

ENVIRONMENTAL DEGRADATION: A HUMAN SECURITY CONUNDRUM FOR PAKISTAN

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Abstract

Environmental degradation is one of the most significant challenges faced by the modern-day governments. Experts have attributed it as mother of all security problems, owing to its serious ramifications for food, water security, migration and natural resources which can lead to inter / intra state conflicts. Pakistan is specifically vulnerable to environmental degradation and is ranked as 5th most affected countries on Global Climate Risk Index 2020. Persistent heat waves, changing patterns of monsoon's, earthquakes, floods, droughts and cyclones have direct linkages with reduction in agricultural production, food security, natural calamities and water issues in Pakistan. Frequency and intensity of Extreme Weather Events is on rise during last two decades. Floods in 2022 alone have displaced more than 3.5 million people and caused loss of 9% in country's GDP. However, inadequate coordination between stake holders, poor implementation, lack of awareness and fiscal constraints are few of the stumbling blocks in the process. A well-coordinated, consistent and integrated response by Federal / Provincial governments and other relevant stake holders is needed to effectively respond the colossal challenges faced by Pakistan.

Keywords: Environmental Degradation, Climate Change, Environmental Governance, Human & National Security, Extreme Weather Events, Food Security, Inter / Intra State Conflicts.

*The impacts of climate change threaten to destabilize regions, promote conflict, and undermine human security around the world." -
United Nations Environment Program¹*

Introduction

Modern Governments are confronted with multifarious challenges to manage and perform a host of intricate functions. Some of these challenges fall in traditional domain while others are categorized as Non-Traditional. Non-

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Traditional security challenges like environmental degradation, climate change, food & energy security, water scarcity, population explosion, infectious diseases etc have direct linkage with survival of the countries².

Environmental Degradation is defined as any change which is undesired and potentially detrimental to the overall environment. Environmental degradation is the natural outcome of the human activity resulting into exhaustion as well as decline in the quality of natural resources like Land, Air, Soil and Water. It also includes damages inflicted to the eco systems, Bio-diversity, natural habitats and wildlife³. The United Nations International Strategy for Disaster Reduction defines environmental degradation as "the reduction of the capacity of the environment to meet social and ecological objectives, and needs". Environmental degradation has been included in the ten most significant threats listed by UN's High-level Panel on Threats, Challenges and Change⁴.

Pakistan is included in the countries who are most vulnerable to natural disasters as a result of environmental degradation⁵. Persistent heat waves, changing patterns of monsoon's, winters & summers, earthquakes, floods, droughts and cyclones have direct linkages with reduction in agricultural production, food shortages, natural calamities and water issues for Pakistan.

A country like Pakistan with serious environmental challenges without a meaningful mitigation strategy will invariably present itself as a lucrative target for traditional security threats⁶. Apropos, the study in hand is aimed at identifying the impact of environmental degradation on various facets of human security in Pakistan adopting an exploratory research paradigm.

Evolution of Environment & Climate Change in Global Security Discourse

History contains numerous examples wherein extreme climatic events have resulted into large scale conflicts. Environmental conditions are known to have a decisive say in deciding fate of communities, nations and civilizations. For instance, prolonged dry spells couple with extreme cold weather in 4th Century AD resulted into displacement of Huns and German tribes into the region of Gaul which had moderate living conditions. This move eventually led to the capture of Rome by Visigoths⁷. Some historians attribute expansion of Muslims towards Mediterranean and Southern Europe by the drought in the Middle East⁸. Vikings,

the inhabitants of Green Land are believed to be eliminated in 15th Century AD, in the era of “Little Ice Age” entailing abrupt fall in temperatures in the region⁹.

Notwithstanding the intensity and damages caused by climatic changes to human security, historically these damages were for a short span of time and in limited geographical area. However, in a world community as densely populated as of today, experiencing severe climatic conditions of varying degrees and nature within one generation seems catastrophic for international peace and security. Extreme Weather Events (EWEs) result into spread of diseases, food and water security issues inducing many human and national security challenges like large scale climate induced migration¹⁰.

