

UNTERSTÜTZT VON / SUPPORTED BY



Alexander von
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Programme Book

Humboldt Kolleg - Translate Southeast Asia

Transformation in Addressing Climate Change and
Sustainability Challenges in Southeast Asia

September 18-21, 2024, Surabaya, Indonesia

Organized by

KRMH Tatas Hardo Panintingjati Brotosudarmo

Leenawaty Limantara

Felycia Edi Soetaredjo



UNIVERSITAS KATOLIK
WIDYA MANDALA
SURABAYA

Introduction



Welcome to the Humboldt Kolleg conference.

We convene at a crucial juncture for Southeast Asia. In the past five years, the region has rapidly embraced digital transformation, solidifying its position as a global technology leader. Internet usage and tech start-ups in Southeast Asia have surged, showing increases of 85% compared to Europe and 65% compared to the US. This digital revolution has woven small businesses into global supply chains, positioning the regional economy to potentially reach a staggering \$1 trillion by 2030. However, this economic ascent is under the ominous cloud of climate change. Scientific projections indicate that by 2030, Southeast Asia will experience an average annual temperature rise of 1°C, with more severe increases likely thereafter.

In recognition of the pressing need for proactive measures, we assemble this conference to explore transformative strategies. Humboldtians, alongside junior researchers from across Southeast Asia, are partnering with experts across diverse fields — earth sciences, urban planning, public health, agriculture, and economics. Together, we aim to confront the climate challenges directly, ensuring our region's resilience and continued prosperity.

Let us collaborate to forge a sustainable future for Southeast Asia!

KRMH Tatas Hardo Panintingjati Brotosudarmo
Chair of Biochemistry, Universitas Ciputra Surabaya
Chairman of Humboldt Kolleg - Translate Southeast Asia 2024

Welcome Remark

It is with great pleasure that I send my best wishes for the Humboldt Kolleg “Transformations in addressing climate change and sustainability challenges in Southeast Asia” taking place in Surabaya. My sincere gratitude goes to the organizing committee, above all to the Humboldtians Prof. Dr. Tatas Hardo Panintingjati Brotosudarmo, former Georg Forster research fellow of the Alexander von Humboldt Foundation, and our former Humboldt ambassador and Humboldt Alumni Award winner Prof. Dr. Leenawaty Limantara. Our gratitude also goes to Prof. Dr. Felycia Adi Soetaredjo.

The organizing committee made immense efforts and great initiative to bring together numerous experts from different countries in Southeast Asia as well as Germany for an exchange of ideas and experiences on issues of global importance: how can we deal with the challenges of climate change and global warming, water and food shortages and resulting health effects, the decline of biodiversity and growing energy demands? How can our global community become more sustainable?

As representative of the Alexander von Humboldt Foundation, I firmly believe that international scientific collaboration is the key to meet the challenges we face in an increasingly complex world affected by climate change. The Humboldt Foundation – in the spirit of its namesake Alexander von Humboldt – is fully committed to expanding our networks and strengthening the links between individuals irrespective of nationalities, disciplines, and gender.



Dr. Katja Yang
Head of Asia Division
Alexander von
Humboldt Foundation,
Bonn

We remember very well the four successful Humboldt Kollegs that took place in Malang in 2011 and 2014 and in Jakarta in 2017 and 2022 – one of them online. The common element of all these Kollegs – including the Kolleg in Surabaya this year – is meeting challenges through synergies, networking, and strategic partnerships in the ASEAN region. Indeed, a Humboldt Kolleg is a perfect forum for scientific networking between experts from various countries, backgrounds and in different career stages who wish to address the challenges of today and of future generations. Moreover, a Humboldt Kolleg helps to strengthen regional and interdisciplinary networking of Humboldt alumni, other researchers and junior scientists.

Our global Humboldt-network of more than 30.000 members of over 140 countries currently comprises 336 members residing in ASEAN countries, 34 of whom are based in Indonesia. We highly value these Humboldtians and would be happy to support more scholars from ASEAN countries.

Only together can we face the challenges of climate change, and in this spirit I would like to thank again Prof. Brotosudarmo for his dedication to hosting this Humboldt Kolleg and would like to wish all participants an enriching, fruitful and pleasant meeting.

Dr. Katja Yang
Head of Asia Division
Alexander von Humboldt Foundation,
Bonn

“International collaboration is key to tackling climate change challenges together”

- Katja Yang

Keynote Speaker



Markus Egermann

Head of the Research Area Transformative Capacities, Leibniz Institute of Ecological Urban and Regional Development (IOR)



Peter von Philipsborn

Chair of Public Health and Health Services Research, Pettenkofer School of Public Health, Ludwig-Maximilians-Universität München



Heike Grimm

Willy Brandt School of Public Policy, Erfurt



Reyn van Ewijk

Chair of Statistics and Econometrics, Johannes Gutenberg University Mainz

Synopsis

This keynote session explores pathways to sustainability through interdisciplinary collaboration across society, politics, economy, and planning. Emphasizing a transdisciplinary approach, it highlights co-producing knowledge and inclusive stakeholder participation in refining solutions. Discussions focus on promoting healthy diets, combating obesity and diabetes, and integrating public health nutrition with environmental sustainability. Addressing global challenges like climate change and pandemics, the session examines policies fostering economic resilience and innovation through entrepreneurial strategies. Additionally, it spotlights Indonesia, employing econometric analyses to reveal economic impacts of climate-related health issues, guiding evidence-based policies for long-term health and economic stability.



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Invited Speaker



Anindito Aditomo

Head of the Educational Standards, Curriculum and Assessment Agency, Ministry of Education, Culture, Research, and Technology
The Republic of Indonesia



Yodi Mahendradhata

Dean and Professor in Health Public and Management, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia



Ian Navarrete

The Asian Science Diplomat Awardee (SDA) recipient, Department of Environmental Science, Southern Leyte State University-Hinunangan Campus, the Philippines.

Synopsis

Embark on a transformative journey merging education and sustainability at the Climate Change and Public Health Indonesia session. Discover how integrating sustainability principles into education standards equips future generations to confront global challenges effectively. Unveil the pivotal role of education in instigating systemic transformations towards sustainability, fostering a climate of cooperation and innovation. Encounter strategic discussions on Climate Change, Agriculture, and Food Security to bolster food security and environmental sustainability. Engage with seasoned experts as they delve into innovative solutions for soil health, water quality, and agricultural resilience. Join us in shaping a sustainable future through the nexus of education, health resilience initiatives, and agricultural sustainability practices, paving the way for a more sustainable existence.

Invited Junior Researchers Speaker



Arif Nur Muhammad Ansori

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Fadhlullah Ramadhani

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Innovation Agency (BRIN)
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Ni Kadek Dita Cahyani

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Renny Indrawati

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Tunjung Mahatmanto

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Synopsis

Embark on a journey of innovation and sustainability at the Humboldt Kolleg's junior researchers session on Transformation in Addressing Climate Change and Sustainability Challenges in Southeast Asia. Engage with rising stars like Dr. Fadhlullah Ramadhani, a BRIN researcher specializing in adaptive agricultural systems, and Dr. Ni Kadek Dita Cahyani, an expert in molecular ecology, biodiversity, and genetics. Explore Dr. Tunjung Mahatmanto's pioneering work in microbiology and biotechnology for a sustainable agro-industry, and delve into Dr. Indrawati's groundbreaking research on natural pigments for health and food safety at Petra Christian University. Join us for a comprehensive discussion on scientific advancement, innovation, and sustainable practices to address regional and global challenges in climate change and sustainability.

Forging Humboldt Southeast Asia Networks Forum

Humboldtians hold a significant position within Southeast Asian communities, comparable to the dual nature of a coin. They are esteemed scholars who contribute significantly to advancing the scientific academic community and are pivotal in driving strategic, long-term social transformation. With their accomplishments spanning academic, social, economic, and political spheres, the influence of Humboldtians is widespread, impacting multicultural societies across various ASEAN nations.

The Humboldt Kolleg – Translate Southeast Asia seeks to extend beyond traditional academic exchanges. This forum presents a platform for sharing diverse perspectives and fostering effective communication among communities, empowering Humboldtians in Southeast Asia to consolidate their influence and strength. This moment is opportune for establishing robust partnerships dedicated to supporting transformation and achieving common goals in addressing global challenges while promoting inclusive, open, and sustainable societies.

We encourage Humboldtians not only to engage in official Humboldt Kolleg activities as scheduled in the programme book but also to take an active role in network-building throughout Southeast Asia.

Share your networking experiences during Humboldt Kolleg – Translate Southeast Asia with us, the Humboldtian organizers.

Share it by posting to us your selfie photo and one short paragraph about what is your future plan of collaboration

Let's collaborate to establish our Humboldt Southeast Asia Networks Forum together and forge sustainable collaboration!

Submit your story to:

KRMH Tatas Brotosudarmo, tatas.brotosudarmo@ciputra.ac.id

Leenawaty Limantara, limantara@petra.ac.id



Programme

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Wednesday, 18 September

Welcoming Dinner of Humboldt Kolleg - Translate Southeast Asia

Invitation to Humboldtians, Keynotes, Invited Speakers, Contributed Speakers, and Representatives. We are honoured to have Her Excellency Ina Ruth Luise Lepel, Ambassador of the Federal Republic of Germany to the Republic of Indonesia, grace us with her presence.

Note: Please be on time!

18:30. 15 min. Special Welcoming Session

1. Kantapon Suraprasit, Professor of Paleontology, Chulalongkorn University
2. Welcoming Address by KRMH Tatas H.P. Brotosudarmo, Chair of Biochemistry, Universitas Ciputra Surabaya, Chairman of the Organising Committee

18:45. Dinner Start





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Thursday, 19 September

06:00. – 07:30. Breakfast

Opening Ceremony Session

08:00. 10 min. Conference Opening by Remo Traditional Dance

08:10. 10 min. **Opening Remarks**

1. Judith Köster, Department Sponsorship and Network, Alexander von Humboldt Foundation Bonn
2. Yohannes Somawihardja, Rector of Universitas Ciputra Surabaya

08:20. 15 min. **Special Opening Keynote Address**

H.E. Ina Ruth Luise Lepel, Ambassador of the Federal Republic of Germany to the Republic of Indonesia

08:35. 5 min. Photo Session

Transformative Approaches to Urban and Educational Sustainability Keynotes Sessions

Moderated by Christina Eviutami Mediastika, Professor of Architecture, School of Creative Industry, Universitas Ciputra Surabaya

08:40. 30 min. **Shaping Urban Transformation for Sustainability**

Markus Egermann, Head of Research Area Transformative Capacities, Leibniz Institute of Ecological Urban and Regional Development (IOR), Dresden

09:10. 25 min. **Transformative Education for Integrative Sustainability**

Anindito Aditomo, Head of the Agency for Standardization, Curriculum, and Assessment in Education, Ministry of Education and Culture of the Republic of Indonesia

09:35. 10 min. Coffee Break



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Thursday, 19 September

Invited Junior Researchers Series

Discussion led by Maribel Dionisio-Sese, Professor of Plant Biology, Institute of Biological Sciences, University of the Philippines at Los Banos; and Grecebio Jonathan D. Alejandro, Professor of Plant Systematics and Phylogenetics, Research Center for the Natural & Applied Sciences, University of Santo Tomas

09:45. 30 min. **Invited Junior Researcher Talks on Biodiversity, Climate Change, and Geoinformatics**

1. Ni Kadek Dita Cahyani, Diponegoro University, Semarang.
2. Fadhullah Ramadhani, National Research and Innovation Agency (BRIN)

10:15. 30 min. **Invited Junior Researcher Talks on Food Technology for Future Needs**

1. Tunjung Mahatmanto, Universitas Brawijaya, Malang
2. Renny Indrawati, Petra Christian University, Surabaya

10:45. Poster Gallery Show

11:45. Lunch



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Thursday, 19 September

Fostering Research Collaboration between Germany and Indonesia

Moderated by KRMH Tatas Brotosudarmo, Chair of Biochemistry, Universitas Ciputra Surabaya

13:00. 20 min. **German-Indonesia Research and Innovation Meeting**

Judith Köster, Department Sponsorship and Network,
AvH Foundation Bonn

13:20. 20 min. **Research in Indonesia**

Ocky Karna Radjasa, Professor and the Chairman of
Research Organization for Earth Sciences and Maritime,
National Research and Innovation Agency (BRIN)

Contributed Junior Researchers Series Day 1

13:40. 50 min. **Contributed Junior Researcher Talks on Urban Design
and Future Development Hosted by Petra Christian
University**

Cilcia Kusumastuti, Department of Civil Engineering
Feny Elsiana, Department of Architecture
Gunawan Tanuwidjaja, Department of Architecture
Esti Asih Nurdiah, Department of Architecture
Bramasta P. Redyantanu, Department of Architecture

14:30. 15 min. Coffee Break

14:45. 50 min. **Contributed Junior Researcher Talks on Sustainable
Environment Hosted by Widya Mandala Catholic University**

Shella P. Santoso, Department of Chemical Engineering
Hardy Shuwanto, Department of Civil Engineering
Jenni Lie, Department of Chemical Engineering
Christian J. Wijaya, Department of Chemical Engineering
Nathania Puspitasari, Department of Chemical Engineering

15:35. Conclusion and Free Time (Dinner not provided)



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Friday, 20 September

06:00. – 07:30. Breakfast

Economics and Healthcare Keynotes Session

Moderated by Damelina Basauli Tambunan, Chair of Family Business and Entrepreneurship, School of Business Management, Universitas Ciputra Surabaya, and KRMH Tatas Brotosudarmo, Chair of Biochemistry, Universitas Ciputra Surabaya.

