

Between Security and Environmental Change: A Theoretical Exploration of the Linkage

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Abstract

Objective: The aim of this study is to reveal the symbiotic relationship between environmental change and the hazards it poses to people, nation-states, and society, and to put environmental security studies squarely on the minds of security scholars and practitioners everywhere. The study concluded that environmental security is not only a worthwhile area of study in and of itself but also has much to offer security studies in general.

Method: The study adopted a theoretical exploration of the linkage between security and environmental change.

Result: Environmental security studies research has an impact on the nature of threats, the status of security, the execution of security, and strategies for undoing crisis politics, in addition to the ethics of security and privatization. The risks that people face depend not just on the physical changes in their environment, but also on how dependent they are on it for survival and how well they can adapt to these changes.

Conclusion: Therefore, societal factors of insecurity like conflict, corruption, trade dependence, and liberalization of the economy have an impact on how sensitive and adaptable people are to environmental changes.

Keywords: Environmental, Security, conflicts, social, Change.

1 INTRODUCTION

The proliferation of wars, conflicts and civil strifes, which have made Singer and Wildavsky (1993) to divide the globe into ‘the zones of peace’ and ‘the zones of turmoil,’ and Kacowicz (1995) to similarly divide the world into “the zones of peace” and “the zones of war.’ have made the issue of security to be a much desired endpoint by states. The carnage cause by the First World War and the desire to avoid its horrors actually propelled states to seek for ways to avoid its reoccurrence. Hence, the issue of security has become the major concern of all states within the international system. At both the domestic and international levels, security has become a matter of high politics; central to government debates and pivotal to the priorities they establish (Collins, 2013, p. 1). As Der Derian (1995, pp. 24-25) has captured it, the overall concern of states with security is such that “no other concept in international relations packs the metaphysical punch, nor commands the disciplinary power of ‘security.’”

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However, despite the agreement on its desirability by states, the concept suffers from different connotations. For instance, Walter Lippman (as cited by Buzan, 1991, p. 16) sees it from the perspective that “a nation is secure to the extent to which it is not in danger of having to sacrifice core values, if it wishes to avoid war, and is able, if challenged, to maintain them by victory in such a war.” This locates security within an overriding spectacle of war or conflict and Kolodziej (2005, p. 25) has further reiterated this fact by insisting that “security ... implies both coercive means to check an aggressor and an all manner of persuasion, bolstered by the prospect of mutually shared benefits, to transform hostility into cooperation.” Thus, as Smith (2010, p. 2) has stated, “security is not just a social concept or topic to be studied or analysed, it is also a problem to be managed or otherwise controlled by human communities on a regular basis if they hope to survive.” It is in this respect that we should view “a threat to national security [as] 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.” Deriving from all these, security-insecurity is better understood in relation to “vulnerabilities – internal and external – that threatens or have the potential to bring down or weaken state resources, both territorial and institutional, and governing regimes” (Ayooob 1995 :9).

Distilling from the above explanations, security can then be applied to referent objects that are of value to an individual (jobs, health, or organizations), groups or state and could also refer to many kinds of risks (such as unemployment, scarcity of food or a change of government). Thus, for our purpose, environment becomes our referent object of security and environmental change as a security risk. Thus, the connection between these two is what we shall refer to as environmental security. According to Barnett (2013, p. 191),” environmental security is one of the ‘new’ non-traditional security issues. Its inclusion in this field of research has further deepened and expanded the idea of security, which was previously limited to the examination of state security, to encompass environmental security now also. Environmental security broadens the focus of security by considering risks beyond the narrow confines of war.

Hence, the inclusion of environment security has made it possible and relevant to consider (1) the extent to which environmental change causes or escalates violent conflicts between and within states, (2) the ways in which environmental change may affect, positively or negatively, national security, (3) the ways in which preparation for war may affect the environment and finally, (4) the ways in which changes in the environment may lead to development issues such as poverty and human security. The first section is the introductory one, followed by the second section which is a brief attempt at tracing the origin of environmental security, while the third section sketches the principal approaches or interpretations of the concept of environmental security. The fourth section takes a theoretical exploration of the linkages between environmental security and the four areas identified above as area of concerns before we finally draw a conclusion on the study.

