

The Role of Indonesian Animal Quarantine Procedures in Supporting Sustainable Event/Exhibition Management

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Abstract: The organization of international pet exhibitions presents significant challenges related to public health, animal welfare, and event sustainability. Without strict quarantine procedures, the risk of spreading Animal Quarantine Diseases (in Indonesia regulation known as Hama dan Penyakit Hewan Karantina/HPHK) may threaten ecosystems, undermine event reputation, and erode stakeholder trust. Within the framework of green exhibitions and sustainable event management, animal quarantine is not merely a risk-control mechanism but also an ethical instrument that supports the three pillars of sustainability: environmental, social, and economic. This study aims to explain how animal quarantine procedures in Indonesia can be integrated into sustainable exhibition standards. The research design employs a descriptive qualitative approach, with the Indonesian Quarantine Agency at Tanjung Priok and Banten. Data were collected through direct observation and interviews with quarantine agency and examined thematically to identify procedural stages and their relevance to sustainability principles. The findings reveal that quarantine procedures in Indonesia encompass document preparation, physical examination, isolation with clinical and laboratory monitoring, and final stages including release, rejection, or destruction. These procedures contribute to green exhibitions by ensuring public health protection, safeguarding animal welfare, promoting digital administrative efficiency, and reinforcing compliance with international regulations. The implications of this research highlight that integrating animal quarantine into sustainable exhibition standards provides practical guidelines for exhibition organizers in Indonesia, while strengthening Indonesia's position as a responsible and sustainable host within the global MICE industry.

Keywords: animal quarantine, green exhibition, international pet exhibition, MICE industry, sustainable event management

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Introduction

According to a Custom Market Insights report on inbound MICE tourism (CMI, 2024a, b), the global MICE market value is projected to almost double from US\$547 billion in 2024 to US\$1 trillion by 2033, or 7.8% of the projected global tourism value in 2033. Mapped against the Organisation for Economic Co-operation and Development (OECD)'s projected 2033 world GDP of US\$86 trillion (OECD, 2021), the MICE/BD industry is estimated to contribute 1.2% of the world's GDP by 2033. The study of the current state of sustainability in the MICE/BD industry is thus important considering the size and significance of the industry (Koh, 2025).

The MICE (Meetings, Incentives, Conferences, and Exhibitions) industry in Indonesia is rapidly shifting toward sustainable practices to mitigate environmental and

socio-cultural impacts (Li et al., 2025). According to the Global Association of the Exhibition Industry (UFI), sustainability in exhibitions extends beyond waste management to include risk mitigation and ethical standards. In this context, animal quarantine serves as a critical biosecurity instrument that ensures international pet exhibitions align with green exhibition principles by preventing ecological disruption and safeguarding public health.

While current "green exhibition" frameworks prioritize waste management, energy efficiency, and green venues (Wee et al., 2021), a critical gap remains in managing biosecurity risks—specifically animal quarantine—within international pet exhibitions. This oversight is significant because cross-border animal mobility inherently risks spreading diseases and zoonoses, which directly threatens public health and biodiversity (Wyatt et al., 2021).

Despite the urgency, existing Indonesian quarantine regulations (Law No. 21/2019) are often implemented purely as administrative hurdles rather than holistic sustainability instruments. Studies indicate that current policies lack effective coordination and fail to integrate the socio-cultural dimensions of sustainability (Husain et al., 2025; Simatupang, 2025). Furthermore, while digital modernization through systems like IQFAST 2.0 enhances surveillance (Hartati, 2025), animal quarantine has yet to be formally recognized as a component of the green exhibition discussion in Indonesia (MR & Firmansyah, 2023).

However, the literature has not yet provided a clear framework for this integration. Therefore, this research seeks to address the following questions:

1. How can Indonesia's animal quarantine procedures be integrated into sustainable exhibition standards?
2. What procedural stages are most critical to aligning biosecurity with sustainability principles in the MICE industry?

To address these gaps, this study employs a qualitative research design with a descriptive qualitative approach to evaluate the integration of quarantine protocols into sustainability standards. Primary data were gathered through semi-structured interviews with officials at the Animal Quarantine Station of Soekarno-Hatta, providing first-hand operational insights. This was complemented by an extensive documentary analysis of credible institutional records, including Law No. 21 of 2019, relevant Ministerial Regulations, and other legal frameworks governing biosecurity in Indonesia. The data were examined using content analysis to identify procedural themes and their alignment with green exhibition principles, such as environmental protection, social responsibility, and economic viability. This methodology ensures a comprehensive evaluation of how regulatory procedures can be practically transformed into sustainable guidelines for the international MICE industry.

