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NEWS, NOTES, & EVENTS

The role of the academic community in combating wildlife trafficking

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This latest edition of InJAST (Volume 3, Number 2) reflects the diverse nature of environmental management to tackle overexploitation of our natural resources. Our guest editorial highlights the methodology adopted by UNEP to assess the status of natural resources, and other papers focus on topics ranging from seawater quality and mangrove restoration to forest plant tissue culture research for the purpose of saving endangered species. In addition, both the last edition of InJAST and this current one contain articles on the illegal and unsustainable wildlife trade in Indonesia. As the long delayed UN Biodiversity Conference (COP 15) finally draws near – on 7-19 December 2022 - in Montreal, Canada, we want to explore this issue of poaching of endangered species for the wildlife trade here.

By its very nature of being illegal, precise facts and figures are difficult to come by. However, estimates from expert wildlife trade monitoring networks and law enforcement agencies around the world indicate that illegal wildlife trafficking is, shockingly, the fourth most profitable organised criminal activity in the world, after the trafficking of weapons, narcotics and people. . Every year, the losses due to illegal wildlife trade in the world may reach US$ 23 billion and involve the trade of thousands of endangered species of flora and fauna. In Indonesia, the value of the illegal trade in wildlife reaches more than US one million per year. Apart from being a source country, Indonesia also has a significantly growing home market for illegally traded wildlife as pets, skins, and medicines.

The illegal wildlife trade uses various modus operandi, directed by organized criminal groups and carried out by a variety of perpetrators on the ground, often very poor locals from rural communities. Whilst this trading activity is a transnational crime, that is, across national and continental borders, and may use the same supply routes usually associated with other crimes such as weapons, drugs and people trafficking, it is usually only the poachers on the ground who are caught and prosecuted.

In the last three years in Indonesia, some 187 cases have been reported of crimes against protected wildlife, with confiscation evidence of about 13,000 live animals, in addition to more than 10,200 dried animal body destined for "medicinal" purposes. . The losses borne by the government, however, are in no way compensated for by the penalties imposed on convicted perpetrators of wildlife crimes in Indonesia. In many cases, these local perpetrators of illegal trade in protected wildlife are only sentenced to eight months to one year, with a fine of only US$ 150 - 700[1]. Middlemen, international criminals, and the purchasers usually go unchecked.

Whilst we might believe the international face of wildlife trafficking is too complex and embedded for us to improve things, all sectors of society, particularly in Indonesia, can play a role according to their duties and functions, to combat or minimize the illegal trade of protected wildlife. Governments can carry out a supervisory function to suppress and/or control the trade in endangered species, both preventively and repressively. Preventive supervision can be in the form of awareness or outreach to the public regarding the importance of efforts to conserve protected wildlife. Repressive efforts can be carried out by the government through strict law enforcement against the perpetrators of the crime of wildlife trafficking.

The public can report to the relevant government agencies or police if they find any ongoing illegal protected wildlife trade, whether they are found in offline or online transactions. They can also ensure that any legally allowed live pet animals are purchased from fully licensed suppliers. To meet the legal market demands for live pet animals, the public can also make an effort to buy such animals that have been bred in captivity and from breeders who are fully abiding by and highlighting the legal requirements for such activities. Environmental watchdog organizations or NGOs can support the efforts of the government and forest-margin communities through joint activities in carrying out protection, as well as other real actions on the ground in the context of conserving protected wildlife.

Academics in Indonesia are obliged to carry out the "Tridarma Perguruan Tinggi", three pillars that cover the activities of teaching, research, and community service. In accordance with those duties and functions, we would like to encourage more Indonesian academics to help reduce the illegal wildlife trade through all three pillars:

1. in teaching activities, lecturers of relevant subjects such as ecology, law, ethics, health, and social science should deliver materials that can provide students with an understanding of the problems that exist, as well as those that will be caused by the illegal wildlife trade.

