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UNCLOS and the High Seas: problems and
suggested solutions to the creation of a common
pool resource on an international
scale

**PROBLEMS AND SUGGESTED
SOLUTIONS TO THE CREATION OF A
COMMON POOL**

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**UNCLOS AND THE HIGH SEAS:
PROBLEMS AND SUGGESTED SOLUTIONS TO THE CREATION OF A COMMON POOL
RESOURCE ON AN INTERNATIONAL SCALE**

Introduction

The purpose of this paper is to critically analyze UNCLOS as an efficient management regime for protecting migratory marine species¹, especially those with economic value. The premise, based on foundations of collective action theory, is UNCLOS cannot adequately protect marine resources. The main reasons include the dynamics involved with national sovereignty, along with UNCLOS creation of what is tantamount to a common pool, or open access resource through the development of the “high seas” concept.

Through the creation of high seas, and more importantly through the adoption of conflicting concepts of *mare liberum*, sovereignty, and resource management, UNCLOS unwittingly has allowed for the over-exploitation of migratory marine species (MMS) on the high seas. The overexploitation has focused on a few developed nations at the detriment of the majority of developing nations. Attempts to regulate MMS’s through the creation of Regional Fisheries Organizations (RFO’s) has led to conflict between notions of *mare liberum*, or freedom of the high seas, and internationally accepted principles of sovereignty. Countries are left to manage MMS’s, which under traditional notions of property law, are free for all to use. Further, States encounter difficult enforcement

¹ **For purposes of this paper, and as will be defined further below, “migratory marine species” refers to both straddling-stock species and transboundary marine species as used in the usual and customary terms of international fisheries vernacular.**

principles when faced with a prima facie defense of sovereignty. The result is an unworkable management scheme for MMS's due to the creation of a common pool resource in the high seas, and collective action problems.

A better method for regulating migratory marine species has been shown through unilateral state action in the form of trade embargos. Further, suggestions to redefine certain areas of the high seas in an attempt to create strong management controls without destroying notions of *mare liberum* and sovereignty have been suggested. One of these proposed solutions seems to focus on the power of developed nations, and it is questionable whether developing nations will benefit from the protection of resources on the high seas. The other solution seems to better favor developing nations by limiting equal access rights to critical habitat areas located on the high seas. Such limits could serve to better protect developing nations interests in migratory marine species.

This paper will look at the problems associated with UNCLOS, specifically focusing on the high seas construction of a common pool resource, and how such a creation does not lend itself to strong management of MMS's in light of international legal standards of *mare liberum* and sovereignty. Collective action problems will be identified as the main reason for these problems. Next, a case study of the use of unilateral trade sanctions by the United States will be identified as an alternative approach to RFO's as a means to manage MMS. Finally, a suggestion to redefine areas of the high seas to include "Conservation Management Zones" will be identified as a possible solution to the existing collective action problems encountered under the notions

of *mare liberum* and sovereignty. A suggestion of such conservation zones may be the solution to protect high seas resources that may otherwise be taken only for the benefit of a few developed nations.

To begin, we will review the definition of “high seas” to see how UNCLOS has created varying property rights of MMS’s.

UNCLOS and Defining Property Rights

One of the main purposes of UNCLOS is to set universal zones of jurisdiction where coastal States can assert property rights.² In general, coastal States have complete jurisdiction over marine resources up to 200 nautical miles from its shore.³ This jurisdiction, or property interest, includes *all* marine resources found within this 200 nautical mile zone. Past this zone exists the high seas. No sovereign country, under UNCLOS, can claim independent jurisdiction to this region. Rather, this area exists under the notion of *mare liberum*, or freedom of the high seas. The effect is to create a

² In 1958, a number of conventions began regarding relative jurisdictional limits of coastal States in relation to the oceans. These conventions included the Convention of the Territorial Sea and the Contiguous Zone, The Convention on the High Seas, The Convention of Fishing & Conservation of Living Resources, and the Convention on the Continental Shelf. All of these Conventions can be said to create relative property rights of the coastal States in relation to both “zones” within the sea, and resources within the sea. *See generally*, R.R. Churchill and A.V. Lowe, *THE LAW OF THE SEA*, (Manchester University Press) (3d ed. 1999).

