

# Study of Natural Disaster and Its Impact in Uttarakhand

Ankita Srivastava<sup>1</sup> Dr. ShriRam<sup>2</sup>

<sup>1</sup>Post Graduate Student <sup>2</sup>Associate Professor

<sup>1,2</sup>Department of Civil Engineering, MMMUT, Gorakhpur - 273010 (U.P.)

**Abstract**— This paper illustrates that the study on natural disaster should be done in future so that the method of minimizing the impact of the disasters can be achieved. It is the damage or the impact that makes any disaster powerful. It is very common now a days but in the year of 2013, Uttarakhand faced a disaster that completely changed the face of Uttarakhand. In this paper I have studied about the disasters and its impact in the hilly area of Uttarakhand.

**Key words:** Cloud Burst, Avalanche, Earthquake

## I. INTRODUCTION

Natural disasters in India and all over the world have caused havoc to the life, property along with nature as a whole from time to time. Some common natural disasters that have been occurred in the past years are flood, flash flood, landslide, cloudburst, forest fire and avalanche. These disasters are declared as a dangerous one only after evaluating the loss that has been done to the property as well as life of people. Natural disasters occur when earth tries to manage its position. As we know that natural disaster cannot be stop by human action but the only thing we can do is that we can minimize the impact of the disasters by getting the data of previous years.

**Uttarakhand-** The geographical Area of the Uttarakhand state is 53,483 sq. km, mostly part of it is covered by mountain and forest (93% of it is mountainous and 64% is covered by Forest). The state consists of many natural things like bio-diversity and rare species of aromatic & medicinal plants which are used in making medicines and other important use. The climatic condition of this state consists of climatic zones that make it amenable to a variety of commercial opportunities in agriculture and horticulture. There are number of small scale industries is 25,294 that

provides employment to 63,599 persons. There are 1802 large and medium scale industries with an investment of Rs 20,000 crore giving employment to more than 5 lakh people. Most of the small and large scale industries are based on forest. There is a total of 54,047 handicraft units in the state.

In the month of June 2013, a disaster occurred that changed the face of the state. In a month of June when cloudburst occurred in the North Indian state of Uttarakhand, it created dangerous flood and landslide in the state which was the worst natural disaster since the 2004 tsunami. 95% of the hazard occurred in Uttarakhand. On 16 July 2013, according to data provided by the Uttarakhand government, more than 5,700 people were "presumed dead." This total included 934 local residents. Many bridges and roads were damaged and they left about 100,000 pilgrims and tourists trapped. The Indian Air Force, the Indian Army, and paramilitary troops evacuated more than 110,000 people from the flood prone area. From 14 to 17 June 2013, all the neighboring state of Uttarakhand was affected with heavy rainfall. The Chorabari Glacier started melting because of the continuous rainfalls, at the height of 3800 metres, and an outbreak of the Mandakini River causes heavy floods near various place of the state. The upper of Uttarakhand are covered with forests and mountain along with snow. Heavy rainfall occurred continuously for some days as well as melting of snow aggravated the floods. Warnings by the India Meteorological Department predicting heavy rains were not given wide publicity beforehand, due to which many people were not aware about this disaster that affect the life of people as well as huge loss of property.

