



ROLE OF BUSINESS ORGANIZATIONS IN DISASTER RESPONSE AND BUILDING RESILIENCE : AN INDIAN SCENARIO

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ABSTRACT

Global average co2 level in air causing a global warming ,precipitation levels in sea iscausing melting of ice caps and glaciers increasing the frequency and complexity of disasters causing far reaching socio economic impact. This paper deals with the need and role of business organizations during various stages of disaster response and also building resilience. The business owners are now aware about importance of disaster mitigation and preparedness. They should focus on ensuring business continuity as well as welfare of community. The welfare of community is essential because people constitute both the employees as well as the customers the two attributes which are necessary for the continuity of the business. Global data shows a rise in magnitude frequency, complexity and impact of disasters. Threat is more in underdeveloped countries due its dense population, lack of prevention measures and resources for reconstructing. Natural disasters are 20 times greater in developing countries than in developed countries. Asia tops high among causalities in case of natural disasters. India is one among the top 10 countries in the world which is disaster prone .India's climatic condition and socio economic factors make it one of the most disaster prone countries in the world.. This is due to its unique geographical and geological situations. Coming to Indian scenario out of 45 states/Union territories 25 states are disaster prone. According to the report of World Bank 2% loss of GDP due to disasters. This stresses the need for better disaster response and mitigation as well as disaster preparedness by Indian companies. Insurance companies and reinsurance companies are educating the business organizations regarding the above. Logistic companies can also play an important role by getting supply chains flowing again and goods and services back into flowing in the community. Retail sector have a significant role in quick starting the supply of food and necessities which will help community back into normalcy. The oil companies ensure the functioning of gas station and uninterrupted power and water supply.IT sectors, health care and pharmaceutical companies also have an important role. The paper also focuses on various measures taken by Indian companies in disaster response and mitigation and some Live Indian examples. Key Words: Disaster, Disaster response, Disaster mitigation, Disaster preparedness

What is a Disaster? A disaster is a natural or manmade calamity which can cause a massive loss of lives, damage to property and an interruption to normal routine both for people and organizations. According to international federation of red cross and red crescent societies „A disaster is a sudden calamitous event that seriously disrupts the functioning of a community or society causing a serious human, material ,economic and environmental losses that exceed the community's or society's ability to cope using its own resources . According to Ministry of home affairs a disaster is a situation in which a normal life or ecosystem gets disrupted and some emergency actions are required to save and preserve the life and environment. Types of disaster. Disasters can be natural or manmade. Natural Disasters Natural disasters are disasters caused by natural phenomenon. They include earthquakes, landslides, volcanic eruptions, floods, hurricanes, tornadoes, tsunamis, wild fires, droughts, hailstorm, snow avalanche, cloud burst, soil erosion and cyclones are natural hazards. Some areas geographically are more disaster prone than others. Unstable landforms, Deforestation, population growth, un planned constructions make disaster prone areas. More vulnerable. ASIA tops the list of causalities in the case of disasters. Manmade Disasters Manmade disasters are human instigated disasters. They include, stampede, chemical spills ,oil spills, fires, industrial accidents, Nuclear plant radiations and blast, biological threats and terrorism. Disasters global scenario Global data shows a rise in magnitude frequency complexity and impact of disasters. Threat is more in underdeveloped countries due its dense population, lack of prevention measures and resources for reconstructing. Natural disasters are 20 times greater in developing countries than in developed countries. Asia tops high among causalities in case of natural disasters. At global level three main sources which collect data are 1) EM-DAT (Centre for research on the epidemiology on disasters).2) Nat Cat maintained by Munich reinsurance Company.3) Sigma by Swiss reinsurance Company. But the reports from this company vary. Lack of central statistical data base on disasters is the major constraint.

UNISDR(United nations office for disaster risk reduction) is the International Organization at the world level for disaster risk reduction. In Asia ,Asian Ministerial Conferences on Disaster Risk Reduction (AMCDRR) and the ISDR Asia Partnership (IAP) forum as its mechanism for consultation and technical support.

KEYWORDS :

Disasters in India.

