

BLIND FOLD LEGAL JOURNAL

VOLUME-1 ISSUE-4 {March 2022-May 2022}

E-Mail:- blindfoldjournal@gmail.com

Website: - www.blindfoldjournal.com

A STUDY ON SEVERITY OF THE INCREASED DISASTER DURING THE PAST DECADES

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Abstract:

The impact of the natural disaster and the manmade disaster have become more impact in the society not only in the particular region but also in the many of the places and also this not only affects the society but also takes away the life of many people in the region and also some disaster remains long last in the society and makes more impacts in the future generation. The impact affects the future generation with many sorts of diseases and also sometimes it takes away the life of many people. For this the government has taken many steps but the following procedure has included the defect so that the effect remains for the more in the society. The research method followed here is empirical research. The sample size is 208 and the samples were selected through simple random sampling technique. The research problem was identified through the review of literature. Descriptive research design was adopted for the study. The sample frame taken by the researcher in public under the limit of the corporation and municipalities. Data collection included both primary and secondary resources. Primary data was collected through questionnaires. Secondary sources included published information from journals, reports and newsletters. The analysis was done by using the SPSS 21 version. The independent variable is Age, gender, place of residence, educational qualification. The dependent variable in which among the age group people are more aware about unemployment and also many of the pros and cons they have been faced by the people in the society. Data was analysed using graphical representation through bar charts. Comparisons were done across the demographic variables using these bar charts and the mean value of the ratings received.

Keywords: Government, Lives of people, Society, Disaster, Impacts.

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Introduction:

Disaster is the result of an immediate situation or the result of a long set process which disrupts normal human life in its established social, traditional and economic system. This is due to the destruction of environment which is caused by extraordinary natural destruction phenomena or human-induced hazards resulting in human hardship and suffering beyond recovery unless external aid is brought in 2004 Indian Ocean TsunamiThe Indian Ocean earthquake and Tsunami occurred in 2004 at the west coast of Sumatra, killing over 230,000 people in fourteen countries. Indian Ocean Tsunami was one of the deadliest natural disasters in history of India. The term "disaster" owes its origin to the French word "Desastre" which is the combination of the article - 'des' and 'astre' meaning 'star1. In earlier days a disaster was considered to be due to some unfavorable star. Nowadays, the term "Disaster" is commonly used to denote any odd event, be natural or manmade, which brings about immense misery to a region so that it becomes difficult to cope with the situation through local resources. The dictionary meaning of Disaster is a sudden or great misfortune, calamity, a sudden calamitous event producing great material damage, loss and distress. India is very big geographical terrain with several kind of hazards like cyclone in coastal areas, hazards like landslides, avalanche, heavy snowfalls, flash flood in the mountain areas, hazards like fire, flood, drought, earthquakes etc across India. In 2005 government of India passed the Disaster management act to deal with these disasters. There are three apex bodies at the national level: NDMA (National Disaster Management Authority), NDRF (National Disaster Response Force) and NIDM (National Institute of Disaster Management). NDMA issued various guidelines, plans and documents with proactive approach to minimise the impacts of the disasters. According to DM act 2005 there should be State Disaster Management Authorities in every State and District Disaster Management Authority in every district. Several states are currently having functional SDMAs and DDMAs. State level and district level disaster management plans are there in place. These measures are taken at policy level. But unfortunately these are not very much effective on ground as not implemented properly, so we have to go a long way to make things working on ground. On the other hand, NDRF is the responsible for post disaster response activists which are

doing pretty well. NDRF located strategically at 12 places across India so it can cover maximum place to respond in minimum time according to the sensitivity of zone and hazards. Now there are several State Disaster Response Force (SDRF) are in process. Poverty Population growth. There is an obvious connection between the increase in losses from a disaster and the increase in population. Rapid urbanization, Transitions in cultural practices, Environmental degradation.

