

Vol. 18 No. 1 June 2021



P-ISSN 0216-6739; E-ISSN 2549-516X  
Accreditation No. 30/E/KPT/2018

# International Journal of Remote Sensing and Earth Sciences



Vol. 18 No. 1 June 2021

P-ISSN 0216-6739; E-ISSN 2549-516X  
Accreditation No. 30/E/KPT/2018

Published by  
Indonesian National Institute of Aeronautics and Space  
(LAPAN)

International Journal of  
**Remote  
Sensing and  
Earth Sciences**

**Published by  
Indonesian National Institute of Aeronautics and Space  
(LAPAN)**

## **Editorial Committee Preface**

Dear IJReSES Readers,

We sincerely thank you for reading the International Journal of Remote Sensing and Earth Sciences Vol. 18 No 1, June 2021. In general, this journal is expected to enrich the serial publications on earth sciences. In particular this journal is aimed to present improvement in remote sensing studies and its applications on earth sciences. This journal also serves as the enrichment on earth sciences publication, not only in Indonesia and Asia but also worldwide.

This journal consists of papers discussing the particular interest in remote sensing field. Those papers are having remote sensing data for image processing, geosciences, oceanography, environment, disaster, mining activities, etc. A variety of topics are discussed in this seventeen edition. Briefly, the topics discussed in this edition are the studies of remote sensing data processing issues such as rice field classification, potential fishing zone, burned areas, total suspended solid, land surface temperature change, and bathymetri. There some new methods, new analysis, and new novelties on this edition.

Finally, enjoy your reading of the IJRESES Vol. 18 No. 1 June 2021, and please refer this journal content for your next research and publication. For editorial team members and the journal secretariat, thank you very much for all big supports for this volume publication.

Editor-in-Chief,

**Dr M. Rokhis Khomarudin**

**Editorial Committee Members**  
**INTERNATIONAL JOURNAL OF**  
**REMOTE SENSING AND EARTH SCIENCES**  
**Vol. 18 No. 1 June 2021**  
**P-ISSN 0216-6739; E-ISSN 2549-516X**

- Editor-in-Chief : **Dr. M. Rokhis Khomarudin**
- Peer Reviewers : **Prof. Dr. Ir. Nengah Suratijaya, M.Agr.**  
**Prof. Dr. Dewayany Sutrisno**  
**Prof. Dr. Ir. Dony Kushardhono, M.Eng.**  
**Dr. Widodo S. Pranowo**  
**Dr. Jonson Lumban-Gaol**  
**Dr. Ir. Baba Barus, M.Sc.**  
**Dr. Takahiro Osawa**  
**Dr. Ratih Dewanti**  
**Dr. Dede Dirgahayu**  
**Dr. Indah Prasasti, M.Si.**  
**Dr. Rahmat Arief**  
**Syarif Budhiman, S.Pi., M.Sc.**
- Secretariat : **Muhammad Bayu, S.Sos.**  
**Haris Benediktus, S.E.**  
**Lusiana Sulistianingsih, S.I.A.**  
**Ar Rasyiid Akbar, S.E.**

Contribution Paper to:

**IJReSES Secretariat**  
**Indonesian National Institute of Aeronautics and Space (LAPAN)**  
Jl. Kalisari No. 8, Pekayon, Pasar Rebo, Jakarta 13710, INDONESIA  
Telp. (021) 8710065, Fax. (021) 8722733  
[www.jurnal.lapan.go.id](http://www.jurnal.lapan.go.id)



Published by:  
**National Institute of Aeronautics and Space of Indonesia**  
**(LAPAN)**

INTERNATIONAL JOURNAL OF  
REMOTE SENSING AND EARTH SCIENCES

Vol. 18 No. 1 June 2021

P-ISSN 0216-6739; E- ISSN 2549-516X

Accreditation No. 30/E/KPT/2018

Contents

Editorial Committee Preface .....	ii
Editorial Committee Members .....	iii
<b>OIL PALM PLANTATION DETECTION IN INDONESIA USING SENTINEL-2 AND LANDSAT-8 OPTICAL SATELLITE IMAGERY (CASE STUDY: ROKAN HULU REGENCY, RIAU PROVINCE)</b>	
Suwarsono, Fajar Yulianto, Yunita Nurmasari, Arie Wahyu Wijayanto.....	1
<b>MACHINE LEARNING APPLIED TO SENTINEL-2 AND LANDSAT-8 MULTISPECTRAL AND MEDIUM-RESOLUTION SATELLITE IMAGERY FOR THE DETECTION OF RICE PRODUCTION AREAS IN NGANJUK, EAST JAVA, INDONESIA</b>	
Terry Devara, Arie Wahyu Wijayanto.....	19
<b>APPLICATION OF LAPAN A3 SATELLITE DATA FOR THE IDENTIFICATION OF PADDY FIELDS USING OBJECT BASED IMAGE ANALYSIS (OBIA)</b>	
Mukhoriyah Mukhoriyah, Dony Kushardono .....	33
<b>SPATIO-TEMPORAL ANOMALIES IN SURFACE BRIGHTNESS TEMPERATURE PRECEDING VOLCANO ERUPTIONS DETECTED BY THE LANDSAT-8 THERMAL INFRARED SENSOR (CASE STUDY: KARANGETANG VOLCANO)</b>	
Suwarsono Suwarsono, Djoko Triyono, Muhammad Rokhis Khomarudin, Rokhmatuloh Rokhmatuloh.....	43
<b>FISHING BOAT DISTRIBUTION ESTABLISHED BY COMPARING VMS AND VIIRS DATA AROUND THE ARU ISLANDS IN MALUKU INDONESIA</b>	
Rafika Minati Devi, Tofan Agung Eka Prasetya, Diah Indriani .....	53
<b>COASTLINE CHANGE ANALYSIS ON BALI ISLAND USING SENTINEL-1 SATELLITE IMAGERY</b>	
Suhendra Suhendra, Christopher Ari Setiawan, Teja Arief Wibawa, Berta Berlian Borneo.....	63
<b>HYDRO-METEOROLOGICAL ASPECTS OF THE 2021 SOUTH KALIMANTAN FLOOD: TOPOGRAPHY, TIDES, AND PRECIPITATION</b>	
Munawir Bintang Pratama, Rafida Multazima, Ismail Naufal Azkiarizqi.....	73
<b>RADAR-BASED STOCHASTIC PRECIPITATION NOWCASTING USING THE SHORT-TERM ENSEMBLE PREDICTION SYSTEM (STEPS) (CASE STUDY: PANGKALAN BUN WEATHER RADAR)</b>	
Abdullah Ali, S. Supriatna, Umi Sa'adah.....	91
<b>ESTIMATION OF ABOVEGROUND CARBON STOCK USING SAR SENTINEL-1 IMAGERY IN SAMARINDA CITY</b>	
Bayu Elwentyo Bagus Dewantoro, Retnadi Heru Jatmiko.....	103
Instruction for Authors .....	
Index.....	

Published by:

**National Institute of Aeronautics and Space of Indonesia (LAPAN)**