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NEED FOR EFFECTIVE COMMUNICATION IN CRISIS MANAGEMENT OF NATURAL DISASTERS

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ABSTRACT

Disaster can be defined as an accident or an event, which may result in temporary or permanent change in the landscape and also may result in loss of lives and property. For India is vulnerable for many disasters. More than half of land area in vulnerable for earthquakes. About one tenth of land area is prone to cyclone and more than one tenth of land area is exposed to floods and about two third of land is subjected to droughts. The of rural land mars is under the threat of outbreak of diseases. Disasters are classified as Natural disasters and Manmade disasters. Though there are many types of natural and manmade Disasters, this study is restricted to the following disasters. The following are the common natural disasters commonly encountered in India namely, Earthquake, Tsunami, Volcano, Landslide, Cyclone, Flood and Forest Fire. India is vulnerable to the following manmade disasters namely, Act of Terrorism, Major transport accidents in air sea on road and on rails, Industrial Accidents, War, Nuclear Threat, Outbreak of diseases and Manmade fire. Communication during disasters plays vital role in saving the lives of the people. When disaster paralyses the normal life of the man, posing the danger of insecurity, it becomes primary responsibility of the government agencies to come to immediate rescue of the people and to restore peace and safe living condition of these disaster victims. Let us discuss the grey areas to be given due care in the event of natural disasters.

Key words: Disasters, Risk management, Crisis communication, Relief, Rehabilitation, Reunion.

INTRODUCTION

Earthquake

The entire Indian sub continent is vulnerable to earthquake of moderate to severe intensities. Earthquake originates from the boundary line of two tectonic plates due to the sudden movement of one plate from the other plate. Earthquakes can be neither predicted nor prevented. Hence due care has to be given in communicating the people to take proper care in constructing building adopting seismic resistant features and detailing as described in

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the building codes. The bitter truth is that almost 80% of the buildings in India remains as non engineered constructions, built be masons without proper technical supervision adopting technical features to resist earthquakes.

Fig. 1: Total destruction due to earthquake

In the event of an earthquake the entire buildings will collapse causing major loss of lives. Unlike other disasters earthquakes do not kill people directly. Loss of lives is caused due to the total collapse of buildings constructed, not adopting earthquake resistant features. Hence if there is proper from the government by extending help to the poor people by offering free technical consultancy in adopting technical detailing in the constructions of houses belonging to economically weaker section, we can avoid large scale destruction of buildings in the event of an earthquake. The government agency should inspect all new constructions in the rural settlement and communicate them to adopt the earthquake resistant detailing in the constructions. Effective communication is achieved.

Tsunami

Tsunami waves are high tide ocean waves generated due the sudden movement of a tectonic plate from the other deep under the sea bed. They travel as surface waves in a radial style in all the directions to reach the land area of the adjoining country boundaries. A major Tsunami wave can rise up to 30 m in height and can intrude into the land area up to 20 to 30 Km in length. We should have effective communication to alert the public to relocate themselves in the safe area. These tsunami waves travel at a speed of about 500 Km per hour. In case if the epicentre happens to be at 1500 Km from the sea shore, then the arrival time of tsunami waves is around 3 hrs. This time is very crucial to save the people. Normally there will be panic situation as the people residing at sea shore area like fishermen will try to ignore and land up in trouble. Power will be shut down the moment tsunami waves enter the land mass and it will be highly difficult for the government to communicate to the people about the safety measures to be taken. All mobile towers will be out of service because of power shout down and it will be very difficult to contact people in case of an emergency.

The road will be flooded and transport will be stopped except for very heavy vehicles. Crisis communications should be established buildings at higher altitudes. There should be emergency power available by means of underground cables connecting hospitals and important buildings from first floor to upper floors. This cable power will reach the upper floors to render essential medical services in case of disasters like this. The communications required for the people who are near shore and that of the people living at far off places will be different. We cannot expect the experts to the job everywhere because they are few in number and government has to train the people like college students and police people to coordinate them to announce the public to move to safe places. This should be down in a large scale with college students so that we can reach the public easily. As they are the sons of the soil, they will take definite care for their men belonging to their colony or township, making the job of government simple. These people can be contacted by battery operated wireless communication, which can be operated at a particular frequency range meant for emergency operations. These students and volunteers will act as members of social task force and they can be easily contacted by government agencies for conveying emergent news. This will greatly save the precious lives and can also minimise loss of property.

Fig. 2: Indian Ocean Tsunami

Landslide

Every monsoon we experience landslide happening at the down slopes of many hilly terrains in the mountain areas. The loose top layer get detached from that of the hard layer and causes severe damage to the properties burying the people alive residing in these areas. The recent landslide in Uttarkhand had left many lessons to be learnt by the disaster experts. There was no communication to the affected area and the government agency could reach the disaster site only after many hours.

The initial few hours of period is very crucial in case of any disaster to save the lives of seriously wounded people by providing emergency medical care. Only helicopters could reach these landslide affected areas and this has greatly increased the agony of the affected

people leaving many dead for want of medical care. We should provide separate link roads apart from regular widened road meant for regular traffic and can be opened for such emergent operation. Kodai hills in Tamil Nadu experiences such landslides endangering the lives of people. Recent technology of soil nailing with polypropylene stripes by special machines will greatly help to hold the soft top layer of earth intact. We can grow plantations with deep routed tree saplings in these areas to avoid loosening of top layer areas.

