

Book Review

**NATIONAL DISASTER MANAGEMENT GUIDELINES :
MANAGEMENT OF URBAN FLOODING**

A PUBLICATION OF THE NATIONAL DISASTER MANAGEMENT AUTHORITY,
GOVERNMENT OF INDIA

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Dr. Subrata Biswas

Assistant Professor

Ramakrishna Mission Brahmananda College of Education, Rahara, Kolkata-700 118

INTRODUCTION

It is a useful document to realize the necessity of planning and management of urban flooding, especially in the era of globalization. Flood is a major concern in India. The National Disaster Management Authority (NMDA) has considered the matter seriously. Previously disaster management has largely focused on riverline floods in rural areas but now special focus has been given to resolve the problems associated with urban floods from economic to epidemic. Factors contributing to urban flooding have been very appropriately presented through a tabular form for further course of action. Statistical data has always been effective in drawing up plans for management programme.

With the cooperation of NMDA, management programs will implement the policies of prevention and recovery. The nodal ministry and other ministers and departments will address specific disasters as assigned to them. Keeping in mind the various issues the strategies are planned out. Science and Technology play a significant role in monitoring and forecasting it. Thereby it will act as a decision support system. By setting up a vulnerability based geospatial framework the preparedness of urban flooding may be improved. Establishment of local networks for real time rainfall data will be accorded the highest priority. Doppler Weather Radars will be calibrated with real time rainfall data from local networks. After the generation of the flood forecast the disaster management can characterize the flood severity and implement the associated flood management plan. The ultimate objectives of urban flood management are to provide ways and means to deal effectively with the possible flooding in urban areas. Success of such a system is closely related to an individual's knowledge of flood risk and their familiarity with emergency response procedures.

BRIEF SUMMARY

However, the density of population and drainage system in urban areas has become a challenge. So, the development of an adequate and functioning drainage system has been taken up as a prime concern. A strong resolution has been taken up of desalting all major drains by March 31 each year. Completion of work will be certified by local authorities. Thus, a master plan has been prepared for desalting including an adequate budget to carry out all these operations along with manpower. Along with urbanization, many bridges have been constructed and many more roads and bridges should be constructed in such a manner that it should not block the drainage systems thereby stopping backwater effects. Special importance will be laid upon areas that are needed to be made flood proof such as Airports.

Rain water harvesting will be carried out to lower the peak. Basic intention is to create an engineered terrestrial ecosystem which has significant aesthetic value. In this case rain gardens have been considered as effective measures for storm water management programmes. Urban storm water management system will include detention and retention facilities to come over the negative impact of urbanization and storm water drainage through integrate planning and coordination. Special attention will be laid on cities located near coastal areas and near river banks. It has been observed that development cannot be sustained unless disaster mitigation is integrated into the planning and development process. The hydrologic and hydraulic characteristics of different risk factors have been considered to be an integrated manner by the management. Models will be provided regarding the information about expected flood frequencies and magnitudes. Flood hazard assessment will be made for standard baseline conditions to ascertain level of risk of flooding on the basis of projected future scenario of rainfall intensities. Cost saving due to reduction of flood damage must be compared with the cost of implementing flood management measures. The development impact assessment and emergency response management system is used for generating early warning based impact assessment scenarios for response planning. Authorities will work out micro level analytical tools with appropriate interfaces. The responsibility of maintaining the information will be shared between different organizations. The process of managing flood will comprise of the documentation of the problem, setting up flooding standards and preliminary goals. The involvement of stake holders will enable profound understanding of flood risks, the community needs and the identification and implementation of flood management measures.

CRITICAL ASSESSMENT

The growing awareness over the years on environmental protection and sustainable development has further laid emphasis on sound environmental management practices. Planning and developments are state subjects and therefore the development in the states is based on the

legislative support as applicable in that state. There should be restrictions of building activity in the vicinity of certain areas especially nearby water-bodies. An incentive should be provided to the owners interested in undertaking of recycling of waste water and rain water harvesting structures. Response measures were taken immediately prior to and following an event and it became very crucial in saving lives and protecting property because flooding has localized impacts on commercial, industrial and institutional areas. Thus, Disaster Management Plan is very important. Officers-in-Charge of drainage and sewerage will be part of the Incident Response team. The National Disaster Management Guidelines on incident response system is prepared and updated by the NMDA. On emergency situations, evacuation will be carried out at shortest notice and may continue as severity increases. Additional temporary arrangements may have to be planned depending upon local conditions. Community level teams will play an important role in planning and assisting in them and work in coordination with the official machinery. Urgent steps should be taken to restore water supply on war porting after the event. Children, Women, the aged and differently-abled will be given special attention. Periodic simulation exercises and work drills will be organized and made mandatory on the lines of pilot initiations of NMDA for ensuring effective functional emergency response along with the inventory of community resources and assets. There is a major gap in the number of fire stations, firefighting and rescue equipment and trained personnel.

Design and development of relevant educational and communication campaigns and launching them from time to time is important. This will manifest itself in better and timely strategies for disaster risk reduction. NMDA has for the first time decided to address urban flooding as a separate disaster, delinking it from floods. Therefore, this book has potential impact on its readers.

CONCLUSION

The National Guidelines for Management of Urban flooding have been formulated by taking every precautionary steps required, even on the basis of economic or social ground. The process includes a vast field of science, technology and humanities. Incorporation of different fields of work will lead to success. The book contains all the details required by planners including statistics and research table. The process of evolving the National Guidelines for management of urban flooding has been very challenging. Through the early warning system and communication, the challenge will be easily overcome. Careful monitoring and maintenance will strengthen the hands of NMDA. Proper measures from every aspect of life have been introduced to rescue humanity.