



6-1998

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Recommended Citation

Zebich-Knos, Michelle (1998) "Global Environment Conflict in the Postcold War Era: Linkage to an Extended Paradigm," *Peace and Conflict Studies*: Vol. 5 : No. 1 , Article 5.

DOI: 10.46743/1082-7307/1998.1191

Available at: <https://nsuworks.nova.edu/pcs/vol5/iss1/5>

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Abstract

Excerpt

The end of the Cold War era has opened a Pandora's Box of environmental concerns that, heretofore, took a back seat to superpower struggles. Today, conflict is no longer played out within a Cold War conceptual framework. Imperfect, and at times, inconsistent as the Cold War framework was, it nevertheless provided decision makers with a recipe for action—or inaction. Since conflict is no longer structured within this framework, the two former superpowers—the United States and Russia—no longer possess clear yardsticks for action. With superpower interference in "proxy" conflict(s) no longer the definitive factor in the international arena, I postulate that global conflict will increasingly take on an environmental character. Ironically, much of this future conflict is likely to be exacerbated by the subtle incorporation of an environmental pillar into national security policy, particularly that of the United States. This paper will examine (1) the progression of "environmental security" as a valid policy concern for nation-states, (2) why policy expansion is occurring, and; (3) the possible consequences of linking environmental problems to an expanded security paradigm.

Keywords: *Brundtland Report (1987), environment and conflict, expanded security paradigm, global environmental conflict, mutual vulnerability, post-Cold War era, security*

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GLOBAL ENVIRONMENTAL CONFLICT IN THE POST-COLD WAR ERA: LINKAGE TO AN EXTENDED SECURITY PARADIGM

Michele Zebich-Knos

By virtue of the environmental unity of the Earth, all our futures are all our futures together. No separation (Meyers, 1993).

Introduction

The end of the Cold War era has opened a Pandora's Box of environmental concerns that, heretofore, took a back seat to superpower struggles. Today, conflict is no longer played out within a Cold War conceptual framework. Imperfect, and at times, inconsistent as the Cold War framework was, it nevertheless provided decision makers with a recipe for action--or inaction. Since conflict is no longer structured within this framework, the two former superpowers --the United States and Russia--no longer possess clear yardsticks for action. With superpower interference in "proxy" conflict(s) no longer the definitive factor in the international arena, I postulate that global conflict will increasingly take on an environmental character. Ironically, much of this future conflict is likely to be exacerbated by the subtle incorporation of an environmental pillar into national security policy, particularly that of the United States. This paper will examine (1) the progression of "environmental security" as a valid policy concern for nation-states, (2) why policy expansion is occurring, and; (3) the possible consequences of linking environmental problems to an expanded security paradigm.

Before beginning to examine the relationship between environmental concerns and conflict, it is necessary to define what is meant by conflict in this paper. We are reminded by Homer-Dixon that environmental change can result in various types of conflict ranging from war and terrorism to diplomatic or trade disputes. Even if environmental degradation does not lead directly to violence, many scholars and environmentalists alike assert that environmental degradation may increase tension at both national and international levels, thus increasing the likelihood of conflict and "impeding the development of cooperative solutions" (Homer-Dixon, 1991: 76-116). I have chosen to limit the definition of global conflict to those events which have a high propensity for violent outcome and which involve, or risk involving, more than one nation-state.

An increase in attention to global environmental problems commenced gradually during the Cold War era particularly after 1972. That year heralded the world's first international environmental conference, the United Nations (UN) Conference on the Human Environment, which came to be called the Stockholm Conference. While global in character, it attracted 114 participant countries including China, but conspicuously absent were the Soviet bloc states (Porter and Brown, 1996). From that starting point, an incremental awareness of global environmental concerns was coalescing world opinion in favor of "thinking environmental." For policymakers and diplomatic representatives to the United Nations, "thinking environmental" had to be taken a step further to

include the establishment of global administrative entities capable of nurturing environmental solutions into full fledged environmental regimes. One of the most significant bodies was the United Nations Environment Program (UNEP) created as a result of the Stockholm Conference. Other environmental bodies would soon follow suite. In the area of international environmental treaties, Dunoff notes that before 1972, there were less than thirty-six multilateral environmental treaties. Between the 1972 Stockholm Conference and 1992 United Nations Conference on Environment and Development, several hundred bilateral and multilateral environmental treaties were signed (Dunoff, 1995). States gradually began reflecting the concern, long voiced by environmental nongovernmental organizations (NGOs), that environmental issues deserve as much attention as do traditional military related security concerns.

