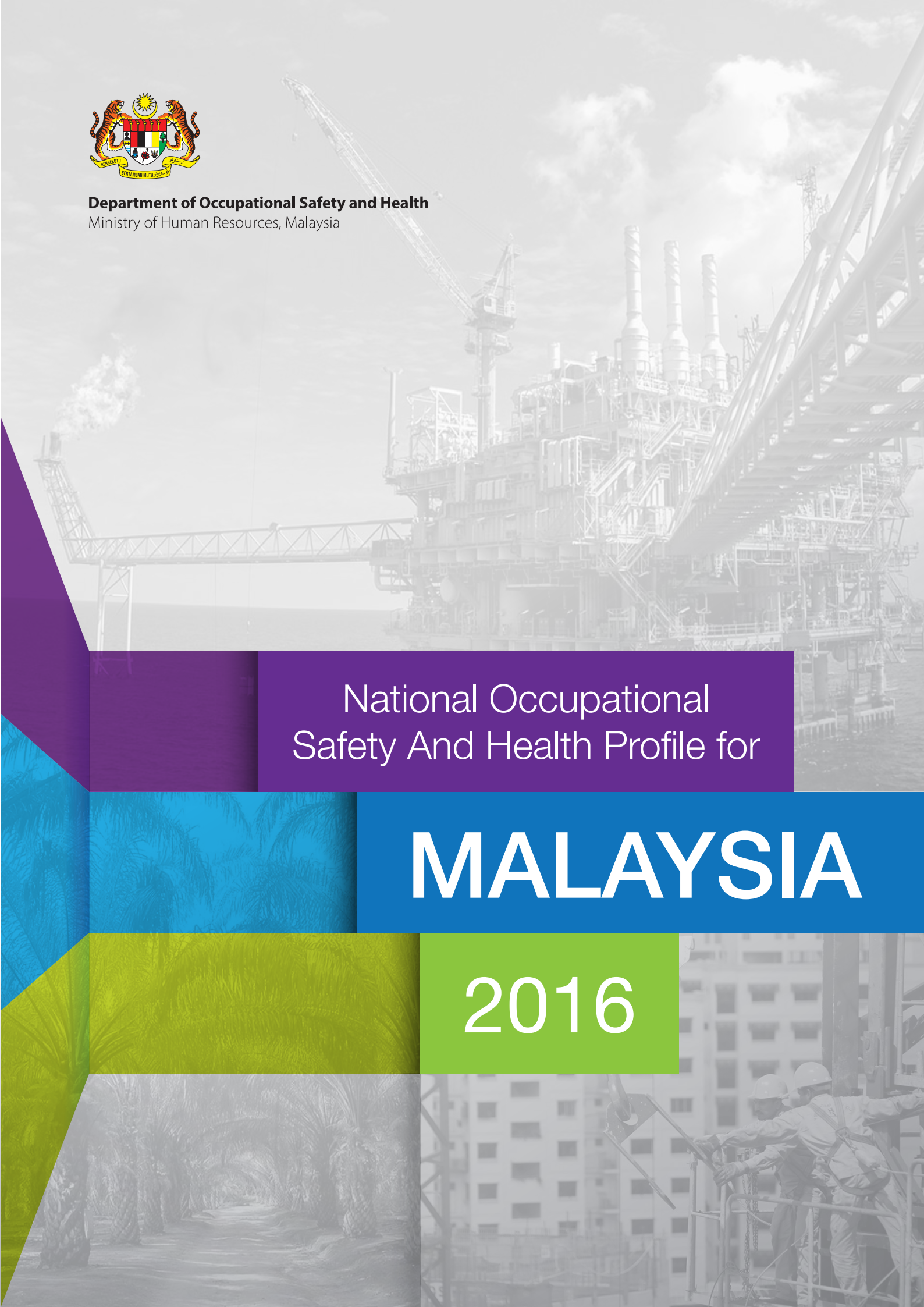

Department of Occupational Safety and Health
Ministry of Human Resources, Malaysia

National Occupational Safety And Health Profile for

MALAYSIA

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1.0 OSH LEGISLATIVE FRAMEWORK

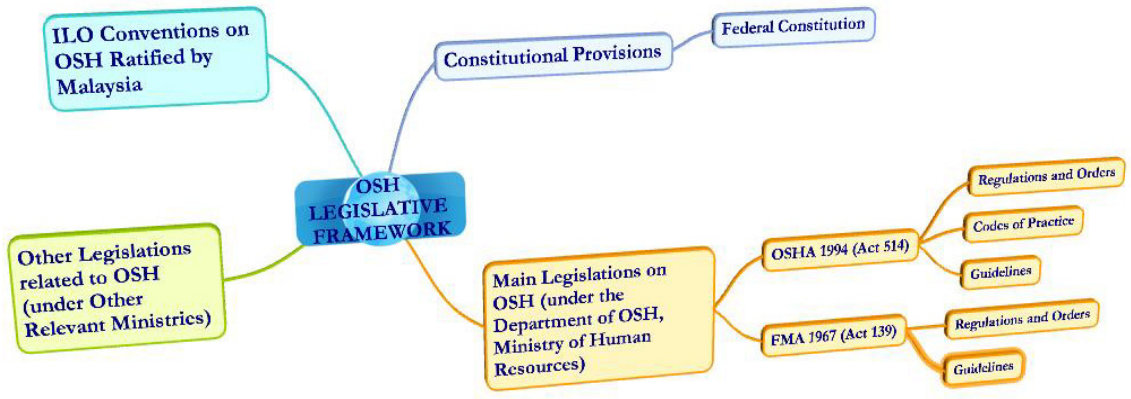

Figure 1.1: Summary of OSH Legislative Framework in Malaysia

1.1 Provisions of the Federal Constitution

The Federal Constitution of Malaysia is the supreme law of Malaysia. The constitutional rights under the Federal Constitution of Malaysia encompass the right to livelihood under Article 5 of the Constitution, and within the spirit and intent of Article 8 that all persons are equal before the law and entitled to equal protection of the law. The right of employment is paralleled to other constitutional rights and the development of the labor legislation in the country has always protected the labor force, including ensuring safe and healthy working environment for all workers. In particular, Article 5 of the Federal Constitution (Liberty of the Person) provides that no person shall be deprived of his life or personal liberty save in accordance with the law, and Article 8 of the Federal Constitution (Equality) provides that all persons are equal before the law and entitled to the equal protection of the law.

1.2 Main Legislations on Occupational Safety and Health (OSH)

The main legislations directly related to the occupational safety and health matters for the industries are the Occupational Safety and Health Act 1994 (OSHA 1994) and the Factories and Machinery Act 1967 (FMA 1967), which are enforced by the Department of Occupational Safety and Health (DOSH) under the Ministry of Human Resources. The Department of Occupational Safety and Health (DOSH) is the government agency mainly responsible for administering, managing, and enforcing legislation related to occupational safety and health (OSH) in this country with the vision to cultivate OSH culture in every workplace and to make every job and task safe and healthy for the

worker. This department is responsible for ensuring the safety, health and welfare of people at work, as well as protecting other people and public from safety and health hazards arising from the activities in the following sectors:

a) Manufacturing
b) Mining and Quarrying
c) Construction
d) Hotels and Restaurant
e) Agriculture, Forestry and Fishing
f) Transport, Storage and Communication
g) Public Services and Statutory Authorities
h) Utilities - Gas, Electricity, Water and Sanitary Services
i) Finance, Insurance, Real Estate and Business Services
j) Wholesale and Retail Trades

As a government agency, the department is responsible for the administration and enforcement of legislations related to occupational safety and health of the country, with a vision of becoming an organization, which leads the nation in creating a safe and healthy work culture that contributes towards enhancing the quality of working life. It is a policy of the Department of Occupational Safety and Health to continuously enhance the quality of products, services and safety and health performance of staff alongside the relevant persons. Both the management and the staff will work together in preventing any potential non-conformity of products and services, and any possibility of injury arising from incidents occurring at work places. In order to ensure the implementation of this policy, the Occupational Safety and Health Management System is created, implemented and maintained by this Department.

1.2.1 Occupational Safety and Health Act 1994 (Act 514)

The Occupational Safety and Health Act 1994 (OSHA 1994) provides the legislative framework to promote, stimulate and encourage high standards of safety and health at work. The Act 514 deals with occupational safety and health matters in the industries. Since then the Government has adopted an approach whereby a new philosophy is now attached to the Act. It now contains a clear statement that 'the responsibility for occupational safety and health at workplace are shared between the employers and the workers since the employers are the ones who provide the working environment which gives rise to hazards at work and the workers are the ones who have to work with these hazards'. Since the enactment of the Act in 1994, 8 Regulations (see below) were made under the Act. The goal-setting philosophy that was enshrined in the Act was meant to cater to the fast-changing scenarios and development of technologies in the industry.

The self-regulatory approach requires the employer to establish effective safety organization and performance through self-regulation schemes, designed to suit the industry or the organization. Therefore, there must be consultation between the employers, workers and the government to discuss any issue on safety and health at work; and it requires co-operation between the employers and the workers to safeguard and improve the quality of safety and health at workplaces. Hence, this new approach taken by the government in enacting the Act was meant to become the basis for proactive works to be undertaken by the industries instead of being told what to do. With the enactment of the Act, Malaysia has moved from the era of direct government supervision to the era of self-help and self- regulation, implying a more active role for the employers and the workers.

OSHA 1994 defines the general duties of employers, employees, the self-employed, designers, manufacturers, importers and suppliers of plant or substances. The salient features of the Act include the establishment of the National Council for Occupational Safety and Health (NCOSH), the duty to formulate Safety and Health Policy, the appointment of Safety and Health Officer in certain classes of industries, the establishment of Safety and Health Committee at the place of work and the use of Approved Industry Codes of Practice as evidence of compliance to safety and health provisions.

1.2.1.1 Regulations and Orders

The Regulations and Orders made under the Act are the:

a) Occupational Safety and Health (Employers' Safety and Health General Policy Statements (Exception) Regulations 1995.
b) Occupational Safety and Health (Control of Industrial Major Accident Hazards) Regulations 1996.
c) Occupational Safety and Health (Safety and Health Committee) Regulations 1996.
d) Occupational Safety and Health (Classification, Labelling of Safety Data Sheet of Hazardous Chemicals) Regulations 2013.
e) Occupational Safety and Health (Safety and Health Officer) Regulations 1997.
f) Occupational Safety and Health (Prohibition of Use of Substance) Regulations 1999.
g) Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.
h) Occupational Safety and Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Diseases) Regulations 2004.
i) Occupational Safety and Health (Safety and Health Officer) Orders 1997.
j) Occupational Safety and Health (Prohibition of Use of Substance) Orders 1997.

1.2.1.2 Codes of Practice

Apart from the Regulations and Orders made under the Act 1994, the Industry or Approved Codes of Practice, were also formulated as important documentations under Part X of the Act, and listed under four classifications as in Table 1.1.

Table 1.1: List of Codes of Practices Regulated by DOSH

	Chemical Management	Year
1	Industry Code of Practice on Chemicals Classification and Hazard Communication	2014
2	Industry Code of Practice on Indoor Air Quality	2010
	Industrial Hygiene	Year
1	Industry Code of Practice for Safe Working in a Confined Space	2010
	Occupational Health	Year
1	Code of Practice on Prevention and Eradication of Drug, Alcohol and Substance Abuse in the Workplace	2005
2	Code of Practice on Prevention and Management of HIV/AIDS at the Workplace	2001
	Transportation	Year
1	Code of Practice for Road Transport Activities	2010
2	Code of Practice on Safety, Health and Environment for Transportation Sector (SHE Code)	2007

1.2.1.3 Guidelines

In order to assist the industries in complying with the legislations, the Department of Occupational Safety and Health (DOSH) formulates Guidelines, explaining the requirements for compliance as categorized in Table 1.2.

Table 1.2: List of Guidelines Published by DOSH

NO.	AGRICULTURE, FORESTRY & FISHING	YEAR
1	Guidelines on Occupational Safety and Health in Logging Operations	2004
2	Guidelines on Occupational Safety and Health in Fishing and Aquaculture Operations	2003
3	Guidelines on Occupational Safety and Health in Agriculture	2002
NO.	**BUILDING CONSTRUCTION & ENGINEERING WORK**	**YEAR**
1	Guidelines for Approval of Design Scaffolding	2016
2	Guidelines for Public Safety and Health at Construction Sites	2007
3	Guidelines for the Prevention of Falls at Workplaces	2007
4	Guidelines on Trenching for Construction Safety	2000
5	Guidelines on Occupational Safety and Health in Tunnel Construction	1998
NO.	**CHEMICAL**	**YEAR**
1	Guidelines on Mercury Management in Oil and Gas Industry	2011
2	Guide for the Generic Use of Assessment of Health Risk Arising From the Use of Chemical Hazardous to Health	2006
3	Guidelines on Storage of Hazardous Chemicals: A Guide for Safe Warehousing of Packaged Hazardous Chemicals	2005
4	Guidelines on the Use of Personal Protective Equipment Against Chemicals Hazards	2005
5	Guidelines on the Monitoring of Airborne Contaminant for Chemicals Hazardous to Health	2002
6	Guidelines on the Control of Chemicals Hazardous to Health	2001
7	Guidelines for the Preparation of a Chemical Register	2000
8	Assessment of the Health Risks Arising from the Use of Hazardous Chemical in the Workplace (2nd Edition)	2000
9	Guidelines on Method of Sampling and Analysis for Airborne Lead	1997
NO.	**COMPETENCY**	**YEAR**
1	Guidelines for Certification of Scaffolding Operator Training Centre	2016
2	Guidelines of Point System for Continuous Education Program	2011
3	Guidelines for Registration of Training Centre for Site Safety Supervisor	2011
4	Guidelines of Employee Training, Registration of Training Centre and Operation of Confined Space Training Course	2008
5	Guidelines for Certification of Crane Operator Training Centre	2004

6	Guidelines for Application of Safety and Health Officer Training Centre	2003
7	Guidelines for the Registration of Assessors, Hygiene Technician and Occupational Health Doctor	2000
8	Examination Syllabus for Engineer's Certification of Competency (Steam and Internal Combustion Engines) Examination	1996
9	Guidelines for Registration - Responsible Person for Tower Crane Installer-Maintainer / Passenger & Goods Hoisting Machine & Gondola	-
NO.	**ERGONOMIC**	**YEAR**
1	Guidelines on Occupational Vibration	2003
2	Guidelines on Occupational Safety and Health for Seating at Work	2003
3	Guidelines on Occupational Safety and Health for Working with Video Display Unit (VDU's)	2003
4	Guidelines on Occupational Safety and Health for Standing at Work	2002
NO.	**GENERAL**	**YEAR**
1	Guidelines on Contract Management	2015
2	Guidelines for The Factories and Machinery (Special Scheme Inspection) (Risk-Based Inspection)	2014
3	Guidelines in Courier Services Industry	2015
4	Guidelines on Occupational Safety and Health Act 1994 (Act 514)	2006
5	Guidelines on Occupational Safety and Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning & Occupational Disease) Regulations 2004 (NADOPOD)	2005
6	Guidelines on Occupational Safety and Health in the Service Sector	2004
7	Guidelines on Gender Issues in Occupational Safety & Health	2003
8	Guidelines for Media Professionals	2000
9	Guidelines on Occupational Safety and Health in the Office	1996
10	Guidelines for the Protection of Employees Against the Effects of Haze at Workplaces	-
11	Guidelines on Occupational Safety and Health Management Systems	-
NO.	**HIRARC**	**YEAR**
1	Guidelines for Hazard Identification, Risk Assessment and Risk Control (HIRARC)	2008
NO.	**INDUSTRIAL HYGIENE**	**YEAR**
1	Guidelines on Heat Stress Management at Workplace	2016

2	Guidelines on Occupational Safety and Health for Design, Inspection, Testing and Examination of Local Exhaust Ventilation System	2008
3	Guidelines for Control of Occupational Noise	2005
NO.	**OCCUPATIONAL HEALTH**	**YEAR**
1	Guidelines on Aedes Mosquito Control in Construction Sites	2015
2	Guidelines on Occupational Health Services	2005
3	Guidelines on Preventing and Responding to Drugs and Alcohol Problems in the Workplace	2004
4	Guidelines on First Aid in the Workplace (2nd Edition)	2004
5	Guidelines on Reproductive Health Policy &Programmes at the Workplace	2002
6	Guidelines on Medical Surveillance	2001
7	Guidance for the Prevention of Stress and Violence at the Workplace	2001

1.2.2 Factories and Machinery Act 1967 (Act 139)

Another important legislation enforced by the Department of Occupational Safety and Health is the Factories and Machinery Act 1967, which was enacted to supersede the Machinery Ordinance 1953 of the States of Malaya. There were 15 regulations promulgated under the Act. The Act 139 was enacted in 1967 and it is the legislation applicable until today to provide for the control of factories with respect to matters relating to the safety, health and welfare of person therein, the registration and inspection of machinery and for matters connected therewith.

For almost 27 years until the coming into force of the Occupational Safety and Health Act 1994, the protection of workers' safety and health issues was governed by the FMA 1967. The Act contains the provisions relating to safety, health and welfare of employees as well as the machinery; persons in charge and certificates of competency; notification of accident, dangerous occurrence and dangerous diseases; and notice of occupation of factory, registration and use of machinery.

The FMA 1967 was amended in 2006 and gazetted on September 14, 2006, and enforced on January 1, 2007. The rational for amending the FMA 1967 was to provide for the provision giving the power to the Minister to issue license to individual or company carrying out activities under the Act; to update, improve and clarify unclear or vague provisions; to ensure the relevancy of the provisions contained in the Act with the current development and to ease the enforcement of the law; as well as to increase the amount of fine suitable to the current situation.

The amendment involved more than 30 provisions including the introduction of new provisions into the Act 2006. The regulations involved in the amendment are the Factories and Machinery (Notification, Certificate of Fitness and Inspection) (Amendment) Regulations, 2004, and the Factories and Machinery (Steam Boiler and Unfired Pressure Vessel) (Amendment) Regulations, 2005.

The Act contains the following Regulations:

a) Factories and Machinery (Steam Boiler and Unfired Pressure Vessel (Amendment) Regulations 2005.
b) Factories and Machinery (Electric Passengers and Good Lifts) Regulations 1970.
c) Factories and Machinery (Fencing of Machinery and Safety) Regulations 1970.
d) Factories and Machinery (Person in Charge) Regulations 1970.
e) Factories and Machinery (Safety, Health and Welfare) Regulations 1970.
f) Factories and Machinery (Administration) Regulations 1970.
g) Factories and Machinery (Certificate of Competency – Examinations) Regulations 1970.
h) Factories and Machinery (Notification, Certificate of Fitness and Inspection) (Amendment) Regulations 2004.
i) Factories and Machinery (Lead Regulations) 1984.
j) Factories and Machinery (Asbestos Process) Regulations 1986.
k) Factories and Machinery (Building Operations & Works of Engineering Construction (Safety) Regulations 1986.
l) Factories and Machinery (Noise Exposure) Regulations 1989.
m) Factories and Machinery (Mineral Dust) Regulations 1989.
n) Factories and Machinery (Exemption to Petroleum Nasional Berhad) Order 2013.
o) Factories and Machinery (Special Scheme of Inspection) (Risk-based Inspection) Regulations 2014.
p) Factories and Machinery (Exemption to Certificate of Fitness for Hoisting Machine) Order 2015.

1.3 Other Legislations Related to OSH (Related Legislations Enforced by the Relevant Ministries)

Apart from the main legislations on OSH as explained above, there are other legislations, which extend the protection of safety and health during employment and relate to the workplace. The legislations are enforced by the relevant Ministries responsible for matters within their jurisdictions.

1.3.1 Ministry of Human Resources

The Ministry of Human Resources is responsible for matters relating to development of skills, labour, occupational safety and health, trade unions, industrial relations, labour court, labour market information, analysis and social security. There are other departments under the Ministry that enforce their respective legislations pertaining to employment, labour and industrial relations.

1.3.1.1 Petroleum (Safety Measures) Act 1984 (Act 302)

Apart from the OSHA 1994 and the FMA 1967, DOSH also enforces the Petroleum (Safety Measures) Act 302, which makes rules for ensuring safety in the transportation, storage and utilization of petroleum. The Act contains provision relating to the transportation of petroleum by road and railway; transportation of petroleum by water; transportation of petroleum by air; transportation of petroleum by pipelines; storage and handling of petroleum; utilization of equipment, gadgets, materials, plants, appliances, buildings, structures and installations; existing equipment, gadgets, materials, plants, appliances, buildings, structures and installations.

For transportation of petroleum by road or railway, the owner or operator of a vehicle used for conveying petroleum is obliged to take all necessary measures to ensure that any employed person dealing with the conveyance of petroleum must carry out the provisions under this Act and Regulations. For transportation by water, it shall not be loaded or unloaded or discharged except at a port, or other place as is appointed by the Minister. Transportation by air and pipelines requires prior authorization of the Minister. Further under the Act, a valid petroleum-handling license is required to store or handle any petroleum. There is also a requirement for labelling of containers or receptacles containing petroleum. The Act also obliges the occupier of premises to give (24 hours' notice) to the Minister of any accident and loss of life or personal injury that occurs by explosion or fire involving petroleum.

1.3.1.2 Employment Act 1955 (Act 265)

Employment Act 1955 is an act relating to employment. The Act applies to all employees in Peninsular Malaysia and the Federal Territory of Labuan whose monthly wages do not exceed RM2,000 and all manual labourers irrespective of their wages. The Act requires an employer to give every employee a written contract of service containing the terms and conditions of the employment including provisions on the termination of the said contract.

The Act provides protection to the employees pertaining to payment of wages, hours of work, entitlement to paid annual leave, sick leave and public holidays as well as special provisions for the protection of female employees in relation to night work and underground work, and maternity benefits. The amendment made in 2012 to the Act, further included provisions on contractor for labour and sexual harassment. These provisions are important to safeguard workers from unfair labour practices by the employers, and include the right to work in a safe and healthy working environment. Employment of foreign employees by an employer also comes under the purview of the Act.

1.3.1.3 Labour Ordinance (Sarawak Cap 76) As Amended by Act 2005 (A1237)

Labour Ordinance (Sarawak Cap 76) intends to make better provision in law relating to labour in Sarawak. The provisions of the Labour Ordinance are similar to the provisions of the Employment Act 1955. The Ordinances cover employees with monthly wages not exceeding RM2,500 and all manual labourers irrespective of their wages. The Ordinance provides for the general terms and conditions relating to contract of service, inter alia, holidays, hours of work, shift work, rest day, annual leave, sick leave, termination, lay-off and retirement benefits and matters relating to wages. The Ordinance also creates offences relating to the infringement of the provisions of the Ordinance and provide penalties for such offences.

1.3.1.4 Labour Ordinance (Sabah Cap. 67) As Amended by Act 2005 (A1238)

Labour Ordinance (Sabah Cap. 67) consolidates the law relating to labour in Sabah. The provisions of the Labour Ordinance are similar to the provisions of the Employment Act 1955. The Ordinance lists the general provisions relating to contract of service such as holidays, hours of work, shift work, rest day, annual leave, sick leave, termination, lay-off and retirement benefits and matters relating to wages. The Ordinances cover employees with monthly wages not exceeding RM2,500 and all manual labourers irrespective of their wages.

1.3.1.5 Children and Young Persons (Employment) Act 1966 (Act 350)

Children and Young Persons (Employment) Act 1966 regulates the employment of children and young persons. The Act states the specific conditions under which a child or a young person may be employed including the allowed number of days of work and hours of work which the employers must comply. The Act defines a 'child' as a person

who has not completed his fifteenth year of age, and a 'young person' as a person not being a child, but has not completed his eighteenth year of age.

The Act provides that a child and young person may only be employed in light work in any undertaking carried out by his family and in public entertainment (upon issuance of license by the Director General of Labour). In any employment involving child and young person, the Act prohibits them from being engaged in hazardous work, employment contrary to the FMA 1967 and OSHA 1994 or the Electricity Act 1990 or employment to work underground. In any appointment connected with public entertainment, the Director General shall not grant any licence if he is of the opinion that the employment is dangerous to the life, limb, health, safety and morals of the child and the young person.

1.3.1.6 Employees' Social Security Act 1969 (Act 4)

Employees' Social Security Act 1969 establishes the Social Security Organization as a body corporate to administer the Scheme of Social Security under the Act. The Act provides social security in certain contingencies and it applies to all industries having one or more employees. The Organization manages the social security scheme provided by the Government to give financial guarantees and protection to the employees and their families in the event of accidents resulting in disablement or death. The Act thus provides compensation for injury sustained during work.

The Act requires the contribution from both the employers and employees according to Third Schedule of the Act. The social security protection includes social insurance like medical and cash benefits, artificial aids and rehabilitation to employees to reduce the sufferings and financial guarantees and protection to the family. The two social schemes are namely the Employment Injury Insurance Scheme and the Invalidity Pension Scheme.

The Employment Injury Insurance Scheme provides employees with coverage by way of cash benefits and medical care in the event of any disablement or death due to employment injury while the Invalidity Pension Scheme provides 24-hour coverage to employees against invalidity or death due to any cause not connected with his employment.

