Building A New Environmental Governance for Sustainable Future

Sung-gil Lee
Kyung Hee University

August 2011

Building A New Environmental Governance for Sustainable Future

1. Introduction

In order to understand the seriousness of climate change's impact on human security, it is worth referring to an essay titled, "A Climate Culprit in Darfur"[1] by UN Secretary General Ban Ki-moon. Published on the Washington Post one day before the World Day to Combat Desertification and Drought[2] in 2007, the essay pointed out that the tragedy in Darfur, Sudan[3] which claimed more than 200,000 lives was a man-made disaster. His opinion was agreed by many because scientific research found that declined precipitation in southern Sudan and the draught and desertification that followed were caused, or at least, accelerated by climate change. According to the UN statistics, average precipitation in southern Sudan has declined some 40 percent since the early 1980s. Scientists at first considered this to be an unfortunate quirk of nature. But subsequent investigation found that it coincided with a rise in temperature of the Indian Ocean, disrupting seasonal monsoon. This suggests that the drying of sub-Saharan Africa derives, to some degree, from man-made global warming.

Climate change is not a matter of inconvenience but a matter of survival which poses the greatest threat to our future survival. As we see in the Darfur case, climate change has emerged as one of the major threats that menace humanity in this century. In addition, scientists predict that more catastrophic events are to come in the near future unless we take urgent measures to stop climate change. In this essay, I would like to illustrate how global environmental governance has evolved over the past four decades and to suggest that the current environmental regime requires a completely new perspective in order to better tackle the unprecedented environmental crisis.

Although sustainability can be defined in many ways, basically it means capacity to endure or survive threat. In this regard, the essay of Ban Ki-moon has a significant meaning in the international community because his organization's primary mission is to maintain international peace and security. Degraded environment caused by climate change is definitely posing a serious threat to global security as Ban Ki-moon mentioned in his article. It also suggests that our security cannot be guaranteed without ensuring environmental sustainability.

2. Global Environmental Concerns and Responses

When it comes to the environment, the traditional concept of geographical border no longer can play a deciding role as byproducts of so-called industrialization and massive consumption have spread beyond over national borders. Against this background, an international environmental regime has emerged by request of the international community to better address environmental issues.

---

[1] Ban Ki-moon, A Climate Culprit in Darfur, The Washington Post. June 16, 2007.

[2] World day to combat desertification and draught is a United Nations observance each June 17.

[3] The Darfur conflict is an ongoing military conflict in the Darfur region of Sudan. It is a conflict along ethnic and tribal lines that began in 2003.The conflict is caused by the Arab famers who need to find water for their camels. So they take their camels farther and farther south. In doing so, the Arab tribes take over the land occupied by the indigenous farming communities. Many droughts, desertification, and overpopulation have occurred in the last decades. This has made the problem worse.

It was 39 years ago when the international community first convened a global conference to discuss the state of the global environment and the relationship between human and the environment. The United Nations Conference on the Human Environment held in Stockholm, Sweden from June 5 to 16, 1972 was the UN's first major conference on international environmental issues, and marked a turning point in the development of international environmental politics. The conference was attended by the representatives of 113 countries, 19 inter-governmental agencies and more that 400 intergovernmental and non-governmental organizations. And it was widely recognized as the beginning of modern political and public awareness of global environmental problems. The conference also led to the creation of the United Nations Environment Programme (UNEP) and establishment of environment departments by many governments.[4]

Twenty years later, UN Conference on Environment and Development (UNCED), also known as the Rio Summit was held in Rio de Janeiro from June 3 to 14, 1992. With 172 governments and 2400 representatives of NGOs attending, the conference triumphed major environmental agreements including the UN Convention on Climate Change and the Convention on Biodiversity. And the Convention to Combat Desertification was also adopted two years later as a result of the conference. Then another twenty years has almost passed. We have only one year to go before the Rio+20 which will be held in Rio de Janeiro in 2012, which many expect to be a crucial moment to talk about sustainable future for the human race.

