Modelling rainfall erosion resulting from climate change

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It is well known that soil erosion leads to agricultural productivity decline and contributes to water quality decline. The current widely used models for determining soil erosion for management purposes in agriculture focus on long term (∼20 years) average annual soil loss and are not well suited to determining variations that occur over short timespans and as a result of climate change. Soil loss resulting from rainfall erosion is directly dependent on the product of runoff and sediment concentration both of which are likely to be influenced by climate change. This presentation demonstrates the capacity of models like the USLE, USLE-M and WEPP to predict variations in runoff and erosion associated with rainfall events eroding bare fallow plots in the USA with a view to modelling rainfall erosion in areas subject to climate change.