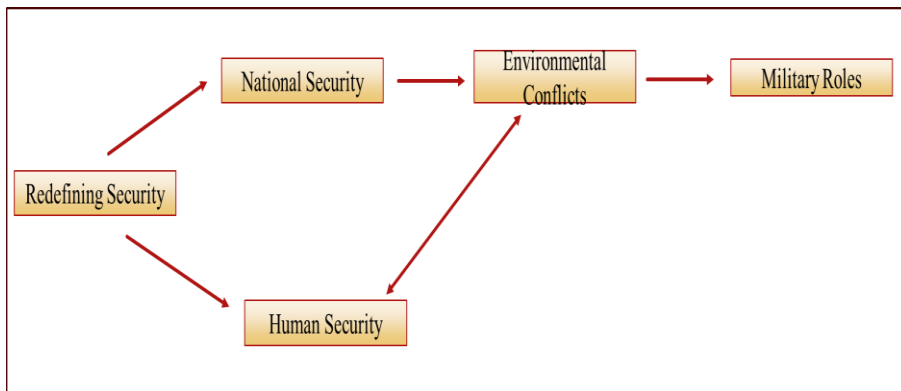
Security is a multidimensional aspect but traditionally, military thinkers as well as policy makers remained more focused on responding to the violent conflicts. This increasing quantum of focus on enhancing military capacities to respond violent conflicts consuming a dominant chunk of the national resources (around 3% of GDPs) across the globe¹¹. While mitigating violent conflicts have been garnering the requisite attention, however, alternate risks to security e.g., Environment has received relatively lesser consideration¹².

Ground breaking discourse on establishing linkages between climate change and security was initiated by Richard Falk, in his book titled “The Endangered Planet: Prospects and Proposals for Human Survival”. Written at a time when environmental degradation or climate change was a relatively new discipline, Falk establishes linkages between availability of time and for climate change adaptation vis-à-vis the intensity of the conflict and potential damages likely to be suffered during the process. He terms it as “The First Law of Ecological Politics”¹³.

Lester Brown in his paper published in 1977 titled “Redefining National Security” studied the inter-connections between environmental degradation and national security. While his work was primarily focused on Food Security, Brown was of the view that conventional military instrument was not capable to address challenges posed by environmental degradation. He emphasized on disarmament and reallocation of budgets for adaptation as the possible methodology for mitigating the serious environmental challenges¹⁴.

Brown's discourse was furthered by Thomas W Wilson, an American expert, in his book titled "Global climate, world politics and national security" published in 1983, Wilson argued that conventional military response and typical nation centered political response is not suitable for addressing environmental challenges. He was of the view that in order to achieve sustainable security the countries need to involve in collaborative global politics¹⁵.

Figure-1: A Guide to Environment – Security Linkages



Source: Barnett J (2003)

While initially treated with “peripheral” weightage, environmental challenges kept on seeking global attention due to their perpetual devastating impacts¹⁶. Experts like Jon Barnett are of the view that “environmental security” as a concept was coined to incur the realization of security challenges to a nation's sovereignty falling within environmental domain. The aim was to elevate signature of environmental challenges in the political priorities from “low politics” to “high politics”¹⁷.

Leading experts like Peter Schwartz, have attributed environmental degradation as “Mother of all Security Problems”, owing to its serious ramifications for food & water security, migration and natural resources which can lead to inter / intra state conflicts of unprecedented scales and magnitude¹⁸. Impact of human activity in environmental degradation can be established by the fact that in a survey of 928 peer reviewed papers published between 1998-2003 revealed that not even a single contradicted human involvement in rising global temperatures¹⁹.

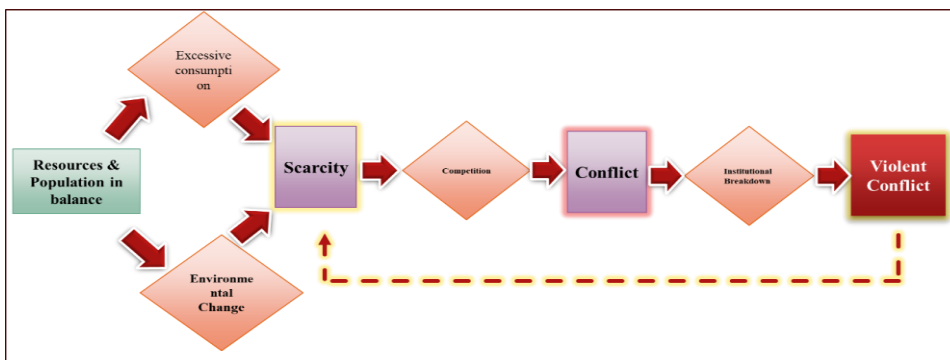
UK’s chief scientist proclaimed environmental degradation as a considerably grave threat to environmental peace and security than terrorism²⁰. In 2007, a report compiled by 11 retired senior commanders of different services claimed that climate change is a “Threat Multiplier” which can aggravate issues like water and food security to a level that can present a formidable threat to the national security of the United States²¹.