Environmental issues ranging from biodiversity and deforestation to depletion of the stratospheric ozone layer were granted worldwide attention by a receptive media eager to report what scientists and policymakers had to say about such concerns. Much media attention was devoted to these issues while more traditional environmental conflicts over resources such as water received less coverage. Attention soon focused on a global commons approach in which the well-being of the world's oceans, atmosphere, and climate is the responsibility of all people--not just particular states. Porter and Brown write of mutual vulnerability. This term emphasizes the fact that environmental problems do not respect traditional nation-state boundaries. As such, environmental degradation caused to the global commons must be the shared responsibility of all states. The Langkawi Declaration on the Environment reiterates this view by stating that "many environmental problems transcend national boundaries and interests, necessitating a co-ordinated global effort" (Langkawi Declaration, 1989). Few would argue that this is not a laudable goal as long as solutions to environmental problems remain non-military and cooperatively attained.

Linking Environment and Security

Redefining Security

This emphasis on "thinking environmental" gradually acquired an added dimension as environmentalists from NGOs, scholars and policymakers alike began to link the environment with security. During the early 1970s, astute observers noted the link between the environment and security. In particular, *Limits to Growth* (1972), the Club of Rome report, brought environmental security to our attention, especially as it pertains to economic interrelationships between natural resources and commerce. By 1977, Lester R. Brown of the WorldWatch Institute suggested that natural resource shortages and environmental degradation are sufficiently important global concerns to warrant a redefinition of national security (Brown, 1977). His statement served to bolster the views of those who were just beginning to advocate an "extended security" paradigm. This paradigm was the antithesis of Cold War militarism.

The 1987 World Commission on Environment and Development report entitled, *Our Common Future* (1987), or more commonly called the Brundtland Report, also marked an important milestone by recognizing that "the whole notion of security as traditionally understood--in terms

of political and national threats to sovereignty--must be expanded to include the growing impacts of environmental stress--locally, nationally, regionally, and globally" (World Commission on Environment and Development, 1987: 19). The commission chair, Norwegian Prime Minister Gro Harlem Brundtland, was adamant in her belief that the traditional definition of security, which relied primarily on a military response to threat, was an inadequate framework for dealing with environmental issues that demand non-military responses (Porter and Brown, 1996).

Brundtland was not the only advocate of this expanded security paradigm. However, before I continue to examine how this expanded paradigm affects environmental conflict, it is wise to define the word security, or more precisely, national security. Kakonen defines national security as "the tasks of a state which attempt to ensure the security of its citizens against outside threat" (Kakonen, 1992: 146). In this traditional definition Kakonen links security--both real and imagined--to military force and weaponry which is deemed the ultimate response to security threats. Maier views national security "as the capacity to control those domestic and foreign conditions that the public opinion of a given country believes necessary to enjoy its own self-determination or autonomy, prosperity, and well-being" (Maier, 1993: 6). Presumably this control mechanism could be of an economic or military nature. Yet, in order to understand security, one must also address the meaning of threat. Ullman does so rather succinctly in a 1983 essay on redefining security:

A threat to national security is an action or sequence of events that (1) threatens drastically, and over a relatively brief span of time, to degrade the quality of life for the inhabitants of a state, or (2) threatens significantly to narrow the range of policy choices available to the government of a state or to private, nongovernmental entities (persons, groups, corporations) within the state (Ullman, 1983: 129-153).

Ullman presents a broader definition of threat than the one couched in excessively narrow military terms by the United States and the Soviet Union during the Cold War. His conceptualization is thus more conducive to a security paradigm shift, from its narrow, militaristic response, to a more "extended" security version advocated by Brundtland and others.

At the same time that Soviet and Eastern bloc nations began withering away in 1989, advocates of extended security were able to garner increasing attention as they made their case for environmental security concerns. Perhaps the most influential and often cited work is the 1989, "Redefining Security," by Jessica Tuchman Mathews of the World Resources Institute. In this article Mathews calls for a redefinition of national security and notes that if security came to include economic components in the 1970s, then there is no reason that it should not also include "resource, environmental and demographic issues" (Mathews, 1989: 162-177). Tuchman represents a loud voice of concerned individuals who are convinced that linking global environmental issues to national security is the best way to solve the world's environmental problems.

