Disaster Management-A necessary subsidies for every population creating disaster related awareness , safety and security for promoting sustainable development for post disaster period

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Abstract

India is among the top most countries in the world who is prone to catastrophe . India because of its geo-climatic conditions experiences more natural cataclysm in the form of cyclone , earthquake , drought and famine which has a serious effect on the lives , property and experiences a huge loss in economy and resources at times it becomes very difficult for the society to cope up with the scenario resulting in serious social , health and psychological impact which may even long lasting . Floods and cyclone not only effect the farmers but also disturb the ongoing commerce business by destroying and effecting the transport system . Poverty and natural disaster are co related and equally responsible for many hybrid disaster to take place , soil erosion , Industrial waste , pollution , environment degradation are all product of man-made disaster , as humans don't worry about the outcome when performing an activity . Disaster can be a long lasting or for a short term but effect people equally , for disaster management we need to make use of artificial intelligences and machine learning to provide safety and security to its people, make water supply chains to fight against forest fires , special policy scheme to for people post disaster effect , introduce green food store houses so that we can provide food to all during the disaster , remote mobile health centres to provide quick response and amplify artificial cloud management for safety and security .

Keywords : Disaster m geo-climatic , poverty , disaster management , artificial intelligences , machine learning

Introduction

Disaster can be delineated as a sudden event or disruption which results in humongous lost of lives , property , environment , economy and social loss , which makes it difficult for the society to cope with the situation . Disaster happens without our knowledge , it is unpredictable and can last for a shot term or a long term , can have a small effect or a huge effect on our earth . Disaster can be categories into three parts We have Natural disaster , Man-made disaster and Hybrid disaster . Natural disaster can be delineated as events over which we don't have any control and there are product of mother nature which incorporates Earthquake , floods , cyclone , drought, Extreme heat , Emergency diseases(COVID -19), Damaging wind etc . Man made disaster refers to events which are product of Human activities , Mankind lacks vision of imagination while conducting a particular activity , In the name of Industrial growth , people have actually polluted the entire environment causing air , water , noise pollution .Human cut down forest and trees for project purpose , construction of buildings , converting concrete land into a jungle where we are surrounded by building with no walking space or even parks for children to play . A huge congestion all around the city which has environment hazards . In the name of agriculture , people have kept on playing with the soil and resulted in soil erosion . Soil erosion is a product of Human activity where people didn't care about agriculture lands , lack of knowledge about the exact use of fertilisers . The biggest problem with mankind is they don't thing about the outcome or circumstances that will occur after an activity is performed .Acts of terrorism , groundwater contamination , structure failures , Fires , Hazardous material spills , Mining accidents are product of Man-made disaster Hybrid disaster is an amalgamation of natural and mankind disaster , for example soil erosion , heavy rain fall and landslide indicated that we shouldn't build buildings on land where the soil quality is poor .Construction of building on such soil will automatically led to destruction in future , People are warned before hand of a situation Clearing of Forest , Industrial waste , Excess production , health hazards are example of hybrid disaster . Natural can't be controlled but it needs to be understood in such a way that it doesn't hampers our lives by preventing an action, which calls for disaster management .Disaster Management can be delineated as the organisational and management of resources and responsibilities for dealing with all Humanitarian crisis with proper preparedness , response and recovery in order to reduce the impact of disaster on earth . Preparedness, recovery an response are the three main pillars of disaster management . How well we are prepared to handle and tackle with the upcoming catastrophe , response how well we are able to response and what are the preventive measures we have taken to control or react to the disaster and recovery , how long will it take us t recovery from the disaster , the time period. If we are prepared with the above three measure we can prevent disaster in the context of manmade disaster which are under our control .

Research Methodology

For the purpose of this exploration , I have used a amalgamation of two of the archetypical social sciences research tools application   –as they are authentic   and brilliant method to assemble statistics from multiple appellant in an methodical and convenient way . Question were asked to the parents and their children , survey , interviews –consisting of several interrogation which were dispersed among representative of each contender group .

Objective of the Research Paper

The main areas of exploration in this paper incorporates

1.To understand what is disaster , its type and forms.

2. An in depth studies on various natural and man-made disaster in India and its post effect

3.What measure has the government taken to prevent disaster and the working of the disaster management system.

