

## **Report of Special Lecture Delivered by Prof. Ramkrishna Maiti**

A special lecture has been organized by the Department of Geography, Diamond Harbour Women's University on 04.06.2021 (Saturday) from 10.30 a.m. through online mode amidst the disastrous COVID-19 pandemic situation. Prof. Ramkrishna Maiti, Professor, Department of Geography, Vidyasagar University, West Bengal has delivered his valuable lecture on **“Water budget at Watershed Scale: Necessary Input for Management”**. The Google Meet Link of this Special Lecture is – <https://meet.google.com/ebx-zans-rpy>. Total 89 participants including research scholars and the students of 2<sup>nd</sup> and 4<sup>th</sup> semester have attended this special lecture. Prof. Maiti has focused upon the hydrological techniques to prepare water budget at watershed scale in the perspective of water resource management. Water crisis is truly a thought-provoking issue in the contemporary time period as the water resource is not equally distributed worldwide and, in this context, appropriate water management at watershed scale is mostly significant now a days. In his lecture Prof. Maiti has mainly highlighted the need for watershed, hydrological parameters (runoff and river-discharge, infiltration, evapotranspiration), water budget and management options. He has elaborately defined the concept of conservation of mass, watershed, diversity of physical and human resources in the different parts of the entire basin area. He has also broadly discussed about the estimation techniques of multiple hydrological parameters for computing water balance. In this aspect, various estimation methods of water discharge e.g., floating method, dye tracer method, salt dilution method, preparation of rating curve, application of water current meter and doppler have been thoroughly deliberated. Beside this, measurement of runoff applying hydrograph and SCS Curve No. Model have been intensively explained in the session. Prof. Maiti has simultaneously pointed out the crucial role of land use pattern in terms of water availability in different sub-basins. He has explained how the SCS Curve Numbers depend on soil conditions and the calculation method for estimating the sub-watershed wise runoff with the help of SCS-CN method. Furthermore, the methods of infiltration measurement using single ring and double ring infiltrometer and the calculation of the cumulative infiltration volume according to Horton (1939) have been explicitly described. Parallely, Prof. Maiti has vividly represented the estimation of evaporation using evaporation pan and calculation of potential, actual and cumulative evapotranspiration according to Penman (1948, 1956, 1963) and Jensen et al. (1990). Finally, the community initiatives in water harvesting have been broadly analyzed in this lecture session. The contribution of in-channel intervention e.g., construction of large dams

and check dams as well as away-channel intervention e.g., contour bunding, construction of artificial recharge pit, excavation of new ponds, surface water storage in the aspect of watershed management have been immensely reflected with proper examples of arid and semi-arid regions. The remarkable fact is that Prof. Maiti has specifically emphasized upon the roof-top harvesting technique and highlighted its significant relevance in water resource management. A vigorous interactive session has been continued for one hour and Prof. Maiti has clarified all queries of students and scholars regarding water resource management. It must be mentioned that the students and scholars are definitely enriched from such a valuable, informative and commendable lecture of Prof. Ramkrishna Maiti.