³ UNCLOS III, part V, relating to the development of the exclusive economic zone (EEZ). Available at: http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm (Last viewed: October 12, 2003).

vast area of ocean where the resources are available to any state, or more specifically, UNCLOS creates a “commons” for purposes of economic analysis.⁴

It is this creation of a commons that is at the heart of the problem. Migratory marine species (MMS), as will be defined next, obtain unique “partial” property rights for coastal states as a result of UNCLOS creation of the high seas. When the MMS’s are located within 200 nautical miles of the coastal State, they become the property of the coastal State under UNCLOS. However, when these same animals are located beyond 200 nautical miles, they become a common resource so long as they remain in the open oceans. This change in the property status of marine species results in confusion, including claims of unilateral rights by coastal States, which leads to conflict as was seen in the Canadian-Spanish fishing dispute of 1995. More importantly, the structure of this “zoned property system” is completely illogical under a collective action analysis because the physical zones do not correspond to the migratory marine species who regularly move from one zone to another. The rationale for this belief will be discussed

⁴ **The author acknowledges UNCLOS III does contain provisions relating to affirmative duties imposed on coastal States to conserve marine resources within the high seas, or to respect coastal State claims to certain species straddling between the EEZ of the coastal State and the high seas. See generally, UNCLOS III, part VII (High Seas), Section 2, Articles 116 – 119. Available at: http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm (Last viewed: October 12, 2003). However, the author will focus on the *general* application of the creation of a high seas “common pool resource,” and its *practical* effect through the manner in which high seas have been treated by States, rather than focusing on the *academic* principles suggested in these Articles. Indeed, the basis of this paper is that coastal States cannot be expected to follow the *academic* rules created under Articles 116-119 of UNCLOS III when there is no incentive to follow such rules *because* the High Seas can only be categorized as a common pool resource, and State actors have no incentive to conserve a resource they have equal access to.**

further below under the subheading “The Logic of UNCLOS Pertaining to Property Zones.”

Definition of Migratory Marine Species

Before engaging in further analysis of UNCLOS’s effect on migratory marine species, I wish to define this term so as to make the point of the paper clear. “Migratory marine species” is meant to refer to those marine species that travel from the jurisdiction of a coastal State to an area outside the jurisdiction of the coastal State, as defined by UNCLOS.⁵ What becomes important is the physical characteristic of traveling from a zone where the coastal State has a property interest, to a zone where no coastal State has a property interest prior to capture. Of course, there are species defined as “straddling stock” species because they tend to straddle a property demarcation line such as between the EEZ and the Open Oceans. It was the Turbut fish (a “straddling stock” species) that was at the heart of the controversy between Canada and Spain in 1995. There are also other, highly migratory species, such as Pacific Yellowfin Tuna, that travel great distances and can be found to cross many different “zones of interest.” These species are generally referred to as “transboundary” species.

⁵ UNCLOS defines the jurisdiction of coastal States, particularly referring to jurisdiction over the marine resources, up to 200 nautical miles from the baseline of the coastal state. Outside of this 200 nautical mile region is considered the high seas where no sovereign has independent jurisdiction over the resources. See, Part V, Article 57, UNCLOS III, *Breadth of the Exclusive Economic Zone*: “The exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.” Available at: http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm (Last viewed October 24, 2003).

The purpose of this paper is *not* to focus on a particular marine species, and thus, the specific delineation of “transboundary” versus “straddling stock” is unimportant. What is important, however, is the *characteristic* of the species, i.e., its tendency to travel from one zone of UNCLOS demarcation to another. For it is this characteristic that highlights a criticism of UNCLOS when it created a “common-zone” in the high seas where no country can claim property rights over the resources. Thus, the term “migratory marine species” encompasses all known species of marine animals that migrate from areas where coastal States can claim resource sovereignty, to areas where no coastal States can claim such sovereignty.

I will now give some background information on the economic theory of collective action as defined by Mancur Olson. The hope is to generate some understanding of the economic model as an aid to the later application of this theory to the common access created by the high seas.

Background on Collective Action

Collective action refers to an economic theory of human behavior. It was first stated in theoretical form by Mancur Olson in 1965.⁶ Since that time, it has become an effective tool for analyzing environmental problems. In an ideal situation, it is used as a “modeling mechanism” to develop certain policies. However, it is also a useful tool to determine the effectiveness of a policy on some set criteria by modeling the decision-

⁶ **See, Mancur Olson, THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS (Harvard University Press) (1965).**

making process of the actors involved. It is this form of application that is most useful in analyzing coastal State action regarding use of the high seas as a common resource.

At its most basic, collective action theory suggests the following; rationale individuals will not do collectively what is in their best interests to do individually. This is based on assumptions of rationale thought, and the dynamics involved with group action emphasizing the diminishing benefits an individual will receive in groups. It is probably best explained in an example.

John lives with ten other men in a fraternity. John has always wanted a clean front yard. Indeed, all of the men in the fraternity also desire a clean front yard. However, due to incessant partying, the front yard of the fraternity is never clean. Instead, it remains full of empty beer cans and kegs.