3. A Climate of Conflict

One of the most famous publications warning climate change as a security issue is 'A Climate of Conflict[5]'. It is a report from an organization called 'International Alert[6]' which analyzes the links between climate change, peace and war. This report takes findings of the Fourth Assessment Review of the Inter-governmental Panel on Climate Change[7] as its starting point and looks at the social and human consequences that are likely to ensure, particularly the risk of conflict and instability. In order to understand how the effects of climate change will interact with socio-economic and political problems in poorer countries, the report traces "consequences of consequences". This process highlights four key elements of risk – political instability, economic weakness, food insecurity and large-scale migration. Based on the analysis of these elements, the report emphasizes that the international community should act to address climate change for peace-building. Many of the world's poorest countries and communities face a double-headed problem: that of climate change and violent conflict. There is a real risk that climate change will compound the propensity for violent conflict, which in turn will leave communities poorer, less resilient and less able to cope with consequences of climate change. According to the report, there are 46 countries – home to 2.7 billion people – in which the effects of climate change interacting with economic, social and

[4] John Vogler, Environmental issues, The Globalization of World Politics, p.349

[5] Dan Smith and Janani Vivekananda, A Climate of Conflict – the links between climate change, peace and war, Nov 2007, International Alert.

[6] International Alert is an independent peace building organization that has worked for over 20 years to lay the foundations for lasting peace and security in communities affected by violent conflict.

[7] The Intergovernmental Panel on Climate Change was established by WMO and UNEP to assess scientific, technical and socio-economic information relevant for the understanding of climate change, its potential impacts and options for adaptation and mitigation. It was awarded of the Nobel Peace Prize with Al Gore in 2007.

political problems will create a high risk of violent conflict, and furthermore poses threat to our security.

4. Environmental Security

Environmental security has been one of the key new security issues that have helped to broaden the meaning of security in the post Cold War period. It is the product of efforts by the environmental movement to raise the profile of environmental issues and contest the practices of national security; the increasing recognition that environmental problems demand common security approaches and the growth in multilateral environmental agreements; and the strategic vacuum created by the end of the Cold War.[8] There are a plenty of environmental issues that threat security such as water shortage, nuclear waste and air pollution. However, few can deny that climate change is the most important factor among various environmental security issues.

Climate change is in the center of the debate over environmental security. In recent years, climate change has come to be viewed as a core development challenge that carries potentially serious implications for international peace and security. Climate change will draw our coastlines, alter where we can grow food, change where we can find water, expose us to fierce storms or more severe droughts likely force large numbers of people to move from their homelands. Climate change will undermine the economic and agricultural base of many countries, particularly the most vulnerable developing countries.[9] It is not surprising that the United States military authorities began to see climate change as threat to national security. Through recent war games and intelligence studies, U.S. military analysts and experts concluded that over the next 20 to 30 years, vulnerable regions, particularly sub-Saharan Africa, the Middle East and South and Southeast Asia, will face the prospect of food shortage, water crises and catastrophic flooding driven by climate change that could demand an American humanitarian relief or military response.[10] U.S. President Barack Obama, collecting his Nobel Peace Prize in 2009, also said that climate change will fuel more conflict for decades. That insight was grounded not on the analysis of environmental activists but that of a group of U.S. generals.[11]

5. International Environmental Governance

Before the era of globalization there were two traditional environmental concerns which are conservation of natural resources and the damage caused by pollution. Neither pollution nor wildlife respects international boundaries, and action to mitigate or conserve sometimes had to involve more than one state. Such global problems need global solution and pose a fundamental requirement for global environmental governance, yet local or regional action remains a vital aspect of responses to many problems. One of the defining characteristics of environmental politics is the awareness of such interconnections and of the need to 'think globally – act globally'. Despite the global dimensions of environmental changes, an effective response still has to depend upon a fragmented international political system of

---

[8] Allan Collins, op. cit. p.236

[9] Oil Brown and Alec Crawford, *Assessing the security implications of climate change for West Africa*, International Institute for Sustainable Development.

