GLOBAL ENVIRONMENTAL THREATS: CAN THE SECURITY COUNCIL PROTECT OUR EARTH?

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The link between environmental degradation and international security has attracted new attention due to the publication of the United Nations report A More Secure World: Our Shared Responsibility, *authored by the High Level Panel on Threats, Challenges and Change, a group of experts assembled by Kofi Annan and tasked with advising the Security Council about new global threats. The panel specifically focuses on desertification, deforestation, and climate change as urgent global environmental threats possibly requiring Security Council action because of their potential to cause massive loss of life and undermine state functions. The report provokes important questions: If, for example, a nation embarked upon a massive deforestation campaign which upset the ocean currents and threatened to send an entire continent into a deep freeze, would the Security Council be able to take measures against the offending nation to counteract this massive environmental threat? In this Note, Alexandra Knight argues that it is legally justified and legitimate for the Security Council, acting under the provisions of Chapter VII, Article 41 of the United Nations Charter, to impose measures to counter regional or global threats to the environment which pose a grave threat to human life and living conditions. While Chapter VII measures also include the use of force, Knight argues that only Article 41 measures—non-military measures like sanctions or interruption of communications—are appropriate to counter environmental threats.*

INTRODUCTION

Imagine that due to climate change, caused in part by anthropogenic activity, the thermohaline[1] circulation system in the Atlantic

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[1] The word thermohaline is a combination of the words "thermo" (heat) and "haline" (salinity). The thermohaline conveyor refers to the circulation of water in the ocean, sweeping warm tropical water to the poles. The thermohaline circulation is controlled in part by differences in seawater density, which are determined by the temperature and salt content of the water. As the global mean temperature on earth rises, the polar ice sheets will melt, causing an influx of fresh water into the oceans and drastically altering the salinity. Changes in salinity in the oceans could thus affect the operation of the thermohaline circulation in the Atlantic Ocean, which is responsible for making northern

Ocean was on the verge of collapse and that within a decade of the collapse, Europe's climate would resemble Siberia, virtually wiping out all agriculture.[2] Imagine further that this collapse of the thermohaline conveyor would result, with a high degree of scientific certainty, from a massive and widespread campaign by Brazil to defoliate and eradicate the Amazon rainforest. While this scenario is a bit dramatic, it illustrates the fact that environmental degradation poses a direct risk to human security, in terms of the potential for great harm to human life and living conditions.[3] To counter such a threat to global human security, would the Security Council, as the organization established under the United Nations (U.N.) Charter to respond to threats to international peace and security, be able to take action? Would the Security Council be able to prevent Brazil from engaging in such a campaign, thus thwarting the massive human suffering that would result from the collapse of the thermohaline conveyor? I will argue in this Note that Security Council action is both necessary and

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and western Europe warmer in winter than other countries at comparable latitudes. U.N. ENVIRONMENTAL PROGRAM, GEO YEARBOOK 2004/5: AN OVERVIEW OF OUR CHANGING ENVIRONMENT 86–87 (2005) [hereinafter GEO YEARBOOK], *available at* http://www.unep.org/geo/yearbook.

[2] This exact scenario is played out in a recent report commissioned by the U.S. Department of Defense. PETER SCHWARTZ & DOUG RANDALL, AN ABRUPT CLIMATE CHANGE SCENARIO AND ITS IMPLICATIONS FOR UNITED STATES NATIONAL SECURITY 11 (Oct. 2003). Other implications include massive immigration, rising seawaters, an increase in devastating monsoons in Southeast Asia causing extensive flooding that makes much of Bangladesh uninhabitable, an overall decline in crop yields threatening widespread famines, increasing spread of devastating diseases, and severe shortages of water and energy. *Id.* at 12–14. The authors also predict intense violence and disruptions after the carrying capacity of certain regions is exhausted, military conflict over natural resources, and construction of large border defenses by states with unaffected agricultural supplies and natural resources. *Id.* at 14–17.

[3] The concept of human security has been defined in just this manner: "Human security is not a concern with weapons—it is a concern with human life and dignity." U.N. Dev. Programme, *Human Development Report 1994*, at 22 (1994).

In this Note, I use the term environmental threat to refer to the threats posed by environmental change or degradation that directly put human life and living conditions, in other words human security, at risk. I do not address the idea of environmental security, which has been used to refer to the idea that environmental scarcity and degradation can result in violent conflict, which in turn endangers human life. For more information on environmental security, see generally THOMAS F. HOMER-DIXON, ENVIRONMENT, SCARCITY AND VIOLENCE (1999) (focusing on ways environmental stress contributes to violent national and international conflict); Günther Baechler, *Why Environmental Transformation Causes Violence: A Synthesis*, ENVTL. CHANGE & SECURITY PROJECT REP. (Envtl. Change & Sec. Program, Woodrow Wilson Ctr., Washington, D.C.), Spring 1998, at 24–39, *available at* http://www.wilsoncenter.org/topics/pubs/ACF26C.pdf (examining factors that lead to environmentally-caused conflict); Thomas F. Homer-Dixon, *On the Threshold: Environmental Changes as Causes of Acute Conflict*, 16 INT'L SECURITY 76 (1991) (discussing acute conflict as effect of environmental pressures in poor countries).

appropriate as a last resort to counter environmental threats of this magnitude.

While the idea of employing the Security Council to counter environmental threats is not new,[4] the linkage between environmental threats and threats to security has gained credence recently through support from the Secretary-General of the U.N., Kofi Annan. The Secretary-General has urged the Security Council to expand its agenda to include what he calls the "soft threats" of environmental change and degradation:

> [W]hile some consider these threats [terrorism and proliferation of weapons of mass destruction] as self-evidently the main challenge to world peace and security, others feel more immediately menaced by . . . so-called "soft threats" such as the persistence of extreme poverty, the disparity of income between and within societies, and the spread of infectious diseases, or climate change and environmental degradation.
>
> In truth, we do not have to choose. The United Nations must confront all these threats and challenges—new and old, "hard" and "soft."[5]

Annan believes that these types of threats must be addressed through the collective security regime embodied by the Security Council. To this end, in September 2003 the Secretary-General assembled a High Level Panel on Threats, Challenges and Changes (High Level Panel) consisting of experts from various countries who were tasked with studying the Security Council and recommending changes to allow it to better respond to these new threats.[6] In the report *In Larger Freedom* issued by Annan in March 2005, he embraced the broad vision laid out by the High Level Panel in reorienting the collective security regime to face new threats.[7] He also emphasized that environmental degradation poses a threat to security with its potential catastrophic consequences on human life.[8]

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[4] It was first suggested by Nico Schrivjer in *International Organization for Environmental Security*, 20 BULL. OF PEACE PROPOSALS 115, 116 (1989).

[5] Kofi Annan, The Secretary-General Address to the General Assembly (Sept. 23, 2003), *available at* http://www.un.org/webcast/ga/58/statements/sg2eng030923.htm.

[6] The panel assembled by Kofi Annan recently published a report recommending changes to the Security Council so that it is better able to counter a diversity of threats. High Level Panel on Threats, Challenges and Change, *A More Secure World: Our Shared Responsibility*, U.N. GAOR, 59th Sess., U.N. Doc. A/59/565 (Dec. 2, 2004) [hereinafter *Our Shared Responsibility*], *available at* http://www.un.org/secureworld.

[7] The Secretary-General, *Report of the Secretary-General, In Larger Freedom: Towards Development, Security, and Human Rights for All*, ¶ 78, *delivered to the General Assembly*, U.N. Doc. A/59/2005 (Mar. 21, 2005) [hereinafter *In Larger Freedom*].

[8] *Id.*

The link between environmental degradation and security is also being taken seriously by organizations such as the United States Department of Defense,[9] the State Department,[10] the National Security Administration,[11] and NATO.[12] The concept of environmental quality being linked with human health and quality of life is also reflected in decisions by international courts, as exemplified by an advisory opinion of the International Court of Justice (ICJ) stating that "the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn."[13]

In this Note, I will argue that it is both legally justifiable and legitimate for the Security Council, acting under Article 41 of Chapter VII of the U.N. Charter, to impose measures to counter threats to the environment which affect human security. Article 41 measures include, *inter alia*, sanctions; freezing of funds; imposition of travel restrictions on government officials; severance of diplomatic ties; and interruption of communications by air, rail, sea, post, and radio.[14]

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[9] *See* 1995 SEC'Y OF DEF. ANN. REP. pt. 5, *available at* http://www.defenselink.mil/execsec/adr95/envir_5.html ("[E]nvironmental security is now an essential part of the U.S. defense mission and a high priority for DoD."). The Department of Defense also paid for a report detailing the possible security implications of an abrupt change in climate caused by the increased emission of carbon and other greenhouse gases. SCHWARTZ & RANDALL, *supra* note 2.

[10] Former Secretary of State Warren Christopher spoke of this linkage. "Environmental forces transcend borders and oceans to threaten directly the health, prosperity and jobs of American citizens . . . . But we must also contend with the vast new danger posed to our national interests by damage to the environment . . . ." Warren Christopher, American Diplomacy and the Global Environmental Challenges of the 21st Century, Address at Stanford University (Apr. 9, 1996), *reprinted in* JON BARNETT, THE MEANING OF ENVIRONMENTAL SECURITY: ECOLOGICAL POLITICS AND POLICY IN THE NEW SECURITY ERA 84–85 (2001).

[11] *See* THE WHITE HOUSE, A NATIONAL SECURITY STRATEGY FOR THE NEW CENTURY 13 (1999), *available at* http://www.dtic.mil/doctrine/jel/other_pubs/nssr99.pdf ("Environmental threats such as climate change, stratospheric ozone depletion . . . and the transnational movement of hazardous chemicals and waste directly threaten the health and economic well-being of U.S. citizens."). The 2002 National Security Strategy briefly mentioned environmental degradation as a shared threat with China: "Shared health and environmental threats, such as the spread of HIV/AIDS, challenge us to promote jointly the welfare of our citizens." THE WHITE HOUSE, THE NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA 27 (2002), *available at* http://www.whitehouse.gov/nsc/nss.pdf. The Clinton administration also created several high level positions to deal with environmental security. BARNETT, *supra* note 10, at 71–72.

[12] The NATO Committee on the Challenges of Modern Society was formed to address non-traditional threats to modern security that affected the environment of nations and the quality of life of their people. For background information on the Committee on the Challenges of Modern Society, see http://www.nato.int/ccms/info.htm.

[13] Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, 241 (July 8).

[14] U.N. Charter art. 41.

These measures are coercive, in that they are imposed against the will of a state and are legally binding on all states.[15] While under another Chapter VII article, Article 42, the Security Council may use military force, as explained in Part I.A, I will focus exclusively on application of non-military Article 41 measures in this Note.[16]

In Part I, I will examine how the existing international environmental legal regime is insufficient to counter large environmental threats. I will argue that action taken by the Security Council as a last resort could fill in gaps in the current regime, but that the use of military force under Article 42 of the U.N. Charter in providing for environmental security is not appropriate. In Part II, I will examine the threshold requirements for action by the Security Council under Chapter VII of the U.N. Charter and will argue that imposition of Article 41 measures to counter environmental threats is within the competence of the Security Council. In Part III, I will propose a framework for analyzing when Security Council action under Article 41, Chapter VII is legal and legitimate. Under this framework, the threats to the environment which warrant action are only those on a regional or global scale which directly pose a grave threat to human life and living conditions. I will conclude by arguing that the potential for action by the Security Council under Article 41 as a last resort is both legal and necessary to counter massive environmental threats putting our collective human security at risk.

I
WHY SECURITY COUNCIL ACTION MAY BE NEEDED TO COUNTER ENVIRONMENTAL THREATS

Addressing environmental issues which pose a threat to regional or global security must be done collectively through an international legal regime. As one commentator remarks, "[a] nation-state alone is not capable of solving many of the environmental problems that it faces. The sharing of international river water, declining fish catches in the open sea, and increasing air pollution have exposed the hollowness in the authority of an individual state to find solutions."[17]

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15 PETER R. BAEHR & LEON GORDENKER, THE UNITED NATIONS IN THE 1990s 65–66 (1992).