Gareth Porter of the Environmental and Energy Study Institute (Washington, D.C.) argues that since (1) motivation among major states to compete for military power is largely absent today; and (2) that the sovereign state is no longer the exclusive unit of analysis in international politics, policymakers now have the leeway to recognize that environmental threats contribute not only to

severe global degradation, but can also lead to domestic economic instability which can serve as a catalyst for future cross-border conflicts (Porter, 1995: 218-222).

As with Jessica Mathews and Lester Brown before him, Porter's reasoning is based on alarming projections about problems such as global warming, ozone depletion, and increasing desertification. These, and a host of other problems, are still greatly debated in the scientific community with their severity and humankind's future corrective ability remaining uncertain.⁽¹⁾ Regardless of such scientific debate, environmental security proponents point to the fact that, since these problems are largely the result of detrimental human actions, humankind has a responsibility to do whatever it takes to ameliorate environmental problems. Since national security policy is traditionally regarded as "high policy" and is considered a vital guideline for a nation-state's quest for survival as a geographically defined whole for the good of its citizens, Porter and Mathews et al. find it natural that environmental issues deserve to be part of each state's vital guideline for survival. Adopting a worst case scenario is far safer for future generations, they assert, than political inaction.

Advocates of environmental security thus urge nation-states to devote more time and resources to avoidance of future catastrophes resulting from human intervention into the Earth's ecosystems. Overgrazing, deforestation and dam construction, to name a few problems, become meshed with the concept of security. This latter term carries with it a sense of urgency. The 1996 State of the World report by the Worldwatch Institute seeks to convey this urgency and warns that rapid environmental degradation "threatens to overwhelm the management capacity of political leaders" (Brown et al, 1996).

Now that Cold War security policy dictates are no longer guided by a relatively clear set of military based priorities, policymakers are unequivocally more receptive to an expanded definition proposed by scholars and representatives of NGOs alike. (Let us recall that Mathews, Brown, and Porter represent NGOs). While a clear definition of environmental security has yet to be formulated, post-Cold War era policymakers in many countries have come to recognize an environmental component of security policy. While the Bush administration was not especially receptive to parts of the Biodiversity Treaty presented the Rio Conference in 1992, President Bush did recognize environmental security as part of the United States' national security policy. President Clinton continues to integrate the environment into its national security policy and, more specifically, inserted an environmental component into the 1996 National Security Strategy of Engagement and Enlargement (1996).

Environmental problems contribute to both social and economic ills throughout the world. While we are unable to say with certainty that longer range problems such as global warming, climate change or stratospheric ozone depletion are as severe as some portend, few would argue that population growth, and its demand on increasingly depleted soils of Africa, Asia or Latin America, are not placing undue stress on fragile governments in developing countries. This stress is widely thought to contribute to political conflict.

Definitions of environmental security vary by author, but most contain a similar belief that environmental well-being is a necessary part of a state's overall national security. Broadus and Vartanov assert that "environmental security is the reasonable assurance of protection against

threats to national well-being or the common interests of the international community associated with environmental damage" (Broadus and Vartanus, 1991: 14-19). Similar in definition is Porter's view that:

environmental security is concerned with any threat to the well-being of societies and their populations from an external force that can be influenced by public policies...increasing stresses on the earth's life-support systems and renewable resources have profound implications...that are at least as serious as traditional military threats (Porter, 1995: 218-222).

Another definition is proffered by Soroos who states that "environmental security can be interpreted more broadly to cover any major ecological development that seriously threatens the welfare of human societies, even without increasing the likelihood of war" (Soroos, 1995: 20-24). Soroos adheres to a broad definition which encompasses, what he believes are, ecological dangers of a more pressing nature than even geopolitically derived armed conflict.

Using a realist approach, Romm avoids actually defining environmental security and, instead, devises three categories of environmental security:

- (1) transnational environmental problems that threaten security broadly defined (i.e. global warming);
- (2) transnational environmental or resource problems that threaten a nation's security in the traditional sense (i.e. water or refugee issues); and
- (3) environmental consequences of war (i.e. intentional oil spills by Iraq) (Romm, 1993: 15-16).

While Romm sheds added light in our quest for greater conceptual clarity, he does not give policymakers a clear macro-level framework as to the degree and type of action states should adopt when confronted with environmental issues.

