

Transboundary Natural Area Protection: Broadening the Definition of National Security

Haven B. Cook

Abstract—This paper looks at the definition and concept of national security, and examines how the environment is linked with national security. The traditional, state view of national security that guides most foreign policy includes the concepts of military power, sovereignty and geopolitical stability. This paper advocates broadening the definition of security to include protection of the environment. Access to natural resources, or their depletion and degradation, affects human welfare and can result in the breakdown of political stability. The assumption behind adding the environment as a dimension of national security is that conservation and protection of natural resources will not only sustain the productivity of the land, but will also preserve and sustain international relations. The destruction and depletion of natural resources in one country can do as much harm to neighboring countries as military aggression. Transboundary natural areas can play an important role in the concept of environmental security, as the conservation of the Earth's plant and animal biodiversity may well depend on the protection of large, undeveloped natural areas. This theory paper attempts to challenge the traditional "state" view of impermeable borders and lead us to a broader concept of security.

Introduction

The traditional concept of national security is defined by military defense and geo-political power. In this traditional view it is the state that is the referent object to be secured. In recent years many scholars, researchers and international theorists have argued that the traditional framework centered on territorial defense and economic and political stability fails to consider the environment as a dimension (Barnett 2001; Brock 1991; Dalby 2002; Elliot 2002; Hauge and Ellingsen 1998; Hemple 1996; Myers 1986; Ronnfeldt 1997; Soroos 1994). Several authors have argued to broaden the definition of national security to include the environment, giving rise to the concept of environmental security.

As humans spread across the globe, conservation of the Earth's plant and animal biodiversity may well depend on the protection of large, undeveloped natural areas. In many cases around the world, these remaining large undeveloped

areas span international boundaries. This has led to the idea of "transboundary natural areas" in which one or more countries share these natural resources along a border. Transboundary areas can play an important role in the concept of environmental security, where degradation of natural resources can pose threats to the environment as well as political structures.

Defining Environmental Security

Access to natural resources or their depletion and degradation affects the human population and can result in the breakdown of political stability. The assumption behind the concept of environmental security is that the conservation and protection of natural resources will not only sustain the productivity of the land but will also preserve and sustain international relations. The destruction and depletion of natural resources in one country can do as much harm to neighboring countries as military aggression.

This paper will examine how the environment can be linked with the concept of national security. There is a vast literature on environmental diplomacy and international cooperation concerning the environment, as well as a large body of work on transboundary environmental issues such as resource sharing, pollution, and externalities. Many authors, such as Carraro (1997), look at environmental negotiations and agreements from a cost-benefit economic analysis. Others have attempted to explain these environmental negotiations from a game theory standpoint (Ali 2003; LeJano and Davos 1999; McCarthy 2003; Soroos 1994). This paper does not intend to look at the broad arena of environmental diplomacy. The focus instead is on how the environment is linked to national security.

One of the most powerful concepts to come out of the Brundtland report (1987) was the recognition that environmental problems now occupy a prominent position on the international stage. Many scholars, researchers, policy makers, and international relations theorists argue for broadening the concept of security beyond its traditional military and geopolitical meaning to include environmental threats. Myers (1986) insists the notion of national security is no longer a simple matter of military prowess; it concerns the stability of the environment that supports human well-being. Dalby (2002) contends that conventional international relations theory does not provide the "intellectual toolkit" necessary for addressing environmental problems, and that we must "rethink security." There is also recognition that the linkage between security and the environment is firmly established as part of the agenda of peace research (Brock 1991; Gleditsch 1998).

Haven B. Cook, Wilderness Specialist and Planner, National Forests in Florida, Tallahassee, FL, U.S.A.

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A Sustainable Future

A widespread fear that the Earth is undergoing, or has already experienced, irreversible environmental damage is leading people to search for more ways of cooperating to conserve natural resources (Ali 2003). With the ecological balance of the Earth at stake, realization that all nations could be endangered has spawned international efforts such as the Montreal Protocol to protect the ozone layer. Brock (1991) wrote about the possibility of using environmental cooperation to build peace. Linking the consequences of environmental degradation to the destructive consequences of war allows us to view environmental degradation as a threat to the state and to our common security. In fact, Brock goes so far as to argue to replace the term “environmental security” with the term “sustainable development,” because the use of the word security denotes static and particularistic thinking, whereas ecological thinking such as sustainability is dynamic and global. He also broadens the idea of sustainable development to include social, political, and cultural contexts.

