

Disaster Management: Present Status and Future Strategies (With special reference to J&K)

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ABSTRACT

Disasters are increasing with increasing population coupled with unplanned urbanization, encroachments, etc. While the history of disasters reveals that it has been a part and parcel of all civilizations but the response and coping mechanisms have always varied with time and space. In the Indian context lot many initiatives have been taken up especially after the International Decade for Natural Disaster Reduction (IDNDR) 1999-2000, yet much more needs to be done. In the state of Jammu and Kashmir Disaster Management has not been a priority owing to a number of reasons. This is despite the fact that most parts of Kashmir valley fall in the most sensitive Seismic Zone (V) while the rest falls in Zone (IV). In addition, floods, landslides, avalanches, cloud bursts etc. have always caused loss of life and property in the State. The fragile environmental setting caused due to anthropogenic factors has further aggravated the problems. The paper tries to analyze the present scenario and the activities needed to be prioritized in future.

Key Words: Catastrophe Hazard Weather Earthquakes Vulnerability

INTRODUCTION

Hazards are a natural phenomenon. Floods, earthquakes, Cyclones, Landslides and other hazards have been occurring all over the World prior to the history of mankind. It is the adverse impact of natural hazards on people and their economies that a natural hazard turns to be a disaster. The measures to reduce the adverse impact of disasters through the means of preparedness, mitigation, response and recovery constitute the major components of Disaster Management.

The long strides of civilization, constant struggle for higher standards of living, rapid urbanization, population explosion and demands of industrial revolution have depleted the natural resource base all over the world. Scientists, all over believe that an environmental catastrophe is already heading way by way of global warming, climatic change and health hazards due to green-house effect. Ozone depletion is another feature of great concern. As per the data collected at 2000 meteorological stations around the World, the Year 1990 was the warmest with temperature averaging 15.4 °C (Hansen 1991). With rise in temperatures, oceans warm and expand, glaciers and polar ice caps melt resulting in raising the sea levels-thus a threat to countries such as Indonesia, Holland, Bangladesh and Maldives. Extreme weather events such as floods, droughts and cyclones become more frequent with increasing intensities. Global warming is definitely going to effect plant and animal life on large scale. Forests are destroyed lands degraded, soil eroded, waters depleted and environment polluted on a regional scale in all the countries with varying rates. Temperature records around the world show half a degree centigrade warming during the past century. An equal rise in response to green-house gases during the next decade itself has been predicted by Ramanathan of Chicago University Researcher fore-see 5°C rise in global temperatures during the next century. The magnitude of the problem could be realized better when it is known that the rise in global temperature till the beginning of the 20th century was 1.2 °C only over 100000 years' (Murty, 1995). The incidence of disease is ever on the increase as a result of unhealthy atmosphere. Pollution all over has degraded the quality of life crippling humans and shortening longevity. Researchers in Public Health found that in Hungary atleast one out of seventeen deaths is due to pollution. The human activities have contributed the most damaging gases to the atmosphere e.g. the chlorofluorocarbons (CFCs) which developed Ozone Holes.

THE INDIAN SCENARIO

All over the World, forests cover about 4400 million hectares of land surface and as thus comprise about 30 % geographical area. The total wooded area occupies about 1100 million hectares (25 %) of the worlds forests (Manorama 1990). ‘The forests in India cover about 10 % of the total geographical area when the annual rate of deforestation is 1.5 million hectares, 5% of the existing cover or more precisely an area of the size of Nagaland. While the World average rate of deforestation is itself high, yet that of India is tremendously 11- time higher, World wide each year 25 billion tones of top soil from crop lands are being washed into the oceans.’(Murty, 1995). While most of the natural disasters of the World occur in countries in Asia and the Pacific, the Indian sub-continent is more vulnerable to most of these disasters. The over exploitation of natural resources as a compulsion by population explosion has increased the vulnerability of communities to different disasters.

