



A Study on Institutional Arrangements of Disaster Management

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Abstract: India is one of the most disaster-prone countries because to its geo-climatic circumstances and high degree of socio-economic vulnerability. A catastrophe occurs when a society's normal functioning is severely disrupted, leading to widespread human, material, or environmental losses that are in excess of the capacity of the afflicted society to manage with its own resources. Sometimes, catastrophes are categorized based on whether or not they were caused by nature or by humans. Natural catastrophes include, but are not limited to, those caused by floods, droughts, tsunamis, and earthquakes. In this paper study the institutional arrangements of disaster management.

Keywords: Disaster management, DM act (2005), Tropical Cyclone, Earthquakes

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INTRODUCTION

Natural disasters are sudden, unexpected, and may affect everyone. These extreme catastrophes, whether natural or man-made, surpass the tolerated size within or beyond specific time limitations, make adjustment impossible, result in catastrophic losses of property, money, and life, and immobilize society. These occurrences aggravate natural environmental processes, resulting in disasters for human society, such as sudden tectonic activity leading to earthquakes and volcanic eruptions, continued dry conditions leading to prolonged droughts, floods, atmospheric disturbances, collisions of celestial bodies, and so on. It is worth noting that human lives are at the center of any discussion on environmental catastrophes. There is a direct correlation between the severity of environmental catastrophes and the amount of money that is lost by societies.[1]

Extreme occurrences, which sometimes turn into catastrophes, are always the result of risky environmental processes. Only if they have a significant impact on human civilization can they be considered catastrophes. An very powerful tropical cyclone (typhoon, hurricane, or tornado) in the middle of an ocean is only an extreme occurrence; but, when it strikes populated coastal regions and causes catastrophic damage and loss of life, it is a tragedy. The same holds true for volcanic eruptions; they are never catastrophic on uninhabited land or water but may cause widespread destruction in urban areas. As a rule, environmental catastrophes have a natural cause and are thus classified as natural disasters. In other words, when humans are situated in an area that might be severely affected by a natural, unexpected physical process or occurrence, catastrophes are the inevitable result.[2-4]

Such example, if a magnitude 10 earthquake hits a densely populated region. When an earthquake of lesser strength, that is, below 7 on the Richter scale, happens in a densely populated region, it becomes a catastrophe. As a corollary, it may be argued that it is not the regularity with which extreme occurrences

occur that makes them so devastating, but rather their extremeness in terms of intensity, scale, dimension, and the quantity of harm they do. The level of destruction wrought upon human civilization is used as a measure of a disaster's intensity. Extreme occurrences are always produced by risky environmental processes, however not all extreme events end in calamity. When they have a negative impact on human civilization, we can call them catastrophes. An very powerful tropical storm (typhoon, hurricane, or tornado) that forms in the middle of the ocean and then dissipates is just an extreme "event," but it is a "disaster" when it causes massive damage to human infrastructure and lives.[5]

Natural disasters are the most common cause of environmental devastation, and as the name implies, they are purely natural. Simply said, when people settle in areas that are prone to atural calamities, such as those caused by earthquakes or tsunamis, these occurrences have catastrophic consequences.[6-7]

AS PER THE DISASTER MANAGEMENT ACT (2005)

A catastrophe is "a sudden catastrophic occurrence that substantially disrupts the functioning of a community or society & causes human material, economic, or environmental losses that surpass the capacity of the community's or society's own resources to manage." Many catastrophic events are brought on by natural causes, but sometimes people are to blame.[8]

$$(\text{Vulnerability} + \text{Hazard}) / \text{Capacity} = \text{DISASTER}$$

The combination of risks, vulnerability, and an inability to mitigate negative risk consequences leads to catastrophe whenever a threat materializes and has an adverse effect on susceptible individuals.[9]

TYPES OF DISASTER

If we look at the main causes of environmental disasters, we can classify them into two broad categories: natural and human-caused.[10-11]

A. Catastrophic events and

B. Natural and man-made catastrophes

As a subset of natural disasters, floods and earthquakes are also recognized. -

- (a) There are three types of man-made catastrophes.
- (b) Natural catastrophes caused by humans include landslides, rapid soil erosion, and
- (c) Biological disasters, such as the unexpected increase or decrease in population of species in a given habitat due to increased nutrient levels or the presence of toxic chemical elements, and (c) chemical and nuclear disasters, such as the release of toxic chemicals into the air, nuclear explosions, and the leakage of radioactive elements.[12]

MATERIAL & METHOD

The research methodology provides a comprehensive overview of the study's methodology, outlining the specific methods, approaches, and designs used throughout the study and explaining why I opted for those particular ones by outlining the merits and drawbacks of each one, bearing in mind how they would be actually implemented in our study. To begin, the approach used must be optimal for completing the study's goals. Second, the methods utilized in this study should be reproducible in future studies.

