e-ISSN 2686-2352



Vol. 17, No. 1, June 2024

The implementation of Occupational Health and Safety (OHS) program on employee working conditions in the harvesting unit of PT Sewangi Sejati Luhur

Amallia Ferhat 1*, Bayu Nurdiansyah1, Tri Endar Suswatiningsih1, Mohammad Prasanto Bimantio1 ¹Institut Pertanian Stiper Yogyakarta, Jl. Nangka II, Krodan, Maguwoharjo, Yogyakarta, Indonesia

*Corresponding Author:amallia@instiperjogja.ac.id; Tel.: +6281-216272007

Article history:

Received: 6 March 2024 Revised: 28 May 2024 Accepted: 13 June 2024 Published: 30 June 2024

Keywords:

Occupational Diseases Occupational Health and Safety (OHS) Program Palm Oil Plantation Working Conditions

ABSTRACT

PT. Sewangi Sejati Luhur, a palm oil plantation company, manages 7,000 hectares divided into 12 divisions across 3 estates. The company primarily focuses on cultivating and processing Fresh Fruit Bunches (FFB), with the harvesting unit employing the most workers. This research aims to investigate the implementation of the Occupational Health and Safety (OHS) program within the harvesting unit at PT Sewangi Sejati Luhur, designed to prevent work accidents and occupational diseases. Conducted in Tapung Hulu Subdistrict, Kampar Regency, Riau Province, the study employs a quantitative descriptive method using the HIRARC method to assess OHS application and employee working conditions. A saturated sample of 30 harvesting employees was surveyed through interviews and documentation of the OHS program. The findings reveal that the OHS program includes periodic health exams, OHS awareness campaigns, monthly activities, and training sessions. The program's implementation has led to low accident rates and satisfactory achievement of goals. Correlation analysis shows a significant link between OHS program implementation and improved employee working conditions. Additionally, 82% of respondents reported that the OHS program significantly influenced their working conditions, while 18% cited other factors. Overall, the OHS program in PT Sewangi Sejati Luhur's harvesting unit has been effective, ensuring a low accident rate and meeting monthly targets.

DOI:

https://doi.org/10.31315/opsi.v17i1.11997

This is an open access article under the CC-BY license.



1. INTRODUCTION

Occupational Health and Safety (OHS) is a concerted effort aimed at fostering a healthy and secure workplace environment, with the primary objective of reducing workplace accidents and work-related illnesses. Enshrined in Undang – Undang No. 1 Tahun 1970 regarding Safety and further reinforced by Undang - Undang No. 36 Tahun 2009 concerning occupational health, these legal frameworks provide the basis for OHS implementation in Indonesia. These laws mandate that all workplaces, regardless of their formal or informal nature, must adhere to occupational health practices. Workplace safety entails measures aimed at preventing accidents, disabilities, and fatalities arising from work-related incidents. This safety initiative

extends to the overall well-being of employees. Proactive awareness of potential risks associated with various work activities is crucial, enabling employees to prepare hazard mitigation and prevention strategies. Therefore, the ultimate objective of OHS is to achieve Zero Accidents[1].

In terms of process safety, the palm oil industry (POI) significantly lags behind, despite several incidents highlighting its susceptibility to process failures resulting in catastrophic accidents. While process safety management has been effectively instituted in the chemical process industry (CPI), driven by the inherently high-risk processes involving hazardous materials and the potential for fire and explosion, the POI falls short in comparison. Although both industries share similarities in terms of hazards, the risk is notably lower in the POI compared to the CPI. This discrepancy primarily arises from the relatively fewer hazardous materials involved in the POI compared to the CPI, leading to a lower overall risk profile [2].

Work conditions encompass a variety of circumstances and environmental factors within a company where employees operate. Favorable work conditions are those that provide comfort and support for employees to effectively carry out their tasks. This includes all elements within the work environment that can impact performance, safety, and security. Therefore, work conditions encompass factors such as physical, psychological, and temporary aspects of the work environment, aiming to ensure that employees feel at ease while working, thereby boosting both personal and organizational productivity[3]. In the event of accidents, there are four elements that influence the outcome, known as People, Equipment, Material, and Environment (PEME). Accidents occur during the interaction process when there is contact between humans and tools, materials, and the surrounding environment. Furthermore, accidents can also result from human activities in the workplace and the handling of tools or materials[4]–[6].

