ISSUE BRIEF

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THE GROWING WATER SCARCITY ISSUE IN PAKISTAN

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Water scarcity is the foremost critical issue that Pakistan faces today. The country is the most water-stressed among the South Asian countries and will face acute scarcity by 2025.[1] The effect of the water crisis in Pakistan is already being felt among people. Almost 30 million Pakistanis have no access to clean water, 80 percent of people living in 24 major cities do not have access to clean water and 16 million slum dwellers of Karachi do not have access to running water.[2]

Water security is, rightly, linked to human rights, with the right to access clean water considered the basic human right of every citizen. However, due to growing population, reckless use of water along with changes in weather patterns because of global warming, countries around the world, both wealthy and poor, face increasing water scarcity in the 21st century. The UN reports that globally three billion people are facing water shortage with one billion facing hunger today. Moreover, the Global Risks Report of the World Economic Forum ranked water crises as the third most important global risk in terms of impact on humanity.[3]

1 Huma Yousaf, "The biggest problem," *Dawn*, November 30, 2020
2 "The water crisis in Pakistan," BORGEN, April 29, 2020.https://www.borgenmagazine.com/water-crisis-in-pakistan/
3 "The Global Risks Reports,2021,16th Edition", World Economic Forum, 2021.https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf

What has led to the Water Scarcity Issue?

For Pakistan, numerous factors have exacerbated the water security issue. The first and foremost being the increase in demand due to burgeoning population growth in the country. With population crossing 220 million people, the country' water demand could reach 274 million acre-feet while the supply of water could remain at191 million-acre-feet.[4] Along with this, the aging water infrastructure has affected the storage and retention capacity of water due to big cracks in canals and sand filled dams. And with huge wastage of water on the way, it has failed to cater to the growing needs and requirements of water in the country. Secondly, the country's commonly grown agriculture crops rice, wheat, cotton and sugarcane are highly dependent on water, consuming around 95 percent of the available water while contributing less than 5 percent to the national gross domestic product (GDP). Moreover, the age-old water-intensive means of agricultural production along with an inefficient irrigation system and poor water management has led to massive wastage of water causing 60 percent water loss. Along with water channels, Pakistan is also dependent on the rain for its water supply, climate change has affected the rainfall pattern causing huge water shortage in the country.

The World Bank report shows that Pakistan's water scarcity issue is because of poor water resource management, outdated irrigation system along with poor water service delivery through municipal units.[5] These have long-term and cross-sectoral socio-economic and environmental risks which include environmental degradation, health impacts on humans and sub-optimal economic performance of the agriculture sector.

Other important factors contributing are the governance issues related to the water sector. This includes incompleteness of policy frameworks and inadequacy of policy implementations. Although Pakistan launched its first National Water Policy in 2018, not much has been done to achieve its mandate.[6] The document proposes that the National Water Council will implement activities related to water, however, there seems to be an overlapping of responsibilities between federal and provincial representatives, which has affected the implementation process. Moreover, the document fails to mention how it will offset the effects of climate change on water security which

4 "The water crisis in Pakistan", World water & solar technologies".https://www.worldwatersolar.com/the-water-crisis-in-pakistan/

5 How Can Pakistan Get More Value from Its Water Resources? Policy Brief, World Bank group. https://mail.issi.org.pk/ajax/actions.hsp?_h=8b091a85baa968fcfc0bf57589a5da42dtdo12t2f0&action=viewattachment&mid=1708&fid=190_8687&attid=1

6 National Water Policy, 2018, Ministry of Water Resources, Government of Pakistan. https://mail.issi.org.pk/ajax/actions.hsp?_h=8b091a85baa968fcfc0bf57589a5da42dtdo12t2f0&action=viewattachment&mid=1708&fid=190_8687&attid=0

has affected the rainfall pattern along with rising sea level. So the existing policy needs to be revised in order to address the country's water scarcity issue.

How to tackle it?

Reports on Pakistan's water statistics show that the issue is serious and consensus has to emerge from all fronts that the threat is real and steps need to be taken on war footings to put an end to it. First and foremost, there is a need to have a comprehensive water law with effective implementation of its mandate.

Since addressing water scarcity requires a multidisciplinary approach, solutions proposed and implemented worldwide show that along with environmental and economic solutions, engineering solutions are also important. For this, construction of multiple small dams instead of going for big dams is the pressing need of the time. Big dams require time, commitment, consideration and burn a big hole in national exchequer, while contrary to that small dams cater to the needs of regional and local population and projects with much less rigor and trouble.

Similarly, public education is undoubtedly key for water conservation efforts, and all public and environmental policy must utilize sound science for the implementation of sustainable resource management initiatives. In Pakistan, there is a serious problem with the general attitude of the public vis a vis water usage. Needless to say, the general public lacks basic etiquettes of water consumption. From taps unnecessarily left open to great amounts of water wasted for washing cars, there is a serious lack of water discipline among the people – a trouble that needs to be properly addressed. Not only water discipline be introduced, it be rather taught & implemented.

In addition there is a need to resolve the outstanding water disputes through proper bilateral or multilateral solutions. Also, effective implementation of general International Law is also imperative to safeguard the rights of the lower riparian states.

Since water-use is heavily dominated by the agriculture sector which is dependent on irrigation, there is an immediate need to replace the existing system with tech-enabled water-economic means e.g. drip irrigation model or drone spraying technique to avoid rampant abuse of resources. In this regard, it is also significant to note that there is a need for effective elimination of the problems of salinity, water logging, and general pollution which additionally decreases the potable water table. Finally, the bare minimum regulation or ban must be imposed on ground water pumping which has directly added to the gravity of the problem by depleting the underground water balance.

Conclusion

Pakistan's water scarcity issue is not because of insufficient water, but due to inefficient water management and its use along with poor delivery services. Reforming the existing policy frameworks and building the institutional capacity at both the federal and provincial levels is imperative for water security. Addressing this issue is also critical for achieving the Sustainable Development Goal (SDG) 6-to ensure availability and sustainable water resource management and sanitation for all.[7] Moreover, the National Water Policy must be comprehensively engaging the federal and provincial frameworks while also addressing the critical impact of climate change on Pakistan's water resources among others.

7 Sustainable Development Goals (United Nations). https://sdgs.un.org/goals/goal6