Filling the National Security Policy Void

The post-Cold War era marked an ideal window of opportunity for environmentalists to convince policymakers that environmental security should help fill the void in a new definition of national security policy. Little convincing was actually needed since policymakers were anxiously grasping for a more coherent policy which would provide direction in what has become an increasingly chaotic global arena. Advocating global environmental well-being and calling it environmental security is akin to mother and apple pie. To not jump on the bandwagon was sure to evoke strong condemnation in the world of public opinion. It is possible that this new national security framework, which now adds environmental security to the military and economic security pillars, can "muddy the waters" and actually increase conflict in a fragile, and largely directionless, new global arena. The student of international politics can also observe added confusion by the fact that the nation-state is no longer our only focal point for world order. Rather, regional and global institutions are taking over more tasks which were exclusively devoted to sovereign nation-states. The European Union, after 1992, is but one example of this new "extended sovereignty" in an increasingly integrated world.

Soroos postulates that environmental security threats are not normally associated with an enemy, but are "the consequences of the cumulative effects of activities taking place in many states, including one's own, such as population growth, resource extraction and refining, energy production, industry, vehicular traffic, and agriculture" (Soroos, 1995: 20-24). An obvious exception would be the direct causal effect of a conflict over water, oil, or any other vital resource.

Confusion exists because environmental problems lurk in a "squishy realm" filled with scientific uncertainty, long term consequences and unknown outcomes, and possible lack of an identifiable enemy. Even more complicating is the fact our environmental enemy of tomorrow could be lurking within our own borders! While environmentalists may have little problem dealing with uncertainty and lack of a clearly defined enemy, domestic and international political structures and institutions are poorly equipped, at this time, to deal with such an illusive enemy--one that may even be of our own creation.

While military security appears to have taken a backseat to economic and environmental security in today's post-Cold War global arena, we should not assume that the "military option" is no longer considered a possible response of choice. The Persian Gulf War and Bosnian conflict serve as vivid reminders of this reality. The military option can be regarded as a last resort, a deadly insurance policy that still bolsters most nation-states' security framework. During the Cold War, superpower politics served to define military action (i.e., Vietnam War) as well as to temper it (i.e., Suez Canal Crisis). Environmental resource conflicts that might have expanded during the Cold War were kept in check thorough superpower intervention. Thus, had Israel and Syria's conflict over water escalated, one could always turn to superpower definition of the outcome. No such bipolar tempering effect exists today. Ideally, tempering of armed conflict should now be a cooperative global effort, unfortunately, it must take place amidst post-Cold War confusion over what really warrants attention. Without this tempering effect, armed conflicts of an environmental nature are likely to increase.

Mission Search and the Environment

A Poor Fit?

Environmentally defined conflict is likely to increase for two significant reasons related to the general "inconsistent fit" between the increasingly accepted definition of national security, which incorporates the environmental component and existing institutions still premised on military force. First, superpower militaries have lost a significant portion of their Cold War mission (to counter either Soviet or American aggression) and are earnestly in search of new missions in order to justify their expensive existence. This can be termed "mission search." While the former Soviet republics and their militaries are undergoing an introspective domestic struggle for redefinition and survival, the United States armed forces face no such basic concerns.

Does environmental security conflict with other national security objectives? This does not appear to be the case. States still define their own national security interests. As long as states retain the task of defining national security interests, it is unlikely that environmental security concerns will conflict with overall state security. This is because it is the state's own policymakers who incorporate environmental security into the national security context. If policymakers choose to eliminate environmental security from the list of national security interests, then it ceases as part of official policy. It then becomes the task of an astute lobbying effort to get it reinstated as a major national concern. Current sentiment worldwide favors environmental security as being in a state's national security interest for two reasons. First, environmental security meshes well with a state's military's search for new missions in an era of downsizing. Second, support for environmental issues is rated favorably by the general public in most countries.

The United States Context

It is not surprising, therefore, that the 1996 *National Security Strategy of Engagement and Enlargement* has embraced an environmental component. Such a component would provide one more justification for a traditional military in search of new missions. The U.S. national security strategy recognizes that severe environmental "risks" can unbalance international stability. Recognized risks include massive population flight, decertification, large-scale ecosystem damage, biodiversity loss, pollution and climate change. Yet, under the *Environment and Sustainable Development* rubric, the strategy also emphasizes that "the decisions we make today regarding military force structures typically influence our ability to respond to threats 20 to 30 years in the future" (*National Security Strategy for Engagement and Enlargement*, 1996: 26).

We are reminded by this document that military force still remains a central part of the security mix for the United States in spite of newly defined, or diverse, threats.⁽²⁾ Incorporating an environmental pillar into national security policy does not imply that policymakers have abandoned traditional notions of security based on the use of force if necessary to preserve vital interests. On the contrary, policymakers appear all too ready to add environmental interests to the vital interests which are capable of provoking a U.S. military response. This is a worrisome point to ponder, yet its essence is clearly stated by the national strategy:

...a number of transnational problems which once seemed quite distant, like environmental degradation, natural resource depletion, rapid population growth and refugee flows, now pose threats to our prosperity and have security implications for both present and long-term American policy (*National Security Strategy for Engagement and Enlargement*, 1996: 1).

