Cook, *supra* note 143. That is, the Draft Articles on State Responsibility are largely a codification of existing international law rather than an expression of progressive development.

¹⁵⁵ PHILLIPE SANDS, *PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW* 873 (2d ed. 2003); see also Bodansky & Cook, *supra* note 143, at 780 (noting that the Draft Articles on State Responsibility apply to particular subject areas, including the law of the sea).

¹⁵⁶ *Commentary to the Draft Articles on State Responsibility*, *supra* note 145, at 59-60; see also James Crawford, *The ILC's Articles on Responsibility of States for Internationally Wrongful Acts: A Retrospect* 96 AM. J. INT'L L. 874, 876 (2002) (“[T]he key idea is that a breach of a primary obligation gives rise, immediately by operation of the law of state responsibility, to a secondary obligation or series of such obligations (cessation, reparation . . .).”). Article 2 of the Draft Articles on State Responsibility provides that an internationally wrongful act occurs “when conduct consisting of an action or omission: (a) is attributable to the State under international law; and (b) Constitutes a breach of an international obligation.” *Draft Articles on State Responsibility*, *supra* note 142, art 2.

¹⁵⁷ See Crawford, *supra* note 156, at 877 (demonstrating that codifications of the substantive international law of obligations, such as the LOSC, can by definition only be partial).

¹⁵⁸ *Draft Articles on State Responsibility*, *supra* notes 142, art. 1.

¹⁵⁹ Bodansky & Cook, *supra* note 143, at 779.

internationally wrongful acts is the refusal to fulfill a treaty obligation.¹⁶⁰ Therefore, the failure of States to live up to their LOSC obligations is properly seen as an internationally wrongful act.

This analysis has demonstrated that States breach their treaty obligations by failing to protect the high seas marine environment. This failure constitutes an "act of the state" as defined by the Draft Articles on State Responsibility.¹⁶¹ In turn, this internationally wrongful act gives rise to State liability, thus providing States party to a HSMPA with a potential avenue through which to enforce compliance by non-party States.

B. All States Have Standing to Invoke the Responsibility of Offending States for the Destruction of the High Seas Marine Environment

It would be very difficult for concerned States to demonstrate any direct harm suffered from injury to seamount ecosystems in areas beyond national jurisdiction because the direct effects of those acts are generally confined to those areas. As indicated below, the LOSC offers few opportunities for concerned States to inhibit high seas bottom trawling. However, the Draft Articles on State Responsibility grant standing to States that are unable to demonstrate direct injury from destructive high seas fishing, thus allowing them to invoke the responsibility of offending States.

1. The LOSC Lacks Adequate Provisions for States to Hold Each Other Accountable for Damage to Seamounts

A major impediment to those wishing to eliminate irresponsible high seas fishing is that under the LOSC, "if a State believes that proper jurisdiction and control have not been exercised by another flag State, there is not a great deal it can do."¹⁶² In fact, all a concerned State can really do is report the infraction to the flag State; the flag State then assumes all responsibility for investigative and remedial actions.¹⁶³ Therefore, should Australia, for example, wish to enforce its HSMPA regime against a vessel

¹⁶⁰ *Commentary to the Draft Articles on State Responsibility*, *supra* note 145, at 64 (citing Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, Second Phase, 1950 I.C.J. 121, 228 (July 18)).

¹⁶¹ *Commentary to the Draft Articles on State Responsibility*, *supra* note 145, at 73 ("[T]he obligation under a treaty to enact a uniform law is breached by the failure to enact the law, and it is not necessary for another State party to point to any specific damage it has suffered by reason of that failure."). That is, even if no State can show that it suffered actual damage, a lack thereof does not preclude a finding of an internationally wrongful act.

¹⁶² BROWN, *supra* note 99, at 294-95.

