

The 3rd International Conference of Transdisciplinary Research on Environmental Problems

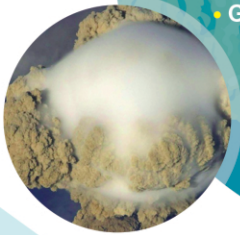
in Southeast Asia (TREPSEA2018)

August 11 - 12, 2018 in Gorontalo, Sulawesi, Indonesia.

Conference Book

Disaster Mitigation

- Volcanic Eruption
- Flood
- Earthquake
- Tsunami
- Landslide
- Groundwater



Sustainable Development and Environmental Preservation

- Heavy Metal Problem
- Conversion of Waste to Energy
- Renewable Energy



TREPSEA 2018

INTERNATIONAL
CONFERENCE

trepsea.org

Measure and Improvement to Urban Environmental Problem

- Urban Management and Community Development
- Urban Transportation Planning
- Traffic Control and Surveillance System
- Garbage Problem
- Waste Water Problem



Food and Human Security

- Food
- Security Problems



Organized by



Research Institute for
Humanity and Nature
(RIHN)



State University
of Gorontalo
(UNG)



Ehime University



Bandung Institute
of Technology
(ITB)



Muhammadiyah University
of Gorontalo
(UMGo)



3rd International Conference of
TREPSEA
INTERNATIONAL
CONFERENCE



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— ABOUT TREPSEA

The International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia (TREPSEA) aim to conduct integrative research of interactions between natural environment and human-social systems in Southeast Asia to solve the environmental problems in Southeast Asia. Its scope thus includes topics of geoscience, environmental science, engineering, medicine, economy, culture, education, and administration.

Transdisciplinary Research (TDR) is defined as research efforts conducted by investigators from different disciplines and non-academic participants working jointly to create new conceptual, theoretical, methodological, and translational innovations. Related stakeholders include sponsoring institutions, governments, development organizations, business and industries, civil society (inhabitant, NGO's etc), and the media.

We are expanding the area to environmental problems and current contributions to have more growth for international conference on the matter of environmental problems. We believe that you definitely have interesting for joining it. The International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia (TREPSEA) aim to conduct integrative research of interactions between natural environment and human-social systems in Southeast Asia to solve the environmental problems in Southeast Asia. Its scope thus includes topics of geoscience, environmental science, engineering, medicine, economy, culture, education, and administration.



— TREPSEA 2014

1st International Conference of Transdisciplinary Research on Environmental Problem in Southeast Asia 2014 (TREPSEA 2014), was held on 4th and 5th September 2014 at Swiss Belinn Hotel, Makassar, Indonesia, which was organized by Ehim University, Bandung Institute of Technology and Hasanuddin University. The conference featured both oral and poster presentations and workshop. Conference participants presented, shared and discussed the ways to solving the problems in Southeast Asia with stakeholders based on their experiences on topics related to disaster mitigation, measure and improvement to urban environmental problems, sustainable development and environmental preservations, and



TREPSEA 2016

2nd International Conference of Transdisciplinary Research on Environmental Problem in Southeast Asia 2014 (TREPSEA 2014), was held on September 20th – 22nd, 2016 in Bandung, West Java, Indonesia, which was organized by Ehime University, Bandung Institute of Technology and State University of Gorontalo. The conference featured both oral and poster presentations and workshop.

Conference participants presented and shared their experiences on topics related to disaster mitigation, measure and improvement to urban environmental problems, sustainable development and environmental preservations, and security of food from their studied regions.

The 3rd international conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia (TREPSEA 2018) will be held on August 11 – 12, 2018 in Gorontalo, Sulawesi, Indonesia



WELCOME MESSAGE —

Our Earth, which is the most beautiful planet in our solar system with uncountable natural resources and artistic appeal of natural beauties and it can only support living organisms according to our acquired knowledge from the science. But our ideal idea for modern living style, industrialization, technology revolution, and improper usage and exploiting of natural resources have made our planet earth suffered from natural disasters: ozone layer depletion, global warming, sea level rising, etc. as well as man-made environmental problems: air pollution, water pollution, industrial waste water contamination of the rivers, mercury pollution, excessive amount of chemicals and heavy metals in foods, etc. and these further lead to the health and social problems. Countries have been suffering from these issues nowadays but developing countries may suffer much higher due to the issue of poverty as the underlying background.

In order to solve this, the integrative approach with research on environmental problems and humanity is necessary. The transdisciplinary research is defined as research efforts conducted by researchers from different disciplines and non-academic stakeholders working cooperatively to create new conceptual, theoretical, methodological, and translational innovations in order to create ideal solution for nature and humanity. The stakeholders are funders, governments, development organizations, business companies, industries, and civil societies (inhabitants, NGO/NPO, etc.) and media for completing of the problems in the environment.

The International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia (TREPSEA) aim to conduct integrative research of interactions between natural environment and human-social systems in Southeast Asia to solve the environmental problems in Southeast Asia. Its scope thus includes topics of geoscience, environmental science, engineering, medicine, economy, culture, education, administration, etc. The participants of this integrative research are having discussions every two year in regularly held international conference where they create translational innovations to solve the environmental and social problems.

It had been the third time for this international conference under the name of TREPSEA, the Transdisciplinary Research on Environmental Problems in Southeast Asia and this year TREPSEA2018 was held on August 11 – 12, 2018 in Gorontalo City, Sulawesi, Indonesia.