Fig. 3: Uttarkhand Land slide

volcano

We have an active volcano in the barren island area of middle Andaman, which has emanated smoke during the recent Sumatra islands. There was first muddy discharge and there had been notable seismic activities like earth tremors. India is safe in the rest of the places against volcanoes. Proper communications has be given to all people living in the adjoining areas the moment one can either find muddy discharge for the mouth of volcano or the moment they notice the smoke coming out of it.

Fig. 4: Andaman volcano

The gases coming out of it are highly dangerous to inhale and people should leave several kilometers away from the place. We will have enough warning from the volcanic

crater to conveniently shift and relocate the people living in the nearby areas. Air traffic across the mountain is to be suspended, as the smoke with ashes and partially burnt mineral particles coming out of the volcanic eruptions will pose serious danger for the air traffic apart from the poor visibility for the pilot to maneuver the plane.

Flood

Flood as a disaster can be effectively managed if we take preventive steps well in advance. The moment we notice that the lakes, tanks and other the water bodies getting filled up to the danger level, we should be in a position to release the water slowly by operating the shutters of the regulators in a careful manner, to dispose the excess water to the sea and not to inundate the downstream areas. The banks of the tanks and rivers are to be constantly watched in case of flood water entering the river basin, to avoid any possible breach of bunds in order to avoid the flood water entering the living areas. When the living areas are flooded, we have to communicate to the power operators to disconnect the supply to avoid large scale electrocution. The supply of food and the relief measures are to be done only by boats. Army has to be pressed into the service to save the people from the danger. We should have proven wireless communication network to communicate among the disaster task force personnel and to the chief of the disaster management team. The recent flood in Chennai has experienced many hardships related to miscommunications between several agencies involved in the relief operations, many voluntary organisations, political outfit groups and several other independent teams started to work on their own without proper link between them, making it extremely difficult for the government agency to coordinate with them. Relief materials like food and medicines were not centralised, in the sense that, every smaller voluntary agents stated to distribute the food and other relief materials independently, creating a lot of confusion in the disaster site. Any number of social groups can be accommodated, provided the chief of operation takes care to have effective communication network between them.

Fig. 5: Chennai under floods

Cyclone

Change in climate conditions can be easily predicted by weather forecasting department and normally there will be sufficient time for the people to relocated themselves to safer areas. The government agency should have efficient communication to shift all the men who are living in unsafe buildings. In case of rural settlement almost all the people are to be relocated to the safer areas and cyclone shelters. If this is not done many serious accidents will happen leading to severe loss of lives in the event of a heavy wind current. The eastern coastal belt starting from Rameswaram in Tamil Nadu to Vishakapattinam in Andra Pradesh experiences cyclones every year, demanding the people on this belt to be on red alert to avert major calamities and loss of lives.

Fire

The time taken for a spark to become fire is about 30 to 40 min as described in the ISO fire curve. This requires meticulous planning for building occupants to adopt effective fire management system to avoid major fire accidents. They should be in a position to have enough number of fire extinguishers of different types namely Carbon di-oxide (CO_2) and tri chemical powder (TCP) fire extinguishers to manage different types of fires.

Fig. 6: Fire due to nuclear installations

Sufficient no of fire buckets filled with dry sand should be placed in the vicinity of major electrical installations to fight electrical fire. What is very critical here is to have effective communications, to all the stake holders of the premises, to teach them how the fire can be managed in the initial 30 minutes period. Electrical appliances should be periodically serviced to avoid electrical short circuiting.

CONCLUSION

Indian sub continent is vulnerable to almost all the natural disasters. Certain amount of precaution taken, prior to disasters, will prevent major calamity and loss of lives while

facing the disasters. When we establish proper communication system to handle crisis situations due to disasters, we can prevent large scale loss of lives and property.

(i) We have to impart training for the selected local people and college students who are fairly educated about the possible disasters that can strike in the defined geographical areas and to make them known to others.

(ii) The government has to install dedicated community radio in AM wavelength, to take care of disaster education as well as guide them in the event of a disaster.

(iii) Private persons who are rich can install amateur radio, namely Hams Radio to monitor the possible disaster events and warn the people to respond appropriately to minimize losses. This will get worldwide disaster managing persons connected.

(iv) The police department should develop control rooms to monitor disasters and to connect to the 20 to 25 base stations built in villages connected by WLL VSAT with hand held communication terminals to take care of people in hilly area to alert about possible landslides, earth tremors and cyclones. This will greatly help to get assistance from other countries through satellite.

(v) We can impart proper training to the students of schools and colleges to take immediate action before, during and after the strike every type of disaster.

(vi) We have to screen visual aids by movies in the theaters to make the people to understand the extent damages anticipated in the event of a disaster.

(vii) Efforts should be taken to display permanent posters every prominent place of gathering of people about disaster preparedness and to advice them to have reserve of foods.

(viii) We have to make use of the battery operated public address system available at temples, churches and mosques to alert people for possible steps to take at periodic manner.

(ix) Every family has to develop first aid kit for facing flood, fire etc.

(x) The government agency should devise suitable methods for the reunion of the families after the disaster is over.

(xi) You should also educate the rural men to have a meeting place, for the members of their family, immediately after the disaster.

(xii) In all we should have comprehensive and effective response plan with efficient communication system to inform the people to ensure safety in the event of a disaster.

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