

# **LEGAL ANALYSIS OF LEGAL PROTECTION FOR WORKERS IN THE AREA OF OCCUPATIONAL SAFETY AND HEALTH (OSH) IN THE INDUSTRIAL SECTOR (RESEARCH STUDY IN THE INDUSTRIAL AREA OF BATAM CITY)**

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## **Abstract**

Occupational Safety and Health (OSH) is a fundamental right of every worker that must be guaranteed through an adequate legal protection system. In the midst of the development of industrial area of Batam City as a national strategic area, the complexity of work relationship and high level of work risk become a challenge in the implementation of OHS protection. This research is motivated by the in-creasing number of work accidents in the industrial area of Batam City, which shows a gap between legal arrangements and implementation of labor protection. The purpose of this study is to analyze the ap-plicable legal arrangements related to OHS protection, assess the implementation of legal protection of workers in the field, and identify obstacles and strategic efforts that need to be made in the context of legal protection. The methods used in this research are normative juridical and empirical juridical ap-proaches, with data collection techniques through literature studies and interviews with relevant parties, including the Kepri Provincial Manpower Office, industrial companies, K3 training institutions, and K3 practitioners. The analysis was conducted by referring to the statute approach and socio-legal ap-proach, based on John Rawls' theory of justice, Lawrence M. Friedman's legal system theory, and Sudikno Mertokusumo's theory of legal certainty. The result shows that although the normative regu-lation on OSH protection is quite complete, its implementation in Batam City still faces various ob-stacles, such as lack of supervision, low legal awareness, and weak deterrent effect from legal sanctions. Comprehensive reform of OSH regulation, capacity building of labor inspectors, and synergy between government, employers, and workers in building OSH conscious culture are needed.

**Keywords:** *Legal Protection, Occupational Safety and Health (K3), Labor, Industry, Batam City.*

## **INTRODUCTION**

Occupational Safety and Health (OSH) has become a fundamental issue in industrial relations, particularly in rapidly developing regions such as Batam, Indonesia. As one of the most prominent industrial hubs in Southeast Asia, Batam attracts domestic and foreign investors in sectors such as electronics, shipbuilding, and manufacturing. This rapid industrial growth, while beneficial to the economy, creates significant risks to workers' safety and health.[1] The high number of workplace accidents and occupational diseases reported in Batam highlights the urgent need for stronger legal protection mechanisms for industrial workers. Legal protection for workers in Indonesia is guaranteed by several statutory frameworks. Law No. 13 of 2003 on Manpower emphasizes the employer's obligation to ensure safe working conditions. Law No. 1 of 1970 on Work Safety further stipulates preventive measures and sanctions for employers who neglect safety standards.[2] Additionally, Law No. 36 of 2009 on Health integrates occupational health into broader public health policies. However, despite the existence of these laws, enforcement remains a major challenge. Many industrial companies in Batam prioritize productivity and efficiency over compliance with OSH regulations, resulting in a gap between normative provisions and practical implementation. International labor standards, particularly those issued by the International Labour Organization (ILO), also play a significant role in shaping Indonesia's legal framework on OSH. ILO Convention No. 155 concerning Occupational Safety and Health and the Working Environment obliges member states to adopt a coherent national policy on OSH.[3] While Indonesia has ratified several ILO conventions related to labor rights, the translation of these standards into concrete industrial practices remains limited. This situation reflects a broader problem of harmonizing national legislation with international commitments. The importance of legal protection for workers extends beyond the prevention of accidents. It represents the state's constitutional responsibility to safeguard human dignity and ensure decent working conditions, as mandated by Article 27 paragraph (2) and Article 28D

paragraph (2) of the 1945 Constitution of Indonesia.[4] In the context of Batam, the enforcement of OSH laws directly affects not only workers' welfare but also industrial sustainability and the region's attractiveness to investors. A safe working environment increases productivity, reduces absenteeism, and enhances industrial competitiveness. This study, therefore, aims to conduct a juridical analysis of legal protection for workers in relation to OSH in Batam's industrial sector. It seeks to identify the legal framework governing OSH, evaluate the effectiveness of its implementation, and analyze challenges faced by regulatory bodies and companies. The research also provides recommendations for strengthening the role of law in ensuring safer industrial practices. Ultimately, the findings are expected to contribute to the improvement of OSH enforcement and the promotion of sustainable industrial development in Indonesia.