India experiences all types of disasters-natural as well as man made but the increasing frequently and intensities of these disasters are reaching a stage that if no proper management practices are evolved and adopted, things in future are going to be worse. The international community through the United Nations tried to address to disaster related aspects by declaring the decade 1999-2000 as the (IDNDR). But again it was during this decade that the losses due to disasters were as high as 592537 human lives lost, 195.9 million people affected and the estimated damages to the tune of 741 billion U.S dollars were recorded (World Disaster Report.2000).

With a diverse physiography, climate and varied socio-economic setting India experiences almost all types of disasters all through. While a district may be experiencing floods the adjoining district may be experiencing drought. Even different parts of the same district may experience various disasters simultaneously.

In the last decade (1990-2000) we have lost more than 31000 human lives due to floods, earthquakes, cyclones and hailstorms. Floods have taken away the maximum numbers of human lives in the decade (IDNDR). The CWC is responsible for the flood forecasting and warning network. Again, these forecasts and warnings are for interstate river basins. The local or regional catchments which really deserve attention have not been covered under this network which results in large scale damages at the local/ regional levels.

Earthquakes are the most dangerous and destructive natural hazard and impossible to predict. Approximately 59% of the total area of the country is vulnerable to seismic activity of varying intensities whereby most of the areas lie in the Himalayan and sub-Himalayan regions and the And-a-man and Nicobar islands. The Bhuj earthquake of 26th January 2001 shook the country economically as well as in-terms of human losses. Death of more than 20000 precious souls and centuries of investment were lost within seconds for which all the nation had to pay the price in one or the other the form. However, Economic losses upto a certain degree can be compensated by measures like surcharge but loss of life can never be. In the words of Emerson,

*“Not gold But only men can make,
A nation great and strong”.*

As a part of risk assessment of natural hazards it is encouraging to have the Vulnerability and Hazard. Atlas of India (VHAI) but the areas demarcated as most vulnerable or least vulnerable to a particular disaster need to be treated accordingly by way of legislation’s, building codes, incentives and penalties and above all public campaigning/awareness.

So far as cyclones are concerned we have developed a reliable warning system especially in states like Andhara Pradesh or Orissa but the same will have to be extended to other states as well.

Droughts are a permanent feature of Indian agriculture now. We have 28% of our total area prone to droughts and appallingly about 68% of the total sown area is drought prone.

The other disasters like landslides, avalanches, forest fires, pest infestation etc are usually localized but the severity is not so critical.

In addition to these natural disasters we have been experiencing some man-made disasters as well. The communal riots, militancy and proxy war are some of the examples. A man made disaster most neglected by all of us is the large scale

migration from rural to the urban areas. Our villages- the cradles of civilization turn to be places mostly abandoned by people in search of jobs and other facilities.

SCENARIO IN JAMMU & KASHMIR

The State of Jammu and Kashmir is all the more vulnerable to almost all the disasters, natural and man made. Once a water surplus state now a water scarce state, J&K occasionally faces severe climatic hazards like the drought. The mountains surrounding the Kashmir Valley were considered to be a treasure of glaciers but for the last few years we have been receiving very low snowfall. Floods are a recurring phenomenon in the State causing enormous loss of life and property. In the State an area of 40000 hectares is prone to floods out of which 32000 hectares is protectable. Our developmental activities hardly take into consideration such remedial measures which would safeguard our fertile lands and the beautiful settlements.

Unfortunately our State falls in Sciesmic Zone V which is highly vulnerable to earthquakes, but again we have not taken any precautions against a possible earthquake. Our building codes shall have to be redefined and implemented strictly. We face the problems of forest fires, landslides, avalanches, pest attacks on our paddy and horticulture. Like other states of the country we have been giving importance to post disaster relief distribution but have been neglecting the fact that it partly compensates the losses. Instead, there is need to go for pre-disaster analysis and preparedness. Our forests have been damaged to the worst possible extent especially during the turmoil period since 1990 which goes on unabated. The discharge capacity of river Jhelum has been reduced by more than 30%. In terms of disaster management we have been giving attention to only structural measures like constructing bunds, embankments etc but have been neglecting the long term non-structural measures and the Watershed Management which is the long term remedy for floods, soil erosion, drought and so on.

