Geophysical Research Abstracts, Vol. 9, 00354, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-00354

Erosion prediction technology development in the United States

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Soil erosion on agricultural lands continues to be a problem throughout the world. Erosion prediction technology is used to assess the current susceptibility of the land to soil loss by water or wind, and then determine the effectiveness of alternative management practices at reducing the risk of excessive erosion. Most recent developments in the United States include the development and implementation of process-based erosion prediction models, web-based and GIS interfaces and extensive databases. This presentation will describe current U.S. erosion models and interfaces, as well as introduce work on a new project within the United States Department of Agriculture to create a combined process-based wind and water erosion model, utilizing components from the Water Erosion Prediction Project (WEPP) model and the Wind Erosion Prediction System (WEPS) model. An initial combined prototype model, developed in 2006 within an object-oriented modeling system, for wind and water erosion estimates for single/multiple events will be described and discussed.