16 Imposition of military force to counter environmental threats would itself impose grave environmental degradation. While some commentators argue for military intervention in response to environmental emergencies, I do not address this option in this Note. See Part I.A for more information on the environmental degradation that military intervention inflicts.

17 Ashok Swain, *Environmental Cooperation in South Asia, in* ENVIRONMENTAL PEACEMAKING 61, 82 (Ken Conca & Geoffrey D. Dabelko eds., 2002).

The international environmental legal regime thus calls for a cooperative multilateral response to shared environmental threats. The Stockholm Declaration, for example, states that "International matters concerning the protection and improvement of the environment should be handled in a cooperative spirit by all countries . . . [and c]ooperation through multilateral or bilateral arrangements or other appropriate means is essential . . . ."[18] Kofi Annan, in his report *In Larger Freedom*, describes an emerging internationally recognized norm of the "responsibility to protect" those people facing threats from forces such as environmental degradation or human rights violations.[19]

In this part, I will first claim in Section A that existing enforcement mechanisms under international law are inadequate to protect against grave environmental threats requiring collective responses. In Section B, I will argue that while the existing means of enforcement should be used as the first recourse to resolve environmental problems, the Security Council could provide a last line of defense against environmental threats. In Section C, I will assert that the use of military force by the Security Council to combat environmental degradation is almost always inappropriate because it is more harmful than beneficial.

The very purpose of the United Nations under the U.N. Charter is to "take effective collective measures for the prevention and removal of threats to the peace."[20] As the Security Council is the organ of the United Nations entrusted with protecting peace and security, it should be made available as a last resort to address grave environmental problems threatening human security.

A. Existing International Means of Enforcement of Environmental Norms

The international legal regime does provide a number of mechanisms for enforcement of environmental norms, including diplomacy, enforcement measures internal to a particular environmental treaty regime, and dispute settlement in international judicial bodies such as the International Court of Justice (ICJ). In this section, I will discuss each of these methods in turn, arguing that the existing regime is inadequate to provide sufficient collective enforcement and protection against large environmental threats.

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[18] Conference on the Human Environment, Stockholm, Swed., June 5–16, 1972, *Declaration of the United Nations Conference on the Human Environment*, principle 24, U.N. Doc. A/CONF.48/14/Rev.1 (June 16, 1972).

[19] *See In Larger Freedom*, *supra* note 7, ¶ 135.

[20] U.N. Charter art. 1, para. 1.

1. *Diplomacy and Negotiation of Environmental Instruments*

Diplomacy, involving the negotiation and execution of international environmental treaties, should be the first measure invoked to resolve environmental threats. Yet relying on diplomacy alone is problematic because the negotiation period for environmental treaties is often very lengthy[21] and it normally takes between two and twelve years for a treaty to come into effect.[22] Indeed, the Kyoto Protocol[23] did not come into force until eight years after it had been opened for signature.[24] There may be some environmental threats that, by virtue of their imminence, simply cannot be countered through the traditional multiple rounds of treaty negotiation. A more flexible and speedy means may be needed to counter environmental threats that pose imminent or irreversible risks to human security.

In addition, the entry into negotiations and binding treaties is entirely voluntary. The high costs of collective action may prevent states from commencing and completing negotiations to address widely dispersed harms that affect many states. States that are facing threats from a powerful neighbor may also lack the diplomatic firepower to initiate discussions and reach agreement regarding negative externalities imposed upon them. More generally, a treaty regime would be ineffective in countering a threat posed by an uncooperative state.

2. *Compliance and Enforcement Regimes in Existing International Environmental Treaties*

A number of international environmental treaties provide their own compliance and enforcement regimes. For example, the 1987 Montreal Protocol,[25] which addresses the manufacturing and trading of ozone-depleting substances, provides that its Implementation Committee may issue cautions or suspend the specific rights and privileges

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21 *See* MOSTAFA K. TOLBA, GLOBAL ENVIRONMENTAL DIPLOMACY 40–41, 178 (1998).

22 *See* PETER MALANCZUK, AKEHURST'S MODERN INTRODUCTION TO INTERNATIONAL LAW 245 (7th rev. ed. 1997). *See generally* MOSTAFA K. TOLBA & IWONA RUMMEL BULSKA, GLOBAL ENVIRONMENTAL DIPLOMACY: NEGOTIATING ENVIRONMENTAL AGREEMENTS FOR THE WORLD, 1973–1992 (1998) (describing and drawing conclusions from authors' personal experience with six international environmental agreements).

23 Conference of the Parties, Framework Convention on Climate Change, Dec. 1–10, 1997, *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, U.N. Doc. FCCC/CP/1997/L.7/Add.1 (Dec. 10, 1997) [hereinafter Kyoto Protocol].

24 *See* Mark Landler, *Mixed Feelings as Kyoto Pact Takes Effect*, N.Y. TIMES, Feb. 16, 2005, at C1 (describing reactions of foreign and domestic industries to Kyoto Protocol plan for reducing carbon emissions).

25 Montreal Protocol on Substances That Deplete the Ozone Layer, Sept. 16, 1987, 1522 U.N.T.S. 3.

provided for under the treaty.[26] The Kyoto Protocol, addressing carbon emissions leading to climate change, provides for internal enforcement mechanisms through establishment of a Facilitative Branch and an Enforcement Branch.[27] The Facilitative Branch provides early warnings of noncompliance and the Enforcement Branch assesses fines in the form of reduced carbon emissions allowances, publicizes the names of countries which are noncompliant, and suspends noncompliant countries from the carbon emissions trading regime created by the treaty.[28] Several other treaty regimes also provide for internal compliance and enforcement measures.[29]

While the existing internal compliance and enforcement regimes would always be the first recourse for resolution of environmental threats covered by those treaties, there exists no general compliance or enforcement regime protecting against environmental threats not addressed by any existing treaty.[30] The existing treaty regimes can also only extend to those states who are parties and thus cannot be brought to bear upon states who fail to join them and who free-ride on the benefits provided by the states in compliance with the regime. Finally, measures provided for in the treaty regime may not be strong enough to force truly recalcitrant states to comply with the regime.[31] The High Level Panel has also noted this enforcement problem with the current "governance structures [tackling] the problems of global

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[26] *See* PHILIPPE SANDS, PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW 206 (2d ed. 2003).

[27] Kyoto Protocol Status of Ratification (Mar. 23, 2005), http://unfccc.int/files/essential_background/kyoto_protocol/application/pdf/kpstats.pdf.

[28] *See* Kyoto Protocol, *supra* note 23, arts. 5–8; SANDS, *supra* note 26, at 207–08.

[29] Other treaties and agreements providing for internal compliance and enforcement measures include: the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, 1673 U.N.T.S. 57 (enforced by COP-5 Dec. V/16, UNEP/CHW.5/29 (Dec. 10, 1999), *available at* http://www.basel.int/meetings/cop/cop5/cop5reportfinal.pdf; the Convention on Long-Range Transboundary Air Pollution, Nov. 13, 1979, 1302 U.N.T.S. 218 (enforced by U.N. ESCOR, Exec. Body for the Convention on LRTAP, 15th Sess., Dec. 1997/2, U.N. Doc. ECE/EB.AIR/53 (Jan. 7, 1998)); and the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, June 25, 1998, 2161 U.N.T.S. 447 (enforced by U.N. ESCOR, Mtg. of the Parties to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 1st Mtg., Dec. I/7, U.N. Doc. ECE/MP.PP/2/Add.8 (Apr. 2, 2004)).

[30] *See* Kenneth F. McCallion & H. Rajan Sharma, *International Resolution of Environmental Disputes and the Bhopal Catastrophe*, *in* INTERNATIONAL INVESTMENTS AND PROTECTION OF THE ENVIRONMENT: THE ROLE OF DISPUTE RESOLUTION MECHANISMS 239, 240–44 (The Int'l Bureau of the Permanent Court of Arbitration ed., 2001).

[31] *See* INSTITUTIONS FOR THE EARTH: SOURCES OF EFFECTIVE INTERNATIONAL ENVIRONMENTAL PROTECTION (Peter Haas et al. eds., 1993) [hereinafter INSTITUTIONS FOR THE EARTH] (describing characteristics of "laggard" states, which fail to sign treaties or to live up to them), *reprinted in* DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 451 (1998).

environmental degradation," stating that "[r]egional and global multilateral treaties on the environment are undermined by inadequate implementation and enforcement by the Member States."[32]

Both free-riding and noncompliance can undermine the effectiveness of the treaty regime as a whole.[33] States may refuse to comply with or refuse to accede to existing treaty regimes either because it is not in their interest to comply, in that they actually benefit from inflicting negative externalities on other states more than they stand to lose from violating or shunning the treaty, or because they have not adequately valued the long-term benefits they would reap from compliance with the regime.[34] States often will not join or comply with a treaty regime unless strong international political pressure is exerted upon them.[35]

3. *Bringing Suit Before the International Court of Justice*

Another avenue for forcing states to comply with environmental treaties or to face liability for inflicting environmental harms is to bring a suit before the International Court of Justice (ICJ). The ICJ has established that a state can be held liable for inflicting environmental harms on another state.[36] Yet there are three limitations to using the ICJ to settle international environmental disputes: lack of

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[32] *Our Shared Responsibility*, *supra* note 6, ¶ 54.

[33] *See* INSTITUTIONS FOR THE EARTH, *supra* note 31, at 452 (arguing that free-riding and noncompliance impair hospitable contractual environment necessary for states to enact credible commitments and follow strategies of reciprocity).

[34] Environmental harm and its impact on the overall economy are notoriously difficult to value because the harms are usually widely dispersed and not easily quantifiable. The benefit of inflicting environmental harm, in the form of increased economic growth, is much easier to value and is usually concentrated in the hands of private investors and government officials. *See* McCallion & Sharma, *supra* note 30, at 242–43.

[35] *See* INSTITUTIONS FOR THE EARTH, *supra* note 31, at 450.

[36] The most famous case finding liability for transboundary environmental harms was *Trail Smelter* (U.S. v. Can.), 3 R.I.A.A. 1905 (1941), finding Canada liable to United States for damages done to land and water in the Columbia River valley by sulphur dioxide emissions from a zinc and lead smelter located in British Columbia, near the border with Washington State. Other cases affirming this right are *Corfu Channel* (U.K. v. Alb.), 1949 I.C.J. 4, 22 (April 9), which reiterated "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States," and the *Lac Lanoux Arbitration* (Spain v. Fr.), 12 R.I.A.A. 281, 316 (1957), which held that with regard to France's plans to divert water from river flowing into Spain, France was entitled to exercise its rights, but it could not ignore Spanish interests.

The advisory opinion in the case *Legality of the Threat or Use of Nuclear Weapons* was the seminal case that affirmed an obligation to refrain from inflicting transboundary harms as being part of the body of customary international law relating to the environment. "The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment." Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, 241–42 (July 8).

standing for harm inflicted upon the global commons, jurisdiction premised on consent of the states involved, and limitations in the remedies available to the ICJ.

The first problem with utilizing the ICJ concerns standing: Global environmental threats cannot be enforced collectively in front of the ICJ because only individual states who suffer particularized harm are able to bring suit.[37] Use of the international courts to enforce against environmental harms is therefore most appropriate and feasible when a single country is harming or has harmed another single country. While the threshold for imposing international liability upon a state is not clearly determined, the bar for acquiring standing before the ICJ is generally thought to be very high.[38] In addition, for harms which are widely dispersed or which are inflicted upon the global commons, the ICJ has not conclusively established that there exists a right, an *actio popularis*, which could be enforced by a state on behalf of the international community as a whole.

The West South Africa case directly held that international law did not allow for the concept of *actio popularis*[39] and several dissenting opinions in the French Nuclear case affirmed that an *actio popularis* did not exist for harms against the global commons, stating that Australia and New Zealand had "no legal title authorizing [them] to act as spokes[persons] for the international community . . . ."[40] While there is some indication that the ICJ may recognize an *actio popularis* for certain *erga omnes* obligations (such as genocide or slavery),[41] there is no firmly established right for individual

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[37] *See* Philippe Sands, *Compliance with International Environmental Obligations: Existing International Legal Arrangements*, *in* IMPROVING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL LAW 55, 58–59 (James Cameron et al. eds., 1996).