ISSN: 2583-2751

Technological, operational/ managerial, economic, social, legal and environmental factors seem to have direct influence over the disaster management cycle, while the influence of institutional and political factors seemed indirect and it is through other factors identified. Disaster risk trends are a measure of the sustainability of development. Trend analysis helps us to understand patterns of disaster risk and, consequently, whether disaster risk reduction is being effective. Using disaster trends to inform policy and practice requires a good understanding of the limits of these trends. The pattern the trend displays (rising, falling or fluctuating) is only as real as the amount, quality and reliability of the data used. For instance, patterns of disaster losses may actually reflect a number of factors unrelated to disaster risk, including the time period over which they are measured and improvements in disaster risk reporting. In order to account for these problems, analysts determine the statistical significance of the trend. There has been a rise in natural disasters in recent years that have put under pressure both wealthy and poorer nations, resulting in humanitarian crises of immense proportions. These incidents have been a serious beginning to international bodies. The adoption of the International Strategy for Disaster Reduction (ISDR) 2000, the World Conference on Disaster Reduction 2005, the Hyogo Framework for Action 2005-2015, and the recent 2010-2011 World Disaster Reduction Campaign are efforts in that direction. From the above paper, it will be difficult to say that the developing nations are far behind the lag. We have to adapt the new strategies and policies so that we can face the problems more confidently and positively. Natural disaster is a threat which cannot be prevented, but measures can be taken to do away with or reduce the possibility of its impact on the society, economy and environment. Loss of lives cannot be recovered but apart from these human losses other losses can be secured. The severity of the disaster was beyond imagination which caused such big damage of valuable lives and properties. community should be more conscious about disaster prevention culture and mitigation. They should be involved in post disaster recovery and reconstruction

process for facing the future disasters and mitigate it. Japan Government's initiative and commitment to mobilize local and international community to minimize the damage and loss from Disaster is highly commendable. Japanese experience of disaster management and mitigation and community involvement in the Great Hanshin-Awaji Earthquake had been proven most successful. Nowadays, India is also facing such consequences very frequently. Japanese lessons can be helpful to India to overcome this challenging and vulnerable situation. In this paper we examined the major disaster phenomenon in Japan and India, a comparative study of disaster management systems of Japan and India, techniques of community mobilization in Japan for successful implementation of disaster preparedness planning and recovery from post disaster situations. We would like to replicate some experience; we gained from Japan to our country and recommend some suggestions on effective community mobilization in India.

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Objectives:

- To know about the rise in the natural disaster when compared to that of that of the last year's occurrence.
- To study that the disasters are occurred by only the natural ways or any other causes.
- To analyse about the human participation should be involved in protecting the disaster occurrence in which the more involvement.
- To know about the factor which causes the natural disaster and by which factor it arises more and the damages are more.

Review of literature:

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• 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 with the new challenges of today's shifting humanitarian landscape, they need to embrace and use new technologies, be more imaginative in their choice of partners, and make more collaboration offered by non-traditional humanitarian actors. (Das and Dasgupta) • The World Risk Report examines the risk at the global level and draws conclusions for future actions in assistance, policy and reporting with focuses on governance and society. (Paik)

- Interim Guide to HAP Standard in Accountability and Quality Management describes how
 this guide can be used by senior managers, programme staff, facilitators and trainers to
 build the awareness and understanding of, and strengthen the implementation of quality
 and accountability in relief and development work. (Maheshwari)
- 'A Whole Community Approach to Emergency Management, Principles, Themes and Pathways for Action' describes that the process of development in many countries causes huge positive and negative impacts on disaster risks. The impact of the similar natural hazards of the same gravity; flood to drought widely differs country to country.(Sharma)
- The Chairman, National Commission on Children and Disasters, in his report identifies gaps in the nation's disaster preparedness, response, and recovery for children and makes recommendations to close the gaps.(Kalsi)
- Proudlock, members of the Study Advisory group of the 'Active Learning Network for Accountability and Performance in Humanitarian Action, describes in their book, 'Improving Humanitarian Impact Assessment: Bridging Theory & Practice', how the thrust is shifted to analyse the impact of humanitarian assistance. Authors described the evidencebased way which shows that the assistance finally affects the livelihoods and lives of the beneficiaries.(Lekurwale)
- 'A Global Report' on 'Reducing Disaster Risk, A Challenge for Development', mentioned that the process of development in many countries causes huge positive and negative impacts on disaster risks. The impact of the similar natural hazards of the same gravity; flood to drought widely differs country to country. (Srivastava and Gupta)
- 'Leading Effectively in Humanitarian Operations' states that leadership has long been an
 important topic in the commercial, political and military areas. There is a widespread
 concern that the international humanitarian action is underperforming due to lack of
 effective leadership, described as a leadership void. (Slettebak)
- '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 comprehensive and convenient form. The publication consists of a list of the major actions to be executed for responding to natural disasters. Guidelines with necessary measures required to be taken for preparedness, response and relief required are subscribed. (Pande and Pande)

