


The Precedent set by Unprecedented Rainfall: Lessons to be Learnt From Disastrous Flooding in Pakistan

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Letter to the Editor

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Abstract

Pakistan has suffered heavy losses due to the torrential monsoon rains of 2022. With obliterated infrastructure and rising disease burden, the nation is still reeling from the dismal aftermath. It is critical to understand that such catastrophes are not a 1-time calamity but are likely to become more frequent with growing severity of the climate crisis. These losses point to a more systemic problem that is a lack of preparedness, and without sustainable long-term measures in place, the nation remains just as vulnerable to the next ‘unpredictable’ weather contingency. Prior planning and effective allocation of resources can help develop a proactive response to future disasters of this magnitude.

To the Editor,

Between June and August, 2022, the monsoon season in Pakistan was struck with an unprecedented spell of torrential rainfall, which has since impacted almost 33 million people nationwide.¹ Fast-forward to November 2022, and a third of the nation is still underwater, with the stagnant waters giving rise to a multitude of water-borne and water-related diseases, including but not limited to malaria, dengue, typhoid fever, and cholera. In addition to catastrophic financial losses and damage to infrastructure, this significantly increased burden of disease threatens to cause a complete collapse of Pakistan’s already-overburdened health care system.

According to the World Health Organization (WHO), nearly 2000 health facilities have been damaged by the flooding.² Approximately 44000 cases of malaria were recorded in Sindh in just over a week in early September and 74% of dengue cases in 2022 thus far were recorded in September alone, though these numbers are considered underestimations due to a lack of testing facilities.^{3,4} Furthermore, drinking water supplies contaminated by flood waters continue to further exacerbate the burden of disease, which is compounded by widespread damage to infrastructure leading to a lack of shelter, food, and sanitation.

While there are many relief efforts underway by private philanthropic organizations, government entities, and international bodies, the devastation in Pakistan forces us to confront the frightening reality of the impact that destructive weather can have, especially on health. More importantly, however, it brings to light a much more systemic problem and that is a failure to acknowledge, predict, and mitigate the effects of adverse weather conditions attributable to climate change. Developing countries like Pakistan cannot afford to simply ‘react’ to disasters, especially when still suffering from aftermath of the COVID-19 pandemic. Without efficiently allocating resources to the implementation of preventive measures, damage that was seen this year will only become increasingly inevitable and harder to recover from.⁵

While the need of the hour is integrating initiatives from different organizations to maximize efficiency and implementation, short term relief efforts, such as distribution of mosquito nets, healthcare camps in affected areas, and provision of necessities will only go so far and lacks both sustainability and long-term impact. A preventive approach of dealing with health-associated detriments of such disasters necessitates improving healthcare by addressing preexisting insufficiencies with measures such as increasing vaccination rates, improving access to healthcare and medicine in a way that does not incur catastrophic healthcare expenditure, and better allocation of resources to primary and secondary care. In addition, analyzing weather trends can allow for allocation of resources to high-risk areas, thereby allowing for a more targeted response using fewer resources.

In conclusion, this crisis has shown that Pakistan lacks the capabilities to deal with a disaster of this scale without preparation. As long as the catastrophic precedents set by ‘unprecedented’ weather patterns continue to be ignored, such a calamity will, almost certainly, repeat itself. Proactive measures to dampen the impacts of adverse weather patterns are no longer an option, but a necessity for resource-constrained developing nations.

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References

1. **Syed RH.** Malaria and diseases spreading fast in flood-hit Pakistan. Published September 22, 2022. <https://www.reuters.com/world/asia-pacific/pakistan-flood-victims-hit-by-disease-outbreak-amid-stagnant-water-2022-09-21/>. Accessed November 30, 2022.
2. **Fatimi AS, Mahmud O.** The costs of protecting health in the face of climate change - feasibility lies in proactivity. *J Pak Med Assoc.* Published online November 16, 2022. doi: [10.47391/JPMA.6641](https://doi.org/10.47391/JPMA.6641)
3. **UNICEF.** *Devastating floods in Pakistan.* <https://www.unicef.org/emergencies/devastating-floods-pakistan-2022>. Accessed November 30, 2022.
4. **World Health Organization (WHO).** *WHO Director-General's statement on Pakistan – September 17, 2022.* <https://www.who.int/news/item/17-09-2022-who-director-general-s-statement-on-pakistan-17-september-2022>. Accessed November 30, 2022.
5. **World Health Organization (WHO).** *Dengue - Pakistan.* Published October 13, 2022. <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON414>. Accessed November 30, 2022.