



ASIA FOR EARTH-2022

“ 8th GoGreen Summit ”
 “ 3rd International Conference on Climate Change ”
 “ 2nd International Conference on Education, Management and Social Science “

01st–03rd June, 2022
 Bali, Indonesia

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Preface

This book reports the Proceedings of the “**Asia for Earth**” held on 1st to 3rd June 2022, Bali, Indonesia (Hybrid Event) organized by **International Society of Environmental Relationship and Sustainability (ISERS)** in association with 10+ universities from Asia.

Asia for Earth Includes include international conference series,

Day 1: 8th GoGreen Summit with the theme **GoGreen: Shape the Future Green Planet.**

Day 2: 3rd International Conference on Climate Change with the theme **Advancing Mitigation and Adaptation Actions for Climate Change.**

Day 3: 2nd International Conference on Education, Management and Social Science (ICEDUMAS) with the theme **Social Atmosphere and Their Use in the Understanding of Environmental Concerns.**

The publishing department has received more than 350 abstracts. After an initial review of the submitted abstracts, 229 papers were presented at the conference and were accepted for publication in the Conference Proceedings. The topics that are covered in the conference include Environmental Pollution, Ecology, Sustainable development, Agriculture, Waste Management Climate Change Adaptation and Mitigation, Global Warming, Environmental Toxicology, Biodiversity, Advanced Biofuels, Renewal Energy Impact on Climate Change, Green Energy, Global Environmental Health, Education, Management and Social Sciences etc. We would like to thank all the participants for their contributions to the conference and the proceedings.

Reviewing papers of the **Asia for Earth** was a challenging process that relies on the good will of those people involved in the field. We invited more than 15 researchers from related fields to review papers for the presentation and the publication in the Asia for Earth Proceeding. We would like to thank all the reviewers for their time and effort in reviewing the documents.

Finally, we would like to thank all the proceeding team members who with much dedication have given their constant support and priceless time to bring out the proceedings in a grand and successful manner. I am sure **Asia for Earth** will be a credit to a large group of people, and each one of us should be proud of its successful outcome.

Asia for Earth-2022

Message from BioLEAGUES Director's Desk...



A. Siddh Kumar Chhajjer

Director, BioLEAGUES Worldwide

On behalf of **BioLEAGUES Worldwide**, I am delighted to welcome all the delegates and participants around the globe to the **"Asia for Earth"** which is going to be held on **1st to 3rd June 2022**

This conference includes International Conference series **8th GoGreen Summit, 3rd International Conference on Climate Change, 2nd International Conference on Education Management and Social Science.**

It will be a great pleasure to join with Doctorates, Research Scholars, Industrialist and Academicians all around the globe. You are invited to be stimulated and enriched by the latest innovations in all the aspects of Environmental Science while delving into presentations surrounding transformative advances provided by a variety of disciplines.

I congratulate the Chairperson, Organizing Secretary, Committee Members, coordinator BioLEAGUES and all the people involved for their efforts in organizing the Asia for Earth and successfully conducting the International Conference and wish all the delegates and participants a very pleasant conference.

A. Siddh Kumar Chhajjer
A. Siddh Kumar Chhajjer



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Message from BioLEAGUES CEO's Desk...



Mr. Rudra Bhanu Satpathy

CEO, BioLEAGUES Worldwide

It is indeed a privilege to acknowledge and thank all the supporters and organizers of the **"Asia for Earth"**, who contributed greatly to organize the conference successfully.

I would like to acknowledge and thank the Chief Guest for his/her valuable contribution in the **Asia for Earth**.

My special thanks to all our Special Guests who so graciously accepted our invitation to participate in the conference. I also wish to acknowledge and thank the sponsors of the conference whose financial support was extremely grateful.

I would like to specially thank our Advisory Committee Members from various Organization whose continuous support have helped us plan and execute the conference successfully.

I am highly indebted to the contribution given by all the Scientists, Industrialist, Doctorates, Research Scholars, Academicians, and students to the conference.



Mr. Rudra Bhanu Satpathy



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Welcome Message- Dr. Bambang



Dr. Ir. Bambang Sugiyono Agus Purwono, M.Sc
General Secretary ISERS – Indonesia Section



Good morning Ladies and Gentlemen, it is a big pleasure to me that International Society of Environmental Relationship and Sustainability (ISERS) organizing a three-days International Conference is Asia for Earth 2022 in Bali, Indonesia (Hybrid Event).