4.How can we control or preventive man made disaster and re-establish our disaster management cycle

Literature Review

 Four elements of Nature that is rain , water , wind , fire and earth are significantly important and helpful in many ways and act times be source of disaster . Natural disaster loose average more than $300 billion per year , it is only for rich people , as poor people are taken into consideration here , water and climate , geological , biological , Nuclear and Industrial accidents are all aspects of disasters . With te increase in population , industrialisation , rapid urbanization and demand of resources are some of the factors which are contributing to future disaster risk , Poverty is one of the main contributor of disaster management . With 78 million population in urban India lives in slum areas , with no proper sanitation or living facilities , living near river or Industrial areas , throwing their garbage and other domestic waste into the river making it polluted , Industrial waste being thrown into the oceans and river , producing huge amount of greenhouses into the atmosphere , there is no limit or restraint on the Industries in the discharge of waste into the air and river ,. Deforestation , soil erosion , overgrazing results in environment degradation and future becomes a contribute to disaster activities like floods and drought , During the disaster it is the women who are affected the most , as they have less access to resources and economical. During the time of disaster men know where and how to save themselves , women stay at home and they don't know how to react or response to a disaster , we common among the poor , Vulnerable, disadvantages and poor suffer the most after a disaster .as they live in fragile housing and vulnerable areas with very less recovery and reconstruct support , Disaster results in serious impact on economic , social and health aspects of life . COVID-19 is the best example of it . Pandemic , has caused seriously economical , social downfall and they is not time limit within which the recovery is possible , which has made million of people unemployed , social impact which has resulted in domestic violence , alcohol misuse, chronic diseases , increase mental health issue which the society is unable to cope with .Disaster further effects the infrastructure of the community that all the other funds required for different upcoming projects are stopped and then funds are used for reconstruction of land and property which has been lost in the disaster , people are effected physically and mentally after the disaster, some effects are temporary and other last for lifelong. Health issues caused by disaster are directly linked with social and economical effects of any disaster , Suppose a bridge falls it will have social , economic and health impacts all together , people injured themselves , funds are required for the reconstruction and the society has to suffer and adopt to changes till the reconstruction is completed .

Findings

India's 68% of the land is inclined to drought , 12% to floods , 60% to earthquake and 8% to cyclones . India is one of the most disaster vulnerable countries affected more than 50 million people and 85% of land. India has examined twelve famines during the period of 1765-1858. In 1943 famine which occurred in Bengal resulted in the death of 1.5 million people out of starvation and diseases , followed by severe drought in 1965 and 1966 . India has experienced seven worst natural disaster which resulted in huge lost of lives which incorporates Kashmir floods of 2014 , Uttarakhand Flash Floods, 2013 , Bihar Flood disaster , 2007 which resulted in the death 1287 people and thousand of livestock lost their life ,

followed by the Indian Ocean Tsunami, 2004 which resulted in the death of 2.30 lakh people which affected 12 countries including India .India's geo-climatic and high socio-economic vulnerability to calamities are responsible for amplifying natural disasters in India . It effects the whole country and a few states in particular . India is prone to floods , cyclones , drought , landslides , heat and cold waves and earthquakes . According to a report by Global Climate Risk Index 2019 , due to extreme weather –related changes , India is considered as the 14th most vulnerable country in the world . In 2017 , India lost 2, 736 lives due to disaster , which is followed by high lost in economy . From 1970-2009 , India experienced 371 Natural disaster as a result 1,51,000 death and 1.86 billions had been effected . Floods are experienced at a high rate in India , effecting crop production and livelihood . In Chhattisgarh due to lighting from 1969 to 2016 , 90 people were killed on an average , per 10 million population followed by Madhya Pradesh and Odisha . Manipur was least effected.
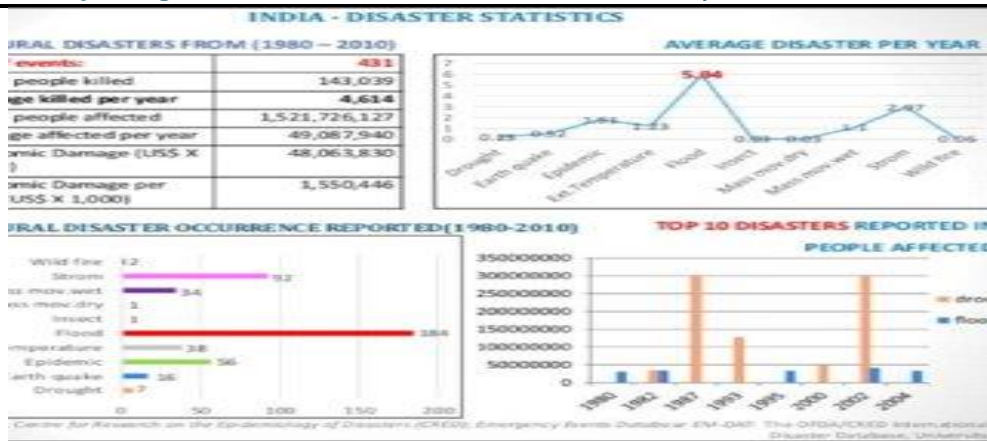

Heat strokes are becoming very common in India , which has resulted in death of many people , 20% in Punjab , 14% in Tripura , followed by Jharkhand 13% , Andhra Pradesh 13% , Odisha 12 % , with Uttaranchal being least effected . Increase in Temperature and Humidity across the states are responsible for heat stroke and lighting , on the other hand Northern and central India are prone to cold waves while coastal areas like West Bengal, Andhra Pradesh , Gujarat and Odisha are victims of cyclone and Hilly areas are inclined to landslides . Natural disaster has cost India $80 billion in the past 20 years .

