

The Geological Disaster of Land Subsidence at Joshimath

At Joshimath of Uttarakhand the land is sinking. In the study of scientists from the Indian Institute of Remote Sensing Dehradun, it is observed that Joshimath and the surrounding areas have been sinking at a state of 6.5 cm (2.5 inches) per year as per the satellite data from July 2020 to March 2022.

The land sinking at Joshimath caused great misery to local people in terms of displacement and economic losses. The land sinking has not started without prior warnings. The land subsidence disaster is neither a sudden natural disaster. 50 years back itself the Mishra Committee report gave warnings about impending disasters due to the spree of 'development' of Joshimath through heavy construction activities. But these warnings are not heeded and the race to develop Joshimath is going from 2001, by successive governments. This is a manmade disaster, due to the accelerated push by the government in the name of clean energy and national security.

According to the review of PMO after a ground-level assessment of land sinking at Joshimath, it was determined that a land-strip around 350 mts wide has been affected. This affected the 20,000 people living here. 760 houses in the town have developed deep cracks. Over 147 among them are totally unfit to be inhabited. These numbers are increasing day by day. For the past two decades constructions mushroomed here. Joshimath bears the weight of around 400 commercial establishments. There are also huge establishments of the Army, the Indo-Tibetan Border Police and NTPC Limited and Jayaprakash Power Ventures Ltd hydro-power projects.

With heavy construction activities of so-called development initiating hydro-power projects at Tapovan and Rishiganga, tunneling, road widening have triggered the disaster at Joshimath. The subsidence of land in Joshimath was triggered by the February 2021 flow of rock and glacier ice mass that descended into Rishiganga and Dhauliganga valleys and flowed into Alakananda River. Substantial discharge of water in Dec 2009 from a punctured underground aquifer played a role in destabilizing Joshimath during a tunnel boring close to Auli discharging substantial amounts of water in December 2009. The 2013 Kedarnath flow was a wakeup call. But the unregulated rise in tourism that led to construction boom is cause for the disaster at Joshimath. This sinking is due to these human induced causes. Tapovan-Vishnugad hydro project tunnel that passes just below Joshimath, which is sitting on an old glacial deposit is a contributing factor to this disaster.

The government proposes to build 66 tunnels in Uttarakhand Himalaya within the next decade and 18 tunnels are already in operation. Building these subsurface structures also will contribute to geological disasters.

Construction of highways and railway tracks too has become a prime cause for landslides and occurrences. Such constructions in the Himalayas are causing recurring landslides in the Himalayas.

Such geological disasters manifested across India too. It is reported that subsidence of land occurred at Jhoria, Bhurkunda, Kapasara, Raniganj and Talcher due to mine-large resource extraction projects, from Delhi to Calcutta due to over extraction of ground water and from Mehsana for hydrocarbons. Last year land in Chama, Himachal Pradesh started to slide shortly after a hydro-electric power project began test runs.

In 2010, some months after the tunnel-boring machines nicked an underground aquifer near Joshimath, two researchers pointed out that "sudden and large-scale dewatering of strata has the potential to trigger ground subsidence in the region. But the governments did not heed such warnings and went on the "development" spree of construction.

Even in north-east the highway construction spree is continuing in the name of social security displacing tribal people in those states besides pushing intrusive anthropogenic activities, destroying Himalayan environment.

Despite many protests in Meghalaya, Arunachal Pradesh, Himachal Pradesh and other states by the people against construction of mega-hydro projects and highway (6 lane) roads devastating the lives and ecology, without heeding these protests of people is on the spree of these constructions; in the name of development and national security suppressing the people's protest. That greed of giant corporates for super profits and corruption of leaders is the cause of this construction spree is not a secret.

Very recently it is reported that massive erosion of banks of Ganga in West Bengal washing away several villages due to erosion of Ganga-Brahmaputra-Meghna delta after construction of the Farakka Barrage. Due to this erosion more than 2,00,000 people in Malda and Murshidabad districts are displaced. People are migrating to other states as construction workers since every year the river is eating into land and the agriculture is suffering.

But the concerned governments and rulers are not heeding warnings, people's protests, severe environmental damage and are marching in other spree of heavy construction in the name of development and national security in a callous manner disregarding the traditional knowledge, agricultural practices, construction practices and cultural aspects of the people for ages and inviting the peril of geological disaster at the cost of people and their safety and interests!

Subsidence of land and devastation is one of such anti-people and anti-national policies adopted by the rulers of every political hue!