During an unprecedented Security Council Session in April 2007, it was consensus amongst participants that climate change presents a substantial threat to the international peace and security²². In the month of June, same year a report by United Nations Environment Program (UNEP) observed that environmental degradation resides at the genesis of Darfur crisis. Degradation of resources triggered conflicts between communities on the possession of vital natural resources like water. The report also mentioned similar concerns in the fight between North and South Sudan²³. United Nations Secretary General Mr Ban Ki-Moon summarized the issue in following words:-

“Almost invariably, we discuss Darfur in a convenient military and political short-hand—an ethnic conflict pitting Arab militias against black rebels and farmers. Look to its roots, though, and you discover a more complex dynamic. Amid the diverse social and political causes, the Darfur conflict began as an ecological crisis, arising in part from climate change.”²⁴

Creation of state of security automatically triggers a state of competition over possession of scarce resources amongst the rivals which may ultimately lead to a violent conflict. The onset of violence results into further consumption of resources by the opposing parties to finance the conflict. This relationship between resources and conflict does not progress in a straight line.

Figure-2: Common Conceptualization of Security Impacts of Environmental Changes



Source: Brown et.al, 2007

The countries or regions already possessing ingredients of conflict like poverty, poor governance and political marginalization are more vulnerable to the adverse impacts on environmental degradation. The already resource deficient, economically fragile and politically disenfranchised parts of the country may even succumb to collapse of basic livelihood earning mechanisms²⁵.

Extraordinary scale and magnitude of challenges proffered by climate change has the capacity to overstretch the capability of governance systems at global level²⁶. Severity of environmental challenges can inhibit the governments to present effective response mechanisms and can even prevent peaceful resolution of inter – intra state conflicts²⁷. 46 countries across the globe with an accumulative population of around 2.7 billion are at high risk of environment triggered violent conflicts²⁸.

In a nutshell, natural disasters proffer astounding challenges to the governance infrastructure, institutional capacities and order of the society. Real test of the performance, flexibility and adaptability of the institutions to totally unpredictable scenarios, while ensuring wellbeing of the public, is exhibited during natural disasters²⁹. In order to proffer befitting response to such colossal challenges, only those governance models are likely to thrive who possess inherent institutional tracts of collaboration, participation, flexibility and adaptability to impending and future challenges³⁰.

Impact of Environmental Degradation on Human Security in Pakistan

“Pakistan had the hottest city on earth, Jacobabad at 51 Degree Celsius in May 2022. It experienced Forest Fires, Melting Glaciers and now has the Worst Floods in the living memory. It is the epicenter of the Climate Catastrophe”

Claudia Webbe - British MP from Leicester East in a Tweet on
4 Sep 2022³¹

The term “Human Security” was first used in 1982 by Independent Commission on Disarmament and Security issues in its report. The commission argued that the traditional concept of security doesn’t encompass full spectrum of security threats besides human security is an inseparable component of national security³². According to a report titled “Human Security in Theory and Practice” compiled by UN Human Security Uni, seven categories of human security are

endangered by environmental degradation and its associated factors³³. All of the eight Millennium Development Goals (MDGs) have direct relationship with environmental degradation. Goals like elimination of extreme poverty, hunger, provision of gender equality, reducing child mortality, fighting diseases are directly proportional to the adaptation and mitigation of environmental degradation across the world³⁴.

