ReviewForm3

JournalName:	**InternationalJournalof EnvironmentandClimateChange**
ManuscriptNumber:	**Ms_IJECC_121224**
TitleoftheManuscript:	**INFLUENCEOF EDAPHICFACTORSON SULFURCONTENTINCalophylluminophyllumL.BIODIESEL**
TypeoftheArticle	**OriginalResearchArticle**

PART1: ReviewComments

CompulsoryREVISIONcomments	**Reviewer'scomment**	**Author'sFeedback***(Pleasecorrectthemanuscriptandhighlightthatpart inthemanuscript.Itismandatorythatauthorsshouldwritehis/herfeedback here)*
Pleasewritea fewsentencesregardingtheimportance ofthismanuscriptfor thescientificcommunity.Whydo youlike (ordislike)thismanuscript?Aminimumof 3-4 sentencesmayberequiredforthispart.	Thestudycontributes valuabledataonthesulfurcontentofbiodieselfromCalophylluminophyllumL., particularlywithsoilsulfurcontent.Thisaddstotheknowledgeofbiodieselqualitycontrol,especiallyfornon-edibleoilsources.However,thenoveltycouldbestrengthened bycomparingthefindingswithothernon-edible feedstocksorexploringtheenvironmentalimplicationsin greaterdetail. **Specificimprovementstobedonetothemanuscri pt:** • HighlightUniqueContributions:Emphasizehowyourworkdiffersfrompreviousstudies.Ifthereare fewstudiesfocusingspecificallyonthesulfurcontentinCalophyllumbiodiesel,thisshouldbe highlightedasa uniqueaspectof yourresearch. • BroaderContext:Considerdiscussingthebroaderimplicationsofyourfindings,suchastheimpacton biodieselregulation,environmentalimpact,andenergysustainability.	Valuable suggestion. I have made the changes. Kindly refer the Abstract (page no. 1)
Isthetitleofthearticlesuitable? (Ifnotpleasesuggestanalternativetitle)	Themanuscript'stitleisappropriateand descriptive.Itaccuratelyreflectsthestudy'sfocusonunderstandinghow soilproperties(edaphicfactors)affectthe sulfurcontentin biodieselderivedfromCalophylluminophyllumL. However,kindlyconsiderthefollowingsuggestionsfor**improvement**: • Clarity:Ensurethattheterm"edaphicfactors"iscleartothetargetaudience.Iftheaudiencemightbe unfamiliarwiththisterm,consideraddinga briefexplanationintheintroduction. • Specificity:Ifthestudyfocusesonspecificedaphicfactors(e.g.,soilsulfurcontent),specifyingthesein thetitlecouldenhanceclarity.Forexample,"InfluenceofSoilSulfurContentandOtherEdaphicFactors onSulfurLevelsinCalophylluminophyllumL. Biodiesel." • Relevance: The titleshould directly communicate the study's relevance to the field of biodiesel production.Includingtermslike"quality"or"composition"mightmake therelevanceclearer. Overall,thecurrenttitleissuitable,buttheseadjustmentscouldhelpinmakingitmorepreciseandinformative.	Valuable suggestion. I have made the changes.
		I' m glad to see the positive impact.

		Valuable suggestion. I have updated some of the recent references. Kindly refer page no. 3, Chapter 1.1 and page no. 5, chapter 2.3.3.

