Universität Basel

Research Project

Movement and Fate of eroded soil organic matter in small catchments

Project funded by own resources

Project title Movement and Fate of eroded soil organic matter in small catchments
Principal Investigator(s) Kuhn, Nikolaus J. ;
Organisation / Research unit
Departement Umweltwissenschaften / Physiogeographie und Umweltwandel (Kuhn)
Project Website http://www.physiogeo.unibas.ch/
Project start 01.05.2011
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Status Completed
Substance specific erosion and transport, for example of phosphorous or organic matter, plays an important role in regional, but also global geochemical cycles. Existing erosion and sediment transport models do not reflect the selective nature of these redistribution processes. The project focuses on erosion experiments as well as soil sampling in the field. Fractionation techniques developed by the research group aim specifically at linking the physical characteristics of sediment determing particle movement with the chemical properties relevant for the environmental impact of soil erosion, e.g. phosphorous contamination of lakes or greenhouse gas emissions caused by erosion.

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Published results

63803, Kuhn, Nikolaus J.; Hoffmann, Thomas; Schwanghart, Wolfgang; Dotterweich, Markus, Agricultural soil erosion and global carbon cycle : controversy over?, 0197-9337, Earth surface processes and landforms, Publication: JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

498499, Kuhn, Nikolaus J., Erosion and climate, 1752-0894, Nature Geoscience, Publication: JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

1002681, Kuhn, Nikolaus J.; Armstrong, Elizabeth K.; Ling, Amy C.; Connolly, Kathryn L.; Heckrath, Goswin, Interrill erosion of carbon and phosphorus from conventionally and organically farmed Devon silt soils, 0341-8162, Catena, Publication: JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

1548856, Kuhn, Nikolaus J.; Armstrong, Elizabeth K., Erosion of organic matter from sandy soils : solving the mass balance, 0341-8162, Catena, Publication: JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

1549171, Bai, YH., He, J., Li, HW., Wang, QJ, Chen, H., Kuhn, N. J., Hikel, H., Chen, F., Gong, YS, Soil structure and crop performance after 10 years of controlled traffic and traditional tillage cropping in the dryland Loess Plateau in China, 0038-075X, Soil science, Publication: JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

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