



NATURAL AND ANTROPOGENIC INFLUENCE ON THE SOIL
EROSION INTENSITY IN THE KARAUJSKI BROOK
CATCHMENT – WESTERN SERBIA

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ABSTRACT

This paper considers the natural and antropogenic characteristics of influence on the soil erosion intensity in the Karaujski brook catchment – Western Serbia.

The Karaujski brook is classified as a ravine. The annual erosion intensity is 125.16 m³ km² of soil. Based on natural and antropogenic factors, the Karaujski brook catchment area belongs to erosion category III, of average intensity, surface type, with the erosion coefficient of 0.41. This analysis enables adequate soil and water protective measures to be taken for the purpose of agricultural production in the area studied.

Key words: natural factors, antropogenic factor, catchment, soil erosion intensity.

INTRODUCTION

Land degradation and soil loss are global events. Human induced pressures on natural ecosystems are still in progress, along with conservation efforts [1]. The main factor causing soil degradation worldwide is water erosion, which threatens 56% of the world's arable land [2].

Over 90% of the total land area in the Republic of Serbia suffers from different types and intensities of erosion [3]. The erosion process can have both direct and indirect impacts, inducing permanent soil disappearance. The calculated value of the total annual sediment yield suggests that some 16.0 cm of soil are annually eroded off the 21,000 ha of land in Serbia [4]. In the Republic of Serbia (Central Serbia), there are 1.221 million ha of eroded soil, and 36,000 ha are in a steady state, now [5].

Erosion has mostly affected strongly sloping, deforested or cultivated shallow soils on slopes, formed on impermeable geological substrates, due to the effects of intense rainfall and fluctuating air temperatures [4].

