



# TREPSEA

## INTERNATIONAL CONFERENCE **2021**

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Organized By :



University  
Of  
Lampung



Research  
Institute For  
Humanity  
And Nature



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Indonesia



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

## Day 1<sup>st</sup> ( 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	The Effect of Housewife Assistance on Dengue Haemorrhagic Fever Management in the Work Area of the Pampang Community Health Center Makassar City  Ilham Syam, Nurlili and Nurul Sekolah Tinggi Ilmu Kesehatan Makassar	13:00	13:30	O-102	Heavy Metal Contamination of River Sediment at ASGM Area in Gorontalo Province, Indonesia  Basir <sup>1</sup> , Masayuki Sakakibara <sup>2</sup> , Sri Manovita Pateda <sup>3</sup> and Koichiro Sera <sup>4</sup> <sup>1</sup> STIK Tamalatea Makassar, <sup>2</sup> Research Institute for Humanity and Nature, <sup>3</sup> Gorontalo State University, <sup>4</sup> Iwate Medical University
		O-4	Effects of Mentoring Housewives Assistance on Ability to Sort Waste in Sub-District of Panakukkang Makassar  Nurlili, Sri Syatriani and Sri Fauziah Sekolah Tinggi Ilmu Kesehatan Makassar			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  Azahary Taufiq <sup>1</sup> , Melya Riniarti <sup>1</sup> , Hendra Prasetya <sup>1</sup> , Slamet Budi Yuwono <sup>1</sup> , Endang Linirin <sup>1</sup> and Masayuki Sakakibara <sup>2,3</sup> <sup>1</sup> University of Lampung, <sup>2</sup> Research Institute for Humanity and Nature, <sup>3</sup> Ehime University
		O-5	Hazard Risk Identification from Used Masks  Meithyra Melviana Simatupang <sup>1</sup> , Erna Veronika <sup>2</sup> <sup>1</sup> Universitas Respati Indonesia, <sup>2</sup> Universitas Esa Unggul			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 <sup>1</sup> , Melya Riniarti <sup>1</sup> , Slamet Budi Yuwono <sup>1</sup> , Hendra Prasetya <sup>1</sup> , Endang Linirin Widiastuti <sup>1</sup> and Masayuki Sakakibara <sup>2,3</sup> <sup>1</sup> University of Lampung, <sup>2</sup> Research Institute for Humanity and Nature, <sup>3</sup> Ehime University
		O-6	Implementation of Health Protocols to Reduce COVID-19 Spread: Study at Terminal Transit in Tana Toraja District, South Sulawesi  Sri Syatriani and Ilham Panggula Sekolah Tinggi Ilmu Kesehatan Makassar			O-103	A preliminary study on mercury contamination in plants from small-scale artisanal gold mining area in Mandalay Region, Myanmar  Xiaoxu Kuang <sup>1</sup> , Win Thiri Kyaw <sup>1</sup> , Pyae Sone Soe <sup>2</sup> , Hnin Ei Khin <sup>3</sup> , Nan Myat Pyae Zaw <sup>4</sup> , Aye Myat Thandar <sup>4</sup> and Masayuki Sakakibara <sup>1,5</sup> <sup>1</sup> Research Institute for Humanity and Nature, <sup>2</sup> Prefectural University of Kumamoto, <sup>3</sup> Environmental Conservation Department (Mandalay Region), <sup>4</sup> Environmental Conservation Department (Head Office), <sup>5</sup> Ehime University
		O-9	Evaluation of the Remote Health Survey Mode Conducted for the Artisanal and Small-scale Gold Mining (ASGM) Community in Mandalay Region, Myanmar During COVID-19 Pandemic  Win Thiri Kyaw <sup>1</sup> , Yee Mon Myint <sup>2</sup> , Xiaoxu Kuang <sup>1</sup> and Masayuki Sakakibara <sup>1,3</sup> <sup>1</sup> Research Institute for Humanity and Nature, <sup>2</sup> Magway General Hospital, <sup>3</sup> Ehime University			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	Knowledge and Attitude of Pregnant Women Towards COVID-19 Prevention in Makassar City, Indonesia  Andi Sani Silwanah <sup>1</sup> , Muhammad Sahlan Zamaa <sup>1</sup> , Hasriani <sup>1</sup> and Rezky Aulia Yusuf <sup>2</sup> <sup>1</sup> Sekolah Tinggi Ilmu Kesehatan Makassar, <sup>2</sup> Universitas Muslim Indonesia			O-105	Purification of selenium-containing leachate in wastewater tanks at a tunnel construction site  Kenji OKAZAKI <sup>1</sup> , Akihiko OBINATA <sup>1</sup> , Toshiyuki KURAHASHI <sup>1</sup> and Masayuki SAKAKIBARA <sup>2,3</sup> <sup>1</sup> Civil Engineering Research Institute, <sup>2</sup> Research Institute for Humanity and Nature, <sup>3</sup> Ehime University

