

Climate Change Disasters: The Need for Climate Justice and Disaster Management in Pakistan

Outline :

1) Introduction

Thesis Statement: There is no escaping the fact that Pakistan is bearing the brunt of climate change disasters caused substantially by the negligence of developed world. Recent catastrophic climate-induced calamities have given birth to an emergency need for climate justice and disaster management in Pakistan. Several holistic measures need to be taken in order to mitigate the risk faced by Pakistan.

2) Contextualizing the key variables

- Climate Change
- Climate Justice
- Disaster Management

3) Climate-induced disasters in Pakistan:

- A) Unprecedented floods of 2010 and 2022
- B) Deadly heatwaves of 2015
- C) Devastating droughts of 2019
- D) Wildfires of 2022 at Koh-e-Sulaiman.

4) Factors manifesting the need for climate justice and disaster management:

- A) Rise in temperature resulting in the increasing frequency of floods, drought, heatwaves and cyclone (case in point: Survey on the temperature of Pakistan)

B) Changing weather patterns affecting the agriculture yield of the country leading to food insecurity. (Case in point: Global Hunger Index 2022) 99th out of 121 countries

C) Climate-induced migration adding misery to already deteriorated lives of people
(Case in point: 33 million people displaced reported by National Disaster Management Authority (NDMA))

D) Rise in sea-level posing a threat of inundation to many coastal areas in Pakistan
(Case in point: Karachi could be completely submerged by 2060 - experts at COP26)

~~E)~~

E) Devastating climate change incidents causing havoc on economic edifice.
(Case in point: \$30 billion lost in flash floods 2022)

5) Pragmatic measures to ensure climate justice and disaster management in Pakistan:

- A) Re-compensing of climate-induced damage in Pakistan by global polluters
- B) Re-directing financial assistance towards rehabilitation, rebuilding and development of climate change victims
- C) Funding and strengthening National Disaster Management Authority (NDMA)
- D) Adopting GIS technology to identify Disaster Risk Zones.

6) Conclusion

Essay:

The ashes of Nagasaki and Heroshima might have brought pacification, self accomplishment, glory and pride to a few small men, occupying big offices, but the real price was paid by innocent people, plants and animals. Same has happened to Pakistan wherein the 'progress, modernization, prosperity and economic growth' of the developed world has wrecked havoc on millions of innocent Pakistanis who have near to zero contribution towards global warming and climate change. In its short history, Pakistan has gone through many twists and turns of climate change including catastrophic floods of 2010 and 2022, severe heatwaves, droughts and wildfires at Koh-e-Sulaiman in 2022. Seeing through the prism of socio-economic losses, it can be clearly stated that Pakistan lags behind in efficiency to combat climate change. There are ^{many} number of factors demonstrating the need of climate justice and disaster management in Pakistan. The most prominent among them is Pakistan's vulnerability to floods, droughts and heatwaves due to rise in temperature, increasing food insecurity and climate-induced migration on large-scale. Moreover, rise in sea level and economic losses due to climate disasters. To overcome the losses and address the climate change, it is high time to ensure climate justice and disaster management by taking comprehensive measures like recompensing of climate-induced damage by global polluters, strengthening National

Disaster Management Authority and using advanced GIS technology to identify Disaster Risk Zones. Hence, there is no escaping the fact that Pakistan is bearing the brunt of climate disasters caused by the negligence of developed countries. Recent catastrophic calamities have given birth to an emergency need for climate justice and disaster management in Pakistan. Therefore, several holistic measures are to be taken to mitigate the risk faced by Pakistan.

Before elucidating the factors responsible for climate change disasters, it is imperative to define what climate change and climate justice entail.

According to United Nations Organization, climate change refers to long-term shifts in temperatures and weather patterns caused mainly due to human activities, activities like generating power, manufacturing goods, etc. have devastating impacts on climate. The reason that climate change has no borders - emissions contributed by one country or group have global consequences. On the contrary, climate justice is a concept that addresses the ethical and human rights issues that occur as a result of climate change. The issue of justice, particularly social justice, environmental justice, and advocates the rights of people most vulnerable to climate change. Hence, both the terms are opposite, yet interrelated to each other.

