

## Letter to the Editor

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**Abbreviation:**

NDMA, National Disaster Management Authority

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# Cyclone Biparjoy: A Test of Pakistan's Disaster Preparedness

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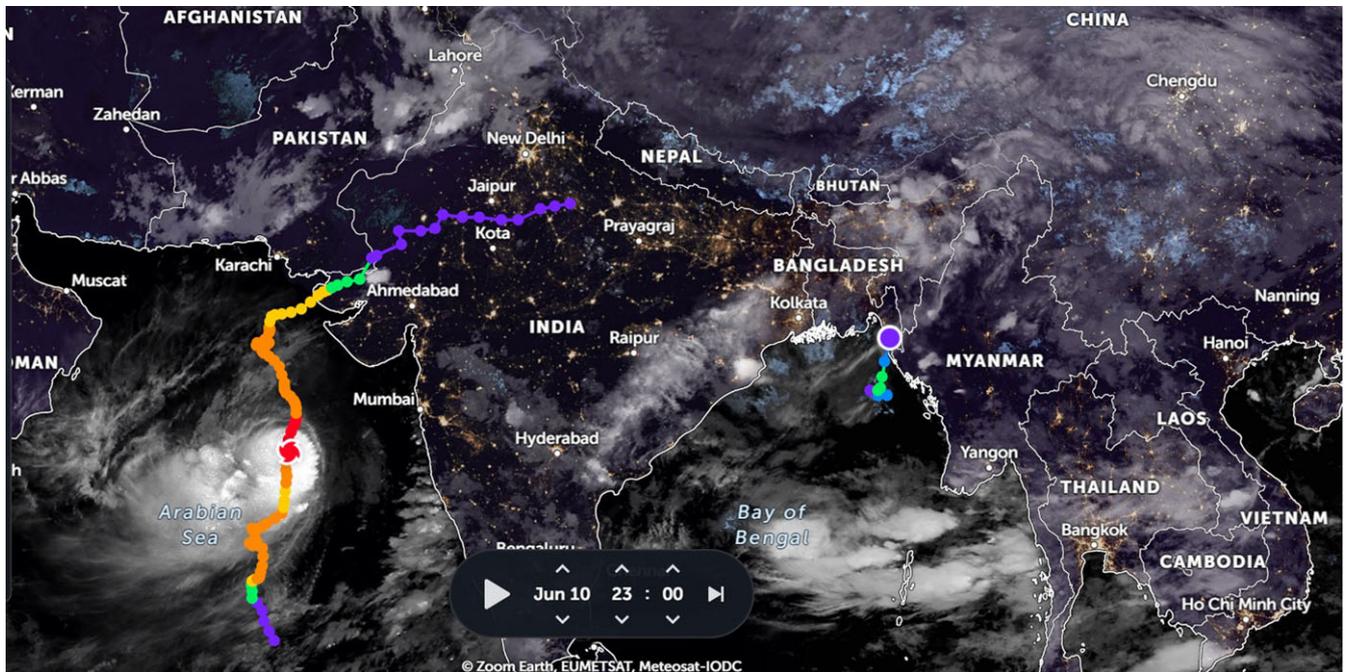
Cyclone Biparjoy, a recent tropical storm in the Arabian Sea, captured significant attention in India and Pakistan. Approaching the western coast of India and southern Pakistan, the storm reached wind speeds of 129 km/h (80 mph) on June 14, classified as a Category 1 storm and expected to make landfall on June 15 as a “very severe cyclonic storm”<sup>1</sup> (Figure 1). The cyclone's name, proposed by Bangladesh, carries the meaning of “disaster” or “calamity” in Bengali.<sup>2</sup>

Over the past 20 years, Pakistan has endured a significant number of natural disasters, including floods, earthquakes, and droughts. The frequency and severity of flood disasters have particularly increased, leading to heightened risks and vulnerability for the population. As a developing nation with limited institutional strength, Pakistan has shown resistance to institutional reform. The devastating floods of 2010 exposed significant shortcomings in flood and disaster management policies, highlighting the disconnect between local, provincial, and federal governments.<sup>3</sup> However, the lessons learned from the past have demonstrated that the efforts taken by the government and relevant authorities this time in Pakistan to lessen the potential devastation from disaster Cyclone Biparjoy and to ensure preparedness are commendable.

