Introduction

The impact of environmental degradation and consequences of environmental changes are increasingly associated with non-conventional notions of security. Considering the environment as a threat to individual, national, or global security has created a new agenda in the discourse of security studies. The increasing scope of international security now readily includes environmental degradation, global warming, and climate change. These issues have extended human understanding of environmental change, conflict, and vulnerability and explored the roles of conservation and sustainable development in promoting peace, stability, and human security.\textsuperscript{1} This is a broad definition of environmental security, as considered by a large number of academics and proponents. The importance of understanding environmental security is two-fold. First, one has to understand the transformations in the theoretical developments of the concept of ‘security.’ Second, one also has to envisage the link between environmental change and livelihood strategies of human beings on the local level and the broader impact of environmental changes on a society. These two dimensions help define environmental issues as important factors of security.

The academic strength of environmental security and its current position in the international security discourse largely depend on the answers to a few essential questions: “what is security?,” “Whose security are we talking about?,” “What counts as a security issue?,” and “how can security be achieved?”\textsuperscript{2} Environmental security offers an intricate relationship between the contemporary environmental changes in the world and environment-led threats and cooperation.
Looking at the question – is environmental degradation a security threat? –, this paper argues in favor of a revised framework of security that includes environment as a key determinant. Later, the paper explains the conceptual linkages between environmental degradation and security through several theoretical viewpoints. The paper primarily focuses on the contributions of the constructivist school of thought to explain the idea of environmental security. The paper also establishes a link among environment degradation, threat to life and vulnerability. This linkage helps to understand the relationship between environmental degradation and potential conflicts. Primary information on the prevalence and effects of ecological degradation and climate change are utilized to support the thesis. Finally, the paper concludes with the argument that environmental changes hamper individual security by affecting livelihoods and promotes transnational security crises for states and regions. Hence, environmental degradation is a significant threat to security for both individuals and nation-states.

**Conceptual Understanding of Security: The making of an alternative security discourse**

With the end of the Cold War in 1990, the study of international security added a new dimension. New conceptions of security (e.g. human security) considered that the traditional notion of state-centric security, typically defined by military aspects, was insufficient to explain emerging threats. As an alternative to the conventional understanding of security affairs, human security discourse incorporated poverty, environment, and intra-state conflict as threats to an individual’s life.³ Thus, the security discourse experienced a shift from traditional to nontraditional security. The traditionalists, backed by political realism, define security in terms of power.⁴ In realism, meaning is closely linked to the military capability of a state. This state-centric and conventional concept of security has been challenged by the post-realist security scholarship. This is the reason why redefining the concept of national
security has been a prime target of numerous research agendas since the 1980’s. Nontraditional security is a significant shift from the conventional idea of security to a new paradigm of security that includes poverty, environment, health and social instability as threat factors.\textsuperscript{5} There are two subcategories of followers of the nontraditional security approach: wideners and the deepeners. Wideners reflect the new scope of the security studies and have included diverse issues (e.g. environment, internal conflict, and economic crisis) as part of security affairs. On the other hand, deepeners discuss the focus of security (i.e., whose security is being threatened).\textsuperscript{6} Apart from these two categories of nontraditional aspects, there are security concerns that are not limited by borders. These transnational security concerns include ethnic conflict, weapons of mass destruction, political instability, and international organized crime (e.g. drug and human trafficking).

The Copenhagen School, led by Barry Buzan and Ole Wæver, has developed a framework called securitization to conceptualize security. This theory introduces a social-constructivist perspective that considers how problems are transformed into security issues.\textsuperscript{7} The Copenhagen School hypothesizes that security can be understood as a result of ‘speech acts,’ a process of repeated usage of the event in the public domain, and through this process, a perceived problem becomes an important agenda for national and international security.\textsuperscript{8} Securitization labels an issue as its prime concern and transforms the way the issue is dealt with the concerned stakeholders. According to the concept of securitization, any security problem can be transformed into an existential threat that requires exceptional, emergency, and rescue measures. A kind of ‘political manipulation’ is present in the whole process of convincing the concerned actors (e.g. activists, politicians, government, donors) that environmental change is a significant security matter. Buzan and Wæver have projected their logic to establish the idea that security is a socially constructed concept. They have also
proposed a methodological survey, different from the traditional approach to study security, focusing on the details of specific issues such as poverty, environment, and climate and their interrelation with the ‘locus’ of security. Here, locus refers to the context and framework of security. Through the process of securitization, a potential issue may transform into a security matter. Importantly, it may not necessarily happen because a real existential threat exists but because the issue is presented in such a way that creates the perception of a security threat.