1.3.1.7 Workman's Compensation Act 1955 (Act 273)

Workman's Compensation Act 1955 provides for the payment of compensation to workmen for injury or occupational disease suffered in the course of their employment. The Act covers only foreign workers who are not permanently residents in Malaysia and

whose earnings are not more than RM500 per month and all manual workers irrespective of the wage.

The Act requires any question arises under the Act to be settled by agreement between the Commissioner, the workman and the employer. The Commissioner may hold an inquiry for the purpose of reaching the agreement between the parties. If such agreement cannot be reached, the matter shall be settled by an Arbitrator. The Act also provides for the compensation payment to the worker's dependants.

The Act prohibits any compensation or payment payable under the Act to be assigned, attached or any claim to be set off against the compensation or payment. The Foreign Workers' Compensation Scheme (Insurance) Order 2005 issued under this Act requires every employer employing foreign workers to insure with the panel of insurance companies appointed under this order and to effect payment of compensation for injuries sustained from accidents during and outside working hours.

1.3.1.8 Workers' Minimum Standards of Housing and Amenities Act 1990 (Act 446)

Workers' Minimum Standards of Housing and Amenities Act 1990 prescribes the minimum standards of housing and nurseries for workers and their dependants, requires employers to allot land for cultivation and grazing in a place of employment, requires employers to provide health, hospital, medical and social amenities and provides for matters incidental thereto.

An employer is not required to provide accommodation or housing to employees under any legislation. However, if the employer chooses to provide accommodation or housing in an area situated outside the city council, municipal council or Federal Territory, the employer shall provide housing and amenities including water, electricity, gas and also nursery, community hall, sports and other recreational facilities and estate hospital in accordance with the provisions of the Act.

These requirements under the Act do not only protect workers' safety and health by providing building, estate hospital, group estate hospital or clinic which meant for the employees. It also covers the welfare of workers where the employer has the duty to provide transportation of sick workers to hospital and to make weekly inspection of the workers' housing.

1.3.1.9 National Wages Consultative Council Act 2011 (Act 732)

Further protection for workers in employment is provided by the National Wages Consultative Council Act 2011 which establishes the National Wages Consultative Council with the responsibility of conducting studies on all matters pertaining to minimum wages and to make recommendation to the Government to make minimum wages orders according to the sectors, types of employment and regional areas. The Act requires the Council, before it makes recommendation to the Government to have consultation with the public on the minimum wages rates and coverage. The Act also requires the Council to collect and analyse data and information and conduct research on wages and the socioeconomic indicators.

The Act also creates offences against employers who fail to pay basic wages as specified in the minimum wages orders to his employees, and upon conviction, be liable to a fine not exceeding ten thousand ringgits for each employee whom has not been paid the minimum wages. The National Wages Consultative Council Act 2011 repealed the Wages Council Act 1947 (Act 195).

1.3.1.10 Human Resource Development Fund Act 2001 (Act 612)

Human Resource Development Fund Act 2001 provides for the imposition and collection of a human resources development levy for the purpose of promoting the training of employees including safety and health training, the establishment and the administration of the Fund by the Corporation, which is incorporated under the Companies Act 1965 (Act 125). The Act 612 states that the functions of the Corporation are:

i. to assess and determine the types and extent of employees', apprentices', and trainees' training and retraining in keeping with the human resource needs of industries;

ii. to promote and stimulate manpower training; and

iii. to determine the terms and conditions under which any financial or other benefits are to be given.

The Act further requires the employer to register with the Corporation. The Corporation is required to maintain a register of all employers registered together with a record of any payments made. The human resources development levy imposed in respect of each employee is at the rate of 1% of the monthly wages.

The Act empowers the Officers in Charge to compound offences under the Act, and empowers the court to order for the payment of the outstanding levy together with the interest thereon if the employer is found guilty of the offences created under the Act. The Act establishes a Human Resources Development Fund (HRDF).

The HRDF is to be utilised to promote, develop and upgrade the skills of the employees including to provide, establish, expand, upgrade or maintain training facilities. The HRDF may also be utilised by the employers in the training of his employees as financial assistance to defray his costs.

1.3.1.11 Industrial Relations Act 1967 (Act 177)

Industrial Relations Act 1967 regulates the relationship between employers and workmen and their trade union and the prevention and settlement of any differences or disputes arising from their relationship. The Act intends to promote and maintain industrial harmony between the employers, workmen and the trade union. The Act protects the rights of employers and workmen and their trade union and provides for the procedure relating to submissions of claims for recognition and scope and representation of trade union and collective bargaining.

A collective agreement shall be in writing and signed by the parties to the agreement and any term or condition of employment contained in the collective agreement must not be less favourable than or in contravention of the provisions of any written law applicable to the workmen covered by the said collective agreement. The Act also provides for the procedure for filing complaint to the Industrial Court, including matters related to dismissal of a workman.

1.3.1.12 Employment Information Act 1953 (Act 159)

Employment Information Act 1953 provides for the collection of information regarding the terms of service and conditions of work of employed persons. The Act empowers the authorized officer to request from an employer a written statement of the number of persons employed, the terms of the contract, the normal working hours, leave, holidays and rest periods allowed, the nature of the work performed by the employee, the wage structure, the job description of each occupation and the total earnings of the person employed. The Act creates offence of giving a false statement required by the authorized officer. It also creates offence of failing to the deliver a written statement requested by the authorized officer. Both offences upon conviction are liable to fine.

1.3.1.13 Private Employment Agencies Act 1981(Act 246)

Private Employment Agencies Act 1981 regulates private employment agencies in Malaysia. The Act prohibits such agencies from employing any person in any occupation injurious to the public interest or knowingly sends, directs or takes any person to any place for immoral purposes. Employers are to maintain records of registration of the workers, records of all aspects relating to the terms and conditions of employment and records of placement of workers under the Act.

The Act provides that private employment agencies shall only carry on the business of a private employment agency under a valid license issued by the Director General of Labour and such license is to be displayed at the conspicuous place of the premise of such business.

1.3.2 Ministry of Finance

The Ministry of Finance is responsible for the government expenditure and revenue raising. The Ministry develops economic policy and prepares the Malaysian federal budget. The Ministry of Finance also oversees financial legislations and regulations.

Employees Provident Fund Act 1999 (Act 452)

Employees Provident Fund Act 1999 obliges all employers to register their employees with Employees Provident Fund upon employment. The Act provides for a compulsory contribution for the benefit of employees. All the employers and employees under the Act, except foreign workers and those listed under the First Schedule of the Act, must contribute to the Employees Provident Fund (EPF).

The EPF is the government organization responsible for social security depository and retirement benefit for workers under legal employment. The Third Schedule of the Act prescribes the applicable rate of the payment of the contribution to the EPF. Employees, upon reaching the age of 55 years old, are entitled to withdraw the sum accumulated in their EPF savings. The employees may also withdraw part of their savings for purposes which are permissible under the Act.

1.3.3 Ministry of Natural Resources and Environment

The Ministry of Natural Resources is responsible for matters relating to natural resources, environment, pollution, contamination, biosafety, lands, mines, minerals,

geoscience, irrigation, drainage, hydrology, biodiversity, wildlife, national parks, forestry, marine park, surveying, mapping and geospatial data and climate change.

1.3.3.1 Environmental Quality Act 1974 (Act 127)

Environmental Quality Act 1974 is an act relating to the prevention, abatement, control of pollution and enhancement of the environment. The Act sets the legal framework for environmental regulations. It aims to protect the workers employed in the industries against unsafe and unhealthy working environment.

The Act requires the submission of the Environmental Impact Assessment (EIA) reports to the Department of Environment for any proposed development projects. The EIA is an important tool in preventing or minimizing pollution and environmental impact resulted from the proposed development project.

Under the Act and the Regulations, industrial activities are required to obtain approvals from the Department of Environment prior to any project implementation. 16 Regulations are made under the Act including the Environmental Quality (Sewage and Industrial Effluents) Regulations, the Environmental Quality (Schedule Wastes) Regulations, the Environmental Quality (Prescribed Premises) (Schedule Wastes Treatment and Disposal Facilities) Regulations, and the Environmental Quality (Clean Air Regulations) to regulate pollution standards within the territorial waters.

1.3.3.2 Mineral Development Act 1994 (Act 525)

Mineral Development Act 1994 (Act 525) makes provision for the inspection and supervision of exploration and mining of minerals and mineral ores. The Act is applicable to fossicking, panning, exploration, mining, and processing minerals and mineral ores, and mines. The Act requires that the Director General shall approve all development and mining scheme on land. The Director General is responsible under the Act for the supervision and control of the safety aspects of mines and activities of the fossicking, panning, exploration, and mining.

The Act requires the managers of mines to keep at the mines offices, all plans relating to the mining activities which must be made according the correct scale and measures. The Act also provides for proceedings and proof of investigation of accidents and danger areas. The Act allows regulations to be made by the Minister. One of the regulations made by the Minister is the Mineral Development (Safety in Exploration and Surface Mining) Regulations 2014. The Regulations require a safety management plan to be prepared by a consultant registered with the Board of Engineers Malaysia.

The safety management plan is to be submitted to the Assistant Director by the holder of a license for the Assistant Director's approval within stipulated period mentioned in the Regulation. The safety management plan must consist, among others, details of identification of hazardous areas, substances and activities and assessment of the risks thereof, mitigating measures to control the said risks, training programme on safety, safety procedures when accidents happen and emergency response procedures. The Regulations also require a holder of a license to take necessary steps to eliminate or minimize the risks in a workplace. The Regulations listed general duties of the holder of a license pertaining to safety in a workplace.

1.3.3.3 Biosafety Act 2007 (Act 678)

Biosafety Act 2007 was enacted as Malaysia recognizes the twin aspects of modern biotechnology: the great potential offered by modern biotechnology, and, the need to protect human health and the environment from the possible adverse effects of the products of biotechnology.

The Act establishes a process to vet all applications for direct release of living modified organisms (LMOs) into the environment to ensure that the particular LMO is safe. If it is safe, then it is approved. To arrive at this decision, a science based risk assessment report provided by the applicant is reviewed by Genetic Modification Advisory Committee (GMAC), consisting almost entirely of scientists.

The process is as suggested by the Cartagena Protocol on Biosafety (CPB). The scheme of the Act is to vet applications for direct release of LMOs into the environment. This process clearly allows LMOs that are safe to be released into the environment.

This National Biosafety Board consists of the representatives of all the relevant Ministries, including the Ministry of Natural Resources and Environment, Ministry of Science, Technology and Innovation, Ministry of Agriculture and Agro-based Industry, Ministry of Health, Ministry of Plantation Industries and Commodities, Ministry of Domestic Trade and Consumer Affairs, Ministry of International Trade and Industry as well as any person who may have specialized knowledge or experience in biosafety related issues.

1.3.4 Ministry of Energy, Green Technology and Water

The Ministry of Energy, Green Technology and Water is responsible for matters relating to energy affairs including sustainable energy, green technology, water supply and sewerage.

1.3.4.1 Gas Supply Act 1993 (Act 501)

Gas Supply Act 1993 provides for the licensing of the supply of gas to consumers through pipeline and related matters, the supply of gas at reasonable prices, the control of gas supply pipelines, installations and appliances with respect to matters relating to safety of person. The Act sets a regulatory framework where both the government and industry are expected to play a part in ensuring economy, quality, efficiency, reliability and safety in the use of Natural Gas and LPG.

The Act requires high standards for appropriate systems and practices to be put in place. Under the Act, the Minister makes the Gas Supply Regulations 1997 which provide a comprehensive set of preventive measures to ensure the safety of gas pipelines and installations at each stage of the process such as during installation, commissioning, operation, maintenance, repair, upgrading and removal of the system.

1.3.4.2 Electricity Supply Act 1990 (Act 447)

Electricity Supply Act 1990 regulates the electricity supply industry, the supply of electricity at reasonable prices, the licensing of any electrical installation, the control of any electrical installation, plant and equipment with respect to the safety of persons and the efficient use of electricity.

The Act also provides for the appointment and functions, duties and powers of the Director General of Electricity Supply, particularly in issuing license for the use of installations in accordance with the terms of a license expressly authorizing the supply or use, as the case may be.

The Act puts the owner, licensee or supply authority and the management under the duty to report to the Director in cases of accident or fire causing or resulting in loss of life or hurt to any person or serious damage to property which has occurred in connection with any installation or electrical plant or equipment if there is a reason to believe that the accident or fire was due to any failure to comply with the Act, and the accident or fire might have been prevented if proper precautions had been taken and observed.

In cases of loss of life or grievous hurt to any person due to any accident or fire connected with installation or electrical plant or equipment, the Director must consent to the alteration or addition to be made to such installation, plant or equipment or to the site of the accident or fire. The Act also provides the possible criminal proceedings to be instituted against any person.

1.3.5 Ministry of Urban Wellbeing, Housing and Local Government

The Ministry of Urban Wellbeing, Housing and Local Government is responsible for matters concerning urban wellbeing, housing, local government, town planning, country planning, fire and rescue authority, landscape, solid waste management, strata management, moneylenders and pawnbrokers.

1.3.5.1 Fire Service Act 1988 (Act 341)

Fire Service Act 1988 intends to provide for the effective and efficient functioning of the Fire Services Department and provides for the protection of persons and property from fire risks. The Act requires owners and managers of designated premises to apply for a Fire Certificate for the premises and ensure such premises comply with the requirements of the life safety, fire prevention, fire protection and firefighting.

The Act regulates the responsibilities of building owners and managers by requiring all fire safety facilities to be maintained and preserving its overall functionality. The building owners and managers have to notify the fire brigade regarding any material change in the premises or any change in its use. Such requirements clearly protect the safety of workers in the premises where they work. Failure to carry out these duties is an offence under the Act and may render the Fire Certificate invalid.

1.3.5.2 Uniform Building by Laws 1984

Uniform Building by Laws provides a common legislation for construction and inspection of structures. It covers a wide range of technical requirements for fire prevention, structural integrity, proper electrical wiring, ventilation and sanitary facilities. Written approval of the local authority for carrying out construction of buildings, which includes construction of factories is a must.

All completed buildings have to be certified as being fit for occupation by the local authority, to protect the safety of persons working in the premise if it is to be used as a workplace. In particular, the By-Laws provides for matters relating to space, light and ventilation in building, temporary works in connection with building operations, structural requirements, constructional requirements, fire requirements, and fire alarms, fire detection, fire extinguishment and firefighting access for every building. The By-Laws cover commercial, residential and common buildings across the country.

1.3.5.3 Street, Drainage and Building Act 1974

This Act amends and consolidates the laws relating to street, drainage and building in local authority areas in Peninsular Malaysia, and for purposes connected therewith. The Act introduces in the form of an Act of Parliament a uniform system with respect to street, drainage and building in local authority areas in Peninsular Malaysia. It provides for:

a) The review of safety and stability in the course of erecting buildings.
b) Powers as regards building in ruinous and dangerous state
c) Order for demolition of house unfit for habitation
d) Dangerous places to be repaired or enclosed
e) Precautions against accident. Bars to be erected across streets during repairs and lights placed at night.
f) Prevention of grass fires
g) Notice on person causing private street to be in a dangerous or defective conditions
h) Maintenance and repair of public streets.

1.3.6 Ministry of Science, Technology and Innovation

The Ministry of Science, Technology and Innovation is responsible for matters concerning science and technology and includes innovation, space science, chemistry, nuclear, meteorological, standards, atomic energy, remote sensing, design, technology park, biotechnology, astronautics, nanotechnology and researches in sciences and technology.

Atomic Energy Licensing Act 1984 (Act 304)

Atomic Energy Licensing Act 1984 establishes the Atomic Energy Licensing Board. The Board acts as the regulatory body of radioactive waste management. The Act empowers the Board to enforce the provisions therein and to introduce guidelines pertaining to the matter provided in the Act. The Act provides for:

1 control and licensing of radioactive materials;
2 protection of workers' health and safety from exposure to ionizing radiation;
3 disposal of radioactive waste;
4 powers of seizure and arrest and liability for nuclear damage.

All users of radioactive materials must be responsible for the wastes they produced, and must be registered and licensed by the Board. The Act further provides mechanism

aimed at controlling people dealing with radioactive material and radioactive waste in a safer manner. Several regulations have been formulated under the Act that cover activities related to the management of radioactive wastes.

1.3.7 Ministry of Agriculture

The Ministry of Agriculture and Agro-based Industry is responsible for agriculture matters including those related to agro-based industry, agritourism, livestock, veterinary services, fisheries, quarantine, inspection, agricultural research, agricultural development, agricultural marketing, agribusiness, botanical garden, food security and food sovereignty.

Pesticides Act 1974 (Act 149)

Pesticides Act 1974 intends to control pesticides in Malaysia by regulating the importation, manufacture, distribution, sale and use of pesticides. It establishes the Pesticides Board to control the importation and manufacture of pesticides by registering and issuing permits to persons desiring to import or manufacture pesticides, as well as to issue licenses to manufacture the pesticide.

To ensure the workers handling these pesticides do so with the utmost care, the workers carrying out any fumigation, spraying or treatment activities must notify the Minister if accident that occasions loss of human life or personal injury occurs as consequent of such activities. The Act also provides a list of controlled pesticides in the First Schedule of the Act.

1.3.8 Ministry of Works

The Ministry of Works is responsible for matters involving public works, highway authority, construction industry, engineers, architects and quantity surveyors.

Construction Industry Development Board Act 1994 (Act 520)

Construction Industry Development Board Act 1994 establishes Lembaga Pembangunan Industri Pembinaan Malaysia (CIDB) and provides for its functions relating to construction industry. The Act requires contractors to be registered with the Lembaga and to hold a valid certificate of registration under the Act. The Lembaga is given power under the Act to require the contractor to accredit according to the terms and under the regulations made under the Act.

The Act empowers the Lembaga to certify construction materials used in the construction industry, and as stated in the Fourth Schedule of the Act, in accordance to the standard stated therein. The Lembaga is empowered to develop and approve Code of Practice for the construction industry. The Act also lists out the obligations of contractors to ensure safety of buildings and construction works undertaken.

1.3.9 Ministry of Health

The Ministry of Health is responsible for matters relating to medical and health including health behaviour, cancer, public health, health management, medical research, health systems research, respiratory medicine, health promotion, healthcare tourism, medical device, blood collection, leprosy control, clinical research, health care, dental care, health institution, laboratory, pharmaceutical and patient safety.

1.3.9.1 Poison Act 1952 (Act 366)

Poison Act 1952 regulates the importation, possession, manufacture, compounding, storage, transport, sale and use of poisons. The Act establishes the Poisons Board, which exercises the advisory function to the Minister of Health. The Act requires poisons to be labelled, packaged and stored in accordance with the regulations made under the Act for safety and health purposes. The Act further requires that no person shall dispense compound or mix any poisons with other substance as safety requirement unless he is a person specified under section 12(1)(a),(b) or (c) of the Act. The Act provides a list of poisons in the First Schedule and makes distinction of groups of poisons, having regards to its strength. This list may be amended by the Minister from time to time.

1.3.9.2 Prevention and Control of Infectious Diseases Act 1988

This Act amends and consolidates the law relating to the prevention and control of infectious diseases and provides for other matters connected therewith. The provisions in this Act include:

a) The Minister may, by regulations made under this Act, prescribe the measures to be taken to prevent the introduction of any infectious disease into Malaysia from an infected area.

b) An authorized officer may enter into and medically examine any vehicle at any time upon its arrival in Malaysia, medically examine any person, animal or article on board such vehicle; and take such samples as may be necessary for the purpose of

determining the sanitary condition of such vehicle or article or the state of health of such person or animal.

c) If in the course of a medical examination an authorized officer finds or has reason to believe that any person is infected or is a contact, he may order such person to be removed to a quarantine station and detained therein for isolation or observation; or to be put under surveillance until such time as the disease is no longer communicable to others.

d) Every medical practitioner who treats or becomes aware of the existence of any infectious disease in any premises shall, with the least practicable delay, give notice of the existence of the infectious disease to the nearest Medical Officer of Health in the form prescribed by regulations made under this Act.

e) No person who knows or has reason to believe that he is suffering from an infectious disease shall expose other persons to the risk of infection by his presence or conduct in any public place or any other place used in common by persons than members of his own family or household or no person who knows or has reason to believe that he is suffering from any infectious disease specified in Part II of the First Schedule shall do any act which he knows or has reason to believe is likely to lead to the spread of such infectious disease.

f) No person who knows or has reason to believe that any article is contaminated or that any animal is infected or contaminated shall give, lend, sell, transmit, animals use or expose such article or animal without prior disinfection.

g) An authorized officer may cause any person who and is infected or whom he has reason to believe to be infected to be removed to a quarantine station for treatment and may detain the person at the station until he can be discharged without danger to the public.

h) An authorized officer may order any contact to undergo observation in such place and for such period as he may think fit, or to undergo surveillance until he may be discharged without danger to the public.

i) A Medical Officer of Health may order the destruction of any structure where a case of infectious disease has occurred if the structure is incapable of being thoroughly disinfected.

j) Where an authorized officer is satisfied that any vehicle has been used to convey any person suffering from an infectious disease, the authorized officer may cause such vehicle to be disinfected.

1.3.10 Ministry of Transport

The Ministry of Transport is responsible for matters relating to road transport, civil aviation, marine, road safety, port authority, railway assets, maritime, air accident investigation, logistic, maritime safety, shipping, rail transport, airport and airline.

1.3.10.1 Civil Aviation Act 1969 (Act 3)

Civil Aviation Act 1969 was enforced to make better provision in the law relating to Civil Aviation, and the Act regulates civil aviation and for carrying out the Chicago Convention. The Act empowers the Minister to make regulations including generally on securing the safety, efficiency and regularity of air navigation and the safety of aircraft and of persons and cargo carried in it, and preventing aircraft endangering other persons and property. Also, the investigation of any accident either occurring in Malaysia or occurring to Malaysian aircraft.

Specific parts under the Act which regulate matters in relation to safety are, the control of obstructions in vicinity of aerodromes, power to declare a controlled area, license to provide airport and aviation services, general duties of licensed company, suspension or revocation of license on breach of condition of license, suspension or revocation of license on breach of this act or regulations under it, and special power in emergency.

Important Regulations made under the Act, the Civil Aviation Regulations 2016 provides for provisions on endangering safety of aircraft, safety of person and property, safety programme and safety management system, safety regulatory oversight, operator's responsibilities in relation to fatigue of crew, crew's responsibilities in relation to fatigue, rules of the air, passenger briefing by pilot-in-command, method of carriage of persons, operator certificate, commercial air transport operations at night or in instrument meteorological conditions by single engine aero planes, additional duties of pilot-in-command in commercial air transport aircraft carrying passengers, Malaysian aircraft used in general aviation operation, foreign aircraft operations.

For investigation of aircraft accident and incident, there are provisions on the appointment of investigator and investigator-in-charge, the duty of responsible person (either the pilot-in-command of the aircraft involved in the accident, or the owner, operator or hirer of the aircraft) to notify the accident or incident to the investigator-in-charge. Thereafter the investigator-in-charge shall cause an investigation into the accident to be conducted immediately.

1.3.10.2 Malaysian Aviation Commission Act 2015 (Act 771)

As part of the government's efforts to streamline and strengthen the national aviation industry, an independent regulator was established under the Malaysian Aviation Commission Act 2015 ("the Act"). The Act established an independent Malaysian Aviation Commission with the objectives inter alia, to regulate economic matters relating to the civil aviation industry, to strengthen the stability of the aviation industry, to provide just and fair treatment to all industry players, to provide a clear and transparent decision making process and to establish a competitive framework to promote healthy, stable and sustainable competition in the aviation industry.

The Commission is under the purview of the Ministry of Transport and entrusted with the duties to oversee the economic and commercial aspects of the aviation industry, while the technical, safety and security aspects of the industry remain under the purview of the Department of Civil Aviation. In this regard, the Act provides that the Commission shall consult the Director General of DCA on any technical, safety and security issue in the performance of its functions.

1.3.10.3 Merchant Shipping Ordinance 1952 [Ord. 70/52]

The Merchant Shipping Ordinance provides for:

a) The return of distressed seamen.
b) The recovery of expenses of relief of distressed seamen.
c) Misconduct endangering life or ship.
d) Penalty for bringing passengers in filthy or insanitary passenger steamer.
e) Penalty for having excessive number of passengers on board.
f) Penalty for bringing passengers from foreign port in excess of authorized number.
g) General supervision by the Surveyor-General of Ships on matters relating to the safe operation of ships, etc.
h) Safety Management System.
i) Safety rules including report to Port Officer of accidents to steamships, rules as to life-saving appliances, duties of owners and master as to carrying life-saving appliances and inspections with respect to life-saving appliances.
j) Issue for cargo ships of safety-equipment certificates and exemption certificates.
k) Cargo ship safety construction certificates and exemption certificates.
l) Report of dangers to navigation and signals of distress.
m) Removing persons in case of danger.
n) Modification of safety certificate as respects life-saving appliances.
o) Placing undue weight on safety valve.
p) Restrictions on carriage of dangerous goods.

q) Penalty for mis-description of dangerous goods, the power to deal with goods suspected of being dangerous, forfeiture of dangerous goods improperly sent or carried and the carriage of dangerous goods.
r) Obligations to take precautions to prevent grain cargo from shifting and the obligation to take precautions in loading deck cargo.
s) Power to detain unsafe ships and procedure for detention
t) Prohibition of discharge of oil or harmful substance.
u) Action to be taken in cases of maritime casualty.
v) Saving for foreign ship coming in under stress of weather.

