

Conference Report

A National Seminar on “Water crisis and its management”

The Institute of Science Education, & Culture organised the National Seminar on “**Water Crisis and its management**” on September 27, 2014 in collaboration with Birla Industrial and Technological Museum (BITM), Kolkata. Prof. Santanu Das, Vice President of the ISEC coordinated the event.

In the 1st Technical Session, Prof. Gouri Pada Dutta of ISEC, was the Chairman. He reiterated to draw the attention to the issue of water conservation and misuse of water. First speaker was Dr. Ajoy Kumar Mishra, former Superintending Hydro-Geologist, Central Ground Water Board, Government of India. Dr. Mishra reviewed use of water and its need for drinking and other consumptions. He also pointed out that 2.2 million people die each year in diarrhoea as per WHO 2011 report, 1.5 million children die due to arsenic pollution in water, and 15,000 deaths per day occurs on each day due to water pollution. He reviewed demand of water nationwide, and showed that this demand of water in India is just above Ethiopia but quite less than the other developed countries. It was mentioned that acute water scarcity exists in many regions worldwide and in large part of India also. Increasing amount of salinity and depletion of ground water level are two major problems that should be addressed to. For example, he pointed out that in New Delhi, water table below ground fall to 61.18 meter in 2007 from that of 26.6 meter recorded in 1996. Also, due to indiscriminate extraction of underground water in Gujarat and Tamil Nadu coasts, in particular, salinity became a stringent problem for agriculture and ecological characteristics of that region. Too much use of pesticides and nitrogen-base fertilizers also affect water quality. Pollution due to arsenic, fluoride, excessive iron, salinity, etc. are also creating health hazard to human beings and ecology. Recharging water into underground aquifer may drive away saline water. Use of open surface water, protecting water bodies from pollution, storing rain water, drip irrigation, aquifer mapping and educating people regarding the imminent problems of water crisis would be the major steps to consider, opined Dr. Mishra.

Next speaker in this session was Dr. Asis Bhattacharya, former Mission Director, Indian Space Research Organization (ISRO), Government of India. He talked on “Application on Remote Sensing and Geographical Information System (GIS) for Water Resources and Crisis Areas”. He pointed out two crisis areas such as less availability of water and poor water management. Satellite pictures collected by ISRO could be analyzed to find out the presence of water bodies, forest or vegetation areas, etc. Geographical Information System (GIS) could well be utilized for mapping hydrological information, ground water depletion over time, presence of conduits, etc. Some simple strategies to distinguish features to extract from the satellite images were also discussed by Dr. Bhattacharya. He pointed out that even situation of soil erosion, flood and draught could be detected through the GIS, and these happenings could be monitored time to time.

The 2nd Session was chaired by Prof. Santanu Das, Vice President of the ISEC. In this session, Mr. Subrata Hal-dar, Executive Engineer (Agri-Irrigation), Department of Water Resources Investigation and Development, Government of West Bengal discussed on “Water Crisis Management”. He deliberated initially on different aspects of prevalent and forthcoming water crisis in wide areas of India, and West Bengal, in particular. The problems of salinity of water in coastal and inland water bodies, high arsenic and fluoride content in water were pointed out by him. The need of restriction on use of underground water and storage and use of rain-water were stressed upon. Recharging of water to raise underground water level, use of sub-surface dam, micro or drip irrigation, implementation of water scanty system of cultivation were also discussed. Protection of Ramsar wetlands (25 such wetlands demarcated in India) is much required. Projects like supplying flood water to drought-affected areas might be explored, he opined. Then he outlined possible techniques to combat this crisis.

(A few photographs are given in back inside cover)

*Prepared by Santanu Das,
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