2 CONCEPTUAL BACKGROUND

2.1 ORIGINS OF THE CONCEPT OF ENVIRONMENTAL SECURITY

The emergence of the subfield of environmental security studies as an important component of the larger security studies was due to four main interrelated developments traceable to the beginning of the 1960s. The first change was the rise in environmental awareness in wealthy nations. Among the events that stimulated this consciousness was the publication of Rachel Carson’s seminar book *Silent Spring* (1962), This described how DDT’s effects on animals and the food chain. Many others, like David Attenborough,

Jacques Cousteau, and David Suzuki, who employed print and electronic media to raise and maintain awareness of environmental issues, closely followed her (Barnett 2013, p. 191). Following the awareness raised, other non-governmental organizations with an interest in environmental security came forward. These groups included the World Wildlife Fund (1961), Friends of the Earth (1969), and Greenpeace (1971), among others.

The release of Harold and Margaret Sprout's *Towards a Politics of Planet Earth* and Richard Falk's *This Endangered Planet*, both in 1971, was the second significant event that contributed to the formation of environmental security as a topic of discourse. These articles highlighted how conventional security rhetoric fails to address environmental threats to both domestic and global security (Barnett 2013, p, 192). The publication of Richard Ullman's article 'Redefining Security' (1983) proposed the possibility of environmental change causing war. Anything that can rapidly lower a state's resident's quality of life or restrict people's and organizations' options within the state is considered a national security danger, according to him (Barnett 2013, pp. 192-3). Despite these numerous publications, the idea of the connectivity between environment and security remained on the peripheral level. This pure vision of security perspective was to change drastically when OPEC, in 1973, increased the price of oil (Akinyemi, Okoli & Chidozie, 2021).

This led to a paradigm shift in the strategic landscape about thinking of security leading to the third major development in environmental security. The end of the Cold War and the bipolar world order created a 'vertigo,' which led to a rethinking about the old ways of viewing security. According to Dalby (1992), the combination of this "vertigo" and the theoretical and policy space that allowed environmental security to become one of the "new" security concerns were made possible by people's growing environmental consciousness in wealthy countries. According to Barnett (2001), academic publications began to have an impact on policy around 1989.

The emerging understanding that environmental changes not only presented hazards to the ecosystem but also to human well-being was the fourth factor that made environmental security so crucial. Environmental changes threaten human security by limiting access to commodities like food, clean, mobile water sources, and fertile soils, it is becoming increasingly clear. It has been recognized that it also leads to abuses of civil and political rights by limiting access to resources for subsistence and health, as well as to the social and economic possibilities required for people to lead fulfilling lives (Matthew et al 2009).

2.2 MAIN INTERPRETATIONS OF THE CONCEPT OF ENVIRONMENTAL SECURITY

The vagueness of the twin phrases "environment" and "security," when combined, contributes to the uncertainty of the idea of environmental security. The general meaning associated with the word 'environment' connotes externality, what is outside of or surrounds an entity. However, Boyden et al (1990, p. 314) have, perhaps, more accurately, defined surroundings as well as the physical and chemical elements that make up the entire earth system. The term security also suffered from this vagueness but Soroos (1997, p. 236) seems to have resolved this by defining it "as the assurance people have that they will continue to enjoy those things that are most important to their survival and well-being." Even despite these clarifications, different meanings are still attached to the term 'environmental security.' A search of the literature has shown that six principal approaches and perspectives can be discerned (see the table below).

The first is that environmental security can be approached from the perspective of human activities on the environment itself. The ecosystem is made up of land, and over the past forty years, approximately one-third of all agriculture has been abandoned due to erosion,

and more than twenty-five percent of all accessible land has experienced some kind of land degradation. Forests make up a portion of the ecosystem; nevertheless, throughout the 1990s alone, 16.1 million hectares of natural forests were cut down year, with 3 million of those hectares occurring in just Africa, Latin America, and the Caribbean between 1990 and 2000. Freshwater is a component of the ecosystem, and 58% of the world's coral reefs are in danger (UNEP, 2002, 2005). Ironically, Pirages and DeGeest (2004) have pointed out that our security as human beings are irrevocably tied with that of the environment. Based on this recognition, Dalby (2009, p. 172) has extended the notion of ecological security to embrace the idea of 'anthropocene security.' This means "security in terms of ecological understandings of humanity as a new presence in the biosphere that we are already changing drastically."

