



ENVIRONMENTAL POLTICS AND IT'S IMPLICATIONS ON INDIA'S NATIONAL SECURITY

By Manjuma Sonowal

Introduction

Issues of 'Environmental Security' affect not only the geographical landscape of a country but its economy and socio-political structure too. Moreover, unilateral State action is insufficient to deal with environmental challenges that cross national borders. Therefore, efforts have been made to preserve and enhance the sustainable route of development in order to foster peace, stability and human security at all levels - at the national, the region and international levels. Now, the problem is also a global issue. Therefore, academia and policy-makers are focusing both on the need to expand our understanding of protection to include environmental concerns such as renewable and non-renewable energy, environmental degradation and climate catastrophes and their effect on people all around the globe. These topics have today launched a new agenda in the security study debate.

Security is a concept that underlines the lack of risks to well-being. Whenever the word is used, a series of questions arise, such as which safety, how are we able to achieve it and how long will we be able to maintain safety requirements? In recent discussions, Barry Buzan is a standard source for many discussions on international relations on the subject of defense. For him "the foreign, economic and military policies of the States are studied in terms of national and international security, the intersection of these policies in areas of transition or conflict and the general structure of the relationships they all create."¹. However, the essence and connotations of the term change with time. During the cold wartime when the world was on the 'brink of annihilation,' facing the menace of a confrontation among two nuclear superpowers, the concept of security was then seen in a prism of interstate power struggle. Thus, security is generally analyzed in military terms.

¹ Barry Buzan, People , State and Fear: The National Security Problem in International Relations, Harvester Press: Great Britain, 1987, p.3.



Strategies of 'balancing' or 'bandwagoning', of ally-seeking and coalition-building, of arms racing and defence-spending were the common currency of classical security policy-making². In other words, then the definition of security was restricted to parochial and conceptual structures of national security which were defined in particular by the criteria of "dominance" and "stability."

However, at the end of the cold war we must take a more systemic approach to the threat agenda we face from non-traditional and non-state threats. The capabilities and motives of the enemies were in a bipolar world system at least understandable if not confirmable³. But disruptions and turbulences all over the world caused by new challenges such as poverty, trafficking in human beings, the influx of refugees and the spread of organized crime cannot be controlled by military resources alone. Since the 1980s there have been many academic debates and building up theory by securitising these topics, which cross national boundaries and extend beyond the realm of the inter-state military conflict. Initial discussions about this subject are largely based on the assumption that the expansion of the security agenda could lead to the incoherence of both scholarship and state policy. However, other discourses believed that security expansion is potentially emancipatory, which enables it to move from the government to human security⁴. Barry Buzan, Ole Waever et.al., Copenhagen School of Security Thoughts, analyzed the mechanism by which a problem becomes an existential danger in terms of a process of "security." Waever and other members of the Copenhagen School stressed the fact that "it is a question of protection to be labeled" and paved the way for extraordinary steps to address the danger.

In its fundamental sense, securitisation means that "only" politically, socially, environmentally or otherwise is designated as a risk to security, to raise awareness of the problem and to increase the

² Graham Evans and Jeffrey Newnham, *The Penguin dictionary of International Relations*, Penguin books: London, 1998, p.40. Available at www.himalayancrossings.com/pdf/course/.../penguin_dictionarypdf. Accessed January 15, 2013.

³ Ronnie D. Lipschutz (ed.), *On Security*, Columbia University Press: New York, 1998, p.1.

⁴ Shahar Hameiri and Lee Jones, "The Politics and Governance of Non-Traditional Security", *International Studies Quarterly*, Vol.57, No.3, September, 2013, p.463.



urgency of effective action⁵. Parallel to other social theorizing contemporaries they stress that protection is partially a "speech act," which means an incredibly dangerous situation, requiring exceptional acts that are recognized as such by at least some audience. They have also worked to connect this security formulation with the broader agenda by suggesting that there are at least five apparent 'sectors' where security is important for world political considerations. These sectors include the military, political, technological, societal and environmental sectors⁶. Defense, therefore, cannot be described as military preparedness for the protection of national states' territorial integrity alone. Thus, in recent years, non-traditional security topics were prominent in the reconstruction of the security discourse contours. They modified "the size of the problems from the national level to a number of new areas of space and territory, and turn state devices accordingly."⁷ Thus in this era the spectrum and danger parameter of blurring national frontiers has been extended. The safety lexicon is also broadened to include other nonmilitary considerations with this shift in the security dynamics.

One topic that has become part of the security debate of today's world is environmental degradation and climate change. The fact that human activity has caused serious harm to human lives in the planetary atmosphere becomes obvious. Buzan et al. proposed that sectors can be understood with regards to particular interactions when talking about various sectors with which protection is very appropriately linked. In their ecosystem, the interactions between human activity and the planetary biosphere are concerned. In this context, environmental protection "is concerned with preserving the local and planetary biosphere as the basic framework of support for all other human

⁵ Shirley V. Scott "The Securitization of Climate Change in World Politics: How Close have We Come and would Full Securitization Enhance the Efficacy of Global Climate Change Policy?" Review of European Community and International Environmental Law, Vol.21, Issue. 3, 2012, p.221.

