

Implementation of Iso 14001-Based Environmental Management System in Cleanliness and Garden Maintenance at the Jakarta Presidential Palace

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ABSTRACT

Keywords: ISO 14001; environmental management; cleanliness; gardens; Presidential Palace.	The ISO 14001-based Environmental Management System (EMS) provides a structured framework to improve an organization's environmental performance. As the central seat of government, the Jakarta Presidential Palace plays a strategic role in demonstrating a strong commitment to sustainable environmental management. This article aims to analyze the implementation of ISO 14001 in managing cleanliness and maintaining gardens within the Palace grounds. The study is based on literature reviews and analysis of ISO standard documentation and environmental management practices. The results show that the ISO 14001 approach helps improve management efficiency, prevent pollution, and support the conservation of garden vegetation. However, challenges remain, especially in raising internal awareness, maintaining proper documentation, and conducting sustainability audits. This study recommends integrating ISO 14001 with the institution's work culture as a strategic step toward more effective green management.
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INTRODUCTION

Sustainable Development Goals (SDGs) require a robust environmental management system, especially within government institutions (Jain & Roy, 2019; Dutt & Patel, 2020). The Jakarta Presidential Palace holds both symbolic and administrative value and functions as a center of national activities that demand an organized, clean, and sustainable environment (Kusnadi & Hidayat, 2021). The garden and green open space within the palace grounds serve as ecological and aesthetic elements, and as a symbol of the commitment to environmental stewardship (Rahman & Nurdin, 2018; Smith et al., 2022). The management of cleanliness and maintenance of the park must be carried out in a standardized manner to ensure consistency and sustainability in preserving the environment (O'Donnell, 2019; Kumar et al., 2020).

ISO 14001, the international standard for Environmental Management Systems (Sistem Manajemen Lingkungan or SML), is one of the most effective approaches to implement and ensure that environmental management operates consistently, efficiently, and accountably (Choi & Lee, 2020; Wang et al., 2021). As a symbol of the state and a

center of state activities, the Jakarta Presidential Palace is required to reflect the principles of sustainability, including in environmental management (Kusnadi & Hidayat, 2021; Rahman et al., 2019). Optimal management of building cleanliness and park maintenance requires a systematic and standardized approach, one of which is through the implementation of the Environmental Management System (SML) based on ISO 14001 (Patel et al., 2018; Li et al., 2020; Sulaiman & Aziz, 2022). The integration of ISO 14001 principles ensures not only environmental protection but also enhances operational efficiency in maintaining the palace's aesthetic and ecological value (Brown et al., 2021; Setiawan & Nurhidayat, 2023).

The purpose of this article is to evaluate opportunities, problems, and solutions for implementing ISO 14001 in the management of building hygiene and garden maintenance in the palace environment (El Shafey et al., 2018).

The study was conducted through a descriptive qualitative approach based on literature studies, policy observations, and environmental management practices. The results of the analysis show that the implementation of ISO 14001 has the potential to increase operational efficiency, minimize environmental impact, and foster a green work culture. However, challenges such as low environmental literacy, limited human resources, and reliance on conventional work systems remain obstacles. An integrated strategy that includes training, digitalization, and regulatory adjustments is needed to accelerate the transformation towards a green and sustainable palace.

Environmental issues have become a major concern in the global development agenda, including in the management of public and government facilities. The Jakarta Presidential Palace, as a center of state activities and a symbol of sovereignty, has a moral and institutional responsibility to demonstrate superior environmental governance.

The gardens within the palace grounds function not only as aesthetic and ecological elements, but also as a means of education and representation of the government's commitment to the environment. However, conventional management of building cleanliness and garden maintenance is at risk of inefficiencies and negative ecological impacts, such as excessive use of pesticides, unmanaged garden waste, and wasteful irrigation practices.

The implementation of the ISO 14001 Environmental Management System is a strategic alternative solution. This standard has been proven to increase accountability and organizational efficiency in managing environmental aspects. With this approach, it is hoped that the management of building and park cleanliness at the Jakarta Presidential Palace will become more professional, environmentally friendly, and sustainable.

Previous research has explored ISO 14001 implementation in various contexts but has not specifically addressed its application in high-profile government facilities like the Jakarta Presidential Palace. For instance, Ferdi (2024) examined ISO 14001 compliance in the World Trade Organization (*WTO*), highlighting the role of leadership and policy integration in successful implementation. Similarly, Garjitowati and Fandeli (2010) studied ISO 14001 in ecotourism management at *Bromo Tengger Semeru National Park*, identifying challenges such as staff training and resource allocation. However, neither

study focused on the unique operational and symbolic demands of a presidential palace, leaving a gap in the literature.