1.4 Summary of Legislations (Acts) Enforced by the Relevant Ministries

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
1	Ministry of Human Resources	Petroleum (Safety Measures) Act 1984 (Act 302)	Part II: Transportation of Petroleum by Road and Railway Section 3: Permitted conveyance of petroleum by road or railway. Section 4: Power of Minister to make regulations. Section 5: Employees to be informed of the provisions of the Act and the regulations; related offences Part III: Transportation of Petroleum by Water Section 6: Permitted loading, unloading and discharging of petroleum. Section 7: Entry into ports of vessels carrying petroleum. Section 8: Notification to Inspector of vessel coming into port. Section 9: Permission of port officer to take petroleum from vessel. Section 10: Unloading or discharging of petroleum. Section 10A: Restriction on loading, unloading and discharging, of petroleum between sunset and sunrise. Section 11: Direction of the Port Officer in respect of vessels carrying petroleum. Section 12: Loading or carriage of petroleum. Section 13: Remaining in any port, etc. without permission. Section 14: Placing on any quay, bank, etc. any petroleum. Part IV: Transportation of Petroleum by Air Section 15: Transportation of petroleum by air not permitted. Part V: Transportation of Petroleum by Pipelines Section 16: Authorization of pipeline works.

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
			Section 17: Emergency pipeline works. Section 18: Offences relating to unauthorized pipeline works. <u>Part VI: Storage and Handling of Petroleum</u> Section 19: Petroleum storage and petroleum handling license. Section 20: Labelling of containers or receptacles containing petroleum. Section 21: Power of Minister to make regulations in special circumstances. Section 22: Notice of accident involving petroleum. Section 23: Inquiry into accidents involving petroleum. Section 24: Insulting persons conducting inquiry. Section 25: Protection agent suits for persons conducting inquiry. Section 26: Evidence not admissible in civil or criminal proceedings. Section 27: Exempted categories of petroleum. <u>Part VII: Utilization of Equipment, Gadgets, Materials, Plants, Appliances, Buildings, Structures and Installations</u> Section 28: Approved equipment, etc. and verification. Section 29: Power of Minister to vary list of approved equipment, etc.
		Employment Act 1955 (Act 265)	<u>Part VIII: Employment of Women</u> Section 34: Prohibition of night work. Section 35: Prohibition of underground work. Section 36: Prohibition of employment by Minister. <u>Part IX: Maternity Protection</u> Section 37: Length of eligible period and entitlement to maternity allowance.

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
			Part XII: Rest Days, Hours of Work, Holidays and Other Conditions of Service Section 59: Rest day. Section 60: Work on rest day. Section 60A: Hours of work. Section 60B: Shift work.
		Labour Ordinance (Sarawak Cap 76) As Amended by Act 2005 (A1237) - Applicable in Sarawak	Part IV: Provisions Relating to Employment. Chapter XI - Special Provisions Relating to The Employment of Children and Young Persons. Chapter XIA: Employment of Women. Chapter XIB: Maternity Protection.
		Labour Ordinance (Sabah Cap. 67) As Amended by Act 2005 (A1238) - Applicable in Sabah	Part IV: Provisions Relating to Employment. Chapter XI: Special Provisions Relating to The Employment of Children and Young Persons. Chapter XIA: Employment of Women. Chapter XIB: Maternity Protection.
		Children and Young Persons (Employment) Act 1966 (Act 350)	Section 2: Employment in which children and young persons may be engaged. Section 3: The Minister may prohibit any child or young person from engaging or being engaged in any employment. Section 4: Number of days' work. Section 5: Hours of work of children. Section 6: Hours of work of young persons.
		Employees' Social Security Act 1969 (Act	Part III: Benefit Section 32A: Occupational Disease.

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
		4)	Section 40: Organization's power to co-operate with existing institutions or promote measures for health, welfare, etc., of insured persons.
		Workman's Compensation Act 1955 (Act 273)	Part II: Workmen's Compensation for Injury Section 5: Compensation for occupational diseases. Section 6: Compensation limited to injuries received at work.
		Workers' Minimum Standards of Housing and Amenities Act 1990 (Act 446)	Part II: Housing and Other Amenities Section 6: Supply of water and electricity and maintenance of houses. Section 8: Building endangering health or safety. Part III: Health, Hospital, Medical Treatment and Sanitation Section 17: Sick workers being admitted to a Government hospital. Section 18: Transportation of sick workers to hospital. Section 20: Duty to report suspected cases of infectious disease. Section 21: Duty of employer to segregate worker suffering from infectious disease. Section 22: Power of Medical Officer of Health to order immunization against infectious disease. Section 23: Weekly inspection of workers' housing.
		Wages Council Act 1947 (Act 195)	Part III: Wages Regulation Orders Section 12: Powers to fix remuneration and holidays. Section 13: Effect and enforcement of wages regulation orders. Section 14: Permits to infirm and incapacitated persons.
		Human Resource Development Fund Act	Part III: Registration and Human Resources Development Levy Section 13: Duty of employer to register with the Corporation.

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
		2001 (Act 612)	Section 14: Imposition of levy. Section 15: Imposition of levy on employer who opts to be registered. Section 16: Deregistration of employers. Section 17: Re-registration of employers. Section 18: Interest on levy due but not paid in time. Section 19: Qualifying conditions. Section 20: Duty of employer to prepare and keep information.
		Industrial Relation Act 1967 (Act 177)	Part II: Protection of Rights of Workmen and Employers and Their Trade Unions Section 4: Rights of workmen and employers. Section 5: Prohibition on employers and their trade unions in respect of certain acts. Section 6: Leave on trade union business. Section 7: Prohibition on workmen and their trade unions in respect of certain acts.
		Private Employment Agencies Act 1981 (Act 246)	Section 6: Protection of public servants.
		Minimum Retirement Age Act 2012 (Act 753)	Part II: Minimum Retirement Age Section 5: Premature Retirement. Section 6: Optional Retirement.
2	Ministry of Finance	Employees Provident Fund Act 1991 (Act 452)	Part V: Contributions to the Employees Provident Fund Section 41: Duty of employer to register with the Board. Section 42: Duty of employer to prepare and furnish statement of wages. Section 43: Rate of contributions. Section 44: Remittance of funds in connection with retirement.

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
3	Ministry of Natural Resources & Environment	Environmental Quality Act 1974 (Act 127)	Part IV: Prohibition and Control of Pollution Section 28: Special defences. Section 33: Power to prohibit or control licensed persons from discharging, etc. of wastes in certain circumstances.
		Mineral Development Act 1994 (Act 525)	Part III: Regulation of Exploration and Mining Section 13: Good and safe practices and environmental standards. Section 14: Manager of mine. Section 15: Directions by manager of mine. Part IV: Accident and Inquiry Section 21: Proceedings upon accident and dangerous occurrence. Part V: Enforcement, Investigation, Evidence, Offences and Penalties Section 23: Enforcement by mines officer.
		Biosafety Act 2007 (Act 670)	Part IV: Notification for Export, Contained Use and Import for Contained Use Section 33: Circumstances where Board may make further order on notification. Part V: Risk Assessment and Risk Management Reports and Emergency Response Plan Section 37: Emergency response plan.
4	Ministry of Energy, Green Technology and Water	Gas Supply Act 1993 (Act 501)	Part IX: General Section 35: Competent person. Section 36: Serious accident to be reported.

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
		Electricity Supply Act 1990 (Act 447)	Part VII Notification of Accident or Fire Section 33: Serious accidents to be reported. Part X: General Section 45: Precautions in execution of work. Section 47: Precautions against atmospheric electricity. Section 50: Prohibition of employment of children.
5	Ministry of Urban Wellbeing, Housing and Local Government	Fire Service Act 1988 (Act 341)	Part V: Fire Certificate Section 29: Application for, and issue of Fire Certificate. Section 32: Change of conditions affecting adequacy of life safety facilities, etc. Section 35A: Power of Director General to order activity to cease in cases of urgency.
		Street Drainage and Building Act 1974	Part II: Streets Section 4: Maintenance and repair of public streets. Section 16: Notice on person causing private street to be in a dangerous or defective conditions. Section 37: Prevention of grass fires Section 41: Precautions against accident. Bars to be erected across streets during repairs and lights placed at night. Section 43: Dangerous places to be repaired or enclosed. Part V: Building Section 70b: The review of safety and stability in the course of erecting buildings. Section 83: Powers as regards building in ruinous and dangerous state. Section 89: Order for demolition of house unfit for habitation.

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
6	Ministry of Science, Technology and Innovation	Atomic Energy Licensing Act 1984 (Act 304)	Part IV: Health and Safety Section 25: Protection of workers. Part VI: Disposal of Radioactive Waste Section 30: Transport of radioactive waste with prior authorization of appropriate authority.
7	Ministry of Agriculture	Pesticides Act 1974 (Act 149)	Part VI: Death and Injury Occasioned by Pesticides Section 28: Reporting of accident, death and personal injury.
8	Ministry of Health	Poison Act 1952 (Act 366)	Section 9: packaging, labelling and storing of poison. Section 10: Transport of poison.
		Prevention and Control of Infectious Diseases Act 1988	Part III: Prevention of Importation of Infectious Disease Section 3: The Minister may, by regulations made under this Act, prescribe the measures to be taken to prevent the introduction of any infectious disease into Malaysia from an infected area. Section 7(1): An authorized officer may: 1 Enter into and medically examine any vehicle at any time upon its arrival in Malaysia; 2 medically examine any person, animal or article on board such vehicle; and 3 take such samples as may be necessary for the purpose of determining the sanitary condition of such vehicle or article or the state of health of such person or animal. Section 7(3): If in the course of a medical examination under subsection (1) an authorized officer finds or has reason to believe that any person is infected or is a

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
			contact, he may order such person: 1 to be removed to a quarantine station and detained therein for isolation or observation; or 2 to be put under surveillance until such time as the disease is no longer communicable to others. Part IV: Control of the Spread of Infectious Disease Section 10(2): Every medical practitioner who treats or becomes aware of the existence of any infectious disease in any premises shall, with the least practicable delay, give notice of the existence of the infectious disease to the nearest Medical Officer of Health in the form prescribed by regulations made under this Act. Section 12(1): No person who knows or has reason to believe that he is suffering from an infectious disease shall expose other persons to the risk of infection by his presence or conduct in any public place or any other place used in common by persons than members of his own family or household or (2) No person who knows or has reason to believe that he is suffering from any infectious disease specified in Part II of the First Schedule shall do any act which he knows or has reason to believe is likely to lead to the spread of such infectious disease. Section 13(1): No person who knows or has reason to believe that any article is contaminated or that any animal is infected or contaminated shall give, lend, sell, transmit, animals. use or expose such article or animal without prior disinfection. Section 14: An authorised officer may cause any person who and is infected or whom he has reason to believe to be. infected to be removed to a quarantine station for

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
			treatment and may detain the person at the station until he can be discharged without danger to the public. Section 15(1): An authorised officer may order any contact to undergo observation in such place and for such period as he may think fit, or to undergo surveillance until he may be discharged without danger to the public. Section 19(1): A Medical Officer of Health may order the. destruction of any structure where a case of infectious disease has occurred if the structure is incapable of being thoroughly disinfected. Section 21: Where an authorised officer is satisfied that any vehicle has been used to convey any person suffering from an infectious disease, the authorised officer may cause such vehicle to be disinfected.
10	Ministry of Transport	Civil Aviation Act 1969 (Act 3)	Part II: Regulation of Civil Aviation Section 3: Power to give effect to the Chicago Convention and regulate civil aviation. Part IV: Control of Obstructions in Vicinity of Aerodromes Section 7: Indication of presence of obstructions near aerodromes. Section 8: Power to declare a controlled area. Part VIIIA: License to Provide Airport and Aviation Services Section 24A: Power of Minister to grant a license to provide airport and aviation services. Section 24E: General duties of licensed company.

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
			Section 24I: Suspension or revocation of license on breach of condition of license. Section 24J: Suspension or revocation of license on breach of this Act or regulations under it. Section 24K: Special power in emergency.
		Malaysian Aviation Commission Act 2015 (Act 771)	Part III: Functions and Powers of the Commission and the Executive Chairman Section 19: Commission to consult Director General of Civil Aviation. Section 40: Power to impose conditions.
		Merchant Shipping Ordinance 1952 [Ord. 70/1952]	Part III - Masters and Seamen Section 158: Provisions for return of distressed seamen. Section 159: Recovery of expenses of relief of distressed seamen. Section 177: Misconduct endangering life or ship. Part IV - Passenger Ships Section 240: Penalty for bringing passengers in filthy or insanitary passenger steamer Section 236: Penalty for having excessive number of passengers on board. Section 237: Penalty for bringing passengers from foreign port in excess of authorized number. Part V – Maritime Transport Safety and Security Section 249AF: General supervision by the Surveyor-General of Ships on matters relating to the safe operation of ships, etc. Section 249AH: Safety Management System. Section 249AO: Safety rules. Section 255: Report to Port Officer of accidents to steamships. Section 257: Rules as to life-saving appliances.

NO	MINISTRIES	LEGISLATIONS (ACTS) ENFORCED	PARTS/SECTIONS RELATING TO OSH
			Section 258: Duties of owners and master as to carrying life-saving appliances. Section 261: Inspections with respect to life-saving appliances. Section 266: Issue for cargo ships of safety-equipment certificates and exemption certificates. Section 268A: Cargo ship safety construction certificates and exemption certificates. Section 278: Report of dangers to navigation. Section 279: Signals of distress. Section 281: Removing persons in case of danger. Section Modification of safety certificate as respects life-saving appliances. Section 287: Placing undue weight on safety valve. Section 289: Restrictions on carriage of dangerous goods. Section 290: Penalty for mis-description of dangerous goods. Section 291: Power to deal with goods suspected of being dangerous. Section 292: Forfeiture of dangerous goods improperly sent or carried. Section 293: Carriage of dangerous goods. Section 297: Obligations to take precautions to prevent grain cargo from shifting. Section 298: Obligation to take precautions in loading deck cargo. Section 302: Power to detain unsafe ships and procedure for detention. <u>Part VA - Pollution from Ships</u> Section 306CA: Prohibition of discharge of oil or harmful substance. Section 306I: Action to be taken in cases of maritime casualty. <u>Part VI - Load Line and Loading</u> Section 331: Saving for foreign ship coming in under stress of weather.

1.5 Summary of Legislations Enacted by the State of Sabah & Sarawak

STATE	LEGISLATION ENFORCED	PARTS/SECTION RELATING TO OSH
Sabah	Town and Country Planning Ordinance (Sabah Cap. 141)	<u>Part VA: Development Control</u> Section28A: Use of land and Building Section 28B: Prohibition of development without planning permission. Section 28C: Application for planning permission. Section 28D: Layout plans. <u>Third Schedule:</u> Part I – Roads, Part II – Buildings and Other Structures, Part III – Community Planning, Part IV – Amenities, Part V – Public Services, Part VI – Transport and Communication.
	Public Health Ordinance 1960	<u>Part III</u> Section 13(c): Obligation to notify notifiable disease by employer. Section 18: Duty of Employer of persons suffering from notifiable disease. Section 24: Power to disinfect premises etc. Section 25: Power to order destruction of infected building and articles <u>Part IV</u> Section 33: Power to enter and examine premises. Section 36: Food and drink to be protected from disease-bearing insert (bake-house, food factory, eating shop, place where food and drink is manufactured. <u>Part VII – Nuisances</u> Section 89: Definition of a nuisance. Section 90: Duty of local authority to prevent nuisance. Section94: Closure of overcrowded premises Section 100: Examination of premises.
	Mining Ordinance 1960 (Chapter 79 of the Revised Edition)	<u>Part II – Prospecting</u> Section 4: General prospecting permits Section 5: Conditions of permit. Section 6: Prospecting licenses.

STATE	LEGISLATION ENFORCED	PARTS/SECTION RELATING TO OSH
		Section 8: Conditions of licenses. Part III – Mining Section 14: Mining leases. Section 20: Power of Chief to close mine if the mine is dangerous to the safety or health of persons employed.
	Sabah Inland Fisheries and Aquaculture Enacment 2003	Part VII Section 47(3): Designated control areas and prohibition of movement Section 48(3): Aquaculture premise suspected of being infected with fish disease Section 49(3): Aquaculture premise infected with fish disease. Section 50: Failure to comply with requirements.
Sarawak	Protection of Public Health Ordinance, 1999 (Chapter 30)	Part V – Food Premises Section 21: Licensing of food premises. Section 22: General Condition for license. Section 23: Cleanliness of food premises. Section 26: Workers in food premises. Part VI – Sanitary Conditions of Premises Section 29: Insanitary premises. Section 30: Destruction of rats, wasp, bees, ext. Part VI – Sanitary Conditions of Premises. Section 31: Premises for designated traces. Section 32: Regular inspection of designated premises. Part VII – Hotels and Lodging Houses Section 33: Licensing of hotels and lodging houses Section 34: Condition for grant of license Section 35: General license conditions Part IX – General Provision for Protection of Public Health. Section 52: Premises not to be overcrowded. Schedule – Designated trades
	Electricity Ordinance (Chapter 50)	Section 4: License required for use of installation; terms, conditions and contents of licenses Section 4G: Competent Control

STATE	LEGISLATION ENFORCED	PARTS/SECTION RELATING TO OSH
		Section 8: Periodical inspection of installation Section 10: Restriction of connection with earth Section 11: Procedure in case of dangerous defect in installation or apparatus Section 14: Report and investigation of accidents Section 31: Prohibition of employment of children
	Mineral Ordinance 2004	Part III – Authority to Prospect and Mining: Licences and Leases. Section 16: Application for panning license. Section 17: Statutory conditions of panning license. Section 22: Application for prospecting license. Section 23: Statutory conditions of prospecting license. Section 44: Application for mining lease Section 54: Statutory conditions of mining lease or certificate.
	Forest Ordinance 2015 (Chapter 71)	Part IV – Forest Management and Development Chapter 3 – Workmen Section 49: Registration of Workmen Section 50: Employers to insure Section 51: Employment of trained workmen
	State Fisheries Ordinance 2003 (Chapter 54)	Part V – Aquaculture Section 29: Permit to establish pond for Aquaculture Section 32: License for hatchery Section 33: Order to stop work on pond, ext. Part VI – Fish Products and Fish Processing Section 41: License for manufacture of fish products and processing fish Section 43: Closure of premises
	Entertainment Ordinance 2000 (Chapter 33)	Part III – Control of Entertainment Section 5: Requirement for license. Part V – General Section 17: Power of Closure.

1.6 ILO Conventions Relating to Occupational Safety and Health and Labour-Related Ratified by Malaysia

Malaysia had ratified the International Labour Organization (ILO) Convention C187 (Promotional Framework for Occupational Safety and Health Convention 2006) as the government's commitment in ensuring the safety and health of employees in the country are protected, by meeting the safety standards set by the international body. Being the third country in Asia after Japan and South Korea to ratify the said Convention, Malaysia agreed to be monitored by the ILO in matters related to OSH, and reducing the number of occupational accidents is the main focus of the country. This needs the employers and employees to cooperate and unite to improve the level of OSH in Malaysia. Prior to the Convention C187, Malaysia had ratified the C119 (Guarding of Machinery Convention 1963) with regard to the prohibition of the sale, hire and use of inadequately guarded machinery.

Other important ratified ILO Conventions related to labour protection are summarized in Table 1.3.

Table 1.3: Ratified ILO Conventions related to labour protection

NO	CONVENTION	PENINSULAR/ SABAH/SARAWAK	RATIFICATION DATE
1	C11 Right of Association (Agriculture) Convention, 1921	Malaysia (Peninsular) Malaysia (Sarawak)	11 January 1960 3 March 1964
2	C12 Workmen's Compensation (Agriculture) Convention, 1921	Malaysia (Peninsular) Malaysia (Sarawak)	5 June 1961 3 March 1964
3	C14 Weekly Rest (Industry) Convention, 1921	Malaysia (Sarawak)	3 March 1964
4	C16 Medical Examination of Young Persons (Sea) Convention, 1921	Malaysia (Sabah and Sarawak)	3 March 1964
5	C17 Workmen's Compensation (Accidents) Convention, 1925	Malaysia (Peninsular)	11 November 1957
6	C19 Equality of Treatment (Accident Compensation) Convention, 1925	Malaysia (Peninsular) Malaysia (Sarawak)	11 November 1957 3 March 1964
7	C29 Forced Labour Convention, 1930	Malaysia	11 November 1957
8	C45 Underground Work (Women) Convention, 1935	Malaysia (Peninsular)	11 November 1957

NO	CONVENTION	PENINSULAR/ SABAH/SARAWAK	RATIFICATION DATE
9	C50 Recruiting of Indigenous Workers Convention, 1936	Malaysia	11 November 1957
10	C64 Contracts of Employment (Indigenous Workers) Convention, 1939	Malaysia	11 November 1957
11	C65 Penal Sanctions (Indigenous Workers) Convention, 1939	Malaysia	11 November 1957
12	C81 Labour Inspection Convention, 1947	Malaysia	1 July 1963
13	C86 Contracts of Employment (Indigenous Workers) Convention, 1947	Malaysia (Sabah and Sarawak)	3 March 1964
14	C88 Employment Service Convention, 1948	Malaysia	6 June 1974
15	C94 Labour Clauses (Public Contracts) Convention, 1949	Malaysia (Sabah and Sarawak)	3 March 1964
16	C95 Protection of Wages Convention, 1949	Malaysia	17 November 1961
17	C97 Migration for Employment Convention (Revised), 1949	Malaysia (Sabah)	3 March 1964
18	C98 Right to Organize and Collective Bargaining Convention, 1949	Malaysia	5 June 1961
19	C119 Guarding of Machinery Convention, 1963	Malaysia	6 June 1974
20	C123 Minimum Age (Underground Work) Convention, 1965	Malaysia	6 June 1974
21	C100 Equal Remuneration Convention, 1951	Malaysia	9 September 1997
22	C138 Minimum Age Convention, 1973	Malaysia	9 September 1997
23	C182 Worst Forms of Child Labour Convention, 1999	Malaysia	10 November 2000
24	C144 Tripartite Consultation (International Labour Standards) Convention, 1976	Malaysia	14 June 2002

Malaysia is considering to ratify the ILO Convention C155 (Occupational Safety and Health Convention, 1981), the convention concerning Occupational Safety and Health and the Working Environment. The C155 Convention applies to all branches of economic activity to all workers in the branches of economic activity covered. The Convention requires member of convention to formulate, implement and periodically review a coherent national policy on occupational safety, occupational health and the working environment.

The aim of the policy shall be to prevent accidents and injury to health arising out of, linked with or occurring in the course of work, by minimizing, so far as is reasonable practicable, the causes of hazards inherent in the working environment. The formulation of the policy referred to in this Convention shall indicate the respective functions and responsibilities in respect of occupational safety and health and the working environment of public authorities, employers, workers and others, taking account both of the complementary character of such responsibilities and of national conditions and practice.

Therefore, the member shall, by laws or regulations or any other method consistent with national conditions and practice and in consultation with the representative organizations of employers and workers concerned, take such steps as may be necessary to give effect to this part of the Convention. While the process of ratifying the C155 Convention is taking place, Malaysia is moving towards its continuous effort of transformation and strategies implementation through its OSH Master Plan 2020 and the way forward for the revision of the updated Occupational Safety and Health Act (OSHA 1994) as the National Policy for OSH. This will be elaborated in Chapter Two of this OSH Profile.