- 'Establishing Community Based Early Warning System, that the impact of hazards greatly varies person to person depending on one's vulnerability. The most vulnerable are those who have low capacity for resilience. They are the poor, those residing in fragile topography, dilapidated and unsafe structured houses, and having very limited resources. (Ranke)
- 'Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981 -2002, describes the impact of catastrophic events on the gender gap in life expectancy. In a sample of up to 141 countries the authors studied the socioeconomic status of women and of disaster strength and analysed its impact on the gender gap in life expectancy.(Haran)
- 'Crisis in a New World Order, narrates the latest thinking of Oxfam on the future of the humanitarian system. The report states that the role of it is important that those affected by the crisis need security, peace, justice, good governance and development. The networking of UN & NGO to complement and support the effort of every human actor to uphold humanitarian principle is very essential. Measuring such contribution is equally vital. (Kumar)
- Mark Goldstein (2012), Director, United States GAO, narrates in his report published by the United States Government Accountability Office, that despite the interoperability limitations, traditional Land Mobile Radio public safety communications are most vital to meet the public safety requirements. (LMR) possesses mission critical voice capabilities. The systems should continue to broadcast narratives for public safety until the broadband system is fully developed.(Reshma et al.)
- Executive Director, UNICEF reflects in his report on 'State of the World's Children' published by the United Nations publication, that today millions of children live in urban slums without access to basic services. In cities and towns hundreds of millions of children

all over the world are marginalized and are at risk. They live near a railroad track. They are most vulnerable to violence, injuries, illness, deaths and exploitation. (Praveen et al.)

- 'Health Response to Haiti in Earthquake' describe the lessons learned for the next massive sudden-onset disaster for improving the health response. The "lessons learned tend to focus on resolving what did not work so well. The ministry of health must be provided with the basic information about the capacity of foreign medical teams and field hospitals prior to the occurrence of a disaster. There are many considerable achievements of the humanitarian community. In Haiti, many lives were saved, people were fed and sheltered, and they received much better care than before. The disaster brought significant positive changes in mentality, behavior, and attitude in future sudden-onset disasters, if massive earthquakes will occur again and some will devastate metropolitan areas or even the capital city, as was the case in Haiti. (Karmegam and Mappillairaju)
- 'Disaster on Green Ramp: The Army's Response, Washington DC' describes the story of the Army's response. The army responded to disaster at the Pope Air Force Base on Green Ramp. The emergency exercise exhibiting teamwork, training and professionalism turned the tragic story into triumphant. (Azam et al.)
- 'United Nations World Disaster Reduction Campaign 2008-2009', reveals that she described that aftermath of emergencies and disasters, the health facilities and services should ensure to perform three vital functions; to protect the lives of the patients, health workers and the structural resiliency of health facilities and services. She stated that this was the barometer of the success of the effective disaster preparedness of the health services. She traced on the accelerated improvement in the ability of health workers to react to and manage emergency situations. (Vyas and Bhattacharya)
- 'Cosmopolitan Society, Human Safety and Rights in Plural and Peaceful Societies" at the Symposium at Evora University. HH reflected on the rapid proliferation of cosmopolitan populations. HH explained the importance of human safety and rights in plural and peaceful societies. HH clarified that the challenge of democratic renewal has been vastly amalgamated by another development which is also the cosmopolitan society; HH reiterated that the world is becoming more pluralist. HH cautioned that the cosmopolitan

ethic in its true spirit has to match with the social pattern in the spirit of cosmopolitan.(Rechsteiner et al.)

