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Thema
AG Digital Soil Mapping

Neue Methoden in Forschung und Anwendung

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Titel
The land evaluation tool within the Tanzania Food and Land Productivity Information System - A new and simple Web-GIS application for public use

Abstract

Within the framework of the transdisciplinary Trans-SEC project, financed by BMBF, it appeared necessary to develop a web-based GIS environment. This serves on the one hand the collection of available spatial data on the whole of Tanzania, but project internal data, too.

Apart from natural resource data collections and a map viewer, two tools have been implemented. The first one is the Tanzania Food Security Monitor. It automatically calculates in a ten-days cycle based o the Water Requirement Sastisfaction Index the potential maize production in order to pre-inform on potential food shortages.

The second tool is dedicated to land evaluation. The basic idea was to provide an easy to handle but flexible tool that allows mainly project developers to ex-ante evaluate the potential of agricultural innovations within their region of interest.

The tool is based on FAO principles and provides background data layers that have been provided with respect to soil by ISRIC http://www.isric.org/content/african-soilgrids-250m-geotiffs) and with respect to climate by the Potsdam Institute for Climate Impact Research.

In a guided way the user is led through five steps to produce and download the evaluation results. After choosing the area of interest, own data layers can be uploaded as geo-tiffs. The crucial step is selection of input layers and the parameterization of these. With respect to the evaluation algorithm a mixture of Storie Index and Averages was chosen, the ratio of which can be adapted. Finally the evaluation results can be downloaded as classified or non classified geo-tiffs for further processing in a desktop GIS.

Since the procedure is globally applicable, it is intended to transfer the tool to other regions of the world.