[38] *Id.* at 878 ("State practice, decisions of international tribunals and the writings of jurists suggest that environmental damage must be 'significant' or 'substantial' . . . for liability to be triggered.").

[39] South West Africa (Eth. v. S. Afr.; Liber. v. S. Afr.), 1966 I.C.J. 6 (Second Phase of Judgment of July 18) ("[A]lthough a right of this kind [*actio popularis*] may be known to certain municipal legal systems of law, it is not known to international law as it stands at present.").

[40] Nuclear Tests (Austl. v. Fr.), 1974 I.C.J. 253, 390 (Dec. 20) (dissenting opinion of Judge De Castro). A joint dissenting opinion in *Nuclear Tests* allowed that the existence of an *actio popularis* in international law was disputed, but said that the determination of whether standing existed would turn on the "precise character and content of that [international environmental] rule and, in particular, whether it confers a right on every State individually to prosecute a claim to secure respect for the rule." Nuclear Tests (N.Z. v. Fr.), 1974 I.C.J. 457, 521 (Dec. 20) (joint dissenting opinion of Judges Onyeama, Dillard, Jimenez de Arechaga, & Sir Humphrey Waldcock).

[41] *Barcelona Traction* implicitly recognized that an *actio popularis* might lie where an international obligation exists *erga omnes* under international law. Barcelona Traction, Light and Power Co. Ltd. (Belg. v. Spain), 1970 I.C.J. 3, 32 (Feb. 5).

states to enforce environmental rights on behalf of the global community.[42]

The next issue relates to the limits of the jurisdiction of the ICJ. One limitation is that only states may be parties to contentious proceedings before the Court.[43] In addition, the Court will not have jurisdiction *ratione materiae* unless all parties to the dispute have consented to its jurisdiction over the particular class of dispute. Consent can be based upon accession to a special agreement or treaty regime granting jurisdiction to the ICJ for disputes under the treaty or upon an express declaration made by the party to the U.N. agreeing to submit to compulsory jurisdiction of the ICJ. But a state must have made an express declaration for there to be jurisdiction, as the U.N. Charter does not provide for general compulsory jurisdiction of the ICJ over states.[44] Under the so-called "optional clause" of Article 36 of the Statute of the International Court of Justice,[45] states have made reservations to their consent to jurisdiction relating to reciprocity, time, and type of dispute, with the United States claiming in its reservation that its specific consent to jurisdiction is required in each case brought against it.[46] Because jurisdiction is based upon consent, the ICJ potentially could not acquire jurisdiction over an environmental dispute involving an uncooperative or hostile state.[47]

The third difficulty with utilizing the ICJ is that the ICJ can only fashion limited remedies. The first limitation on remedies is that the ICJ would be unable to prevent future environmental harms because it is generally limited to actual breaches of an obligation owed to the injured state.[48] While the ICJ has limited capacity to address future

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[42] Philippe Sands does suggest that particularly egregious violations of environmental obligations relating to the common heritage of mankind or rights protected by treaties might potentially be the basis for an *actio popularis*. SANDS, *supra* note 26, at 189. Yet he cautions that many international organizations have not yet accepted the existence of an *actio popularis* concept and that no cases have successfully relied upon this. *Id.* at 189–90.

[43] MALANCZUK, *supra* note 22, at 282.

[44] U.N. Charter art. 36.

[45] Statute of the International Court of Justice, June 26, 1945, art. 36, ¶ 3, *available at* http://www.icj-cij.org/icjwww/ibasicdocuments/ibasictext/ibasicstatute.htm.

[46] U.N., MULTILATERAL TREATIES DEPOSITED WITH THE SECRETARY-GENERAL: STATUS AS AT 31 DECEMBER 2004, Vol. I, Pt. I, Chs. I to XI, U.N. Doc. ST/LEG/SER.E/23 (2004) (cataloguing U.S. reservations regarding ICJ jurisdiction).

[47] *See* MALANCZUK, *supra* note 22, at 284–86; Charles E. Di Leva, *Trends in International Environmental Law: A Field With Increasing Influence*, 21 ENVTL. L. REP. 10,077, 10,078 (1991) (arguing that principal impediments to utilization of ICJ to resolve environmental disputes are difficult in obtaining jurisdiction over state parties and complicated process of adjudication).

[48] *See* SANDS, *supra* note 26, at 182–87.

threats through its ability to issue advisory opinions[49] and provisional remedies,[50] advisory opinions are nonbinding and provisional remedies can only bind the parties to the dispute. A second problem is that if multiple states are causing harm to the environment, then the ICJ would need to have jurisdiction over all the states in order for the court to issue a judgment that addresses all the relevant sources of environmental pollution. Although the ICJ is not per se prohibited from hearing a case if it might affect the legal interests of a third party, the ICJ has construed the requirement of consent very strictly,[51] declining to rule in one instance where it found that the third party's rights and obligations constituted the real substance of the dispute.[52] A third problem is that unless the state were found to be violating an *erga omnes* norm, the remedy fashioned would be oriented towards eliminating the harm inflicted upon the states bringing the dispute, rather than upon the global commons as a whole.

All three existing mechanisms of enforcement—diplomatic negotiation of treaties, utilizing enforcement mechanisms internal to existing treaties, and bringing suit before the ICJ—are problematic in some respects. In this next Section, I will argue that the Security Council, acting under Article 41, could provide an important last resort to counter environmental threats and fill the gaps in the existing enforcement regime.

B. The Security Council as a Collective Enforcement Organization

The Security Council is well suited to provide a last means of collective defense against environmental threats where other mechanisms have failed or would be ineffective. Secretary-General Kofi Annan reinforced this role for the Security Council, casting it as the organization entrusted with ensuring collective protection of the global commons, and stating that the "charter requires the council to be the defender of the 'common interest.'"[53]

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[49] In the case *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 1996 I.C.J. 226, 241 (July 8), the ICJ ruled on whether the threat or use of nuclear weapons was lawful under international law and concluded that "[t]here exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control." *Id.* at 227.

[50] The ICJ has only issued provisional measures in two environmental disputes, *Nuclear Tests*, (N.Z. v. Fr.), 1973 I.C.J. 99 (Dec. 20), and *Fisheries Jurisdiction*, (U.K. v. Ice.), 1972 I.C.J. 12 (Interim Protection Order of Aug. 17), but has ruled that its interim measures are legally binding on the parties to the dispute. *LaGrand Case* (F.R.G. v. U.S.), 2001 I.C.J. 104 (June 27).

[51] *See* MALANCZUK, *supra* note 22, at 286.

[52] *See* Case Concerning East Timor (Port. v. Austl.), 1995 I.C.J. 90 (June 30).

[53] Kofi Annan, *Two Concepts of Sovereignty*, ECONOMIST, Sept. 18, 1999, at 49, 50.

The Security Council may fulfill a gap-filling role where diplomatic means have been unsuccessful in countering truly serious environmental degradation. While the first means of enforcement—diplomatic negotiation of treaties and agreements—may be lengthy and ultimately ineffective against intractable hold-out states, measures can be imposed by the Security Council very quickly and, if taken under Chapter VII of the U.N. Charter, are binding on all states.[54] The Security Council can thus respond much more effectively against imminent environmental threats where time is of the essence. Because the Security Council carries the full weight of the United Nations behind it, enforcement could be carried out against more powerful states inflicting harms against their weaker neighbors.[55] Thus, where diplomacy has failed, the Security Council could step in and apply coercive measures such as targeted sanctions or suspension of diplomatic ties to force the state back to the negotiating table. The fact that the Security Council had seized upon the issue at all would send a strong message to hold-out states that the international community will not tolerate their continued infliction of environmental degradation. One author suggests that increasing public pressure on a reluctant state could heighten state concern such that the state would accede to or comply with an environmental treaty regime.[56] Indeed, the threat of Security Council action alone may dramatically heighten state concern for environmental problems.[57]

With respect to the second means of enforcement, the binding and severe character of Security Council measures could add teeth to the enforcement regime where the soft measures internal to the environmental treaty regime have failed. Carefully targeted sanctions and the freezing of funds could thus be applied to act as an effective last resort against willful and repeated violators of international environmental law.

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[54] MALANCZUK, *supra* note 22, at 374.

[55] One important caveat to this statement is that enforcement would be very difficult against any of the five permanent members—the United States, Russia, the United Kingdom, France, and China—because of their veto power. *See* U.N. Charter arts. 23 & 27, ¶ 3.

[56] INSTITUTIONS FOR THE EARTH, *supra* note 31, at 452–53. The author gives as an example the United Kingdom changing its policy regarding acid rain and the North Sea after facing public exposure in high-level meetings. *Id.* The author identifies a sufficiently high level of government concern as a fundamental condition for institutional effectiveness of an environmental compliance regime. Because governments have scarce resources, concern must be high enough such that the government is prompted to apply its resources to the problem. *Id.*

[57] *See* INT'L COMM'N ON INTERVENTION AND STATE SOVEREIGNTY (ICISS), THE RESPONSIBILITY TO PROTECT 25 (2001) ("[T]ough threatened direct prevention efforts can be important in eliminating the need to actually resort to coercive measures.").

Security Council action under Article 41 of Chapter VII is also better tailored to addressing many environmental threats than are international courts. While suits petitioning for collective enforcement are difficult to bring before the ICJ because of standing requirements, the General Assembly and the Secretary-General are authorized under the U.N. Charter to bring potential threats to security before the Security Council.[58] The Security Council also has the advantage of being able to fashion ex ante remedies that are binding upon all states, not just the states party to a particular dispute. For example, the Security Council under Article 41 could impose binding sanctions against all states exporting products that are created or extracted using a particular environmentally harmful practice, rather than just the one or more states bringing the issue to the fore. While the ICJ generally requires a showing of particularized harm by the parties to the dispute[59] (except in the case of advisory opinions, as noted above), the Security Council under Chapter VII may address future threats to peace or security.[60] Furthermore, the Security Council can address non-state actors,[61] while only states may be parties in contentious proceedings before the ICJ.[62]

Because the Security Council under Article 41 can impose binding measures with far-reaching impacts, such as sanctions and the freezing of funds, allowing the Security Council to take action against environmental threats could also create a deterrent effect. Countries who continually impose negative externalities on a regional or global scale might be induced to reform their practices, come to the negotiating table, or abide by existing treaties if the specter of the Security Council's enforcement power were looming overhead. Countries would be put on notice that they cannot escape environmental liability by remaining outside international treaty regimes.

Allowing for Security Council action for environmental threats may also bring environmental problems to the fore of world security issues. Treating these threats as a security issue could impress upon the world the gravity of environmental threats and the need to deal with the threats through a collective regime. Because countries tend

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[58] U.N. Charter arts. 11 (General Assembly), 99 (Secretary-General).

[59] *See* Gabcíkovo-Nagymaros Project (Hung. v. Slovk.), 1997 I.C.J. 7, 42 (Sept. 25) (rejecting Hungary's use of precautionary principle to try to nullify contract with Slovakia for building of dam and stating that "serious though these uncertainties might have been they could not, alone, establish the objective existence of a 'peril'. . . . [An] 'extremely grave and imminent' peril must 'have been a threat to the interest at the actual time.'") (citations omitted).

[60] U.N. Charter art. 39.

[61] *See infra* notes 122–25 and accompanying text.

[62] MALANCZUK, *supra* note 22, at 282.

to spend more money on issues they perceive as security issues, rather than social issues, raising the status of environmental problems to security threats could also potentially mean more money allocated to existing treaty regimes to cover monitoring and compliance costs.[63]

C. *Why Military Measures Are Not Appropriate to Counter Environmental Threats*

While Chapter VII Article 42 empowers the Security Council to use military measures, use of military force to counter environmental threats is inappropriate and counterproductive. It is inimical to the spirit of international environmental law, because as stated in the Rio Declaration, "[w]arfare is inherently destructive of sustainable development"[64] and "[p]eace, development and environmental protection are interdependent and indivisible."[65] The spirit of cooperation embodied by international environmental law and the obligation in the Stockholm and Rio Declarations[66] to resolve environmental disputes peacefully limit the application of Chapter VII measures by the Security Council to the Article 41 measures of sanctions, severing of diplomatic ties, freezing of funds, and interruption of communications. Having recourse to military measures under Article 42 would clearly undermine the principles of international environmental law.