## **LITERATURE REVIEW**

### **2.1. Legal Framework of Occupational Safety and Health (OSH) in Indonesia**

The Indonesian legal system provides a comprehensive framework for Occupational Safety and Health (OSH), which aims to safeguard workers against risks arising from industrial activities. The main legislative basis is Law No. 1 of 1970 on Work Safety, which stipulates that every company must implement preventive measures to eliminate or reduce hazards in the workplace. This law emphasizes that employers are responsible for providing a safe working environment, proper protective equipment, and training programs for workers. Another important regulation is Law No. 13 of 2003 on Manpower, which explicitly recognizes workers' rights to occupational safety and health under Article 86. This provision affirms that employees are entitled to protection for their safety, health, and morality. Complementing this, Law No. 36 of 2009 on Health highlights occupational health as part of the broader right to health, underscoring the state's role in ensuring access to health services for workers. In addition to these primary laws, Indonesia has issued government regulations and ministerial decrees concerning OSH management systems, such as Government Regulation No. 50 of 2012 on OSH Management Systems (SMK3). This regulation requires companies with more than 100 employees or with high-risk activities to implement a structured OSH management system aligned with international standards. Despite the existence of these legal instruments, the main challenge lies in implementation. Many industrial companies in Batam, especially small and medium enterprises, lack awareness and commitment to fully applying OSH regulations. This discrepancy between law and practice reveals a gap in legal enforcement and monitoring. Therefore, analyzing the legal framework of OSH in Indonesia requires not only a review of statutes but also a critical evaluation of their effectiveness in practice.

### **2.2 Theories of Legal Protection**

The concept of legal protection for workers is rooted in the principle of social justice and the recognition of labor as a fundamental element of human dignity. According to Philipus M. Hadjon, legal protection can be divided into two forms: preventive protection, which ensures that rights are safeguarded through regulations before violations occur, and repressive protection, which provides remedies and sanctions after a violation has taken place. In the context of OSH, preventive protection includes the establishment of safety standards, inspection mechanisms, and training programs, while repressive protection involves penalties against employers who neglect safety obligations. From a broader perspective, Roscoe Pound's theory of law as a tool of social engineering emphasizes that law should guide and shape social behavior to achieve order and welfare. Applied to the field of labor law, OSH regulations function as instruments to influence corporate practices, ensuring that industrial development does not sacrifice workers' well-being. Similarly, Gustav Radbruch's idea of the three values of law—justice, utility, and legal certainty—is particularly relevant. OSH protection must balance justice for workers, usefulness for companies in maintaining productivity, and certainty through clear legal rules. In the Indonesian context, these theoretical perspectives demonstrate that legal protection for workers in OSH is not merely normative but also reflects broader social, economic, and ethical considerations. The failure to implement effective protection indicates a systemic issue where the balance among justice, certainty, and expediency is disrupted. Thus, legal theories provide a framework to critically assess the adequacy of existing regulations and their practical enforcement in Batam's industrial sector.

### **2.3 OSH in Industrial Practices in Batam**

Batam's industrial zone, as part of a Free Trade Zone (FTZ), is a major contributor to Indonesia's economic growth. However, this rapid industrialization has been accompanied by increasing risks of workplace accidents. Reports from the Batam Manpower Office indicate that cases of industrial accidents, particularly in shipbuilding and manufacturing, remain high compared to other regions in Indonesia. The causes often include inadequate safety training, poor maintenance of machinery, and insufficient use of personal protective equipment (PPE). Although large multinational corporations operating in Batam generally comply with OSH standards, smaller companies often neglect these obligations. This situation reflects a lack of enforcement and supervision by relevant authorities. The limited number of inspectors compared to the vast number of industrial companies makes comprehensive monitoring

difficult. Moreover, workers themselves frequently lack awareness of OSH rights, which further exacerbates vulnerability. Another challenge is the dominance of contractual labor in Batam. Contract-based employment relationships discourage workers from reporting safety violations due to fear of losing their jobs. This precarious condition undermines the implementation of OSH standards and indicates a structural imbalance in industrial relations. As a result, while the legal framework exists, its effectiveness depends heavily on institutional capacity and the empowerment of workers to assert their rights.