2.0 NATIONAL POLICY AND STRATEGIES FOR OCCUPATIONAL SAFETY AND HEALTH

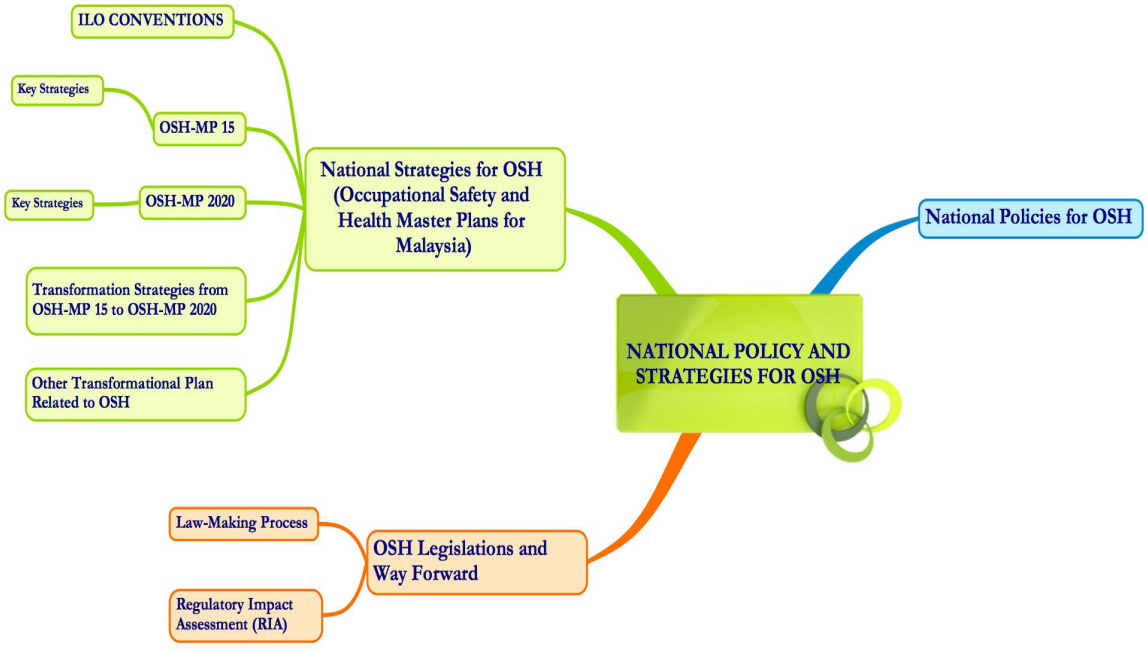

Figure 2.1: Policy and Strategies for OSH and Review Mechanism

2.1 National Policy for OSH

The efforts taken toward formulating the national policy relating to occupational safety and health for the country has been in place through the long-term vision for OSH in Malaysia. Malaysia's determination to combat the challenges faced in the working environment is evident in the National Development Policy, which comprised of the Economic Transformation Program (ETP), Government Transformation Program (GTP) and the Eleventh Malaysian Plan (2016-2020). The safety and health national plan will be a supportive document in achieving a preventive culture. Through this plan, emphasis is made on productivity. It is the foundation for sectorial growth, the catalyst for greater income equity at all levels, and a great hedge against future economic instability. Both business and programs undertake initiatives to ensure that average workers productivity increases. These plans unlock an effective way of doing business.

At the centre of many of the planned initiatives will be liberalization measures to promote competition. These will be especially important in attracting multi-national corporations in developing a regional financial footprint and in stimulating growth in Islamic financial services. The economy will be driven by innovation and a shift to higher value-add activities. While innovation continues, there will also be a much greater focus on quality and on improving standards. For example, the quality of skills training will be improved through industry-led bodies that will set standards, issue guidelines on content and harmonize the skills-training curriculum across sectors.

This policy reaffirms the government's commitment to the people, and believes that growth cannot be measured by success alone. The wellbeing of the nation, and a commitment to inclusive and sustainable growth, are necessary hallmarks of an advanced nation. The goal of the government is not only to increase GDP but balanced in equitable wealth distribution and enhanced wellbeing. The contribution of OSH to Malaysian wellbeing index is by improving the working environment taking into consideration trade disputes, man-days lost due to industrial action, industrial accidents, and average working hours.

The GTP has been phased over three periods, and is committed to delivering outcomes across each of 1Malaysia, People First, Performance Now dimensions. The GTP has as objective to improve public perception of safety especially through public participation and volunteerism. Furthermore, ETP aims to create a better fit between the skills demanded in the labour market and the skills developed. It highlights Malaysia's need for well-trained individuals with the right vocational and technical training.

Malaysia had embarked on its OSH Master Plans and the enactment of the Occupational Safety and Health Act 1994 (OSHA 1994), as strategies to realize the policy for the country. With the launch of the Occupational Safety and Health Master Plan 2015, followed by the Occupational Safety and Health Master Plan 2020, both Master Plans targeted towards spreading out OSH ownership, focused on building and sustaining the culture of self-regulation that would be fully ingrained into the working culture of all workplaces, and focused on the integration of preventive safety cultures into the everyday business practice.

The OSHA 1994 had been enacted with the aims of securing the safety, health and welfare of persons at work, protecting others against risks to safety or health in connection with the activities of persons at work, establishing the National Council for Occupational Safety and Health, and for matters connected therewith. Eventually, the practices of safety culture will be the working culture of all employers and employees in Malaysia.

2.2 National Strategies for OSH

2.2.1 Malaysia Occupational Safety and Health Master Plans (OSH-MP)

The OSH Master Plan has been established in light of Malaysia having to face challenges in terms of working environment and it is crucial in strengthening Malaysia as a contributor to the regional economy and the world economic community. The first Occupational Safety and Health Master Plan (known as the OSH-MP 15) was launched by the Prime Minister of Malaysia on May 2, 2009 with the main objective to develop a safe, healthy and productive human capital by adopting, promoting and maintaining a safe and healthy work culture at the workplace.

The Occupational Safety and Health Master Plan 2015 was developed in accordance with government direction which each strategy is developed to support the foundations towards a National "High Income, Advance Technology" later in 2020. In the 11th Malaysian Plan, the Government is committed to improve people living standards, dignity and potential to take advantage of economic development and progress. Together with the goal of achieving developed nation status by the year 2020, all levels of society should benefit from the country's economic prosperity.

On 1st May 2016, the Prime Minister of Malaysia launched the OSH Master Plan 2020 (OSH-MP 2020) and pronounced in his speech that “this OSH-MP 2020 is expected to contribute to the reduced rate of occupational accidents and diseases and thus assist the Government in raising the quality of life of the people. The quality of working life is one of the elements contributing to the well-being of Malaysians”. The OSH Vision towards 2020 is the ‘Enculturation of Safe and Healthy Work Culture for Well-being of Workers, Employers and the Country’ and the OSH Mission is ‘Inculcating Preventive Culture at the Workplace’. The Framework for the OSH-MP 2020 is based on three important elements:

- ✓ Increase Productivity,
- ✓ Increase Quality of Working Environment, and
- ✓ Contribute to the Quality of Peoples Life.

The 2016-2020 Occupational Safety and Health Master Plan is the strategy and programme formulated to further boost national occupational safety and health (OSH) to greater effort to protect the nation's human resources as important asset to the success of national development programs. Excellent OSH achievement will improve the employee’s quality of life and thus contribute to increased productivity and index components under the Work Environment Index of Malaysia Social Welfare in line with the policy and the country's transformation plan to achieve Vision 2020.

This master plan is a continuation of the previous OSH strategic plan and master plan started in 2006, which were premised on a Safe and Healthy Work Culture among employers and employees. Safe and Healthy Work Culture is a cornerstone in making workplaces safer and healthier in Malaysia through a strategic program to prevent accidents and occupational diseases (www.dosh.gov.my).

Much emphasis has been given to science and technology. But for OSH systems to be effective there must be a good safety culture. OSH systems cannot be effective if the safety culture is poor. OSHMP aims at promoting a culture of prevention. A culture of prevention goes beyond the activities of the workplace to include activities carried out outside of the workplace. This makes safety prevention different from safety culture which includes only workplace activities.

Thus, OSHMP 2016 broadens the horizon of occupational accidents and diseases. Behavioural and psychological aspects present a challenge as the product of individual and group values, attitudes, perceptions, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of an organisation's health and safety management system is often affected by the way people feel and what they do.

As far as Malaysia is concerned, the present state of safety prevention is pathological, reactive, calculative, proactive and generative. Pathological in that safety culture employers and workers do not care about violating safety rules. This is often termed "a no care safety culture. Malaysia is termed to have a reactive safety culture because safety becomes important only after an accident. This is often called a "blame safety culture". Also, the safety culture is calculative in that systems are in place to manage all hazards called "planned safety culture". Proactive in that workers do not work on problems they find but avoid problems in advance to improve the work environment. And lastly, generative safety culture which is a dynamic culture in which safety is built into ways of working and thinking.

The Master plan is one of the requirements for C187 International Labour Convention which has been ratified by Malaysia. Though the infrastructure of Malaysia is not at the same level with developed countries like Finland and UK, Malaysia is leading in terms of legal framework with the right number of infrastructures that can solve OSH issues as at now. The Master Plan lays more emphasis on infrastructure than OSH issues. Focus of OSH transformation is in line with government. The focus is on preventive culture than safety culture. The OSHMP 2020 regards safety and health as supporting the National Transformation Plan, safety and health as contributing positively to Malaysians well-being index and able to produce competent skill workers as the plan protects workers, thus skills.

2.2.2 Occupational Safety and Health Master Plan 15 (OSH-MP 15)

The main aim of the OSH-MP 15 during its formulation was to build a safe, healthy and productive pool of human capital by creating, cultivating and sustaining a safe and healthy work culture in all organizations throughout Malaysia. OSH-MP 15 catalysed the formation of a more complete national OSH overall infrastructure by providing a sharper focus and a clearer direction for OSH in Malaysia. It brought a major change in attitude and behaviour among employers and make them develop a more positive and proactive approach to OSH. This resulted a significant rise in the standards of safety and health in the working environment which will put Malaysia on the way to becoming a regional centre of excellence and a regional leader in OSH.

The OSH leadership by the government and industry complemented by community engagement had driven and directed the development of workplace safety and health initiatives. New OSH skills and competencies been acquired, while strategic OSH alliances with partners at both regional and global level have been in place and effectively operating. The result of improvement in work safety and health contributed to safer, healthier and more productive pool of human capital.

The specific objectives of the OSH MP 15 are:

a) To increase awareness and knowledge in OSH and commitment to OSH in all undertakings both big and small business;

b) To reduce the rates of workplace injuries and associated fatalities;

c) To reduce the number of occupational lung diseases, occupational noise induced hearing loss and occupational skin diseases; and

d) To minimize their adverse impacts on efficiency, productivity and business performance.

2.2.3 Key Strategies of OSH-MP 15

The four (4) key strategies to achieve the OSH-MP 15 scenario, along with their expected outcomes have been identified as, setting out the national targets in workplace safety and health and articulate the characteristics that Malaysia must demonstrate to ensure the sustainability of its human capital through implementation of safety culture at workplace. The four (4) strategies adopted for the implementation of the OSH-MP 15 are shown in Table 2.1 below.

Table 2.1: Key Strategies of OSH-MP 15

NO.	STRATEGIES	PROGRAMS
1.	Fostering and Enhancing Government Leadership and Practices	1 Enhance the OSH legal and policy framework. 2 Provide compliance support to OSH legislation. 3 Implement an effective enforcement regime. 4 Launch special programs and new approaches to improve OSH. 5 Compilation of OSH best practices. 6 Strengthen the NIOSH. 7 Facilitate OSH training and information services. 8 Strengthen the capacity of government to influence OSH outcomes. 9 Facilitate, develop and encourage OSH research and development (OSH R&D). 10 Incentive and recognition scheme for good OSH performer. 11 Introduce risk based social security scheme. 12 Ratification of ILO conventions and directives. 13 Rehabilitation and return to work program.
2.	Inculcating Preventive Workplace Culture	a) Promote safety culture. b) Prevent occupational diseases more effectively. c) Eliminate hazards at the design stage. d) Design and develop safe environments, systems and products. e) Advance injury prevention knowledge and information. f) Increase quantity and quality of OSH practitioners.
3.	Industry Leadership and Business Community Engagement	a) Build strong capabilities to better manage OSH. b) Industry-led OSH outreach programs by related association (FMM, MEF, CICM, MAPA, MTUC, etc.) c) Driving improvements through large organizations (GLCs, MNCs) on vendor, sub-contractor and supplier. d) Estimate and reflect the real costs of accidents and promote a business case for good OSH management. e) Establish the practice of including OSH performance in contracts.

NO.	STRATEGIES	PROGRAMS
		f) Publish and disseminate useful and timely OSH information (company and association).
4.	Strong Partnership Locally and Internationally	a) Enhance the capabilities of the NCOSH. b) Enhance international collaboration (OSHNet). c) Develop local OSH experts to sit in international committee and bodies.

2.2.4 Occupational Safety and Health Master Plan 2016-2020

The OSH-MP 2020 focuses on a preventative safety and health culture by the ratification of the ILO Convention C187-Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187) which emphases "a culture in which the right to a safe and healthy working environment is respected at all levels, where government, employers and workers actively participate in securing a safe and healthy working environment through a system of defined rights, responsibilities and duties, and where the principle of prevention is accorded the highest priority".

The elements of general principles of prevention include:

a) Elimination of occupational hazards;
b) Combating the risks at the source;
c) Adapting to technical progress;
d) Giving collective protective measures priority over individual protective measures;
e) Evaluation of hazards which cannot be avoided;
f) Adapting the work to the individual, especially as regards the design of workplaces, the choice of equipment and working and production methods;
g) Replacing dangerous substances by non-dangerous or less dangerous ones; and
h) Giving appropriate instructions to the workers.

The approaches taken through under the OSH-MP 2020 are wide enough to comprise:

a) OSH policies and legislations;
b) OSH knowledge and skills;
c) Strategic and effective enforcement;
d) Involvement of government agencies and GLCs;
e) OSH Promotion on awareness and information;
f) OSH data collection and research;

g) Commitment and involvement of employees in OSH program;
h) Employer and employee awareness of the importance of OSH;
i) Involvement of industry and NGOs;
j) OSH training centre, TVET and IPT;
k) Industrial community involvement;
l) Effective OSH management efficiency;
m) Assessment of risks in the prevention of accidents and occupational diseases.

Preventive Culture

As the main strategy of the OSH-MP 2020 is the inculcation of a preventive culture at the workplace, this approach will follow through with the implementation and inculcation of the principle of responsibility and self-regulation among employers and workers. The preventive culture places a high premium on awareness, responsibility and commitment among employers and workers, respect for the rights of workers with regard to OSH, encouragement of the involvement of workers in OSH activities, enhanced OSH knowledge and skills, as well as capable OSH management that is founded on effective risk management.

The desired outcome is the transformation of the workplace in this country into a safe and healthy environment to protect the most important asset that is the workers. OSH-MP 2020 focuses efforts to reduce the rate of accidents and death by 10% by reducing the rate of accidents to 2.53 per 1,000 workers and the rate of fatalities to 4.36 per 100,000 workers by 2020. The OSH-MP 2020 is also focusing on the increase of the reported cases of occupational diseases and poisoning as much as 30% compared to the year 2015 (DOSH, www.dosh.gov.my).

To realize this goal, the OSH-MP 2020 would be implemented through the five strategies shown in Table 2.2. These 5 strategies of the OSH-MP 2020 are in turn reinforced by various programmes and activities focused on nurturing the preventive culture among employers and workers. To ensure its success, aside from the commitment of employers and workers, the OSH-MP 2020 outlines the duties and responsibilities of all stakeholders, which are the Government, associations, competent persons and relevant parties with influence over employers and workers.

Table 2.2: Implementation of OSH-MP 2020 through Five Strategies

NO.	STRATEGIES	PROGRAMS
1.	Government Leadership in OSH	a) Government as role model for OSH. b) Sharing of OSH in the country (NCOSH). c) Policies and legislations. d) OSH data and research. e) Capacity of enforcers.
2.	Strengthening of OSH Management at the Workplace	a) OSH knowledge and skills. b) OSH compliance assistance. c) Promotion of preventive culture. d) OSH innovation. e) Effective OSH enforcement. f) Increase of numbers and quality of OSH practitioners.
3.	OSH Sharing and Network	a) Supply network and chain. b) OSH through association activities. c) OSH through social responsibility. d) OSH for prospective workers.
4.	Mainstreaming Industrial Hygiene	a) Re-engineering of industrial hygiene management. b) Comprehensive health risk assessment. c) Occupational health services program at the workplace. d) Industrial hygiene outreach program. e) Effective enforcement of legislation relating to industrial hygiene.
5.	International OSH Strategic Alliances	a) Collaboration with international OSH institutes and experts. b) Study of international OSH standards. c) National and international hygiene collaborative networks.

2.2.5 Transformation Strategies from OSH-MP 15 to OSH-MP 20

Since 2005, Malaysia has been working towards creating a safe and healthy work culture by creating a five (5) years Strategic Plans: OSHMP 2005, 2010, 2015 and 2020. These Strategic Plans involve three (3) steps: ownership, self-regulation and preventive culture. In an effort to be abreast with current OSH issues and promote a safety culture, review mechanisms have been put in place and these reviews are carried out by consulting the industries.

One of the key points that the OSH-MP 15 focused on is to alleviate the standing of Malaysia in the eyes of its trading partners around the world about of improvement of safety and health within the country. As such, the key thrust of the OSH-MP 15 is internalization of OSH itself, with the trading partners as supporting counterparts in the developed and other developing nation. Malaysia needs to keep abreast with the current OSH situations and demand for workers' right. The protection is to be guaranteed to workers in employment, not only in terms of paid wages and union activities but also in terms of protection of OSH to all workers in the country irrespective whether they are local or foreign.

Malaysia is having almost two million foreign workers in the country working for industries especially construction sectors which are known to be dirty, dangerous and dark; and this kind of situation demands for the need to benchmark what Malaysia had done and is going to get on, in order to bring up the level of safety and health practices among workers in all industries to a greater height. As such, we have to take the initiatives to meet the global requirements especially to the ILO standards and recommendations to be implemented in the country so much so that the aspects of occupational safety and health of the workers could be maintained and improved continuously. This initiative will put Malaysia as one of those responsible countries when comes to issues of occupational safety and health at the workplaces.

Efforts taken by the country in updating the legislation on OSH during the OSH-MP 15 include evaluating whether the documentations are meeting the expectation of the international bodies standards and requirements like the ILO, WHO, EU and other international bodies. This exercise includes formulating new legislations, regulations, codes of practice and guidelines that incorporated those international requirements. Meanwhile, the agenda on OSH transformation is also to strive to cater new emerging issues like nuclear as well as stress at work, drug abuse and gender issues that will impact workers at the workplaces. Thus, many consultation forums and meetings need to be attended or conducted for purpose of regional cooperation.

Up to this date, Malaysia is in the ASEAN OSHNET (ASEAN Occupational Safety and Health Network), where the ASEAN member countries agreed to establish the ASEAN OSHNET among the National OSH Centres in ASEAN member countries, and actively participating and working together to cooperate in many areas of cooperation in OSH. Malaysia became the leader and the Director General of the Department of Occupational Safety and Health (DOSH) Malaysia was the second ASEAN OSHNET Executive Director that was given the trust by the leadership of other countries to take lead through our experience in many areas on occupational safety and health.

Malaysia has become the reference for important areas in industrial hygiene, occupational health and also management of ergonomics and chemical safety over the years. The country had been recognized as leader in these areas of interests. Hence, the OSH Master Plan is crucial in such a way that it targeted to benchmark ourselves with the international standards and as evidence of the country capabilities in upholding safety and health agenda at the workplace for the industries. The outcome of the active participation and key role of the country in ASEAN OSHNET activities had taken the OIC (Organization Islamic Country) to recognize Malaysia as the champion in OSH within the Islamic countries.

Additionally, Malaysia has actively participated the working committee on safety and health at OIC in Turkey with the Director General of DOSH, Malaysia who chaired the meeting at and being entrusted to prepare the blueprint for OIC for OSH cooperation and activities. This effort would be a move for OIC to promote safety and health agenda within their member countries besides ASEAN member countries. This is indeed a significant achievement since the first OSH Master Plan was prepared and implemented, as it is a challenge to the country capabilities to reach the international playing field and we succeeded at the ASEAN level and at the OIC level, where our model had been referred to in other part of the world.

Our expert references in OSH are sought after by the member countries through paper presentations in conferences and seminars, specific training and short courses delivered to other countries like Bangladesh, Pakistan, Sri Lanka and the African countries. We shared our experience and expertise on the issues of safety and health at work. With the leading role in promoting safety and health internationally, and becoming role model to other countries, we are progressing well and to keep the transformation and progress ahead for the years to come, leadership and commitment, coupled with innovation and strength in strategies are the central elements and key factors to sustain what we have achieved, obviously through the OSH-MP 2020 initiatives.

2.2.6 Other Industrial Transformation Plan Related to OSH

The 11th Malaysia Plan 2016-2020 (RMK-11) recognises importance of construction industry and introduced the Construction Industry Transformation Programme (CITP) 2016-2020 to propel the industry forward and meet market demand. It is a specific Focus Area within Chapter 8 of the RMK-11, as construction industry is one on the five key sectors crucial to the Malaysian economy and its growth. The industry is large with more than 500 billion ringgit in project value during the 10th Malaysia Plan, which grows at 8% per annum, and is expected to continue growing annually at 10.3% up to 2020 with an average of 5.5% contribution to GDP.

One strategic thrust identified under the CITP is to achieve Quality, Safety and Professionalism that is eventually ingrained in the industry's practice and culture at all levels. The emphasis of safety components contained in CITP is to complement the OSH MP 2020 of the country. In order to improve Quality, Safety and Professionalism, the CITP introduces four initiatives Q1 to Q4.

Q1- Increase emphasis on quality and implement quality assessments.

Q2- Improve workplace safety and workers' amenities.

Q3- Improve ease of doing business by addressing regulatory constraints.

Q4- Promote and raise awareness of CITP initiatives.

Key outcomes targeted under the Quality, Safety and Professionalism thrust to be achieved by 2020 include having more than 50% of public projects exceed acceptable QLASSIC score, more than 50% reduction in worksite fatalities and injuries, and an improvement by 5% points in the World Bank's Ease of Doing Business indicator for dealing with construction permits. On safety, a high occupational death in construction averaging 70 deaths per year since 2020 is among the highest compared to other industries.

2.3 Occupational Safety and Health Legislation and Way Forward

In pursuant to Strategy 1 of the OSH-MP 2020 (Government Leadership), the stipulated program includes Policy and Legislation which requires OSH legislation and policies that can effectively address the issues of OSH and able to shape the culture of prevention in the workplace and improve quality of OSH service delivery. For this reason, the amendment to the present legislations relating to OSH should be made in order to improve and facilitate methods of regulating behaviour in safe working environment towards safe work culture.

The next way forward and move to strengthen the existing main legislations on OSH is through migration of the FMA 1967 into the OSHA 1994. The migration meant to facilitate the industry with one legislation, extend the scope of application of the act, legalize all administrative requirements, enable corporatization of services, enhance empowerment and accountability of competent persons and the duty holders under the Act, provide framework on administration of competency, increase amount of penalty and provide enabler and extended power of Minister to make Regulations.

2.3.1 Law-Making Process

A Bill or draft of a new Act will be tabled in Parliament soon after the final stage of the drafting is completed. The most common type of Bill in Malaysia is the Public Bill introduced by the Minister, relating to matters of government policy and having a general application over the entire nation. The Bill shall go through the pre-Parliamentary procedure, Parliamentary procedure and post-Parliamentary procedure. The process involves the drafting of the Bill by the Drafting Division of the Attorney General's Chambers, after consultation and discussion with the Ministry of Human Resources as the Ministry in charge. Once ready, the Bill would be taken to the Parliament by the Minister concerned to fix the date for the First Reading, and next to undergo the Second Reading Committee Stage and Third Reading.

A Bill would be introduced to the members of the House of Representatives, where the Minister would read out the short title of the Bill and by circulation of the Bill, a notice would be given to let know that the Bill will be debated during the Second Reading. The Bill would be gazetted and Parliament sets the date for the Second Reading. The Bill would be discussed extensively and at the end of the discussion, members would be required to vote in favour of, or against the Bill. Once the required votes are obtained, the Bill shall move to the next Committee Stage. The Bill is discussed in an informal manner, where the members of the House become the members of the Committee. The House may appoint an ad hoc committee to discuss the Bill when it involves technical matters. The final stage before the Bill is deemed passed by the House does not involve much debate. Members are invited to vote for or against the Bill once again, and once the required votes are obtained, the Bill is considered passed by the House.

The Bill would be forwarded to the Senate where a similar procedure would be followed. The Senate has no power to reject the Bill but the Senate may delay sending the Bill back to the House of Representative. Next, the Bill would be presented to the Yang di-Pertuan Agong (YDPA) for Royal Assent by affixing the public seal. Under Article 66(4) of the Federal Constitution, "The YDPA shall within thirty days after a Bill is presented to him assent to the Bill by causing the Public Seal to be affixed thereto." Article 66(4A) further provides that "If a Bill is not assented to by the YDPA within the time specified in Clause (4), it shall become law at the expiration of the time specified in that Clause in the like manner as if he had assented thereto. "All statutes must be gazetted and does not come into force until it has been gazetted.

Article 66(5) of the Federal Constitution stipulates that "A Bill become law on being assented to by the YDPA or as provided in Clause (4A), but no law shall come into force until it has been published, without prejudice, however, to the power of Parliament to postpone the operation of any law or to make laws with retrospective effect." This

means the power of Parliament is either to postpone the operation of the law or to make laws with retrospective effect. Parliament can specify that the law is to take effect at a later date even though it is published today.

2.3.2 Regulatory Impact Assessment (RIA)

The Tenth Malaysia Plan had highlighted that regulatory environment substantially affect companies' behaviour and performance. In pursuant to this, the National Policy on the Development and Implementation of Regulations requires all Federal Government regulators to undertake the Regulatory Impact Assessment (RIA) in creating all new regulations or review of regulations that relate to, or impact business, investments and trade, upon assessment by the Malaysia Productivity Corporation (MPC).

RIA involves Impact Analysis whereby Cost-Benefit Analysis is used that emphasizes on the calculation of business impact assessment in terms of administrative b urdens, license simplification, compliance costs on business, bearing capacity of SMEs, impacts on competition and social economic effects. Hence, measuring unnecessary compliance burdens imposed by the regulatory activities of government remains a challenge and the impacts of compliance burden can be substantial.

