## Flood Warnings and Recent Disaster at Uttarakhand

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#### **ABSTRACT**

The partition from Uttar Pradesh Uttarakhand has been struggling for development pertaining to road connectivity, power supply and other developments like: education, health, tourism and water supply etc. During the development activities, it has perhaps not been taken care or totally ignored about the ecological imbalances being created by such activities. No proper indication or assessment is made from environmentalist foe Uttarakhand tragedy which occurred recently in the month of June' 2013 whereas in US there were announcement by Govt. to vacate the lower portion of New York city, 15 days before Sandy came on 31st Oct' 2012.

The said Uttarakhand disaster during June became an eye opener to cope with one of the worst ecological disasters in recent memory. Union Environment Minister, Jayanthi Natarajan said that an 'eco-sensitive zone plan' was in place in the State and that the authorities must not compromise on the 'fragile ecology' of the region. We must look this disaster with magnifying glass whether by giving such statement will make people aware about its non-revival in future course of time.

In this paper, it suggested looking such kind of tragedy due to disaster in new direction and causes must be found out whether it was only due to development of buildings, roads and hydro power etc. for disturbing ecosystem or something else has indicator for such tragedy for that solutions can be worked out.

Keywords: Disaster, flood warnings, Uttarakhand tragedy, ecological imbalance.

## 1. INTRODUCTION

It is very much imperative and also true to notice that if some disturbances are created in any system, the disturbed system will take its own course to balance it. This may be one reason as environmentalist are saying that the Uttarakhand tragedy is no other reason than the cutting of trees, hills for expansion or creation of roads or developments like creating infrastructure like buildings, dams, colleges, Universities, Health centre in Hilly region. Whether it is true? The populations living in hilly region will definitely seek answer.

The Environmentalist Sri Sundar Bahuguna had already launched *Chipko Andolan* 4- decades before

to save the cutting of trees in hilly region and not to installed Tihari dams or any other such activities which may damage ecology. Question again comes, whether is this the only reason?, it is still unanswered. This paper is trying to highlight such issues so that in future Kedar Nath Tragedy will not get revised.

#### 2. FRAGILE ECOLOGY

Union Environment Minister Ms. Jayanthi Natarajan said that an 'eco-sensitive zone plan' was in place in the State and that the authorities must not compromise on the 'fragile ecology' of the region. Is it not a politicizing statement when people were struggling with tragedy? Ms. Natarajan said the National Ganga River Basin Authority (NGRBA) headed by Prime Minister Manmohan Singh had in

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2011 recommended that a 130-km stretch from Gomukh to Uttarkashi be declared an eco-sensitive zone. "The proposal was accepted and a draft notification was put in place in 2011, which was later finalized in December, 2012, and is still in force."

Mr. Bahuguna, belonging to Ms. Natarajan's party, however, is opposed to the proposal for he believes the move would rob the local people of much-needed infrastructure development and deal a blow to the State's tourism industry. While environmental activists maintain that the flood was a man-made disaster waiting to happen, the State has tried to brand the incident as a natural calamity. Mr. Bahuguna has sought to describe the flash floods as an "unprecedented" event caused by a "Himalayan tsunami."

The Bharatiya Janata Party too had backed Mr. Bahuguna's opinion on the issue — the then BJP Chief Minister Ramesh Pokhriyal 'Nishank' had written to the Environment Minister, expressing his opposition to any such move.

(Source: Times of India, Mumbai, June 20, 2013)

"The Uttarakhand Assembly had earlier passed a resolution opposing the move to notify the Gangotri-Uttarkashi stretch as an eco-sensitive zone. The BJP Chief Minister before him also held the same point of view. They believe that the region's development will

be affected by this proposal," said Ms. Natarajan.

However, the first priority right now was to ensure relief and rehabilitation for the afflicted, said Ms. Natarajan, decrying the politicization of the issue at a time of crisis.

"In a democracy, we have to discuss things... but I believe this is not the time to bring those issues to the fore. As of now, all of us must join hands to ensure that all the stricken people are safe," Ms. Natarajan said.

### 3. FEW PHOTOGRAPHS OF TRAGEDY



(a)



(b)



Uttarakhand tragedy: Over 160 bodies found in four days



# 4. Projected Reason of Kedar Nath Tragedy

As per authors view point, there may be following reasons for the disaster in hills on 18<sup>th</sup> June' 2013:

- i) it might happened due to cloud burst.
- ii) There were some slides in the hills, that blocked the natural water flow and was broken during heavy rain falls.
- iii) Any big lakes at high altitude of Kedar Nath shrine got over flowed and broken created heavy water flowing impact.
- iv) Glacier ice plateau got shifted during heavy downpour.

#### 5. SCIENTIFIC REASONS & DISCUSSIONS

Let us consider that any hot substance is in touch of cold ice. The ice gets in molten conditions and finally converted into water. But if ice piece is bigger in size it may take longer time to get it converted into water on other hand when ice may maintain the temperature of hot body under cold condition. It is very clear that during snow fall / ice particles rainfall while in contact with base body, get only attached when temperature of body is equal or lower than the snow/ice temperature.

There is logic behind the tragedy. The entire hilly region where at higher altitude glacier sheets are formed, during colder season when snowfall starts, suppose ice sheets on glacier are hotter than the snowfall temperature, snow falling over glacier will get covered into ice sheets over existing glacier but not get attached.

Thus sheet which formed during winner may get detached during heavy down pour and can slides and create heavy impact with its weight and size of sheets. This will damage the construction, pilgrims / tourists, villagers and other lively hoods occupying the hills during those periods. A model can be prepared and shown to confirm this activities happening in the hilly region.

#### 6. CONCLUSION

As discussed above, the glacier on high altitude in the hills are little on higher temperature can accommodate snow sheets falls during winter, but not get attached. It may be named as green ice sheets over glacier. During raining season, when heavy down pour occurs, the upper sheets will get detached and starts sliding. This moving ice sheets may damages hilly stone and road or building construction at lower altitude when it reaches with velocity and heavy mass. Authors would like to again stress their views that this movement of green ice sheets may damage entire glacier area of hilly reason.

Thus, it is concluded that the tragedy was not due to cloud burst nor such heavy down pour can damage entire hill area at same time Badri Nath, Joshimath and Kedarnath shrine and logic raised is the only cause to create tragedy and tragedy may be repeated in near future or frequency may get enhanced.

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