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Strategic Environmental Management: Integration Of Environmental Scanning, Risk, Sustainability And Organizational Strategy

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Abstract

Environmental management in organizations requires a strategic approach that integrates environmental aspects with the organization's decision-making process. This study aims to identify strategic components in environmental management and establish the relationship between environmental analysis, risks, sustainability objectives, and organizational strategy. The study uses a Narrative Literature Review approach by reviewing five journals that discuss external environmental analysis, environmental risk management, mitigation, social and environmental responsibility, sustainability objectives, and environmental performance. The results of the study indicate that environmental scanning can be the basis for identifying changes, opportunities, threats, and risks faced by organizations. Identified risks then require mitigation strategies and organizational responses that consider environmental aspects and stakeholder involvement. The results of risk management can then be translated into specific and measurable sustainability objectives, before being integrated into organizational strategies and actions. Furthermore, environmental performance becomes one indicator to evaluate the effectiveness of the strategy and its relationship to organizational goals. Based on the literature synthesis, this study produces a conceptual framework for Strategic Environmental Management that connects environmental scanning, environmental risk, sustainability objectives, and organizational strategy in a continuous process through monitoring and review. This framework demonstrates that environmental management needs to be viewed as a strategic and integrated process.

Keywords:Strategic Environmental Management; Environmental Scanning; Environmental Risk; Sustainability Objectives; Organizational Strategy

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INTRODUCTION

Environmental management is increasingly important to integrate into organizational strategy because environmental challenges are not only related to regulatory compliance but also relate to operational efficiency, sustainability, reputation, and the achievement of organizational goals. Syamira and Cerya (2025), in a study entitled The Effect of Green Management Strategy Implementation and Environmental Performance on Profitability in Consumer Goods Companies Listed on the Indonesia Stock Exchange in 2021–2023, showed that green management strategies, as measured by ISO 14001, had a positive and significant effect on company profitability. Meanwhile, environmental performance, as measured by PROPER, did not show a significant effect partially, although both variables simultaneously had a significant effect on profitability. These findings indicate that environmental management needs to be positioned as part of a business strategy, not simply to fulfill administrative obligations. Thus, organizations need to consider how external environmental conditions, stakeholder demands, and opportunities for efficiency improvement are translated into strategic decisions that provide both environmental benefits and economic value.

This perspective is reinforced by Widodo (2026) through the study Environmental Management Strategy (Eco-Pesantren): Field Study of Sanitation and Hygiene Management at Anwarul Huda Islamic Boarding School, Malang. This study shows that the success of environmental management is determined by the integration of planning, implementation, monitoring, and evaluation, supported by written policies, leadership, and the active participation of organizational members. Environmental management is not only implemented through technical actions, but also integrated into the vision, values, and culture of the organization so that it can run consistently and sustainably. Although focused on the educational environment, these findings illustrate that the effectiveness of environmental strategies requires structured managerial mechanisms and the involvement of all stakeholders. When linked to the research of Syamira and Cerya (2025), both studies demonstrate two complementary dimensions: the importance of the relationship between environmental management and organizational performance and the importance of integrating policies and management processes in the implementation of environmental programs.

Various approaches have been used to help organizations address environmental issues for sustainability. However, studies on environmental management still encompass diverse perspectives. This indicates the need for studies that can view these various perspectives in a more integrated manner. Based on the description above, the research problem formulation in this study is what are the strategic components in environmental management, and how are the relationships between environmental analysis, risks, sustainability objectives, and organizational strategy. The purpose of this

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study is to identify strategic components in environmental management and establish the relationship between environmental analysis, risks, sustainability objectives, and organizational strategy through a literature review. This study is expected to provide a conceptual understanding of the main components of Strategic Environmental Management and serve as a basis for developing a framework that integrates environmental aspects with the organization's strategic processes.

RESEARCH METHODS

This study uses a Narrative Literature Review as its primary approach. A narrative literature review is a qualitative approach used to examine various previous research findings relevant to a specific topic. In this study, the literature review focused on identifying strategic components in environmental management and the interrelationships between environmental analysis, risk management, sustainability objectives, and organizational strategy. The narrative literature review approach was chosen because it can provide a comprehensive overview of previous research findings on a specific topic and serve as a starting point for further research. This research was used to construct a narrative that integrates various research findings and identifies research gaps that still exist in previous studies (Rakhmawan et al., 2026).

