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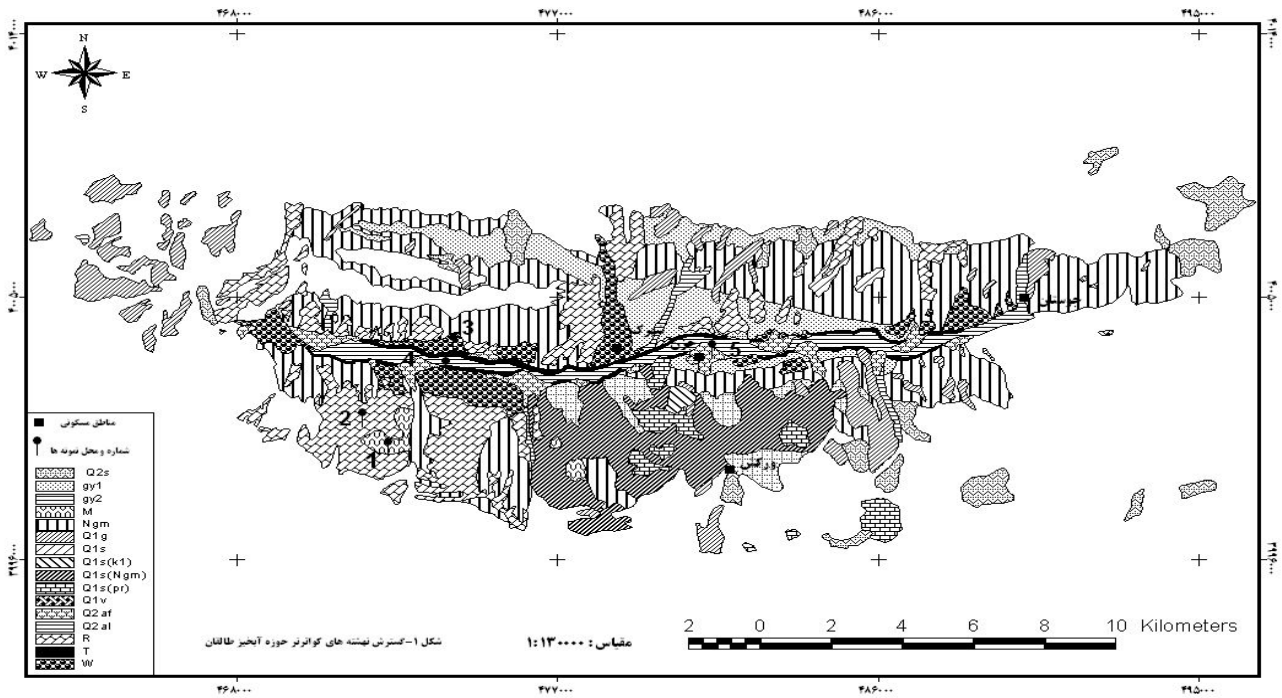
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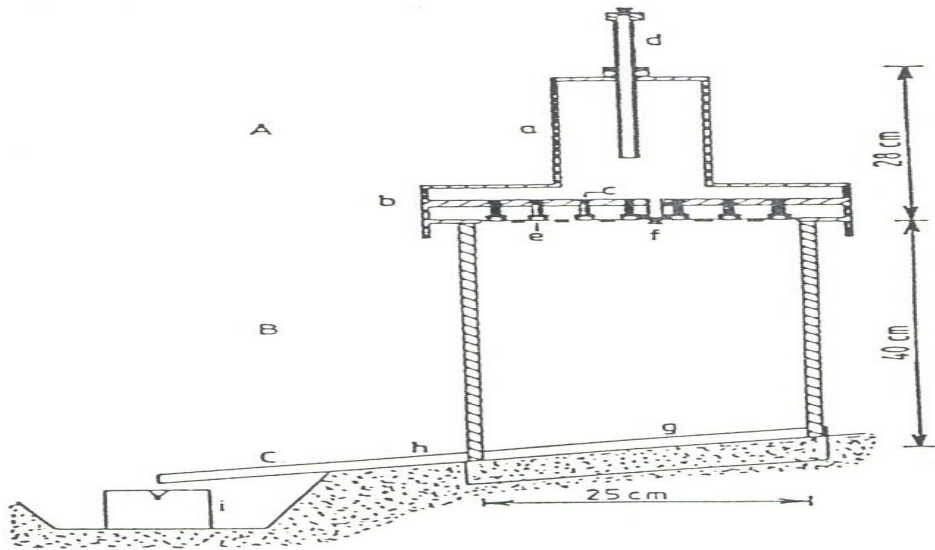
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## Erodibility of Quaternary Alluvial Terraces of Taleghan Drainage Basin, Iran

S. Feiznia<sup>1\*</sup>, A. Mohammadian Behbahani<sup>2</sup> and M. S. Zakikhani<sup>3</sup>

<sup>1</sup> Professor, Faculty of Natural Resources, University of Tehran, I.R. Iran

<sup>2</sup> M. Sc. Graduated in Combating Desertification, Faculty of Natural Resources, University of Tehran, I.R. Iran

<sup>3</sup> Academic Member of Islamic Azad University, Karaj Branch, I.R. Iran

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### Abstract

In this research Quaternary Deposits of Taleghan Drainage Basin were investigated, related map was provided and their erodibility was determined. The most widespread Quaternary Deposits of Taleghan Drainage are alluvial terraces which are as follows from the higher elevations to present alluvial river: "Mindel" Terrace, "Riss" Terrace, "Wurm" Terrace, "Torja War" Terrace. The erodibility of alluvial terraces and alluvial fan deposits were investigated by different methods. For this purpose, in the case of "Riss" and "Torja war" alluvial terraces having thin soil horizon, modified -K parameter in USLE model and rainfall simulator were used. For "Mindel" and "Wurm" Alluvial Terraces and Jazan-Varkesh Alluvial Fan having thick soil horizon, K parameter in USLE model and rainfall simulator were used. The results of this research have shown that the most widespread Quaternary Deposit of Taleghan Drainage is "Riss" with 2743 hectares and 2.4% area. Alluvial Terraces are mainly found in the center of Drainage basin. The amount of modified K parameter in "Riss" Terrace is 0.12 and in "Torja War" Terrace is 0.17. The amount of K in "Wurm" Terrace is 0.23, in "Mindel" Terrace is 0.16 and in Jazan-Varkesh Alluvial Fan is 0.05, the order of erodibility from the highest to the lowest is "Wurm", "Torja War", "Mindel", "Riss" Alluvial Terraces and finally Jazan-Varkesh Alluvial Fan. The order of erodibility from the highest to the lowest according to rainfall simulator is: "Torja War", "Wurm", "Riss" and "Mindel" Alluvial Terraces and finally Jazan-Varkesh Alluvial Fan. In conclusion, except for very coarse-grained alluvial terraces in which there are difficulties in using rainfall simulator, the results from K parameter in USLE model and rainfall simulator are in accordance with each other.

**Keywords:** Alluvial Terraces, Taleghan Drainage Basin, Quaternary Deposits, Erodibility, Sediment Yield.