PRIORITIES

Feeling the gravity of the situation viz-a viz different disasters number of steps need to be taken without loosing any further time because if this problem is not addressed now it will be very difficult to manage or at least reduce the losses due to a disaster in future. Accordingly, the following measures need to be taken up with immediate effect.

1. **Preparedness:-** The saying, 'A stitch in time saves nine', holds true about preparedness to any disaster. Our govt., functionaries in particular and the people in general need to be educated about the various aspects, certain do's and don'ts viz-a viz a disaster. A dependable forecast and warning system must be created on top priority.
2. **Vulnerability Assessment:-** This exercise needs to be taken up and areas prone to different hazards need to be prioritized accordingly in accordance with requirements of men and material in the event of a disaster.
3. **Zoning:-** Different areas need to be marked as per their vulnerability and the uses of different zones needs to be proposed accordingly.
4. **Building Codes:-** Building codes need to be determined and followed strictly for public or private construction.
5. **Techno Legal Regime:-** A strong techno legal regime needs to be followed, While the technocrats can propose disaster resilient solutions to different problems, these need to be backed by strong legislations with incentives as well as penalties.
6. **District Disaster Management Plan:-** Each district should have District Disaster Management Plan updated from time to time. This plan must incorporate information about the resources available in the district, the officials / people to be contacted in the event of a disaster, the vulnerable spots, the priorities and the options. Although some districts have partly prepared the DDMPs yet these plans need regular updation. This plan must be prepared in accordance with the recommendations of the High Powered Committee (HPC) constituted for this purpose by the Govt. of India.
7. **Training:** Training should be considered as an integral part of day to day activities of all the officials and the people in the vulnerable areas. Although it may not be possible to train people on a large scale in training courses yet it can be done through mass media. The Administrative Training Institutes (ATI'S) need to be strengthened viz-a viz training in Disaster management.

8. **IEC:** Information, Education and Communication (IEC) component can be of great help in reducing the loss burden due to a disaster. People participate only when they are aware.
9. **Structural and Non-structural Measures:** There should be a judicious mix of these measures. If for example we go for strengthening embankments we should simultaneously educate people not to damage it.
10. **Watershed Management:** Watershed Management is the ultimate long term solution to hazards like soil erosion, floods, droughts, desertification, pollution and so on. The catchment areas of the main rivers Jhelum, Chenab and Tawi need to be treated on the basis of Watershed management.
11. **Adoption of Appropriate Technology:** Before Adopting a new technology its applicability as per the local conditions needs to be taken care of.

In addition to these measures traditional knowledge, expertise and local resources must be taken into account. Restoration of ecological balance through large scale afforestation can be helpful in a number of ways to mitigate the adverse impacts of most of the natural hazards. Police personnel and other security agencies need to be trained thoroughly in dealing with various disasters. A central agency (Revenue Department) at the state, divisional, district and tehsil level needs to be nominated and authorized to take immediate decisions in the wake of a calamity. The agencies involved with various disaster related activities should meet frequently to discuss various related issues.

REFERENCES

- [1]. Hansen.J (1991) Press Conf .Dir. NASA.N.Y The Hindu. Jan.11.
- [2]. Manorama. (1990) Year book, Kottayam PP 397-99
- [3]. Murty,J.V.S. (1995) Watershed Management in India; Wiley Eastern New Delhi-pp 4-6.
- [4]. Raza M.Ajaz-ud-din A Kashmir Valley; Vol II.Vikas Pub, & A,Mohammad. (1973) New Delhi,PP5-20
- [5]. World Disaster (2000) Report.