



## Natural disasters in Jammu and Kashmir

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### Abstract

India has traditionally been a disaster-prone nation, with various states affected by different kinds of catastrophes. The effect of these catastrophes is increased when a region is prone to several kinds of disasters. “This study attempts to understand the impact of natural and man-made disasters on the people of Jammu and Kashmir (J&K) and Ladakh region in India as well as it also examines the resilience mechanisms adopted by the people, and identifies measures taken by the government in response to these disasters. To understand these disasters’ dynamics, we performed both offline and online desk reviews for this research. The study indicates that J&K and Ladakh area is plagued not only by numerous natural catastrophes like as floods, earthquakes, avalanches, and landslides but also by the terrorism and violence, which has caused unprecedented death and damage. These natural and man-made catastrophes have negatively impacted most areas of life and development in the region. To minimise the hazards, effective disaster risk reduction and management systems, early warning systems and infrastructure need to be improved. In addition, community involvement has to be increased with the aim of resolving the complaints of the people and involving them in the design and execution of sustainable development initiatives.

**Keywords:** Natural disaster; Man-made disaster; Conflict; Terrorism; Violence; Jammu and Kashmir; Ladakh; India

### Introduction

Disasters are a worldwide occurrence. Natural and man-made catastrophes have had an effect on the growth, economics, and health of both emerging and developed countries and have placed strain on people throughout the globe. The United Nations International Strategy for Disaster Reduction defines the term disaster as a serious disruption of the functioning of a community or a society involving widespread human, material, economic, or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources . Disasters that are the consequence of natural risks such as earthquakes, floods, cyclones, and droughts are termed natural disasters. Those that are the consequence of human activity such as industrialisation, wars, global terrorism, political disputes, and economic crises are classified as man-made disasters . A mix of natural and man-made catastrophes has impacted most nations across the globe and resulting in large-scale death and illness, ruined livelihoods, producing millions of refugees, and migrants.

This mix of natural and man-made catastrophes has had severe impacts on major aspects of J&K and Ladakh region’s economy, including vital sources of income like as agriculture,



horticulture, handicrafts, and tourism. These catastrophes have strained the administrative apparatus of the area and left its people vulnerable. However, there are dearth of research which have concentrated on the aftermath of particular natural disasters and acts of terrorism and violence as a type of catastrophe. There have been shortage of research which have examined the effect of natural and man-made catastrophes on people's lives and development in a comprehensive manner. This article tries to evaluate the effect of various natural and man-made catastrophes (e.g., terrorism and violence) on the inhabitants of J&K and Ladakh area". It analyses the effect of catastrophes and the methods of resilience adopted by the people of the area, and identifies actions made by the government in response to these disasters.

### **The J&K Tragedy:**

The catastrophe which struck on 13 September, 2014, both the locals and the visiting pilgrims were affected by the calamity. According to statistics given by the J&K administration, more than 300 persons were believed dead, 50 bridges have been swept away entirely in the state. More than 900 roads in various areas have sustained severe damage, limiting connection to majority of the settlements in the state. As to the study done by the sphere India, the estimated numbers of persons impacted were 1, 01, 36063. In addition to the immense loss of precious lives and damage to property and infrastructure, the disaster has also caused loss of livelihood which has adversely effected the tourism industry of the state and the economy of the state also suffered as it is primarily depending upon the tourism for sustenance. A satellite based Indian Space Research Organization joint quick assessment on J & K flood 2014 destruction has shown that Bandipore district of Kashmir division suffered the greatest burden with 148 sq kms falling under the floodwaters. Pulwama witnessed floods across 102 sq kms and Srinagar over 100 sq kms. Tehsil Sonawari of Bandipora was allegedly destroyed on a huge extent. The early damage is estimated at around Rs1lakh crore. According to World Bank, yearly direct losses from natural catastrophes are estimated at 2 percent of India's Gross Domestic Product (GDP) (GDP). By that perspective the loss produced by J & K Disaster 2014 on its own in a single instance may be a substantial percentage of typical yearly losses

### **Corporate Initiatives:**

Corporate social Initiative is a feeling of social conciousness of a company for the benefit of the society. It is a process which seeks to accept responsibility for the company's actions and promote a good effect via its operations on the environment, customers employees, communities, stakeholders and any other members of the public sphere who may also be regarded as stakeholders. The typology established for the overview of business concious efforts for the socieity did not cover such a broad range of problems, it concentrated on corporate participation in natural disaster mitigation measures with in the philanthropist and CSR programmes. The overview anticipated that most of this would require collaboration with organisation outside the corporate community such public sector, NGOs and Community group.

### **Impacts of Earthquakes**



Situated close to the “Himalayas, J&K and Ladakh area lies in a mountain building geological zone and therefore suffers recurrent seismic activity. It is an earthquake-prone region that comes within the most active seismic zones in India. It has survived numerous earthquakes throughout the years. Between 1889 and 1990, 170 earthquakes were reported in the area. The year 1885 saw one of the worst earthquakes to hit the area, the impacts of which were felt from Srinagar to Gilgit and to Shimla in the adjacent state of Himachal Pradesh. In 2005, a large earthquake - with a magnitude of 7.6 on the Richter scale – hit the border area between India and Pakistan. The repercussions impacted both nations. More than 80,000 people – most of them in Pakistan – lost their lives, resulting in a huge humanitarian catastrophe. The earthquake also resulted in injuries to roughly 100,000 persons in Pakistan and over 6300 people in India. It is regarded the worst earthquake in the documented history of the Himalayan area. Around 1300 of those murdered were from Uri in Baramulla region of J&K. The township suffered significant damage to most of its buildings, with 121 of them falling entirely and several communities in the area were badly impacted by the earthquake.

