



## Requiem for a country – Pakistan can survive regular flood events

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In Pakistan, swirling deluges and downpours have lashed one-third of the territory due to a three-month disaster, washing away 1.2 million homes [1]. Which caused widespread devastation and affected 32 million people scrambling to survive [2], of which 16 million were children[3], leaving around 1700 people dead, including over 350 children[4]. The number of fatalities is rising due to the waterborne disease outbreak among survivors, and more than 3 million children face health risks [5]. Millions of families have been forced from their homes; homeless people are living in relief camps and tents alongside roads to protect themselves from the scorching sun as temperatures in some areas pass 40 degrees Celsius [1]; among the most adversely affected are children. The initially estimated losses to the economy are about \$ 30 million, and the financial cost of Pakistan is staggering. In addition, much of the country's agriculture belt is underwater and destroyed crops, including onion harvest and rice, wheat, and corn. Pakistan's overall vulnerability and climate change was the main factor that triggered the devastating flood, which caused massive damage to the critical infrastructure, including roads, bridges, schools, hospitals, electricity, and communication networks in the flood-stricken areas [6].

At the time of the flood, the pressure on Pakistan was unprecedented, even in its troubled history. Yet such despair would be premature. Terrible floods have fundamentally changed and weakened the Pakistani system. This, however, will not be clear for a long while – and in the meantime, it is worth remembering the extraordinary resilience that the Pakistani nation has often shown in the face of natural disaster, from which they have repeatedly emerged with the structure of local authority and political culture essentially unchanged. What is undoubtedly true is that if such natural disasters frequently occur because climate change increases the risk of extreme events, then Pakistan will be destroyed as an organized society, but so will many other countries worldwide. It is a very complex picture, and Pakistan is particularly vulnerable to climate change because of its lack of ability to adapt or avoid the impact of climate change, consequently in inevitable loss and damage. Pakistan should have learned that it won't survive anymore due to negligence. Therefore, the government should own up to its responsibility and take serious steps to tackle these unseen events.

Public administration and policymakers should collaborate with the international community to deal with the massive consequences of climate change and extreme natural disasters. Firstly, on an urgent basis, the government should provide psychosocial services to children, women, and men who experienced shock and distress from losing their homes and loved ones. Damage incurred to the educational infrastructure further jeopardized education access. Therefore, the government should set up learning spaces to resume their learning process, help them cope with trauma, and help bring back a sense of normalcy. In the long-run local government, community and NGOs should ensure that these vulnerable kids are safe, healthy, well nourished, and preparing for their future.

Secondly, turning to another big challenge, the flood caused massive damage to agricultural land provoked by the extraordinary supply shortage of goods, pushing inflation. The current spike in inflation, which increased food and energy prices, was already high due to the covid- 19, political instability in Pakistan, Putin's invasion, export disruption, and the exchange rate. Inflation is rising, and the prospect of a cost-of-living crisis looms for the low-income class and especially for the flood victims. The government should take serious steps to mitigate the consequences of higher inflation and avoid inflation pressure. In the short term, the government has limits

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to offset increased prices, and people will suffer. Still, officials can temporarily reduce taxes on sales, oil, and electricity and make life a little more affordable.

While in the long term, Pakistan is an agricultural country that needs an irrigation system which is damaged [7]. Therefore, the government should construct small dams to balance cost and benefit, saving millions of dollars worth of crops and preventing severe food shortages. In 2014 an unsuccessful project, “Billion Tree Tsunami,” was initiated to plant ten billion trees to cope with ongoing flood challenges and create green jobs [8, 9]. Therefore, the government should make more efforts and initiate long-term projects for tree plantation, with proper planning, adequate monitoring, and focus on natural degradation. In addition, the government can encourage renewable energy and build a resilient infrastructure that hinders natural drainage and save future generations. In addition, the government should invest in new infrastructure with scientific modeling and move all residence areas out of the at-risk area. Government can collaborate with private companies, take the initiative of flood insurance in high-risk areas, and vulnerable people at high risk should be insured against droughts, floods, and other climate-related events. And establishing relief, shelter, and feeding camps in highly vulnerable and remote areas for hundreds of thousands of people after being displaced by a natural disaster; small changes matter a lot.

The level of greenhouse gas emissions in Pakistan is relatively low and contributes less to climate change. Unfortunately, it is ranked among the topmost vulnerable countries to the impact. Therefore, other developed countries should compensate for climate reparations to build adequate infrastructure to control water and smashed infrastructure in case of massive devastation. In addition, the government of Pakistan, industry, and research institutions should actively participate in international forums urging developed nations to speed up their plans to reduce emissions.

This disaster also warns that the government of Pakistan should reserve emergency funds for short-term relief efforts, to address the loss and damage inflicted by natural disasters, rebuild damaged infrastructure, and provide a livelihood to local people. Pakistan’s internal structure and dynamics are complicated. It is divided, economically backward, and corrupt. Government should plan and build a transparent system for the fair distribution of relief funds. Pakistan should train the National Disaster Management Authority members to rescue the flood victims, perform relief and rehabilitation operations, and distribute aid to affected people. In addition, the National Disaster Management Authority management units only exist at the provincial and district level. The government should expand them at the thesil level and in remote areas to be proactive the flood risk management.

Pakistan is prone to disasters; healthcare facilities and hospitals should be critical in local and national emergency responses. Therefore, healthcare organizations, hospitals, and other personnel should be prepared to protect and provide quality care to individuals from exposure to any risk. In these conditions, millions of children and pregnant women could be at high risk of skin, waterborne disease, Malaria, and diarrhea. Health authorities need to be trained healthcare professionals for the readiness to practice towards disaster and show a positive attitude toward dealing with the victim of natural disasters. Therefore, it is necessary to provide proper disaster management training to the paramedical staff to deal with emergencies. Pakistan should start regional and global collaborations with international experts and organizations, provide policy, practice, training and support, and arrange seminars and international-level training to train local medical and rescue staff and improve the efforts to restore the natural ecosystem.

Furthermore, policymakers and educators should develop a robust curriculum incorporating theoretical and practical components in disaster management, such as medicine, and prepare competent health workers for the future. Moreover, relevant stakeholders related to disaster management need to ensure the effectiveness of human resource management and build risk perception strategies and communication techniques. In addition, training and exercise should be carried out with the operational stimulation and modules. And make sure the availability and accessibility of medicines and other pharmaceutical items during disaster events. Furthermore, policy institutes should cover more specific areas such as mainstreaming disaster management-related issues, policies, plans, and projects; Implementation of good adaption practices; precautionary measures to prevent and mitigate food and medicine crises in the most vulnerable and remote areas; providing the necessary education, information and communication to the local people and disaster management authority; and strengthening early warning system, all these elements should be part of the plan during emergencies.



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