The Regulatory Impact Analysis (RIA) is required for all new regulations as it is the government's intention to ensure that cumbersome regulations that create unnecessary burdens to society and business, discourage competition and innovation or alienate stakeholders are reduced or avoided. It is to ensure that regulations are effective in addressing the desired public policy objectives and in serving the country in a balanced and equitable manner and implemented in a transparent manner.

The National Policy on the Development and Implementation of Regulations will address the gaps in the management system for regulations to put Malaysia in a position to meet international best practices in regulations or Good Regulatory Practice (GRP). This will help to enhance transparency and credibility of regulatory actions and create a climate for better quality of life and business environment. The Government recognizes that this policy will contribute towards building an economy that attracts industries and investments that value good regulatory environment, hence generating quality jobs and increasing national wealth.

The capacity and capability of all institutions involved in the management, development and implementation of regulations will be upgraded and the governance and organizational structures reviewed to meet the requirements of international best practices. The interconnected nature of the issues dictates that this change be

undertaken in an integrated manner by involving the various ministries, agencies, industry interests and other stakeholders (National Policy on the Development and Implementation of Regulations (July 2013), Regulatory Review Department, Malaysia Productivity Corporation (MPC)).

2.4 OSH Framework and Programs for Malaysia towards Compliance to the ILO Conventions C155 and C187

In an effort to promote health and safety at work, the International Labour Organization has come out with a series of conventions and code of practices relating to every area of economic activity. Countries that ratified these conventions are required to adhere to them by carrying out the requirements initiated in each of these Conventions. Malaysia like many other countries has ratified some of these conventions. Among others is the International Labour Organization Convention C187.

C187 was adopted at Geneva during the 95th session of the International Labour Conference which took place on the 15th of June 2006. C187 convention deals with the Promotional Framework for Occupational Safety and Health. It entered into force on the 20th of February 2009. And Malaysia ratified this convention on the 7th of June 2012.

Another convention which provisions Malaysia has dealt extensively with is C155. This convention was drawn in 1981 in Geneva, which was the 67th session of the General conference of the International Labour Organization. This Convention deals with Occupational Safety and Health and the Working Environment. It entered into force on the 11th of August 1983. Though Malaysia has not ratified this convention, it has covered requirements laid down in the C155. .

2.4.1 CONVENTION 187

The provisions in the C187 Convention include the following:

a)	Each Member shall promote a safe and healthy working environment by formulating a national policy.
b)	Each Member shall promote and advance, at all relevant levels, the right of workers to a safe and healthy working environment.
c)	In formulating its national policy, each Member, in light of national conditions and practice and in consultation with the most representative organizations of employers and workers, shall promote basic principles such as assessing

occupational risks or hazards; combating occupational risks or hazards at source; and developing a national preventative safety and health culture that includes information, consultation and training.

d) Each Member shall establish, maintain, progressively develop and periodically review a national system for OSH, in consultation with the most representative organizations of employers and workers.

e) The national system for OSH shall include among others:

i) Laws and regulations, collective agreements where appropriate, and any other relevant instruments on occupational safety and health;

ii) An authority or body, or authorities or bodies, responsible for OSH, designated in accordance with national law and practice;

iii) Mechanisms for ensuring compliance with national laws and regulations, including systems of inspection; and

iv) Arrangements to promote, at the level of the undertaking, cooperation between management, workers and their representatives as an essential element of workplace-related prevention measures.

f) The national system for OSH shall include, where appropriate:

i) A national tripartite advisory body, or bodies, addressing occupational safety and health issues;

ii) Information and advisory services on occupational safety and health;

iii) The provision of OSH training;

iv) Occupational health services in accordance with national law and practice;

v) Research on OSH;

vi) A mechanism for the collection and analysis of data on occupational injuries and diseases, taking into account relevant ILO instruments;

vii) Provisions for collaboration with relevant insurance or social security schemes covering occupational injuries and diseases; and

viii) Support mechanisms for a progressive improvement of OSH conditions in micro-enterprises, in small and medium-sized enterprises and in the informal economy.

g) Each Member shall formulate, implement, monitor, evaluate and periodically review a national programme on occupational safety and health in consultation with the most representative organizations of employers and workers.

h) The national programme shall:

i) Promote the development of a national preventative safety and health culture;

ii) Contribute to the protection of workers by eliminating or minimizing, so far as is reasonably practicable, work-related hazards and risks, in accordance with national law and practice, in order to prevent occupational injuries, diseases and deaths and promote safety and health in the workplace;

iii) Be formulated and reviewed on the basis of analysis of the national situation regarding OSH, including analysis of the national system for OSH;

iv) Include objectives, targets and indicators of progress; and

v) Be supported, where possible, by other complementary national programmes and plans, which will assist in achieving progressively a safe and healthy working environment.

The national programme shall be widely publicized and, to the extent possible, endorsed and launched by the highest national authorities.

2.4.2 CONVENTION 155

The provisions under the convention C155 include:

a) The applicability of the conventions to all branches of economic activities and to all workers of the economic activities covered in the convention.

b) Each Member ratifying this Convention may, after consultation at the earliest possible stage with the representative organizations of employers and workers concerned, exclude from its application, in part or in whole, particular branches of economic activity, such as maritime shipping or fishing, in respect of which special problems of a substantial nature arise.

c) The need for any member which ratifies this Convention to list, in the first report on the application of the Convention submitted under Article 22 of the Constitution of the International Labour Organization, any branches which may have been excluded in pursuance of paragraph 2 of this Article, giving the reasons for such exclusion and describing the measures taken to give adequate protection to workers in excluded branches, and shall indicate in subsequent reports any progress towards wider application.

d) A Member ratifying this Convention may, after consultation at the earliest possible stage with the representative organizations of employers and workers concerned, exclude from its application, in part or in whole, limited categories of workers in

respect of which there are particular difficulties.

e) Each Member which ratifies this Convention shall list, in the first report on the application of the Convention submitted under Article 22 of the Constitution of the International Labour Organization, any limited categories of workers which may have been excluded in pursuance of paragraph 2 of this Article, giving the reasons for such exclusion, and shall indicate in subsequent reports any progress towards wider application.

f) Each Member shall, in the light of national conditions and practice, and in consultation with the most representative organisations of employers and workers, formulate, implement and periodically review a coherent national policy on occupational safety, occupational health and the working environment.

g) The aim of the policy shall be to prevent accidents and injury to health arising out of, linked with or occurring in the course of work, by minimising, so far as is reasonably practicable, the causes of hazards inherent in the working environment.

h) The policy referred to in Article 4 of this Convention shall take account of the following main spheres of action in so far as they affect occupational safety and health and the working environment:

i) Design, testing, choice, substitution, installation, arrangement, use and maintenance of the material elements of work (workplaces, working environment, tools, machinery and equipment, chemical, physical and biological substances and agents, work processes);

ii) Relationships between the material elements of work and the persons who carry out or supervise the work, and adaptation of machinery, equipment, working time, organization of work and work processes to the physical and mental capacities of the workers;

iii) Training, including necessary further training, qualifications and motivations of persons involved, in one capacity or another, in the achievement of adequate levels of safety and health;

iv) Communication and co-operation at the levels of the working group and the undertaking and at all other appropriate levels up to and including the national level;

v) The protection of workers and their representatives from disciplinary measures as a result of actions properly taken by them in conformity with the policy referred to in Article 4 of this Convention.

i) The formulation of the policy referred to in Article 4 of this Convention shall indicate the respective functions and responsibilities in respect of occupational safety and health and the working environment of public authorities, employers, workers and others, taking account both of the complementary character of such responsibilities and of national conditions and practice.

j) The situation regarding occupational safety and health and the working environment shall be reviewed at appropriate intervals, either over-all or in respect of particular areas, with a view to identifying major problems, evolving effective methods for dealing with them and priorities of action, and evaluating results.

a) Each Member shall, by laws or regulations or any other method consistent with national conditions and practice and in consultation with the representative organizations of employers and workers concerned, take such steps as may be necessary to give effect to Article 4 of this Convention.

b) The enforcement of laws and regulations concerning occupational safety and health and the working environment shall be secured by an adequate and appropriate system of inspection.

c) The enforcement system shall provide for adequate penalties for violations of the laws and regulations.

d) Measures shall be taken to provide guidance to employers and workers so as to help them to comply with legal obligations.

e) To give effect to the policy referred to in Article 4 of this Convention, the competent authority or authorities shall ensure that the following functions are progressively carried out:

i) The determination, where the nature and degree of hazards so require, of conditions governing the design, construction and layout of undertakings, the commencement of their operations, major alterations affecting them and changes in their purposes, the safety of technical equipment used at work, as well as the application of procedures defined by the competent authorities;

ii) The determination of work processes and of substances and agents the exposure to which is to be prohibited, limited or made subject to authorization or control by the competent authority or authorities; health hazards due to the simultaneous exposure to several substances or agents shall be taken into consideration;

iii) The establishment and application of procedures for the notification of occupational accidents and diseases, by employers and, when appropriate, insurance institutions and others directly concerned, and the production of annual statistics on occupational accidents and diseases;

iv) The holding of inquiries, where cases of occupational accidents, occupational diseases or any other injuries to health which arise in the course of or in connection with work appear to reflect situations which are serious;

v) The publication, annually, of information on measures taken in pursuance of the policy referred to in Article 4 of this Convention and on occupational accidents, occupational diseases and other injuries to health which arise in the course of or in connection with work;

vi) The introduction or extension of systems, taking into account national conditions and possibilities, to examine chemical, physical and biological agents in respect of the risk to the health of workers.
f) Measures shall be taken, in accordance with national law and practice, with a view to ensuring that those who design, manufacture, import, provide or transfer machinery, equipment or substances for occupational use; i) Satisfy themselves that, so far as is reasonably practicable, the machinery, equipment or substance does not entail dangers for the safety and health of those using it correctly; ii) Make available information concerning the correct installation and use of machinery and equipment and the correct use of substances, and information on hazards of machinery and equipment and dangerous properties of chemical substances and physical and biological agents or products, as well as instructions on how known hazards are to be avoided; iii) Undertake studies and research or otherwise keep abreast of the scientific and technical knowledge necessary to comply with subparagraphs (a) and (b) of this Article.
g) A worker who has removed himself from a work situation, which he has reasonable justification to believe, presents an imminent and serious danger to his life or health shall be protected from undue consequences in accordance with national conditions and practice.
h) Measures shall be taken with a view to promoting in a manner appropriate to national conditions and practice, the inclusion of questions of occupational safety and health and the working environment at all levels of education and training, including higher technical, medical and professional education, in a manner meeting the training needs of all workers.
i) With a view to ensuring the coherence of the policy referred to in Article 4 of this Convention and of measures for its application, each Member shall, after consultation at the earliest possible stage with the most representative organizations of employers and workers, and with other bodies as appropriate, make arrangements appropriate to national conditions and practice to ensure the necessary co-ordination between various authorities and bodies called upon to give effect to Parts II and III of this Convention.
j) Whenever circumstances so require and national conditions and practice permit, these arrangements shall include the establishment of a central body.
k) Employers shall be required to ensure that, as far as is reasonably practicable, the workplaces, machinery, equipment and processes under their control are safe and without risk to health.
l) Employers shall be required to ensure that, so far as is reasonably practicable, the

chemical, physical and biological substances and agents under their control are without risk to health when the appropriate measures of protection are taken.
m) Employers shall be required to provide, where necessary, adequate protective clothing and protective equipment to prevent, so far as is reasonably practicable, risk of accidents or of adverse effects on health.
n) Whenever two or more undertakings engage in activities simultaneously at one workplace, they shall collaborate in applying the requirements of this Convention.
o) Employers shall be required to provide, where necessary, for measures to deal with emergencies and accidents, including adequate first-aid arrangements.
p) There shall be arrangements at the level of the undertaking under which-: i) Workers, in the course of performing their work, co-operate in the fulfilment by their employer of the obligations placed upon him; ii) Representatives of workers in the undertaking co-operate with the employer in the field of occupational safety and health; iii) Representatives of workers in an undertaking are given adequate information on measures taken by the employer to secure occupational safety and health and may consult their representative organisations about such information provided they do not disclose commercial secrets; iv) Workers and their representatives in the undertaking are given appropriate training in occupational safety and health; v) Workers or their representatives and, as the case may be, their representative organisations in an undertaking, in accordance with national law and practice, are enabled to enquire into, and are consulted by the employer on, all aspects of occupational safety and health associated with their work; for this purpose technical advisers may, by mutual agreement, be brought in from outside the undertaking; vi) A worker reports forthwith to his immediate supervisor any situation which he has reasonable justification to believe presents an imminent and serious danger to his life or health; until the employer has taken remedial action, if necessary, the employer cannot require workers to return to a work situation where there is continuing imminent and serious danger to life or health.
a) Co-operation between management and workers and/or their representatives within the undertaking shall be an essential element of organizational and other measures taken in pursuance of Articles 16 to 19 of this Convention.
b) Occupational safety and health measures shall not involve any expenditure for the workers.

2.4.3 Efforts toward Compliance

Through the ILO Convention C187 ratification, Malaysia had strategized activities related to OSH through the OSHMP 2010-2015 and OSHMP 2016-2020. Table 2.3 shows the efforts in Malaysia to keep its OSH practices consistent with the Articles laid down in the ILO Convention C187. While Malaysia is ratifying theILO Convention C155, the enactment and enforcement of the OSHA 1994 and the activities carried out to achieve the objects of the Act are evidence of compliance effort to the Articles set out under C155. Table 2.4 shed more light on this effort.

Table 2.3: Efforts in Malaysia to Keep its OSH Practices in Line with ILO Convention 187

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
STRATEGY 1 **FOSTERING AND ENHANCING GOVERNMENT LEADERSHIP AND PRACTICES**	• Facilities, develop and encourage OSH research and development (OSH R&D)	**ARTICLE 4** Establish, maintain, develop (progressively), review (periodically) OSH National System	**STRATEGY 1-5** **GOVERNMENT LEADERSHIP**	Introduce new five (5) years strategic plan for OSH (OSH Master Plan 2016-2020) including enhancement of OSH infrastructure to solve OSH issues
	• Enhance legal and policy framework for OSH	**ARTICLE 3** Formulate national policy		**OSH Policies and Legislations** • To cope with changes in technologies, knowledge, standards, business requirements and public expectation • New OSH Act • New regulations • Deregulations • ICOP and Guideline
	• Provide compliance support to OSH legislation	**ARTICLE 4** Laws and Regulations		The Occupational Safety and Health Act 1994 (OSHA 1994) and the Factories and Machinery Act 1967 (FMA 1967)

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
	• Implement an effective enforcement	**ARTICLE 4** 1. Authority/body responsible for OSH 2. Mechanisms for ensuring compliance with laws		**Capacity of OSH Enforcers** Knowledge and skill, Equipment, Inspection, Other resources
	• Launch special programmes and new approaches to improve OSH	**ARTICLE 3** Arrangements for promoting cooperation between management, workers and representatives for prevention measures		**National OSH Tripartite Body- (NCOSH)** To enhance the role of NCOSH: • To help contribute ideas and solutions to government to enhance Malaysia OSH standards • To get more involvement of OSH players and supporters in promoting OSH (self-regulation activities)

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
	• Compilation of OSH best practices	**ARTICLE 3** Arrangements for promoting cooperation between management, workers and representatives for prevention measures		**OSH Service Delivery (DOSH)** • Consultation and advice • Online OSH Information Centre – Act, Regulation, Policies, Research papers, Speeches, OSH Data etc. • Online services – MyKKP
	• Ratification of ILO conventions and Directives	**ARTICLE 3** 1. National tripartite advisory body 2. Information and advisory services		**National OSH Tripartite Body- (NCOSH)** Improving promotional activities to widen the reach
	• Strengthen NIOSH	**ARTICLE 3** Training		National Institute for OSH training roles: • To enhance commitment • Performance evaluation • Corporations and collaboration

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
				• To become example and contributor in promoting OSH to industry and public
	• Facilitate OSH training and information services	**ARTICLE 3** Training		National Institute for OSH training roles: • To enhance commitment • Performance evaluation • Corporations and collaboration
	• Introduce risk base social security scheme	Mechanism for data collection and analysis		Legislations on employees' social security and workmen compensation
	• Rehabilitation and return to work programme	Collaboration with social insurance or social security schemes		Legislations on employees' social security and workmen compensation
STRATEGY 2 **PREVENTIVE WORKPLACE SAFETY CULTURES**	• Promote safety culture	**ARTICLE 2& 3** Members shall promote safe and healthy working environment	**STRATEGY 2** **STRENGTHEN OSH MANAGEMENT AT WORKPLACE**	**OSH Compliance Support** • To enhance OSH management standard of SMEs • Improved Approach

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
	• Prevent occupational diseases more effectively	**ARTICLE 2&3** Members shall promote safe and healthy working environment		**Effective OSH Enforcement** • To enhance the effectiveness of DOSH enforcement through Enforcement policy • Notices • Compound and prosecutions
	• Eliminate hazards at the design stage	**ARTICLE 3** Assessing occupational risks or hazards Combating occupational risk or hazards at source		**OSH Knowledge and Competence** • To enhance knowledge and competence of employees, employers and other duty holders through policies and legislation • OSH Management • Risk management and risk assessment

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
	• Design and develop safe environment, systems and product	**ARTICLE 5** Eliminating or minimizing work-related hazards and risks		**OSH Innovation** • To encourage employers and employees to find solutions to solve issues innovatively and share the solutions with others • Good practices • HIRARC • To create platform to promote, collect and share • Sharing through OSH INFO CENTRE • Training • Promotional activities
	• Advance injury prevention knowledge and information	**ARTICLE 3** Members shall promote and advance the right of workers to a safe and healthy working environment		**OSH Knowledge and competence** • To enhance knowledge and competence of employees, employers and other duty holders through policies and

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	PROGRAMME		STRATEGIES	PROGRAMME
				legislation • OSH Management • Risk management and risk assessment • Management training (top to middle management) • Employee training • Induction • Specialized training
	• Increase quality and quantity of OSH practitioners			**Numbers and quality of OSH Practitioners** • To enhance the quality of training • To enhance "easy access" to OSH training • Logistic wise • Fund-Sponsors • To increase the numbers of competent persons to the demand of industry

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
				• To promote IPTA to conduct studies in OSH
STRATEGY 3 **INDUSTRY LEADERSHIP AND COMMUNITY ENGAGEMENT**	• Build strong capabilities to better manage OSH	**ARTICLE 4** Support mechanisms for improvement in micro-enterprises and informal sector	**STRATEGY 3** **OSH SHARING AND NETWORK**	**Network and Supply Chain** • To enhance contract of management for companies in carrying out their safety and health duties to their contractors and vendors • To promote OSH knowledge to clients
	• To estimate and reflect the real costs of accidents and promote good OSH management	**ARTICLE 5** Components of national programme: • Promote national preventive safety and health culture • Eliminating or minimizing work-related hazards and risks		**OSH through Association** • To encourage employer association, trade association and workers' union to incorporate OSH training and promotion in their yearly activities

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
		• Include objectives, targets and indicators of progress		
	• Establish the practice of including OSH performance in contracts	**ARTICLE 5** • Components of national programme; • Subject to support by other complimentary national programmes and plans		**OSH through CSR** • To promote industry to have OSH CSR programme to industrial neighbour and public to help promote safety and health
	• Industry-led OSH outreach programmes by related association (FMM, MEF, CICM, MAPA, MTUC, etc)	**ARTICLE 4** Support mechanisms for improvement in micro-enterprises and informal sector		**OSH through Association** To encourage employer association, trade association and workers' union to incorporate OSH training and promotion in their yearly activities
	• Driving improvements through large organizations (GLCs, MNCs) on vendor, sub-contractor and	**ARTICLE 5** Formulate, implement, monitor, evaluate and review (periodically) OSH National Programme		**Network and Supply Chain** • To enhance companies' roles in taking care of the

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
	supplier			safety and health of their contractors and vendors • OSH service providers • Promote OSH awareness • To promote OSH knowledge to clients • Enhance compliance of OSH law among designers and suppliers
STRATEGY 4 **DEVELOP STRONG PARTNERSHIPS LOCALLY AND INTERNATIONALLY**	• Enhance the capabilities of the NCOSH	**ARTICLE 4** • Arrangements for promoting cooperation between management, workers and representative for preventive measures • National tripartite advisory body • Information and advisory services	**STRATEGY 4** **MAINSTREAMING INDUSTRIAL HYGIENE**	**Mainstreaming Management of Industrial Hygiene** • Industrial Hygiene Management • SOHELP-Systematic Occupational Health and Enhancement Level Programme • Integration of occupational data in reporting of death, medical records

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
	• Enhance international collaboration (OSHNet)	**ARTICLE 4** National tripartite advisory body		**Industrial Hygiene Outreach Programme** • To enhance the Out-Reach Programmes • Involvement of OSH Players to promote OSH
	• Develop local OSH experts to sit in international committees and bodies	**ARTICLE 5** Components of national programme: • Subject to support by other complimentary national programmes and plans		**Comprehensive Health Risk Assessment** • To enhance health risk assessment to be more comprehensive • To increase compliance rate on HRA
			STRATEGY 5 **INTERNATIONAL OSH STRATEGIC ALLIANCE**	**Collaboration with International OSH Experts and Institutes** 1. Compliance to International standards 2. Sharing knowledge, experience to ASEAN OSHNet, OIC-OSHNet and

OSH-MP 15 (2010-2015)		C187	OSH-MP 2020 (2016-2020)	
STRATEGIES	PROGRAMME		STRATEGIES	PROGRAMME
				others 1. Conducting OSH training to others 2. Sending experts 3. Paper presentation in international OSH dialogue, discussion, Conference or seminar 4. Benchmarking visits by other countries

Table 2.4: Efforts in Malaysia to Keep its OSH Practices in Line with ILO Convention 155

OSH-MP 15 (2010-2015)		C155	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
STRATEGY 1 **FOSTERING AND ENHANCING GOVERNMENT LEADERSHIP AND PRACTICES**	• Enhance the legal and policy framework of OSH	**ARTICLE 4** Formulate National policy	**STRATEGY 1** **GOVERNMENT LEADERSHIP**	**OSH Policies and Legislations** • To cope with changes in technologies, knowledge, standards, business requirements and public expectation • New OSH Act • New regulations • Deregulations • ICOP and Guideline
	• Provide compliance support to OSH legislation	**ARTICLE 10** Compliance to legal obligations		**OSH Service Delivery (DOSH)** • Consultation and advice • Online OSH Information centre – Act and Regulation, Policies, Research papers, Speeches, OSH Data • Online services – MyKKP

OSH-MP 15 (2010-2015)		C155	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
	• Compilation of OSH best practices	**ARTICLE 11** Annual publication of measures taken in pursuance of the policy		**OSH Service Delivery (DOSH)** • Consultation and advice • Online OSH Information Centre – Act and Regulation, Policies, Research papers, Speeches, OSH Data • Online services – MyKKP
	• Facilitate, develop and encourage OSH R&D	**ARTICLE 11** Research **ARTICLE 12** Keep abreast of scientific and technical knowledge		**OSH data and Research** • Enhance Malaysia OSH data collection and analysis • Enhance the number and quality of OSH research
	• Facilitate OSH training and information services	**ARTICLE 14** Education and training		**National Institute for OSH training roles:** • To enhance commitment • Performance evaluation

OSH-MP 15 (2010-2015)		C155	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
				• Corporations and collaboration
	• Build strong capabilities to better manage OSH	**ARTICLE 14** Education and training		**National Institute for OSH training roles**: • To enhance commitment • Performance evaluation corporation and collaboration
STRATEGY 2 **PREVENTIVE WORKPLACE SAFETY CULTURES**	• Punitive scheme for bad OSH performer	**ARTICLE 9** Penalties for violations of laws and regulations	**STRATEGY 2** **STRENGTHENING OF OSH MANAGEMENGT AT THE WORKPLACE**	**OSH Legislation** • Penalties for violations
	• Eliminate hazards at the design stage. Design and develop safe environments, systems and products	**ARTICLES 5 & 11** Main spheres of actions		**OSH Knowledge and competence** • To enhance knowledge and competence of employees, employers and other duty holders through policies and legislation • OSH Management

OSH-MP 15 (2010-2015)		C155	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
				• Risk management and risk assessment
STRATEGY 3 **INDUSTRY LEADERSHIP AND COMMUNITY ENGAGEMENT**	• Publish and disseminate useful and timely OSH information	**ARTICLE 12** Adequate communication	**STRATEGY 3** **OSH SHARING AND NETWORKING**	**Network and Supply Chain** • To ensure companies carry out their duties and responsibilities to take care of the safety and health of their contractors and vendors • Promote OSH awareness • Promote OSH knowledge to clients • Enhance compliance of OSH law among designers and suppliers
	• Build strong capabilities to better manage OSH	**ARTICLE 6** Formulation of policy to indicate functions and responsibilities in respect of OSH and the working environment of public		**Legal requirements for Quality of OSH Practitioners** • To enhance the quality of training, syllabus,