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Istheabstractofthearticlecomprehensive?Doyou suggesttheaddition(ordeletion)of somepointsinthis section?Pleasewriteyoursuggestionshere.	**Summary:**Theabstractprovidesabriefoverview ofthestudy'saims,methodology, results,andconclusions. It highlights theinvestigation ofsulfurcontentinCalophyllumbiodieselconcerningsoilsulfurcontentacross differentregionsinSouthernKarnataka. **Strength s:** • Cleariden tificationof studyareasandthe purposeoftheresearch. • Mentionofmethodologiesused,suchasICP-OESandturbidimetry. **AreasforImprovement :** • Theabstractcouldbenefit fromamorespecificdescription ofthefindings, particularlythecomparative analysisof sulfurcontentindifferentregions. • Quantitative data(e.g.,sulfurcontentlevels)shouldbepresentedtogiveaclearerpictureofthestudy's findings. • Theconclusioncouldbemoreconcise,focusingonthemaintakeawayratherthanmentioningtheneed forfurtherresearch. **Specificimprovementstobedonetothemanuscri pt:** • **ObjectiveStatement:**Beginwithaclearstatementoftheresearchobjective.Forexample,"Thisstudy investigates thesulfurcontentinbiodieselproducedfromCalophylluminophyllumL.seedscollected fromvariousregionsinSouthernKarnataka." • **MethodsBrief:**Specifytheprimaryanalyticaltechniquesused.Forexample,"Sulfurcontentwas analysedusingInductively CoupledPlasmaOpticalEmissionSpectroscopy (ICP-OES)and turbidimetry." • **Quantitative Results:** Include specific quantitative results. For example, "The sulfur content in biodieselrangedfromX ppmtoYppmacrossthe studiedregions." •	
Aresubsectionsandstructureofthemanuscri pt appropriate?	Themanuscriptisstructuredintothefollowingsections:Abstract,Introduction,MaterialsandMethods, ResultsandDiscussion,andConclusion.Thisstructurealignswellwithstandardscientificreportingformats. **SuggestionsforImprovement:** • Abstract:Theabstractshouldsuccinctlysummarisethebackground,methodology,keyfindi ngs,and implications.Itshouldalsoincludea clearstatementofthestudy'snovelty. • Introduction:Theintroductionshouldprovideastrongrationale forthestudy,including therelevance of sulfurcontentinbiodieselanditsimpactonfuelqualityandenvironmentalconcerns. • MaterialsandMethods:Clearlydefinetheproceduresandmaterialsused.Ensurethatallsub sections arelogicallyorganisedanddetailedenoughtoallow studyreplication. • ResultsandDiscussion:Theresultsshouldbepresentedclearly,withappropriateuseoftablesand figures.Thediscussionshouldinterprettheresultsinthecontextofexistingliterature,highlighting the study'scontributionsandlimitations. • Conclusion:Theconclusion shouldsuccinctlysummarisethemainfindingsandtheir	
Pleasewritea fewsentencesregardingthescientific correctnessofthismanuscript.Whydoyouthinktha t thismanuscriptisscientificallyrobustandtechnica lly sound?Aminimumof 3-4sentencesmayberequired forthispart.	The manuscriptdemonstrates scientific correctness and technical soundness through its comprehensive approachto studyingthe sulfur contentin biodieselfrom CalophylluminophyllumL. It employswell- establishedanalyticaltechniques,suchasInductively CoupledPlasmaOpticalEmissionSpectroscopy (ICP-OES)andturbidimetry,ensuringaccurateandreliablemeasurements ofsulfurcontent.Thestudy'sdesign, includingtheselectionofdiversegeographicallocationsandtheconsiderationofvarioussoilproperties,adds tothe robustnessofthe findings.Furthermore,theanalysisis backedbyadequatestatisticalmethods,providing athoroughinterpretation ofthedataanditsimplications forbiodieselqualityandproduction.Overall,the	
Arethereferencessufficientandrecent?If youhave suggestionsofadditionalreferences,pleasement ion themintheReviewform.	Thereferences inthemanuscript areamixofolderandmorerecentsources.Whilesomereferences dateback severalyears,theystillprovidefoundational information relevanttothestudy.However,includingmorerecent referencescould strengthenthe manuscriptbyaligningitwiththelatestadvancementsinthe field.Hereareafew suggestionsforadditionalreferences:	

	• Recentstudiesonthecharacterisationofbiodiesel,particularlythosefocusing onthesulfurcontentand itsenvironmentalimpact. • Currentmethodologiesforsulfur contentanalysisinbiodieselandcomparisonswiththemethodsusedin thisstudy. • Updatedresearchontheinfluenceofedaphicfactorsonbiodieselquality,specificallyregardingnon-edibleoilsourceslike*Calophylluminophyllum*. Theseadditionswouldprovideamorecomprehensiveoverviewofthecurrentstateofresearchinthefieldand highlightthestudy'srelevanceincontemporarybiodieselproduction.	