According to Supriyadi et al. [7], several factors contribute to work accidents, including unsafe conditions and unsafe actions. Unsafe conditions pertain to hazardous workplace conditions such as poor lighting, extreme temperatures, and other physical environmental disturbances. Unsafe actions involve behaviors and practices that increase the likelihood of work accidents, such as neglecting to use Personal Protective Equipment (PPE) and utilizing non-standard equipment. In the implementation of OHS, a crucial aspect involves conducting risk assessments to prioritize controlling measures against the risk of accidents or workrelated illnesses. This assessment process includes evaluating the severity level, loss level, and frequency of risks[8]. Oil palm plantation companies engage in a range of activities from cultivation to palm oil processing, and they typically belong to the category of relatively labor-intensive industries, indicating a high reliance on labor. With a sizable workforce, the potential for work accidents also rises. In their study at PT. Sisirau Aceh Tamiang, Mora et al.[7] found that OHS significantly and positively influence employee productivity. Oyekale et al. [9] in their research found that OHS influence employee performance by 73%. Mayangsari et al. [10] research at the PT Sucofindo Duri indicates that OHS programs such as recruitment, education and training, counseling, the use of personal protective equipment, accident warning signs, sanctions, and rewards can be implemented to enhance performance, safety, and health at work. However, the aspect of control is still lacking, leading to minor accidents that do not result in the loss of workdays for employees.

PT. Sewangi Sejati Luhur is a palm oil plantation company involved in the cultivation and processing of Fresh Fruit Bunches (FFB). The company operates on a plantation area of 7,000 hectares, divided into 12 divisions across 3 estates. The implementation of OHS at PT. Sewangi Sejati Luhur is carried out across various work units, with a particular focus on the harvesting unit. This harvesting unit employs the highest number of human workers within the company, where activities include: 1) cutting fresh fruit bunches; 2) arranging dry fronds; 3) cutting fruit stalks; 4) loading fruit from the plantation; 5) collecting loose fruit bunches; and 6) fruit administration tasks. Considering the sequence of these activities, it is evident that a significant workforce is required, which also increases the likelihood of workplace accidents. Potential work accidents may include: 1) being struck by FFB bunches; 2) being struck by fronds; 3) being pierced by fruit frond spines; 4) injuries due to harvesting tools; and 5) eye irritation from palm dust during work. The workers are exposed to various occupational hazards. Further research and interventions are necessary to improve the working conditions of this already vast and growing workforce[11]. Based on these factors, the objective of this research is to investigate the implementation of the OHS program within the harvesting unit at PT. Sewangi Sejati Luhur.

OHSMS (Occupational Health and Safety Management Systems) practices have a significant positive effect on employee satisfaction and OHS performance; employee satisfaction has a significant positive effect on reduced accident costs; and OHS performance has a significant positive effect on reduced accident costs [12]. Iskandar et al. [13] analyzed the factors related to unsafe actions (unsafe behavior) of 86 workers in oil

palm harvesters at PT Priatama Riau. Tenure, gender, attitude, knowledge, OSH supervision, OSH training, work equipment, and unsafe conditions are related to Unsafe Actions.

OHS integrity and Zero Accident policy can be combined with knowledge-sharing practices to achieve a safer and more productive work environment. The implications of the study by Abidin [14] reveal that OHS practices can offer valuable insights for palm oil mills and comparable industries, aiding them in enhancing the efficacy of their safety protocols. The research underscores the significance of knowledge sharing as a critical element in fostering a sustainable safety culture within these workplaces. By emphasizing the importance of sharing expertise and experiences, the study implies that organizations can cultivate a culture of safety that is both enduring and effective in promoting workplace well-being and accident prevention.

Lubis & Steven [15] did a a cross-sectional study that aimed to explain the relationship between the independent variable (health and safety promotion) and the the dependent variable (safety behavior) on production workers at PTPN IV Kebun Bah Jambi. It is recommended that the management of PKS PTPN IV Kebun Bah Jambi promote regular updates on health and safety information, encourage engagement in health and safety initiatives, enhance the involvement of production workers, and facilitate their full participation in health and safety training. This comprehensive approach aims to ensure the protection of all workers in the workplace.

Aishakina et al. [16] also did the study to determine factors related to work accidents for workers in the production division of Palm Oil Mills, Bangkinang District, Kampar Regency. The use of personal protective equipment (PPE) emerges as the predominant factor influencing work accidents among workers in the production division of Palm Oil Mills, it is recommended that the company implements comprehensive training programs focused on the proper use of PPE. Additionally, increasing socialization efforts to raise awareness about the importance of using PPE and the risks associated with not using it, along with promoting occupational safety and health practices, is crucial. Moreover, enhancing supervision mechanisms, reinforcing the enforcement of sanctions for non-compliance with safety protocols, and instituting awards to incentivize adherence to safety guidelines can further motivate the workforce and contribute to accident prevention efforts.