Followers of this school of thought advocate that security is a speech act, because, the process of securitization is a methodological task facilitated by the stakeholders (securitizing actors) who speak in favor of the particular issue and debate it so that the image of the issue is built as a proper referent object of security. The Copenhagen School has conducted research on the nature of the securitizing actor, the scope of the diverse context, and the framework of the act of securitization. Typical examples of securitizing actors include political leaders, bureaucrats, governments, media, lobbyists, and various pressure groups. Actors can express their opinion about or perform a task to securitize a particular referent object. However, no single actor conclusively takes the credit of securitizing the issue. Therefore, when an issue is securitized, it reflects the institutional and hierarchical structures that exist in the society. In other words, the socially constructed nature of the society becomes reflected in the securitization process. Along with the actors and the environment (context of securitization), another significant factor is the audience of the securitization process. The audience is the citizen of a state or a particular section of the society. According to Buzan and Wæver, the “securitizing move” will only be successful if the audience accepts that there is an existential threat to a shared value. Traditionally, in a nation-state, the government is the primary driving force behind the securitization process. Buzan and Wæver have also concluded that government usually plays the role of the speaker for and promoter of security for a society and a state. It is part of the national responsibility that the
government feels is mandated to it. Nevertheless, civil society has contributed significantly in the securitization process. The environmental movement is an example that is securitized by both non-state and state actors.

Wideners have significantly contributed to expand the scope of the security discourse. Apart from the state-centric idea of national security that scholars have mostly dealt with, issues of societal security have gained prominence. An issue is a matter of concern under societal security if a society perceives it to constitute an existential threat. Similarly, it becomes necessary that society perceives the issue as a security concern. This implies that a society can also “de-securitize” an issue (i.e., cease to perceive it as a threat). Richard Ullman, in his article “Redefining Security,” sought to widen the concept to non-military threats, including threats to the quality of life of citizens in a society. As a result, defining non-military threats has become a challenging task for scholars. The International Conference on the Relationship between Disarmament and Development convened by the United Nations General Assembly in New York in 1987, was the first time that non-military threats to security moved to the forefront of global concern. Later on, the United Nations Human Development Report, 1990, emphasized economic crisis as a threat to human security. With the developments both in scholarly activities and practical aspects of nontraditional security paradigm, new concept of security constitutes underdevelopment, declining prospects for development, poor governance, and resource waste as its referent objects.

