



## Protection of Oil Palm Workers From Risk And Hazards using HIRARC Model – is it Aligned to Islamic Ethics?

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### Abstract

In Malaysian Sustainable Palm Oil certification system, Principle 4 covers the responsibility to social, health, safety, and employment based on the HIRARC model. From the Islamic perspective, the HIRARC model is reviewed to be aligned to the Islamic ethics with excerpts of verse in the holy Quran depicting Islam not only stress on the safety aspect, but it also focuses on to evade man from peril or unsafe acts. HIRARC is known in oil palm plantations. The objective of this case study was to investigate the knowledge and awareness about HIRARC of palm oil workers in an oil palm plantation in Kalabakan, Sabah. The conceptual framework was based on the Theory of Planned Behaviour where cognition pertained to the three factors: attitude, subjective norms, and perceived behavioural control determined with scale type of questions guided by MSPO Principle 4. Data was also collected on demographic of the workers through face-to-face interview. The outcome of the study showed that age and education levels have not only influenced the workers' level of knowledge and awareness of HIRARC of palm oil workers in preventing injuries accordingly to their job types. Attitudes, subjective norms, and perceived behavioural control have significant positive effects. As 96.4% of the workers in the case study were of Islamic faith, the outcome of the study could be attributed to the spiritual and moral obligation of every person to performing responsible activities to protect themselves from harm and injuries.

**Keywords:** Malaysian Sustainable Palm Oil certification system, HIRARC model, Islamic ethics, Theory of Planned Behaviour, Attitude, Subjective Norms, Perceived Behavioural Control

### 1.Introduction

Malaysia is one of the largest productions of palm oil in the world after Indonesia and highly dependent on 'low-skilled' migrant workers. World Bank (2015, p. 2) stated that most Malaysian policies that target poverty reduction to close the income gap between the rural and the urban population, has disregarded the importance of migrant labour for the overall performance of economy, job creation and average income development. Puder (2019) noted that the policies only address social inequalities in rural areas and neglects the often-poor working and living conditions faced by migrant workers. Subsequently, an investigation by Puder (2021) reported the super exploitation of the migrant workers, recommending take a closer, critical look at the Malaysian policies that promote bio-based industries and to ensure that they not only promise the greening of the economy but also better working and living conditions for the workers employed in relevant sectors. This case study was conducted to determine the current level of knowledge and awareness of Risk Management, Hazard Identification, Risk Assessment and Risk Control (HIRARC) of palm oil workers in an oil palm plantation in Sabah.

### 2. Literature Review

In Islamic perspective, according to Ismail and Ahmad Razimi (2018), the teachings represent the first guidance for inviting man to observe the safety and health measures. This is made in reference to the second level of ultimate objective of Shariah (Maqasid Shariah) which, it is obligatory upon each Muslim to protect his life all times and it is recommended to protect other's life too. In their interpretation, employer must ensure his employees working effectively and productively with safe and healthy ambience. They further brought up that Prophet Muhammad SAW said :

*“Removing any harm from the road is charity (that will be rewarded by Allah.”* (Narrated by Bukhari)

In this context, the Roundtable on Sustainable Palm Oil (RSPO), a global certification system to certify sustainable palm oil established in 2004 with a package of sustainable management practices, advocates to protect worker's rights and reduction of workplace accidents. Since its adoption is on a voluntary compliance, the palm oil industry has continuously grappled with claims that compliance with its principles and criteria presents a financial burden (Yeong et al., 2021). The two leading oil palm producers, Indonesia and Malaysia develop their own certifications on the



management of plantation activities under applicable procedures and laws of the respective countries. The Indonesian Sustainable Palm Oil (ISPO) Plantation certification system were officially issued in 2011, mandatory only for large plantation. The Malaysian Sustainable Palm (MSPO) certification system started in early 2015 voluntarily for all stakeholders and was later enforced as mandatory in 2019. In MSPO, Principle 4 covers the responsibility to social, health, safety, and employment. The HIRARC model has become vital to the practice of planning, management, and company operations. A hazard identification and risk assessment are a procedure used to identify and analyse both present and potential dangers on a job site, as well as the measures utilised to mitigate or eliminate the identified hazards (OSHA, 2023). The employees may be aware of HIRARC, but they may be unaware of its application to their daily tasks. Accidents and failures involving palm oil mill employees have frequently been reported or discussed in the past (Ngadiman, et al., 2019) and occurs regularly due to the employee's own carelessness. In Islamic Based Safety (IBS) on establishing a safe or unsafe workplace in terms of making a right or wrong decision, Bahall (2002) explains if a Muslim conducts his organization deviate from principle of Islam, he/she will reap benefit with short lasting and most importantly, there is no existence of worship (ibadah) in his work. This is based on the excerpt of the verse in the Holy Quran:

*“And spend in the way of Allah and do not throw (yourselves) with your own hands into destruction (by refraining). And do good; indeed, Allah loves the doers of good.”* (al-Baqarah, 2: 195).

### 3. Conceptual Framework

Ismail and Ahmad Razimi (2018) related that Islam commands its followers to pursuit towards betterment with endeavour, not in favour to any static and stunted principle, as mentioned in the Holy Quran:

*“For each one is successive [angels] before and behind him who protect him by the decree of Allah. Indeed, Allah will not change the condition of a people until they change what is in themselves. And when Allah intends for a people ill, there is no repelling it. And there is not for them besides Him any patron.”*(ar-Ra’d, 13:11)

In this perspective, the conceptual framework is based on the Theory of Planned Behaviour (Ajzen, 1991) where cognition (attitude, subjective norms, and perceived behavioural control) influences intention, and intention influences behaviour as shown in Figure 3.1.

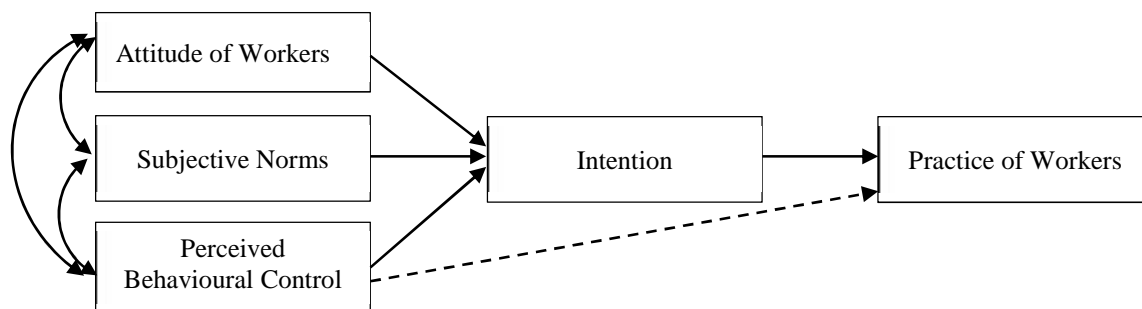


Figure 1: Cognition-intention behaviour framework (Ajzen, 1991)

### 4. Objective

The objective of this case study is to conduct a case study on the current level of knowledge and awareness on HIRARC of palm oil workers in an oil palm plantation in Kalabakan, Sabah.

### 5. Significance of Study

The number of case studies that have been conducted concerning HIRARC is rather low for the agriculture sector. The determination of the degree of knowledge and awareness among workers in an oil palm plantation on HIRARC provided information on how critically crucial it is for the workers to have a safe working environment. When working



in a plantation, it is essential to adhere to the guidelines provided by MSPO to ensure that plantation practices are carried out in an organised and methodical manner aligning to Islamic ethnics.

## 6. Research Methodology

This current research used a hard copy questionnaire consisting of information on the demographic, understanding about the HIRARC and their awareness about HIRARC with scale types of questions guided by MSPO Principle 4, particularly the 2nd Criterion. Rating the scale of numbers ranging from 1 to 5. 1 – Strongly Disagree, 2 – Disagree; 3 – Neutral; 4 – Agree and 5 – Strongly Agree. The sample size of 148 was calculated using the Raosoft software with 95% confidence interval with 5% margin error for a population of 240. Data were collected through a face-to-face interview on working days. Data analysis used the SPSS (Statistical Package for the Social Sciences) to generate descriptive statistics.

## 7. Findings and Discussions

Most of the respondents were in the age group of 30-39 years old followed by the 40-49 years old age group and 22-29 years olds as shown in Figure 2. Majority of 52.7% were male and 47.3% were female. The main race was the Bugis at 84.5%. The migrant workers from Indonesia made up 87.2% and the rest were locals. 96.4% were of Islamic faith.