Methodology (Candara, 14 pt, Bold)

This study uses a descriptive qualitative approach to analyze the integration of animal quarantine procedures in Indonesia into a sustainable event and exhibition management framework. This methodology emphasizes descriptive data, natural settings, inductive reasoning, and interpretation (Waruwu, 2024). It is flexible, allowing researchers to use various theoretical approaches and sampling techniques (Hall, 2024), and provides a systematic and factual summary of phenomena (Furidha, 2023). This approach is appropriate for in-depth exploration of procedural mechanisms, regulatory compliance, and operational challenges. The study aims to explain how biosecurity protocols function as ethical and

practical instruments that support the three pillars of sustainability (environmental, social, and economic) in the MICE industry.

This research was conducted at the Tanjung Priok Quarantine Agency and the Banten Quarantine Agency. Primary data were obtained from key informants at both agencies. Secondary data included relevant Indonesian regulations, institutional guidelines, green exhibition standards, and MICE industry reports. Data collection involved field observations at the Quarantine Agencies to observe the implementation of animal handling and laboratory monitoring, and semi-structured interviews with agency officials regarding processes such as document verification, physical exams, and biosecurity enforcement. Qualitative data were analyzed using Thematic Analysis

Results and discussions

Results

Preserving Social Sustainability through Zoonotic Risk Containment and Public Safety

The primary function of animal quarantine—encompassing the verification of Health Certificates and rabies serology tests—transcends mere clinical duty; it serves as a critical social safeguard. In the context of international exhibitions, these procedures act as the fundamental layer of social sustainability by mitigating the risk of high-fatality zoonotic outbreaks at the event venue.

Table 1. The Intersection of Biosecurity Protocols and Social Sustainability Goals

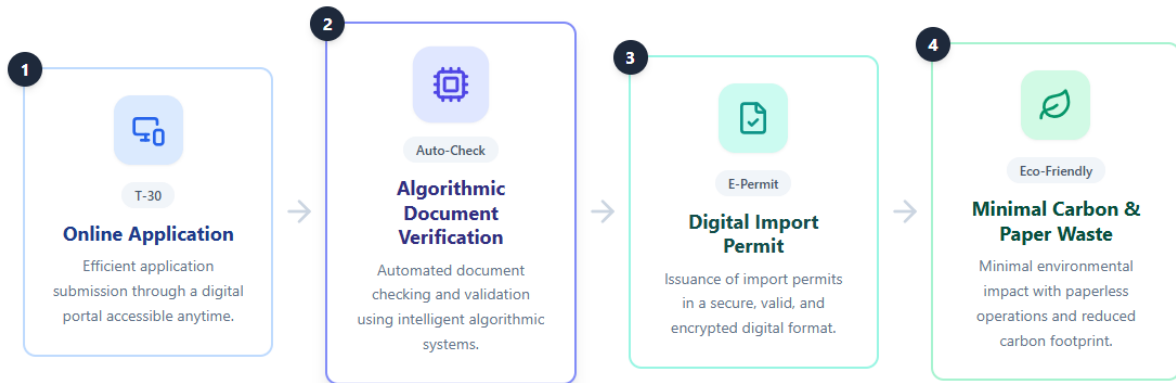
Technical Procedure	Mitigated Risk	Sustainable Event Contribution
Health Certificate Validation	Pathogen Introduction	Public Health & Safety Assurance
Clinical Inspection	Local Fauna Infection	Environmental & Community Protection
Microchip Identity Matching	Fraud & Illegal Trade	Ethical Compliance & Integrity

(Source: Processed data, 2025)

The data from field observation findings reveal that biosecurity is a "social license to operate" for international exhibitions. A single zoonotic incident would not only jeopardize public health but also cause irreversible damage to the reputation of the host destination's MICE industry. By institutionalizing these checks, the quarantine agency provides a safety guarantee that allows organizers to fulfill their ethical obligations. This aligns with the non-negotiable pillar of social sustainability regarding stakeholder protection (Singh et al., 2020). Over the past few years, the worldwide emphasis on sustainability has had a major impact on many industries, such as event management (Smith, 2021). Events frequently generate substantial waste, leading to environmental and social challenges (Surbhi, 2025). The framework of sustainable event management, social sustainability is defined by an event's ability to maintain a harmonious and safe relationship with its host community. The quarantine procedure acts as the primary barrier against "biological externalities"—negative impacts that an event might inadvertently impose on society. By ensuring that no pathogens cross from the exhibition floor to the local population, the quarantine process transforms the event from a potential bio-risk into a socially responsible platform that prioritizes human and animal well-being over mere economic gain.