While discussing the ~~of~~ climate-induced disasters in Pakistan, the recent flash floods tops the list. These flood deluged one-third of under water. Around 33 million ^{put} people were affected in the aftermath of this huge climate change disaster and Pakistan had to suffer from a loss of \$30 billion. For a country having \$6 billion as its foreign reserves, this massive amount is formidably unbearable. Hence, floods of 2022 are the glaring example of climate-triggered disasters in Pakistan.

Apart from floods, deadly heatwaves in the year 2015 is also presenting the horrible image of climate change. The heatwaves had severely disrupted people's livelihoods and resulted in the death of hundreds of people. According to online source named Britannica, summer of 2015 was an extended period of extreme heat and resulted in more than 1100 deaths in Pakistan. Moreover, heatwaves were not only happened in 2015, every coming year is hotter than the previous year. The year 2018 was among the top five warmest years of Pakistan since Industrial Revolution. In short, the frequent occurrence of heatwaves is demonstrating the harsh reality of climate change.

In addition to heatwaves, Pakistan has experienced an increase in the frequency and severity of drought due to the effects of climate change. In 2018, Pakistan received reduced rainfall during the monsoon season with

Sindh 70% below average and Balochistan 45% below average. Due to ~~that~~ shortage of reduced rainfall, several areas in Pakistan were affected by droughts. According to Government of Pakistan estimation, some 5 million people were affected by droughts in Sindh and Balochistan. Thus, devastating droughts have illustrated the ruthless existence of climate change.

In the similar way, another ramification of climate change disasters in Pakistan appeared in the form of extreme weather events like wild fires. In 2022, devastating forest fires continued to rage in Pakistan amidst extreme weather. One of the worst affected areas was Balochistan where deadly fires destroyed nearly 40 percent of the trees in the pine ^{forests} of Koh-e-Sulaiman Range. Moreover, deadly wildfires in Khyber Pakhtunkhwa killed four members of the same family. Hence, it can be stated that such events depict the disastrous scenario of climate change in Pakistan.

There is no escaping the fact that there are multiple factors manifesting the need of climate justice and disaster management in Pakistan. The most significant among ~~these~~ such factors is ~~presence~~ rising temperature which is resulting in the frequent incidents of floods, droughts, heatwaves and cyclonic activities. On comparing with global temperature, Pakistan's average temperature is significantly higher. According to the survey report, during

the last century, the average temperature across Pakistan has increased by 0.6 degree Celsius, which conforms with the increase in global temperature. Needless to say, this increase in temperature is increasing the frequency of extreme weather events. Therefore, Pakistan is in a more-than-ever need for climate justice and disaster management.

To add more to the agony, changing weather patterns are affecting the agriculture yield of the country and nurturing the scourge of food insecurity. It is an undeniable truth that climate change enhances the susceptibility of agricultural zones to episodic natural catastrophes such as storms, floods, and droughts, in turn exposing country to the threat of food insecurity. Unfortunately, Pakistan ranks 99th among 191 countries ^{on the GHI} - a serious level of hunger crisis. Due to the climatic apocalypse, the food situation in Pakistan is going from bad to worse as the production of wheat, rice and many other food crops has steadily decreased. Thus, this situation speaks volumes about the need of climate justice and disaster management.

Coupled with food insecurity, climate-induced migration adding misery to already deteriorated lives of people. Over the past few decades, an increasing number of people are being uprooted from their places of origin due to growing

Climate related stresses like variation in temperature, floods, droughts etc. Recently, a third-degree climate-intensified floods hit the country, and consequently, 33 million people were displaced and migrated to the places secured from flood, predominantly urban areas. People were compelled to leave their homes in order to save their lives. Therefore, demonstration of such massive migration has arisen the need for climate justice and disaster management.