India is one among the top 10 countries in the world which is disaster prone. India's climatic condition and socio economic factors make it one of the most disaster prone countries in the world. The extreme weather conditions, ice and snow in glaciers cause various disasters. Earthquake and hail storms happen frequently. This is due to its unique geographical and geological situations. Five major vulnerable regions are Himalayan region, coastal zones, alluvial plains(Indus,ganga and Brahmaputra causing flood in UP and Bihar) ,hilly part of peninsula. The western part of country including Rajasthan, Gujarat and some parts of Maharashtra are frequently drought prone. Apart from that increasing population, pollution, deforestation, unscientific development, unplanned urbanization, wrong agricultural practices all cause disasters in India. According to the statistics of national disaster management in India (NDM India), during last 30 years 431 major disasters happened causing loss of life and property. Coming to Indian scenario out of 45 states/Union territories 25 states are disaster prone.68 percent of land in India is draught prone, 12percent is flood prone and 8 percent is cyclone prone. Following drought floods, cyclones.

According to IPCC(Intergovernmental panel of climate change) global average co2 level in air causing a global warming ,precipitation levels in sea is causing melting of ice caps and glaciers increasing the frequency and complexity of disasters causing far reaching socio economic impact. According to the report of World Bank 2% loss of GDP due to disasters.

Impact of disaster on Business organizations.

Disasters whether natural or operational have serious implications on business.

Large and small business varies in their capacity to handle disasters. Larger organizations can better handle disaster due to their human as well as financial resources. Key factors at stake are

- 1) Capital.
- 2) Assets.
- 3) Personnel.

Capital

Capital refers to financial resources company use to purchase goods or lab our for their business operations. When disaster happens this

is required to rebuild the structures as well as paying the compensation and insurance for employees. This capital will not be available for the organizations to advance their operations. Large companies have additional capital to spare for restoring business operations. Small companies have do not have copious amount of capital saved for business purposes. Small firms might have to take external finance to restore business which may cause cash out flows or even closing down of business.

Assets

Assets are physical items like land, building machinery etc. which is used for business operations. Large firms will be operating at multiple locations. They can either restore the business operations or transfer operations to another facility to maintain normal output. But smaller firms usually operate in single location. Even though they rebuild the business it will take long to reach a profile level before the happening of disasters. In other case they are forced to close down the business.

Personnel

For large firms if the personnel is injured they have ample source of replacement from other locations or technically competent organizations can make their employees work from home.

But for smaller firms they do not have enough number of employees to restore operations which will cause closing down of business. If the owner itself is injured there won't be an option of starting restarting the business.

Business organizations should have considerations or plans for continuity in case of disaster happen.

Need of business organizations in disaster response and building resilience.

Building resilience in disaster means 'the ability of a system or society or community exposed to hazards to resist, absorb and accommodate and recover from disaster in a timely and effective manner including both prevention and restoration. If the frequency of disasters increases they have serious adverse effect on business organizations and hence economic and human development. Since disasters can cause a slowdown or closing down of business operations participation in disaster response and management is a necessity for them. They have an important role in disaster risk prevention and management. They can do this by interaction with the government. To follow risk reduction strategies, implementation of guidelines for security measures, insurance and liability regimes. The Hyogo framework for action by AMCDRR (Asian ministerial conference on disaster risk reduction) stresses the need for regional mechanism to implement and oversee disaster risk reduction. This can be through effective participation of business organizations both public and private, government, other regional bodies, non-governmental organizations public and community. Among this role of business organization is important due to availability and use of resources both human and non-human

Disaster Management Frame work.

Disaster, management involves coordination with International, National and Local Organizations. Major Organizations are

- UNITED NATIONS AND ITS ORGANIZATIONS.
- HEALTH CARE IN DANGER PROJECT.
- INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES.
- THE INTERNATIONAL COMMITTEE OF THE RED CROSS.
- INTERNATIONAL NON GOVERNMENT AGENCIES.
- NATIONAL ORGANIZATIONS.