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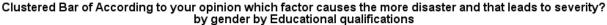
- The proceedings of the international workshop on Risk to Resilience, Strategic Tools for Disaster Risk Reduction, highlighted the different methodologies presented for evaluating DRR strategies for hydro-meteorological hazards, including those likely to emerge as a consequence of climate change, and to mainstream these in the policy process and the frameworks on other hazards were also highlighted. (Tobita et al.)
- 'Sphere Handbook' highlights the Humanitarian Charter and Minimum Standards in Humanitarian Response, shares the principles and a set of universal minimum standards in core areas of humanitarian response which describes core principles that govern humanitarian action, and asserts the right of populations to life with dignity, protection and assistance. (Roy)

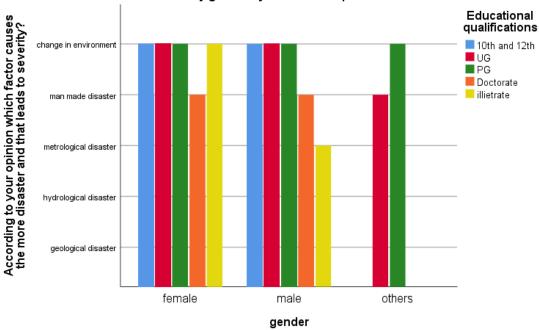
Methodology:

The research method followed here is empirical research. The sample size is 208 and the samples were selected through simple random sampling technique. The research problem was identified through the review of literature. Descriptive research design was adopted for the study. The sample frame taken by the researcher in public under the limit of the corporation and municipalities. Data collection included both primary and secondary resources. Primary data was collected through questionnaires. Secondary sources included published information from journals, reports and newsletters. The analysis was done by using the SPSS 21 version. The independent variable is Age, gender, place of residence, educational qualification. The dependent variable in which among the age group people are more aware about unemployment and also many of the pros and cons they have been faced by the people in the society. Data was analysed using graphical representation through bar charts. Comparisons were done across the demographic variables using these bar charts and the mean value of the ratings received.

Analysis:

Graph 1.1:

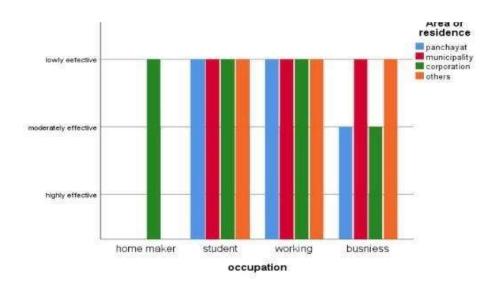




Legend:

In graph 1.1., The comparison between the gender and the educational qualification in which they have given the opinion on factors that causes more severity which causes the disaster.

Graph 1.2:

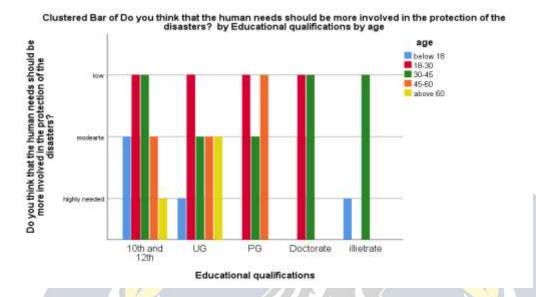


Legend:

In graph 1.2., the comparison between the occupation and area of residence in which they have given the opinion on factors that causes more severity which causes the disaster.