Leveraging Digital Governance as a Catalyst for Green Exhibition Standards

The transition to digital platforms represents more than administrative efficiency; it is a strategic move toward "Green MICE" governance. By digitizing the pre-event approval process, the quarantine agency systematically reduces the environmental footprint associated with traditional paper-based bureaucracies.



(Source: Processed data, 2025)

Figure 1. The Digital Workflow as a Driver for Resource Efficiency

Digital integration acts as a catalyst for environmental sustainability by eliminating physical document transport and redundant paperwork. This "Green Administrative" model forces event organizers to adopt proactive planning (H-30 submission), reducing the high-waste logistical rushes typical of manual systems. Digital synchronization is a prerequisite for modern, sustainable law enforcement, ensuring that regulatory compliance does not come at an environmental cost. The correlation with green exhibitions lies in the "Dematerialization" of event logistics. Sustainable event standards, such as ISO 20121, emphasize the reduction of resource consumption throughout the event lifecycle. The use of the *Best-Trust* system directly supports this by institutionalizing a paperless workflow and reducing the carbon emissions associated with the physical mobilization of couriers and administrative personnel. Consequently, animal quarantine serves as an unintentional yet effective "green partner" that enforces environmental best practices within the event's supply chain.

Balancing Economic Vitality with Ecosystem Preservation via Regulated Entry

The classification of exhibition animals under "temporary entry" (*pemasukan sementara*) status ensures that the economic benefits of MICE activities do not lead to biological degradation. This regulatory framework creates a protected "bubble" for the event, preventing foreign biological assets from entering the local supply chain or ecosystem. The prohibition of commercial transactions during pet exhibitions serves as an ethical filter that separates legitimate educational exchange from high-risk illegal trade. This mechanism ensures that the event's economic contribution is high-quality and low-risk. By strictly defining the spatial boundaries of the animals' presence, quarantine procedures prevent "biological dumping," that quarantine is an integrated environmental protection instrument (Simatupang, 2025). This procedure directly correlates to the "Environmental Integrity" of a sustainable exhibition. A truly sustainable

event must ensure that its temporary presence does not cause permanent ecological damage. By enforcing "temporary entry" and spatial isolation, the quarantine procedure prevents invasive species or foreign pathogens from escaping the event perimeter and disrupting the local biodiversity. This ensures that the event remains an "ecological neutral" activity, where the temporary influx of foreign animals is strictly managed to prevent long-term environmental liabilities for the host region.

Enhancing Event Accountability through Digital Traceability and Identity Standards

The mandatory use of ISO-standard microchips shifts the exhibition paradigm from subjective visual inspection to objective, data-driven accountability. This traceability system ensures that every biological asset within the event perimeter has a verifiable and untamperable health history.

STAGE	ACTION & DESCRIPTION	SUSTAINABILITY OUTCOME
Origin Tagging	ISO-Standard Microchip Embedding Securing the biological asset's identity at the source.	Data Integrity: Eliminates the risk of illegal animal trafficking and fraud.
Identity Verification	Real-time Digital Cross-referencing Matching physical microchips with "Best-Trust" digital permits.	Transparency: Ensures only verified, healthy animals enter the event perimeter.
On-site Monitoring	Dynamic Health & Safety Tracking Routine clinical checks within the biosecurity 'bubble'.	Risk Mitigation: Prevents social and environmental harm from potential outbreaks.
Verifiable Audit Trail	Accountability & Compliance Logging Creating a permanent record of all health interactions.	Governance: Provides empirical evidence for sustainable event certifications.

(Source: Processed data, 2025)

Figure 2. The Traceability Loop for Accountable Exhibitions

Identity accuracy is the backbone of "Transparent MICE." Traceability prevents the infiltration of "shadow participants"—animals without health clearances—that could otherwise compromise the biosecurity of the entire exhibition. This technology-driven oversight creates an accountable ecosystem in which organizers can demonstrate, with empirical data, that their event adheres to international animal welfare and biosecurity standards. This aligns with the "Governance and Transparency" pillar of sustainability. Modern sustainable event management requires rigorous reporting and verification of all event assets. The microchip system provides a "Digital Passport" that serves as an audit trail for the event's biosecurity performance. By providing verifiable data on every animal, the quarantine procedure enables event organizers to demonstrate full accountability to regulators, sponsors, and the public, thereby elevating the event's credibility and its alignment with global ethical exhibition standards.