¹⁶³ LOSC, *supra* note 92, art. 94(6).

flagged by a non-party State, it would inform the flag State of the vessel's offense, leaving any further measures to the discretion of the flag State.¹⁶⁴

However, the LOSC does enumerate certain dispute settlement provisions and provides venue for the submission of disputes.¹⁶⁵ States may elect to submit any public law disputes concerning the application or interpretation of the LOSC either to the International Tribunal for the Law of the Sea, the International Court of Justice, an arbitral tribunal, or a special arbitral tribunal.¹⁶⁶ Russia, for example, has chosen the special arbitral tribunal as a settlement mechanism for any dispute relating to fisheries and the protection and preservation of the marine environment.¹⁶⁷ Therefore, should Australia wish to argue that bottom trawling at a HSEMPA seamount contravenes another State's LOSC obligations, the LOSC provides a venue for the submission of the dispute in one of the above-mentioned tribunals. Further, upon submission of the dispute pursuant to article 287 and pending final adjudication, the relevant tribunal may prescribe any provisional measures necessary to prevent serious harm to the marine environment.¹⁶⁸

Nonetheless, the likelihood that a claim regarding the abrogation of high seas fishing rights would be heard is low. States generally must demonstrate direct injury, which is difficult to do when the damage occurs at sensitive deep-sea ecosystems beyond national jurisdiction. The problem has been posed as follows:

Whether a state has, in the absence of a specific treaty right . . . a general legal interest in the protection of the environment in areas beyond its national jurisdiction such as to allow it to exercise rights of legal protection on behalf of the international community as a whole . . . is a question which remains difficult to answer in the absence of state practice. This might be a situation, for example, where the activities of a state were alleged to be causing environmental damage to . . . the high seas . . . or to living resources found in or

¹⁶⁴ The LOSC also grants limited enforcement powers to port and coastal states. *See id.* arts. 218, 220.

¹⁶⁵ Article 297(3)(a) requires that "[d]isputes concerning the interpretation or application of the provisions of this Convention with regard to fisheries shall be settled in accordance with section 2." *Id.* art. 297(3)(a).

¹⁶⁶ *Id.* art. 287.

¹⁶⁷ *See UNITED NATIONS DIVISION OF OCEAN AFFAIRS AND THE LAW OF THE SEA, DECLARATIONS AND STATEMENTS BY RUSSIAN FEDERATION*, available at http://www.un.org/Depts/los/convention_agreements/convention_declarations.htm#Russian%20Federation%20Upon%20ratification (last visited Apr. 19, 2005). Japan and New Zealand have not made a selection pursuant to article 287.

¹⁶⁸ LOSC, *supra* note 92, art. 290.

passing through those [seas]. In such cases, the question is which states, if any, have the right to enforce such international legal obligations as may exist to not cause environmental damage to an area of the global commons?¹⁶⁹

The LOSC is noticeably silent on the subject of standing.¹⁷⁰ However, it states that its provisions relating to responsibility and liability are without prejudice to the application of existing international law rules and those rules that may develop.¹⁷¹ That is, the LOSC allows for the potential invocation and imposition of liability under broader customary international rules and/or progressive development.

2. *The Draft Articles on State Responsibility Confer Standing on Concerned States*

The Draft Articles on State Responsibility articulate emerging principles regarding the manner in which injured States are entitled to invoke the responsibility of the offending State. As discussed above, there is little a State can do to enforce responsible fishing practices at seamounts because it is difficult for the State to demonstrate that it is injured when seamounts beyond its jurisdiction are trawled.¹⁷² However, in contrast to the LOSC, the Draft Articles on State Responsibility grant standing to States that cannot show direct injury.¹⁷³ Pursuant to article 48, non-injured States can hold offending States responsible if the obligation breached is owed to the international community as a whole.¹⁷⁴

Such obligations are commonly referred to as obligations *erga omnes*.¹⁷⁵ This term refers to the right of a State party to a treaty to bring an action against another party that it believes is in violation of its treaty obligations, even if the invoking party has not suffered material damage.¹⁷⁶

¹⁶⁹ JAMES CAMERON ET AL., *IMPROVING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL LAW* 60-61 (1996).