08:00. 60 min. **Business, Economy, and Econometrics**

Heike Grimm, Professor of Public Policy and Entrepreneurship
Willy Brandt School, Erfurt University

Reyn van Ewijk, Professor of Statistics and Econometrics,
Johannes Gutenberg University, Mainz

09:00. 55 min. **Food Systems Transformations and Health**

Peter von Philipsborn, Chair of Public Health and Health
Service Research, Ludwig-Maximilians-Universität München
Yodi Mahendradhata, Professor of Health Policy and
Management, Universitas Gadjah Mada

09:55. 15 min. Coffee Break

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Friday, 20 September

Contributed Junior Researchers Series Day 2

- 10:10. 40 min. **Contributed Junior Researcher Talks on Epidemiology and Public Health Hosted by Universitas Ciputra Surabaya**
Ms. Sarah Hagia Lestari M.D., School of Medicine
Dr. Lidya Handayani Tjan M.D., School of Medicine
Ms. Natalia Yuwono M.D., School of Medicine
Ms. Areta Indarto M.D., School of Medicine
- 10:50. 40 min. **Contributed Junior Researcher Talks on Green Economy and Entrepreneurship Hosted by Universitas Ciputra Surabaya**
Dr. Adi Kurniawan Yusup, School of Business
Dr. Teofilus, School of Business
Dr. Timotius Sutrisno, School of Business
Dr. Luky Patricia Widianingsih, School of Business
- 11:30. Lunch and Prayer Time

Programme

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Friday, 20 September

Climate Change, Agriculture, and Food Security Keynote Session

moderated by Asfa Widiyanto, Professor of Islamic Thought, Faculty of Tarbiya and Teaching Sciences, State Institute for Islamic Studies (IAIN)

13:30. 25 min. **Climate Change, Agriculture and Food Security**

Ian Navarrete, Professor of Environmental Soil Science,
Southern Leyte State University

Indonesian Young Academy of Sciences - Humboldtians SA Session

Moderated by Young Academy Fellow Felycia Adi Soetaredjo, Professor of Chemical Engineering, Widya Mandala Surabaya Catholic University, Surabaya

13:55. 50 min. **Indonesian Young Academy of Sciences - Humboldtians**

Arif Ansori, Fellow of Indonesian Young Academy of
Sciences, Airlangga University

Chanchai Boonla, Professor at Faculty of Medicine,
Chulalongkorn University

Christian Joseph Cumagun, Professor of Plant Pathology,
University of the Philippines - University of Idaho

Dr. Piyush Dhawan, ASEAN Secretariat

14:45. 15 min. Coffee Break



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Friday, 20 September

Initiative Actions on Transformative Strategies to Tackle Climate Change and Sustainable Challenges

15:00. 45 min. **Gallery Walk Exercise**

Leenawaty Limantara, Petra Christian University

15:45. **Reading of the Humboldtians White Paper**

KRMH Tatas H.P. Brotosudarmo, Chair of Biochemistry,
Universitas Ciputra Surabaya, Chairman of Humboldt Kolleg -
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16:00. Conclusion and Free Time

18:30. Dinner is available at the Hotel



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Saturday, 21 September

06:00. – 07:30. Breakfast

08:00 - 11:30. Excursion Surabaya Old City

11:30. Lunch at the Hotel and Farewell



Contributed Junior Researchers



Adi Kurniawan Yusup

Ciputra University Surabaya
adi.kurniawan@ciputra.ac.id

Profile:

Dr. Adi Kurniawan Yusup, S.E., MM, is a lecturer at Ciputra University specializing in Financial and Investment Management. His current research areas include corporate finance, investment and portfolio management, and corporate governance.



Areta Idarto

Ciputra University Surabaya
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Profile:

Areta Idarto is a pediatrician by training and very passionate about what he does. He is also adaptive and welcomes challenges with the will to learn and be innovative in the process. He is eager to collaborate with other professionals in various fields of interest. As both clinician and lecturer, quality improvement of patient service and care is a journey towards excellence.



Bramasta Putra Redyantanu

Petra Christian University
bramasta@petra.ac.id

Profile:

Bramasta Putra Redyantanu, a lecturer in architecture at Petra Christian University, earned his doctorate in 2024 from Universitas Indonesia. His research explores design methods influenced by virtual digital technology, viewing design as a form of knowledge intertwined with societal development.



Christian Julius Wijaya

Widya Mandala Surabaya Catholic University
christian_wijaya@ukwms.ac.id

Profile:

Dr. Christian Julius Wijaya is a lecturer and researcher at the Department of Chemical Engineering, Widya Mandala Surabaya Catholic University. His research area is on advanced materials, especially metal-organic frameworks and cellulose-based materials, for various applications. His focus is mostly on drug delivery systems that use these advanced materials.

Contributed Junior Researchers



Cilcia Kusumastuti

Petra Christian University
cilcia.k@petra.ac.id

Profile:

Cilcia Kusumastuti, an academic in Civil Engineering, Petra Christian University, specializes in statistical hydrology and climate change impacts. Her PhD focused on time-frequency bias correction of climate model simulations. After completing it in early 2024, she has interest in future climate observation and solutions to hydrological challenges in tropical regions.



Esti Asih Nurdiah

Petra Christian University
estian@petra.ac.id

Profile:

Esti is a lecturer at Petra Christian University. She studied her PhD at the University of Sheffield, researching the utilisation of Indonesian bamboo for gridshell structures, including material properties, structural analysis, optimisation, and construction methods. Her research focuses on bamboo as a sustainable building material and its applications.



Feny Elsiana

Petra Christian University
feny.elsiana@petra.ac.id

Profile:

Feny Elsiana earned her master's degree from the Department of Architecture at Institut Teknologi Sepuluh Nopember in 2013, and her doctoral degree from the same department in 2024. She is currently a lecturer in the Department of Architecture at Petra Christian University. Her research interests revolve around daylighting design and technology in architecture.



Gunawan Tanuwidjaja

Petra Christian University
gunte@petra.ac.id

Profile:

Gunawan, a lecturer in Architecture at Petra Christian University, specializes in Inclusive Design. He holds a Ph.D. from Queensland University of Technology, supported by an Australia Awards Scholarship. His research focuses on inclusive educational facilities, collaborating with international partners like UBCHEA, JICA, SIF, and UN-Habitat.

Contributed Junior Researchers



Hardy Shuwanto

Universitas Prima Indonesia
hardyshu818@gmail.com

Profile:

Hardy Shuwanto is currently an Assistant Professor associated with Universitas Prima Indonesia. His research interests include electrocatalysis, photocatalysis, supercapacitors, photoelectrocatalysis, and plasma technologies. Dr. Shuwanto has contributed to numerous scientific publications, particularly in the areas of advanced nanomaterials for energy and environmental applications.



Jenni Lie

Widya Mandala Surabaya Catholic University
liejenni@ukwms.ac.id

Profile:

Jenni Lie is a chemical engineering academic at Widya Mandala Surabaya Catholic University. With a Ph.D. from National Taiwan University of Science and Technology, her research includes environmental engineering, metal recovery, and renewable energy. She has a significant publication record and an h-index of 11 (SINTA) (Chemical Engineering UKWMS) (AD Scientific Index).



Lidya Handayani

School of Medicine, Ciputra University Surabaya
lidya.tjan@ciputra.ac.id

Profile:

Dr. Lidya Handayani, a clinical microbiologist and lecturer at Universitas Ciputra Surabaya, holds a Ph.D. in virology from Kobe University and a master's from Universitas Airlangga. She specializes in infectious disease analysis, microbiology lab management, infection control, and AMR. Currently she focuses on teaching and mentoring medical students as future healthcare professionals.



Luky Patricia Widianingsih

Ciputra University Surabaya
luky.patricia@ciputra.ac.id

Profile:

Luky Patricia Widianingsih is a lecturer in Ciputra University's accounting study program. Active as a journal manager and also as a quality assurance team. Her research interests are in sustainability accounting, management accounting and qualitative research. She is open to collaborating with researchers and practitioners.

Contributed Junior Researchers



Natalia Yuwono

Ciputra University Surabaya
natalia.yuwono@ciputra.ac.id

Profile:

Dr. Natalia Yuwono, lecturer at School of Medicine, Universitas Ciputra Surabaya. Holds a Master's degree in Tropical Medicine from Universitas Airlangga. Specializes in human parasites and researches tropical infections, as well as maternal and child health. Passionate about educating and advancing healthcare in these critical areas.



Nathania Puspitasari

Widya Mandala Surabaya Catholic University
nathania.puspita@ukwms.ac.id

Profile:

Ir. Nathania Puspitasari, S.T., Ph.D., IPP. Currently, I work as a lecturer at the Department of Chemical Engineering, Widya Mandala Surabaya Catholic University, Indonesia. My research interest is in the field of biotechnology innovation, with a special focus on biomaterials and environmental engineering.



Phuc Dao Gia

Institute of International and Comparative Law, University of Economics and Law
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Profile:

DAO Gia Phuc holds an LL.D. degree Nagoya University, Japan in 2019. He is a researcher and lecturer in law. He has been the research director of several projects, such as: environmental justice (EU JULE JIFF in Viet Nam, Call 3 and 4), Emissions Trading Scheme (VNU funding).



Shella Permatasari Santoso

Widya Mandala Surabaya Catholic University
shella@ukwms.ac.id

Profile:

Shella Permatasari Santoso is a Ph.D. in Chemical Engineering major, with research interest on biocomposite from various natural-derived materials for green technology and environmental remediation.

Contributed Junior Researchers



Teofilus

Ciputra University Surabaya
teofilus@ciputra.ac.id

Profile:

He is an active contributor to academic research, having published extensively in the fields of management, entrepreneurship, and retail strategies. His work frequently explores innovative methodologies and strategic planning, reflecting his deep commitment to blending practical business insights with scholarly research. He also serves as a dedicated reviewer and associate editor for multiple academic journals.



Timotius F. C. W. Sutrisno

Ciputra University Surabaya
timotius.febry@ciputra.ac.id

Profile:

Timotius F. C. W. Sutrisno is an Associate Professor in operation management and have more than 10 years in manufacturing food and beverage.

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Abdul Gafur

APP Forestry R&D, PT Arara Abadi
gafur@uwalumni.com

Profile:

Dr. Abdul Gafur is currently holding the position of Riau R&D Head, APP Forestry, Indonesia. His main research interest is plant-microbe interactions. Dr. Gafur has published refereed scientific articles (Scopus Index 17) and serves as an editor in several reputable journals. He is the Fellow of Asian PGPR Society awardee.



Agung Wardana

Faculty of Law, Universitas Gadjah Mada
made.wardana@ugm.ac.id

Profile:

Agung Wardana is an associate professor at the Faculty of Law, Universitas Gadjah Mada, Indonesia. He was an Alexander von Humboldt Postdoctoral Research Fellow at the Max Planck Institute for Comparative Public Law and International Law, Heidelberg, Germany (2021-2024).



Allan Patrick Macabeo

Laboratory for Organic Reactivity, Discovery and Synthesis
allanpatrick.macabeo78@gmail.com

Profile:

Dr. Allan Patrick G. Macabeo is a professor and the principal investigator of the Laboratory for Organic Reactivity, Discovery, and Synthesis. He was an Alexander von Humboldt Fellow at the Helmholtz Center for Infection Research in 2017-2018. His research interests include the chemistry of novel biologically active natural products, synthetic methodology, diversity-oriented synthesis, and asymmetric catalysis.



Andreas Wibowo

Parahyangan Catholic University
andreas_wibowo@unpar.ac.id

Profile:

Andreas Wibowo is a senior lecturer in construction management at Parahyangan Catholic University. His expertise areas include public-private partnerships in infrastructure, risk management, and financial engineering.

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Anindito Aditomo

Ministry of Education and Culture of the Republic of Indonesia

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Profile:

Anindito Aditomo is the Head of Research and Development Agency and Book Development at the Ministry of Education and Culture of Indonesia. Appointed in 2021, he focuses on educational innovation, curriculum development, assessment transformation, and educational resource enhancement.