The second approach focuses on common security, the impact of which transcends the narrow confines of any nation's territorial borders. The term 'common' here implies that certain ecological security issues have global in dimension. These include ozone layer depletion and climate change brought on by the combined effect of gas emissions from several nations, which have an impact on the world regardless of the nations and their locations. While many environmental problems may be 'common,' no two countries have the same interests. This is the basis for the failure of some of these agreements to significantly affect and halt environmental degradation. The remaining approaches to environmental security are discussed under the next section and subsections.

Six Key Interpretations of Environmental Security

Name	Entity to be Secured	Major Source of Risk	Scale of Concern
Ecological Security	Natural Environment	Human Activity	Ecosystem
Common Security	Nation State	Environmental Change	Global/Regional
Environmental Science	Nation State	War	National
National Security	Nation State	Environmental Change	National
Greening Defence	Armed Forces	Green/Peace Groups	Organizational
Human Security	Individuals	Environmental Change	Local

Source: Barnett (2013, p. 195)

3 METHODOLOGY

This qualitative paper depends on secondary data from local and worldwide peer-reviewed journals, news articles, and official documents. It adopts a theoretical exploration of the linkages between security and environment to gather data for analysis.

4 RESULTS AND DISCUSSION

4.1 THEORETICAL EXPLORATION OF THE LINKAGES

There are four other approaches that fit into the specific narrative of this study and will be looked at in a little more detail than the first two discussed above. These are treated in the subsections below and have to do with the interface between environmental change and human security, national (and armed forces) security, and conflict. The examination is to show the symbiotic relationship between environmental change and the risks it poses to individuals, nation-states, and the armed forces (see table above).

4.2 Environmental Change and Human Security

By proposing that people rather than states be the point of comparison or object for safety and the thing that needs to be made secure, the idea of "human security" has merely shifted the primary objective of state-centric security studies to people (Kerr 2013, p. 106). By proposing that people rather than states be the reference point or object of security and the entity to be made secure, the idea of "human security" has merely shifted the focus of state-centric security studies to people. A proponent of the narrow school, Mack (2004), limits human security to the threat of political violence to people by the state or any other organized political actor. The narrow school supports the view that human security is "the protection of individuals and communities from war and other forms of violence" (Human Security Centre 2005). However, as Mack (2004, p. 367) has emphasised, although there are many other threats to people apart from systematic violence, nevertheless, violence correlates with these other threats such as poverty and poor governance.

According to the broad school of thought, risks to human security go beyond just physical violence. They define human security as being free from both want and fear, which is consistent with the UNDP's emphasis on human development. As it relates to the Third World, and in the context of underdevelopment, Thakur (2004, p. 347) holds that "human security is concerned with the protection of people from critical life-threatening dangers, regardless of whether the threats are rooted in anthropogenic activities or natural events, whether they lie within or outside states, and whether they are direct or structural" (Thakar 2004a, p. 347).

Protecting the vital center of everyone's existence in ways that increase human freedoms and fulfillment will therefore be the main goal of human security (Kerr 2013, p. 107). In this way, therefore, people can be environmentally insecure in many ways and for all sorts of reasons (Kubičková & Benešová, 2023). For instance, a comparison of Australian farmers with those in other Third World nations demonstrates how human environmental insecurity is more socially than environmentally induced. Australian farmers experience the same environmental challenges as their counterparts in the Third World (thin soils and unpredictable weather). Although irrigation is widely used, and accessible, food transport and storage systems are modern and effective, fertilizers and pesticides are easily affordable, and there are numerous options for off-farm income, Australian farmers consume less of their own crops than their counterparts in Third World countries.

The analysis above shows that environmental change does not have an impact on human security in a vacuum, but rather interacts with several other social factors, such as poverty, the extent to which groups receive help from the state (or prejudice), and the degree of social solidarity within and around the most vulnerable groups. This shows that people face risks in addition to environmental changes, and that the degree to which people depend on their environment for existence and their capacity for adaptation determine the scope of these risks.

As Barnett (2013, p. 203) As previously said, past processes like colonialism and war influence present-day fears while current processes like liberalizing trade and climate change influence future-day insecurities. We conclude as Westing (1986, p. 195) has opined that "it is thus inescapable that any concept of international security must in the last analysis be based on this obligate relationship of humankind and its environment."