Individually, John has every incentive to clean the front yard because this is what he desires. As well, the other ten men also have an incentive to clean the front yard because it is what they individually desire. However, because the front yard is a common resource (it is open to all members of the fraternity), the benefits of cleaning the yard are distributed to everyone who lives there. Thus, the benefits are diminished fractionally by the amount of individuals who enjoy the benefit. Moreover, the *costs* of cleaning the fraternity, if borne by John alone, would not equal the *benefits* because John is the only person cleaning the yard, while all members of the fraternity share in the benefit of a clean yard. The result, absent some enforcement measure, is John has no incentive to

clean the yard himself. Rather, as a rational human being, John's best strategy is to avoid cleaning the front yard and wait until the yard is cleaned by his roommates. This way, John receives the entire benefit of a clean yard without incurring any costs.

This strategy works as well for John's roommates. They each have little incentive to clean the front yard individually, and would rather "free ride" on the cleaning of the yard by another. This is the basic tenet of collective action; given a common resource that is non-excludable (the front yard), an individual will not act to take action where the benefits will be distributed to other members of the group.⁷

The concept of collective action is best applied to what has been termed "common pool resources."⁸ Common pool resources (CPR's) are resources that are non-excludable, but highly divisible. The "clean front yard" noted above is an example of a CPR. The actors (John and his roommates) all have equal access to the resource (the front yard); they cannot exclude one another. However, once they have used the resource (made it messy), it cannot be used again. Thus, it is divisible.⁹

In the context of this article, UNCLOS-defined high seas are the CPR because, based on the "common" characteristic of high seas, no nations can be denied access. Thus, the high seas are non-excludable. Moreover, the migratory marine species, once they have crossed into high seas jurisdiction, represent the excludable resource at issue in

⁷ *Id.*

⁸ *See, ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (Cambridge University Press) (1990).*

⁹ *Id.*

this paper. Because there are no strong enforcement measures, due in large part to issues of sovereignty and notions of *mare liberum*, which regardless of certain articles in UNCLOS III relating to an affirmative duty to manage and conserve resources on the high seas, allow coastal States to take unilateral actions that result in over-exploitation of MMS.¹⁰ The reasons for over-exploitation can be found in the fact that high seas are open to all nations.

The equal access granted to each coastal State, regardless of the subsequent rules regarding actions within the equal access area, is the basis for the problem under a collective action analysis. Nations have every incentive to serve their sovereign interests. They do this within their territorial seas, and the EEZ granted to the States. However, because the State can control the resource extraction unilaterally, within these “zones,” the resources have a greater likelihood of conservation. Of course, this is dependant on the coastal States management of the resource. However, high seas create a different situation. There is no possibility of unilateral management because all nations are granted access. Thus, nations are left to negotiate bilateral agreements, or regional organizations for the management of the marine species.¹¹ However, collective action

¹⁰ As recent example of unilateral State action is the 1995 Canada-Spain fishing dispute, which will be discussed in further detail below. Also, this dispute led to the development of the 1996 Straddling Stock Treaty, which attempted to place significant restrictions on coastal State sovereignty. However, as will be shown below, such restrictions have been resisted by coastal States, as can be seen by the lack of support for adoption of the Straddling Stock Agreement among countries. See, Shavloske, Patrick, *The Canadian-Spanish Fishing Dispute: A Template for Inadequacies of the United Nations Convention on Law of the Sea and a Clarion Call for Ratification of the New Fish Stock Treaty*, 7 IND. INT’L & COMP.L.REV. (1996).

¹¹ Part 11, Article 145 of UNCLOS provides for the protection of marine resources on the high seas through the following language:

suggests states will act in a manner that benefits their personal interests when they are given equal access to a common resource. This suggests States will not work to conserve and manage MMS on the high seas where they can get away with extraction for their personal benefit, and the probability for punishment is diminished. In the international context, sovereignty, and the notion of equal access (*mare liberum*), gives nations a strong argument to suggest the benefits of unilateral resource extraction outweigh the potential detriments of being found in violation of specific principles of resource management, which are themselves ambiguous.¹²

The high seas create a “tragedy of the commons” by allowing unobstructed resource extraction of migratory marine species. Collectively, due to the creation of a

“Protection of the marine environment

Necessary measures shall be taken in accordance with this Convention with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities. To this end the Authority shall adopt appropriate rules, regulations and procedures for inter alia :

- (a) the prevention, reduction and control of pollution and other hazards to the marine environment, including the coastline, and of interference with the ecological balance of the marine environment, particular attention being paid to the need for protection from harmful effects of such activities as drilling, dredging, excavation, disposal of waste, construction and operation or maintenance of installations, pipelines and other devices related to such activities;**
- (b) the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment.”**

To allow for the protection of the marine environmental, UNCLOS provides in Article 197 for the development of Regional Organizations for the protection of marine resources on the high seas. See, UNCLOS, Articles 145, 197, Available 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) (Last viewed: October 24, 2003).

¹² See, e.g., L.S. Parsons & J.S. Beckett, The NAFO Model of International Collaborative Research, Management and Cooperation, 23 J. N.W. ATL. FISH. SCI. 1, 10 (1998). Explaining the NAFO opt-out procedure.