**Is the Environment a Security Threat? Linking environment and security**

The literature on environmental security has introduced an interdisciplinary perspective into security studies. Environmental security encompasses the interactive dynamics of the diverse human and natural networks that constitute the modern world.
Furthermore, environment as a resource has strategic significance for nation-states who build power through natural resources like water, oil, gas, and various other minerals. Increasing state control over environment and natural resources has spillover effects such as environmental degradation, resulting in undue catastrophes. These include uncontrolled migration, high population growth, and human casualties. Such catastrophes have become real security concerns for the affected states. Traditionally, the realist understanding of security does not include the environment as a matter of concern. However, post-realist scholars do include the environment as an important security concern. Shaukat Hassan in *Adelphi Paper* discusses the relationship between the environmental foundation of a nation and its effect on the economy. According to his argument, continuous environmental calamities decrease the economic growth of a nation, hamper its social cohesion, and destabilize its political structure.\(^{16}\) Environmental change reduces economic opportunities for a country by causing demographic displacement within states and across international borders. An unexpected movement of population across the international border raises political tension between neighboring countries. Environmental stress can also cause an affected sub-national group to shift its allegiance from the centre to the periphery, increasing the possibilities of political disorder, civil strife, and even insurgency.\(^{17}\) In the southwestern part of Bangladesh, the government had undertaken the Coastal Embankment Project in the 1960s without taking into consideration its environmental impacts.\(^{18}\) Initially, this project contributed to better agricultural production. However, it irreversibly affected the region’s ecosystem. As a result of such unplanned development project, a whole range of economic disasters such as water-logging and silting of rivers affected the region. The project hampered the productivity of the soil and thereby caused residents to migrate to already over-populated urban areas in search of a better livelihood.
Environmental calamities trigger policy choices that can catalyze a potential conflict or aggravate an existing one. Environmental devastation faced by a country due to natural calamities, especially those originating from beyond its borders, eventually sour bilateral relations and hamper regional stability. In recent times, environmental challenges ranging from pollution, excessive carbon emissions and rapid population growth have led to increased scarcity of natural resources like water, energy, and food. The case of Darfur is the most suitable example in this regard. Darfur faced relentless desertification over the past several decades. The process of desertification had eroded the surface clay and soils, and finally depleted the productivity of arable lands in the greater region of Darfur and particularly in northern Darfur. This environmental degradation caused forced ecological migration towards the southern part of Sudan. This internal displacement caused tensions in the issues of land use and resource sharing, which finally continued to threaten peaceful coexistence and the social cohesion of Darfur. Hence, the situation ignited local tensions and provoked violent resource-based conflicts since February 2003.

There are debates on environment as the primary source of conflict or cause of war. Alan Dupont argues that environmental difficulties are unlikely to be the primary cause of major conflict between states. Environmental issues, according to Dupont, interact with more direct causes of conflict to prolong or complicate existing disputes. For example, environmental degradation can create refugee crisis between two neighboring countries. Now, refugee issues may aggravate conflicts in between the neighbors. Thus environment is not the direct cause of a conflict. Daniel Deudney has also vehemently opposed considering environmental degradation as a reference object of international security. According to Deudney, the concept of national security, as opposed to national interest or well-being, has been centered upon organized violence. He gives the example of natural calamities like earthquakes or hurricanes that had caused excessive damage; he opposes the notion that such
events are threats to national security. However, Deudney’s analysis is flawed as it is very biased to the natural disasters which have comparatively fewer effects on developed countries. He does not consider the lacking capacity of underdeveloped countries to tackle these environmental disasters. For example, the February 2010 earthquake in Chile was stronger than the one that devastated Haiti just a month before. Yet, Haiti faced more casualties and damages than Chile, because of its poor and unprotected infrastructure, lack of preparation to face such disaster, and absence of emergency response to the post-earthquake situation.

On the contrary, Chile maintained its building codes and built its own emergency response system for such situations. Chile is a wealthier nation with the experience of tackling such seismic catastrophes. While Haiti has experienced several catastrophic earthquakes over the course of its history, the country’s lack of building codes, preparation and disaster planning resulted in total crisis in the aftermath of the 2010 earthquake. Haiti still carries the devastation and is on a slow path to recovery.

Debates are also concerned with the link between environmental problems and involvement of the defense institutions to counter potential conflicts arising from these kinds of problems. Daniel Deudney suggests that applying the concept of securitization in environmental problems is nothing but a convincing act for a statesman or actor who runs the state to legitimize military action to protect the state. Wæver and Brock have also identified the idea of linking the army and environmental degradation as a counterproductive linkage. This is because of the nature of the traditional defense institutions controlled by the state lack instruments of cooperative measures or support in tackling natural disasters like cyclones or floods. However, this argument may not be applicable to the modern security institutions of many states. Modern military institutions are quite adaptive to such situations and develop capacities to handle these disasters and conduct relief and recovery programs, among other
activities. Moreover, climate change receives considerable attention in strategic documents of the defense forces in many countries such as the United States, Germany, France, China, Finland and Australia.\textsuperscript{26} Today, these defense forces are capable of disaster management and post-disaster rehabilitation program, and are further supported by non-governmental organizations and international donors that provide post-disaster service to the affected population. In May 2009, Bangladesh faced cyclone \textit{Aila} in its south-western coastal belt. The Armed Forces of Bangladesh took the lead role to manage the post-disaster conditions in terms of massive immediate response and subsequent rehabilitation of the affected people. The Bangladesh army and Coast Guard reestablished the local communication and helped in setting 278 water treatment plants in 14 cyclone-affected districts of Bangladesh.\textsuperscript{27} They continued rescue operations in those areas.

