

Husnain Raza  
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English Essay.

5- Why is Pakistan so vulnerable to Climate Change and water Crisis?

Outline:

1. Introduction

The agrarian economy and geographical location of Pakistan makes it vulnerable to climate change and water crisis. The country needs to build more dams and strengthen its disaster management system to overcome this challenge.

2- Contextualizing Climate Change and <sup>Crisis</sup> water in Pakistan.

3. Why Pakistan is vulnerable to climate change and water crisis?

(i) Agrarian economy of Pakistan makes it vulnerable these risks.

(ii) Geographical location of country plays role in increasing its vulnerability to climate change

(iii) Pakistan is vulnerable to climate water crisis because of its short water life

(iv) The coastal population and coastal economy is at risk due to rising sea level.

(v) Weak disaster management system of country makes it more prone to damage.

(vi) Existing socio-economic inequalities could worsen the problem of climate change.

#### 4.3. Observed consequences of vulnerability of Pakistan to Climate Change and water Crisis:

(i) Massive floods and corresponding losses to the country

(ii) Heatwaves and extreme weather events

(iii) Crop losses and food insecurity.



54- How Country can prepare itself against these risks?

(i) Strengthening disaster preparedness, response and recovery.

(ii) Focus on green-energy sources and building climate-resilient infrastructure.

(iii) Removing hurdles in construction of dams.

(iv) Implementation of "Climate Justice" in letter and spirit by Int'l UN Conference of Parties (COP)

## 5- Conclusion.

Essay:

Pakistan is eighth most vulnerable country to climate change according

to Climate Risk Index.

This shows the proneness of the country to climate change and related risk of water crisis. The country is located in South Asia, which is home to Himalayas and other mighty mountains and glaciers. These glaciers are a source of water for agriculture, industry and domestic needs of the nation. The climate change in the form of melting glaciers poses serious threat to the country. The nation is blessed with large plains of fertile lands but the problems posed by climate change and water crisis are a threat to its agrarian economy. This vulnerability

has already started to show itself in the form of massive floods and extreme weather events.

Therefore, the country needs to prepare itself against these risks. It needs to

take policy measures to strengthen its disaster management system. Further, global action in the form of 'Climate Justice' is also needed. In short,

the land of the Pure is faced with risks of climate change and water crisis and serious efforts are needed to save and prepare the country from these challenges.

Climate change is defined as change in composition of atmosphere mainly due to human activities which result in changes in pattern of



climate which is observed in addition to natural variations in the climate. It has been proven scientifically as a phenomenon which has many harmful impacts for survival of human race. Pakistan, an agrarian economy is highly vulnerable to the threats of climate change. The geography of the country and its dependence upon the flowing water of its rivers increases its proneness. These challenges of water crisis and climate change have potential to cause serious losses to the economy and society of Pakistan. Hence, Pakistan needs to pay attention to these challenges to prepare for these challenges.

One of the reasons why Pakistan is vulnerable to challenges of climate change and water crisis is its dependence on agriculture. The economy of country is based on agriculture and it directly makes up around 20 percent of Gross Domestic Product (GDP) of country, on average. The climate change, on the one hand, changes the composition of soil and weather patterns. On the other hand, the risk of water crisis makes irrigation more difficult. This resultantly affects agriculture produce and its contribution to economy. Hence, the country is vulnerable to these risks due to its agrarian economy.

Another line of thought on exploring reasons of vulnerability of Pakistan to climate change is impact of its geographical location. The country is located in vicinity of one of the world's highest mountains and glaciers. The water from these melting glaciers is a major source of water for country. With the increase in melting of glaciers, the country is at risk of losing its major supply of water. Further, climate-induced melting has caused many floods due to mismanagement and capacity constraints of its reservoirs. Therefore, the geographical location of country makes it vulnerable to climate change and its water crisis.



