

The Role of Trees in the Evaluation of Slope Stability

A. Arslanov – Bashkir State Agricultural University, Graduate student of chair of an environmental engineering, Ufa, Republic of Bashkortostan, Russian Federation

R. Mustafin – Bashkir State Agricultural University, Associate Professor, Head of the department of an environmental engineering, construction and hydraulics, Candidate of Agricultural Sciences, Ufa, Republic of Bashkortostan, Russian Federation

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In the Russian Federation a significant proportion of the territory is mountainous forests (over 40%), and trees and shrubs slopes, carrying out environmental and safety functions. They regulate the flow of water, protect the soil against erosion, regulate the wind mode, prevent downward movement of cold air masses, prevent mudslides, avalanches, landslides, changing air circulation. This circumstance is caused by the need to develop silvicultural practices to ensure the prevention of decrease in their stability and the formation of plants, excluding erosion.

Because the root system of trees and shrubs is traditionally considered one of the most effective means to strengthen the slopes, the development of appropriate calculation methods and their subsequent implementation in the design, development and construction, to provide reasonable and necessary information to a wide range of stakeholders and organizations.

Specific adhesion of ground roots of trees and shrubs was taken into account by the authors in the root layer of thickness $2,0 \pm 0,5$ m. The degree of this increase is set by the results of a survey of vegetation on the slope.