OSH-MP 15 (2010-2015)		C155	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
		authorities, employers, workers and others		trainers, facilities and examination • To increase the numbers of competent persons to the demand of industry • To promote IPTA to conduct studies in OSH
	• To estimate and reflect the real cost of accidents and promote good OSH management	**ARTICLE 21** OSH measures not to include expenditure for the workers		**OSH through Association** To encourage employers' association, trades' association and workers' union to incorporate OSH training and promotion in their yearly activities
	• Establish the practice of including OSH performance in contracts	**ARTICLE 2** Convention applies to all workers in the branches of economic activity		**OSH through CSR** To promote industry to have OSH CSR programme to the community
STRATEGY 4 **DEVELOP STRONG PARTNERSHIPS**	• Enhancing inter-agency collaboration and intervention	**ARTICLE 15** Co-ordination and corporation	**STRATEGY 4** **MAINSTREAMING INDUSTRIAL HYGIENE**	**Collaboration with International OSH Experts and Institutes**

OSH-MP 15 (2010-2015)		C155	OSH-MP 2020 (2016-2020)	
STRATEGIES	**PROGRAMME**		**STRATEGIES**	**PROGRAMME**
LOCALLY AND INTERNATIONALLY	activities		**STRATEGY 5 INTERNATIONAL OSH STRATEGIC ALLIANCE**	• Compliance to International standards • Sharing knowledge, experience to ASEAN OSHNet, OIC OSHNet and others • Conducting OSH training to others • Sending Experts • Paper presentation in international OSH dialogue, discussion, Conference or seminar • Benchmarking visits by other Countries

2.5 Mechanism for the Formulation of OSH Master Plan (OSHMP 2020)

OUTPUT	MATTERS	AGENCIES/ MEMBERS INVOLVED
National Policy on OSH (OSH way forward)	Symposium	Members: Senior officer of DOSH
1. 1st Draft of OSHMP 2016 – 2020 2. Strategy for Implementation of OSHMP	Development of OSH Master Plan 2020 (Technical Committee)	Members: Senior officer of DOSH
1. 2nd Draft of OSHMP 2016 – 2020 2. Strategy for Implementation of OSHMP	Meeting on development of OSH Master Plan 2020	Members: Top level management of DOSH
1. Presentation for Final Draft of the OSHMP 2020 to Agencies, which evolved directly and indirectly with the Master Plan. 2. Discussion of the Final Draft document. 3. Obtained advices and expertise from relevant Agencies. 4. Obtained response and feedback from relevant Agencies on implementation of the OSHMP 2020 draft.	Dialogue with Stakeholders	Attendees (Agencies Representative): MOHR, FMM, GISM, JHEKS, JPS, JPRM, JKTSM, JTM, NUBE, CIDB, MEF, MISIF, MTUC, UPM, UKM, MBAM, NIOSH, IEM, PERKESO, MAPA, SYABAS, TNB, MIHA, UMP, KLIA Training and Research Centre Sdn Bhd, Gamuda Engineering Sdn Bhd, IJM, Corp Berhad, Sime Darby Plantations, Putrajaya Holdings Sdn Bhd., Telekom Malaysia Berhad
Response from the members of the MNCOSH	Meeting of Malaysian National council for OSH (MNCOSH)	Attendees: Members of MNCOSH, observers, representative, secretariat, other parties
Response from the members of the NLAC	Meeting of National Labour Advisory Council (NLAC)	Attendees: Chairman, Secretary, Employees representative, Employers representative
1. 2nd Draft of OSHMP 2016 – 2020 2. Strategy for Implementation of OSHMP	Meeting on development of OSH Master Plan 2020	Members: Top level management of DOSH
Approval by the Cabinet	Memorandum from the Ministry of Human Resources for the OSH Master Plan 2020	Cabinet

Figure 2.2: Mechanism for the Formulation of OSH Master Plan (OSHMP 2020)

3.0 OSH COORDINATION AND COLLABORATION

3.1 Coordination Mechanism in OSH

3.1.1 Social Dialogue

Social dialogue can take place at different levels and forms depending on national settings. According to ILO, social dialogue includes all types of negotiations, consultations or information sharing among representatives of governments, employers and workers or between those of employers and workers on issues of common interest relating to economic and social policy. It is a means to achieving social and economic aims and also gives workers a voice in their societies and workplaces.

The value of national social dialogue depends on the independence, representations and capacity of the social partners to engage in it. A social dialogue can be bipartite, which is between workers and employers, or tripartite, which includes the government. Social dialogue can improve the design of policy procedures as it can contribute to their effective implementation and also increase the quality of the results.

The conditions for effective social dialogue to take place are:

- Adequate institutional support
- Strong and independent workers' and employers' organizations with the good technical means and also access to significant information to participate in social dialogue
- Political drive and pledge to participate in social dialogue on the part of all the parties
- Veneration for the fundamental rights of freedom of association and mutual bargaining

The main area for social dialogue is that of economic reform and social equity, whereby social equity compromises both issues of social protection and of minimum wages. An example of the outcome of the social dialogue was the first Minimum Wage Order was gazetted on July 16, 2012 which stipulates different wage based on regions and rate as in Table 3.1.

The order was subsequently reviewed and revised to take effective July 1, 2016 which resulted in increased minimum wage (Table 3.2) despite the long overdue. Under the Order, the minimum wages shall be reviewed every 2 years.

Table 3.1: Minimum wage rate for workers based on Minimum Wage Order, 2012

REGION	MINIMUM WAGE RATE	
	Monthly	Hourly
Peninsular Malaysia	RM900	RM4.33
Sabah, Sarawak and the Federal Territory of Labuan	RM800	RM3.85

Table 3.2: Minimum wage rate for workers based on Minimum Wage Order, 2016

REGION	MINIMUM WAGE RATE			
	Monthly	Daily		Hourly
		Number of working days in a week		
Peninsular Malaysia	RM1,000	6	RM38.46	RM4.81
		5	RM46.15	
		4	RM57.69	
Sabah, Sarawak and the Federal Territory of Labuan	RM920	6	RM35.38	RM4.42
		5	RM42.46	
		4	RM53.08	

On the other hand, employers perceive the rigidity of the wage system in Malaysian firms as a major obstacle to flexibility of human resources management and thus to enterprise competitiveness. The question of how to strike a balance between competitiveness and social equity manifests itself as a debate between those in favour of minimum wage and those who want a flexible wage system.

Social dialogue is also a way to create a more efficient and more effective dispute resolution. Through social dialogue, the social partners can strengthen democratic governance, creating robust labour market institutions that contribute to long-term social and economic stability and peace.

Industrial relations/labour relation is the study of relationship between employees and their employers concerning work-related issues. Industrial relations stresses on 3 main areas which are the relationship between employers and trade unions, framework provided by employment laws, and disciplinary processes and cessation of the employment contract. The role of industrial relations is to strengthen the relationship between the employers and to prevent exploitation and discrimination in the workplace or outside of the workplace.

Industrial relation in Malaysia is recognized as a tripartite system and it is made up of 3 parties namely employers and their organizations, employees and their unions, and the government. The Ministry of Human Resources (MOHR) acts as the president of the tripartite system. The major laws that govern Malaysia's tripartite system are:

- Employment Act 1955 - Specifies regulations covering all aspects of employment of workers. The provisions aim to defend against exploitation by employers. The coverages are to:
  i. Provide minimum benefits for those workers covered by the act
  ii. Establish certain rights for employers
  iii. Establish certain rights for employees

- Industrial Relations Act 1967 - Regulates the relationships between employers and employees through trade union by**:**
  i. Providing and encouraging harmonious relation between employers and employees
  ii. Providing guidelines on collective bargaining between employers and employees
  iii. Establishing procedures for settlement of trade disputes

- Trade Unions Act 1959 - Establishes the responsibilities of trade unions and their members by:
  i. Providing the rules on the rights of employees to form, join and participate in any lawful trade union activities
  ii. Providing the rules on the rights of employers to form, join and participate in any lawful employer's association activities.
  iii. Establishing and promoting legislations affecting the interest of the trade union members

3.1.2 Tripartite Concept

The tripartite concept can be defined as the interaction of government, employers and workers (through their representatives) as equal and independent partners to seek solutions to issues of common concern. In other words, tripartite is made up of 3 parties with Ministry of Human Resources as its president which primary role is to oversee the overall development of discussions.

The party includes government, employers and their organization and employees and their unions. The government utilizes this platform in formulating the government policy, legislation, and national programs on Occupational Safety and Health in the

country. The government acts as a legislator through parliament, administrator through MOHR, and also as a participant, as the largest employer in the country. The role of MOHR in the tripartite system includes:

- Protecting the welfare of the employees
- Promoting good employer-employee relationship through a stable and peaceful tripartite system
- Equipping the unemployed with basic industrial skills and to improving the skill level of the workforce
- Assisting in maximizing country's manpower resources through manpower planning

National Labour Advisory Council (NLAC) is the national tripartite consultative mechanism established to provide consultation and co-operation between the government and the organization. NLAC is made up of 14 representatives from employees, 14 from employers and 12 from government. MOHR chairs the NLAC meetings and appoints the government representative. Other representatives are appointed after consultation from Malaysian Employer's Federation (MEF), Malaysian Trade Union Congress (MTUC) and Congress of Unions of Employees in Public and Civil Service (CUEPACS). NLAC meeting is held twice a year and in times of urgency.

OSH tripartite concept can be explained through Figure 3.1. Through MOHR, NCOSH is the main authority in discussing, studying and investigating matters regarding the safety, health and welfare of workers at the workplace and advising the Minister of Human Resources thereof. DOSH is responsible for ensuring the safety, health and welfare of people at work as well as protecting other people from the safety and health hazards arising from the activities sectors.

The roles of employers and their organizations are to:

- Promote and protect the interest of their members
- Negotiate and deal with trade unions of employees
- Represent their members in any disagreements between an individual member and the employee's union

An employee has a right under Section 4 of the Industrial Relations 1967 to join a trade union. In private sector, employee is represented by Malaysian Trade Union Congress (MTUC) to issues including minimum wages for workers, cost of living, foreign workers. In public sector, employee is represented by The Congress of Unions in The Public and Civil Service (CUEPACS). Trade Union and Employers Federation will implement the policies, legislations and national programs to employees and employers through disseminating of information and constant training.

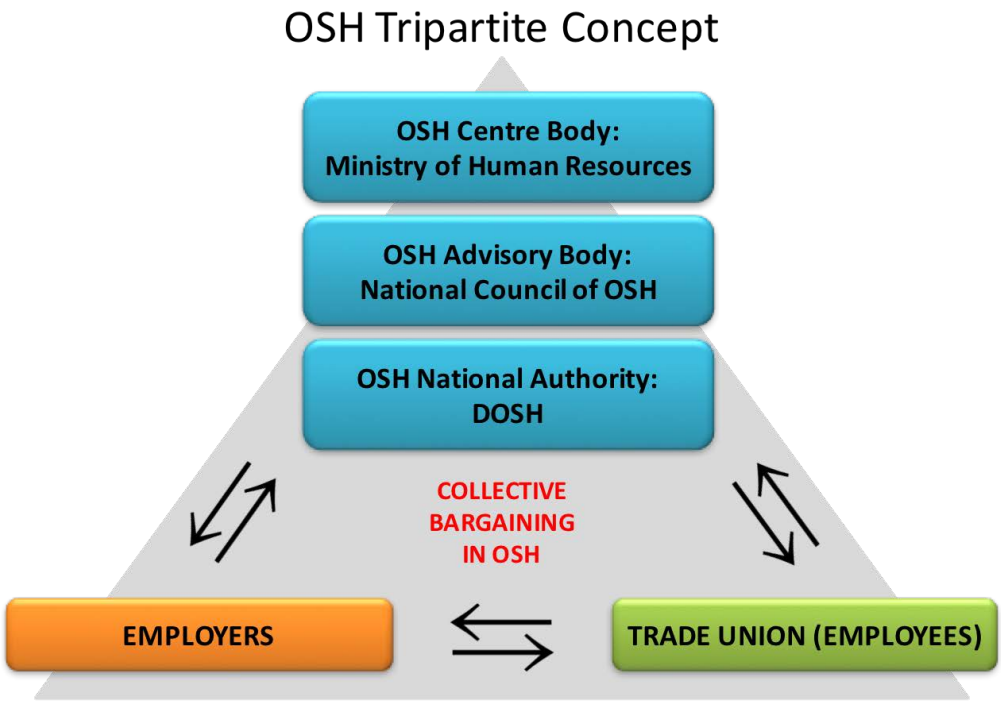

Figure 3.1: Social Dialogue Diagram: Tripartite Concept in Malaysia

We have a tripartite body, which is National Labour Advisory Council (NLAC) which meets regularly and attain consensus on major issue among the three social partner namely government, employers and workers. One of such consensus arrived at is the National Labour Policy. Approach for tripartite process can be explained in Figure 3.2. Labour policies and laws are formulated and implemented by the Ministry of Human Resources (MOHR). All the inputs resulting from the consultation from the OSH experts, employee unions and employer organizations are delivered to the advisory body, NCOSH for them to carry out investigations and make reports and recommendations to the MOHR.

After consensus by MOHR, the recommended policies are then delivered to the national authority body (DOSH) for enforcement. In addition, the trade union federations of labours and employers represent their constituents regarding labour matters by giving advice and guidance, as well as actively participating on government advisory commissions. In general, employer's goals focus on labour costs, productivity, and profitability. In contrast, securing high wages and benefits, safe working conditions, fulfilling work, and a voice in the workplace concern with workers and their representatives. Feedback and comments from group of OSH experts and trade unions regarding the recommended policies to DOSH are forwarded to MOHR for further improvement.

Figure 3.2: Tripartite process approach

3.1.3 Bipartite Concept

In Malaysia, important initiatives have also occurred at the sectoral level, where there has been substantial cooperation between trade unions and employers in lessening the impact of the crisis on jobs. Before the crisis, the Federation of Malaysian Manufacturer (FMM) had become the first employers' organization to establish a joint committee with the Malaysian Trade Union Congress (MTUC).

When the crisis has occurred, the joint committee constituted itself as a task force on retrenchments and vacancies. Basically, the committee functions as a private employment service. They hold a list. It also seeks out vacancies for retrenched workers on the list it maintains.

3.2 Occupational Safety and Health Structure, Function and Organizations at National Level

The overview of the coordination structure of Occupational Safety and Health at National Level is described in Figure 3.3.

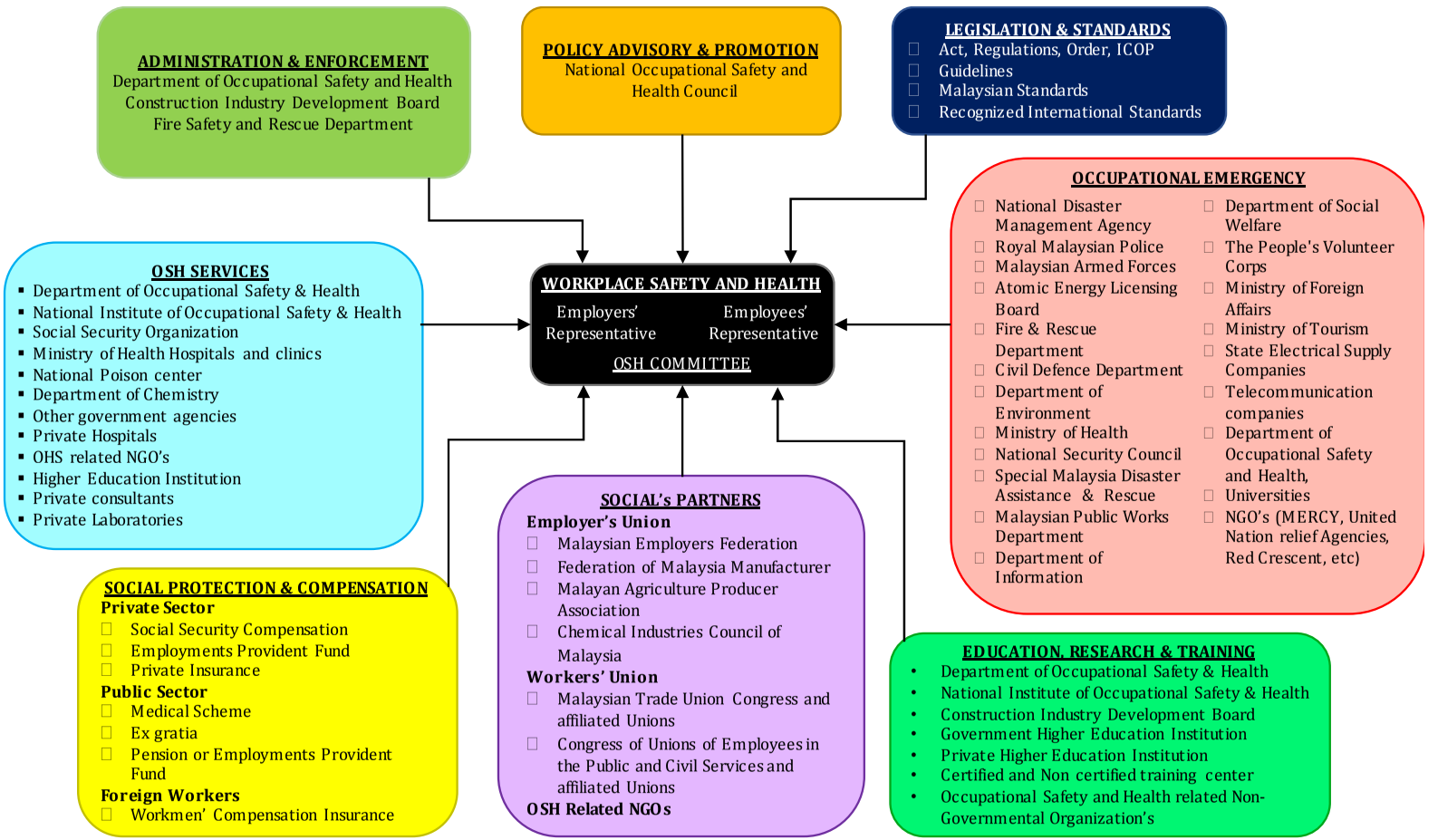

Figure 3.3: Occupational Safety and Health Structure, Function and Organizations in Malaysia

3.2.1 Ministry of Human Resources and Agencies under the Ministry

The Ministry of Human Resources (MOHR) is a ministry is responsible for skills development, labour, occupational safety and health, trade unions, industrial relations, industrial court, labour market information and analysis, as well as social security. MOHR currently has ten Departments, four Statutory Bodies and Companies, and three Advisory Councils under its authority. MOHR organization chart is illustrated in Figure 3.4.

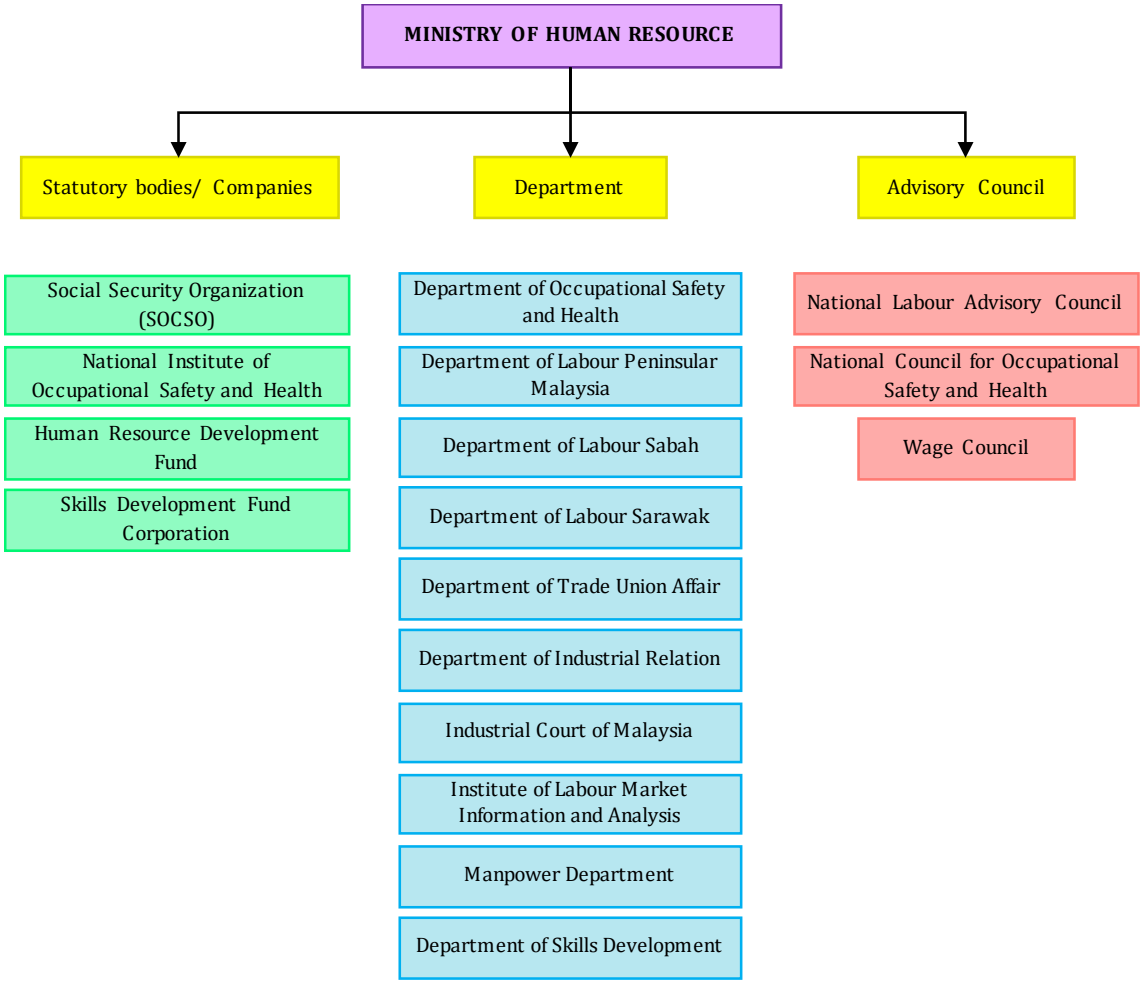

Figure 3.4: Ministry of Human Resources Organizational Chart

The following sub-Chapters describe the agencies under Ministry of Human Resources which collaborate significantly in the management of OSH at national level.

3.2.1.1 Department of Occupational Safety and Health

The Department of Occupational Safety and Health (DOSH) is a department under the Ministry of Human Resources. This department is responsible for ensuring the safety, health and welfare of people at work as well as protecting other people from the safety and health hazards arising from the work activities.

As a government agency, the department is responsible for the administration and enforcement of legislations related to occupational safety and health of the country, with a vision of becoming an organization which leads the nation in creating a safe and healthy work culture that contributes towards enhancing the quality of working life.

The objectives of DOSH are to prevent industrial accidents and occupational diseases by the year 2020 through:

- Reduction in rate of fatalities to 4.36/100,000 workers;
- Reduction in rate of accidents to 2.53/1000 workers; and
- Increase in reporting of occupational diseases and poisoning among workers by 30%.

As a government agency, the department is responsible for the administration and enforcement of legislations related to occupational safety and health with a vision of becoming an organization which leads the nation in creating a safe and healthy work culture that contributes towards enhancing the quality of working life. The main functions of DOSH are as follow:

- To study and review the policies and legislations of OSH.

- To enforce the following legislations:
  a) Occupational Safety and Health Act 1994 and its regulations.
  b) Factories and Machinery Act 1967 and its regulations.
  c) Part of Petroleum Act 1984 (Safety Measures) and its regulations.

- To conduct research and technical analysis on issues related to occupational safety and health at the workplace.

- To carry out promotional and publicity programs to employers, workers and the public to foster and increase the awareness of occupational safety and health.

- To become a secretariat for the National Council regarding OSH.

Currently, DOSH has 15 state offices, with the headquarters located at Putrajaya. The Department's headquarters division consists of 11 Divisions. The list, address and contact details of DOSH Headquarter office, branch and regional offices are as attached in **Appendix 3A**.

3.2.1.2 Department of Labour

Under the Ministry of Human Resource, there are 3 separate Department of Labour; Peninsular Malaysia, Sabah and Sarawak respectively in the labour management of different region in Malaysia. Generally, the vision, mission and objectives of the departments are as follow:

a) Vision:
Prime mover/Main catalyst in generating excellent private sector human resources management.

b) Mission:
To strengthen labour administrations in upgrading the welfare of employees, interest of employers and widen job opportunities in fulfilling the needs of labour market.

c) Objectives:
   i) To safeguard and promote the interest and welfare of the industrial society;
   ii) To give priority and maintain job opportunities for citizens;
   iii) To assist industries in enhancing their competitiveness in facing global challenges;
   iv) To establish a workforce and employers knowledgeable in labour matters and labour laws in order to create a conducive labour environment for industrial and investment development.

3.2.1.3 National Council for Occupational Safety and Health (NCOSH)

National Council for Occupational Safety and Health (NCOSH) under the Ministry of Human Resources is a supreme body responsible for determining the direction and policy of the State in relation to occupational safety and health in Malaysia. It was established in 1995 in accordance with Section 8 of the Occupational Health and Safety Act 1994 (Act 514).

The main objective of NCOSH establishment is a continuous effort by the government to ensure the safety, health and welfare of employees in the workplace is secure. Accordingly, NCOSH has become more mature and always striving to improve the level of occupational health and safety in making a safe and healthy work practices part of the Malaysian culture. This effort is based on a tripartite process towards a culture practice.

