

From Planning to Prevention: Risk Management Strategies in the Pre-Opening Stage of Agrotourism

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Abstract

This study aims to identify and analyse operational risks during the pre-opening phase of agrotourism destinations in Indonesia and propose effective risk management strategies. The research focuses on understanding the potential risks related to safety, cleanliness, and maintenance that may impact the visitor experience and the overall reputation of the agrotourism site. A qualitative research method was employed, involving direct observations, interviews with stakeholders, and data triangulation to ensure the validity and reliability of the findings. The results highlight several key operational risks, including accidents related to traffic, cleanliness issues such as pest control, and maintenance challenges of ageing infrastructure. These risks pose significant threats to visitors' safety and agrotourism businesses' sustainability. The study recommends implementing enhanced security measures, regular cleanliness maintenance, and a structured approach to infrastructure maintenance to minimise these risks. These strategies are expected to improve service quality, ensure safety, and enhance the competitiveness of agrotourism destinations. The findings contribute to developing a comprehensive risk management framework for agrotourism in the pre-opening phase, offering practical solutions for stakeholders in the industry.

Keywords: Agrotourism, Risk Management, Pre-Opening Phase, Operational Risks.

1. Introduction

Agrotourism in Indonesia holds significant potential. It contributes to local economic development, poverty alleviation, and environmental conservation, and has strong potential for sustainable tourism development in the country (Utama, 2014). In addition, agrotourism plays an important role in rural development and agricultural income diversification. Agrotourism offers numerous benefits, including strengthening local economies, creating employment opportunities, and preserving rural lifestyles and landscapes (Privitera et al., 2010; Cichowska & Klimek, 2011). Farmers consider agrotourism essential for economic benefits and achieving marketing, social, and personal entrepreneurial goals (Tew, 2010). Agrotourism can supplement traditional farm income and contribute to environmental preservation (Hernández-Mogollón et al., 2011). Organic farming is closely linked with agrotourism (Fatimah et al., 2024) and offers opportunities for sustainable tourism (Privitera et al., 2010). Although farm entrepreneurs generally have a positive attitude toward agrotourism development, some remain reluctant to participate personally (Hernández-Mogollón et al., 2011). Overall, agrotourism presents significant opportunities for rural area development and the sustainability of agricultural systems.



Agrotourism introduces both opportunities and risks to rural farming communities. Common risks include operational challenges, environmental factors, and economic uncertainty (Halimah et al., 2024; Tshekladze & Sulaberidze, 2022). Specific risks identified include population density, climate change, seasonality, pest outbreaks, food safety issues, and financial instability (Tshekladze & Sulaberidze, 2022). Risk management strategies involve identifying risk sources, analysing the risk level, and implementing control measures (Halimah et al., 2024). Mitigation approaches include risk transfer to third parties, enhanced communication and cooperation, development of alternative actions, and creation of new programs (Halimah et al., 2024). Agrotourism can be a risk management strategy that provides additional income and encourages environmentally friendly farming practices (Mahaliyanaarachchi, 2016). Implementing Good Agricultural Practices (GAP), increasing farmers' knowledge through training, and strengthening government support are critical for risk mitigation (Syamsiah et al., 2020). Effective risk management in agrotourism can lead to sustainable rural development and improved livelihoods for farming communities (Mahaliyanaarachchi, 2016).

Risk management is crucial for businesses, especially during the pre-opening phase. In tourism enterprises, a proactive approach to risk management is essential, requiring a strategic plan to identify, analyse, evaluate, address, and monitor risks (Papaioannou & Shen, 2018). Across industries, effective risk management involves identifying potential risks and developing strategies to minimise their impact before they occur. Agrotourism faces operational risks, as identified in the Kampung Susu Dynasty Agrotourism case study in Indonesia (Halimah et al., 2024). Risk assessment and mitigation strategies are essential for the successful development of agrotourism, as shown in the case of mango farming in Cirebon Regency (Syamsiah et al., 2020). The Failure Mode and Effect Analysis (FMEA) method can be used to identify and prioritise risks. In highland vegetable farming, agroforestry systems offer a balanced approach to risk management, providing economic benefits while protecting land and the environment (Jumiyati et al., 2020). These studies highlight the importance of effective risk management strategies in development of agrotourism.

