

Topic: Floods in Pakistan: Causes and Implications

Outline:

1) Introduction

Thesis Statement: There are many causes of floods in Pakistan. Few natural factors and many human-made blunders have worsened the implications for the state. However, by taking certain measures, these implications can be mitigated.

2) Factors behind floods in Pakistan

3) Causes of floods in Pakistan

- a) Heavy monsoon rains
- b) Excessive glaciers melting
- c) Illegal occupation of flood plains
- d) Massive deforestation
- e) Trans-boundary water terrorism
- f) Flawed and slow risk monitoring system
- g) Reactive disaster management regime
- h) Fiscal mismanagement

4) Implications of Floods in Pakistan

- a) Humanitarian loss
- b) Infrastructural damages
- c) Agricultural losses
- d) Threat of food insecurity
- e) High and rapid urbanisation
- f) Rise in crime rate
- g) Increase in water borne diseases
- h) Risk to heritage sites

How to mitigate affects of floods:

- a) Seek climate justice
- b) Increase water storage capacity
- c) Strengthen institutions
- d) Start afforestation and reforestation

Date: _____

Essay

Day: _____

In ancient societies people used to live in caves and hunted for food. With the passage of time, man did great advancement and made many inventions. Man, who was living in caves initially, is now residing in high-rise buildings. Man, who did not know how to protect himself from others, made weapons like atomic bombs to protect oneself and one's state. However, with this modernization and advancement man disturbed the environment and nature.

On the other hand, according to Thomas Hobbes man is cunning and selfish, so man made most of the situations he faced. After industrial revolution, man made, and only focused on profit maximization and did a lot of harm to climate. Resultantly nowadays, the globe is facing climate change. As Rebecca Solnit, an American writer, rightly said that "These are disasters that are entirely manmade, but none that are entirely natural", suits and fits well on the situation of Pakistan. The recent floods of 2022 in Pakistan were the result of climate change. Due to climate change, Pakistan faced heavy monsoon rains which broke the record of almost 30 years. Moreover, climate change has caused global warming due to which the ice sheets, specially

Himalayan glaciers, are melting and contributing in floods. Other than natural causes, there are many manmade issues which exacerbated the situation in Pakistan. Illegal occupation of flood plains, massive deforestation, poor risk monitoring system and fiscal mismanagement added fuel to fire. Due to these floods Pakistan has faced humanitarian, infrastructural and agricultural losses. Along with these, risk of food insecurity and rise in crime rate is also creating trouble within nation. However, Pakistan need to take certain steps like seeking climate justice from international community, increase its water storage capacity and empower the institutions to mitigate the affects of flood. This discussion will shed light on causes of floods in Pakistan, its implications and certain measures to mitigate the affects of floods.

Pakistan is the most affected of climate change and is ranked among top 15 countries most severely exposed to the risk of floods. According to the reports by the World Resource Institute (WRI), around 715,000 people in Pakistan are vulnerable to floods. This figure is expected to multiply to 2.7 million people by 2030. These floods are mainly caused by heavy rainfall, dam break and

melting of glaciers. These floods have affected the country severely and caused a great damage to, not only to infrastructure and agriculture but also human life as well. The following paragraphs will discuss about the causes of floods in Pakistan.

The heavy monsoon rains, are mainly due to natural process, have played a major role in recent flash floods in Pakistan. In regular pattern, monsoon rain lasts from June to September but due to climate change there was change in monsoon pattern. Monsoon rain changed its centuries old passage this year and it entered in Sukkur and Khairpur in Sindh and covered it with water. Sindh received (5.7 pc/l.) times of 30-year average rain which is almost 400% more rain than usual. Hence, erratic and heavy monsoon rains caused floods.

Along with heavy rains, the excessive amount of glacial melting has also contributed negatively in the situation. The recent heatwaves due to global warming have melted the Himalayan glaciers which falls into Indus River. In result, the flow and amount of water in Indus was multiplied ten folds and further made the situation worse. And Pakistan could not store more

this fresh water due to past storage capacity. Therefore, floods were inevitable.

