



### News from IEI's Asian Regional Initiative in Bangalore (India) – June 2013

#### “Value-addition to food crop processing: converting banana plant-waste to cooking fuel”

In order to improve sustainable access to energy services in rural areas, we at IEI-Asia have been working on an “energy-development” model that **integrates economically-feasible income and employment generating activities** with **cleaner and/or more efficient energy services**. In this project, currently being implemented, the waste of newly-established banana plantations is being used to generate biogas for fuelling stoves.

Banana-plantations of tissue-cultured saplings have been developed in Ramanagara district, of Karnataka state (south-west India). Floating-drum biogas digesters have been constructed adjacent to these plantations. Residues from the banana cultivation -- stems from harvested plants and pseudo-stems from among the standing plants -- are being chopped and fed to the digesters. Details of the input are being recorded for the purpose of study and future replication.

Through anaerobic digestion, biogas (chiefly methane) is being accumulated in the gas-holders. These gas-holders are being linked by piping to surrounding households, so that they can be supplied with the gas as cooking fuel.

Meanwhile, clusters of bananas are being taken to the towns nearby for sale as the fruit matures. Hence, along with food-crop-residues being converted to a renewable source of cooking fuel, additional food is being grown, and additional employment and income for small farmers generated at the plantations. The net revenue from banana cultivation is being recorded and will be used towards recovery of the system costs.

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