The researcher employed a sampling strategy to collect data for the theoretical and practical components of the study. For the quantitative portion of the study, the researcher collects data from 200 individuals across two questionnaires. Residents of Banaras were asked to take out a survey on their experiences with and opinions on the city's disaster management agencies. Government personnel from the many stakeholders in disaster management in the Banaras district filled out the second questionnaire. For the qualitative portion of the research, participants filled out questionnaires. Books, papers, journals, the internet, and other secondary sources were also utilised for this research.

RESULT

Q.1: When it comes to natural disasters like earthquakes, tornadoes, cyclones, winter storms, fires, floods, and so on, how well do you believe your family is prepared?

Ans.-

Yes	Not at all	No	Don't know	To some extent
49%	5%	18%	8%	28%

Explanation- With this query, we hope to ascertain the general populace's level of preparedness for natural disasters. We found that the mean score was 2.488372 out of a possible 3 points, placing it well below the median. This is reflected in a standard deviation of 0.94239.

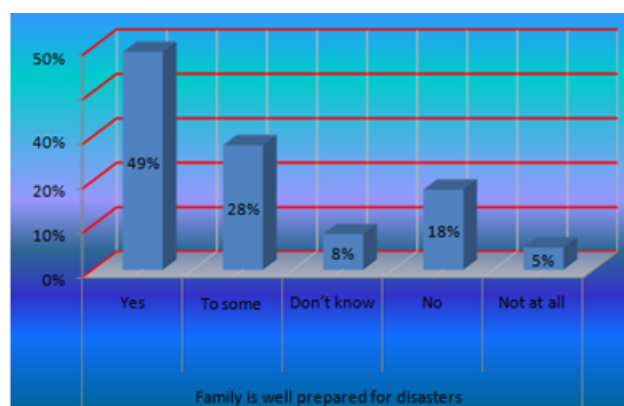


Figure 1. In the event of a disaster, the family is ready.

Researchers wanted to assess people's preparedness for natural disasters by polling their knowledge on the topic. They sent out questionnaires to 87 people, asking whether or not they believed their own families

were secure from harm.

- (1) Almost half of those surveyed said they feel protected because of the protections put in place by their government.
- (2) Almost a third of responders have said they are prepared to weather the storms nonetheless.
- (3) Three percent of respondents said they have no idea how to handle such situations.
- (4) Fourteen percent of respondents said they may not be able to handle such crises effectively.
- (5) Five percent of respondents said they are not prepared for crises right now.

Q.2 : Do you believe that the community you live in is relatively well- prepared for a disaster ?

Ans.-

Yes	No	To some extent	Not at all	Don't know
52%	18%	18%	6%	13%

Explanation- With this inquiry, we hope to gauge how prepared the general populace is to deal with natural catastrophes. We determined an average status by finding that the mean score range was 2.604651. Also, the standard deviation, which turns out to be 1.009124, is calculated.

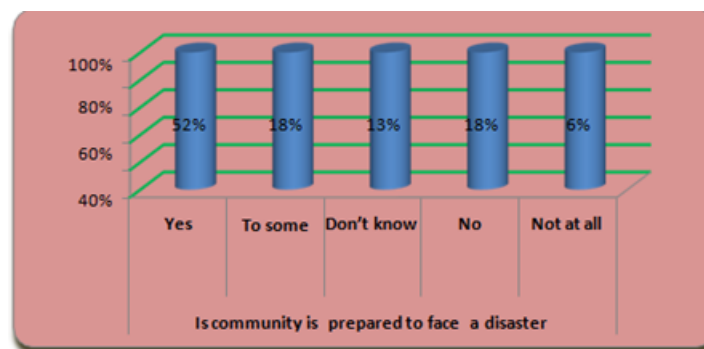


Figure 2. Is the neighborhood ready for a catastrophe?

Researchers asked 87 people who said their families were largely safe from disasters what their degree of disaster preparedness was using a questionnaire.

- (1) In the first place, almost half of respondents (52%) say they feel secure because of government and religious/NGO support.
- (2) Eighteen percent of respondents said they were certain they could cope with the calamities nonetheless.
- (3) The third paragraph reveals that 13% of respondents admit they have no idea how to deal with such

situations in the event that they arise.