“high seas,” each State has no interest in conserving MMS’s because the resource will be taken by other State actors once the resource enters a “common” zone, or high seas. It is precisely this inconsistency on property rights that has led to heated claims of ownership as was seen in the 1995 Canadian-Spanish fishing dispute. This paper will now highlight aspects of this dispute as an example of how the UNCLOS designation of the high seas has frustrated attempts at MMS conservation.

The Canadian-Spanish Fishing Dispute

In 1995, Spain and Canada were locked in a heated conflict regarding the taking of turbot, a “straddling-stock” fish species.¹³ Populations of turbot exist within Canada’s exclusive economic zone and into the high seas. As such, the fish are both the exclusive property of Canada while they are within the EEZ, and a common pool resource (non-excludable but highly divisible) while they are within the high seas.¹⁴ Both Canada and Spain rely on the fish for a significant portion of their fishing income. However, the fish populations, due to their migratory nature, were being decimated due to overfishing. Indeed, while Canada determined safe levels of catch to be 19,700 tons for Canada and the entire European Union combined in 1995, Spain had come off of record catches of turbot in the 1970’s of over 500,000 tons per year.¹⁵

¹³ See, Shavloske, Patrick, *The Canadian-Spanish Fishing Dispute: A Template for Inadequacies of the United Nations Convention on Law of the Sea and a Clarion Call for Ratification of the New Fish Stock Treaty*, 7 IND. INT’L & COMP.L.REV. 223 (1996).

¹⁴ *Id.* at 225.

¹⁵ *Id.*

Without going into great detail on each country's historical claims to the right to fish in the Grand Bank's area (where the turbot is found), it is apparent Spain was respecting Canada's 200 nautical mile EEZ by fishing just outside this area on the high seas. Even so, Spain did not respect Canada's claim of quotas, which was granted under the North Atlantic Fisheries Organization (NAFO), an RFO created under UNCLOS. Instead, Spain fished in the high seas just outside of Canada's EEZ without regard for such quotas.¹⁶ Canada, a non-signatory to UNCLOS at the time, took immediate action to enforce its domestic laws. It chased the Spanish fishing vessel in the high seas, fired a warning shot across its bow, boarded the Spanish vessel, and towed it back into Canadian waters holding the captain and boat pursuant to domestic laws.¹⁷

The actions taken by Canada of engaging a sovereign in the high seas, firing upon it, and forcing the ship into Canadian waters cannot be reconciled under UNCLOS, or any other international treaty as a whole¹⁸. Rather, the actions represent an example of what occurs when a sovereign nation feels its' resources are being taken by another actor without concern for the future of the resource. In this case, Canada created a harsh incentive for Spain to halt resource extraction; it used its police power and essentially engaged in an act of war. Of course, this flies in the face of international dispute

¹⁶ *Id.* at 227.

¹⁷ *Id.*

¹⁸ **There is some argument that UNCLOS, through the creation of RFO's, and the duties imposed on State's through the passage of Part VI, Section II of UNCLOS III, allows for State's to enforce violations of quotas set by the RFO. However, this cannot be reconciled with notions of *mare liberum* and sovereignty, both of which are recognized by UNCLOS and established under principles of international customary law. Further, Part VI allows for enforcement where a State is fishing within the EEZ of the coastal State. Spain was justifiably outside this area, and within the common resource area of the high seas.**

resolution, and can hardly be seen as a rational example of how countries should resolve marine resource disputes. However, it does highlight two serious problems with UNCLOS. First, the creation of a high seas, a common pool resource, did not take into account the effect this “common area” would have on migratory marine species. Second, UNCLOS lacks true enforcement measures that will sufficiently create incentives for state actors to collectively act for the conservation of marine species in general, and migratory marine species specifically. This will be highlighted in greater detail below.

UNCLOS and the High Seas: The Logic of Collective Action When Sovereignty and Mare Liberum Act as Affirmative Defenses

Principles of sovereignty and *mare liberum* have been well established in the international arena under Law of the Sea.¹⁹ These principles are directly attacked through the current management schemes created under UNCLOS that attempt to deal with MMS issues. I believe the main reason for this inconsistency is due to the problems

¹⁹ It is acknowledged that *traditional* notions of *mare liberum* and sovereignty have changed with the enactment of UNCLOS III regarding *complete* sovereignty, and *complete* open oceans. The author makes this statement intending to support the remaining views of sovereignty (as it relates to a nations autonomy domestically), and the notion of *mare liberum* that was the basis for the creation of the high seas (creating a zone of equal *access*) without focusing on any specific *duties* created under specific treaties.

encountered by UNCLOS in demarcating the “high seas” geographically without concern for the fact that valuable marine resources regularly travel between the high seas and zones of sovereignty.

