

How climate change creates conditions for catastrophes like this

[Nick Logan](#)



The science behind Nepal's violent flash flood

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An entire river valley along the Nepal border was wiped out in seconds... but local radar showed no rain, and it wasn't an earthquake. CBC Meteorologist Johanna Wagstaffe breaks down how a massive glacier collapse triggered a violent inland tsunami—and why geologists warn this unfolding climate disaster isn't over yet.

It's too early to say what role human-caused climate change may have had in the catastrophe along the Nepal-Tibet border, which [China has blamed](#) on a glacier collapse.

But scientists say warming global temperatures, a result of the emissions from burning fossil fuels, have increasingly created unstable conditions in glacial regions like the Himalayas in recent years.

Slobodan Simonović, director of engineering works with the Institute for Catastrophic Loss Reduction, told CBC News the combined impact of monsoon season — which runs from June to late September — and accelerated glacier melt can lead to excess water accumulations.

That water is held back by natural dams made of ice and sediment, known as moraines, until it overflows or bursts through the barrier. Scientists call this a glacial lake outburst flood.

Sometimes that's due to sudden and intense rainfall — similar to [what happened in India](#) in August 2025. Other times it can be the result of an avalanche or landslide at a higher elevation that crashes into the pooled water.

Simonović says people living in areas like this part of Nepal are far more vulnerable due to villages being situated along rivers and streams that flow down the slopes of the mountains.

In fact, a [2023 study](#) published by Nature estimated some 15 million people are exposed to the hazards of glacial lake outburst floods due to climate change.

Experts caution against describing climate change as the only trigger for Wednesday's flood.

But Simonović says glacier regions around the world are at increased risk as the planet heats up.

– *With files from CBC's Lauren Pelley and Reuters*



● 21 hours ago

Hesitation around Kailash pilgrimage after flood

[Briar Stewart](#)

I am Briar Stewart, a CBC reporter, now en route to Kathmandu, Nepal.

At the airport in Istanbul, the line to board is a mix of Nepalese citizens, journalists and travellers, some of whom are anxious about following through with their plans.

I was approached by three American women who arrived from Texas and had been planning to do a sacred pilgrimage to Mount Kailash in Tibet. They were trying to find out information about the state of roads and routes on the ground in Nepal. They left their homes in Texas just as the news was breaking about the devastating flood. They said their family members urged them not to travel, but their tour agency said there was another route to Tibet through which they would be able to go.

They consider this journey to be a once-in-a-lifetime opportunity, and described it as a sacred route for those who are Hindu and Buddhist. They are anxious, but said they will have at least one day on the ground in Kathmandu to try and better establish whether they feel comfortable setting off.

Many of the foreign citizens missing in the region were making the same pilgrimage.