Urban Risks in India

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At the present rate of urban growth, it has been established that around 50 per cent of world population would be living in cities and, it is mega-cities which are likely to grow to 100, and 90 per cent of these in the developing nations. Geologically as well as geographically, India, has 57 per cent of its land prone to one or other kind of natural disasters. However, with the present trends of urbanization and very weak economy to develop infrastructure capacity to keep pace with dynamics of urban growth, the nation is subjected to deterioration of Urban Environmental services. Incapability of building capacities of cities to sustain migration and urban growth is seen to have narrowed down the gaps between Natural and Manmade disasters. In fact, in-spite of advanced technologies available for prediction, prevention and information to mitigate impacts of disasters, the frequency of occurrence of disasters as well as damage due to disasters is increasing. This is a clear indicator of the thin line between natural and manmade disasters.

Man's intervention in ecological systems has lead to landslides, floods and even storms/cyclones. Hence, relationship between human modification of ecosystems through development and the presumed naturally occurring disasters cannot be ignored.

Global environmental changes, whatever aspects considered, must include, impacts due to changes in urban expansion on natural ecosystems. Therefore, sustainable development, has to include access to natural resources which are the basis of survival.

Whatever, benefits urbanisation has brought to the nation in past 50 years, has also brought about degradation of cities' natural resources. The deforestation of hillsides, paving over of soils, pollution of streams, cutting of roads, in the hilly areas only have led to increase of vulnerability of settlements, to disasters like floods, landslides and droughts.

Apart from above, the urban environment services for which cities were an attraction have become over pressurised and overused due to urban growth beyond their capacities to provide for. If present trends of the growth continue, and ensuring environmental deterioration pose grave risks of resource degradation and vulnerability to disasters. Left unabated the affects of natural events will continue to take an increasing toll of lives and property. Specifically those who are least able to afford the losses.

The Indian monsoon, which has traditionally brought mixed offerings, brings greater grief than usual to the subcontinent. Ferociously lashing out at large parts of the country, leaves both citizens and state agencies struggling to cope with the widespread devastation. In the battered states of Uttar Pradesh, Bihar, Bengal and Assam, over 2,000 people been reported as dead during last year, eight million rendered homeless and property worth Rs. 5,000 crore damaged. Worse, the departiing monsoon has delivered an unkind coup degrace to western India, with Maharashtra and Gujarat reeling under its impact. Thirty-one deaths had been reported in Maharashtra and ten in Gujarat. Although the Gujarat government had evacuated over 1.5 lakh residents from six of the flood-affected districts, a staggering 10 lakh people were left are still struggling to cope with the devastation in Surat, Vadodara and Bharuch. Indeed, flooding in Gujarat threatened to cripple other part os the country as well, with officials fearing a widespread power crisis in northern India since the vital HBJ natural gas pipeline originating at Hazira – which feeds a number of power plants in other states submerged under water.

As in the case of the Malpa landslide, a natural tragedy has had a multiplier effect because of lack of vision and a seemingly perverse determination to learn nothing from past mistakes. Take the case of Gujarat, which has still not recovered from the effects of the killer cyclone in Kandla last year. Despite these bitter experiences, the government has failed to put in place a comprehensive disaster management plan. Predictably, Chief Minister Keshubhai Patel had announced a relief grant of Rs. 2 crore and galvanised the army and navy to assist the state agencies in ameliorating the situation. While this brought some succour to the victims, Gujarat, like other similarly affected states, need to go beyond repeated one-time relief operations. A full-fledged disaster management plan would yield a more accurate prediction of crises and better co-ordination among state agencies.

The lower income families are the most vulnerable. Although the enormity of risks of impacts of natural disasters would depend upon the local situation but it has been established that damage in terms of costs of loss would be much more in cities than in rural areas due to cost of assets in terms of property and infrastructure that could be affected. On the other hand life of urban poor who have neither resources nor information of the impacts and possible disasters, are at risk.

The basic reason for the poor to be most vulnerable are threefold.

1. Poor coming from surrounding rural areas or smaller towns in search of labour/employment find places in the high risk zones of the cities e.g. flood plains have little or no means to mitigate the impacts of associated natural events, through prevention or preparedness measures e.g. in Delhi around 2.5 lakh population lives in slums which have mushroomed in flood plains of Yamuna.
2. Unable to satisfy their need for food, material and fuel.
3. Victimised by modification of environment by themselves or others,to the extent to benign natural events constituting hazards.

To a greater or lesser degree the urban poor in the region suffer all the three conditions. IDNDR was expected to affect the way development takes place. Howver, with all the need and all the competing claims for assistance, the decade was not expected to bring any change in the region, it has affected only in the manner in which environmental change is managed in urban areas.

For instance, in the case of Surat, the Ukai dam authorities in Gujarat had been charged with not being sufficiently alert in monitoring the rising water levels in the catchment areas of Madhya Pradesh which feed the Tapti river. Had they released the Tapti waters in proportionate instalments, they could have averted the flash floods that submerged 80 per cent of the city last year. The lapse resulted in an entire repetition of the events of 1994 in Surat which culminated in the plague scare and made that textile city an international pariah.

