

INFLUENCE OF CLIMATE CHANGE ON PAKISTAN'S NATIONAL SECURITY

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ABSTRACT

The aim of this paper is to investigate the impact of climate changes on the security of Pakistan. It also explores policies on climate change with regard to climate challenges faced by the country. It is argued that there is a number of climate related challenges including economic security, water security, food security and energy security. This research study also analyses the government policy regarding climate change. It is found in this study that due to the transfer of environment subject from the federal list to the provincial list. Provincial governments are required to take capacity-building means for handling climate change.

Keywords: Climate Change, National Security, Economic Security, Indus Delta Region

INTRODUCTION

The obligation of a nation state to maintain and ensure its survival is termed as National security, which is achieved by harnessing national resources and application of elements of National Power. The concept of National Security is defined with orientation to the people, "that the opinion of public in a given community believes it necessary to relish its prosperity, well-being and autonomy" (P.Romm, Joseph, 1993). The concept of Comprehensive Security in-fact involves all dimensions of Human Security such as; energy security, economic security, environmental security, etc. Relevant to the topic of discussion, the security of environment aims to provide security to the people from the consequences of natural and humanly created pressures, which result in the deterioration of existing layout of atmosphere. The concept of Climate Change thus involves "an alteration in the climate pattern as a direct consequence of human activity which alters the existing composition and layout of worldwide atmosphere". Climate Change first appeared on the international scene two decades ago and has made significant progress with the realisation to all stakeholders that it is of vital importance to the future of mankind. Despite difference of opinion, major world players are alarmed on the serious consequences of change in climate pattern on whole spectrum of people's life and security. This paper analyses

the impact of climate change on the national security of country. It also explores policies of climate change in Pakistan.

Climate Changes for Pakistan: Globally, there are several challenges likely to be confronted. As the polar ice caps melt, the competition to control the resources (estimated for gas and oil around 400 billion barrels) in the Arctic Circle may provoke conflict between major players for getting maximum share. As Anders Fogh Rasmussen, the NATO Secretary General said, “climate change has potentially huge security implications”. Climate change will create strategic challenges for Pakistan in coming years. In next 20 – 30 years, Pakistan may confront the prospects of food shortages, water crisis and catastrophic flooding, which will have implications on national security.

Economic Security: In year 2006 World Bank published a comprehensive document titled “Assessment Report on Environment of Pakistan”, highlighting challenges along-with charge of degradation in Pakistan’s environment. As per the report, the annual cost of “US \$4.2 billion or Rs.365 billion have been estimated as cost of Pakistan’s environment degradation which is almost 6% of GDP” (Strategic Assessment Report 2006). Experts also believe that the annual cost of degradation in environment has recently reached to approximately US\$ 5.2 Billion equal to Rs.450 billion causing regular losses well over 6% of GDP, which is increasing at an alarming rate. 90 % of natural calamities in Pakistan have been caused due to climate change with increased flood and drought hazards at varying spells of the years. As per the fresh estimates of Government of Pakistan, “Environment alteration could cost up to 14 billion dollars losses to national exchequer due to various forms of disasters, which are likely to be over 5% of the share in GDP” (Malik Amin Aslam, 2012). Therefore, climate change has huge impacts on the economic security of Pakistan.

Water Security: Water security has direct impact on the food and energy security which impacts overall economy of the country. In his research work on the Indian Subcontinent’s civilizations, Michel Danino highlights that “loss of major river systems in the past had a domino effect on the thriving civilizations which became extinct one after the other” (Daily Science May 28, 2012). Pakistan is now being graded as water strained country with deterioration in availability of per capita fresh drinking water, less than 1800 cubic meters per year (m³/y) therefore on its way to be converted into a water- rare country (per capita availability less than 1000 m³/y by 2035 (WB 2006). Similarly, water in rivers is also anticipated to decay further to 800 m³/y in 2026 due to accumulative population. The security of adequate water is very dangerous issue in times to come for Pakistan” (Gov. of Pakistan, 2010). Availability of less water in Pakistan is likely to cause food scarcity and conflict amongst provinces and with

