

# A Review on Occupational Safety and Health in Malaysia

\*Roszi Naszariah Nasni Naseri<sup>1</sup> & Maryam Mohd Esa<sup>2</sup>

<sup>1</sup>Faculty of Business and Management, Universiti Teknologi MARA, Melaka Branch, Alor Gajah Campus, Malaysia

<sup>2</sup>Faculty of Business, Hospitality and Technology, Universiti Islam Melaka, Malaysia

\*Corresponding Author

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## ABSTRACT

This review examines the evolution, current state, and challenges of Occupational Safety and Health (OSH) in Malaysia, with a focus on identifying gaps in policy implementation and enforcement. The study reveals that while Malaysia has made significant legislative advancements, such as the enactment of the Occupational Safety and Health Act (OSHA) 1994, compliance remains inconsistent across industries, particularly in high-risk sectors like construction and manufacturing. Key findings highlight the need for stronger enforcement mechanisms, enhanced training programs, and increased awareness campaigns, especially among small and medium enterprises (SMEs). The review recommends targeted financial solutions, such as adoption grants for Safety Management Systems (SMS), to address resource constraints. Additionally, it suggests combining OSHA 1994's self-regulation approach with increased supervision in high-risk industries to improve compliance. These insights aim to guide policymakers and industry leaders in fostering a safer, more sustainable workplace environment aligned with Malaysia's economic and industrial growth.

**Keywords:** Occupational Safety and Health (OSH), Policy Implementation, Workplace Hazards, Safety Management Systems (SMS), OSH Framework

## INTRODUCTION AND BACKGROUND

Occupational Safety and Health (OSH) is a cornerstone in safeguarding workers and fostering sustainable economic growth within any nation. It not only protects employees from harm but also enhances productivity, reduces costs associated with workplace accidents, and contributes to economic resilience. In Malaysia, the rapid pace of industrialization and economic diversification over the past few decades has fundamentally reshaped the workplace landscape, introducing both new opportunities and heightened occupational risks. From the towering cranes of high-rise construction sites to the labour-intensive and often hazardous work in palm oil plantations, workers face a diverse array of occupational hazards. These challenges underscore the need for comprehensive safety measures and stringent enforcement of OSH policies (Department of Occupational Safety and Health (DOSH), 2023).

The urgency of addressing OSH gaps has been highlighted by several high-profile incidents. For example, the 2021 fire at a Selangor factory, which led to multiple fatalities and significant economic losses, serves as a grim reminder of persistent shortcomings in translating OSH policies into effective practice. Similar issues plague industries such as construction, agriculture, and manufacturing, which remain some of the most hazardous sectors in Malaysia. Such incidents not only cause irreparable harm to workers and their families but also undermine the reputation and sustainability of businesses (Hamid et al., 2022).

Despite significant advancements in OSH legislation, including the establishment of the Occupational Safety and Health Act (OSHA) in 1994, and ongoing efforts by the Department of Occupational Safety and Health (DOSH), Malaysia continues to struggle with ensuring consistent enforcement and compliance across industries. Recent statistics are particularly concerning. In 2022, the construction sector alone accounted for

over 30% of all reported workplace fatalities, highlighting that while regulatory frameworks exist, their implementation often falls short in high-risk sectors (DOSH, 2023). The situation is further exacerbated by the proliferation of small to medium enterprises (SMEs), which constitute a significant portion of Malaysia's economy. Many SMEs lack the financial resources, technical expertise, or awareness necessary to establish effective safety management systems (SMS), widening the gap between legislative intent and practical workplace safety (Che Man & Ali, 2023).

Given these challenges, a comprehensive review of Malaysia's OSH framework is imperative. Such a review would not only trace the historical evolution of OSH policies but also critically assess the current state of regulations, the effectiveness of enforcement mechanisms, and the roles played by both governmental and private entities. Additionally, it would highlight gaps in implementation and offer actionable recommendations to address them.