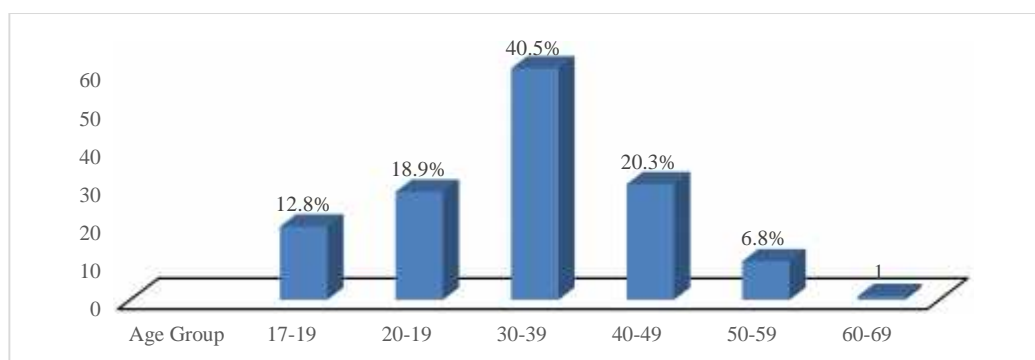
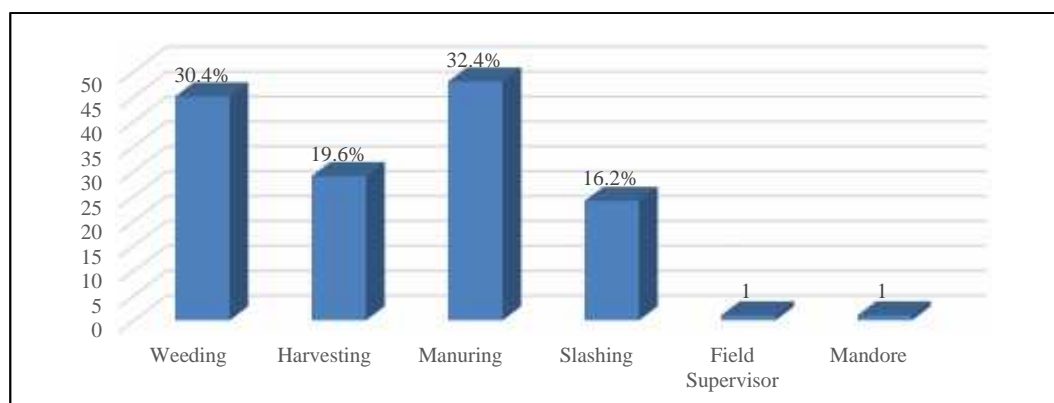


Figure 2: Age Group of Respondents

Their education levels were mainly at Sekolah Menengah Pertengahan (37.3%), Sekolah Dasar (33.1%) and Sekolah Menengah Atas (12.2%). Majority of 53.4% had worked in the plantation for more than 5 years. They were given specific jobs with 8 working hours per day as shown in Figure 3. Most were assigned with manuring followed by weeding, harvesting, and slashing. There were only one field supervisor and one mandore overseeing the workers.





## 7.1 Perceptions

Table 1 shows the perceptions of respondents on risk while doing their jobs. The workers indicated awareness as they agreed that there were high risks involved in their jobs. Although, they perceived that they were not always facing the danger every day, they were neutral in being able to handle the danger by themselves. Thus, they expressed close to strongly agree they attached to great importance to safety while working by practicing HIRARC and wearing Personal Protective Equipment (PPE) can low the risk.

Table 1: Mean of risk while doing the jobs

Risk	Description	Mean	Standard Deviation
1	The risk is high while doing the job in the plantation than any sector.	4.22	0.8150
2	I always facing the danger every day.	3.75	1.2717
3	I always handle the danger by myself.	3.50	1.3777
4	I attach great importance to safety when working.	4.79	0.4983
5	I am practicing the HIRARC while doing the jobs.	4.51	0.6003
6	The Personal Protective Equipment (PPE) can low the risk from getting danger.	4.72	0.4924

### 7.1.1 Attitude of Workers

Attitude as suggested by Eagly and Chaiken (1993) is a measure of how individuals assess a psychological object based on their behaviour. This study operationalised the attitude toward the HIRARC model of protecting themselves from risks and hazards in oil palm plantation job. The level of positive attitude with the scale from agreed towards strongly agree in practicing HIRARC with awareness and knowledge were reflected in Items 1, 5 and 6. The practice of HIRARC was not a force action as reflected in Item 3 and Item 4.