The literature sources for this study were obtained through the Google Scholar and Semantic Scholar databases, which were selected because they have extensive literature coverage and provide access to various scientific publications, such as journal articles, proceedings, and theses from various scientific fields. The literature collection process was carried out using keywords related to environmental management, environmental analysis, risk management, sustainability goals, and organizational strategy. The literature used was published within the last five years, namely 2021–2026, with the aim of obtaining relevant sources and reflecting the latest research developments. Next, the literature was selected based on topic suitability, relevance to the research objectives, and its relationship to the relationship between environmental analysis, risk, sustainability goals, and organizational strategy. Based on this screening process, five journal articles were selected as the primary sources in compiling this narrative literature review (Rakhmawan et al., 2026).

THEORETICAL BASIS

Environmental Management

According to Che Ku Kassim et al., (2022) in Hasan, Wijayanto (2025), environmental management is a system for managing the environment by balancing economic aspects, which illustrates a company's environmental performance, which is expected to increase company value. The findings of research conducted by Deswanto

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and Siregar (2018) show that environmental performance has a positive impact on increasing company value. This finding is consistent with the results of a study conducted by Nakao et al., which emphasized that the implementation of effective environmental management can create operational efficiency, reduce environmental risks, and strengthen the company's reputation in the eyes of stakeholders. Through structured environmental management, companies can not only comply with regulations and fulfill their social responsibilities, but also increase their attractiveness to investors and create long-term economic value (Hasan & Wijayanto, 2025).

Environmental Analysis

Organizational environmental analysis includes conditions, situations, circumstances, events, and various influences within and around the organization that can affect the organization's sustainability and development through internal strengths and weaknesses as well as external opportunities and challenges, so that internal and external environmental analysis is needed to improve organizational quality (Fikri et al., 2024). The internal environment includes resources, structure, culture, and organizational capabilities that form the basis for identifying strengths and weaknesses (Octavia et al., 2020; David, 2015), while the external environment includes factors beyond the organization's control that can influence the company's direction, decisions, and strategies (David, 2010; William, 2001; Pearce & Robinson, 2014). Therefore, internal and external environmental analysis is needed to identify strategic factors and determine the organization's response to environmental changes (Fikri et al., 2024).

Risk Management

Risk management is a systematic process for identifying, assessing, controlling, and monitoring risks that may arise in a business activity or financial institution (Dayu et al., 2023). Risk management theory defines four stages of risk management: risk identification, risk measurement, risk monitoring, and risk limit implementation (Nasution et al., 2024). Risk is defined as something that depends on the type of risk faced in a particular situation, which can pose obstacles to achieving organizational goals (Chairane et al., 2025).

Sustainable Development

According to Emil Salim, sustainable development is a development process that optimizes the use of natural and human resources by aligning natural resources with human development. According to Sofyan Effendi, sustainable development is a development process that utilizes existing resources, investment direction, technological development direction, and institutional changes that are carried out in harmony and with

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attention to current and future potential to meet the needs and aspirations of society. Sustainable development is defined as development that maintains the sustainability of social life, development that maintains the improvement of economic welfare, and development that maintains environmental quality. A society supported by governance that ensures the implementation of development that will improve the quality of life from one generation to the next (Veronica et al., 2022).

Organizational Strategy

Organizational strategy is a crucial component in ensuring the organization's continuity and competitiveness in a dynamic and competitive environment. Effective strategy requires clear planning through vision, mission, and objectives, supported by strong leadership and communication (Whittington, 2003; De Feo & Janssen, 2001). Strategy in action is the implementation stage of strategic planning through programs, policies, resource allocation, and operational activities to achieve long-term goals (David, 2011). Thus, organizational success is determined not only by the quality of planning, but also by the ability to implement strategies adaptively, collaboratively, and timely in response to environmental changes, thereby supporting sustainability and building long-term excellence (Muharam et al., 2025).

RESULTS AND DISCUSSION

Table 1. Summary of Narrative Review Results

	Author & Year	Research Focus	Method	Key Findings	Strategic Components	Research Gap	Relation to Research Objectives
1	Chairane, Nurlaila, & Syahriza (2025)	Implementation of TJSL through a risk management perspective in PT Pelindo Multi Terminal's waste sorting education program.	Descriptive qualitative, case study.	Identified risks such as low environmental awareness, limited infrastructure, and stakeholder resistance. Mitigation was carried out through accountability,	*Environmental Risk; Risk Mitigation; Stakeholders; Environmental Responsibility; Sustainability*	The focus of the research is on the implementation of the TJSL program and its risk management, so it has not explained how the results of environmental analysis systematically become input for risk identification	Supports environmental risk, risk mitigation, and sustainability components, and demonstrates the importance of stakeholders in environmental strategies.