start	end	Program (Zoom1)		start	end	Program (Zoom2)			
<b>Session 1 Environmental Issues and Public Health</b> Chairperson: Dr. Win Thiri Kyaw, Research Institute for Humanity and Nature				<b>Session 7 Heavy Metal Problems and Renewable Energy</b> 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 <sup>1</sup> , Syarifah Aminah <sup>2</sup> , Muflihani Yanis <sup>1</sup> and Waryat <sup>3</sup> <sup>1</sup> Jakarta Assesment Institute of Agriculture Technology, <sup>2</sup> Indonesian Center for Food Crops Research and Development, <sup>3</sup> 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 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-Lampung 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		
<b>Session 1 Environmental Issues and Public Health</b> Chairperson: Dr. Yaktiworo Indriani, University of Lampung				<b>Session 7 Heavy Metal Problems and Renewable Energy</b> 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 <sup>1</sup> , Uju 2, Joko Santoso <sup>2</sup> and Tri Wibowo <sup>3</sup> <sup>1</sup> Forest Product Research and Development Center, <sup>2</sup> Bogor Agriculture University, <sup>3</sup> 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 <sup>1,2</sup> , Ni Luh Putu Rischha Phadmacanty <sup>1</sup> , Mochamad Riza Iskandar <sup>1</sup> , Dwi Hindarti and Zainal Arifin <sup>1</sup> <sup>1</sup> Indonesian Institute of Sciences, <sup>2</sup> University of Brighton			O-110	Rooftop Solar PV program for Tourism Villages in Bali  Deddy Kurniawan Halim <sup>1</sup> and A.A. Nyoman Sri Wahyuni <sup>2</sup> <sup>1</sup> Politeknik Internasional Bali, <sup>2</sup> 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 <sup>1</sup> , Wahyu Hidayat <sup>1</sup> , Rahmi Adi Bazenet <sup>1</sup> , Irwan Sukri Banuwa <sup>1</sup> , Melya Riniarti <sup>1</sup> , Hendra Prasatia <sup>1</sup> , Ainin Niswati <sup>1</sup> , Udin Hasanudin <sup>1</sup> , Jiho Yoo <sup>2</sup> , Sangdo Kim <sup>2</sup> and Sihyun Lee <sup>2</sup> <sup>1</sup> University of Lampung, <sup>2</sup> 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 <sup>1</sup> , Ali Rahmat <sup>2</sup> , Indah Listiana <sup>3</sup> , Helvi Yanfika <sup>3</sup> , Diana Widyastuti <sup>3</sup> , and Maya Riantini <sup>3</sup> <sup>1</sup> Siliwangi University, <sup>2</sup> The Indonesian Institute of Sciences, <sup>3</sup> 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 <sup>1</sup> , Fitria <sup>1,2</sup> , Sita Heris Anita <sup>1</sup> , Maulida Oktaviani <sup>1</sup> and Widya Fatriasari <sup>1</sup> <sup>1</sup> Research Center for Biomaterials LIPI, <sup>2</sup> Washington State University		
		O-34	Study of Potential Pollution of Teaching Laboratory Chemical Waste in IPB University And Its Alternative Management Solutions  Della Kharisma <sup>1</sup> , Zaenal Abidin <sup>1</sup> , Cecep Kusmana <sup>1</sup> , Herry Suhardiyanto <sup>1</sup> , Najwa Azzahra Siradj <sup>2</sup> <sup>1</sup> IPB University, <sup>2</sup> 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)	