Ironically, as environmentalists and NGOs were actively trying to get environmental issues placed on the national security agenda they may have overlooked the fact that the fundamental nature of national security strategy is still premised on military power to resolve conflict. We are reminded by Nacht that other considerations, economic or environmental, have yet to replace "classical concerns about the use, or threat of use, of force" (Nacht, 1995: 193-195). While seemingly proactive at first glance, a closer examination of the above phrase can be interpreted to provide a green light for U.S. military intervention in environmental matters extending beyond our borders. Haass also asserts that humanitarian problems, under which he includes

environmental degradation, do not normally directly threaten U.S. interests. To allege that they do threaten U.S. interests is an invitation to military intervention for environmental reasons (Haass, 1995: 43-58). Since it is difficult to rally public support for costly overseas ventures that involve humanitarian issues (Somalia and Haiti are examples), linking an issue to vital national interests within our own borders is apt to provide the key to such support.

An expanded mission is also reiterated by others in the U.S. government including J. Brian Atwood, Administrator for U.S. Agency for International Development (USAID). Atwood stated at the New Directions for U.S. Foreign Policy Conference held at the University of Maryland that national security begins with the assumption that, if people in other regions are "destabilizing their regions," either through refugee flows or environmental catastrophes, then American interests are at risk. Atwood further explains how we have a responsibility to treat what he calls the root causes, otherwise our military forces may be called upon to remedy the consequences of such turmoil. He goes on to cite a study by the Defense Intelligence Agency which outlines sources of potential future political conflict resulting from Lake Victoria's ecological deterioration. This type of military threat estimate for Africa now includes an environmental interpretation where containment of communism might have been regarded as the root cause thirty years ago for the same instability (Atwood, 1995: 135-137). Of note is the fact that while most Cold War political-military institutions remain intact, these same institutions are beginning to expand their missions to meet changing times while their basic framework remains intact and quite traditional. Thus, we now see that intelligence gathering dons a "green" cloak as Undersecretary of State for Political Affairs, Peter Tarnoff, explained before the Senate Committee on Intelligence:

Promoting sustainable development is assisted by estimates of population growth rates, environmental damage, and local political and economic stability. In the short term, intelligence has called policymakers' attention to questionable logging practices and fishing methods which would damage the livelihood and health of Americans (Tarnoff, 1995).

While tasked with the cleanup of environmental problems caused by military installations, we are reminded that the U.S. Department of Defense does have an environmental security program nor a Deputy Undersecretary of Defense for Environmental Security. While cleanup activities are certainly a laudable goal, let us recall the words of the current Deputy Undersecretary for Environmental Security, Sherri Wasserman Goodman: "A healthy environment supports life, liberty and freedom from fear and want--the same values we stand ready to fight and die for. The DoD environmental security program integrates environmental considerations into defense policies and practices" (Goodman, 1994: 25-39). Do those concerned with global environmental problems really want fighting words blended into their model?

European Union and North Atlantic Treaty Organization (NATO)

More specifically, the European Commission focuses upon cooperative efforts such as the Fisheries Council. The Council sets allowable catches and quotas as well as formulates common fisheries policy. Since European disputes over fishing rights have occurred in the past, this is a natural area of concern for EU members. Extending environmental concerns beyond EU borders includes cooperation with Russia and other former communist bloc states over nuclear power

plant operations. A memorandum of understanding (MOU) was signed in December 1996 by European Commission representatives, G7 states and Ukraine. The MOU outlines short term projects for improving safety at Chernobyl and calls for closing the plant by the year 2000. The MOU is a cooperative venture that broaches the social and financial issues linked to the proposed closure. The European Commission has also examined long term climate change issues (European Commission, 1996).

In a bolder example, Norway called upon the EU to address security threats posed by Russian nuclear pollution in the Barents Sea region. Siri Bjerke, Norwegian Deputy Foreign Minister, expressed concern that nuclear pollution in Russia's Kola Peninsula was so serious as to threaten the entire rich fishing ground of the Scandinavian Arctic region. Bjerke implied that the stability of Europe depended upon ensuring Russian participation in cooperative European environmental affairs. She also lobbied the EU to make this issue a top priority in Europe's security policy ("Norway Enlists EU...", 1994).