Brings the biggest joy, pride and fulfillment and welcome all the delegates, speakers, and participants of this international conference will be held at Denpasar, Bali, Indonesia on June 1st to 3rd, 2022.

The Schedule of the Conference series Asia for Earth 2022 is:

1. 8th GoGreen Summit - 1st June 2022
2. 3rd International Conference on Climate Change - 2nd June 2022
3. 2nd International Conference on Education, Management and Social Science (ICEDUMAS) for environment - 3rd June 2022

ISERS has signed the Memorandum of Understanding with Xiamen University Malaysia, Universities like Philippine Normal University-Philippines, Universitas Islam Negeri Maulana Malik Ibrahim, Malang-Indonesia, National Institute of Technology Malang, Indonesia, Universitas Indo Global Mandiri, Indonesia, and Sister Nivedita University-India.

I would like to invite the Indonesia president of universities, researchers, lecturers, observers, and company that concern about GoGreen summit and climate change to participate in this International conference.

ISERS will give the appreciation to top 3 people will be awarded **Planet leader Award 2021** for their extraordinary contribution towards environment will be receiving the awards.

ISERS have organized several international Conferences and collaborated with top universities form Asia Pacific, Middle East, India, USA and Eurasian countries.

I am certain that this international conference will prove to be a healthy point of academic interaction and so the students and faculty members as well will not only give but also benefit and draw inspiration also networking from the talks and presentations from the distinguished guests.

I would like to express my deep appreciation to Honorable chief guest, keynote speakers, invited speakers, and participants for the efforts to present the ideas and methods in a lively and accessible way.

Finally, but not least, I would like to thank those who have responded to our call to take part and to contribute to this conference. We have a big hope that all of you enjoy, and get more knowledge and fruitful experience through the conference.



Dr. Ir. Bambang Sugiyono Agus Purwono

Welcome Message- Dr. Manoshi Das



Dr. Manoshi Das

Co-Founder, GFSRD, India



There is no doubt that Human beings are the best creation of the earth, but it is also fact that human being is only creature that damages earth. We all together made a maximum damage of mother earth. As a result, we are facing challenges of climate change. As it is a serious issue, and everyone is affected; everyone in this planet is expected to take responsibilities to overcome this.

We are happy to be one of the partners for the **Asia for Earth conference, 2022** organized by BioLEAGUES Worldwide and the International Society of Environmental Relationship and Sustainability in association with five renowned universities of India, Indonesia and Malaysia.

On behalf of the Global Forum for Sustainable Rural Development (GFSRD), I would like to congratulate everyone who made this conference series possible and for providing us an opportunity to be part of the Nobel cause.

We are quite confidence that the outcome of the seminar series will be immense beneficials for the academicians, research and global policy makers.

Best Wishes.

Dr. Manoshi Das

Welcome Message - Dr. Mohamad Faiz Bin Mohd Amin



UNIVERSITI
MALAYSIA
KELANTAN

Fakulti Sains Bumi
Faculty of Earth Science



WELCOME MESSAGE

Assalamu Alaikum Wr Wb and Goodday everyone

It is great privilege to welcome all keynote speakers, presenters, participants, and sponsors from all over the world to the 8th Go Green Summit which to be held on 1-3 June 2022 in Bali, Indonesia (Hybrid mode).

8th Go Green Summit in collaboration with ISERS, Bio LEAGUES and Universiti Malaysia Kelantan (UMK) has strengthened the event to be a premier gathering of all renowned researchers, eminent scientist, academicians, and NGO's from different countries to share their innovative researches in all aspects of environment science. I strongly believe all the sharing and discussion from eminent speakers will give a new perspective and new strategies on all aspects of environmental sciences in our daily life.

Theme of 8th Go Green Summit is " **Go Green: Shape the Future Green Planet** ". As stated within the theme, to spread awareness and encourage the fellow earth mates to be part of this global movement in making the planet "Earth" a better place to live tomorrow.

Now it is the time for all of us to be more innovative rather than peripheral and conventional. The 8th Go Green Summit is a platform to share resources and solutions within a regional economy and connect people working towards similar goals. Our main focus is on Climate Change and Global warming issues now a days, so all climate activists, environmentalists, scientists, geologists, ecologists, academicians, and scholars from across the globe in the field of climate change & global warming to come together and discuss the latest research & innovations in science & technology to combat the earth from diminishing. So, I encourage all participants of this summit to do best to achieve the set goal of this conference.

