Journal of Marine Sciences & Environmental Technologies





ISSN (Print): 2413-5267

ISSN (Online): 2706-9966

Volume 5, issue 2 (December-2019)

Editor-in-Chief

Assist. Prof. Dr. Maher A. Eraibi (Alasmarya Islamic University, Libya)

Managing Editor

Assoc. Prof. Dr. Aly Y. Okasha (Alasmarya Islamic University, Libya)

Editing General Supervisor

Assoc. Prof. Dr. Hesham G. Ibrahim (Alasmarya Islamic University, Libya)

Associate Editors

Assist. Prof. Dr. Khaled M. M. Boushnaf (Elmergib University, Libya) Assoc. Prof. Dr. Mohamed S. Hamouda (Libyan Academy, Libya)

Scientific Advisory Committee

Prof. Dr. Abdulsalam M. Methnani (SRCEST, Libya)

Prof. Dr. Mohamed A. Al-Meshragi (University of Tripoli, Libya)

Prof. Dr. Mohamed A. Elsaidi (Sebha University, Libya)

Prof. Dr. Hassan A. Haweel (National Mining Corporation, Libya, Libya)

Prof. Dr. Abdelhafid Bouaida Hassi (Omar Al-Mukhtar University, Libya)

Prof. Dr. Mohamed M. Baraka (University of Tripoli, Libya)

Assoc. Prof. Dr. Saad K. El-Obaidi (University of Benghazi)

Assoc. Prof. Dr. Mokhtar M. Shaglouf (Sirte University, Libya)

Assoc. Prof. Dr. Ismail A. Alshugman (University of Tripoli, Libya)

Journal of Marine Sciences and Environmental Technologies (JMSET) is a biannually scientific referred periodical international journal.

Published by;

Faculty of Marine Resources Al-Asmarya Islamic University Zliten City-Libya

Legal Deposit Number: 402/2019, National Book House, Benghazi, Libya

ISSN (Print): 2413-5267 ISSN (Online): 2706-9966

Arab Impact Factor (AIF) 2019 (1.7)

Arab Impact Factor (AIF) 2018 (1.6)

Arab Impact Factor (AIF) 2017 (1.6)

http://arabimpactfactor.com



The correspondence should be sent to the following address:

Dr. Director of the editorial board Journal of Marine Sciences and Environmental Technologies Faculty of Marine Resources – Alasmarya Islamic University Zlitan Teaching Hospital Road, Beside Sports City Zlitan - Libya PO Box 50 Zliten

Fax: + 218514628034

E-mail: jmsetg@asmarya.edu.ly

© Copyright 2019 by Faculty of Marine Resources, Alasmarya Islamic University, Zliten City, Libya.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means electronic, photocopying or otherwise, without the prior written permission of the copyright holders.

All the contents of this journal reflect the views of the authors and do not necessarily reflect the views of the editorial board or the university. Researchers bear full responsibility for what is presented in them researches.

Foreword

Journal of Marine Sciences and Environmental Technologies (JMSET) is a scientific refereed periodical international journal (ISSN-Print: 2413-5267; and ISSN-Online: 2706-9966). It is issued by Faculty of Marine Resources at Alasmarya Islamic University, in accordance to the resolution of the Council of Alasmarya Islamic University (253/2015). JMSET endeavors to provide a notable and discern forum to publish research manuscripts of high quality relevant to wider area of marine science and environmental topics. JMSET is a multidisciplinary journal covering wide area subjects of marine science and environmental technologies. It promotes insight and understanding of the state of the art, and trends in environment, engineering, and marine sciences.

This volume 5 and issue 2 (December 2019) contains seven diversified scientific contributions (manuscripts) which are blindly peer reviewed by members of JMSET editorial, and reviewers panel to ensure optimum standards. We hope these papers will be helpful for imparting advanced knowledge to the researchers, academics, and technologist who are involved in research, teaching and practical fields. The issue covers a broad range of topics in the field science, and techniques of environmental impacts. During the past four years with the efforts of all members of the Editorial and Evaluation Board, we are pleased to announce that the Journal received the Arab Impact Factor for the year 2019 (1.7). Consequently, the impact factor of the journal has increased over the past years. In this regard, we can only congratulate ourselves and you on this achievement, and we promise you that efforts will be made to enter the International Scientific Impact Factor (ISI).

We want to express our heartfelt thanks to Authors for submitting their work and also to the distinguished members of the editorial board, reviewers and the publication committee who have put their relentless effort to publish the issue successfully. We believe this issue reflects the topics focus of JMSET and provides resources to the research community. We believe our authors will be continuously supporting and relying on JMSET to publish quality research work.

Dr. Maher A. Eraibi

Editor-in-Chief, JMSET Dean of Faculty of Marine Resources Alasmarya Islamic University

Call for Manuscripts

Journal of Marine Sciences and Environmental Technologies is a peer-reviewed journal, published by Faculty of Marine Resources, Alasmarya Islamic University. The journal publishes research papers in the fields of;

Marine Science;

The journal draws from diverse topics within the major disciplines of coastal and blue water oceanography (biological, chemical, geological and physical) as well as subjects in ecology, conservation and technological developments with the marine environment as the unifying theme. Also all branches of engineering related to marine such as (offshore & marine explore, mechanical, naval architecture and corrosion,... etc.).

