Polar Sea Ice Melts Away in Time for Antarctic Easter Surprise

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Summary:

On April 2, 2009, during the quiet preceding the 2009 Easter holiday, US President Barack Obama and US Secretary of State Hillary Clinton transmitted to the Senate Foreign Relations Committee (SFRC) Treaty Document 111-2 (2009),[1] which calls for US Senate ratification of Annex VI (*on Liability Arising From Environmental Emergencies*) of the Antarctic Treaty's Protocol on Environmental Protection (hereinafter referred to as the 'Madrid Protocol'). The Madrid Protocol affirms Article IV of the Antarctic Treaty.[2] The US became a Party to the Antarctic Treaty in 1961. It became a Party to the Madrid Protocol and its Annexes I-IV in 1998[3] and to Madrid Protocol Annex V in 2002.[4] Annex VI of the Madrid Protocol, which the US now seeks to ratify, however, is not yet in force.[5]

Secretary of State Clinton explained that, in order to ratify Madrid Protocol Annex VI, the US Congress must first enact considerable domestic implementing legislation that would likely entail review by various House and Senate committees. "Legislation will be required for the United States to implement many of the provisions of the Annex. Draft implementing legislation has been prepared and will be submitted to the appropriate congressional committees." [6]

It is said that "the Antarctic Treaty and its Madrid Protocol comprise the cornerstone of [a complex of international agreements comprising[7]] the ATS [Antarctic Treaty System]"[8].

> "To establish a scheme for…comprehensive environmental protection…in Antarctica…the parties to the Antarctic Treaty set forth in the Protocol legally binding principles applicable to all activities in Antarctica and they prohibited all activities relating to mineral resources, except for scientific research. In addition, the Protocol prescribes detailed rules through a system of annexes on environmental Impact assessment (Annex I), conservation of Antarctic fauna and flora (Annex II), waste disposal and waste management (Annex III), prevention of marine pollution (Annex IV), and area protection and management (Annex V)." [9]

Annex VI of the Madrid Protocol "sets forth rules and procedures relating to liability resulting from the failure of a [private or governmental] operator to take prompt and effective response action to environmental emergencies arising from its own activities in Antarctica." It applies to "scientific research programs, tourism, *and all other* governmental and nongovernmental activities in the Antarctic Treaty area for which advance notice is required…"[10] In addition, "Pursuant to Annex VI…the Parties agree to require their operators to take preventative measures and establish contingency plans for preventing and responding to environmental

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emergencies in the Antarctic Treaty area and to take prompt and effective response action to such emergencies arising from their activities." [11]

It is abundantly clear that the President's April 2nd submission of the Madrid Protocol Annex VI to the SFRC was partly in response to global media reports seizing upon the public's observations of melting ice shelves at both the north and south poles.[12] In addition, it served to highlight the US government's lead role at the 32nd Antarctic Treaty Consultative Meeting that took place in Baltimore during April 6–17.[13]

Apparently, President Obama's interest in Annex VI, not to mention, Annexes I-V of the Madrid Protocol, is quite closely related to his interest in the UN Law of the Sea Convention. Ms. Clinton's Baltimore speech, for example, endeavored to secure international cooperation to protect both the North and South poles. Indeed, two media articles, one appearing on April 7, 2009 in the *Greenwire*[14], and the other appearing on April 8, 2009 in the *China Post*,[15] reference US Secretary of State Hillary Clinton's opening remarks at the Baltimore international conference convened for the Antarctic Treaty Consultative Meeting and the Arctic Council. With respect to the Arctic, Ms. Clinton said that she and President "Obama were committed to having the US Congress ratify the Law of the Sea Convention."[16] And, with respect to the Antarctic, she made reference to the melting Wilkins Ice Shelf and announced that President "Obama had provided Congress with an annex to the treaty for ratification...which set the obligations of signatories in case of an *environmental catastrophe* in the South Pole region."[17] However, Ms. Clinton did not bother to mention how the term *environmental catastrophe* does not appear as a legal 'term of art' within Annex VI, or for that matter, within any of the other Annexes to the Madrid Protocol or the Protocol itself; rather, there appears only the term *environmental emergency*. A review of the plain language definitions of the words 'catastrophe' and 'emergency' reveals that they are very different, even in the context of the environment.[18]

Ms. Clinton's speech was consistent with the findings of two reports issued by the Joint Oceans Commission Initiative ('JOCI'), in which former Admiral James Watkins and new CIA Director Leon Panetta likely participated as Commissioners. An April 6, 2009 report recommended US Congressional accession to the UN Law of the Sea Convention, [19] while a prior June 2006 JOCI report recommended changes to U.S. legislation and regulation to "[e]nable the transition toward an ecosystem-based approach".[20]

At the very least, it is arguable that both Secretary of State Clinton and President Obama have publicly committed themselves to UNCLOS accession and to Madrid Protocol Annex VI ratification for purely *environmental* reasons. This is especially curious given the lengths to which the previous administration went to avoid discussion of the UNCLOS' forty-five plus (45+) environmental articles, protocols and regulations that have already been used as a form of lawfare to diminish US legal and economic sovereignty and to compromise US military preparedness.[21] It is also very interesting given the strong possibility that their ambitions may be much greater. It is conceivable that the President and the Secretary of State will use US Annex VI ratification as a back-door effort to first secure US UNCLOS accession, and then to negotiate

amendments or an environmental protocol to the UNCLOS to regulate global environmental hazards on the 'high seas' in 'areas beyond national jurisdiction' ('ABNJ').

As it currently stands, the literature surrounding the Madrid Protocol and its annexes reflects the interpretation of green groups, legal positivists (utopians and 'transnationalists'[22]) and EU officials. They believe that such instruments supercede the US Constitution and implicitly incorporate Europe's 'standard-of-proof diminishing', 'burden of proof-reversing', 'guilty-until-proven-innocent', 'I fear, therefore I shall ban', 'hazard-not-risk-based', 'economic-cost-benefit-deficient', 'Roman-civil-law-not-common-law', 'extra-WTO' Precautionary Principle.

Yet, these stakeholders do not believe that the Madrid Protocol or the current UNCLOS regime is adequate to address global environmental hazards. For example, a September 7, 2008 article appearing in *e!Science News* emphasized the calls of environmental group scientists and UN officials attending a UN-affiliated conference marking the International Polar Year, for "[a] new coordinated international set of rules to govern commercial and research activities in both of Earth's polar regions". The article makes clear these officials' concerns that the current UNCLOS and Antarctic Treaty System regimes are unable by themselves to address the environmental hazards posed to the Arctic and Antarctic regions.[23] In addition, a recent (2008) series of reports prepared by environmental group scientists and statements made by European Union officials at United Nations General Assembly ad hoc working group meetings (during 2006-2008) have called for an Implementation Agreement under UNCLOS to address such concerns, which would explicitly incorporate Europe's Precautionary Principle. If this is true, then *either* US ratification of Madrid Protocol Annex VI *and/or* US UNCLOS accession would likely herald Europe's Precautionary Principle as US law.[24]

More Detailed Analysis:

As in most cases, the devil is in the details and the details are *other than* clear or transparent. For this reason, Congress must uphold its oath of office to support the US Constitution[25], which means providing all Americans with due process of law[26] - in this case, critical information. In other words, it is incumbent upon the Congress to hold open public hearings in those committees possessing oversight jurisdiction to examine the text of and literature surrounding the Madrid Protocol, its Annexes I-V, and the potential legal and economic impacts of the Madrid Protocol and its Annex VI, in light of modern international environmental law. They should also carefully review whatever US implementing legislation is necessary to ensure that US law is consistent with the obligations this country will assume upon ratification. In addition, the Congress should convene open public hearings in multiple committees possessing oversight jurisdiction to investigate the relationship between Madrid Protocol Annexes I-VI with the environmental provisions of the UNCLOS in light of modern international environmental law, and the need for new domestic implementing legislation incident to US accession to that treaty.

Based on the academic and green group literature surrounding the Madrid Protocol, its annexes and the UNCLOS, a rather solid case can be made that the 'devil in the details', this time around, assumes four different forms.

1. *A More Rigorous Bi-Level Environmental Impact Assessment*

First, it is arguable that Madrid Protocol Article 3(2); Article 8; and Annex I, Articles 1-3; incorporated a stricter substantive legal requirement for conducting environmental impact assessments (EIAs) than that mandated under *then* current US law. At least one commentator who had performed a comparative analysis of the Madrid Protocol and NEPA, had previously found that while, overall, the substantive and procedural requirements for EIAs imposed by the National Environmental Policy Act (NEPA) upon proposed *governmental* agency activities qualified as the international 'gold standard', certain substantive aspects of the Madrid Protocol's EIA provisions (i.e., the broader scope and foresight of the subject matter to be addressed within the Protocol's more rigorous bi-level EIA reporting requirement) were even more rigorous than those contained within NEPA *at that time*. Consequently, it was recommended that, through the US ratification process, these substantive elements of the Protocol could be adopted via US domestic implementing legislation falling under the auspices of NEPA, while NEPA's more rigorous procedural standards could be broadened so that they also cover *nongovernmental* entities operating in Antarctica[27] and elaborated upon by US agency (e.g., EPA) regulations.[28] [29]This commentator's observations concerning the differences between the Protocol and NEPA was apparently shared by the US congressional sponsor of two bills intended to implement the legal obligations the US assumed upon ratification of the Madrid Protocol.[30]

Indeed, during the 1993 hearings surrounding proposed US implementing legislation, green groups emphasized the need to use US ratification of the Madrid Protocol *to strengthen* US domestic laws, including NEPA, so that they represented the highest international environmental benchmark. It is interesting to note how such groups then emphasized the need to maintain the highest standards given the importance of not only Antarctica, but also the North Pole, for future global environmental forecasting purposes. This strongly suggests that green groups ultimately had in mind for the US government to prospectively apply the stricter Madrid Protocol standards to proposed activities at the North Pole as well.[31]

International commentators have noted how the Madrid Protocol's EIA requirement is bi-level, consisting of a preliminary 'first-level' assessment (PA) and a subsequent comprehensive environmental evaluation (CEE).[32] The EIAs should reveal all possible environmental effects of future proposed activities in Antarctica (other than seabed mining which is prohibited for a period of fifty years) to be undertaken by operators, including US government agencies (including military). "Unless it has been determined that an activity will have less than a minor or transitory impact…on the Antarctic environment or on dependent or associated ecosystems…an Initial Environmental Evaluation shall be prepared". "If an Initial Environmental Evaluation indicates or if it is otherwise determined that a proposed activity is likely to have more than a minor or transitory impact, a Comprehensive Environmental