neighbours, for which we may need new accords. Pakistan being a lower riparian nation is dependent on nature and other countries for water. India has 52 projects at various stages of completion on the Rivers flowing to Pakistan, owing to its own growing demand, water stress conditions, India may attempt to further reduce the river inflow adding to the challenges for Pakistan, and similar situation may be faced from Afghanistan due to proposed construction of Dam over River Kabul. On the other hand, water storage capacity of Pakistan is also not commensurate with the current and future requirement due to silting. Water storage reservoirs of Pakistan mainly comprise three large dams as Tarbela, Mangla & Chashma which were constructed in late seventies, however, their capacities are reducing due to silting. The present capacity relates to only 9 percent of the Indus River System annual flow which is far less than average 40 percent world over. When viewed in the context of melting glaciers may lead to increased flooding and later on decreases in river flows. Similarly, changes in Monsoon pattern will also have its impact on agro-based economy of the country. In Pakistan the most dangerous aspect of the glacial melting is the large lakes left behind, a potential source of destructive flooding. “Scientists have identified 2,420 glacial lakes as GLOFs in Gilgit Baltistan. Of those 52 are potentially dangerous to the population living below” (Survey Report, 2008). Attabad Lake is a case in point.

Food Security: Agriculture and Livestock sectors are the “backbone of Pakistan’s economy, which contributes 22% to GDP and accounts 60% exports of country” (Pakistan Economic Survey, 2013). This also delivers employment to population around 68% of the most people belonging to rural areas. The food security will be affected by climate change due to reduction in production in crops and adversarial influences on livestock caused by risky events like cyclones, floods and droughts etc. The Indus Valley, which is the cradle of agriculture in Pakistan, is seriously threatened by climate change. As a result, production of crops is likely to be reduced (15 -20 % in cereals) and livestock (20-30%) creating crisis in dairy and poultry related products. Reduced water is changing the patterns of crops and rotation. Similarly, rangelands would be affected from droughts and shifting of population. Uncertainty in the availability of water for irrigation triggered by variations in river flows due to unusual melting of glacier, altered pattern of precipitation and deficiency of irrigation water due to insufficient storing capacity may result in decrease of export leaning crops as well as other consumer crops thus negatively affecting national exchequer.

Energy Security: As per the estimates of Planning Commission of Pakistan, the power sector is presently facing 3000-5000 megawatts shortage as electricity demand is about 20,000 megawatts and manufacturing is about 13-14000 megawatts. Production of Power was chiefly reliant on hydro

resources and late complemented by gas and oil. As in last almost 40 years, no new Dams have been constructed and storage capacity of existing dams has reduced to 14.28 MAF due to slitting. Presently, almost one third of electricity in Pakistan is produced by hydel means, which is likely to increase with the construction of Diamer-Bhasha dam and proposed construction of other hydel projects. However, due to impact of change in climatic conditions and declining glaciers, the water in Pakistan's rivers is also likely to decline in long term. In such a scenario, energy generation by hydel means is likely to also be affected negatively.

Human Security: Human security is most vulnerable due to negative and ripple effects of climate change for Pakistan, which implies the change in the social and political order on which the individuals and communities security reposes. Human security dimensions will have immediate impact on social fabrics of society due to sharp decrease in production capacity, low yield of crops, less space for living, mass migrations, unemployment, affecting gravely the social and health sectors.

Rise in Sea Level and its Impact on Indus Delta Region: Pakistan has been clustered by the UNEP's Coastal Areas and Oceans Program Activity Centre among the nations "which are most susceptible to negative impacts of rising sea level" (Govt. of Pakistan, 2003). The Karachi, house of around 10% of population, and around 40% of industry related to manufacturing is located in the near vicinity of coast. Marine ecosystems and coastal zones especially the Indus delta could be damaged from amplified saline water intrusion due to sea rise and augmented storms. The invasion of sea water upstream of the delta spreading up to 80 km in the seaside areas of Badin, Hyderabad and Thatta districts is hugely affecting marine life and the irrigation land. Besides increase in level of sea, the other main threat to generally emanate from enlarged tropical cyclone consequential from rising temperature of ocean. It is dreaded that the hurricanes or cyclone if settled in Arabian Sea is likely to affect Balochistan and Sindh in a big way consequential into loss of property and life.

National Response to Climate Relatives Challenges: In February 2013, Pakistan issued its first policy on climate change to meet the emerging challenges through the strategy of adaptation; i.e. actions intended to safeguard people, communities against the effects of anticipated and actual climate change and mitigation; means reduction of Green House Gas (GHG) emissions. The objective of the climate change policy is to ensure that "impact of change in climatic conditions is dovetailed in the socially and economically susceptible sectors with the aim to direct Pakistan towards climate hardy progress" (Govt. of Pakistan, 2012). Important aims of this policy are; "water, food and energy security, encourage preservation of natural resources and extended sustainability, lessen the risks of dangerous

events such as droughts, floods and tropical storms and reinforce decision making and coordination mechanisms among the ministries on climate change” (Ibid).

