

Second International Seminar on Earth Sciences and Technology (ISEST-2023)

IOP Conference Series: Earth and Environmental Science
Volume 1245

Bandung, Indonesia
7 - 8 March 2023

Editors:

**Riantini Virtriana
Brian Bramanto
Muhammad Rais Abdillah**

**Reynaldy Fifariz
Idham Andri Kurniawan**

ISBN: 978-1-7138-7980-0
ISSN: 1755-1307

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

This work is licensed under a Creative Commons Attribution 3.0 International Licence.
Licence details: <http://creativecommons.org/licenses/by/3.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2024)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Preface

Peer Review Statement

The Marine Fossils and Paleocological Significance of the Southern Edge of South Sumatra Basin in Linggapura Lampung, Indonesia.....	1
<i>D G Harbowo, D Pratama, B Priadi, T Julian, D J P Sihombing, E S Sitinjak</i>	
Analysis of Soil Deformation Due to Oil and Gas Exploration and Hydrocarbons Micro Seepage in Ngasem District, Bojonegoro Regency	13
<i>H Sadewa Wiguna, N Hayati</i>	
Identification and Characterization of Gas Hydrate Using Marine Seismic and Well Data: South Makassar Strait Case Study	25
<i>A W Muntashir, T B Nainggolan, E Supriyana</i>	
Carbon Emissions Prediction from Land Change Model in Bandung Regency, Indonesia.....	33
<i>I Indrarini, D N Handiani</i>	
Identification of Landslides Controlling and Triggering Factors Using the Analytical Hierarchy Process (AHP) in Dermasuci Village, Pangkah District, Tegal Regency, Central Java Province - Indonesia	44
<i>B T Widodo, H Setiawan, I W Warmada</i>	
A Statistical Review of the Dates and Patterns of Volcanic Activity of Lewotolo Volcano, East Nusa Tenggara, Indonesia.....	55
<i>T Muliawati, D G Harbowo</i>	
Sustainable Engineered Cementitious Composite Using Natural Sisal and Coir Fibers	70
<i>Suranta Sembiring, Patria Kusumaningrum, F Zaki Anwar</i>	
The Impact of Environmental, Social, and Economic Factors Due to Anak Krakatau Volcano Tsunami Using Remote Sensing Technology	81
<i>Riantini Virtriana, Agung Budi Harto, Pitri Rohayani, Tania Septi Anggraini, Kalingga Titon Nur Ihsan</i>	
Geochemical Characteristics of Lacustrine Source Rock: An Insight of Banuwati Formation from Sunda and Asri Basins, Indonesia.....	93
<i>Bagus Priyanto, Eddy Ariyono Subroto, Asep Heri Patria Kesumajana, Very Susanto, Agus Dwi Suryanto</i>	
Comparing Gardner-Knopoff, Gruenthal, and Uhrhammer Earthquake Declustering Methods in Aceh, Indonesia	103
<i>Juellyan, Bambang Setiawan, Muttaqin Hasan, Halida Yunita, Munira Sungkar, Taufiq Saidi</i>	
Preliminary Result of Dominant Frequency and Seismic Amplification in Penajam Paser Utara and Its Surrounding Regions Using the HVSr Method.....	111
<i>A Mawadah, Z Zulfakriza, S Widiantoro, P Supendi, Y M Husni, A Lesmana, M F Azhari</i>	
Application of Modified Segment Tracing Algorithm (mSTA) Method to Identify Landslide Susceptibility Zones Around Mt. Sinabung, Indonesia	119
<i>Zahratunnisa, Asep Saepuloh, Estu Kriswati, Ahmad Basuki</i>	