## **2.4 Comparative Perspective with ILO Standards**

International standards, particularly those of the International Labour Organization (ILO), provide valuable benchmarks for assessing Indonesia's OSH framework. The most relevant is ILO Convention No. 155 on Occupational Safety and Health, which emphasizes the need for a coherent national policy, preventive measures, and continuous improvement in OSH systems. In addition, ILO Convention No. 187 on the Promotional Framework for Occupational Safety and Health advocates for a culture of prevention, involving governments, employers, and workers alike. Although Indonesia has ratified several labor-related conventions, including those on freedom of association and elimination of forced labor, it has not yet ratified Convention No. 155. Nevertheless, many of its principles have been adopted into national legislation, such as the requirement for OSH management systems (SMK3). However, implementation in Batam often falls short compared to international standards. For instance, in countries like Singapore and Malaysia, OSH policies are supported by advanced monitoring technology and strict sanctions that create stronger deterrent effects. This comparative perspective highlights that Indonesia's OSH framework, while normatively sufficient, lags behind in enforcement and compliance. Learning from best practices in neighboring countries and aligning more closely with ILO conventions can enhance Indonesia's ability to protect workers in high-risk industrial areas like Batam.

## **METHODOLOGY**

This research adopts a juridical-normative and empirical approach to analyze the legal protection of workers concerning Occupational Safety and Health (OSH) in Batam's industrial sector. The juridical-normative approach focuses on the examination of legal norms, statutory regulations, and international labor standards related to OSH. Meanwhile, the empirical approach is used to assess the actual implementation of these norms in Batam's industrial practices, including challenges and enforcement gaps. The research specification is descriptive-analytical. This means the study does not merely describe the legal provisions but also analyzes their effectiveness in practice. The descriptive element outlines the applicable laws and regulations, while the analytical element evaluates the discrepancies between normative frameworks and their enforcement in the field.

The types of legal materials used consist of:

- a. Primary legal materials: Indonesian statutes and regulations, including Law No. 1 of 1970 on Work Safety, Law No. 13 of 2003 on Manpower, Law No. 36 of 2009 on Health, Government Regulation No. 50 of 2012 on OSH Management Systems, and relevant constitutional provisions.
- b. Secondary legal materials: academic books, journal articles, previous research on OSH, and official reports by the Ministry of Manpower and the Batam Manpower Office.
- c. Tertiary legal materials: supporting materials such as legal dictionaries, encyclopedias, and relevant statistical data.

For the empirical component, data collection techniques include interviews with key stakeholders, such as officials from the Batam Manpower Office, OSH inspectors, company representatives, and trade union leaders. Additionally, case studies of workplace accidents in Batam are analyzed to provide practical insights. Field observations in selected industrial companies were conducted to identify the application of OSH measures such as safety training, use of personal protective equipment (PPE), and risk management procedures. The data analysis method employs qualitative juridical analysis. Collected legal materials are systematically categorized and interpreted to identify principles, norms, and regulations governing OSH. Empirical findings are then compared with the normative framework to reveal discrepancies, compliance levels, and enforcement challenges. This triangulation method ensures that the conclusions drawn are both legally grounded and empirically validated. The research location is the Batam Industrial Area, which was chosen due to its significance as Indonesia's fastest-growing industrial hub and its high incidence of occupational accidents. By focusing on Batam, this research highlights the urgent need for improved OSH enforcement in regions where industrial expansion and labor exploitation intersect. Through this combined methodology, the study seeks to produce a comprehensive juridical analysis that not only identifies normative gaps but also offers practical recommendations for strengthening OSH protection for workers in Batam and beyond.

