

# WHY IS THE LAND OF JOSHIMATH SINKING?

Joshimath is a city located in Uttarakhand in the district of Chamoli. It is a spiritual town where Adi Shankaracharya, a religious reformer, acquired enlightenment in the 8th century. It is situated at 6150 feet (1875m) from the sea level. It is a gateway to several mountain climbing expeditions, trekking trails, pilgrim centers like Badrinath, and Hemkund Sahib, and international skiing destination Auli. The population of the town is only about 23,000 but it has been heavily built with hotels and resorts.

On October 2021, cracks first appeared in a few houses in Joshimath town, when 14 families in the Chhawani Bazar locality noted cracks in their houses. Over the year later, by January 2023, the situation became alarming when suddenly a large part of the town experienced a land sinking. Multiple roads and about 723 houses in all nine wards of the town had developed major or minor cracks on the walls, ceiling, and floors. Nearly 150 families have been moved to safer locations within the town. The largest ropeway in Asia has been closed to tourists, two hotels have shut down their doors for an indefinite period and locals have taken to the streets.

The unplanned and rampant construction in and around the town has resulted in land subsidence. The town of Joshimath was built over a century ago on landslide debris which had a low bearing capacity. The town also falls in high-risk seismic ' Zone-V' which is prone to earthquakes. According to the Uttarakhand State

Disaster Management Authority (USDMA) report, the town is located in an area prone to landslides. Way back in 1976 a report by the Mishra committee predicted that the current crisis would grip Joshimath, which is now sinking. The report further added that undercuttings by the river flows of Alaknanda and Dhaulliganga are also playing their part in bringing landslides.

Residents of Joshimath town blamed the construction work of the hydropower project run by the National Thermal power corporation for exacerbating Joshimath's land subsidence. However, NTPC in the 5th January press release denied any role in the ongoing Joshimath crisis. As per the USDMA survey report in 2022, unplanned developmental activities without due regard for bearing capacity have contributed to aggravating slope instability-related issues in Joshimath. Layer over layer of new construction, rapid urbanization coupled with deforestation has weakened the foundation in the already fragile area. USDMA report also pointed to a lack of drainage and wastewater disposal systems as being part of the subsidence in town.

The Uttarakhand government established an expert group in 2022, the researchers discovered that a few areas in Joshimath town are “Sinking” as a result of both man-made and natural factors. The government has ordered to stop of construction activities in the area. The construction of BRO Helang bypass and Tapovan Vishnugad hydropower NTPC have been brought to a halt by the Chamoli district magistrate. Experts have also recommended replanting at sensitive sites, to save the town of Joshimath. To save Joshimath, there needs to be a coordinated effort between the government and civil organizations with the

help of military organizations like the Border Roads Organization (BRO).