4.3 Environmental Change and National Security (including Armed Forces)

Baldwin and Milner (1992, p. 29) have drawn attention to the fact that "the concept of national security is one of the most ambiguous and value-laden terms in social science." Within the international system, nations have accepted the Realists' perceptions that the best way to secure national security is to prepare for war. The need to secure a state's national security has also generated a greater need to acquire the necessary means and

power to do so. The contention is that power gives a state the ability to promote and protect its national interest while ensuring its national security safe from foreign intervention. Power also accords the state with the ability to “win in bargaining situations and to shape the rules governing the international system” (Kegley and Wittkopf, 1999, p. 383). This form the basis by which scholars tend to rate states; that is, according to their power to influence or coerce other nations. However, military power and the possession of necessary armaments to deter those who may wish to attack have always been central to the conception of national security. The new and current trend in thinking seem to be along the line which Nye (1990) had stated, that is, “in assessing international power today, factors such as technology, education and economic growth are becoming more important, whereas geography, population and raw materials are becoming less important.”

A necessary addition to this is also the influence of environmental change in conceptualizing national security. Environmental change may erode the economic foundation that supports military power of a state, particularly, if the state’s economic well-being is based on natural resources as is the case with some developed and developing countries. Changes in the environment and climatic conditions can adversely affect income and employment in primary sectors. Therefore, the long-term capability of an economy’s armed forces will also be impacted if its natural capital base is destroyed because of environmental change. Sen (1999) believes that human development is crucial for prosperity, but changes in climatic and environmental conditions expose people to health risks that also threaten that development. Particularly for rentier states, environmental change can weaken the political stability and legitimacy which the government enjoys by decreasing the income base and hence the government’s ability to provide welfare, employment, and key services (Kahl 2006). This is the fact that Falk (1971, p. 185) has wanted driven home when he states that “we need to revamp our entire concept of ‘national security’ and ‘economic growth’ if we are to solve the problem of environmental decay.” Of equal importance is the risk pose to national territorial security by the intensity of hurricanes, cyclones and typhoons under climate change, resulting in damages to critical infrastructures necessary for producing and distributing energy, water and food, massive loss of lives and displacing peoples from their homes (Joshua, Gberevbie & Onor, 2021).

While understanding environmental problems as a national security is not unproblematic, it is significant that Deudney (1990) has offer three reasons why attempts to link environmental changes to national security may be analytically misleading. First, military risks differ from those posed by the environment. Deudney explains the distinction by saying that although military threats are inflicted on purpose and their origins are obvious, environmental dangers are unintentional and their causes are frequently unknown. Second, Deudney contends that making the connection between environmental challenges and national security may not have the desired impact of raising awareness of these issues, but rather may reinforce current military institutions and improve their operational capability. The third point is that international conflict is not likely to be sparked by environmental change. Therefore, there is some justification for analyzing the relationship between environmental change and national security; the main issue is how to define national security, as well as who it is for and why.

No matter the arguments raised by Deudney (1990), the fact remains that linking environmental change with security will eventually implies a linkage with the most important of security institutions, the military. As Barnett (2013, p. 200) has noted, some of the biggest conflicts between the idea of environmental security and militaries are brought up when thinking about their role. The military trains for and engages in combat with potentially catastrophic effects on people and the environment to fight and win conflicts. This contrasts with the environmental objectives of creating peace and sustainable development. Military expenditure, in certain countries, is sustained and

derived from money realized from resource extraction and these resources are often the cause of these conflicts. Money spent on procuring weapons to prosecute the war could have been spent on social and environmental activities that will benefit the people and even the environment (Joshua & Chidozie, 2021). As Sprout and Sprout (1971, p. 406) have highlighted it, "... the goal of national security as traditionally conceived ... presents problems that are becoming increasingly resistant to military solutions."