(4) Only 18% of those who are asked say they would be able to handle these situations well should they arise.

(5) six percent of respondents said they are not prepared to deal with a calamity.

Q.3: Do you and your loved ones have a plan in place for when a disaster strikes??

Ans:-

Yes	No	To some extent	Not at all	Don't know
41%	16%	22%	9%	12%

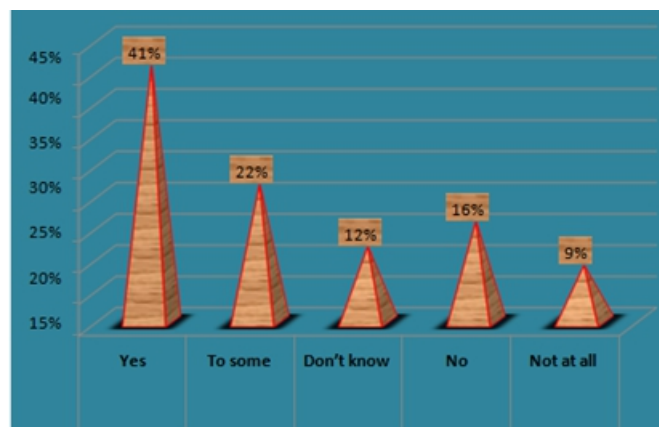


Figure 3. Met with Family to Go Over Emergency Plans

Explanation- Inquiring into how well informed local families are on catastrophe preparedness is the goal of this inquiry. The mean score was 2.348837 out of a possible 4.0, putting it in the lower-than-average category. Furthermore, we calculated the standard deviation to be 1.165862.

Researchers asked 87 people who said their families were largely safe from disasters what their degree of disaster preparedness was using a questionnaire.

- (1) Forty-one percent of respondents say they feel secure, mostly because of the efforts of government institutions, religious groups, and non-governmental organizations (NGOs).
- (2) Twenty-two percent of respondents said they are certain they can cope with the upcoming crises anyway.
- (3) Three-and-a-half percent of respondents admit they have no idea what to do in an emergency.
- (4) Only 12% of respondents said they were confident in their ability to handle these types of crises.
- (5) Fifteen percent of respondents said they are not prepared to deal with a catastrophic event.

Q.4: Do all the people in your household know what to do and who to call if something like this were to happen?

Ans:-

Yes	No	To some extent	Not at all	Don't know
46%	5%	27%	4%	18%

Explanation- The purpose of this inquiry is to ascertain the degree to which family members are informed about community emergencies. Based on our research, we know that its status is below-average, as its mean is 2.325581 in the mean score range. Differences between means are 1.212114.

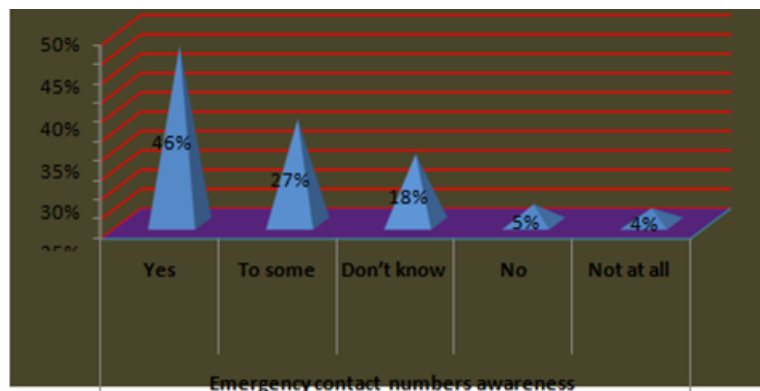


Figure 4. Knowledge of How to Call for Help

Researchers asked 87 people who said their families were largely safe from disasters what their degree of disaster preparedness was using a questionnaire.

- (1) A plurality of respondents (46%) report being familiar with the contact information for government agencies and non-governmental organizations (NGOs) that may assist in times of crisis.
- (2) Almost a third of the sample (27% of all responses) believes they will use these emergency contact methods anyhow.
- (3) 18% of respondents say they are unaware of these emergency contact details.
- (4) 4.5% of respondents say they don't have any of these emergency contacts.
- (5) Only .04% of respondents say they are familiar with these emergency contacts.

Q.5: Does everyone in your family know where the family bible is kept?