Annisa Satyanti

Australian Bureau of Agricultural and Resource Economics and Sciences

annisa.satyanti@gmail.com

Profile:

Dr. Satyanti is a Humboldt International Climate Protection Fellow (2011-12), forester, and plant ecologist. With a double MSc in Forest Ecology and Management from Wageningen University and Agriculture and Forestry from the University of Eastern Finland, she holds a PhD from ANU. She is a research scientist in Canberra.



Antonius Josef Surjadi

Universitas Katholik Indonesia Atma Jaya

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Profile:

Antonius Surjadi is an emiritus resarchers from Universitas Katholik Indonesia Atma Jaya. He is a recipient of Humboldt Research Fellowship Programme 1959.



Arief Wijaya

World Resources Institute (WRI) Indonesia

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Profile:

As the Program Director, he overseeing the AFOLU (Agriculture, Forest and Landuse) and CECO (Climate, Energy, Cities and the Ocean) portfolios. His expertise includes tropical forest landscapes, deforestation drivers, low-carbon development policies, and national GHG inventories. Arief holds a PhD in Geoinformatics and an MSc in Natural Resources Management.

Humboldtians



Aris Junaidi

Universitas Gadjah Mada
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Profile:

Aris Junaidi, a professor at Universitas Gadjah Mada, specializes in reproductive endocrinology. He has held various academic and administrative roles, including Director of Quality Assurance and Education Attaché. His international experience spans research and leadership positions in Australia and Germany.



Asfa Widiyanto

State Islamic University (UIN) Salatiga
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Profile:

Professor of Islamic thought and Sociology of Religion at the State Islamic University (UIN) Salatiga, Indonesia. He obtained his doctorate from the University of Bonn and his master's from Leiden University. From 2011 until 2013, he undertook postdoctoral research at the University of Marburg and the University of Bamberg, which was sponsored by the Alexander von Humboldt Foundation.



Bernadetta Kwintiana Ane

Media Nusantara Citra University
bk.ane@ieee.org

Profile:

Bernadetta Kwintiana is a Computer Science faculty member at MNC University, Jakarta, specializing in deep learning, neuroevolution for VR/AR, and bioinformatics for cancer research. Her experience includes roles as an IEEE DVP expert, top researcher in Germany, Humboldt postdoc, and Monbukagakusho researcher in Japan.



Bidhari Pidhatika

National Research and Innovation Agency (BRIN)
bidhari.pidhatika@brin.go.id

Profile:

Bidhari Pidhatika: B.Sc. Universitas Gadjah Mada (2002), M.Sc. Chalmers University (2006), Ph.D. ETH Zürich (2011). Research fellowships at Freiburg (2016-2018) and Flinders University (2022-2023). L'Oreal-UNESCO fellow (2011). Researcher and group leader at BRIN Indonesia. Expertise: biomedical polymers, surface modifications.

Humboldtians



Chanchai Boonla

Chulalongkorn University
chanchai.b@chula.ac.th

Profile:

Chanchai Boonla is currently working as an Assistant Professor in the Department of Biochemistry, Faculty of Medicine, Chulalongkorn University. He received the AvH postdoctoral fellowship in 2008 and the renewal for a research stay in 2016.



Christian Joseph Cumagun

University of the Philippines / University of Idaho
ccumagun@uidaho.edu

Profile:

Christian Joseph R. Cumagun is a retired plant pathology professor at University of the Philippines Los Baños (UPLB), now a research scientist at the University of Idaho. He holds degrees from UPLB, Denmark, and Germany, and is acclaimed for his work in fungal biology. He has received numerous awards and served as a visiting professor worldwide.



Christopher Bernido

Research Center for Theoretical Physics, Central Visayan Institute Foundation
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Dr. Christopher C. Bernido, President of the Central Visayan Institute Foundation (CVIF), holds a Ph.D. and M.S. in Physics from SUNY Albany and a B.S. from UP Diliman. He has honorary doctorates from Holy Angel University and Ateneo de Naga University, and has been a Humboldt Research Fellow and ICTP Senior Associate Member.



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Profile:

Prof. Deendarlianto, an Alexander von Humboldt Fellow, conducted research at Helmholtz Zentrum Dresden Rossendorf (HZDR) from 2008 to 2011. His expertise is in multiphase flow for new and renewable energy. Currently, he is a full professor at Universitas Gadjah Mada and served as vice chairman of the Energy Commission at Indonesia's National Research Council (2015-2020).

Humboldtians



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Dr. Duu Sheng Ong, a professor at Multimedia University (MMU), holds a PhD in Electronics Engineering from the University of Sheffield and an MPhil and BSc in Physics from Universiti Malaya. His research focuses on THz electronic devices and semiconductor modelling. He is a Fellow of Institute Physics Malaysia and a Chartered Physicist and Engineer.



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Gaik Ee Lee is a Malaysian bryologist and an Associate Professor at the Institute of Tropical Biodiversity and Sustainable Development, Universiti Malaysia Terengganu. Her research includes the diversity and taxonomy of leafy liverworts, historical biogeography and amber fossils of leafy liverworts, and the phytochemical analysis and biological activities of secondary metabolites of bryophytes.



Grecebio Jonathan Alejandro

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Profile:

Dr. Alejandro is a full professor and currently the Director for Graduate Research in the University of Santo Tomas (UST). There are over 80 Plant names authored and/or co-authored by Dr. Alejandro based on International Plant Name Index (IPNI). He established the UST-TAPBG Research group recognized by the DOST- PCHRD as Center/Facility of DNA Barcoding of Herbal Products & Medicines.



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Prof. Ian Navarrete is currently the head of the Research, Innovation, and Extension Services of Southern Leyte State University-Hinunangan Campus, Philippines. He has been actively involved in mangrove research in the past years.

Humboldtians



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Dr. Kantapon Suraprasit is a Thai lecturer who completed a postdoctoral fellowship granted by the AvH Foundation in 2020. His expertise lies in the evolution and paleoecology of Quaternary large mammals in Southeast Asia. He currently teaches paleontology and geology at Department of Geology, Faculty of Science, Chulalongkorn University in Bangkok, Thailand.



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Profile:

Laksana Tri Handoko is the Chairman of the National Research and Innovation Agency (BRIN). He is a renowned Indonesian scientist in theoretical and particle physics. He has authored numerous influential publications and received various awards for his contributions to informatics and technology development.



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Leenawaty Limantara, a professor and the vice executive director of the board of trustee at Petra Christian University, is an Indonesian female scientist and female leader of Indonesian higher education institutions. As a scientist, she was known in the discovery of chlorophyll's excited triplet states and the application of photodynamic therapy for cancer and tumors.



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Prof. Maribel L. Dionisio-Sese, M.Sc., D.Sc. is a botany graduate from the University of the Philippines Los Baños (UPLB) and University of Tokyo, Japan. She is a specialist in plant and algal physiology, photobiology, and stress physiology. As faculty-scientist in UPLB, she held several academic, research and administrative positions in the same institution.

Humboldtians



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Dr. Mochamad Furqon Azis Ismail, a physical oceanographer at Indonesia's National Research and Innovation Agency (BRIN), researches cross-shelf exchange in ocean circulation and climate. He was recently awarded a Georg Forster Research Fellowship as a visiting researcher at GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany.



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Prof. Dr. Mochammad Sholichin is a retired Vice Rector of Darma Persada University and a former guest lecturer at the Faculty of Pharmaceutical Sciences, Setsunan University, Osaka, Japan.



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Dr. Mohajit, a distinguished faculty member at the Institute of Technology Bandung, specializes in advanced engineering and technology research. His work significantly contributes to the development of innovative solutions in his field. He has been honored with the prestigious Alexander von Humboldt Research Fellowship for his outstanding contributions to research excellence.



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Prof. Ocky Radjasa is a marine microbiologist working at National Research and Innovation Agency. He has research interest on marine microbial diversity, marine microbial natural products and bioprospecting of marine microorganisms.

Humboldtians



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Piyush Dhawan is the Principal Advisor to the ASEAN Secretariat and works with the German Development Cooperation in Jakarta. In his current role his team supports the ASEAN countries in reducing land-based waste to protect marine environments in Vietnam, Cambodia, the Philippines, and Indonesia.



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Dr. Rafael A. Espiritu, Full Professor in Chemistry at De La Salle University, holds degrees from DLSU and a PhD from Osaka University. He completed a Humboldt postdoc fellowship in Germany. His research focuses on metabolomics, transcriptomics, membrane biophysics, and regulated cell death in colorectal cancer.



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Prof. Rita S. Sitorus, MD, PhD, is a Professor and senior consultant at Universitas Indonesia's Faculty of Medicine, Cipto-Mangunkusumo Hospital. With 5 years abroad, including research in Germany, Japan, and the Netherlands on eye diseases, her current roles include serving on professional boards regionally and advising Indonesia's Ministry of Health.



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Profile:

Riyanti Djalante is a Senior Officer at the ASEAN Secretariat. She specializes in disaster management and climate change resilience, contributing significantly to regional policies and initiatives. Djalante holds extensive academic and field experience, enhancing ASEAN's capacity to address environmental challenges.

Humboldtians



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Dr. Shamsuddin Shahid is a Professor at Universiti Teknologi Malaysia (UTM). He uses statistical tools to develop innovative solutions for adapting to global environmental changes. Dr. Shahid has completed approximately 20 research projects, published over 400 research articles, and supervised 15 PhD theses.



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Siti Isrina Oktavia Salasia is a lecturer at the Faculty of Veterinary Medicine, Gadjah Mada University. She graduated from the Faculty of Veterinary Medicine Justus-Liebig-University, Giessen, Germany (1994, DAAD scholarship), postdoctoral research at JLU-Giessen, Germany (1988, DAAD scholarship and 2002, AvH scholarship). Research focuses on clinical microbiology.



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Sri Yudawati Cahyarini, BRIN Research Professor in Geology-Paleoclimatology/Paleoceanography, heads the Paleoclimate and Paleoenvironment Research Group. With a Kiel University PhD on a DAAD scholarship, she's a Georg Forster Fellow and recipient of grants including from National Geographic and USAID. Her work, notably on past climate and coral proxies, is widely published.



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Surjani Wonorahardjo, a distinguished professor at Universitas Negeri Malang, is an expert in chemical education. Her influential research has advanced the field, earning her multiple awards and recognition in academic circles.

Humboldtians



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Profile:

Swati Mehta Dhawan is a development sector researcher and consultant with 15 years of experience in digital financial inclusion, women's economic empowerment, and consumer protection. Her work spans developing market economies in Asia and Africa across development and humanitarian settings. She has a PhD in Economic Geography and an MSc in Development Studies.



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Profile:

Tatas Hardo Panintingjati Brotosudarmo, a professor at Universitas Ciputra, is renowned for his groundbreaking research in photosynthesis and bioenergetics. He has received numerous awards for his contributions to biochemistry and molecular biology, and his work has been widely published in prestigious scientific journals.



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Profile:

Victor Asio is a University Professor of Soil Science and Geoecology at Visayas State University, Philippines. He obtained his doctorate degree from the University of Hohenheim as a DAAD Fellow. He was a Humboldt Fellow based at Martin Luther University in Halle. He completed a postdoc at Halle and National Taiwan University.



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Dr. Piyawattanametha, a UCLA Ph.D. graduate, was a Senior Scientist at Stanford University. He co-founded the Global Young Academy, received the Fraunhofer-Bessel Research Award, and was recognized by the World Economic Forum. An Adjunct Professor at Michigan State University, he's also a Senior Editor at IEEE Photonics Letters.

Humboldtians



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Dr. Yodi Mahendradhata is the Dean and Professor of Health Policy and Management at the Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Indonesia. His research interests include global health, knowledge translation, implementation science, and health policy and management. Dr. Mahendradhata was a Humboldt scholar at Heidelberg University, Germany.

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Senior and Other Researchers



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Prof. Antoni, a Civil Engineering professor at Petra Christian University, specializes in concrete technology and sustainable construction materials. His research focuses on utilizing industrial by-products, such as fly ash. He has significantly contributed to Indonesia's construction standards and continues to lead research, mentor students, and collaborate with industry for sustainable advancements.



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Mediastika is a Professor of Architecture at the School of Creative Industry, Universitas Ciputra Surabaya, Indonesia. She majored in built environment and architecture and minored in architectural acoustics. She is one of the few Indonesian lecturers and scientists who consistently work on the sound aspects of buildings and urban design.



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Prof. Dr. Ch. Whidya Utami is an expert in management with a focus on retail, entrepreneurial marketing, and business strategy. She is a distinguished academic, consultant, and author, actively involved in research, professional organizations, and higher education in Indonesia. Her contributions have earned her national and international recognition, and her publications are widely referenced in the field.



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Dennis Cheek, Dean of the School of Entrepreneurship & Humanities at Universitas Ciputra, holds dual PhDs from Pennsylvania State University and Durham University. He has over 850 publications and co-edits the Journal of Entrepreneurship & Public Policy. He has worked with the John Templeton and Ewing Marion Kauffman foundations.