NCOSH consists of fifteen members and a secretary. Deputy Minister of Human Resources is the Chairman of NCOSH, while the secretariat composed of Senior Officer of DOSH. The Council is composed of representatives of the government (5), employers (3 people) and workers (3 people), professional bodies and voluntary (4 people including a woman) and observers (6 people).

The vision of NCOSH is to become a major driving force leading the State body through a tripartite process, forming a safe and healthy work culture and thereby improving the quality of life. The mission is to raise awareness of Malaysians on Occupational Safety and Health and create healthy and safe work culture among employers, employees and all parties. In addition, it is also to ensure network system security management and health fair and implementation of a comprehensive safety protection.

NCOSH may, and when requested by the Minister to do so shall, carry out investigations and make reports and recommendations to him with regard to any matter relating to the objects of this Act and, in particular, but without prejudice to the generality of the foregoing provisions, with regard to: -

- changes it considers desirable to occupational safety and health legislation;
- the improvement of the administration and enforcement of occupational safety and health legislation;
- the fostering of a co-operative consultative relationship between management and labour on the safety, health and welfare of persons at work;
- the special problems with respect to occupational safety, health and welfare of women, handicapped persons and other groups in the community;
- the establishment of adequate methods of control of industrial chemicals at a place of work;
- the statistical analysis of occupationally related deaths and injuries;
- the provision of health care facilities at a place of work;
- the fostering of the development and adoption by law of industry codes of practice related to occupational safety, health and welfare; and

- the development of rehabilitation plans and facilities to assist persons injured at a place of work.

NCOSH establishment is in line with the legal principle that is one of the main principles underlying the enactment of the Occupational Safety and Health Act of 1994. To meet the requirements of the Act, the Minister of Human Resources has established a council to appoint a number of members and a secretary.

NCOSH establishment is in line with the legal principle that is one of the main principles underlying the enactment of the Occupational Safety and Health Act of 1994. To meet the requirements of the Act, the Minister of Human Resources has established a council to appoint a number of members and a secretary.

- three (3) persons shall be from organizations representing employers;
- three (3) persons shall be from organizations representing employees;
- three (3) or more persons shall be from Ministries or Departments whose responsibility is related to occupational safety and health; and
- three (3) or more persons, of whom at least one shall be a woman, shall be from organizations or professional bodies the activities of whose members are related to occupational safety and health and who, in the opinion of the Minister, are able to contribute to the work of the Council.

The members of the Council shall hold office for a term of three years or for such shorter period as may be specified by the Minister and shall be eligible for reappointment for a maximum of two terms. The organizational structure is as shown in Figure 3.5.

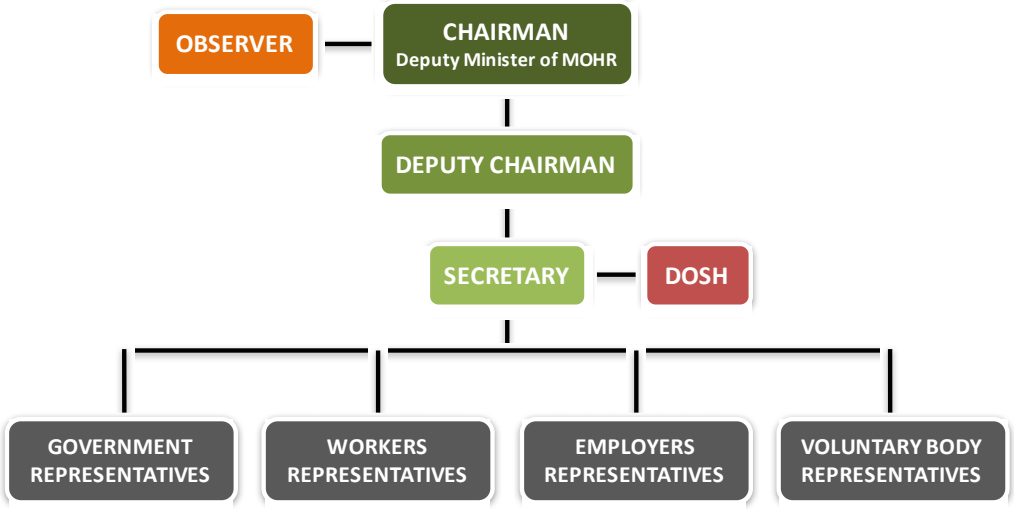

Figure 3.5: National Council of Occupational Safety and Health Organization

3.2.2 National Institute of Occupational Safety & Health (NIOSH)

NIOSH was established with an endowment fund from the SOCSO and from the Government. This fund was invested to become part of NIOSH's source of income. NIOSH was registered in June 1992 as a company limited by guarantee under the Malaysian Companies Act 1965. The Institute started operations in March 1993.

The vision of NIOSH is to be the Leading Centre of Excellence in Occupational Safety and Health in Malaysia. The mission was to be the preferred partner in enhancing OSH. The Corporate Value are as follow:

a) Integrity: Adhering to the highest standard of moral values and honesty.

b) Professionalism: Competent in the respective fields and perform tasks in a quality and effective manner.

c) Respect: Respect to every individual in any transaction.

d) Innovative: Always looking for new ideas to improve the delivery system.

e) Cooperate: All parties must work together in good faith to achieve the goal.

The Board of Directors is the administrative body that makes policies and decisions and its members are individuals from government, unions and the industrial sector. The core activities of NIOSH were in providing training and education, promotion and information activities, consultation, research and development as well as competency examination.

3.2.2.1 Social Security Organisation (SOCSO)

The Social Security Scheme was first introduced in the country in 1958, soon after Malaysia gained its independence. At the same time, the International Labour Organisation (ILO) was conducting a study on social security. In 1962, a high-level committee was formed to review the study results. The study by A.N. Ambo through the ILO provided the basis for the drafting of the Employees' Social Security Bill, which was subsequently passed by the Parliament of Malaysia in April 1969 and named the Employees' Social Security Act 1969.

The study by A.N. Ambo contributed significantly to the social security protection of employees who have contributed much to the growth of national economy. An expert on

social science from India, A.M. Ambo conducted the study under the International Labour Organisation (ILO). The vision of SOCSO was to become the premier and outstanding leader in social security towards 2020.

SOCSO mission was to provide a social security protection to Insured Person and their dependants through social security schemes and to increase awareness on occupational safety and health that will ultimately improve the Insured Person social wellbeing whereas the objective was to provide social security protection to all employees and their dependants through social security schemes base on the concept of caring society in line with the National Development Policy and Vision 2020.

3.2.3 Other Ministry and Agencies

Various other agencies and ministries work in tandem with DOSH under MoHR in the governance of OSH at national level. The following sub-Chapters describes some of the agencies and ministries involved which contributes directly and significantly to the management of OSH.

3.2.3.1 Ministry of Health (MOH)

The objective of MOH is to assist an individual in achieving and sustaining as well as maintaining a certain level of health status to further facilitate them in leading a productive lifestyle - economically and socially. This could be materialised by introducing or providing a promotional and preventive approaches, other than an efficient treatment and rehabilitation services, which is suitable and effective, whilst priorities on the less fortunate groups.

The vision is a nation working together for better health whilst the mission is to lead and work in partnership specifically:

a) to facilitate and support the people to:
   i) attain fully their potential in health
   ii) appreciate health as a valuable asset
   iii) take individual responsibility and positive action for their health

b) to ensure a high-quality health system that is:
   i) customer centred
   ii) equitable
   iii) affordable

iv) efficient
v) technologically appropriate
vi) environmentally adaptable
vii) innovative

c) with emphasis on:
i) professionalism, caring and teamwork value
ii) respect for human dignity
iii) community participation

Under the Ministry, the Department of Public Health and Pharmaceutical Services Division is directly involved in management of OSH-related services through the enforcement of the following legislation:

a) Department of Public Health:
i) Prevention & Control of Infectious Diseases Act 1988
ii) Food Act 1983
iii) Hydrogen Cyanide (Fumigation) Health Act, 1953

b) Pharmaceutical Services Division:
i) Poison Act, 1952 (Revise 1989)
ii) Dangerous Drugs Act, 1952 (Revised 1980)

3.2.3.2 Ministry of Science, Technology and Innovation (MoSTI)

Following Section 3 of the Act, the Atomic Energy Licensing Board (AELB) was established on 1st February 1985 as the National Regulatory Authority to enforce the Atomic Energy Licensing Act (1984). The AELB's main objective is to regulate and control all activities dealing with atomic energy throughout the country in order to ensure that such activities are being handled safely and do not endanger the radiation workers, members of the public, properties and environment from radiation hazards.

The vision, mission, objectives and functions (based on Atomic Energy Licensing Act (Act 304)) of AELB are:

a) Vision:
Remaining a relevant regulatory authority with credibility in radiation and nuclear safety, security and safeguarding its peaceful uses for national sustainable development.

b) Mission:
Encouraging innovation culture to ensure the Safe and Peaceful Uses of Radiation and Nuclear Technology.

c) Objectives
i) To ensure radiation and nuclear technology does not affect national and societal well-being by not significantly affecting the public, environment and workers negatively.
ii) To acquire, disseminate and generate knowledge to enhance radiation and nuclear safety, security and where appropriate safeguards.
iii) To create wealth by providing a conducive environment and international confidence through a credible and competent national regulatory framework to facilitate the introduction of modern industries and acquisition of sensitive state-of-art technologies to the nation.

d) Functions
i) To advise the Minister and the government of Malaysia on matters relating to the Atomic Energy Licensing Act 1984 and developments pertaining thereto with particular reference to the implications of such developments for Malaysia;
ii) To exercise and supervision over the production, application and use of atomic energy and matters incidental thereto;
iii) To establish, maintain and develop scientific and technical co-operation with such other bodies, institutions or organizations in relation to nuclear matters or atomic energy as the Board thinks fit for the purposes of the Atomic Energy Licensing Act 1984;
iv) Where so directed by the government of Malaysia, to perform or provide for the performance of the obligations arising from agreements, conventions or treaties relating to nuclear matters or atomic energy to which Malaysia is a party where such agreements, conventions or treaties relate to the purposes of the Atomic Energy Licensing Act 1984; and
v) To do such other things arising out of or consequential to the functions of the Board under the Atomic Energy Licensing Act 1984 which are not inconsistent with the purposes of this Act, whether or not directed by the Minister.

On the other hand, the Malaysia Nuclear Agency is an agency which functions are as follow:

a) To conduct research and development (R&D), services and training in the field of nuclear technology for national development;

b) To encourage application, transfer and commercialisation of nuclear technology; and,

c) To coordinate and manage the national and international nuclear affairs, and act as the liaison agency with International Atomic Energy Agency (IAEA) and Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO).

3.2.3.3 Ministry of Agriculture and Agro-Based Industry

The Pesticides Board of Crop Protection Division is established under Ministry of Agriculture and Agro-Based Industry Malaysia in the management of pesticides. The Board is empowered by Pesticides Act, 1974 and Pesticides (Highly Toxic Pesticides) Regulation, 1996.

3.2.3.4 Construction Industry Development Board (CIDB)

CIDB was established under the Construction Industry Development Board Act (Act 520) and among their functions are to promote and stimulate the development, improvement and expansion of the construction industry. Its mission is to develop the Malaysian Construction Industry in line with a vision to be a credible organisation in developing a World Class Construction Industry. The Government through CIDB Malaysia is responsible for developing and enhancing the development of the construction industry in Malaysia.

The vision of CIDB was to become as the distinguished organization in developing a world-class construction industry while the objective was to develop the capability of the construction industry through the enhancement of quality and productivity by placing great emphasis on professionalism, innovation and knowledge in the endeavour to improve the quality of life.

3.2.3.5 Ministry of Higher Education (MoHE)

MoHE important role in creating an ecosystem of higher learning in the best public university (UA), private higher education institutions (IPTS), polytechnics and community colleges. The higher learning and educational institutes provides various technical resources and expertise in research and development as well as capacity building in OSH.

All these institutions are major components of ecosystems education and training in the country that will generate thinkers, scientists, scholars, workers skilled and semi-skilled workers in accordance with their respective roles which has a significant contribution to the development to the field of OSH.

3.3 Occupational Safety and Health Structure, Function and Organizations at Enterprise Level

Malaysia adopted a self-regulation approach in regulating Occupational Safety and Health (OSH) in the workplace. Section 15 of OSHA 1994 required the employer to make sure the safety, health and overall welfare of employees during work, but to an extent that it is practicable. Apart from employer, employees also have their own duty to ensure their own safety at work.

Section 24 required that employees must take reasonable effort to care for their own as well as their colleagues' safety while at work and cooperate with employers to ensure workplace safety. It is clear that the Act were designed to make employers and employees work together in the regulation of OSH in the workplace.

Based on statistic, accident rate remains high in the workplace especially in SMEs, although there is legal requirement to ensure OSH is well taken care of in the workplace. This showed that the implementation of OSH in SMEs is not receiving the full attention from the management. SMEs and large multinational companies are very different in many aspects. These differences have huge impact when it comes to the implementation of OSH and this raises several issues.

The size of the company plays a big part in the effectiveness of OSH implementation. Large multinational companies often have the financial muscle and structure to effectively implement a good OSH system. They have the financial capability which in most cases, lacking in SMEs in committing and developing a safety program inside their organization. Large multinational companies also have the necessary size and structure to effectively implement and benefit from OSH.

Employers shall take reasonable measures to ensure employees' safety by preventing accidents in the workplace. Although the concept of self-regulation approach in regulating OSH at workplace is good, it still has apparent weaknesses. SMEs are still struggling to comply with even the minimum requirements of the legislation. This happens because the workplace is constantly evolving with the introduction of new technologies and methods of working.

As a result, new occupational diseases and hazards appear and threaten the well-being of employees. By relying on self-regulation approach, it is hard for SMEs to get the much-needed support for them to be aware of the new hazards and other issues surfaced. Although DOSH has set up a state office in every state, but the large number of SMEs is still a major challenge for DOSH to reach them effectively.

There are two (2) factors contributing the major impact on the ability of SMEs to effectively implement OSH namely:

A) Financial Resources

Financial resource is a vital element for SMEs (and any companies) in the implementation of OSH. Safety measures such as setting up an OSH documentation system, safety training, and establishing an OSH department in the organization needs considerable investment from the organizations. SMEs with limited capital, often invest on things that will increase their production and generate greater profits. Management in SMEs perceive that investment in production is more important as it will strengthen their footing and survivability. As such, OSH is neglected because it cannot translate into direct gain for the company or help in the survival of the company

B) Sound management capability.

Management expertise is also important in the implementation of OSH. Knowledge such as accidents investigation, risk assessment and safety audit is needed if OSH was to be implemented effectively. SMEs often lack this kind of capability as the managements are not aware of it or ignore it as they see this as unimportant. Furthermore, with no clear division of responsibilities, SMEs do not appoint a specific officer in the company to handle OSH. Thus, OSH does not receive the attention from management in SMEs.

An effective implementation of OSH practices could reduce accidents thus decreasing compensation paid. To have effective implementation of OSH legislation in SMEs, the enforcement in the form of inspection by the relevant authorities on the workplace can help to reduce accidents by forcing employers to adhere to safety standard.

However, it is very difficult to carry out inspections on SMEs in Malaysia as there are a large number of them in the entire country. It would take a long time and effort to reach every SME in the country. It will also require the government to put in a lot of financial resources and manpower to carry out the inspection. Therefore, inspection is not a practical long term solution considering the number of SMEs in Malaysia and the issue of

accessibility. Thus, the management of SMEs must provide a safe workplace for employees by implementing OSH.

In order to do so, management in SMEs can rely on several safety management practices such as providing safety training, allowing employee participation in making safety-related decision, supervisory support and enforcing safety rules in the workplace.

The Occupational Safety and Health Act (1994) provides a basic framework for collaboration at the workplace between employers and workers. The legal framework of the collaboration was detailed in Occupational Safety and Health (Safety and Health Committee) Regulations (1996) that stipulates the obligations of establishing a safety committee at the workplace under Section 30(1) where:

a) there are forty or more persons employed at the place of work or
b) the Director General directs the establishment of such a committee at the place of work.

Occupational Safety and Health (Safety and Health Committee) Regulations 1996 describes in detail the duties and tasks, obligations and rights in relation to OSH of the employers, workers, safety officers and safety representatives of the workers, as well as the tasks of the Occupational Safety and Health Committee at the workplace.

In coordinating OSH, employer shall consult the safety and health committee with a view to the making and maintenance of arrangements which will the employer and the employees to co-operate effectively in promoting and developing measures to ensure the safety and health at the place of work of the employees, and in checking the effectiveness of such measures.

3.3.1 Composition and Structure of the Safety and Health Committee

The composition and functions of the Occupational Safety and Health Committee are shown in Figure 3.6.

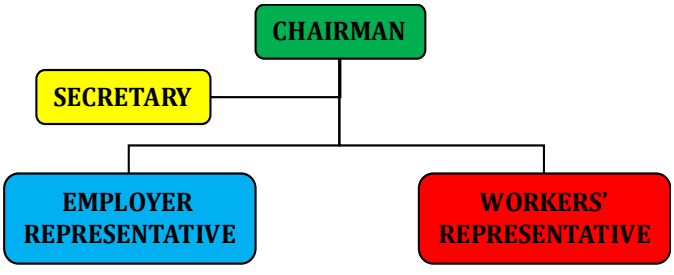

Figure 3.6: Composition of OSH Actors in Malaysian OSH Committee

A safety and health committee shall consist of -

(a) a chairman;

(b) a secretary;

(c) representatives of employer; and

(d) representatives of employees.

Where there are one hundred persons or less employed at a place of work, there shall not be less than two representatives each from the employees and the management on the committee; and where there are more than one hundred persons employed at the place of work, there shall not be less than four representatives each from the employees and the management.

- An employer or his authorized manager shall be the chairman of a safety and health committee.
- The secretary of the committee shall be the person who is employed as the safety and health officer at the place of work.
- Where there is no person employed as a safety and health officer at the place of work, the chairman may appoint another person to act as the Secretary of the committee or the members may, by ballot, appoint from amongst themselves the secretary of the committee.

In appointing other members of committee:

(1) An employer shall invite persons employed at the place of work to nominate their representatives to the safety and health committee; and where the number of persons so nominated exceeds the number of vacancies available, a ballot shall be held to determine the representatives.

(2) In the case where no representative or an insufficient number of representative or an insufficient number of the representatives of the employees are nominated, the employer shall appoint the required number of persons to represent the employees.

(3) An employer shall not penalise a member of the committee in any manner for being absent from his normal duties at work while carrying out the functions of the committee.

3.3.2 Tasks, Functions, Duties, Roles and Responsibilities of Safety and Health Committee

3.3.2.1 General

The safety and health committee of a place of work shall –

i) assist in development of safety and health rules and safe systems of work;

ii) review the effectiveness of safety and health programmes;

iii) carry out studies on the trends of accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational disease which occurs at the place of work, and shall report to the employer of any unsafe or unhealthy condition or practices at the place of work together with recommendations for corrective actions; and

iv) review the safety and health policies at the place of work and make recommendations to the employer for any revision of such policies.

3.3.2.2 Inspection of Place of Work

The safety and health committee –

i) inspect the place of work at least once in every three months to ascertain if there is anything prejudicial to the safety and health of persons employed therein:

Provided that the committee may, at any time, make further inspections of any plant therein or any part of the place of work to check on the effectiveness of the measures taken to ensure the safety and health of persons at the place of work;

ii) discuss, as soon as is practicable, the observation of the members of the committee make during the inspection of the place of work, and if there are circumstances at the place of work which, in the opinion of the committee, are prejudicial to the safety and health of any person employed therein, shall record the details of such circumstances in a report kept for such purpose; and

iii) make recommendations to the employer on the remedial measures to be taken on any matter prejudicial to the safety and health of persons at the place of work and shall record such recommendations in the report.

3.3.2.3 Investigation into any accident

i) A safety and health committee shall inspect the place of work, as soon as it is safe to do so, after any accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational disease has occurred at the place of work.

ii) Where a person is employed as a safety and health officer, he shall furnish the chairman of the committee with a report of his findings subsequent to an investigation conducted by him into any accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational disease which has occurred at the place of work, and the chairman shall, as soon as is practicable, convene a meeting of the committee to discuss the report.

iii) Where no safety and health officer is employed at the place of work, the employer or his authorised manager shall forthwith inform the chairman or the secretary of the committee of any accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational disease which has occurred at the place of work, and the chairman or the secretary shall, as soon as is practicable, after the committee has inspected the place of work, convene a meeting to investigate into such incident.

iv) At the meeting of the committee convened as in (ii) and (iii), the committee shall discuss the cause of the accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational disease and make recommendations to the employer of the measures to be taken to prevent the reoccurrence of such incident.

3.3.2.4 Matters to be considered by Committee

A safety and health committee, when performing its functions, shall take into consideration the following:

i) any reports from those which may be submitted by a safety and health officer;

ii) the safety audits submitted by safety and health auditors;

iii) the reports and factual information provided by occupational safety and health officers; and

iv) the reports by other government agencies on matters pertaining to safety and health at a place of work.

3.3.2.5 Investigation of Complaint

i) An employer shall provide and maintain a system of communication to enable any of his employees to make a complaint on any matter prejudicial to the safety and health of persons at the place of work.

ii) An employer, upon receiving a complaint as detailed in (i) shall, as soon as is practicable, attend to the complaint and shall take immediate measures to eliminate or minimize the risk to safety and health at the place of work.

iii) Where an employer is unable to discharge his duties under (ii), the employee may make a similar complaint, or the employer may refer the matter, to the committee.

iv) The committee shall, upon a complaint being made or matter being referred to under (iii), investigate the matter and shall thereafter prepare a report and make recommendations to the employer on the ways of eliminating or minimising the risk to safety and health at the place of work.

3.3.2.6 Resolution of Complaint

i) An employer shall, as soon as is it practicable, implement every recommendation made by the Safety and Health Committee, and if for any reason he or his authorised manager is unable to implement any of the recommendations, he shall convey his reason to the Safety and Health Committee.

ii) If the committee does not agree with any of the reasons given by the employer or his authorised manager under (i), the committee shall make a request to the Director General to undertake an inspection of the place of work and to resolve the matter.

iii) For purpose of a request made under (ii), the committee shall submit to the Director General in duplicate the following:

(a) the inspection or investigation report;

(b) the recommendation of the committee to the employer; and

(c) any other documentary or material evidence pertaining to the complaint.

3.4 Employers' and Workers' Organizations

3.4.1 Employers' Representative

3.4.1.1 Malaysian Employers Federation (MEF)

Malaysian Employers Federation (MEF) is the central organisation of private sector employers in Malaysia recognised nationally, regionally and internationally. Established in 1959, MEF promotes and safeguards the rights and interests of employers. MEF provides a forum for consultation and discussion among members on matters of common interest, and seeks for the adoption of sound principles and practices of human resource and industrial relations through information, advice, research and information, training and other activities.

The Federation achieves its vision and mission through the following core activities and objects: -

- representation of members at conciliation and mediation proceedings and at proceedings before the Labour and Industrial Courts.
- provision of advisory/consultancy services, at all levels.
- provision of professional training and related activities through the establishment of an MEF Academy.
- research and development of best practices in all relevant fields.
- advocacy and representation of employers' interests and business needs at national, regional and international fora

The Industrial Relations Panel met on a regular basis to deliberate on industrial relations and human resources issues. The committee include a chairman and regional representatives including:

- Northern region
- Perak region
- Central region
- Shah Alam region
- Melaka area
- Negeri Sembilan Area
- East Coast Region
- Southern Region
- North Johor Area
- Hotel group meeting

MEF represents employers at various level as follow:

A) National level

i) National Labour Advisory Council (NLAC)
ii) Human Resources Consultative Panel
iii) Social Security Organisation (SOCSO)
iv) Employees Provident Fund (EPF)
v) Malaysia Productivity Corporation (MPC)
vi) Human Resources Development Fund (HRDF)
vii) National Vocational Training Council (NVTC)
viii) National Institute of Occupational Safety and Health (NIOSH)
ix) National Council for Occupational Safety and Health (NCOSH)
x) National Wages Consultative Council (NWCC)

B) Regional level

i) ASEAN Confederation of Employers (ACE)

The ASEAN Confederation of Employers (ACE) was established and represented by Employers' Organisations in ASEAN, to optimise liaison, co-operation and representation in the fields of labour and social legislation, industrial relations and practices. The members of ACE are Employers' Association of Indonesia (APINDO), Cambodian Federation of Employers & Business Associations (CAMFEBA), Employers Confederation of The Philippines (ECOP), Employers Confederation of Thailand (ECOT), Malaysian Employers Federation (MEF) and the Singapore National Employers Federation (SNEF).

ii) Confederation of Asia-Pacific Employers (CAPE)

The roles of Confederation of Asia-Pacific Employers (CAPE) areo formulate socio-economic policies for stability and growth, recognising the challenges and opportunities of globalisation, and realising the imperative need for cooperation, cohesion and interaction in a borderless economy.

C) International Level: International Organisation of Employers (IOE)

MEF is a Member of the IOE, the recognised spokesman of world private sector employers on all labour and social matters. At the annual International Labour

Conference (ILC) in Geneva, MEF is the Employers' Delegate in the Malaysian delegation comprising representatives of government, employers and workers.