A balancing of the harms of different forms of intervention to counter environmental threats will rarely favor military intervention, if it suggests intervention at all. Military intervention can degrade land, pollute water systems through use of toxic chemicals, and increase carbon emissions.[67] The military itself is therefore a major source of pollution. One author estimates that the United States military is responsible for ten percent of the total carbon emissions in the United States and that one quarter of the jet fuel consumed globally is used by air forces.[68]

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[63] *See* Wenche Hauge & Tanja Ellingsen, *Causal Pathways to Conflict*, *in* ENVIRONMENTAL CONFLICT 36, 37 (Paul F. Diehl & Nils P. Gleditsch eds., 2001) (arguing that environmental security movement sought to raise status of and money accorded to environmental threats by linking them to security).

[64] Conference on Environment and Development, June 3–14, 1992, *Rio Declaration on Environment and Development*, princ. 24, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I) (1992) [hereinafter Rio Declaration].

[65] *Id.* princ. 25.

[66] *See supra* note 18 and accompanying text.

[67] *See id.* The United Nations Environmental Program's Report on environmental degradation in the former Yugoslavia reveals the intense environmental pressure that warfare inflicts. United Nations Environment Programme & United Nations Centre for Human Settlements (Habitat), The Kosovo Conflict: Consequences for the Environment and Human Settlements (1999), *available at* http://www.grid.unep.ch/btf/final/finalreport.pdf.

[68] *See* BARNETT, *supra* note 10, at 95.

Because global environmental protection and military action are incompatible, I limit myself in this Note to discussing Security Council intervention employing non-military coercive measures under Article 41.

Allowing for the Security Council to impose Article 41 measures as a last resort against states inflicting or threatening to inflict serious environmental degradation would help remedy the problems with existing means of enforcement and provide an important last defense against grave environmental threats. Yet the Security Council must have both the competence to consider matters relating to environmental protection and the ability to take action under Chapter VII to counter a particular instance of an environmental threat. In this next Part, I will address both of these questions.

II
CAN THE SECURITY COUNCIL TAKE ACTION UNDER CHAPTER VII AGAINST AN ENVIRONMENTAL THREAT?

In this Part, I will argue first that environmental threats are within the general competences[69] of the Security Council and, second, that the Security Council would be able to take action under Chapter VII to counter a grave threat to the environment.[70]

A. Whether Environmental Threats Are Within the Competences of the Security Council

Despite the fact that environmental matters were originally thought to be outside the competences of the Security Council, the

[69] If an issue is not a legitimate threat to security, as implied by the object and purposes of the U.N. Charter, some ICJ decisions have suggested that it would then be considered outside of the competences (power) of the Security Council, and any Security Council action taken on the issue would be deemed illegitimate. *See infra* notes 101–02. *But see* Concerning Questions of Interpretation and Application of the 1971 Montreal Convention Arising from the Aerial Incident at Lockerbie (Libyan Arab Jamahiraya v. U.K.) 1992 I.C.J. 3, 142 (Apr. 14) (separate opinion of Shahabuddeen) (questioning whether there is any body capable of imposing limitation on power of Security Council to determine whether matter is within its competences); Reparation for Injuries Suffered in the Service of the United Nations, Advisory Opinion, 1949 I.C.J. 174, 182 (Apr. 11) ("Under international law, the Organization must be deemed to have those powers which, though not expressly provided in the Charter, are conferred upon it by necessary implication as being essential to the performance of its duties.").

[70] While some commentators believe that Security Council discretion is unlimited with respect to determining what is within its own competence so long as it is a legitimate threat to security, *see* THOMAS M. FRANCK, RECOURSE TO FORCE 6 (2002), I address these as two separate issues because any Security Council action with respect to the environment is likely to raise questions about the Security Council acting outside of its competences, as limited by the overall structure and purpose of the U.N. Charter.

post-Cold War period has seen an incredible expansion in the range and types of issues considered by the Security Council. The Security Council recognized that environmental and social conflicts could constitute threats to international peace and security in a summit declaration in 1992.[71]

The absence of war and military conflicts amongst states does not in itself ensure international peace and security. The non-military sources of instability in the economic, social, humanitarian and ecological fields have become threats to peace and security. The United Nations membership as a whole needs to give the highest priority to the solution of these matters.[72]

In the past five years, the Security Council has passed a wide array of resolutions dealing with issues outside its traditional realm of inter-state violence, including terrorism,[73] humanitarian intervention and relief,[74] certification schemes for diamonds to ensure that they do not originate from conflict areas,[75] children and armed conflict,[76] conditions in refugee camps,[77] women and girls and armed conflict,[78] the social causes of armed conflict,[79] the extradition of two terrorists

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[71] *See generally* The Secretary-General, *An Agenda for Peace: Preventive Diplomacy, Peacemaking and Peace-keeping*, U.N. Doc. S/24111, A/47/277 (June 17, 1992) (identifying environmental damage as new stability risk); U.N. Sec. Council, *Statement by the President*, U.N. Doc. A/47/253 (Jan. 31, 1992) (recognizing ecological instability as security threat).

[72] *Security Council Summit Declaration: 'New Risks for Stability and Security,'* N.Y. TIMES, Feb. 1, 1992, at A4 (reprinting text of Security Council meeting).

[73] *See, e.g.*, S.C. Res. 1465, U.N. SCOR, 58th Sess., 4706th mtg., U.N. Doc. S/RES/1465 (Feb. 13, 2003) (condemning bomb attack in Colombia).

[74] *See, e.g.*, S.C. Res. 1574, U.N. SCOR, 59th Sess., 5082d mtg., U.N. Doc. S/RES/1574 (Nov. 19, 2004) (condemning violence and violations of human rights in Sudan); S.C. Res. 1436, U.N. SCOR, 57th Sess., 4615th mtg., U.N. Doc. S/RES/1436 (Dec. 24, 2002) (expressing support for United Nations mission and Special Court in Sierra Leone, and Truth and Reconciliation Commission).

[75] *See* S.C. Res. 1459, U.N. SCOR, 58th Sess., 4694th mtg., U.N. Doc. S/RES/1459 (Jan. 28, 2003) (approving Kimberley Process Certification Scheme to reduce trade in diamonds fueling conflict in Sierra Leone).

[76] *See* S.C. Res. 1460, U.N. SCOR, 58th Sess., 4695th mtg., U.N. Doc. S/RES/1460 (Jan. 30, 2003) (highlighting impact of armed conflict on children).

[77] *See, e.g.*, S.C. Res. 1208, U.N. SCOR, 53d Sess., 3945th mtg., U.N. Doc. S/RES/1208 (Nov. 19, 1998) (addressing humanitarian concerns about security, social, and living conditions in African refugee camps).

[78] *See, e.g.*, S.C. Res. 1539, U.N. SCOR, 59th Sess., 4948th mtg., U.N. Doc. S/RES/1539 (Apr. 22, 2004) (expressing concern about sexual abuse of women and girls in conflict and encouraging implementation of HIV education and HIV testing for U.N. personnel); S.C. Res. 1325, U.N. SCOR, 55th Sess., 4213th mtg., U.N. Doc. S/RES/1325 (Oct. 31, 2000) (considering impact of armed conflict on women and girls).

[79] *See* S.C. Res. 1318, U.N. SCOR, 55th Sess., 4194th mtg., U.N. Doc. S/RES/1318 (Sept. 7, 2000) ("[s]trongly encourages the development within the United Nations system and more widely of comprehensive and integrated strategies to address the root causes of conflicts, including their economic and social dimensions").

thought responsible for the Lockerbie bombing,[80] and the HIV/AIDS epidemic.[81] This new "activist" Security Council[82] has clearly shown an increased willingness to deal with areas once thought to be outside the realm of traditional security concerns.

The Security Council has specifically discussed environmental threats on at least one occasion: the environmental damage caused by Saddam Hussein's burning of the Kuwaiti oil wells.[83] The Security Council has also acted to curtail the exploitation of natural resources where the natural resources were being used to fund destructive wars.[84] Support for considering environmental threats within the competence of the Security Council comes from academic commentators,[85] as well as from the Secretary-General[86] and the High Level

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[80] *See* S.C. Res. 748, U.N. SCOR, 47th Sess., 3063d mtg., U.N. Doc. S/RES/748 (Mar. 31, 1992) (imposing sanctions based on Libya's noncompliance with S.C. Res. 731, U.N. SCOR, 47th Sess., 3033d mtg., U.N. Doc. S/RES/731 (Jan. 21, 1992), which urged Libya to respond immediately to requests from France, United Kingdom, United States and Ireland to extradite terrorists responsible for Lockerbie bombing).

[81] *See* S.C. Res. 1308, U.N. SCOR, 55th Sess., 4172d mtg., U.N. Doc. S/RES/1308 (July 17 2000) ("[s]tressing that the HIV/AIDS pandemic, if unchecked, may pose a risk to stability and security").

[82] *See* DAVID SCHWEIGMAN, THE AUTHORITY OF THE SECURITY COUNCIL UNDER CHAPTER VII OF THE UN CHARTER: LEGAL LIMITS AND THE ROLE OF THE INTERNATIONAL COURT OF JUSTICE 3 (2001) (discussing "activism exhibited by the Council"). After the end of the Cold War, the average number of resolutions passed in a year went from fifteen to sixty, and ninety-three percent (247 of 267) of all Chapter VII resolutions of the Council were passed between 1990 and 2002. Peter Wallensteen & Patrik Johansson, *Security Council Decisions in Perspective*, *in* THE UN SECURITY COUNCIL: FROM THE COLD WAR TO THE 21ST CENTURY 17, 18–19 (David M. Malone ed., 2004) [hereinafter THE UN SECURITY COUNCIL]. The Security Council was also much more willing to impose sanctions; beginning in the 1990s, the Council increasingly imposed targeted sanctions to counter aggression, restore democracy, protect human rights, punish a country for violating U.N. mandates, and bring terrorists to justice. DAVID CORTRIGHT & GEORGE A. LOPEZ, SANCTIONS AND THE SEARCH FOR SECURITY: CHALLENGES TO UN ACTION, 202–03 (2002).

[83] The Security Council imposed liability on Iraq for the damage, stating that Iraq "is liable under international law for any direct loss, damage—including environmental damage and the depletion of natural resources . . . as a result of its unlawful invasion and occupation of Kuwait." S.C. Res. 687 ¶ 16, U.N. SCOR, 46th Sess., 2981st mtg., U.N. Doc. S/RES/687 (Apr. 3, 1991).

[84] S.C. Res. 1376, ¶ 8, U.N. SCOR, 56th Sess., 4412th mtg., U.N. Doc. S/RES/1376 (Nov. 9, 2001) ("[The Security Council r]eiterates its condemnation of all illegal exploitation of the natural resources[,] . . . demands that such exploitation cease and stresses that the natural resources of the Democratic Republic of the Congo should not be exploited to finance the conflict in that country.").

[85] *See, e.g.*, Linda A. Malone, *"Green Helmets": A Conceptual Framework for Security Council Authority in Environmental Emergencies*, 17 MICH. J. INT'L L. 515, 536 (1996) (arguing that Security Council should consider addressing environmental disasters despite potential norm-creation problems); Alexandre S. Timoshenko, *Ecological Security: Response to Global Challenges*, *in* ENVIRONMENTAL CHANGE AND INTERNATIONAL LAW: NEW CHALLENGES AND DIMENSIONS 413, 418 (Edith B. Weiss ed., 1992) (arguing that

Panel.[87] There are thus strong arguments that consideration of environmental threats would be within the competences of the Security Council.

Although environmental threats may be within the Security Council's purview, I next discuss whether the Security Council may actually take action against those threats.

