



TREPSEA

INTERNATIONAL CONFERENCE

2021

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University
Of
Lampung



Research
Institute For
Humanity
And Nature



The
Bandung
Institute of
Technology



University
Of
Gorontalo

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Future Earth



SRiREP – Project
(RIHN)



Ikatan Ahli
Geologi
Indonesia



Perhimpunan
Ekonomi Pertanian
Indonesia (PERHEPI)

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TREPSEA 2021 Programs and Schedules

| Day 1 - 16 September 2021 | | | | | |
|---------------------------|-------|--|-------|-------|--|
| start | end | Program (Zoom1) | start | end | Program (Zoom2) |
| 9:00 | 9:20 | Opening Ceremony (*ONLY at Zoom 1) | | | |
| 9:30 | 11:00 | Keynotes (*ONLY at Zoom 1) by Professor Bambang S Brodjonegoro, Dr. Alue Dohong and Professor Hein Mallee | | | |
| 11:10 | 12:10 | Plenary Session 1: Heavy Metal Problem and Environment Issue & Public Health (*ONLY at Zoom 1) (Dr. Nurfitri Abdul Gafur, Dr. Sri Manovita Pateda and Professor Masayuki Sakakibara) | | | |
| 12:10 | 13:00 | Lunch Break | | | |
| 13:00 | 14:50 | Session 1: Environmental Issues and Public Health - QA for Environmental Issues and Public Health | 13:00 | 14:40 | Session 7: Heavy Metal Problems and Renewable Energy - QA for Heavy Metal Problems and Renewable Energy |
| | | | 14:40 | 15:00 | Break |
| 14:50 | 15:10 | Break | 15:00 | 15:25 | Session 5: Resources Management and Global Value Chain - QA for Resources Management and Global Value Chain |
| 15:10 | 16:05 | Session 1: Environmental Issues and Public Health - QA for Environmental Issues and Public Health | 15:25 | 15:40 | Break |
| | | | 15:40 | 15:50 | Session 6: Legal Issues and Business Ethics in Resource Management - QA for Legal Issues and Business Ethics in Resource Management |
| Day 2 - 17 September 2021 | | | | | |
| start | end | Program (Zoom1) | start | end | Program (Zoom2) |
| 8:30 | 10:00 | Plenary Session 2: Ecological Risks and Food Security and Sustainable Agriculture and Equitable Development (*ONLY at Zoom 1) (Professor Ryohei Kada, Professor Katsuya Tanaka and Professor Bustanul Arifin)***TBC | | | |
| 10:15 | 11:05 | Session 2: Ecological Risks and Food Security - QA for Ecological Risk & Food Security | 10:15 | 11:35 | Session 4: Sustainable Agriculture and Equitable Development - QA for Sustainable Agriculture and Equitable Development |
| 11:05 | 11:20 | Break | | | |
| 11:20 | 11:40 | Session 8: Urban and Community Development - QA for Urban Management and Community Development | 11:35 | 13:30 | Lunch Break |
| 11:40 | 13:30 | Lunch Break | | | |
| 13:30 | 13:45 | Session 8: Urban and Community Development - QA for Urban Management and Community Development | 13:30 | 13:55 | Session 4: Sustainable Agriculture and Equitable Development - QA for Sustainable Agriculture and Equitable Development |
| 13:45 | 14:30 | Break | 13:55 | 14:30 | Break |
| 14:30 | 16:00 | Poster Session via Spatial Chat | | | |
| Day 3 - 18 September 2021 | | | | | |
| start | end | Program (Zoom1) | start | end | Program (Zoom2) |
| 8:30 | 10:00 | Plenary Session 3: Disaster Risks Reduction and Disaster Management and Sustainable Development Goals (SDGs) (*ONLY at Zoom 1) Professor Atsushi Yoshimoto, Dr. Irwan Meilano, Professor Rudy and Dr. Yayu Indriati Arifin | | | |
| 10:15 | 11:15 | Session3: Disaster Risks Reduction and Disaster Management - QA for Disaster Risks Reduction and Disaster Management | 10:15 | 11:55 | Session 9: Sustainable Development Goals (SDGs) - QA for Sustainable Development Goals |
| 11:15 | 13:00 | Lunch Break | 11:55 | 13:00 | Lunch Break |
| 13:00 | 14:30 | Workshop 1 Transdisciplinary Approach to Reducing the ASGM related Problems Organized by RIHN | 13:00 | 14:30 | Workshop 2 Sustainability Certification of Agricultural System Organized by UNIRA |
| 14:40 | 15:30 | Discussion (*ONLY at Zoom 1) | | | |
| 15:30 | 16:00 | Closing ceremony (*ONLY at Zoom 1) | | | |

Day 1st (16 September 2021)