⁶ Simon Dalby, Geopolitical Change and Contemporary Security Studies: Contextualizing the Human Security Agenda, Working Paper, No.30, Insitute of International Relations: The University of British Columbia, April 2000, p.4. Available at www.cir.ubc.ca/download/i/mark_dl/u/4006903219/.../webwp30.pdf Accessed on December 28, 2014.

⁷ Hameiri and Jones, No.4, p.465.



enterprises"⁸. A change of emphasis can also be seen in the philosophy of security after the cold war and realistic concerns about statistically-oriented security approaches, where the reference object is not the state, but the human being.

The term environmental security has many connotations. There is a common trend to use the terms - environmental security and environmental protection - interchangeably. Any attempt to broaden the protection concept to the environmental domain thus met with discussions and differences of opinion in the fields of academia and policy. It can be referred to as the protection of the environment from military action, security against natural and human hazards or the restoration of peace in the face of a conflict which arises from competing claims for endless environmental resources. An all-embracing concept of environmental safety is very complicated at this juncture. The causes, manifestations, intensity and consequences of environmental degradation are diverse. Countries are also diverse in their vulnerabilities and coping mechanisms. Furthermore, the environmental safety of a particular country that is a democratic structure is inextricably related to the economic-social climate. It is the socio-political environment of the country which determines the equal access to environmental goods and services of individuals. Failure to obtain these goods in certain areas eventually contributes to violence and civil and international disputes.

Environment Scarcity

All such disputes are not only caused by environmental scarcity, but also by unequal distribution policies. The growing resource consumption gap between the rich and the poor countries has further exacerbated the issue. Economic, social, and political institutions already are fragile and hungry, sizeable, abject poverty, and underserved population growth. Developing countries are becoming more environmentally vulnerable, as much of their people rely upon the climate-sensitive sectors of their lives and livelihoods. The consequences of the disparity of economic and social systems are such dreadful circumstances. However the dichotomy is not limited to rich and

⁸ Bary Buzan, Ole Waever and Jaap de Wilde, Security: A new Framework for Analysis, Lynne Rienner: Boulder, the United States, 1998, p. 8.



poor countries of the world but between rich and poor masses of the poor impoverished Southern countries as well.

Under this context, environmental security is defined as being protected from natural and human-induced environmental hazards by natural resources such as crops, soils, forests, and energy resources, and as having available the steps needed in order to combat those risks. In no traditional sense are safety risks environmental pollution, global Warming and climate change. If the term security is interpreted in a broader context, which integrates human, social, physical, and economic well-being of a country, then environmental distress is a risk enforcement aggravating the existing animosities among communities in some regions. In this sense environmental security is related to human security too. Environmental degradation and climate change have in actual fact impacted different aspects of human safety. This is an all-encompassing term. In the 1994 issue of the United Nations Human Development Reports (HDR), which listed seven elements of human security, environmental safety was among the aspects inextricably linked to human protection. Also, the environmental change caused "laughter and silent emergencies"⁹ has hindered other elements such as protection of economic, food and health. Human safety here means the guarantee of the general well-being of the human being involved due to environmental attacks. In the traditional territorial context, safety and environmental insecurity cannot solve these problems and, as a non-conventional challenge, actors and organizations beyond the bounds of the national framework are required because environmental strains are spread across national boundaries.

However, environmental problems can be both natural and human-induced. We are living in the anthropocentric era, in which the seemingly superior human clan interferes in all aspects of the natural world to achieve their own profit and gains. This irreversible cascade of changes has taken us to the brink of a huge environmental transition that we've never faced before. These include diversion of river flows, dam building at the upper reaches of a river leading to water scarcity downstream, unscrupulous urbanization, diversion of forest lands, illegal logging leading to

⁹ UNDP, Human Development Report, Oxford University Press: New York, 1994, pp.24-25. Available at http://hdr.undp.org/sites/default/files/reports/255/hdr_1994_en_complete_nostats.pdf Accessed on August 23, 2014.



deforestation, excessive extraction of groundwater causing water scarcity, developmental projects in ecologically fragile regions and so on. All of these human actions have made our world more vulnerable. Environmental reengineering in one country can also be disastrous for other countries. The following lines of Ramaswamy R. Iyer clearly illustrate this trend: "The configuration of groundwater aquifers in one country could lead to an excess in another; one country can manage to pollute the water running towards another; the deforestation in a mountainous country could result in excessive flooding on one country of the planes, with floods as if they were Ramaswamy R. ¹⁰. The frequency and severity of these problems have been increased by environmental change.

