

AN IMPACT OF CLIMATE CHANGE ON SECURITIZATION OF PAKISTAN

Dr. Khalid Mahmood Shafi *
Rohan **

Abstract

Climate change is phenomenally affecting the eco system which in turn is endangering the survival of human beings. Pakistan being eighth on climate vulnerability index in the world, is facing serious human security challenges which may lead to deep rooted social disasters if not taken seriously. This article explores the impact of climate change on human security by analysing different types of climate change impacts in the context of Pakistan. The study finds out that environmental degradation results in global warming, meltdown down of glaciers, floods, water scarcity and food shortage. The article concludes that if apt and timely measures are not adopted by the Government, environmental degradation can lead into a deep-rooted human security crisis in Pakistan.

Key words: *Climate Change, Human Security, Policy, Securitization and Pakistan*

1. Introduction

Climate change is acknowledged as the most serious threat to humanity surpassing the Nuclear war. Climate crisis has already demonstrated that the way our societies and economies are organised is unsustainable on a planet of finite resources. Now can we fight against nature, no you work with nature. In climate

* National Defence University, Islamabad. khalidmayo@hotmail.com

** Researcher and Student at Knoxx College, Galesburg, USA. rohaankhalid@hotmail.com

confronted scenarios, the Governments need to manage the unavoidable so that they can avoid the unmanageable. Climate change and global warming has assumed the prime importance mainly due to multiple reasons inter alia rapid industrial development, deforestation and population explosion. These developments phenomenally lead to human security issues in different parts of the globe. It has not only endangered the survival of homo sapiens but has also drastically affected the eco system on earth. Things related to environmental degradation geared up due to the mad race for exploiting world resources and heavy industrialization in the later part of 20th century.

Generally, it is agreed that human survival in 21st century is linked with the favorable global environment which can only be achieved through adoption of environment friendly laws and policies by all states not few ones. Like states have plans for national security, we as global citizens should have global security arrangements not against aliens but against the threatening security challenge of environmental degradation and its adaptiveness to human lives.

Realizing the sensitivity of environmental degradation, the UN has also concentrated on the issue to urge global players for effective legislation and implementation. In this regard national, regional and international policies and strategies have been formulated, however non-implementation remains the core issue. Pakistan being member of the UN and a responsible nuclear state has an obligation to follow up UN environmental regime. In different points of time Pakistan has taken serious steps to contribute towards the attainment of human friendly environmental. However, being a developing country, environmental degradation issues could hardly attain the stature of a national priority that resulted in a state where climate changes and environmental degradation have reached to a level that might become a security threat in near future posing a grave danger to the survival of the country.

2. Methodology

This research has been done from the secondary sources. By having all the policymaking reports and collected data has been evaluated concerning the sensitivity of environmental degradation. National, regional and international strategies have also been discussed to sort out that core problem. This research is documented based and having an exploratory approach. The future survival

belongs to fittest in the environment and not to the mighty. Unlike others species, we the human have the option to keep the environment fittest to our survival not fit to environment. However, unfortunately, we are the only responsible specie who are making our own environment unfit for ourselves.

This article will delineate the impact of climate change on Pakistan and how it effects the security paradigm of Pakistan while taking human security as a component of the analysis.

3. Security and Climate Change

Policymakers, military strategists and academics all increasingly hail climate change as a security issue(Floyd, R. 2008).The approach to link climate change with security owes a lot to Thomas Homer-Dixon and his colleagues in the early 1990s. He viewed environmental security through the political and military lens. He worked on certain selected case studies, and reached to the conclusion that the environmental dilapidation and “depletion of resources interacts with population growth and uneven resource distribution to cause violent conflict”(Homer-Dixon, T. F. 2010).In early nineties then UN general secretary, Batrus Ghali introduced the concept of “Human Security” by the dynamics of correlation between environment and security. The concept approached the parameters of traditional security paradigm with a wider approach. Later R. Brown coped concept of security acquiring a new broader shape beyond military security in which he contends that global food insecurity and the associated instability in food prices have become a common source of political instability(Brown, 2015). Rafaela de Brito contends that one of the most influential approaches regarding the environment-security linkage is one that concentrates on the causal links between environmental change and conflict(Floyd, R. 2008). Kaplan goes further to anarchy as the security problem which will be prompted and worsened by environmental degradation (Kaplan, 2002). States instead of addressing domestic causes of environmental change find it in external environmental threats. This results in an inadequate response because the threat is an unspecified ‘Others’ against ‘us’ as a state(Scott, 2008).