Evaluation shall be prepared."[33] The Congress should investigate whether strict US adherence to these provisions of the Madrid Protocol (i.e., a two-tiered environmental impact assessment), pursuant to 16 U.S.C. §§ 2401-2413, especially subsequent to US ratification of Annex VI, could conceivably subject US Navy sonar training exercises to environmental override. For example, what would occur if the US Navy, based on expediency grounds, prepares a detailed environmental assessment of its planned training activities in the Antarctic area which finds no present or future environmental harm to wildlife, in lieu of submitting a full environmental impact statement? Would such a prima facie statutory violation justify a presumption in favor of an injunction in favor of the environment without scientific proof of harm? Respondents and amicus curiae in the recent *NRDC v. Winter* case endeavored to have the US Supreme Court apply at least one of three possible applications of Europe's Precautionary Principle to ensure that the Navy's failure to meet NEPA's strict EIS requirement constituted prima facie evidence of irreparable environmental harm justifying *a priori* imposition of a preliminary injunction.[34]

2. *A Lesser Science-Based and Economic Cost-Efficient Environment & Health Safety Standard*

Second, it is arguable that the Madrid Protocol incorporates a *lesser* science-based and economic cost-efficient environmental safety standard than that mandated under current US law, to account for situations where available information would be inadequate to prove a cause and effect relationship between human activities and environmental harm in Antarctica. The literature surrounding Madrid Protocol Article 7; Annex II; and Annex IV states that the Protocol implicitly incorporates Europe's Precautionary Principle, which minimizes the role of risk assessment and eschews economic cost-benefit analysis.[35]

> "In the literature, the Protocol has often been praised because of its precautionary approach. One commentator has stated that *the precautionary principle is 'perhaps one of the most important legal breakthroughs in the Protocol* (…) With the Protocol, *the burden of proof is reversed*. Because it is assumed that all human activities are likely to cause an impact on the environment, parties to the Protocol must undertake an environmental impact assessment before activities can proceed".[36]

Consequently, a proposed activity could be prohibited or severely restricted merely upon a prima facie showing that such activity might possibly, sometime in the uncertain distant future, trigger an environmental emergency (hazard) that adversely impacts the Antarctic (*and potentially even, the Arctic*) environment. Several commentators who have identified the Madrid Protocol as implicitly incorporating Europe's Precautionary Principle have cited the following examples: a) the Protocol, Article 7 prohibition against mineral activities;[37] b) the Annex II, Article 4(2) prohibition against dogs;[38] c) the Annex II, Article 6 requirement that *precautions*, including those listed in Appendix C to this Annex "Precautions to Prevent Introductions of Micro-organisms", be taken to prevent the introduction of micro-organisms (e.g., viruses, bacteria, parasites, yeasts, fungi) not present in the native fauna and flora."); and d) Protocol Article 3(2)(c), which requires that proposed activities (e.g., tourism)[39] in Antarctica be preplanned and assessed for their potential environmental impacts on the Antarctica environment and related

ecosystems.[40] Similarly, it can be argued, as a matter of inverse logic, that the inapplicability of the rules of Annex IV – "Prevention of Marine Pollution" to operators and States Party which undertake certain preventative or precautionary measures strongly suggests the presence of Europe's Precautionary Principle. For example, Annex IV shall not apply to operators and States Party that, among other things, can show they have taken a) "all reasonable *precautions*… after the occurrence of the damage or discovery of the discharge for the purpose of preventing or minimising the discharge…into the sea of oil or oily mixture resulting from damage to a ship or its equipment"; b) "all reasonable *precautions* have been taken, before and after the occurrence of the damage, for the purpose of preventing or minimising the escape…of garbage"; and c) "all reasonable *precautions* have been taken to prevent the accidental loss of synthetic fishing nets", presumably before any damage to marine resources has occurred.[41]

Commentators who have been concerned about the environmental governance weaknesses inherent in the Madrid Protocol (i.e., its failure to expressly incorporate Europe's Precautionary Principle) have developed rationales upon which opportunistic governments (including an environmentally progressive US government) could rely when applying it.

> "The Protocol does not clearly oblige the contracting parties to take *the precautionary principle* into account in decision making. [Yet,] *It can be argued that such an obligation derives more implicitly from particular provisions of the Protocol*"…***Nonetheless, various strong arguments can be made for applying the precautionary principle to the management of human activities in Antarctica***: — Application of the principle would harmonize with the designation of Antarctica as 'a natural reserve, devoted to peace and science,' in Article 2 of the Protocol. — The precautionary principle has been codified in other international and regional agreements on the protection of natural areas. — Application of the principle would be consistent with the proactive approach of the Antarctic Treaty System. In the past, the consultative parties of the ATS adopted legal instruments concerning human activities without knowing whether these activities would be initiated or whether they would result in significant impacts on the Antarctic environment (e.g., the Convention on the Conservation of Antarctic Seals and CRAMRA)".[42]

Thus, an important question that remains is whether an environmentally enlightened Obama administration and the 111th Congressional supermajority will be persuaded to incorporate Europe's Precautionary Principle into US legislation that implements the requirements of Madrid Protocol Annex VI for US domestic law purposes.

3. *A Strict Liability Regime That Presumes Environmental Harm and Reverses the Burden of Proof*

Third, it is arguable that Annex VI of the Madrid Protocol implicitly incorporates Europe's Precautionary Principle to the extent it imposes on State Parties the obligation to adopt a strict liability regime to protect the Antarctica environment, rather than a negligence (fault-based) regime that currently serves as the basis for most US environmental laws.[43] Commentators who are concerned about "the melting of the ice sheet in the North Pole or the melting of the freshwater stored in Antarctica"[44] have argued that a strict liability obligation of the type

imposed by Annex VI is more in line with "precaution, which applies to uncertain threats [than with] prevention, which applies to known threats".[45]

> "If liability rules are based on the principle of prevention, this could lead to protracted arguments concerning the identity of the liable entity. The *precautionary principle* provides a clearer basis for allocating liability. Its utility stems from the fact that it provides a basis for reversing the burden of proof. It states that economic actors are liable unless they can prove that their activities are environmentally harmless. This understanding of the ***precautionary principle*** has been supported by the European Court of Justice, which has held that certain activities can only be authorized where there are no reasonable scientific doubts as to the absence of negative environmental impacts." [46]

This controversial interpretation dates back to the prior long-running disagreement between the United States and other nations reflected in Paragraph 141(b) of UN General Assembly Report A/54/339 (1999). It concerned "Whether an annex on liability should contain obligations for the operator to take *precautionary measures*, response action or remedial measures".[47]

Clearly, the provisions of Annex VI evidence a distinction between 'preventative' and 'response' actions which seems to indicate how they are each viewed in temporal and sovereignty-based terms.

> "The structure of Annex VI exhibits a distinction between preventative and response action…The negotiating States always intended for Articles 3 (Preventative Measures) and 4 (Contingency Plans) *to apply prior to an environmental emergency in order to either prevent the emergency or to minimise its impact*. *Conversely, the provisions dealing with response action (Article 5 and on) were intended to only apply once the accident constituting the environmental emergency had occurred*. That is, response action was never intended to include action taken prior to an emergency occurring in order to reduce the risk of such an emergency occurring. *The significance of this distinction arises because all Parties are encouraged to take response action and are able to claim compensation for such action [; thus,] allowing Parties to 'interfere' with the activities of other States without the precondition of an environmental emergency, under the guise of 'response action' would be an undesirable outcome*…[T]his distinction needed to be clarified. As a result, the definition of 'environmental emergency' [was] expressly restricted to accidental events 'that have occurred,' and 'response action' only includes measures taken 'after an environmental emergency has occurred.'" [48]

And this distinction appears to have given rise to a political compromise in which compulsory arbitration[49] was made applicable to breaches of only some obligations under Annex VI.[50] These include obligations relevant *after* the occurrence of an environmental emergency – i.e., the failure to undertake those 'response' actions required under Articles 5(1)[51] and 5(2)[52] which result in strict liability and compulsory arbitration under Articles 6(1)[53] and 6(2);[54] and do not include obligations relevant *prior to* the occurrence of an environmental emergency – i.e., failure to undertake preventative measures, which are not subject to such rules.[55]

> "Article 7(6) [of Annex VI] excluded the application of compulsory arbitration from everything in the Protocol *except for* liability of a Party as a *State operator* under Article 6(1) and, provided it is first considered by the [Antarctic Treaty Consultative Meeting[56]] ATCM, under Article 6(2). This

> means that the [international] obligations of Parties to require that their operators take *preventative measures*, *make contingency plans*, take response action and obtain insurance coverage, and of Parties themselves to provide for enforcement mechanisms in their domestic law, are all *not* subject to compulsory arbitration".[57]

To further clarify that strict liability, subject to certain exemptions, [58] attaches in the event of a failure to act only *after* an environmental emergency has already transpired, the term 'environmental emergency' has been broadly defined to include "any accidental event *that has occurred*…and that results in, or imminently threatens to result in, any significant and harmful impact on the Antarctic environment".[59] In effect, the use of such language would seem to suggest, as emphasized by the green Antarctic Southern Ocean Coalition (ASOC), that Europe's Precautionary Principle is *not* yet fully incorporated within the Madrid Protocol's Annex VI. ASOC arrived at this conclusion because of the potential confusion that could arise between the *ex post* liability provisions and the *ex ante* EIA and preventative measures provisions which, in turn, would negate the burden of proof reversal that is a hallmark of Europe's Precautionary Principle.[60]

The alleged political compromise reached also strongly suggests that the strict liability regime of Annex VI, *as a matter of international law*, applies only to State governmental operators[61] (i.e., governmental agencies and instrumentalities) which specifically do "not include a juridical person that is a contractor or subcontractor acting on behalf of a State operator".[62]

This does not mean, however, that non-State operators will escape litigation *as a matter of US domestic law* for failure to take a necessary response action. The US government will be capable of bringing a liability action in a US federal court pursuant to Article 6(1) for reimbursement of costs it has expended to respond to an environmental emergency caused either by a State or non-State operator in the Antarctic.[63] Since the US government is not likely to sue one of its own agencies, this provision essentially "entitles [it as] a Party to recover the costs from the responsible *non*-State operator. And, it "assesses liability as the cost of the response action that was voluntarily taken by [it]."[64] According to Secretary of State Clinton, this "will require the creation of a domestic cause of action and the establishment of an administrative enforcement mechanism"[65], consistent with Annex VI, Article 7(3).[66] At least one commentator has posited that this scenario could just as easily play out in the case of US companies doing business abroad, in which case they could become the subject of an enforcement action in the courts of another Madrid Protocol State Party.[67]