Lastly but not least, I would like to take this opportunity to thank all committee for spending their valuable time to bring the 8th Go Green Summit 2022 to great success. My sincere thanks goes to supporters and sponsors. We are also happy to collaborate with ISERS and Bioleague in making 8th Go Green summit a grand success. I look forward to receive you at 8th Go Green Summit 2022.

With Best Wishes

Assoc. Prof. Ts. Dr. Mohamad Faiz Bin Mohd Amin
Co-Chair Go Green Summit 2022
Associate Professor and Dean,
Faculty of Earth Science, Universiti Malaysia Kelantan, Malaysia

Welcome Message – Dr. Atreyi Ghosh



Dr Atreyi Ghosh

Assistant Professor and Researcher,

Department of Microbiology and Biotechnology, Sister Nivedita University, India



Dear Students, Faculties and Friends

I am pleased to know that Sister Nivedita University, India is collaborating with International Society of Environmental Relationship and Sustainability (ISERS) for organizing three-days International Conference is Asia for Earth 2022 in Bali, Indonesia (Hybrid Event).

On behalf of Sister Nivedita University, India, I am delighted to welcome all the delegates and participants around the globe for the "Asia for earth 2022" which is going to be held on 1st -3rd June 2022.

The Schedule of the Conference series Asia for Earth 2022 is:

1. 8th GoGreen Summit-1st June, 2022
2. 3rd International Conference on Climate Change- 2nd June, 2022
3. 2nd International Conference on Education, Management and Social Science (ICEDUMAS) for environment - 3rd June, 2022

This conference will give opportunities to UG and PG students, faculty members, Research scholars, industrialists, and researchers alike to take an active part and present research papers.

Our focus is on sustainable systems and practices, which we believe are foundational to the success of individual organizations as well as our cities, states, nations, and all over the world. So, I encourage all participants of this summit to do best to achieve the set goal of this conference.

I would like to express my deep appreciation to Honourable chief guest, keynote speakers, invited speakers, and participants for the efforts to present the ideas and methods in a lively and accessible way. Let us encourage the fellow earth mates to be part of this global movement in making the Planet earth a better place to live".

Finally, but not least, I would like to thank those who have responded to our call to take part and to contribute to this conference. We have a big hope that all of you enjoy, and get more knowledge and fruitful experience through the conference.

Dr Atreyi Ghosh

Welcome Message - Bert Jazmin Tuga



REPUBLIKA NG PILIPINAS
Republic of the Philippines
PAMANTASANG NORMAL NG PILIPINAS VISAYAS
Philippine Normal University Visayas
ANG PAMBANSANG SENTRO SA EDUKASYONG PANGGURO
The National Center for Teacher Education
LUNGSOD NG CADIZ
City of Cadiz



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Bert Jazmin Tuga, PhD
President
Philippine Normal University, Philippines

Message for the 8th GoGreen Summit

We are in a geological period where human activity has been the dominant influence on climate and the environment. As humans, we enjoy changing and transforming our surroundings to suit our needs and desires because that is part of our human nature: to live and interact with the environment.

However, the frequency and severity of our tendency to tear down forests in order to build skyscrapers, cities, and roads, plus our inclination to burn fossil fuels, throw garbage into our rivers and oceans, practices that we have grown accustomed to, has now reached a state where they become unsustainable.

But this is not to say that human activity is only designed to destroy the planet. While it is a fact that we are the dominant contributor to the Anthropocene, we also have the potential to help heal the planet by focusing our attention on using renewable sources of energy and technologies that will greatly decrease our carbon footprint and implement mechanisms to make our activities more sustainable and eco-friendlier.

The Philippine Normal University Visayas, the Environment and Green Technology Education Hub (EGTEH), is at the forefront of the University's goals to achieve a more sustainable future through education and teacher training. Since being designated as EGTEH, PNU Visayas has conducted several projects and initiatives to integrate its instruction, research, extension, and production programs with UNESCO's vision of Education for Sustainable Development (ESD). The integration of the ESD in PNU's culture and practices is just the first step toward crafting a teacher education curriculum that will pave the way for a more sustainable future.

PNU, as the National Center for Teacher Education, is serious in its role in shaping the future to be enjoyed by humanity. For this reason, we are grateful to be part of the 8th GoGreen Summit organized by BioLEAGUES Worldwide and the International Society of Environmental Relationship and Sustainability. We are confident and optimistic that through this summit, our institutions will be able to facilitate an exchange of insights and practices regarding environmental sustainability and proliferate these ideas to our stakeholders.