As a chairperson of committee, I would like to express my deep appreciation to the Research Institute for Humanity and Nature (RIHN), State University of Gorontalo (UNG), Ehime University, Bandung Institute of Technology (ITB) and Muhammadiyah University of Gorontalo (UMGo) for their sponsorship and organized cooperatively for this conference. I would like to thank our special guests: Prof. Dr. Emil Salim, an economist and known for the first state minister of environment, Republic of Indonesia, and Prof. Dr. Syamsu Qamar Badu, Rector of State University of Gorontalo and our invited speakers: Prof. Dr. Ir. Nelson Pomalingo, M.Pd, the Regent of Gorontalo Regency, H. Hamim Pou, S.Kom, MM, the Regent of Bone Bolango Regency, Prof. Dr. Ir. Mahludin H. Baruwadi, M.P, Vice Rector for Academic Affairs, State University of Gorontalo (UNG), and Ms. Kana Furusawa, Vice Secretary General, the Japanese Geoparks Network for their enormous supports and their excellent keynotes for this conference.

Also, I would like to thanks to committee member: Prof. Dr. Fenty Usman Puluhulawa, M.Hum, State University of Gorontalo, and general committee members: Prof. Dr. Dwia Aries Tina Pulubuhu, Hasanuddin University, Prof. Dr. Emmy Suparka, Bandung Institute of Technology, Prof. Dr. Syamsu Qamar Badu, M.Pd. Rector of State University of Gorontalo, and Dr. Arif Satria, SP, M.Si, Bogor Agricultural University, and Prof. Dr. H. Gufran Darma Dirawan, M. EMD., State University of Makassar, Scientific Committee (SC) members and Local Organizing Committee (LOC) members for their selfless and great efforts for all essential works of this conference. On the behalf of all committee members, I would like to thank the researchers and scientists, paper and poster presenters, students, stakeholders, and funders for their participation, sharing their concerns, their highlight topics, discussing their experience, expertise, and solving these environmental problem issues and all would be remained as priceless contributions for our new generations.

Chairman



Prof. Masayuki Sakakibara
Ehime University

COMMITTEE MEMBERS OF TREPSEA 2018

CHAIRMAN

General Chairman	: Prof. Masayuki Sakakibara, Ph.D	EU
Vice Chairman	: Prof. Dr. Fenty Usman Puluhulawa, M.Hum	UNG

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	Prof. Dr. Syamsu Qamar Badu, M.Pd	UNG
	Dr. Arif Satria, SP, M.Si	IPB
	Prof. Dr. H. Gufran Darma Dirawan, M. EMD.	UNM

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Committee	: Lanto Ningrayati Amali, Ph.D	UNG
	Novriyanto Napu, Ph.D	UNG
	Dr. Lilan Dama	UNG
	Dr. Sunarty Eraku	UNG
	Raflin Hinelu, M.Si	UNG
	Intan Novianti Manyoe, MT	UNG

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Presentation	: Firman Sauqi Nursabila, S.T	ITB
Logistic	: M. Imron Hasani, S.T	ITB
Geotourism	: Alfend Rudyawan, S.T, M.T, Ph.D	ITB
	Nabila Novasari Soviana	ITB





EVENT SCHEDULE OF TREPSEA 2018

DAY 0 - August, 10th 2018

18.45 – 21.00	Ice Breaking and Introduction	Ballroom
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DAY 1 - August, 11th 2018

07.30 – 08.00	Registration	Ballroom
08.00 – 09.00	Opening	Ballroom
09.00 – 09.15	Photo Session	Ballroom
09.15 – 09.30	Coffee Break	Ballroom
09.30 – 10.00	Keynote Speaker 1 A	Ballroom
10.00 – 10.10	Preparation for Invited Speaker 1 A	Ballroom
10.10 – 10.40	Invited Speaker 1 A	Ballroom
10.40 – 10.50	Preparation for Invited Speaker 2 A	Ballroom
10.50 – 11.20	Invited Speaker 2 A	Ballroom
11.20 – 12.30	Lunch Break	Ballroom
12.30 – 14.20	Oral Session 1 (Topic 1, 2, 3, 4)	Selected Room
14.20 – 14.35	Coffee Break	Selected Room
14.25 – 16.45	Oral Session 1 (cont' Topic 1, 2 and Topic 3,4)	Selected Room
16.45 – 18.00	Preparation for Gala Dinner	
18.00 – 20.00	Gala Dinner	Ballroom

DAY 2 - August, 12th 2018

08.00 – 08.30	Keynote Speaker 1 B	
08.30 – 08.40	Preparation for Invited Speaker 1 B	Ballroom
08.40 – 09.10	Invited Speaker 1 B	Ballroom
09.10 – 09.20	Preparation for Invited Speaker 2 B	Ballroom
09.20 – 09.50	Invited Speaker 2 B	Ballroom
09.50 – 10.00	Coffee Break & Preparation for Poster Session	Ballroom
10.00 – 10.30	Poster Session	Ballroom
10.30 – 13.00	Oral Session 2 (Topic 1, 2, 3, 4)	Ballroom
13.00 – 14.30	Lunch Break	Selected Room
14.30 – 16.30	Workshop	Ballroom
16.30 – 17.00	Coffee Break	Selected Room
17.00 – 18.00	Preparation for Closing Ceremony	
18.00 – 19.00	Closing Ceremony	Ballroom