2. MATERIALS AND METHODS

The basic research method employed is quantitative descriptive. The purpose of using this method is to determine the values of variables (either one or more) without making comparisons or linking between variables. The quantitative approach in this study involves the use of numbers, data collection, interpretation, and analysis of the data. The risk management approach is conducted using the Hirarc Method (Hazard Identification Risk Assessment and Risk Control), which refers to the Occupational Health and Safety Management System OHSAS 18001. The Hirarc Method is chosen with the aim of identifying potential hazards in the work environment. It consists of the hazard identification process and risk assessment using risk assessment matrices. Hazard identification is a part of risk management, where this activity is carried out throughout the organization's activities to determine which activities pose hazards and can have serious impacts on occupational safety. The application of HIRARC in this study is aimed at improving the work environment in the oil palm industry. It is a tool to identify all factors that may cause harm to workers. It will also consider the chances of a harm to occur and the possible severity that could arise from the exposure. In the end, it will enable employers to plan, introduce and monitor preventive measures to ensure that the risks are adequately controlled at all times [17].

This research uses a qualitative method to collect data from the respondents as key informants that can represent the problema[18]. The research sample consists of 30 harvesting employees at PT. Sewangi Sejati Luhur, which represents the entire harvesting workforce.

The steps of risk management using the Hirarc Method are as follows [19]:

- 1. Hazard Identification: This involves examining each work area to identify all types of hazards inherent in specific types of work.
- 2. Risk Assessment: It is an assessment of the risk associated with hazards in the workplace.
- Risk Control: It is a process used to identify and control all possible hazards in the workplace.

Common accidents in the plantation industry include incidents such as being struck by palm fronds or fruit, or getting scratched by harvesting tools. To address these diverse risks in the workplace, UNSW Health and Safety (source) provides summaries in matrices and tables, as exemplified in Table 1 and Table 2.

Table 1. Likelihood criteria according to UNSW health and safety

Level	Description	Severity of Injury	Working days
1	Non significant	No harm or injury is incurred	Not causing loss of working days.
2	Small	Resulting in minor injuries, minor losses and not causing significant impacts on business continuity	Able to work on the same day/shift.
3	Medium	Severe injuries requiring hospitalization, without resulting in permanent disabilities, with moderate financial losses.	Loss of working days less than 3 days
4	Heavy	Causing severe injuries and permanent disabilities, significant financial losses, and having serious implications for business continuity.	Loss of working days 3 days or more
5	Disaster	Resulting in fatalities and severe losses, potentially leading to the permanent cessation of business activities.	Permanent loss of working days

Source: [20]

Table 2. Criteria for determining the concept of occupational safety health (OHS)

Level	Criteria	Quality	Quantity
1	Rare	Thinkable but not only in times of extreme circumstances	Less than 1 time per 10 years
2	Small Probability	It hasn't happened yet but it can appear/happen at some time	Occurs 1 time per 10 years
3	Possible	It should have happened and may have happened/appeared here or elsewhere	1 time per 5 years to 1 time per year
4	Likely possible	Can occur easily, it may appear in the most common circumstances	More than 1 time per year to 1 time per month
5	Certainly possible	It often happens, expected to appear in the most common circumstances	More than 1 time per month

Source: [21]

Assessment and evaluation of potential hazards are conducted to determine the extent of the risk considering the magnitude of the impact. The results of the evaluated risk analysis are then compared with standard benchmarks and norms within the company. Subsequently, risk rating is performed to determine the level of existing risk.

3. RESULTS

The identity of the harvesting employee respondents in this study consists of their age, job status, and length of employment at the company. Based on the analysis results, the majority of harvesting employees fall within the age range of 31 to 38 years, with a total of 11 individuals (37%) out of the total respondents. The job status of harvesting employees is identified as permanent, with the highest length of employment as a harvesting employee being 10 years. Table 3 describes the identity of harvesting employees working at PT. Sewangi Sejati Luhur.