<b>Session 1 Environmental Issues and Public Health</b> Chairperson: Dr. Hiroki KASAMATSU, Ehime University				<b>Session 5 Resources Management and Global Value</b> 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 Batutegei 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 <sup>1</sup> , Muziatun <sup>1</sup> , Yuyu Pongoliu <sup>1</sup> , Hiroki Kasamatsu <sup>2</sup> , Motoko Shimagami <sup>2</sup> <sup>1</sup> Gorontalo State University, <sup>2</sup> 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 <sup>1</sup> , Dudung Darusman <sup>2</sup> , Bramasto Nugroho <sup>2</sup> and Leti Sundawati <sup>2</sup> <sup>1</sup> Forest Research and Development Centre, <sup>2</sup> Bogor Agricultural University
		O-18	An Analysis of <i>Natural Phenomenon Superstition</i> in ASGM area of Suwawa Timur  Mohamad Ariyanto Adjulaini <sup>1</sup> , Muziatun <sup>1</sup> , Yuyu Pongoliu <sup>1</sup> , Hiroki Kasamatsu <sup>2</sup> and Motoko Shimagami <sup>2</sup> <sup>1</sup> Gorontalo State University, <sup>2</sup> Ehime University			O-97	The Potential of Kabuyutan Sacred Natural Site toward a Sustainable Landscape Management in Indonesia  Mohammad Zaini Dahlan <sup>1</sup> , Katsue Fukamachi <sup>2</sup> and Shozo Shibata <sup>2</sup> <sup>1</sup> Institut Teknologi Bandung, <sup>2</sup> 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, Lincab 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
<b>Session 1 Environmental Issues and Public Health</b> 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 <sup>1</sup> , Motoko SHIMAGAMI <sup>1</sup> , Sri Manovita PATEDA <sup>2</sup> , Zuhriana K. YUSUF <sup>3</sup> , Wirda Y. DULAHU <sup>2</sup> , Mohammad Rivai NAKOE <sup>2</sup> , Yuyu PONGOLIU <sup>2</sup> , MUZIATUN <sup>2</sup> , Nurfitri Abdul GAFUR <sup>3</sup> and Xiaoxu KUANG <sup>4</sup> <sup>1</sup> Ehime University, <sup>2</sup> Gorontalo State University, <sup>3</sup> Bone Bolango Regency, <sup>4</sup> Research Institute for Humanity and Nature, Japan	<b>Session 6 Legal Issues and Business Ethics in Resource Management</b> Chairperson: Dr. Hendra Praselia, 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 <sup>1</sup> , Rudy <sup>1</sup> , Indah Listiana <sup>1</sup> , R.A. Diana Widyastuti <sup>1</sup> , Maya Riantini <sup>1</sup> and Abdul Mutolib <sup>2</sup> <sup>1</sup> University of Lampung, <sup>2</sup> 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 <sup>1</sup> , Noverman Duadji <sup>1</sup> , Indra Gumay Febryano <sup>1</sup> , Maurent Kartika Maharani <sup>1</sup> and Ali Rahmat <sup>2</sup> <sup>1</sup> University of Lampung, <sup>2</sup> 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 <sup>1</sup> , Masayuki Sakakibara <sup>1,2</sup> , Masahiko Nagai <sup>3</sup> <sup>1</sup> Research Institute for Humanity and Nature, <sup>2</sup> Ehime University, <sup>3</sup> Yamaguchi University				

