

ECOLOGICAL RECONSTRUCTION OF DEGRADED LANDS FROM THE ZAGĂR IMPROVEMENT PERIMETER, MUREȘ COUNTY

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The problem that required the execution of technical improvement works was the existence of some sliding surfaces located on the slopes, behind which, after an initial stage of sliding, areas of excess water were formed, which without the execution of drainage channels would have led to the reactivation of the sliding processes of the slopes. In conjunction with the afforestation work, mechanical shaping of surfaces was also carried out, consisting of smoothing out roughness (ridges, mounds, slip steps) and levelling and levelling the topsoil. A greater number of species has been adopted in afforestation compositions to increase biodiversity, resistance of stands to impact with biotic and abiotic pests and thus increase their stability. Research under the theme aims to provide new insights into the behaviour of protective forest crops by comparing the data obtained. Observations have been made on the behaviour of species in mixtures and possible damage caused by abiotic and biotic factors. As far as erosion processes are concerned, observations were made on the areas where they are still active, the reasons why they have not been stopped and remedial solutions were proposed. Direct field observations and measurements were carried out, where sample squares were placed for each stationary unit under study. The sample markets were located in the most representative areas for each seasonal unit, the size and shape of the sample markets was determined to be 200 m² circular in shape, the radius of the circle being determined according to the slope of the land. Within these sample squares, diameters and heights were measured and the consistency, vitality of the trees and the existence of undergrowth was determined. Observations were made, both in the sample and overall markets, on aspects related to: the current composition and composition of afforestation, the differences that occur, the causes that led to the disappearance or appearance of some species; the influences they had on each other (inter-specific relationships); the influence of forest crops on erosion processes; the influence of abiotic factors on forest crops and the course of the natural regeneration process in the perimeter crops.

As a recommendation, it is necessary to fill in the areas of land where forest vegetation has not been established with species that have proved to be well adapted and vital in the existing seasonal conditions, and to build a drainage network.

Keywords: ecological reconstruction, erosion, species mixing.