The idea of human security widens the focus of the environmental security beyond its conflict-oriented focus. Human security usually concentrates on the security of the individual or groups in a society to ensure their well-being. Human security or insecurity is then a function of multiple factors affecting the well-being of the concerned group. A 2000 International Union for Conservation of Nature (IUCN) & Organization for Economic Co-operation and Development (OECD) report, \textit{State of the Art Review of Environmental Security and Co-operation}, mentions that the human security approach takes focus away from state-centered interests and highlights the multiple stresses (e.g., poverty, food crisis, no access to health service) that may cause insecurity and the types of resilience that promote security for individuals and groups.\textsuperscript{28} The report advocates the idea that security and insecurity are closely related to poverty, resource scarcity, and social discrimination. This approach also advocates that environment-induced conflict is one of the many factors influencing individual or societal security. In the areas of environment and security, the prominent example of scholarly work is the Global Environmental Change and Human
Security Project (GECHS) initiated by Steve Lonergan, which describes the linkages between environmental change and human security. GECHS addresses a particular case of population displacement and scrutinizes how environmental change and other concerned stimuli contribute to insecurity and vulnerability.\(^{29}\) The research has explored the status of environmental refugees as a significant cause of human insecurity that arises because of environmental change. The GECHS report finds that there are many hypothetical statements available regarding the causal relationship between environmental degradation and displacement. However, it is difficult to identify or isolate the specific role that environmental drivers play in causing the displacement of people.\(^{30}\) Therefore, environmental change or degradation is yet to be established as the primary cause for displacement led internal conflicts.

Going back to Daniel Deudney’s critique of environmental security, he concludes that the making of environmental security is an outcome of the causal relations of securitization of the environment and the policy response of the state institutions.\(^{31}\) Though this thesis could not explain many unanswered questions raised by scholars, it has successfully linked the securitization process and the environment, which legitimizes state policy initiatives regarding the mobilization of different institutions in tackling environment-induced security threats. Furthermore, the environment has also been identified as a cross-border issue that requires a shared responsibility of concerned nation-states. This transnational character of environmental degradation upholds its links with international security. Therefore, securitization is not always able to satisfy all requirements to link the environment and security. It is often a fusion of many concepts encircling environment and security that helps to identify environmental changes as a security threat.

**Environment-Threat-Vulnerability Nexus: Real security threat**
The environment-threat-vulnerability nexus plays a vital role in proving that environment is a real security threat. Two aspects of this nexus are significant. First, ecosystem integrity is crucial for the population’s sustainable livelihood. Therefore, certain environmental conditions—often resulting from environmental change, “such as pollution depletion, or natural disasters”—can pose an acute threat to security. Environmental degradations and climate change increase an individual’s vulnerability. Moreover, environment is linked with international security as it becomes evident that national solutions to environmental problems would not be sustainable in the long-run without international cooperation. In one of its report, the United States Agency for International Development (USAID) mentions that only 1.5% of Haiti was forested in 2008, in comparison with 60% in 1923. Haiti has lost its forest along with its agricultural self-sufficiency. After a dramatic rise in food prices in 2008, violent protests culminated in the city of Alexis. This has created enormous plight for the Haitians and has contributed to Haiti’s political instability. It was not only the 2010 earthquake that devastated this Caribbean nation, but also a continued destruction of the environment that has worsened, instability, poverty and social development within the country.

The second aspect is the direct relationship between environment and transnational conflict. One assumption in this context is that a number of environment-related factors such as environmental degradation, depletion, and lack of access to natural resources can lead to the outbreak of violent conflict. Günther Baechler shows how environmental conflicts are inevitable because of “overuse of renewable resources, overstrain of the environment’s sink capacity, and impoverishment of the space of living.” He argues in favor of the existence of the environment-violence nexus, and notes:
“violent conflicts triggered by the environment due to degradation of renewable resources (water, land, forest, vegetation) generally manifest themselves in socioeconomic crisis regions of developing and of transitional societies if and when social fault lines can be manipulated by actors in struggles over social, ethnic, political, and international power.”