B. *Whether the Security Council Could Take Action Under Chapter VII to Counter Environmental Threats*

Whether the Security Council is able to take action against a threat under Chapter VII is contingent upon a determination under Article 39 of the U.N. Charter that the threat constitutes a "threat to the peace, breach of the peace, or act of aggression" such that measures "shall be taken . . . to maintain or restore international peace and security."[88] Because action under Chapter VII involves application of coercive force against states (sanctions or other non-military measures under Article 41 and military force under Article 42), the Security Council must determine that a threat meet the two conditions imposed by Article 39 prior to taking Chapter VII action.

The first limiting factor on action under Chapter VII is that the threat must have an international dimension so that measures are taken to "maintain or restore international peace and security."[89] The principle that the Security Council should not intervene in purely domestic matters is echoed also in Article 2 of the U.N. Charter, which states "[n]othing contained in the present Charter shall authorize the United Nations to intervene in matters which are essentially within the domestic jurisdiction of any state."[90] Because of this limiting principle, the Security Council often has taken pains to highlight the international ramifications of the situation, even when the event seems to have purely domestic consequences.[91]

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global ecological concerns deserve serious legal and political consideration as international security issues).

[86] *See supra* note 5 and accompanying text.

[87] *See Our Shared Responsibility*, *supra* note 6, at 26.

[88] U.N. Charter art. 39.

[89] *Id.* Although a determination under Article 39 is not explicitly required by the text of Articles 41 or 42, one commentator has remarked that this practice "by now amounts to an authoritative interpretation of chapter VII to the effect that an Article 39 determination must be made in advance of, or at the time of, enforcement action." Frederic L. Kirgis, Jr., *The Security Council's First Fifty Years*, 89 AM. J. INT'L L. 506, 512 (1995).

[90] U.N. Charter art. 2, para. 7.

[91] In justifying intervention to stop Saddam Hussein's repression of the civilian Kurds inside Iraq, the Council highlighted the "massive flow of refugees towards and across international frontiers" and the "cross-border incursions" which "threaten international peace

While the U.N. Charter contains explicit norms of nonintervention in purely domestic matters, many commentators have postulated that the expansion in the number, range, and depth of international instruments has eroded the concept of states having absolute sovereignty and dominion over domestic affairs.[92] Many academics have argued that we are moving instead to an international system increasingly populated by non-state actors—transnational corporations, nongovernmental organizations, international organizations, and individuals—such that the individual or non-state actor should be granted rights in the international legal order.[93] The norm of nonintervention laid out in Articles 2(4) and 2(7) has been balanced against and limited by the commitment in the U.N. Charter in the preamble and in Articles 1(3), 55, and 56 to promote respect for human rights and fundamental freedoms.[94] The actual practice of the Security Council, as

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and security in the region." S.C. Res. 688, pmbl., U.N. SCOR, 46th Sess., 2982d mtg., U.N. Doc. S/RES/688 (Apr. 5, 1991).

To support intervention into the domestic political turmoil of Haiti following a military coup, the Security Council used the "de facto regime of systematic violations of civil liberties" and the "desperate plight of Haitian refugees" as justification that the situation constituted a threat to regional peace and security. S.C. Res. 940, pmbl., U.N. SCOR, 49th Sess., 3413d mtg., U.N. Doc. S/RES/940 (July 31, 1994). In Somalia, the Security Council seemed to highlight the gross violations of human rights and the obstruction to international aid as reasons for the intervention, but appeared to present no concrete international ramifications. Yet the Security Council was careful to emphasize the "unique character" and "extraordinary nature" of the situation which demanded an "exceptional response." S.C. Res. 794, pmbl., U.N. SCOR, 47th Sess., 3145th mtg., U.N. Doc. S/RES/794 (1992).

92 *See* FRANCK, *supra* note 70, at 40–44.

93 *See id.* at 43 (discussing "gradual attrition, in U.N. practice, of states' monopoly over matters of 'domestic jurisdiction' "); Gene M. Lyons & Michael Mastanduno, *Introduction: International Intervention, State Sovereignty, and the Future of International Society*, *in* BEYOND WESTPHALIA: STATE SOVEREIGNTY AND INTERNATIONAL INTERVENTION 3 (Gene M. Lyons & Michael Mastanduno eds., 1995) (asking whether we are witnessing emergence of right to intervene in domestic affairs of member states in name of community norms, values, or interests); Mark W. Zacher, *The Decaying Pillars of the Westphalian Temple: Implications for International Order and Governance*, *in* GOVERNANCE WITHOUT GOVERNMENT: ORDER AND CHANGE IN WORLD POLITICS 58, 60 (James N. Rosenau & Ernst-Otto Czempiel eds., 1992) (finding that state sovereignty is increasingly giving way to network of interdependencies and regulatory arrangements).

Kofi Annan commented on this transformation of the concept of sovereignty, stating that "State sovereignty, in its most basic sense, is being redefined . . . by the forces of globalisation and international co-operation." Annan, *supra* note 53, at 49.

94 U.N. Charter pmbl. ("to reaffirm faith in fundamental human rights, in the dignity and worth of the human person"), art. 1, para. 3 ("to achieve international co-operation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms"), art. 55 ("the United Nations shall promote . . . universal respect for, and observance of, human rights and fundamental freedoms for all"), and art. 56 ("All Members pledge themselves to take joint and separate action in co-operation with the Organization for the achievement of the purposes set forth in Article 55.").

noted above, has also reflected this erosion of sovereignty through Security Council intervention into what arguably were purely domestic crises.

Yet it is not as clear whether this erosion of sovereignty would extend past purely humanitarian intervention to support intervention to counter environmental threats. Although the erosion of sovereignty has occurred in the environmental realm through the proliferation of environmental treaties on both a global and regional level,[95] the Security Council has still held true to the idea that sovereignty allows governments to freely exploit their natural resources as long as they do not harm other states.[96] In short, the principles of nonintervention would likely defeat a push to counter purely domestic environmental threats.

The boundaries of the second limiting factor—that a threat exists to peace and security—are more difficult to delineate, since the definition of what exactly constitutes a threat to the peace was intentionally left open, with wide discretion afforded to the Council.[97] One international legal scholar even goes so far as to say that "a threat to the peace in the sense of Article 39 seems to be whatever the Security Council says is a threat to the peace, which is a political decision . . .

Many advocates of humanitarian intervention have commented on the shift in balance in favor of human rights over the principle of non-intervention. *See* SYDNEY D. BAILEY, THE UN SECURITY COUNCIL AND HUMAN RIGHTS 123 (1994) ("[O]ver the decades, the Security Council and other U.N. organs have come to see that matters of domestic jurisdiction must be understood in the light of other principles of the Charter, and in particular the commitment of U.N. Members to promote respect for human rights and fundamental freedoms."); Jarat Chopra, *The Obsolescence of Intervention Under International Law*, *in* SUBDUING SOVEREIGNTY: SOVEREIGNTY AND THE RIGHT TO INTERVENE 33, 56 (Marianna Heiberg ed., 1992) ("The general prohibition on the use of force, the growth of a human rights regime and prospects of environmental protection overshadow territorial limits to the application of law.").

95 *See* Chopra, *supra* note 94, at 26 (1992) ("The general prohibition on the use of force, the growth of a human rights regime and prospects of environmental protection overshadow territorial limits to application of law."); Fernand Keuleneer, *Environmentalism, the Transformation of International Law, and the Pursuit of Political Objectives*, *in* THE GREENING OF US FOREIGN POLICY 31, 32 (Terry L. Anderson & Henry I. Miller eds., 2000) ("[L]aw is increasingly replaced by rights, States by networks, and elected officials by judges and appointed NGO-experts, often operating in a system of autoreference.").

96 S.C. Res. 1376, U.N. SCOR, 56th Sess., 4412th mtg., U.N. Doc. S/RES/1376 (Sep. 11, 2001) ("reaffirming also the political independence, the territorial integrity and the sovereignty of the Democratic Republic of the Congo, including over its natural resources").

97 David Schweigman points to the original intentions of the drafters to leave the decision to the Council, citing from the United Nations Conference on International Organization, where it was decided "to leave to the Council the entire decision, and also the entire responsibility for that decision, as to what constitutes a threat to the peace, a breach of the peace, or an act of aggression." SCHWEIGMAN, *supra* note 82, at 34.

not easily subject to legal interpretation."[98] While commentators agree that the Security Council generally has wide discretion in this essentially fact-based determination,[99] many have suggested that the determination is limited by the object and purposes of the Charter, as well as the principle of good faith.[100] The International Criminal Tribunal for the Former Yugoslavia ruled that any determination under Article 39 must be within the limits of the purposes and principles of the Charter[101] and dissenting judges on the ICJ in the *South West Africa Case* stated that the Council must discern a real threat to security before it can become involved in the matter.[102] In order for the Security Council to counter an environmental threat, some actual linkage to a threat to human security would have to be asserted for the action to remain within the object and purposes of the U.N. Charter.[103]

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98 *See* MALANCZUK, *supra* note 22, at 426.

99 *See* Bardo Fassbender, Review Essay: Quis Judicabit? *The Security Council, Its Powers and Its Legal Control*, 11 EUR. J. INT'L L. 219, 222 (2000) (commenting that Stein acknowledges "wide discretionary powers of the Security Council in assessing a factual situation with regard to its potential impact on international peace and security") (translating quotation from ANDREAS STEIN, DER SICHERHEITSRAT DER VEREINTEN NATIONEN UND DIE RULE OF LAW: AUSLEGUNG UND RECHTSFORTBILDUNG DES BEGRIFFS DER FRIEDENSBEDROHUNG BEI HUMANITÄREN INTERVENTIONEN AUF DER GRUNDLAGE DES KAPITELS VII DER CHARTA DER VEREINTEN NATIONEN 393 (1999)); Malcolm N. Shaw, *The Security Council and the International Court of Justice: Judicial Drift and Judicial Function*, *in* THE INTERNATIONAL COURT OF JUSTICE: ITS FUTURE ROLE AFTER FIFTY YEARS 219, 226 (A.S. Muller et al. eds., 1997) (noting that Council has "wide discretion to exercise its judgment as to whether an Article 39 situation exists").

100 In his essay reviewing several international scholars' views of what is legal under Article 39, Bardo Fassbender quotes Michael Frass as stating that "The Security Council's discretion is limited by the principle of good faith, the sovereignty of member states, the principle of proportionality, the fundamental human rights and *jus cogens*." Fassbender, *supra* note 99, at 222 (translating quotation from MICHAEL FRAAS, SICHERHEITSRAT DER VEREINTEN NATIONEN UND INTERNATIONALER GERICHTSHOF 256 (1998)).

101 Appeals Chamber Decision on the Tadic Jurisdictional Motion, Prosecutor v. Dusko Tadic, Case No. IT-94-1-AR72, Oct. 2, 1995, ¶ 29 ("[T]he determination that there exists such a threat is not a totally unfettered discretion, as it has to remain, at the very least, within the limits of the Purposes and Principles of the Charter.").

102 Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) Notwithstanding Security Council Resolution 276 (1970), 1971 I.C.J. 16, 293 (June 21) ("To assert that a matter may have a distant repercussion on the maintenance of peace is not enough to turn the Security Council into a world government."); *id.* at 340 ("[T]he Security Council can act in the preservation of peace and security, provided the treaty said to be involved is not a mere figment or pretext.").

103 While I argue that some link to human security would have to be shown, Jochen Herbst contends that a mere breach of an international environmental obligation of "essential importance" may qualify as a threat to the peace. Bardo Fassbender notes:

> This discretion remains, however, contingent on and thus limited by the purposes and principles of the U.N. Charter . . . . A threat to the peace may also result from a breach of an international obligation of essential importance for

Environmental degradation taking place in the context of armed conflict, such as Iraq's burning of the Kuwaiti oil wells,[104] would clearly qualify for Security Council action under Chapter VII. Environmental threats outside the context of armed conflict, however, would have to impose large risks on human life or living conditions in order to truly constitute a threat to peace and security.[105] Kofi Annan has urged adoption of a consistent analytical approach for determining when intervention under Chapter VII is justified.[106] In Part III, I propose a framework that could be employed to determine when environmental threats become a threat to international peace and security such that intervention under Article 41 is both in accordance with the objects and purposes of the Charter and in good faith.