Senior and Other Researchers



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Dr. Dennis P. Peque is a Professor in forestry at the Department of Forest Science, Visayas State University (VSU), Philippines. Currently, he is the Director of the Regional Climate Change Research and Development Center, VSU. He obtained his MSc and PhD degrees in Forestry from the University of Göttingen, Germany.



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Dian Retno Sari Dewi, an associate professor at Universitas Katolik Widya Mandala Surabaya, specializes in Product-Service Systems Supply Chain and leads the Industrial Studio Laboratory, where she fosters collaboration between academia and industry, particularly in cleaner logistics and Product-Service Systems research.



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Profile:

Hutomo Setia Budi is a designer with a passion for design and business, with a strong interest in the use of technologies in design. In addition to being an educator, his business has worked with major companies like GE, Philips, and Mindray. He enriches and inspires his students with the experience gained from projects and industry collaborations.



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Profile:

Dr. Bornales, a physics professor, served as MSU-IIT's Vice Chancellor for Research and Extension (2012-2022), implementing projects and policies that advanced MSU-IIT towards becoming a research university. Her efforts significantly enhanced research, extension, and innovation at the institution.

Senior and Other Researchers



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Profile:

Maria Yuliana, a tenured assistant professor in Chemical Engineering at Widya Mandala Surabaya Catholic University, focuses on environmental science, health, and clean energy, particularly using natural resources and waste for energy. She emphasizes waste transformation to address global challenges in waste and energy sustainability.



Surya Hermawan

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Profile:

Dr.rer.nat. Surya Hermawan, a renowned Coastal Geoscience and Engineering lecturer at Petra Christian University, specializes in environmental sustainability and climate change. His community service projects focus on water quality control using sustainable practices. His research, widely published, emphasizes his expertise in hydrodynamic modeling for environmental solutions.

Abstracts



Keynote Abstracts

Business, Entrepreneurship, and Sustainability Challenges

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Business and entrepreneurship play pivotal roles in addressing sustainability challenges by driving innovation and promoting practices that reduce environmental impact. The integration of sustainable practices into business models not only meets regulatory requirements but also caters to a growing consumer demand for environmentally conscious products. Entrepreneurs are uniquely positioned to lead in this area, leveraging their agility to implement cutting-edge solutions and disrupt traditional industries with sustainable alternatives. However, the transition to sustainable operations poses significant challenges, including the need for substantial initial investments and the potential for slower financial returns.

In this keynote speech, I will address the critical nexus of business, entrepreneurship, and sustainability within the context of global trends, with a particular focus on Indonesia. The presentation will begin with an exploration of global trends affecting these sectors and then transition to examining their local relevance and impact on Indonesian businesses. I will highlight opportunities for leveraging these global trends to foster growth and sustainable entrepreneurship in Indonesia. The discussion will extend to the dynamic German-Indonesian relations, showcasing successful collaborations in business, entrepreneurship, and sustainability. A comparative analysis of the entrepreneurship and innovation ecosystems of Germany and Indonesia will be presented, identifying mutual lessons and insights for beneficial exchange. Furthermore, the keynote will delve into the policy and regulatory environments in both countries, emphasizing their roles in shaping sustainable entrepreneurship. In conclusion, I will feature the latest research on the sustainability orientation of German digital entrepreneurs, raising the critical question of whether more regulation is necessary.

Keynote Abstracts

Food Systems Transformations for Sustainability and Health

Peter von Philipsborn

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The global food system is responsible for approximately one third of all anthropogenic greenhouse gas emissions. At the same time, dietary intake is a key determinant of human health and well-being. A transformation of food systems is therefore essential for achieving global climate and sustainability targets, while improving human health and well-being. In most countries world-wide, diets are not well-aligned with current evidence-based dietary guidelines. Supporting healthy and sustainable diets on a population level requires the creation of food environments that improve the availability, accessibility, affordability and attractiveness of healthy and sustainable foods. A range of public policies can contribute to this goal, including, among others: nutrition standards for public institutions such as schools and kindergartens; food labelling policies; fiscal policies; regulation of food marketing; retail and food service sector policies; and nutrition education and advice. There is a broad evidence base showing that such policies can be effective when they are well designed and adapted to the specific context. In most countries for which data are available, a majority of the population supports government action for healthy and sustainable diets. However, adoption and implementation of such evidence-informed nutrition policies is still patchy, suggesting that relevant barriers to action exist that need to be overcome. Strategies for overcoming these barriers include: i) processes and platforms for improved collaboration between policy, practice and research; ii) a reframing of the debate around food and food policies; and iii) public engagement with science and evidence-informed, science-based advocacy, among others.

Keynote Abstracts

Shaping Urban Transformation for Sustainability

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Since the 1970s at the latest, we have observed a systemic unsustainability at a global scale in all sectors (food, mobility, energy etc.) that risks the survival of humanity on planet Earth. While a deep structural change is urgently needed, current societies lack the capabilities to transform systems towards sustainability. The presentation summarises the current state of the art on global (un)sustainability, explains the failure of past and current approaches to tackle sustainability problems and introduces the concept of transformative capacities, which offers entry points for system change.

By the example of the City of the Future project (2015 – 2022, Germany, BMBF) it will be shown how transdisciplinary and transformative research can enhance transformative capacities in cities by involving public officials, policy makers, business makers and especially citizens and intermediary actors into processes of urban change. It will be shown how sustainability visions, transition pathways and urban experiments were co-created between science and society. Strategies to involve often unheard voices and inactive citizens will be introduced. A critical reflection on first impacts, achievements and setbacks will be done at the end.

Abstracts

Education for a Sustainable Future: Insights from Curriculum Reform in the Merdeka Belajar Transformation

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Curriculum reform is politically unpopular, and not without reason. Changes in national curriculum policy require teachers and principals, as well as parents, to make many adjustments. Unfortunately, such changes rarely lead to their promised impact on teaching and learning quality. Nonetheless, curriculum is perhaps the aspect of the education system that is most often tinkered with. In the case of Indonesia, the national curriculum framework has been overhauled four times in 2004, 2006, 2013, and 2024. In this talk, I will elaborate on the rationale for Indonesia's most recent curriculum reform, including the urgent need to mainstream climate change education. I will argue that this recent curriculum reform takes a more systemic approach and thus has a much better chance of improving teaching and learning quality. Empirical evidence from the national assessment will be presented to show early impact of the reform.

Abstracts

Heat Resilience, Human Health, and Equity in Southeast Asia

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Southeast Asia is increasingly vulnerable to the impacts of climate change, with rising temperatures and more frequent heatwaves posing significant risks to human health. The effects of extreme heat are particularly severe for vulnerable populations, exacerbating health inequities and threatening the region's development. As the region experiences rapid urbanization and industrial growth, the resilience of communities to heat stress is becoming a critical public health issue. This presentation focuses on the intersection of heat resilience, human health, and equity in Southeast Asia, with particular attention to how heat-related health impacts disproportionately affect marginalized populations. Prolonged heat exposure can lead to a range of health issues, including heat stroke, cardiovascular and respiratory conditions, and diminished physical performance. Vulnerable groups such as outdoor workers, the elderly, and low-income communities face the greatest risks due to limited access to cooling infrastructure, healthcare, and adaptive resources. This presentation will explore how building heat resilience can mitigate these health risks and enhance the region's capacity to adapt to a warming climate. It will highlight the need for integrated policies that combine public health initiatives with urban planning, environmental management, and social protection. Strengthening heat resilience is not only about addressing immediate health concerns but also about ensuring that all populations can thrive in the face of climate change.

Abstracts

The Role of Supply and Demand Risk on Supply Chain Performance of Agriculture Manufacturing Companies: Evidence from Eastern Indonesia

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Purpose: One of the success strategies in the agricultural industry is risk management in the supply chain, the role of supply, demand, and customer integration to achieve supply chain performance is challenging for developing countries. This study examines the relationship between Supply Risk and Demand Risk on Supply Chain Performance with customer integration moderation. This is further studied to calculate the risk of sustainability of the agricultural industry

Design/methodology/approach: Structural equation modeling was carried out on a sample of supply chain managers at an agricultural manufacturing company in eastern Indonesia to test the hypotheses developed.

Findings: The findings presented allow the author to better understand the relationship between Supply and demand risk on supply chain performance. More precisely, empirical evidence is provided on the impact of risk aspects on supply chain performance. Furthermore, these findings show the role of customer integration.

Originality/value: By focusing on Supply Chain Risk in the agricultural industry, this paper contributes to knowledge about risk in general and specifically in the agricultural manufacturing industry. In addition, by studying the farm industry from developing countries, this paper helps develop a broader and more diverse perspective on risk in the supply chain.

Abstracts

Integrating Remote Sensing and Artificial Intelligence for Climate Change Mitigation and Adaptation in Developing Countries: A Review

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Climate change significantly impacts developing countries, exposing vulnerabilities and hindering sustainable development, especially from a spatial and temporal perspective. Mitigation and adaptation of climate change policies may have progressed across all regional sectors. Despite progress, adopting low-emission and adaptation technologies lags in most developing countries. Critical barriers to mitigation and adaptation are low uptake of technologies, insufficient mobilization of funds, including research and dissemination, low climate literacy, lack of political commitment, and low sense of urgency. Recently, the impact of El Nino in 2023 and La Nino in 2024/2025 cannot be underestimated for disrupting regional food reserves. This review reveals the potential advantages of integrating remote sensing based on imagery from satellite sensors and unmanned aerial vehicles (UAVs) combined with artificial intelligence (AI) technologies to tackle climate change issues. The review underscores the potential benefits of these technologies, such as increased efficiency and effectiveness in many sectors.

Previous studies for highly cited articles, recent advancements, and the potential impacts of these technologies on climate change mitigation and adaptation strategies are shown. The review underlines the importance of collaborative efforts among developing countries and capacity building for the scientists and stakeholders in easy-to-understand and application cost-efficient and effective ways to make better policies.

Abstracts

Are We the Last Generation of Accountants — or the First to Embrace Sustainability?

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This paper explores the pivotal role of the accounting profession in fighting climate change, highlighting the intrinsic link between finance and climate change. Accountants play a crucial role in enhancing the transparency and credibility of financial reporting through improved measurement and disclosure practices. Prior research underscores the significant contributions of accounting in risk and opportunity assessments, environmental and social performance metrics, and sustainability disclosures, all of which are essential for fostering a green economy and entrepreneurship. The recent introduction of the International Sustainability Standards Board's (ISSB) International Financial Reporting Standard (IFRS) S1 and S2 marks a significant advancement. These standards provide a consistent and uniform global framework for Environmental, Social, and Governance (ESG) reporting, addressing the evolving needs of investors. The emergence of sustainability-focused accounting necessitates a shift in perspective, viewing sustainability as an opportunity rather than a sacrifice. There are still numerous research opportunities available in this area as well as the need for capacity building among accountants, academics, and industry professionals to effectively implement these new standards.

Abstracts

Sustainability Aspects of Microbial Growth and Its Control in Food System Under Climate Change

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While human actions have been identified as key driver of climate change, microbes also play a significant role. As the most numerous organisms on the Earth, microbes are responsible in decomposition of dead organisms. They both produce and consume the three primary gases that account for global warming: carbon dioxide, methane, and nitrous oxide. Therefore, manipulation in the growth of microbes becomes one of the mitigation strategies toward changing climate. In the food system, controlling microbial growth is closely related to food safety, production, processing, preservation, and storage. Cultivation of beneficial microbes through biomass fermentation inherently supports sustainability due to resource and energy efficiency, waste reduction, and lower carbon footprint. Fermented foods are also sustainable sources of nutrients and health-promoting bioactive compounds. On the other hand, microbial growth control is necessarily carried out against spoilage and pathogenic microbes. The changing climate is linked to the increase of pathogenic microbial contamination of water and food. Chemical methods are widely used for microbial inactivation, but it has significant environmental impacts and health risks. Physical methods can be either sustainable or not, depending on the level of energy consumption. Biological methods are the most environmentally friendly, but less effective to suppress the growth of harmful microbes. The innovative and integrative methods are then emerging to improve the effectiveness of the treatments and promote more sustainability issue. Some of potential technology among them are the nanoparticles, cold plasma, electrochemical, as well as photodynamic inactivation. The details of each current status and prospect are discussed.

Abstracts

Innovative Living Solutions: Smart, Energy-Efficient Homes for Active Seniors and Those with Disabilities

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This research explores the intersection of smart home technology and energy efficiency to create living spaces that support the independence and comfort of older people, including active older people and older people with disabilities. The project will implement and test various smart home systems—such as voice-activated controls, automated lighting, and climate systems—alongside energy-efficient appliances and renewable energy integrations. The goal is to identify the most effective strategies for reducing energy usage while enhancing accessibility and safety, thereby contributing to the development of sustainable, inclusive housing solutions.

