

Q What impact global climate change will have on the water resources of Pakistan? How will it affect inter-provincial harmony?

### Introduction.

"water is not only for life ... water is life." This quote by the UN secretary general, Antonio Guterres, reflects the critical importance of water as a need that connects all aspects of human life. It implies that global climate change leading towards water insecurity in Pakistan, it could also result in disturbing inter-provincial harmony. Hence, water resources in Pakistan are under continuous threat of climate change. Its spill over effects would be fault lines in provincial relations.

## Pakistan and Global Climate Change

Pakistan is highly vulnerable to climate change due to its geographic location, high dependence on agriculture and water resources, low adaptive capacity of its people and weak system of emergency preparedness. "For the past 20 years Pakistan has consistently ranked among the top 10 most vulnerable countries on the Climate Risk Index", United States Institute of Peace. Extreme weather patterns are causing various impacts upon Pakistan. That in turn poses a serious threat to the national unity in Pakistan.

## Impacts of Global Climate Change on Water Resources of Pakistan.

Global climate change adversely affects water resources of Pakistan. Such implications are discussed as below:

1. Climate change - induced abnormal melting of glaciers.

Rising temperatures due to climate change are an existential threat to glaciers of Pakistan. Pakistan is home to about 7000 known glaciers. These are essential source of fresh water for the Pakistan. However, their abnormal melting could lead Pakistan to water insecurity.

According to Pakistan Economic Survey 2014-15, "Pakistan's 5000 glaciers are retreating faster than any other part of the world". Hence, global climate change causes unprecedented melting of glaciers in Pakistan.

2. Global warming is drying up surface water in Pakistan.

Another negative implication of climate change is drying up surface water bodies in Pakistan. Such bodies include rivers, lakes, canals, tributaries, delta and others.

Rising temperatures proportionally increase evaporation. It results in drying up of surface water. Several environmentalists are predicting about drying up of rivers in Pakistan. The United Nations also projected that Pakistan could run dry by 2030. Thus, there is a risk of drying up water resources of Pakistan.

### 3- Disturbance in Hydrological cycle in Pakistan.

Hydrological cycle could be disturbed due to climate change in Pakistan. The cycle starts from evaporation of water ending at precipitation into the ground. The process is repeated in a cyclic manner. Due to climate change, there is an increased rate of evaporation and depletion of ground water in Pakistan. According to Pakistan Council of Research in Water Resources (PCRWR), climate change is

compounding depletion of ground water resources by disrupting the natural hydrological process of ground water recharge".

Hence, climate change poses a threat to normal hydrological cycle in Pakistan.

Implications on inter-provincial harmony.

Climate-induced manifestations on water resources of Pakistan is disturbing for inter-provincial harmony. Extreme weather patterns could lead to disagreements on several matters related to water resources. These may include,

1) Conflicts over water distribution  
Climate change is exaggerating conflicts over water distribution among provinces. Rising temperatures are causing increase in water demand coupled

water shortages.

Meanwhile it becomes a challenge for water distribution in Pakistan. Smaller provinces are already blaming big provinces of taking more water than its quota. The quota is decided by Indus River System Authority (IRSA) of Pakistan.

## 2) Controversies over construction of dams.

As, global climate change causes flash floods, Pakistan need to enhance its water storage capacity. It would also be helpful in addressing water scarcity in Pakistan.

However, there is persistent controversies over construction of dams. Diamela Bhash dam is one of such controversial projects. It was supposed to be completed by 2019. However, due to a lot of opposition, the project's estimated completion year is 2028 now.

This shows, increasing demands of dams due to climate-induced disasters is another test for inter-provincial harmony in Pakistan.

## Way forward: Addressing manifestations of global climate change

Pakistan's deepening climate-change-induced water crises require structural reforms. It would in turn alleviate inter-provincial disunity upon water resources.

First, Pakistan should go for climate adaptation. It would include steps toward increasing greestation to capture carbon emissions. Furthermore, urbanisation should also be kept in check. As it causes rapid deforestation in the country.

Second, implementation of national water policy is the most needed. The policy was revealed in 2018, but failed to yield results due to provincial concerns. Thus, carrying out the policy in letter and spirit would address water issues of Pakistan.

Third, a national consensus is required to make Pakistan water-secure. Construction of dams and equitable water sharing is necessary. It could enhance Pakistan's water storage capacity. Besides, such measures would also remove ambiguities among provinces.

### Conclusion:

Water is necessary for survival of every nation. In Pakistan climate change is posing not only threat to its water resources, but also to inter-provincial harmony. However,

there is a silver lining in every cloud. Taking timely and effective measures would make Pakistan water sustainable and removes disparity among its provinces.