Pakistan is one of the most vulnerable countries to environmental degradation and is ranked as 5th most affected countries on Global Climate Risk Index 2020³⁵. Climate Change, Pollution, Water Scarcity, Land Degradation and Deforestation are few of the major facets of Environmental Degradation in the world in general and Pakistan in particular³⁶. According to studies 49.6% population and 22.8% of Pakistan's area, which amounts to approximately 115 million people and 0.16 million square kilometers, is at risk due to damages by environmental degradation³⁷.

The phenomenon is posing inextricable challenges for every sphere of life in Pakistan. Impacts of Environmental degradation and its associated elements on various facets of Human Security in Pakistan are discussed in the succeeding paragraphs.

Agriculture & Food Security

Concept of state ensuring food security of the entire population is enshrined in the Article 38 of the Constitution of Pakistan. The article emphasizes the well-being as well as provision of essential commodities including food and shelter³⁸. Pakistan's food security concerns are quiet alarming with as it has been ranked 99th out of 129 countries in the Global Hunger Index (GHI) report released in July 2023³⁹. An alarming figure of 58% of the population is considered in "food insecure" category⁴⁰. The report attributes a "toxic cocktail of conflict, climate change and the COVID-19 pandemic" as root cause of the food security issues of Pakistan. The more disturbing fact mentioned by the report that Pakistan's current score of 26.1 has declined from the score of 29.6 in GHI report of 2014⁴¹. Global Food Security Index of 2017 ranks Pakistan as 77th amongst the qualifying 113 countries. Pakistan's Human Development Indicators are below than most of the South Asian Countries⁴².

Despite being considered an agricultural country, Pakistan has 38% or 5th highest rate of stunted growth in the world with 37.5 million people without

proper nutrition and 68% of the households cannot afford a staple – adjusted nutrition diet⁴³. Another reason for lack of food security in Pakistan is the huge gap between average outputs of crops produced in Pakistan as compared with the averages at national and international levels. For instance, there is a gap of 31%-73% between best available vis-à-vis average agricultural yields and 61% gap in milk production within Pakistan⁴⁴.

As per an Agro-Climatic Zone Level Analysis for Temperature and Precipitation in Pakistan between 1951-2000 carried out by Global Climate Change Impact Study Centre (GCISC), mean annual temperature rise of 4.3°C-4.9°C by year 2085 has been predicted⁴⁵. This temperature rise could prove devastating for the agriculture in Pakistan. An overall rise of 1°C in temperatures could result into 9% reduction in wheat production alone⁴⁶.

A joint study between London School of Economics (LSE) and Lahore University of Management Sciences (LUMS) predict an approximate 0.5°C rise in Pakistan's temperature by the year 2040 which would mean approximately 10% loss in yields of all major crops. In terms of financial impact, Rs 30,000 loss per acre of land will be incurred to the farmers⁴⁷. Global Facility for Disaster Reduction and Recovery Organization (GFDRR) estimates that temperatures in Southern and Coastal regions of Pakistan are likely to rise between 1.4-3.7°C by year 2060. Rising temperatures coupled with irregular rain patterns could result into serious damages to the crop production in Pakistan⁴⁸. Pakistan Institute of Development Economics (PIDE) has estimated following losses to crop yields due to climatic variations⁴⁹: -

- Wheat : 6-11%
- Basmati Rice : 15-18%
- Live Stock Production : 20-30%

Amir Hayat Bhindara, a renowned climate change expert and progressive farmer who has been on different advisory positions on agriculture during an interview with the researcher on 14 August 2023 stated that changing weather patterns and heatwaves have direct impact on the agriculture production and food security of Pakistan. He was of the view that the most overwhelming implication imposed by the climate change to our food security sector is “urgency” by “squeezing the reaction window” to the onset of natural disasters. Climate Change induced natural calamities have been further reinforced due to non-availability of

real time information, appropriate early warning systems and lack of mechanization in the agriculture sector⁵⁰.