Collective action suggests individual State actors will not engage in collective action to conserve MMS’s because the creation of a common pool resource in the “high seas” leaves little incentives for individual State’s to conserve, even when they individually desire such conservation! RFO’s create no direct incentives to properly manage MMS because State’s can opt-out of the RFO requirements²⁰, and there are no direct enforcement mechanisms due to the conflicts between RFO enforcement measures, and notions of *mare liberum* and sovereignty. I will now discuss the problems with UNCLOS’s current attempt to regulate MMS through the development of RFO’s.

**a. Regional Fishery Organizations and the Conflicts with Sovereignty
and *Mare Liberum***

Mare liberum means that each state has an equal right to exploit the resources of the high seas. Implicit in that right is a concomitant restriction against any state regulating the high seas activities of vessels flying another state's flag. States vary in their commitment to fisheries protection, and no state wants to disadvantage its nationals in the international arena. As a result, every commercially valuable fish stock that straddles the high seas and an international commons is overfished.²¹

²⁰ *Id.*, supra note 12.

²¹ Bratspies, Rebecca, *Finessing King Neptune: Fisheries Management and the Limits of International Law*, 25 HARV. ENVTL. L. REV. 213, 217 (2001). Citing: Meltzer, Evelyn, *Global Overview of Straddling and Highly Migratory Fish Stocks: The Nonsustainable Nature of High Seas Fisheries*, 25 OCEAN DEV. & INT'L L. 255, 328 (1994).

The point of this quote is to identify the problem associated with the international notion of *mare liberum*. It was, and is, the basis for the creation of a common pool resource on the “high seas.” Notions of sovereignty further complicate resource extraction of MMS on the high seas. This is precisely because there are no “incentives,” in the economic sense of the word, for States to restrict their fishing practices on the high seas. Some suggest the development of Regional Fishing Organizations (RFO’s) are the answer to this problem. Indeed, the text of UNCLOS III provides for the management of straddling stock and transboundary species of marine animals through the creation of these organizations.²² However, a closer analysis of the success-rate of RFO’s suggest, through collective action analysis, they do not work precisely because sovereignty and *mare liberum* prevent sufficient enforcement mechanisms, which are needed to create incentives not to overfish.

RFO’s have been largely unsuccessful at defining resource management on the high seas because of a lack of unanimous support, as well as a lack of enforcement measures. The Canada-Spain fishing dispute is an example of RFO’s inadequacies.

NAFO was the RFO managing the area of the Grand Banks at issue in the Canada-Spain fishing dispute. Under the rules promulgated by NAFO, Spain had the right to opt out of the fishing quotas set by NAFO.²³ Thus, Spain had a

²² See, UNCLOS, Article 197, Available at: http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm (Last viewed: October 24, 2003).

²³ See, L.S. Parsons & J.S. Beckett, *The NAFO Model of International Collaborative Research, Management and Cooperation*, 23 J. N.W. ATL. FISH. SCI. 1, 10 (1998).

legitimate argument it was entitled to fish within the high seas portion of the Grand Banks under UNCLOS III, and the RFO provisions. This was the case even where Spain was technically violating the NAFO-set fishing quotas.

It should be easy to see RFO's, specifically in the example given above, are inadequate mechanisms for regulating MMS on the high seas. This is precisely because such organizations are faced with members that can claim sovereignty as a defense to being regulated. Further, under the notions of *mare liberum* that helped to create the "high seas" concept, no sovereign can be specifically excluded from a fishing ground on the high seas. Thus, RFO's can be seen as an inadequate mechanism for dealing the common pool resource problem created by the high seas.

Further, under a collective action analysis, Spain has no incentive to follow a quota system set by an organization that cannot enforce such quotas. Certainly, Spain must assume other nations will maximize their take of the marine resource. Given the lack of uniform enforcement regulations, and because the resource is finite, Spain's direct incentive is to capture the maximum amount of the resource before other nations with equal access privileges.

Collective action states that in instances of weak enforcement mechanisms, as is the case with RFO's, sovereigns have *no* incentive to act in the collective interest. This was proven true in the Canada-Spain dispute of 1995.

More importantly, in the context of developing nations, and the need to preserve high seas resources for the benefit of all nations, there is a significant need to limit the collective problems associated with the high seas as a common pool resource. I believe the best way to achieve this is to place *meaningful* restrictions on the use of high seas resources. In one instance, this has been done by unilateral State action. In another case, an academic has suggested the use of “Conservation Zones,” which alter the property designation of certain areas of the high seas. The manner in which these “Conservation Zones” would work is very similar to the regime created under UNCLOS to deal with the extraction of poly-metallic nodules on the deep sea ocean floor within the high seas.²⁴ We will now look at each of these examples, and determine if either are well suited to preserving MMS on the high seas.