[1]https://kumparan.com/pandangan-jogja/perdagangan-satwa-liar-dunia-nilainya-rp-341-t-setahun-indonesia-rp-15-t-1yKmbVHqn5z/full

2. as researchers, academics must also be encouraged to conduct relevant research, especially in developing methodologies for effective monitoring, and especially by utilizing technology that can be applied by law enforcers, so that cases of crimes against wildlife can be detected much more rapidly and effectively. Just as importantly, however, two fields of research need emphasizing. The contribution of universities can also be in the form of academic studies that will inform and encourage government policies that are effective, efficient, and in favor of (a) the conservation of endangered wildlife and (b) rural community development.
3. by conducting public awareness activities, which can be aligned with PKM (Community Service), KKN (Real Work of Lectures), or MBKM (Freedom Learns, Freedom Campus).

In summary, universities and their researchers have a significant role in the fight against the illegal and unsustainable wildlife trade, in monitoring wildlife populations and poaching activity, and in changing people's behavior, so that the activities of hunting, trading, or owning protected wildlife become unattractive and unacceptable to all communities. This role draws on disciplines across the sciences, social sciences, arts, and humanities, encouraging those interdisciplinary behaviours so important for effective environmental management that delivers for the long-term health and well-being of people.

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NOTES

Megafauna extinctions produce idiosyncratic Anthropocene assemblage

The "trophic downgrading of planet Earth" refers to the systematic decline of the world's largest vertebrates. However, our understanding of why megafauna extinction risk varies through time and the importance of site- or species-specific factors remain unclear. Here, we unravel the unexpected variability in remaining terrestrial megafauna assemblages across 10 Southeast Asian tropical forests. Consistent with global trends, every landscape experienced Holocene and/or Anthropocene megafauna extirpations, and the four most disturbed landscapes experienced 2.5 times more extirpations than the six least disturbed landscapes. However, there were no consistent size- or guild-related trends, no two tropical forests had identical assemblages, and the abundance of four species showed positive relationships with forest degradation and humans. Our results suggest that the region's megafauna assemblages are the product of a convoluted geoclimatic legacy interacting with modern disturbances and that some megafauna may persist in degraded tropical forests near settlements with sufficient poaching controls.

Amir, Zachary et al. (**2022**). Megafauna extinctions produce idiosyncratic Anthropocene assemblage. *Science Advances*, 8, eabq2307
https://www.science.org/doi/10.1126/sciadv.abq2307

Restoring the orangutan in a Whole- or Half-Earth context

Various global-scale proposals exist to reduce the loss of biological diversity. These include the Half-Earth and Whole-Earth visions that respectively seek to set aside half the planet for wildlife conservation or to diversify conservation practices fundamentally and change the economic systems that determine environmental harm. Here we assess these visions in the specific context of Bornean orangutans *Pongo pygmaeus* and their conservation. Using an expert-led process we explored three scenarios over a 10-year time frame: continuation of Current Conditions, a Half-Earth approach and a Whole-Earth approach. In addition, we examined a 100-year population recovery scenario assuming 0% offtake of Bornean orangutans. Current Conditions were predicted to result in a population c. 73% of its current size by 2032. Half-Earth was judged comparatively easy to achieve and predicted to result in an orangutan population of c. 87% of its current size by 2032. Whole-Earth was anticipated to lead to greater forest loss and ape killing, resulting in a prediction of c. 44% of the current orangutan population for 2032. Finally, under the recovery scenario, populations could be c. 148% of their current size by 2122. Although we acknowledge uncertainties in all of these predictions, we conclude that the Half-Earth and Whole-Earth visions operate along different timelines, with the implementation of Whole-Earth requiring too much

time to benefit orangutans. None of the theorized proposals provided a complete solution, so drawing elements from each will be required. We provide recommendations for equitable outcomes.