Abstracts

Racing Against Time: Preserving Indonesian Biodiversity Amidst Climate Change

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Indonesia's biodiversity is a cornerstone of its national life, ecology, and culture. Located in the Coral Triangle and encompassing the Sunda and Sahul Shelves, Indonesia's unique ecosystems span over 13,000 islands, making it the world's second most biodiverse country. This rich biodiversity supports the nation's welfare, contributes to industrial and pharmaceutical sectors, and underpins cultural diversity, attracting tourists. However, Indonesia's biodiversity faces significant threats from a population of over 275 million, anthropogenic pressures, exploitation, and climate change. Much of this biodiversity remains undocumented and is at risk of extinction, potentially disrupting ecosystems and regional cultures. Comprehensive biodiversity data collection and collaboration across various fields are essential to address these challenges. An authoritative body is needed to manage national biodiversity data, ensuring extensive research across diverse ecosystems. This effort is crucial to preserving Indonesia's biodiversity for future generations.

Abstracts

Entrepreneurial Marketing Dimensions and Business Performance in Women Entrepreneurs in MSME's

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This research explores the interplay between the dimensions of Entrepreneurial Marketing (EM) and Business Performance (BP) among Women Entrepreneurs in Micro, Small, and Medium-sized Enterprises (MSMEs) based on the perspective of Entrepreneurial Marketing Theory. The urgency of this study lies in its significant contribution to the field of Entrepreneurial Marketing Theory by proposing a comprehensive model that examines the relationships between the dimensions of Entrepreneurial Marketing and Business Performance. This research addresses a national research priority with a focus on the themes of Economics and Human Resources Development, specifically within the context of women's knowledge-based entrepreneurship and MSMEs. The primary objective of this study is to empirically investigate the influence of seven key dimensions of Entrepreneurial Marketing, namely Proactiveness, Calculated risk-taking, Innovativeness, Opportunity Focus, Resource leveraging, Customer intensity, and Value creation, on the Business Performance of MSMEs owned by Women Entrepreneurs in Surabaya. This research employs quantitative methods and statistical analysis to provide insights into the dynamics between EM dimensions and BP outcomes, shedding light on the strategies employed by Women Entrepreneurs to enhance their business performance. The findings of this study have practical implications for both women-led MSMEs and the broader entrepreneurial marketing landscape, offering guidance for optimizing marketing strategies and business growth.

Abstracts

A Road to Sustainable Coffee Production: Putting Technologies into Practice

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Coffee production faces significant environmental challenges, particularly from climate change, while paradoxically being a major contributor to greenhouse gas emissions. To address these issues, we outline a roadmap for integrating on-farm and off-farm technologies that can both mitigate the environmental impact of coffee production and enhance its resilience.

On-farm technologies focus on agroforestry as a sustainable model that promotes biodiversity, improves soil health, and reduces the need for chemical inputs. By incorporating shade trees and diverse plant species, agroforestry systems can enhance the quality of coffee beans while simultaneously offering ecosystem services, such as carbon sequestration and habitat preservation. This approach not only aligns with environmental goals but also supports economic and social sustainability by providing farmers with additional income sources from the sale of timber, fruits, and other non-coffee products.

Off-farm technologies emphasize innovations in coffee processing and the development of biorefineries. These technologies can significantly reduce waste and energy consumption while producing high-quality coffee and valuable by-products, such as bioactive food ingredients, biofertilizers, and other bio-based materials. By creating new revenue streams and reducing the carbon footprint of coffee processing, these technologies contribute to the economic and social viability of coffee production and reduce its overall environmental impact.

However, despite the potential benefits, the adoption of these technologies in the coffee industry remains limited. We highlight the need for targeted interventions, policy support, and capacity building to accelerate the adoption of sustainable practices across the coffee value chain, ultimately achieving the three pillars of sustainability: economic, social, and environmental.

Abstracts

Actual-Virtual as Sustainability Opportunity

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This presentation proposes the exploration of actual-virtual spatiality as a foundation for expanding societal spatial practices toward sustainability. It summarizes the author's doctoral research in architecture, focusing on virtual readings as a potential extension of architectural spatial understanding. The study investigates three virtual spatial practices: digital waste community, actual condition-based virtual architectural exhibitions, and nighttime games in the city square. The first study reveals that virtuality has the potential to connect various elements within society. In this context, self-managed waste systems are strengthened by virtual digital social media, enabling engagement across different environmental roles. The second study examines virtual exhibitions as an alternative representation of actual spatial conditions in the field. These exhibitions serve as abstract representations, allowing a broader understanding and exploration of environmental issues and potentials. They are not mere events but rather methods for sharpening environmental issues and solutions. The final study relates to community spatial practices based on virtual experiences. Through the Alun-Alun game, virtuality emerges via simple object systems, universally expanding spatial usage by the public. Ultimately, this presentation emphasizes the role and potential of actual-virtual spatial readings as contributors to societal and environmental sustainability.

Abstracts

Utilization of Lerak Fruit for Production of Adsorbent for Water Treatment

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Indonesia has high biodiversity, one of which is the type of plant. Lerak (soap nuts) are one of the typical plants of tropical regions, including Indonesia. Lerak have fruits that cannot be consumed, thus limiting their utilization. Currently, the utilization of Lerak is still limited to the production of natural soap; in fact, Lerak are rich in other phytochemical content. This phytochemical content can be combined with metal ions for the synthesis of metal-organic networks (MOF) which can be used as adsorbents. This study shows MOF that can be produced by coordinating the phytochemicals of Lerak with copper ions at alkaline pH via a hydrothermal reaction. Solid particles with rhombic morphology are obtained from the combination of Lerak and copper, and these particles have good adsorption capacity for dyes and other metal ions. This study describes other uses of soap nuts to produce economical and environmentally friendly adsorbents.

Abstracts

Photocatalysis for Energy and Environmental Sustainability

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Fossil fuels-based energy sources have threaten living organism's life, specifically because of its negative effects generated from the mining process until the combustion products. The acceleration of global warming can not be avoided and one of the solutions is to replace the fossil fuels energy with cleaner energy, such as hydrogen. Hydrogen that produced using conventional ways still rely on fossil fuels. Therefore, hydrogen production with a green method is encouraged. Photocatalysis with its facile and simplicity, can be applied to generate hydrogen. This method requires nothing but only water and light which is unlimited in the nature. Photocatalysis faces problems such as photocarriers recombination in photocatalyst which might degrade the hydrogen production activity. In this study, our group is developing photocatalyst that absorb visible light and exhibit a surpress photocarriers recombination. $\text{ZnIn}(\text{O},\text{S})$ catalyst could generate a relatively high amount of hydrogen as well as can be used to address the environmental problem simultaneously, such as detoxify antibiotic in water bodies.

Abstracts

Surface Functionalization of Waste Pet Fibers by Nitric Oxide for Antibacterial Activities

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At present, microbes have enormous potential to become a major global public health issue. Escherichia coli is the prominent cause of cholecystitis, urinary tract infection (UTI), and other clinical infections. Meanwhile, Staphylococcus aureus is capable of causing various diseases from minor to severe infections. Due to its outstanding antibacterial properties, nitric oxide (NO) is essential for biological processes. Additionally, enzymatic hydrolysis using polyethylene terephthalate hydrolase (PETase) is one of the promising methods for PET upcycling. Recombinant PETase was used to enzymatically treat waste PET fibers, subsequently NO-conjugated PET fibers can be created from the porous structure of treated PET fibers. In this study, the first strategy for antibacterial applications by NO releasing PETase-hydrolyzed PET fibers was demonstrated. NO-conjugated PET fibers was successfully prepared which exhibits a continuous NO release profile over 12 h. The surface properties of functionalized PET fibers was successfully confirmed by fourier-transform infrared spectroscopy (FTIR), scanning electron microscope (SEM), Griess assay, and zeta potential. The antibacterial test indicated a reduction of E. coli by 90.2% and S. aureus by 71.1% after exposure to the functionalized material. Overall, this novel antibacterial agent may offer great potential applications in the medical field.

Abstracts

The Role of Horizontal Light Pipe and Shading Systems in Improving Daylight Performance in Office Building

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Daylighting is essential for the health and well-being of the building occupants, as well as for reducing energy consumption and enhancing user performance. Using daylight in buildings has become a fundamental strategy for sustainable building design. From an architectural design perspective, office buildings should have a narrow plan to optimize daylighting. However, many office buildings in the Tropics have a deep plan to maximize the rentable floor area and apply full glazing on their façades. This deep plan design restricts daylight levels in the region far from the building perimeter. Additionally, a glazed façade without proper shading can lead to glare problems and uneven distribution of daylight. Glare often leads users to close blinds and rely solely on electric lighting. Using Horizontal Light Pipe (HLP) as an optical daylighting strategy that can collect, transport, and distribute daylight into areas distant from the building perimeter and shading systems such as perforated screens, blinds, and light shelves can decrease excessive illuminance and glare in the area near the building perimeter. The experimental using simulation or physical scaled model was employed in many studies to evaluate the daylight performance of HLP and shading systems. HLP and shading systems in buildings can increase the average daylight level in areas far from the building perimeter, decrease the average daylight level near the building's perimeter, and improve the uniformity of daylight distribution across office space.

Abstracts

Unlocking Climate Model Potential: A Holistic Bias Correction Approach for Solutions to Hydrological Challenges

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Hydrological challenges can be assessed through comprehensive analysis, with dataset selection and source determining result reliability. Traditionally, these analyses have relied on historical data to predict future conditions. However, the non-stationary nature of today's hydrological variables makes traditional methods less relevant. Climate model simulations offer an alternative for simulating non-stationary future hydrological conditions. Although raw climate model simulations provide global access to various climate variable datasets, they exhibit systematic biases that must be addressed for effective use. This work proposes the application of a time-frequency bias correction approach, Wavelet-based Bias Correction (WBC), to rectify these biases in climate model simulations. WBC transforms raw model outputs into valuable tools for hydrological forecasting and water resource management, supporting sustainable water management in a non-stationary climate. The robustness of WBC is tested using several models from two generations of global climate models (GCMs) in the Coupled Model Intercomparison Project phases five and six (CMIP5; CMIP6). WBC is applied to correct global mean sea level and sea-ice extent—two climate variables with opposing trends—as well as the frequency of events and temporal and spatial dependence on air temperature and precipitation. These statistical attributes are crucial for hydrological simulations, such as rainfall-runoff modeling and water-budget analysis in reservoirs. By addressing inherent biases in climate simulations, WBC enhances models' ability to replicate historical observations and provide more accurate data for predicting future hydrological conditions under changing climates.

Abstracts

Climate Change, Infectious Disease Dynamics, and AMR: Mitigation and Adaptation Strategies

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Climate change significantly affects infectious disease dynamics and the proliferation of antimicrobial-resistant (AMR) organisms, with pronounced implications for Southeast Asia. The region's diverse geographic and climatic conditions, including tropical rainforests, coastal areas, and monsoon-driven flooding, influence vector ecology and disease transmission. High population density in urban areas and economic disparities exacerbate vulnerabilities, while variations in precipitation patterns impact water quality, increasing the risk of water-borne diseases such as cholera. Additionally, Southeast Asia's biodiversity and habitat disruptions facilitate the emergence and spread of zoonotic diseases, including Ebola. Rising temperatures heighten the risk of foodborne illnesses and alter vector behavior, influencing the prevalence of diseases such as malaria and dengue fever. Climate change also promotes the spread of AMR organisms by accelerating bacterial growth rates, creating environmental stressors that favor resistant strains, and contaminating water sources with resistant bacteria. Addressing these multifaceted challenges requires region-specific transformative approaches. Enhanced disease surveillance systems, integrated vector control strategies, and improvements in water and sanitation infrastructure are crucial. Strengthening public health frameworks and emphasizing research on climate-health interactions and community-based adaptation measures are essential for building resilience. These strategies ensure robust health systems to effectively mitigate the compounded impacts of climate change and AMR in Southeast Asia.

Abstracts

Revolutionizing Rare Earth Element Recovery from Electronic Waste: Intensified Leaching and Optimized Processes for Cathode Ray Tube Phosphor

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The escalating demand for rare earth elements (REEs) coupled with the growing accumulation of electronic waste necessitates innovative recycling solutions. This research focuses on the recovery of REEs from waste cathode ray tube (CRT) phosphors, a rich but often overlooked source. The objective is to present a comprehensive study on the intensified leaching processes by subcritical water extraction and microwave-assisted leaching tailored for CRT phosphor, optimizing conditions such as acid concentration, temperature and time to maximize REE extraction efficiency. Advanced techniques in process intensification and selective recovery are employed to enhance the purity and yield of the recovered elements. Our findings demonstrate significant improvements in leaching rates of REE using intensified leaching as compared with the conventional hydrometallurgy, and REE subcritical extraction through methodical optimization followed by the selective recovery of REE from the leachate, contributing to the sustainable management of electronic waste and the strategic supply of critical materials. This research not only highlights the technical feasibility of REE recovery from CRT phosphor but also underscores the economic and environmental benefits of adopting such innovative recycling methods.