The Use of Unilateral Trade Sanction as a Mechanism to Limit Overexploitation of MMS on the High Seas: The United States Example

For many years, the United States has taken an active role in using trade sanctions as a means of protecting MMS internationally.²⁵ It is the use of trade

²⁴ *See*, R.R. CHURCHILL AND A.V. LOWE, THE LAW OF THE SEA, 223-252 (Manchester University Press) (3d ed. 1999).

²⁵ Examples of US laws that have been used to enforce international conservation regimes include:

- a. **Pelly Amendment to the Fisherman’s Protective Act: grants broad authority to the Secretaries of Commerce and Interior to certify whether a foreign nation is acting in a fashion that diminishes the effectiveness of an international fishery conservation agreement or international program for endangered or threatened species.**

sanctions that has allowed for the conservation of such successful campaigns as the Dolphin-Safe Tuna venture of the early 1990's. However, the United States is allowed to use unilateral trade sanctions specifically because it is *not* a signatory to UNCLOS III.²⁶ Indeed, UNCLOS requires compulsory dispute resolution procedures for State parties who have a dispute over a particular activity.²⁷ Such a compulsory dispute process would likely prevent the United States from engaging in unilateral trade sanctions. In the context of what has previously been stated regarding poor enforcement mechanisms for protecting MMS on the high seas, unilateral trade sanctions may offer a superior alternative to RFO's, or other "management" schemes created under UNCLOS.

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- b. Packwood-Magnuson Amendment;**
 - c. Driftnet Act Amendments of 1990;**
 - d. 1990 Driftnet Amendments to the Marine Mammal Protection Act;**
 - e. International Dolphin Conservation Act of 1992;**
 - f. Section 205 of the Magnuson Fishery Conservation and Management Act of 1976;**
 - g. Section 801 of the Fishery Conservation Amendments of 1990 (Anadromous Fish Certificatio of 1975;**
 - h. Endangered Species Act of 1973.n Amendments);**

²⁶ See, Richard McLaughlin, *UNCLOS and the Demise of the United States' Use of Trade Sanctions to Protect Dolphins, Sea Turtles, Whales, and Other International marine Living Resources*, 21 *ECOLOGY L.Q.* 1 (1994).

²⁷ *Id.*, at 52.

The benefit of unilateral trade sanctions are they offer strong incentives for compliance. A country wishing to do business with the United States must comply with policies regarding conservation of MMS. Otherwise, the country is excluded from trade opportunities. Thus, the problems of sovereignty and *mare liberum* are resolved by looking to incentives *outside* of the UNCLOS regime. However, upon closer inspection, such an option seems severely limited in application for a number of reasons.

Only developed nations with the trade power on the level of the United States would be able to employ trade sanctions that created a sufficient incentive to conserve MMS by other countries. Countries that are less developed, or maintain limited international trade, would be unable to influence other nations to comply with MMS conservation on the high seas because there is simply insufficient incentives provided by a nation with limited trade. This fact leads to the other problem; reliance on developed nations to have a “conservation-minded” attitude towards MMS.

Those developed nations that could influence the international community through trade sanctions may simply choose *not* to conserve MMS. Japan is a perfect example. As a developed nation with significant international trade influence, Japan could be considered a nation, like the United States, that can influence actions of other countries on the high seas. However, in relation to certain MMS like whales, Japan has a significant interest in utilization, rather than

preservation. Thus, it is quite possible developed nations may choose extraction of MMS, rather than conservation. Moreover, developed countries employing trade sanctions may limit extraction by other countries, only to maintain the resource for their own consumption. The end result may be a monopoly created by the developed nation on a particular MMS, where other countries are excluded at the sole benefit of the developed nations. This will certainly have a negative effect on protecting high seas resources for all countries, developed and developing alike.

It seems unilateral trade sanctions *can* be effective at conserving MMS. They certainly offer greater incentives than UNCLOS for conservation of MMS on the high seas. However, such unilateral actions are also plagued with difficulties. First, only a small number of developed countries have the clout to effectively employ unilateral trade sanctions. Second, it is likely many developed countries may choose *not* to conserve MMS, or choose to limit other sovereigns access to the resource for the developed countries own extraction interests. Thus, for these reasons, I believe unilateral trade sanctions are *not* the answer to our common pool resource problems. We will now look to the development of “conservation zones” as an alternative method to protecting MMS.

The Development of Conservation Zones to Marginalize the Impact of Creating a Commons on the High Seas.