Given the transnational consequences of natural and human-made environmental change, it is in every nation's best interest to distinguish forms of collaboration in the fight against climate challenges and their different demonstrations. In addition to concerns about the climate induced shortage of resources, severe weather and relocation of populations, countries have sought to address green house gas (GHGs) pollution as the direct reason for environmental change and the resulting global warming. Consequently, strategies are being conceived time after time to minimize GHGs by imposing different legislation and incentives and drive towards a low carbon trajectory. But, since threats to climate protection are typically transnational in nature, their resolution calls for undertakings and cooperation from a broad range of players – national, regional and international. It is not easy, if ecological concerns and interest vary in countries, to agree on cross-border and global environmental issues. Those of us who are interested in discussions and the negotiations on an environmental framework have developed into a different kind of strategy. They strive to safeguard their respective national interests in this entire operation, which have made the world a comprehensive deal untraceable.

Environment and Security

In this context, environmental change in India has emerged as a major non-traditional safety problem as well as an important environmental issue. There is a large number of environmental

¹⁰ Ramaswamy R. Iyer, "Scarce Natural Resources and Language of Security", Economic and Political Weekly, May 16, 1998, p. 1167.



problems, such as lack of resources, biodiversity destruction, extreme weather events, increase in the level of sea levels and the resulting option of behavioral strategy of migration. These are threats to the entire economic political and social wellbeing of the masses. Improving Indian national environmental management capacity must be enhanced by control systems, preparation capabilities, staff and services for the implementation of plans. But the risks which result from environmental changes must be considered in the sense of interdependency to mitigate environmental threats. Our environmental protection programs are essentially domestic. However, border controls cannot be used to manage cross-border pollution or the effects of carbon emissions. Cooperation between nations has proven extremely important at various Conferences of the Parties. India in these conferences tried to raise her voice to protect her national interest vis-à-vis the global concerns for the threat. In this respect, the aim of strengthening military security does not imply national interest. Instead of States are seen as the primary players in promoting human protection of all kinds, including the climate. The negotiating role of India in various global environmental parliaments is decided by its national interest in providing all its citizens with environmental protection, which is also interwoven with its developmental aspirations.

The aim of this study is to highlight the environmental threats that the global community has faced today and how this affects India in particular, given that the environmental discourse has now become an integral part of the larger political processes and discussions. The consequences of such risks are serious and immediate. Although they have exacerbated the current socio-political tensions in any given society, the need to achieve limitless economic growth and developments in some countries also has exacerbated their strength. The study focuses on the environmental dimension of geopolitics in general and its impact on the national security of India in particular, and on the effects of climate change. It also seeks to evaluate: the stated positions of major players in the international environmental politics; and to determine the policies involved both domestically and internationally in the environmental policy of India - in particular, their perception of the problem of environmental change and of the sort of negotiating position that follows from these perceptions;



Environmental problems and climate change have attracted the attention of not only scientists and economists but of policymakers and the public in general. The current literature on this subject addresses generally the various aspects of environmental issues, the challenges facing nations, the gaps in capacity to cope and the nature of climate policy and a fragmented climate system focused on divisive political interests. The thrust areas can be broadly thematized as – i) the securitization of environmental issues; ii) response to climate change and the resultant ecopolitics; and iii) the environmental issues and India. The following are some representative works.

The first subject consists of books, papers, articles and studies dealing with the question of environmental securitization. A compact analysis of how global warming and climate change are jeopardizing our safety is puzzled in this book: *Climate conflict: how global warming is threatening stability*¹¹. For the author, 'the most vulnerable are the poor, fragile and failing countries.' He admits that "added stress from climate change could intensify the trend with the existence of other destabilizing factors in a given society." In that way a situation he suggests to improve the adaptation capacity of states to confront such instabilities. It is also worth mentioning the novel, *Environmental security (2002)*¹², which deals with the widening area of safety and reformulation of the definition in and beyond international relations during the 1990s. The book's innovation is in its effort to propose a variety of new formulations to re-evaluate security ideas in particular and international relations, as well as to establish alternate ways of conceptualizing contemporary deterioration in the world. The author considers environmental scarcity and degradation as one of the causes of conflict in another book, *Environmental Security: Internal and External Dimensions and Response (2003)*¹³. He talks about water and its environmental protection ties in the area of South Asia. He also addresses population

¹¹ Jeffrey Mazo, *Climate Conflict: How Global Warming Threatens Security and What to Do about It*, The International Institute of Strategic Studies: London, 2010.

¹² Simon Dalby, *Environmental Security, Broadlines*, Volume 20, University of Minnesota Press: Minneapolis, London, 2002.

¹³ Col. P. K. Gautam, *Environmental Security: Internal and External Dimensions and Response*, Knowledge World: New Delhi 2003.



development, migration, urbanization, Himalayan environmental protection, nuclear weapons environmental aspects and so on. The role of military is also emphasized in this book.

