

## 6. Floods and water scarcity in Pakistan.

### Introduction:

Floods and water scarcity are the two extreme situations in Pakistan. On one hand, Pakistan is facing extreme water shortages and droughts. On the other hand, Pakistan sees violent floods. These two opposite situations are the result of climate change, mismanagement of resources, lack of infrastructure and other ineffective policies and other socio-economic and political challenges. These water shortages and floods hit Pakistan in various domains. Thus, by taking effective measures water resources may be managed properly.

How Pakistan stands at the opposite extremes?  
Pakistan, currently, stands at the two extremes. On one side, there is no sufficient water available. While at the same time Pakistan is



Grappling with recurrent floods in the country.

i) Water Scarcity in Pakistan: Pakistan is facing with a serious challenge of water scarcity. Ground water levels are falling at rapid pace. Rivers are dried up into sandy landscapes. This causes Pakistan to move rapidly from 'water - stressed' country status.

Numerous reports estimate extreme water shortages in Pakistan. As per International Monetary Fund (IMF), Pakistan's per capita annual water availability has reduced from 1500 cubic metres in 2009 to 1017 cubic metres in 2021. This reveals how Pakistan is moving towards extreme water shortages in the country.

Further more, the United Nations has placed Pakistan in the critically water-insecure category in its report namely, 'Global water



Security 2023 Assessment: it  
Shows That Pakistan is in  
dire situation of water  
scarcity.

Floods in Pakistan: The other  
extreme  
Besides losing water  
resources Pakistan experiences  
high levels of floods. These  
floods carry a lot of  
water with them. But, Pakistan  
has always remained unable  
to harness such high levels  
of water in the shape of floods.

Pakistan had recorded  
levels of major floods  
in the ~~2005~~ 2010 and 2022. These  
major historical floods had  
engulfed about 50% of  
the land of Pakistan. Almost  
every province had a worse  
experience of these violent  
floods.

Heavy rain fall occur in  
the monsoon period, 2010 across  
Pakistan. Pakistan Meteorological  
department recorded the  
highest levels of 200 mm  
rain fall in 24-hour time.  
Instead of harnessing flood



water. It was allowed to overflow from the Indus River towards settlements.

Another recent example of worse floods is 2022 flood. Most of the areas of Balochistan, Sindh, Khyber Pakhtun Khwa and South Punjab were under water for more than a month. These receives 154mm, 443mm, 164mm and 141mm of rainfall in 2022 respectively. Hence, Pakistan stands two extreme poles of water shortages and excess water in the shape of floods.

## Factors Responsible:

Behind such extreme standings, there are various factors. These are:

i) Climate Change:  
Pakistan is the 5th most vulnerable country to the climate change. Extreme weather patterns are causing rise in temperatures and irregular monsoon rainfalls.



Rising temperatures result in drying up of water bodies. At some point melting of glaciers also cause floods. On the other hand, changing monsoon patterns causes irregular and violent rainfalls. The results of which are seen in the flash floods. Rising temperature, changing precipitation patterns, glacier melting, floods, droughts and rising sea level are results of climate change. (Climate change and water resources in Pakistan, Waji Ejaz Nekoker)

Thus, climate change is posing a serious threat to water availability in Pakistan.

ii) Mismanagement of resources: In Pakistan, there is a problem of managing water resources. water wastage is the most common practice. Domestic use comprises of the total 60% water wastage. Moreover there is lack of capability of water recycling in Pakistan.



iii) Lack of infrastructure:  
Pakistan lacks a sufficient infrastructure to hold normal water availability. Dams stand foremost in this cause.

Pakistan has only two largest dams Mangla Dam and Tarbela dam. However, both dams have crossed their dead levels. They are incapable to hold more water from any potential flood. Moreover, the weak embankments of rivers causes water shed towards the settlements. Hence, the absence of required infrastructure is making Pakistan water insecure.

## Way Forward:

Multiple strategies may pull Pakistan out of worse situations. By taking effective measures Pakistan may harness excess flood water to address water shortages. These measures may include,



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i) Construction of dams:  
Rising up dams is important to address both issues; water scarcity and floods. Constructing more dams beside the present ones will increase the country's capability to store more water for future use. Further more, repairing of existing dams is crucial to enhance water storing ability.

ii) Controlling water resources:  
Mostly, water resources in Pakistan are left uncontrolled. Specifically, ground water is being exploited at in most cases. This results in water wastage. There must be a mechanism to control all water resource. The ground water should be under strict control system. Thus, managing water resources is necessary for Pakistan.

iii) Political consensus:  
Political participation is crucial to find solutions for water scarcity in Pakistan.



All federating units must play their role to make Pakistan water sustainable. Besides there would be joined efforts for managing disasters like floods to make them beneficial instead of lethal. Hence, political interest is important for Pakistan's water problems.

## Conclusion:

Pakistan is facing two opposite situations of water availability at the same time. Resulting from a range of factors, the problem may be resolved by taking effective decisions and measures.