Achieving Circularity in Event Management through Closed-Loop Biosecurity

The re-export protocol, which requires the mandatory return of all exhibition animals to their country of origin, serves as the final phase of a "closed-loop" management system. This ensures that the event lifecycle is completed without leaving behind any uncontrolled biological residues in the host country.

Table 2. Lifecycle Analysis of Quarantine Integration in Sustainable Events

Event Lifecycle Phase	Quarantine Intervention	Sustainability Objective
Pre-Event	Digital Document Audit	Administrative Waste Reduction
Operational Phase	Spatial & Clinical Isolation	Real-time Risk Mitigation
Post-Event Closure	Re-export Verification	Zero-Residual Biological Impact

(Source: Processed data, 2025)

The re-export requirement is the biological equivalent of a "Zero Waste" policy. In sustainable event theory, a circular event must manage all inputs to ensure they do not become harmful outputs. By verifying that animals "arrive healthy and depart healthy," quarantine guarantees that the event has a net-zero impact on the host country's biodiversity. This reflects the "Circular Economy" approach in event management. A sustainable event is one that leaves no trace (or a positive one). The re-export procedure ensures a "Zero Biological Residual" outcome, mirroring the waste management principle where every item brought into a venue must be taken out. By enforcing this post-event closure, the quarantine agency ensures that the "biological cycle" of the event is fully resolved, preventing any long-term pathogen persistence that could jeopardize the environment. This makes the event truly sustainable by ensuring its impact is confined strictly to its designated timeframe and location.

Discussions

This study aimed to explain how animal quarantine procedures in Indonesia can be integrated into sustainable exhibition standards. The findings demonstrated that quarantine procedures at Soekarno-Hatta and Tanjung Priok—encompassing four sequential phases (preparation, implementation, monitoring, and final phase)—possess direct relevance to the core dimensions of sustainable event management, specifically in mitigating environmental risks and ensuring social safety. Accordingly, the research aim and question have been comprehensively addressed through empirical data obtained from observations and interviews.

The primary significance of these findings lies in the construction of a conceptual bridge between two domains of knowledge that have thus far developed in isolation. In the sustainable event management literature, the focus has predominantly been on "green" operational practices. Wee et al. (2021) identified characteristics of green event practices in MICE tourism such as green venues and waste management, while Gonçalves et al. (2025) emphasized recycling, energy efficiency, and digitalization. However, even as Mair et al. (2024) called for broader event type coverage and non-Western contexts, the literature has remained "bio-blind" regarding animal biosecurity. Conversely, veterinary literature, like Biggs & Young (2025), focuses on technical disease transmission risks without framing them as part of event sustainability.

This study explicitly bridges this gap by demonstrating that biosecurity is not a separate technical issue, but a fundamental pillar of a "Green Exhibition." By integrating

biosecurity into the event sustainability discourse, this research expands the definition of "environmental sustainability" in MICE to include the protection of local ecosystems from foreign biological hazards, thereby providing a more holistic framework for sustainable exhibition standards.

A critical reflection on these findings reveals a fundamental contradiction between general green event practices and quarantine-led sustainability. Most sustainability practices in events are typically voluntary and frequently constrained by high costs and limited organizer commitment (El-Said et al., 2025; Gonçalves et al., 2025). However, this study identifies that in the context of animal-inclusive events in Indonesia, sustainability is achieved through "mandated compliance." Because quarantine procedures are underpinned by legal obligations under Law Number 21 of 2019, they operate with a degree of structure that voluntary green initiatives often lack.

This implies a theoretical shift: for high-risk exhibitions, "greenness" is not just a choice made by the organizer, but a regulatory requirement. The success of Indonesian quarantine in supporting sustainable event management suggests that regulation-based integration possesses a significant implementation advantage over purely voluntary dimensions, ensuring that environmental and social safeguards are consistently applied regardless of the organizer's sustainability maturity.