Meijaard, Erik et al. (**2022**). Restoring the orangutan in a Whole- or Half-Earth context. *Oryx*, 56(5): 1-12. https://www.cambridge.org/core/journals/oryx/article/restoring-the-orangutan-in-a-whole-or-halfearth-context/95C49E3F747CF09704C0E5E274D80B64

Land-use choices follow profitability at the expense of ecological functions in Indonesian smallholder landscapes

Smallholder-dominated agricultural mosaic landscapes are highlighted as model production systems that deliver both economic and ecological goods in tropical agricultural landscapes, but trade-offs underlying current land-use dynamics are poorly known. Here, using the most comprehensive quantification of land-use change and associated bundles of ecosystem functions, services and economic benefits to date, we show that Indonesian smallholders predominantly choose farm portfolios with high economic productivity but low ecological value. The more profitable oil palm and rubber monocultures replace forests and agroforests critical for maintaining above- and below-ground ecological functions and the diversity of most taxa. Between the monocultures, the higher economic performance of oil palm over rubber comes with the reliance on fertilizer inputs and with increased nutrient leaching losses. Strategies to achieve an ecological-economic balance and a sustainable management of tropical smallholder landscapes must be prioritized to avoid further environmental degradation.

Clough, Yann et al. (**2016**). Land-use choices follow profitability at the expense of ecological functions in Indonesian smallholder landscapes. *Nature Communications*, 7: 13137. https://www.nature.com/articles/ncomms13137

Perception and Awareness of Local Community to A "Green Wall" Forest Restoration Programme in the Gunung Gede Pangrango National Park, Indonesia

Forest restoration activities have been being carried out across the globe in order to improve degraded forest ecosystem. For Indonesia context, forest restoration in conservation areas need to consider both ecological aspects and regulating access for the community. A study on perceptions and awareness of local community towards restoration program was conducted from April to May 2021 in Cihanyawar Village, Sukabumi District, West Java, Indonesia. The village located adjacent to the Gunung Gede Pangrango National Park (GGPNP), one of Indonesia's conservation area that has been gazeted as UNESCO's biosphere reserve since 1982. The objective of this study is to assess perception and awareness of local community towards "Green Wall" restoration program in the GGPNP. We employed questionnaires method for assessing socio-economic of community. Socio-economic analyses of 100 respondents show that they are at the age range between 30 -50 years (48%), low education level (73%), the majority work as farmers (96%), with the income ranging from 1 to 3 million Rupiah (US$ 69 to 207) per month (83%). Based on respondents' age, education level, occupation, and income level, they have a moderate level of perception and awareness of green wall restoration program. Chi-square test shows that the level of community perception is not influenced by age and education levels but influenced by occupation and income levels. While the community awareness level is not influenced by age, occupancy and income level, but influenced by the education level. The results of the study provide evidence that restoring ecosystem is important for the social and economic aspects of communities around conservation area.

Priatna, Dolly et al. (**2022**). Perception and Awareness of Local Community to A "Green Wall" Forest Restoration Programme in the Gunung Gede Pangrango National Park, Indonesia. *Asian Journal of Conservation Biology*, 11(1): 77-83. https://www.ajcb.in/journals/full_papers_july_2022/AJCB-Vol11-No1-71349_Priatna%20et%20al.pdf

Safeguarding imperiled biodiversity and evolutionary processes in the Wallacea center of endemism

Wallacea—the meeting point between the Asian and Australian fauna—is one of the world's largest centers of endemism. Twenty-three million years of complex geological history have given rise to a living laboratory for the study of evolution and biodiversity, highly vulnerable to anthropogenic pressures. In the present article, we review the historic and contemporary processes shaping Wallacea's biodiversity and explore ways to conserve its unique ecosystems. Although remoteness has spared many Wallacean islands from the severe overexploitation that characterizes many tropical regions, industrial-scale expansion of agriculture, mining, aquaculture and fisheries is damaging terrestrial and aquatic ecosystems, denuding endemics from communities, and threatening a long-term legacy of impoverished human populations. An impending biodiversity catastrophe demands collaborative actions to improve community-based management, minimize environmental impacts, monitor threatened species, and reduce wildlife trade. Securing a positive future for Wallacea's imperiled ecosystems requires a fundamental

shift away from managing marine and terrestrial realms independently.