Table 2: Mean of Attitude of the Workers

Attitude	Description	Mean	Standard Deviation
1	I am very diligent in using HIRARC before doing tasks.	4.41	0.6381
2	I am very inert to use HIRARC before start doing the jobs.	2.86	1.4094
3	I will use HIRARC if told by supervisor otherwise I will not use it.	2.89	1.5034
4	I am lazy to do HIRARC because it slows me down to do work.	2.19	1.3111
5	For me, I am a safety conscious person, so I use HIRARC because it is very important to reduce the risk when working.	4.70	0.4761
6	I diligently do HIRARC because it is easy to use.	4.36	0.8082

### 7.1.2 Subjective Norms

According to Ajzen (1991), subjective norms refer to perceived social pressure that shapes one's behaviour. The subjective norms of the perception towards the HIRARC in this study were conceptualized as the work environment pressure that workers perceive because of mandatory compliance of MSPO. The perception of subjective norms in all the 6 items were consistent, as indicated by the Cronbach Alpha value of 0.811 with an average mean of 4.62. This indicated that the workers firmly agreed with these norms because it was mandatory for employees. However, it was also reflected that workers were aware to control the risk of getting injured at work and when performing their duties, HIRARC would assist in performing their duties more safely.



Table 4.5: Mean of Subjective Norms

Subjective Norms	Description	Mean	Standard Deviation
1	I agree HIRARC are important in doing the work and task.	4.70	0.5403
2	I need to adapt the HIRARC in my working routine.	4.54	0.5646
3	HIRARC is to identify and control the hazard and risk in workplace or activities.	4.55	0.6312
4	HIRARC are important to use in order to control the risk of getting injured in work.	4.66	0.5435
5	HIRARC is mandatory for employees when doing work.	4.66	0.5559
6	HIRARC can help me doing the job more safely.	4.59	0.5063

### 7.1.3 Perceived Behaviour Control

Perceived behavioural control defined by Ajzen (1991) is an individual's perception of how easy or hard it is to enact a specific behaviour based on their past experience, resources, and capabilities. In this study, the perceived behavioural control is the assessment of workers practising HIRARC despite without experience of injuries occurred when performing the job. There was agreement towards the strongly agree scale that the workers had no problems to use the HIRARC to reduce the risk of injury. They were constantly brief on safety before performing the job learning about the HIRARC was to monitor the surrounding to identify the risk. They disagreed that they were not habitual in practicing HIRARC.

Table 4.7: Mean of Perceived Behaviour Control

Perceived Behaviour Control	Description	Mean	Standard Deviation
1	I have no problems to use the HIRARC in order to reduce myself from getting injured.	4.45	0.7315
2	I do not use HIRARC because it interferes with my daily work.	2.39	1.4829
3	Sometimes I practice HIRARC but sometimes I do not.	2.76	1.3868
4	I am always aware the brief about safety before doing the job.	4.49	0.6003
5	I learned about HIRARC before using it when doing work.	4.51	0.5653
6	Typical example of HIRARC is monitor surrounding to identify the risk of doing the jobs.	4.59	0.4926

## 8. Conclusion

From the Islamic perspective, the HIRARC model is reviewed to be aligned to the Islamic ethics. The excerpts of verse in the holy Quran depicts Islam not only stress on the safety aspect, it also focuses on to evade man from peril or unsafe acts. To assure safety in the workplaces, in the compliance of MSPO, the HIRARC is the cornerstone of the indicators of Principle 4 requiring employer to analyse the trend of the accidents and injuries occurred in the oil palm plantation in order to increase the prevention steps to be taken in the future and the counselling service in preventing post-accident. Age and education levels have not only influenced the workers' level of knowledge and awareness of HIRARC of palm oil workers an oil palm plantation in Sabah in preventing injuries accordingly to their job types. Attitudes, subjective norms, and perceived behavioural control have significant positive effects. As 96.4% of the workers in the case study were of Islamic faith, the outcome of the study could be attributed to the spiritual and moral obligation of every person to performing responsible activities to protect themselves from harm and injuries.

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