

e-ISSN 2614-8528

p-ISSN 2598-9723

Geos. Ind.



VOL. 5 NO. 2, August 2020

Available online since 1 June 2020 at :

<https://jurnal.unej.ac.id/index.php/GEOSI/issue/view/952>

# GEOSFERA INDONESIA



**Published By:**

**DEPARTMENT OF GEOGRAPHY EDUCATION**

**UNIVERSITY OF JEMBER**

# **GEOSFERA INDONESIA, VOL. 5 NO. 2 (2020)**

Accredited by the Ministry of Research , Technology , and Higher Education of the Republic of  
Indonesia, No. 30/E/KPT/2019

## **EDITORIAL TEAM**

### **EDITOR IN CHIEF**

**Fahmi Arif Kurnianto (SCOPUS ID: 57208473928)**

Department of Geography Education, University of Jember, Indonesia

### **ADVISORY INTERNATIONAL EDITORIAL BOARDS**

**Mihai Ciprian Margarint (SCOPUS ID : 36698019400)**

Department of Geography, Alexandru Ioan Cuza University of Iasi, Romania

**Franck Lavigne (SCOPUS ID : 15738234900)**

Physical Geography Laboratory, Université Paris 1 Panthéon-Sorbonne, France

**Fahrudi Ahwan Ikhsan (SCOPUS ID : 57208469257)**

Department of Geography Education, University of Jember, Indonesia

**Mustafa Ustuner (SCOPUS ID : 56246446800)**

Department of Geomatics Engineering, Yildiz Technical University, Turkey

**Bashkim Idrizi (SCOPUS ID : 55937683800)**

Department of Geodesy, University "Mother Teresa" -Skopje, Macedonia

**Guillermo Hector Re (SCOPUS ID : 7102894803)**

Department of Geology, Universidad de Buenos Aires, Buenos Aires, Argentina

**Laras Tursilowati (SCOPUS ID : 55317967300)**

Indonesian National Institute of Aeronautics and Space (LAPAN), Indonesia

**Kuppanagounder Kumaraswamy (SCOPUS ID : 6602935596)**

Department of Geography, Bharathidasan University, Tiruchirappalli, India

## FOCUS AND SCOPE

Geosfera Indonesia welcomes High Quality Original Research Articles, Short Communications, and Review Articles written by researchers, academicians, professional, and practitioners from **all over the world** about :

**(1) Geography Education** : Collaborative learning; Comparative Learning; Curriculum; e-learning ; Instructional technology; Learning community; Life skills ; Remedial Teaching; Taxonomy of Educational Objectives (Bloom's Taxonomy); New Technology; Industry and Education : A Continuous Collaboration; Blended Learning; Character; Constructivist Learning; Disrupting Innovation; Expeditionary Learning; Flexible Learning; Flipped Classroom; Flipped Learning; Gamification; Global View; Ground Up Diversity; High-Quality Teachers; Hip-Hop Education (HipHopEd); Lesson Study; Mobile Education; Problem Based Learning; Process Oriented Guided Inquiry Lessons (POGIL); Project Based Learning (PBL); Start-up; Student Centred Learning; Autodidacticism (Self-teaching); Informal learning; Unschooling or homeschooling; PISA Task, **(2) Physical Geography** : tectonics and regional structure; glacial processes and landforms; fluvial sequences; fluvial processes and landforms; mass movement; hillslopes and soil erosion; slopes processes; karst processes and landforms; aeolian processes and landforms; coastal dunes and arid landforms; coastal and marine processes; theoretical and quantitative geomorphology; soil geomorphology; soil geography; lithology; hydrogeography, **(3) Human Geography** : Cultural Geography; Political Geography; Social Geography; Population Geography; Urban Geography, **(4) Geographic Information System (GIS)** : data collection and acquisition; data structures and algorithms; spatio-temporal databases; spatial analysis, data mining, and decision support systems; cartography; location based services; uncertainty handling in spatial data; topology; geo-computation; geo-telematics; spatial information infrastructures; interoperability and open systems; applications of geoinformation technology (all possible domains), **(5) Remote Sensing**: Multi-spectral and hyperspectral remote sensing; Active and passive microwave remote sensing; Lidar and laser scanning; Geometric reconstruction; Physical modeling and signatures; Change detection; Image processing and pattern recognition; Data fusion and data assimilation; Dedicated satellite missions; Operational processing facilities; Spaceborne, airborne and terrestrial platforms; Remote sensing applications, **(6) Environmental Science** : Environmental Geography; Environmental Education; Climate Change; land use and cover change; pollution; natural resources management; conservation; Management and valorisation of waste; Development of methods for environmental quality management; Environmental system modelling and optimization; Environmental analysis and assessment; Social, economic and policy aspects of environmental management, **(7) Disaster Risk Reduction** : Risk awareness and assessment including hazard analysis and vulnerability/capacity analysis for natural disaster risk reduction; Knowledge development including education, training, research and information for natural disaster risk reduction; Public commitment and institutional frameworks, including organisational, policy, legislation and community action for natural disaster risk reduction.