Struebig, Matthew J. et al. (2022). Safeguarding imperiled biodiversity and evolutionary processes in the Wallacea center of endemism. *BioScience*, Vol. XX No. XX.
https://www.researchgate.net/publication/364750065_Safeguarding_Imperiled_Biodiversity_and_Evolutionary_Processes_in_the_Wallacea_Center_of_Endemism#fullTextFileContent

Rainforest conversion to smallholder cash crops leads to varying declines of beetles (*Coleoptera*) on Sumatra

Southeast Asian arthropod biodiversity is in rapid decline, but the variability of responses within taxa has received little attention. Using canopy fogging, we collected ~50,000 beetles (Coleoptera) in (1) lowland rainforest, (2) jungle rubber (rubber agroforest), and smallholder monoculture plantations of (3) rubber and (4) oil palm in Sumatra, across two landscapes and seasons. On average, beetle abundance was more than 50%, and biomass over 75%, lower in rubber and oil palm plantations than in rainforest and jungle rubber. This pattern was influenced by landscape and season. Abundance and biomass declines were similar in *Chrysomelidae*, *Elateridae*, and *Staphylinidae*, but differed in *Curculionidae*, which were most abundant in oil palm due to the introduced oil palm pollinator *Elaeidobius kamerunicus*. Across beetle families, species richness in monocultures was reduced by at least 70% compared to rain- forest, with beetle richness in jungle rubber being similar to rainforest. Community composition in oil palm plantations differed markedly from the other land-use systems for *Chrysomelidae* and *Curculionida*e, but less for *Elateridae* and *Staphylinidae*. Turnover contributed more to overall beta diversity than nestedness for all families and land-use systems. Likely undersampling of the beetle community in rainforest suggests that declines of beetle density and diversity are much more severe than reported here, especially for beetle families with many concealed species, such as Staphylinidae. This study provides first evidence that negative responses of beetles to tropical land-use change vary among families, and is the first report of its kind from heavily understudied Sumatra.

Kasmiatun et al. (2022). Rainforest conversion to smallholder cash crops leads to varying declines of beetles (*Coleoptera*) on Sumatra. *Biotropica*, 00:1-13.
https://onlinelibrary.wiley.com/doi/full/10.1111/btp.13165

Sumatra-wide assessment of spatiotemporal niche partitioning among small carnivore species

Niche partitioning is a result of interspecific competition between closely-related species to allow co-existence. Multiple species of small carnivores co-occur throughout their ranges in Sumatra, but they are among the lesser studied group of mammal species. This study aimed to collate occurrence records of small carnivores, model their island-wide spatial distribution, and assess their spatio-temporal niche partitioning in Sumatra. We collated camera trap records of small carnivores that were mainly bycatch data from widespread tiger surveys. We used Maxent to predict suitable habitat for nine small carnivore species in response to environmental variables, calculated pairwise spatial niche overlap, and then assessed temporal overlap using Kernel density estimation. In total, we detected 16 of the 21 small carnivore species known to occur in Sumatra. We predicted the suitable habitat of nine species that were found in≥20 locations. Species with the smallest extent of predicted suitable habitat were the Malay civet (*Viverra tangalunga*) and short-tailed mongoose (*Herpestes brachyurus*). Of 36 pairwise comparisons, five species pairs had high overlaps and four species pairs had low overlap on spatiotemporal niche. High overlaps did not necessarily indicate high competition pressure because these species have different behaviour to allow coexistence, such as food preference and arboreality. Camera trap surveys are commonly conducted for species-specific studies, yet they also yield abundant records of non-target species. We therefore encouraged collaboration among institutions working in the same region to use bycatch data to fill the knowledge gaps in the ecology of other lesser known species.

