



Investigation of interception, throughfall and stemflow of maquis vegetation in eastern Mediterranean region

G. Baloutsos (1), A. Bourletsikas (1) and E. Baltas (2)

(1) National Agriculture Research Foundation, Institute of Mediterranean Forests Ecosystems & Technology of Forests Products, Department of Forest Hydrology, Terma Alkmanos, Ilissia, 115 28, Athens, Greece, (2) Laboratory of General & Agricultural Hydraulics & Land Reclamation, Department of Hydraulics, Soil Science and Agricultural Engineering, Faculty of Agriculture, Aristotle University of Thessaloniki, 54006, Greece

Gross rainfall, throughfall, stemflow and interception losses were determined and studied for seven years (1996 - 2002) in an evergreen schlyrophylous species (maquis) stand of eastern Mediterranean region and specifically of southern - western Greece. The data were collected on a weekly basis and in this study are presented and analysed on a yearly, monthly and single rain event time scale. The seven years mean annual values of throughfall, stemflow and interception losses were 61.2%, 6.8% and 32% of the corresponding gross rainfall (1134 mm), respectively. The annual values were compared and discussed with those of studies carried out in the western Mediterranean region. The monthly values were analysed and compared with the corresponding values of gross rainfall through the year. Furthermore, throughfall, stemflow and interception losses were regressed, on a single rain event scale, against a number of meteorological variables. All the regression equations were found significant for at least 0.05 probability level. The equations were tested with the data of 2003 by means of comparison of predicted and observed values of these components. All equations yielded satisfactory estimates, especially from rainfall events greater than 10 mm.