Table 3. Characteristics of respondents based on age, job status, and length of employment of harvesting employees at PT. Sewangi Sejati Luhur

Employee Characteristics	Category	Qty	(%)
	23-30	6	20
A 200	31-38	11	37
Ages	39-46	9	30
	47-53	4	13
	Freelance	0	0
Employment Status	Permanent	30	100
	Contract	0	0
	1-3	7	23,3
I am allo of coursing seems	4-6	7	23,3
Length of service year	7-9	4	13,3
	>10	12	40

Source: Primary research data

The OHS program implemented at PT. Sewangi Sejati Luhur consists of program preparation, program development, and program achievement evaluation. The programs executed concerning K3 implementation are as follows: 1) OHS meetings; 2) OHS-Ministry of Labor performance reports; 3) Periodic health examinations; 4) OHS socialization; 5) OHS month implementation; 6) OHS inspections; 7) OHS training; 8) Internal OHS audits; 9) Field supervisor OHS inspections; 10) OHS facility improvements; 11) Fulfillment of internal audit findings. OHS programs implemented at PT. Sewangi Sejati Luhur was executed according to plan or occurred earlier or later than scheduled. The OHS programs are organized by the Occupational Health and Safety Committee. In the implementation of the OHS program at PT. Sewangi Sejati Luhur, there are two factors contributing to accidents: human factors and environmental factors. These factors are further broken down into several sub-factors such as human factors, the use of Personal Protective Equipment (PPE), land conditions, and hazardous job types. Within the human factor, there are work regulations that outline the tasks and responsibilities to be carried out during company operations. Based on field observations, Table 4 shows the respondents' responses to the regulations in place at PT. Sewangi Sejati Luhur.

The research results indicate that all respondents acknowledge the regulations regarding Harvesting Standard Operating Procedures (SOP), the implementation of SOP for harvesting, and work supervision in the harvesting unit. The SOP for harvesting activities includes the mandatory use of PPE during work. The harvesting SOP aligned with OHS practices implemented at PT. Sewangi Sejati Luhur serves as a mandatory guideline to be followed by all employees. Harvesting activities are overseen by one Harvesting Supervisor to ensure that employees complete tasks according to set targets.

Regarding employee competency, PT. Sewangi Sejati Luhur relies on several references: 1) Previous work experience; 2) New employee training programs attended; 3) New employees' involvement and participation in training programs. Table 4 represents respondents' responses regarding the references used by PT. Sewangi Sejati Luhur concerning indicators of employee competency.

Table 4. Respondents' responses regarding the measurement of employee competency at PT. Sewangi Sejati Luhur

Description of the Statement		Respondents' Responses			
		%	No	%	
Previous employee work experience	16	53,3	14	46,7	
New employee training programs that have been followed	4	13,3	26	86,7	
Activeness and participation of new employees in training programs	4	13,3	26	86,7	

Source: Primary research data

Employees with previous work experience have worked in either company-owned or privately-owned/personal lands, which have been their daily jobs. Regarding the new employee training program, the

company conducts training as daily hired laborers (BHL), and then, if they meet the criteria, they will be hired as permanent employees.

Regarding the use of PPE, the results show that for each question, respondents answered "yes" at 100%, indicating that the use of PPE is strongly enforced in the company. PPE checks are conducted before employees start work during the morning briefing, conducted by the Harvesting Supervisor, who checks the completeness of PPE usage. If the PPE is damaged and it is not time for replacement, it will be recorded by the Harvesting Supervisor and replaced with a new one later.

Regarding the topographic conditions of the work area, the land conditions consist of hilly terrain, slopes, flat terrain, and peatlands. The land conditions significantly affect the production output and the way work is performed. If the land conditions align with the employees' preferences, the production output will be maximized. It is known that four employees have experienced work accidents. The types of accidents experienced include slipping, being pierced by palm frond spines, and being hit by a harvesting hook or tool.

In the harvesting activities at PT. Sewangi Sejati Luhur, the categories of hazardous work include: 1) Lowering Fresh Fruit Bunches (FFB); 2) Frond cutting; 3) Arranging fronds in ditches,; 4) Transporting FFB to the Harvest Collection Point; 5) Transporting FFB using a rickshaw.

Based on the types of work, three hazardous types of work with a total of 10 or more victims are the lowering of FFB, transporting FFB to the Harvest Collection Point (TPH), and transporting FFB using a rickshaw. The high number of victims in these accidents is primarily due to workers' lack of caution, resulting in FFB falling from trees and onto harvesting employees, whether being lowered from the trees or being loaded onto trucks. Meanwhile, work accidents occurring during the transportation of FFB using an angkong involve the angkong hitting the harvesters' legs. Among the 30 respondents, the number of respondents who experienced accidents based on the type of work can be seen in Table 5.