The evacuation efforts undertaken by India and Pakistan deserve appreciation as over 180 000 people were successfully relocated from coastal areas, minimizing potential loss of life and property. In Pakistan, authorities intensified their evacuation efforts in Sindh, ensuring the safety of approximately 91% of the high-risk population. The National Disaster Management Authority (NDMA) played a crucial role in coordinating preventive measures, providing timely communication and guidance. The Pakistan Meteorological Department issued warnings about potential consequences, allowing people to take necessary precautions. A well-coordinated response involving government bodies and agencies, such as the Sindh provincial government, NDMA, and district administrations, effectively managed the crisis. Sindh Rangers, Sindh Police, and the military were deployed for rescue operations, while a provision of vital resources within the relief camps, such as clean drinking water, food, tents, mosquito nets, and medical assistance, proved crucial for the affected population.<sup>4</sup>

To disseminate information about Cyclone Biparjoy, advertisements and awareness campaigns were conducted through television, phone calls, social media platforms like Facebook, Twitter, WhatsApp, and governmental websites. Additionally, high-risk areas were identified, evacuation plans were developed, and collaboration with relevant authorities was ensured. Mock drills were conducted, safe locations were provided, and infrastructure was assessed. A communication system to regularly inform fishing communities about real-time weather updates and guidance was ensured. Moreover, hospitals were alerted and prepared for any potential emergencies that may arise during the cyclone. Doctors and medical staff were informed to be on duty, ensuring that necessary medical assistance could be provided promptly if needed. These measures were put in place to prioritize the health and safety of the affected population.<sup>4,5</sup>

Although the cyclone had minimal impact on Pakistan's coastline, the government and relevant organizations' preparedness and preventive measures should be acknowledged. Continued investment in disaster preparedness, including early warning systems, infrastructure resilience, and stakeholder coordination, is crucial to minimize future impacts.



**Figure 1.** Satellite image of Cyclonic Storm Biparjoy, 2023 (<https://zoom.earth/storms/biparjoy-2023/>; accessed June 21, 2023).

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HR and AHK: Literature review and drafting.

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**Ethical standards.** No ethical approval was required for this study as it is a letter to the editor and not based on any human data.

## References

1. **Cyclone Biparjoy Churns Toward India and Pakistan.** Earth Observatory, NASA. Published June 14, 2023. Accessed June 19, 2023. <https://earthobservatory.nasa.gov/images/151463/cyclone-biparjoy-churns-toward-india-and-pakistan>
2. **How Cyclones Get Their Names: Who Named Cyclone Biparjoy and What It Means?** *The Economic Times*. Updated June 16, 2023. Accessed June 20, 2023. <https://economictimes.indiatimes.com/news/how-to/who-named-cyclone-biparjoy-what-it-means-and-how-cyclones-are-named/articleshow/100987170.cms>
3. **Deen S. Pakistan 2010 floods.** Policy gaps in disaster preparedness and response. *Int J Disaster Risk Reduct.* 2015;12:341-349.
4. **Cyclone Biparjoy Makes Landfall in India's Gujarat Coast Near Pakistan.** Aaj News, Web Desk. Updated June 15, 2023. Accessed June 21, 2023. <https://www.aajenglish.tv/news/30324021>
5. **NDMA Government of Pakistan – Subject: Tropical Cyclone “BIPARJOY” Formed Over Southeast Arabian Sea (9 June 2023, 1600 hours).** ReliefWeb Blog. Originally published June 9, 2023. Accessed June 21, 2023. <https://reliefweb.int/report/pakistan/ndma-government-pakistan-subject-tropical-cyclone-biparjoy-formed-over-southeast-arabian-sea-9-june-2023-1600-hours>