



An outlook on disaster management

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Abstract

The rapidly changing scenario of environment's stability and climate change has created a series of disasters around the world. With the passage of time these disasters have proved to be catastrophic in nature as well as their occurrence has expanded its scale. Disasters have become the part of everyday media reports. With evolving science and technology; the scale, variety and mode of occurrence of these disasters has also evolved. Human and humanity both are facing crisis and therefore world also need to awake from its cryosleep before it is too late.

Series of meetings and events has happened around the world focusing disaster and its management. Here we will understand the broader aspect of disaster and its management, various frameworks adopted as well as India's preparedness for disaster management.

Keywords: Yokohama conference, Kobe conference, Hyogo framework for action, Sendai conference, India's overview on disaster, natural disaster management act 2005, prime-minister 10 point agenda, and community based disaster management

Introduction

Traditionally disasters have been defined as events that are massive, natural and sudden and its impact is so much that they goes beyond the coping capacity of local communities who are facing it. But the occurrence and scale of disaster should not be measured in terms of natural and massiveness. Larger death tolls can't be the consideration of deciding disaster. Every single life is important but according to United Nations, it depends on the discretion of nation that what should be the scale to consider as disaster.

Types

Disasters are mainly of two type i.e.

Natural Disaster

E.G. earthquake, floods, landslides, volcanoes, cyclone, tsunami etc. are natural disaster that has led to colossal loss of property and lives since ancient time.

Man-made disaster

That disaster which may be smaller in magnitude but have increased in frequency with advancement and development as a result of human intent or negligence e.g. wars, industrial disaster, urban disaster, nuclear disaster, Day zero. However be it natural or man-made the phase all disasters are same.

History of disaster management

Disaster management is a very new concept that travels back to 1990's when U.N. designated the 1990's as the *International decade for natural disaster reduction*. It all started from the very *first global summit on disaster*

management i.e. *Yokohama Conference, 1994*.

First U.N. world conference on disaster risk reduction (WCDRR), Yokohama 1994

Yokohama conference gave us the wisdom of disaster management. *Disaster management cycle* as a concept was initiated in this summit. 10 principles were adopted for safer world i.e.

1. Risk assessment
2. Disaster prevention and preparedness
3. Disaster prevention and preparedness as integral part of development policy and planning
4. Developing and strengthening the capacities to prevent, reduce and mitigate disaster management.
5. Early warning of impending disasters
6. Preventive measures
7. Measures for reduction of vulnerability
8. Use of technology
9. Emphasis on environmental protection
10. Strong political determination

Second U.N. world conference on disaster risk reduction (WCDRR), Kobe 2005

This conference got international media attention because prior to this conference south East Asia had already faced catastrophic Indian Ocean tsunami. This conference adopted plans to put in place an international early warning programmed (IEWP).

Objective of conference: The goal of conference was to reduce the toll of disaster through preparation. Because of devastating Indian Ocean tsunami, developing global tsunami

warning system was top priority.

Topics Included

1. pledges to reduce disaster damage
2. Health care and disaster
3. Early warning system
4. Safe building standards
5. Agreeing upon cost effective preventive counter measures

This conference also adopted Hyogo framework for action.

Hyogo framework for action (2005-2015)

- This framework was endorsed and adopted by Kobe world conference on disaster reduction. This framework was the first plan to explain and detail the work required from all different sectors to reduce disaster risks.
 - It also adopted the strategies called as *United Nations international strategies for disaster reduction (UNISDR)*.
 - It was valid for 10 years i.e. 2005-2015.
 - It focuses on government, international agencies, disaster experts and many other stakeholders to bring into a common system of coordination.
 - The 10 year Hyogo framework for action has following priority action –
1. Priority action 1- Ensures that disaster risk reduction is a national and local priority with strong institutional basis for implementation.
 2. Priority action 2- Identifies, assess and monitor risks and enhance early warning.
 3. Priority action 3- Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
 4. Priority action 4- Reduces the underlying risk factors.
 5. Priority action 5- Strengthens disaster preparedness for effective response at all levels.

Third U.N. world conference on disaster risk reduction (WCDRR), Sendai 2015

- It was a refined form of Hyogo framework.
- Mandated for 15 years i.e. 2015-2030.
- It is a non binding agreement, recognizes state has primary role to reduce disaster risk but that responsibility should be shared including local govt., private sector and other stakeholders.
- It aimed for *substantial reduction of disaster risk and losses in lives, livelihoods, health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.*
- UNISDR has been tasked to support the implementation and review of Sendai framework.
- *It has 7 global targets and 4 priorities for action.*

Seven global targets

1. Reduction in global disaster mortality by 2030, aiming to lower average 100000 global mortality rates in the decade 2020-30, compared to period 2005-15.
2. Reduction in no. of affected people globally by 2030, aiming to lower the average global figure per 100000 in decade 2020-30, compared to period 2005-15.
3. Reduction in direct economic loss with respect to GDP by

2030.

4. Reduction in disaster damage to critical infrastructure and disruption of basic services.
5. Increase in no. of countries with national and local disaster risk reduction strategies by 2020.
6. Enhanced international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this Framework by 2030.
7. Increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.

