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Some concepts relevant to rainfall erosion research and models

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Rainfall erosion depends on the erosive power of rain and the susceptibility of the soil to that erosive power. In the RUSLE, the erosive power of rain is related to the product of storm kinetic energy and the maximum 30 minute rainfall intensity. RUSLE Soil Erodibility values calculated from soil properties do not vary with geographic variations in climate. Detachment by raindrops impacting flows is directly related to raindrop kinetic energy or, alternative momentum. Transport equations develop for open channel flow apply to sediment transport by rain-impacted flows. All eroded particles travel across the soil surface at the same rate. Concepts such as those mentioned here have been used in studies and modeling of rainfall erosion. This paper will present and discuss the issues related to some of concepts relevant to rainfall erosion research and models.