There has been significant academic contribution towards weeding out the problems associated with resource management on the high seas, especially after the Canadian-Spain fishing dispute in 1995. The immediate reaction to the dispute was the Straddling Stock Agreement.²⁸ This agreement identifies the problem of a lack of enforcement authority on the high seas. Moreover, the Straddling Stock Agreement takes a strong stand on States duties to conserve and manage a fisheries resource, even on the high seas. It places greater emphasis on control of a fishing vessel by the flag State, and provides for strong penalties for non-compliance.²⁹ However, all of these measures have fallen short since most of the blue water fishing nations have not signed the Straddling Stock Agreement.³⁰ Moreover, several States that played key roles in the negotiating of the treaty have not ratified it.³¹

The reasons for the failure of the Straddling Stock Agreement to take hold, I believe, has to do with the incentives created under a common pool resource. If the high seas were not considered common property, or if the resource at issue, MMS, were not finite and therefore highly divisible, nations might be more apt to work collectively for management. However, under a collective action analysis, no nation has an individual incentive to conserve MMS. And the reason why is

²⁸ Available at: http://www.un.org/Depts/los/convention_agreements/convention_overview_fish_stocks.htm (Last viewed: October 24, 2003).

²⁹ *Id.*

³⁰ Among the major fishing states that have not signed the agreement are: Chile, Mexico, Peru, Poland, Thailand, and Vietnam. *See, The Agreement on High Seas Fishing: An Update*, at <http://www.un.org/ecosocdev/geninfo/sustdev/fishery.htm> (Last viewed: October 18, 2003)

³¹ *Id.* Argentina and New Zealand are two core group states that have not ratified the Agreement.

because the high seas have been defined as a commons for all nations. I believe this notion fits more squarely in terms of equal access for transit purposes, but it has no place in MMS management. Others feel the same way, and as a result, have suggested an alternative in the way of “conservation zones” as a means of re-categorizing the property interests, at least relating to MMS, on the high seas.

Conservation zones are defined just like the term would suggest. These are zones on the high seas where resource extraction is prevented for conservation purposes.³² Such zones would be identified through an ecological approach.³³ Sensitive areas of MMS development would be placed into such zones, and they would be managed by an independent, international trustee from the United Nations.³⁴ These zones would not prevent transit access over the high seas by nations. They would simply prevent resource extraction by nations. Further, because no nation is allowed to fish in these areas, enforcement would increase through self-monitoring. Nations would all have a vested interest in policing the areas to ensure MMS were developing unobstructed. Ultimately, each nation would benefit from this limited approach because the zones would produce more viable populations of MMS, which would then be available to fishing nations through migration and/or licensing.

³² See, Bratspies, Rebecca, *Finessing King Neptune: Fisheries Management and the Limits of International Law*, 25 HARV. ENVTL. L. REV. 213 (2001).

³³ *Id.*

³⁴ *Id.*

One of the most important aspects of a conservation zone approach is the independent nature of the trustee. Much like the United Nations, having an independent trustee would limit States from feeling compelled to “race” to the bottom by overexploitation of a common resource. Indeed, because property rights relative to extraction have been altered from a common resource to a private resource, MMS have now altered their status to a private good while in the conservation zone.³⁵ As a private good, there is an absolute right to exclude, and such authority will allow for better conservation and management of the species for all nations to enjoy.

Conservation zones have a number of benefits over the current “all access” nature to resources on the high seas. First, by transforming the MMS resource into a private good, rather than a common good, you functionally change the incentives of nations to over-extract the resource. Second, by allowing for independent supervision, you marginalize nations feelings of unfair competition, which ultimately leads to a desire for over-exploitation. However, there are still a number of problems associated with the notion of conservation zones.

One such problem concerns the identification of such ecologically significant zones on the high seas. Indeed, much of the productive fisheries exists

³⁵ **Private goods differ from common pool resources in that private goods are both highly excludable and highly divisible. Common pool resources, on the other hand, are not highly excludable, but are highly divisible. For a detailed explanation of the variations between private goods and common pool resources, see, ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (Cambridge University Press, 1990).**

within areas defined as the territorial or EEZ of coastal States. As such, there is a limited amount of “ecologically-sensitive” MMS zones within the high seas. Thus, it is questionable as to whether a “conservation zone” approach would have a significant effect in this area.

This criticism is somewhat limited by the fact that coastal States are already engaging in significant conservation measures within their jurisdiction. However, the migratory nature of certain MMS leads them to feeding/breeding grounds either on the high seas themselves, or through the high seas to alternative feeding/breeding grounds within other coastal State jurisdictions. With increased scientific study, these high seas breeding/feeding grounds or “highways” are being identified. As such, it is conceivable conservation zones would be placed within these areas, and act as an aid in MMS protection between zones of unilateral jurisdiction.

Another potential problem with conservation zones is the ability to adequately enforce resource extraction in such regions. Proper enforcement requires monitoring, which can be expensive. One way of dealing with such problems is to require monitors from participating countries under rules formulated by the trustee. An alternative would include the use of non-governmental organization members to be used as monitors. Monitoring would be a requirement of fishing within conservation zones, and monitors would be required to report any infractions on resource extraction.