Four priorities of action

1. Understanding disaster risk.
2. Strengthening disaster risk governance to manage disaster risk
3. Investing in disaster risk reduction
4. Enhancing disaster preparedness for effective response to *build back better* in recovery, rehabilitation and reconstruction.

Overview of India

According to 10th five year plan; India is one of the most disaster prone countries of the world. The kind of economic development we've seen has disastrous impact. Our ecological footprint has increased and environmental regularity has been compromised and we are as a nation having poverty too; so the consequences would be more serious.

Scale of vulnerability

- Almost 10% of India is drought prone. Drought is recurring problem year after year.
- India has good rainfall in average value but distribution differs i.e. 2/3rd of India is prone to scanty rainfall.
- Almost 60% of India is vulnerable to earthquake more than VII on modified mercalli scale.
- It is officially declared that no part of India is free from earthquake vulnerability.
- 10% to 12% of India is vulnerable to cyclone and floods.
- Around 22 states are high risk state and 25 states have recurrent chronic disaster.
- According to *Global climate change vulnerability index*, India is 2nd most vulnerable country after Bangladesh.
- More likely we are going to face the concept of “day zero” as similar to cape town city of south Africa, where water scarcity is at its worst due to rapacious exploitation of water resources and citizens are allowed just 25 liters of water per day.
- Accordingly *United Nations world water development report* bengaluru city is in the list where day zero concepts can be seen in the nearby future.
- According to an estimate India will have 50% of water deficit by 2030.

Disaster management in India

It all started in 1999; a high powered committee was setup under J.C Pant prior to the devastating cyclone in odisha. This committee recommended for the set up of disaster management ministry but this did not become reality in the

form recommended. After the Bhuj earthquake, all party national committee on disaster management was setup under chairmanship of prime minister. This committee recommended the creation of *national disaster management authority (NDMA)* under ministry of home affairs and thus disaster management act was enacted in 2005.

The tenth five year plan document had for the first time, a detailed chapter on disaster management. The twelfth finance commission was also mandated to review the financial arrangements for disaster management. *On 23 December 2005, govt. of India enacted the disaster management Act* which envisaged the creation of *National Disaster Management Authority (NDMA)* headed by prime minister and *State Disaster Management Authority (SDMA)* headed by chief minister for the holistic approach to disaster management.

In the recent years, our disaster management system has become robust and effective due to govt. and community awareness programs. Infact, India was praised by United Nations after its successfully limited casualties in cyclone Phailin (2013) and Hudhud (2014). Meteorological services and satellite predictions have become more robust in the recent years thereby limiting the casualty figures to minimum as the preparedness is done more effectively due to technological advancement.

Prime minister's 10 point agenda on disaster risk reduction (DRR)

In the year 2016, prime minister had listed the agenda during his inaugural speech at the *Asian ministerial conference on disaster risk reduction (AMCDRR)*. The all-inclusive agenda presents a holistic approach to disaster risk management and addresses the whole range of issues, from community preparedness to use of technology and international collaboration. The prime minister's 10 point agenda on DRR is –

1. All development sectors must imbibe the principles of disaster risk management.
2. Risk coverage of all from poor household to SME's to Multinational Corporation to nation states.
3. Greater involvement and leadership of women in disaster management
4. Invest in risk mapping globally. For mapping risks related to hazard like earthquake we have accepted standards and parameters.
5. Use of technology to enhance the efficiency.
6. Developing network of universities to work on disaster management.
7. Using social media and mobile techniques.
8. Build on local capacity and initiative.
9. Learning from the previous disaster must not be wasted as after every disaster there are papers on lesson that are rarely applied.
10. Greater cohesion in international response to disasters.

P.M's 10 point agenda is also in line with sustainable development goals 2030. Disaster management is the part of SDG's as they talk about sustainable solutions to survival issues including poverty, malnutrition, I.M.R, M.M.R etc.

Need to focus on community based disaster management

- Local communities are first responders. The first few hours are golden hours and the local community intervention can save max. Life and minimize losses and casualties.
- The local communities know the vulnerability best as they first intervene to such events. They can help in mapping the vulnerable areas which can effectively help better disaster impact control.
- Local communities know alternatives best which is more enduring and effective solution for disaster damage control.
- Their traditional knowledge to mitigate disaster can come handy when such critical situation arises.

Conclusion

There is nothing natural in natural disaster, every disaster is man-made. *Events may or may not be natural but consequences are always man-made.* Policy failures and apathetic governance is biggest challenge rather facing disaster. We also need to change some of the aspect of N.D.M Act 2005, e.g. *we still don't have national disaster mitigation fund (NDMF).*

One must be sure that there is nothing like prevention; prevention is just a notion and not possible completely but mitigation is possible because mitigation deals with reducing the risk of events by identifying causal factors and intervening adequately. *Disaster management is more effective under non-structural solutions which involve human activities rather modifying the environment.* Therefore, the wisdom of disaster risk reduction is by addressing the causal factor and focusing on behavioral aspect of human.

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