

ISSN: 2327-4336

Volume 7, Number 10, October 2019



# Journal of Geoscience and Environment Protection



ISSN: 2327-4336



9 772327 433007 10

<https://www.scirp.org/journal/gep>

# Journal Editorial Board

ISSN 2327-4336 (Print) ISSN 2327-4344 (Online)

<https://www.scirp.org/journal/gep>

---

## Editor-in-Chief

**Prof. Valentine Udoh James**

Clarion University of Pennsylvania, USA

## Editorial Board

**Dr. Mukesh Singh Boori**

Samara University, Russia

**Prof. Jianmin Chen**

Fudan University, China

**Prof. Peter G. Flood**

University of New England, Australia

**Prof. Yehia Hafez**

King Abdulaziz University, Saudi Arabia

**Prof. Benedict Ilozor**

Eastern Michigan University, USA

**Prof. Sabah A. Ismail**

University of Kirkuk, Iraq

**Prof. M. A. Khalifa**

Menoufia University, Egypt

**Dr. Juan Ma**

Fayetteville State University, USA

**Dr. Amirhomayoun Saffarzadeh**

Kyushu University, Japan

**Prof. V. I. Solomatin**

Russian Academy of Nature Science, Russia

**Dr. Mustafa Din Subari**

Universiti Teknologi Malaysia, Malaysia

**Prof. Leiming Yin**

Chinese Academy of Sciences, China

**Dr. Xiaochun Zhang**

Carnegie Institution for Science, USA

**Prof. Qixing Zhou**

Nankai University, China

## Table of Contents

**Volume 7    Number 10**

**October 2019**

**Efficacy of Purple Non Sulphur Bacterium *Rhodobacter sphaeroides* Strain UMSFW1 in the Utilization of Palm Oil Mill Effluent**

S. Al Azad, F. S. Chin, M. T. B. M. Lal.....1

**Municipal Solid Waste Disposal Site Selection in Jacobabad Using RS/GIS Techniques**

S. Zehra, S. Afsar, Y. Anis.....13

**Assessing the Trace Metal Content of Groundwater in the Bakassi Peninsular, Onshore Rio del Rey, Akwa-Mundemba, Cameroun**

R. A. II Akoachere, T. Hosono, T. A. Eyong, M.-C. P. Ngassam, T. T. Oben.....23

**Study on Climate Impacts on Asphalt Pavement in Tibet, China**

C. Wang, X. X. Zhou, G. D. Gao.....49

**Research and Analysis of a Persistent Heavy Pollution Event in Ningbo, China**

J. M. Guo, Y. G. Guo, C. Zhou.....60

**Biogeochemistry of Lake Baikal Stony Littoral**

A. N. Suturin.....72

**The Effect of Climate Variables on Dengue Burden in Indonesia: A Case Study from Medan City**

M. D. Setiawati.....80

**Prediction of the Distribution of Perennial Cultivated Grasses in the Northwest Sichuan Plateau, China under Climate Change**

B. Guo, S. Wang, C. Chen, M. T. Wang, T. T. Li.....95

**Radioactivity Measurements and Radiation Dose Assessments in Ground Water of Al-Baha Region, Saudi Arabia**

A. H. Al-Ghamdi.....112

**Statistical Air Pollution Index (API) for Trinidad and Tobago Based on Observed Data on Trinidad's West Coast**

H. Baboolal, V. Stoute, S. Chadee, D. Balladin.....120

**Morpho-Structural Mapping Constraints from Geophysical and Test Pit Investigations: Case Study of the Bomkoul Locality in Douala Sedimentary Basin, Cameroon, Central Africa**

M. B. Mbog, J. V. Kenfack, G. F. N. Ngon, B. Tassongwa, E. C. Bayiga, J. Etame.....136

# Journal of Geoscience and Environment Protection (GEP)

## Journal Information

### SUBSCRIPTIONS

The *Journal of Geoscience and Environment Protection* (Online at Scientific Research Publishing, <https://www.scirp.org/>) is published monthly by Scientific Research Publishing, Inc., USA.

#### **Subscription rates:**

Print: \$39 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### SERVICES

#### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### **Reprints (minimum quantity 100 copies)**

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### COPYRIGHT

#### **Copyright and reuse rights for the front matter of the journal:**

Copyright © 2019 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

#### **Copyright for individual papers of the journal:**

Copyright © 2019 by author(s) and Scientific Research Publishing Inc.

#### **Reuse rights for individual papers:**

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

#### **Disclaimer of liability**

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

### PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: [gep@scirp.org](mailto:gep@scirp.org)



## Call for Papers

# Journal of Geoscience and Environment Protection (GEP)

ISSN 2327-4336 (Print) ISSN 2327-4344 (Online)

<https://www.scirp.org/journal/gep>

**Journal of Geosciences and Environment Protection (GEP)** is an international journal dedicated to the latest advancement of Geoscience and Environment Protection. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of Geoscience and Environment Protection. All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process.

## Subject Coverage

This journal invites original research and review papers that address the following issues. Topics of interest include, but are not limited to:

### Environmental Protection

- Air Pollution
- Chemical Pollution
- Climate Change
- Disasters Management
- Environmental Earth Sciences
- Environmental Geology and Rehabilitation
- Environmental Law and Policies
- Environmental Risk
- Global Environmental Protection Technology
- Global Warming
- Landfill Waste Management
- Mineral Processing, Waste Management and Recycling
- Nuclear Energy and Environmental Protection
- Pollution Control and Technologies
- Soil Environment and Soil Science in Other Disciplines
- Sustainability of Resources and Environment
- Waste Water Management and Aquaculture
- Water Engineering

- Water Resources Management and Water Quality

### Geoscience

- BioGeomarkers and Their Significance for Astrogeology and Astrobiology
- Crystallography and Mineralogy
- Education and Capacity Building in Geosciences
- Endogenous, Exogenous Petrology and Geochemistry
- Energy and Mineral Deposits
- Geodynamics
- Geoethics
- Geographic Information Science
- Geological Collections and Museology
- Geophysics
- Hydrology and Hydrogeology
- International Partnership in Geosciences
- Medical and Forensic Geology
- Meteorites and Planetary Geology
- Natural Hazards
- Paleontology
- Stratigraphy and Sedimentology

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the GEP.

## Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

## Website and E-Mail

<https://www.scirp.org/journal/gep>

E-mail: [gep@scirp.org](mailto:gep@scirp.org)

## ***What is SCIRP?***

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

## ***What is Open Access?***

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



**Scientific  
Research  
Publishing**

**Website: <https://www.scirp.org>**

**Subscription: [sub@scirp.org](mailto:sub@scirp.org)**

**Advertisement: [service@scirp.org](mailto:service@scirp.org)**