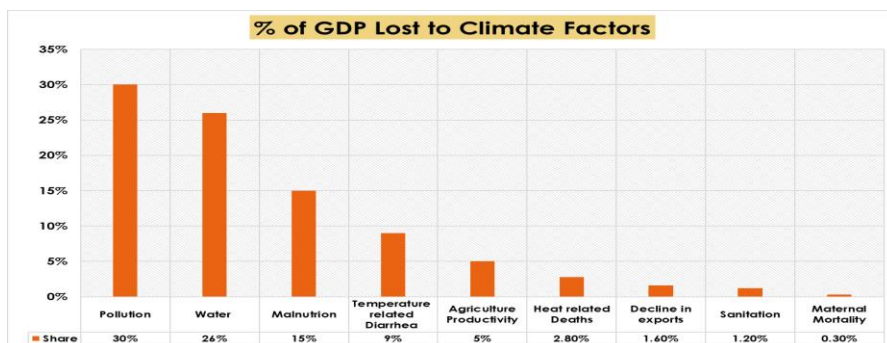
Economy

Environmental degradation has a glaring impact on the economic outlay at global level. Financial losses incurred as the consequence of climate change are expected to be 20% of the global GDP i.e., around \$20 trillion⁵¹. A vast majority in Pakistan depends upon Fisheries, Forests and Agriculture for earning basic livelihood, the phenomenon has direct impact on survival of these communities due to its devastating impact on their sources of earning⁵². Economic survey of Pakistan estimated that Pakistan may suffer economic losses of Rs 365 billion per year due to deteriorating environment which could rise upto Rs 400 billion⁵³. Broad distribution of these losses as per sectors is as under⁵⁴:-

- Pollution - Rs 132 Bn
- Water, Sanitation and Hygiene (WASH) - Rs 112 Bn
- Soil Degradation - Rs 70 Bn
- Lead exposure - Rs 45 Bn
- Deforestation - Rs 6 Bn

Pakistan has suffered 152 Extreme Weather Events (EWEs) between 1999-2018. These events caused reduction of 0.53% per unit of GDP which translates into economic losses worth \$3792.52 million. Asian Development Bank (ADB) estimating annual costs for climate adaptation for Pakistan to be between \$ 7-14 billion⁵⁵. Indus River Basin has remained the hub of socio-cultural and economic lifeline for more than 80% of the population living in this basin for past 5000 years.

Figure-3: Author’s Illustration: Share of Climate Factors in GDP Loss to Pakistan



Source: Eco Survey of Pakistan 2021-22

Mismanagement of this precious water resource amounts to an annual loss of \$12 billion which is roughly 4% of Pakistan's GDP⁵⁶. A study by Ministry of Climate Change (MoCC) estimated \$ 1.3-1.9 bn of annual economic losses suffered by Pakistan due to environmental degradation which is 0.5-0.7% of the GDP⁵⁷.

Air pollution alone causes global economic loss of around \$8bn on daily basis with accumulative annual losses predicted go upto \$25 trillion by 2060⁵⁸. The situation in agriculture sector presents the most worrisome scenario as it the largest sector of Pakistan's economy, sharing around 22.9% of the GDP and accommodating 37.4% of the workforce⁵⁹. Owing to its vital significance, Agriculture – Water Nexus has been included in Priority Sectoral Area, as part of the maiden National Adaptation Plan for Pakistan – 2023, unveiled in July 2023 by the Minister of Climate Change Sherry Rehman⁶⁰.

Country Climate and Development Report (CCDR) by the World Bank projects environmental degradation will result in a 7-9% fall in Pakistan's GDP by 2030, further shrinking it by 20% till 2050⁶¹. The combined economic effects of catastrophic floods of 2022 caused damages up to the tunes of \$ 30.2 bn, which is 4.8% of the GDP for year 2022-23. The more painful reality is that out of the 94 districts severely affected by the catastrophe, 19 are amongst the poorest in the country.

The calamity has pushed 3.7% or 8.4 million additional people under the poverty line⁶². Pakistan will need \$348 bn worth financing for mitigating environmental disasters which is around 800% the total budget amount for year 2022-23. Out of this amount, around \$152bn will be required between 2023-30. Pollution is another factor causing devastating impact on Pakistan's economy incurring an estimated annual loss of \$ 47.8 bn which is around 6% of the GDP⁶³. Another study predicts that a whopping \$415Bn per annum as the cost of managing the Extreme Weather Events (EWEs) in Pakistan⁶⁴. According to UNICEF study, inadequate sanitation facilities alone are resulting into annual losses of \$5.7 Bn or around 4% of country's GDP⁶⁵.

