## 'Dams in the para glacial zone are a danger'

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**Ravi Chopra**, Director, People's Science Institute, has been a critic of hydropower projects in Uttarakhand and has chaired and been part of several committees that have deliberated on infrastructure development in the State, while staying true to the principles of sustainable environment. He spoke to The Hindu on the causes of the Uttarakhand deluge, the challenges of hydropower development and whether alternate models of development are possible.

## How do you see the disaster in Uttarakhand? Is it natural or manmade?

What we know so far is that the temperatures on February 5 and 6 in the Himalayas were higher than what's normal for this time of the year. A mass of ice, snow and fresh water — always a lethal combination — came hurtling down a slope carrying with it lots of boulder and rocks and other debris and reached the base of the Rishi Ganga river. However to those who've died and been swept away, it doesn't matter if the origins of the floods were from a glacial lake being breached or a rock falling on a glacier. While these are natural events, we have at various previous occasions warned of such risks. It's a folly to be building dams, and hydropower projects above elevations of 2,200 metres. So in that sense, it's entirely a man-made disaster.

## In the aftermath of the 2013 floods, you'd led a committee — under the orders of the Supreme Court — to investigate the viability of hydropower projects. Were those recommendations heeded?

In the aftermath of the disaster, and after several petitions, there was no response from the government until the matter reached the Supreme Court. However, the Ministry of Environment and Forests, which was then led by Secretary, Mr. Shashi Shekhar, accepted our key recommendation — that most of the hydropower projects proposed by the Uttarakhand government be dropped. However, this led to the power developer companies then raising objections that they were being penalised in spite of following all the norms of the environmental appraisal process. That led to a second committee being formed and they opined that while all environmental appraisal norms were followed, it would be advisable to cancel hydropower projects.

A third committee has been set up but this time there were barely any environmentalists and consisted almost entirely of engineers. There is still a constant tussle and the Uttarakhand government has now cancelled most of the hydropower projects. The Clean Ganga mission and the Ganga draft law also played a significant role which influenced the Centre's decision to not develop any more new hydropower projects.

The Uttarakhand government has been constantly advocating for hydropower projects on the grounds that it is the only reasonable source of electricity to meet the developmental demands of the region. Is a balance possible? Until about 10 years ago, I believed that it was possible to strike a balance between hydropower projects in Uttarakhand without harming the environment here but there is really no case for it now. There are multiple reasons. One is that the cost of solar power has been dramatically reduced and it makes no sense to generate power at ₹7-8 per unit when solar power is ₹2. Second is that there is no sustainable way to develop such projects given the flouting of environmental norms and challenges with the disposal of debris, accumulated muck. The recent avalanche plus the 2013 experience show that dams in the para glacial zone (above 2,200 m) are a danger to the people below.

## Given that Uttarakhand, like most States, wants to provide reliable electricity access, Internet connectivity, what alternatives are possible in terms of power supply?

We must have a solar-power based development. Industrial development here also has to be thought through.

There are thousands of places here with unexplored potential that can host homestays.