4.4 Environmental Change and Conflict

Due to the prevalence of disputes, scholars have made numerous attempts to comprehend and classify them. Consequently, words like "internal conflicts" are now used (Brown 1996), 'asymmetrical warfare' (Mack, 1974, 2008; Arreguin-Toft, 2001), 'civilian-based civil wars' (Anderson, 1999); 'fire next door' (Francis, 2011), 'new wars' (Kaldor 2001), 'small wars' (Harding 1994), 'civil wars' (King 1997), 'ethnic conflicts' (Stavenhagen 1996), 'conflicts in post-colonial states' (van de Goor et al 1996), 'ethno-religious wars' (Furley, 1995), 'greed and grievance' (Berdal and Malone, 2004, Collier, 2004), 'guerrilla/insurgency warfare' (Clapham, 2000), and 'unconventional warfare' (Merari, 2007), to categorise and explain the different types of conflicts pervading the world today. Zartman (1991, p. 370) has correlated, conflict arises with interactions among people; "an unavoidable concomitant of choices and decisions and an expression of the basic fact of human interdependence." Much earlier, Coser (1956, p. 121) had explained that conflict happens when two or more individuals engage in a struggle for ideals and claims to power, authority, and wealth with the opponents' goals being to neutralize, harm, or destroy their competitors.

It gets its theoretical position from the writings of the realists, who primarily addressed resource scarcity and interstate warfare. Ullman (1983, p. 139) has warned that "conflict over resources is likely to grow more intense" and Myers (1986, p. 251) has also stated that "if a nation's environmental foundations are depleted, its economy will steadily decline, its social fabric deteriorate, and its political structure become destabilized. The outcome is all too likely to be conflict, whether conflict in the form of disorder and insurrection within the nation or tensions and hostilities with other nations." Gleick (1991), asserts that resources, which might be strategic objectives or tactical aids, could be a source of conflict in support of the relationship between environmental deterioration and violence. The possibility of interstate conflict between countries with shared water resources may be imminent, taking for instance the argument over water as a resource between Chad and Nigeria (River Niger) and Ethiopia and Sudan Egypt over the Nile River. As Naff (1992, p. 25) reports, "the strategic reality of water is that under the circumstances of scarcity, it becomes a highly symbolic, contagious, aggregated, intense, salient, complicated, zero-sum, power-and-prestige-packed issue, highly prone to conflict and extremely difficult to resolve." Even the former Egyptian foreign minister and later Secretary General of the United Nations, Boutros Boutros-Ghali, has predicted the possibility that "the next war in our region will be over the waters of the Nile, not politics" (Gleick 1991, p. 20). However, despite the obvious, scholars such as Katz (2011) are of the opinion that the risk of water being a source of conflict is being overstated and as Allan (2002) and Tir and Ackerman (2009) have variously stated, countries are more likely to cooperate than fight over water, even in the Middle East. Population growth has also been linked with environmental degradation and violence, with poverty and technology added as critical variables (Barnett 2013, p. 197).

The Environment and Conflict (ENCOP) Project, based in Zurich, and the Toronto Project (Project on the Environment, People, and Security at the University of Toronto), both of which have produced reports that offer methodical explanations of the relationship between population, environmental/climatic change, and conflicts. The idea that conflict in Africa is caused by natural resources has received a lot of scholarly attention (Alao, 2007; Cilliers and Christian, 2000; Hirsh, 2007; Hodges, 2003 and Keen, 1998). Numerous studies have hypothesized that both their scarcity and abundance are

what fuel armed conflict (Collier 2000; de Soysa 2000); still other studies have hypothesized that inequitable distribution of the proceeds from resource extraction has contributed to the violence in West Kalimantan (Peluso and Harwell 2000), Nigeria's Niger Delta (Watts 2001), and Bougainville Island (Boge 1999). Researchers do, however, generally agree that although climate change may not directly cause war, it may, in some cases, raise the probability of conflict inside states. Because of this, climate change is frequently referred to as a "threat multiplier."

5 CONCLUSION

Due to the new and growing issues in the international system, it has become increasingly difficult to anticipate the future due to the constantly shifting and dynamic character of international security. This study made the case that environmental security is not only a worthwhile area of study in and of itself, but also has a lot to offer security studies. Recognizing the origins of threats, the state of security, the application of security, and strategies to undo crisis politics, as well as the ethics of security and securitization, are all impacted by research from the field of environmental security studies. The purpose of this study was to make environmental security studies a top priority for all security researchers and practitioners. It also shares the opinion that environmental changes are merely one part of the hazard's humans confront. Like this, the degree to which and flexible individuals are to environmental changes depends on societal elements that lead to insecurity, such as war, fraud, trade reliance, and liberalization of capitalism.

Conflicts of interest

The authors declare no conflict of interest.

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