Safe building sites are the very first step that development has to consider. Yet the issue of landuse and disaster vulnerability is one of the most conflicting issues of environmental change with, urbanisation.

Food is another obvious issue of environment change. Regional interdependency on basic food resources and local production are affected by landuse change and resources degradation Compounded by impact of natural events make this basic need, particularly *in form of water* very vital.

Fuel crisis have come and gone for some sections, but for urban poor, the dependency on locally obtainable cheap fuel is a contributor as well as impact of disaster vulnerability because of the landuse change

Extensive extraction of building material for urban development has significant contributions to risk of rendering areas vulnerable to disasters. Buildings, specifically shelters, have always been built by people themselves in these urban areas without considering codal provisions for the design and construction of buildings. In fact, major loss of life was notified in Latur due to collapse of buildings, which were built without any consideration of impact of seismicity in the area

Looking at empirical evidence, it is not enough to say that given enough time and monitory resources, provisional shelters can be transferred into acceptable safe shelters or that housing could change in social status There are important distinctions that generally separate low-income settlements from other settlements in urban areas. Such distinctions are based on the difference in access to certain goods and services provided by ecosystems that encompass the urban area, the peri urban and hinterland for such items like water structural timber, waste disposal and recreation areas. The location and expansion of the cities in the region are basically in response to utilisation of these services on-site or nearby. Over time however, less vulnerable sites have become scarce in relation to population increase and its demands

Due to scarcity of land and pressurised infrastructural services, the densities in urban settlements are much larger which render, these agglomerations, more vulnerable, as the number of causalities per disaster would be much more than in less dense areas

Due to increase in pressures on civic services the law enforcement agencies are unable to discharge their duties effectively. Densities give rise to further deterioration of, already complex law and order situation as the law of 'mightest' prevails in such densities to have acess even to whatever minimum is available, of urban Basic services This gives rise to crime, snatches and burglaries and inadequate power supply, water supply and sanitation conditions in these illegal settlements have been instrumental in major crimes in the metro-politans.

Dynamics of change in urban settlements planning that allow economic activities within residential areas pose risks, which become instrumental in hazards like fire. Theft of power in the illegal settlements more than often, becomes a cause of major fire Direct and indirect losses due to fire, in India are estimated to be more than 1200 crores annually with around 20,000 fatal injuries. Economic cumpulsion to expand sky words in mega cities due to exorbitant costs of land, are leading to multi storeyed buildings. Frequent fires in these buildings demonstrate that attention to fire safety is minimum, in design as well as construction and maintenance. The main cause has always been inadequate water supply to these areas., improper maintenance of fire hydrants and narrow lanes for fire escape where fire tenders can't move for rescue

Urban centers also suffer on account of health risk. Inadequate sanitation and civic services and high densities once again promote these risks Often it is only, when alarming happenings take place e.g plague in Surat, that the Governments get encouraged to formulate policies and action plans for improvement of urban areas.

It is a common site to see hazardous wastes having been dumped in the open. 40 per cent of wastes in India cities is not even collected. Toxic wastes from effluent of industries located invariably in and around densely populated areas are often. Health in urban areas due to increased emissions of CO_2, CO, SO_2 paticulate matter, is virtually making cities havens to live. Major cities like Delhi, Mumbai, Chennai had 3.5 million vehicles in 1991 and now the number alone is more than the other three mega cities.

(Buildings) Encroachments and extensions of buildings without consideration to the codal provisions for safety of structures against earthquakes, are a common site in urban areas

Urbanisation and globalisation have led the country to increase in number. of individual vehicles A car consumes 5 times energy per person against that used by a bus as a public transport emissions are 5.7 times more in a car than bus.

Growth of cottage industries and hazarduous industries in urban villages in large towns is a threat, as any law does not govern them. In fact, urban villages called Laldora areas have become havens for storage and trade of toxic materials. An inventory of such areas is neither available with regulatory bodies nor the people residing or employed in such areas, are, aware of the risks involved Country looses 1 per cent housing stock every year by one or other natural hazards

Therefore, it is high time that urban development may not be measured by increase in economic activity and benefits in terms of only financial outputs, but development need to based on indicators like health of people, pollution levels, state and quality of shelter available. Availability of urban basic services like water supply as well as social infrastructure like health, education and security of people.

Therefore challenges before urban managers are to be able to work for:

1. Resource Mobilisation
2. Risk Mitigation
3 Poverty Alleviation
4. Emergency Planning
5 Strengthening of information base, by preparing hazard maps and microzonation
6. Dissemination of information to grass root levels
7. Encourage coordination between multi-disciplinary actors in Disaster Management
8. Improve skills and knowledge base of nodal officers in the task force.
9. Control and integration of policy planning into physical planning of the cities
10. Identification of NGOs with specific skills in preparedness, mitigation and management disasters.
11 Identification of training institutes for training of nodal officers as well as communities
12. Preparation of risk assessment and disaster assessment modules at district level
13. Adequate medical research and treatment facilities in treating the hazard inflected diseases.
14 Strengthening of buildings and shelters for mitigating impacts of disasters.