| start | end | Program (Zoom1) | start | end | Program (Zoom2) | |
|---|-------|--|--|-------|-----------------|---|
| 9:00 | 9:20 | Opening Ceremony (*ONLY Zoom 1) | | | | |
| 9:30 | 11:00 | Keynote talk (Professor Bambang S Brodjonegoro, Dr. Siti Nurbaya Bakar, Professor Hein Mallee) (*ONLY Zoom 1) | | | | |
| 11:10 | 12:10 | Plenary session 1 Heavy Metal Problem and Environment Issue & Public Health (Dr. Nurfitri Abdul Gafur, dr. Sri Manovita Pateda, M.Kes, and Professor Masayuki Sakakibara) (*ONLY Zoom 1) | | | | |
| 12:10 | 13:00 | Lunch Break | | | | |
| Session 1 Environmental Issues and Public Health Chairperson: Dr. Yusriani, Universitas Muslim Indonesia | | | Session 7 Heavy Metal Problems and Renewable Energy Chairperson: Dr. Ina Winarni , Forest product Research and Development Center | | | |
| 13:00 | 13:30 | O-3 | 13:00 | 13:30 | O-102 | Heavy Metal Contamination of River Sediment at ASGM Area in Gorontalo Province, Indonesia Basir ¹ , Masayuki Sakakibara ² , Sri Manovita Pateda ³ and Koichiro Sera ⁴ ¹ STIK Tamalatea Makassar, ² Research Institute for Humanity and Nature, ³ Gorontalo State University, ⁴ Iwate Medical University |
| | | O-4 | | | O-109 | Atmospheric Mercury Contamination on the Tree Bark Due to the Artisanal Small Scale Gold Mining (ASGM) Activity in the Bunut Seberang Village, Pesawaran District, Lampung Province Indonesia Azhary Tanfiq ¹ , Melya Riniarti ¹ , Hendra Prasetya ¹ , Slamet Budi Yuwono ¹ , Endang Linirin ¹ and Masayuki Sakakibara ^{2,3} ¹ University of Lampung, ² Research Institute for Humanity and Nature, ³ Ehime University |
| | | O-5 | | | O-108 | Analysis of Atmospheric Mercury Concentrations in Tree Bark of Multi Purpose Tree Species (MPTS) in Bunut Seberang Village, Lampung Province, Indonesia Tedy Rendra ¹ , Melya Riniarti ¹ , Slamet Budi Yuwono ¹ , Hendra Prasetya ¹ , Endang Linirian Widiastuti ¹ and Masayuki Sakakibara ^{2,3} ¹ University of Lampung, ² Research Institute for Humanity and Nature, ³ Ehime University |
| | | O-6 | | | O-103 | A preliminary study on mercury contamination in plants from small-scale artisanal gold mining area in Mandalay Region, Myanmar Xiaoxu Kuang ¹ , Win Thiri Kyaw ¹ , Pyae Sone Soe ² , Hnin Ei Khin ³ , Nan Myat Pyae Zaw ⁴ , Aye Myat Thandar ⁴ and Masayuki Sakakibara ^{1,5} ¹ Research Institute for Humanity and Nature, ² Prefectural University of Kumamoto, ³ Environmental Conservation Department (Mandalay Region), ⁴ Environmental Conservation Department (Head Office), ⁵ Ehime University |
| | | O-9 | | | O-106 | A Complex Land Use Matrix, the Case of Ponce-Enriquez in Ecuador: ASGM, Agricultural Plantations and Local Forest remnants José Luis Rivera, Ximena Diaz, Carolina Bernal, Carolina Ramos and Jeny Ruales Escuela Politécnica Nacional |
| | | O-16 | | | O-105 | Purification of selenium-containing leachate in wastewater tanks at a tunnel construction site Kenji OKAZAKI ¹ , Akihiko OBINATA ¹ , Toshiyuki KURAHASHI ¹ and Masayuki SAKAKIBARA ^{2,3} ¹ Civil Engineering Research Institute, ² Research Institute for Humanity and Nature, ³ Ehima University |

| start | end | Program (Zoom1) | | start | end | Program (Zoom2) | | | |
|---|-------|-----------------|--|--|-------|-----------------|--|-------|--|
| Session 1_Environmental Issues and Public Health Chairperson: Dr. Win Thiri Kyaw, Research Institute for Humanity and Nature | | | | Session 7_Heavy Metal Problems and Renewable Energy Chairperson: Dr. José Luis Rivera, Escuela Politecnica Nacional | | | | | |
| 13:40 | 14:10 | O-13 | Characteristics of Moringa Leaf Powder as Fortification and Consumer Acceptance Yossi Handayani ¹ , Syarifah Aminah ² , Muflihani Yanis ¹ and Waryat ³ ¹ Jakarta Assesment Institute of Agriculture Technology, ² Indonesian Center for Food Crops Research and Development, ³ Indonesian Center for Horticulture Research and Development | 13:40 | 14:10 | O-112 | Distribution of Heavy Metals on Water and Sediments of Ratai Bay of Pesawaran Regency-Lampung, Indonesia Endang Linirin Widiastuti, Ellen Larasati , Warsono, Gregorius Nugroho Susanto and Abdullah Aman Damai University of Lampung | | |
| | | O-28 | The determinant factor of stunting in children under five in Bandar Lampung City Yaktiworo Indriani , Samsu Udayana Nurdin and Rodiani University of Lampung | | | O-113 | Distribution of Heavy Metals on Biota of Ratai Bay of Pesawaran Regency-Lampung, Indonesia Endang Linirin Widiastuti, Retno Fitrianiingsih , Warsono, Supono and Indra Gumay Febryano University of Lampung | | |