Arguably, there is nothing to prevent an environmentally progressive US government, as a matter of US domestic law, to sue *non*-State operators in US federal court for failure to undertake preventative measures and environmental impact statements, consistent with Europe's Precautionary Principle. This all depends, in the end, on what the final implementing legislation says. And, if the testimonies proffered by green group activists during the 1993 Madrid Protocol implementation hearings, which, in part, addressed the former Clinton administration's "submission to [Congress] of a provision allowing for citizens' suits", are any indicator, the prospect that Annex VI implementing legislation submitted by the Obama administration may

provide a cause of action for 'citizen suits' against non-State and State operators must be closely scrutinized.[68]

Another factor militating in favor of an environmentally progressive US government ultimately adopting Europe's Precautionary Principle within US domestic implementing legislation, would be its ability to avoid liability, *as a matter of international law*, under the doctrine of State Responsibility. The US government would not be liable, on State Responsibility grounds, for the failure of a non-State operator to take response action, to the extent the US government "took appropriate measures within its competence, including the adoption of laws and regulations, administrative actions and enforcement measures to ensure compliance with […] Annex" VI".[69] In other words, the US government would "not bear liability for the acts taken by its nationals and non-State actors" if it "enacts [the appropriate] laws and regulations and [then] implements them".[70]

4) *The Potential for an UNCLOS Implementing Agreement Incorporating Europe's Precautionary Principle to Preserve the Marine Environment of, and Further Impair Freedom of Navigation on the 'High Seas'*

Fourth, the Obama administration has expressed its intention to both ratify Annex VI of the Antarctica Treaty's Madrid Protocol and to accede to the UNCLOS, recognizing that they are "intimately related".[71] During the past few years, European officials, United Nations University scholars, university academicians and green activist groups have called for UNCLOS parties to negotiate a new Implementing Agreement incorporating updated international environmental legal norms, including Europe's Precautionary Principle. They believe that a more comprehensive agreement is needed to fill the regulatory gaps and resolve the apparent conflicts that exist between these related legal regimes (i.e., as reflected, in part, by the lack of consensus concerning the status of legal claims to Antarctica and the competing notions of national jurisdiction and the common heritage of mankind[72]), which allegedly render the environmental health of the 'high seas', otherwise known as, 'areas beyond national jurisdiction' ('ABNJ') and the marine genetic resources found within them vulnerable to further degradation from pollution and global warming/ climate change acidification.[73] Considering the growing attractiveness of this proposal within and among these stakeholder communities, members of Congress must carefully review all of the environmental regulatory provisions of the UNCLOS, its environmental protocols and its environmental regulations to identify their scope and application, prior to approving US accession. They must also carefully examine all of the literature discussing the grounds for the proposed UNCLOS *environmental* implementing agreement.

According to Dr. Gerhard Hafner of the Austrian Federal Ministry for Foreign Affairs, who spoke in 2006 before the United Nations General Assembly, the European Union is squarely in favor of such an agreement.

> "[T]he EU reiterates its call for the development of an Implementation Agreement consistent with the [UNCLOS] which will provide for the conservation and management of marine biological

> diversity *in areas beyond the limits of national jurisdiction*, including the establishment and regulation, on an integrated and *precautionary basis*, of marine protected areas where there is a scientific case for establishing these areas…The measures in ABNJ ***have to be based on*** the best available scientific information and ***the precautionary principle***" [74]

Given the focus of Madrid Protocol Annex V on establishing Antarctic Specially Protected Areas, it is quite apparent that the subject matter of an UNCLOS Implementing Agreement would be consistent with and complement that of the Madrid Protocol.

And, more recently, during 2008, Aleksander Čičerov, Minister Plenipotentiary at the Permanent Mission of Slovenia to the United Nations, speaking on behalf of the European Union, remarked that, "the EU remains of the view that ultimately an Implementation Agreement under UNCLOS would be the most effective option in order to provide such an integrated regime and address in a comprehensive manner the multiplicity of challenges facing the protection and sustainable use of marine biodiversity in ABNJ."[75] He provided the following rationale which echoes his colleague's call for a Precautionary Principle-based implementing agreement:

> "*The implementation of the UNCLOS general framework and principles* for the management of the oceans relies mainly on sectoral or regional instruments. This fragmented approach does not allow for the development of a global strategy to protect marine biodiversity. This has notably prevented the international community from establishing multipurpose MPAs in ABNJ, given the lack of integrated mechanisms to identify, design, manage and enforce such tools…The mainly sectoral focus of existing ocean bodies also results in a patchy application across sectors of basic principles guiding ocean governance and management. The ecosystem approach, ***the precautionary principle*** or prior impact assessment are being gradually incorporated as basic tools underpinning the policy of existing ocean bodies, but this evolution is taking place unevenly and is far from being completed. Whilst recognising the importance of these sectoral and regional bodies, *the lack of an integrated approach is a hindrance to effectively protecting ocean biodiversity*…[T]he EU also recognizes that there are short-term options available through existing arrangements, which can help to achieve the above mentioned goals of integration, coordination and cooperation, working through the existing competent bodies, when available…[T]he EU proposes the establishment of multi-purpose pilot Marine Protected Areas in ABNJ as a key element of an ecosystem-based and ***precautionary approach*** to oceans management." [76]

Indeed, one in a series of reports from the International Union for Conservation of Nature and Natural Resources (IUCN), a green activist group, "identifies regulatory and governance gaps in the current international regime for the conservation and sustainable use of marine biodiversity in ABNJ". In response, it has cited the need for "An instrument or mechanism to ensure that modern conservation principles such as the ecosystem approach and ***the precautionary principle*** are incorporated and applied in all existing global and regional treaties or instruments relevant to ABNJ."[77] One such possibility is a "global instrument on [marine protected areas] MPAs or more broadly on marine spatial planning…consistent with UNCLOS [that] could serve as a means to implement the environmental duties of Part XII in the context of modern eco-system-based and precautionary management approaches."[78]

And, a second IUCN report in that series has argued that such an implementing agreement would logically entail the imposition of formal environmental limitations upon what are assumed to be 'high seas' freedoms throughout the globe.

> "Under UNCLOS, the high seas are open to all States and certain 'freedoms' include inter alia navigation, overflight, fishing and [marine scientific research]…*The freedoms are not absolute as they are conditioned by obligations to not cause damage to the environment* of other States arising from customary international law and the general obligations under UNCLOS to protect and preserve the marine environment; to conserve high seas living resources; to prevent, reduce and control pollution of the marine environment; and to fulfill their duties to cooperate with other States".[79]

Clearly, this report makes reference to the environmental restrictions placed on freedom of navigation by the 45 provisions of UNCLOS Part XII [80] and the three related International Seabed Authority (ISA) regulations.[81] Indeed, as concerns the broad scope of the ISA's mandate pursuant to UNCLOS Article 145,[82] a prior IUCN report had declared that,

> "[T]he ISA's mandate regarding the resources of the deep seabed *extends well beyond* mineral exploitation, and the Authority is being encouraged to more fully exercise its powers and responsibilities with regard to living resources of the seabed and to ensure that marine ecosystems are properly protected".[83]

Apart from the loss of navigational and economic freedoms deemed necessary to preserve and protect the marine environment, as discussed above, one of the IUCN reports suggests that the scope of such an UNCLOS Implementing Agreement, moreover, could be broad enough to cover the legal status of intangible property rights acquired in marine genetic resources (MGRs) in the ABNJ (i.e., it can preside over the loss of US private property rights as well). In other words, the objective of such an MGR framework would be to redistribute such rights and the financial profits and benefits flowing from them so that they may be 'equitably' shared with[84] developing countries.[85]

> "***It is thought that bioprospecting and exploitation of MGRs in the water column falls under the regime of the high seas***, whereas there is debate as to the extent that the Part XI regime for the Area applies to MGRs of the deep-sea bed. The ISA under Part XI has no direct authority to regulate the exploitation of biological resources in the Area because the term 'resources' is defined as being non-living resources. If the issue of bioprospecting is to be included within an Implementation Agreement, the potential role of the ISA in such a regime also needs to be discussed. ***Legally it would be possible to broaden the mandate of the ISA*** *which would reduce the need for development of a new institutional structure for regulation of bioprospecting for MGRs sourced from the deep seabed*".[86]

A legal framework of this nature would be akin, but not identical, to the politically controversial 'access and benefit sharing' (ABS) treaty proposed by developing country members of the United Nations Convention on Biological Diversity (CBD).[87] Unlike the ABS regime previously proposed at the CBD during 2003, which is intended to facilitate the redistribution and equitable sharing of genetic materials acquired from national forests located within the sovereign

territories of developing countries and the financial benefits flowing therefrom,[88] the proposed MGR 'high seas' framework would likely fall under the UNCLOS' common heritage of mankind doctrine. During 2007 and 2008, for example, the EU proposed such a regime in the context of the UNCLOS and the Antarctic Treaty, as a temporary 'fix' to protect the 'high seas' marine environment until the time that regulatory gaps in ocean governance can be remedied through an UNCLOS Implementation Agreement.[89]

These issues are not new in the context of the UNCLOS. Previously, during a 2006 meeting of a UN General Assembly Working Group on marine biological diversity, the "EU had proposed a new UNCLOS implementation agreement" on fisheries to control deep sea bottom trawling activities "and the creation of marine protected areas, ***invoking the Precautionary Principle***" to ensure "the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction." Not unexpectedly, the U.S. and Japan had strenuously objected.[90] The disagreement reflected the apparently different regional and national conceptions of how the benefits of marine genetic resources should be shared with developing countries. Whereas Europe called for the expanded jurisdiction of the International Seabed Authority over the global commons and new international regulations to protect such resources as the common heritage of mankind, the U.S. and Japan argued that such resources should instead fall subject to the freedom of the 'high seas' principle.[91] Commentators, therefore, have already pointed to the potential conflict over the future treatment of marine genetic resources located within the U.S. EEZ and the global commons.

Needless, to say, these ABS regimes also engender serious international trade - World Trade Organization (WTO) - issues which are beyond the scope of this discussion.

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[1] *See* "MESSAGE FROM THE PRESIDENT OF THE UNITED STATES, Transmitting Annex VI on Liability Arising from Environmental Emergencies to the Protocol on Environmental Protection to the Antarctic Treaty (Annex VI) Adopted on June 14, 2005", Treaty Doc. 111-2, 111th Congress First Session (April 2, 2009) at: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_documents&docid=f:td002.pdf .