TREPSEA

TIMETABLE



ORAL AND POSTER PRESENTATION

DAY 1 - August, 11th 2018

ORAL PRESENTATION

Session 1 : 12.30 – 14.20

Session 1 (continued) : 14.25 – 16.45

DAY 2 - August, 12th 2018

ORAL PRESENTATION

Session 2 : 10.30 – 13.00

POSTER PRESENTATION

Session : 10.00 – 10.30

**TREPSEA2018 CONFERENCE SUBMITTED ABSTRACTS IN
RELATED CATEGORIES**

01 - Disaster Mitigation					
Oral Presentation					
Day 1, August 11					
No	Authors	Title	Number	Room	Time
1	Boby Bagja Pratama	Addressing the Environmental Risk from the Mud Flow Disaster in Sidoarjo	TRP-2	1	12.30-12.45
2	Ade Panca Z., H. Sari Hasibuan, Raldi Koestoer	Disaster Mitigation of Climate Change Effects on Small Islands (Case of Harapan Island)	TRP-3	1	12.45-13.00
3	Heriansyah Putra, Hideaki Yasuhara, Naoki Kinoshita, and Erizal	Application of Enzyme-Mediated Calcite Precipitation for Liquefaction Mitigation	TRP-6	1	13.00-13.15
4	Mohamad Dio Pangulu, Yuyu Indriati Arifin, Yemima Otoluwa, Yasin Septian	Identification of Landslide-Prone Area in the Region of Dunggilata Mines Folk as an Effort to Increase Safety of Traditional Miners	TRP-11	1	13.15-13.30
5	Supartoyo and Nia Kurnia Praja	The Napu - Poso Earthquake on May 29th, 2017	TRP-123	1	13.30-13.45
6	Purwanto, Djamaluddin, Sabrianto Aswad, Dedi Eka Wahyuwibowo, Hideaki Yasuhara,	Study on Influence of Joint Orientation on Rock Engineering Properties for Mining and Infrastructure Design	TRP-23	1	13.45-14.00

7	Intan Noviantari Manyoe, Ulva Ria Irfan, Dadang Ahmad Suriamiharja, Sunarty S. Eraku, Dewi Darmayanti Tolodo, Siti Suhartini S. Napu	Geology and 2D Modelling of Magnetic Data to Evaluate Surface and Subsurface Setting in Bongongoayu Geothermal Area, Gorontalo	TRP-25	1	14.15-14.30
COFFE BREAK 15'					
8	Anggun Farwati M. Abdullah, Widya Annisa, Dewi Darmayanti Tolodo, Komang Sugianti, Mohamad Noorhidayat Baruadi.	Measurement of the Distribution of Sedimentary Material on Bolango Watershed for Utilization as a Building Material and Preventing a Flood Based on Sporicity and Seive Analysis	TRP-26	1	14.45-15.00
9	Siti Suhartini S. Napu, Tedy Harianto Salama, Fauzul Chaidir A. Usman, Indra Samir	Sediment Material Potential of Bone River as a Prevention of Silting and Flood of Bone River Estuary, Gorontalo	TRP-27	1	15.00-15.15
10	Herawanti Kumalasari, Raldi Hendro Koestoer, Hayati Sari Hasibuan	Disaster Risk Mitigation of Landslide for Sustainability of Geothermal Production in West Java Province, Indonesia	TRP-32	1	15.15-15.30
11	Benyamin Sapiie, Meli Hadiana, Terry Alfa Furqon	Strain Analysis of Sub-Seismic Scale Fault Using Sandbox Modeling: Implications of Slip Rate Determination	TRP-38	1	15.30-15.45

12	Purnama Sendjaja, Emmy Suparka, Chalid I. Abdullah, and IGB Eddy Sucipta	Characteristic of The Mount Colo Volcano, Una-Una Island, Central Sulawesi Province: Tectonic Evolution and Disaster Mitigation	TRP-53	1	15.45-16.00
13	Indrawan, Daud Yusuf	Flood Points Distribution Mapping for the Determination of Evacuation Route and Disaster Post in Gorontalo City	TRP-61	1	16.00-16.15
14	Arif Susanto, Suryantini, Imam A. Sadisun, Asep Saepuloh, Joshua Satriana	Effects of Hydrothermal Alteration on Petrophysical Properties of Rocks in the Cibolang Area, Bandung	TRP-64	1	16.15-16.30
15	Ninie Rina Herdianita	Way Ratai Geothermal System at Lampung: Surface Manifestations and Geochemistry Study	TRP-73	1	16.30-16.45

Day 2, August 12

16	Ninie Rina Herdianita, Johnnedy Situmorang and Irfan Hamzah	Mt. Kembar Geothermal System in Aceh, Indonesia: Preliminary Survey, Prospect and Development Problems	TRP-74	1	10.30-10.45
17	Firman Sauqi Nur Sabila, Mirzam Abdurrachman	Characterization of Silica Saturation in Magmatic Evolution of Raung Volcano and its Implications for Volcanism History	TRP-76	1	10.45-11.00
18	Emmy Suparka, Agus H. Harsolumakso, Johannes Hutabarat, Irev Jundullo	New Data of the Ophiolite Complexes in Pagedongan, Banjarnegara, Central Java	TRP-89	1	11.00-11.15

