

Can The Govt Manage Land of Floods and Droughts On Policy Alone?

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Pakistan has a history of massive flooding followed by severe drought due to water mismanagement and climate topography, with melting glaciers acting as a tap on the north end and the sea on the other. In addition, climate change vulnerabilities add fuel to the fire. Climate scientists have predicted that Pakistan is of the countries most affected by climate change. Although, the government looked promising to cope with these changes, Pakistan's situation is probably formidable to reverse. However, it requires more time and finances to solve this issue with consistent long-term policies.

In Pakistan, there are two major sources of rainfall – one is the Monsoon season and the second is the western disturbances. During the monsoon season, the country gets up to 70 percent rainfall from July to September. The Indus River, on average, annually receives around 213mm, and Kharif and Rabi receive 53mm of water. The issue of mismanagement by the government during natural disasters is no surprise to the nation, from providing physical aid to injuries to providing food and assistance to the affected. The government of Pakistan drastically fails to provide essential support to its people.

Over the past decades, millions of people have lost their lives while others have been left unsupported with injuries and loss of business due to natural disasters such as floods. According to the World Bank Group, in the recent flood of 2022, the country faced the worst flooding causing an economic loss of USD 30 billion, affecting almost 33 million people and killing 1730 lives, in addition to the loss to housing, agriculture, livestock, transportation and communication sectors, which further elevated the damage. It is also estimated that recovery and reconstruction need over USD 16 billion dollars.

In Sindh especially, a fatal flooding monsoon season caused the death of more than 400 people, and more than a quarter million houses were either damaged or destroyed. In addition, 45% loss in cotton, 85% loss in dates, and 31% loss in rice accumulated the loss manifold as the province received an alarming irregular record-breaking monsoon season due to water mismanagement. For the urban setups, Karachi, one of the most densely over-populated cities of Pakistan, was hit by extreme record-keeping rainfall for the first time in over 89 years. The city received almost 500 mm of rain in August, out of which nearly 200 mm was received within 24 hours. According to most news reports, these altered rainfalls caused flooding in the city due to Karachi's poor sewage and drainage management.

On the flip side, during summers and winters, only the canal areas of rural Sindh and Karachi receive less than what is required to maintain a substantial living, which causes drought. Shortly after Independence, international agencies rated Pakistan a Water Abundant country in 1950. The following year, the availability of water annually was calculated to be around 5700 m³, which was thrice more than the threshold value of 1700 m³.

Decades later, in 1992, the United Nations Fund for Population stated that Pakistan's water availability level had dropped to 1700 m³ making it into the list of water-stressed countries. Later in 2003, Pakistan's water availability officially declined from the threshold value, i.e., 1700 m³. Presently, Pakistan has been rated as a water-scarce country with surprisingly water availability hardly around 950 m³, drastically reducing from 1950.

Sources have suggested that Pakistan's per capita water availability will continue to decline drastically if the paradigm of water infrastructure remains the same. Three main reasons behind this drastic decline are the increase in overpopulation, no shift or development in the reservoirs other than Tarbela Dam, and, most importantly, Climate change. While some provinces will face flooding, others, such as Baluchistan and Sindh, will face extreme droughts.

Droughts have not only an environmental impact but, like floods, they affect thousands of people, causing drought-borne diseases and malnutrition in children. Drought also impacts the agriculture sector, affecting the country's crop production and economy. The areas predicted to be most affected by drought in Baluchistan and Sindh. In Pakistan, droughts usually occur because of various irregularities in the monsoon season. During the monsoon, because of the arid and hyper-arid climate, some cities of the country remain dry throughout the year, making them extremely at risk of drought.

Coping with the challenges, Pakistan launched a National Climate Change Policy in 2013, which intends to develop renewable energy, and reduce emissions through the enactment of green fiscal reforms in addition to a plantation drive aiming to plant about 10 billion trees.

However, Pakistan can adopt many new ways to fight this mismanagement as developing an integrated surveillance and monitoring system that will create a new database to track the water flows and surveillance.

Furthermore, the government of Pakistan should build more dams and reservoirs to ensure the preservation of water for the future. This will prevent water wastage and pave the way for people to preserve water resources. To sum up, despite having the geographical advantage of glaciers in the Himalayas, Pakistan is suffering from water scarcity and floods. The effects of climate change may be challenging to reverse. Still, they are not impossible if the efforts are put in by both the people and the leaders of our nation.

This situation is made worse due to lack of governance capabilities for proper management of water. Although there exist policies that govern the water system, such as National Water Policy 2018, they are often outdated. However, this National Water Policy may assist in reforming the water scarcity situation but it will still fail under improper governance and management. All in all, there is need for the governance and institutional reform for the management of floods and droughts.

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