There have been attempts to link ecological degradation and resource scarcity as the significant risk factor for a society and a nation. Scarcity generates more demands for the natural resources. Lack of supply in response to an increasing demand increases environmental risks and brings adverse changes to the world system. Thus these changes raise environment-induced tensions or conflicts. The following model illustrates the potential for economic activity to cause environmental changes that lead to a conflict.

The diagram shows the linkage between human activities and the regional and global climatic and environmental changes. Further, this relationship escalates towards political, ethnic and civil wars. This dispute leads to inter-state or intra-state conflict with regional or
global implications. Chalecki has explained how the patterns of human behavior and its interaction with the economic variables of society can bring climatic changes both regionally and globally. The relevant example is the increase of carbon dioxide gas emissions due to industrialization in many parts of the world. Climate change and ecological degradation hamper the natural flow of resource supply and lead to political disputes as well as ethnic and civil unrests. Due to the transnational nature of resources, conflict due to scarcity affects the regional or global level in the long-run. Homer-Dixon has investigated the relationship between population growth, renewable resource scarcities, migration, and violent conflict and thus has contributed in framing a nexus among environment, threat, and vulnerability. He mentions three reasons that connect the environment with conflict. These are the degradation and depletion of renewable resources, the increased consumption of those resources, and their uneven distribution. This annotation establishes environment as the core referent object of security.

Impact of Environmental Degradation and National and International Responses

The Germanwatch Global Climate Risk Index reveals that more than 650,000 people died worldwide from extreme weather events, and losses of more than $2.1 trillion occurred globally during 1990 to 2009. The State of the World 2010 and 2007 Intergovernmental Panel on Climate Change reports provide detailed information on environmental degradation and its impact on human life and biodiversity. According to the reports, 50% of forests have been cleared. Only one-fifth of the Earth's forests remain intact. Forest area has increased slightly since 1980 in industrial countries, but has declined by almost 10% in developing countries. The rapid industrialization of developing countries has had an inverse effect on its forests.
Carbon dioxide emissions are a big crisis. Two major sources of carbon emissions are coal and petroleum.\textsuperscript{44} Global carbon emission raised the average temperature of the world. The 19\textsuperscript{th} century Swedish scientist Svante Arrhenius found that human activities were responsible in the large emission of CO\textsubscript{2} to the atmosphere, which could cause to global warming and sea level rise.\textsuperscript{45} This global warming theory found another strong advocate in the 20\textsuperscript{th} century, when an English engineer, Guy Stewart Callendar, researched a doubling of CO\textsubscript{2} could gradually bring a 2°C rise in future centuries.\textsuperscript{46} Recent literature shows that with the current rates of emissions, the earth will experience 1°C (1.8°F) warming by 2030 at the latest, and 3°C (5.4°F) increase in temperature before the end of the next century.\textsuperscript{47} This can have tremendous consequences, such as widespread extinction of plant and animal species, sea level rise, and coastal flooding. It is projected that by 2050 the sea level will rise approximately 1.5 meters, flooding low-lying countries like Bangladesh and the Maldives.\textsuperscript{48} Numbers of storms and other climatic disorders such as hurricanes, cyclones, and typhoons will increase due to global warming. Biological diversity will be severely hampered. The ocean plays a vital role in maintaining biodiversity, regulating climate and weather patterns, and providing food and livelihood for millions of people worldwide. These roles will be hampered significantly. Coastal areas are increasingly experiencing habitat loss due to sea-level rise and severe storm events. As a result of the rise in sea-water temperature, the intensity of extreme weather events such as hurricanes, typhoons, and cyclones is expected to rise.\textsuperscript{49} Climate change and ocean acidification create negative impacts on marine and coastal ecosystems. Overfishing, pollution, coastal destruction, and declining water quality cause this degradation, which is already limiting coastal and marine ecosystems in performing their functions.\textsuperscript{50} A sharp rise in urbanization also creates pressures upon nature and makes the process of resource distribution uneven. Hence, environmental degradation is caused by depletion of natural resources and damages to the ecosystem.
There are policy options as response measures to these environmental crises. One of these responsive policy measures is known as adaptation strategy. This is considered as the central focus of environment-based development activities. Adaptation refers to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. This strategy refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change. As part of the national response, countries usually go through a consultative process to integrate environmental and climate change issues into sectoral policies. The government also conducts needs assessments of the availability of resources to implement relevant policies. Institutional capability at the state level has been identified as a major constraint in implementing policy and enforcing environmental acts and regulations. To overcome these constraints, states concentrate on developing the capacity of individuals and institutions in this regard. The government commissions research studies and implements action plans to prevent further deterioration of the environmental resource base and to assess making environment-friendly sectoral policies. Furthermore, nations explore avenues for regional and international cooperation to fight against environmental insecurity. For example, Bangladesh has adopted a set of policies to manage its environment more effectively. Bangladesh began its activities with limited capacity to fight against the impacts of climate change. However, it is now playing a proactive role in many regional and international environmental forums such as South Asian Association for Regional Cooperation and the United Nations. The reason for being proactive is that Bangladesh has been identified as one of the most vulnerable countries by the United Nations. The Bangladeshi government signed and ratified the 1992 United Nations Framework Convention on Climate Change (UNFCC) and kept its commitment to adopt the National Adaptation Programs of Action.
These programs address urgent needs for adaptation strategies to avoid future vulnerabilities.

