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Disaster Management

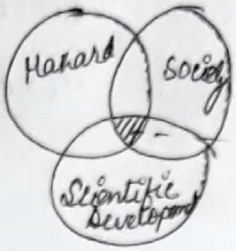
The frequency of disasters have enhanced in the recent past due to factors like global warming, climate change, environmental degradation, population expansion etc. Whenever disaster happens human development would be pushed decades back. As such effective management of disasters is essential & for this the pre-condition is good governance.

Disaster is defined as a catastrophic situation in which normal pattern of life & ecosystem would be ~~dist~~ disrupted. & emergency interventions would be required to save both life & property. (MHA)

According to U.N., Disaster is defined as a misfortune in which the security of the community is disrupted

Disaster never takes place in vacuum. When a Hazard affects a sizable population it is termed as Disaster or

in other words Disaster happens at the intersection of Hazard, Society & Scientific Development.



There is a difference between Crisis & Disaster. Crisis can be individualistic or collective in nature. & But Disasters are always collective in nature. If Crisis are improperly managed, it results in Disaster.

There are four main component of Disaster Management —

i) Prevention.
ii) Preparedness
iii) Mitigation
iv) Relief

Mainstreaming Disaster Management

There are 3 connotations of the term Mainstreaming —

1) All major projects which have been funded

by govt & private agencies should be designed in such a manner so that the potential risk of Disasters do not enhance

ii) All these projects should also be designed in a such a manner that the impact of Disaster do not fall on other sphere.

iii) All Disaster Risk Reduction Initiatives should have human development as one of the objective.

Vulnerability & Vulnerability Analysis

An area can be vulnerable for disaster on account of many factors which can include—

a) location of the area.
b) condition of structures.
c) lack of coordination between govt. agencies.
d) " forecasting system etc.

If a systematic study is made of all these factors it would

be termed as Vulnerability Analysis.

Vulnerability is defined as a characteristic of Society, Institution, Group or Organisation by virtue of which it is unable to cope up, unable to resist, refrain or recover from the impact of Disaster. In the Aftermath of Disaster Vulnerability can enhance due to role played by Anti-Social elements or vested interests or can reduce through community initiatives.

India is vulnerable for Disasters on account of 2 broad considerations :—

1. Natural factors 2. Anthropogenic factors

1. Natural factors include —

a) 58·6% of India's landmass is prone to Earthquakes of moderate to high intensity type.

b) 12% of India's landmass is prone to floods.

c) 68% of India's cultivable area is prone to Droughts.

d) out of 7516 km. of coastline, 5700 km. is prone to Tropical Cyclones.

2. Anthropogenic factors include :

a) Environmental Degradation
b) Development in High Risk areas.
c) Urbanisation
d) Industrialisation
e) Population Expansion
d) Global warming & climate change.

Community based Disaster Management

The local community is regarded as the 1st responder in Disaster Management. Because the impact of Disaster 1st of all falls on local community & as such they have the best knowledge of their impact. They also know the traditional methods to deal with these disasters.

But their impediments include—

a) Lack of technical knowledge.

b) lack of funds
c) They are not able to negotiate with the formal agencies of the govt.

The significance of Community Based Disaster Management (CBDM) is gaining strength.
Schools are considered to be the starting point of CBDM initiative. They are not only meant for imparting education but when disaster happens they serve as Relief centres & also centre for medical facilities as well as a centre for food Distribution.

The Biggest challenge posed before the local community is that the frequency of Disasters is enhancing due to global warming & climate change.

If these initiatives are properly managed it would be fruitful for their livelihood & also for Poverty Alleviations.

Initiatives of India at the global level:

In the year 2005, India became a signatory to "HYOGO Framework for Disaster Risk Reduction" which was signed by 164 countries at Kobe in Japan. This framework stood for one Decade. There are 3 strategic goals of this framework:-

i) to integrate Disaster Risk Reduction with sustainable development programmes of the government.

ii) Establish institutions at various levels to develop resilience for Disasters.

iii) Inclusion of Disaster Management in the programmes of Emergency Preparedness.

In the year 2010, with the help of India the SAARC Disaster Management Centre was established in New Delhi.