Despite the sound procedural framework, this research identifies critical limitations that hinder the full realization of a "Digital Green Exhibition." The requirement for physical document verification and the infrastructure gap at non-primary entry points are consistent with the findings of Husain et al. (2025) and Narut et al. (2025) regarding the suboptimal implementation of quarantine policies in regional areas. This indicates a "digital-operational divide" where the theoretical benefits of paperless systems (like *Best-Trust*) are partially negated by the persistence of manual bureaucracy. This limitation suggests that while the procedural framework for a green exhibition is in place, the implementation capacity—particularly in digital consistency—still requires strengthening to meet global sustainable MICE standards.

The implications of this research demonstrate that animal quarantine is not merely a risk-control mechanism but an ethical instrument bridging biosecurity and event sustainability. For international event organizers, these findings provide practical guidelines for integrating quarantine procedures into green exhibition planning, ensuring that biological safety is treated as a core sustainability KPI. For Indonesia, this integration reinforces its position as a responsible and sustainable host within the global MICE industry. Future research should explore event organizers' and exhibitors' perspectives on quarantine procedures and develop a quantitative evaluation framework to measure biosecurity's specific contribution to event sustainability indices.

Conclusions

This study demonstrates that animal quarantine procedures in Indonesia serve as a fundamental structural framework, rather than a peripheral regulatory requirement, for the realization of sustainable exhibition standards. By successfully integrating rigorous biosecurity protocols into the management of international pet exhibitions, this research identifies a critical intersection where veterinary control transforms into a strategic instrument for institutional and environmental responsibility. A significant outcome of this inquiry is the conceptualization of "Biological Integrity" as an essential, yet frequently overlooked, dimension of the green exhibition discourse. While established literature on sustainable events has traditionally focused on carbon footprints and waste reduction, this research argues that the systematic containment of zoonotic risks and the protection of local biodiversity are equally vital to an event's sustainability profile.

This finding addresses a distinct gap between veterinary biosecurity and MICE management, offering a comprehensive model for responsible event hosting in a non-Western context.

The implications of these findings suggest that for the global MICE industry, sustainability frameworks and certifications should be expanded to include biosecurity metrics, particularly for events involving live biological assets. For organizers, the research implies that quarantine compliance must be repositioned as a core Key Performance Indicator (KPI) of their sustainability strategy to enhance stakeholder trust. Indonesia's structured quarantine system provides a robust benchmark for this integration, reinforcing its credibility as a destination committed to high-standard, sustainable event management.

Future research directions should focus on developing quantitative sustainability indices that incorporate biosecurity performance and exploring multi-stakeholder perspectives to ensure the inclusivity of these standards. Comparative studies across different regulatory jurisdictions would further refine international best practices, ensuring that the global expansion of the exhibition industry remains aligned with the principles of biological and environmental safety.

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References

- Biggs, R. S., & Young, C. A. (2025). Practical Biosecurity for Human-Livestock Interactions at Exhibition Events and Petting Zoos. *Veterinary Clinics of NA: Food Animal Practice*, 41(1), 123–135. <https://doi.org/10.1016/j.cvfa.2024.11.011>.
- Custom Market Insights (2024a). Inbound MICE tourism market 2024-2033.
- Custom Market Insights (2024b). Global tourism market 2024-2033.
- El-Said, O. A., Aziz, H., Salem, I. E., & Youssif, M. (2025). The role of mega events' sustainability practices in fostering environmentally sustainable behaviors: evidence from Expo 2020 Dubai. *International Journal of Event and Festival Management*, 16(2), 265–292. <https://doi.org/10.1108/IJEFM-07-2024-0088>.
- Furidha, Brylialfi Wahyu. (2023). Comprehension of the Descriptive Qualitative Research Method: A Critical Assessment of the Literature. *Journal of Multidisciplinary Research* Vol. 2, Issue. 4. <https://journal.jfpublisher.com/index.php/jmr>.
- Gonçalves, L. R. T., Sales, D. da S., Camila, M. R., Guimarães, H. A., Correia, V. G., Palma, M. A. M., Vidigal, J. G., & Pinto, A. E. M. (2025). Sustainability in Events: Practices and Challenges. *Revista de Gestão Social e Ambiental*, 19(3), 1–17.
- Hall, Steven. (2024). Qualitative Description as an Introductory Method to Qualitative Research for Master's-Level Students and Research Trainees. *International Journal of Qualitative Methods* Volume 23: 1–5. journals.sagepub.com/home/ijq.
- Hartati, E. D. (2025). Strategi Transformasi Digital Barantin Menuju Lembaga Karantina Berkelas Dunia. *Journal of Innovation Research and Knowledge*, 5(2), 2253–2258.
- Husain, Y., Suprpto, S., & Akbar, M. F. (2025). Implementation of the Policy of Law Number 21 Of 2019 on Animal, Fish and Plant Quarantine Center. *International Journal Paper Public Review*, 6(1), 1–16.
- Koh, Edward. 2025. Sustainability in the global MICE/ business events industry – the current state, and the road ahead *ABAC Journal* Vol. 46 No. 1, 2026 pp. 36-47

