

# Opinion: Landslides are a global injustice, and they're rarely caused by the people worst affected

May 5 2023, by Dave Petley

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Credit: AI-generated image ([disclaimer](#))

In northern India, a tragedy is playing out in slow-motion. Located at about 2,000 meters elevation in Chamoli District in the Himalayas, Joshimath is an ancient, sacred town of about 17,000 people. Popular with pilgrims and visitors wanting to ski or climb the nearby mountains,

the town is a beautiful refuge from the bustle of the plains.

Late in 2022, a new chapter started in the long history of Joshimath as cracks started to develop in buildings across the town. These quickly spread over a large area, ripping apart roads, houses and hotels. These events were widely reported by the Indian media, which generally ascribed them to ["subsidence."](#) The reality is something else: the town is built upon debris from an ancient landslide.

And that landslide has started to move.

The age of the landslide is unclear, but it is likely to be hundreds or even thousands of years old. The debris has been covered with soil and plants, hiding it from sight and giving local people the impression they were living on solid ground.

The existence of the landslide, and the hazard that it poses, was identified [about 50 years ago](#), but little action has been taken to mitigate the risk. To date at least 860 houses have been rendered uninhabitable, and the landslide continues to move. Hundreds of people are living in temporary camps, with no real clarity as to their future prospects, and thousands more worry that the landslide movement will spread to their part of the town.

Why the landslide started moving again in late 2022 is unclear. In the past few months many fingers have been pointed. Over the past decade, a large hydroelectric "run of the river" scheme has been built in the valleys near the town, which meant building tunnels beneath Joshimath. Shaking caused by blasting has been reported throughout the area. It is unsurprising that people [believe that there is a link](#).

In early 2021, a large debris flow swept down the valley below Joshimath, triggered by the [collapse of a mountainside](#) high in the

mountains, severely damaging the dam from the hydroelectric power scheme and killing more than 200 people, mostly dam workers. Some people link the reactivation of the Joshimath landslide to this flow.

A third theory is that [climate change](#), which has caused [more intense rainfall](#) in the area, has [triggered the landslide](#). All of these mechanisms are possible. In the absence of detailed scientific investigations, rumors dominate.

## **Many other Joshimaths go unreported**

Sadly, Joshimath is not an isolated case. Landslides are destroying communities right across the high mountains of South Asia, most frequently small, isolated settlements that do not command the attention that has been heaped on Joshimath. Over and over again, people lose their major economic assets—their house and land—and are rendered destitute. Women and girls often fare particularly poorly in these circumstances.

In the vast majority of cases, the landslides result from things outside of the control of the people affected, making these events a travesty of social justice. At the macro-level, the increases in rainfall intensity that are occurring in many mountain areas result principally from [greenhouse gas emissions](#) that occurred thousands of kilometers away in far richer economies.

In other cases, the landslides are the result of large energy projects that will bring security of supply to distant cities, while isolated communities may still have no reliable supply, and that will generate profits that will bring little benefit to the [mountain regions](#). More locally, landslides often result from roads that serve to bypass their communities, and are sometimes associated with local corruption as, for example, the owners of construction machinery bribe officials to allow road building in

unsuitable areas.

## **A safety net for landslide victims**

There is a paucity of social justice, or even of discussion about social justice, when it comes to these landslides. The victims at every stage are the local people, who lose their home, their land, their possessions and their livelihood, and sometimes their lives. Even in richer countries landslides are often not an insurable risk, in contrast to floods or windstorms. For most people it is not possible to assess the likelihood of a property being affected by a [landslide](#), so home owners are in effect having to gamble.

It is time to make changes. In the mountains of South Asia, the current rampant, poorly-coordinated development needs to be controlled for the sake of the environment and the local population. There is no case for an embargo on construction across the region, but there is a strong rationale for ensuring that there are proper technical assessments of large schemes; for environmental impact assessments that are scientifically rigorous; for land use planning controls on the basis of hazard and for the careful management of water. When things go wrong, and they will, there is a need for a safety net, either through insurance or through government schemes.

Sadly, failure to act will further drive inequality, causing a further breakdown in the fragile social balance of high mountain areas.

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