This study aims to identify potential risks occurring during the pre-opening phase of agrotourism enterprises. This research is important because agrotourism is a rapidly growing sector in Indonesia, including Bali. By identifying and managing risks that may arise during the pre-opening phase, this study is expected to provide valuable guidance for managers and entrepreneurs in the agrotourism sector to manage and mitigate risks during this particularly vulnerable phase in the life cycle of a tourism business.

2. Literature Review

2.1. Agrotourism

Agrotourism, a subset of rural tourism, involves visitors engaging in agriculture-based activities for recreation, education, and entertainment (Bernardo et al., 2004). It provides opportunities for farm entrepreneurs to diversify income streams and preserve rural landscapes (Hernández-Mogollón et al., 2011). This sustainable practice combines agriculture and tourism, fostering economic development, environmental conservation, and local employment opportunities, especially for women (Apaza-Panca et al., 2020). Agrotourism activities may include outdoor recreation, educational experiences, entertainment, hospitality services, and direct farm sales (Bernardo et al., 2004). Despite its potential benefits, such as increased income for farmers and preservation of rural heritage, agrotourism faces challenges in its implementation (Hernández-Mogollón et al., 2011). While rural tourism has seen

significant growth in countries like Spain, agrotourism has not yet achieved the same level of development, even though it has strong environmental components and potential to attract environmentally conscious tourists (Leco et al., 2013).

2.2. Risk Management

Risk management is a comprehensive process involving identifying, assessing, and mitigating risks to an acceptable level within an organisation (Berg, 2010; Kungwani, 2014; Stoneburner et al., 2002). It encompasses various physical, legal, and financial risks and aims to balance operational and economic costs with protective measures (Peltier, 2004; Kungwani, 2014). The risk management generally consists of three main stages: risk assessment, mitigation, and ongoing evaluation (Stoneburner et al., 2002). Organisations use risk assessment to determine potential threats, vulnerabilities, and associated risks, especially within information systems (Stoneburner et al., 2002). Risk mitigation involves implementing appropriate controls to reduce or eliminate identified risks (Stoneburner et al., 2002). Financial risk management focuses on risks that can be managed using traded financial instruments and considers the relationship between risk and return (Kungwani, 2014). Effective risk management is essential for organisations to protect their critical information and IT systems (Stoneburner et al., 2002).

Risk management is also vital for sustainable tourism development, involving identifying, analysing, and mitigating potential threats (Papaioannou & Shen, 2018). It aims to minimise losses from natural and anthropogenic disasters (Cunliffe, 2006) and to adapt to changing market conditions (Ural, 2016). Key risk factors in tourism development projects include infrastructure deficiencies, poor market demand, underdeveloped financial markets, and a lack of skilled labour (Awodele et al., 2021). Effective risk management requires a proactive approach with pre-established plans and strategies to address potential consequences (Papaioannou & Shen, 2018). This process involves planning and implementing measures to manage the adverse impacts of crises and disasters on tourism (Ural, 2016). To ensure successful tourism development, all stakeholders must be involved in risk management, integrating it into decision-making processes (Awodele et al., 2021). This comprehensive approach is essential for minimising future losses and promoting sustainable tourism practices (Cunliffe, 2006).

3. Methods

The research method used in this study is a qualitative approach. Qualitative research is grounded in post-positivist philosophy and is employed to examine natural conditions, with the researcher serving as the key instrument (Abdussamad, 2021). This method aims to reveal phenomena in a holistic and contextual manner by collecting data from natural settings and analysing them inductively (Fadli, 2021). It emphasises a deep understanding of social issues, with data presented in a descriptive or narrative form (Waruwu, 2024). Data collection techniques include observation, interviews, document analysis, and focus group discussions, while data analysis involves data reduction, data presentation, and drawing conclusions (Waruwu, 2024). Compared to quantitative methods, which rely on statistical processing, qualitative research is considered more effective in thoroughly and comprehensively explaining phenomena (Hayati, 2015).