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MinorREVISIONcomments **Isthelanguage/Englishqualityofthearticlesuitable forscholarlycommunications?**	Themanuscriptdemonstratesagoodlevelofscientificwriting,withclearandpreciselanguage.However,thereareareaswhereimprovementscanbemade: **GrammarandTenses:** • Ensureconsistentuseoftenses,especiallyinthedescriptionofmethods(pasttense)andresults(past tense)versusdiscussion(presenttenseforongoingimplications). • Correctanygrammaticalerrorsandimprovesentencestructureforclarityandconciseness. **SentenceStructure:** • Avoidoverlycomplexsentences.Breakthemintoshorter,clearerstatementswherenecessary. • Ensurethateachparagraphcontainsa singlemainidea and flowslogicallytothenext. **GeneralRecommendations**: • Proofreading:Athoroughproofreadingtocorrectminorgrammaticalerrors,spellingmistakes,and inconsistenciesinterminologyisrecommended. • StyleConsistency:Ensureconsistentuseof scientificterminologyandunitsofmeasurement. • Clarity andConciseness:Aim for concise language, especially in the abstract and conclusion,to effectivelycommunicatethekeypoints.	Valuable suggestion. I have made the chages.
Optional/Generalcomments	1. **Summary:**Theintroductioncontextualises thestudywithinIndia'sbroaderenergydemandandfossilfuel dependencyissues.ItintroducesCalophylluminophyllumL.asapotentialfeedstockforbiodieselanddiscusses therelevanceof sulfurcontentanalysis. **Strength s:** • Well-structuredbackgroundinformationontheenergylandscapeandthe significanceofbiodiesel. • ThejustificationforchoosingCalophylluminophyllumL.isbasedonitsadvantagesandpotentialasa biodieselsource. **AreasforImprovement :** • Theintroductioncould includea moreprecisestatementofthe study'sobjectivesandresearchquestions. • Morerecentreferencescouldbeaddedto supportclaimsaboutthebenefitsofCalophyllumbiodiesel. • Abriefoverviewofpreviousresearchon sulfurcontentinbiodieselwouldprovidea bettercontext. **Specificimprovementstobedonetothemanuscri pt:** • **ClearResearchGap**:Clearlyidentifythegapintheexistingliterature.Forinstance,"Whilebiodiesel fromCalophylluminophyllumL.hasbeenexploredforitshighoilcontent,theimpactofregionalsoil sulfurcontentonthe sulfurlevelsinbiodieselremainsunderexplored." • **Recent References**:Update theintroductionwiththe mostrecent studiesonbiodieselproduction,sulfur content,andnon-ediblefeedstocks. • **ObjectivesandHypotheses**:Clearlystatethestudy'sobjectivesandanyhypotheses.Forexample, "Thisstudyaimstoevaluatethesulfurcontentin Calophyllumbiodieselanddeterminethecorrelation betweensoilsulfurcontentandthe sulfurlevelsinthefinalproduct." **2.** **MaterialsandMethods** **Summary:**Thissectiondescribesthestudyarea,theprocessesusedforoilextractionandbiodieselproduction, andthemethodsforanalysingsulfurcontent. **Strength s:** • Detaileddescriptionofthe studyarea, includinggeographicandclimaticinformation. • Acomprehensiveexplanationofthe	Valuable suggestion. I have made the changes. 1. Introduction - Page no. 3, chapter 1.3 2. Materials and Method - Page no. 5 and 6 3. Result and Discussion - Page no. 9, chapter 3.3 Conclusion - page no. 12, Chapter 4