## **RESULTS AND DISCUSSION**

### **4.1 Implementation of OSH Regulations in Batam's Industrial Sector**

The enforcement of Occupational Safety and Health (OSH) regulations in Batam reflects both progress and persistent shortcomings. Large multinational corporations, particularly in the electronics and shipbuilding sectors, tend to comply with Law No. 1 of 1970 on Work Safety and Government Regulation No. 50 of 2012 on OSH Management Systems (SMK3). They generally provide Personal Protective Equipment (PPE), conduct risk assessments, and organize regular training sessions. These measures demonstrate that OSH implementation is feasible when companies allocate sufficient resources. However, many small and medium-sized enterprises (SMEs) fall short of compliance. Due to financial constraints and limited managerial capacity, OSH is often considered a secondary issue. This neglect results in poor maintenance of machinery, minimal training, and unsafe working conditions. Reports from the Batam Manpower Office reveal that only about 60% of inspected companies in 2022 had implemented SMK3 effectively. This indicates a significant gap between normative requirements and practical realities, primarily due to weak enforcement mechanisms and insufficient monitoring.

### **4.2 Challenges in Enforcement**

Several structural and institutional barriers continue to undermine the effective enforcement of OSH standards in Batam's industrial sector. The first and most significant challenge is the shortage of inspectors. With more than 2,000 registered industrial enterprises, Batam faces a severe imbalance between the number of inspectors and the scale of workplaces requiring supervision. This shortage reduces the capacity of government institutions to ensure compliance, as inspections become infrequent, delayed, or superficial. The second challenge lies in the entrenched culture of negligence among many employers. For a considerable number of business actors, compliance with OSH standards is perceived primarily as an economic burden. Employers frequently prioritize productivity, cost-efficiency, and short-term profit margins over long-term investments in safety and health. Consequently, safety equipment is often outdated, training programs are underfunded, and preventive systems are disregarded. A third challenge involves the precarious nature of employment. Many workers in Batam are hired under short-term or contractual arrangements, which discourages them from reporting safety violations. Fear of contract termination or retaliation silences many workers who witness unsafe conditions. As a result, incidents are underreported, and systemic problems remain hidden from regulators. The lack of a secure environment for whistleblowing undermines the legal principle of participatory protection, which emphasizes that workers should play an active role in maintaining safety standards.

### **4.3 Case Studies of Industrial Accidents in Batam**

Concrete case studies provide stark evidence of the consequences of inadequate OSH implementation. In 2022, a fatal accident occurred in one of Batam's shipyards when scaffolding collapsed due to the absence of safety harnesses and poor installation standards. Two workers lost their lives, and subsequent investigations revealed that the company had not conducted mandatory safety training or proper inspections. The tragedy highlights the systemic neglect of preventive measures in high-risk industries such as shipbuilding. Another case in 2023 involved chemical exposure in an electronics factory, where several workers suffered respiratory illnesses after prolonged contact with hazardous substances. Investigations revealed that ventilation systems were inadequate and that workers had not been provided with sufficient protective gear. These incidents not only endangered the health and safety of employees but also caused reputational and financial losses for the companies involved. Compensation claims, medical expenses, and decreased productivity contributed to declining competitiveness. These examples illustrate that neglecting OSH not only jeopardizes workers' constitutional rights but also threatens industrial sustainability and investor confidence in Batam.

### **4.4 Discussion: Legal Protection and Gaps**

The findings confirm that Indonesia's legal framework for OSH is normatively robust but weak in enforcement. The principle of preventive legal protection, as described by Hadjon, is undermined when companies disregard safety obligations until accidents occur. The repressive aspect of protection also suffers from lenient sanctions and limited judicial follow-up. Compared to international standards, especially ILO Convention No. 155, Batam's industrial practices still fall short in building a culture of prevention. This situation highlights a critical gap between law and practice. Strengthening enforcement requires not only stricter sanctions but also institutional reforms, such as increasing the number of OSH inspectors, enhancing inter-agency coordination, and adopting modern monitoring technologies. Workers must also be empowered through awareness programs and stronger union support to ensure they can assert their rights without fear of retaliation. Ultimately, improving OSH enforcement in Batam is not only a matter of protecting workers' constitutional rights but also of ensuring industrial sustainability.

and maintaining Batam's reputation as a safe and competitive investment destination. Without stronger enforcement, the promise of legal protection in OSH will remain largely aspirational rather than practical.