Abstracts

Empowering Children as Climate Change Agents

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Addressing climate change primarily involves adult responsibilities; however, empowering children as proactive contributors is crucial for fostering resilience and achieving a sustainable future. Providing children with climate-related knowledge, skills, and opportunities can instil enduring sustainable practices and a profound sense of environmental stewardship. Key strategies for empowering youth include integrating climate education into curricula through age-appropriate programs, incorporating practical activities, and promoting critical thinking about environmental issues. Enhancing sustainable habits can embed these practices into children's daily lives. Additional strategies involve boosting resilience through disaster preparedness training, adaptability, and engaging children in community-based climate awareness activities. Inspiring youth action can be facilitated through leadership opportunities and by fostering hope and optimism. The use of technology can further enhance learning and engagement. Practical initiatives, including school-based green projects and involvement in local environmental clubs, offer hands-on experience and platforms for children to express their environmental concerns and ideas. Furthermore, partnerships between schools, local governments, and environmental organizations can provide additional resources and support for these initiatives. By leveraging these approaches, we can cultivate a generation of environmentally conscious individuals equipped to drive collective action and make a significant impact. Ultimately, empowering children in the fight against climate change not only prepares them for future challenges but also instils a lifelong commitment to environmental stewardship, ensuring a more sustainable and resilient world for generations to come.

Abstracts

Climate Change, Deforestation, and the Surge of Parasitic Diseases in Indonesia

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As an archipelago, Indonesia is particularly susceptible to the impacts of climate change. Over the past three decades, the nation has experienced rising surface temperatures, increased precipitation, and intensified wet and dry seasons punctuated by more frequent extreme weather events. Climate change can be caused by several things, one of which is deforestation. Deforestation, driven by factors such as colonization, transmigration, logging, agriculture, mining, hydropower development, and fuelwood collection, is a primary contributor to these climate shifts. Such environmental alterations have profound implications for the dynamics of infectious diseases, posing substantial risks to human, wildlife, and domestic animal health.

Altered land use practices significantly influence the distribution of hosts, parasites, and vectors, thereby reshaping the epidemiological landscape of parasitic diseases in the region. This includes heightened infection rates among definitive and alternative hosts and modified vector behaviors. Notable parasitic diseases affected by tropical forest loss include malaria, cutaneous leishmaniasis, filariasis, soil-transmitted helminthiases, toxoplasmosis, Chagas disease, and schistosomiasis. An interdisciplinary approach is imperative to effectively address the complex interplay between environmental change and parasitic disease burden.

Abstracts

Cellulose-Based Antibacterial Film Prepared from Oil Palm Empty Fruit Bunches (OPEFB) Waste for a Potential Wound Dressing

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Wounds are damage to human skin tissue that humans often experience, whether mild, moderate or severe. In the healing process, wound dressings are needed to avoid the entry of pathogens or other foreign objects that can cause more severe infections. This study developed a wound dressing with antiseptic and antibacterial properties to protect wounds and accelerate wound healing. Cellulose film was proposed as a safe wound dressing layer with good biocompatibility and mechanical properties. As the largest palm oil producer, Indonesia is abundant in oil palm empty fruit bunches (OPEFB) waste which is rich in cellulose content of up to 48.45% but are still a burden on the environment because they have not been utilized properly. In this study, this waste was successfully used as raw material for cellulose film through alkali treatment and acid hydrolysis until the cellulose content reached 86.13%. Herein, silver-based metal-organic frameworks (AgMOF) were incorporated into the cellulose film to enhance the antibacterial properties. This was proven by an increase in the zone of inhibition (ZOI) in the antibacterial test on the growth of *E. coli* and *S. aureus* bacteria.

This waste-based cellulose film has great potential as a wound dressing layer, especially after being combined with AgMOF and antiseptics. In addition, the use of OPEFB also overcomes environmental problems by converting waste into valuable products.

Abstracts

Revolutionising Design: Bamboo's Role in Environment and Sustainable Development

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The escalating environmental crisis and the urgent need for sustainable development have underscored the demand for sustainable materials in the construction industry, which contributes significantly to carbon emissions. Bamboo, with its rapid growth, renewability, and remarkable strength, is emerging as a pivotal resource in the revolution of design and construction. This paper explores the multifaceted roles of bamboo in sustainable development, highlighting its potential to reduce carbon footprints, support biodiversity, and foster growth in local communities through its application in architecture and settlement development. Through case studies, we demonstrate that bamboo is not merely an alternative material but a transformative agent in promoting environmental sustainability. By integrating bamboo into architectural design and human settlements, we can pave the way for a more resilient future for communities, aligning with global goals for sustainable development.

Abstracts

Genomic Analysis and B-Cell Epitope Mapping of Indonesian SARS-CoV-2 Isolates for Peptide Vaccine Design: A Preliminary Study

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The COVID-19 pandemic, driven by SARS-CoV-2, continues to pose significant public health challenges, particularly with the emergence of new variants exhibiting distinct mutations. These mutations raise concerns about increased infectivity, immune evasion, and reduced vaccine efficacy. This preliminary study investigates the genomic characteristics of SARS-CoV-2 isolates from East Java, Indonesia, through a comparative analysis with reference strains and known variants. Key mutations and regions of genetic variation, especially in the spike (S) protein, were identified. This protein is a critical target for neutralizing antibodies. Computational methods were used to predict potential B-cell epitopes within the S protein, which were then evaluated for immunogenicity potential. Several conserved B-cell epitopes with strong potential to induce neutralizing antibodies were identified, highlighting their promise as candidates for a peptide-based vaccine. These findings underscore the importance of targeting region-specific viral variants to enhance vaccine efficacy. In conclusion, this study provides a crucial foundation for the development of a peptide-based vaccine against SARS-CoV-2, with reverse vaccinology demonstrating its effectiveness in swiftly identifying potential vaccine candidates, particularly in response to emerging viral variants.

Abstracts

Barriers and Enablers for Green Entrepreneurs

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Startup costs are high, financial resources are limited, public awareness is low, rules are erratic, and infrastructure is inadequate for Indonesia's green entrepreneurship industry. Public-private partnerships, infrastructure improvements, educational programs, and incentives may be used by the government to overcome these challenges. The substantial initial capital required for green enterprises frequently deters entrepreneurs, a challenge that could be alleviated through governmental financial incentives. Access to financing may be improved through the development of green financial instruments and the promotion of public-private partnerships. Lack of awareness and education about sustainability may hinder the desire for eco-friendly items. Sustainable firms should be offered green credit by financial institutions. A culture of sustainability is promoted through public awareness and education. Inconsistent legislation and insufficient infrastructure impede green activities; therefore, it is crucial to enhance laws and invest in sustainable infrastructure. Robust public-private partnerships can improve access to resources, technology, and finance, mitigating risks and fostering innovation. This approach will enable Indonesia's shift to a sustainable and resilient economy.

Abstracts

Modeling in the Development of Main Transmission Pipe Design: Umbulan Water Supply Project 4000 LPS in Capacity

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The Umbulan water supply system is an Indonesian national strategic project that has the largest capacity and investment scale to date, involving the role of the private sector through a public private partnership scheme. The Umbulan water system will supply water needs for households and industry for 5 districts and cities in East Java which include Pasuruan district, Pasuruan City, Sidoarjo district, Surabaya, and Gresik district. The Umbulan water supply system is about 4,000 LPS in capacity which consists of the main components, i.e., the Umbulan spring raw water source, reservoir and transfer pump system, transmission pipe system, and water distribution network. The investment in the Umbulan water supply system project is more than 2.05 trillion IDR in the initial stage excluding investment costs for the water distribution network system. This study focuses on modeling of the main transmission system where the required pipe length is around 100 km with a nominal diameter of 1000-2000 mm. This modeling is very important in developing the design of the Umbulan transmission system as a tool to see various alternatives application for implementation which in this case requires very significant costs in the project. The model developed can facilitate the optimization of transmission system design including the selection of pipe material types, hydraulic aspects, energy requirement (energy foot print), pipe stress analysis, and specification. This model is very useful in implementing the design of the Umbulan transmission system as a first step before detailed engineering design is carried out.

Abstracts

Strengthening Reduce, Reuse, Recycle (3R) to Preserve Marine Biodiversity in ASEAN

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The escalating influx of plastic into the world's oceans, amounting to around 14 million tonnes annually and constituting 80% of all marine debris, presents a critical threat to global marine ecosystems. Projections indicate that by 2025, plastic could outweigh fish in the ocean if current trends persist, highlighting the urgent need for coordinated action. Southeast Asia's Coral Triangle, a vital hub of marine biodiversity supporting over 120 million people, is disproportionately affected by this crisis, exacerbated by rapid urbanization and consumption growth.

Recognizing the transboundary nature of marine litter, ASEAN has made significant strides through initiatives such as the Bangkok Declaration and the ASEAN Framework of Action on Marine Debris. These efforts culminated in the ASEAN Regional Action Plan, aligning regional strategies to combat marine debris with global frameworks like the recently endorsed UN resolution for a binding international agreement on plastic pollution.

The ASEAN-German cooperation project "Reduce, Reuse, Recycle to Protect the Marine Environment and Coral Reefs" (3RproMar) launched in 2020 aims to bolster ASEAN member states' capacity to reduce land-based plastic waste. Emphasizing collaborative approaches along the plastic value chain, the project bridges policy advice with practical implementation, facilitating knowledge exchange and best practice dissemination across ASEAN.

Through its integrated approach and engagement with ASEAN in the Intergovernmental Negotiating Committee (INC) on plastic pollution, 3RproMar is poised to enhance regional cooperation and support effective participation in international frameworks. By leveraging local pilot projects and policy insights, the project contributes valuable insights to global discussions on marine litter management and underscores the importance of proactive regional engagement in addressing this pressing environmental challenge.

Abstracts

Financial Inclusion for Climate Resilience: Enhancing Adaptive Capacities of Small-Scale Fishers in the Philippines

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The small-scale fishing industry in the Philippines, vital to the nation's economy and food security, faces significant challenges due to overfishing, habitat degradation, and climate change. This study explores the role of financial inclusion in enhancing the socio-economic resilience and adaptive capacities of small-scale fishers, thereby improving the adoption of Marine Protected Areas (MPAs), an ecosystem-based adaptation (EbA) strategy. MPAs combine regulated access to fishing grounds with the establishment of reserves where fishing is restricted, aiming to balance community needs with marine conservation.

Adopting the sustainable livelihoods framework, this study examines the vulnerability context, livelihood assets, and structural barriers influencing livelihood strategies in Siargao. Initial skepticism and enforcement issues were significant hurdles. However, community perceptions evolved positively over time as fish populations within protected areas increased, benefiting surrounding fishing grounds. Despite these benefits, fishers faced exacerbated vulnerabilities due to declining fishing incomes, limited income diversification, and the inability to cope with and recover from economic and climate shocks.

The interplay between resilience and adaptation is highlighted through the example of Typhoon Odette, a rapid-onset climate event that significantly impacted the assets and livelihoods of small-scale fishers. Given their low absorptive capacity, fishers struggled to cope with the immediate shock and rebuild their livelihoods. This vulnerability undermines their ability to adapt to slow-onset climate events as well.

Effective support for fishers is essential to reduce vulnerabilities and address short- and medium-term impacts of MPAs. This includes building capacity at both the individual household and community levels and fostering trust and cooperation between community members and decision-makers.

This study underscores the role of financial services in building the socio-economic resilience of small-scale fishers, enabling them to adapt to ecosystem-based approaches. Financial services such as savings, credit, insurance, and social protection systems can support small-scale fishers to overcome shocks, diversify livelihoods, and transition to new income sources, thereby increasing adoption of sustainable fisheries management.

Abstracts

Leveraging Indigenous Medicinal Plants for Sustainable Health Solutions and Climate Resilience in the Philippines

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The Philippines, with its rich biodiversity and long history of traditional medicine, offers a unique repository of plant-based remedies capable of addressing various health challenges while promoting ecological balance. This review explores the dual potential of indigenous medicinal plants in the Philippines to contribute to sustainable health solutions and enhance climate resilience. In a decade of ethnobotanical studies we conducted, our study encompassed 10 sites across the country's three major island groups, including six indigenous peoples' communities and four rural communities. Overall, we documented 196 native medicinal species belonging to 160 genera and 68 families, used to treat approximately 245 different medical conditions. The family Lamiaceae was the best represented, with 16 species (24%), followed by Moraceae with 11 species (16%) and Apocynaceae with 10 species (15%). Notably, 16% of these species (32) are endemic to the Philippines. Conservation assessments indicate that 96 species (49%) are of least concern, while 90 species (46%) lack data, and five species (3%) are categorized as near threatened on the IUCN Red List. The documented medicinal plants exhibit various growth forms, including trees (70 species, 36%), shrubs (56 species, 29%), and herbs (39 species, 20%). The findings underscore the rich ethnobotanical knowledge within these communities and the potential of native medicinal plants to foster sustainable health solutions and enhance climate resilience.