This study aims to provide a nuanced analysis of Malaysia's OSH landscape, exploring how existing frameworks can be strengthened to better protect workers. Key areas of focus include the role of enforcement agencies like DOSH, the importance of capacity-building programs such as those provided by the National Institute of Occupational Safety and Health (NIOSH), and the potential for public-private partnerships to improve compliance. By addressing these aspects, this review seeks to guide policymakers, industry leaders, and stakeholders in creating a safer, more inclusive work environment that aligns with Malaysia's aspirations for sustainable industrial and economic growth. Ensuring the well-being of workers is not just a moral imperative but also a strategic priority for Malaysia as it continues to advance toward becoming a high-income, industrialized nation.

## **HISTORICAL DEVELOPMENT OF OSH IN MALAYSIA**

The development of Occupational Safety and Health (OSH) in Malaysia has been a gradual but transformative journey, adapting to the nation's evolving industrial landscape. Malaysia's OSH framework has expanded in response to shifts in economic activities and workplace hazards, reflecting a significant progression across five distinct eras, each marked by unique legislative milestones and an expanding scope of worker protections (DOSH, 2023). Table 1 outlines these eras and key legislative developments.

**Steam Boiler Safety Era (Pre-1914):** OSH practices in Malaysia trace back to the Perak Boiler Enactment of 1890, one of the earliest legislative efforts aimed at safeguarding workers. During this period, tin mining was a major industry, and boilers—essential to mining operations—posed severe risks. This legislation mandated regular inspections to prevent explosions, a common hazard at the time, thus setting a precedent for safety regulations within hazardous industries (Rahman, 2021).

**Machinery Safety Era (1914–1952):** As Malaysia's industrial activities grew, so did the need for broader machinery safety regulations. The Machinery Enactment of 1932 built upon earlier boiler safety laws by including various types of industrial machinery. This enactment provided a more structured approach to worker safety, reflecting the country's transition from an agrarian economy to a more mechanized one, which introduced new risks (DOSH, 2023).

**Industrial Safety Era (1953–1967):** With industrial expansion in the post-war period, the Machinery Ordinance of 1953 was enacted. This ordinance significantly broadened OSH regulations, applying to diverse industrial machinery used across sectors beyond mining. The legislation included protective measures for workers exposed to increasingly complex mechanical processes, thus highlighting the government's growing recognition of industrial safety (Abdullah & Nasir, 2022).

**Industrial Safety and Hygiene Era (1970–1994):** As Malaysia embarked on rapid industrialization in the 1960s and 1970s, OSH regulations were further refined. The Factory and Machinery Act (FMA) of 1967 was introduced to address safety in manufacturing, particularly in sectors that were not traditionally machine-dependent. This act aimed to cover a wider range of occupational hazards, including exposure to harmful chemicals and poor workplace hygiene, which had become pressing issues in light of industrial growth (Malaysian Trade Union Congress, 2021).

Occupational Safety and Health Era (Post-1994): A pivotal moment in Malaysia's OSH history came with the enactment of the Occupational Safety and Health Act (OSHA) in 1994. OSHA 1994 marked a fundamental shift from prescriptive to self-regulatory approaches in workplace safety, empowering industries to take active roles in managing their own safety protocols. This era also expanded OSH coverage across all industries and emphasized a holistic approach to health and safety management, addressing a broader range of hazards than previous legislations (Rampal & Nizam, 2022). This milestone positioned Malaysia as one of the first Asian countries to adopt a comprehensive OSH framework, aligning with global standards and responding to local incidents, such as the Bright Sparklers fire in 1991, which underscored the need for proactive safety measures (Che Man & Ali, 2023).