## PUBLICATION INFORMATION

Geosfera Indonesia (Geos. Ind.) : |ISSN: 2598-9723 (Print)|ISSN: 2614-8528 (Online) is an international open access and peer-reviewed journal, published by Department of Geography Education, University of Jember, Indonesia. Its published three times a year in April, August, and December. Geosfera Indonesia is accredited by the Ministry of Research, Technology and Higher Education of the Republic of Indonesia (RISTEKDIKTI), No. 30/E/KPT/2019. This journal has been covered by following indexing and abstracting services: (1) CABI : CAB Abstracts (Web of Science); (2) Directory of Open Access Journal (DOAJ); (3) EBSCO; (4) Google Scholar (5) One Search (National Library of Republic of Indonesia); (6) SINTA 2.

### SECRETARIAT OF GEOSFERA INDONESIA

Department of Geography Education, University of Jember, FKIP Building, Jl. Kalimantan 37,  
Jember, East Java, 68121, Indonesia.  
Telp. (0331) 334988 / 330738  
Email : [geografi.fkip@unej.ac.id](mailto:geografi.fkip@unej.ac.id)  
Website : <https://jurnal.unej.ac.id/index.php/GEOSI>

## TABLE OF CONTENTS

<b>A New Algorithm For The Grid Cell-Based Runoff Routing Model Based on Travel Time Concept</b> <i>Baina Afkri, M. Pramono Hadi, Slamet Suprayogi</i>	160-185
<b>A Preliminary Study on Tsunami Disaster in Yogyakarta: Identification of Vulnerability Order and Components</b> <i>Lina Wahyuni, Muh. Aris Marfai, M. Pramono Hadi</i>	186-195
<b>Soil Zonation and The Shaking Table Test of The Embankment on Clayey Soil</b> <i>Ripon Hore, Sudipta Chakraborty, Md. Fayjul Bari, Ayaz Mahmud Shuvon, Mehedi Ahmed Ansary</i>	196-209
<b>Modeling Land Use and Land Cover Dynamic Using Geographic Information System and Markov-CA</b> <i>Millary Agung Widiawaty, Arif Ismail, Moh. Dede, N. Nurhanifah</i>	210-225
<b>Spatio-Statistical Analysis of Rainfall and Temperature Distribution, Anomaly and Trend in Nigeria</b> <i>Elisha Ademola Adeleke and Eniola Aminat Orebayo</i>	226-249
<b>The Facies and Metamorphism Types Determination of Metamorphic Rock in The Part of Mekongga Complex</b> <i>M. Musnajam, Ahmad Tarmizi Abd Karim, N. Nurfadillah, Fahrudi Ahwan Ikhsan, Andri Estining Sejati</i>	250-267
<b>Building Density Level of Urban Slum Area in Jakarta</b> <i>Tenty Melvianti Legarias, Renny Nurhasana, Edy Irwansyah</i>	268-287
<b>Land Value Potential Zonation : Implication Towards Urban Planning</b> <i>Revi Mainaki, Anita Eka Putri, Dwiyono Hari Utomo</i>	288-300