Sibarani, Marsya C. et al. (2022). Sumatra-wide assessment of spatiotemporal niche partitioning among small carnivore species. *Mammalian Biology*, s42991-022-00315-6
https://link.springer.com/article/10.1007/s42991-022-00315-6#citeas

Drivers of three most charismatic mammalian species distribution across a multiple-use tropical forest landscape of Sumatra, Indonesia

Tropical Rainforest Heritage sites of Sumatra are some of the most irreplaceable landscapes in the world for biodiversity conservation. These landscapes harbor many endangered Asiatic mammals all suffering multifaceted threats due to anthropogenic activities. Three charismatic mammals in Sumatra: *Elephas maximus sumatranus, Pongo abelii*, and *Panthera tigris sumatrae* are protected and listed as Critically Endangered (CR) within the IUCN Red List. Nevertheless, their current geographic distribution remains unclear, and the impact

of environmental factors on these species are mostly unknown. This study predicts the potential range of those species on the island of Sumatra using anthropogenic, biophysical, topographic, and climatic parameters based on the ensemble machine learning algorithms. We also investigated the effects of habitat loss from current land use, ecosystem availability, and importance of Indonesian protected areas. Our predictive model had relatively excellent performance (Sørensen: 0.81–0.94) and can enhance knowledge on the current species distributions. The most critical environmental predictors for the distribution of the three species are conservation status and temperature seasonality. This study revealed that more than half of the species distributions occurred in non-protected areas, with proportional coverage being 83%, 72%, and 54% for *E.m. sumatranus*, *P. abelii*, and *P.t. sumatrae*, respectively. Our study further provides reliable information on places where conservation efforts must be prioritized, both inside and outside of the protected area networks, to safeguard the ongoing survival of these Indonesian large charismatic mammals.

Rahman, Dede A. et al. (2022). Drivers of three most charismatic mammalian species distribution across a multiple-use tropical forest landscape of Sumatra, Indonesia . *Animals*, 12: 2722.
https://www.mdpi.com/2076-2615/12/19/2722

Empirically grounded technology forecasts and the energy transition

Rapidly decarbonizing the global energy system is critical for addressing climate change, but concerns about costs have been a barrier to implementation. Most energy-economy models have historically underestimated deployment rates for renewable energy technologies and overestimated their costs. These issues have driven calls for alternative approaches and more reliable technology forecasting methods. Here, we use an approach based on probabilistic cost forecasting methods that have been statistically validated by backtesting on more than 50 technologies. We generate probabilistic cost forecasts for solar energy, wind energy, batteries, and electrolyzers, conditional on deployment. We use these methods to estimate future energy system costs and explore how technology cost uncertainty propagates through to system costs in three different scenarios. Compared to continuing with a fossil fuel-based system, a rapid green energy transition will likely result in overall net savings of many trillions of dollars—even without accounting for climate damages or co-benefits of climate policy.

Way, Rupert et al. (2022). Empirically grounded technology forecasts and the energy transition. *Joule*, 6(9): 2057-2082.
https://www.sciencedirect.com/science/article/pii/S2542435122004010X

Deforestation projections imply range-wide population decline for critically endangered Bornean orangutan

Assessing where wildlife populations are at risk from future habitat loss is particularly important for land-use planning and avoiding biodiversity declines. Combining projections of future deforestation with species density information provides an improved way to anticipate such declines. Using the critically endangered Bornean orangutan (*Pongo pygmaeus*) as a case study we applied a spatio-temporally explicit deforestation model to forest loss data from 2001 to 2017 and projected future impacts on orangutans to the 2030s. Our projections point to continued deforestation across the island, amounting to a potential loss of forest habitat for 26,200 orangutans. Populations currently persisting in forests gazetted for industrial timber and oil palm concessions, or unprotected forests outside of concessions, were projected to experience the worst losses within the next 15 years, amounting to 15,400 individuals. Our analysis indicates the importance of protecting orangutan habitat in plantation landscapes, maintaining protected areas and efforts to prevent the conversion of logged forests for the survival of highly vulnerable wildlife. The modeling framework could be expanded to other species with available density or occurrence data. Our findings highlight that species conservation should not only act on the current information, but also anticipate future changes to be effective.