There has been more than 200 natural disasters in 2020 , with Cyclone Amphan being the costliest natural disaster resulting in $15 billion economic loss , effecting the Bay of Bengal –India and Bangladesh. This was the third most dangerous storm the region experienced since 1999 . These are example of natural disaster which India has experienced which were not under the control of Humans and there was no early preventive measures taken even when few disasters were predicted.
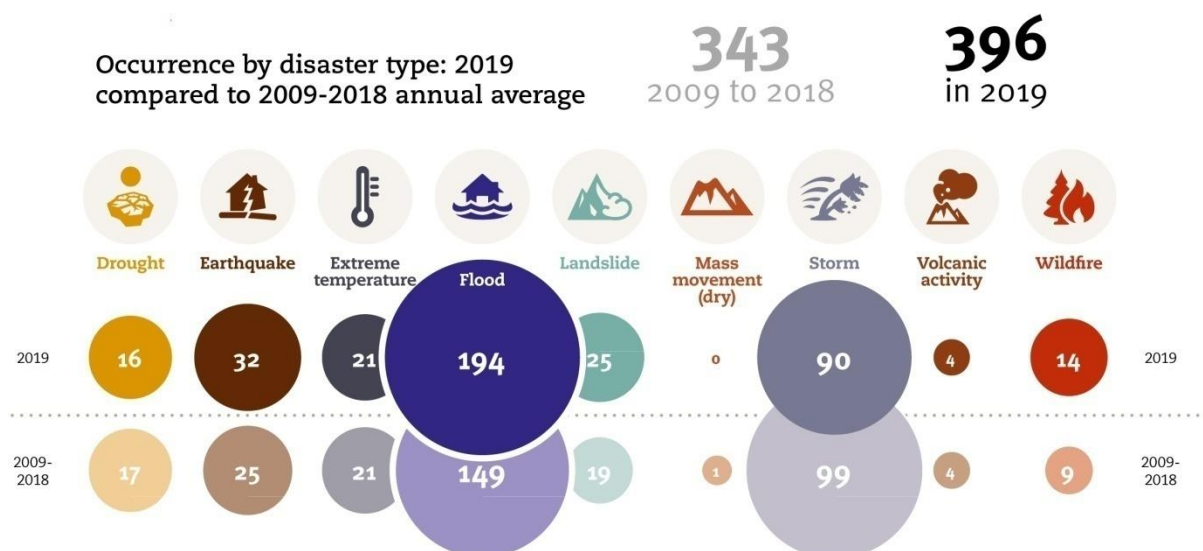
INDIA - DISASTER STATISTICS

The Vizag gas leak is Visakhapatam , Andhra Pradesh is the most recent man made disaster of 2020 , which is similar to the Bhopal tragedy , the world's worst and major industrial disaster . AMRI Hospital Fire in Kolkata, 2011 , Girish Park Kolkata , Flyover collapse which killed 18 people to death , with 78 injured which resulted in huge lost of life and economic , Lalita Park Building 2010 in West Delhi .

Every disaster be it man made or natural has a serious effect on the lives of people for instance earthquake is the most destructive form of natural disaster which changes the picture of a state , breaking down of buildings , causing death and serious injury to humans a huge amount of fund is required for the reconstruction . Tsunami for instance caused flood in low lying coastal areas which generally effect human settlement , causing damage to pipeline of drinking water and even agricultural land may render unfit due to salt water from the sea making land unfit for crop production .

Floods ruin the entire commercial trading due to description in transport and communication facilities resulting in economy loss with massive loss in lives and property as experienced in Afro-Asian countries during flood very year . Floods also make the water contaminated for drinking and is responsible for the spread of number of water borne disease, already the world is running shortage of water and India tops the list in water crisis. Drought results in loss of agriculture –shortage of water from rainfall results in major impact on agriculture with increased intensity followed by land degradation , fall in investment capacity of famers , with India being dependent on monsoon for agriculture , droughts has resulted in increase suicide death among the famers where they are living below poverty line .

Cyclone has a serious effect on the coastal areas with strong wind and heavy rainfall , Heavy rain and strong wind disrupts road and rail transport facilities by flood water , uprooted trees and electric polls, a strong wind in cyclone generates surges in sea water , there is heavy loss of human lives and livestock due to strong wind .