## Day 2<sup>nd</sup> (17 September 2021)

start	end	Program (Zoom1)		start	end	Program (Zoom2)	
8:30	10:00	<p align="center"><b>Plenary session 2</b>  <b>Ecological Risks and Food Security and Sustainable Agriculture and Equitable Development</b>            (Professor Ryohei Kada, Professor Krista Jacobsen, Professor Katsuya Tanaka, and Professor Bustanul Arifin) (*ONLY Zoom 1)</p>					
<p><b>Session 2_Ecological Risks and Food Security</b>  <b>Chairperson: Dr. Yulia Rahma Fitriana, University of Lampung</b></p>				<p><b>Session 4_Sustainable Agriculture and Equitable Development</b>  <b>Chairperson: Dr. Zainal Abidin, University of Lampung</b></p>			
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  Sulastri 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 <sup>1</sup> , Helvi Yanfika <sup>1</sup> , Ragil Ayu Mangesti <sup>1</sup> , Tubagus Hasanuddin <sup>1</sup> , Rinaldi Bursan <sup>1</sup> and Ali Rahmat <sup>2</sup> <sup>1</sup> University of Lampung, <sup>2</sup> Indonesian Institute of Sciences			O-86	Women's Contribution in Supporting Coffee Sustainability: Case Study in Tana Toraja and Enrekang Districts, South Sulawesi  Diany Faia Sophia Hartatri, 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
<p><b>Session 2_Ecological Risks and Food Security</b>  <b>Chairperson: Dr. Hendra Prasetya, University of Lampung</b></p>				<p><b>Session 4_Sustainable Agriculture and Equitable Development</b>  <b>Chairperson: Mr. Bangun Adi Wijaya, University of Lampung</b></p>			
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 <i>Falcataria Moluccana</i> Seedlings  Melya Riniarti <sup>1</sup> , Hendra Prasetya <sup>1</sup> , Wahyu Hidayat <sup>1</sup> , Ainin Niswati <sup>1</sup> , Udin Hasanudin <sup>1</sup> , Irwan Sukri Banuwa <sup>1</sup> , Aulia Asmara Loka <sup>1</sup> , Jihyo Yoo <sup>2</sup> , Sangdo Kim <sup>2</sup> and Sihyun Lee <sup>2</sup> <sup>1</sup> University of Lampung, <sup>2</sup> 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 University of Lampung, 2 Padjadjaran University, 3 Lampung State Polytechnic			O-73	<i>Monstera adansonii</i> 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 <sup>1</sup> , Kurnia Rimadhanti Ningtyas <sup>1</sup> , Siti Suharyatun <sup>2</sup> , Winda Rahmawati <sup>2</sup> and Diding Suhandy <sup>2</sup> <sup>1</sup> Lampung State Polytechnic, <sup>2</sup> University of Lampung			O-85	Accelerated Growth of <i>Kappaphycus alvarezii</i> with Using Sargassum aquifolium Extract  Nunik Cokrowati <sup>1</sup> , Yenny Risjani <sup>2</sup> , Muhamad Firdaus <sup>2</sup> and Sri Andayani <sup>2</sup> <sup>1</sup> University of Mataram, <sup>2</sup> University of Brawijaya
		O-46	Nutritional Quality of Faloak ( <i>Sterculia quadrifida</i> R.Br.) Plant Parts  Siswadi Siswadi <sup>1</sup> , Grace Serepina Saragih <sup>2</sup> and Heny Rianawati <sup>3</sup> <sup>1</sup> Banjarbaru Environment and Forestry Research and Development Institute, <sup>2</sup> Research and Development Center for Environmental Quality and Laboratory, <sup>3</sup> 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 <i>Falcataria Moluccana</i> Plantation  Novendra Muhammad Rafly <sup>1</sup> , Melya Riniarti <sup>1</sup> , Hendra Prasetya <sup>1</sup> , Wahyu Hidayat <sup>1</sup> , Ainin Niswati <sup>1</sup> , Udin Hasanudin <sup>1</sup> , Irwan Sukri Banuwa <sup>1</sup> , Jihyo Yoo <sup>2</sup> , Sangdo Kim <sup>2</sup> and Sihyun Lee <sup>2</sup> <sup>1</sup> University of Lampung, <sup>2</sup> Korean Institute of Energy Research
11:05	11:20	Break		10:45	11:15	O-67	Physico-chemical and Chemical Characterization of Lignin Isolated from Black Liquor of Pulp Industry by-product  Nissa Nurfaejrin Solihat <sup>1</sup> , Eko Budi Santoso <sup>2</sup> , Maya Ismayati <sup>1</sup> , Muhammad Adly Rahandi Lubis <sup>1</sup> , Fahriya Puspita Sari <sup>1</sup> , Faizatul Falah <sup>1</sup> , Widya Fatriasari <sup>1</sup> and Wasrin Syafii <sup>2</sup> <sup>1</sup> Indonesian Institute of Sciences, <sup>2</sup> 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)	