| | | O-35 | Sources of Knowledge for Pregnant Women About How to Prevent Maternal Mortality Based on Group and Mass Communication Levels Yusriani Universitas Muslim Indonesia | | | O-114 | Heavy Metals Concentration in Green Macroalgae <i>Spirogyra</i> sp. of Way Ratai River Pesawaran Regency Lampung Endang Linirin, Fatimah Alhafizoh , Tugiyono and Gregorius Nugroho Susanto University of Lampung | | |
| | | O-130 | Assessment of Factors Affecting the Incidence of Malaria in the Middle Wasile Area, East Halmahera Regency, North Maluku Province Adi Hermawan and Sahdan Mustari Institut Teknologi dan Kesehatan Tri Tunas Nasional | | | O-115 | Plankton Diversity and its Heavy Metal Content on Ratai Bay of Pesawaran District-Lmapung Indonesia Endang Linirin Widiastuti, Anisa Danyatul Afifa , Tugiyono and Suratman University of Lampung | | |
| | | O-131 | Survey of Knowledge and Practice related Health Risks of Mercury Exposure among Gold Craft Workers in Rappocini Area, Makassar City Nanang Rahmadani and Muhammad Syafri Institut Teknologi dan Kesehatan Tri Tunas Nasional | | | O-116 | Heavy Metals Determination on Nekton of Way Ratai River of Pesawaran Regency Rizka Ayu Assyifa , Enisantaria br Manik, Endang Linirin Widiastuti, Nuning Nurcahyani , Tugiyono and Wawan A. Setiawan University of Lampung | | |
| | | O-132 | Factors Related to Knowledge Level of Mother for Providing Complementary Food to Breastfeeding in Central Mamuju District, South Sulawesi Asmiana Saputri Ilyas and Sitti Herliyanti Rambu Institut Teknologi dan Kesehatan Tri Tunas Nasional | | | O-118 | Management of Lead (Pb) Waste Post Closing of Used Battery Smelter Ridwan Fauzi , Rita, and Siti Masitoh Ministry of Environment and Forestry | | |
| Session 1_Environmental Issues and Public Health Chairperson: Dr. Yaktiworo Indriani, University of Lampung | | | | Session 7_Heavy Metal Problems and Renewable Energy Chairperson: Dr. Xiaoxu Kuang, Research Institute for Humanity and Nature | | | | | |
| 14:20 | 14:50 | O-2 | Central Java Regional Geochemistry: Influence of Environmental Geology and Mineral Occurrences Purnama Sendjaja , Ari Kusniadi and Verry Eddy Setiawan Ministry of Energy and Mineral Resources Republic of Indonesia | 14:20 | 14:40 | O-107 | Bioethanol Production from Seaweed Waste as Biomass Resources Ina Winarni ¹ , Uju 2, Joko Santoso ² and Tri Wibowo ³ ¹ Forest Product Research and Development Center, ² Bogor Agriculture University, ³ Ministry of Finance | | |
| | | O-10 | Metals in green mussels: is there any effect on their reproduction? A preliminary study of Muara Angke, Jakarta Bay Wulan Koagouw ^{1,2} , Ni Luh Putu Rischha Phadmacanty ¹ , Mochamad Riza Iskandar ¹ , Dwi Hindarti1 and Zainal Arifin ³ ¹ Indonesian Institute of Sciences, ² University of Brighton | | | O-110 | Rooftop Solar PV program for Tourism Villages in Bali Deddy Kurniawan Halim ¹ and A.A. Nyoman Sri Wahyuni ² ¹ Politeknik Internasional Bali, ² Sekolah Tinggi Ilmu Sosial dan Ilmu Politik Margarana | | |
| | | O-17 | A Simple Colorimetric Detection of Ceftriaxone and Its Removal Using Zeolite Synthesized from Low-Cost Materials Vicky Prajaputra , Zaenal Abidin, Sri Budiarti and Dyah Tjahyandari Suryaningtyas IPB University | | | O-111 | Effects of Adhesive Content on the Bioenergetic Properties of Charcoal Briquette from Sengon (<i>Falcataria moluccana</i>) Wood Siti Mutiara Ridjayanti ¹ , Wahyu Hidayat ¹ , Rahmi Adi Bazenet ¹ , Irwan Sukri Banuwa ¹ , Melya Riniarti ¹ , Hendra Praselia ¹ , Ainin Niswati ¹ , Udin Hasanudin ¹ , Jiho Yoo ² , Sango Kim ² and Sihyun Lee ² ¹ University of Lampung, ² Korean Institute of Energy Research, | | |
| | | O-19 | Adaption Strategy of Fisherman to Climate Change : A Case Study from Limau Sub-District, Tanggamus Regency Abdul Mutolib ¹ , Ali Rahmat ² , Indah Listiana ³ , Helvi Yanfika ³ , Diana Widyastuti ³ , and Maya Riantini ³ ¹ Siliwangi University, ² The Indonesian Institute of Sciences, ³ University of Lampung | | | O-117 | Sugar Production of Autoclave-pretreated Oil Palm Empty Fruit Bunches (<i>Elaeis Guineensis</i> Jacq.) by Different Acids Fahriya Puspita Sari ¹ , Fitria ^{1,2} , Sita Heris Anita ¹ , Maulida Oktaviani ¹ and Widya Fatriasari ¹ ¹ Research Center for Biomaterials LIPI, ² Washington State University | | |
| | | O-34 | Study of Potential Pollution of Teaching Laboratory Chemical Waste in IPB University And Its Alternative Management Solutions Della Kharisma ¹ , Zaenal Abidin ¹ , Cecep Kusmana ¹ , Herry Suhardiyanto ¹ , Najwa Azzahra Siradj ² ¹ IPB University, ² Bogor Vocational School of Chemical Analyst | | | 14:40 | 15:00 | Break | |
| | | O-152 | Removal of Residual Antibiotics from Hospital Waste Water with Activated Carbon from Palm Kernel Meal (PKM) Achmad Gus Fahmi , Zaenal Abidin , Cecep Kusmana and Erliza Noor IPB university | | | | | | |
| 14:50 | 15:10 | Break | | | | | | | |

