Geophysical Research Abstracts
Vol. 17, EGU2015-2023, 2015
EGU General Assembly 2015


# Northern Namibia′s Ehenge: marginal soil with high water use efficiency

Brice Prudat

Physical Geography & Environmental Change, Environmental Sciences, University of Basel, Switzerland
(brice.prudat@unibas.ch)

Farmers of North-Central Namibia identify Ehenge as a common soil type. It has been described so far as a (hypoluvic hyperalbic) Arenosol. The sequence of characteristic horizons is as follows: sandy A and E; thin accumulation horizon Bt on top of a Bg horizon. Farmers consider this soil as nutrient-poor with a deep loose sand layer on top of a very hard layer at a depth of several decimeters. Despite its low nutrient content, the Ehenge is usually cultivated because it holds water for a longer period than some more nutrient-rich soils. This is attributed to the combination of the sandy texture and the hardpan, generating rapid infiltration, but protection from evaporation and drainage from the root zone of the millet typically planted in northern Namibia. The development of agriculture in North-Central Namibia will determine the future use and preservation of these soils, as the presence of hardpan is commonly considered to be a limiting factor for agricultural development. Our research on the hydrology of the Ehenge demonstrates that this soil has a large potential for agricultural water use efficiency, in an area with very limited water resources if understood in the context of its current use by the Namibian farmers.