In another example, France and Germany have expressed concern over nuclear reactor safety in the former communist bloc. While few question the emphasis that these two EU member states place on cooperation, they have, nevertheless, openly criticized the safety of the Kozloduy (Bulgaria), Mochovce (Slovakia), Jaslovske Bohunice (Czech Republic), and Medzamor (Armenia) plants. Under the cloak of Cold War secrecy, few in the West would have been made aware of the dangers lurking in many communist bloc reactors. On a positive note, these problems are now openly discussed and shared with scientists and financiers around the world. In fact, an international nuclear safety conference was held in Moscow on April 19-20, 1996. Cooperation, not conflict, is currently the only solution voiced by EU member states toward their former communist bloc neighbors. Yet, if these states are unable to get their economic houses in order, how can they be expected to meet an increasingly vocal consumer demand for energy without heavy emphasis on their often poorly maintained Soviet era nuclear plants? For cooperation to work, massive financial infusions are clearly needed. What is unknown is the extent to which the West is willing to foot the bill for such cooperation.

We are also reminded that NATO increasingly examines environmental concerns. NATO is a mutual defense treaty, but over the recent years its missions have greatly expanded. Today, NATO has a Scientific and Environmental Affairs Division which engages in cooperative endeavors regarding defense related environmental issues. These cooperative ventures also include Russia and the former communist bloc states. Of note is the fact that NATO is currently no longer limiting itself to military installation related environmental concerns, but is branching out to more general issues. In 1994, for example, NATO sponsored a conference on the "Role of the Military in Protecting the Ozone Layer."

Expansion of NATO's mission to include environmental issues has already been well established (NATO, 1994). The Scientific and Environmental Affairs Division defined a "Priority Area on Environmental Security" which is designed to facilitate East-West cooperation on environmental security matters. A significant security threat is recognized, particularly transboundary air pollution and water resource issues. Other sources of what NATO terms environmental insecurity include man-made disasters such as industrial accidents (Austin, 1995).

Environmental Containment

Indirect Versus Direct Threats

Is too much linkage between security and the environment to be feared, just as much as too little attention to the environment might be? To what extent will North-South relations be guided by an environmental containment theory that is currently being formulated to meet the needs, not of developing countries, but of pre-existing political and military institutions within developed countries?

One of the dilemmas presented to policymakers when one mixes security policy with environmental issues is that the latter comes in two varieties:

- (1) Indirect Threats: Long term threats which are less "attributable" to any one nation-state (global warming, stratospheric ozone depletion); and
- (2) Direct Threats: Short term threats easily "attributable" to one or more nation-state (nuclear reactor accident, traditional resource conflict over water or oil).

Since indirect, or long term, environmental perpetrators are found in both developed and developing countries, I postulate that future conflict will not focus on these threats, but rather on the second variety. Direct threats include traditional natural resource conflicts and also accidental man-made disasters of the Chernobyl type.

North-South and the Former Communist Bloc

Mapping the existing direct threat locations reveals most of them to be in financially strapped, former communist bloc nations or developing nations. Table 1 lists only those high priority locations in which past and/or present tension or armed threat has already transpired and in which U.S., Russian or European intervention is more likely to occur. Excluded is a potential water conflict over upstream U.S. water consumption patterns on the Colorado/Rio Grande Rivers and its downstream consequences in Mexico. Because of the unequal power relationship between the United States and Mexico, as well as the new bonds forged through the North American Free Trade Agreement, this matter is quite likely to spawn nothing more than verbal conflict.

The obvious volatility of these potential conflicts lies in the fact that many states may feel obligated to intervene. European states, both central and western, would be affected to varying degrees from a nuclear reactor disaster. Could such reactors become so poorly maintained that European states plan a pre-emptive strike to permanently close a reactor in order to avert a nuclear radiation disaster from spilling over their borders? Would the NATO connection force the United States' involvement? Such wild scenarios are indeed just that--scenarios. Yet, if we are to heed the wishes of many in the international NGO community, many more nation-states will write an environmental pillar into their post Cold War security policy. Once opened, the Pandora's Box of environmental conflicts will be linked through a security paradigm that offers a

rationale for armed involvement among neighboring states and with added potential of pitting developed against developing states. Instead of intervention for the sake of fighting communist expansionism, would such a pillar serve to justify intervention by more powerful, or developed, states for the sake of preserving an "environmental good" for their own citizens?