<b>Session 8_Urban and Community Development</b> Chairperson:Dr. Ali Rahmat, Indonesian Institute of Sciences				<b>Session 4_Sustainable Agriculture and Equitable Development</b> 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 <sup>1</sup> , Melya Riniarti <sup>1</sup> , Hendra Prasetya <sup>1</sup> , Wahyu Hidayat <sup>1</sup> , Ainin Niswati <sup>1</sup> , Udin Hasanudin <sup>1</sup> , Irwan Sukri Banuwa <sup>1</sup> , Jiho Yoo <sup>2</sup> , Sangdo Kim <sup>2</sup> and Sihyun Lee <sup>2</sup> <sup>1</sup> University of Lampung, <sup>2</sup> 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 <sup>1</sup> , Rahmat Safe <sup>1</sup> , Indra Gumay Febryano <sup>1</sup> , Hari Kaskoyo <sup>1</sup> and Ali Rahmat <sup>2</sup> <sup>1</sup> University of Lampung, <sup>2</sup> 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 <sup>1</sup> , Kus Hendarto <sup>1</sup> , Fitri Yelli <sup>1</sup> , Indah Listiana <sup>1</sup> , Helvi Yanfika <sup>1</sup> , Maya Riantini <sup>1</sup> , Ali Rahmat <sup>2</sup> and Abdul Mutolib <sup>3</sup> <sup>1</sup> University of Lampung, <sup>2</sup> Indonesian Institute of Science, <sup>3</sup> University of Siliwangi
		O-124	Creating Community Awareness Inaction on Environmental Problems: Implementation and Outcomes of Cinematic Education  Andi Muhammad Nur Fitrah Syamsul <sup>1</sup> , Mohamad Jahja <sup>1</sup> , Lanto Ningrayati Amali <sup>1</sup> , Fachruddin Otilingo <sup>1</sup> , Hasanuddin Fatsah <sup>1</sup> , Ishak Isa <sup>1</sup> , Hiroki Kasamatsu <sup>2</sup> and Satomi Kimijima <sup>3</sup> <sup>1</sup> State University of Gorontalo, <sup>2</sup> Ehime University, <sup>3</sup> Research Institute for Humanity and Nature	11:35	13:30	<b>Lunch Break</b>	
		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			<b>Session 4_Sustainable Agriculture and Equitable Development</b> Chairperson: Ms. Diany Failsa Sophia Hartatri, Indonesian Coffee and Cocoa Research Institute	
11:40	13:30	<b>Lunch Break</b>		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
<b>Session 8_Urban and Community Development</b> 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 <sup>1</sup> , Azan Noer Ramadhan <sup>2</sup> , Winih Sekaringtyas Ramadhani <sup>2</sup> , Indah Listiana <sup>2</sup> , Muhammad Nurtanto <sup>3</sup> and Rinaldi Bursan <sup>2</sup> <sup>1</sup> Indonesian Institute of Science, <sup>2</sup> University of Lampung, <sup>3</sup> 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 Assessment Institute Agricultural Technology
		O-128	The Impact of Transplants Machine on Acceleration of Innovations Adoption in Rice Cultivation  F Y Adriyani <sup>1</sup> and K K Rangga <sup>2</sup> <sup>1</sup> The Assessment Institute of Agricultural Technology, <sup>2</sup> University of Lampung			O-68	Behavior of Farmers in Adaptation to Climate Change on Productivity of Pepper (Piper nigrum L.) in East Lampung Regency  Indah Listiana <sup>1</sup> , Helvi Yanfika <sup>1</sup> , Rinaldi Bursan <sup>1</sup> , Habibullah Jimad <sup>1</sup> , Maya Riantini <sup>1</sup> , R.A.D Widyastuti <sup>1</sup> , Abdul Mutolib <sup>2</sup> and Reno Wikandaru <sup>3</sup> <sup>1</sup> University of Lampung, <sup>2</sup> University of Siliwangi, <sup>3</sup> University of Gadjah Mada
13:45	14:30	<b>Break</b>		O-74	Placement Precision of Organic Fertilizer Based on Soil Conservation in Taro Cultivation  Andi Masnang, Asmanur Jannah, Dyah Budiburi, Wibaningwati and Febi Nurilmala Nusa Bangsa University		
		<b>Break</b>		<b>Break</b>			
14:30	16:00	<b>Poster session via Spetial Chat (*ONLY Zoom 1)</b>					



