

## EDITORIAL

*Floods are repeatedly in the headlines every year in local, national and international media. The problem of floods and their computation is one of the main and the most complex problems facing the hydrologists. The optimal development of water resources depends to a considerable extent on flood flow control, design and construction of structural measures like dams, embankments, etc. and taking proper measures for flood mitigation including non-structural measures like flood plain zoning, flood forecasting and warning, etc. There are several situations in which an estimate of future flood conditions is required for design or forecasting purposes. In the design situation, engineers and planners involved in the design of dams, spillways, river channel improvements, storm sewers, bridges, culverts, etc. need information on flood magnitude and frequency. In the forecasting situation, immediate information on flood magnitude and timing are needed. The detailed flood hydrology studies, are essential for understanding the runoff process in the catchment and stream channel in order to develop general and better methods for accurate flood forecasts and design flood predictions.*

*The problem of floods in India varies from basin to basin, so also the magnitude of damages caused by floods. The most flood prone areas are in the Brahmaputra basin and northern sub basins in the Ganga basin, Dam failures caused due to overtopping or seepage and piping, and other causes also lead to catastrophic floods. Flood plain management aims at the best use of flood plains and their water resources for the welfare of the country using strategies for modifying the flood, reducing the susceptibility to flood damage and reducing the impact of flooding.*

*This issue of 'Jalvigyan Sameeksha' is devoted to the theme of 'Flood Hydrology'. Various important aspects covering flood plain zoning, dam break floods, flood routing, design flood, flood management, forecasting, etc. have been covered by different authors. It is hoped that these would provide useful ideas and information regarding this important aspect of hydrology to all concerned.*

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