¹⁷⁰ An exception to this statement is the provision for prompt release actions contained in article 292.

¹⁷¹ LOSC, *supra* note 92, art. 304.

¹⁷² *See supra* Part IV.B.1.

¹⁷³ This regime is described in article 48, and is the principal element of progressive development relating to the right to invoke responsibility. Bodansky & Cook, *supra* note 143, at 786; *see also* Edith Brown Weiss, *Invoking State Responsibility in the Twenty-first Century*, 96 AM. J. INT'L L. 798, 803 (2002) ("Article 48 reflects more recent developments in international law and represents its progressive development").

¹⁷⁴ *Draft Articles on State Responsibility*, *supra* note 142, art. 48.

¹⁷⁵ *See Commentary to the Draft Articles on State Responsibility*, *supra* note 145, at 320-21.

¹⁷⁶ CAMERON, *supra* note 169, at 59 (citing fur seals arbitration); *see also* SANDS, *supra* note 155, at 185.

Thus, those States left uninjured in the direct sense can still invoke the responsibility of the offending state for violations of obligations *erga omnes*.¹⁷⁷

Obligations *erga omnes* exhibit two important characteristics: universality and solidarity.¹⁷⁸ The former indicates that the obligations are binding on all States without exception, while the latter means that each State has a legal interest in their protection.¹⁷⁹ The *raison d'être* for obligations *erga omnes* has been described as such:

No State can elude the binding force of these obligations, not only because States recognize that it must be so, but also (and more fundamentally) because nobody can claim special exemptions from moral absolutes The rationale for the universal opposability of obligations *erga omnes* is not to be found in an extrinsic principle . . . but in the recognition of the universal validity of the basic moral values that these obligations are meant to protect.¹⁸⁰

Obligations *erga omnes* are most famously discussed in the *Barcelona Traction* case.¹⁸¹ Therein, the International Court of Justice ("ICJ") pronounced that outlawing acts of aggression and slavery, and affirming basic human rights¹⁸² amounted to obligations owed to the international community as a whole. While the Court made no reference to obligations *erga omnes* relating to the environment, the commentaries to the Draft Articles on State Responsibility opine that the ICJ's pronouncement was not meant to be exhaustive or exclusive.¹⁸³

¹⁷⁷ See *Commentary to the Draft Articles on State Responsibility*, *supra* note 145, at 321. While the term *erga omnes* is not expressly used in the Articles, the commentary indicates that it was intended that the Articles embody its spirit. "Every State, by virtue of its membership in the international community, has a legal interest in the protection of certain basic rights and the fulfilment [sic] of certain essential obligations." *Id.* at 66. The ILC probably left the term out because it has been confused with obligations owed to all parties to a treaty. Weiss, *supra* note 173, at 804.

¹⁷⁸ MAURIZIO RAGAZZI, *THE CONCEPT OF INTERNATIONAL OBLIGATIONS ERGA OMNES* 17 (1997).

¹⁷⁹ *Id.* Notably, a bottom trawling State's status as a party to LOSC, the CBD, or the Compliance Agreement is irrelevant in terms of establishing liability as an essential feature of obligations *erga omnes* is universality; thus, all states are bound by that obligation, regardless of their existing treaty concessions.

¹⁸⁰ RAGAZZI, *supra* note 178, at 183.

¹⁸¹ *Barcelona Traction, Light and Power Co., Ltd. (Belg. v. Spain)*, Second Phase, 1970 I.C.J. 3 (Feb. 5).