The integration of indigenous knowledge with modern scientific approaches is highlighted as a pathway to promote sustainable development, improve public health, and strengthen environmental conservation in the Philippines. Lastly, the sustainable cultivation and utilization of these plants will be explored as strategies for climate adaptation and mitigation, contributing to the resilience of local communities against climate change.

Abstracts

e-Nose Technology in Jakarta's Real-time Air Quality Monitoring

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Jakarta Smart City has become an innovation center playing a central role in transforming Jakarta into a Global City. In 2024, Jakarta is one of the most densely populated cities in Asia, with a population more than 11 million inhabitants. Rapid urbanization has occurred, accompanied by numerous challenges, including heavy traffic, high pollution levels, flooding, lack of green space availability, and poor environmental quality. Jakarta Environmental Agency found that the transportation, manufacturing, and energy sectors are the largest emitters polluting Jakarta's air, which include pollutants such as SO₂, NO_x, CO, PM₁₀, PM_{2.5}, black carbon, and non-methane volatile organic compounds. Among Indonesian provinces, Jakarta has the worst Air Quality Index value of 142 AQI, falling into the unhealthy category. The PM_{2.5} concentration in Jakarta is 52.4µg/m³, which is 10.5 times the safety level recommended by the World Health Organization (WHO). Chemical compounds in PM_{2.5} can cause respiratory disorders such as asthma, bronchitis, and emphysema. Other toxic compounds can cause chronic health problems, including arrhythmia, cancer, and reproductive disorders. The transportation sector is the main cause of air pollution in Jakarta. Gasoline and diesel-powered vehicles produce 96.36% of CO emissions and contribute 32%-57% to ambient PM_{2.5} air. Regarding SO₂ emissions, the manufacturing industry sector is the main emitter at 61.9% due to coal use. Not only vehicle emissions but wind movement also affects the increase in air pollution. June and July are when the east monsoon winds blow. The dry air from the east impacts Jakarta's air quality, making it dry and polluted.

Using artificial intelligence and e-Nose technology, an artificial sensing system using a series of wireless sensors can detect the presence of colorless and odorless hazardous compounds and their unique chemical elements. Furthermore, with pattern recognition techniques and artificial neural network algorithms, air quality can not only be measured in real-time but also accurately predicted.

Abstracts

Coral Paleoclimatology: High Resolution Climate Records from Indonesian Porites Corals

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Understanding global warming, which leads to climate change, is important. This requires long-time series climate data. Indonesia is an important region for climate studies and a region of the coral triangle, providing a richness of coral reef biodiversity. In a monthly resolution, Coral can provide information on climate parameters from the present to the past, up to hundreds, even thousands of years. Thus, coral is a promising provider of high-resolution climate data for the location or time period where the measurements are unavailable. Several coral paleoclimatology studies in Indonesia record an increasing frequency of interannual climate phenomena such as ENSO/IOD from medieval to the present; the magnitude of seasonal sea surface temperature (SST) at present is doubled compared to Medieval SST, and there are varying imprints of Indo-Pacific climate mode on SST and SSS over the Indonesian maritime region as it is recorded in corals.

Abstracts

Fossil Records and Isotopic Evidence Reveal the Unseen Ecosystems of Peninsular Thailand During the Late Middle Pleistocene

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Mammalian fossil records from the late middle Pleistocene sites, approximately 200,000 years ago, in Peninsular Thailand have sparked research into how Pleistocene terrestrial ecosystems influenced geographic distribution ranges of early humans and associated faunas across Southeast Asia. In particular, Peninsular Thailand was regarded as an obligatory pathway for early humans and mammals during their dispersal between two different biogeographical subregions, the Indochinese and Sundaic realms. Thus, the understanding of paleoenvironments and paleoclimate in this region is highly relevant.

We aim to describe the Pleistocene mammal fossils recovered from Peninsular Thailand and to analyze the impact of climate on human evolution in the region. The extreme southward distribution of some grassland-related taxa (such as locally extinct spotted hyaenas and Himalayan gorals), which were common in mainland Southeast Asia during the Pleistocene, reflects the habitat continuity from north to south of Thailand. However, the presence of rainforest-associated taxa (e.g., macaques, locally extinct orangutans, and Javan rhinoceroses) in Peninsular Thailand confirms the existence of a closed canopy forest during the late middle Pleistocene.

Stable carbon isotope analyses of mammalian tooth enamel from the cave deposits of Yai Ruak (Krabi) and Tham Phadan (Nakhon Si Thammarat) in Peninsular Thailand suggest that the region was characterized by more open vegetation or a forest-grassland mosaic during the late middle Pleistocene, unlike the present-day landscapes that are mostly covered by rainforests. The expansion of savanna landscapes in Peninsular Thailand was likely driven by the enhanced seasonality of precipitation and/or drier climatic condition during the late middle Pleistocene.

Abstracts

Caulerpa Farming and Wild Harvesting in the Philippines: Addressing Sustainability Challenges of Subsistence Systems in SE Asian Coastal Communities

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The genus *Caulerpa* is a highly valued edible green seaweed, providing food and livelihood in coastal communities across the Philippines and Southeast Asia. This study explores the community perception, awareness levels, production volumes, seasonal variations, market prices, and factors influencing the distribution of *Caulerpa* across the Philippines. The supply chain and value chain maps of *Caulerpa* in the Philippines depicting the various activities and processes between fisherfolk, traders, and consumers are also presented. Improved dissemination of information regarding cultivation methods and greater cooperation from the public sector is essential to foster inclusivity within the *Caulerpa* value chain. This underscores the significance of *Caulerpa* as a crucial food resource in the Philippines, emphasizing the need for conservation to sustain its availability and production. These findings hold broader implications for rural development in coastal areas across Southeast Asia, particularly in addressing sustainability challenges within the seaweed industry and subsistence systems of coastal communities.

Abstracts

Early Detection and Response: Plant Disease Surveillance Amid Climate Shifts

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Early detection of plant pathogens plays a significant role in responding to the impacts of climate change on agriculture. The Plant and Soil Health Center of the University of Idaho aims to meet the needs of research and extension initiatives in southwest Idaho to sustain and improve crop yield. An integral part of the center is the Plant Diagnostic Lab, a hub lab of the National Plant Disease Network which investigates plant pathogens in a variety of crops with a focus on developing novel and predictive diagnostic technologies. This lab provides growers with a variety of diagnostic tests services and advice. In this presentation, we will discuss our work on the following areas: (1) plant disease surveillance and spore trapping network providing a disease forecast to growers and producing information on spore population dynamics that can inform epidemiological models, and (2) the emergence of new diseases due to climate change. Detecting plant pathogens early is a proactive measure for managing plant diseases amid climate shifts.

Abstracts

Data-Driven Models for Assessing the Effectiveness of Urban Heat Island Mitigation Measures in Greater Kuala Lumpur

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This study presents an innovative method that uses machine learning (ML) to address urban heat island (UHI) mitigation planning in Kuala Lumpur. High-resolution multispectral data from Landsat 8 was used to extract several parameters for the years 2013 to 2023. ML models were developed to forecast LST and assess the effects of augmenting green areas and implementing white roofs to decrease LST within the urban area. The research found that LST in Kuala Lumpur rose by a maximum of 2°C between 2013 and 2023. This rise was mainly caused by urban growth and the UHI effect. The investigation revealed that the substitution of natural landscapes with heat-absorbing built-up areas led to elevated temperatures inside the city compared to adjacent rural regions. Out of all the predictive models, the support vector machine model had the highest level of accuracy in forecasting LST, with a Kling-Gupta Efficiency (KGE) score of 0.69 and a geographic bias of $\pm 1.59^{\circ}\text{C}$. According to the RF model, a 25% increase in NDVI might lead to a reduction in LST ranging from -1.39 to -0.11°C. Similarly, a 25% increase in albedo could result in a fall in LST ranging from -1.18 to -0.12°C. The decrease in LST was most pronounced in regions with high LST, indicating that improving albedo and NDVI might significantly alleviate the severe UHI impact. The model can be used to measure the decrease of the UHI effect in specific areas by increasing the amount of green and reflective surfaces in different ratios.

Abstracts

Religion and Climate Change: The Role of Faith-Based Civil Society Organisations in Indonesia

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Religion constitutes an auspicious investigative lens and an archetypal microcosm of culture for reading the various ways of human discernment, deed and mind (which include worldviews, ethical systems, lifestyles, practices, hopes and fears) in its connection to worldwide change, most specifically the climate change. This influence of religion is exceedingly equivocal and it can be either positive or negative. We may also observe the growing inclination within faith-based organisations to aspire to be greener while assessing their traditions for ethical necessities to act against worldwide warming and to revere the natural environment in general (Gerten and Bergmann 2012).

This study will investigate the role that faith-based civil society organisations in Indonesia play in addressing climate change. It will also examine the agency of actors within these faith-based civil society organisations in Indonesia in contributing, reshaping and negotiating climate change discourse and activism. Lastly, it will assess the prospects for faith-based environmentalism in Indonesia. It is hoped that this study will constitute a significant contribution to unravelling the dynamics of faith-based environmentalism in Indonesia, in which Muslims constitute the majority but there is a significant number of populations from other religions.

Abstracts

Combining Metabolomic and Transcriptomic Approaches to Probe Regulated Necrosis in Colorectal Cancer Among Filipino Patients

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Colorectal cancer is the third most diagnosed cancer both in the Philippines and globally, accounting for around 7% of all cancer-related deaths in the country and over 9% worldwide. To reduce the human and economic burden from this disease, extensive research has been directed towards finding efficient and novel therapeutic protocols. In this work, the unique metabolomic and transcriptomic signature/s associated with newly characterized regulated necrotic cell death pathways namely necroptosis, ferroptosis, and pyroptosis, in HT-29 colorectal cancer cell line will be probed using NMR, LC-MS/MS, and next-generation sequencing. A clinical aspect of the project focuses on the same multi-omics experimental analysis in colorectal cancer patient tissue samples. With the use of extensive bioinformatics approaches correlating cell line data, we aim to identify distinctive dysregulated metabolic pathways and gene expression in clinical samples that could provide insights on the sensitivity of these samples towards necroptosis, ferroptosis, and/or pyroptosis. The results of these work could provide a basis on using these regulated necrotic pathways as novel target/s for colorectal cancer therapy, which could eventually be extended to other forms of cancer and even other human pathophysiological conditions.

Abstracts

Microbiome Engineering for Sustainable Climate-Resilient Industrial Plantation Forests

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The steady increase of global wood demand over time requires the development of industrial plantation forests. They are essential in providing raw materials for different forest-based products such as timber, pulp and paper, bioenergy, etc. Plantation forests also contribute to the mitigation of climate change by taking up carbon dioxide from the atmosphere thereby reducing the greenhouse gas effect. Sustainability of plantation forests should, therefore, be viewed from economic, social and ecological perspectives. One challenge to this initiative has been to grow healthy trees, which is greatly affected by both above- and below-ground biotic and abiotic factors including soil microbes. Beneficial soil microbes directly or indirectly improve the availability of certain nutrients required for tree growth, health and survival. On the other hand, pathogens instigate diseases, impairing the forest ecosystem sustainability. Soil microbial diversity plays a crucial role in the sustainability of plantation forest ecosystems. The microbiome, in particular rhizomicrobiome, is key to ecological processes involving biotic and abiotic components. There have been reports that the rhizomicrobiome in plantation forests are less diverse than that in natural forests. In this scenario, microbiome engineering promoting microbial diversity in plantation forests should lead to more climate-resilient ecosystems able to better mitigate the stresses and to more sustainable forest productivity. Utilization of biofertilizers, biostimulants, biocontrol agents, and saprotrophs is one such strategy to maintain microbial diversity for improved soil health and better tree growth. Thus, microbiome engineering is encouraged for sustainable climate-resilient industrial plantation forests.