On March 18, 2015, Hyogo framework was extended by SENDAI Framework which

was signed by India along with Other Nations at Sendai in Japan. The sendai framework could be lasting till the year 2030.

The Sendai framework puts emphasis on the role played by the State which would be more effective if the participation comes from the local community as well as private agencies.

The Strategic goals include —

a) Identification of Disaster Risk

b) Strengthening the Disaster Risk Reduction Initiatives.

c) Arranging funds for this purpose.

d) Re-establishment of an area devastated by Disaster on the principle of "3B" — ~~Build~~ Built, Back, Better.

The other objectives include —

a) Reduction of mortality rate by 2030.

b) " " number of injured by 2030

c) Preventing Economic Loss due to Disaster by 2030.

The 1st National level plan for Disaster Management was unveiled by P.M. on June 3rd, 2016 & is based on the Sendai Framework. There are 6 thematic areas in this plan which includes:

I) Mainstreaming & Integrated Approach
II) Capacity Building
III) Participatory Approach
IV) Working along with elected representatives.
V) Establishment of Public ~~Redre~~ Grievances Forum.
VI) Maintaining Quality Standards by ~~confeaing~~ conferring awards & certificates for this purpose.

In the year, 2016, Asian Ministerial level Conference for Disaster Risk Reduction was organised at New Delhi where P.M. unveiled his 10 point Agenda

for Disaster Risk Reduction which includes:

1) Establishment of all major projects on Disaster Realience Methods.

2) Inclusion of Women in Disaster Risk Reduction initiatives.

3) Risk coverage of all from poor to the affluent & from small & medium enterprises to the MNCs.

4) Mapping of all Hazards on a Global Basis.

5) Establishment of an Association of International Universities.

6) Promoting Cooperation among nations for this purpose.

7) Use of leverage technology.

8) Participation of local communities.

9) Use of Social Media.

10) Ensure that leasons learnt from any Disaster do not go in waste.

Classification of Disasters in India :→

A High Power Committee constituted by Govt. identified 31 types of different disasters & placed them in 5 Broad Catagories :-

1. Water & climate related Disasters which includes floods, Droughts, Tsunami, thunder & lightening, hailstorm, cloud Bursting, Tropical Cyclones, Heat Waves, cold waves,

2. Geologically related Disaster
   Earthquakes, Landslides, Dam Bursting.

3. Industrial Disaster →
   Chemical Disaster
   Nuclear "
   Mines "

4. Accident Related Disaster →

Road Accident	Electrical Disaster
Air "	Building collapse
Rail "	Serial Bomb Blast
Stampede.	Urban Fires
Boat capsizing	Forest Fires
	Oil Spill.

5. Biologically Related Disaster :-

Epidemics, Cattle Epidemic, Food poisoning.

Earthquakes

There are 4 seismic zones in India → ~~Zone~~ Zone II, III, IV, V, of which Zone V, is the most vulnerable zone which includes J&K, Himachal Pradesh, Uttarakhand, North Bihar, North-East states, Andaman & Nicober Island & Bhuj area of Gujarat where there is confluence of 3 plates.

The main reason behind Earthquakes in India is the subduction of Indian Plate under the Eurasian Plate, Himalayas are the youngest mountain range of the world, still in the process of formation. As such we can see the margin of Himalayas is being redefined.

The earth inside is in a molten stage where boders or dumps collide with each other or get separated from each other

with the release of energy which is in the form of seismic energy.

Vulnerability for earthquake enhances not only due to the conditions of structures but also due to the construction of dams & reservoirs & excessive withdrawl of underground water as it acts as absorber of seismic waves.

According to a report, more than 80% structures in the metropolitan cities of India do not abide by the National Building Code.

In case of earthquakes, damage to building is mainly done by the horizontal waves & damage would be manifold if the frequency of seismic waves matches with that of the building to develop a Reasonance Effect.

Mitigation measures include the

following ——

1) Although Earthquakes can't be forecasted but an Alert System can be established for this purpose as has been done in U.S., Japan & Taiwan. There is a difference of 11–15 minutes between the P & S waves. In these countries, a dense network of small observatories have been established in the high risk zones which registers the time when P-wave occurs & communicated to far flung areas so that evacuations can be made on time.