Specificimprovementstobedonetothemanuscript:

- **StudyAreaDescription**:Whilegeographicandclimaticdetailsareincluded,considersummarising themandfocusingmoreontheirrelevancetothe study(e.g.,variationsin sulfurcontentinsoil).
- **MethodologicalClarity**:Simplifythemethodologybyhighlightingcriticalsteps.Forexample,"Oil extraction was performedusing the Soxhletmethod,followed by transesterificationusing sodium methoxide."
- **Statistical Analysis**: Clearly outline the statistical methods used for analysingthe data, such as correlation analysis,regressionmodels,orANOVA,toshowhowdatareliabilityandsignificancewere determined.
- **Visual Aids**: Consider adding a flowchart or diagram of the methodology to enhance reader comprehension.

3.ResultsandDiscussion

Summary: Theresultssectionpresentsdataonsulfurcontentinsoil,oil,andbiodieselacrossdifferentregions. Thediscussioninterpretsthesefindingsinthecontextofregionaldifferencesand edaphicfactors.

Strengths:

- Thedataiswell-organised,andthetablesareinformative.
- Thediscussionlogicallyinterpretstheresults,linkingthemtoenvironmentalfactors.

AreasforImprovement:

- Thepresentationofresultscouldbeenhancedwithmorevisualaids,suchasgraphsorcharts.
- Thereshouldbeamoreapparentdistinctionbetweenthepresentationofresultsandtheirdiscussion.
- Thediscussioncoulddelvedeeperintotheimplicationsofthefindingsforthebiodieselindustryand environmentalpolicy.

Specificimprovementstobedonetothemanuscript:

- ResultsPresentation:Separatetheresultsanddiscussionmoreclearly.First,straightforwardlypre sent thefindings,thendiscusstheirimplicationsandcontext.
- VisualDataRepresentation:Includegraphsorchartstovisuallyrepresentdatatrends,suchassulfur contentvariationsacrossdifferentregions.
- In-depthDiscussion:Provideadeeperanalysisofthe results.Forexample,discusswhycertainregions havehighersulfurcontentandhowsoilcharacteristicsorregionalenvironmental factorsmight contribute.
- ComparativeAnalysis:Ifavailable,compareyourfindingswithexistingliteratureonsimilarstudies. Thishelpscontextualisetheresultswithinthebroaderscientificdiscussion.

5.Conclusion

Summary: Theconclusionreiteratesthepotentialof Calophyllumasabiodieselfeedstockandtheinfluenceof sulfurcontentonbiodieselquality.Itsuggeststheneedforfurtherresearchtorefinepurificationprocesses.

Strengths:

- Theconclusioneffectivelysummarisestheessentialfindingsandtheirimplications.

AreasforImprovement:

- Theconclusioncouldbe morefocused,avoidingtherepetitionofearliersections.
- Recommendationsforfutureresearchshouldbemorespecific,possiblysuggestingmethodologiesor areasoffocus.

Specificimprovementstobedonetothemanuscript:

- ConciseSummary:Summarisethekeyfindingsinafewsentences.Avoidreiteratingdetailedresults; focusonthe study'smaincontributions.
- SpecificRecommendations:Offerrecommendationsforfutureresearch,suchas"Furtherstudiess hould explorepurificationmethodstoreducesulfurcontentinbiodieseltomeetinternationalstandards."

- PracticalImplications:Discussthepracticalimplicationsofyourfindingsforbiodieselproductionand policy,e.g.,"Theregionalvariabilityinsulfurcontentsuggests theneedforlocalisedqualitycontrol measuresinbiodieselproduction."

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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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	No ethical issue in the manuscript.

Reviewer Details:

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