There are some other texts, however, in which different writers have expressed their opinion on and contrary to environmental securitisation. They addressed the crucial connection between the shortage of resources and violent conflict. The Routledge Handbook of Security Studies (2010)¹⁴ is a large volume that contains a broad range of important essays in the field of safety studies by various scholars. One of the articles in this book called "Resources, the Climate and Conflict"¹⁵ has defined the theoretical debate on environmental scarcity and violent conflict between Neo-Malthusians and Cornucopians. The former claims that growing resource scarcity is harmful to human security as it can lead to competitiveness and armed conflict, but the latter believes in "human innovation," which can prevent shortages and therefore generate substitutes for technological development. In view of resource scarcity, other schools such as liberal conflict theory and political ecologists, which share certain opinions of both parties, spoke again about the value of collaboration than conflict. Human protection is a paradigm that helps us understand different global vulnerabilities, and that questions the conventional notion of national security by suggesting that the person should be the right guide for security rather than the State.

Climate change and environmental degradation have largely threatened people's lives. It creates some kind of vulnerability. There are few books on this link between environmental and human insecurity. The book Global Environmental Change and Human Security (2010)¹⁶ highlights the dynamic social, health and economic implications of global environmental change. It traces the evolution of the way people relate to their world and the threats of protection they face, while acknowledging the fact that there are a variety of risks to the state's sovereign integrity rather than military invasion. The book is structured on three interconnected themes. While part

¹⁴ Myrian Dunn and Victor Mauer (eds.), The Routledge Handbook of Security Studies, Routledge: London, 2010.

¹⁵ Nils Petter Gleditsch and Ole Magnus Theisen, "Resources, the Environment and Conflict" in Myrian Dunn and Victor Mauer (eds.), The Routledge Handbook of Security Studies, Routledge: London, 2010, pp.221-231.

¹⁶ Richard A. Mathew, Jon Barnett et.al., Global Environmental Change and Human Security, The MIT Press: Cambridge, 2010.



of this article explains how the effects of the environmental change on human security can be undermined by the discussion of specific risks, such as environmental change associated diseases and a discussion about specific places and events (with the help of a case study of decade-long Nepalese civil war). The last section of the book examines the links between sustainable development and human security. Another book, *Environment and Human Security (2003)*¹⁷ is also worth mentioning. Various volume papers covering four parts cover various dimensions of the connection between safety and environmental change. Though Professor Jayantanuj Bandyopadhyaya analyzes with special regard to southern countries in his paper the impact of environmental change on human safety, Professor Gautam Kumar Basu has questioned the potential of ensuring human safety through today's kind of world environmental policy. It also addresses key environmental and sustainable development concerns. By providing regional responses, the authors viewed environmental safety. In the last section of the book, climate change, climate change and adaptation strategies are explicitly discussed.

A number of relevant articles published in esteemed journals dealing with the issue of Climate issues, environmental scarcity and violent conflicts are abounding in securitization. One such article is “The Politics and Governance of Non Traditional Security” (2013)¹⁸ that discusses how the realm of 'securitization' has been extended to the issues that were previously left outside the domain of high politics. It analyzes various approaches, opinions, and discussions about the Copenhagen School and Paris School's non-traditional security concerns. It also illuminates the re-scaling of protection and the hazy issue in Southeast Asia. Similarly Simon Dalby sheds light on how the various modifications to security discussions separate him from the conventional focus on external military threats and domestic order in the essay, "Secure, modern, ecological:

¹⁷ Purusottam Bhattacharya and Sugata Hazra (ed.s.), *Environment and Human Security*, Lancers Books: New Delhi 2003.

¹⁸ ShaharHameiriandLeeJones, “ThePoliticsandGovernanceofNonTraditionalSecurity”, *InternationalStudies Quaterly*, Vol.57, No.3, September 2013, pp.462-473.



the dilemmas from post-Cold War security discourse" (1992)¹⁹. It outlines a range of security theoretical analyzes. It also addresses environmental security policy. Braden R. Allenby, the author, has conceptualized environmental safety in his article "Environmental security: definition and implementation" (2000)²⁰. Here he addressed how environmental protection has become a political concern in the post-Cold War years at a national level at the intersection of concerns of the environment and national security. The article proposes various components of the national security mission strengthened – resource shortages, energy security, environmental and biological security. It also provides a matrix-based framework for a certain nation state to identify environmental safety issues.

Gareth Porter's essay, "Environmental Security As a National Security Issue" (1998)²¹, illustrates the lack of discovery of the origin of contemporary problems by conventional cold war security issues. The second section deals with the various aspects of environmental security and the relationship between scarce renewable resources and international conflicts, while the second highlights the American view on environmental safety and illuminates the fact that the state seeks to redefine national security to include environmental security. The second section covers two main areas: In terms of its capacity as a source of violence and its effect on the well-being of communities and economies, the article describes environmental security. It can be compatible or confront the safety of the nation state exclusively. With respect to the global essence of threats to the climate, it defines the true global dimension of temperature growth, ozone depletion and extreme weather events and the loss of biodiversity as they challenge the basic organic infrastructure supporting life on Earth. The article also outlines environmental flash points – such as a crisis in Somalia and the Rwandan, where environmental degradation is the indirect cause for violent domestic conflicts, in the waters of shared rivers and depleted fish resources, where

¹⁹ Simon Dalby, "Security, Modernity, Ecology: The Dilemmas of Post-Cold War security Discourse", *Alternatives: Global, Local Political*, Vol.17, No.1, Winter, 1992, pp.95-134.