[2] *See* "Protocol on Environmental Protection to the Antarctic Treaty (1991)", British Antarctic Survey Natural Environment Research Council at: http://www.antarctica.ac.uk/about_antarctica/geopolitical/treaty/update_1991.php. *See also* "Antarctic International Law", Australian Antarctic Division website at: http://www.aad.gov.au/default.asp?casid=76; "The Madrid Protocol", Australian Antarctic Division website at: http://www.aad.gov.au/default.asp?casid=825 .

[3] The Madrid Protocol and its Annexes I-IV was ratified by the United States on April 17, 1997, and went into force on January 14, 1998. *See* "Chapter II - The Antarctic Treaty System: Introduction", "Signature, Ratification, Acceptance, Approval or Accession, and Entry into Force of the Protocol", at p. 67, in U.S. State Department Handbook of the Antarctic Treaty System, Ninth Edition (Aug/Sept. 2002) at: http://www.state.gov/documents/organization/15272.pdf; http://www.state.gov/g/oes/rls/rpts/ant. *See also* "United Nations General Assembly Resolution A/RES/54/45" (Dec. 23, 1999) at: http://www.nyo.unep.org/pdfs/5445.pdf . ("*Welcoming the entry into force of the Protocol on Environmental Protection to the Antarctic Treaty on 14 January 1998*, under which Antarctica has been designated as a natural reserve, devoted to peace and science, and the provisions contained in the Protocol regarding the protection of the Antarctic environment and dependent and associated ecosystems, including the need for environmental impact assessment in the planning and conduct of all relevant activities in Antarctica" (emphasis added)). *Id*. at par. 6.

[4] Annex V of the Madrid Protocol was accepted by the United States on April 17, 1997, and entered into force on May, 24 2002. *See* "Chapter II - The Antarctic Treaty System: Introduction", "Signature, Ratification, Acceptance, Approval or Accession, and Entry into Force of the Protocol", at p. 67, *supra*; Vito De Lucia, "Antarctic Treaty System" (Sept. 14, 2008 last updated) at: http://www.eoearth.org/article/Antarctic_Treaty_System .

[5] "Annex VI on Liability Arising From Environmental Emergencies was adopted under Measure 1 (2005) at the XXVIIIth ATCM in Stockholm on June 14, 2005 and has yet to enter into force (although ratification procedures are ongoing)." *See* Vito De Lucia, "Antarctic Treaty System" *supra*.

[6] "Pursuant to Annex VI, which has not yet entered into force for any State, the Parties agree to require their operators to take preventative measures and establish contingency plans for preventing and responding to environmental emergencies in the Antarctic Treaty area and to take prompt and effective response action to such emergencies arising from their activities. Annex VI also sets forth provisions relating to liability arising from the failure of operators in the Antarctic to respond to environmental emergencies." *See* Hillary Rodham Clinton, Letter of Submittal, accompanying "MESSAGE FROM THE PRESIDENT OF THE UNITED STATES, Transmitting Annex VI on Liability Arising from Environmental Emergencies to the Protocol on Environmental Protection to the Antarctic Treaty (Annex VI) *supra* at p. v.

[7] "The primary purpose of the Antarctic Treaty is to ensure that 'Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord.' The treaty provides for freedom of scientific research in Antarctica and promotes international cooperation toward that end. Through Consultative Meetings and other provisions of the treaty, *a growing complex of arrangements for regulating activities of nations in the Antarctic has evolved. This complex of arrangements is known as the Antarctic Treaty System (ATS)*, the center of which is the treaty itself. Other aspects of the ATS include recommendations adopted at Consultative Meetings and separate agreements and conventions adopted at Special Consultative Meetings. *Among the separate agreements and conventions that have been adopted are the Agreed Measures for the Conservation of Antarctic Fauna and Flora, the Convention for the Conservation of Antarctic Seals, and the Convention on the Conservation of Antarctic Marine Living Resources*…After seven years of negotiation, on June 2, 1988, in Wellington, New Zealand, the Convention on the Regulation of Antarctic Mineral Resource Activities (also known as CRAMRA or the 'Wellington Convention') was adopted by consensus of the nations that were Consultative Parties (20 at that time) to the Antarctic Treaty. The convention, negotiated under the provisions of the Antarctic Treaty, would have established an environmentally based regulatory framework for possible future development of mineral resources in Antarctica. Almost immediately, however, it came under attack by those who feared that any development of mineral resources in Antarctica would adversely affect the pristine nature of the continent. Consequently, the negotiators representing the Antarctic Treaty Consultative Parties (those countries with significant established research interests in Antarctica, of which there are now 26) negotiated a new measure to place a ban on mineral resource development in Antarctica and preserve its environmental quality. *This measure is known as the Protocol on Environmental Protection to the Antarctic Treaty, with Annexes. It was submitted to the Senate for its advice and consent for ratification and was approved on October 7, 1992 (Treaty Doc. 102-22). Implementing legislation was passed by the 104th Congress in the Antarctic Science, Tourism, and Conservation Act of 1996, P.L. 104-227*" (emphasis added). *See* James E. Mielke, "Oceans & Coastal Resources: A Briefing Book - Antarctic Environmental Protection and Mineral Resources ", Congressional Research Service Report 97-588 ENR (May 30, 1997) at: http://ncseonline.org/NLE/CRSreports/BriefingBooks/Oceans/w.cfm and http://ncseonline.org/NLE/crsreports/BriefingBooks/Oceans/index.cfm .

[8] "The ATS is comprised of the Antarctic Treaty of 1959 and the Madrid Protocol of 1991." *See* Peter J. Beck, "Fear and Loathing in the South Pole: The Need to Resolve the Antarctic Sovereignty Issue and a Framework for Doing It", 22 Temple International & Comparative Law Journal 213, 220 (Spring 2008) at: http://www.temple.edu/law/ticlj/ticlj22-1Tray.pdf.

[9] *See* "Written Statement of Bruce S. Manheim, Jr., Senior Attorney, Environmental Defense Fund", Before the Subcommittee on Economic Policy, Trade and Environment of the House Committee on Foreign Affairs and the House Committee on Merchant Marine and Fisheries, on Implementing Legislation for the Protocol on Environmental Protection to the Antarctic Treaty (Nov. 16, 1993) at p. 44, at: http://ia360917.us.archive.org/1/items/implementinglegi00unit/implementinglegi00unit.pdf .

[10] *See* "Hillary Rodham Clinton, Letter of Submittal, accompanying MESSAGE FROM THE PRESIDENT OF THE UNITED STATES, Transmitting Annex VI on Liability Arising from Environmental Emergencies to the Protocol on Environmental Protection to the Antarctic Treaty (Annex VI)" *supra* at p. v.
[11] *Id*.
[12] *See* Maggie Fox and Xavier Briand, *Wordie Ice Shelf Has Disappeared: Scientists*, Reuters (April 9, 2009) at: http://www.reuters.com/article/environmentNews/idUSTRE5383Y720090409; *Antarctic Ice Shelf Disappears, Arctic Melting Rapidly*, Environmental News Service (April 3, 2009) at: http://www.ens-newswire.com/ens/apr2009/2009-04-03-01.asp; Will Dunham, *Slab of Antarctic Ice Shelf Collapses Amid Warming*, Reuters (March 26, 2008) at: http://uk.reuters.com/article/environmentNews/idUKN2529744920080326; *Greenland And Antarctic Ice Sheet Melting*, Rate Unknown, Science Daily (Feb. 25, 2009) at: http://www.sciencedaily.com/releases/2009/02/090216131158.htm; Tim Lister, *Massive Antarctic Ice Shelf on Verge of Collapse* CNN Blog (Jan. 23, 2009), at: http://ac360.blogs.cnn.com/2009/01/23/massive-antarctic-ice-shelf-on-verge-of-collapse .
[13] *See* Cheryl Pellerin, "United States Hosts 32nd Meeting of Antarctic Treaty Nations", America.gov (April 6, 2009) at: http://www.america.gov/st/energy-english/2009/April/20090406145613lcnirellep0.4059412.html .
[14] *See* Allison Winter, *OCEANS: Panel Urges Federal Action to Protect Coasts, Marine Resources*, Greenwire (4/7/09) at: http://www.eenews.net/public/Greenwire/2009/04/07/1 ("Secretary of State Hillary Rodham Clinton called for ratification of the treaty in her opening statement yesterday at a conference of nations gathered for the Antarctic Treaty Consultative Meeting and the Arctic Council. Clinton also called for more protection for the polar regions. 'It is crucial we work together,' Clinton said. '*That starts with the Law of the Sea Convention, which President Obama and I are committed to ratifying*, to give the United States and our partners the clarity we need to work together smoothly and effectively in the Arctic region'") (emphasis added).
[15] *See* "U.S. Committed to Backing Law of the Sea Convention", The China Post (April 8, 2009) at: http://www.chinapost.com.tw/international/americas/2009/04/08/203408/U.S.-committed.htm .
[16] *Id*.
[17] *Id*.
[18] The term **'catastrophe'** is defined as "1**:** the final event of the dramatic action especially of a tragedy; 2**:** a momentous tragic event ranging from extreme misfortune to utter overthrow or ruin; 3 ***a: a violent and sudden change in a feature of the earth b: a violent usually destructive natural event (as a supernova)***; 4**:** utter failure**:** fiasco…" *See* Merriam Webster Online, at: http://www.merriam-webster.com/dictionary/catastrophe . By contrast, the term **'emergency'** is defined as "1**:** ***an unforeseen combination of circumstances or the resulting state that calls for immediate action***; 2 **:** an urgent need for assistance or relief…" *See* Merriam Webster Online, at: http://www.merriam-webster.com/dictionary/emergency.
[19] *See* "Changing Oceans, Changing World: Ocean Priorities for the Obama Administration and Congress: Recommendations from the Joint Ocean Commission Initiative" (April 2009) at pp. 3, 20 and 21, at: http://www.jointoceancommission.org/resource-center/1-Reports/2009-04-07_JOCI_Changing_Oceans,_Changing_World.pdf. "This report presents recommendations to the Obama Administration and the 111th Congress for improving human well-being, creating wealth, and providing responsible stewardship of ocean, coastal, and Great Lakes resources. It is presented by the Joint Ocean Commission Initiative, with broad endorsement from organizations interested in the management, use, and conservation of our oceans. It embodies analyses by organizations and thought leaders representing a diversity of interests, including ocean and coastal related industries, environmental advocacy groups, science and education organizations, and local, state, and federal government partners. The recommendations in this report focus on specific actions the Obama Administration and Congress should take within a two to four year time frame to improve ocean and coastal policy and management, bolster international leadership, strengthen ocean science, and adequately fund ocean and coastal management and science. The proposed reforms respond to urgent challenges, including climate change and its impacts, development of a comprehensive energy policy that includes ocean-based energy resources, and stimulation of the national economy, a significant portion of which is dependent on ocean and coastal activities and resources." *Id.*, at Executive Summary at p. 1.
[20] *See* Joint Ocean Commission Initiative, *From Sea to Shining Sea: Priorities for Ocean Policy Reform, Report to the United States Senate*, (June 2006), at 19-20, http://www.jointoceancommission.org/resource-center/1-

Reports/2006-06-13_Sea_to_Shining_Sea_Report_to_Senate.pdf. It specifically recommended that federal environmental regulatory agencies develop guidelines to implement proposed amendments to federal environmental statutes that will come up for reauthorization in the future, including the MSFCMA, CZMA, CAA, CWA and the National Marine Sanctuaries Act. *Id*. The 2006 JOCI report also highlighted the interrelationship between its recommended U.S. statutory and regulatory changes and the need for the U.S. to ratify UNCLOS. *Id.*, at pp. 30-31.