ANALYSIS OF POLCY ON CLIAMTE CHANGE

Lack of Cooperation Between Federal and Provincial Authorities:

Under the recently promulgated eighteenth amendment of the constitution, the subject of environment has been delegated to the provinces, whereas the capacity to absorb changes has not been generated, while “certain policy issues have overlapping with federal jurisdictions, which involve appropriate regulation, therefore, making hard for provinces” (Firuza Pastakia, 2012).

Dissolution of Ministry of Climate Change: Presently the countries around the globe are devoting deeply in meeting adverse effects of climate change, the Pakistan strangely has not only “liquefied it’s climate change ministry but also reduced its budget by over 60 percent” (Aamir Saeed, 2013). The ministry has instead been converted into a division, where understanding of envisioned policy aims will be a major challenge.

Human Resource and Institutional Capacity Building: Knowledge to discourse the climate change in Pakistan is inadequate. Insufficient human resource is a major limitation, in part, due to a brain drain, restricted investment in climate change education, and lack of mandate and opportunity for accomplished persons in Pakistan. Also Pakistan has meagre number of climate specialist scientists, technologists, modelers, and experts. Similarly, there is “shortage of organizations to deal with all-inclusive climate change science, management, mitigation, adaptation, and policy issues” (Govt. of Pakistan, 2012).

Public Awareness Programmes: Pakistan is one of the countries where people have minimal awareness and knowledge of climate change. The government has issued a comprehensive Climate Change Policy, however, its implementation mechanism with regards to adaptation and mitigation remains a big question. Resource allocation for capacity enhancement and development also falls below the desired levels.

RECOMMENDATIONS

Addressing Disconnects of Jurisdictions: Due to international implications and huge importance it is strongly felt that Federal Jurisdiction be restored and Ministry of Climate Change be revived to take on lead role. Sufficient funding be allocated for actualization of announced policy which sound very good on paper.

International Assistance for Green Climate Fund: Pakistan’s allocation for climate change is minimal as compared to other regional countries. Pakistan has to advance climate change associated projects to get

its funding share from the internationally backed green climate fund, as it does not possess the capacity to cope with these challenges at its own.

Human Resource and Capacity Enhancement: Advance and coordinate the departmental and ministerial decision making mechanism for harmonized implementation. Also, create pool professionals in the field of climate change by despatching abroad maximum scientist and students for qualifying in the relevant disciplines. Also, improve preparedness and disaster mitigation capacities at and federal, provincial and district levels.

Public Awareness Campaigns: There is a need to revise curriculum and enhance media coverage in order to make people understand that there is a very strong link between vulnerability, poverty and climate change. Aggressively pursue a forestation programs to reduce carbon emissions, preserve ecology and control silt in water systems/reservoirs.

Water Security: There is a need to ensure early restoration, renovation and up-gradation of the existing irrigation facilities in the country to make it robust to climate change related dangerous events and also to build reservoirs to control the flow of water from Indus River down to Kotri Barrage during high flood years. For water conservation, provide encouragements for adaptation to proficient irrigation methods like drip irrigation and use of sprinklers. Constructive engagement with India for strict implementation of Indus Basin Water Treaty and exploring avenues for such treaty with Afghanistan for ensuring uninterrupted flow of water from River Kabul.

Food Security: Enhance the research capacity to evaluate the likely influences on numerous crops and to advance suitable adaptation procedures. Increase the productivity of crop per unit of land and water by growing the competence of several agricultural ideas especially the irrigation water. Through R&D, grow new types of crops that are high yielding, resilient to heat, tolerant to drought, less susceptible to heavy rains and less liable to insect pests.

Energy Security: Masses will have to be made conscious to conserve energy through public campaign. Explore and exploit the opportunities afforded by renewable energy especially the solar and wind energy due to huge potentials. Concurrently with friendly countries especially with the help of China embark upon mega development projects like dams for hydro energy production. Similarly huge coal reservoirs of Thar coal be exploited by energy production to make affordable energy mix and long term sustainability.

CONCLUSION

Climate change is an emergent form of persistent threat to both national and international security, therefore, warrants a wholesome and systematic response. Pakistan alone cannot address the issue a global and

regional approach is required. Therefore, the effort to counter, adapt and alleviate the harmful effects of Climate Change, must come as a collective response from all levels of society and as a whole of the government approach. There is a need to integrate measures in respective departments to ensure that Pakistan not only remains relevant to the international community but after the identification of the threat to its national security incorporates necessary mitigation and adaptation measures for holistic response.

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