1. Potential Water Conflicts

Grand Anatolian Project (Euphrates):	Turkey-Syria, Turkey-Iraq
Nile Riparians:	Egypt-Sudan, Egypt-Ethiopia
Jordan Riparian States:	Israel-Jordan, Israel-Syria,
West Bank Aquifers:	Israel-Palestinians-Jordan
Litani Riparians:	Israel-Lebanon
Aral Sea Basin:	Kazakhstan-Uzbekistan
	Kyrgyzstan-Uzbekistan
	Tajikistan-Uzbekistan
Brahmaputra Riparians:	India-Bangladesh
Ganges Riparians:	India-Nepal, India-Bangladesh

2. Potential Nuclear Reactor Conflicts

Chernobyl (Ukraine):	Ukraine-Russia, Ukraine-?
Mochovce (Slovakia):	Slovakia-?, Slovakia-EU
Kozloduy (Bulgaria):	Bulgaria-Romania, Bulgaria-EU
Medzamor (Armenia):	Armenia-Turkey
Juragua (Cuba) ⁽³⁾ :	US-Cuba

Table 1. High Priority Direct Threat Environmental Conflict⁽⁴⁾

Homer-Dixon's assessment, that developing states are more vulnerable to environmental change than "rich ones," thus making environmentally induced conflict more likely in these states, is congruent with the assertions I have expressed in this paper (Homer-Dixon, 1991). In his attempt to map cause and effect, Homer-Dixon notes that environmental changes may cause social effects that may lead to conflict. Yet, his range of seven major environmental problems consists of indirect threats which he admits are long term. They include: greenhouse warming, stratospheric ozone depletion, acid deposition, deforestation, degradation of agricultural land, overuse and pollution of water supplies, and depletion of fish stocks. These problems are long range and not easily attributable to identifiable state(s). Equipped with a national security policy that includes an environmental pillar may provide militarily stronger developed states or alliances with a perceived rationale to intervene in (1) high priority direct threats whose cause and effect are more easily observed and, eventually, even in (2) indirect threats such as those outlined by Homer-Dixon. While environmentalists urge policymakers to think in transboundary terms, we must do so in cooperative environmental endeavors such as treaty making and regime building. Yet, we must also face the reality that nation-state boundaries still exist. To pretend, for

example, that a dangerous radiation plume emitted from a nuclear reactor gone awry is regional in scope, without inserting state boundaries into the mix, distorts current political reality. This political reality continues to be backed up by military force as the final equalizer in the international arena. A new world view based on environmental concerns should focus efforts toward building more effective global environmental regimes and avoid close association with institutions that possess a military component.

Conclusion

Environmental Need for Change

Non-revolutionary change normally occurs within existing frameworks. As environmental security becomes a standard pillar for most states and international organizations as well, we must ask the following question: How do we manage environmental conflict in order to maximize transboundary environmental well-being (global security) and, simultaneously, assure traditional nation-state security (national security)?

We know that state sovereignty has not been abandoned as the Rio Declaration assures us

Principle 2 - States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies (United Nations, Rio Declaration, 1992).

Cooperation among sovereign states is still the most important tenet in all international environmental treaties and documents. Principle 7 reinforces state cooperation "in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem"(United Nations, Rio Declaration, 1992). Yet, Principle 2 goes on to say that states also have a responsibility to ensure that activities undertaken within their borders do not damage the environment of other states, or areas, beyond their jurisdiction (United Nations, Rio Declaration, 1992).

Thus, according to the long held sovereignty doctrine, Turkey has a right to alter water flow in the Euphrates through its series of dams such as the Ataturk Dam. However, should Turkey dangerously compromise Syria and/or Iraq's water needs through significantly increased upstream water use, we might assume that such a threat would be met with force by the downstream states. Complicating matters is the fact that Turkey is a member of NATO. This is but one direct threat scenario that could contribute to what may become water wars of the future.

We are reminded of countless other scenarios such as the precarious water balance between Israel, Syria, Jordan and the West Bank. Two-thirds of Israeli water sources are derived from West Bank aquifers and the Golan Heights area. Past clashes over water resulted in contained conflict during the Cold War era. Winnefeld and Morris cite ten water related clashes between 1951 and April 1967 prior to the 1967 Arab-Israeli War. Following that war Israel increased its existing fresh water reserves by nearly 50 percent (Winnefeld and Morris, 1994).