**Poster session via Spatial Chat**

14:30		16:00	
14:30	16:00	P-1	Service Quality and Patient Interest in Choosing Class 2 Inpatient Care Herlinawati <sup>1</sup> , Muslimin <sup>1</sup> , Heni Fa'riatul Aeni <sup>1</sup> and Lisandi <sup>1</sup> 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 <sup>1</sup> , Zuhriana K. Yusuf <sup>1</sup> , Sri Manovita Pateda <sup>1</sup> , Wirda Y. Dulahu <sup>1</sup> , Mohammad Rivai Nakoe <sup>1</sup> and Nurfitri A. Gafur <sup>2</sup> <sup>1</sup> State University of Gorontalo, <sup>2</sup> Bone Bolango regency
		P-3	The Impact of COVID-19 Pandemic in ASGM Community Widya Puspa Molou <sup>1</sup> , Wirda Y Dulahu <sup>1</sup> , Sri Manovita Pateda <sup>1</sup> , Zuhriana K Yusuf <sup>1</sup> , Mohamad Rivai Nakoe <sup>1</sup> and Nurfitri Gafur <sup>2</sup> <sup>1</sup> State University of Gorontalo, <sup>2</sup> Bone Bolango regency
		P-4	Tobacco Consumption Behaviour in Artisanal and Small-scale Gold Mining (ASGM) Community Putri Dian Puspita <sup>1</sup> , Moh. Rivai Nakoe <sup>1</sup> , Zuhriana K. Yusuf <sup>1</sup> , Sri Manovita Pateda <sup>1</sup> , Wirda Y. Dulahu <sup>1</sup> , Nurfitri A. Gafur <sup>2</sup> <sup>1</sup> State University of Gorontalo, <sup>2</sup> 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 <sup>1</sup> , Rudi Siap Bintoro <sup>1</sup> and Anang Dwi Purwanto <sup>2</sup> <sup>1</sup> Hang Tuah University, <sup>2</sup> Remote Sensing Applications Center, LAPAN
		P-10	Consumer Skepticism toward Green Purchase Intention in Bandar Lampung Rinaldi Bursan <sup>1</sup> , Driya Wiryawan <sup>1</sup> , Habibullah Jimad <sup>1</sup> , Indah Listiana <sup>1</sup> , Maya Riantini <sup>1</sup> , Helvi Yanfika <sup>1</sup> , RAD Widyastuti <sup>1</sup> , Abdul Mutolib <sup>2</sup> and Dina Arini Adipathy <sup>3</sup> <sup>1</sup> University of Lampung, <sup>2</sup> University of Siliwangi, <sup>3</sup> 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 <sup>1</sup> , Yuyu Pongoliu <sup>1</sup> , Junus Buhari Hafid <sup>1</sup> , Muziatun <sup>1</sup> , Hiroki Kasamatsu <sup>2</sup> , Motoko Shimagami <sup>2</sup> <sup>1</sup> State University of Gorontalo, <sup>2</sup> Ehime University
		P-15	Family Financial Condition During The COVID-19 Pandemic in Suwawa Timur ASGM Junus Buhari Hafid <sup>1</sup> , Yuyu Pongoliu <sup>1</sup> , Achmad Renaldi Saputra Illy <sup>1</sup> , Muziatun <sup>1</sup> , Hiroki Kasamatsu <sup>2</sup> , Motoko Shimagami <sup>2</sup> <sup>1</sup> State University of Gorontalo, <sup>2</sup> Ehime University

