



## Submissions

Review: *Prof. Low Cost Natural Wastewater Treatment Technologies in Rural Communities using Instream Wetland, Moringa Oleifera, and Aeration Weirs – A Comparative Study*

## 1. Request

## 2. Guidelines

## 3. Download &amp; Review

## 4. Completion

**Request for Review**

You have been selected as a potential reviewer of the following submission. Below is an overview of the submission, as well as the timeline for this review. We hope that you are able to participate.

**Article Title**

Prof. Low Cost Natural Wastewater Treatment Technologies in Rural Communities using Instream Wetland, Moringa Oleifera, and Aeration Weirs – A Comparative Study

**Abstract**

**Background and Objectives:** Low cost natural waste water treatment technologies is very useful in development communities that lacks investment and technologies. Wetland technologies prove excellent results for waste water treatment. the objective of this study is to compare and propose a new wastewater technologies using wetland, weirs as an aeration source, finally add Moringa Oleifera seeds which proven effective in removing: suspended substances, turbidity, chemical oxygen demand (COD), color, and other organic pollutants.

**Materials and Methods:** To cover the objectives, several studies have been carried out, and can be summarized as follows: 2 study areas were investigated that used in stream wetland as a natural treatment and compare the hydraulic design and efficiency for two case studies both in Egyptian drainage systems. Secondly, studied a field aeration weir that already exist in one of the rural drains and studied its ability improving water quality after aeration system, finally represent a laboratory analysis using Moringa Oleifera seeds for drainage water treatment.

**Results:** Removal efficiency for first wetland study area ranged from 35-75% for removal of suspended solids, from 58-30% for BOD, 57-44% for COD, and 99% for fecal coliform. While in the second instream wetland is 50% for EC, 83.33 for bicarbonate, 44.2% for TDS, 20% for TSS, 60% for BOD, 85% for COD, 63% for calcium, 88% for potassium, 20% for magnesium, 90% for lead, 99% for total and fecal coliform. The removal efficiency when using M. Oleifera is 85.1% for turbidity, 96.1 % for total coliform, 82.8% for total coliform, 60 % for arsenic, 85% for cadmium, and 90% for nickel. The efficiency for weir as an aeration source is 77.1 % for EC, 98% for TDS, 92.9 for bicarbonate, 95.8% for chloride, and 83.3% for phosphate.

**Conclusion:** The studied technologies offer a cheaper alternative to conventional treatment methods without use any chemical substances for treatment and provide minimum operation and maintenance needs. The in-stream wetland could be replicated to cover larger percentage of drains recommend using M. Oleifera beside native plants in wetland specially in sedimentation zone, also study weirs as an aeration sources.

**Review Type**

Double-blind

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**Review Schedule**

2020/11/01

Editor's Request

2020/11/15

Response Due Date

2020/12/20

Review Due Date

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## Review

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## Review Submitted

Thank you for completing the review of this submission. Your review has been submitted successfully. We appreciate your contribution to the quality of the work that we publish; the editor may contact you again for more information if needed.

### Review Discussions

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Muhammad Faizal &lt;muhammadfaizal@unsri.ac.id&gt;

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**[JAES][ID 27530] Article Review Request**

2 pesan

**SCIndeks Asistent** <ceoncees@gmail.com>

1 November 2020 17.34

Kepada: Muhammad Faizal &lt;muhammadfaizal@unsri.ac.id&gt;

Dear Muhammad Faizal,

I believe that you would serve as an excellent reviewer of the manuscript, "Prof. Low Cost Natural Wastewater Treatment Technologies in Rural Communities using Instream Wetland, Moringa Oleifera, and Aeration Weirs – A Comparative Study," which has been submitted to Journal of Applied Engineering Science. The submission's abstract is inserted below, and I hope that you will consider undertaking this important task for us.

Please log into the journal web site by 2020-11-15 to indicate whether you will undertake the review or not, as well as to access the submission and to record your review and recommendation.

The review itself is due 2020-12-13.

Submission URL: <https://aseestant.ceon.rs/index.php/jaes/reviewer/submission?submissionId=27530&reviewId=40865&key=DPG3T7hb>

"Prof. Low Cost Natural Wastewater Treatment Technologies in Rural Communities using Instream Wetland, Moringa Oleifera, and Aeration Weirs – A Comparative Study"

Abstract

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**Conclusion:** The studied technologies offer a cheaper alternative to conventional treatment methods without use any chemical substances for treatment and provide minimum operation and maintenance needs. The in-stream wetland could be replicated to cover larger percentage of drains recommend using M. Oleifera beside native plants in wetland specially in sedimentation zone, also study weirs as an aeration sources.

Thank you for considering this request.

