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Development of Sustainability Criteria in the Context of Bioenergy Production in Rural Tanzania: The Case Study of the Tandai/Morogoro

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Abstract

The production of modern and traditional sources of bioenergy such as liquid biofuels and biogas but also woodfuel and charcoal became an increasingly controversial discussed topic in recent years. This development was initiated by a whole set of distinct triggers such as global warming, “peak oil” and increase in fossil fuel prices as well as increasing prices for agricultural commodities. Due to the fossil fuels demand of the transport sector, the substitution via biofuels was mostly on the spot of this dispute. A lack of area and a supply gap evoked through changed exquisiteness of cash crops in Europe respectively prospected area or production potentials in developing countries. In Tanzania in October a moratorium on biofuels stepped back to small farmers and processors and fulfilment of sustainability criteria. These criteria are to be developed and still don't appear in the present draft of Tanzania guidelines on biofuels.

The contribution of the Leibniz Institute for Agricultural Landscape Research (ZALF) aims at a sound, comprehensive and locally grounded analysis of sustainability effects of woodfuel and *Jatropha curcas* production in the village of Tandai in the foothills of the Uluguru Mountains in Morogoro District/Tanzania. The recently completed field survey (expected accomplishment mid June 2010) followed, among others, also one distinctive research topic: The consensual based development of sustainability criteria as well as the related sustainability assessment for the local level. In the mid-term, the benefits and risks of the implementation of new energy crop value chains, or its compartments, should be assessed.

An outline and overview of an adequate set of sustainability criteria was developed and discussed at a local kick-off workshop in March 2010. Stakeholder with such different backgrounds as ministry officials, researchers and local farmers agreed consensually upon the hereby derived set, consisting out of social, economic and ecologic criteria. The next step, a village workshop in Tandai, adjusted the perspectives of the experts to the realities on the ground. Additionally, quantifiable criteria and qualifiable criteria were elaborated and their data requests summarised into a data collection questionnaire.

Keywords: Indicators, sustainability, Sustainability impact assessment, Tanzania