Graph 1.3:

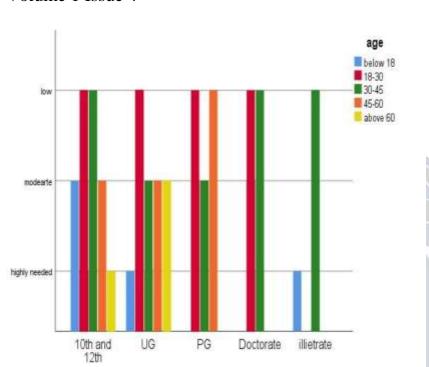
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Legend:

In graph 1.3., the comparison has been made between the educational qualification and age on which they have given their opinion on human needs to be involved in the protection of the disasters.

Graph 1.4:



Educational qualifications

Legend:

In graph 1.4., the comparison has been made between the educational qualification and age on which they have given their opinion on human needs to be involved in the protection of the disasters.

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Result:

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In graph 1.1., The comparison between the gender and the educational qualification in which they have given the opinion on factors that causes more severity which causes the disaster in which the people have given the opinion on their basis in which people of gender female with the educational qualification of 10th&12th, UG, PG have rated to the same extend in which they have given the opinion for the changes in the environment is the cause of the disaster and also in which the change in the environment have rated to the extent of 60-70%, and the cause of the man made disaster as 20-30%, and the cause of disaster due to meteorological disaster is of 2-5%.

In the graph 1.2., the comparison has been made between the occupation and the area of the residence on which the domestic violence have been increased in pandemic period in which that the person in the area of the residence people with the occupation of the student, working of the panchayat, municipalities and the corporation and the person in the other areas have responded to the same extent in which they have rated to the same percent and the lowly effective with the rating of 85-90% and the moderate effective is of with the percent of 5-10%.

In graph 1.3, the comparison has been made between the educational qualification and age on which they have given their opinion on human needs to be involved in the protection of the disasters in which the people with the educational qualification of with all the ages of which from 18 to above 60 the people have given the response for the human needs to be involved in the disaster in which that is for high they have rated to the percent of 40-50%, and for moderate they have rated to the percent of 30-40%, and for low they have rated to the percent of 10-20%.

In graph 1.4., the comparison has been made between the educational qualification and the age in which the government took an effective measure to control of domestic violence the people with the age of below 18 and 18-30 and with the educational qualification of 10 and 12th have responded that all of these have been the major factor for the unemployment in which they have think that the people in that are the young generation and they might know about the rate of the unemployment and the age of 30-45 and the above 60 have responded that the population and the age of the 45-60 have responded for the educational qualification is the major factor for the unemployment with the all of these they have responded for the all of these with the 40-50%, and the population of 20-30%, and the educational qualification with the 10-20%.

Discussion:

In graph 1.1., The comparison between the gender and the educational qualification in which they

have given the opinion on factors that causes more severity which causes the disaster in which the people have given the opinion on their basis in which people of gender female with the educational qualification of 10th&12th, UG, PG have rated to the same extend in which they think that the cause of the change in the environment is the more cause for the severity of the natural disaster due to the man made things there occurs more disaster in the society and by the gender of male with the educational qualification of 10th and 12th, UG, PG, have rated to the same extent as of the cause was due to the change in the environment, and the gender of male with the doctorate and the others with the UG have rated to the same extent in which they were some of the research and known about the content about the cause of the disaster that causes the more disaster and its causes for the severity and the gender of male with the educational qualification of illiterate have rated to the meteorological disaster because they think that the person in that position may think that the person may have the different opinion for the disaster and the other causes have not been chosen by the person.

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In graph 1.2., The comparison between the occupation and area of residence in which they have given the opinion on factors that causes more severity which causes the disaster in which that the person in the area of the residence people with the occupation of the student, working of the panchayat, municipalities and the corporation and the person in the other areas have responded to the same extent which they think that the cause of the change in the environment is the more cause for the severity of the natural disaster due to the man made things there occurs more disaster in the society and the people of the corporation have rated to the moderate because they might have been more affected by the domestic violence or the laws are not effective as they feels and the municipality and the other have rated to the higher extent for the lowly effective and they think that the person in that position may think that the person may have the different opinion for the disaster and the other causes have not been chosen by the person.