Prof. Dr Gradimir Danon  
Editor in Chief

Journal of Applied Engineering Science - JAES [www.engineeringscience.rs](http://www.engineeringscience.rs)

Ovaj mejl je poslat sa sistemskog naloga. Ako želite da odgovorite na njega, molimo Vas da koristite sledeću adresu

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"Prof. Dr Gradimir Danon"

[gdanon@iipp.rs](mailto:gdanon@iipp.rs)

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**Muhammad Faizal** <muhammadfaizal@unsri.ac.id>  
Kepada: SCIndeks Asistent <ceoncees@gmail.com>

3 November 2020 10.36

Dear Prof. Dr Gradimir Danon,  
Thank you very much for believing me to review the manuscript.  
I will review it ASAP.  
Best Regards,

Assoc. Prof. Dr. Muhammad Faizal  
Chemical Engineering Department  
Faculty of Engineering  
Universitas Sriwijaya

[Kutipan teks disembunyikan]



Muhammad Faizal &lt;muhammadfaizal@unsri.ac.id&gt;

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**[JAES][ID 27530] Submission Review Reminder**

3 pesan

**SCIndeks Asistent** <ceonces@gmail.com>

12 Desember 2020 16.14

Kepada: Muhammad Faizal &lt;muhammadfaizal@unsri.ac.id&gt;

Dear Muhammad Faizal,

Just a gentle reminder of our request for your review of the submission, "Prof. Low Cost Natural Wastewater Treatment Technologies in Rural Communities using Instream Wetland, Moringa Oleifera, and Aeration Weirs – A Comparative Study," for Journal of Applied Engineering Science. We were hoping to have this review by 2020/12/10, and would be pleased to receive it as soon as you are able to prepare it.

Submission URL: <https://aseestant.ceon.rs/index.php/jaes/reviewer/submission?submissionId=27530&reviewId=40865&key=R5wf6jUv>

Please confirm your ability to complete this vital contribution to the work of the journal. I look forward to hearing from you.

Prof. Dr Gradimir Danon  
Editor in Chief  
[gdanon@iipp.rs](mailto:gdanon@iipp.rs)

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"Prof. Dr Gradimir Danon"  
[gdanon@iipp.rs](mailto:gdanon@iipp.rs)

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**Muhammad Faizal** <muhammadfaizal@unsri.ac.id>

13 Desember 2020 17.30

Kepada: SCIndeks Asistent &lt;ceonces@gmail.com&gt;

Dear Prof. Gladimir Danon,  
Thank you very much for your email. Sorry, tomorrow morning I will complete the review and send it  
Best regards,

M. Faizal  
[Kutipan teks disembunyikan]

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**Muhammad Faizal** <muhammadfaizal@unsri.ac.id>

14 Desember 2020 07.13

Kepada: SCIndeks Asistent &lt;ceonces@gmail.com&gt;

Dear Prof. Dr. Gradimir Danon,  
Please find herewith the reviewed manuscript " Low Cost Natural Wastewater Treatment Technologies in Rural Communities using Instream Wetland, Moringa Oleifera, and Aeration Weirs – A Comparative Study".  
Sorry for sending late.  
Best regards,

Dr. Muhammad Faizal

Pada tanggal Sab, 12 Des 2020 pukul 01.14 SCIndeks Asistent <ceonces@gmail.com> menulis:

[Kutipan teks disembunyikan]

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 **27530-Article Text-147727-1-4-20200715\_Rev MF final.docx**



Muhammad Faizal &lt;muhammadfaizal@unsri.ac.id&gt;

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**[JAES][ID 27530] Article Review Acknowledgement**

2 pesan

**SCIndeks Asistent** <ceoncees@gmail.com>

14 Desember 2020 14.38

Kepada: Muhammad Faizal &lt;muhammadfaizal@unsri.ac.id&gt;

Dear Muhammad Faizal,

Thank you for completing the review of the submission, "Prof. Low Cost Natural Wastewater Treatment Technologies in Rural Communities using Instream Wetland, Moringa Oleifera, and Aeration Weirs – A Comparative Study," for Journal of Applied Engineering Science. We appreciate your contribution to the quality of the work that we publish.

Prof. Dr Gradimir Danon

Editor in Chief

[gdanon@iipp.rs](mailto:gdanon@iipp.rs)Journal of Applied Engineering Science - JAES [www.engineeringscience.rs](http://www.engineeringscience.rs)

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"Prof. Dr Gradimir Danon"

[gdanon@iipp.rs](mailto:gdanon@iipp.rs)

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**Muhammad Faizal** <muhammadfaizal@unsri.ac.id>

17 Desember 2020 11.30

Kepada: SCIndeks Asistent &lt;ceoncees@gmail.com&gt;

Dear Prof. Gradimir Danon,

Thank you for your mail.

Best regards,

Dr. Muhammad Faizal

[Kutipan teks disembunyikan]