19	Priadi B., Basuki N.I., Abidin H., and Permana H.	Submarine Volcanism along Sangihe-Talaud Waters, Indonesia	TRP-94	1	11.15-11.30
20	Priadi B. and Saputro S.P.	High Potassic Magmatism in Tana-Toraja, Sulawesi-Indonesia	TRP-95	1	11.30-11.45
21	Pamela, Yukni Arifianti, Fitriani Agustin	Comparative Study Between Bivariate Statistical Models in Landslide Susceptibility Map	TRP-99	1	11.45-12.00
22	Kazunari Kimura, Tomohiro Nagata, Shuya Kan	Landslide disaster and its prevention works in Shikoku region of Japan	TRP-100	1	12.00 - 12.15
23	Yudhicara, D.H. Natawidjaja, Dicky Muslim, A. Sudradjat	Paleoseismology Study of Kumering Fault Segment, Sumatra Fault	TRP-92	1	12.15-12.30
24	Imam A. Sadisun, Rivai Sargawi, Julian Situmorang, Indra A. Dinata, Urwatul Wusqa	Towards Development of a Slope Management System along the Tawaeli-Toboli National Road Segment, Central Sulawesi	TRP-112	1	12.30-12.45
25	I G.B. Eddy Sucipta, Bambang Priadi, Bayu Himawan	Petrology and Geochemistry of Three Periode Eruption Products In The Kelud Volcano	TRP-118	1	12.45-13.00

01 - Disaster Mitigation

Poster Presentation

Day 2, August 12

No	Authors	Title	Number	Room
1	I G.B. Eddy Sucipta, Adzkia Noerma Arifa,	Magmatic Conditions as Indicated by Petrological and Mineralogical Aspects in the 2016 Sinaburg	TRP-44	Ballroom

	Fachri Muhammad, Oktory Prambada	Eruption		Ballroom
2	Dina Anggreni Sarsito, Susilo, Alfend Rudyawan, Heri Andreas dan Dhota Pradipta	Studying Gorontalo Fault Kinematic Using Geometric Geodetic GNSS GPS Monitoring	TRP-71	
3	Taufik Ismail, Mirzam Abdurrachman, Ya n Rizal and Rahmawati Arbie	The Influence of Rock Resistance For Geomorphology of Krakatoa Islands, South Lampung District, Lampung Province	TRP-80	
4	Taufik Ismail and Mirzam Abdurrachman	Volcanostratigraphy of Krakatau Islands, South Lampung District, Lampung Province	TRP-81	
5	Helmy Hizkya, Mirzam Abdurachman, Muhammad Hafidh and Divi Ramdan	Geochemical Exploration of geothermal manifestations : Study case of Bajawa Volcanic Complex, Flores Island, East Nusa Tenggara Province.	TRP-84	
6	Firman Habib, Mirzam Abdurrachman, Iwan Setiawan	Vulcanostratigraphy and Petrogenesis of Sundoro Volcano, Central Java	TRP-85	
7	Rolis Junwandi, Mirzam Abdurrachman, Mochamad Nugraha	Petrogenesis Of Guntur Complex, Garut District, West Java Province	TRP-90	
8	Rolis Junwandi, Mirzam Abdurrachman, Mochamad Nugraha	Volcanostratigraphy Of Guntur Complex, Garut District, West Java Province	TRP-107	
9	Selvia Novianti, Mirzam Abdurrachman	Volcanic Hazard Potentials and Source Mechanisms of Volcanic Earthquakes in Gede Volcano: How	TRP-24	

		to Deal With The Risk and When it Erupted		
10	Yuniarni, Rum and Priadi, Bambang	Magma Mixing Along the Petrogenesis of Dore Volcanic Rocks Sorong, West Papua	TRP-115	
11	Robby Ginanjar, Imam A Sadisun	Rock mass quality of cross cut XC 662 and XC 6-1a in Ciurug Underground Mining Level 600, Pongkor, Bogor Regency, West Java	TRP-119	
12	Abd Kadir Mubarak A Amin, Masayuki Sakakibara, Yayu Indriati Arifin	Facies Study of Lake Deposits Formation (Qpl) to Determine Deposition Environment of Ancient Limboto Lake: a Preliminary Result	TRP-13	
13	Fauzul Chaidir A. Usman, Intan Noviantari Manyoe, Reskiyanto Fauzi Duwingik, Della Nawarita Putri Kasim	Geophysical Survey of Landslide Movement and Mechanism in Gorontalo Outer Ring Road, Gorontalo	TRP-124	

02 - Sustainable Development and Environmental Preservation

Oral Presentation

Day 1, August 11

No	Authors	Title	Number	Room	Time
1	Basri, and Masayuki Sakakibara	Health Impact Assessment of Artisanal and Small-scale Gold Mining in Bombana, Southeast Sulawesi, Indonesia	TRP-15	2	12.30-12.45
2	Hendra Prasetia, Masayuki Sakakibara and Koichiro Sera	Atmospheric Mercury Contamination Assessment Using Various Tree Bark in an ASGM Area in North Gorontalo Regency, Indonesia	TRP-16	2	12.45-13.00
3	Jarnuzi Gunlazuardi, Hedi Surahman, Yuni Krisyuningsih Krisnandi, Ivandini Tribidasari Anggraningrum, and Hisao Yoshida	Newly Developed Artificial Photosynthesis Device for Renewable Fuel and Fine Chemical	TRP-34	2	13.00-13.15
4	Nguyen Thi Hoang Ha, Nguyen Quoc Bien, Cao The Ha, Mai Trong Nhuan, Nguyen Thi An Hang, Tran Dang Quy	Removal of heavy metals from mining wastewater using adsorption combined with constructed wetland: a pilot scale	TRP-36	2	13.15-13.30

