Geophysical Research Abstracts
Vol. 14, EGU2012-5661, 2012
EGU General Assembly 2012

New elements in teaching soil-landscape relationships

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A landscape is an area whose character is the result of the action and interaction of natural and/or human factors. Landscapes are fundamental spatial units for soil scientists working in the fields of soil survey and soil geography. For these scientists but also for those who use their products (e.g. maps), interrelations between geology, geomorphology, soil formation and derived soil patterns in relation to land use are keys to the understanding of landscape functions. Many of these relations have been documented in aging soil survey reports but these are often difficult to access. As a result, important and unique soil-landscape phenomena remain hidden for other environmental scientists or the general public. In the Netherlands, efforts have been undertaken to aggregate information from soil survey reports and recent scientific insights into a new book with the aim to teach students the basic elements in soil-landscape research and to provide insights into valuable earth phenomena that are in need of preservation and/or careful management. New elements include amongst others:
- State-of-the-art graphics to show how basic soil forming factors such as climate (change), parent material and time are interrelated.
- Detailed catenas for specific soil-landscape systems, showing the relations between geomorphology and soil genesis.
- Combining traditional soil maps with high-resolution DEM data to make soil-landscape relations more explicit.
- Indicating the extent and impacts of land use change using maps of land use history.
With this approach, current insights into natural patterns of geodiversity and pedodiversity are documented and available as a resource for education but also for policy makers working in the fields of geoheritage.