[10] John M. Broder, Climate Change Seen as Threat to U.S. Security, The New York Times, August 9, 2009.

[11] The Economist, Trondheim, Jul 8th 2010.

sovereign states. Global environmental governance consequently involves bringing to bear inter-state relations, international law, and international organizations in addressing shared environmental problems. Using the term 'governance' - as distinct from government - implies the regulation and control have to be exercised in the absence of central government, delivering the kinds of service that a world government would provide if it were to exist.[12] Fortunately, we have seen a set of international environmental agreements ranging from endangered species and the ozone layer to hazardous wastes and the Antarctica. Although not all of them have been successful, they certainly provided member states with opportunities for global cooperation in tackling environmental problems.

The 1992 UN Conference on Environment and Development or Earth Summit was a turning point in environmental governance. The conference held in Rio de Janeiro was the largest international conference so far and raised the profile of the environment as an international issue while concluding several significant documents and agreements, such as Agenda 21 and conventions on climate change and biodiversity. Two years later, the UN convention to combat desertification was adopted in line with the result of the Earth Summit[13]. Concluding these three agreements which are now called three major UN environmental conventions had vast significance because each of them addresses three most important components of our planet respectively – air, species and land. Among many environmental conventions and protocols that aim to protect various components of our planet earth, I would like to focus on the above three agreements because the referent objectives of them, I think, are definitely most basic and indispensable for human existence. Indeed, this idea is the core of my paper on environmental security in the era of climate change. These three components of the environment – air, life and land – are inherently interconnected. That is why we should deal the three together, not separately.

However, there are growing concerns that the current environmental governance structure designed by the UN has reached its limit as the regime failed to adopt a new roadmap for the post-Kyoto era in the 15th and 16th Conferences of the Parties of the UNFCCC due to conflict of interests among stakeholders. In order to respond to environmental threats due to a lack of consensus beyond Kyoto system it is imperative to revise the current underlying principle upon which the current environmental governance structure rests.

The task of rising to the challenge of adaptation to face the social and political consequences cannot be left in the hands of the dysfunctional governance because citizens often fall prey to the dire consequences stemming from it. Accordingly, I would like to introduce an ancient Asian idea of "Heaven, Earth and Man (天地人)"[14] in an effort to seek a new global environmental regime to replace the existing environmental regime. The "Heaven, Earth and Man" philosophy enables a better integration of the three key environmental conventions i.e. UNFCCC, UNCCD and UNCBD. These three conventions pertain to atmosphere, land and species represented by man. The idea of Heaven, Earth and Man also happens to correspond to each of them in order. I will briefly introduce each convention and try to illustrate how they attest to the above correlation.

---

[12] John Vogler, Environmental issues, *The Globalization of World Politics*, 2nd Edition, Oxford Universit y Press: p. 384-385

[13] http://www.unccd.int/convention/menu.php

[14] The "Heaven, Earth and Man" idea first came from the Book of Change.

(1) United Nations Framework Convention on Climate Change

The possible impact of increased carbon dioxide levels in the atmosphere was well recognized over 40 years ago, and by the end of the 1980s there was serious concern that there would be substantial changes in the planet's climate if carbon emissions were not curbed. By the early 1990s, scientists found out that the pattern of natural climate change would be different from that of human-induced change. The international community agreed to adopt the United Nations Framework Convention on Climate Change (UNFCCC) produced at the Earth Summit. A key principle of the climate change regime, written into the 1992 UNFCCC, was the notion of 'common but differentiated responsibilities'. This, in effect, meant that although all nations had to accept responsibility for the world's changing climate, it was developed nations that were immediately responsible because they had benefited from the industrialization which was generally regarded as the source of the excess carbon dioxide emissions that had caused mean temperature increase.