¹⁸² *Id.*

¹⁸³ The ILC indicates that while the ICJ in *Barcelona Traction* gave some examples of obligations *erga omnes*, that list was instructive and not exhaustive and will "necessarily evolve over time." *Commentary to the Draft Articles on State Responsibility*, *supra* note 145, at 322. In fact, the ILC uses protection of the marine environment as a potential example. See *id.* Similarly, the American Society of

The obligations *erga omnes* principle should be applied to the international legal protection of the environment.¹⁸⁴ Environmental protection is now generally recognized as an essential condition to the advancement of peace and human rights, in addition to development,¹⁸⁵ and as such there is “a tendency towards favouring the right of a state to bring an action in its capacity as a member of the international community to prevent significant damage from occurring to the environment in areas beyond national jurisdiction.”¹⁸⁶ Environmental obligations involving common concern principles are likely candidates for *erga omnes* status, specifically those established by a treaty intended to protect the high seas.¹⁸⁷ As one commentator has argued, “[a]s a global common over which no State has jurisdiction or control, the high seas should in principle be the main area to explore when considering the existence of obligations *erga omnes* relating to the protection of the marine environment.”¹⁸⁸ Therefore, because harm to seamount LMRs directly affects the interests of the international community in maintaining ocean biodiversity and protecting vulnerable marine life, the obligation to protect seamounts in the global commons should be seen as an obligation *erga omnes*.¹⁸⁹

In concert with the forum provisions contained in the LOSC, article 48 represents a potentially powerful tool for the protection of fragile seamount ecosystems through enforcing a HSMPA against non-party States. Concerned States hoping to enforce compliance with a HSMPA could—relying on standing conferred by article 48—invoke the responsibility of

International Law notes that the category of obligations *erga omnes* is likely to grow in the arena of environmental protection. Weiss, *supra* note 173, at 804, 811-12.

¹⁸⁴ See CAMERON, *supra* note 169, at 60.

¹⁸⁵ RAGAZZI, *supra* note 178, at 155. See also Rio Declaration on Environment and Development, U.N. GAOR, 46th Sess., U.N. Doc. A/Conf151/5/Rev.1 (June 13, 1992).

¹⁸⁶ CAMERON, *supra* note 169, at 62.

¹⁸⁷ SANDS, *supra* note 155, at 189.

¹⁸⁸ RAGAZZI, *supra* note 178, at 162. A possible avenue through which States could effectuate and manifest obligations *erga omnes* to protect and preserve the marine environment can be found in article 218 of LOSC. Prior to the LOSC, it was not legally possible to exercise jurisdiction over a foreign vessel that had caused pollution to the marine environment in areas beyond national jurisdiction. See BROWN, *supra* note 99, at 343. This article provides that a port State may undertake to investigate and institute any necessary proceedings against a vessel that voluntarily appears within one of its ports of any discharge from that vessel occurring on the high seas. That is, “under Article 218, port States are entitled to enforce international rules and standards for the environmental protection of the high seas to the benefit of the common interests of States, irrespective of any damage to their own individual rights.” RAGAZZI, *supra* note 178, at 162. Thus, this article is a potential ally for States wishing to enforce a HSMPA.

¹⁸⁹ *Commentary to the Draft Articles on State Responsibility*, *supra* note 145, at 233 (offering pollution of the sea as an example of an obligation owed to the global community).

bottom trawling States for a breach of LOSC obligations by bringing a dispute before one of the above-mentioned tribunals.¹⁹⁰

C. *Concerned States Can Also Pursue Countermeasures Commensurate with the Draft Articles on State Responsibility to Deter High Seas Bottom Trawling*

The Draft Articles on State Responsibility provide that concerned States may also have the right to adopt certain countermeasures to induce offending States to comply with their LOSC obligations and refrain from fishing at a HSMPA. Article 54 provides that while Draft Articles on State Responsibility do not regulate countermeasures taken by States other than the injured State (i.e., those identified in article 48), they are without prejudice to the right of any of those States to take lawful measures against an offending State to ensure that the breach ceases.¹⁹¹ Thus, article 54 “leaves open the question whether any State may take measures to ensure compliance with certain international obligations in the general interest.”¹⁹² Such cases are, however, controversial and embryonic,¹⁹³ and State practice in this arena is very sparse. Consequently, “[t]he current state of international law on countermeasures taken in the general collective interest is uncertain . . . [a]t present, there appears to be no clearly recognized entitlement of State referred to in Article 48 to take countermeasures in the collective interest.”¹⁹⁴ Concerned States must therefore push at existing boundaries such that State practice can ripen to develop that entitlement.

