

Not just climate change



STEPHEN ALTER

Blaming flash floods on global warming alone blinds us to dangers of ill-planned development in Himalaya

THIS YEAR'S MONSOON has been particularly destructive in the lower Himalaya, causing devastating erosion and flash floods in many parts of Uttarakhand and Himachal Pradesh. As early as mid-May, heavy rain struck the mountains, several weeks before the anticipated arrival of the monsoon. Friends and neighbours in my hometown of Mussoorie blamed these unexpected storms on "climate change", shaking their heads with fatalistic despair. Somehow, they seemed to forget that violent pre-monsoon thunderstorms have occurred in Mussoorie for generations.

Without a doubt, rapidly rising temperatures on our planet and the increasing presence of greenhouse gases in the atmosphere pose an enormous risk to the future of life on Earth as we know it. However, automatically blaming erratic weather on climate change often distracts us from the real causes and consequences. Unfortunately, this repeated refrain has become an alternative to the old, weather-beaten phrase, "acts of god," which insurance companies always invoked as a disclaimer.

Being neither a meteorologist nor a glaciologist, I can't offer a definitive explanation for the tragic events that struck the upper Bhagirathi Valley last week, when a flash flood wiped out parts of Dharali village near Harsil. Even as rescue efforts are still underway, it is clear that the loss of life and property has been horrific. What is also self-evident is that this kind of event has happened many times before and similar disasters will occur in the future. Living in the Himalaya we must understand that this is an extremely unstable region that is vulnerable to the powerful forces of hydrology, erosion and earthquakes. Deforestation and other man-made environmental problems only make things worse.

In recent memory, we have seen the catastrophic flash floods of 2013, when

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Kedarnath and the Mandakini Valley were inundated by an unstoppable surge of water and debris caused by a glacial outburst that was triggered by excessive rain. Two years earlier, in 2011, the Assi Ganga Valley near Uttarkashi was scoured of life by a powerful flood that washed away a large hydropower project along with many labourers who were camped by the river. When these disasters occurred, I was reminded of the historic floods of 1970 and 1978, when minor tributaries of the Alakananda and Bhagirathi were blocked by landslides, forming temporary dams that finally burst and carried a huge volume of water and rubble downstream. Almost a century before that, in 1880, a major flash flood occurred near the site of this week's disaster. Frederick Wilson, a British timber baron who had a home in Harsil and clear-felled the deodar forests around Dharali, was reported to have been washed away and killed. However, as preparations for his memorial service were being made, he arrived in Mussoorie on foot, having miraculously survived.

All of this is to say that the tragic consequences of a heavy monsoon in populated areas of the Himalaya is not something new or unexpected. What has changed is the indiscriminate, unplanned and often illegal construction of homes, guesthouses, ashrams, hotels, Maggi points and military camps that lie directly in the path of potential flash floods. The scarcity of buildable land in the mountains, where level ground is hard to find, drives people to take desperate risks. Margins of streams and rivers, often filled with debris from earlier floods, present a tempting option. Add to this political opportunism or bureaucratic complacency and the end result becomes inevitable.

Much of the recent construction along the Char Dham Yatra route in Uttarakhand is in response to constantly increasing num-

bers of pilgrims visiting sacred sites near the sources of the Ganga. These were once remote shrines that devotees approached on foot, but they are now interconnected by ever-widening motor roads, not to mention helicopter services. Without some sort of control over the number of visitors that travel through these valleys, the magnitude of forthcoming disasters will only increase. The annual flood of religious tourism in Uttarakhand leads to the proliferation of hotels, *dhabas* and yoga retreats that cater to their needs. The majority of these structures are erected along riverbanks where water levels can suddenly rise, washing away everything in their wake.

One doesn't have to travel to Uttarkashi or Dharali to observe this kind of dangerous, ill-advised construction. It is happening in the state capital of Dehradun, where streambeds and seasonal watercourses are now sites for residential colonies. In Mussoorie, where new construction had been halted for years by the Supreme Court of India, there is now a surreptitious building boom. Many new houses and homestays have been built on precarious foundations, often atop the rubble of earlier landslides. Of course, none of these disasters waiting to happen are the result of climate change. Nevertheless, when rain begins to fall and hillsides collapse, we tend to look for causes beyond our own careless greed and indifference.

The true consequences of global warming will be far more profound and prolonged than the natural disasters we are seeing today. Shifting weather patterns and melting glaciers in the Himalaya are certainly part of the outcome. However, by always pointing a finger at climate change, we distance ourselves from the more immediate and avoidable factors that make these crises so horrendous and painfully familiar.

Alter lives and writes in the Himalaya