Although the convention was a global agreement to tackle climate change, it set no mandatory limits on green house gas emissions for individual countries and contains no enforcement mechanism. Instead, the convention provides for a protocol that would set mandatory emission limits, which is known Kyoto Protocol.[15] The 1997 Kyoto Protocol to the UNFCCC commits the developed countries to make an average of a 5.2% cut in their greenhouse gas emissions from a 1990 baseline. Within this, different national targets were negotiated.[16] The achievement at Kyoto was to bind most of the developed nations to a set of emissions cuts that varied. It is noteworthy that the Kyoto Protocol offers three market-based mechanisms, namely, emissions trading, clean development mechanism and joint implementation. However, the climate regime has been afflicted by the free rider problem. If some countries join together and agree to make cuts that are costly, then others who do not can enjoy the environmental benefits of such actions without paying. It is regrettable that the US has withdrawn the convention because it had anticipated it would not be able to meet the emission target with its existing industrial system. Anyway, the UNFCCC and Kyoto Protocol were a groundbreaking initiative to cut carbon emission with a capitalistic method. Without implementing the UNFCCC effectively, it would be impossible to get rid of threat posed by climate change.

(2) United Nations Convention to Combat Desertification

Desertification and, more broadly, land degradation, have long been known as both cause and consequences of food insecurity. A reduction in the land's potential for agricultural production may be caused by a variety of degradation processes, including soil erosion; soil fertility loss, biodiversity loss and salinization. When discussing deserts, it's important to keep in mind the distinction between deserts as a specific ecosystem and desertification as a specific process. Deserts are beguiling and wondrous such as Atacama in Chile and the Sahara in Africa while desertification is the rapid, human-induced creation of deserts – the sudden, accelerated conversion of arid or semi-arid land, usually by over-grazing, deforestation, over-extraction of groundwater, drought, over-planting, or some nasty combination of the five.[17] The international community has recognized that desertification is

[15] http://unfccc.int/kyoto_protocol/items/2830.php
[16] http://unfccc.int/essential_background/items/2877.php
[17] Max Ajl, Desertification Threatens Food Security and Climate, http://solveclimatenews.com/news/20091020/desertification-threatens-food-security-and-climate

a major economic, social and environmental security issue to many countries in all regions of the world. As a result of the international community's long quest for how to tackle desertification, the United Nations Convention to Combat Desertification was adopted in 1994.[18]

Its Executive Secretary Luc Gnacadja warned that action is urgent, saying "If we cannot find a solution to this problem… in 2025, close to 70 percent [of the planet's soil] could be affected. There will not be global security without food security." When land covered with vegetation loses its vegetation, it heats up more rapidly, worsening climate change. Hotter soil leaks carbon into the atmosphere faster than non-overheated soil, thereby contributing to the world's carbon dioxide count. Furthermore, as vegetation is eaten up during over-grazing or destroyed, its root structure disappears. Massive amount of plant-based carbon go directly into the atmosphere from the land, where it had formerly been securely stashed away. In addition, the humus that had been stored in the soil also migrates into the atmosphere, contribution to the overload of carbon dioxide already there. Food crisis, flooding, extreme increase in temperature, reduced rainfall, death of domestic and wild animals, soil erosion, soil wastage, deaths due to hunger and reduced rainfall causing water shortage are just a few hazardous effects of desertification.[19] Meanwhile, the Tenth Session of the Conference of the Parties (COP10) of the UNCCD will be held in Changwon, Gyeongnam Province in Korea in October, 2011, for the first time in Asia. The COP10 will be expected to become a good opportunity for the Korean government and civil society to engage more actively in global efforts to combat desertification.