| start | end | Program (Zoom1) | | start | end | Program (Zoom2) | |
|--|-------|-----------------|---|---|-------|-----------------|--|
| Session 1_Environmental Issues and Public Health Chairperson: Dr. Hiroki KASAMATSU, Ehime University | | | | Session 5_Resources Management and Global Value ChainChairperson: Dr. Melya Riniarti, University of Lampung | | | |
| 15:10 | 15:35 | O-14 | The Effect of Land Cover Forest on Fluctuations in Availability of Water in the Batuteji Dam, Lampung, Indonesia Emi Artika, Slamet Budi Yuwono, Irwan Sukri Banuwa, Agus Setiawan Universitas Lampung | 15:00 | 15:25 | O-93 | The Diversity of Plant Species in the Proboscis Monkey's Habitat as a Species Reference for Habitat Rehabilitation Tri Atmoko Ministry of Environment and Forestry |
| | | O-15 | A Sociocultural Analysis of Word <i>Ladies</i> in ASGM Area of Suwawa Timur Yeni Mariyani Junus ¹ , Muziatun ¹ , Yayu Pongoliu ¹ , Hiroki Kasamatsu ² , Motoko Shimagami ² ¹ Gorontalo State University, ² Ehime University | | | O-95 | Conditions for Successful Local Collective Action in Mangrove Forest Management: Some Evidences from Eastern Coastal Area of South Sulawesi, Indonesia Sri Suharti ¹ , Dudung Darusman ² , Bramasto Nugroho ² and Leti Sundawati ² ¹ Forest Research and Development Centre, ² Bogor Agricultural University |
| | | O-18 | An Analysis of <i>Natural Phenomenon Superstition</i> in ASGM area of Suwawa Timur Mohamad Ariyanto Adjulaini ¹ , Muziatun ¹ ,Yayu Pongoliu ¹ , Hiroki Kasamatsu ² and Motoko Shimagami ² ¹ Gorontalo State University, ² Ehime University | | | O-97 | The Potential of Kabuyutan Sacred Natural Site toward a Sustainable Landscape Management in Indonesia Mohammad Zaini Dahlan ¹ , Katsue Fukamachi ² and Shozo Shibata ² ¹ Institut Teknologi Bandung, ² Kyoto University |
| | | O-30 | Attitudes and Skills of Women Farmer Groups in Waste Management in the Coastal Areas of Srengsem Village, Bandar Lampung City Yuli Safitri, Kordiyana K. Rangga, Indah Listiana and Rinaldi Bursan University of Lampung | | | O-94 | Economic Significance and Challenges in Community-based Sericulture Cultivation Retno Agustarini, Sri Suharti, Lincah Andadari, Asmanah Widarti and Dhany Yuniati Ministry of Environment and Forestry |
| | | O-32 | Effectiveness of Using of Brown Algae Alginate to Immobilize the Indigenous Bioremediation Bacteria for Reduce Waste Water from Shrimp Culture Agus Setyawan, Supono, Arlin Wijayanti and Ussy Tri Anti University of Lampung | | | O-92 | Measurement of the Risk of COVID-19 Exposure to Nurses Working in the COVID-19 Isolation Room Rahma Yulis and Anggraeni Kae Sekolah Tinggi Ilmu Kesehatan Makassar |
| Session 1_Environmental Issues and Public Health Chairperson: Dr. Abdul Mutolib, Siliwangi University | | | | 15:25 | 15:40 | Break | |
| 15:45 | 16:05 | O-20 | Current Situation, Problems, and a New Program of the Long-Term Stay Type ASGM in East Suwawa, Gorontalo, Indonesia Hiroki KASAMATSU ¹ , Motoko SHIMAGAMI ¹ , Sri Manovita PATEDA ² , Zuhriana K. YUSUF ² , Wirda Y. DULAHU ² , Mohammad Rivai NAKOE ² , Yayu PONGOLIU ² , MUZIATUN ² , Nurfitri Abdul GAFUR ³ and Xiaoxu KUANG ⁴ ¹ Ehime University, ² Gorontalo State University, ³ Bone Bolango Regency, ⁴ Research Institute for Humanity and Nature, Japan | Session 6_ Legal Issues and Business Ethics in Resource Management Chairperson: Dr. Hendra Prasetya, University of Lampung | | | |
| | | O-22 | The Estimated Total Area of Forest Fire in Siak Regency, Riau Province during the Early Period of COVID-19 Outbreak Muhammad Hidayatul Mustofa, Lailan Syaufina and Nining Puspaningsih IPB University | 15:40 | 15:50 | O-99 | Level Of Gender Equality In Salted Fish Agro-Industrial Production At Tulang Bawang District Helvi Yanfika ¹ , Rudy ¹ , Indah Listiana ¹ , R.A. Diana Widyastuti ¹ , Maya Riantini ¹ and Abdul Mutolib ² ¹ University of Lampung, ² University of Siliwangi |
| | | O-23 | Bird's Species Response to The Ex-Coal Mining Reclamation Stages Tri Atmoko, Ardiyanto Wahyu Nugroho, and Mukhlisi Ministry of Environment and Forestry | | | O-100 | Mangrove Forest: Analysis of Regulatory Impact (Studies in the Coastal Zone of the City of Bandar Lampung) Novita Tresiana ¹ , Noverman Duadji ¹ , Indra Gumay Febryano ¹ , Maurent Kartika Maharani ¹ and Ali Rahmat ² ¹ University of Lampung, ² Indonesian Institute of Sciences |
| | | O-31 | Time-series Assessment of Artisanal and Small-Scale Gold Mining Sites and Change in Miners' Activities: a Case of Gorontalo, Indonesia Satomi Kimijima ¹ , Masayuki Sakakibara ^{1,2} , Masahiko Nagai ³ ¹ Research Institute for Humanity and Nature, ² Ehime University, ³ Yamaguchi University | | | | |