Table 1: Evolution of OSH Legislation in Malaysia

Era	Key Legislation	Primary Focus
Steam Boiler Safety Era	Perak Boiler Enactment 1890	Boiler inspections for mining
Machinery Safety Era	Machinery Enactment 1913, 1932	Broader machinery safety regulations
Industrial Safety Era	Machinery Ordinance 1953	Expanded scope to various machinery industries
Industrial Safety and Hygiene Era	Factory and Machinery Act 1967	Addressed manufacturing and non-machinery risks
Occupational Safety and Health Era	OSHA 1994	Comprehensive OSH across all sectors

Each legislative era has contributed to building a comprehensive OSH framework that adapts to Malaysia's economic evolution and diverse workplace needs. While progress has been substantial, the challenges highlighted in OSHA's self-regulation approach point to the necessity of continued refinement to ensure consistent and effective safety practices across all sectors.

### Current Osh Framework and Key Agencies

Malaysia's Occupational Safety and Health (OSH) framework is governed by the Ministry of Human Resources, which oversees several key agencies that play crucial roles in ensuring workplace safety. These agencies include the Department of Occupational Safety and Health (DOSH), the National Council for Occupational Safety and Health (NCOSH), the Construction Industry Development Board (CIDB), the Social Security Organization (SOCSO), and the National Institute of Occupational Safety and Health (NIOSH) (DOSH, 2023).

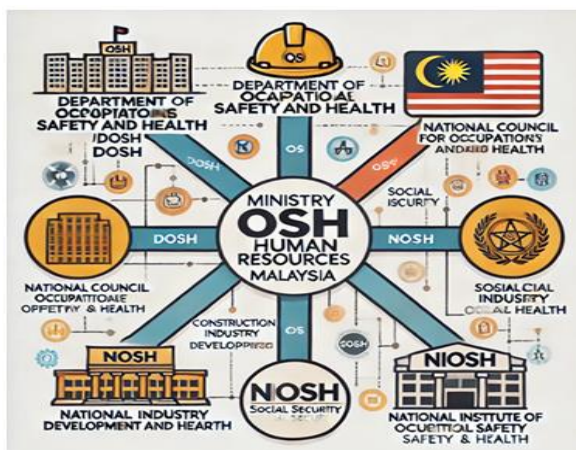


Figure 1: OSH Administrative Structure in Malaysia

The OSH administrative structure in Malaysia is a multi-agency framework that includes DOSH, NCOSH, CIDB, SOCSO, and NIOSH. Each agency plays a distinct role in policy formulation, enforcement, training, and social security, contributing to a comprehensive approach to workplace safety.

**DOSH:** This agency is primarily responsible for drafting policies, conducting inspections, and performing audits to ensure compliance with safety protocols. Its enforcement activities are vital for maintaining high safety standards in the workplace.

**NCOSH:** The council provides advisory services on policy development, manages statistical analyses of workplace incidents, and creates industry-specific codes of practice, thereby contributing to evidence-based decision-making in occupational safety (NCOSH, 2023).

**CIDB:** The board implements safety regulations within the construction industry, which includes the mandatory registration of contractors and the enforcement of the Green Card program to ensure compliance with site safety protocols.

**SOCSO:** This organization administers social security schemes that protect workers from accidents, occupational diseases, and disabilities, providing essential financial support and healthcare services.

**NIOSH:** NIOSH focuses on training, consultation, and research aimed at promoting workplace safety awareness and best practices among management and supervisors (Abdullah et al., 2022). Their initiatives are instrumental in fostering a culture of safety across various industries.

Overall, the collaborative efforts of these agencies form a comprehensive OSH framework that aims to reduce workplace hazards and enhance the safety and health of Malaysian workers.

### Evaluation of Osh Effectiveness and Challenges

While Malaysia has made strides in establishing a solid OSH foundation, significant challenges remain. Recent studies indicate that compliance with safety regulations is uneven, with sectors such as construction and manufacturing frequently underreporting adherence to safety protocols. According to Hamid et al. (2023), only 20% of processing plants in Malaysia consistently comply with safety regulations, underscoring a need for stronger enforcement and increased industry engagement in OSH practices.

