

Dying of Thirst While Drowning

How Pakistan's cities are running out of water - even as they flood

Ussama Bin Sajjad Kiyani

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WE all saw that video of a family being swept away by rising flood one by one, many of us didn't had the heart to see it till the end, but at that moment we were united by one thought: "Could we have prevented this?" These past months of cloudbursts and heavy rains in Pakistan have been heartbreaking to witness. Every day we saw people drowning, homes collapsing, cars being swept away, crops getting destroyed, and livelihoods lost. Families clinging to rooftops or evacuating their homes while the floods carried away everything they owned. This isn't the first time this has happened, it reminded us of 2022, when we faced one of the worst climate disasters of our history, the flood that resulted in almost \$15 billion in losses and over 33 million people affected. It was supposed to be a wake-up call, a reminder that these disasters are not random, but a pattern we can overcome. And yet once again we are drowning in our own unpreparedness.

Early reports, such as one done by analysts at Arif Habib Ltd, estimate that economic toll of Pakistan 2025 monsoon floods likely is around \$1.4 billion. These events have lingering effects that carry on and cause problems for the future as well. For instance, agriculture and livestock markets have both suffered shocks of \$1,032 million and \$2 million respectively. While the Transport and Communication industry has had a hit of \$333 million. These shocks are expected to increase CPI by about 7.22% in FY26.

However, despite of these flash floods and heavy rains the outlook is paradoxical. Its alarming to note that while floodwaters are rising above us, the ground beneath us is drying up. In Islamabad alone, 100 mm of rain fell in a single day, ends up turning roads into rivers. Yet CDA reports that our groundwater is dropping by over a meter per annum. Per capita water availability has steadily deteriorated from over 1500m3 in 2009 to less than 860m3 in 2023, entering water scarcity threshold. The issue extends to the Indus Water Basin. GRACE data suggests a storage decline of 2.16 cm/yr during the period, 2015-2022. This rate has been declining at an

increasing rate due to climate factors as well.

To make matters worse only about 47% of current population has access to safe drinking water. Leaving the rest to rely on contaminated and unsafe water sources, making them prone to water borne diseases. "It feels like we are surrounded by water, yet dying of thirst. Like a person stranded on a boat in the middle of the ocean: water everywhere, but nothing to drink." UNICEF estimates that around 53,000 children under the age of five die annually due to lack of safe drinking water.

Storage is also an issue as Pakistan has only a 30 days of carryover storage compared to 170 days for India. Another point of concern is our weak and outdated infrastructure, leading to more than 40% losses during water supplies. In many housing societies, boring that once tapped water at 50 feet now has to go 300 feet deep while still yielding less output. Though climate change plays a role, but much of the damage is the result of our own planning failures. There exists no enforced regulation on city plans. Housing societies are built on natural water pathways. Green areas are being replaced with concrete. Resulting in less groundwater recharge due to lack of porous pavements. Rainwater utilization barely gets a mention in most urban plans. We treat rainfall as an inconvenience instead of an opportunity. Instead of storing rainfall, we rush to get rid of it.

When managed properly, rainfall can recharge aquifers and improve soil conditions. Proper setups can also help reducing rainwater runoff by more than fifty percent. Multiple actors such as UN-Habitat, WWF, and CDA have all tested rainwater harvesting pilots. These include but not limited to building more than 100 recharge wells, and 3800 catchment systems. In addition to this, organizations such as PCRWR have also rehabilitated ancient methods for rainwater utilization, such as Karez System in Balochistan. We have yet to fully tap the potential of these pilots as they remain scattered and small in scale.

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Program which has incentivized people to adopt environment friendly initiatives. They have also made rainwater harvesting systems a mandatory code for 23 building categories. Another example, is the introduction of NatCat Model 2025 by NDMA. For the first time, it feels like we have something promising at hand, a system that can forecast hazards up to 100 years ahead, powered by satellite imaging and geospatial data. It can identify vulnerable areas, sites of early evacuation, and where infrastructure needs to be reinforced. The question now stands:

"when will we start using this information as a guide for real policy and action" However, having tools is one thing but actually translating them from numbers on a presentation to practice is another.

From Awareness to Action: The time for warnings has long passed. Pakistan can't afford to keep swinging between emergency responses for floods and droughts, between drowning and thirst. Development authorities and private builders need to act now, while public awareness should be increased.

We must start of by embedding forecasting tools like the NatCat Model, into urban planning and development frameworks. Natural drainage channels should not be repurposed for residential or commercial usages. Proper zoning laws should be made and infrastructure should be regulated to mitigate urban flooding.

Moreover, rainwater needs to be treated as an asset rather than a problem. EPA Punjab's RWH code should be scaled nationwide. Water supplies infrastructure needs a long awaited upgradation. While drainage systems should be redesigned not to just get the water off the streets but also return to recharge depleting aquifers.

These pilots and models should not just sit in policy files but be a part of how we design cities, approve housing projects, and manage our water. We have the data, the experience, and sadly, the scars. What we need now is the courage to act and maintained efforts.

– **The author is a Staff Economist at the Pakistan Institute of Development Economics (PIDE). He can be reached at: ussama@pide.org.pk**