5	Yayu Indriati Arifin, Masayuki Sakakibara, Koichiro Sera.	Assessing impact of artisanal and small scale gold mining activities on inhabitants and miners: a case study in Bolaang Mongondow, North Sulawesi Province, Indonesia	TRP-37	2	13.30-13.45
6	Tetsu Sato	Visualizing challenges and opportunities for sustainable development: A transdisciplinary approach	TRP-40	2	13.45-14.00
7	Nguyen Ngoc Ha, Nguyen Nhu Tri, Nguyen Van Dong and Nguyen Phuc Cam Tu	Distribution of heavy metals in sediment along the Southern coast of Vietnam	TRP-42	2	14.15-14.30
			COFFE BREAK 15'		
15'	Hasriwiani Habo Abbas, Masayuki Sakakibara, Koichio Sera, Mansur Sididi	The Social Economic and Mercury Exposure of Goldsmith in Manggala Subdistrict of Urban Artisanal Gold Mining (UAGM) Area in Makassar, South Sulawesi, Indonesia	TRP-45	2	14.45-15.00
9	Fitryane Lihawa, Marike Machmud and Yayu Indriati Arifin	Mercury Pollution in the river water of Bumela of Gorontalo regency due to traditional gold mining activities	TRP-49	2	15.00-15.15
10	Muhammad Isman Jusuf	Correlation Between Heavy Metal Pollution and Cerebrocardiovascular Disease (Systematic Review)	TRP-50	2	15.15-15.30

11	Satoru Komatsu, Katsuya Tanaka,	Household Attributes and Dependency on Artisanal and Small-scale Gold Mining of Villagers in Rural Gorontalo	TRP-51	2	15.30-15.45
12	Purnama Sendjaja and Ary Kusniadi	Regional Geochemical Map of West Java, Indonesia: Evaluation for Environmental and Mineral Resources	TRP-52	2	15.45-16.00
13	Minson Simatupang	Liquefaction Resistance of Calcite Treated Sand based on Laboratory Investigation	TRP-56	2	16.00-16.15
14	Khalema, Hareteke Ishmael	Environment and socio- economic impacts of artisanal and small scale mining(ASGM) in the Republic of South Africa	TRP-57	2	16.15-16.30
15	Astin Lukum, Yoseph Paramata, Deasy N Botutihe, Ervina Yusuf, Kostiawan Sukamto, Arfiani Rizki Paramata	Development of Bioadsorbent Chitosan from Shrimp Shell Waste to Mercury Absorption Efficiency	TRP-65	2	16.30-16.45

Day 2, August 12

16	Dorothea Agnes Rampisela	Transdisciplinary approach in managing smallholdings cacao plantation for poverty alleviation and sustainable development	TRP-75	2	10.30-10.45
17	Hiroki Kasamatsu, Motoko Shimagami, Masayuki	The Researchers Role and Future View of TDCOPs from Case Study of Dihime Limboto-ko, Gorontalo District	TRP-82	2	10.45-11.00

	Sakakibara				
18	Hisanari Sugawara	The geopark governance with the case study of the Shimonita Geopark in Japan	TRP-83	2	11.00-11.15
19	Alfend Rudyawan	Gorontalo As A Global Geopark; A Young People Perspectives	TRP-91	2	11.15-11.30
20	Andi Arumansawang, Masayuki Sakakibara, and Sakae Sano	Heavy Metal Potential at Settling Pond of Coal Mining, East Kalimantan, Indonesia	TRP-101	2	11.30-11.45
21	Nurfitri Abdul Gafur, Masayuki Sakakibara, Sakae Sano, and Koichiro Sera	Heavy Metal Pollution of Bone River Water and Sediment in Gorontalo Province, Indonesia.	TRP-102	2	11.45-12.00
22	Sri Manovita Pateda, Masayuki Sakakibara and Koichiro Sera	Early Detection of Mercury-induced Health Disorders in Artisanal and Small-scale Gold Mining Area in Gorontalo Province, Indonesia	TRP-103	2	12.00 - 12.15
23	Kenji Okazaki, Toshiyuki Kurahashi, Shusaku Yamazaki and Masayuki Sakakibara	Temperature dependence for purification of leachate containing heavy metals by phytoremediation using the artificial channel	TRP-104	2	12.15-12.30
24	Masayuki Sakakibara, Katsuya Tanaka, Hiroki Kasamatsu, and Motoko	Co-creation of Sustainable Regional Innovation for Reducing Risk of High-impact Environmental Pollution	TRP-105	2	12.30-12.45

	Shimagami				
25	Myo Han Htun and Masayuki Sakakibara	Assessment of the Effectiveness of the Knowledge and Practice Based Mercury (Hg) Free Society Networks for the Reduction of Mercury Pollution Problems in ASEAN Countries	TRP-106	2	12.45-13.00

02 - Sustainable Development and Environmental Preservation

Poster Presentation

Day 2, August 12

No	Authors	Title	Number	Room
1	Widya Annisa, Intan Noviantari Manyoe, Abd. Kadir Mubarak, Siti Suhartini S. Napu, and I Gede Sindu Pratama	Chemical Content Analysis of Coral Limestone as Prospecting of Extractive Development in Gorontalo City	TRP-9	Ballroom
2	Idham Andri Kurniawan, Heriyadi Rachmat, Emmy Suparka, I Gusti Bagus Eddy Sucipta, Mirzam Abdurrachman, Irev Junduloh	Crystal size distribution of pillow lava and dyke in Siantu Beach, Belitung, Indonesia: Promote special geosite in Belitung Geopark	TRP-54	
3	Selvia Novianti, Mirzam Abdurrachman	Environmental Risk and Health Hazardous Substances in Artisanal Small-Scaled Gold	TRP-60	