## **COMPARISON**

Based on Muh. Aliuddin Arief's thesis, the comparison of Occupational Safety and Health (OSH) protection in Batam with regional and international practices highlights that the Indonesian framework is normatively strong but practically weak. Indonesia has already established comprehensive regulations on OSH through Law No. 1 of 1970 on Work Safety, Law No. 13 of 2003 on Manpower, and Government Regulation No. 50 of 2012 on OSH Management Systems (SMK3). These laws ensure that workers are entitled to safe and healthy working conditions. However, as observed in the Batam Industrial Area, enforcement remains inconsistent due to insufficient inspectors, weak employer compliance, and the prevalence of short-term labor contracts that discourage workers from reporting violations. Thus, even though the legal foundation exists, Muh. Aliuddin Arief's research confirms that its implementation in Batam is still far from optimal.

In contrast, Singapore provides a striking example of effective enforcement. Its Workplace Safety and Health Act of 2006 obliges employers to conduct risk assessments and implement preventive measures regardless of company size. This is supported by frequent inspections, mandatory reporting, and severe penalties for non-compliance. A preventive culture is also promoted through active worker participation in OSH committees and recognition for companies with good safety records. This reflects how Singapore successfully combines strict enforcement with cultural transformation, something that is lacking in Batam according to Arief's findings. Malaysia, on the other hand, presents a model that is regionally closer to Indonesia. The Occupational Safety and Health Act of 1994 emphasizes employer self-regulation, but enforcement is carried out by the Department of Occupational Safety and Health (DOSH). While Malaysia faces challenges similar to Indonesia, especially regarding compliance among SMEs, its centralized reporting system and stricter penalties—such as fines of up to MYR 50,000 or imprisonment—create stronger deterrence than the administrative sanctions commonly applied in Batam. The thesis emphasizes that Batam could learn from Malaysia's approach in strengthening penalties and reporting mechanisms as part of legal protection.

At the global level, the International Labour Organization (ILO) provides key guidance through Convention No. 155 on Occupational Safety and Health and Convention No. 187 on the Promotional Framework for OSH.[13] These instruments encourage preventive policies, continuous improvement, and worker participation. Although Indonesia has integrated many of these principles into its domestic framework, it has not ratified Convention No. 155, which weakens its commitment to international oversight. Muh. Aliuddin Arief's thesis stresses that this lack of full alignment with international standards contributes to the ineffective realization of OSH rights in Batam's industrial practices. In conclusion, the comparative analysis based on Arief's study demonstrates that while Indonesia's laws are adequate on paper, enforcement is insufficient in Batam. Singapore's model shows the importance of prevention and strict monitoring, Malaysia illustrates the role of deterrent sanctions, and ILO standards emphasize comprehensive cultural and institutional reform. For Batam, the main lesson is that legal protection must be supported by institutional strengthening, stricter sanctions, and cultural change. Without these measures, the OSH framework will remain aspirational rather than truly protective of workers

## **.6. Conclusions and Suggestion**

Based on the discussion in the previous chapter, the following conclusions can be drawn:

- a. **Strength of the Legal Framework**  
Indonesia has established a comprehensive legal framework governing Occupational Safety and Health (OSH). Law No. 1 of 1970 on Work Safety, Law No. 13 of 2003 on Manpower, and Government Regulation No. 50 of 2012 on OSH Management Systems provide a strong normative basis to guarantee workers' rights to safety.[14] These laws outline both preventive and corrective measures, ensuring that employers are legally bound to protect their workers.
- b. **Weaknesses in Enforcement**  
Despite the existence of these laws, their implementation in Batam's industrial sector remains weak. The number of OSH inspectors is insufficient compared to the large number of enterprises. Many violations are resolved through administrative warnings with little deterrent effect. As a result, companies continue to neglect safety obligations. Preventive measures, such as mandatory training and proper provision of protective equipment, are often overlooked.
- c. **Comparative Position**  
Compared to neighboring countries, Batam lags behind. Singapore enforces OSH strictly through its Workplace Safety and Health Act of 2006, emphasizing prevention and heavy sanctions. Malaysia, under the Occupational Safety and Health Act of 1994, combines employer self-regulation with stronger penalties than

Indonesia. Meanwhile, Indonesia has only partially aligned with ILO standards, as it has not ratified Convention No. 155, which weakens its international commitment.