In this study, the qualitative research stages were carried out as follows. First, the researcher conducted direct observations at the agrotourism site to identify potential risks during the pre-opening phase, observe real conditions in the field, and understand factors that could serve as sources of risk. Second, in-depth interviews were conducted with key

stakeholders such as the owner, management, and staff involved in agrotourism to gather further information regarding risks and the risk management strategies that were implemented or planned. Third, the data collected from observations and interviews were analysed inductively through the processes of data reduction, data display, and conclusion drawing. The researcher identified themes and patterns from the data to better understand the phenomenon being studied. Lastly, data triangulation was performed by comparing findings from various data sources to ensure the validity and reliability of the results.

4. Results and Discussion

This study employed qualitative data analysis, where information obtained from various informants was analysed to identify key operational risks related to safety, cleanliness, and maintenance. This analysis aids in understanding the scale and impact of each identified risk and find appropriate solutions. The results of the data analysis revealed several main operational risks at the agrotourism site.

The first major risk identified was related to accidents. The fast-moving vehicles on the road in front of the agrotourism site posed a danger to visitors, especially children crossing to access the area. Such incidents could lead to serious accidents, harming visitor safety and the reputation of the agrotourism site. To address this, a security team has been deployed to manage traffic and assist visitors in crossing safely. This team has communication tools and safety equipment to respond to emergencies. Additionally, street lighting has been installed to improve visibility at night and reduce the risk of accidents.

The second risk concerned cleanliness. The presence of flies disrupted visitor comfort and had the potential to contaminate food, thereby posing health risks. Regular pest control efforts using safe and environmentally friendly methods have been implemented to mitigate this.

The third major risk was associated with maintenance. Wooden buildings and playgrounds were prone to deterioration over time due to exposure to natural elements like rain and sunlight. This deterioration could endanger visitors and hinder operational activities. The agrotourism management responded by conducting routine infrastructure monitoring, especially for wooden structures, to detect early damage and perform timely repairs.

These operational risks—related to safety, cleanliness, and maintenance—can have significant negative consequences. First, visitor safety may be compromised, leading to discomfort, fear, reluctance to return, negative reviews, and even trauma. A lack of safety measures can increase the likelihood of accidents or crime, especially among vulnerable visitors like children, damaging the site's reputation as a safe destination. Second, visitor satisfaction may decline. Poor cleanliness and inadequate maintenance can cause severe dissatisfaction, prompting visitors to seek alternatives. Diminished service quality due to these shortcomings may lead to disappointment and a perceived lack of value. Third, the reputation of the agrotourism site may suffer. Incidents related to poor safety, cleanliness, or maintenance can significantly damage public perception and erode stakeholder trust, ultimately reducing the site's appeal and drastically reducing visitors and revenue.

To manage these operational risks effectively, the agrotourism site follows a strategic risk management approach consisting of four main steps: risk identification, risk analysis, mitigation planning, and monitoring and evaluation. The identification stage involves a comprehensive understanding of all operational, financial, and legal aspects. Risk analysis evaluates the likelihood and impact of potential risks to set management priorities. Based on this, appropriate mitigation strategies are developed, which may include preventive,

responsive, or risk transfer measures. Finally, continuous monitoring and evaluation are conducted to adjust to changes and improve decision-making.

Several strategic actions are recommended to minimise the negative impacts of operational risks and enhance service quality for visitors. To enhance safety, the site should install CCTV cameras in strategic areas such as entrances, play areas, animal interaction zones, and cash registers to monitor activity, prevent crime, and provide evidence in case of incidents. Increasing the number of trained security personnel, tightening security procedures (including baggage checks and visitor registration), and providing ongoing visitor education on safety protocols are also crucial.