Table 5. Number of accident victims based on type of work at PT. Sewangi Sejati Luhur

	Respond					
Types of Jobs	Number of Accident Victims	%	Not Having an Accident	%		
FFB lowering	10	33,3	20	66,7		
Cutting of fronds	6	20	24	80		
Compilation of fronds in deadlock	8	26,7	22	73,3		
Transportation of FFB to harvest collection point	10	33,3	20	66,7		
Transport FFB with rickshaw	11	36,7	19	63,3		

Source: Primary research data

In the implementation of OHS at PT. Sewangi Sejati Luhur, there are several classifications of accidents that commonly occur, including: 1) Falling; 2) Struck by palm frond; 3) Struck by harvesting tools; 4) Struck by FFB; 5) Caught; 6) Slipping; 7) Sinking; 8) Bitten by animals; 9) Stung by animals; 10) Foreign object entering the eye; 11) Cut/scratched; 12) Pierced by frond spines. Among these 12 classifications of work accidents, foreign object entering the eye is the most frequent type of work accident, with a total of 13 individuals. This condition occurs due to harvesters not wearing protective goggles. Another frequent occurrence is being pierced by frond spines, experienced by 6 individuals, followed by falling due to slippery paths experienced by 3 individuals, slipping experienced by 3 individuals, and being cut by harvesting tools experienced by 3 individuals. Among the classifications of work accidents at PT. Sewangi Sejati Luhur, the type of work accident with a high risk is being cut by harvesting tools.

Next is the classification of work accidents based on the nature of injuries, which refers to the impact or consequence experienced by humans due to work accidents, whether in the short or long term. Accidents are unforeseen events or occurrences without any intentional elements. A total of 13 individuals have experienced work accidents resulting in red eyes. This is caused by the non-use of Personal Protective Equipment such as goggles when harvesting palm oil. There are 6 individuals who have suffered surface wounds, primarily caused by being pierced by sawut frond spines. Meanwhile, three individuals have suffered cuts on their skin due to contact with harvesting tools, and three others have experienced muscle cramps caused by slipping,

while two individuals have suffered sprains also caused by slipping. One individual has experienced bruising due to being struck by a FFB.

Work accidents are also caused by the use of palm oil harvesting tools. There have been a total of 11 incidents caused by being struck by a harvesting hook and 5 incidents caused by being struck by a sickle. Both tools that cause many accidents are commonly used in the harvesting process. Accidents caused by sickles occur when sharpening the sickle and when using it for harvesting. Meanwhile, accidents caused by harvesting hooks occur during the process of detaching and swinging the hook from its stem. Accidents involving machetes occur when attempting to cut palm fruit stalks. When using an angkong, accidents occur due to slipping into holes present in the palm oil plantation land.

Next, the hazard assessment and risk assessment, as well as the assignment of colors, are conducted using references from UNSW Health and Safety. Assessing risk involves identifying the likelihood and consequences criteria (severity) based on the qualitative identification of the consequences suffered by workers and considering the lost workdays.

Table 6. l	dentification	of hazards and	d risk assessment results

Hazard Identification	Risk Assessment			
Hazard Identification	L	C	L.C	Risk level
Struck by Fresh Fruit Bunches (FFB)	4	1	4	M
Struck by Frond	4	3	12	Н
Struck by Palm Fruit	2	2	4	M
Pierced by Frond Spines	1	5	5	M
Exposed to Frond Powder	3	2	6	M
Struck by Machete	3	2	6	M
Struck by Harvesting Hook	3			M
Struck by Sickle	3			L
Struck by Angkong	2			L
Bitten by Venomous Animal	2			L

Source: Primary research data

According to Table 6, accidents caused by being struck by fronds occupy the category of high-risk assessment in work accidents. This type of accident is considered high-risk because it is deemed to occur most frequently, especially during palm fruit harvesting. Meanwhile, the relationship between the implementation of OHS and the working conditions of employees can be observed in Table 7.

Based on Table 7, the relationship between the implementation of OHS and the working conditions of harvesting employees, there are two relationships for land cleanliness or clearing, namely hazard identification and OHS socialization.

Management factors, including Commitment to Occupational Safety and Health and supervision, along with human factors such as knowledge, physical abilities, and skills, as well as work factors like work standards, can all have significant effects on safety outcomes. For instance, when management fails to enforce strict sanctions, some oil palm harvesters may disregard the use of complete personal protective equipment or fail to concentrate on using work tools properly due to rushing or other distractions. Additionally, issues such as damaged work equipment can contribute to negligence in performing work tasks. Therefore, addressing these management, human, and work factors is essential for improving safety and preventing accidents in the oil palm harvesting industry [22].

4. DISCUSSION

In handling work accidents at PT. Sewangi Sejati Luhur, there is a procedure in place for managing work accidents. If a work accident occurs in the harvesting area, the first person to be informed about the situation is the Harvesting Supervisor. The Harvesting Supervisor will then check with the assistant regarding the matter, and the assistant will follow up on the matter with the Harvesting Supervisor. If a serious accident occurs, the Harvesting Supervisor will transport the victim to the clinic or refer them to the hospital if necessary.

