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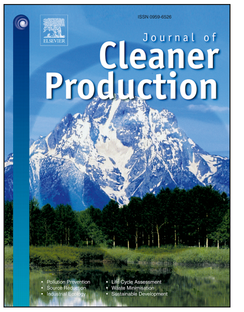

What is the true value of food waste? A case study of technology integration in urban food waste treatment in Suzhou City, China

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What is the true value of food waste? A case study of technology integration in urban food waste treatment in Suzhou City, China

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Abstract

Food waste has the potential to be a valuable resource if disposed of correctly, meaning that treatment technology and the utilization of the recycled product based on sustainable criteria are important. There is a need to build up a comprehensive technology assessment method to find a reasonable management approach for developing countries such as China. Much of the food waste produced in China is disposed of via landfills, processed into animal feed, or re-processed into waste oil. In response, the Chinese government has established food waste treatment pilot projects in 100 cities. This study evaluates the economics and environmental performance of one such pilot project in Suzhou City, Jiangsu Province, from a technology integration perspective. By integrating multiple food waste treatment technologies, this project had an average daily energy output of 27,500 m^3 of biogas and 30 tonnes per day (tpd) of biodiesel in 2013, and can reach a daily net profit of 82,055 Chinese Yuan under normal operation.

Keywords: Food waste; sustainability; biodiesel; biogas; Suzhou. **Word count:** 6232