Day 2nd (17 September 2021)

| start | end | Program (Zoom1) | | start | end | Program (Zoom2) | |
|--|-------|---|--|--|-------|-----------------|--|
| 8:30 | 10:00 | Plenary session 2 Ecological Risks and Food Security and Sustainable Agriculture and Equitable Development (Professor Ryohei Kada, Professor Krista Jacobsen, Professor Katsuya Tanaka, and Professor Bustanul Arifin) (*ONLY Zoom 1) | | | | | |
| Session 2_Ecological Risks and Food Security Chairperson: Dr. Yulia Rahma Fitriana, University of Lampung | | | | Session 4_Sustainable Agriculture and Equitable Development Chairperson: Dr. Zainal Abidin, University of Lampung | | | |
| 10:15 | 10:35 | O-39 | Basic Hydrogeochemical Characterization in Four Microwatershed in the Mining Districts: Bella Rica, San Gerardo, Nambija and Chinapintza, South of Ecuador Samantha Ruiz, Carolina Bernal, Ximena Díaz and José Luis Rivera Escuela Politécnica Nacional | 10:15 | 10:35 | O-79 | Contesting Power and Agricultural Expansion in Gunung Halimun Salak National Park (GHSNP) Corridor, West Java, Indonesia Sulastris Sardjo 1, 2, Arya Hadi Dharmawan 1, Dudung Darusman 1 and Ekawati Sri Wahyuni 1 1 IPB University, 2 University of Indonesia |
| | | O-40 | Influence of Farmer Decision Making Choosing Rice Varieties and Climate Change to Rice Productivity Levels in Central Lampung Regency Kordiyana L. Rangga 1, Helvi Yanfika 1, Ragil Ayu Mangesti 1,Tubagus Hasanuddin 1, Rinaldi Bursan 1 and Ali Rahmat 2 1 University of Lampung, 2 Indonesian Institute of Sciences | | | O-86 | Women's Contribution in Supporting Coffee Sustainability: Case Study in Tana Toraja and Enrekang Districts, South Sulawesi Diany Faila Sophia Hartatriti, Fitria Yuliasmara and Novie Pranata Erdiansyah Indonesian Coffee and Cocoa Research Institute |
| | | O-47 | Ecological Risks and Food Security: Community-based Programs in Forest Restoration & Food Security in the Bukit Nanti Martapura Forest Area (UPTD KPH WIL VI Bukit Nanti-Martapura) Noverman Duadji and Novita Tresiana University of Lampung | | | O-76 | Residents' consciousness of traditional rice cultivation - Case Study of Tana Toraja Regency, Indonesia Kaho Furutani and Hiroki Kasamatsu Ehime University |
| | | O-50 | Income and Welfare of Cassava Farmers in the Era of COVID- 19 in Lampung Province, Indonesia Wan Abbas Zakaria, Teguh Endaryanto, Lidya Sari Mas Indah and Dedy Hermawan University of Lampung | | | O-80 | Economic Feasibility and Factors Influencing the Sustainability of Hybrid Rice Production I Putu Wardana 1, Bhakti Prihatmojo 1, Dedi Nugraha 1 and S.A.N. Aryawati 2 1 Indonesian Center for Food Crops Research and Development, 2 Bali Assessment Institute for Agricultural Technology |
| Session 2_Ecological Risks and Food Security Chairperson: Dr. Hendra Prasetya, University of Lampung | | | | Session 4_Sustainable Agriculture and Equitable Development Chairperson: Mr. Bangun Adi Wijaya, University of Lampung | | | |
| 10:45 | 11:05 | O-38 | Study of Rhodamine B Dyes Content in Snacks of Karuwisi Traditional Market Makassar, South Sulawesi, Indonesia Andi Tilka Muftiah Ridja, Andi Yulia Kasma and Aminullah Sekolah Tinggi Ilmu Kesehatan Makassar | 10:45 | 11:15 | O-69 | Meranti Biochar Effect on Growth of Falcataria Moluccana Seedlings Melya Riniarti 1, Hendra Prasetya 1, Wahyu Hidayat 1, Ainin Niswati 1, Udin Hasanudin 1, Irwan Sukri Banuwa 1, Aulia Asmara Loka 1, Jiho Yoo 2, Sangdo Kim 2 and Sihyun Lee 2 1 University of Lampung, 2 Korean Institute of Energy Research |
| | | O-44 | Authentication of Pure and Adulterated Sumbawa Monofloral Honey using Ultraviolet-Visible Spectroscopy Diding Suhandy 1, Kusumiyati 2, Sapto Kuncoro 1, Winda Rahmawati 1 and Meirilwita Yulia 1 1 University of Lampung, 2 Padjadjaran University, 3 Lampung State Polytechnic | | | O-73 | Monstera adansonii Plant Propagation Acceleration Using Bud Breaker and Rootmore Hayane Adeline Warganegara and Sri Ramadiana University of Lampung |
| | | O-45 | UV Spectroscopy for Discrimination of Two Arabica Coffee Cultivars in West Java Indonesia: A Feasibility Study Meirilwita Yulia 1, Kurnia Rimadhanti Ningtyas 1, Siti Suharyatun 2, Winda Rahmawati 2 and Diding Suhandy 2 1 Lampung State Polytechnic, 2 University of Lampung | | | O-85 | Accelerated Growth of Kappaphycus alvarezii with Using Sargassum aquifolium Extract Nunik Cokrowati 1, Yenny Risjani 2, Muhamad Firdaus 2 and Sri Andayani 2 1 University of Mataram, 2 University of Brawijaya |
| | | O-46 | Nutritional Quality of Faloak (Sterculia quadrifida R.Br.) Plant Parts Siswadi Siswadi 1, Grace Serepina Saragih 2 and Heny Rianawati 3 1 Banjarbaru Environment and Forestry Research and Development Institute, 2 Research and Development Center for Environmental Quality and Laboratory, 3 Kupang Environment and Forestry Research Development Institute | | | O-77 | Application of Biochar from Oil Palm Empty Fruit Bunches to Enhance the Soil Fertility and Growth of Falcataria Moluccana Plantation Novendra Muhammad Raffly 1, Melya Riniarti 1, Hendra Prasetya 1, Wahyu Hidayat 1, Ainin Niswati 2, Udin Hasanudin 1, Irwan Sukri Banuwa 1, Jiho Yoo 2, Sangdo Kim 2 and Sihyun Lee 2 1 University of Lampung, 2 Korean Institute of Energy Research |
| 11:05 | 11:20 | Break | | | | O-67 | Physico-chemical and Chemical Characterization of Lignin Isolated from Black Liquor of Pulp Industry by-product Nissa Nurfajrin Solihat 1, Eko Budi Santoso 2, Maya Ismayati 1, Muhammad Adly Rahandi Lubis 1, Fahriya Puspita Sari 1, Faizatul Falah 1, Widya Fatriasari 1 and Wasrin Syafii 2 1 Indonesian Institute of Sciences, 2 Institut Pertanian Bogor |
| | | | | | | O-78 | Studies on the Crude Nutrient and Mineral Composition of Cassava Tuber Peels for Animal Feedstuff Khalil Andalas University |