Table 7. The Relationship between the implementation of OHS and the working conditions of harvesting employees

OHS Implementation	Hazard	Application of		6 W W W	
Working Conditions	Identification	PPE Use	OHS Socialization	Condition Handler	
Land cleanliness	Reduce the risk of accidents due to bushland		The importance of keeping the land clean	-	
Provision of Health Facilities	Reduce the risk of illness by doing work with a healthy lifestyle	PPE Grant for Safety and Work Cooperation	The importance of maintaining and implementing OHS	Provision of medicines and treatments covered by BPJS	
Provision of Job Security	The use of PPE while working to avoid risks due to doing work	The use of PPE while working to avoid risks due to doing work	Giving direction by superiors to always be safe at work	-	
Relationship between employees	Supervise the work done by the foreman	Reprimand if there are employees who do not use PPE	Socialization carried out by assistants and foremen regarding the importance of OHS which is carried out every 2 weeks	-	
Harvest Support Tools	In order to always be vigilant in the use of harvesting tools	Use of PPE at work	Giving directions to use harvesting tools correctly and responsibly	-	

Source: Primary research data

The hazard identification for land cleanliness is conducted to reduce the risk of work accidents due to extensive vegetation. OHS socialization aims to ensure that the land remains clean according to SOP. Regarding the provision of health facilities and its relationship with the implementation of OHS, there are four categories: 1) hazard identification; 2) application of PPE; 3) OHS socialization; and 4) provision of medication. These four categories are implemented to ensure that the health of employees is maintained, leading to increased work productivity. Based on these results, further assessment is conducted regarding risk assessment in harvesting activities performed by employees. Out of 30 respondents, 9 respondents, or 30%, answered that harvesting activities are classified as low-risk work activities. Meanwhile, 18 respondents, or 60%, stated that harvesting activities fall into the category of moderate-risk work activities, and 3 respondents indicated that harvesting activities are considered high-risk work activities. On the other hand, using correlation analysis to find the percentage indicating the relationship between the implementation of the OHS program and the working conditions of employees is 82%, meaning that the OHS program has a significant impact on the working conditions of employees. The result of the correlation is inline with other result by Marpaung & Dirbawanto [23] that analyze the influence of K3, training and career development on the performance of PTPN IV Kebun Gunung Bayu employees have a significant effect on employee performance.

By prioritizing employee health and safety, employers indirectly enhance workplace productivity, as healthy and safe working conditions contribute to employee morale, engagement, and performance. The study underscores the need for continuous improvement in OHS practices, emphasizing regular review and updating of safety protocols based on hazard identification, risk assessments, and employee feedback to ensure effectiveness and relevance. Overall, proactive measures to ensure employee health and safety are essential for fostering improved working conditions, productivity, and organizational success. This result is

similar with Hidayah et al.[24] that studied OHS at oil palm company in Kampar, Riau. The corporation has established amenities and infrastructure, including allocating funds for executing occupational safety and health (OSH) program initiatives like furnishing comprehensive protective gear, fire suppression apparatus, and medical aid sets. A set policy concerning Occupational Safety and Health (OSH) and its approach toward employees is already in place within the company. The management of OSH at the palm oil facility situated in Kampar Regency has been enacted, adhering to governmental regulation number 50 of 2012.

There are several limitations that should be acknowledged. Firstly, the study's sample size may be relatively small, potentially limiting the generalizability of the findings to a broader population. Additionally, the study relies on self-reported data from respondents, which may be subject to biases or inaccuracies. Moreover, the classification of harvesting activities into low, moderate, or high-risk categories may be subjective and could vary depending on individual perspectives or contextual factors. Furthermore, the study primarily focuses on the perception of OHS measures and their impact on working conditions, rather than objective measures of safety outcomes or health indicators. It is also essential to consider potential external factors, such as environmental conditions or technological advancements, which could influence the effectiveness of OHS practices but may not have been fully explored in the study. Lastly, the study's scope may not encompass all relevant aspects of OHS management, such as regulatory compliance or organizational culture, which could further influence safety outcomes. Therefore, while the study provides valuable insights, these limitations should be considered when interpreting the findings and designing future research or interventions in this area.

5. CONCLUSION

From this study, it can be concluded that the implementation of Occupational Health and Safety (OHS) programs in the harvesting unit of PT. Sewangi Sejati Luhur consists of: 1) periodic health examinations; 2) OHS awareness campaigns; 3) observance of OHS month; and 4) OHS training. The implementation of OHS in the harvesting unit of PT. Sewangi Sejati Luhur has been carried out effectively, resulting in a low accident rate and the successful achievement of program goals each month. There is a correlation between the implementation of OHS and the working conditions of employees, with each indicator being interconnected regarding the application of OHS measures. The relation between the implementation of OHS and the working conditions of employees is 82%, indicating a moderately high level of correlation with interrelated indicators, this conclusion is inline with impact and role of OHS in the performance of other company [25].