### A. EARTHQUAKE

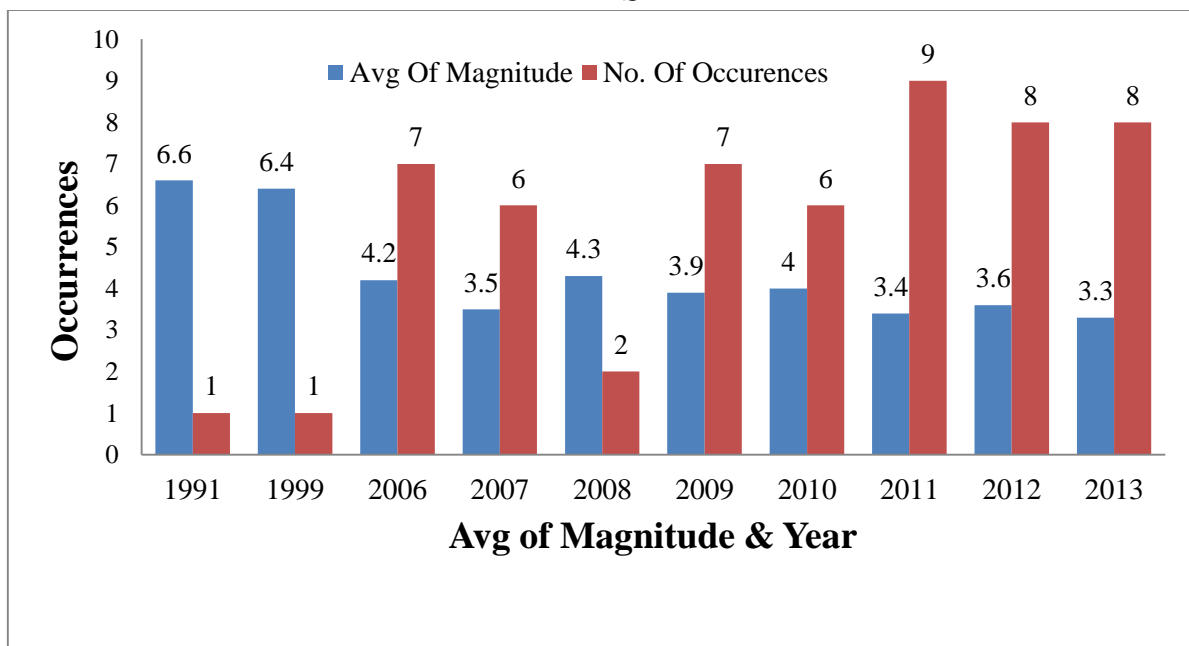


Fig. 1: Comparison of Occurrence with Average of Magnitude & Year

**B. FLASH FLOOD**

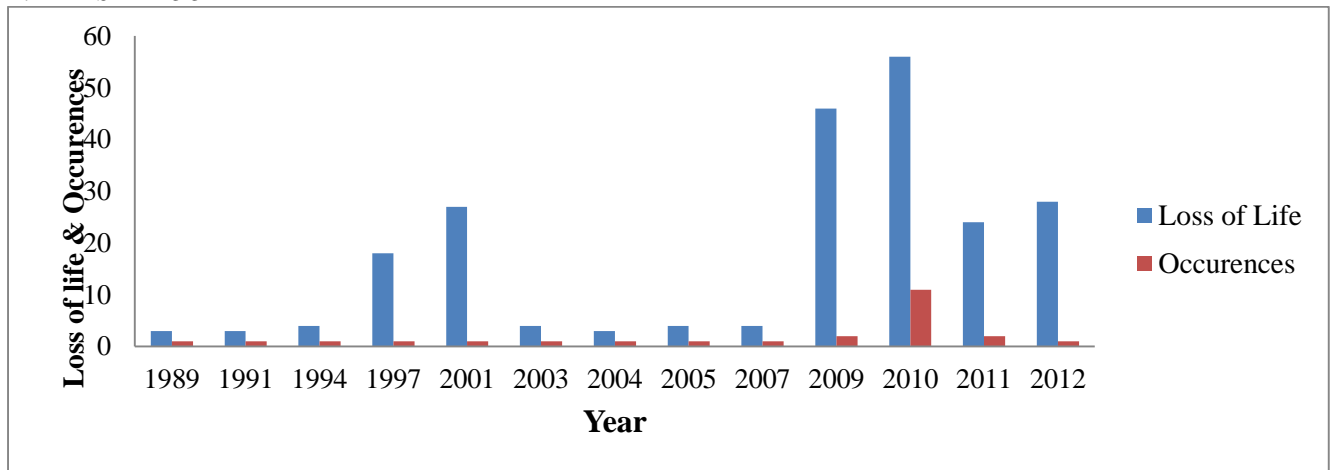


Fig.2: Comparison of Loss of life and Occurrences with Year

The graph represents the Loss of life and occurrences with respect to year. As we can see in the graph that the maximum number of people died in the year 2010 due to Flash flood and it occurred approx 10 times in the year of 2010.