Recently, the international community has paid much attention to the security implications of environmental problems and climate change. In 2004, the Chief Scientific Advisor of the United Kingdom, Sir David King, suggested that “climate change is a far greater threat to the world’s stability than international terrorism.” His assertion was further supported by several statements made by Margaret Beckett, the British Foreign Secretary, between May 2006 and June 2007. During her stay at the Foreign Office, she openly declared, “Climate security as the central plank of British foreign policy.” In October of 2006, at a major foreign policy address in Berlin, Mrs. Beckett noted, “Today, being a credible foreign minister means being serious about climate security.”

A group of eleven high-ranking, retired American military officials released a report in April 2007. They argued that climate change would act as a “threat multiplier” that makes existing concerns, such as water scarcity and food insecurity, more complex and intractable and presents a tangible threat to the national security interests of the United States. In the Fifteenth Conference of the Parties (COP) of the UNFCC in Copenhagen, the participatory nations have agreed to explore further collective approaches to include environmental policies and adaptation measures as a part of their national strategy. The Sixteenth COP was held in Cancun, Mexico in 2010. Governments of participant countries renewed their hopes for a concerted effort to combat climate change. They negotiated a ‘balanced package’ (‘six-pack’ package), which combines progress on mitigation, transparency (measurement, reporting and verification), adaptation, finance, technology, and REDD (reducing emissions from deforestation and forest degradation). Finally, the governments set up a new ‘Green Climate Fund’ to manage $100 billion in aid by 2020 to nations who are affected by climate change. The fund will be
monitored by a 24 member board chosen evenly from developed and developing nations. Unfortunately, the Cancun Declaration could not address the crucial question of by how much all nations will cut carbon emissions, which are chiefly responsible for global warming. Nevertheless, on the success of the Cancun Conference, Christiana Figueres, the Executive Secretary of UNFCC, mentions that “nations have shown they can work together under a common roof, to reach consensus on a common cause.” This effort has restored the faith of the policy-makers on a multilateral approach to combat climate change and environmental insecurity.

International pressure along with national awareness is rising to protect the global climate and environment. National governments are collaborating with their international development partners. The Government of Bangladesh is implementing long-term planning to manage environmental risks with the help of the international development agencies. The Asian Development Bank, the World Bank, Department of Foreign and International Development (UK), Canadian International Development Agency, and other development partners are involved in building the capacity of government and non-government organizations to produce an effective and efficient governance mechanism to fight against environmental threats. Therefore, managing environmental security has become a significant policy issue where the stakeholder is not only the government of a state; various non-governmental and international development agencies are also involved in the process.