[21] *See* "ITSSD: US Navy Had a Whale of a Job Fending Off Green Lawfare in NRDC v. Winter Case", PR Newswire (April 8, 2009) at: http://news.prnewswire.com/ViewContent.aspx?ACCT=109&STORY=/www/story/04-08-2009/0005003016&EDATE.

[22] *See* "ITSSD Letter to SFRC Objecting to the Nomination of Harold Koh as the Next Legal Adviser to the US State Department", Institute for Trade, Standards and Sustainable Development (April 24, 2009) at: http://www.itssd.org/correspondences.html .

[23] A new coordinated international set of rules to govern commercial and research activities in both of Earth's polar regions is urgently needed to reflect new environmental realities and to temper pressure building on these highly fragile ecosystems, according to several of the experts convening in Iceland for a UN-affiliated conference marking the International Polar Year. Due to climate change, the ancient ice lid on the Arctic Ocean is fast disappearing, creating new opportunities for fishers and resource companies, and opening a potential new, far shorter ocean route between Europe and Asia, a prospect already drawing billions of dollars in investment in ice-class ships. Antarctica, meanwhile, is witnessing a growing parade of tourists (40,000, including tour staff, in 2007), as well as researchers (now about 4,000 in summer occupying 37 permanent stations and numerous field camps) and companies interested in exploiting the biological properties of that continent's 'extremophiles.' However, 'many experts believe this new rush to the polar regions is not manageable within existing international law, says A.H. Zakri, Director of the United Nations University's Yokohama-based Institute of Advanced Studies (UNU-IAS)…Dr. Tatiana Saksina of the World Wildlife Fund's International Arctic Programme…National marine environmental protection regimes that cover significant portions of Arctic waters constitute a fragmented system of governance, with large gaps in jurisdiction, implementation and effectiveness. The UN Convention on the Law of the Sea (UNCLOS), meanwhile, includes environmental rules inadequate to protect the ice oceans, she says…'There is an urgent need for a comprehensive international environmental regime specially tailored for the unique arctic conditions. This regime is needed before natural resource development expands widely'…" *See* "Experts Meet on Need for New Rules to Govern World's Fragile Polar Regions", United Nations University e!Science News (Sept. 7, 2008) at: http://esciencenews.com/articles/2008/09/07/experts.meet.need.new.rules.govern.worlds.fragile.polar.regions.

[24] *See* Lawrence A. Kogan, *What Goes Around, Comes Around: How UNCLOS Ratification Will Herald Europe's Precautionary Principle as U.S. Law*, 7 SANTA CLARA J. INT'L L. (forthcoming 2009), abstract at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1356837.

[25] U.S. Const. Art. VI, cl. 3 ("The Senators and Representatives before mentioned...shall be bound by Oath or Affirmation, to support the Constitution)"; United States Senate and House of Representatives Oath of Office, http://www.senate.gov/artandhistory/history/common/briefing/Oath_Office.htm. ("I, (name of Member), do solemnly swear (or affirm) that I will support and defend the Constitution of the United States against all enemies, foreign or domestic; that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties of the office on which I am about to enter. So help me God").

[26] The obligation imposed on U.S. congressional representatives and senators to 'support the U.S. Constitution' and its accompanying Bill of Rights serves to safeguard Americans against the inclinations of a wanton and arbitrary U.S. government. Since the time-honored notion of due process of law (comprising substantive *and* procedural rights) is found within the penumbra of the Fifth and Fourteenth Amendments of the Bill of Rights, senators' failure to take such rights into account by heeding Americans' requests for thorough public hearings to vet the UNCLOS is arguably tantamount to a violation of Americans' U.S. constitutional rights.

[27] "*US government actions* undertaken in Antarctica are subject to the requirements of both the Protocol and the US National Environmental Policy Act (NEPA). *There are differences in the scope and intent of the Protocol and NEPA*; however, both require environmental impact assessment (EIA) as part of the planning process for proposed actions that have the potential for environmental impacts…***NEPA applies only to actions of the US government***;

therefore, because NEPA includes certain desirable attributes that have been refined and clarified through numerous court cases, and because the Protocol is just entering implementation internationally, *some recommendations are made for strengthening the* ***procedural*** *requirements of the Protocol* for activities undertaken by all Parties in Antarctica. ***The Protocol gives clear and strong guidance*** *for protection of specific, valued [A]ntarctic environmental resources including intrinsic wilderness and aesthetic values, and the value of Antarctica as an area for scientific research.* ***That guidance requires a higher standard of environmental protection*** *for Antarctica than is required in other parts of the world*…Three areas are identified where the EIA provisions of the Protocol could be strengthened to improve its effectiveness. First, the thresholds defined by the Protocol need to be clarified. Specifically, the meanings of the terms "minor" and "transitory" are not clear in the context of the Protocol. The use of 'or' in the phrase 'minor or transitory' further confuses the meaning. Second, cumulative impact assessment is called for by the Protocol but is not defined. A clear definition could reduce the chance that cumulative impacts would be given inadequate consideration. Finally, the public has limited opportunities to comment on or influence the preparation of initial or comprehensive environmental evaluations. Experience has shown that public input to environmental documents has a considerable influence on agency decision making and the quality of EIA that agencies perform" (emphasis added). *See* J. Timothy Ensminger, Lance N. McCold and J. Warren Webb, "Environmental Impact Assessment Under the National Environmental Policy Act and the Protocol on Environmental Protection to the Antarctic Treaty", Environmental Management Vol. 24, No. 1 (Springer Publishers ©1999) pp. 13-23, at: http://www.springerlink.com/content/8c91bty1e05e9270.

[28] "Environmental Impact Assessment; As amended in 1996, the Act provides that the National Environmental Policy Act of 1969 applies to proposals for federal agency activities in Antarctica, as specified in the amendments. The term 'federal activity' includes all activities conducted under a federal agency research program, whether or not conducted by the agency. *Unless the agency determines that the activity will have less than a minor or transitory impact, or unless a comprehensive environmental evaluation is being prepared, the agency shall prepare an initial environmental evaluation in accordance with Article 2 of Annex I to the Protocol*. If the agency determines, through the initial environmental evaluation, that the proposed activity is likely to have no more than a minor or transitory impact, the activity may proceed if procedures are put in place to assess and verify the impact of the activity. *If the agency determines that a proposed federal activity is likely to have more than a minor or transitory impact, the agency shall prepare and circulate a comprehensive environmental evaluation in accordance with Article 3 of Annex I to the Protocol*, and shall make the evaluation available for public comment. Any decision to proceed shall be based on the evaluation as well as other considerations which the agency, in its discretion, considers relevant. These requirements do not apply in instances where the Secretary of State, in cooperation with the lead U.S. agency planning an Antarctic joint activity, determine that: the major part of the joint activity is being contributed by a government or governments other than the U.S., one of these other governments is coordinating the implementation of environmental impact assessment procedures for the activity, and such government has signed, ratified or acceded to the Protocol. *The Administrator is expected to promulgate regulations by October 1998 to provide for* ***the environmental impact assessment of nongovernmental activities****, including tourism, for which the U.S. is required to give advance notice under the Treaty*. The regulations must also provide for coordination of the review of information regarding environmental impact assessment received from other Parties to the Protocol" (emphasis added). *See* ANTARCTIC CONSERVATION ACT OF 1978 16 U.S.C. §§ 2401-2413, (Oct. 28, 1978), as amended 1996, at: http://wildlifelaw.unm.edu/fedbook/aca.html . See also "Antarctic Conservation Act of 1978 (Public Law 95-541) *as amended by* Antarctic Science, Tourism, and Conservation Act of 1996 (Public Law 104-227) with Regulations" National Science Foundation (July 2001) at: http://www.nsf.gov/od/opp/antarct/aca/nsf01151/aca1_intro.pdf .

[29] "The U.S. Environmental Protection Agency (EPA) proposes to promulgate final regulations that provide for assessment of the potential environmental impacts of nongovernmental activities in Antarctica and for coordination of the review of information regarding environmental impact assessments (EIAs) received from other Parties under the Protocol on Environmental Protection (the Protocol) to the Antarctic Treaty of 1959 (the Treaty)…Five alternatives for the rule-making were developed… Alternative 2, EPA's preferred alternative, would modify the Interim Final Rule to respond to suggestions for certain changes in the EIA process including changes that would ensure consistency between the governmental and nongovernmental EIA processes and that could reduce the time and cost of the EIA process for the nongovernmental operators. Under Alternative 2, the following modifications

would be incorporated into the Interim Final Rule: 1. Make necessary technical modifications and edits (see Alternative 1, footnote 9). 2. Add a provision allowing operators to submit multi-year EIA documentation to address proposed expeditions for a period of up to five austral summer seasons. 3. *Add a definition, or other provision, that would establish a threshold for 'more than a minor or transitory impact'…The term 'more than a minor or transitory impact' would have the same meaning as 'significantly affecting the quality of the human environment', the same threshold definition applied to EIA of governmental activities in Antarctica* thus ensuring regulatory consistency between the governmental and nongovernmental EIA requirements" (emphasis added). *See* Final Environmental Impact Statement for the Proposed Rule on Environmental Impact Assessment of Nongovernmental Activities in Antarctica" (August 2001) at pp. a-i, s-iv, s-v and fn 11, at: http://www.epa.gov/compliance/resources/publications/nepa/antarctica/finaleis/chapter_00.pdf.

