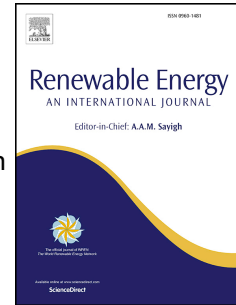


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Utilizing sugarcane leaves/straws as source of bioenergy in the Philippines: A case in the Visayas Region

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Abstract

The Philippines is an agricultural country comprised of three major regions: Luzon, Visayas, and Mindanao. Sugarcane is the top produced agricultural crop in the Philippines which, during its harvesting, leaves behind residues composed mostly of sugarcane leaves/straws (SCL). These residues may be utilized for production of biofuels. However, despite SCL being one of the predominant agro-industrial residues in the country, studies on its utilization, especially for energy generation, have been very limited. In this work, assessment of the potential recoverable energy from SCL produced in the Philippines was done through estimating the potential bioenergy recoverable when they are used for direct combustion, bioethanol, and/or bio-methane production. The archipelagic scenario of the country makes it important to look into the specific regions when assessing potentials of available resources as scenario for the entire country is very much different when compared to its specific islands or regions. Great potential has been found in SCL alone in displacing a significant fraction of coal currently used in electricity generation or in meeting mandates for biofuel blending in the Philippines, more so in the Visayas having ~68% share of the annual sugarcane production, which amounts to 40.2 ± 2.4 PJ/year of recoverable bioenergy from SCL.

Keywords: *sugarcane, leaves, straws, bioenergy, bioethanol, bio-methane*

Declarations of interest: none

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