

## **National Disaster Management Guidelines by Management of Urban Flooding : A Bird's eye view**

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### **Abstract:**

'National Disaster Management Guidelines' by Management of Urban Flooding is an informative and insightful book and a must read for people with keen interest to work on, or learn different aspects of Urban Flood management. The book elucidates how urban flooding is different from rural flooding and therefore, it is imperative to set up guidelines to address the issue separately. The book analyses and explains the contributing factors to urban flooding, details of requisite and existing institutional framework and arrangements, early warning systems in a straight forward and crystal clear manner. Both the language and style of writing are simple and lucid. A novice in the subject can also acquire myriads of information, insights and ideas, broaden his or her understanding of the subject and an inquisitive mind gets a kick start to explore, analyse different aspects of the subject, imagine and innovate new ideas through introspection to work on it.

**Keywords:** Disaster Management, Urban Flooding, Flood control measures, Awareness generation.

From the very beginning of the book, the management stresses on addressing the issue holistically and on an altogether new or different level. In the executive summary of the book, it is explained how exactly the guidelines are presented in ten chapters in a 'step by step' approach. The book also provides a gist of some of the key points. Such a systematic approach intrigues a reader into the subject. As I finished reading the executive summary, action plans and introduction, I gradually felt like delving more and more into the crux of the matter. The book says 'A significant part of urban management framework is dependent upon the use of science and technology for improved monitoring, modelling/ forecasting and decision support systems.' Setting up a vulnerability based geospatial framework to generate and analyze different scenarios is recommended in the book, which will help in 'identifying and planning for the most effective/ appropriate actions in a dynamic way, incorporating day-to-day changes that take place in urban areas, with the potential to alter the vulnerability profile.' The disaster management strategies, as discussed in the book, relies heavily on science and technology and Doppler weather radars, national hydrological information system, sensor web development, measurement of flood levels, decision support system are some crucial tools to access hydrologic and climatic data in real time. Use of flow chart makes it easier for a reader to understand the entire system. Flood detection and forecast system, assessment of flood hazard and time available, decision support, flood warning and response system are pivotal to

formulate strategies. From the beginning to end of the book, a 'holistic' and a 'multidisciplinary' method is devised, which is paramount to address such a complicated issue.

In chapter 8, it is written 'The factors causing urban flooding are significantly different when compared to riverine flooding, which mostly impact rural areas. Cities and towns did not remain isolated when large tracts of rural areas got flooded but flood management strategies largely formed on covering extensive rural areas'. Realising that factors contributing to the urban flooding have also aggravated over time with rapid urbanisation and increasing population densities, it is crucial to formulate new strategies to deal with such events. The primary focus of the guidelines is on 'capacity development', by extensive use of science and technology.

Disaster related curricula have already been introduced by the Central Board of Secondary Education (CBSE) for classes VIII, IX and X. It has to be clearly brought out that urban flooding is different from riverine flood which largely affects rural areas. The MOUD, in consultation with the MHRD, will encourage the CBSE to include modules of UFD in classes XI and XII as well. ' Thus, the management consistently emphasize on the distinctive nature of Urban flooding from rural flooding throughout the book. Including extensive urban flood education at the school level for capacity development is indeed a commendable strategy devised in the book. Also, developing suitable modules for inclusion in the curricula of architecture and engineering courses in the IITs and NITs and other universities is one of the key recommendations, which will open doors to new innovations and designs to tackle the issue. The book says ' One of the major public health concerns in management of urban flooding is the possibility of breakout of epidemics after a severe flooding event. Besides this, trauma care and emergency medical care are also very relevant. ' Hence, the DM related aspects of medical education will be taught meticulously at different levels, so that the health workers can handle emergencies aptly.

The book emphasizes on the need to develop awareness generation campaigns to reduce urban flood vulnerability. Coordinated efforts of state governments, local authorities, insurance companies and other stakeholders are crucial to establish suitable hedging mechanism, like insurance of life and property and communicate its benefits. Public representatives including municipal ward members, MLAs and MPs have to address the issue at grass root level by developing and organising awareness generation programs among people. Last but not the least, radio, visual and print media should run aggressive media campaign to highlight the issue, besides the production of printed materials like brochures, pamphlets, posters etc. It would not be an exaggeration to say that the book has succeeded to address such a complex issue in an elaborate and holistic manner. The book articulates the need to design special programmes for differently abled, mentally challenged and elderly people- 'Specially designed public awareness programmes will be developed for addressing the needs of physically handicapped and mentally challenged people, women and the elderly.' (Page 140-141)

It's imperative to address the issue of urban flooding separately and awareness generation is crucial to deal with the aftermath of floods. The book 'National disaster management guidelines' by management of urban flooding will provide myriads of insights and information to formulate new strategies and definitely pave the way for new research and experiments in this regard.

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