Environmental Technologies;

JMSET covers all sorts of researches on the field of environmental technologies (management, assessment, monitoring and treatment) of atmospheric environment, aquatic environment and municipal solid waste,...etc.

We are seeking submissions for forthcoming issues. The paper should be written in professional English. The length of 3000-8000 words is preferred. All manuscripts should be prepared in MS-word format, and submitted to managing Editor e-mail.

Paper Selection and Publication Process

- a) Upon receipt of paper submission, the editor sends an E-mail of conformation to the corresponding author within 1-3 working days. If you fail to receive this conformation, your submission/e-mail may be missed. Please contact the Editor in time for that.
- b) Peer review. We use double-blind system for peer-review, both reviews and authors' identities remain anonymous. The paper will be peer-reviewed by three experts, one is an editorial staff and the other two are external reviewers. The review process may take 2-3 weeks.
- c) Notification of the results of review by E-mail to into the authors to revise paper.
- d) After publication, the corresponding author will receive one copy of printed journal and one soft copy of journal, free of charge.

Requirements and Copyrights

Submission of an article implies that the work described has not been published previously (except in the form of an abstractor as part of a published lecture or academic thesis), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other languages, without the written content of the Publisher. The Editors reserve the right to edit or otherwise alter all contributions, but authors will receive proofs for approval before publication.

Copyrights for articles published in JMSET journal are retained by the authors, with first publication rights granted to the journal. The journal/publisher is not responsible for subsequent uses of the work. It is the author's responsibility to bring an infringement action if so desired by the author.

More Information

Contact with Managing Editor

E-mail: jmsetg@asmarya.edu.ly

Preface

Issue 2 of volume 5, includes the contributions from the following categories: (Soil and water, Geographic Information Systems and Remote Sensing, Microbiology, Material and Mineral Science, Biotechnology, Food Science, and Botany).

The seven manuscripts in this JMSET Journal (Volume 5, Issue No. 2) present an in-depth discussion on latest field of Applied Science.

The first research paper presented a study on Laboratory and Statistical Methods for Estimating Soil Erosion on Al-Jabal Alkhdar Slopes. The second research paper was concerned with Study of The Spatio-Temporal Relationship Between VIIRS and LiDAR Satellites Imagery of Sulfur Dioxide Emissions from Mergeb Cement Plant in Khoums City, Libya. The third research paper showed a mini review about Benefits and Limitations of *Rhizobium*-Legume Symbiosis and Nitrogen Fixation Under Libyan Saline Soil. While the fourth research paper included the Finite Element Analysis of Free Energy Permanent Magnet Motor Using Solidworks and Finite Element Method Magnetics (FEMM) Software. The fifth research paper focused on studying of The Ability of Secondary Metabolites from *Bacillus* spp. in Inhibition of Formation of Bacterial Biofilms. The sixth paper concerned with Optimization of Carp (*Cyprinus carpio*) Fish Wastes Oil Color Extracted by Using Infra-red Ray with Response Surface Methodology. The seventh and final research paper studied Allelopathy of Aqueous Extracts of Leaves, Flower and Fruits of *Hyoscyamus muticus* L.

JMSET Editorial Board

Contents

Laboratory and Statistical Methods for Estimating Soil Erosion on Al- Jabal Alkhdar Slopes.		
Murad M. Aburas, Ahmed Y. Habel, and Asama S. Alferjani.		
Study of The Spatio-Temporal Relationship Between VIIRS and LiDAR Satellites Imagery of Sulfur Dioxide Emissions from Mergeb Cement Plant in Khoums City, Libya. Dawi Muftah Ageel.	E18-31	
Benefits and Limitations of <i>Rhizobium</i> -Legume Symbiosis and Nitrogen Fixation Under Libyan Saline Soil: Mini Review. Mustafa E. Elsharif.	E32-45	
Finite Element Analysis of Free Energy Permanent Magnet Motor Using Solidworks and Finite Element Method Magnetics (FEMM) Software. Talal A. Elmasri, Mabrooka A. Elmasri, and Esra S. Abdulhafid.	E46-62	
Study of The Ability of Secondary Metabolites from Bacillus spp. in Inhibition of Formation of Bacterial Biofilms. Eman A A. Al-Imara, and Ghaidaa J.A. Al-Gazzawy.	A01-24	
Optimization of Carp (Cyprinus carpio) Fish Wastes Oil Color Extracted by Using Infra-red Ray with Response Surface Methodology. Sabah M. H. Al-Shatty, Asaad R.S. Al-Hilphy, and Atheer A.A. Al-Mtury.	A25-44	
Allelopathy of Aqueous Extracts of Leaves, Flower and Fruits of Hyoscyamus muticus L. Abdel Hameed Zerbi, Mohamed Derawi Elayb, Ayada Faraj Ali, and Naser Omar.	A45-53	