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				transparency, stakeholder participation, and ISO 26000 integration.		and then translated into organizational strategy.	
2	Hasan & Wijayanto (2025)	The influence of green innovation, environmental investment, environmental management, and environmental performance on firm value.	Quantitative; panel data regression.	Environmental performance has a significant positive effect on company value, while green innovation has a significant negative effect and environmental investment and management do not have a significant effect on company value.	*Environmental Management; Environmental Performance; Organizational Values*	Focus on the relationship of environmental factors to corporate value, not on the process by which environmental issues are analyzed, risks are prioritized, sustainability goals are set, and then integrated into the organization's strategy.	Supports the relationship between environmental management, environmental performance, and organizational value and demonstrates the importance of incorporating environmental performance into organizational strategy.
3	Azzahra, Syah, Indradewa, & Sofia (2026)	Integration of external environmental analysis and risk management to support the sustainability of the Modern Islamic Boarding School.	Descriptive case study; Porter's Five Forces, PEST, EFE, and ISO 31000.	*Environmental scanning*used to identify opportunities and threats, then translated into risk	*Environmental Scanning; Environmental Risk; Risk Assessment; Risk Treatment; Monitoring; Sustainability*	It has integrated environmental scanning and risk management, but the context is specific to educational organizations and has not	It is the main basis for the relationship between environmental scanning, environmental risk, risk treatment, sustainability/str

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				identification, risk analysis, risk treatment, residual risk, and monitoring & review.		explicitly developed a broader conceptual relationship between environmental scanning, risk, sustainability objectives, and organizational strategy.	ategic adaptation.
4	Setiarso & Widyatmoko (2025)	Environmental and economic risk analysis in the Dhoho Kediri International Airport access road construction project.	Quantitative; surveys, interviews, and document analysis.	Identify risks such as habitat loss, air pollution, and soil erosion and develop mitigation strategies to reduce environmental impacts and support project sustainability.	*Environmental Risk; Risk Assessment; Mitigation Strategy; Environmental Protection; Project Sustainability*	Research focuses on the identification and mitigation of project risks, so it has not connected this process to broader environmental scanning and organizational sustainability goals at a strategic level.	Supporting environmental risk, mitigation strategy, sustainability relationships.
5	Rahmanita (2026)	Implementation of SMART Goals in risk management of environmentally based tourist destinations in Tukad Bindu, Denpasar.	Descriptive qualitative; observation, interviews, and questionnaires.	SMART Goals help make mitigation strategies specific, measurable, realistic, relevant, and time-bound, and integrate environme	*Sustainability Objectives; Risk Mitigation; SMART Goals; Performance Indicators; Stakeholder Participation*	Focuses on SMART-based goal setting and mitigation, but has not yet outlined how these sustainability goals are derived from the environmental scanning and	Supports the relationship between risk, sustainability objectives, strategic action and provides a basis for including measurable goals in the framework.

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				ntal, social, and economic aspects.		risk assessment process and how these goals are integrated into organizational strategy.	

Strategic Components in Environmental Management

Strategic components in environmental management are elements that organizations use to integrate environmental considerations into the planning, decision-making, and implementation of business strategies. These components form an integrated strategic framework. Environmental analysis serves to identify internal and external conditions and relevant environmental issues. The results of the analysis form the basis for risk management to identify and control potential threats to the achievement of organizational goals. Furthermore, sustainable development provides direction and targets that consider the balance of environmental, economic, and social aspects. All these results are then integrated into organizational strategy through planning, resource allocation, and program implementation, while environmental management becomes an operational system for implementing, monitoring, evaluating, and improving environmental performance in a sustainable manner. According to Sudrajat et al. (2023), environmental management accounting (EMA) plays a role in providing physical and monetary information related to resource use, energy and water consumption, waste generation, emissions, and environmental management costs to support managerial decision-making. This information helps organizations identify environmental impacts, control costs, improve resource efficiency, and evaluate environmental performance. Thus, integrating environmental aspects into business strategy not only supports ecosystem protection but also promotes operational efficiency and long-term business sustainability. EMA can be positioned as a supporting instrument that connects environmental scanning, risk management, sustainability goals, and organizational strategy to achieve more integrated environmental management oriented toward long-term sustainability.