²⁰ Braden R. Allenby, "Environmental Security: Concept and Implementation", *International Political Science Review*, Vol.21, No.1, 2000, pp.5-21.

²¹ Gareth Porter, "Environmental Security as a National Security Issue" in Tuathail, Gearóid Ó, Simon Dalby and Paul Routledge (eds.), *Geopolitics Reader*, Routledge: London, 1998.



the loss of resources is the direct goal of the conflict. The author draws the US view of environmental security in this context with particular reference to the Clinton administration which included environmental security in the national security policy. However, weaving different oppositions with global realities and political priorities toward the concept of environmental security, the author finally shows how development assistance in preventing climatic conflicts becomes irrelevant to the U in the USA because of the militarisation of the concept and its integration in the broader socio-economic and political causes.

Environmental insecurity

Environmental insecurity does not imply resource scarcity only, climate change and global warming have contributed largely to this problem too. Concentration of this is focused in the article titled "Climate Changes: New Dimensions of Environmental Security" (2013)²², which outlined how the current environmental safety debate was driven by climate change. The Author examines three topics: 'urban vulnerability to extreme events; the unforeseeable social and political ramifications of adaptation and mitigation measures, and geo-engineering potential and negative impacts. It criticizes the global urban economy, which produces the environment and works at the cost of our environment.

Some studies deal solely with lack of resources as an environmental question and a violent dispute. "The Coming Anarchy" (1998)²³ is one of such articles where R.D. Kaplan considers overpopulation, war, crime and migration to be a hostile force in the 21st century, through the lens of environmental and nature concerns. He makes clear that future conflicts will in many instances be worsened by environmental shortages - such as lack of water, trees, arable land, etc. - by using examples from West Africa to endorse his premonition. He argued that such shortage of resource, combined with poverty and population growth destabilization, exacerbates

²² Simon Dalby, "Climate Change: New Dimensions of Environmental Security" RUSI Journal, Vol.158, No.3, pp.34-43, 2013.

²³ Robert D. Kaplan, "The Coming Anarchy", in Gearóid Ó Tuathail,, Simon Dalby and Paul Routledge (eds.), Geopolitics Reader, Routledge: London, 1998.



ethnic conflicts and causes mass migrations of persons who in turn worsen conflicts and disease. Kaplan is building his case through historian testimony and commentators such as Van Creveld, Homer–Dixon et.al. He also mentions the “the clash of civilizations concepts” by Samuel Huntington and predicts that the influx of refugee flows and rural migration to cities would result, through cultural and tribal war, in the further obsolescence of national boundaries and create a world-wide chaos where crime and war are almost synonymous. His hypothesis indicates that the changing economic conditions contribute to revised group identities, which could in particular be transformed from religious to racial to cultural. As a result, the author expects the breakup of countries that will be replaced by ethnic communities and predicts a vibrant future in which people will migrate and fight each other to survive. In his study of Africa, Kaplan links the Malthusian theme to national security, thereby connecting the 'outside' dimension of crime and terrorism to security policy and policy thought. Basically, he attempted to concentrate on the emerging challenges that call for a strategic dimension of the global situation and management techniques, often accompanied by military planning.

T F. Homer-article Dixon's "Environmental Scarcity and Mass Violence"(1998) ²⁴focused on the violent masses in key areas of the world due to the decline and loss of renewable energy resources, an increasing appetite and uneven distribution of resources. According to him, such resource shortages could add to insurrections, ethnic clashes, refugee exodus, heightened social divisions, and weakened institutions. This paper includes a series of case studies coordinated by the University of Toronto Peace and Conflict Studies Program and the American Academy of Art and Science in Cambridge, helping to provide a better picture of how and where social breakdown and abuse result in environmental scarcity. He also stresses, however, that the environmental violence cases are mostly subnational. International resource wars are hardly sustainable but non-renewable except water battle. In addition, the consequences of the former's shortage are indirect and combined with other social and political stresses. The author also spoke of a few 'pivotal States' that are the hardest hit by environmental degradation with particular

²⁴ T.F.Homer-Dixon, “Environmental Scarcity and Mass Violence” in Gearóid Ó Tuathail, Simon Dalby and Paul Routledge (eds.), *Geopolitics Reader*, Routledge: London, 1998.



focus on India. In India, the issue may be exacerbated by growing population development, rural-urban differences, negative effects of social stratification, as well as deficient social and political structures. The Neo-classical economists have suggested the process of market reform and adequate economic growth as a means of addressing the Neo-Malthusian crisis.

