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DISASTER MANAGEMENT: CHALLENGES & SOLUTIONS INDIAN PERSPECTIVE

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ABSTRACT:
Natural disasters in India, many of them related to the climate of India, cause massive losses of Indian life and property. Natural disasters have affected mankind the world over since time immemorial leaving behind a trail of fury and havoc of unimaginable proportions. All these are regardless of the tremendous advancements made in science and technology.
The natural disasters like floods, cyclone, droughts and earthquakes have become a regular feature of our normal life. They are catastrophic events with multi-dimensional effects that suddenly disrupt the daily pattern of life. This necessitates an effective disaster management mechanism that could provide immediate relief followed by future reconstruction, rehabilitation and disaster preparedness efforts. It calls for a multipronged approach at the national and local level along with international cooperation to reduce the risks and vulnerability of the populace affected by disaster. Droughts, flash floods, cyclones, avalanches, landslides brought on by torrential rains and snowstorms pose the greatest threats. Landslides are common in the Lower Himalayas. Parts of the Western Ghats also suffer from low-intensity landslides.
Floods are the most common natural disaster in India.Almost all of India is flood-prone, and extreme precipitation events, such as flash floods and torrential rains, have become increasingly common in central India over the past several decades, coinciding with rising temperatures.Without people there can be no disaster. Natural disaster is, therefore, defined as the interface between an extreme physical event and a vulnerable human population. The inevitability of natural disasters and aforementioned conditions make disaster management a complex process requiring comprehensive planning and multisectoral management. The foremost question that haunts all social scientists dealing with the issue of disaster management in modern times is how mankind despite the amazing scientific progress continued to be a spectator to the fury unleashed by disasters. This question brings to light the varied inter-linkages between society, polity, economy and last but not the least environment all of which have to be carefully examined and explored in any research undertaken in this area.This research work on the basis of analysis of the following three hypothesis namely:
(i) the better the integration between the developmental policies and disaster management policies, the lesser would be the vulnerability of the people
(ii) disasters cause a sudden change in the physical, social, economic and environmental functioning of a society thereby derailing the traditional development interventions and
(iii) state's capacity to effectively deal with disasters is related to the field of disaster management in India.

INTRODUCTION:
The Indian subcontinent is highly vulnerable to cyclones, droughts, earthquakes and floods. Avalanches, forest fire and landslides occur frequently in the Himalayan region of northern India. Among the 35 total states/ Union Territories in the country, 25 are disaster prone. On an average, about 50 million people in the country are affected by one or the other disaster every year, besides loss of property worth several million. In the 1970s and the 80s, droughts and famines were the biggest killers in India, the situation stands altered today. It is probably a combination of factors like better resources management and food security measures that has greatly reduced the deaths caused by droughts and famines. Floods, high winds and earthquakes dominate (98%) the reported injuries, with ever increasing numbers in the last ten years. The period from 1973 to 2001 has been associated with a large number of earthquakes in Asia that have a relatively high injury- to death ratio. Floods, droughts, cyclones, earthquakes, landslides and avalanches are some of the major natural disasters that repeatedly and increasingly affect India.
India is hit by one major natural disaster or the other almost every year wherein the loss of life is accompanied by losses of the magnitude that is difficult to comprehend. The decade (1990-99), which was the International Decade for Natural Disaster Reduction (1990-99), it witnessed a spate of large-scale disasters that defied all attempts to stem them. These included the Latur (Maharashtra) Earthquake of 1993 killing about 10,000 persons, the Andhra Pradesh Cyclones of 1990 and 1996, killing about 1000 persons each, the Gujarat Cyclone of 1998 killing over 3,500 persons and the Orissa Super Cyclone of 1999 killing about 10,000 persons. Besides these major events, there were smaller earthquakes in Uttarkashi, Chamoli and Jabalpur, and frequent floods in the north-east, Uttar Pradesh, Bihar and Kerala. Unfortunately, these disasters were not taken up as learning opportunities, and lessons were not drawn from them to the extent to be prepared in combating future disasters. What happened in Gujarat in 2001and the way it was handled are grim reminders of the fact that we still need to learn and improve much.
The precise cost of the disaster in terms of loss of lives, property, loss of development opportunities, etc. cannot

be clearly assessed, counted or scaled. The costs of disaster are clearly inequitable, falling heavily only on the few. Disasters result not only in loss of shelter but also create hardships, lack of food availability, and temporary loss of livelihood and disrupt socio-economic activities. Some of the losses may be redeemable and compensated for through disaster relief and insurance. However, apart from economic dimension, such disturbances have their psychological and social dimensions as well, which need to be studied, and documented besides developing appropriate mitigation strategies.

PROBLEM DISCUSSION:

This study is based on an analysis of major Earthquakes of 1993 and two major cyclones of 1996 and 1998 in terms of assessment of their nature and causes, impact, measures taken, lessons learnt and future Initiatives by the two primary actors viz., government and the non-governmental organizations). This also examines in great details their relationship with the local communities in order to help strengthen traditional as also evolve varied coping. Strategies in order to reduce future vulnerability. In view of the catastrophic nature and colossal impact of both Earthquakes and cyclones, a series of structural and non-structural measures have been recommended. These are primarily aimed at minimizing the extent of loss and damage through better · organization and development of an effective disaster preparedness strategy. Only this could ensure a judicious combination of disaster and development policies that will reduce vulnerabilities faced by the Indian populace mired in steep poverty. The NGOs role has been commendable through provisions of micro-credit and other longterm rehabilitation measures but a lot more remains to be done.