| start | end | Program (Zoom1) | | start | end | Program (Zoom2) | |
|--|--|--|--|--|-------|-----------------|--|
| Session 8. Urban and Community Development Chairperson:Dr. Ali Rahmat, Indonesian Institute of Sciences | | | | Session 4. Sustainable Agriculture and Equitable Development Chairperson: Dr. Melya Riniarti, University of Lampung | | | |
| 11:20 | 11:40 | O-120 | Reformulation of Socially Resilient Village Nyi R. Irmayani, B. Mujiyadi, Habibullah, Nurhayu, Rudy G. Erwinsyah and Arif Aeni Ministry of Social Affairs Republic of Indonesia | 11:25 | 11:35 | O-82 | Effect of Meranti-based Biochar on the Growth of Sengon (Facataria moluccana) Bangun Adi Wijaya ¹ , Melya Riniarti ¹ , Hendra Prasetya ¹ , Wahyu Hidayat ¹ , Ainin Niswati ¹ , Udin Hasanudin ¹ , Irwan Sukri Banuwa ¹ , Jiho Yoo ² , Sangdo Kim ² and Sihyun Lee ² ¹ University of Lampung, ² Korean Institute of Energy Research |
| | | O-121 | Relationship on Forest Health with the Welfare Level of the Community Around the Mangrove Forest Irlan Rahmat Maulana ¹ , Rahmat Safe'i ¹ , Indra Gumay Febryano ¹ , Hari Kaskoyo ¹ and Ali Rahmat ² ¹ University of Lampung, ² Indonesian Institute of Sciences | | | O-71 | Characteristic of Growth and Development of Red Chili (Capsicum ANNUM L.) by Biofertilizer and Alkali Supplement Fertilizer Application R.A.D Widyastuti ¹ , Kus Hendarto ¹ , Fitri Yelli ¹ , Indah Listiana ¹ , Helvi Yanfika ¹ , Maya Riantini ¹ , Ali Rahmat ² and Abdul Mutolib ³ ¹ University of Lampung, ² Indonesian Institute of Science, ³ University of Siliwangi |
| | | O-124 | Creating Community Awareness Inaction on Environmental Problems: Implementation and Outcomes of Cinematic Education Andi Muhammad Nur Fitrah Syamsul ¹ , Mohamad Jahja ¹ , Lanto Ningrayati Amali ¹ , Fachruddin Oliingo ¹ , Hasanuddin Fatsah ¹ , Ishak Isa ¹ , Hiroki Kasamatsu ² and Satomi Kimijima ³ ¹ State University of Gorontalo, ² Ehime University, ³ Research Institute for Humanity and Nature | 11:35 | 13:30 | Lunch Break | |
| | | O-126 | Spatial Structure and Community Perception of Pejaten Village on Policy Determining Rural Industry Area in Tabanan District, Bali Nyoman Utari Vipriyanti, Sang Putu Kaler Surata, I Putu Sujana, Emy Handayani and Dewa Ayu Puspawati Universitas Mahasarwati Denpasar | | | | |
| | | | | Session 4. Sustainable Agriculture and Equitable Development Chairperson: Ms. Diany Faila Sophia Hartatri, Indonesian Coffee and Cocoa Research Institute | | | |
| 11:40 | 13:30 | Lunch Break | | 13:30 | 13:55 | O-89 | Analysis of Food Expenditures of Rice Farmers in Flooding Prone Region in South Lampung District, Lampung Province Zainal Abidin, Dewangga Nikmatullah, Adia Nugraha and Yuliana Saleh University of Lampung |
| Session 8. Urban and Community Development Chairperson: Dr. Abdul Mutolib, Siliwangi University | | | | | | O-83 | Farmers' Perception to Climate-Smart Agriculture (CSA) and Coffee Farming Productivity (Case Study on Coffee Farming Families in Tanggamus District, Lampung Province) Tubagus Hasanuddin and Intan Diani Fardinatri University of Lampung |
| 13:30 | 13:45 | O-119 | Changes in Land Use using the NDVI (Normalized Difference Vegetation Index) Method in Kedamaian Sub district, Bandar Lampung City as Urban City Ali Rahmat ¹ , Azan Noer Ramadhan ² , Winih Sekarintyas Ramadhani ² , Indah Listiana ² , Muhammad Nurtanto ³ and Rinaldi Bursan ² ¹ Indonesian Institute of Science, ² University of Lampung, ³ Sultan Ageng Tirtayasa University | | | O-91 | The Culture of Farmers-Breeders Mitigation Facing Drought in Lampung, Indonesia Slameto, Jekvy Hendra, Meidaliyantisah and Rely Hevrizen Lampung Assesment Institute Agricultural Technology |
| | | O-128 | The Impact of Transplants Machine on Acceleration of Innovations Adoption in Rice Cultivation F Y Adriyani ¹ and K K Rangga ² ¹ The Assessment Institute of Agricultural Technology, ² University of Lampung | | | O-68 | Behavior of Farmers in Adaptation to Climate Change on Productivity of Pepper (Pipper nigrum L.) in East Lampung Regency Indah Listiana ¹ , Helvi Yanfika ¹ , Rinaldi Bursan ¹ , Habibullah Jimad ¹ , Maya Riantini ¹ , R.A.D Widyastuti ¹ , Abdul Mutolib ² and Reno Wikandaru ³ ¹ University of Lampung, ² University of Siliwangi, ³ University of Gadjah Mada |
| O-123 | Farmers Perceptions of Paddy Rice Cultivation Technology in Jakarta City Chery Soraya Ammatillah ¹ , Susi Sutardi ¹ , Syarifah Aminah ² and Dan Nurmawinda ¹ ¹ Jakarta Assessment Institute for Agricultural Technology, ² Indonesian Center for Food Crops Research and Development | O-74 | Placement Precision of Organic Fertilizer Based on Soil Conservation in Taro Cultivation Andi Masnang, Asmanur Jannah, Dyah Budibruri, Wibaningwati and Febi Nurilmala Nusa Bangsa University | | | | |
| 13:45 | 14:30 | Break | | 13:55 | 14:30 | Break | |
| 14:30 | 16:00 | Poster session via Spetial Chat (*ONLY Zoom 1) | | | | | |

| Poster session via Spatial Chat | | | | |
|---------------------------------|-------|------|---|---|
| 14:30 | 16:00 | P-1 | Service Quality and Patient Interest in Choosing Class 2 Inpatient Care | Herlinawati ¹ , Muslimin ¹ , Heni Fa'riatul Aeni ¹ and Lisandi ¹ Sekolah Tinggi Ilmu Kesehatan Cirebon |
| | | P-2 | A Comparative Study of the Neurological Symptoms of the Suwawa Artisanal and Small- Scale Gold Mining (ASGM) Community | Diaz Regina Shafira ¹ , Zuhriana K. Yusuf ¹ , Sri Manovita Pateda ¹ , Wirda Y. Dulahu ¹ , Mohammad Rivai Nakoe ¹ and Nurfitri A. Gafur ² ¹ State University of Gorontalo, ² Bone Bolango regency |
| | | P-3 | The Impact of COVID-19 Pandemic in ASGM Community | Widya Puspa Molou ¹ , Wirda Y Dulahu ¹ , Sri Manovita Pateda ¹ , Zuhriana K Yusuf ¹ , Mohamad Rivai Nakoe ¹ and Nurfitri Gafur ² ¹ State University of Gorontalo, ² Bone Bolango regency |
| | | P-4 | Tobacco Consumption Behaviour in Artisanal and Small-scale Gold Mining (ASGM) Community | Putri Dian Puspita ¹ , Moh. Rivai Nakoe ¹ , Zuhriana K. Yusuf ¹ , Sri Manovita Pateda ¹ , Wirda Y. Dulahu ¹ , Nurfitri A. Gafur ² ¹ State University of Gorontalo, ² Bone Bolango regency |
| | | P-7 | Mapping of Mangrove Ecosystem Conditions in Coastal Waters of Bintan Island using SPOT 4 and SPOT 7 Satellite Imagery | Money Carattri Kusuma Werdani ¹ , Rudi Siap Bintoro ¹ and Anang Dwi Purwanto ² ¹ Hang Tuah University, ² Remote Sensing Applications Center, LAPAN |
| | | P-10 | Consumer Skepticism toward Green Purchase Intention in Bandar Lampung | Rinaldi Bursan ¹ , Driya Wiryawan ¹ , Habibullah Jimad ¹ , Indah Listiana ¹ , Maya Riantini ¹ , Helvi Yanfika ¹ , RAD Widyastuti ¹ , Abdul Mutolib ² and Dina Arini Adipathy ³ ¹ University of Lampung, ² University of Siliwangi, ³ Magister Management University of Lampung |
| | | P-14 | The Relationship Between Income and Inhabitant Consumption Patterns in Suwawa Timur ASGM Area During the Pandemic of Covid-19 | Achmad Renaldi Saputra Illy ¹ , Yayu Pongoliu ¹ , Junus Buhari Hafid ¹ , Muziatun ¹ , Hiroki Kasamatsu ² , Motoko Shimagami ² ¹ State University of Gorontalo, ² Ehime University |
| | | P-15 | Family Financial Condition During The COVID-19 Pandemic in Suwawa Timur ASGM | Junus Buhari Hafid ¹ , Yayu Pongoliu ¹ , Achmad Renaldi Saputra Illy ¹ , Muziatun ¹ , Hiroki Kasamatsu ² , Motoko Shimagami ² ¹ State University of Gorontalo, ² Ehime University |