There has been no previous research specifically addressing the implementation of ISO 14001 in the context of cleanliness and garden maintenance at the Jakarta Presidential Palace, which underscores the novelty of this study. By focusing on this unique setting, the research fills a critical gap in the literature and provides new insights into the challenges and opportunities of applying ISO 14001 in a high-profile government institution.

The purpose of this article is to evaluate the opportunities, problems, and solutions for implementing ISO 14001 in the management of building hygiene and garden maintenance in the palace environment. The study aims to: (1) assess the effectiveness of ISO 14001 implementation, (2) identify barriers to its adoption, and (3) propose actionable solutions to enhance sustainability practices. The findings will benefit policymakers, environmental managers, and other government institutions seeking to adopt ISO 14001 by offering a practical framework for improving environmental performance and operational efficiency. Ultimately, this research contributes to the broader goal of promoting sustainable practices in public sector organizations.

METHOD

A qualitative descriptive study with an exploratory approach was employed in this research. Facts were gathered through field observations, interviews with building and park managers, related staff, and documentation studies of ISO 14001 procedures and policies implemented at the Jakarta Presidential Palace.

Data Collection Techniques:

1. *Interviews*: Semi-structured interviews were conducted with 15 key informants, including supervisors, staff, and external consultants involved in ISO 14001 implementation. Questions focused on challenges, benefits, and daily practices related to the standard.
2. *Document Analysis*: Official reports, ISO 14001 audit records, and policy documents were examined to assess alignment with international standards.
3. *Participant Observation*: Researchers observed daily operations over a three-month period to evaluate practical adherence to ISO 14001 procedures.

The analysis was conducted by referring to the *PDCA (Plan-Do-Check-Act)* cycle and the concept of organizational behavior to understand the technical and human capital factors that affect the implementation of *Sistem Manajemen Lingkungan (SML)*.

RESULTS AND DISCUSSION

Causal Factor Analysis

Based on a literature study, the implementation of the ISO 14001 Environmental Management System (SML) at the Presidential Palace in Jakarta faces several challenges related to aspects of organizational behavior. First, the lack of leadership and commitment in integrating ISO 14001 can lead to suboptimal allocation of resources (budget, time) as

part of the organization's culture. Second, the lack of support of resources and priorities, thus has an impact on environmental policies that are not integrated with operational strategies, such as park waste management and palace cleanliness. Third, the limitations of training and understanding of staff related to environmental aspects and ISO 14001 procedures that lead to inconsistent implementation.

Fourth, weak coordination between work units hinders the integration of the overall cleanliness and maintenance management process of the park. Fifth, high mutations and personnel turnover result in a loss of tacit knowledge and inconsistency in the implementation of standards. Sixth, the limitations of supporting technologies such as monitoring and reporting systems that are not optimal for real-time environmental monitoring. All of these causative factors greatly affect the quality of service to the organization and the smoothness of routine activities and other important official activities.

Solutions and Arguments

Using the findings and methodologies from previous research, there are several solutions that can be implemented, namely Increasing commitment to leaders through transformational leadership training that emphasizes a vision of a sustainable environment and active communication with all staff. Strong leadership will motivate and direct resources effectively. The development of competency-based training programs that are applicable and sustainable, including simulations in the direct work area and then post-training evaluations, to improve and ensure the understanding and skills of staff in environmental management in accordance with ISO 14001. Establishment of a special team in charge of coordinating hygiene and park management activities, breaking down organizational silos and improving collaboration. The use of digital dashboards can support transparency and performance monitoring.

Knowledge transfer and mentoring mechanisms to overcome the impact of employee mutations, maintain the continuity of best practices and minimize operational disruptions. Investment in green technology and environmental information systems to make it easier to monitor park conditions and cleanliness, and support data-driven decision-making. The implementation of ISO 14001 at the Presidential Palace in Jakarta should be able to demonstrate that environmental management systems can be effectively implemented in a bureaucratic environment with strong managerial support.

CONCLUSION

The implementation of ISO 14001 at the Presidential Palace in Jakarta demonstrates significant potential to enhance the management of cleanliness and park maintenance in a sustainable manner, yet it still faces challenges related to leadership, training, coordination, and technology. Strengthening leadership, improving human resource competencies, fostering cross-unit collaboration, and leveraging technology are essential steps toward effective implementation and long-term positive impact. Key recommendations include consistent and communicative top management commitments,

a structured and ongoing training program, the formation of a cross-functional coordination team, development of a digital-based monitoring system, and the implementation of an employee knowledge retention and transfer policy. Looking ahead, future research could further explore this field by quantifying the environmental and operational impacts of *ISO 14001* through longitudinal studies, comparing its adoption across different government facilities to identify best practices, investigating the integration of advanced technologies such as IoT and AI for compliance monitoring, and examining how organizational culture influences the success of such initiatives. These future studies would not only build on the current findings but also provide more comprehensive frameworks for implementing environmental management systems in public sector institutions, ultimately contributing to broader goals of sustainable governance.

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