From these conclusions, the author can offer several recommendations, namely:

- a. **Strengthening Institutional Capacity**  
The first and most urgent recommendation is to strengthen institutional capacity in enforcing Occupational Safety and Health (OSH) regulations. At present, the number of OSH inspectors is far below what is required to supervise thousands of enterprises in Batam. The government should increase the recruitment and training of inspectors, provide them with modern digital tools such as electronic monitoring systems, and enhance inter-agency coordination between the Ministry of Manpower, local governments, and the Ministry of Industry. Mobile inspection units and online reporting platforms can also be established to allow real-time monitoring of compliance. By modernizing supervision, the government can close the enforcement gap that currently undermines the law.
- b. **Imposing Stricter Sanctions and Accountability**  
Another crucial measure is the imposition of stricter sanctions against non-compliant employers. Administrative warnings and light fines, which are commonly used today, fail to create a deterrent effect. Instead, sanctions should be progressive and proportional to the severity of the violation. Companies that repeatedly fail to comply should face suspension of operations or criminal liability for management. At the same time, mechanisms should be created to hold multinational corporations and contractors jointly accountable, ensuring that safety responsibilities cannot be outsourced or ignored. Malaysia's model of imposing imprisonment for serious violations provides an example that Indonesia can adopt to strengthen accountability.
- c. **Promoting a Preventive Safety Culture**  
Legal protection cannot function effectively without a cultural transformation within companies. Employers must be encouraged to view OSH not as a financial burden but as an investment in productivity, competitiveness, and corporate reputation. The government can promote this shift by adopting incentive-based policies such as tax reductions, public awards, or certification schemes for companies with exemplary safety performance. Media campaigns and partnerships with business associations should also be developed to highlight the benefits of safety culture. By fostering voluntary compliance, the government can reduce the reliance on punitive measures and instead encourage proactive prevention of accidents.
- d. **Empowering Workers and Strengthening Participation**  
Workers play a central role in ensuring the success of OSH policies. Unfortunately, many workers in Batam remain reluctant to report unsafe conditions due to job insecurity, especially among contract and temporary workers. To address this, the government should establish safe and anonymous reporting mechanisms, including hotlines and digital platforms. Trade unions and worker organizations must be empowered to conduct independent monitoring, deliver OSH training, and negotiate for safer conditions through collective bargaining. Mandatory worker participation in OSH committees should be strictly enforced so that employees have a direct role in safety decision-making processes. Strengthening worker participation not only enhances prevention but also democratizes workplace governance.
- e. **Improving Education and Awareness**  
Education and awareness campaigns should target not only workers but also employers, supervisors, and even vocational schools. Training programs must be made mandatory in high-risk industries such as shipbuilding, electronics, and chemicals. Furthermore, OSH education should be integrated into the curriculum of technical and vocational education institutions in Batam to prepare future workers with a safety-first mindset. Media campaigns, seminars, and workshops should be developed in collaboration with universities to spread awareness across the community.
- f. **Aligning with International Standards**  
Indonesia should move forward in ratifying ILO Convention No. 155 and fully incorporating its principles into national law. Ratification would strengthen the international legitimacy of Indonesia's OSH policies and provide opportunities for technical assistance and best practice sharing with other countries. In addition, Indonesia could establish bilateral cooperation with neighboring countries such as Singapore and Malaysia to learn from their enforcement practices. Alignment with international standards will not only improve worker protection but also boost Indonesia's attractiveness as an investment destination by demonstrating compliance with global labor norms.
- g. **Final Remarks**  
In summary, the effectiveness of OSH protection in Batam depends on both institutional and cultural reforms. Strengthening inspectors, imposing stricter sanctions, fostering preventive culture, empowering

workers, expanding education, and aligning with international standards are essential steps. Only through a comprehensive and multi-dimensional approach can Batam ensure that industrial growth does not compromise the health, safety, and dignity of workers.[15]

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