(Day3) 18th September, 2021

| start | end | Program (Zoom1) | | start | end | Program (Zoom2) | |
|---|---|---|--|--|-------|---|--|
| 8:30 | 10:00 | Plenary session 3 Disaster Risks Reduction and Disaster Management and Sustainable Development Goals (SDGs) (Professor Atsushi Yoshimoto, Dr. Irwan Meilano, Professor. Rudy and Dr. Yuyu Indriati Arifin) (*ONLY Zoom 1) | | | | | |
| Session3_Disaster Risks Reduction and Disaster Management Chair Person: Ms. Putri Nilam Sari, Andalas University | | | | Session 9_Sustainable Development Goals (SDGs) Chairperson: Dr. Mohamad Jahja, Gorontalo State University | | | |
| 10:15 | 10:50 | O-52 | Geological, Geohydrological Mapping And Disaster Analysis in Baturturu Hamlet, Mertelu Village, Gunungkidul District, D.I. Yogyakarta Fajriani ¹ , Nurfadillah Jusman ¹ , Umrah ¹ , Ayusari Wahyuni ¹ , Ihsan ¹ , Muh Said ¹ and M Arif Rahmna Bole ² ¹ UIN Alauddin Makassar, ² Gadjah Mada University, | 10:15 | 10:35 | O-145 | Development of Geo-tourism Site in Bunikasih-Pangalengan: Environmental Conservation from ASGM Activities Idham Andri Kurniawan ¹ , Mirzam Abdurrachman ¹ , Masayuki Sakakibara ² , Irwan Meilano ¹ , Nurcahyo Indro Basuki ¹ , Andri Slamet Subandrio ¹ , Very Susanto ¹ , Adzkia Noerma Arifa ¹ and Muhammad Saung Penggalih ¹ ¹ Bandung Institute of Technology, ² Research Institute for Humanity and Nature |
| | | O-53 | Earthquake Hazard Analysis Based on Seismicity Data Wa Ode Emiria Srikandi , Intan Noviantari Manyoe, Yasin Septian and Dela Pusfika Sari Napu Universitas Negeri Gorontalo | | | O-146 | The Structure of Sustainable Eco-tourism with the Case Study of Geodiversity Story in the Oze National Park, Central Japan Hisanari Sugawara Gunma Museum of Natural History |
| | | O-54 | Assessment of Student Knowledge Concerning COVID-19 Transmission: A Case Study in a Health Institute Esse Puji Pawenrusi , Nurleli and Rika Pratiwi Sekolah Tinggi Ilmu Kesehatan Makassar | | | O-148 | Visitors Experience on Sumatran Butterfly Ecotourism in Sustainable Environmental Awareness Gita Paramita Djausal ¹ , Lilih Muflihah ¹ , Linda Rosalia ² and M. Hanif Khairy V ¹ ¹ University of Lampung, ² Yayasan Sahabat Alam |
| | | O-55 | Business Models on Peatlands to Prevent Land and Forest Fires Dhany Yuniati ¹ , Husnul Khotimah ¹ , Yunita Lisnawati ¹ and Habibi Mainas ² ¹ Ministry of Environment and Forestry, ² Indonesian Conservation Community Warsi | | | O-151 | Assessment of Geosite for Geotourism Development in Gorontalo Outer Ring Road Area Naafi' Syahna Firdhaus Biya , Intan Noviantari Manyoe, Moh. Afandi Polontalo, Fikri Boften, Mardiana Baharta, Alifi Naftalia and Fauzul Chaidir Usman Universitas Negeri Gorontalo |
| | | O-56 | Synergy between Disaster Preparedness Area Program with Local Institutions for Community Disaster Preparedness Suradi, Setyo Sumarno, Sugiyanto, Togiaratua Nainggolan, Ruaida Murni, Rudy G. Erwinsyah and Lis Andriyani Ministry of Social Affairs the Republic of Indonesia | | | Session 9_Sustainable Development Goals (SDGs) Chairperson: Dr. Hisanari Sugawara, Gunma Museum of Natural History | |
| | O-57 | The Role of Crystal Fraction to Relative Magma Viscosity: An Approach to Understand the Explosive Caldera-Forming Volcanism of Raung Volcano Firman Sauqi Nur Sabila ¹ , Mirzam Abdurrachman ² and Idham Andri Kurniawan ² ¹ Universitas Jember, ² Institut Teknologi Bandung | 10:45 | 11:05 | O-136 | | |
| | O-58 | Reducing the Risk Disaster of COVID-19 in Indonesia with Social Cash Assistance Badrun Susantyo , Habibulah, Nyi Irmayani, Togiaratua Nainggolan, Sugiyanto, Rudy G. Erwinsyah, Aulia Rahman, Johan Arifin and Bilal As'Adhanayadi Ministry of Social Affairs The Republic of Indonesia | | | O-137 | Social Entrepreneurship Program to Improve the Economic Welfare of Poor Families in Indonesia Hari Harjanto Setiawan , Badrun Susantyo, Agus Budi Purwanto, Muhammad Belanawane Sulubere, Delfirman, Yanuar Farida Wismayanti, Alit Kurniasari, Husmiati Yusuf, Aulia Rahman, Ita Konita, Mery Ganti and Widiarto Ministry of Social Affairs the Republic of Indonesia | |
| | | Session3_Disaster Risks Reduction and Disaster Management Chairperson: Mr. Firman Sauqi Nur Sabila, Institut Teknologi Bandung | | | 11:00 | 11:10 | O-59 |
| O-62 | Community Preparedness Against the Threat of Abrasion and Tidal Floods in Padang City Putri Nilam Sari , Yulina Wahyuningrum Purba and Azyyati Ridha Alfian Andalas University | | | | | | |