[30] "My bill, the Antarctic Environmental Protocol Act of 1993 [H.R. 1066, to implement the Protocol], with minor modifications, is the same text as the bill reported in the 102d Congress by the Committee on Merchant Marine and Fisheries, H.R. 5459, House Report 102-932, part 1…My bill contains comprehensive, stand-alone legislation to implement the Madrid protocol and its five annexes domestically. While I am not wed to any particular form and would not elevate form over the substance of this legislation, I do not agree with the approach that says all we need to do is make fine-tuning amendments to the Antarctic Conservation Act of 1978, 16 U.S.C. 2401 et seq., a law that only implements one aspect of the Protocol, the conservation of fauna and flora--and be done with it…Another significant difference between the two bills is the fact *my bill would have the United States implement the EIA provisions of the Madrid protocol through the National Environmental Policy Act of 1969, NEPA*, 42 U.S.C. 4321 et seq…***Although NSF might have to prepare fewer studies under NEPA than under the protocol***, a single document could indicate how the environmental impact of the proposed action is more than minor and also more than significant" (emphasis added)." *See* Hon. Gerry E. Studds, Extension of Remarks on Antarctic Environmental Protocol Act of 1993 (Feb. 23, 1993) at p. E422, at: http://belobog.si.umich.edu/clair/corpora/corpora/us_congressional_record/103/103.ext.19930223.032.html. *See also* "Statement of the Honorable Gerry E. Studds, Chairman, Committee on Merchant Marine and Fisheries" at a Joint Hearing of the Committees on Foreign Affairs and Merchant Marine and Fisheries On Implementing Legislation for the Protocol on Environmental Protection to the Antarctic Treaty (Nov. 16, 1993) at pp. 71-72, at: http://ia360917.us.archive.org/1/items/implementinglegi00unit/implementinglegi00unit.pdf .

[31] *See generally* "Statement of the Antarctica Project, Greenpeace, Friends of the Earth-U.S., The Human Society of the United States, National Wildlife Federation, and Sierra Club", before the Subcommittee on Economic Policy, Trade and the Environment of the Committee on Merchant Marine and Fisheries and the Committee on Foreign Affairs of the House of Representatives on Implementing Legislation for the Protocol to the Antarctic Treaty on Environmental Protection, Rpt. 103-83 (Nov. 16, 1993) at pp. 97-119, at: http://ia360917.us.archive.org/1/items/implementinglegi00unit/implementinglegi00unit.pdf. *See also generally*, "Letter dated August 23, 1993 to Vice President Al Gore from Jim Barnes, International Director, Friends of the Earth, and Beth Marks, Director, the Antarctica Project", and "Remarks of James N. Barnes, 'The Place of Science on an Environmentally Regulated Continent'", *Id*., at pp. 120-129.

[32] *See* Madrid Protocol, Annex I, Article 2(1). "If an Initial Environmental Evaluation indicates that a proposed activity is likely to have no more than a minor or transitory impact, the activity may proceed, provided that appropriate procedures, which may include monitoring, are put in place to assess and verify the impact of the activity." Annex I, Article 2(2). "…An adequate protection of the Antarctic environment is not possible if during the decision-making process with regard to proposed activities, no knowledge is available on the possible effects of these activities. 'The EIAs is the sine qua non of effective environmental regulation'…As far as the preliminary assessment (PA) – the first level of the EIA in Annex I - is concerned, the Protocol does not include many concrete requirements and Article 1 of Annex I accepts explicitly the discretionary competence of Contracting Parties to conduct this assessment 'in accordance with appropriate national procedures'. With regard to the second level of EIA – the initial environmental evaluation (IEE) – the Protocol also leaves quite some scope to the 'domestic legislator'. The comprehensive environmental evaluation (CEE) is worked out in much more detail; however, even at this level, the Protocol contains some vague terminology that requires interpretation by the Contracting Parties…One of the most important examples is the use of terminology (less or more than) 'minor or transitory impact', which should determine the level of EIA. As stated in the literature, 'it seems that 'minor or transitory' will

fall to be determined by each State and ultimately by individual operators under domestic laws implementing the Protocol, thus introducing unwelcome subjectivity and diversity in the application of this important threshold'. Other questions relate to the content of the EIAs, the meaning of 'wilderness values', the way in which cumulative impacts should be assessed, and how the subjectivity of the assessment could be limited." *See* C. J. Bastmeijer, *The Antarctic Environmental Protocol and its Domestic Legal Implementation* (Kluwer Law Int'l (©2003)) at p. 25, at: http://books.google.com/books?id=9yG2HP4Tgc0C&dq=UNCLOS++%2B+antarctic+treaty+%2B+environmental+protocol+%2B+precautionary+principle&printsec=frontcover&source=bl&ots=jF_70tlu65&sig=4K0V9IAR0c-Tyq6J9EuL-hJLvMM&hl=en&ei=NMbjSZXjLZDfmQfvpdjDBQ&sa=X&oi=book_result&ct=result&resnum=6#PPA465,M1 .

[33] Madrid Protocol Annex I, Article 2(1) requires that an initial EIA include the following information: "a) a description of the proposed activity, including its purpose, location, duration and intensity; and (b) consideration of alternatives to the proposed activity and any impacts that the activity may have, including consideration of cumulative impacts in the light of existing and known planned activities." Madrid Protocol Annex I, Article 3(2)(a)-(l) requires that a comprehensive environmental evaluation include the following information: (a) a description of the proposed activity including its purpose, location, duration and intensity, and possible alternatives to the activity, including the alternative of not proceeding, and the consequences of those alternatives; (b) a description of the initial environmental reference state with which predicted changes are to be compared and a prediction of the future environmental reference state in the absence of the proposed activity; (c) a description of the methods and data used to forecast the impacts of the proposed activity; (d) estimation of the nature, extent, duration, and intensity of the likely direct impacts of the proposed activity; (e) consideration of possible indirect or second order impacts of the proposed activity; (f) consideration of cumulative impacts of the proposed activity in the light of existing activities and other known planned activities; (g) identification of measures, including monitoring programs, that could be taken to minimise or mitigate impacts of the proposed activity and to detect unforeseen impacts and that could provide early warning of any adverse effects of the activity as well as to deal promptly and effectively with accidents; (h) identification of unavoidable impacts of the proposed activity; (i) consideration of the effects of the proposed activity on the conduct of scientific research and on other existing uses and values; (j) an identification of gaps in knowledge and uncertainties encountered in compiling the information required under this paragraph; (k) a non-technical summary of the information provided under this paragraph; and (l) the name and address of the person or organisation which prepared the Comprehensive Environmental Evaluation and the address to which comments thereon should be directed."

[34] *See* Lawrence A. Kogan, "A Chill Wind for Precaution?: Broader Ramifications of Supreme Court's *Winter* Decision", Washington Legal Foundation (Working Paper No. 163) (April 2009) at: http://www.itssd.org/Winter%20Decision%20--%200409KoganWPFinal.pdf .

[35] *See* Lawrence Kogan, *WTO Ruling on Biotech Foods Addresses 'Precautionary Principle'*, LEGAL BACKGROUNDER (Wash. Lgl. Fndt.), Dec. 8, 2006, at: http://www.itssd.org/Publications/wto-biotech-foods-dec0806.pdf ; Peter Strauss, Turner T. Smith Jr. and Lucas Bergkamp, *Norm Creation in the European Union*, *Chapter 2* B *Rulemaking*, American Bar Association, at 49, 53 (June 2007) at: http://www.abanet.org/adminlaw/eu/Reports_Rulemaking_06-07-2007.pdf ; Jeroen H. J. den Hartog and Mark G. Paulson, *Europe=s 'REACH' Initiative Will Impact Trade Secrets*, LEGAL BACKGROUNDER (Wash. Lgl. Fndt.) (June 2006) at: http://www.wlf.org/upload/061606dehartog.pdf .

[36] *See* C. J. Bastmeijer, *The Antarctic Environmental Protocol and its Domestic Legal Implementation* (Kluwer Law Int'l (©2003)) *supra* at p. 295, (emphasis added), *citing* Laurence Cordonnery, *Environmental Protection in Antarctica: Drawing Lessons From the CCAMLR Model for the Implementation of the Madrid Protocol*, 29 Ocean Dev. & Int'l L. 125-146, 130 (1998).

[37] "Indeed the prohibition of mineral activities laid down in Article 7 of the Protocol appears to be based on the idea that there is not enough knowledge with regard to the possible adverse impacts of mineral activities on the Antarctic environment." *Id*.

[38] "*Other provisions of the Protocol also appear to be based on the precautionary principle*. For example, the site of the British Antarctica Survey [last viewed during December 2000] state[d] with regard to the obligation to remove all dogs from Antarctica, laid down in Article 4 paragraph 2, of Annex II to the Protocol: 'A suggested link between a virus in seals and distemper in husky dogs was never proved but was one of the factors which led to the Protocol (…) to insist that huskies were removed from the Antarctic.'" *Id.* citing the British Antarctic Survey website, which

now states the following: "Annex II to the Environmental Protocol (Conservation of Antarctic Flora and Flora) required that dogs were removed from Antarctica by April 1994. This ban was introduced because of concern that dogs *might* introduce diseases such as canine distemper that *might* be transferred to seals, and that they could break free and disturb or attack the wildlife. It was also thought to be inconsistent for the Protocol to have strict controls on the introduction of non-native species, but at the same time allow huskies to be bred and used in Antarctica." *See* "Removal of the Sledge Dogs from Antarctica", British Antarctica Survey website at: http://www.antarctica.ac.uk/about_antarctica/environment/wildlife/removal_of_sledge_dogs.php (last visited 4/14/09). *See also* Madrid Protocol Article 15 – Emergency Response Action; Annex IV – Prevention of Marine Pollution, Article 12 – Preventive Measures and Emergency Preparedness and Response.

[39] "In our view, some of the practical results implied by *application of the precautionary principle to Antarctic tourism* might include: — *improving the applicability of EIA to tourism*; — *generally improving the process of ex ante assessment of cumulative impacts rather than expecting that ex post monitoring will provide all the answers*; — prohibiting tourist activities in potentially sensitive sites where environmental monitoring is lacking or insufficient…establishing temporal or spatial limitations for certain sites as required by their specific values and characteristics, including limiting the number of visitors where appropriate… preventing access to any site that has not been visited before, so as not to expand the number of sites exposed to a human presence; and — adopting restrictions on the permissible types of tourist activities" (emphasis added)." *See* Kees Bastmeijer and Ricardo Roura, *Regulating Antarctic Tourism and the Precautionary Principle*, supra at pp. 773-774.

[40] "[A]ctivities in the Antarctic Treaty area shall be planned and conducted on the basis of information sufficient to allow prior assessments of, and informed judgments about, their possible impacts on the Antarctic environment and dependent and associated ecosystems…" *See* Madrid Protocol, Article 3(2)(c).

[41] *See* Madrid Protocol Annex IV – Prevention of Marine Pollution, Article 3(2)(a)(i) and Article 5(a) and (b) (emphasis added).