Amber Saylor Mase, Benjamin M. Gramig and Linda Stalker Prokopy in a study entitled “Climate change beliefs, risk perceptions and adaptation behaviour among Midwestern U.S. crop farmers”(Mase, et al, 2017) contended that“*climate*

change is the greatest challenge for sustainable food system and it has adverse implications for food security. Consistency in the weather pattern i.e. temperature, precipitation and pattern of rainfall over a longer period of time are essential for agricultural growth and farming practices. Hence, increasing temperatures and profound variability in rainfall pattern are detrimental to the agriculture industry”.

4. Impacts of Climate Change on Human Security

When natural calamities occur, people are not affected similarly; poor, socioeconomically weaker segments of the population suffer disproportionately. When individuals lose their source of earnings, it makes them more susceptible to any upcoming hazard, be it another natural tragedy and financial brush off. Actually, the fiscal values of such happenings are shocking. For example, flooding phenomenon in Pakistan cost it 2% of its GDP (UNISDR 2012), a noteworthy amount for a country coping with several serious socio-economic problems (Cuny, 1994). Immediately after a disaster, health problems are rapidly apparent as individuals suffer from injuries. The sick and aged patients need extraordinary attention and their requirements have to be integrated in evacuation procedures. In the meantime, problems rapidly arise for those suffering from pre-existing health concerns, and need treatment or medicine that may not be easily accessible. If medical records have been misplaced or destroyed in the calamity, it can create serious difficulties for the patients (Khan & Zeeshan, 2016). Women, being major population of the world are the most affected by Climate change.

Natural threats - intermingled with prevailing human susceptibilities such as land shortages; population growth, cultural/racial conflict and poverty- drive people towards marginal zones increasing their exposure to natural disasters (Delgado et al, 2013). Poor quality lodging and physical infrastructure leave societies more at the danger of deaths, injuries or homelessness in case of disasters. Such tragedies often become problematic by secondary disasters that be man inducted by nature. As a consequence of natural catastrophes, individuals can lose all; their loved ones, households, properties, and entire livings, sometimes in just minutes. In the instant response phase, there are substantial tasks to make certain that people obtain satisfactory accommodations and aid. Affected families are forced to stay in provisional shelters where they remain helpless with insufficient belongings and inadequate privacy. Complicated gender-based problems persist in a post-

disaster situation such as gender violence, human trafficking, and personal abuse etc. Natural disasters affect community security in various ways. Most people obtain their security from their association with different groups such as relatives, societies, companies and ethnic or racial groups, which deliver practical sustenance and a set of standards by which to live. So, the communities with inadequate societal funds; thus already with a community security problem, are less capable to recuperate from disasters.

It is essential for human security that people should be able to live in the communities that honour their fundamental human rights and that these fundamental rights are more likely to be respected in societies that hold multi-party elections but all forms of political government are capable of generating political insecurity, through administrative ineffectiveness, bug-passing and disinterest. In the perspective of natural disasters, human security can be augmented through governments expenditure more in other domains than on disaster preparedness and mitigation. A perfect example of this is Pakistan, which continues to spend large sums of money on other issues without appropriately financing the disaster management and risk reduction fields, regardless of recurrent floods and other disasters that have shattered the country's economy over the years.

5. Pakistan's Legal and Policy Framework on Environment

Pakistan being party to international obligations and multilateral treaties is supposed to adhere to climate change strategies implementation for sustainable development. Federal Government is bound to fulfil the obligations as per the provisions of these international conventions. These multilateral treaties include the Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971), Convention concerning the Protection of the World Cultural and Natural Heritage (1972), Convention on International Trade in Endangered Species of Wild Fauna and Flora, Convention on Migratory Species, Convention on Biological Diversity, and Convention on Combating Desertification, 1994 (Ibid). In case of Pakistan, the legal laws concerning natural resources pre-date the 1973 Constitution, while quite a few are more than fifty years old. These laws shift to provincial governments major part of the responsibility for managing the exploitation of natural resources in their respective areas. Their content is primarily administrative, detailing powers, prohibitions and penalties (Ibid).