		Mining in Sekotong, West Nusa Tenggara, Indonesia		
4	Mirzam Abdurrachman, Idham Andri Kurniawan, Heriyadi Rachmat, Emmy Suparka, I Gusti Bagus Eddy Sucipta, Firman Sauqi Nur Sabila	The origin of pillow lava and dyke in Siantu Beach, Belitung, Indonesia	TRP-66	
5	Purnama Sendjaja, Emmy Suparka and Muslimin U. Botjing	Geodiversity of The Togean Islands National Park, Central Sulawesi Province for Geopark Assessment	TRP-70	
6	Nabila Novasari Soviana, Budi Brahmantyo, Mirzam Abdurrachman, Firman Sauqi Nur Sabila	"Gunung Api Purba Nglanggeran" welcomes UNESCO Global Geopark Reassessment in 2019	TRP-79	
7	Sufriadin, Sri Widodo, Meinarni Thamrin, Adi Maulana, Akane Ito, Tsubasa Otake	The Nature of Ultramafic Rocks from Sulawesi and Their Suitability for CO ₂ Sequestration	TRP-12	

03 - Measure and Improvement to Urban Environmental Problem

Oral Presentation

Day 1, August 11

No	Authors	Title	Number	Room	Time
1	Heri Andreas, Hasanuddin Z Abidin, Dina A Sarsito, Dhota Pradipta	Insight into Jakarta and World Coastal Cities Experiencing Anthropogenic Land Subsidence	TRP-18	3	12.30-12.45
2	Mohomad Jahja, Yayu Indrait Arifin, Rifadli Bahsuan and Lukman AR Laliyo	Problems of Sustainable Development in Isolated Areas in Bone Bolango Regency	TRP-19	3	12.45-13.00
3	Anton Kaharu, Mohamad Faisal Dunggio	Monitoring and Evaluation of City Transport Preservation in the Province (AKDP) Systematically	TRP-20	3	13.00-13.15
4	Fenty Puluhulawa, Yayu Indriyati Arifin, Amanda Adelina Harun	Challenges Implementing Minamata Convention on Mercury in Artisanal Small Scale Gold Mining in Gorontalo	TRP-21	3	13.15-13.30
5	Syahrone Al Khadzir, and Roby Wahyu Tamami	Eco-Biger (Ecopreneur Biodigester) is Right Digester Innovation for Houshold to Increase People's Welfare in Indonesia	TRP-28	3	13.30-13.45
6	Syahrone Al Khadzir	Development of Sustainable Transportation of	TRP-30	3	13.45-14.00

		Gorontalo City			
7	Citra Anggita, Tsuyoshi Hatori	Customary Practices of Musyawarah Mufakat: An Indonesian Style Of Consensus Building	TRP-33	3	14.15-14.30
COFFE BREAK					
8	Nursida Arif, Risman Jaya, Alfiatun Nur Khasanah	Analysis of Urban Household Energy Consumption Based on Geographic and Social Factors in Kota Tengah of Gorontalo City	TRP-41	3	14.45-15.00
9	Fory Armin Naway	Novel waste management policy in Gorontalo regency: the women participation approach.	TRP-87	3	15.00-15.15
10	Prihantini Glagah Eskacakra Setyowisnu	Mathematics Model Construction of the Law of Mass to Reduce Traffic Levels in Indonesia	TRP-93	3	15.15-15.30
11	Amo, Farisa	The Need of Manado- Bitung Railway	TRP- 108	3	15.30-15.45
12	Sani Kamil Baldan, Aditiya, Vera Febriana Umiati, Tinon Yudhiana, Diana Nur Hafifah, Rysca Indreswari	Vertigo (Vertical Garden Thousands) The Effort of the Utilization of Waste Plastic Bottles for the Empowerment of the Community-Based Argo-Tourism in the Pojoy Village Sukoharjo City	TRP- 111	3	15.45-16.00
13	Sunarty Eraku, Rifadli Bahsoan, Ningrayati Amali, Ishak Isa	A Study on Biogeophysical Condition of Limboto Lake, Gorontalo Province	TRP-17	3	16.00-16.15

14	Nelson Pomalingo, Yayu Indriati Arifin, Iswan Dunggio and Zainal Abidin Umar.	Regional government policy in management and use of the Limboto river catchment area	TRP-77	3	16.15-16.30
15	Sarson W.Dj Pomalato, Novianita Achmad, Sri Lestari Mahmud	Mathematical Modeling in Preventing Siltation of Limboto Lake by Using SOCS Method (Solution, Observe, Control, Solicitation)	TRP-78	3	16.30-16.45

Day 2, August 12

16	Ibrahim and Mustamin	The Role of Village Business Agencies in Improving Community Economy in The Remaining of Gold Mining Areas in Regency of West Sumbawa	TRP-63	3	10.30-10.45
17	Sri Maryati, Sunarty Eraku, Muh Kasim	Study the Influence of Land Cover on Water Quality in Bone River, Province of Gorontalo, Indonesia	TRP-88	3	10.45-11.00
18	Motoko Shimagami, Hiroki Kasamatsu, Masayuki Sakakibara	<i>Kikigaki</i> Program as a Transformative Boundary Object for Stimulating Sustainable Regional Innovation through Cross-generational Urban-Rural Interaction: Case studies from Japan and Indonesia	TRP-96	3	11.00-11.15
19	A.S. Yuwono, Y. Wardiatno, R. Widyastuti, D. Wulandari, A.V.	Integration of Selected Environmental Aspects to Develop a Novel Ecosystem Health Index	TRP-97	3	11.15-11.30

