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The DecLaRe geospatial toolbox for West Africa: Land evaluation, micronutrients and more

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Abstract

Within the BMFTR-funded project DecLaRe a geospatial toolbox was developed in order to provide basic GIS functionality that enables to present and to work with data collected in an inter-disciplinary framework. The toolbox is completely based on open-source software and delivered in an encapsulated format so that it can be installed on servers or personal computers elsewhere for programme development or teaching. Major components are a land evaluation tool that enables ex-ante evaluation of intervention zones for agricultural innovations and a micronutrient tool that allows to detect potential human micronutrient deficiency based on local diets. Available data sets include bio-physical (e.g. soil, climate) as well as socio-economical (e.g. household composition, nutrition behaviour). The tool is free for distribution and can be used in other regions of the world if respective data sets are available.

Included baseline data concern the ISRIC soil data sets interpolated to 250 m, modelled climate data at 5 and 50km raster resolution (PIK), open street map information, digitised historical maps (e.g. geology), historic project data (e.g. BenSOTER) and FAO crop parameterisation.

Within the DecLaRe project the toolbox additionally served as a data repository in a password secured environment. That way project internal data could be compared and new ideas developed in order to create interdisciplinary output. The toolbox has the potential to be used across project boundaries. In future it will be installed at WASCAL (Burkina Faso), University for Development Studies (UDS, Tamale, Ghana) and at the University of Parakou (Parakou, Benin).

For detailed information on the software environment please connect to Terra GIS.

Keywords: DecLaRe project, GIS, land evaluation, micronutrients, spatial tools

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