Pakistan's strenuous response to this emerging threat to its 'idea and institutions' was initiated by President Zardari's PPP Government in 2008 with the commissioning of a high-powered Task Force for Climate Change Response, which culminated in formulation of the National Climate Change Policy 2012. In another landmark response, the Government set up a separate Ministry of Climate Change in the same year. Later on, this aspect was amply highlighted in Prime Minister Imran Khan's speech at UN General Assembly in 2019. The National Climate Change Policy outlined Pakistan's nine major vulnerabilities to climate change. However, we need to follow the example where in 2020 a court of appeal stopped United Kingdom's Government decision of adding the third runway at London Airport, citing that government illegally neglected its commitment to reduce carbon emissions.

6. Climate Change and Securitization of Pakistan

According to Lieven that among all kinds of external and internal threats, climate change is the gravest threat to the security of Pakistan (Matthew, 2010). In Pakistan, climate change was recognized as a threat earlier on, as is evident by the statement of Federal Minister, Makhdoom Syed Faisal Saleh Hayat, in the Musharraf era, who sounded an alarm by saying: "Agricultural productivity in Pakistan was affected by the changes in land and water regimes, where dry land areas in arid and semi-arid regions were most vulnerable, and affected agricultural productivity, putting the country's food security at risk"(Bansal & Datta, 2013). The succeeding paragraphs will highlight the effects of climate change on security of Pakistan.

Developing countries like Pakistan are least responsible for increased level of GHG emissions, yet are most threatened by its adverse effects. Government of Pakistan commissioned a Task Force on Climate Change (TFCC) which, in its report highlighted climate change as a major non-traditional security threat. To cope with the challenge, National Climate Change Policy was developed by the Ministry of Environment and adopted by the cabinet in September 2012. Later, the Government of Pakistan passed Climate Change Act 2017. Thus relevant legislation and policies do exist in Pakistan but implementation is wanting.

In the environmental sector's discourse analysis, the rhetoric debating creation of a separate Ministry of Climate Change is indicative of public attention accorded

to the environmental issues. Although the discourse revealed explicit and implied references about the ‘existential threat’ and ‘virtual certainty’ of climate change to Pakistan’s ‘survival’ but the state response was ‘cosmetic’ at best and non-existent at worst. Like the economic sector, the silver lining of the environmental sector analysis remains in heightened mindfulness about the cross sectoral security implications of the environmental issues. Irrespective of environmental issues failure to get securitized, the discourse analysis highlights some critical issues like water stress, rise in average temperature, unusual rains and flooding, etc, which beg urgent inclusion in the security agenda of an agricultural country like Pakistan. Environmental issues need to be synthesized with a premium in every discussion about Pakistan’s national security because of their overarching impact.

Super floods during 2010 affected 2.1 million hectares of agriculture land of Pakistan’s most productive region. It resulted in the loss of crops, property, livestock, and damage to infrastructure and human settlements that people had built over a period of time. The loss of meagre possessions of people further pushes them to poverty line where millions are already languishing. Pakistan, hence, fails to realize its objective to become a welfare state. Societal cleavages deepen further, polarization increases, the number of dissatisfied people swells leading to frustration, aggression and extremism. Overall it sets back Pakistan’s goal to develop and provide a decent life to its people.

6.1. Global Warming, Glacial Meltdown and Securitization of Pakistan

The Himalayan range comprises high altitude glaciers that provide water to several rivers in Asia. These rivers supply water to nearly half of the world’s inhabitants. Many people in Asia rely on glacial melt water during dry weather. Faster glacial melt interrogates the very persistent nature of several Himalayan flowing rivers patients (Khan & Zeeshan, 2016). Despite its critical importance as resource to human life, assessments of conflict show that throughout history while water systems have often been used as weapons and targets during conflicts, water resources in themselves have seldom been the sole source of violent struggles. Having antagonistic relation on eastern border which from Pakistan’s water sources mostly originates, creates a worst future scenario.