	Driantika, K.S.K. Rusly	in Indonesia			
20	Lilan Dama, Nurrijal	Adaptation of Lesson Study Learning Community in Development Literacy Culture Based on Local Wisdom for Improving Student Thinking Creativity	TRP-55	3	11.30-11.45
21	Perry Zakaria, Lailany Yahya, Emli Rahmi	An Emergency Response of Gorontaloese Language: The Effectiveness Investigation of Conservation and Revitalization for The Regional Language From A Mathematical Point of View	TRP-86	3	11.45-12.00
22	Novri Youla Kandowangko, Margaretha Solang, Djuna Lamondo	Assistance to the community in Monggolito village at Gorontalo regency to maintain their agricultural land	TRP-114	3	12.00 - 12.15
23	Arif Susanto, Suryantini, Joshua Satriana, Munib Ikhwatun Iman	Contamination of Thermal Water to Groundwater in Kertasari Area, Bandung	TRP-117	3	12.15-12.30
24	Bustanul Arifin, Katsuya Tanaka, Ryohei Kada, Hanung Ismono, Slamet Budiyuwono,	Sustainability of Rice Farming Practices in Lower Sekampung Watershed, Indonesia	TRP-122	3	12.30-12.45

	and Fitri Mesystisari				
25	Sunarty Eraku, Rifadli Bahsoan, Ningrayati Amali, Ishak Isa, Rakhmat J. Lahay, Karin Maulana	Examining the Spatial Distribution of Areas Vulnerable to Land Movements by Using Storie Method in Watershed Area of Limboto Lake, Gorontalo Province	TRP-125	3	12-45 -13.00

04 - Food and Human Security

Oral Presentation

Day 1, August 11

No.	Authors	Title	Number	Room	Time
1	Pupung Puspa Ardini	The Development of Earthquake Risk Reduction Curriculum for Children Age Between 4-6 Years Old in Gorontalo	TRP-1	4	12.30-12.45
2	Vita F. Ridwan, Nobuhiko Matsumura	Measuring the Relationship Between the Sense of Acceptance from Foreigners and the Sense of Multicultural	TRP-4	4	12.45-13.00
3	Masmuni Wahda Aisya, Efri Leni Rauf, Julima Ahaya	Boiled Egg Whites Benefits in Healing Perineal Wounds of Mothers in Postpartum Period at Community Health Center of Pulubala Regency of Gorontalo	TRP-5	4	13.00-13.15
4	Dewi Purnama Windasari, Muhammad Sahlan Zamaa, Esse Puji Pawenrusi	Analysis of Lead and Cadmium Levels on Fried Snacks at Karuwisi Primary School, Makassar, Indonesia	TRP-7	4	13.15-13.30
5	Evi Hulukati, Salma Rivani Luawo, Hasan S. Panigoro	A Mathematical Model for HIV/AIDS Transmission among Men who have Sex with Men (MSM) with Counseling: Analysis, Simulation, and Interpretation	TRP-8	4	13.30-13.45
6	Reskiyanto Fauzi Duwingik, Yuyu Indriati Arifin, Della	Media <i>Pipi Dan Kening</i> as a Growing Effort Awareness of Students Against Earthquake Disaster	TRP-10	4	13.45-14.00

	Nawarita P. Kasim, Fahmi Idris Muarif, Revaldi Helamsyah P. Hamim, and Rachmat Ramadhan Nur Syamsuri				
7	Masri Kudrat Umar, Sukarman Kamuli	Environmental Mitigation: Encouraging Household Involvement through Workshops on Multicultural	TRP-22	4	14.15-14.30
COFFE BREAK 15'					
8	Faiza A. Dali, Rahim Husain	Monitoring and Evaluation of Fish Quality Standard Compliance	TRP-29	4	14.45-15.00
9	Rieny Sulistijowati, Rita Marsuci Harmain, Hadri Djon	Chemical Content Changes of Dried Stingray (<i>Dasyatis</i> sp.) by Immersion of Cucumber Tree Fruit (<i>Averrhoa blimbi</i> L.) Extract	TRP-31	4	15.00-15.15
10	Muhammad Arfan, Wahyu Supartono, Henry Yuliando	Analysis on quality improvement of used cooking oil with young pineapple (<i>Ananas comosus</i>) using Taguchi Method	TRP-35	4	15.15-15.30
11	Siti Aisa Liputo, Marleni Limonu, Rahmiyati Kasim	The Effect of Temperature and Roasting Time to the Preference Level and Nutrition Value of Snack Food Bars Using Goroho Banana Flour and Less of Tofu Flour	TRP-39	4	15.30-15.45
12	Dewa Oka	Transformation of Bero	TRP-43	4	15.45-16.00

	Suparwata and Moh. Muchlis Djibran	Ground Become Potential for Agribusiness of Dragon Fruit			
13	Nurhayati Bialangi, Mohamad Adam Mustapa, Yuszda Salimi	Phytochemical Screening and Thin Layer Chromatography of <i>Peperomia pellucida</i> L. Kunth	TRP-46	4	16.00-16.15
14	Wiwin Rewini Kunusa, Nurain Thomas, Muhammad Taupik	Concentration of Pb, Sn and Fe Metals on Milk Products and Canned Fish in Gorontalo City	TRP-47	4	16.15-16.30
15	Mutia Cherawaty Thalib and Nirwan Junusa	Developing Protection Law based on Gorontalo local culture for domestic workers at Gorontalo city	TRP-48	4	16.30-16.45

