

QUESTION NO# 7

Introduction

The era of Industrialization, along with innovation and technology, brought the menace of climate change. Although climate change is a natural phenomena, frequent rise in global temperature captivated the thoughts and concerns of countless people. Industrialization is one of the prominent cause of the current climatic situation which is led by developed economies while the fruit is bearing by developing countries such as Pakistan. Pakistan, which is contributing very little to climate change, is one of the most vulnerable country to bear the consequences. Pakistan is among top 20 countries which are most vulnerable, not merely due to climate change but because of flawed environmental-hazardous-development model. Pakistan needs to adopt sustainable environmental-hazardous-development model in order to combat the catastrophic repercussions.

Low readiness adds up to high vulnerability making a dangerous combination

Although Pakistan ranks 31st out of 63 countries in climate change performance index, it is the most vulnerable country to bear the consequences. The major

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reason for high vulnerability is lack of preparedness and weak disaster management system.

How Pakistan's environmental-hazardous development model takes Pakistan to the top of V20

1- Increasing trend of housing societies at the expense of environment

There is increase trend of establishing housing societies at the expense of environment. Housing societies are being built on the river bed which is making those residencies vulnerable to floods.

According to The Ravi Urban Development Authority,

"park view housing society was built on the river bed of the Ravi river and it is an illegal encroachment of about 8000 Kanals of river bed."

2. Weak Implementation of National Building code

National building code is there but weak implementation in terms of building designs, use of sub-standard material and structural safety measure makes those buildings susceptible to collapse on disaster.

"For instance, in Karachi a 7-storey building collapsed killing 27 people; investigation pointed to illegal construction, code violation, and structural failure and regulatory negligence".

(-The Express Tribune)

3- Massive and unplanned Urbanization making societies vulnerable to disaster

Massive Urbanization is making societies more vulnerable to disastrous damages. Unplanned urbanization leading to huge pressure and contamination of environment.

"Urbanization is placing heavy pressure on surface and ground-water resources through contamination, increased floods, loss of wetlands, increased run-off and poor water management."

(NUST journal of Engineering science)

4- Delayed and Inefficient rescue system making population vulnerable to catastrophic situation

Lack of good governance which is leading to inefficient and delayed rescue system increase the number of deaths following any disaster. For instance, a tourist family of 18 members drowned in Swat river while waiting for rescue expose inefficiency in governance system.

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5. Deforestation of river banks leading the population in proximity vulnerable to flash floods

River banks need to be vegetative which provides root surface area for the absorption of water which decreases the flow rate during high run-off season.

Deforestation is turning the river banks into a barren land making the residents susceptible to disastrous situation.

6. Lack of proper planning and preparedness for hazardous situation

Pakistan lacks proper planning to combat the hazardous situation. There is no risk zoning and urban planning in cities. According to National disaster management Authority (NDMA):

"The country is vulnerable, and the main cause of such heavy losses and damages is lack of planning, preparedness, and the country's limited institutional and organizational capacity for disaster management."

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Recommendations to mitigate environmental risks and enhance resilience

1- Increase funding for disaster management

Appropriate budget ought to be allocated for disaster management. As per 2025-budget Pakistan National Disaster Management Authority has been allocated only 908 million which makes around 0.1% of GDP. This minimal budget is enough as compared to the damages Pakistan had faced due to climate disaster. At least 1% of GDP should be allocated to mitigate environmental risk.

2- Strong implementation of National building code

Authorities should ensure the implementation of national building code to reduce the risk of building collapse during earthquake or floods. Illegal constructions and use of sub-standard material should be strictly checked.

3- Illegal housing societies at the river-bed should never be allowed

Establishment of housing

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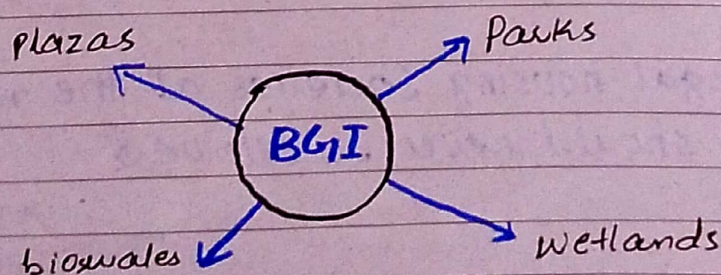
Societies should never be allowed near the river-bed at any expense. These housing societies and real-estate business are neither fruitful to economy as these are contributing only 0-1% to GDP, nor these illegal constructions are fair to environment.

4. Risk Zoning of Vulnerable areas

Areas which are most vulnerable to disaster should be tagged as Red-zone and there should be no residences such as near the river banks or above the faultlines. Yellow-zones should be the areas where there should be minimal construction. Such risk-zoning can prevent measure damages due to disaster.

5- Sponge city model

Sponge city model is a multifunctional model which helps to control floods, heat reduction, recreation and enhance biodiversity. This model is known as BGI (Blue-green infrastructure) which works on the principle of absorb, retain and reuse water.



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6- Drainage system/ should be improved & storm-water management

The drainage system is out-dated which should be improved and updated. Furthermore, poor storm water system should be transformed according to global approach which indicates that the best model is using the flood water as ~~and~~ an asset "Drain it fast Versus treat it as an asset."

Conclusion

Although climate change is responsible for disastrous climatic conditions in Pakistan, poor governance and fragile disaster-management system is further deteriorating the condition making Pakistan one of the most vulnerable country affected due to climate change. Pakistan needs to adopt globally accepted models of disaster management. One such example is the case study of Copenhagen Denmark cloudburst management plan of 2012. Unless Pakistan improve its governance system and work on sustainable developmental model, the condition of disaster will be further worsened. There is an native American proverb that only when the last tree has been cut, the last river poisoned, and the last fish caught, will we realise we can't eat money.

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