**[After Biparjoy](https://www.dawn.com/news/1760478/after-biparjoy)**

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WHILE [Pakistan may have been spared the worst of Cyclone Biparjoy](https://www.dawn.com/news/1760058/pakistan-largely-spared-as-cyclone-biparjoy-weakens-after-hitting-indias-gujarat), let us not forget that beneath the calm waters of the Arabian Sea, a profound energy is beginning to stir. Global warming is changing the very nature of our storms, and we cannot afford to overlook it any longer.

Biparjoy tells a story of a relentless power beyond our grasp. Year after year, Pakistan undergoes devastating climate impacts — from floods to heatwaves to drought. Despite contributing less than one per cent to global greenhouse gas emissions, our country is one of the most vulnerable victims of the ever-changing climate and its adverse effects.

Cyclones like Biparjoy reveal the urgency of our climate crisis. Of the two major basins of the northern Indian Ocean, namely the Bay of Bengal and the Arabian Sea, the latter has not historically generated a lot of cyclonic activity. But this has changed drastically over the past few decades, primarily due to global warming. Studies show that sea surface temperatures over the Arabian Sea have increased from 1.2 to 1.4 degrees Celsius in recent decades. And this figure is likely to keep rising. Warmer waters, it would appear, become a hotbed for cyclonic activity.

It is no surprise, then, that Biparjoy is not an anomaly. In the last few years, the Arabian Sea has witnessed cyclones Vayu, Nisarga, and Tauktae. In fact, studies show a 52pc rise in the total number of cyclones and a 150pc increase in the number of severe cyclones in the last four decades, with increased global warming causing an exponential rise in the frequency and intensity of tropical cyclones in the region. The tumultuous Arabian Sea has been warning us for decades now, and it is we who have continued to turn a blind eye.

Cyclones like Biparjoy underscore the urgency of our climate crisis.

With rapid shifts in global temperature, cyclones are becoming more and more likely to occur in places where they are least expected.

The coasts of India and Pakistan are under constant threat. As Biparjoy approached the coast, it was predicted that communities in southern Sindh would receive very heavy rainfall and storm surges of up to 3.5 metres high. The Pakistan Meteorological Department also warned that traditional mud and straw homes were particularly vulnerable to disintegration due to these surges. We may feel lucky to have escaped disaster but it is uncertain when the next one will strike.

In response to potential risk, Pakistani civil and military authorities evacuated over 80,000 people from the coastal areas to safety. Schools and government buildings were converted into relief camps to house these people. But displacement can cause distress. Fishermen, for example, risk leaving behind their boats, and other inhabitants of vulnerable spots are also unable to take their livestock with them during an emergency evacuation — but these are practically their only sources of income.

The residents of Karachi, particularly those in the coastal areas, risk having their homes destroyed by the strong winds that cyclones bring with them. With the affected coastal areas housing large and often impoverished populations, evacuation is often a difficult and imperfect solution. So, what then?

Cyclones are here to stay, and we must learn to adapt. Climate-resilient infrastructure is an innovative solution with the potential to help. During the 2010 floods, architect Yasmeen Lari designed and built over 1,000 low-cost, eco-friendly, and water-resistant homes in Sindh using locally sourced bamboo, mud, and lime. The hou­ses were not only able to withstand extreme weather but provided an accessible blueprint for locals to emulate sustainably.

By 2014, Lari and her organisation, the Heritage Foun­dation of Pakis­tan, had constructed 40,000 zero-carbon shelters in Sindh and KP. When the floods hit again in 2011 and 2012, these homes were able to resist widespread damage to life, property, and livestock. Lari’s “barefoot social architecture” had proven effective.

Approaches like Lari’s disaster-resilient infrastructure are essential to prepare ourselves for the long-term climate crisis and its effects. Biparjoy was expected to hit southern Pakistan — Thatta, Keti Bandar, Suja­wal, and Badin — areas that had been devastated by floods only a year ago, leaving thousands displaced and scores of homes destroyed. One can only imagine the damage which could have been caused had the cyclone not changed its predicted trajectory.

Instead of treating evacuation as a sole solution, Pakistan must turn to promote localised, eco-friendly, and sustainable solutions like bamboo homes. If we are to minimise the damage that climate change is wreaking on us, effective climate adaptation is essential — a task that requires us to think anew, to think further, and to think resiliently.

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