The illegal occupation of flood plains is another major cause of this havoc. The flood plains are occupied by land mafias in Sindh by the politicians and many other influential people. They have made illegal housing societies and roads there due to which the capability of water absorption is decreased. In a result, the intensity of flood is increased. During floods, these encroachments are hit and cause threat to life. Thus, it contributes in floods to be more disastrous.

In company with encroachments, massive deforestation in Pakistan has also caused floods. The timber mafia is cutting trees to make profits and fill their pockets. According to a report, the rate of deforestation is 5500 acres per year. Due to which the current forest cover has shrunk to 3-4% which was 33% initially. Forest work as a shield against flood and it lessens the intensity by stopping the water. Consequently, deforestation has enlarged the affects of floods.

Moreover, the situation becomes worse when India, an upper riparian state, releases extra water in monsoon season, making Pakistan a victim of

trans-boundary water terrorism. India has build dams and reservoirs to store and control water of Pakistan. At times, India stops the water causing water shortage in Pakistan and flooding by releasing excessive water.

Furthermore, risk monitoring system is very poor, slow and flawed due to which floods have caused more damage to the country. In disaster management bodies, there is dearth of information and knowledge regarding disaster's identification, risk assessment and management. As these recent floods were expected in 2025 but appeared three years earlier and the institutions had no clue. It resulted in heavy losses due to poor risk monitoring system.

In addition, the floods in Pakistan are also causing more harm because of its reactive rather than proactive disaster management regime.

Pakistan is one of the worst affected of climate change. Heavy rains, heat waves and glacial melting are giving hints to the regime to prepare in advance but disaster management has failed to comprehend it. According to National Engineering Services Report, Pakistan has the potential to build 750 dams to meet water it water

requirements and decrease the threat of floods or water shortage. But, due to poor politics and policies, the disaster management regime becomes active usually after the disaster.

Lastly, fiscal mismanagement is also a major cause behind the massive destruction caused by floods. Fiscal mismanagement is mainly because of lack of transparency and accountability. According to Transparency International, Pakistan is ranked 140 out of 180 countries. Because of it, the international community is also not helping the state in crisis. This shows that mismanagement has increased by the flood devastations.

The above mentioned paragraphs have discussed causes of recent flash floods of 2022. The upcoming paragraph will uncover the implications of floods in Pakistan.

The major implication faced by Pakistan due to floods is humanitarian loss. Almost 1400 innocent people have lost their lives in recent flash floods of 2022. Moreover, around 33 million people are affected by it. According to World Bank Report, more than 13000 people have been injured due to floods in Pakistan. Among these people, there are many children.

and women as well. These stats show the severity of floods.

Along with humanitarian loss, Pakistan has also faced infrastructural damages as well. More than 1400 bridges, roads and almost 1.7 million houses have been damaged all over in Pakistan. Moreover, many hotels in Swat alongside rivers have been washed away by floods. Almost 30 million people have been displaced due to damaged houses and floods. The reconstruction cost is estimated to be more than \$13 billion. It shows the wrath of floods.

Together with infrastructural damages, agricultural sector was highly impacted due to floods. According to a report, almost 8.3 million acres of fertile land and crop was damaged by floods. In addition, almost 0.75 million livestock has been lost. It does not only affect the poor and rural community but the whole nation. As agricultural sector contributed a huge share in total economy of the state. The floods have had great implications for this sector.

Due to agricultural losses, the threat of food insecurity is looming on Pakistan. Because of floods there were damages to infrastructure, croplands and livestock, which compromised the food

production, access and supply of food to masses. Moreover, water resources are also destroyed due to heavy floods and there occurs lack of sanitation as well. Both are critical to food insecurity. The catastrophic floods in Pakistan have pushed the country to the brink.

Another implication of floods is rapid, high and unplanned urbanisation. As, people residing in rural areas have no hope back their because they have almost lost everything; homes, source of earning, lands, and livestock. So people rapidly move to urban centres which creates social unrest and puts a sense of inequality among the proletariat class. Due to this rapid urbanisation, the people face many issues and urban centres become over-crowded.

