

3rd International Conference on **Hydrology & Meteorology**

September 15-16, 2014 Hyderabad International Convention Centre, India

Present status of lakes in Bangalore important for recharging the groundwater level

Nazima Noor, Monalika Prasad, Gopal H R, Chandra Shekar S, Rashmi V and Bela Zutshi
Bangalore University, India

The destruction and disappearance of lakes is a severe threat to Bangalore city since they are the only source of ground water, irrigation and potable water. In the present investigation, the water quality analysis of the few selected lakes and the exact nature, cause and levels of the pollutants was studied. The water samples were collected from different lakes, viz., Hebbal lake, Vengaiiah lake, Yellamalappa Chetty lake, Madivala lake, Hulimavu lake, Arekere lake, Heelalige lake, Hebbagodi lake, Chandapura lake and Veerasandra lake which belong to different lake series of the three water-valley-systems of Bangalore city. The following water parameters viz. pH, turbidity, COD, BOD, DO, TSS, TDS, conductivity, total alkalinity, nitrate, sulphate, phosphate and calcium were analyzed along with morphometry, flora and fauna associated with the lake environment. Plankton diversity and anthropogenic activities affecting the lake-use patterns were analysed. Wide range of results in the parameters was seen depending upon the type of wastes and other effluents discharged into the water and its pollution level. High level of nutrients such as sulphates, phosphates and nitrates and dissolved phosphorous were the main cause of heavy eutrophication whereas high level of BOD and reduced levels of DO showed that the water quality was not good for the aquatic organisms to flourish. It was also noted that the bio-diversity of these lakes have been adversely affected due to its indiscriminate use. The decrease in number and water quality of lakes in Bangalore has the direct relation to urbanization and industrialization which is going at an immeasurable rate. It is a direct measure of the status of management of anthropogenic activities, management of land, solid waste collection and disposal, disposal of used water, and also the attitudes of people in general. Standard values for freshwater bodies given by BIS: 10500-1991 (revised 2003) were used for the comparison of water quality in general.

bela_zutshi@yahoo.co.in