The ILC’s commentary to article 54 offers examples of potential countermeasures, including economic sanctions and suspension of treaties.¹⁹⁵ Countermeasures can refer to “self-help” or “self-protection” measures,¹⁹⁶ and can preclude a wrongful act by an injured State when it takes such measures against the State that has committed the internationally wrongful act.¹⁹⁷ Under the auspices of article 54, it is possible to imagine certain States adopting economic measures against nations that trawl HSMPAs.¹⁹⁸ For example, Australia could potentially adopt measures

¹⁹⁰ Generally, those States invoking responsibility will demand cessation of the harmful act. Crawford, *supra* note 156, at 876.

¹⁹¹ *Commentary to the Draft Articles on State Responsibility*, *supra* note 145, at 327-28.

¹⁹² *Id.* at 183.

¹⁹³ *Id.* at 327.

¹⁹⁴ *Id.* at 355.

¹⁹⁵ *See id.* at 351-56.

¹⁹⁶ *Id.* at 181.

¹⁹⁷ *Id.* at 182.

¹⁹⁸ Any such measures must be consistent with article XX of the General Agreement on Tariffs and Trade. For a more detailed discussion of such measures, see JEFFREY DUNOFF ET AL., INTERNATIONAL

against Japan or New Zealand in response to a failure of those nations to live up to their LOSC obligations to preserve rare and fragile ecosystems. Similarly, concerned coastal States could perhaps deny Exclusive Economic Zone (“EEZ”) fishing permits to nations that trawl at HSMPAs, and/or establish an EEZ permit condition that requires foreign flagged vessels to refrain from high seas bottom trawling.

V. CONCLUSION

It is widely recognized that current international law does not adequately protect the biological diversity of areas beyond national jurisdiction.¹⁹⁹ The freedom to fish the high seas has outlived its legitimacy in light of the current state of over-exploitation and habitat degradation.²⁰⁰ Thus, “to do nothing more than is currently required risks irreversible loss of diversity and concomitant economic, scientific, and medical opportunities.”²⁰¹ While no State has the competence to regulate all high seas fishing—that competence lies with the international community as a whole—there is hope for seamount living marine resources if States are willing to establish and attempt to enforce High Seas Marine Protected Areas. Concerned States can develop a legally sound case that destructive fishing practices at certain vulnerable seamount ecosystems constitute a violation of the 1982 U.N. Convention on the Law of the Sea, and can then attempt to induce compliance with a High Seas Marine Protected Area.

In the interim, because time is of the essence,²⁰² States should respect the weight of international opinion behind the recent U.N. General Assembly pronouncement urging the temporary cessation of high seas bottom trawling, thus preserving seamounts until sustainable long-term solutions are crafted.

LAW: NORMS, ACTORS, PROCESS 797-805 (2002) (discussing the Tuna-Dolphin dispute between Mexico and the U. S.).

¹⁹⁹ Anton, *supra* note 12, at 343.

²⁰⁰ Gorina-Ysern, *supra* note 79, at 651. *See also* Anton, *supra* note 12, at 363 (noting that “it has seemed clear for some time that more concrete and detailed regulation under the L.O.S. Convention framework is necessary.”).

²⁰¹ Anton, *supra* note 12, at 367.

²⁰² *See* Gorina-Ysern, *supra* note 79, at 660 (posing the question: “how long will it take for States to implement measures . . . that are effective in preventing the overexploitation and depletion of marine species, and the destruction of high seas habitats by vessels registered under their flag?”).