Building on from that idea, short water life of country is another cause of its vulnerability to climate change and water crisis. The water storage reservoirs of Pakistan have capacity to store water for only 30 days usage. The whereas, the minimum required capacity is 90 days of water use. This results in lesser water available for use and more water to cause flooding in case of overflows. Therefore, this constrained capacity to store water ~~is~~ plays its role in making country more vulnerable to these natural hazards and threats.

and Further, the population coastal economy and of

of country is another factor which increases vulnerability to climate change. Due to increasing temperatures and melting of glaciers, the sea level of country is also increasing. The mean sea level at Karachi is increasing at the rate of 1.1 mm per year. This poses serious threats to coastal communities of Gwadar, Karachi and Pasni, to mention a few. Further, it also poses serious challenges to the <sup>coastal</sup> economy of country. Thus, the coastal population and economy is at serious risk of climate change. Additionally, the disaster management system of country poses is not capable to

handle the disasters caused by climate change and water crisis. The National Disaster Management Authority and its corresponding provincial authorities and departments have various problems. This range of lack of data, no and resources to lack of coordination and community engagement. The floods of 2022 revealed its weaknesses. Therefore these capacity constraints to disaster preparedness and recovery is another major factor which makes country vulnerable to climate change and water crisis.

Finally, the socio-economic conditions of a country also makes it more vulnerable. There are



Existing socio-economic inequalities which could become worse as a result of climate change and water crisis. Many communities in Balochistan and that do not have safe drinking water. Further, the economic crisis has also pushed more people below poverty line. As a result, the country has become more vulnerable to climate change and water crisis.

The vulnerability of the country has already started showing itself in various forms. It has started to impact its people and economy. One example is massive floods in the country in year, 2022. The floods caused an estimated damage of

\$17 billion and it will cost around \$16 billion to rehabilitate and rebuild the displaced communities (The Guardian). Further, it displaced around 33 million people. Hence, the floods in 2022 in Pakistan are an evidence to increased vulnerability of country to climate change and water crisis. Another important example is increased number of heat waves and extreme weather events in the country. The country recorded highest ever April  $\sigma$  in 2022 based on record of last three decades. It killed several people and caused other losses to the country.

Furthermore, the crop losses and food insecurity is also a looming threat in the country. The climate change alters the composition of soil and increased temperatures damage crop patterns and growing seasons. As a result the agriculture and crops are affected badly. Therefore, Pakistan has started importing wheat to meet its domestic demand, instead of exporting agricultural produce. Therefore, these examples clearly indicate the vulnerability of country to threats of climate change and water crisis.

Having established this point that the country is highly vulnerable



to climate change and water crisis, it is pertinent to explore some measures to prepare the nation against these threats. As they say, "Every cloud has a silver lining". These problems and vulnerabilities could be taken as an opportunity to strengthen country's preparedness to disasters. Several administrative efforts are needed to strengthen disaster risk preparedness and response. It includes, collection of data of vulnerable communities, empowerment of local governments and enhanced coordination among all the disaster management machinery, among others.

In this way, the country can reduce its vulnerability and prepare itself for these challenges.

Another important step is focus on green-energy and renewable resources. This can help save and utilize the existing resources of country.

The share of renewables need to increased to minimum of 50% in national energy mix.

In longer run, the country needs phase out all the fossil fuels from its energy mix.

In this way, it can decrease its vulnerability and strengthen itself in the face of climate change and water crisis threats.

Furthermore, the country needs to build more dams. This will help to not only increase the water life of country but also increase the share renewable energy in national energy mix. The hurdles to building of dams including resistance by some communities and economic constraints needs to be removed. In this way, the country can better prepare itself to the threats of climate change and water crisis.

Finally, the global community has to play its role to help developing



countries including Pakistan to cope up with climate challenges. The implementation of concept of 'Climate Justice' in letter and spirit is need of the hour.

The Global Shield Fund announced in Conference of Parties 27<sup>th</sup> meeting (COP-27) is one such step. These need to be implemented so that Pakistan can manage its vulnerabilities and prepare itself for threats which are originally caused by carbon emissions of the developed world.

In short, Pakistan is highly vulnerable to the threats of

climate change and water crisis. This is due to its agrarian economy, geographical location and capacity constraints to manage threats imposed by climate change and water crisis. The floods in year 2022 and increasing extreme weather events are its evidence. The country needs to take policy measures to prepare itself for these emerging threats. The global powers have to play their role to implement climate justice so that Pakistan can cope with these challenges and have an equal opportunity to

Progress among the  
nations of the world.