In terms of cleanliness, thorough and regular cleaning of all areas, such as animal enclosures, toilets, dining areas, and public spaces, should be done using safe and eco-friendly cleaning products. Adequate waste bins must be provided and emptied regularly, with recycling encouraged when possible. Visitors should also maintain cleanliness through clear signage and awareness efforts.

Lastly, for maintenance, a structured approach should be adopted. Scheduled maintenance must be carried out routinely, supported by a comprehensive maintenance plan that includes problem identification, preventive measures, and repair solutions. High-quality, durable materials should be used in construction and renovations to extend the lifespan of facilities. Periodic monitoring and evaluation are essential to ensure maintenance strategies are effective and aligned with operational goals.

5. Conclusion

Agrotourism destinations must implement a comprehensive and well-structured risk management strategy to manage risks effectively during the pre-opening phase. Operational risks, particularly those related to safety, cleanliness, and maintenance, can significantly impact the visitor experience and the overall reputation of the destination. Therefore, identifying, analysing, and mitigating risks are essential to establishing a safe, clean environment. Implementing appropriate strategies helps reduce potential hazards and operational disruptions, improving service quality and enhancing the destination's competitiveness.

To improve operational risk management, several key recommendations should be adopted. First, security measures should be enhanced by installing CCTV in strategic areas, increasing the presence of well-trained security personnel, tightening access control and incident reporting procedures, and providing ongoing visitor education on safety. Second, cleanliness must be maintained consistently through routine cleaning, adequate waste disposal systems, and engaging visitors in cleanliness efforts. Lastly, sustainable infrastructure maintenance can be implemented by developing a regular maintenance schedule, using high-quality and durable materials, and conducting periodic monitoring and evaluation. By taking these strategic steps, agrotourism destinations can effectively minimise risks and provide all visitors a safer, more enjoyable, and high-quality tourism experience.

6. References

- Abdussamad, Z. (2021). *Metode Penelitian Kualitatif*. Syakir Media Press.
- Apaza-Panca, C. M., Santa-Cruz Arévalo, J. E., Maquera-Luque, P. J., & Ticona-Carrizales, L. (2020). Rethinking Tourism Public Policies to mitigate the effects of Covid-19. *Cuestiones Políticas*, 38(Especial), 119–133. <https://doi.org/10.46398/cuestpol.38e.08>