Ans:-

Yes	No	To some extent	Not at all	Don't know
53%	15%	17%	07%	08%

Explanation- By asking this, we hope to learn how well family members are familiar with crucial emergency paperwork. The mean score was 1.883721 out of a possible 4.0, placing it below the median. The standard deviation was also determined to be 1.010749.

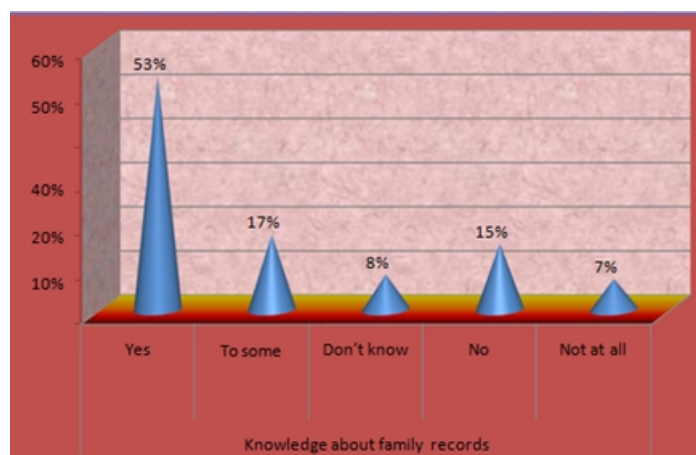


Figure 5. Make Sure You Know Where Your Family History Is

Researchers asked 87 people who said their families were largely safe from disasters what their degree of disaster preparedness was using a questionnaire.

- (1) Over half of those surveyed (53%) said they had access to their family tree.
- (2) Seventeen percent of respondents said they will eventually locate family history information.
- (3) Not even 3% of people can locate their vital records.
- (4) Fourteen percent of those polled said they didn't have any idea their families kept records like this.
- (5) seven percent of those polled claim to have no idea what these emergency numbers are for.

Q.6: In the event of a natural disaster, do you know what procedures will be followed at your place of work, your children's school, or other such institutions?

Ans :-

Yes	No	To some extent	Not at all	Don't know
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23%	23%	14%	19%	21%
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Explanation By asking this, we hope to gauge how well the community as a whole is prepared for emergencies. Based on our research, we determined that the mean score range was 2.00, indicating a subpar performance. Similarly, we calculated that the standard deviation was 0.982194.

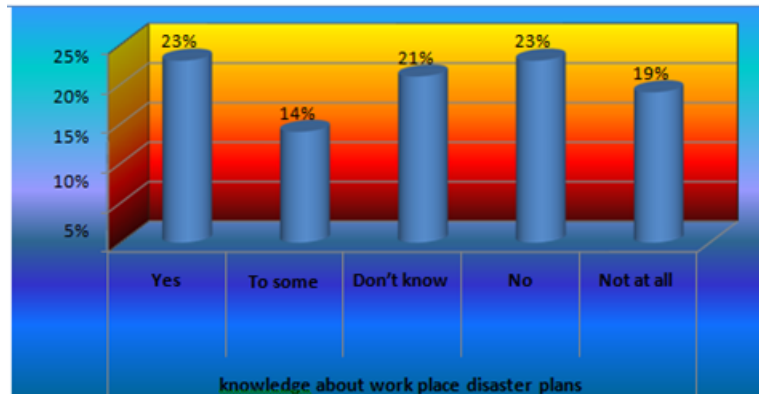


Figure 6. Acquaintance with contingency plans

Researchers asked 87 people who said their families were largely safe from disasters what their degree of disaster preparedness was using a questionnaire.

- (1) Only 23% of those surveyed reported being familiar with emergency procedures at their place of employment or their children's school.
- (2) Fourteen percent of respondents said they will learn about the plans nonetheless.
- (3) In a recent survey, 21% of participants said they lacked awareness of catastrophe preparation strategies.
- (4) As many as 23% of those polled said they were unaware of the plans.
- (5) Five percent of respondents say they are unaware of the existence of these contingency plans.

CONCLUSION

We have taken the first, crucial steps toward reducing our susceptibility by instituting preventative and mitigating measures and organizing ourselves for a swift, competent reaction. We are inching toward sustainable growth with a large awareness creation effort, the development of capacities, and the institutionalization of the whole system via a technological legal and financial infrastructure. Our goal for the year 2020 is to make India a more secure and peaceful place to live by concerted action, a blending of national resources, and citizen involvement. In the next two decades, what seems impossible now will become a reality. This is our end aim, and we want to pursue it with the fervor of a missionary. The road ahead may seem daunting now, but as we continue to work together, we will find that it becomes much less so.

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