

Review Form 1.7

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_112167
Title of the Manuscript:	Evaluation of Biogas Production Potential from Waste Coconut Water
Type of the Article	

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Compulsory REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>The article is within the scope of the journal. The research conducted together with the findings are significant in the area of waste beneficiation and the circular economy which is of current and relevant importance. It seems that coconut water waste is hazardous to the environment and there is potential to reduce the hazard using the proposed methods discussed in the paper.</p> <p>The title is suitable since it indicates that the potential is being evaluated which corresponds to the research methods and findings.</p> <p>The abstract is comprehensive and summarises the methods employed and the main findings, however, it is about 358 words which is more than the specified maximum by the journal of 300 words. Citations and literature findings don't seem appropriate for the abstract.</p> <p>The subsections are structured cohesively.</p> <p>Yes, however, I think it would be more appropriate to say an anaerobic digester lab set-up was simulated since it is not an actual piece of lab equipment used but rather plastic bottles.</p> <p>Sufficient since this is research paper and not a review article</p> <p>Some general suggestions for improvement;</p> <ul style="list-style-type: none"> • Section 2.1.1.- no need to explain how a pH meter functions. The method of how the pH was measured is sufficient and this should also be written in paragraph form (not bullet points) as in sections 2.1.2 and 2.1.3 to apply consistency. It should also be written in past tense as the methods were applied and it is not a laboratory instruction manual. • Equations in sections 2.1.2, 2.1.3 and 2.1.5 are cut off in the word document. Please check • There is some inconsistency in spacing between units and the numbers for example no spaces are left between 50ml but then a space is left between 100 ml. Choose the correct notation and check that consistency is applied throughout the paper. • Figure 1: You have not defined HRT on your x-axis or anywhere in the document. The sample slurry ratios should appear in the legend or caption so that one can understand the graph and draw comparisons without looking at the text. i.e., A (500 g cow dung: 500 g water), B (), C () etc. No error bars are shown on the graph, are these average values reported since you mentioned tests were conducted in triplicate, then please include error bars. • You mentioned coconut water was collected from two different sites (Girls and Boys), but you did not indicate whether you combined the samples before characterising it and using it for the experiments, if not combined then shouldn't characterisation be reported on two different species of coconut water as we would expect the characteristics to be different? • You have mentioned a few study methods and findings in your introduction section which are relevant, but I have not seen you draw comparisons to your study findings. It would be good to discuss this in your results section to help the reader understand whether your 	

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	<p>proposed methods and results are superior in any way. For example, Tewelde et al. used brewery waste and Onwaye et al used lime water so how does this compare to your results using coconut water?</p> <ul style="list-style-type: none"> • Are the tests you have conducted sufficiently to be able to conclude that the biogas production from coconut water is indeed possible? You mentioned the flammability test which is a qualitative test. I understand that you have measured the microbes and drawn conclusions based on Manimuthu et al study but is it possible to measure the calorific value of the biogas produced so that a better comparison can be drawn to biogas produced from other methods and natural gas? This would highlight the value of the work more and express the techno-economic viability. • Are you generating any waste during the process, and have you identified what can be done with the waste to garner sustainable processes? • In a typical digestion process, would you use process water with the cow dung to produce a slurry? If so, then should it not be stated/highlighted that by using coconut wastewater, you are also reducing dependency on process water which also is beneficial to the environment. • It would be interesting to understand and mention if there are other uses in the industry for coconut wastewater and how that compares to the method you have proposed to establish or highlight if this is the best utilisation of the waste economically and from an environmental perspective. 	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>There are several grammar and language errors. It is suggested that the entire paper be revised or passed through a grammar/language-checking tool to assist and improve the quality of the paper</p>	
<p>Optional/General comments</p>	<p>Try to include DOIs where possible for references in the reference list</p>	

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

Reviewer Details:

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