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start	end	Program (Zoom1)	start	end	Program (Zoom2)	
8:30	10:00	<b>Plenary session 3</b> <b>Disaster Risks Reduction and Disaster Management and Sustainable Development Goals (SDGs)</b> <b>(Professor Atsushi Yoshimoto, Dr. Irwan Meilano, Professor. Rudy and Dr. Yuyu Indriati Arifin) (*ONLY Zoom 1)</b>				
<b>Session3_Disaster Risks Reduction and Disaster Management</b> <b>Chair Person: Ms. Putri Nilam Sari, Andalas University</b>			<b>Session 9_Sustainable Development Goals (SDGs)</b> <b>Chairperson: Dr. Mohamad Jahja, Gorontalo State University</b>			
10:15	10:50	<b>O-52</b> Geological, Geohydrological Mapping And Disaster Analysis in Baturturu Hamlet, Mertelu Village, Gunungkidul District, D.I. Yogyakarta  Fajriani <sup>1</sup> , Nurfadillah Jusman <sup>1</sup> , Umrah <sup>1</sup> , Ayusari Wahyuni <sup>1</sup> , Ihsan <sup>1</sup> , Muh Said <sup>1</sup> and M Arif Rahmna Bole <sup>2</sup> <sup>1</sup> UIN Alauddin Makassar, <sup>2</sup> Gadjah Mada University,	10:15	10:35	<b>O-145</b> Development of Geo-tourism Site in Bunikasih-Pangalengan: Environmental Conservation from ASGM Activities  Idham Andri Kurniawan <sup>1</sup> , Mirzam Abdurrachman <sup>1</sup> , Masayuki Sakakibara <sup>2</sup> , Irwan Meilano <sup>1</sup> , Nurcahyo Indro Basuki <sup>1</sup> , Andri Slamet Subandrio <sup>1</sup> , Very Susanto <sup>1</sup> , Adzkia Noerma Arifa <sup>1</sup> and Muhammad Saung Penggalih <sup>1</sup> <sup>1</sup> Bandung Institute of Technology, <sup>2</sup> Research Institute for Humanity and Nature	
		<b>O-53</b> Earthquake Hazard Analysis Based on Seismicity Data  Wa Ode Emiria Srikandi, Intan Noviantari Manyoe, Yasin Septian and Dela Pusfika Sari Napu Universitas Negeri Gorontalo			<b>O-146</b> 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	
		<b>O-54</b> Assessment of Student Knowledge Concerning COVID-19 Transmission: A Case Study in a Health Institute  Esse Puji Pawenrusi, Nurieli and Rika Pratiwi Sekolah Tinggi Ilmu Kesehatan Makassar			<b>O-148</b> Visitors Experience on Sumatran Butterfly Ecotourism in Sustainable Environmental Awareness  Gita Paramita Djausal <sup>1</sup> , Lilih Mufflihah <sup>1</sup> , Linda Rosalia <sup>2</sup> and M. Hanif Khairy V <sup>1</sup> <sup>1</sup> University of Lampung, <sup>2</sup> Yayasan Sahabat Alam	
		<b>O-55</b> Business Models on Peatlands to Prevent Land and Forest Fires  Dhany Yuniati <sup>1</sup> , Husnul Khotimah <sup>1</sup> , Yunita Lisnawati <sup>1</sup> and Habibi Mainas <sup>2</sup> <sup>1</sup> Ministry of Environment and Forestry, <sup>2</sup> Indonesian Conservation Community Warsi			<b>O-151</b> Assessment of Geosite for Geotourism Development in Gorontalo Outer Ring Road Area  Naafi' Syahna Firdhaus Biya, Intan Noviantari Manyoe, Moh. Afandi Polontalo, Fikri Bofren, Mardiana Baharta, Alifi Naftalia and Fauzul Chaidir Usman Universitas Negeri Gorontalo	
		<b>O-56</b> 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			<b>Session 9_Sustainable Development Goals (SDGs)</b> <b>Chairperson: Dr. Hisanari Sugawara, Gunma Museum of Natural History</b>	
		<b>O-57</b> 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 <sup>1</sup> , Mirzam Abdurrachman <sup>2</sup> and Idham Andri Kurniawan <sup>2</sup> <sup>1</sup> Universitas Jember, <sup>2</sup> Institut Teknologi Bandung			10:45	11:05
<b>O-58</b> 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	<b>O-137</b> 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					
<b>Session3_Disaster Risks Reduction and Disaster Management</b> <b>Chairperson: Mr. Firman Sauqi Nur Sabila, Institut Teknologi Bandung</b>						
11:00	11:10	<b>O-59</b> Landuse Changes, Climate Change and Flood Episodes in Way Bulok Watershed Lampung Province  Slamet Budi Yuwono, Irwan Sukri Banuwa and Nano Suryono University of Lampung				
		<b>O-62</b> 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				
			<b>O-135</b> Accounting Correlated Random Parameters in Best-worst Scaling: Case of Preferences of Job Opportunities in Artisanal Small Gold Mining (ASGM) Community in Indonesia  Satoru Komatsu <sup>1</sup> , Yuyu Isyana D. Pongoliu <sup>2</sup> , Katsuya Tanaka <sup>3</sup> , Masayuki Sakakibara <sup>4,5</sup> and Taro Ohdoko <sup>6</sup> <sup>1</sup> Nagasaki University, <sup>2</sup> Gorontalo State University, <sup>3</sup> Shiga University, <sup>4</sup> Research Institute for Humanity and Nature, <sup>5</sup> Ehime University, <sup>6</sup> Dokkyo University			

