**Is access to water essential for food security?**

**[Naeem Abbas Abid](https://nation.com.pk/Columnist/naeem-abbas-abid)**

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As per the Food and Agriculture Organisation of the United Nations (FAO), food security has four main components: accessibility, availability, utilisation, and stability. The utilisation part of food security deals with adequate drinking water, proper hygiene, sanitation, and good healthcare to ensure individuals’ nutritional needs, which indicates that access to clean drinking water is always a critical element of food security. Developing countries like Pakistan—already struggling with food security—deal with access to clean drinking water as an additional challenge.

The competition for water usage in different ways is putting enormous pressure on water quality and its availability. In Pakistan, 60 percent of infectious diseases are water-borne, and about 45 percent of infants die per year because of diarrhoea. The primary sources of water in Pakistan are surface water and groundwater, which are being severely affected by water pollution. About 70 percent of the Pakistani population relies on groundwater for drinking purposes, which is contaminated by poor sewage treatment, high use of pesticides and fertilisers, and deep soakage pits. Across Pakistan, the arsenic content in groundwater ranges from 50 parts per billion (ppb) to 950 ppb, while the World Health Organisation (WHO) recommended standard is ten ppb. Given the health risk factors like cancer and skin lesions associated with long-term exposure to arsenic, one can easily comprehend how much the Pakistani population is at serious health risk because of unsafe drinking water. When it comes to surface water, unchecked industrial waste disposal into water bodies is a significant contributor to surface water pollution. Every day, approximately 2000 gallons of sewage are discharged to surface water, and industries treat only one percent of the total water waste before releasing it to surface water bodies. Such a high rate of ground and surface water pollution makes the water unfit for drinking purposes and compromises the nation’s food security.

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In addition to water pollution, water scarcity is even a more significant challenge. The current Pakistani population of approximately 220 million is expected to gain another 182 million by 2100. On the other hand, water availability per capita is 1017 cubic meters, and if it reaches 1000 cubic meters, the country would be declared water-scarce. The other three provinces in Pakistan blame the most populated province, Punjab, for seizing their water resources. Michael Kugelman, a South Asia expert at the Washington-based Woodrow Wilson Center, believes that the water crisis’ economic impact can result in disputes among provinces and raise violent conflicts in the region. In Karachi, the most populous city in the country, the water mafia is already active, and numerous police reports of water theft have been filed. United States Institute of Peace (USIP), in their 2013 report “Understanding Pakistan’s Water Security Nexus,” contended that levels of water violence in Pakistan range from community and municipal level to provincial and national level. In conclusion, the shortage of water resources in Pakistan can disturb the country’s peace and security situation on a vast scale.

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Given the current rate of water depletion and water pollution in the country, it is time to take measures to ensure food security and peace for the nation’s greater good. We can improve our water utilisation by introducing enforceable laws for the industries to treat water before disposing of it in the water bodies. If a firm does not abide by the law, it should be penalised heavily. The government should also introduce pollution permits, which should be tradeable. If the firm produces less than an allowed limit, it can exchange the permit with other firms. The government also needs to set up safe drinking purification plants at the national level so that everyone can have access to safe drinking water. The primary focus should be in villages where people are at significant risk because they are not in such a strong financial position to buy private-labelled pure drinking water daily. To ensure adequate water utilisation, the government needs to launch awareness campaigns in local print and digital media about water waste and its repercussions on society in the long run. On a provincial level, the provincial governments need to join hands to formulate the new water distribution plans to avoid the rift among provinces. Water utilisation is a critical factor. And yes, if we don’t ensure its proper utilisation on time, we might be exposing ourselves to food insecurity in the long run.