Day 2, August 12

16	Netty Ino Ischak, and Deasy N. Botutihe	Evaluation Of Antidiabetic Activity Of Bay Leaves (<i>Eugenia Polyantha</i>) and Sambiloto Leaves (<i>Andrographis Paniculata</i>) On Type 2 Diabetes Mellitus Cases	TRP-58	4	09.30-09.45
17	Irvin Novita Arifin	The Influence Of Guided Inquiry Learning Model On Student Creative Thinking Ability In Science Subject In Grade Iv Elementary School 15 Telaga Biru Gorontalo Regency	TRP-59	4	09.45-10.00
18	Lukman A.R.Laliyo, and Eka Donna Fauziah	Identify teacher problems in implementing problem-based learning strategies	TRP-62	4	10.00-10.15
19	Moh. Karmin Baruadi, Fory	Cultural Tourism Potential as a Learning	TRP-68	4	10.15-10.30

	Armin Naway, Novriyanto Napu,	Support of Local Content Subject in Gorontalo Regency			
20	Ishak Isa, Eka Setiawati, Erni Mohammad, Wiwin Rewini Kunusa	Utilization of Cellulose Isolate Corn Corn (Zea mays) As Adsorbent Heavy Metal Copper (Cu) and Cadmium (Cd)	TRP-69	4	10.30-10.45
21	Djuna Lamondo, Margaretha Solang, Anita Amir	Analysis the Contents of Plumbum (Pb) within Fish <i>Awaous melanocephalus</i> the Given the <i>Citrus aurantifolia</i> Extract	TRP-72	4	10.45-11.00
22	Lukas K. Mangalla, Agustinus Lolok	Effect of Microwave Energy Application on Heating Rate of Rice Drying	TRP-98	4	11.00-11.15
23	Leonora F Waromi, Hayati Sari Hasibuan , Suyud Warno Utomo	Sustainable Food Security Strategy: Study of Land Suitability of Rice and Sago Commodity in Kampong Wapeko, Merauke District, Papua Province, Indonesia	TRP-109	4	11.15-11.30
24	Opir Rumape, Netty Ino Ischak, and Akram La Kilo	Application of KJS Extract for Soybean Insect Control	TRP-110	4	11.30-11.45
25	Katsuya Tanaka, Bustanul Arifin , Hanung Ismono, Ryohei Kada	Analysis of Farmers' Adoption Decisions of Sustainable Rice Production Using the Best-worst Scaling	TRP-113	4	11.45-12.00

04 - Food and Human Security

Poster Presentation

Day 2, August 12

No.	Authors	Title	Number	Room
1	Lisna Ahmad	Physicochemical Properties of	TRP-14	

		Instant Corn Porridge with Antioxidant Fortified by Cherry Leaf Extract (<i>Muntingia Calabura</i>)		Ballroom
2	Zainal Abidin Umar	The Role of Market Orientation as a Mediation of Effect of Entrepreneurs Orientation to Business Performance (Study on Micro Small Food Industry Company in Gorontalo Province)	TRP-67	
3	Mursalin	Minimizing Misconceptions on the Topic of Elasticity and Hooke's Law by Relating-Experiencing-Appling-Cooperating-Transferring Learning	TRP-116	
4	Margaretha Solang, Djuna Lamondo, Syam Kumaji, Novri Y Kandowangk o	Provision of Chitosan of Ark Clams Shell in Blood Cockles Meatball: Its Effect On The Decreased Level of Plumbum, Mercury, and Bacteria	TRP-120	
5	Chairunnisah Lamangantjo, Jusna Ahmad, Mohamad Lihawa	The Arthropod Community Structure on Corn Plants (<i>Zea mays</i>) that Treatment with Green Fertilizer and Bokashi from Siam Weed (<i>Chromolaena odorata</i>)	TRP-121	

ABSTRACTS

MEASURE AND IMPROVEMENT TO URBAN ENVIRONMENTAL PROBLEM

Lemahabang, Cirebon, West Java



TRP-20

Monitoring and Evaluation of City Transport Preservation in the Province (AKDP) Systematically

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Abstract: Public transport is one of the means needed to support the activity and mobility of most urban community. However, an urban advance will still require public transportation. Public transport preservation always confronts very heterogeneous issues of utilization, human resources, materials, tools, standards and methods of work, funding, weather and disaster. The root of the problem that is very influential on the performance of public transport in urban is the level of achievement of standard implementation in each work unit preservation route of public transportation in the field. The purpose of this study is to model monitoring and evaluation of urban systematic, hierarchical, and comprehensive preservation of urban public transportation routes. Model trials were conducted on several public transport network routes in Gorontalo Province by 2017. The results of the monitoring and evaluation model of preservation showed that the input, process and output subsystems were optimal, but the outcome and impact subsystems were respectively less than optimal. The results of the assessment indicate that the process of implementation of public transport route preservation is good enough in implementing technical standards of service, meaning that internally does not indicate any deviation of service quality. When the route of public transportation from preservation proceeds to serve the operational vehicle, the monitoring and evaluation results show less than optimal value, meaning that the decrease of public transportation route performance is more dominant due to the influence of external factors.

Keywords: Evaluation; monitoring; performance; preservation; systemic.



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