In addition to it, rise in sea-level is also posing a threat of inundation of many coastal areas in Pakistan. It has been observed that the sea level is rising due to the melting of glaciers and unusually heavy rains. The coastal areas in Sindh province are considered as most vulnerable to inundation. This grave reality is clearly visible from the warning experts gave at the COP26, that Karachi could be completely submerged by the year 2060, if the current trajectory of rising sea levels continues. ^{Hence,} In order to tackle such issues, climate justice and disaster management is need of the hour.

Last but not least, climate induced disasters have wreaked havoc on already crippling economy of Pakistan. There is no denying the fact that economy of Pakistan has been facing serious downfalls since late 60s and climate change fomented

disasters are pushing Pakistan into the great Economic abyss. According to the Asian Development Bank (ADB), Pakistan is facing around \$1 billion economic loss per year. Moreover, as per National Disaster Management Authority (NDMA), floods of 2022 have created economic loss of 30 billion USD. Such massive loss could have been reduced if Pakistan had effective disaster management. Thus, economic losses on such large-scale demonstrate that there is an immediate need of climate-justice and disaster management.

Up until now, it has been clear why Pakistan is in dire need of climate justice and disaster management. Therefore, there is an urgent need to take certain pragmatic measures in order to mitigate the looming crisis of climate-induced woes in Pakistan. First and foremost, global polluters have to recompense for the disasters caused due to climate change by timely releasing loss and damage funds. At COP27, the major emitters of GHGs have pledged to compensate vulnerable countries suffering from climate change impacts. To an extent Pakistan has contributed in persuading the developed countries for reviving the loss and damage fund. As stated by Foreign Minister of Pakistan at COP27, it is not the charity we seek, not alms, not aid, but justice. Hence it is quite clear

that how important is climate justice and it would only be ensured when pledges made are fulfilled.

Furthermore, the government should re-direct funds available towards rehabilitation, rebuilding and development of the victims of climate change disasters. These 33 million people suffering from sheer difficulties be placed ~~at~~ on the top priority when it comes to the budgetary allocations in the current and forth-coming financial year. Moreover, the foreign aid coming in the country for flood affectees must ^{be} ~~tramped~~ to them.

Quite hand in hand with rebuilding people, it is pertinent to strengthen and fund climate disaster management institution. The National Disaster Management Authority of Pakistan needs greater funding, political support and co-ordination to work more effectively. Moreover, the co-ordination between National and Provincial disaster authorities is needed. Although there are frameworks in place, but implementation is lacking. Therefore, it will be beneficial for Pakistan and its community to strengthen NDMA and encourage the co-operation and collaboration among institutes to ensure climate disaster management in the country.

Likewise, adopting the Geographic Information System (GIS) and Remote Sensing (RS) can help identifying the disaster risk zones. GIS technology helps in

identifying flood-affected locations and providing shelters for affected people. In addition to that, the suitable places for constructing the retaining wall structures and an alternate route for draining the floodwater. In this scenario, example of Philippines can be taken that is among the top most vulnerable countries to climate change, has adopted and built a geographic information ~~core~~ system (GIS) core that has helped in preventing and mitigating the natural disasters to some extent. Hence, Pakistan, in order to lessen the occurrence of such calamities, should adopt these technologies in its true spirit.

In a nutshell, the "global polluters" have brought this calamity of climate change to the world and developing countries being the insignificant and negligible contributors are bearing the brunt of it.

Pakistan is among the worst affected countries of the climate change disasters and it is witnessing the wrath of nature in the form of floods, droughts, heatwaves ()

and wildfires. Therefore, the need for climate justice and disaster management is manifested through number of factors such as rise in temperature, changing weather patterns and rise in sea level are some of them. Nevertheless, the situation can still be tackled if global polluters / developed countries pay the climate reparation to Pakistan, National Disaster Management Authority is strengthened and proper adoption and utilization of GIS technology is ensured. Thus, the climate clock is ticking fast, but seeing the prism of optimism, there is still time to take immediate and long-term actions to curb this challenge.

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