Classification of soil degradation intensity as a basis for land use and conservation strategy in Semi-Arid and Sub-Humid areas: an example from Misanga Catchment, Kondoa, Central Tanzania

Yanda, P.Z.

Institute of Resource Assessment, P. O. Box 35097, Dar es Salaam, Tanzania

Abstract

This paper addresses a need for classifying the intensity of soil degradation in degraded areas. Such information provides a guideline for developing appropriate soil and water conservation strategies. In this study, the "*Padogenetic Baseline Approach*" is employed for mapping spatial variations in the intensity of soil degradation in the Mwisanga catchment. On the basis of this methodology, the catchment was classified into two categories: the erosional and depositional zones. Through this approach, the eroded soils have been reconstructed even in those areas where there has been total soil stripping. Profiles of the un-degraded soil have provided a reference mark (particularly the argillic B horizon of Lixisols). One specific criterion for classifying the units in the depositional zone was based on relating the quality of the buried soil with that of the overlying young soil developed from the colluviums/alluvium. The potentialities of soils in different degradation units have been identified as basis for developing appropriate land use and conservation strategies in these different units.