- Awodele, O., Ngige, O., & Balogun, T. (2021). Industry 4.0: The Impact of Technology on the Output Potentials of Skilled and Unskilled Workforce in Developing Countries. *ECIAIR 2021 3rd European Conference on the Impact of Artificial Intelligence and Robotics (p. 10)*. Academic Conferences and Publishing Limited.
- Berg, H. (2010). Risk management: procedures, methods and experiences. *Reliability: Theory & Applications*, 5((2(17))), 79–95.
- Bernardo, A., Ball, C., Nolasco, L., Moake, J. F., & Dong, J. F. (2004). Effects of inflammatory cytokines on the release and cleavage of the endothelial cell-derived ultralarge von Willebrand-factor multimers under flow. *Blood*, 104(1), 100–106. <https://doi.org/10.1182/blood-2004-01-0107>
- Cichowska, J., & Klimek, A. (2011). The Role of Agrotourism in the Development and Conversion. *Infrastruktura i Ekologia Terenów Wiejskich*, 11, 97–107.
- Cunliffe, S. (2006). *Tourism and cultural risk management. Of the Past, for the Future: Integrating Archaeology and Conservation*. The Getty Conservation Institute.
- Fadli, M. R. (2021). Memahami desain metode penelitian kualitatif. *Humanika, Kajian Ilmiah Mata Kuliah Umum*, 21(1), 33–54.
- Fatimah, S. E., Komara, A., Srisuk, P., Saha, S., & Rahmatika, D. N. (2024). Educational Tourism of Local Wisdom Products in Thailand. *JOURNAL OF SUSTAINABLE COMMUNITY SERVICE*, 4(2), 135–142. <https://doi.org/10.55047/jscs.v4i2.571>
- Halimah, A. N., Widayanti, S., & Yuliati, N. (2024). Analysis of Operational Risk Management of Kampung Susu Dinasty Agrotourism in Sidem Village Gondang Subdistrict Tulungagung Regency. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, 8(1), 168–181. <https://doi.org/10.29040/ijebar.v8i1.12777>
- Hayati, N. (2015). Pemilihan metode yang tepat dalam penelitian (metode kuantitatif dan metode kualitatif). *Jurnal Tarbiyah Al-Awlad*, 4(1), 345–357.
- Hernández-Mogollón, J. M., Campón-Cerro, A. M., Leco-Berrocal, F., & Pérez-Díaz, A. (2011). Agricultural diversification and the sustainability of agricultural systems: Possibilities for the development of agrotourism. *Environmental Engineering and Management Journal*, 10(12), 1911–1921. <https://doi.org/10.30638/eemj.2011.255>
- Jumiyati, S., Arsyad, M., Hadid, A., Toknok, B., & Sjamsir, Z. (2020). Implementation of environmental-economic concepts through farming risk management in highland vegetable agroforestry. *IOP Conference Series: Earth and Environmental Science*, 575(1). <https://doi.org/10.1088/1755-1315/575/1/012061>
- Kungwani, M. P. (2014). Risk Management-An Analytical Study. *IOSR Journal of Business and Management (IOSR-JBM)*, 16(3), 83–89.
- Leco, F., Pérez, A., Hernández, J. M., & Campón, A. M. (2013). Rural tourists and their attitudes and motivations towards the practice of environmental activities such as agrotourism. *International Journal of Environmental Research*, 7(1), 255–264.
- Mahaliyanaarachchi, R. P. (2016). Pp 1-12 Awarded as the best paper at the Kuala Lumpur International Agriculture. *The Journal of Agricultural Sciences*, 11(1), 1–12.
- Papaioannou, E., & Shen, S. (2018). *Risk Management in Tourism Ventures*. Emerald Publishing Limited.
- Peltier, T. R. (2004). Risk analysis and risk management. *Information Systems Security*, 13(4), 44–56. <https://doi.org/10.1201/1086/44640.13.4.20040901/83732.7>
- Privitera, C. M., Renninger, L. W., Carney, T., Klein, S., & Aguilar, M. (2010). Pupil dilation during visual target detection. *Journal of Vision*, 10(10:3), 1–14. <https://doi.org/10.1167/10.10.3>
- Stoneburner, G., Goguen, A., & Feringa, A. (2002). Risk Management Guide for Information Technology Systems. *Nist Special Publication*, 800(30), 800–830. <https://doi.org/10.1517/14728222.10.2.289>
- Syamsiah, J., Rahayu, R., & Binafsihi, W. (2020). Soil properties and shallot yield responses

- to different salinity levels. *Sains Tanah*, 17(1), 30–34. <https://doi.org/10.20961/stjssa.v17i1.41566>
- Tew, C. (2010). Importance of Agritourism for Agripreneur Goal Accomplishment. *University of Missouri-Columbia*.
- Tshekladze, M., & Sulaberidze, S. (2022). Possible Risks in Agritourism and Ways To Overcome Them (Based on the Example of the Guria Region). *Three Seas Economic Journal*, 3(4), 52–59. <https://doi.org/10.30525/2661-5150/2022-4-8>
- Ural, M. (2016). Risk management for sustainable tourism. *European Journal of Tourism, Hospitality and Recreation*, 7(1), 63–71. <https://doi.org/10.1515/ejthr-2016-0007>
- Utama, I. G. B. R. (2014). *Agrotourism as an Alternative form of tourism in Bali Indonesia* (Summary of Paperback:, Scholars' Press (October 22, 2014), ISBN-10: 3639667123, ISBN-13, 978-3639667127.).
- Waruwu, M. (2024). Metode Penelitian dan Pengembangan (R&D): Konsep, Jenis, Tahapan dan Kelebihan. *Jurnal Ilmiah Profesi Pendidikan*, 9(2), 1220–1230. <https://doi.org/10.29303/jipp.v9i2.2141>