In addition to urbanisation, the country witnesses rise in crime rate as well, due to floods. The largest and most populated city of Pakistan: Karachi is facing almost 115 street crimes per day, alone, it shows that there is 63% of increase in criminal activity alone in Karachi. This high rate of crime is mainly due to floods, because people who lost their homes, savings, and lands have moved to urban settings and are

causing troubles there. However, these people were forced to be criminals because there was no support from government side and they were dying of hunger, so in these cases, and disasters people usually go towards crime.

Furthermore, as parts of the country continue to remain under water, water borne disease are becoming rampant and causing more problem to already affected population. Diseases like diarrhoea, food poisoning, dengue, typhoid, cholera and hepatitis are spreading like fire in forest. According to a report of British Red Cross, these water-borne diseases will multiply the death toll of people in Pakistan.

Lastly, the recent floods have created a risk and threat to heritage sites. The torrential rains that have left most of Sindh under the water and have also destroyed the trace of the province as well, mostly affecting the historic remains of the Indus Valley Civilisation dating back to 2500 BCE at Mohenjo Daro, Kot Diji and Ranikot. According to Pakistan's Department of Archaeology, Mohenjo Daro may be withdrawn from the World Heritage list, if urgent conservation and restoration efforts are not undertaken.

The severe implications of flash floods 2022 have been discussed in previous paragraphs. The coming paragraphs will shed light on some recommendations to mitigate floods and its affects.

Firstly, Pakistan should seek climate justice from international community. The recent floods were mainly due to climate change. And climate change is happening because of high carbon emissions. The major emitters are USA and China. But Pakistan, despite less than 1% emissions, is the worst affected of climate change. Hence, Pakistan must raise its voice on all international platforms to get climate justice, in the form of monetary assistance, infrastructural development and human developmental programmes.

Secondly, the state must increase its water storage capacity by building more dams. Currently, Pakistan has approximately 150 small and big dams with the storage capacity of 30-day water supply. It is far below the 1000 day capacity recommended for a country with such climate conditions. However, according to National Services Pakistan Report of 2018, the country has the potential to build 750 dams. So, Pakistan should create more storage capacity so that it can benefit

from it in future and can take advantage from floods.

Thirdly, the state should empower and strengthen its institutions in order to mitigate the affects of floods. The institutions like National Disaster Management Authority (NDMA) should be given more funds, advance tools and skill developing trainings so it can protect people from such hazards. Moreover, centre-province must collaborate on such serious disaster and devise a uniform policies to recover from losses.

Lastly, the government must start afforestation and reforestation on national level to mitigate floods and its affects.

As the forest cover can increase the resilience of ecosystems, prevent soil erosion and can reduce the risk of flash floods.

Moreover, the state must take strict actions against timber mafias and other stakeholders contributing in deforestation.

In addition, projects like Ten Billion Tree Tsunami should be re-introduced by new governments to restore the forest covers.

To sum up, there are number of causes of floods in Pakistan that had severe implications on the state. However, these implications can be mitigated by taking certain measures. Besides few

natural causes, like heavy monsoon rains and excessive glacial melting, there are numbers of human made errors due to which wrath of floods has risen. Illegal occupation of flood plains, encroachments, massive deforestation and poor risk monetary system are the major causes due to which floods were exacerbated. It had many severe implications for the state. Pakistan faced humanitarian, agricultural and infrastructural losses which shooked the foundations of whole nation. It was worst disaster in the history of Pakistan. It left the state with the threat of food insecurity, high crime rate and water borne diseases. However, Pakistan can mitigate the affects of this flood, in particular, and future disasters, in general, by taking certain measures. The state must seek climate justice, as Pakistan has minimal role in climate change but apparently it is the worst affected of climate change. Moreover, by building more dams, empowering the institution and by restoring the forest covers Pakistan can mitigate future floods. It is commonly said, "where there is a will, there is a way." So with true dedication Pakistan can recover from the damages and can avoid the future disasters; floods.