III
AN ANALYTICAL FRAMEWORK FOR DETERMINING WHEN APPLICATION OF ARTICLE 41 MEASURES IS APPROPRIATE AND LEGAL

In this Section, I will explore when an environmental threat becomes a sufficient threat to international peace and security to justify the use of Article 41 enforcement measures. Because the past practice of the Security Council provides very little guidance in determining when imposition of Article 41 measures is appropriate, I propose that the Security Council should use an adapted version of the

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the safeguarding and preservation of the human environment, or from the international trade in drugs.

Fassbender, *supra* note 99, at 222 (translating quotation from JOCHEN HERBST, RECHTSKONTROLLE DES UN-SICHERHEITSRATES 416 (1999)).

104 *See* S.C. Res. 687, ¶ 16, U.N. SCOR, 46th Sess., 2981st mtg., U.N. Doc. S/RES/687 (Apr. 3, 1991) (holding Iraq liable for all "environmental damage . . . as a result of its unlawful invasion and occupation of Kuwait").

105 Martin Lailach claims that the concept of international peace and security in the Charter "comprises the absence of international armed conflicts and of large-scale, man-made human suffering." Fassbender, *supra* note 99, at 222 (translating quotation from MARTIN LAILACH, DIE WAHRUNG DES WELTFRIEDENS UND DER INTERNATIONALEN SICHERHEIT ALS AUFGABE DES SICHERHEITSRATES DER VEREINTEN NATIONEN 307 (1998)). In defining what constitutes large-scale, man-made suffering, Lailach describes it as occurring in cases of "acts of genocide, torture, slavery, systematic rape of women, massive discrimination for racial or other reasons, 'ethnic cleansing' or other instances of expulsion, the obstruction of humanitarian assistance, and acts of a similar nature." *Id.* Lailach believes that international peace is breached "when the cases are not of a solitary, but numerous and massive, systematic nature." *Id.*

106 Kofi Annan constituted the High Level Panel partly to create such an analytical framework. *See supra* note 6 and accompanying text. He criticizes the lack of such a framework, stating that "we have also learnt that, if it is to enjoy the sustained support of the world's peoples, intervention must be based on legitimate and universal principles." Annan, *supra* note 53, at 49.

analytic framework recommended by the High Level Panel to determine when intervention under Chapter VII is legal and legitimate.[107]

I have used the High Level Panel's criteria as the starting point because this framework for intervention is the work of experts representing a cross-section of the international community. Annan's explicit approval of the panel report in *In Larger Freedom* also makes the choice of the Panel's framework as a starting point logical.[108] While the High Level Panel's criteria are targeted at the use of military force under Article 42, I will adopt the criteria to the use of nonmilitary measures under Article 41. Article 41 measures include sanctions, severing of diplomatic ties, interruption of means of communication, and freezing of funds, among others.[109] As mentioned previously, I believe that use of military force to counter environmental threats would be justified in only extremely rare scenarios and therefore do not address it further in this Note.[110]

The adoption of a transparent framework would cabin the Security Council's discretion in determining when intervention is necessary.[111] But like the High Level Panel, I do not claim that use of my framework "will . . . produce agreed conclusions with push-button predictability."[112] Rather, it could force the reasoned and open consideration of the issues in a way that could potentially "improve the chances of reaching international consensus," increase transparency of decisionmaking procedures, and check the possibility of one state manipulating the intervention regime for self-interested motives.[113] As in the context of humanitarian intervention, there will rarely be complete consensus as to when a situation requires intervention, but at least there could be consensus on the procedure and analysis required to reach a decision.

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107 *Our Shared Responsibility*, *supra* note 6, ¶ 207.

108 *In Larger Freedom*, *supra* note 7, ¶ 77.

109 U.N. Charter art. 41.

110 Those who argue for allowing the imposition of Article 42 measures do so only in the event of true environmental emergencies resulting in grave catastrophe, such as large thermonuclear explosions. *See supra* note 16 and accompanying text.

111 The High Level Panel terms their criteria "criteria of legitimacy." *Our Shared Responsibility*, *supra* note 6, ¶ 207. The High Level Panel explains how adoption of the framework will contribute to legitimacy, stating that the purpose of the framework is "to maximize the possibility of achieving Security Council consensus around when it is appropriate or not to use coercive action, including armed force; to maximize international support for whatever the Security Council decides; and to minimize the possibility of individual Member States bypassing the Security Council." *Id.* ¶ 206.

112 *Id.* ¶ 206.

113 *See id.* at 61.

The five criteria proffered by the Panel are:[114] first, whether the seriousness of the threat was of a kind that could represent harm to State or human security and was sufficiently clear and serious to justify prima facie the use of military force; second, whether the actual and clear purpose of the proposed military action was to halt or avert the threat; third, whether every non-military option had been reasonably exhausted; fourth, whether the proposed use of force, measured in terms of scale, duration, and intensity, was not only proportional, but also represented the minimum necessary to achieve the purpose; and fifth, whether, after balancing the consequences, there was a reasonable chance of the military action against the threat being successful and the consequences of action were not likely to be worse than the consequences of inaction. The adapted framework I describe in this Section will allow the Security Council to determine when an environmental threat becomes a threat to international peace and security such that imposition of Article 41 measures is both legal and justified.

A. Assessing the Magnitude of the Harm

The first criterion in my adapted analytical framework involves assessing the magnitude of harm. The link between the environment and security is premised on the fact that major environmental degradation can impact human health and living conditions on a massive scale. Therefore, the reference point for assessing the magnitude of the environmental threat and the risk of the threat occurring should always be human health and living conditions.[115] Many commentators have argued that the magnitude of harm necessary to trigger a human-

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[114] *Id.* ¶ 207(a)–(e).

[115] Note that this is a different threshold from what triggers liability for environmental damage under international law. I argue that the standard for Security Council intervention should be based instead on the potential harm to human health and living conditions. Liability under international law for environmental damage is not predicated on risk to human health and living conditions, but rather the extent of damage (whether financial, environmental, or otherwise) done to a state's legal interest. The threshold of liability under international case law is variously described as harm that entails a "serious consequence," Trail Smelter (U.S. v. Can.), 3 R.I.A.A. 1905, 1965 (1941), or "irreparable damage to, or substantially [sic] prejudice" to a legal interest of another state, Concerning Certain Phosphate Lands in Nauru (Nauru v. Austl.), Preliminary Objections, 1992 I.C.J. 240, 244 (June 26). The threshold imposed by environmental treaties is variously described as "serious," Convention on the Transboundary Effects of Industrial Accidents, Mar. 17, 1992, 2105 U.N.T.S. 457, 461; "significant," Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Mar. 17, 1992, 1936 U.N.T.S. 269, 271; above "tolerable levels," Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, *opened for signature* June 21, 1993, 32 I.L.M. 1230, 1234 (not yet in force); or entailing "substantial injury," Int'l Law Ass'n, *Montreal Rules of International Law Applicable to Transfrontier Pollution*, art. 3(1) (Sept. 4, 1982).

itarian intervention should be massive and widespread,[116] and this should likewise be the basis for Chapter VII intervention to counter environmental threats.

Examples of environmental threats that could cause loss of life or human habitat on a global scale include reversal of the thermohaline conveyor and widespread depletion of the ozone layer. Other global environmental threats that have not yet reached the same magnitude of harm, but which may in the future endanger human life on a large scale, are desertification and loss of biodiversity. Already, desertification has degraded more than a billion hectares of land to such a level that millions of people have been forced to abandon their traditional nomadic or agricultural lifestyles.[117] If deforestation, overuse, and diversion of freshwater resources continue to occur, the resulting massive number of famines created by advancing desertification could pose such a grave threat that Security Council action would be warranted. Massive loss of biodiversity could adversely affect human health through loss of ecosystem services maintaining water and soil quality, loss of potential medicines from natural sources, decrease in world food production, and an increase in human infectious diseases caused by ecosystem disturbances.[118]

Threats of a regional, but still serious, nature may also meet this threshold. Examples of regional threats posing grave security concerns include massive pollution of transboundary watercourses or massive deforestation.[119] Another recent example is China's construction of multiple dams on the Mekong River, which threaten the livelihood and survival of close to sixty million people in the five

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116 *See, e.g.*, Antonio [NMI] Cassese, Ex Iniuria Ius Oritur: *Are We Moving Towards International Legitimation of Forcible Humanitarian Countermeasures in the World Community?*, 10 EUR. J. INT'L. L. 23, 27 (1999) (suggesting that humanitarian intervention is justified only for "gross and egregious breaches of human rights involving loss of life of hundreds or thousands of innocent people, and amounting to crimes against humanity"); Nikolai Krylov, *Humanitarian Intervention: Pros and Cons*, 17 LOY. L.A. INT'L & COMP. L. REV. 365, 387–88 (1995) (postulating that threat to human lives and large-scale atrocities are first prerequisite for humanitarian intervention). The High Level Panel itself suggests that "[a]ny event or process that leads to large-scale death or lessening of life chances and undermines States as the basic unit of the international system is a threat to international security" such that a framework for collective preventive action to address threats is necessary. *Our Shared Responsibility*, *supra* note 6, pt. 2 synopsis.

117 *In Larger Freedom*, *supra* note 7, ¶ 58.

118 *See generally* ERIC CHIVIAN, BIODIVERSITY: ITS IMPORTANCE TO HUMAN HEALTH, INTERIM EXECUTIVE SUMMARY (A Project of the Center for Health and Global Environment, Harvard Medical School, 2002), *available at* http://www.med.harvard.edu/chge/Biodiversity.screen.pdf.

119 *See* Karen Wright, *Blown Away*, DISCOVER, Mar. 2005, at 32, 32–37 (reporting that deforestation, coupled with use of highly toxic pesticides, is creating hazardous dust storms that have caused severe respiratory and other health problems around globe).

countries downriver who rely on the Mekong for fishing and irrigation, and as a water supply.[120] If a country persisted in utilizing resources in such a manner that it severely threatened human life or the livelihoods of many countries in the region, the magnitude of the threat would be great enough to qualify for Security Council action. Threats of a lesser magnitude, such as localized threats or threats involving a small loss of life or human habitat, would not qualify for Security Council action.

B. Determining Whether Action Is Targeted at Actual Environmental Threat

The second criterion in the framework examines causation. Can we be sure that a particular activity, undertaken and controlled by humanity, directly brings about the alleged threat to human security? For Security Council action to be justified, it would be imperative to establish a causal nexus with some degree of certainty under current scientific understanding that the particular human activity is the source of the risk to human health and living conditions. Use of the global monitoring and sensing devices developed by the military could be employed to develop "environmental intelligence" that would assist in pinpointing the exact cause of the threat and in determining the magnitude of the degradation.[121]

Another important consideration is that in order to fulfill the requirement of effectiveness, the target of the Security Council action should be the actor who has the most effective control over the continuation or cessation of the environmental threat. What should not be overlooked in assessing the source of the threat is the role of non-state actors, usually either multinational or domestic corporations. If the real source of the pollution is a corporation with extremely poor

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[120] *See* Jane Perlez, *In Life on the Mekong, China's Dams Dominate*, N.Y. TIMES, Mar. 19, 2005, at A1. The construction of dams by the Chinese, however, is not an ideal situation for Security Council intervention. Given the current structure of the Security Council, China would have veto power over any resolution introduced to try to coerce it to negotiate a regional watercourse agreement with the other Mekong River countries—Laos, Mynmar, Thailand, Vietnam, and Cambodia.

