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Set-up of a GIS-based Regional Agricultural Environmental Information System (RAEIS) in China

by
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Abstract
The Sino-German Project between the China Agricultural University and the University of Hohenheim, Germany, focuses on sustainable Agriculture in the North China Plain. One major focus of the project is the establishment of an experiment field near Beijing to investigate different agricultural practices and their impact on yield and environment. The second task is to set-up a Regional Agricultural Environmental Information System (RAEIS) for the North China Plain (NCP), which exceeds almost the size of Germany. Researchers from several departments are involved In the project: Agricultural Economics, Agricultural Informatics, Vegetable Science, Landscape Ecology, Phytomedicine, Plant Nutrition, Plant Production and Soil Science. The major aim of the RAEIS for the NCP is to provide information (i) about agriculture in the region, (ii) about the impact of agricultural practices on the environment and (iii) of simulation scenarios for sustainable strategies. Consequently, the RAEIS for the NCP provides information for decision support and therefore could be regarded as a Decision Support System (DSS), too. The investigation of agricultural and environmental issues have a spatial relation which demands the handling and analysis of spatial data. The use of GIS enables the capture, storage, analysis and presentation of spatial data. Therefore, GIS is the major tool for the set-up of the RAEIS for the NCP. This contribution discusses the problems of the set-up and presents the design and first results of the RAEIS for the NCP.

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