Voigt, Maria et al. (2022). Deforestation projections imply range-wide population decline for critically endangered Bornean orangutan. *Perspective in Ecology and Conservation*, 20:240-248.
https://www.perspectecolconserv.com/en-deforestation-projections-imply-range-wide-population-articulo-resumen-S2530064422000372

EVENTS

UN Biodiversity Conference (CBD COP 15)

December 7 - 19, 2022 in Montreal, Canada, governments from around the world will come together to agree on a new set of goals to guide global action through 2030 to halt and reverse nature loss.

Nature is critical to meeting the Sustainable Development Goals and limiting global warming to 1.5 degrees. Adoption of a bold global biodiversity framework that addresses the key drivers of nature loss is needed to secure our own health and well-being alongside that of the planet.

What needs to happen at COP 15:

- Adoption of an equitable and comprehensive framework matched by the resources needed for implementation
- Clear targets to address overexploitation, pollution, fragmentation and unsustainable agricultural practices
- A plan that safeguards the rights of indigenous peoples and recognizes their contributions as stewards of nature
- Finance for biodiversity and alignment of financial flows with nature to drive finances toward sustainable investments and away from environmentally harmful ones

UN Climate Change Conference 2022 (UNFCCC COP 27) - Sharm El-Sheikh, Egypt 6-18 November 2022

The 2022 United Nations Climate Change Conference, more commonly referred to as Conference of the Parties of the UNFCCC, or COP27, will be the 27th United Nations Climate Change conference, to be held from 6 to 18 November 2022 in Sharm El Sheikh, Egypt. It will take place under the presidency of Egyptian Minister of Foreign Affairs Sameh Shoukry, with more than 90 heads of state and representatives of 190 countries expected to attend.

The conference has been held annually since the first UN climate agreement in 1992. It is used by governments to agree action to limit global temperature rises associated with climate change. The selection of Egypt as a host country attracted controversy ahead of the summit due to the country's human rights record.

International Conference on Human-Wildlife Conflict and Coexistence
Oxford, UK: 30th March-1st April 2023.

The IUCN Species Survival Commission (SSC) Human-Wildlife Conflict & Coexistence Specialist Group, the Global Environment Facility-funded and World Bank-led Global Wildlife Program and the Wildlife Conservation Research Unit at Oxford University's Department of Zoology are co-hosting this International Conference on Human-Wildlife Conflict and Coexistence in Oxford, UK, on 30th March-1st April 2023. The conference is organised in collaboration with the IUCN Commission on Environmental, Economic and Social Policy (CEESP), the Food and Agriculture Organization (FAO) of the United Nations, the United Nations Development Programme (UNDP) and several more organisations.

Human-wildlife conflict is one of the most pressing threats to biodiversity conservation and achievement of sustainable development. These conflicts threaten the healthy co-existence of people and wildlife and undermine conservation efforts. Collaboration across disciplines and sectors is needed in this to address human-wildlife conflicts world-wide.

"Human-wildlife conflict is one of the most pressing threats to biodiversity conservation and achievement of sustainable development."

This conference provides a major opportunity to do so. For the first time at this scale, we are bringing together representatives from several major sectors, including governments, NGOs, intergovernmental organisations, academic and business sectors, and indigenous and local communities, to discuss and debate insights and solutions for human-wildlife conflict management.

It will be an interdisciplinary event, actively seeking participation from presenters and discussants from fields such as ecology, animal behaviour, psychology, law, conflict analysis, mediation, peacebuilding, international development, economics, anthropology and others, to understand human-wildlife conflict through various viewpoints, learn from each other, and build new links and collaborations.