[42] *See* Kees Bastmeijer and Ricardo Roura, *Regulating Antarctic Tourism and the Precautionary Principle*, 98 American Journal of International Law 763, 772 (2004).

[43] There are exceptions, however. "Chapter 103 of 42 U.S.C., Section 9601 et seq. (1980)…[the] Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)…addresses cleanup of hazardous substances. It empowers the Environmental Protection Agency to identify and prioritize sites for cleanup, and to order or carry out environmental remediation. Subject to limited defenses, it imposes strict liability for environmental cleanup on persons whose actions cause release into the environment. It also mandates reporting to the National Response Center of hazardous substance releases. In conjunction with the Clean Water Act, it mandates preparation of the National Contingency Plan for responding to oil or hazardous substances release… Chapter 40 of 33 U.S.C., Sections 2702 to 2761…[the] Oil Pollution Control Act of 1990…mandates extensive planning for oil spills from tank vessels and onshore and offshore facilities. It establishes comprehensive elements of damage for oil spills, an disposes strict liability on those responsible for oil spills, but is not applicable to public vessels." See Federal Environmental Laws and Regulations on the Internet, Marine Environmental Support Office (updated 9/23/03) at: http://meso.spawar.navy.mil/law1.html .

[44] *See* Philippe Cullet, "Liability and Redress for Human-Induced Global Warming: Towards an International Regime", 43 Stanford Journal of International Law, pp. 99-121, 118 (2007) at: http://www.ielrc.org/content/a0701.pdf.

[45] *See* Kees Bastmeijer and Ricardo Roura, *Regulating Antarctic Tourism and the Precautionary Principle*, supra at p. 772, *citing* James Cameron, *The Precautionary Principle: Core Meaning, Constitutional Framework and Procedures for Implementation*, paper presented at the Institute of Environmental Studies, University of New South Wales (Sept. 20–21, 1993).

[46] *See* Philippe Cullet, "Liability and Redress for Human-Induced Global Warming: Towards an International Regime", *supra* at p. 105.

[47] *See* "Report of the Secretary-General on the Question of Antarctica" (A/54/339) (Sept. 10, 1999) at: http://www.nyo.unep.org/pdfs/a54339.pdf; "Despite a few specific exemptions in Article 8, Article 6(3) establishes a strict liability standard. Unlike negligence, which tends to create arbitrary exemptions, strict liability unequivocally holds operators liable for damage caused. Further, the strict liability standard prevents Parties from successfully advocating exemptions that would only apply to a single class of operators." *See* "Analysis of First Antarctic

Liability Regime", Antarctic & Southern Oceans Coalition (Aug. 3, 2005) at: http://www.asoc.org/Portals/0/pdfs/liability%20regime%20summary0803.pdf .

[48] *See* Michael Johnson, "Liability for Environmental Damage in Antarctica: The Adoption of Annex VI to the Antarctic Environmental Protocol", 19 Georgetown International Environmental Law Review 33 (2006) at: http://findarticles.com/p/articles/mi_qa3970/is_200610/ai_n19430539/?tag=content;col1 (emphasis added).

[49] *See* Madrid Protocol Article 9(5); Articles 18-20; Schedule to the Protocol – Arbitration, Articles 1-13.

[50] *Id*.

[51] "Each Party shall require each of its operators to take prompt and effective response action to environmental emergencies arising from the activities of that operator." *See* Annex VI, Article 5(1).

[52] "In the event that an operator does not take prompt and effective response action, the Party of that operator and other Parties are encouraged to take such action, including through their agents and operators specifically authorised by them to take such action on their behalf." *See* Annex VI, Article 5(2).

[53] In effect, pursuant to Article 7(4), "the settlement of claims for liability of **State operators** under Article 6(1) was expressly left to the State-to-State dispute settlement mechanism, provided for in Articles 18,19 and 20 of the Protocol." *Id*.

[54] And, pursuant to Article 7(5)(a), "The liability of a Party as a State operator under Article 6(2)(a) shall be resolved only by the Antarctic Treaty Consultative Meeting and, should the question remain unresolved, only in accordance with any enquiry procedure which may be established by the Parties, the provisions of Articles 18, 19 and 20 of the Protocol and, as applicable, the Schedule to the Protocol on Arbitration. *Id*.

[55] Annex VI, Article 3 "requires each Party to require its operators to undertake reasonable preventative measures that are designed to reduce the risk of environmental emergencies and their potential adverse impact. Article 3 provides a non-exclusive list of preventative measures that operators may take." *See* Treaty Doc.111-2, *supra* at p. 3.

[56] *See* Annex VI, Article 7(5)(a) and (b).

[57] *See* Michael Johnson, "Liability for Environmental Damage in Antarctica: The Adoption of Annex VI to the Antarctic Environmental Protocol", *supra*.

[58] *See* Alexandre Kiss and Dinah Shelton, *Strict Liability in International Environmental Law*, Chapter in Thomas A. Mensah, "Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum (Tafsir Malick Ndiaye and Rüdiger Wolfrum, Eds.) (Brill Academic Publishers © 2007) at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1010478; Antarctic and Southern Ocean Coalition (ASOC)

[59] *See* Annex VI, Article 2(b).

[60] According to the green Antarctic and Southern Ocean Coalition, the final decision of the Parties to settle on the 'any significant and harmful impact' threshold language for triggering liability for environmental damage, within the definition of 'environmental emergency', essentially "*revers[es]… the general commitment to the precautionary principle* ***implicit in the Protocol*** [and] chang[es] the burden of proof obligation explicit in the 'less than / no more than / more than minor and/or transitory' formulation used throughout the Protocol…[potentially causing] "terminological…difficulties…wherever EIA and liability for environmental emergency are coupled" (emphasis added). *See* ASOC Information Paper on Liability, XXV ATCM Information Paper Agenda Item 8 (Aug. 2002) at p. 4, at: http://www.asoc.org/Portals/0/pdfs/IP77.liability.xxv.pdf.

[61] "A State operator or a 'Operator of the Party' means an operator that organises in that Party's territory, activities to be carried out in the Antarctic Treaty area, and: (i) those activities are subject to authorisation by that Party for the Antarctic Treaty area; or (ii) in the case of a Party which does not formally authorise activities for the Antarctic Treaty area, those activities are subject to a comparable regulatory process by that Party. The terms 'its operator', 'Party of the operator', and 'Party of that operator' shall be interpreted in accordance with this definition." *See* Annex VI, Article 2(d). "The purpose of this definition is to establish a regulatory link between a Party and an operator. As the United States does not formally authorize activities for the Antarctic Treaty area…but does administer the advance notification process, the second condition applies for the United States, namely, that the activities are subject to a 'comparable regulatory process.'" *See* Treaty Doc. 111-2, *supra* at p. 3.

[62] *See* Annex VI, Article 2(c).

[63] *See* Annex VI, Article 6(1).

[64] *See* Treaty Doc 111-2, *supra* at p. 5.

[65] *Id*.

[66] "Article 7(3) obliges Parties to ensure a domestic law mechanism exists with respect to both its non-State operators and other non-State operators incorporated in its territory. The obligation on States in Article 7(3) is to merely ensure a domestic law mechanism exists, and it is left up to that mechanism to spell out who is to invoke it-this will most likely be the relevant State." *See* Michael Johnson, "Liability for Environmental Damage in Antarctica: The Adoption of Annex VI to the Antarctic Environmental Protocol", *supra*.

[67] "[Even]…with a mechanism in place to cover both operators of the relevant Party and operators that are incorporated, resident, or have their principal place of business in that Party, there would again be potential for enforcement action to be invoked in more than one jurisdiction. To deal with this problem a consultation process was included, which noted that Parties should consult to determine where the action will be invoked." *Id*.

[68] *See* Oral Statement of Bruce S. Manheim, Jr., Senior Attorney, Environmental Defense Fund", Before the Subcommittee on Economic Policy, Trade and Environment of the House Committee on Foreign Affairs and the House Committee on Merchant Marine and Fisheries, on Implementing Legislation for the Protocol on Environmental Protection to the Antarctic Treaty *supra*, at p. 10; Testimony of Ambassador David A. Colson, Deputy Assistant Secretary of State for Oceans and Fisheries, Department of State, *Id*., at p. 32; "Testimony of Dr. Cornelius Sullivan, Director, Office of Polar Programs, National Science Foundation", *Id.,*at p. 39; "Written Statement of Bruce S. Manheim, Jr., Senior Attorney, Environmental Defense Fund", *Id.,*at pp. 66-68; "Written Statement of Louis J. Lanzerotti, Distinguished Member of the Technical Staff, AT&T Bell Laboratories, and Chair, Committee on Antarctic Policy and Science Polar Research Board National Research Council National Academy of Sciences on the Committee's Report Science and Stewardship in the Antarctic, *Id*., at p. 95. *See also* "Written Statement of the Antarctica Project, Greenpeace, Friends of the Earth-U.S., The Human Society of the United States, National Wildlife Federation, and Sierra Club", *supra* at pp. 108-110.

[69] *See* Annex VI, Article 10.

[70] *See* Treaty Doc 111-2, *supra* at p. 7.

[71] "*The law of the sea and Antarctica are intimately related*. Appreciation for that relationship and for its international political and policy implications requires assessment of the legal situation of the continent. That is, Antarctica's legal situation remains linked to considerations about sovereignty on the continent and the legal bases for states asserting valid title to territory there. Antarctica today is claimed by seven states (Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom) which base the legitimacy of their pie-shaped sectors on various legal grounds. The precise legal status of these claims to the continent in turn determines whether the claimants may lawfully extend jurisdiction offshore in the form of territorial seas, exclusive economic zones and continental shelf delimitations. Even though these claims to Antarctica exist, it is equally important to realize that they are not recognized by any other states in the international community" (emphasis added). *See* Christopher C. Joyner, "Antarctica and the Law of the Sea", (Martinus Nijhoff Publishers © 1992) at p. 41, at: http://books.google.com/books?id=y6JAr747H60C&pg=PA36&vq=142&dq=antarctic+treaty+%2B+area+beyond+national+jurisdiction&source=gbs_search_r&cad=1_1#PPA41,M1.