Enforcement would also be linked to monitoring. If violations occur, the vessel would be subject to court imposed sanctions through an independent tribunal based on the composition of the conservation zone regime. Judgments would be enforceable in the vessels flag State, and participating States could be “deputized” to immediately redress ongoing violations in conservation zones.³⁶

Given this analysis, it seems conservation zones offer some significant advantages over the current regime of MMS management on the high seas. Most importantly, conservation zones change the property designation of MMS from a common pool resource to a private resource subject to independent regulation. Thus, all of the incentives created for unrestricted resource extraction cease once the resource has been privatized.

Further, privatization does not impugn notions of sovereignty or *mare liberum*. Nations are free to transit these areas, and they are not subject to competing sovereigns authority. Rather, an independent, international council manages the resources within the conservation zone for all nations, and enforces violations through an efficient scheme of monitoring.

The only question that remains is what incentives do individual nations have in allowing for the adoption of conservation zones. Certainly, one can

³⁶ As stated earlier, such “deputizations” already have a basis of support under enforcement measures for violations of RFO quotas. *See supra*, note 22.

foresee an analogy between States refusing to enter into the Straddling Stock Treaty, and those same States refusing to subject themselves to privatization of otherwise common resources. Indeed, there is no direct answer to this question, and it is left open-ended. The only assumption that can be made is with increased MMS scarcity, States will want to compromise their equal access to the resource in exchange for some assurance of future availability.

Some support for the aforementioned assumption can be found in the development of the International Sea Bed Authority (ISBA) to deal with the management of resource extraction within the high seas.³⁷ The development of the ISBA came as a result of acknowledging the problems associated with a “common” resource (poly-metallic nodules) located within the high seas, and the associated problems with equal access opportunity by all countries to extract the resource.³⁸ Based on this understanding, an independent agency was created to manage the poly-metallic resource. Part of the management resulted in altering the property “status” of the resource from a *common* good to a *private* good. This is precisely what a “Conservation Zone” would do.

As stated above, a “Conservation Zone” would operate through an independent agency (like the ISBA), and its purpose would be to manage MMS in the same way the ISBA manages poly-metallic nodules. The result is altering

³⁷ **See supra, note 24. Part XI of the Law of the Sea Convention developed under UNCLOS III created the management scheme of the ISBA.**

³⁸ **It is understood that many developing countries had no access to the poly-metallic resources due to a lack of funds and technology, and this was one motivating factor for the development of the ISBA.**

MMS property “status” from a *common* good to a *private* good. Thus, through the example of the development of the ISBA, the unwillingness of nations to accept such a change in property status of high seas resources has been shown to be limited with respect to such resources under certain conditions.

Conclusion

The concept of the high seas is an important tradition that ensures equal access to the open oceans for all nations. This not only includes transit access, but access to the resources of the high seas. The importance to developing nations cannot be overstated, since many still do not have the capacity to exploit the shared resources.

The problem with the designation of the high seas as a global commons is it creates an incentive for individual nations to over-exploit the resources at the expense of all other nations. Under economic theory, the problem presents itself as a collective action problem, and MMS are seen as common pool resources within the high seas.

Current examples of MMS extraction on the high seas suggests the collective action problem is alive and well, and UNCLOS is failing at providing a significant remedy. RFO’s are inadequate mechanisms at protecting MMS because they lack enforcement mechanisms. Further, treaties such as the

Straddling Stock Treaty have been unable to gain consensus, and therefore have been largely ineffective. The main reasons for the failures of RFO's and treaties has to do with continuing notions of sovereignty and *mare liberum*.

Sovereignty and *mare liberum* allow States to limit enforcement of their activities on the high seas. Combine this with a non-excludable and divisible resource like MMS, and you have a text book collective action problem. Thus, to better manage the conservation of MMS, we must look to alternative methods that create incentives for conservation.

Unilateral trade sanctions have been shown in practice to be effective forms of conservation on an international level. This is because such sanctions provide incentives different from those created on the high seas. So long as the incentive to trade outweighs unlimited resource extraction on the high seas, trade sanctions will likely succeed at limiting MMS exploitation. However, there is a limited number of developed countries who enjoy such status. Moreover, the developed countries themselves might have incentives not to engage in MMS conservation. For these reasons, unilateral trade sanctions seem to be a imprudent alternative.

Conservation zones offer a transition in the property designation of MMS from a common pool resource to a private resource by changing the designation of certain high seas areas from a commons to a restricted access area. Such a

transfer works to alter the incentives created under a traditional common pool resource problem. As such, conservation zones, equipped with adequate enforcement mechanisms, may be a valid alternative for MMS conservation. However, it is unknown to what extent States will be willing to adopt such a measure given a lack of immediate benefits. This uncertainty is limited, to some extent, by the analogous development of the International Sea Bed Authority as an independent organization to manage access to poly-metallic nodule resources within the high seas.