(Day3) 18th September, 2021

| start | end | Program (Zoom1) | | start | end | Program (Zoom2) | |
|---|-------|---|--|---|-------|---|---|
| Session3 Disaster Risks Reduction and Disaster Management Chairperson: Mr. Firman Sauqi Nur Sabila, Institut Teknologi Bandung | | | | Session 9 Sustainable Development Goals (SDGs) Chairperson: Dr. Yuyu Indriati Arifin, Gorontalo State University | | | |
| 11:10 | 11:15 | O-65 | Hazard assessment of tephra fallout for October 2013 eruption of Tangkuban Perahu in Lembang subdistrict, West Java, Indonesia I Gusti Eddy Sucipta, Idham Andri Kurniawan, Mirzam Abdurrahman , Asep Saepuloh, Muhammad Rais Abdillah, Very Susanto and Adzkia Noerma Arifa Bandung Institute of Technology | 11:15 | 11:30 | O-134 | Household Demand for Animal Food in Urban and Rural of Bengkulu, Indonesia Nikmatul Khoiriyah ¹ , Ana Arifatus Sa’diyah ² and Esther Kembauw ³ ¹ University of Islam Malang, ² University of Tribhuwana Tunggaladewi, ³ University of Pattimura |
| 11:15 | 13:00 | | | | | O-140 | Limboto Lake Case and Cultural Diversity Magdalena Baga , Yuyu Indriati Arifin and Nonny Basalama Universitas Negeri Gorontalo |
| | | | | | | O-143 | Model of Potential Fishing Ground in Regional Fisheries Management of Indonesia (WPP-RI) 716 to Support the Achievement of SDGs Anang Dwi Purwanto ¹ , Argo Galih Suhada ¹ and Diyah Permatasari ² ¹ Remote Sensing Applications Center, LAPAN, ² Diponegoro University |
| | | | | Session 9 Sustainable Development Goals (SDGs) Chairperson: Dr. Idham Andri Kurniawan, Bandung Institute of Technology | | | |
| | | | Lunch Break | 11:40 | 11:55 | O-147 | A Novel Palm-fiber Net Industry as New Hope of Alleviating Poverty in Gorontalo Province Mohamad Jahja ¹ , Nurfitri Abdul Gafur ^{1,2} , Hugeng Lamansa ² , Masayuki Sakakibara ^{3,4} and Tsutomu Yamagiuchi ⁵ ¹ State University of Gorontalo, ² Bone-bolango Regency, ³ Ehime University, ⁴ Research Institute for Humanity and Nature, ⁵ ESPEC MIC Corp. |
| | | | | | | O-133 | The Effect of Acclimatization Chamber and Growth Hormone on the Survival of Endangered <i>Hopea Gregaria</i> Tree Species Faisal Danu Tuheteru ¹ , Asrianti Arif ¹ ,Husna ¹ , Albasri ¹ , Sri Andriyani ¹ and Diana Prameswari ² ¹ University of Halu Oleo, ² Forest Research and Development Center |
| | | | | | | O-149 | The Response of Medang Seedling (<i>Litsea firma</i> Hook) to Various Doses of Biofertilizer Diana Prameswari, Dona Octavia and Linciah Andadari Forest Research and Development Center |
| | | | | 11:55 | 13:00 | Lunch Break | |
| 13:00 | 14:30 | Workshop 1 Transdisciplinary Approach to Reducing the ASGM related Problems Organized by RIHN | | 13:00 | 14:30 | Workshop 2 Sustainability Certification of Agricultural System Organized by UNIRA | |
| 14:40 | 15:30 | Discussion (*ONLY Zoom 1) | | | | | |
| 15:30 | 16:00 | Closing ceremony (*ONLY Zoom 1) | | | | | |

Effect of Meranti-based Biochar on the Growth of Sengon (*Facataria moluccana*)

Bangun Adi Wijaya ¹, Melya Riniarti ¹, Hendra Prasetya ¹, Wahyu Hidayat ¹, Ainin Niswati ¹,
Udin Hasanudin ¹, Irwan Sukri Banuwa ¹, Jiho Yoo ², Sangdo Kim ² and Sihyun Lee ²

¹ Faculty of Agriculture, University of Lampung, Indonesia

² Climate Change Research Division, Korean Institute of Energy Research, Republic of Korea

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Abstract: *Falcataria moluccana* is widely cultivated in Indonesia. To optimize *F. moluccana* cultivation, a good plant growing media condition is needed. Biochar was an agent that could improve the quality of soil, especially wood-based biochar because contains higher C compare to other materials. The aim of this study was to find out the effect of meranti biochar to the growth of *F. moluccana*. In this study, biochar made from wood waste of meranti (*Shorea* spp.) using pyrolysis system, with temperature of 400 °C and 600 °C. Dosage applied were 0 ton/ha, 5 ton/ha and 10 ton/ha. The experimental design was split plot with main plot was the temperature and split by dosages. The study took for 6 months. Parameters observed was heigh increment, diameter increment, P-shoot content and some soil properties (pH, Cation Exchange Capacity (CEC), C-organic and P-total). The results showed that the height and diameter of *F. moluccana* was increasing compared to control treatment. The application of meranti biochar 5 ton/ha at temperature 600°C had the highest diameter and height increment compared to other treatment, and also for C-organic value. While for P-soil total, the application of meranti biochar at temperature of 400°C gain the best value for both dosages applied compare to another treatments. Meanwhile, there is no significant effect yet for pH and CEC.

Keywords: Biochar; *Falcataria moluccana*; *Shorea*; Pyrolysis; Wood waste



Certificate of Appreciation

This certificate of appreciation is awarded to

BANGUN ADI WIJAYA

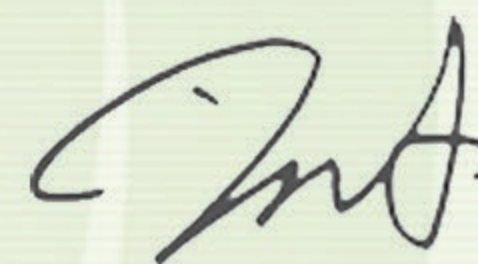
for the participation as a **Presenter** in

the 4th International Conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia (TREPSEA 2021) was held as an online conference from September 16th to 18th, 2021.

Presented by



Professor Karomani
Rector
University of Lampung



Professor Masayuki Sakakibara
Project Leader, SRIREP Project,
Research Institute for Humanity and Nature (RIHN)

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