On behalf of the Philippine Normal University System, I would like to congratulate everyone who made this summit possible and for providing us with the opportunity to share our experiences and expertise.

Together, we shall build a sustainable future.

Bert Jazmin Tuga

Welcome Message - Dr Iman Farshchi



MAHSA
UNIVERSITY
BE MORE



Dr Iman Farshchi

Dean, Faculty of Engineering & Built Environment,
MAHSA University, Malaysia

On behalf of Faculty of Engineering and Built Environment, MAHSA University, it is my great pleasure that we can collaborate with International Society for Environment Relationships and Sustainability (ISERS) and other esteemed research institutes around the world to organize **Asia for Earth 2022** at Bali, Indonesia.

Organizing such events which address ecological problems is crucial. As you know nowadays we are in the critical stage due to the day to day human activities, our natural resources which are really critical climatic change. We have lots of pollution and disaster happens to our natural resources. So as an academician and academic institution, we must work together to contribute and offer innovative solutions to overcome these issues. We have a great roles and responsibilities to come out with new ideas, technologies and sustainable solutions to make sure to preserve our earth for our future generations. This preventive measures makes our children to get advantage of all resources nowadays available for us.

Meanwhile, MAHSA University also playing an important role particularly to bring out with new initiatives and new projects such as Eco-Village which involves with the green technologies and also the application of the sustainable and new technologies related to IR 4.0.

I am very glad and I am really honored that we as MAHSA University can collaborate with International societies for environmental relationship and sustainability to join the coming event June 2022 for Asia for Earth 2022 with GoGreen summit. I really hope that this great collaboration together with various potential Universities, Research centers and Higher educational institution of Asia is to gather all great scientists around the world for knowledge sharing opportunities. Asia for earth is a forum that make sure that we come out with new ideas to make sure we keep our planet for future generation.

Thank you so much and I am really glad to this opportunity and hope to see you all soon at ASIA for earth 2022.

Dr Iman Farshchi

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Welcome Message - Dr. Marzuki Alie



Dr. Marzuki Alie

Rector, Universitas Indo Global Mandiri (UIGM),
Indonesia

Global climate change has already had obvious effects on the environment. Ice on rivers and lakes is breaking up earlier, glaciers have shrunk, plant and animal ranges have shifted, and trees are flowering sooner. To preserve a liveable climate, greenhouse-gas emissions must be reduced to net 0 by 2050. By changing our habits, we can tackle the climate emergency & build a sustainable world. In its January 2020 McKinsey global report, *Climate risk and response: Physical hazards and socioeconomic impacts*, they found that physical risk from climate change is already present and growing around the world. In this report, they look more closely at Asia. Asia is well positioned to address these challenges and capture the opportunities that come from managing climate risk effectively. Infrastructure and urban areas are still being built out in many parts of Asia, which gives the region a chance to ensure that what goes up is more resilient and better able to withstand heightened risk. At the same time, key economies in the region, such as China and Japan, are leading the world in technologies, from electric vehicles to renewable energy, that are necessary to adapt to and mitigate climate change. Universitas Indo Global Mandiri (UIGM) has anticipated earlier this global climate change by, among others, is rising awareness to staff and students alike. In fact, UIGM has launched program on the design and manufacture of carbon cleaner device, green energy initiatives, etc. Co-hosting 8th GoGreen Summit with the theme: *GoGreen: Shape the Future of Green Planet* from 1 – 3 June 2022 in Bali, Indonesia is a gesture of our commitment on anticipation of global climate change. Allow me to sincerely thank BioLEAGUES and ISERS as the host of the GoGreen Summit for the invitation to co-host this monumental event. Also, to other institutions of higher learning that involved in co-hosting this important event, let us make this planet sustained for our future generation. Have a nice and fruitful conference, do the networking, and enjoy the beautiful scenes in Bali, if you manage to come physically to attend the conference

Dr. Marzuki Alie

Welcome Message - Ghozalfan Basarah



Ghozalfan Basarah

Director, PT. Gerlink Utama Mandiri
West Java, Indonesia



Gerlink Energy take this opportunity and great pride in welcoming all the attendees of the Asia for Earth international event at Bali, Indonesia from 1st to 3rd June 2022.

