

EDITORIAL

Hydrological and hydraulic design of water resources projects depend to a considerable extent on the information about hydrological processes obtained through observations at measurement sites/stations. Hydrological and related meteorological data provide information for developing and managing the water resources, forecasting flood discharges of stages, low flows, operation of reservoirs and hydro-electric plants, planning, management and utilization of groundwater etc. and also provide data base for hydrological modelling and research studies. In spite of importance of hydrological network design, studies for determining its optimum density are not extensive in many countries and particularly so in India. The basic scientific problem in network design are to determine how many data acquisition points are required and where to locate them. The diversity of terrain and of water problems throughout the world makes it impractical to derive one universally satisfactory procedure for the design of hydrological network.

The ideal hydrological network design would incorporate knowledge concerning the physical and stochastic nature of hydrological processes into a framework that accounts for the effects that the data will have on future water resources decisions. It should be stressed that the network design is an iterative process, and design is to be reevaluated and updated providentially considering climatic and physiographic factors, population and other indices of water resources development.

This issue of 'Jalvigyan Sameeksha' is devoted to the theme of Hydrological Network Design. Important aspects covering networks for rainfall, groundwater, flood forecasting etc. and status of hydrological network in some states, have been presented by different authors. It is hoped that the ideas expressed and information provided would be useful for all dealing with this important area of hydrology.