As scientific evidence continues to mount on the impacts of environmental degradation, deforestation, and global climate change, nations will realize that such change will not be advantageous to them and will not only seek more cooperation, but will look to defining sustainable levels of resource use (Ali 2003; Sorros 1994). Scientific literature and research during the 1990s has attempted to better conceptualize the link between environment and politics.

Dalby (2002) says the major question is what kind of shift in social values would come from viewing environmental degradation as a threat. Would it move us closer to sustainable levels of resource utilization? Ecological science and the complexities of global climate change must emerge as the basis for political, economic and social decisions, and we are a long way from that level of understanding.

Traditional Concept of National Security

The concept of national security has its roots in European warfare, where expansionism, as a national strategy, required other countries to defend their territories. Machiavelli's famous treatise *The Prince*, written in 1513, defined the state and equated the concept of security with national defense;

in this sense security is associated with the attainment and retention of power (Bull 2003). Dimensions of the concept of national security usually include military/defense capability, political sovereignty, and secure geographical borders (fig.1). Indicators to measure these dimensions form the base of political and international relations theory. The state of the environment has not historically been considered a dimension of national security, perhaps because in previous centuries large-scale environmental degradation did not pose a threat to a nation's political power.

In previous centuries, the scale of military aggression and expansion of empires did not have immediate effects on the environment. The exploitation of natural resources through expansionism was regarded as a means of asserting or retaining political dominance by one group over another, not as a way to secure the stability of the state. However, as people become vulnerable to the effects of resource degradation, the environmental problems expand to social and political ones. Dalby (2002) notes it is the degradation of the environment that sets off an increase in crime, social disintegration, and ethnic conflict, leading to population explosion, social unrest and resource scarcity becoming key national security interests. Journalist Robert Kaplan's oft-cited article in a 1994 issue of *Atlantic Monthly* called *The Coming Anarchy* casts the environment itself as a threat (Kaplan 1994). According to such doomsayers, depletion of natural resources and degradation of the environment threatens human security to such an extent that it will be the basis of a future world war. Unfortunately, theoretical inquiry on eco-politics remains largely undeveloped.

Over 30 years ago, Falk (1971) was probably the first to describe the problem of access to resources as begetting violence, generally started by the more powerful nation as a way to maintain and reinforce their control over resources, even in the face of calls for justice by the less powerful. Under this geopolitical theory, responsibility for violence and inequity, as well as finding solutions to them rests with the more powerful nation. Barnett (2001) in his theory-laden book *The Meaning of Environmental Security*, looks at the increasingly global recognition of environmental problems by examining what he calls the “collision of environment and security.” He places the concept in the realm of politics, though embedded in an increasing awareness of the interconnectedness of modern problems. The traditional approach, which Barnett calls a view of environment and security, is



Figure 1—Dimensions of national security.

that the state is the object to be secured, and this view is consistent with strategic concerns about warfare and territorial defense and is influenced by political and international relations theory.

Moving to a View of Common Security

The alternative approach of including the environment as a dimension of security advocates the security of the biosphere and its ecosystems as a means of protecting the habitat of all life on Earth, emphasizing that it is the ecosystems and ecological processes that must be secured (that is, their health, integrity, and functioning maintained). By shifting the focus to the ecosystem, the concept of ecological security concerns the overall welfare of the planet. The notion of environmental security posits the state as being responsible for security of the resources and maintaining access to resources for its people.

What is needed is to replace the traditional concept of national security with a new paradigm of human welfare dependent on a balance between interdependence and self-sufficiency of nations (fig.2). Despite its idealistic nature, the ascendancy of common security over national security will increasingly be the dominant theoretical view in the future, with elements of common security, equity, and common heritage replacing the exploitative ideals of nationalism and military industrialism. Before this paradigm shift takes places, however, a causal link must be firmly established between environmental degradation and threats to national security. What indicators would be used to measure this concept? How is the environmental dimension linked to the other dimensions? A theoretical base needs to be constructed in the literature, as well as research on the indicators of the environment as a dimension.

