Geophysical Research Abstracts,
Vol. 11, EGU2009-9858, 2009
EGU General Assembly 2009

Alpine Soils as long-term Bioindicators

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The introductory words concern the definitions and peculiarities of alpine soils and their position in the Austrian Soil Classification 2000 in comparison with the World Reference Base for Soil Resources 2006. The important parameters for genesis and threats for these soils in steep and high positions are discussed. It must be emphasized that the main threats are the very different kinds of erosion e.g. by water, wind and snow, and also by skiing (end of season) as well as and mountain-biking (mainly summer-sport). Due the very slow regeneration and - in this connection – due to the very slow changes of the soil entities, these soils give an utmost importance as a long-time bioindicator.
With regard to the climate change one can assume an increase in the content of organic matter on site, but also an increase of erosion and mass movement on the other site, e. g. in kind of “plaiken” (soil slide) as result of an increasing intensity of rainfall.
It lies partly in our hands to diminish the number and the intensity of the threats, we can influence the soil development, but the result to reach a new ecological equilibrium is very long – in case of alpine soil more than two generations.