Figure 1 explains the policy formulation process of adaptation strategies regarding environmental management. This becomes a collective process to attain environmental security. Environmental adaptation strategies today are formed and implemented collectively by different stakeholders: governments, nongovernment organizations (NGOs), the
international donor community, and experts from home and abroad. They act together in innovating strategies to ensure environmental security. The above figure also portrays the number of responsible actors who are involved in the context of securitizing environment. Addressing environment security is no longer dependent only on the national actors—it becomes transnational considering the context of further cooperation among the divergent actors. This cooperation framework may embrace a new idea of “collective security” from the perspective of the 21st century. Here, all the actors are willing to design a framework of security to decipher the codes of environmental threats and promote mutual engagements.

From the securitization perspective, one can also relate environment and security through this framework. Numbers of securitization actors are increasing from the vulnerable population group to more active agencies like NGOs and international donor communities (e.g. donor countries, the UN, international NGOs). These actors formulate policies that are foremost concerns of the national strategy of a country. “Speech act” (i.e., the politicization factor of securitizing the environment) is significantly present when these actors are involved to create a framework of environmental security and influence this framework to be incorporated to the national security strategy. Therefore, both national and international responses to negate environmental risk factors are significant to justify environmental change as a prominent security threat.
Concluding Remarks

In the 21st century, nations face diversified threats and vulnerabilities, ranging from religious extremism to cyber-terrorism. The nature and sources of various security threats transform the notion of the security. In many cases, the acts of the concerned stakeholders also define the nature of the security. One has to consider these three factors to comprehend security threats today: the nature and act of the concerned actors, the scope of the diverse context, and the framework of the security act. This paper critically addresses different schools of thought in security studies and especially focuses on how environment is a security threat. It discusses mainly the contribution of constructivist school of thought in the creation of the idea of environmental security. The role of securitizing the environment has been critically discussed. In explaining securitization, it has been found that the concept could not successfully answer the question—‘whose security is addressed?’ The human security approach helps to answer this question by ‘deepening’ the debate. Deepeners discuss more about the extent of harm to an individual and a society. The consequences are different but
mutually affect each other. Formulating cooperation strategies to encounter environmental threats requires all the concerned actors to critically observe whose security is addressed and how the security can be addressed.

To consider environment as a security threat, it is obvious that conventional security discourse requires reform of its state-centric conceptual underpinnings. Further, a mono-disciplinary approach is highly unlikely to perform the task of understanding the security concerns in the 21st century. An interdisciplinary research approach is essential to understand the environmental security properly. This approach should involve a range of experts from environmentalists to defense specialists; an understanding the research questions and permit more detailed investigation about security; observation of the capacity of the concerned actors to secure the subjects; and a definition of the network of security actors who define/redefine security. Finally, the approach should successfully correlate the causal factors of environmental threats to human security. Over the years, research on the environment-security nexus has experienced new developments. Identifying environmental threats as security concern becomes an interdisciplinary practice for academics and activists. These interdisciplinary research scholarships deal with the idea of environmental security, thereby enriching security studies discourse with more insightful thoughts.

Endnotes

5 The definition of the nontraditional security is used by the Consortium of Non-traditional Security Studies in Asia (NTS-Asia). For more details see NTS-Asia website, www.rsis-ntsasia.org.
6 For a better understanding of the concepts of “wideners” and “deepeners” one can read: Sarah Terry, Definition Security: Normative Assumption and Methodological Shortcomings, (Canada: University of Calgary, 1998), 1.

9 Rens van Munster, Logics of Security: The Copenhagen School, Risk Management and the War on Terror, (Denmark: Political Science Publications & University of South Denmark, 2005), 3-5.


19 To know more about the environmental impact on Darfur’s conflict situation, one can read: University for Peace, Environmental Degradation as a Cause of Conflict in Darfur (conference Proceeding), (Ethiopia: University for Peace, 2004), 12-13.


23 Ibid. Bajak.


26 For a list of countries please see: Michael Brzoska, “Climate change as a driver of security policy,” Paper prepare for SGIR 2010, (Stockholm: SGIR, September, 2010), 8-10.

27 International Federation of Red Cross and Red Crescent Societies, DREF Operation: Bangladesh Cyclone Aila, (Dhaka: IFRC, 2009), 2.


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