Currently 37% of Pakistan's population is residing in urban centers which is likely to reach 60% by 2050. Urban centers are already experiencing smog, heatwaves, urban flooding and other environmental challenges. Infrastructure and resources required to accommodate the additional influx would require huge financial investments over a prolonged period of time⁶⁶. Heatwaves have a

significant impact on reduction of work hours and labour productivity in Pakistan. An anticipated 5% loss of work hours coupled with heat stress, dehydration and exhaustion will result in reduction of income amongst labour⁶⁷.

Health

Challenges to the health sector have been exacerbated globally due to worsening environmental indicators with Pakistan at the forefront of the onslaught. International Federation of Red Cross and Crescent (IFRC) is of the opinion that environmental degradation is adversely impacting every dimension of human Physical and Mental health in Pakistan⁶⁸. According to Ministry of Climate Change (MoCC) and a report by University of Chicago's Energy Policy Institute (EPIC), Air pollution alone is causing 235,000 premature deaths annually and reducing average life expectancy of citizens by up to 3.9 years in Pakistan⁶⁹.

Plastic pollution is another formidable challenge to the health across Pakistan. According to estimates, an average person in Pakistan consumes about 2000 tiny particles of plastic every week, which translates into around 250 grams of plastic every year which is extremely dangerous for the health and well-being⁷⁰. Pakistan produces approx. 0.667 Kg of hospital waste per bed per day⁷¹. Around 25% of this waste is estimated to be mixed with general waste thus creating serious public health challenges⁷².

Inter-Governmental Panel for Climate Change (IPCC) in its 6th synthesis report released in March 2023 has assessed a likelihood of rise in deaths due to continuously rising heatwaves. Spread of diseases of multiple vectors like food and water coupled with mental health challenges could aggravate volatile human security situation in many countries and regions⁷³. Environmental degradation has caused particularly negative impact on the urban centers. Extreme heat, smog and other challenges have particularly affected the public health, livelihood, water, hygiene and sanitation in major cities. The impacts are more prominent and damaging for vulnerable and marginalized communities⁷⁴.

Rising temperatures across Pakistan provide congenial conditions for spreading vector borne diseases like Dengue and Malaria⁷⁵. WASH is another significant health challenge for Pakistan. Diarrhea alone causes 53,000 deaths amongst children every year⁷⁶. The challenge is further exacerbated due to the fact that more than 25 million people in the country i.e., 12% population in urban

centers and 42% in rural areas have no access to toilets. Approximately 70% of the families are consuming contaminated drinking water⁷⁷.

Environmental degradation causes frequent displacements along with challenges to food security and general well-being of the affected population. This situation contributes towards multiple mental health challenges like anxiety, depression, stress disorders, insomnia, sexual dysfunction and drug addiction etc⁷⁸.

Existence of toxic chemicals in the water, food and air contribute towards development of liver, lungs and breast cancers⁷⁹. 70% of the flood affected children had experienced mental health challenges in the backdrop of traumatic experiences of 2010 floods⁸⁰.

Social Implications

Environmental degradation and its associated factors have multidimensional social impacts with varying degree of intensity and scope. These impacts range from disruptions in supply chain, infrastructure and cost management of water food, shelter and power, disruptions in availability and useability of land, agriculture products, industrial processes and even recreation opportunities. However, the most glaring challenge transpires in the shape of forced displacement of population to survive in the wake of ongoing or anticipated disaster⁸¹. Social aspects of climate change also entail an inherent economic cost. Apart from the economic estimates of adapting and mitigating climate change, in case appropriate measures are not taken states may have to bear around \$16 trillion in social costs alone⁸².

Relationship between climate change and social inequality is a of a vicious cycle. As a result of prevailing inequality vulnerable groups suffer disproportionately from the harmful implications of climate change which ultimately results in further deepening the social divide amongst the society⁸³. This increasing inequality increases susceptibility and undermines the capacity of these vulnerable communities to cope up with the perpetual consequences of climate change⁸⁴.

Growing implications of environmental degradation on different segments are believed to be acting as catalyst in widening the existing societal fault lines across Pakistan having direct impact on its national security⁸⁵.