It is further projected that the usual mean temperature has increased from 3 °C to 6 °C over the last hundred years and there is probability to increase of temperature from 1-3°C (Houghton et al., 1991) to 4.5°C or higher by 2080 (Moorhead, 2009). Nevertheless, many climate experts believe that the globe can bear the rise of 2°C that could be edge, as an increase of more than this would have serious implications which would be dangerous to environmental systems (Moorhead,2009).

Pakistan's share, though, in the global emissions is only 0.7% however, it still stands most vulnerable to the adverse effects of climate change (Burke et al,2017). According to German watch, The Global Climate Risk Index ranks Pakistan 8th, as the most vulnerable country to climate change since 1995 to 2014. The key indicators of climate change in Pakistan have been discussed in succeeding paragraphs.

The rise in mean Temperature: During the 20th century, Pakistan has experienced an average rise of temperature by 0.57 °C which is expected to elevate further by 4.4 °C by the end of 21st century.

- Pakistan is listed among top 10 countries which have been adversely affected by the extreme weather events between 1995 and 2015, owing to recurrent and distressing droughts and floods almost every year. During this time frame, on average 487 people were killed annually in weather-related events.
- Public infrastructure in Punjab and Azad Jammu and Kashmir was mainly impacted during 2014 floods, destroying more than 5,000 community development schemes incurring a loss of over Rs.15 billion to the national exchequer (Ministry of Water & Power-Annual Flood Report, 2015).

According to Fourth assessment report of IPCC (AR4) published in 2007, Himalayan glaciers are thinning out and there is very high probability that by the year 2050, they will shrink significantly(IPCC 2007). Since 1960, almost 1/5th of the Himalayan ice topping has vanished. Where in Pakistan the primary source of water are glacial melt and precipitation which rely on a specific temperature, thus the anticipated climate change is expected to have grave repercussion for Pakistan's water security. More frequent and intense droughts and floods due to amplified divergence in intra-annual and inter-annual river flow have rendered water availability lower and irrigation demands higher. Apart from loss of natural

reservoirs as the glacier melts down, there will also have serious long-term implications for sustainable supply of water.

During 20th century, an estimated 20 cm rise in the average sea level has been observed. Whereas the rise along the coast of Arabian Sea has been approximately at 1.2 mm/year which is likely to increase further, causing intrusion of saline water up to 80 km upstream in coastal belt of Pakistan whereby distressing the cultivatable land of Sindh (Chang et al, 2013). Saline water intrusion is also harming marine ecosystems including mangrove forests and fisheries in the Indus delta. Since Pakistan is the 8th most vulnerable country as per Climate Risk Index (German watch, 2016), it needs to build its legislative and technical capability and capacity to manage the ever-increasing environmental threats. In order to address the concerns which Pakistan faces or will face in future owing to the changing climate, the National Climate Change Policy of Pakistan has been formulated. The policy is aimed at objectives mentioned in succeeding paragraphs.

- i. Chasing of unrelenting economic growth and simultaneously addressing the climate change challenges suitably.
- ii. Integration of National policies with climate change policies, thereby spiraling an inter-provincial and inter-ministerial synchronized mechanism and decision making on climate change.
- iii. Assisting and intensifying Pakistan's role in the world as a vigilant member of the international community in managing climate change concerns.
- iv. Guaranteeing water, food and energy security of Pakistan in the face of challenges presented by climate change.
- v. Curtailing the peril of upsurge in strength and frequency of harsh weather events including floods, droughts and tropical storms.
- vi. Nurturing the progress of suitable economic incentives thus promoting both public and private sector venture in mitigation and adaptation measures.
- vii. Augmenting the awareness, skill and institutional capacity and ability of relevant stakeholders.