Water Quality Assessment of Lake Maninjau After the Mass Fish Kill Event.....	131
<i>Taofik Jasalesmana, Mutiara Rachmat Putri, Mirzam Abdurrachman, Cynthia Henny, Sulung Nomosatryo, Ira Akhdiana</i>	
An Enhanced Earthquake Risk Analysis Using H3 Spatial Indexing.....	143
<i>A N Aini, O A Dewantari, D P A Mandala, M B F Bisri</i>	
Distributions of Chromium, Copper, and Cadmium in the Estuary-Coastal Surface Sediment of Tin-Rich Island.....	160
<i>A U Nurhidayati, S Y Cahyarini, D A Utami</i>	
Cianjur Earthquake- Roles of Social Media and the Distribution of Sciences	170
<i>A Rudyawan, A Pamumpuni, M R Puspaningrum, I Gunawan, B Sapiie, A P Handayani, M Abdurrachman</i>	
Utilization of By-Products and Waste GGBFS Materials from Steel Processing Industry to Produce Sustainable Green Pervious Concrete in Indonesia	178
<i>Patria Kusumaningrum, Muhammad Risnan</i>	
Assessing Geotourism Aspects of Ungaran Geothermal Areas for Promoting Sustainable Energy Through Volcano-Geothermal Tourist Destination.....	187
<i>J Marin, A Paskarana, E B S Sandy, J Agustian</i>	
Surface Geology Analysis on the Relationship Between Fault Creep and Overpressure in Grobogan, Central Java, Indonesia.....	198
<i>Eri S. Sitinjak, Benjamin Sapiie, Agus M. Ramdhan, Ana N. Hidayati, Yanuar A. Azhari, Nanda F. Adriyansyah</i>	
The Risk of Ignorance of DEM Height Reference System on Coastal Inundation Modeling (the Case of Jakarta)	211
<i>Heri Andreas, Firman Juliandri, Dhota Pradipta, Dina A. Sarsito, Hasanuddin Z. Abidin</i>	
Fragmentation Evaluation of Some Selected Mudrock Indiced by Physical and Mineralogical Properties.....	218
<i>Misbahudin, P R D Perdana, D Y Fatimah, F F Amanda, D P Kusumastuti, B Wicaksono, A S N Chairat</i>	
Velocity Changes Associated to the 2019 Ambon 6.5 Mw Earthquake Using Ambient Seismic Noise.....	234
<i>A Amiruddin, N T Puspito, D P Sahara, A D Nugraha, Zulfakriza</i>	
Geochemical and Geological Properties of Tin Related to Ore Deposits: A Review	243
<i>A D Handoko, B Sapiie, Syafrizal, A Rudyawan</i>	
Design and Preliminary Results of Debris Flow Analog Model in Laboratory Scale, Case Study of Bentarsari Sub-Watershed	253
<i>Imam A. Sadisun, Indra A. Dinata, Lambok M. Hutasoit</i>	
First Occurrence of Planktonic Foraminiferal Species <i>Boliella Adamsii</i> as a Marker for the Pleistocene-Holocene Boundary in the Sea Around Sumba Island	260
<i>R D W Ardi, Aswan, K A Maryunani, E Yulianto, P S Putra, S H Nugroho</i>	
Cianjur M5.6 Earthquake Aftershock Survey (CEAS) Using ITB Temporary Seismographs.....	272
<i>M F Azhari, A D Nugraha, Z Zulfakriza, R V Ry, A Lesmana, A S Putra, F Muttaqy, N Heryandoko, A Saputra, A Mawadah, D A Putri, H S Saputra</i>	