Another recurring issue is the limited awareness and prioritization of OSH, particularly among small to medium enterprises (SMEs) (The Star, 2023). This lack of awareness is compounded by an overemphasis on productivity over safety, leading to higher accident rates in industries where safety management systems (SMS) are either weak or non-existent (Hamid et al., 2023). Furthermore, enforcement of safety standards across regions varies, with urban industries generally more compliant than rural ones, as shown in Table 2.

Table 2: Compliance Rates of Safety Management Systems by Industry

Industry	Compliance Rate (%)	Common Challenges
Manufacturing	20	Low SMS adoption, focus on productivity
Construction	35	Inconsistent enforcement, lack of training
Agriculture	15	Limited awareness, underdeveloped regulations

Source: Hamid et al., 2022

To address these challenges, Malaysia could benefit from adopting financial solutions such as adoption grants for SMEs to implement SMS. For example, the government could introduce targeted grants to help SMEs cover the costs of safety training and equipment, thereby reducing the financial burden on smaller enterprises.



Additionally, case studies from countries like Singapore, which have successfully implemented similar grant programs, could serve as a model for Malaysia.

Furthermore, Malaysia's OSH framework could be improved by aligning more closely with international standards, such as those set by the International Labour Organization (ILO). For instance, the ILO's guidelines on occupational safety emphasize the importance of worker participation in safety management, an area where Malaysia's framework could be strengthened. By incorporating more participatory approaches, Malaysia could enhance worker engagement in safety practices, leading to better compliance and fewer accidents.

Another area for improvement is the enforcement of OSH regulations in rural areas. Localized data from DOSH (2023) indicates that rural industries, particularly in agriculture and small-scale manufacturing, have significantly lower compliance rates compared to urban areas. This disparity suggests a need for more targeted enforcement efforts in rural regions, including increased inspections and awareness campaigns tailored to the specific challenges faced by these industries.

Finally, the self-regulatory approach of OSHA 1994 could be effectively combined with increased supervision in high-risk industries. For example, DOSH could implement a tiered enforcement system where high-risk industries, such as construction and manufacturing, are subject to more frequent inspections and stricter penalties for non-compliance. This approach would balance the flexibility of self-regulation with the accountability of increased oversight, leading to better safety outcomes.

## **CONCLUSION**

This review highlights Malaysia's OSH (Occupational Safety and Health) evolution, demonstrating significant strides in legislative improvements that have broadened OSH coverage across various sectors. However, despite these advancements, compliance with OSH regulations remains inconsistent across industries, revealing gaps in enforcement and awareness. This disparity underscores the need for targeted interventions to address both structural and behavioral barriers to achieving comprehensive OSH standards nationwide.

Key lessons from this review emphasize the importance of strengthening enforcement mechanisms to ensure adherence to safety standards and expanding OSH awareness campaigns to foster a proactive safety culture. Such efforts should focus on empowering both employers and employees with the knowledge and tools necessary to prioritize workplace safety. Addressing these challenges requires a multifaceted approach involving education, accountability, and collaboration.

To advance OSH in Malaysia, active partnerships between government agencies, private sectors, and policymakers are essential. Initiatives like enhanced training programs offered by institutions such as the National Institute of Occupational Safety and Health (NIOSH) can play a pivotal role in equipping the workforce with the necessary skills and knowledge. Simultaneously, stricter enforcement by agencies such as the Department of Occupational Safety and Health (DOSH) can ensure consistent compliance with OSH regulations, thereby reducing workplace hazards and incidents.

Ultimately, establishing a robust and well-enforced OSH framework is not only a matter of compliance but also a cornerstone for Malaysia's continued industrialization. By integrating workplace safety into the broader narrative of national economic growth and sustainability goals, Malaysia can create a safer, healthier, and more productive workforce. This alignment is critical for ensuring that the nation's pursuit of industrial and economic progress does not compromise the well-being of its workers but instead promotes long-term social and economic resilience.

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