Pakistan is among the countries most vulnerable to climate change and has a very low technical and financial capacity to adapt to its adverse impacts. As envisioned in the Planning Commission's Vision 2030 document, it is imperative to set the stage that would prepare it to combat this new challenge. While Pakistan aims to work on a strategy, the more immediate and critical task before it is to organize itself for adaptation to Climate Change. PM Imran Khan took practical steps as nominating a Climate Change Minister (Zartaj Gul) and highlighting the issue as first in his address to UN General Assembly in 2019.

6.2. Water Crisis, Food Scarcity and Securitization of Pakistan

Reducing availability of water in view of climate change and increase in population would adversely impact country's food security. The demand for water based on traditional usage practices cannot be met unless it is eased through conservation and improving irrigation methods for use of water besides development of crops which can thrive on less water.

Climate change has many insinuations for food security in Pakistan. First, uneven, and untimely handiness of passable irrigation of water causes lower crop harvest in irrigated crop zones. Growers are less involved in cultivating water intensive crops like rice and sugarcane that require more water now due to strong evaporation. Secondly, the increased temperature with high evaporation during long summer season has direct impact on low crop yield. Thirdly, the extra melting of glaciers combined with uneven annual rainfall often results into flash floods with millions of folks migrated and loss of billions of worth in food, standing crops and damaging infrastructure. Fourthly, the regularity as well as intensity of extreme natural disasters like floods, drought, and cyclones, results into grave damages for the standing crops coupled with huge damage to life, livelihood and property. Finally, due to continuous population explosion of the country and non-equivalent corresponding availability of continuous supply of food, the inflation rate is extremely high for the have nots to make their both ends meet. The chief staple foods like wheat, rice, maize, sugarcane and vegetables have become difficult for the poor people and the availability of fruits in spite of a great national yield is out of the reach of poor people.

7. Conclusion

The legal system has a term of strict natural happening considered to be beyond the control and strength of humans but “acts of God”(Pachauri, et al 2009). Natural calamities and harmful environmental occurrences are believed to rise in count on an international scale, raising levels of monetary, social, and civil pressure that could increase both political and economic wars.

Huge natural catastrophist could also harm fundamental elements of global economy such as water, food, medicine, energy, livelihoods, supply chains, initiating deep rooted fears that could increase the scale of practical self-protective actions. Intelligence agencies, academia and intelligentsia should concentrate on the possible main disasters in different parts of the world that results in social, political and economic “ripple effects” that lead to violent conflicts. Climate change and natural disasters, fundamentally, act as risk multipliers for chaos in some of the most vulnerable areas of the world.

Natural disasters can drastically result in deep social alienation and government unresponsiveness or ineffectiveness, urging hostile movements. In 1970, the governments reaction to the cyclone that hit Eastern Pakistan; largely contributed to the separation of Bangladesh as independent country(Khan & Zeeshan, 2016).

Reducing the direct harm of such tragedies needs initiatives in three areas: increasing regional resilience, refining relief competencies, and where mandatory, assisting replacement from the most exposed zones. Avoiding adverse concerns about political strength and human security will entail both national and international cooperation to promote the importance of avoiding intense clashes that could rise from these “natural attacks”.

The high-altitude glaciers of Himalayas of which several rivers supply water to Asia including Pakistan. Rather these are the life line of the inhabitants of this part of the world. Faster glacial melt not only decomposes out water reservoir but also most probably could become a source of discontent among neighboring states on South Asia inter alia. The same may adversely affect the agriculture sector which would lead to food scarcity and followed by more poverty. 80% of Himalayan glaciers will be gone in next two to three decades.

The receding Himalayan glaciers would not only lead to water scarcity but has also become a major cause of flooding in the region. Flooding again causes erosion of cultivable land and affect agriculture growth. To store water and

looking at future the South Asia's main apple of discord would be the right over water emanating from north (Al-Rodhan, 2007).

It is recommended that regional cooperation among nation states needs to strengthen as climate change does not see borders and its effects are global and regional. Long term realistic planning in lines with research conducted in the field of climate change followed by effective implementation can mitigate the effects of climate change.

Boundaries are bound to protect its citizens and territory. Pakistan being nuclear state has little danger of aggression from antagonist neighboring states but it is definitely facing challenges from natural disasters caused by climate change.

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