However, the author pointed out the both camps' sterility and recognized that ingenuity can reduce the probability of confrontation, notably in wealthy states with modern technologies, productive markets and reformed social structures with educated masses. He also mentions the naivety gap in communities where the need for imagination to overcome scarcity is greater than chronic civil war may lead to their supply. The article thus articulates the hazards of scarcely-related resources impacting an unprecedented number of millions of citizens. His other article "Environmental Scarcities, State Capacity, and Civil Violence" (1995)²⁵, has echoed this view again. As population growth and uneven resource allocation can also cause violent conflicts over these resources, it identifies climate change as one of the top three causes of renewable resources scarcity. The study compares the cases of China, India and Indonesia to see that environmental scarcity interferes with general economic competitiveness, thus reducing the capacity of government to allocate resources and thereby raising the divide between 'state and state demands.' All these eventually lead to civil unrest, including "insurgency, ethnic disputes, disturbances and possibly civil war."

The German Advisory Council on Global Change, entitled World on Transition - Climate Change as a safety risk (2007)²⁶, also documented a compact assessment of the safety risks of environmental change. This report identifies four conflict constellations in

²⁵ Homer-Dixon, "Environmental Scarcities, State Capacity, and Civil Violence", Bulletin of the American Academy of Arts and Sciences, Vol.48, No. 7, April 1995, pp.26-33.

²⁶ German Advisory Council on Global Change, World in Transition: Climate Change as a Security Risk, Earthscan: London 2007.



Which vital changes are predictable as a result of climate change and which can occur in various regions of the world with similar characteristics. It underlines that this phenomenon will overwhelm many nations' adaptability in the decades to come, which will inevitably lead to destabilization and conflict that endangers national and international security interests.

Global strategies are needed when dealing with environmental degradation and climate change. But, according to their national circumstances, their irregular effects lead countries to respond. Writers have also expressed their views on this case in many books and articles. Several texts on the second theme have affirmed that the successful fight against climate change cannot be successfully combatted without an important geopolitical strategy. This genre of literature broadly deals with the potential ramifications of the impacts of climate change on humanity. Several texts on this subject affirm that there can be no successful battle against climate change without an important geopolitical strategy. Many of these books on eco-politics often concentrate on environmental policy and the connections between international inequalities and climate policy and policy in the developing world²⁷.

Giddens' article, "The Politics of Climate Change" (2009)²⁸, which echoes the second theme, requires a special mention. He argues that like drivers from SUV (Sports Utility Vehicle), a few people are essentially oriented towards the depth of the risks we face. But the new feature of his book is that he treats climate change rather than moral or technical issues as a political problem. He argues from "Giddens Paradox" that the unseen or intangible essence of global warming as well as remote climate change horizons on the one hand makes it special and, paradoxically, makes it impossible for us to deal with. On the other hand, Giddens develops a few principles that provide a brief account of climate change science in which he assesses a largely grouped, skeptical, moderate and disastrous scientific debate. With a positive view of human potential, he moderates the tragic dimension. Then he deals with the problem of energy

²⁷ Raymond L. Bryant and Sinead Bailey, *Third World Political Ecology*, Routledge: London 1996; Marian A. L .Miller, *The Third World in Global Environmental Politics*, Open University Press: Buckingham, 1995; Peter Calvert and Susan Calvert, *The South, the North and the Environment*, Pinter: London and Newyork, 1999.

²⁸ Anthony Giddens, *The Politics of Climate Change*, Polity Press, Cambridge, 2009.



privatization, which complicated energy sources such as oil and gas, and made politically challenging investments in alternative energy sources. Although Giddens sympathizes green principles, such as the precautionary principle, polluter pays and sustainability, he is very critical of the forms in which politics is used to achieve them. For Giddens, the enabling state will play a central role in averting future catastrophes and in reshaping social behaviour. In addition, he highlighted political unity across parties and the capacity of the State to reduce carbon dependency both domestically as well as internationally. Giddens also discusses in some detail the function carbon taxes can play in stimulating innovation. He continued to emphasize the value of the markets, while also identifying the need for a state that can actually produce results. Later in the book, Giddens analyses the international dimensions. He refutes here any Kyoto-style bargaining or international collaboration due to divisions between key actors.

Instead, it proposes cooperation between individual states. For example, the developed nations who may act as the vanguard, should explore ways of direct bilateral cooperation with one another to share the fruits of technological advance. Because resource scarcity shapes future geopolitics, he emphasizes the interlink between energy security and climate change in greater detail. The better the policy to manage climate change, the more likely it is to be effective and be embraced by the general public. The most important thing is, however, that the book shows Giddens' positive views, as it sees the potential and the danger together, and emphasizes that the technological innovation that is necessary to allow all human societies to adapt to climate change would allow us to grasp the opportunity.