[121] *See* BARNETT, *supra* note 10, at 99 (noting development of "environmental intelligence" by using intelligence agencies to carry out environmental research). Many others have commented on the possibility of redeploying global monitoring/spying devices to monitor environmental degradation. *See, e.g.*, STEFANIE PFAHL ET AL., THE USE OF GLOBAL MONITORING IN SUPPORT OF ENVIRONMENT AND SECURITY: REPORT FOR THE JOINT RESEARCH CENTRE OF THE EUROPEAN COMMISSION (2000), *available at* http://www.eurisy.asso.fr/events/humanitar/proceedings/pdf/873final.pdf; OECD DEV. ASSISTANCE COMM., WORLD CONSERVATION UNION (IUCN), STATE-OF-THE-ART REVIEW OF ENVIRONMENT, SECURITY, AND DEVELOPMENT CO-OPERATION: FOR THE WORKING PARTY ON DEVELOPMENT CO-OPERATION AND ENVIRONMENT 38, *available at* http://www.iisd.org/pdf/2002/envsec_oecd_review.pdf (last visited May 30, 2005).

environmental standards operating in a country with a weak or corrupted central government, the target should be the polluting corporation. Instead of imposing further burdens on an already weakened state, a more effective use of Article 41 measures would be the application of sanctions against the corporation's products or the freezing of the operating funds of the corporation until they cease to pose a serious environmental threat.

The Security Council's recent resolutions targeting terrorist groups and their funding mechanisms demonstrate that the Security Council is willing to target non-state actors with Chapter VII measures.[122] The Security Council has also imposed sanctions against rebel groups operating in Sierra Leone with respect to their trade in diamonds, which provided funding for weapons. Targeted sanctions in this case were very effective in shutting down the ability of these non-state actors to operate.[123] The United Nations has also imposed targeted sanctions on other non-state actors, including the Khmer Rouge, Uniao Nacional para a Independenci Total de Angola (UNITA), and Al-Qaida.[124] Resolutions imposing targeted sanctions or commanding the freezing of funds would likely be very successful in stopping rogue corporations or states from inflicting massive degradation on the environment. While the freezing of funds has had only qualified success against Al-Qaida,[125] the same operational difficulties in tracing and identifying funds would not be present in the case of heavily polluting companies.

Environmental intervention will always be open to criticism about its legitimacy because of the difficulty in determining exact causation. Determining whether a serious environmental harm was due to a specific source is difficult. Determining whether that harm would result in a massive and immediate loss of human life is even more

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122 Examples of resolutions targeting terrorists as non-state actors are: S.C. Res. 1516, U.N. SCOR, 58th Sess., 4867th mtg., U.N. Doc. S/RES/1516 (Nov. 20, 2003) (urging all States to cooperate in efforts to find and bring to justice perpetrators, organizers, and sponsors of terrorist attacks in Istanbul, Turkey in 2003) and S.C. Res. 1452, U.N. SCOR, 57th Sess., 4678th mtg., U.N. Doc. S/RES/1452 (Dec. 20, 2002) (modifying previous resolutions authorinzing the use of Chapter VII measures against states offering support to terrorists). Security Council Resolution 1373, passed after the September 11 attacks, specifically targeted the financing activities, communications, and harboring of terrorists. S.C. Res. 1373, U.N. SCOR, 56th Sess., 4385th mtg., U.N. Doc. S/RES/1373 (Sept. 28, 2001).

123 *See* Andrés Franco, *Armed Nonstate Actors*, *in* THE UN SECURITY COUNCIL, *supra* note 82, at 119.

124 *See* David Cortright & George A. Lopez, *Reforming Sanctions*, *in* THE UN SECURITY COUNCIL, *supra* note 82, at 167, 169–71.

125 *See* Franco, *supra* note 123, at 119.

problematic. This issue of the risk of future harm leads us into a discussion of the assessment of risk of harm.

C. *Measuring Risk of Harm*

The third criterion involves evaluating the risk of harm to human health and setting a threshold for when that risk merits coercive intervention. For most environmental threats, traditional means of dispute resolution, such as the negotiation of new treaties or accession to existing environmental treaties are clearly the preferred means. If the country is in violation of an existing treaty, then the dispute resolution and compliance mechanisms specified in terms of the treaty should be employed first. If possible, recourse should be made to non-coercive dispute resolution prior to resorting to coercive measures under Article 41.

Yet at some point, when the risk of harm occurring is great and the state in question is non-cooperative, the traditional peaceful means of enforcement may need to be abandoned in favor of coercive Chapter VII Security Council measures under Article 41. For example, the timeframe of a meltdown of a nuclear reactor precludes resort to the traditional means of diplomacy to negotiate a nuclear power safety treaty prior to allowing intervention.[126]

But intervention by the Security Council may also be justified in cases where the risk of the harm occurring is not so certain, but the magnitude of the harm threatened is enormous, such as the reversal of the thermohaline conveyor. In this Section, I propose that a preventive approach is advisable in countering such threats, although perhaps unlikely at present.

The High Level Panel embraced a preventative approach to security, casting it as a "responsibility to protect," and specifically mentioned the environment as one of the six areas in which preventative action must be embraced by the Security Council.[127] The High

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[126] One commentator has argued that use of force is justified in this type of documented emergency situation. *See* Michael K. Murphy, Note, *Achieving Economic Security with Swords as Ploughshares: The Modern Use of Force to Combat Environmental Degradation*, 39 VA. J. INT'L L. 1181, 1187 (1999) ("[A] state may use armed force against another state to combat environmental harm if the threat requires the state to defend itself from massive destruction without time for deliberation or negotiation of international intervention.").

[127] *Our Shared Responsibility*, *supra* note 6, at 1–2. This concept of preventative action has existed for some time in the traditional security realm, with some commentators classifying the Security Council action in disarming Iraq in 1991 as a "preventative concept of international peace and security: as long as the Iraqi regime is in force, international peace and security is threatened." SCHWEIGMAN, *supra* note 82, at 154. Various resolutions on nuclear proliferation and weapons of mass destruction may also be viewed as preventative measures. *See, e.g.*, S.C. Res. 1540, U.N. SCOR, 59th Sess., 4956th mtg., U.N. Doc. S/RES/1540 (Apr. 28, 2004) ("affirming that proliferation of nuclear, chemical and biological

Level Panel cited as an example of successful preventative measures the "naming and shaming" and imposition of sanctions by the Security Council against individuals or countries that engage in the trade of natural resources from conflict zones, such as Sierra Leone, Angola, or the Congo.[128] One commentator on environmental security, Alexandre Timoshenko, similarly argues for a model of environmental security based on the use of preventative measures, because the function of environmental security should be to "forecast and prevent" rather than to "react and correct."[129]

But while a preventative approach may be generally appropriate, it must still be justified in specific cases by an assessment of the magnitude of harm to human welfare and the risk that the harm will occur. Where the magnitude of harm threatened is very great and irreversible, we may be satisfied with a lesser degree of certainty of the harm occurring and may allow for intervention despite the fact that the harm will not occur in the near future.

This idea of accepting a lesser degree of certainty of risk for harms of a great magnitude is embodied in international environmental law as the precautionary principle. Principle 15 of the Rio Declaration on the environment articulates the precautionary principle: "[W]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."[130] While the precautionary principle is reflected in a number of environmental treaties,[131] international courts have

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weapons, as well as their means of delivery, constitutes a threat to international peace and security"); S.C. Res. 1467, U.N. SCOR, 58th Sess., 4720th mtg., U.N. Doc. S/RES/1467 (Mar. 18, 2003) ("The Security Council expresses its profound concern at the impact of the proliferation of small arms and light weapons, as well as mercenary activities, on peace and security in West Africa. These contribute to serious violations of human rights and international humanitarian law, which the Council condemns.").

128 *Our Shared Responsibility*, *supra* note 6, at ¶ 91.

129 Timoshenko, *supra* note 85, at 432, 434.

130 Rio Declaration, *supra* note 64, principle 15.

131 *See, e.g.*, Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Jan. 29, 2000, art. 10(6), 39 I.L.M. 1027 (2000) ("[l]ack of scientific certainty due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse effects of a living modified organism on the conservation and sustainable use of biological diversity . . . shall not prevent that Party" from prohibiting imports); Convention on Biological Diversity (Rio de Janeiro), June 5, 1992, pmbl., 31 I.L.M. 822 (1992) ("[W]here there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat."); Convention on the Protection of the Marine Environment of the Baltic Sea Area, Apr. 9, 1992, art. 3(2), BNA 35:0401 (authorizing preventative measures to be taken "when there is reason to assume that . . . [harm might be caused] even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects"); Convention on the Protection and Use of Transboundary Watercourses and

been reluctant to accord it the status of customary international law.[132]

There is no single global standard for risk tolerance because of local and regional differences that exist in risk perception and risk aversion. The differences are particularly acute in the security realm.[133] Despite the difficulties, international environmental law expert Philippe Sands believes that the precautionary principle could potentially be applied on a global scale. He believes that a point will be reached when it is clear that human well-being and environmental health are being put at risk by large scale human activities, and at this point "humankind's shared perception of risk could be identified, a course could be plotted and precautionary actions taken to ameliorate or prevent a potential threat to human and environmental health of current and future generations."[134] Just as the United States' perception and tolerance of risk of terrorist attack fundamentally shifted after September 11,[135] the world's tolerance for risk of environmental

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International Lakes, Mar. 17, 1992, 1936 U.N.T.S. 269, 272–73 ("[A]ction to avoid the potential transboundary impact of the release of hazardous substances shall not be postponed on the ground that scientific research has not fully proved a causal link.").

[132] *See* Gabcíkovo-Nagymaros Project (Hung. v. Slov.), 1997 I.C.J. 7, 67–69 (Sept. 25) (rejecting Hungary's use of precautionary principle to try to nullify contract with Slovakia for building of dam). The WTO disallowed Japan's application of the precautionary principle in banning import of U.S. apples that it suspected could be infected with fire blight, because available scientific evidence showed that the risk was negligible. The WTO did not allow Japan to apply its own (very low) tolerance of this risk, despite the fact that Japan, as an island nation, is particularly susceptible to fire blight; an outbreak could easily wipe out the entire Japanese apple industry. Appellate Body Report, *Japan—Measures Affecting the Importation of Apples*, WT/DS245/AB/R ¶¶ 232–37 (Nov. 26, 2003). The WTO beef hormones case also illustrates the WTO's reluctance to allow use of the precautionary principle. The WTO prevented the European Community (EC) from imposing its own tolerance of risk in deciding whether or not to allow importation of beef from the United States that had been treated with hormones. The EC had done its own assessment of the scientific data available and concluded that there was a cognizable risk of harm to human health that was too high for its tolerance. The WTO Appellate Body disagreed with the EC after doing their own survey of the available scientific data and concluding that the risk was negligible. Appellate Body Report, *EC—Measures Concerning Meat and Meat Products (Hormones)*, WT/DS26/AB/R ¶¶ 171–77, 190–209 (Jan. 16, 1998).

[133] Michael Powers, an analyst at the Chemical & Biological Arms Control Institute, attributed the difference in risk perception between Europe and the United States to different historical experiences with terrorism. INTERNATIONAL SECRETARIAT, NATO PARLIAMENTARY ASSEMBLY, NATO: NEW THREATS, NEW HORIZONS ¶ 10 (2002).

[134] SANDS, *supra* note 26, at 248. Philippe Sands argues that the precautionary principle has achieved sufficiently broad support for it to be considered a principle of customary law, and that within the European Union it has achieved customary status. Sands sees opposition to its application continuing to diminish. *Id.* at 279.

[135] A publication from the NATO Parliamentary Assembly documents this shift in the perception of risk: "Reflecting the dramatic shift in the US's threat perception after the September 11 2001 terrorist attacks on its homeland, the September 2002 US National Security Strategy (NSS) has elevated the option of pre-emptive military action as a means

harm could similarly shift in the wake of a large environmental disaster.

The use of Article 41 measures to counter an environmental disaster of major proportions, even in the face of scientific uncertainty, could be a possibility if the world's tolerance of risk for environmental threats undergoes a large shift.[136] Yet continuing reluctance to sign on to the Kyoto Protocol by the United States and Australia[137] indicates that there is still a fairly high tolerance of risk, even for environmental harms of great magnitude such as climate change. Any application of preventative measures under Article 41 will, for the foreseeable future, have to be founded on relative certainty in the international scientific community of harm occurring, a large magnitude of threatened harm, and a strong causal nexus between the harm and the targeted states.