The meeting is packed with workshops, symposiums and plenary sessions with main focus on thought-provoking discussions and peer-led networking. The Conference would thus represent a unique opportunity for global networking with key opinion leaders and service providers. Participants will be also able to discuss challenges encountered and solutions adopted especially in the field of Waste Management, environmental science and so on

Gerlink Energy Produces Various Eco-friendly powerplant devices. Inspired from nature built to keep it safe and clean. The products Gerlink Energy offers are domestic and non-B3 medical waste treatment systems using the hydrothermal method. The hydrothermal method is a process of reducing organic and non-organic waste (except metal and glass) simultaneously with the help of water and high heat. The results of this system produce hydro charcoal and tar liquid which can be used as plant fertilizers.

We do hope that you will enjoy the Conference and that your interaction with your colleagues will stimulate a creative exchange of ideas and will be personally rewarding!

Ghozalfan Basarah

Welcome Message- Dr. Isidora Radulov



Dr. Isidora Radulov

Vice-Rector for Research, Innovation, and Technology Transfer
Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara



The climate is changing and the whole planet is vulnerable to consequences. Many countries in the world are experiencing higher temperatures, changing hydrology and other extreme events - droughts, floods, heat waves, storms, and forest fires. The concentration of greenhouse gases already released into the atmosphere guarantees that similar or more significant changes will take place in the future - even if no more CO₂ is emitted worldwide.

It is possible that mismanagement of the environment is the most dangerous relic of the past, greatly increasing the world's vulnerability even to modest global warming.

More and outstanding knowledge is needed to meet these challenges head-on. So, in order to overcome the current environmental challenges, it is the scientist's duty that through research to become leaders of innovation and change in science and technology.

We are happy to be one of the partners for the **8th GoGreen Summit, 2022** organized by BioLEAGUES Worldwide and the International Society of Environmental Relationship and Sustainability in association with other prestigious universities from Asia.

On behalf of the **Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara** we would like to congratulate everyone who made this conference possible.

I am sure you will have fruitful and rewarding exchanges during the summit days. I wish you every success with this important conference and I look forward to seeing you again next year!

Dr. Isidora Radulov



Asia for
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Asia for Earth-2022

01st-03rd June, 2022-Bali, Indonesia

Abstracts of Keynote Speakers



THE SPATIAL CONCEPT OF CLIMATE CHANGE RESILIENT KAMPUNG INTLOGOMAS KAMPUNG, MALANG CITY

**Ibnu Sasongko, Mohamad Reza, Widianto Hari Subagiyo dan Ardyanto M. Gai
National Institute of Technology, Bendungan Sigura-gura Street No.2, Malang, Indonesia**

Abstract:

The development of settlements in Indonesia is characterized by the development of urban Kampung, that are increasingly widespread are usually densely populated, packed with irregular buildings, small lots and have limited infrastructure. Other cities also have Kampung, although in less livable conditions, some of them in the form of slums and plethora of informal housing. Throughout the development history, various efforts to improve urban Kampung turned out successful, marked by the increase of quality of life in said Kampung, some of them manages to go green and sustainable, or even developed into more productive Kampung To achieve better life in these Kampung, local communities' role in participating in the betterment of their respective Kampung become increasingly important, with the added benefit of increased social activities and added economic values.

Nowadays world at large is experiencing global warming; largely caused by excessive emission of greenhouse gases that result in climate change which impacts the world at large whether slowly or rapidly, often in disastrous manners. While big, all-encompassing efforts may seem daunting, efforts to overcome this can be started on small scales, namely at the Kampung level. Various Kampung improvement efforts such as greening, recycling, reducing artificial material usage, and other such efforts could be packaged as a whole into a Kampung setting, through the concept of spatial planning optimized for climate change. One of the Kampung that began to implement environmentally conscious improvement efforts, spatial arrangement, and productive greening was Tlogomas Kampung in Malang city.

Qualitative study, Likert, scale and integrated spatial arrangement systems are used in this study. This study aims to develop the spatial concept of the resilient Kampung on small scale that could be utilized as a model to be further developed into a wider scale resilient settlements in urban areas.

Keywords: Resilient Kampung, Climate Change and Spatial Concepts

Biography:

Ibnu Sasongko was born in Malang - East Java, on 08th September 1959. Home address: Jl Bendungan Bening 56 Malang. He is a Lecturer in Urban and Regional Planning Department, National Institute of Technology – Malang, since 1988. Lecturer of: Housing, Spatial Planning Based on Culture, site Planning. Last education back ground: Doctoral Degree, in Architecture, Sepuluh Nopember Institute of Technology, 2006. Organization of Profesionis Indonesian Association of Planners, with the level Leading Expert. He is a profesional planner, Active in Local-National -International Seminar, Speaker