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start	end	Program (Zoom1)	start	end	Program (Zoom2)	
<b>Session3_Disaster Risks Reduction and Disaster Management</b> <b>Chairperson: Mr. Firman Sauqi Nur Sabila, Institut Teknologi Bandung</b>			<b>Session 9_Sustainable Development Goals (SDGs)</b> <b>Chairperson: Dr. Yuyu Indriati Arifin, Gorontalo State University</b>			
11:10	11:15	<b>O-65</b> 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, <b>Mirzam Abdurrachman</b> , Asep Saepuloh, Muhammad Rais Abdillah, Very Susanto and Adzkia Noerma Arifa Bandung Institute of Technology	11:15	11:30	<b>O-134</b> Household Demand for Animal Food in Urban and Rural of Bengkulu, Indonesia  <b>Nikmatul Khoiriyah</b> <sup>1</sup> , Ana Arifatus Sa'diyah <sup>2</sup> and Esther Kembauw <sup>3</sup> <sup>1</sup> University of Islam Malang, <sup>2</sup> University of Tribhuwana Tunggal, <sup>3</sup> University of Pattimura	
11:15	13:00	<b>Lunch Break</b>			<b>O-140</b> Limboto Lake Case and Cultural Diversity  <b>Magdalena Baga</b> , Yuyu Indriati Arifin and Nonny Basalama Universitas Negeri Gorontalo	
					<b>O-143</b> Model of Potential Fishing Ground in Regional Fisheries Management of Indonesia (WPP-RI) 716 to Support the Achievement of SDGs  <b>Anang Dwi Purwanto</b> <sup>1</sup> , Argo Galih Suhada <sup>1</sup> and Diyah Permatasari <sup>2</sup> <sup>1</sup> Remote Sensing Applications Center, LAPAN, <sup>2</sup> Diponegoro University	
			<b>Session 9_Sustainable Development Goals (SDGs)</b> <b>Chairperson: Dr. Idham Andri Kurniawan, Bandung Institute of Technology</b>			
				11:40	11:55	<b>O-147</b> A Novel Palm-fiber Net Industry as New Hope of Alleviating Poverty in Gorontalo Province  <b>Mohamad Jahja</b> <sup>1</sup> , Nurfitri Abdul Gafur <sup>1,2</sup> , Hugeng Lamansa <sup>2</sup> , Masayuki Sakakibara <sup>3,4</sup> and Tsutomu Yamagiuchi <sup>5</sup> <sup>1</sup> State University of Gorontalo, <sup>2</sup> Bone-bolango Regency, <sup>3</sup> Ehime University, <sup>4</sup> Research Institute for Humanity and Nature, <sup>5</sup> ESPEC MIC Corp.
						<b>O-133</b> The Effect of Acclimatization Chamber and Growth Hormone on the Survival of Endangered <i>Hopea Gregaria</i> Tree Species  Faisal Danu Tuheteru <sup>1</sup> , Asrianti Arif <sup>1</sup> , Husna <sup>1</sup> , Albasri <sup>1</sup> , Sri Andriyani <sup>1</sup> and <b>Diana Prameswari</b> <sup>2</sup> <sup>1</sup> University of Halu Oleo, <sup>2</sup> Forest Research and Development Center
			11:55	13:00	<b>Lunch Break</b>	
13:00	14:30	<b>Workshop 1</b> <b>Transdisciplinary Approach to Reducing the ASGM related Problems</b>  <b>Organized by RIHN</b>	13:00	14:30	<b>Workshop 2</b> <b>Sustainability Certification of Agricultural System</b>  <b>Organized by UNIRA</b>	
14:40	15:30	<b>Discussion (*ONLY Zoom 1)</b>				
15:30	16:00	<b>Closing ceremony (*ONLY Zoom 1)</b>				

## 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 Taufiq<sup>1</sup>, Melya Riniarti<sup>1</sup>, Hendra Prasetya<sup>1</sup>, Slamet Budi Yuwono<sup>1</sup>, Endang Linirin Widiastuti<sup>1</sup> and Masayuki Sakakibara<sup>2,3</sup>

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**Abstract:** Mercury is known as heavy metals toxic that used in various industrial and mining supply. The extensive use of mercury as amalgamation process caused heavily problems of mercury contamination around the ASGM area. The evaporated mercury from amalgamation process could damage people's health through inhaling, causing complex health problem such brain damage and death. The aim of this study was to know the distribution of evaporated mercury contamination using tree barks as bioindicator by measuring the mercury concentrations and toxicity levels. The method that used to measure the mercury distribution in tree bark was using Atomic Absorption Spectrometer (AAS). The results showed that the total mercury (THg) of *Magnolia champaca*, *Swietenia mahagoni* and *Anthocephalus cadamba* were 56.5, 45.8 and 34.8  $\mu\text{g}$ , respectively. The sampling method used was stratified sampling around the ASGM area and found with a total of 11 trees (one *Magnolia champaca*, three *Anthocephalus cadamba* and seven *Swietenia mahagoni*). *Magnolia champaca*, *Swietenia mahagoni* and *Anthocephalus cadamba* showed high concentrations of THg in the tree bark, which were found at the elevation level of 0-114 m and 114-231 m. This results indicated that the tree barks could be used as bioindicator of atmospheric mercury contaminations. The mercury found in these tree barks indicating that the mercury was spread across around the ASGM area, either the closest to the ASGM or furthest from the ASGM has a high level of mercury toxicity. This shown that the atmospheric condition was in danger because of high atmospheric mercury toxicity.

**Keywords:** ASGM; Distriburion pattern; Mercury; Mining; Tree bark

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# Certificate of Appreciation

This certificate of appreciation is awarded to

**AZHARY TAUFIQ**

for the participation as a **Presenter** in

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