D. Proportionality of Means Employed

The fourth criterion in the framework is proportionality: whether the means employed are proportional to the harm and whether the scale, duration, and intensity of the action are the minimum necessary to counter the harm. This criterion requires that the magnitude and causation of the environmental threat be determined and carefully targeted. As mentioned above, environmental sensing and global monitoring technology could be employed to measure the magnitude of the threat and pinpoint the source. The data gathered could then be employed by the Security Council in its determination of the type, duration, and scale of the measures needed. An example of the proportionality principle in practice would be a country extracting minerals in such an unsafe manner as to be severely polluting water supplies of its neighbors. Intervention in this case could initially be limited to sanctions against trade in the minerals, imposed until the extraction ceases or the country switches to utilizing an internationally approved safe standard for conducting the extraction.

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of last resort to defend against an attack." NATO Parliamentary Assembly, NATO and the Use of Force, 165 PC 04 E rev. 1 ¶ 22 (2004), *available at* http://www.nato-pa.int/default.asp?shortcut=500.

136 Ivo Daalder echoes Sands' sentiments that when environmental problems such as massive deforestation of the rain forest become sufficiently grave for a large number of people, use of forcible intervention may be deemed legitimate. Ivo Daalder, *The Use of Force in a Changing World: US and European Perspectives*, 16 LEIDEN J. INT'L L. 171, 179 (2003).

137 Both countries have signed on to the agreement but have failed to ratify it. Kyoto Protocol Status of Ratification, http://unfccc.int/files/essential_background/kyoto_protocol/application/pdf/kpstats.pdf (last visited May 27, 2005).

E. Balancing of the Harms of Intervention v. Non-Intervention

The fifth requirement involves a balancing of the harm inflicted by coercive intervention against the harm avoided by the intervention.[138] While I propose that intervention only involve imposition of non-military uses of force, even non-military coercive measures, like sanctions, can have collateral effects on the environment and human health, and they necessarily impose on the sovereignty of the target state. For example, if sanctions were applied against one product produced through a heavily polluting process, then the workers employed in that industry might suffer directly from being deprived of their economic livelihoods. In addition, in order to support themselves, those workers could potentially have to resort to other destructive practices, such as clearcutting timber or slash-and-burn agriculture. It is therefore essential that the potential environmental and human damage from non-military intervention be factored into the consideration of whether Article 41 measures are justified.

The United Nations has already developed a methodology for gauging adverse humanitarian side effects of sanctions, with assessments now a regular part of U.N. sanctions policy.[139] The assessment methodology could be extended to include the side effects of sanctions targeting environmental harms. If the assessment of the environmental and humanitarian impacts of an environmental sanctions regime indicates that the collateral effects would be severe, then the Security Council should confine itself to traditional, noncoercive tactics.[140] In addition, other Article 41 measures such as political isolation, bans on travel, or freezing of funds could be employed in lieu of sanctions.

The key to deciding what measures to impose would be to determine who is responsible for the threat and how to target and impose costs on them most effectively. In the latter part of the 1990s, humani-

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[138] Recall that the U.N. Charter embodies a general principle of non-intervention with respect to purely internal situations. *See supra* notes 87–89 and accompanying text.

[139] Cortright & Lopez, *supra* note 124, at 168–69. The U.N. Office for the Coordination of Humanitarian Affairs carries out the assessment of the potential humanitarian impacts of a particular sanctions regime. *Id.*

[140] Christiansen and Powers outline their requirements for a just sanctions regime, imposing sanctions only when (1) a grave injustice requires response; (2) the Security Council is committed to reaching a political settlement; (3) less coercive means have failed; (4) basic provisions are made for human needs through use of a targeted and narrow sanctions regime; (5) sanctions are proportionate to the harm occurring; and (6) the sanctions are imposed multilaterally. Drew Christiansen, S.J. & Gerard F. Powers, *Economic Sanctions and the Just War Doctrine*, *in* ECONOMIC SANCTIONS: PANACEA OR PEACEBUILDING IN A POST-COLD WAR WORLD? 97, 111–13 (David Cortright and George A. Lopez eds., 1995). These criteria are in agreement with the criteria proposed in my framework for when coercive measures can be employed.

tarian concerns about the collateral effects of sanctions brought about a shift towards sanctions targeted at individuals rather than entire countries, such as freezing the funds of particular individuals and the imposition of travel and visa bans.[141] Such sanctions minimizing humanitarian impacts have generated partial compliance and effective diplomatic bargaining pressure, even if they have not produced immediate and full compliance.[142] Commodity-specific sanctions have also been employed with success, targeting timber in the case of the Khmer Rouge and diamond smuggling in the case of Angola and Sierra Leone while minimizing collateral harm.[143] Sanctions against particular commodities would be particularly useful for environmental threats. For example, if the environmental threat at issue were a particularly harmful mining process that relied on mercury to separate out the mineral (causing concomitant damage to an international watercourse relied upon by a large population for drinking and irrigation), then a targeted commodity sanctions regime could prevent importation of mercury into the country, as well as blocking the sale of the mineral on the international market. Recent reforms and improvements in U.N. sanctions monitoring and implementation made through appointment of independent expert panels[144] suggests that sanctions or other coercive mechanisms could effectively be employed to counter environmental threats without significant adverse humanitarian effects.

Observation of all five criteria will set a high threshold for environmental intervention under Article 41, but it will help ensure the legitimacy of those actions taken. The Security Council should employ this analytical framework to determine when an environmental threat becomes a threat to international peace and security such that intervention under Article 41 is both legal and justified under the U.N. Charter.

F. Concerns About Democratic Legitimacy

Use of coercive action by the Security Council to counter any threat is open to criticism about the lack of democratic accountability

141 Cortright and Lopez, *supra* note 124, at 168–70 (chronicling shift in using targeted sanctions in response to humanitarian consequences on civilian populations).

142 *Id.* Cortright and Lopez report that the sanctions regime employed against Yugoslavia and Libya helped to produce negotiated agreements. Sanctions against the military junta in Haiti led to the Governor's Island Agreement being negotiated. U.N. sanctions applied against Cambodia, Angola, and Sierra Leone assisted in weakening and isolating the rebel regimes. Cortright and Lopez report that U.N. sanctions had at least some impact in half of the cases examined. *Id.* at 170.

143 *Id.* at 171.

144 *Id.* at 172.

in the institution. The decisions of the Security Council have never actually been reviewed by the International Court of Justice,[145] the Council has not yet adopted formal principles guiding its decision-making (leading to complaints of unfettered discretion and lack of transparency),[146] and the membership of the Security Council is not in any way representative of the United Nations as a whole.[147] These concerns about the legitimacy of decisions of the Security Council to intervene are institutional concerns and apply equally in cases of purely humanitarian intervention or intervention to counter environmental threats. A pressing concern of many developing countries is that the lack of democratic accountability, transparency, and representation will lead the permanent five Security Council members to disguise imperialistic or paternalistic motives as humanitarian or environmental concerns.[148]

The report by the High Level Panel has addressed these concerns, recommending several changes to increase the legitimacy of the Security Council: bringing into the decisionmaking process those countries more representative of the broader membership of the United Nations; enlarging the Security Council under one of two proposed models; requiring members intending to veto a resolution to so indicate before the actual vote; and increasing the transparency and accountability of the Security Council's deliberative processes through adoption of the formal analytic framework.[149] To increase transparency, instead of the usual practice of releasing only terse resolutions giving little or no reasoning for its actions, in cases of environmental intervention the Security Council could be required to disclose a clear and solid basis for the decision. Any resolution to

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[145] The International Court of Justice (ICJ) did accept jurisdiction to hear Libya's complaint about the Security Council's action taken against it in the early 1990s in response to the Lockerbie bombing. But the ICJ waited for a diplomatic solution to the impasse and did not rule on the merits of the case. *See* David M. Malone, *Conclusion*, *in* THE UN SECURITY COUNCIL, *supra* note 82, at 633.

[146] *Id.* at 634. Until 1990, the Security Council made it a practice to refrain from mentioning the legal basis of its competence and the grounds for its action. This made testing for legality and decisions *ultra vires* very difficult. MOHAMMED BEDJAOUI, THE NEW WORLD ORDER AND THE SECURITY COUNCIL: TESTING THE LEGALITY OF ITS ACTS 21 (1994).

[147] Malone, *supra* note 145, at 634. The Security Council has five permanent members—the United States, China, Russia, France, and Britain—and nine rotating members. The permanent members have veto power over all resolutions, while the non-permanent members do not.

[148] Jon Barnett makes the point that the United States has interpreted environmental security in ways that allow it to shift the problem to a global level and thus avoid individual responsibility (like cleaning up its own military bases abroad). BARNETT, *supra* note 10, at 87–88 (2001).

[149] *Our Shared Responsibility*, *supra* note 6, at ¶¶ 249–58.

intervene would need to present the scientific and monitoring data underlying the decision and demonstrate that the environmental threat countered presented a massive risk to human life or livelihood. Adoption of the formal analytic framework would cabin the Security Council's discretion, forcing it to undergo a rigorous analysis and to reveal the grounds and reasoning for its decisions. If these suggestions are implemented, they will alleviate many of the concerns of developing nations.

Yet a more fundamental shift of Security Council analysis of intervention is needed, which would focus on intervention as a "responsibility to protect," rather than as a right of the intervention. A report authored by the International Commission on Intervention and State Sovereignty (ICISS) entitled *The Responsibility to Protect* first recommended that intervention be evaluated from the point of view of those needing support, rather than from those who may be considering intervention.[150] The decision to intervene must be a collective or multilateral decision based on the "right intention." The ICISS recommends determining whether the decision manifests the "right intention" through assessing whether the community for whom the intervention is going to be carried out actually supports the intervention and whether other countries in the region support the intervention.[151]

The principle of nonintervention should restrain the decision to intervene and coercive measures should only be applied as a last resort, when the magnitude and risk of harm are sufficient such that exhaustion of alternative remedies is not required.[152] Despite the Council's flaws, the ICISS supports use of the Security Council, emphasizing that the key to legitimacy lies not in "find[ing] alternatives to the Security Council as a source of authority," but in making "the Security Council work much better than it has."[153]

CONCLUSION

Application of Article 41 measures by the Security Council should always be the last resort to counter environmental threats, with traditional noncoercive means of enforcement and dispute resolution measures being a superior first choice. The lack of democratic representation in the Security Council and the lack of consent inherent in

150 *See* INT'L COMM'N ON INTERVENTION AND STATE SOVEREIGNTY (ICISS), THE RESPONSIBILITY TO PROTECT 36 (2001).

151 *Id.*

152 The ICISS also recommends intervention only as a last resort after the state has been given ample time and support to rectify the situation. *Id.* at 36–37.

153 *Id.* at 49.

the use of coercive measures suggest that they should be used cautiously. But imposition of coercive Article 41 measures may be called for under the framework I have proposed. Such actions will be legitimate where: the magnitude of the harm to human security is international and large-scale; the threat is clearly and inextricably linked to identifiable human activity; the measure is aimed at the actor who can most effectively cease the degradation occurring; application of the preventative principle using the best available scientific knowledge calls for abandonment of traditional enforcement means before the harm occurs; and the consequences of Article 41 intervention, including the potential for collateral environmental degradation and human harm, do not outweigh the consequences of resorting to more noncoercive means of addressing the problem.

Although the threshold for application of any Article 41 coercive measures should be high, allowing for the possibility of collective intervention against environmental threats would still be an important means of countering the very real and severe threats we are sure to face in the coming years. Existing means of enforcement do not provide a foolproof defense against environmental threats. Therefore, in the face of severe global environmental threats to human security, the soft enforcement and compliance mechanisms of international environmental law cannot be relied upon alone.

In the future, we will no longer be able to tolerate wanton and willful infliction of severe negative environmental externalities on the global environment. The specter of the Security Council using Article 41 measures to combat environmental degradation may well force those who are the worst offenders to temper their conduct. Allowing for extremely cautious use of Article 41 measures in combating environmental degradation would put those offenders on notice that if they seek to or continue to impose grave regional or global environmental threats, the Security Council can act in the name of the common good to counter the environmental threat and provide for the collective protection of human security.