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“Development on the margin”

Biofuel from Forestry: Promising or Disappointing? The Case of Jatropha in China

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Abstract

Over the last decades, interest in Jatropha considerably increased as a promising tree for biodiesel production from non-arable land. Therefore, Jatropha has been promoted in many places like India, Africa and China. China represents an interesting case due to its political goal of maintaining food self-sufficiency, a steeply increasing demand for energy and a ban on biofuel production on arable land. The plantation of Jatropha on marginal lands has been one strategy to combine political goals and increasing energy demands. It not only supplies energy but contributes to income generation in remote areas and bears further benefits like decreasing soil erosion. The government initiated the plantation of Jatropha in the framework of a project called Forestry Oil Integration (FOI) scheme, a cooperation between state-owned energy companies and the State Forestry Administration. The aim of this research is the identification of factors for the success of government initiated energy forest projects on marginal land. Case study research was carried out in 2010 in two Chinese provinces, Sichuan and Guangxi, including stakeholder interviews at different levels.

The result of the survey is unexpected: All plantations in the survey area stopped. We identify three main factors for the failure: institutional factors, geographical factors and market risks. First of all, within the FOI scheme, governmental programs are combined and alliances with non-governmental actors are undertaken in a way that is not resilient to external shocks. The project failed in establishing sound institutions to prevent a complete failure due to external shocks. The interests of the local government and farmers seem to above all relate to the subsidies within the scheme, which is why the plantation stopped quickly after the termination of the subsidy flow. On the other hand, on marginal land, Jatropha is low in productivity and economic return, as well as very sensitive to frost. Finally, the sudden decrease of the market petroleum price in 2008 cooled down the promotion of Jatropha. The findings from the FOI project illustrate setting sound institutions capable to deal with external risks is required, which contribute to refining the previous study of Jatropha.

Keywords: Biofuels, China, farmers' adoption, institutions, jatropha, marginal land