According to Pakistan Institute of Development Economics (PIDE) a staggering number of more than 23 million out of school children in the country making it second worst figure in the world⁸⁶. Poverty and lack of food security are two major causes of children in such large numbers dropping off the school which poses a serious human and national security enigma for the state⁸⁷. Presence of numerous internal and external, geo-political issues environmental degradation can act as a threat multiplier in aggravating Pakistan's national security woes⁸⁸.

Water Scarcity, distribution and management of existing water resources is another pressing concern for Pakistan. Pakistan is ranked 14 in 17 countries facing extreme risk of water availability⁸⁹. With over 80% of the population currently experiencing Water Scarcity for at least one month, the country is assumed to be plunged into water scarcity as a whole by 2025. The situation gets further grim as 78% of the country's water flows from a hostile neighbor. From a per capita water availability of 5000m³ in 1947, Pakistan crossed the 1000m³ water scarcity line in 2005 and currently headed towards absolute water scarcity by 2025⁹⁰. Declining water reservoirs, inadequate storage, replenishment and management mechanisms vis-à-vis rapidly growing population has the potential to widen the socio-political divide in Pakistan to unprecedented levels⁹¹.

Climate induced migration is one of the leading social challenges confronted by Pakistan. Pakistan has suffered more than 150 extreme weather events between 1998-2018 resulting into massive socio-economic losses⁹². Devastating floods of 2010 alone resulted into 20 million climate refugees. Torrential rains in Sindh and Punjab provinces during 2012 resulted into 9.6 million climate refugees⁹³. Droughts are emerging as the leading cause of climate induced migration in Pakistan.

According to United Nations Convention on Combat Desertification (UNCCD), Pakistan is included in leading 23 countries prone to drought emergencies⁹⁴. Trend of climate induced migration has witnessed a surge in past two decades and is likely to aggravate in future. Reports estimate that Pakistan may have 0.6 million climate refugees by 2030 which could rise to 2 million by year 2050⁹⁵. This increasing number could pose multiple socio-economic, governance and security challenges to Pakistan, most prominent being conflicts between host communities and refugees over scarce natural resources⁹⁶.

A study aimed at understanding social impacts of climate induced migration in Muzafargarh and Tahrparkar Districts came up with certain significant findings. The victims had experienced various socio-economic challenges to include loss of livelihoods, hunger, deaths amongst humans and livestock, reduction in farm production, basic health issues and soaring of debts⁹⁷. Study revealed that sustained economic stresses, malnutrition, unclean and insufficient drinking water and overall sense of insecurity have created serious psychological disorders in the areas⁹⁸. Tharparkar has been declared as the leading district in terms of suicides by Sindh mental health authority with maximum number cases between 2016 and 2020⁹⁹.

Conclusion

The paper has endeavored to study the impact and linkages of environmental degradation and its associated factors like climate change, pollution, water scarcity, land degradation etc on the human security situation in Pakistan. Pakistan is included in top 5 countries most vulnerable to natural disasters and Extreme Weather Events (EWEs). A literal chain reaction of natural disasters has been unleashed on Pakistan in last two decades with more than 150 natural disasters including Flash, Urban and Super floods led the way, with the latest floods in 2022 affecting 33 million people and incurring more than \$30 Bn in economic losses. Earthquakes, droughts, cyclones, changing monsoon patterns, heatwaves and smog are few other outcomes of environmental degradation confronted by Pakistan.

A country like Pakistan, already embroiled in host of political and socio-economic challenges an onslaught of environmental challenges could have a significant impact on the human and national security. Food security i.e., agriculture, the backbone of economy of Pakistan with 22% of share in GDP and employing 38% of workforce has been under extreme stress due to changing weather patterns. Smog, air, water and land pollution are incurring the economic costs, reduction in lifespan of citizens and other health challenges. It is virtually making our cities unlivable. Environmental degradation is exacerbating existing health challenges thus adding further pressure on our fragile health system.

Apart from the economic, food security, health, the social cost of environmental degradation is often underestimated. Climate induced migration is on the rise in Pakistan and is expected to surge considering the climate risk profile of the country. Millions of refugees and the host communities fighting for scarce

natural resources is a recipe for disaster which could easily exploit and aggravate the existing socio-political divide. A comprehensive, integrated and well laid out plan with the consent and support of all the stake holders is the only way forward to drive Pakistan out of the crisis.

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