Volcanic Geohazard Analysis - Case Study from the Ujung Lemah Abang Nuclear Power Plant Area, Central West Java.....	282
<i>P Sumintadiredja, A Rudyawan, M Surmayadi, IGBE Sucipta</i>	
Review of Morphological Changes of Anak Krakatau Before and After 2018 Eruption Using Aerial Photogrammetry	293
<i>Wilfridus F S Banggur, Aditya Pratama, Taufik Ismail, Dini Nurfitriani, Ardy Setya Prayoga, M N Kartadinata, Devy Kamil Syahbana, Deni Mardiono, Philipson Bani</i>	
Petrogenesis of Adang and Talaya Volcanic Rocks, in the Mamuju Area and Its Surrounding, West Sulawesi	303
<i>M A Zaidani, B Priadi, I G B E Sucipta, V Susanto, A Saepuloh</i>	
Peak Ground Velocity (PGV) Estimation of Mw 5.6 Cianjur Earthquake November 11, 2022 Using Global Positioning System (GPS)	315
<i>Irwan Meilano, Susilo Susilo, Sidik Tri Wibowo</i>	
Rain Scanner Radar and Optical Flow Combination for Early Identification of the Incoming Bow Echo Heavy Precipitation	321
<i>G A Nugroho, Syahrul, E Maryadi, A Rahmawati, T Sinatra, A Indrawati, N Cholianawati, A Awaludin</i>	
Significant Precipitation Anomalies Over Indonesia in the Aftermath of Iod Events	331
<i>Chairul Nazli Nasution, Faiz Rohman Fajary, Muhammad Rais Abdillah, Aditya Rakhmat Kartadikaria</i>	
The Effect of Rainfall Anomalies Due to Enso on Tea Productivity in West Java Indonesia (Case Study: Bandung Regency).....	340
<i>Rahmatika, Joko Wiratmo</i>	
Prediction of Convective Available Potential Energy and Equivalent Potential Temperature Using a Coupled WRF and Deep Learning for Typhoon Identification	352
<i>Mamad Tamamadin, Changkye Lee, Seong-Hoon Kee, Jurng-Jae Yee</i>	
Correlation Analysis of GNSS-Derived Precipitable Water Vapor (PWV) with Rainfall Data in Indonesia	363
<i>Azhari Barbarosa, Dudy D Wijaya, Zamzam A J Tanuwijaya, Nabila S E Putri, Wedyanto Kuntjoro</i>	
Utilization of Jason-3 Satellite Altimetry Data for Observation of TC Seroja	382
<i>Hananda D. Mahetran, Dudy D. Wijaya, Zamzam A. J. Tanuwijaya, Wedyanto Kuntjoro, Agustinus B. Setyadji, Fathin Nurzman, Ivonne M. Radjawane, Hansan Park</i>	
Data Reconstruction of Sea Surface Temperature in Indonesia's Fish Management Area 713 (IFMA-713) Using Machine Learning	393
<i>S Nurdjaman, R A Wicaksono, A R Kartadikaria, M R Abdullah</i>	
Coastline Change Using Time Series Satellite Images in the North Coast of Java: Study Case Indramayu Regency, West Java, Indonesia.....	408
<i>Erva Aulia Fauzunora, Asep Saepuloh, Ayi Tarya</i>	
Characterizing Coastline and Sediment Interaction in the North Coast of Java Using Satellite Images	417
<i>Efrat N. Nainggolan, Asep Saepuloh, Susanna Nurdjaman</i>	

Study of Driving Force and Surface Current Patterns in Labuan Bajo from High Frequency Radar Data from October to December 2018.....	434
<i>Y Baharsyah, A R Hakim, A Ramdhani, R Rachmayani</i>	
Effectiveness of Vertical Error Budget Model for Portable Multi-Beam Echo-Sounder in Shallow Water Bathymetric Survey.....	453
<i>AA Abubakar, Poerbandono</i>	
Indonesian “tsunami-Generation” in a Nutshell: Systematic Literature Review	466
<i>Afifah Hanum Amahoru, Ainur Ridho, Radikal Lukafiardi, Mizan Bustanul Fuady Bisri</i>	
Long-Term Trend and Variability of Ocean Heat Content in the Indonesian Maritime Continent	491
<i>Subekti Mujiasih, Mochamad Furqon Azis Ismail, Abdul Basit, Herlina Ika Ratnawati, Rahaden Bagas Hatmaja, Johanis Dominggus Lekalette</i>	
Mapping of Tsunami Evacuation Routes and Shelters in Batukaras Village, Pangandaran Regency, Indonesia	503
<i>Farras Rizqy Hafizh, Berto Noven Marsekal, Candida Aulia De Silva Nusantara, Wiwin Windupranata</i>	
Evaluation of GNSS Reflectometry Method for Sea Level Estimation in Indonesia	511
<i>Lisa A. Cahyaningtyas, Dudy D. Wijaya, Bambang Setyadji, Aditya R. Kartadikaria, Hansan Park, Sidik T. Wibowo, Rega Himawan</i>	
Determination of Indonesia’s Marine Deflection of Vertical from Multi-Mission Altimetry Satellite Data	519
<i>Ahmad Fauzan, Dudy Darmawan Wijaya, Fathin Nurzaman, Faruq Khadami, Hansan Park</i>	
Coastline Change Analysis Using Landsat-8 on Rebana Metropolitan Area, West Java.....	528
<i>Tri Kies Welly, Wiwin Windupranata</i>	

Author Index