Andrew Hurrell and Benedict Kingsburry have published a detailed overview of environmental policy in their edited volume *The International Politics of the Environment: Actors, Interests and Institutions* (1992)²⁹. It analyzes different ideas, documents and organizations involved in the international environmental regimes negotiation process. The book offers detailed descriptions of the global environmental problems ranging from climatic change to ozone depletion and dumping to the position of various organizations such as the United

²⁹ Andrew Hurrell and Benedict Kingsburry(eds.), *The International Politics of the Environment : Actors, Interests, and Institution*, Clarendon Press: Oxford, 1992.



Nations, the World Bank as well as the environmental policies of key climate negotiator actors including the U.S., European Union, Japan and Brazil, along with analysis of various rules and schemes involved in the process. It also examines political powers that are conflicting to the detriment of a uniform global climate system and seeks to propose ways to solve the deadlock that is hampering the development of a strong climate regime. There are also other books on international agreements and different ways to illustrate these treaties. The published volume *Shaping National Answers to Climate Change: A Guide to post-Rio (1995)*³⁰ is a real guide as it focuses on international environmental agreement negotiations. It seeks to examine the links between international negotiation strategy and the creation of national policy. It also addresses different policy areas inherent in these deals, such as carbon taxes, tradable allowances, technology transfer etc. They are very much under discussion. The book *Environment, Society and International Relations: Towards More Effective International Environmental Agreements (2000)*³¹, discusses at length various international relations approaches to the environment and their ability for studying the effectiveness of international environmental agreements. It challenges the appropriateness of environmental agreements to resolve environmental issues and analyzes the mechanisms and constraints of the Agreements. Another book *Global Warming and Climate Change: Ten Years after Kyoto and Still Counting (2008)*³², is another great book divided into two volumes. It analyzes different environmental treaties such as the Kyoto Protocol, the Bali Action Plan, their different key measures, institutional and policy reactions, amongst others. The author has therefore drawn the contours of global environmental policy.

³⁰ Henry Lee (ed.) *Shaping National Responses to Climate Change: A Post-Rio Guide*, Island Press: Washington, D.C.,1995.

³¹ Gabriela Kutting, *Environment, Society and International Relations: Towards More Effective International Environmental Agreements*, Routledge: London,2000.

³² Velma I. Grover, *Global Warming and Climate Change: Ten Years after Kyoto and Still Counting*, Volume 1 and 2, Science Publishers: Enfield, 2008.



The answers of individual countries to the issue of climate change are equally relevant because they can help to analyze why global climate talks are deadlocked. Meanwhile, environmental issues and threatening factors are of major concern to academics as well. A number of books are written in the Indian sense, echoing the third subject. Stolen Harvest: the Dispatch of Global Supply of Food (2000)³³ illustrates three big shifts in the development of food with 'The Green, Blue, and White Revolution.' With each revolution the production of fruit, fish and milk and meat has increased. However, when each of them cost tremendously, the writer opposed these revolutions. The agri-businesses have virtually killed and replaced indigenous diversity with soya, wheat, shrimp and cow monoculture.

Modern agriculture also takes place for the sake of western consumption in the developing world. This book has been criticized by Shiva. Water Wars: Privatization, Pollution and Profit (2002)³⁴ is another book by Vandana Shiva that deals with the driving forces behind the scarce water supplies. It has shown many worldwide woes of water, such as Israel-Palestine conflicts, which are 'camouflaged as ethnic wars' but are really fought over scarce natural resources. The Commission predicted the loss of community water rights by "corporate privatization culture," international water exchange, damming, extraction and aqua firming. She has given examples of human-induced natural disasters, the harmful consequences of the green revolution, industrial agriculture and water loss, river reversal and water wars, the lack of water from illegal mining, construction deforestations, mangroves, shrimp cultivation and so on.

The book Water: Perspectives, Issues, Concerns (2003)³⁵ exclusively deals with various issues pertaining to water resource. It analyzes the suitability and suitability of water provisions contained in the Indian Constitution, various governmental rules, water policies and actions, such as national water policies, ground water law, etc. It addresses the contentious issues of the construction of large barracks and the resulting disillusionment. The Sardar Sarovar Project, Tehri Hydro Electric project, Silent Valley Project and the anti-dam movements are mentioned in

³³ Vandana Shiva, Stolen Harvest: The Hijacking of Global Food Supply, Southend Press:Cambridge 2000.

³⁴ Vandana Shiva, Water Wars : Privatization, Pollution and Profit,South End Press:Cambridge in 2002.

³⁵ Ramaswamy R. Iyer , Water: Perspectives, Issues, Concerns, Sage: New Delhi, 2003.



this respect. Large dams over transboundary rivers can also lead to riparian conflicts. This can also result in environmental disasters and deterioration. Finally, the book talks about shortages and disputes in the language of safety with regard to water supplies. There is also extensive discussion of India's relations with neighbors on the basis of mutual water supplies and water treaties.

