Assessing the Viability of Arundo donax as a Potential Source of Green Energy for Electricity Cogeneration in Belize

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Climate Change Specialist, Inter-American Institute for Cooperation on Agriculture (IICA), Georgetown, Guyana.
Retired Professor, Integrated Coastal Management and Climate Change Adaptation, UWI, Cave Hill Campus, Barbados.
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THE UPCYCLE

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The authors of this paper researched with industry in mind, looking at the native Wild cane (Arundo donax) as a potential energy crop. Its ability to grow in varying soil and climatic conditions makes it a resilient candidate for biomass energy [1]. This resilience is important for Belize, which relies on hydroelectric and biomass sources for 37% of its energy generation[2], both of which are susceptible to climate change.

The study examined the optimum growing conditions for the cane, choosing several sites with different meteorological and soil conditions.

CESaRE has identified critical areas for consideration stemming from the authors' work:

1. The best soil and climatic conditions for the growth of Arundo donax were identified, validating its potential to grow in moderate rainfall conditions with minimal inputs. It fares well in comparison to sugarcane, which is currently used for bioenergy.

2. Further analysis of this species is necessary to enhance ongoing research on the use of wild cane as an energy source. Genetic level analysis will more accurately identify the species which may be best suited for this task. Additional research on the economic feasibility of commercial cultivation is suggested, particularly for farmers' livelihood.

3. Refining the most effective propagation methods and the effects of various nutrients to maximise growth and yield will be beneficial for commercial activity.

CESaRE has a strong mandate to connect leading institutions and academics in the Caribbean, pushing research publications from virtual sources of information to catalysts of change.

Through our innovative publication issues, we will feature many academics in our scope of the environmental sciences and renewable energy, and The UpCycle hopes to further the discussion beyond publication.

Owing to your work within the field, we are connecting you to our latest postgraduate feature article and we hope that there is room for collaboration. Your continued active engagement with academics and research institutions will build resilience in the Caribbean region and stimulate much needed change.

You can contact the corresponding author here.

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