A number of authors have examined the linkage between the concepts of natural security and environment, examining the difference between the traditional, statist view of national security as a military/territorial defense concept and the humanist, ecological view that presents a new paradigm of seeing the world as an integrated whole rather than a collection of parts.

One of the best known attempts at developing a theory to link environment and national security was done by Thomas Homer-Dixon (1991) and his colleagues on the Global

Environmental Change Committee of the Social Science Research Council at the University of Toronto, leading to their work being referred to as "The Toronto Group." His 1991 study focused on how environmental scarcity affects conflict, suggesting an analytic framework for exploring causal pathways using environmental effects as the independent variable. His 1994 study (Homer-Dixon 1994) expanded on his original hypotheses, using a number of carefully documented case studies to show environmental scarcity functions as an independent variable. The rest of the literature on environmental security throughout the 1990s centers around Homer-Dixon's work, either expanding on his attempts to link environmental stress with conflict, or offering critiques on his methods.

Hauge and Ellingsen (1998) attempted to examine the environment-conflict link at a larger scale than Homer-Dixon's case studies, conducting a multivariate analysis on a larger number of studies to show a causal relationship between environmental degradation and armed conflict. Their main critique of Homer-Dixon's work is that Homer-Dixon chose studies where both environmental degradation and armed conflict occurred, thus having no variation in the dependent or independent variables and allowing for no comparisons.

Hauge and Ellingsen's work was the first attempt to use a large number of cases to examine the link between environmental scarcity and conflict and to test the variation in the dependent variables of civil war and of domestic armed conflict and how they are affected by the independent variables of annual change in forest cover, land degradation, and freshwater availability. They also used other conflict-generating independent variables to control for economic and political conditions. Although other authors have suggested potential indicators that could show this linkage (Ronnfeldt 1997; UNESCO 1998), few have attempted the analysis.

Graeger (1996) attempts to lay out a clear reasoning for establishing a theoretical and operational linkage between security and changes in the environment caused by humans. Graeger suggests that the concept of environmental security can result in international confidence-building effects and alleviate some concerns about military insecurity, thus leading to improvements in political security. She uses the example of environmental cooperation in the Baltic Sea region as using environmental cooperation to promote peace building, and notes that environmental security can be defined as the normative link between the environment and human activities. With the link between the environment and security



Figure 2—A new dimension of national security.

established, the idea of environmental sustainability can become a part of the political and social agenda of nations.

Cooperating on environmental protection measures can uphold and reinforce international agreement processes. Brock (1991) notes that transboundary national parks or conservation areas can serve as "buffer zones" between conflicting parties, demilitarize ecologically sensitive border areas, and function as a model for cooperating on other fronts. Singh and Jackson (1999) report that transfrontier conservation areas can be a mechanism for peace in Central Asia by offering new opportunities for cooperation and different levels of cooperation based on respective political climates. Lastly, Ali (2003) explores how resource scarcity and conservation can be a catalyst for resolving other kinds of disputes. Looking at issue linkage, he states that environmental cooperation can enlarge the zone of agreement between countries; for example, the idea of debt-for-nature swaps has been used by many countries, even when there is no physical border or shared resources.

Future Directions

Among the calls for considering the environment as a component of national security is one arguing the opposite. Levy (1995) notes the main arguments against adding the environment as a dimension of security. Levy defines both "security" and the "environment" in a traditional realist-political way, insisting the environment is too broad to make it a practical consideration of security issues. Levy charges that the notion of environmental degradation imperils security by undermining human life support systems is simply rhetoric aimed at boosting support for environmental protection.

A review of the concept of national security indicates two broad themes. The first is the recognition that the concept of national security has indeed been broadened, in the mind of many theorists, to include the notions of environmental security and human well-being. Many authors write as if this is the new paradigm. Secondly, it is clear that there remains a great deal of work to be done on conceptualizing environmental security. More detailed studies and better data will help define the relationship between environmental stress and conflict and strongly establish the linkage that places the environment squarely as a dimension of national security. More theoretical work that recognizes environmental change as posing a direct threat to human security will provide a basis for seeing security as fundamentally a human value, not an end to be achieved.

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