In Asia, the regional platform mainly consists of the Asian Ministerial Conferences on Disaster Risk Reduction (AMCDRR) and the ISDR Asia Partnership (IAP) forum as its mechanism for consultation and technical support. Established in 2005, the AMCDRR is a biennial conference jointly organized by different Asian countries and the United Nations Office for Disaster Risk Reduction (UNISDR).

Institutional Framework in India

National Disaster Management Act was passed in 2005.

Disaster Management Structure.

National Disaster Management Authority (NDMA) with prime minister as the Chair person.

National Executive committee-Secretaries of 14 ministries and Chief of integrated de

Central Ministries:

National Disaster management Authority.

National Institute of Disaster Management.

National Disaster Response Force (NDRF).

State Level

State Level Disaster Management Authority (SDMA) headed by Chief Minister.

State Executive Committee.

District Level

District Disaster management Authority (DDMA).

Interface between government and public.

Apart from this a national Core Group on Cyclone Monitoring & Mitigation has been constituted. Experts from Indian Meteorological Department, National Centre for Medium Range Weather Forecasting, Central Water Commission, National Remote Sensing Agency and Indian Space Research Organization have been made the Members of the Core Group. Police network (POLNET) will be extended to District Magistrates, Sub Divisional magistrates as well as control rooms.

Sendai Frame Work

It is the most important institutional mechanism for disaster risk reduction. Sendai frame work is a voluntary, nonbinding international agreement. It emphasizes that State has a primary role in disaster risk reduction along with stake holders, Local government, Private sector, on business organizations etc.

Role of private sectors.

Corporate sector has huge resources –human, technical, material & financial. They have significant presence in every region in the country. It also works and interacts with the community very closely and has an important role in the well-being and prosperity of the community as its own progress. Role of Corporate Social Responsibility (CSR) has also increased as the value and reputation of a company is being increasingly assessed by its social behavior and its contribution to the economic as well as human wellbeing.

A typical disaster has three stages.

- 1) Period of preparedness and preplanning.
- 2) Response period usually measures in days.
- 3) Recovery Period which can be short term (days or months) or long term (Months or years)

Private sector can upgrade for early warning signals. Technologies like sensor networks, large scale data analysis and communication will help to provide early warning signals. Secondly companies can provide infrastructure which helps in speedy recovery. Thirdly companies can build financial models to help cities to manage risk. Mostly disasters are high impact events, comes in rush and most cities don't have enough financial resources.

Private sector contribution to preparedness

Business can play a key role by building resilient communities. They can extend their efforts to employees, suppliers, family members of employees, government agencies and other stakeholders. They can identify the accommodation and rehabilitation for refugees.

Mobile companies can provide early alerts. Data base can be maintained for customer requests for debris removal and food and necessities. Can focus on improving the resilience of the unprivileged communities through education and support services. Private sector can build the resilience to local community through education and financial plans for them. IT sector can back

up their data in other regional locations from where employees can operate or provide opportunity to work from home. Private companies can play a role by stocking up emergency supplies like food, first aid and other amenities.

Private sector contribution to disaster response and recovery.

Pharmaceutical companies can provide medical supplies. Airline companies can play a crucial role in lifting and rescuing operations.

Logistics Company has a huge role in managing the disruptions and getting supply chain intact. Retail sector can also play a great role by getting convenience goods in flow as life will be back to normalcy once the basic necessities are available.

Oil and gas sector can aid in the functioning of gas stations as well as activate the telecommunication and power sector.

Organizations can provide food and necessities during the disaster especially logistics company can play a crucial role. They can provide a recovery through a single fund rather than government alone bears the expense.

expense.

Assistance by organizations non food relief supplies, food, They can provide volunteer coordination, capacity-building, and cleanup.

The private sector interacts frequently with the public sector to fulfill necessary community disaster functions.

Public sector relies on private sector for food and supplies.

Private sector can support the disaster activities by providing capital, expertise, capital, innovation and technology.

Private sector is getting incentives in participating for developmental programs that helps in building disaster resilience.

Private organizations can build disaster resistant structures which will help to minimize both human material losses.

