



Agricultural Model for the Nile Basin Decision Support System

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To analyze options for increasing food supply in the Nile basin the Nile Agricultural Model (AM) was developed. The AM includes state-of-the-art descriptions of biophysical, hydrological and economic processes and realizes a coherent and consistent integration of hydrology, agronomy and economics. The AM covers both the agro-ecological domain (water, crop productivity) and the economic domain (food supply, demand, and trade) and allows to evaluate the macro-economic and hydrological impacts of scenarios for agricultural development. Starting with the hydrological information from the NileBasin-DSS the AM calculates the available water for agriculture, the crop production and irrigation requirements with the FAO-model AquaCrop. With the global commodity trade model MAGNET scenarios for land development and conversion are evaluated. The AM predicts consequences for trade, food security and development based on soil and water availability, crop allocation, food demand and food policy. The model will be used as a decision support tool to contribute to more productive and sustainable agriculture in individual Nile countries and the whole region.