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The Relationship between Environmental Analysis, Risk, Sustainability Goals, and Organizational Strategy



Figure 1. Strategic Environmental Management Model

Azzahra et al. (2026)examines the integration of external environmental analysis and risk management in supporting organizational sustainability. This study uses Porter's Five Forces, PEST Analysis, and External Factor Evaluation (EFE) to identify external environmental opportunities and threats, which are then mapped into a risk management process based on ISO 31000:2018, an international risk management guideline that emphasizes the integration of risk management into all organizational processes and the role of leadership. The results show that environmental analysis can be the basis for identifying and prioritizing risks and determining mitigation actions. This finding contributes to the concept of Strategic Environmental Management by placing environmental scanning as the initial stage to obtain information that forms the basis for risk management (Azzahra et al., 2026).

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Setiarso and Widyatmoko (2025) This study discusses the environmental and economic risks in the Dhoho Kediri International Airport access road construction project. The study identified various environmental risks, including habitat loss, air and noise pollution, and soil erosion, and then formulated mitigation strategies to reduce the resulting impacts. These results indicate that risk identification needs to be followed by concrete management actions to control environmental risks and maintain project sustainability. In the context of Strategic Environmental Management, this study strengthens the relationship between environmental risk and mitigation strategy, namely that risk assessment results need to be translated into strategic actions in environmental management (Setiarso & Widyatmoko, 2025).

Chairane et al. (2025)examines the implementation of Social and Environmental Responsibility (TJSL) through a risk management perspective in the waste sorting education program of PT Pelindo Multi Terminal Belawan. The study shows risks in the form of low environmental awareness, limited infrastructure, and potential stakeholder resistance, which are then responded to through strengthening accountability, transparency, stakeholder participation, and the application of ISO 26000 principles. These findings indicate that environmental risk management requires not only technical actions, but also organizational responses and stakeholder involvement. Within the framework of this research, the journal expands the concept of risk management by showing the importance of stakeholder engagement and environmental responsibility in implementing organizational sustainability strategies (Chairane et al., 2025).

Rahmanita (2026)discusses the application of SMART Goals in risk management at an environmentally-based tourism destination in Tukad Bindu, Denpasar. The study shows that mitigation strategies can be directed through Specific, Measurable, Achievable, Relevant, and Time-bound objectives, thus making risk management actions more focused and evaluable. This approach also integrates environmental, social, and economic aspects in determining destination management objectives. These findings are relevant to Strategic Environmental Management because they demonstrate that the results of risk identification and management need to be translated into clear and measurable sustainability objectives to serve as a basis for implementing organizational strategies (Rahmanita, 2026).

Hasan & Wijayanto (2025) This study analyzed the influence of green innovation, environmental investment, environmental management, and environmental performance on company value in the energy sector. The results showed that environmental performance had a positive and significant effect on company value, while green innovation, environmental investment, and environmental management did not all show a significant effect. These findings indicate that the existence of environmental activities or investments does not automatically generate organizational value, so it is important

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for organizations to ensure that environmental strategies produce measurable and evaluable performance. Within the framework of Strategic Environmental Management, this study contributes to the relationship between organizational strategy, environmental performance, and organizational value, which complements the stages of environmental analysis, risk, and sustainability objectives in the developed framework (Hasan & Wijayanto, 2025).

Based on a review of the five studies, it can be seen that each journal contributes to a different component of Strategic Environmental Management. Azzahra et al. (2026) provide a foundation for the environmental scanning and risk identification stages. Setiarso and Widyatmoko (2025) demonstrate how environmental risks are translated into mitigation strategies. Chairane et al. (2025) expand on mitigation strategies to include stakeholders and environmental social responsibility. Rahmanita (2026) demonstrates the importance of measurable sustainability objectives, while Hasan and Wijayanto (2025) link environmental performance to organizational values. Synthesizing these five studies reveals that the components of environmental management can be placed in a more integrated relationship. Environmental scanning generates information about changes, opportunities, and threats facing an organization. This information serves as the basis for identifying and assessing risks. Prioritized risks then require mitigation strategies and organizational responses. Furthermore, these strategies need to be directed toward specific and measurable sustainability goals. Implementing strategies results in environmental performance that can be evaluated and linked to organizational performance. The monitoring and evaluation process can then provide feedback for the organization to make adjustments to environmental conditions.

CONCLUSION

Based on the results of a review of five journals, it can be concluded that Strategic Environmental Management is an approach that integrates environmental scanning, environmental risk management, sustainability objectives, and organizational strategy in a continuous process. Environmental scanning serves as the basis for understanding environmental changes, opportunities, and threats, which are then used in risk identification and management. The results of risk management are then directed into specific and measurable sustainability goals and translated into organizational strategies and actions. The implementation of the strategy then produces environmental and organizational performance that can be evaluated through monitoring and review as feedback for the next process. Thus, the literature synthesis produces a framework that shows that environmental management needs to be part of the organization's strategic process.

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