Abstracts

Veterinary and Human Medical Cases of MRSA in Yogyakarta

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The emergence of methicillin-resistant *Staphylococcus aureus* (MRSA), a highly pathogenic bacteria strain in veterinary and human medical cases, continues to be a significant concern in public health. This study detected MRSA in *S. aureus* isolates from veterinary and human medical cases in Yogyakarta, Indonesia. A total of 28 cases of *S. aureus* infection were examined in this study, consisting of 12 *S. aureus* isolates from dogs, 6 isolates from cats and 10 isolates from humans. All isolates were confirmed as *S. aureus* based on bacterial culture, and the 23S rRNA and *nuc* genes were detected by PCR. All samples were evaluated for antibiotic sensitivity using the Kirby-Bauer disk diffusion method. The sensitivity test results of *S. aureus* isolates from human, dogs and cats showed resistance to tetracycline (30%/75.50%/83.33%), penicillin and ampicillin (100%/75.00%/50.00%), oxacillin (100%/58.33%/66.67%), clindamycin (60%/16.67%/16.67%), erythromycin (100%/16.67%/0%), and gentamicin (40%/16.67%/0%), respectively. Detection of MRSA was carried out by using ORSAB media and genotypic confirmation through amplifying the *mecA* gene as genes encoding methicillin resistance using PCR. The results showed that 25 isolates (83.33%) of *S. aureus* were identified as MRSA strains and 3 dog isolates (16.67%) as methicillin-susceptible *S. aureus* (MSSA) strains. The most common MRSA strains were found in human isolates (100%), cat isolates (100%), and dog isolates (75%). *Staphylococcus aureus* transmission is closely related to interaction between pet owners and companion animals such as dogs and cats. This finding raises the concern of preventing the zoonotic spread of MRSA.

Abstracts

Characteristics and Management of Marginal Uplands Under a Changing Climate in the Philippines

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Marginal uplands are problematic lands resulting from deforestation, shifting cultivation, and unsustainable cultivation practices in upland areas. Soil erosion, which is enhanced by the high rainfall and frequent occurrence of typhoons, is the dominant process that causes soil degradation and marginalization. The typical plant species found in marginal uplands include Cogon (*Imperata cylindrica*), Bugang or Talahib (*Saccharum spontaneum*), Carabao grass (*Paspalum conjugatum*), Hantutuknaw (*Melastoma malabathricum*), and Guava (*Psidium guajava*). The soils in marginal uplands possess various constraints to crop production that vary with the soil genesis and land use history. These include physical constraints, such as shallow depth, compaction, steep slopes, and low infiltration rates, as well as chemical constraints, such as acidic or alkaline pH, low organic matter, and nutrient contents. Agroforestry is widely accepted as the sustainable form of management strategy for marginal uplands. The use of native tree species to rehabilitate denuded lands, called Rainforestation Farming, has been proven effective at various sites throughout the country and has been adopted as part of the national strategy to rehabilitate marginal or degraded uplands. Contour farming, the practice of cultivating sloping lands along lines of consistent elevation, is also a proven strategy to improve soil quality in marginal uplands.

Abstracts

Maximum Temperature and Prevalence of Urolithiasis are Both on the Rise in Thailand

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Urolithiasis is prevalent in tropical countries. Exposure to high ambient temperature is known to increase the risk of urinary stone formation. Global warming is one of the environmental factors that significantly contributes to the urinary stone development. In this study, we examined the trend of an increase in ambient temperature in Thailand using the RCP 4.5 and 8.5 scenarios. We found that the maximum temperature was progressively increased in Thailand. The trend of increased temperature was observed in the prediction models. The heat wave was particularly intensified in the North of Thailand. Five-year retrospective data of urolithiasis patients who admitted at the Buriram hospital, a provincial hospital in the Northeast of Thailand, were collected between 2012 and 2016. The association of temperature and rainfall parameters with urolithiasis onset was evaluated. A total of 2,238 urolithiasis patients were admitted to the Buriram hospital during 2012-2016. The numbers of admitted patients gradually increased by year (404 in 2012, 412 in 2013, 252 in 2014, 473 in 2015 and 497 in 2016). Evidently, the maximum temperature was positively correlated with the number of admitted stone patients. In contrast, the amount of rainfall was negatively correlated with the number of admitted patients.

Conclusions, our data clearly indicate that global warming is happening in Thailand. Increased temperature and decreased rainfall are associated with increased prevalence of urolithiasis. Implementation of effective approaches to decelerate global heating are urgently needed to prevent the onset of urolithiasis, particularly in the regions where the heat is exaggerated.

Abstracts

Chemical Pathways to Sustainability: Educating for a Climate-Resilient Biodiverse Future

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Chemistry is a science of material transformation at the molecular level. The synthesis and analysis at this level would change the matter in a way that would lead to a different nature at the end. Our nature is now being a warm discussion since bigger signs of in-equilibrium are revealed. Global warming, climate change, and pollution are real phenomena experienced by all. The future of biodiversity is in danger too.

Nature as a whole entity from the Hegelian perspective, while wholeness is the main backbone of discussion about its sustainability. Chemistry must contribute its insight to describe the changes and stability from the molecular level. There are products of chemistry which are not compatible with nature, damaging the environment. The pursuit of renewable energy apart from fossil fuels is also a kind of exploiting nature particularly. In this case, chemistry education must be more responsible for what our nature experiences nowadays. Ethics of chemistry proposes more about norms, moral values, and virtues relevant to chemistry according to the general ethics perspective.

Chemistry education must bring out the way of communication, between man and nature. When one puts action on nature, while oneself is a part of nature, the changes affect all. In this case, Levinas introduced the contemporary definition of Other (nature), the wholeness, as the counterpart of Self (man). While nature is explored and exploited, ethics should play its role.

One can learn this part from the early stage of education. Method development is the main task of today's chemistry, providing pathways to building more friendly ecosystems, from the molecular level.

Abstracts

Molecular Biodiscovery with Dothidiomycetes Reveals Fungal Treasure Troves That Produce Biologically Active Natural Products

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Monophyletic Ascomycota is considered to be one of the diverse and distinct assemblage in the fungal kingdom. Though many fungal isolates are known to exhibit interesting bioactivities, there still remain less explored fungal taxa that have high potential to probe lead compounds for drug discovery and development. The ascomycete class Dothideomycetes comprises a highly diverse range of fungi. The number of species in this class discovered to date is steadily rising in number due to increasing studies in microfungi thriving in a variety of aquatic and terrestrial ecological systems. The literature reports rich data showcasing secondary metabolites from Dothideomycetes with profound biological activities. Our molecular bioexplorations on several representative novel fungal taxa under this class such as species of the genera *Sparticola* (Sporormiaceae), *Pseudolophiostoma* (Lophiostomataceae) and *Pseudopalawania* (Palawaniaceae) allowed the isolation, purification, structure, identification and biological assessment of secondary metabolites with novel skeletons and biogenetic origins. Most of the compounds represent structures plausibly stemming from polyketide-derived natural products, for example the highly oxidized spiroketal bisnaphthalenes, phenalenones, tetrahydroxanthones and cytochalasans. Most exhibit cytotoxic, F-actin network disruption, antimicrobial, and lipase and alpha-glucosidase inhibitions. Our results show the importance of exploring novel fungal taxa of the class Dothideomycetes for unearthing natural products with potent biological properties.

Abstracts

Fire Occurrence in Forest Landscape Restoration Projects in the Philippines: Its Potential Contribution to Climate Change

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Fires damage seedlings and established tree plantations, and hence release of carbon into the atmosphere. A total of 30 members People's Organization (PO) involved in implementing the National Greening Program (NGP) in the Visayas region were interviewed to document their activities in protecting plantations from fires. A parallel study was conducted to estimate carbon stocks of Philippines' NGP projects from 2011 to 2023. Growth rate, and diameter and height distribution were considered in the estimation. Trees with age <5 years were excluded as they were presumed to have small stem diameters. Majority (76.7%) of the respondents have NGP projects of <5 years and mostly were <100 hectares. Respondents understand that unmanaged plantations in grasslands are vulnerable to fires during dry months. Fire occurrences are mostly accidental and usually come from swidden farms, charcoal making, and wildlife hunting. Firebreaks and firelines were established by POs on voluntary basis since budget is not part of their contract. Meanwhile, the NGP have accomplished a total of 1,866,777,981 seedlings planted in 2,237,718 ha from 2011 to 2023. Six-year-old seedlings store 1.6 tons C ha⁻¹ or a total of 1,165,429.69 tons C while 12-year-old trees are estimated to have sequestered 26.4 tons C ha⁻¹ or a total of stocks of 19,522,085.41 tons C. If established plantations are damaged by fires, an estimated 6,206,254.53 tons C or more will potentially be lost from burning. Planted trees should be protected from fires as they mitigate the impact of climate change.

Abstracts

Advancing Sustainability through Interdisciplinarity and Transdisciplinarity

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Modern academic universities appeared in Germany and other nations in the late 19th century. Faculties organized around disciplinary specialties invented new inquiry methods and conferred the first modern PhD degrees. Contemporary research universities contribute significant benefits within contemporary societies – despite continuing debates about purpose and utility (Cole, 2009).

Since the 1960s, academic life within universities and research institutions have been reconfigured to pursue complex scientific, technical, humanistic, environmental, and other issues by academics working across disciplines. Funding agencies, both public and private, made attendant changes in their programs (EOPUS, 202). Various terms describe these efforts such as disciplinary, cross-disciplinary, multidisciplinary, interdisciplinary, transdisciplinarity, and convergence (Cheek, Dai, & Li, in press; Cheek & Dai, in press).

Southeast Asia - and Indonesia specifically – should strongly encourage the growth of interdisciplinary and transdisciplinary research and teaching so that serious regional environmental and sustainability challenges are addressed. Success will require reconceptualizing the purposes of the Southeast Asian university, altering government regulations moving higher education faculties' academic preparation trajectory away from strict linear adherence to a single discipline, promoting more cross-disciplinary departments, student majors, and innovations (a distinct challenge facing Indonesia),

and encouraging more interdisciplinary and transdisciplinary funded research projects that span countries, topics, research methods, technologies, and longer timelines (Baptista & Klein, 2022). Simply continuing with the present organization and administration of higher education and current programming available to students at undergraduate and graduate levels will be insufficient to meet the stringent challenges presented by climate change and sustainability (cf. Crow and Defars, 2020).



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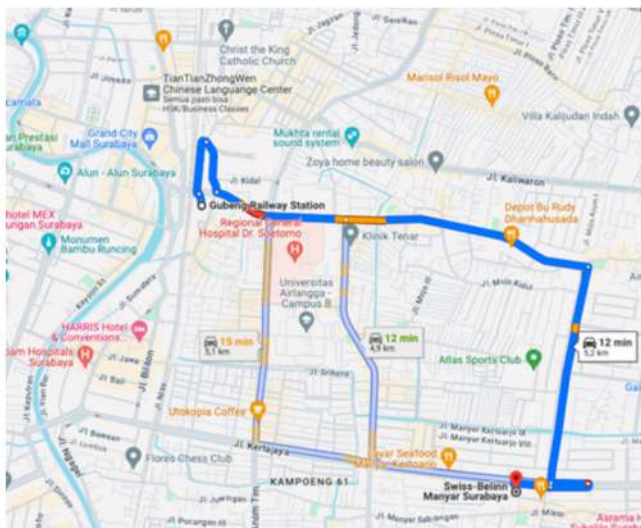


Distances

16.3 km (35 min) from Juanda International Airport of Surabaya
8 km (28 min) to the Old City of Surabaya
5.8 km (12 min) from the Surabaya City Central Square (Alun-Alun)
5.7 km (18 min) to Tunjungan Plaza Shopping Centre
5.3 km (12 min) from Gubeng Central Railway Station of Surabaya
5.0 km (12 min) to Grand City Mall Shopping Centre
1.5 km (21 min walk) to Galaxy Mall 3 Shopping Centre
450 m (6 min walk) to Layar Seafood Manyar Restaurant

Recommended Taxi Transportation

- We suggest you use a Blue Bird taxi from the airport to the hotel venue with an estimated cost around IDR 100,000 to IDR 150,000
- You can also use online taxi (Grab or Gojek)



General Guidelines

Reimbursement for Humboldtian

The costs of flight tickets and transportation will be reimbursed up to a maximum ceiling limit provided in Indonesian Rupiah: Indonesia IDR 2,040,000 (EUR 120), Malaysia IDR 4,080,000 (EUR 240), the Philippines IDR 4,760,000 (EUR 280), Thailand IDR 4,760,000 (EUR 280), and Vietnam IDR 5,440,000 (EUR 320).

To ensure a smooth reimbursement process, please submit the following documents (reimbursement is only given in cash, and **not bank transfer**):

- (1) PDF copy of your ticket indicating the price.
- (2) PDF copy of your ID card/passport
- (3) Your boarding pass for the departure to Surabaya (to be submitted at the reimbursement desk at the venue)

To submit your necessary documents, kindly use the following Google Form link:
<https://forms.gle/qvSNueQV2BkYSJBj9>

Duration of Talk and Discussion

- **Standard Keynote:** Each keynote session includes a 20-minute presentation followed by a 10-minute discussion.
- **Invited Talks:** Each invited talk consists of a 15-minute presentation with a subsequent 10-minute discussion.
- **Junior Researchers Session:** Each presenter is allotted 10 minutes for their presentation and an additional 10 minutes for discussion.

Academic Poster

While there is flexibility in the design of the academic poster, it is essential that the poster size is standardized to A1 Portrait.



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