- Emerald Publishing Limited e-ISSN: 2730-3543 p-ISSN: 0858-0855 DOI 10.1108/ABAC-08-2025-0149 <https://www.emerald.com/abac/article-pdf/46/1/36/11266767/abac-08-2025-0149en.pdf>
- Li, X., Wong, J. N. B., Kim, D., Qin, J., & Yuan, Y. (2025). Sustainable Planning and Development of the MICE Industry With Tourism Evaluation Index: The Case of Indonesia. *International Journal of Tourism Research RESEARCH*. <https://doi.org/10.1002/jtr.70075>.
- Mair, J., Trendafilova, S., & Werner, K. (2024). Environmental Sustainability in Event Management: A Critical Commentary. *Event Management*, 28, 477–484.
- MR, S. P., & Firmansyah, A. (2023). PENERAPAN KONSEP KEBERLANJUTAN PADA PELAKU INDUSTRI MICE (MEETING, INCENTIVES, CONFERENCE, & EXHIBITION) DI. *JURNALKU*, 3(4), 375–389.
- Narut, M. G. P., Nursalam, Seran, D. A. N., & Mau, A. O. E. (2025). Implementasi Undang-Undang Nomor 21 Tahun 2019 tentang Karantina Hewan, Ikan, dan Tumbuhan pada Balai Karantina Hewan, Ikan, dan Tumbuhan NTT (Studi Karantina Hewan). *Journal Education and Government Wiyata*, 3(2), 566–578.
- OECD (2021). Real GDP long-term forecast. Available from: <https://www.oecd.org/en/data/indicators/real-gdp-long-term-forecast.html>
- Simatupang, R. B. (2025). An Animal Quarantine Policy Analysis with Environmental Law Study. *The 8th Legal International Conference and Studies: Corporate Responsibility and Environmental Law Through Economic & Business Management, KnE Social Sciences Practices*, 589–598. <https://doi.org/10.18502/kss.v10i27.20094>.
- Singh, N., Shalender, K., & Su, C. J. (2020). Developing Impacts and Indicators for Sustainable Event Management Using A Triple Bottom Line Approach: A Study of Auto Expo. *Event Management*, 24, 1–16.
- Smith, J., & Hall, P. (2021). Integrating sustainability into event strategies: A practical approach. *Event Management Research Journal*, 18(1), 50-65. <https://doi.org/10.1234/emr.2021.0050>
- Surbhi, 2025. Surbhi. (2025). Reducing Waste in Event Planning: Practical Strategies for Sustainable Event Management in Faridabad. Proceedings of the 9th International Conference on Synergizing Sustainable Technologies and Management Practices (STAMP 2024), Advances in Economics, Business and Management Research 321. http://doi.org/10.2991/978-94-6463-682-6_21
- Waruwu, Marinu. (2024). Pendekatan Penelitian Kualitatif: Konsep, Prosedur, Kelebihan dan Peran di Bidang Pendidikan. *Jurnal Penelitian dan Evaluasi Pendidikan*. Volume 5 Nomor 2 Tahun 2024. e-ISSN: 2745-9985. <https://afeksi.id/jurnal/index.php/afeksi/>
- Wee, H., Mustapha, N. A., & Anas, M. S. (2021). Characteristic of Green Event Practices in MICE Tourism A Systematic Literature Review Characteristic of Green Event Practices in MICE Tourism : A Systematic Literature Review. *International Journal of Academic Research in Business and Social Sciences*, 11(16). <https://doi.org/10.6007/IJARBS/v11-i16/11234>.
- Wyatt, T., Maher, J., Allen, D., Clarke, N., & Rook, D. (2021). The welfare of wildlife: an interdisciplinary analysis of harm in the legal and illegal wildlife trades and possible ways forward. *Crime, Law and Social Change*. <https://doi.org/10.1007/s10611-021-09984-9>.