(3) Convention on Biological Diversity

The Convention on Biological Diversity (CBD) was also the result of the Earth Summit in 1992. The CBD was inspired by the world community's growing commitment to sustainable development. The Earth's biological resources are vital to humanity's economic and social development. As a result, there is a growing recognition that biological diversity is a global asset of tremendous value to present and future generations. At the same time, the threat to species and ecosystems has never been so great as it is today. Species extinction caused by human activities continues at an alarming rate.[20] It is also the consequence of climate change. Rapid climate change destroys habitats for species and breaks their food chain. The biodiversity we see today is the fruit of billions of years of evolution, shaped by natural processes and by the influence of humans. It forms the web of life of which we are an integral part and upon which we so fully depend.

Sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generation to meet their own needs."[21] No doubt that ensuring environmental sustainability is the key to ensuring sustainability because there is nothing, so far, to replace our Earth. And it is self evident that what make the Earth so productive that we can live is species on the globe. In other words, environmental sustainability is to seek continuous survival without harming natural resources on which we depend. Thus, environmental sustainability is a matter of security as security means to do

[18] http://www.unccd.int/convention/menu.php
[19] http://www.globalwarmingandu.com/deforestation/desertification/Problems-With-Desertification.html
[20] http://www.cbd.int/history/
[21] Our Common Future, known as the Brundtland Report, United Nations World Commission on Enviro nment and Development, 1987.

something to survive threat. In this regards, protecting biodiversity is a way to ensure our security.

6. Conclusion

There is a real risk that climate change will compound the propensity for violent conflict which, in turn, will leave communities poorer, less resilient and less able to cope with the consequences of climate change. But there is also an opportunity here; if it is targeted and appropriately addressed through a more integrated approach based on the "Heaven, Earth and Man" philosophy which encompasses the three major UN environmental conventions, this vicious cycle can be transformed into a virtuous one.

New global environmental governance should take a profoundly different approach to view the environment, which the western civilization considers a subject of conquest while the eastern civilization puts priority on harmony with it. A hot and dry sky cannot make rain, arid lands cannot support life, and man cannot survive without nature. In this context, we should lead a sustainability revolution for a sustainable future.

Based upon that, the international agreements can provide communities and states with relevant knowledge and technology as well as financial assistance in combating climate change. Indeed, climate change offers an opportunity for a better international cooperation, for it is an issue that can unite otherwise divided and uncompromised international community.[22] Our sustainable future can be guaranteed only when we properly address climate change which is the greatest threat in our century with new environmental governance.

References

[22] Dan Smith and Janani Vivekananda, op. cit. : p.8

Ban Ki-moon, A Climate Culprit in Darfur, The Washington Post. June 16, 2007.
Dan Smith and Janani Vivekananda, *A Climate of Conflict – the links between climate change, peace and war*, Nov 2007, International Alert.
Alan Collins, *Contemporary Security Studies*, 2nd ed. Oxford University Press: p.3
Oil Brown and Alec Crawford, *Assessing the security implications of climate change for West Africa*, International Institute for Sustainable Development.
John M. Broder, Climate Change Seen as Threat to U.S. Security, The New York Times, August 9, 2009.
The Economist, Trondheim, Jul 8th 2010.
John Vogler, Environmental issues, *The Globalization of World Politics*, 2nd Edition, Oxford University Press: p. 384-385
Our Common Future, known as the Brundtland Report, United Nations World Commission on Environment and Development, 1987.
Max Ajl, Desertification Threatens Food Security and Climate, http://solveclimatenews.com/news/20091020/desertification-threatens-food-security-and-climate
http://www.unccd.int/convention/menu.php
http://unfccc.int/kyoto_protocol/items/2830.php
http://unfccc.int/essential_background/items/2877.php
http://www.cbd.int/history/
http://solveclimatenews.com/news/20091020/desertification-threatens-food-security-and-climate
http://www.unccd.int/convention/menu.php
http://www.globalwarmingandu.com/deforestation/desertification/Problems-With-Desertification.html

THE EAST ASIA INSTITUTE 909 Sampoong Bldg., 310-68 Euljiro 4-ga, Jung-gu, Seoul 100-786, Korea