In graph 1.3., it has been that the comparison has been made between the educational qualification and age on which they have given their opinion on human needs to be involved in the protection of the disasters in which the people with the educational qualification of 10th and 12th of age below 18 for the moderate in which they think that the human involvement need to be made to reduce the disaster and the age of 18-30, 30-45 they have given the opinion for the low because

they think that the people involvement if there then the occurrence of the destroying will be less so that the severity will be reduced for the society, and the age of 45-60 with the educational qualification of 10th and 12th and UG have rated to the same extend because they think that the involvement need to be made, and the cause for the rating of the moderate with the educational qualification of UG, PG, higher secondary because they think that the people involvement can be of the middle level rather than that the government initiative is needed, and the high level the educational qualification with the age of above 60 and below 18 have rated to the higher extent rather than the human involvement other mode of involvement need to be made as by their opinion.

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In graph 1.4., the comparison has been made between the educational qualification and age on which they have given their opinion on human needs to be involved in the protection of the disasters in which the government took an effective measure to control of domestic violence for the increase the people with the age of below 18 and 18-30 and with the educational qualification of 10 and 12th have responded that all of these have been the major factor for the unemployment in which they have think that the people in that are the young generation and they might know about the rate of the violence and the age of 30-45 and the above 60 have responded that the population and the age of the 45-60 have responded for the educational qualification is the major factor for the violence and thus they have responded for the think because they have the thought the people with the young generation have known about the major factor that affecting the violence rate, and the people of the age below 18,18-30,30-45 of the education UG have responded for the all of these in which they think that this is the factor for the violence and the age of 45-60 and above 60 have responded for the population of the major factor for the violence and they think that the people have much more experienced in the field so that they have responded for the term population, and the education of PG with the age of 18-30 and 30-45 have responded for all of these and the age of 45-60 have rated to the educational qualification is the factor for the violence they think that due to the education the rate of the violence ave been increased, and the people with the education of the doctorate with the age of 18-30,30-45 have responded that the population is the major factor for the violence in which they have made many research so that they feel that the violence the population is the major factor, and the age of 30-45 with the duration of the illiterate have rated to the population as they feel that due to the overpopulation the violence is simultaneously increasing and also non effectiveness of the government steps.

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Conclusion:

From the analysis and the survey done it has been analysed that the people living in poverty cannot afford adequate housing or infrastructure. They are unable to acquire resources needed before and after a disaster strikes. Education increases awareness about avoiding or reducing the impact of disasters. A better-educated population will have more professionals trained to prepare for catastrophic natural events. Governments can set policies and establish infrastructure to reduce vulnerability to hazards. Some governments have more resources available to dedicate to disaster risk reduction. Technology allows us to forecast weather, significantly reducing vulnerability. Children and the elderly are more vulnerable because they have less physical strength and weaker immune systems. Children and the elderly are more dependent on others for survival but may not have anyone to depend upon after disaster strikes. Women are more likely to be poorer and less educated than men, making them more vulnerable to hazards.

Reference:

- Azam, Md Quamar, et al. "Practicing Mass Casualty Scenarios: Experience From a Developing Level 1 Trauma Center in the Himalayan Foothills." *Disaster Medicine and Public Health Preparedness*, Apr. 2020, pp. 1–6.
- Das, Shreyasee, and Shatanjaya Dasgupta. "Marriage Market Responses in the Wake of a Natural Disaster in India." SSRN Electronic Journal, doi:10.2139/ssrn.3266117.
- Haran, Nivedita P. "Disaster Laws in India." Disaster Law, 2017, pp. 375–82, doi:10.4324/9781315102931-25.
- Kalsi, Sewa Ram. "Early Warning System for Tropical Storms in India." Early Warning

Systems for Natural Disaster Reduction, 2003, pp. 191–98, doi:10.1007/978-3-642-55903-7_25.