A concerted and collaborative effort of the government, NGOs and local communities is required to ensure the success of a disaster management policy that focuses on disaster preparedness. It is intertwined with both the short term and long term developmental needs of the country to help build the capacity of the people to cope with the disasters. The people of India have to learn to live with disasters as they have in the past through an open approach to flood and cyclone management. This research work therefore, makes an attempt to study two important natural disasters, Earthquakes and cyclones in India. The study also focuses on the subsequent management activities undertaken to mitigate, minimize and prevent, if possible, the havoc caused by these natural disasters.

OBJECTIVE:

The objective of research in this discipline is to reduce 'vulnerability' to natural disasters. However, distinctions should be made among the several factors involved in the 'reduction of risk' and 'vulnerability'.

Analysis of each of these elements as independent factors is necessary both in understanding the two broadly prevalent theories explaining the occurrence and subsequent management of natural disasters as 'Gods Act' or 'Natures Act' and 'Human Act'.

LITERATURE REVIEW:

A right mix of policy, institutional arrangements and use of technology provides the framework for a country's approach to disaster mitigation. Effective disaster management follows certain patterns but no universal model. Worldwide, there has been a shift in philosophical approach away from a strictly "top-down" approach, relying on government alone, to a combination of "top-down" and "bottom-up" approaches. The goal is to enhance the indigenous coping mechanisms of the vulnerable community; unleash their cooperative spirit and energy; and empower them through appropriate information and contextual knowledge to mitigate the natural disasters.

Valerie Almos (2011) in his Summary Annual Report elaborates an overview of the activities of the United Nations Office for the Coordination of Humanitarian Affairs in Haiti earthquake. He stated that the new challenges of today's shifting humanitarian landscape, they need to embrace and use new technologies, more imaginative in their choice of partners, make more collaboration offered by nontraditional humanitarian actors.

Proudlock, Ramalingam and Sandison (2009), members of the Study Advisory group of the ‗Active Learning Network for Accountably and Performance in Humanitarian Action, describes in their book, ‗Improving Humanitarian Impact Assessment: Bridging Theory & Practice', how the trust is shifted towards analysis of the impact of the humanitarian assistance based on the evidence-based way, and how the aid ultimately affects the lives and livelihoods of the recipients.

Disaster Management Division, Government of India (2010), in its book on ‗Standard Operating Procedure (SOP)' published by the Disaster Management Division, Ministry of Home Affairs, Government of India describes how to respond to natural disasters, in a concise and convenient form, a list of major executive actions involved in responding to natural disasters and necessary measures for preparedness, response and relief required to be taken.

METHODOLOGY:

The Collection of data and information for a subject like Disaster Management, which is uncertain and unpredictable to a great extent, is an extremely difficult task. Even the research design has to be a mix of exploration, description and experimental.

SAMPLING PLAN:

To assess the impact of drought on farmers, first the exploratory research was done to find the facts about Earthquakes. International frameworks were studied to see the standards adopted worldwide in this direction. On the basis of study and considering the factors pertaining to India, questionnaire was formed to assess the impact through descriptive research. The framework

of the questionnaire is based on U.S model to find the impact of Earthquake. Thus the plan consisted of first a thorough exploratory research followed by descriptive research by conducting a survey through questionnaire.

SAMPLING METHOD:

The sampling method used is stratified Convenience Sampling.

SAMPLE SIZE:

The sample consisted of 100 farmers from three villages. The sample also comprises 10 technical experts and 25 administrative functionaries besides 100 actual suffer – villagers for the study. The survey of actual sufferers has been done using a structured questionnaire.

The main sources from which the secondary data was collected were from literature available on disaster management: Technology : conventional & space Reports on past disasters Books, Magazines and surveys UNDP reports and statistics Annual Reports & other relevant information from global agencies engaged in collecting and updating the data/information constantly

CONCLUSION:

Disaster management is every body's job. Ideally, it's public good with an active interface involving public, private and community partnership. However, this interface is yet to realize fully.Disaster management is a vital governance issue. The efficient disaster management is still an evolving agenda of the government. The system requires many changes and innovations to quicken the emergency responses of administration and increase the effectiveness of the machinery to meet the crisis situation and enhance crisis preparedness. The recommendations given below are based on a study of the present structure, systems and processes including Disaster Management Act, 2005 and what are perceived as the gaps in the system. While arriving at these recommendations, the aspects related to existing constitutional and legal framework, institutional mechanisms, funding and infrastructure support, preparedness measures, human resources development, and knowledge management have been critically examined.

Long term prevention and mitigation measures like retrofitting of existing public utility and other critical buildings, construction of new buildings in accordance with earthquake resistant construction technologies and non-structural measures such as building bye laws and zoning regulations, enforcement of building bye-laws, fiscal incentives for retrofitting of building etc. need to be implemented.Satellite communication, remote sensing and GIS have demonstrated effectiveness to enhance the emergency response. The Indian Space Research Organisation(ISRO has put in place Disaster Management Support (DMS) Programme with well-knit space, aerial and ground based communication and observational capability, in close association with concerned Central and State Agencies. Using aerospace systems conjunctively, the programme has been responding to the major natural disasters the country has faced, including the Tsunami of December 26, 2004, monitoring of artificial lake in Sutlej basins impending to flash floods in Himachal Pradesh, earthquake in J&K, and the flood and drought in different parts of the country.

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