REFERENCES

- [1] T. B. Purnama and M. A. Rambe, "A Qualitative Study of Personal Protection Equipment Compliance among Palm Oil Workers in Asahan District, The Province of North Sumatra, Indonesia," in *Proceeding Book of The International Conference on Manpower and Sustainable Development: Transformation of Manpower in the Changing World of Work*, 2023.
- [2] H. Kamarden, K. Kidam, H. Hashim, and O. Hassan, "An Investigation into the Need of Process Safety Management (PSM) in the Palm Oil Industry," *Appl. Mech. Mater.*, vol. 625, pp. 458–461, May 2014, doi: 10.4028/www.scientific.net/AMM.625.458.
- [3] D. Sunarsi, "The analysis of the work environmental and organizational cultural impact on the performance and implication of the work satisfaction," *J. Ilm. Ilmu Adm. Publik J. Pemikir. dan Penelit. Adm. Publik*, vol. 9, no. 2, pp. 237–246, 2019.
- [4] R. I. Nirtha, M. Firmansyah, and H. Prahastini, "Analisis Pengaruh Penerapan Keselamatan dan Kesehatan Kerja (K3) Terhadap Kinerja Karyawan di Perkebunan Kelapa Sawit PT. Hasnur Citra Terpadu," *Jukung (Jurnal Tek. Lingkungan)*, vol. 5, no. 1, 2019.
- [5] D. Octaviani, N. Afifah, and Juniwati, "Determinant of Employees Performance in West Borneo Palm Oil Industry: Occupational Safety and Health Insight," in 1st International Conference on Management and Small Medium Enterprise, in Strategic Management & Entrepreneurship Toward The New Normal Era,. May 2023. [Online]. Available: http://prosiding.uika-bogor.ac.id/index.php/ICMSME/article/view/470

[6] H. Khair, R. Sabrina, and R. W. Batubara, "Effect of Occupational Safety, Health (K3) and Leadership Style on Employee Work Productivity Mediated by Discipline in Operations PTPN IV Balimbingan," *J. Mantik*, vol. 6, no. 2, pp. 1421–1427, 2022.