[72] "*Some commentators assert that State parties to the 1982 LOS Convention (but not to the Antarctic Treaty) will view the Southern Ocean as having the character of high seas, beyond national jurisdiction. In addition, those States will view the seabed of the Southern Ocean as the common heritage of mankind, subject to the deep seabed mineral regime provided by Part XI of the 1982 LOS Convention…Conversely, Scott Hajost has contended that neither Antarctica, nor the adjacent Antarctic seabed can be considered to be part of the deep seabed 'Area' mentioned in Part XI because there is no consensus that these regions are beyond the limit of national jurisdiction*…In addition, during UNCLOS III negotiations, the President, Hamilton Shirley Amerasinghe of Sri Lanka, even asserted that Antarctica was in no way linked to the Convention…That the possibility of 'reverse creeping jurisdiction' occurring along the Antarctic continental shelf may be but a moot point, simply because no consensus has ever existed on Part XI of Convention" (emphasis added). *Id*., at p. 140, fn 141, *citing* Pinto, "Authority to Manage Resources of the Southern Ocean", p. 36; Scott Hajost, "Authority to Manage Fisheries and Mineral Resources of the Southern Ocean: The Perspective of Non-Claimant Parties to the Antarctic Treaty" *in* Clingan, *Law of the Sea: What Lies Ahead?*, p. 376; UN Doc. A/PV 2380 (1975) p. 16; Francisco Orrego-Vicuna, "Antarctic Mineral Exploitation: The Emerging Framework", (Cambridge Univ. Press © 1988), p. 210. "*To wit, no mention is made in the Antarctic Treaty of either the territorial sea or the continental shelf*. Article VI maintains that the treaty applies to the area south of 60 degrees South latitude, including all ice shelves. However, the article also asserts that *'Nothing in the*

present Treaty shall prejudice or in any way affect the rights, or the exercise of the rights, of any State under international law with regard to the 'high seas' within that area'…In addition, Article IV of the Treaty would prohibit any new claims to territorial sovereignty in Antarctica, or the enlargement of an existing claim, both of which would be implicit in effecting continental shelf delimitation" (emphasis added). *Id*., at p. 140, fn 142.

[73] *See* Marian Wilkinson, "Greenhouse Gas Threatens Ocean Food Chain", The Sydney Morning Herald (March 9, 2009) at: http://www.smh.com.au/environment/global-warming/greenhouse-gas-threatens-ocean-food-chain-20090308-8sgt.html. ("Rising concentrations of acid in the Southern Ocean caused by greenhouse gases are damaging the ability of some sea creatures to form shells, posing a serious threat to marine life, a study by Australian scientists has found…'The potential knock-on effects pose significant implications for the oceanic food chain and the findings are a worrying signal of what we can expect to see elsewhere in the future,' said Dr Howard, whose study was funded by the Federal Government's Department of Climate Change. The study, which is published today in the journal *Nature Geoscience*, compared the shells of microscopic marine animals, called forams, taken from the Southern Ocean with shells from similar animals preserved in sediments dating back to pre-industrial times. The scientists found the modern creatures had shell weights 30 to 35 per cent lower than their pre-industrial forebears. The study has implications for a wide range of sea life whose shells or skeletons could be damaged or deformed by rising acid levels, including krill, the main food source for whales"). *Id*. Green groups had previously rung the alarm bells during 1993 about the risk that mineral exploitation and over-fishing posed to krill. *See* "Written Statement of Bruce S. Manheim, Jr., Senior Attorney, Environmental Defense Fund", Before the Subcommittee on Economic Policy, Trade and Environment of the House Committee on Foreign Affairs and the House Committee on Merchant Marine and Fisheries, on Implementing Legislation for the Protocol on Environmental Protection to the Antarctic Treaty *supra*, at p. 45; "Letter dated August 23, 1993 to Vice President Al Gore from Jim Barnes, International Director, Friends of the Earth, and Beth Marks, Director, the Antarctica Project", and "Remarks of James N. Barnes, 'The Place of Science on an Environmentally Regulated Continent'" *supra*, at pp. 127-128.

[74] *See* "Statement on behalf of the European Union by Prof. Dr. Gerhard Hafner, Austrian Federal Ministry for Foreign Affairs", Ad Hoc Open-ended Informal Working Group of the United Nations General Assembly to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction (2/13/06) (emphasis added) at: http://www.eu-un.europa.eu/articles/en/article_5691_en.htm .

[75] *See* "Statement on behalf of the European Union by Mr. Aleksander Čičerov, Minister Plenipotentiary at the Permanent Mission of Slovenia to the United Nations", United Nations General Assembly Ad-Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, (4/28/08) at: http://www.eu2008.si/en/News_and_Documents/Statements_in_International_Organisations/April/0428UN_Marine_Biological_Diversity.html ; http://newyork.predstavnistvo.si/fileadmin/user_upload/dkp_13_mny/docs/EU_Presidency_Statements/1EU_opening_statement_28.4.08.pdf .

[76] *Id*.

[77] *See* Kristina M. Gjerde, Harm Dotinga, Sharelle Hart, Erik Jaap Molenaar, Rosemary Rayfuse and Robin Warner, *Options for Addressing Regulatory and Governance Gaps in the International Regime for the Conservation and Sustainable Use of Marine Biodiversity in Areas beyond National Jurisdiction*, IUCN Environmental Policy and Law Papers online Marine Series No. 2 (International Union for Conservation of Nature and Natural Resources © 2008) at p. 3, at: http://cmsdata.iucn.org/downloads/iucn_marine_paper_2.pdf .

[78] *Id*., at p. 9 (emphasis added).

[79] *See* Sharelle Hart, Elements of a Possible Implementation Agreement to UNCLOS for the Conservation and Sustainable Use of Marine Biodiversity in Areas beyond National Jurisdiction, IUCN Environmental Policy and Law Papers online Marine Series No. 4 (International Union for Conservation of Nature and Natural Resources © 2008) at p. 5, at: http://cmsdata.iucn.org/downloads/iucn_marine_paper_4.pdf .

[80] *See* J. William Middendorf II and Lawrence A. Kogan, "The 'LOST 45' UN Environmental Restrictions on U.S. Sovereignty", ITSSD JOURNAL ON THE UN LAW OF THE SEA CONVENTION (Sept. 2007), accessible at: http://itssdjournalunclos-lost.blogspot.com/2008/01/itssd-lost-45-un-environmental.html.

[81] The ISBA has been rather active since 1997. They have already completed final environmental regulations and guidelines governing the activities relating to polymetallic nodules and only recently submitted to the ISBA Assembly for consideration draft regulations and guidelines they have worked on to encompass polymetallic ferromanganese sulfides and cobalt-rich crusts. *See* Report of the Secretary-General of the International Seabed Authority under article 166, par. 4, of the United Nations Convention on the Law of the Sea", at p. 4, citing ISBA/4/C/4/Rev.1; *See also* Michael W. Lodge, *The International Seabed Authority's Regulations in Prospecting and Exploration for Polymetallic Nodules in the Area*, THE JOURNAL, VOL. 10, ABSTRACT 2 (Dec. 18, 2001) at 12, http://www.dundee.ac.uk/cepmlp/journal/html/vol10/article10-2.pdf; Decision of the Assembly of the International Seabed Authority Relating to the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, International Seabed Authority Assembly ISBA/6/A/18 (July 20, 2000), http://www.isa.org.jm/files/documents/EN/6Sess/Ass/ISBA-6A-18.pdf; Draft Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area, International Seabed Council ISBA/13/C/WP.1 (March 29, 2007), http://www.isa.org.jm/files/documents/EN/13Sess/Cncl/ISBA-13C-WP1.pdf; Draft Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area, International Seabed Authority Legal and Technical Commission ISBA/13/LTC/WP.1 (May 9, 2007), http://www.isa.org.jm/files/documents/EN/13Sess/LTC/ISBA-13LTC-WP1.pdf; Informal Note on Matters before the 14th Session of the Int'l Seabed Authority (May 26 - June 6, 2008), http://www.isa.org.jm/en/sessions/2008.

[82] UNLCOS Article 145 mandates the International Seabed Authority to "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 [from] the coastline, and of interference with the ecological balance of the marine environment." *See* UNCLOS Article 145(a). Article 145 also specifies that such rules, regulations and procedures must ensure "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." *See* UNCLOS Article 145(b).

[83] *See* IUCN (2004) TEN-YEAR HIGH SEAS MARINE PROTECTED AREA STRATEGY: A Ten-year Strategy to Promote the Development of a Global Representative System of High Seas Marine Protected Area Networks, Executive Summary (Sept. 2003) (emphasis added) at 13, Toolbox 1, http://www.iucn.org/THEMES/MARINE/pdf/10-Year_HSMPA_Strategy_SummaryVersion.pdf.

[84] *Id*., Executive Summary at p. vii.

[85] *Id*. (emphasis added). "It is argued that financial and economic benefits derived from the utilisation of MGR should be shared on an equitable basis rather than kept for the benefit of the few technologically advanced States or entities that are in a position to undertake bioprospecting activities (especially of the deep seabed). A number of States have suggested that a benefit sharing regime for deep-seabed genetic resources could be included in the mandate of the ISA given the symbiotic relationship of the biodiversity with the deep seabed and its mineral resources. If bioprospecting for MGR is considered within the scope of an Implementation Agreement, the interests of developing countries regarding the sharing of financial benefits arising from the exploitation and utilisation of such resources should be considered." *Id*., at p. 16.

[86] *Id*.

[87] *See* "International Regime on Access and Benefit-Sharing", UN Convention on Biological Diversity website at: http://www.cbd.int/abs/regime.shtml.

[88] *See* "Building a Global Partnership on Access and Benefit-Sharing", Press Release, Secretariat of the Convention on Biological Diversity (April 1, 2009) at: http://www.cbd.int/doc/press/2009/pr-2009-04-01-abs-en.pdf.

[89] *See* "General Assembly Resolution 61/222 - Genetic Resources Beyond National Jurisdiction, Marine Biodiversity Working Group Highlights: Wednesday 30 April 2008", Earth Negotiations Bulletin Vol. 25 No. 47 (May 1, 2008) at pp. 1-2, at: http://www.iisd.ca/download/pdf/enb2547e.pdf. *See also* "Summary of the Eighth Meeting of the Open-Ended Informal Consultative Process on Oceans and the Law of the Sea: 25-29 June 2007", Earth Negotiations Bulletin Vol. 25 No. 43 (July 2, 2007) at: http://www.iisd.ca/download/pdf/enb2543e.pdf; "Eighth Meeting of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea: 25-29 June 2007", Earth Negotiations Bulletin Vol. 25 No. 38 (June 25, 2007) at: http://www.iisd.ca/oceans/icp8/compilatione.pdf; United Nations General Assembly Resolution "Oceans and the Law of the Sea" (A/RES/61/222) (March 16, 2007) at: http://www.undemocracy.com/A-RES-61-222.pdf.

[90] *See* "Legal Status of Marine Genetic Resources in Question", BRIDGES TRADE BIORES VOL. 6, NO. 4 (March 3, 2006) http://www.ictsd.org/biores/06-03-03/inbrief.htm.
[91] *Id*.