Developing disaster micro insurance schemes having a tie up with governmental and non profit organizations.

Some examples

The President of the Confederation of Indian Industry (CII) has invoked the corporate sectors' social responsibility following the Tsunami tragedy. The CII has set up "Tsunami Relief Fund" and has activated helpline offices in Delhi, Chennai and Hyderabad. The Confederation is in touch with the Central and State (Provincial) Governments and is collecting feedback on the extent of damage and the immediate requirements of the affected people. Tamil Nadu, CII has operationalized four easy to-use water treatment plants, CII, in the Andaman and Nicobar Islands to provide clean drinking water to the affected people. Light trucks, generators, pumps and other industrial equipment has also been sent. GARD (Get Airports Ready) in Kazakhstan with a public private partnership between Deutsche post (DHL) in which DHL offering its logistics expert to Airport authority which is a public private partnership General insurance association in Thailand by insurance companies for 1 million baht mainly for relief activities.

Thomson Reuters Foundation organization, which works in Indonesia, Nepal, the Philippines, Haiti, Colombia and Guatemala, has erected more than 48,000 disaster-resistant buildings for 245,000 people, trained some 25,000 workers and created 12,000 jobs. organization, which works in Indonesia, Nepal, the Philippines, Haiti, Colombia and Guatemala, has erected more than 48,000 disaster-resistant buildings for 245,000 people, trained some 25,000 workers and created 12,000 jobs.

Afat vimo insurance scheme in India with the collaboration of insurance companies, authorities, donors and NGOs which is implemented in Tamil Nadu, Pondicherry, J&K and Gujarat.

NPC -safety and environmental company providing emergency response services **Map Tha Put Industrial estate**, the biggest industrial estate in Thailand where joint exercises with government and standard operating procedure is co-ordinated.

SEEDS(Sustainable environment and ecological development society) create a pool of masons trained to build earthquake - resistant construction.

Office depot retail in US helping the small firms get ready with disasters, relief and recovery operations Shell donated more than \$500000 in 2011 during tornadoes and worked with state volunteer commissions and disaster relief agencies

Indian Examples.

Survey shows more than 50 percent of Indian companies are not prepared with disaster. Indian SMBs (Small and medium businesses) are adopting technologies of virtualization, cloud computing and mobility, often with improved disaster preparedness. Power outage (74%) and industrial accidents (72%) are the top disasters cited. Only 6% of Indian SMBs are "highly prepared" for disaster; 8% have a disaster recovery plan. The reasons for not having a disaster recovery plan range from lack of resources (42%), computer systems not critical to business (37%), budgets (21%) and business priority (16%) Following 'Kutch' earthquake FICCI(for humanitarian endeavours) have a tie up with 'CARE' for building homes, supplying blankets, shoes and other relief items.

Hyper city Retail trains its employees to handle emergencies like earthquakes, terrorist strikes, floods and bomb threats.

Regular drills are carried out at the Mahindra Group headquarters at Worli in Mumbai. A retired army Brigadier handles the group's security. **Page 1** Godrej Industries Ltd have a business continuity plan in all regions since they have some of their offices in disaster prone areas. They ensure that a third party vendor will turn around the supply within one and a half month.

Mumbai based HDFC bank has its recovery Centre in Bangalore which has all its data backup. In case of disaster happens all other regional offices will switch to Bangalore within 30 minutes.

Bata India provided 1500 pair of shoes during Jammu & Kashmir earthquake in 2005.

Johnson and Johnson provided sanitary napkins as a part of relief measures.

"Relief 123 by "Vihaan Networks Limited (VNL) & Bharat Sanchar Nigam Limited (BSNL), a disaster response solution for first responders and public safety agencies. (With NDMA & NDRF) .(2017). NDRF is national disaster response force.

Conclusion.

Disaster response by private companies are in nascent stage. India as one among the most disaster prone areas in the world and its high density population stresses the need for private organizations to participate in disaster response and preparedness. Along with public participation business organizations can play a crucial role due to private sectors both human and non human resources. Government's support like tax exemptions and incentives will promote the business in disaster prone regions.

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