- [7] Z. Mora, A. Suharyanto, and M. Yahya, "Effect of work safety and work healthy towards employee's productivity in PT. Sisirau Aceh Tamiang," *Burns*, vol. 2, no. 1, pp. 753–760, 2020.
- [8] R. Aishakina, O. Dewi, and E. P. Rahayu, "Factors Related to Work Accidents for Workers in the Production Division of Palm Oil Mills, Bangkinang District, Kampar Regency in 202", [Online]. Available: http://repo.htp.ac.id/id/eprint/399/18/Factors Related to Work Accidents for Workers in the.pdf
- [9] T. O. Oyekale, P. C. Ugbekile, C. P. Adekunle, E. OlufunmilayoOluwalana, and S. O. Sam-Wobo, "Impact of Occupational Hazards on the Technical Efficiencies of Oil Palm Processors in Edo State, Nigeria," *Int. J. Environ. Agric. Biotechnol.*, vol. 7, p. 6, 2022.
- [10] T. Mayangsari, R. Renaldi, A. Alhidayati, N. Lusiana, and M. Makomulamin, "Occupational Safety Analysis Using the Hazard Identification And Risk Assessment Control (HIRAC) Method at Pt. Sucofindo Duri Year 2022: Analisis Keselamatan Kerja Dengan Menggunakan Metode Hazard Identification And Risk Assessment Control (HIRAC) Di Pt. Sucofindo Duri Tahun 2022," J. Olahraga dan Kesehat., vol. 1, no. 3, pp. 669–679, 2022.
- [11] N. Myzabella, L. Fritschi, N. Merdith, S. El-Zaemey, H. Chih, and A. Reid, "Occupational Health and Safety in the Palm Oil Industry: A Systematic Review," *Int. J. Occup. Environ. Med.*, vol. 10, no. 4, pp. 159–173, May 2019, doi: 10.15171/ijoem.2019.1576.
- [12] M. Bayram and M. C. Ünğan, "The relationships between OHS prevention costs, OHSMS practices, employee satisfaction, OHS performance and accident costs," *Total Qual. Manag. Bus. Excell.*, vol. 31, no. 11–12, pp. 1325–1344, May 2020, doi: 10.1080/14783363.2018.1480897.
- [13] Iskandar, Y. D. A. Wahyudiono, N. Widajati, and Zulkifli, "Factors Related with Unsafe Action in Palm Oil Harvesters at PT. Priatama Riau Kebun Rupat Island," *Indones. J. Occup. Saf. Heal.*, vol. 12, no. 2, pp. 246–255, May 2023, doi: 10.20473/ijosh.v12i2.2023.246-255.
- [14] Z. Abidin, "Accuppational Safety And Health Management System For Zero Accidents In Palm Oil Plantation Companies In West Borneo," *J. Soc. Sci.*, vol. 2, no. 12, pp. 1154–1173, May 2023, doi: 10.57185/joss.v2i12.261.
- [15] H. S. Lubis and J. Steven F.d, "Relationship Occupational Health and Safety Promotion between Safety Behavior Production Workers in Palm Plant PTPN IV Kebun Bah Jambi," in 1st Public Health International Conference (PHICo 2016), Atlantis Press, May 2016, pp. 155–158. doi: 10.2991/phico-16.2017.29.
- [16] R. Aishakina, O. Dewi, and E. Purnawati Rahayu, "Factors Related to Work Accidents for Workers in the Production Division of Palm Oil Mills, Bangkinang District, Kampar Regency in 2021," *Budapest Int. Res. Critics Inst*, vol. 4, no. 4, pp. 10784–10789, 2021.
- [17] H. M. Hadi, K. Karuppiah, and S. B. M. Tamrin, "Application of HIRARC in Palm Oil Mill Industry: A Case Study," in *Occupational Safety and Health in Commodity Agriculture: Case Studies from Malaysian Agricultural Perspective*, Malaysia: Universiti Putra Malaysia, 2014, pp. 201–240.
- [18] B. Parasuraman, I. W. Othman, F. S. B. Jurup, and B. Rathakrishnan, "Occupational Health and Safety Committee Practices Through The Concept of Worker Participation: A Case Study of Palm Oil Factory, Sandakan, Sabah, Malaysia," *Borneo Res. J.*, vol. 3, pp. 115–136, May 2009, [Online]. Available: http://jummec.um.edu.my/index.php/BRJ/article/view/9813
- [19] R. D. Putra, B. Sukandari, and W. Wihartono, "Risk management of occupational safety and health in kri docking project using hazard identification, risk assessment and risk control (HIRARC) method case study: PT. PAL Indonesia," *J. Asro*, vol. 10, no. 2, pp. 76–91, May 2019, [Online]. Available: http://mail.asrojournal-sttal.ac.id/index.php/ASRO/article/view/131

[20] L. Benakka, L. Z. Gharbi, S. Bacroume, Z. Bejjaji, and M. Aouane, "The implementation of the occupational health and safety management system according to OHSAS 18001/2007 in a Moroccan telecommunication company," in *E3S Web of Conferences*, EDP Sciences, 2021, p. 74.

- [21] E. Stemn, C. Bofinger, D. Cliff, and M. E. Hassall, "Examining the relationship between safety culture maturity and safety performance of the mining industry," *Saf. Sci.*, vol. 113, pp. 345–355, 2019.
- [22] D. Afriani, M. Lestari, A. Camelia, D. Andarini, Novrikasari, and T. Nurhaliza, "Analysis of The Cause of Work Accident at Palm Oil Harvesters," Universitas Sriwijaya, May 2021, pp. 277–293. [Online]. Available: https://sicph.fkm.unsri.ac.id/index.php/sicph/article/view/110
- [23] T. N. Marpaung and N. D. Dirbawanto, "The Influence of K3 (Occupational Health and Safety), Training and Career Development on the Performance of PTPN IV Kebun Gunung Bayu Employees," *Formosa J. Appl. Sci.*, vol. 2, no. 9, pp. 2177–2190, May 2023, doi: 10.55927/fjas.v2i9.6002.
- [24] P. Hidayah, Herniwanti, and M. K. Zaman, "Implementation of Occupational Safety and Health (K3) Inspection as a Work Accident Prevention Effort in Palm Oil Factory, Kampar Regency, Riau Province," *Sci. Midwifery*, vol. 10, no. 3, pp. 2215–2224, May 2022, doi: 10.35335/midwifery.v10i3.641.
- [25] M. A. Gopang, M. Nebhwani, A. Khatri, and H. B. Marri, "An assessment of occupational health and safety measures and performance of SMEs: An empirical investigation," *Saf. Sci.*, vol. 93, pp. 127–133, May 2017, doi: 10.1016/j.ssci.2016.11.024.