### **Impacts of Landslides**

Landslides are another geological danger prevalent in J&K and Ladakh area. The area is home to young mountain ranges, which have a weak rock foundation that may unleash a flow of debris, mud, and rocks when the stability of the slope becomes disrupted. Heavy rains, cloudbursts, and earthquakes may cause landslides. Anthropogenic activities such as deforestation, road building, and other unsustainable development activities have further exacerbated the vulnerability of the region. Most of the regions in J&K are prone to landslides, with the districts of Bandipora, Kargil, Anantnag, Kishtwar, Pulwama, and Shopian being particularly vulnerable. The ecologically sensitive area of Ladakh has also been severely impacted by human activities such as encroachment of hill slopes, forest fires, terrace farming, and vibrations via intensive vehicle traffic, making it a particularly susceptible zone for landslides and mudslides. In 2010, the Ladakh area experienced one of its most catastrophic landslides as a consequence of a cloudburst. The severe rains caused numerous landslides and flash floods, resulting to the deaths of 234 people with foreigners accounting for approximately 10 percent of the fatalities. The torrent of rubble from the hills caused havoc on its route, damaging hospitals, homes, highways, bridges, farms, and other infrastructure.

### **Impacts of Floods and Avalanches**

Flooding is one of the most frequent and also one of the most destructive natural catastrophes throughout the globe. It is usually a consequence of overflow of water owing to rainfall, melting of snow, or other natural factors, which ends up burying an area of land. Besides these natural factors, there are human actions like as deforestation, fast and unplanned development, building of dams and bridges without adequate study, and changing patterns of vegetation that make a region more susceptible to floods. The region is prone to floods, with large rivers like as Jhelum, Chenab, and Indus running through its inhabited regions. Kashmir valley’s bowl form, with its wide range in elevations, renders the low-lying parts of the region particularly prone



to floods. In the two-major metropolitan areas of the region – Jammu and Srinagar – the number of wetlands such as lakes and ponds, which serve as natural sponges, have gone down significantly, resulting in regular urban floods.

### **Community Resilience and Government Measures on Disasters**

In the aftermath of catastrophes, amid the widespread death and damage, people and communities have developed different methods to deal with the situation. This coping capacity is closely related to the vulnerability profile of the person or the group. The susceptibility is governed by social and economic circumstances such as age, gender, health, profession, and other factors. The capacity of the people to deal with these natural catastrophes may also be related to the socio-political history of the state, as highlighted in a study by Rakesh Chadda and colleagues following the 2005 earthquake. The research suggests that the years of violent warfare may have better prepared the inhabitants of the area to deal mentally with natural catastrophes and to live in difficult circumstances. The social capital method has been a major coping strategy wherein individuals have gone out of their way to assist one other, as was the case in the aftermath of the floods of 2014. Due to the absence of an early warning system, individuals were compelled to leave in a hurry as the water level increased, which resulted in avoidable losses. The Indian Army has been a major institution addressing the disaster assistance in the areas of J&K and Ladakh. The army and the National Disaster Relief Force were called into action and played a major part in the rescue efforts in 2014. The army also set up medical camps in flood-affected regions and a research indicates that this played a significant role in the aftermath of the catastrophe, although the poor supply of some medicines and the limited number of physicians available hampered the usefulness of these camps. While the army and other governmental institutions did their best during the flood, it was the local youth networks that went out of their way to save people – even tourists – with the assistance of tiny boats and tyres. There was also material assistance from other areas of the region in the shape of food supplies such as milk, vegetables, and rice, which enabled people maintain themselves in the early aftermath of the floods. Organizations that are usually hostile to one other – such as the military forces, non-government organisations (NGOs), separatists, and local youth – were all working toward the same objectives during the natural catastrophe. Women have played a significant part in the case of catastrophes”. In the aftermath of the earthquake in 2005, women coordinated relief activities, assisted in the construction of temporary shelters, and cooked meals in the wake of the disaster

### **Conclusion**

Natural catastrophes and nature's wrath has again and again not only inflicted significant damage, but has also revealed the deep seated gap in the disaster management system in India and our lack of preparation which makes us even more prone to harm in such an eventuality. Our preparedness for such events is even more catastrophic, as witnessed in the recent floods in Jammu and Kashmir we had to search for boats, man power, and connection at the time of the occurring of floods. Our government has to delve into the deep introspection and come up



with a strategy which could at least reduce the danger of destruction and be resourceful in such ways which might be beneficial to everyone. In a dynamic scenario like the one in J&K and Ladakh area, the research, although being faithful to the fundamental character of catastrophes, terrorism and violence, may fail to portray the current reality. The strengthening of efficient disaster risk reduction and management systems, early warning systems and infrastructure – particularly health facilities, schools and highways – in J&K and Ladakh area.

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