Indeed, India is also regarded by academics and scholars as a major research and study area in the global climate regime. There is also a wide selection of state-of-the-art essays and books. The book *Environmental Threats, Vulnerability, and Adaptation: Case Studies from India (2003)*³⁶ is a compilation of case studies undertaken at TERI on vulnerability and adaptation responses in different sectors in India. Several volume chapters examined the vulnerability of districts and states to declines in crop yields, water availability, sea level rise, etc., on the basis of corresponding case studies.

Here too, the Geographic Information System (GIS) to map the effect on Indian agriculture and water availability of climate change is analyzed for vulnerabilities. Moreover, the 'double vulnerability' to climate change and globalization of the vulnerable regions of the countries is highlighted. This book also emphasizes the links between poverty and insecurity and adaptation's environmental and socioeconomic aspects. Finally, it proposes ways of integrating the priorities of sustainable growth and programs for poverty reduction. While describing the catastrophic existence of climate change and the framework of complex international agreements, this book, *The Politics of Climate Change and the Global Crises: Mortgaging Our Future (2012)*³⁷ has addressed the Indian climate policy and its position on the International Negotiations. Another book by the same author, *An India that can Say Yes: A Climate Responsible Development Agenda for Copenhagen and Beyond (2009)*³⁸ while describing the

³⁶ *Environmental Threats, Vulnerability, and and Adaptation: Case Studies from India*, TERI: New Delhi, 2003.

³⁷ Praful Bidwai, *The Politics of Climate Change and the Global Crises: Mortgaging Our Future*, Orient Black Swan: New Delhi, 2012.

³⁸ Praful Bidwai, *An India That Can Say Yes: A Climate Responsible Development Agenda for Copenhagen and Beyond*, Heinrich Boll Stiftung: New Delhi, 2009.



evolution of India's climate policy against the backdrop of her shifting foreign policy framework and its drawbacks, offers deep insights into the notion of equity, low carbon development strategies in the Indian context as well as in the international context.

Another important work in which many contributors gave a broad range of views on climate change is the edited volume *Manual of Climate Changes and India: Development, Politics and Government* (2012)³⁹. It analyzes international climate negotiations and its various stakes, discussions and dilemmas, together with India's recent approach and actions to this topic. Moreover, several papers analyzing the result of landmark summits by Lavanya K. Dubash, Gautam Dutta, Sandeep Sengupta, Andrew Kumar, Praful Bidwai, Sandreap Sengupta Sinha, R. Ramachandran, P. K. Gautam, Shyam Saran et.a. 40 and various studies, resolutions, protocols, environmental policy documents of India etc.⁴¹ on the subject provided a comprehensive insight into the current climate policy developments and their impacts on the policy of the individual State.

Way ahead

One may argue that in the available literature on the topic there are three kinds of writings. Others deal with environmental security and analyze the critical links between resource shortage and violent conflict; others deal with the possible consequences of the global climate war. A causal connection between the environment and violence has been identified in the former type of writings. Climate and violence are often associated in this type of literature with the deterioration of the environment due to civil wars and nuke holocaust or with environmental deterioration as a catalyst for exacerbating existing conflicts. These are localized problems, however. Except an all-out nuclear war there are minimum chances of global environmental deterioration due to civil strife. The resource war is very regional once again.

The second type of texts asserts that without an important geopolitical strategy there can be no effective fight against climate change.

³⁹ Navroz K. Dubash (ed.), *Handbook of Climate Change and India: Development, Politics and Governance*, Oxford University Press: India, 2012.



The third category of writings addresses climate change and environmental degradation in the Indian context in particular. The official roles of India, climate as a question of new social movements and domestic policy on the environment are all the topics addressed. There are, however, some important questions unanswered at the time:

Undoubtedly the effects of environmental change are far reaching. However, the study of the science of environmental change will not give us a real picture. Science offers an overview of the environmental issues that have occurred in all parts of the world. But science is also rendered in socio-political and economic contexts. The issue is then said to often be human buildings and to have socio-political and economic roots. Modernization and development have worsened this situation further. While countries acquire scientific information about environmental degradation, they have often missed the point on their agenda that information is collected to their advantage. Policies are thus developed in such a way that the true nature custodians – the vulnerable rural communities – are excluded. In the generation of scientific information and solutions, their concerns are rarely addressed.

All these have posed a threat to security. Here, however, the object referred to is not the state. Differences in the vulnerabilities and coping mechanisms of the rich and the poor inside society were analysed in some literatures, however they did not focus sufficiently on environmental change issues. They may not consider that the severity of environmental issues has been increased by such a dichotomy. Therefore why climate threats in the sense of individual countries such as India have become so severe and what related problems have led to their increasing severity and speed need to be addressed;

The current literature also does not show how the global climate risk response can conflict with the response of individual countries in view of the unequal impacts of environmental change across regions. Countries are not equally capable of dealing with risks and their socio-economic priorities vary. In the Indian context, therefore, it becomes important to examine the responses formulated to the perceived risks.