- Karmegam, Dhivya, and Bagavandas Mappillairaju. "Spatio-Temporal Distribution of Negative Emotions on Twitter during Floods in Chennai, India, in 2015: A Post Hoc Analysis." *International Journal of Health Geographics*, vol. 19, no. 1, May 2020, p. 19.
- Kumar, Binod. "Interrogating Disaster Law in India." *Disaster Law*, 2017, pp. 112–21, doi:10.4324/9781315102931-8.
- Lekurwale, Jayandra Dinkar. "Disaster as an Internal Security Threat to India: A
 Comparative Study of Natural and Man Made Disasters in India." SSRN Electronic

 Journal, doi:10.2139/ssrn.2704689.
- Maheshwari, B. K. "Disaster Management in India and Characterization for Geohazards."
 Geotechnics for Natural Disaster Mitigation and Management, 2020, pp. 21–32,
 doi:10.1007/978-981-13-8828-6_2.
- Paik, Saswati. "Impact of Natural Disasters on Schools in India: Current Scenario in Terms of Policies and Practices." *Disaster Risk Reduction*, 2018, pp. 295–312, doi:10.1007/978-981-10-3310-0_15.
- Pande, Ravindra K., and Rajnish Pande. "Resettlement and Rehabilitation Issues in Uttaranchal (India) with Reference to Natural Disasters." *Disaster Prevention and Management: An International Journal*, vol. 16, no. 3, 2007, pp. 361–69, doi:10.1108/09653560710758314.
- Praveen, Bushra, et al. "Analyzing Trend and Forecasting of Rainfall Changes in India
 Using Non-Parametric and Machine Learning Approaches." Scientific Reports, vol. 10,
 no. 1, June 2020, p. 10342.

Ranke, Ulrich. "Responsibility of Geoscience in Natural Disaster Risk Management."
 Natural Disaster Risk Management, 2016, pp. 449–82, doi:10.1007/978-3-319-20675-2_10.

- Rechsteiner, Karin, et al. "Metaphors For Trauma: A Cross-Cultural Qualitative
 Comparison in Brazil, India, Poland, and Switzerland." *Journal of Traumatic Stress*, Apr. 2020, doi:10.1002/jts.22533.
- Reshma, R., et al. "ESTIMATING THE SOIL MOISTURE INDEX USING
 NORMALIZED DIFFERENCE VEGETATION INDEX (NDVI) AND LAND
 SURFACE TEMPERATURE (LST) FOR BIDAR AND KALABURAGI DISTRICT,
 KARNATAKA." I-Manager's Journal on Civil Engineering, vol. 8, no. 2, 2018, p. 35,
 doi:10.26634/jce.8.2.14553.
- Roy, Tirthankar. Natural Disasters and Indian History: Oxford India Short Introductions.
 OUP India, 2012.
- Sharma, Vinod K. "Natural Disaster Management in India." *Indian Journal of Public Administration*, vol. 43, no. 3, 1997, pp. 764–74, doi:10.1177/0019556119970343.
- Slettebak, Rune T. "Climate Change, Natural Disasters, and Post-Disaster Unrest in India." *India Review*, vol. 12, no. 4, 2013, pp. 260–79, doi:10.1080/14736489.2013.846786.
- Srivastava, H. N., and G. D. Gupta. "Disaster Mitigation Vis-á-Vis Time of Occurrence and Magnitude of Earthquakes in India." *Natural Hazards*, vol. 31, no. 2, 2004, pp. 343–56, doi:10.1023/b:nhaz.0000023356.00213.5e.
- Tobita, Jun, et al. "Integrated Disaster Simulator Using WebGIS and Its Application to Community Disaster Mitigation Activities." *Journal of Natural Disaster Science*, vol. 30,

no. 2, 2008, pp. 71–82, doi:10.2328/jnds.30.71.

 Vyas, Swapnil S., and Bimal K. Bhattacharya. "Agricultural Drought Early Warning from Geostationary Meteorological Satellites: Concept and Demonstration over Semi-Arid Tract in India." *Environmental Monitoring and Assessment*, vol. 192, no. 5, Apr.