**C. AVALANCHE**

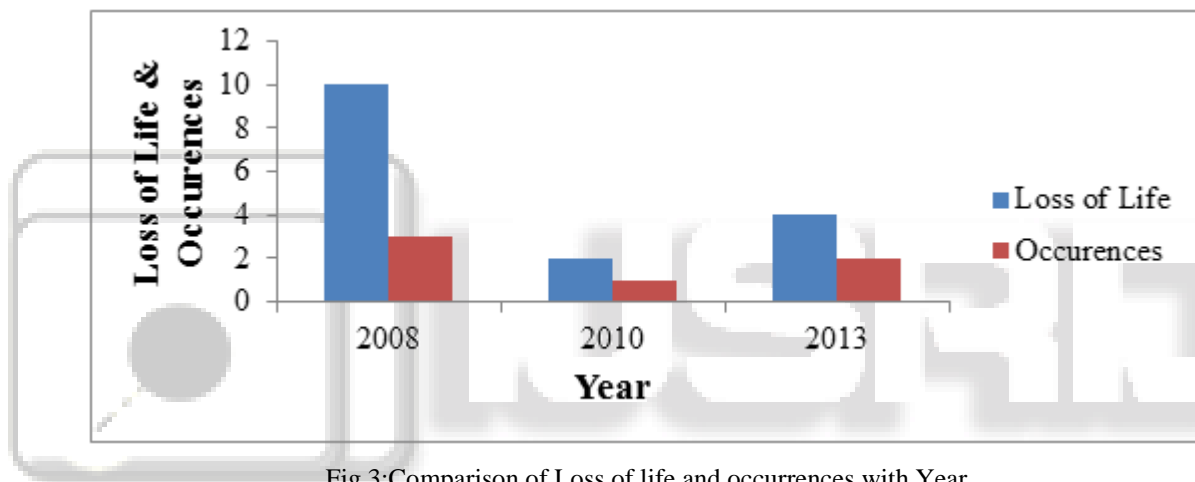


Fig.3: Comparison of Loss of life and occurrences with Year

This graph represents the Year in which Avalanche has been occurred with respect to the number of people who died because of the occurrences of Avalanche.

**D. CLOUD BURST**

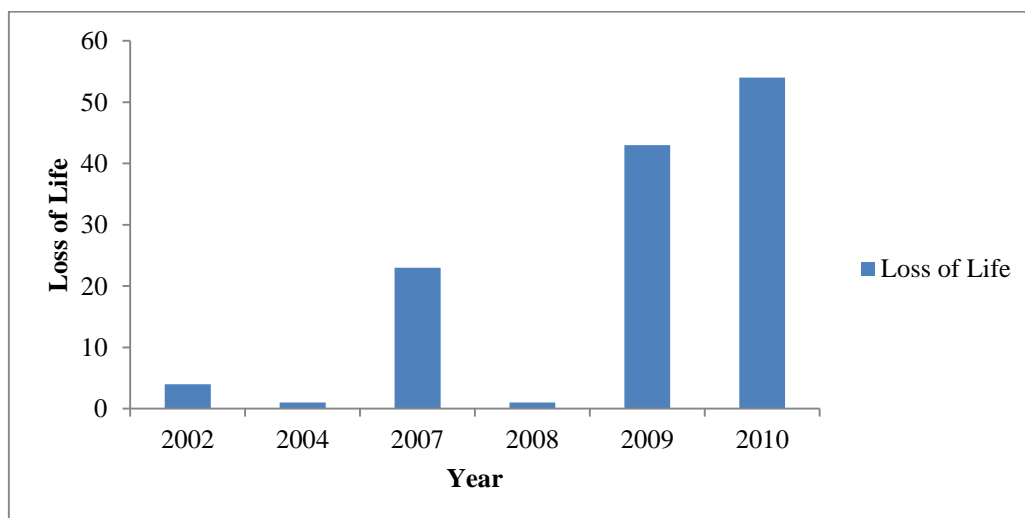


Fig.4: Comparison of Loss of life with Year

The graph represents the number of people died due to the cloudburst with respect to the year. In the year 2010 maximum number of people died due to cloudburst.

## II. RESULTS AND DISCUSSIONS

The discussion points out the measures to prevent and reduce disaster risk. By the time a disaster strikes, it may seem too late to interrupt the negative feedback of the impact of disaster risk. But this is not the case; there are various opportunities for us to contribute our effort to the disaster prone area so that its impact can be minimized. These include:

- Ensuring that the financial support for housing and community reconstruction reaches to the poor people.
- Insisting that whatever the investments are made in disaster risk reduction in the reconstruction of housing, infrastructure, and other community assets can be done properly.
- Involving all the local professionals (builders, architects, and engineers) in training and post-disaster planning oriented toward risk reduction.

## III. CONCLUSION

The disaster cannot be stop forcefully but the only thing we can do is that we can minimize its impact and for this the Central as well as state Government has to be participate actively in providing equipment, funds, medical facility and all the other facilities that may be helpful for the people of disaster prone area. As far as possible the locals nearby area should be aware about the impact of disaster and its causes.

A more modern and social understanding of disaster however views this difference as artificial (as the disasters are not in the favour of human being) since most disaster results from the action or unawareness of people and their social and economic structure and also by not living in resonance with nature.

The critical aspects of handling with natural disasters have always been avoided, even post disaster resonance of state through rescue, relief and rehabilitation measures have been found insufficient.

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