While the post-Cold War era appears filled with confusion, many are trying to fill the void by calling attention to increasing environmental damage done to the Earth which could lead to social decay and, eventually, to heightened political tensions. There is little doubt that the post-Cold War era has ushered in greater transparency over environmental issues than has existed in any other era. Deforestation can be estimated through satellite imagery, and formerly off-limits communist bloc sites can be openly monitored. Nation-states certainly have more information at their disposal with which to better assess environmental concerns. Yet, scholars and policymakers alike should proceed cautiously before infusing environmental security into every traditional political institution. Let us not forget that security implies that a military solution may be an option, thus increasing the likelihood for armed conflict.

The recognition that environmental problems constitute a security issue at both the national and global levels may induce states to act within the context of a regional or international organization in order to resolve conflict. The relationship between national and global environmental security concerns may be very compatible in the case of indirect threats such as depletion of stratospheric ozone reveals. Concern over this issue culminated in the 1987 Montreal Protocol which sought to improve the problem. However, direct environmental security threats over issues such as riparian water disputes, which can be traced to a small, but well defined number of states, are harder to resolve. Will states facing such an environmental dilemma employ the use of force as an option? Compatibility between nation-states and global recognition of environmental security concerns may provoke nation-states to seek a solution at all costs, even if use of force becomes necessary.

One may even make the leap from the United Nations General Assembly, where the global environmental agenda developed into a growing body of international law and greater cooperation, to the Security Council. Signs of joining the UN's environmental endeavors by the Security Council are faint, but, nevertheless, discernable. Sands cites a January 1992 statement by the UN Security Council members which declared that "non-military sources of instability in the economic, social, humanitarian and ecological fields have become threats to peace and security" (Sands, 1993: 367-390). Realistically, anything can be regarded as a threat to peace and stability as long as the defining state(s) believe it to be so. However, Trolldalen and Tinker urge us to seriously reconsider inserting environmental security into the Security Council's agenda. Both authors remind us of the essentially military nature, and respect for state sovereignty, which guide the Council's international peacekeeping mission:

Tinker: There may be some risk to world stability if the Security Council treats environmental issues, such as conflicts over resource allocation or pollution, as direct threats to international... security. That risk could easily develop if the United Nations Security Council decides to take collective security action against a nation because of an environmental concern, such as building a dam that could create refugee or flooding problems across the border (Tinker, 1992: 787-801).

Trolldalen: ...The question of the meaning of the term 'security' has been raised and some have argued that 'ecological security' could become part of the Security Council's mandate. This could prove to have serious implications, since the UN Charter recognizes the right of self-defence...If a threat to environmental security were to arise, certain states might exploit the chance to take unilateral action (Trolldalen, 1992: 17).

Those involved in searching for environmental solutions to a host of problems, must recognize that the international political system is in flux. Sovereign nation-states exist, possess military might of varying degrees, yet are increasingly losing sovereignty through regional and global trade and financial linkages which transcend the nation-state concept. The post-Cold War era is a fragile and unstable period in which the dust has yet to settle. Efforts spent on redefining security would be better spent if policymakers abandon efforts to integrate an environmental pillar into the traditional paradigm. The 'greening' of world conflict will only serve to obfuscate the cooperative efforts already underway for solving the world's environmental problems

Notes

1. Porter admits that while "the thinning of the stratospheric ozone layer because of the accumulation of certain man-made chemicals could have a severe impact on human health and nutrition...and biological diversity is being lost at a rate estimated at 2 percent to 10 percent of all species per decade...each of these environmental threats is subject to significant empirical and scientific uncertainty" (Porter, 1995: 218-222).

2. Deudney writes of his concern about a squishy security environmental linkage and asserts that in the "conventional national security mentality" everyone is an enemy while in the environmental arena, "we" not they are the enemy. See: Daniel Deudney. 1990. "The Case Against Linking Environmental Degradation and National Security." *Millennium: Journal of International Studies*. Vol. 19, No. 3: 461-476.

3. Cuba begun construction of a nuclear reactor at Juragua in the early 1980s, but the project was later halted. In 1995, renewed Cuban-Russian efforts to complete the project were undertaken. Should the Soviet designed reactor be completed, this would be a real worry for the U.S, which has already expressed concern over the plant's safety. Once operational, Cuba would then have a nuclear reactor 260 miles from Miami (Rohter, 1996, A3).

4. Sources: Klotzli, 1994; Gleick, 1993; The 1991 Bellagio Conference on US-USSR Environmental Protection Institution: Strategy for Survival: Problems of Legislative and Executive Power in the Field of Environmental Protection in the Ukraine; "EU/Bulgaria: Mounting Pressure on Bulgaria Over Nuclear Plant Concerns," 1995.

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