The International Conference on Human-Wildlife Conflict and Coexistence aims to

1. Facilitate dialogue and peer-to-peer learning across sectors and actors on the topic for partnerships and collaboration across people and institutions working on human-wildlife conflict.
2. Generate interdisciplinary and shared understanding of the latest insights, technologies, methods, ideas, and information from the field of human-wildlife conflict, coexistence and interactions.
3. Mainstream human-wildlife conflict as one of the top global priorities in biodiversity conservation and the Sustainable Development Goals for the next decade, catalysing opportunities for working together on national, regional or global policies and initiatives.
4. Identify and develop a collective way forward for addressing knowledge and implementation gaps for effective efforts to reduce and manage human-wildlife conflict.

Call for hosts of the 10th International Conference on UNESCO Global Geoparks in 2023

This call to host the 10th International Conference on UNESCO Global Geoparks in 2022 is open to countries or regions that already have functional UNESCO Global Geoparks, whose contribution will be essential for the success of the event. If your organization or country is interested in hosting the 2022 Conference, you are kindly invited to submit a well-developed technical proposal specifying the offer.

ICBEE 2023: 17. International Conference on Biodiversity and Ecological Engineering
January 09-10, 2023 in Bali, Indonesia

The International Research Conference Aims and Objectives

The International Research Conference is a federated organization dedicated to bringing together a significant number of diverse scholarly events for presentation within the conference program. Events will run over a span of time during the conference depending on the number and length of the presentations. With its high quality, it provides an exceptional value for students, academics and industry researchers.

International Conference on Biodiversity and Ecological Engineering

Aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of Biodiversity and Ecological Engineering. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Biodiversity and Ecological Engineering.

Call for Contributions

Prospective authors are kindly encouraged to contribute to and help shape the conference through submissions of their research abstracts, papers and e-posters. Also, high quality research contributions describing original and unpublished results of conceptual, constructive, empirical, experimental, or theoretical work in all areas of Biodiversity and Ecological Engineering are cordially invited for presentation at the conference. The conference solicits contributions of abstracts, papers and e-posters that address themes and topics of the conference, including figures, tables and references of novel research materials.

Guidelines for Authors

Please ensure your submission meets the conference's strict guidelines for accepting scholarly papers. Downloadable versions of the check list for Full-Text Papers and Abstract Papers.

Please refer to the Paper Submission Guideline, Abstract Submission Guideline and Author Information before submitting your paper.

Conference Proceedings

All submitted conference papers will be blind peer reviewed by three competent reviewers. The peer-reviewed conference proceedings are indexed in the Open Science Index, Google Scholar, Semantic Scholar, Zenedo, OpenAIRE, BASE, WorldCAT, Sherpa/RoMEO, and other index databases. Impact Factor Indicators.

Join SER in Darwin, Australia September 26-30, 2023 for our 10th World Conference on Ecological Restoration

Since 2005, the SER World Conference has been the premier venue for those interested in connecting with the international restoration community. Our World Conferences are an exciting biennial gathering of experts in the scientific, technical, and socio-economic dimensions of restoring damaged and degraded ecosystems all biomes and on all continents. Conference attendees are passionate about discussing and debating big picture issues and broad trends, as well as specific tools, techniques, research, and policies for restoration.

We are proud to host our next World Conference in Darwin, Australia September 26-30, 2023. SER2023 will be the Society's 10th World Conference since 2005 and 26th meeting since our founding in 1988.

The SER World Conference brings delegates from every continent representing a range of professional backgrounds including natural and social sciences, environmental engineering, urban and regional planning, public policy, landscape architecture, natural resource management, and more. Attendees include:

- Professors, researchers, and students
- Staff scientists from research institutes and governmental agencies specializing in restoration, conservation, and land management
- Environmental consultants and contractors ranging from independently owned small business to national and multinational companies
- Local, national, and international nonprofit organizations
- Staff from botanic gardens, zoos, engineering and landscape firms, and mining and extraction industries
- Individuals and entities from the financial sector
- We always feature *Make a Difference* field trips as part of the conference program, giving participants a chance to learn about local management challenges and have hands-on participation in restoration implementation.
- Our conferences are hosted around the world to highlight the diverse landscapes our community work in and facilitate the exchange of knowledge among our global network of over 4,000 members. We hope to see you soon!