Occurrence by disaster type: 2019 compared to 2009-2018 annual average — 343 2009 to 2018 — 396 in 2019

Social impact of a disaster is detected at the community level , how the society response it , the outgoing disaster COVID-19 sets an example of rapid social changes having , with complete lockdown all over the world , with people loosing their jobs or doing work for home , are unable to adopt to the changes which is resulting in mental illness , physiological issues , increase in domestic violence ,double the cases have been reported in just two months under The National Crime records Bureau COVID-19 has resulted in death of million of people across the world. The disaster causes serious negative psychological effect such as fatigue , gastrointestinal upset and ties as well as cognitive signs such as confusion , impaired concentration and attention , and also includes emotional signs such as anxiety depression and grief . Disaster makes lives very difficult for the refuges and migrant workers , during the time of disaster or after its effect , they don't have place to live or cant afford to return to their homeland , we have seen this during the COVID-19 situation with the sudden lockdown people had to travel kms to reach their home , walking for days after days and many people die in between with no access to food or water .

There is one National Disaster Management authority at the central and one state disaster Management authority at the state level are the two Institutions formed to make policies and adopt preventive measures be prepared for the upcoming disaster, Man made disaster needs to be minimised which includes pollution , industrial waste , soil erosion , providing better knowledge and educational training about disaster management , Poverty and inequality are equally responsible for disaster , rapid urbanizations , increase emission of carbon dioxide resulting in global warning , constant climate change issues , unlimited use of natural resources , cutting down of forests , hampering the biodiversity are all product of manmade disaster , construction of dams , lack of infrastructure for disposal of solid and liquid waste , man made disaster allows hybrid disaster to occur in India , with high rate of unemployment followed by lack of vocational and skill training , provided to the farmers . India is a tropical country, its geo-climate conditions automatically gives rise to natural disaster , however correct precautions can reduce its effect . We need to come up with new policies and measure to handle disaster management in India .

Suggestion

Disaster Management is a crucial and effective social support for modern day where natural calamities creating an assure threat towards human civilization . As we all know Human Civilization reaches an important cross road but still human race is being sophisticated in front of catastrophe so we need to implement series management strategies to provide disaster management and population safety

1.We need to set up special geomorphology analyser to provide advance statistics about impending natural cataclysm .

2. We need to implement artificial intelligences and machine learning to provide better safety and security to our population

3.We need to set up digital satellite security management to provide hazard less safety towards people.

4.We need to set up remote mobile health centre to provide maximum health care facilities .

5.We need to set up special response centre quick response towards disaster effecting areas.

6. We need to set up green food store houses to provide continues food chain supply towards disaster affected areas.

7.We need to set up remote disaster rest centres and implement a policy by the name of Matangini Hazra disaster shelter hazard.

8.We need to introduce special post disaster economic package and revital agro economy sector by providing require subsidies.

9. We need to arrange special rescue boat facility in flood tendencies areas .

10 . We need to set up special rescue management team by well equip and robotics technique to provide quick disaster response in urban areas.

11.We need to make mandatory by enforcing fire safety related law and management in every urban sector.

12.We need to establish water chain supply management to provide require amount of water to fight against fire related disaster .

13. We need to amplify artificial cloud management with proper safety mechanism to extinguish heart burning forest fires .

14. We also need to moisturise special forest zones with uninterrupted water supply to avoid devastating forest fires , deforestation due to disaster and many more .

15. We need to special earthquake resistances urban buildings in earthquake effected areas , hilly-mountain areas to provide better safety and security management towards population.

16. We need to set up special drone related cyber security management to make proper investigation in remote areas .

17.We need to set up disaster management camp and introduce a certificate course to create employment in disaster management sector in both rural and urban areas for encouraging people with national disaster safety management .

18. We need to provide special insurance policy for disaster effected people for their health care to other necessary subsidies , special bank loan with a minimum return rate to empower disaster effected population , special employment privilege (Contact and performance bases) towards disaster effecting people and their family .

Conclusion

Disaster in any form or of any type has a drastic effect on the society and it becomes very difficult to cope up with the situation . A sudden event which results in humongous loss of people , animals and property can't be controlled but preventive measures can't be taken . 2020 has experienced more than 200 natural cataclysm which has resulted in the death of millions of people across the globe , followed by the COVID 19 pandemic . Preparedness, response and recovery are the three main elements of disaster management . We require a proper disaster management system , establish water supply management system to fight against forest fire , which further result in deforestation. We need to use artificial intelligence and machine learning to protect and provide safety to its people and prevent man-made disaster by taking preventive measures before hand and control the existing of hybrid disaster in any form, as human activities are responsible for much disaster happening on this earth .

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