



Experiments with artificial rain on different types of soil and vegetation covering in experimental basins in Romania

A.M.Mainerici

National Institute of Hydrology and Water Management

This paper presents the results of an artificial rain experimental program, used for the study of the infiltration process and erosion processes generated by superficial runoff, depending on different types of soil and vegetation covering. The three basins are situated in hilly areas of the Sub-Carpathian region and are characteristic for this physical-geographical unit from the point of view of the vegetation covering, soils and values of mean slopes. The artificial rain program simulated rainfalls of different intensities. From the rainfall-runoff process analysis resulted that infiltration varies from an initial value equal to the intensity of the rainfall, to a stabilized value, the obtained data showing the dependency of the infiltration process to the conditional factors and the intensity of the rainfall. Also, the erosion process analysis was made on artificial rain runoff plots of land, through the analysis of water samples from the surface runoff, taken at small time intervals on terrains with different physical-geographical characteristics. The results showed that the total load varies depending on the slope of the terrain, initial soil humidity and the degree of soil processing.