3.4.1.2 The Federation of Malaysian Manufacturers (FMM)

The Federation of Malaysian Manufacturers (FMM) is Malaysia's premier economic organization that has membership of various type of manufacturing companies in Malaysia. It was established in 1968 and is the largest private sector economic organisation in Malaysia representing over 2,800 manufacturing and industrial service companies of varying sizes.

The Federation of Malaysian Manufacturers had 10 representative's branches throughout Malaysia including:

- Kedah/Perlis
- Penang
- Perak
- Selangor
- Negeri Sembilan
- Malacca
- Johor
- Eastern
- Sarawak
- Sabah representative office

FMM Institute, a subsidiary company of the Federation of Malaysian Manufacturers, was established to provide industry-relevant skills training for the manufacturing and services sectors for the continuing development of the human capital. It was incorporated on January 12, 1999. The Institute on average conducts 1,000 programmes and trains 18,000 participants in various categories of programmes nation-wide annually.

In line with its primary objective to develop the potentials and enhance the skills of personnel at every level of industry, FMM Institute offers a wide range of functional corporate training programmes to cater to the needs of the manufacturing and services sectors. One of the program conducted by FMM institute is OSH certification program.

3.4.2 Employee representative

3.4.2.1 Malaysian Trades Union Congress (MTUC)

The Malaysian Trades Union Congress (MTUC), is a national trade union centre in Malaysia. It was formed in 1949 and was originally known as the Malayan Trades Union Council. It then changed its name to the Malayan Trades Union Congress in 1958, and then to its current name with the formation of Malaysia. MTUC is affiliated with the International Trade Union Confederation.

MTUC affiliates with numbers of other worker's organization in various sectors as detailed in **Appendix 3B**.

3.4.2.2 Congress of Unions of Employees in the Public and Civil Services

The Congress of Union of Employees in the Public & Civil Services Malaysia (CUEPACS), is a national trade union centre in Malaysia. It has a membership of 1,200,000 workers. The objectives of the union are to: -

- Make any needed to promote the interests or for the perfection of the work of all or any of its affiliated trade unions.
- Protect the interests of trade unions and their members combined.
- Improve the conditions of employment such as hiring, tenure, promotion, discipline, job security, wages and benefits - retirement benefits of members of trade union affiliation.
- Regulate employee relations / employer along with the relationship between the government of any Member of the Union.
- Set up machinery to be agreed between employer with CUEPACS for the purpose of negotiating and discuss all matters concerning members of trade unions and their members.
- Hold benefits for members of the trade union members as may be decided by Congress Convention.
- To assist (for financial or other) all or any members of trade unions and their members.
- Assist any member of a trade union or any of its members, either financial or other to obtain any legal advice Law provisions subject to provisions in the law which came into force Union.

- Promote legislation on behalf unions or members of particular trade unions in general.
- Run, if decided by Congress Convention, the work of composing, print, publish and distribute any newspaper, magazine, or other news sari -other printed literature to advance the goals of CUEPACS or promote the interests of its member unions.
- Promoting the welfare of material, social and educational unions members with any legitimate way is considered appropriate by the Convention of Congress or Congress Party
- Carry out all actions and efforts necessary to advance the goals of the above in accordance with the decisions made by Congress in the Convention three years or Special Convention

CUEPACS is affiliated with various worker's congress from the civil servants as listed in **Appendix 3C**.

4.0 OSH TECHNICAL STANDARDS, GUIDELINES AND MANAGEMENT SYSTEMS

4.1 DOSH Related Regulatory Standards, Guidelines and National System

4.1.1 Industrial Code of Practice (ICOP)

There are 4 types of ICOP used in Malaysia under Occupational Safety and Health. They are chemical management, industrial hygiene, occupational health and transportation. **Appendix 4A** details out the list of OSH-related industrial code of practice in Malaysia.

4.1.2 OSH-Related Guidelines in Malaysia

As of 2016, there are 52 guidelines produced by DOSH to support and cater for the implementation of safety and health in Malaysia. List of guidelines is showed in **Appendix 4B**.

4.2 Non-Regulatory Malaysian Standards and Accreditation System

The Standards of Malaysia Act 1996 (Act 549) governs issues related to standardization and accreditation in Malaysia. The Act establishes the Department of Standards (STANDARDS MALAYSIA) as the National Standards and Accreditation Body. The Act additionally establishes the Standards and Accreditation Council (MSAC).

The main function of this Department is to foster and promote standardization and accreditation as a means of advancing the national economy, promoting industrial efficiency and development, benefiting the health and safety of the public, protecting the consumers, facilitating domestic and international trade and furthering international cooperation. It also acts as the advisory body to the Minister of Science, Technology and Innovation on standardization and accreditation.

Standards-Writing Organizations (SWO) are organizations or associations appointed by SIRIM Berhad under the Malaysian Standards System to undertake the development of standards in specifically defined scopes of work. A total of 16 bodies have been approved by SIRIM and DOSH is one of the SWO secretariat in sector of occupational safety and health. Three scopes covered in developing the standard are:

i) To prepare standards related to safe systems of work and practices in occupational setting.

ii) To review existing Malaysian Standards related to the scope.

iii) To monitor, deliberate, vote and report on international and regional standardization activities within the above scope as appropriate.

DOSH through the Department of International Policy and Research Development has completed the standard for MS Safety and Health Signage in use at workplace: Specification (First Revision) MS 2558: 2014. Other than that, DOSH act as the Permanent-Member (P-member) in developing the international standards for ISO/PC 283 (Project Committee 283) to be known as "ISO 45001 Occupational Health and Safety Management Systems – Requirements with Guideline for Use".

4.3 Department of Standards – Certification Body: Status of Malaysian Standards (MS)

In attempt to promote the economy and industrial efficiency, Standards Malaysia has developed a Malaysian Standard for Occupational Safety and Health Management System based on the ILO OSH Guidelines 2001. There has been an 8.4% increase in the development of Malaysian Standards (MS) since Malaysia OSH Profile 2009.

As of 31st of August 2016, Standards Malaysia has developed 6,067 of MS in various fields, with 227 specifically related to Occupational Safety and Health. In terms of programmes related to OSH, Malaysia has participated in the International Accreditation Forum program for Occupational Safety and Health Management Systems (OSH) (ISO/IEC 17021-1, ACB-OSH & related IAF MD Series).

Malaysian Standards are adopted from international standards. From the 227 Malaysian Standards related to the field of OSH, 4 of the standards underwent modification in order to be adapted to the use in the country while 154 remained identical to international standard (Table 4.1). Figure 4.1 showed cumulative number of MS developed from year 2008 to 2016.

Table 4.1: Malaysian Standard (MS) Status as of 31st August 2016

SECTOR	CUMULATIVE MS DEVELOPED	ALIGNED MS	
		IDENTICAL	MODIFIED
Occupational Safety and Health	227	154	4

(Source: Standard Department Malaysia)

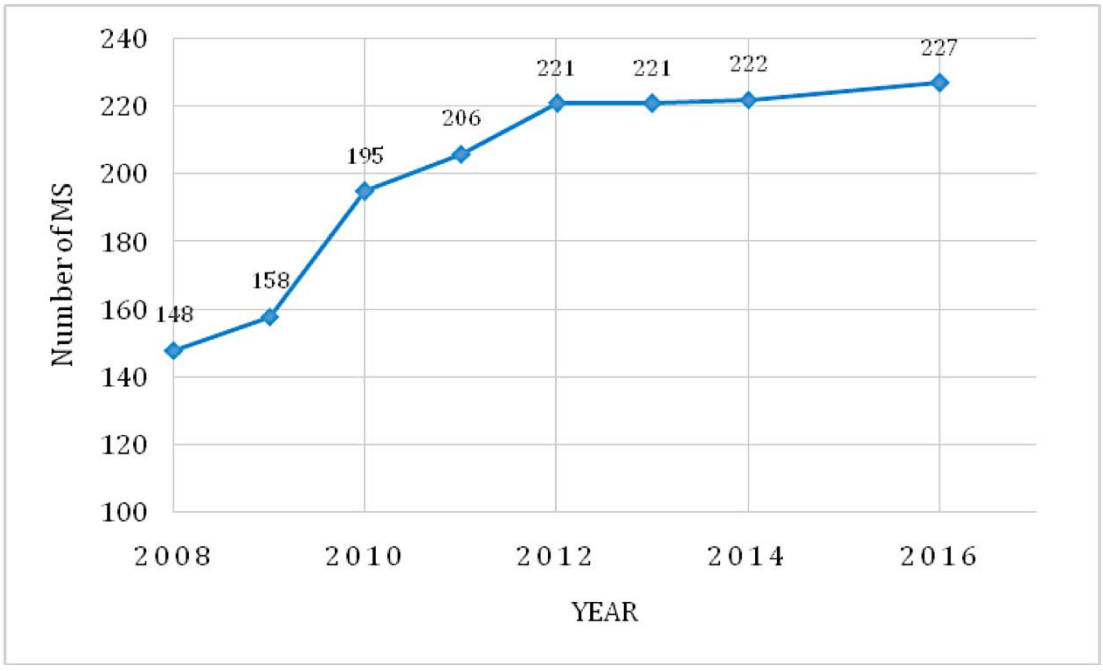

Figure 4.1: Number of Occupational Safety and Health Malaysian Standards (MS) developed from 2008 until 2016.

According to Department of Standards, the following are the current (as of January 2017) certified scopes and organization for OSH in OHSAS 18001:2007 and Malaysian Standard, MS 1722 Part 1:2005:

1. Number of certified scopes for OSH:
   a) OHSAS 18001:2007: 913
   b) MS 1722 Part 1:2005: 203

2. Number of certified organisation for OSH:
   a) OHSAS 18001:2007: 839
   b) MS 1722 Part 1:2005: 189

On the contrary, the DOSH Annual Report in 2015, provided a record of 1356 companies which has complied with OSHMS. As of January 2017, a total of 9 certification bodies for OSHMS had been accredited by the Department of Standard Malaysia as listed in Table 4.2. However, only seven 5 CB are accredited by Standards Malaysia to issue MS 1722 certification.

Table 4.2: List of Certification Bodies Accredited by Department of Standards, Malaysia

NO	REFERENCE NO	NAME OF CERTIFICATION BODIES	URL
1	OSH 06122005	CB 01 SIRIM QAS International Sdn Bhd	www.sirim-qas.com.my/
2	OSH 18072007	CB 02 SGS (Malaysia) Sdn Bhd	http://www.sgs.my/
3	OSH 20102008	CB 03 Intertek Certification International Sdn Bhd	http://www.intertek.com/
4	OSH 29032011	CB 04 NIOSH Certification Sdn Bhd	http://www.ncsb.com.my/
5	OSH 01112011	CB 05 AJA EQS Certification (M) Sdn Bhd	http://www.aja.com.my/
6	OSH 07122011	CB 06 Independent European Certification (M) Sdn Bhd	http://www.iecmalaysia.com.my/
7	OSH 14122011	CB 07 Bureau Veritas Certification (Malaysia) Sdn Bhd	http://www.bureauveritas.com/wps/wcm/connect/bv_com/group/home/worldwide-locations/south_east_asia/malaysia
8	OSH 30042014	CB 08 KGS Certification Sdn Bhd	http://www.kgscert.com/
9	OSH 25062015	CB 09 CI International Certification Sdn Bhd	http://www.cert-int.com/malaysia/certification-international-malaysia

4.3.1 Occupational Safety and Health Malaysian Standards

A. Malaysian Ergonomics Standards

Ergonomics standards play an important role in improving the usability of systems, through improved consistency of the user interface and improved ergonomic quality of interface components. Conforming to standards ensures that systems used are productive, efficient, safe and comfortable.

Ergonomics standards can take several forms, such as regulations which are formulated on a national level, or guidelines and standards instituted by international organizations. Conforming to Standards gives confidence that systems or products are designed to meet the minimum requirement for safety and comfort. Standards are useful as they provide users a means of benchmarking their working conditions.

The Malaysian Standards on ergonomics is technically identical to the ISO standards. The advantage is that these standards are equated to a professional member level that is well recognized by domestic and relevant industries worldwide.

Appendix 4C lists all the Malaysian Ergonomic Standards (total: 150 standards) that apply in Occupational Safety and Health. Identical standard indicates a standard where the technical content, structure, and wording (or is an identical translation) of a Malaysian Standard is exactly the same as in an International Standard or is identical in technical content and structure although it may contain minimal editorial changes.

B. Occupational Safety and Health Standard

The Department of Occupational Safety and Health is one of the standing technical committees responsible for developing standards in Malaysia. A total of 41 safety standards have been developed, 71 personal protective equipment related standards and 4 health/industrial hygiene standards produced by the Department of Standard Malaysia. **Appendix 4D**, 4E and 4F indicate the safety standards, and the personal protective and health/industrial hygiene related standards respectively.

C. Laboratory Standards

A total of 6 standards developed by Department of Standards with the most recent being fume cupboard code of practice are highlighted in **Appendix 4G**.

4.3.2 Implementation of Occupational Safety and Health Management System in Malaysia

The application of OSHMS is based on relevant OSH criteria, standards and performance. It aims at providing a method to assess and improve performance of the prevention of workplace incidents and accidents via the effective management of hazards and risks in the workplace. It is a logical, stepwise method to decide what needs to be done, how best to do it, monitoring progress toward established goals, evaluating how well it is done

and identifying areas for improvement. It is and must be capable of being able to adapt to changes in the organization and be able to meet legislative requirements.

A systematic approach has been established to control and improve occupational health and safety performance. This contributes to the protection of employees from work hazards, injuries, ill health, diseases, near misses and fatalities. It helps organizations to comply with legal requirements stated in the Occupational Safety and Health Act 1994 (Act 514), Factory and Machinery Act 1967 (Act 139) and Petroleum (Safety Measures) Act 1984 (Act 302).

The implementation of OSHMS in organizations is aimed at reducing the risks related to Occupational Safety and Health by reducing accidents and improving productivity, safety and health of employees. There are two standards used as a reference in Malaysia.

A. MS 1722:2001 (National standard) and
B. OHSAS 18001:2007 (International standard)

Table 4.3 below presents the cross-reference of elements between both standards. Generally, both standards have similar corresponding sub-elements. One sub-element of the OHSAS has no corresponding sub-element in MS (4.5.2, Evaluation of compliance).

The main difference between the standards is indicated in the section of terms and definitions of both OHSAS and MS and it is centred on the scope of hazards. For OHSAS, the scope of hazard is restricted to source, situation or act with a potential for harm in terms of human injury or ill-health, or a combination of these. Meanwhile for MS, the scope of hazard includes “damage to property”. The absence of the scope “damage to property” differentiates other important definitions such as incident, near misses and risk between OHSAS and MS.

The previous OHSAS 18001:1999 was inclusive of “damage to property or damage to the workplace environment”. The explanation for the changes was that the latest OHSAS edition has given the aspect of health a greater emphasis. This is because OHSAS considers such damage as not being directly related to Occupational Health and Safety or OHS management, instead it is included in the field of asset management.

As hazard is the basic element in the explanation of incident, near miss and risk, the omission of “damage to property” brings major differences in the outcome of hazard identification for HIRADC in OHSAS 18001:2007 and the implementation of risk control when compared to the outcome of HIRARC in MS 1722:2011.

Another major difference in HIRARC is the activities that need to be considered in hazard identification. HIRARC in MS requires work involving routine, non-routine and abnormal activities to be considered, however OHSAS does not consider abnormal activities for hazard identification.

In OHSAS, sub-element 4.3.2: Legal and other requirements specifically require organizations to ensure that all applicable legal and other requirements to which the organizations subscribe to are considered in establishing, implementing and maintaining OHS management systems. In MS, the emphasis on legal requirement is given in the corresponding sub-element (3.3.3 HIRARC), where organisations are required to provide HIRARC procedures which is in compliance with national laws and regulations.

In MS, compliance to the requirement requires less number of procedures compared to OHSAS. Number of mandatory procedures required to comply with the standard is 15 for OHSAS and MS only required 5 mandatory procedures. The mandatory procedures required for the OHSAS which are;

i) Hazard identification, risk assessment and determining controls or HIRADC,
ii) Legal and other requirements,
iii) Competence, training and awareness,
iv) Communication,
v) Participation and consultation,
vi) Control of documents,
vii) Operational control,
viii) Emergency preparedness and response,
ix) Performance, measurement and monitoring,
x) Calibration and maintenance of equipment to monitor and measure performance,
xi) Evaluation of compliance,
xii) Incident investigation,
xiii) Nonconformity, corrective action and preventive action,
xiv) Control of records and
xv) Audit procedure.

On the other hand, the mandatory procedures for MS are

i) Hazard identification, Risk Assessment and Risk Control or HIRARC,
ii) Emergency prevention, preparedness and response,
iii) Procurement,
iv) Incident investigation and
v) Audit.

Table 4.3: The cross-reference between OHSAS and MS

MAIN ELEMENT	OHSAS 18001:2007	MAIN ELEMENT	MS 1722:2001
4.1	General requirements	3.0	OSHMS in the Organization
4.2	OHS Policy	3.1	OSH Policy
4.3.1	Hazard Identification, Risk Assessment & Determining Controls	3.3.1 3.3.3 3.3.5	(Initial Review) Hazard Identification, Risk Assessment and Risk Control Management of Change
4.3.2	Legal and Other Requirements	3.3.1 3.3.3	(Initial Review) Hazard Identification, Risk Assessment and Risk Control
4.3.3	Objectives & Programme(s)	3.3.2	OSH Objectives
4.4.1	Resources, Roles, Responsibility, Accountability & Authority	3.2.1	Responsibility, Accountability and Authority
4.4.2	Competence, Training & Awareness	3.3.2	Competence, Training & Awareness
4.4.3.1	Communication	3.2.4	Communication
4.4.3.2	Participation & Consultation	3.1.2	Employee participation
4.4.4.	Documentation	3.2.3	OSH MS Documentation
4.4.5	Control of Documents	3.2.3	OSH MS Documentation
4.4.6	Operational Controls	3.3.5 3.3.6 3.3.7	Management of Change Procurement Contracting
4.4.7	Emergency Preparedness & Response	3.3.4	Emergency Prevention, Preparedness & Response
4.5.1	Performance Measurement & Monitoring	3.4.1	Performance Monitoring & Measurement
4.5.2	Evaluation of Compliance	-	-
4.5.3.1	Incident Investigation	3.4.2	Incident Investigation
4.5.3.2	Nonconformity, Corrective & Preventive Action	3.5.1	Preventive & Corrective Actions
4.5.4	Control of Records	3.2.3	OSH MS Documentation
4.5.5	Internal Audit	3.4.3	Audit
4.6	Management Review	3.4.4 3.5.2	Management Review Continual Improvement

A. Malaysian Standard MS 1722:2001 (National Standard)

MS 1722:2001 is a Malaysian Standard that provides requirements on Occupational Safety and Health Management Systems (OSHMS) and also provides the basis for the development of OSH systems in an organization. The development of MS 1722: 2001 is based on the International Labour Organization's standard, ILO-OSH MS2001. The aim of this standard is to establish legislative compliance, protecting employees from work-related hazard and elimination of work related injuries, disabilities, illness, disease, near misses and fatalities.

The MS requirements provide the basis for the development of a sustainable safety and health culture in the organization. The MS was developed by the Technical Committee on Safe Work and Practices in Occupational Setting under the authority of the Industry Standards Committee on OSH. Both committees are made up of representatives from various government agencies, employers and universities. The development was carried out by the Department of Occupational Safety and Health Malaysia.

The MS1722:2011 is the first revision of MS1722: The requirements in Part 1 were introduced in 2005. The voluntary guidelines were prepared by ILO based on the approach of cooperation between tripartite constituents and relevant stakeholders. The objective of the guideline is designed to be used as a model to establish a national framework for OSHMS, in tandem with national laws and regulations. It also serves as a guidance to develop national and tailored guidelines on OSHMS to respond to the needs of organizations, according to their sizes and nature of activities.

B. BS OHSAS 18001:2007 (International Standard)

OHSAS 18001:2007 is an internationally used and recognized standard for OSHMS and is widely used as part of OSHMS in Malaysia compared to MS 1722. The OHSAS 18001 was revised in 2007 and is now recognized as OHSAS 18001:2007. The element in OHSAS is based on the philosophy of Plan-Do-Check-Act or PDCA cycle.

OHSAS 18001 specifies the requirements for an OSHMS and it is designed to be applicable to all types of companies. OHSAS 18001 is not an ISO standard, but it is integrated with ISO 9001:2011 (Quality) and ISO 14001:2004 (Environmental) management system standards and applies to all organizations.

4.4 Industrial or Organizational Private Compliance Documents

Industries in Malaysia have established the requirement of OSHMS within the scope of their industrial sector. For example, in the oil and gas industry, the Malaysia Petroleum Management (MPM) has established the requirements for all Petroleum Arrangements Contractors (PACs) in the upstream activities to establish their HSEMS which was spelled out in the PETRONAS Procedure and Guidelines for Upstream Activities (PPGUA).

The HSEMS requirement is a mandatory requirement on all oil and gas contractors, the during the tendering process. In addition, PETRONAS has also voluntarily established the Petronas Technical Standards (PTS) for internal use. The PTS covers various technical areas which set mandatory requirement within the organization which are higher than the legally required standards.

Other sectors besides oil and gas industry, also uses different OSH-related management system and standards. Among some other examples are Asian Composites Manufacturing Sdn. Bhd. which is accredited by NADCAP (National Aerospace and Defence Contractors Accreditation Program) while Malaysia Airports Holdings Berhad (MAHB) has adhered to Safety Management System by Department of Civil Aviation Malaysia and International Civil Aviation Organization (ICAO).

5.0 OSH SYSTEM IMPLEMENTATION: MEANS AND TOOLS

5.1 Inspection and Enforcement Systems

5.1.1 Department of Occupational Safety and Health

DOSH enforces the Factory and Machinery Act (FMA) 1967 and the Occupational Safety and Health Act (OSHA) 1994 (Act 514). The sectors and industrial activities covered by First Schedule under the Act is as follow:

i) Manufacturing
ii) Mining and Quarrying
iii) Construction
iv) Hotels and Restaurant
v) Agriculture, Forestry and Fishing
vi) Transport, Storage and Communication
vii) Public Services and Statutory Authorities
viii) Utilities - Gas, Electricity, Water and Sanitary Services
ix) Finance, Insurance, Real Estate and Business Services
x) Wholesale and Retail Trades

The list and functions of each division are listed in the **Appendix 5A** while the enforcement activities conducted by DOSH are as listed in **Appendix 5B**. The detailed human resources of DOSH for Headquarter and Branch Offices can be found at http://staff.dosh.gov.my/.

5.1.2 Construction Industry Development Board (CIDB)

CIDB is a federal statutory body under the Ministry of Works which was established under the Construction Industry Development Board Act (Act 520) to develop, regulate, enforce and execute other tasks related to the construction industry complementing Occupational Safety and Health Act, 1994. In 2011, the Act was amended to strengthen CIDB's roles in ensuring quality construction and partially enforcing safe at the same time enhance the adoption of best practices in construction.

Currently, CIDB enforces the CIDB Act 520 (Revised 2011). The amendment affirms the contractor's responsibility for output of construction works. The amendment also ensures the deployment of competent and qualified personnel at the construction sites. For example, enforcement through work site inspection is the most efficient method to enforce CIDB Act 520 and its amendments.

Concurrently, the amended Act empowers CIDB to ensure that relevant standards of construction materials for both imported and locally manufactured products are adhered to. This is important to guarantee quality output and safety. Among the enforcement activities related to OSH carried out by CIDB are as follow:

a) Issuance of Certificate of Approval (COA) for Imported Products

   i) Among imported products or building materials listed in Schedule Four of Custom Order, which require COA include ceramic products, iron & steel, cement, glass, insulation material, aluminium and cement fibre.

   ii) The certification process for local materials/products are done through the Certification of Construction Products and Materials (CCPM). Every product or building material that is certified through CCPM will be issued with a *Perakuan Pematuhan Standard* (PPS).

b) Integrated Enforcement Operation:

   i) Involve other enforcement agencies such as the Local Authorities, Immigration Department, Department of Occupational Health and Safety (DOSH), Health Department and others to ensure that work sites comply with the requirement of Act 520 and other written rules and regulations.

   ii) Conducted special work site inspection nationwide as part of aedes mosquito eradication programme especially at hotspot areas.

5.1.3 Fire and Rescue Department of Malaysia (BOMBA)

BOMBA currently enforces two main Act that relate to OSH, namely; Uniform Building By-Law 1984 and Fire Services Act 1988. The purpose of the regulation is to ensure the protection of persons and property from fire risks and for purposes connected therewith. To ensure the implementation of the act, the enforcement of the act is conducted by Fire Safety Division in BOMBA. The function of fire safety division of BOMBA is as follow:

i) To set a fire safety policy and ensure implementation according to the relevant laws.

ii) Enforcement of Fire Services Act 1988 under the allocation of fire certification and elimination of fire hazards.

iii) Updating rules and directives of the fire safety division regarding tire certification, elimination of fire hazard, building certification and licensing certification to become more relevant with the current needs.

iv) Ensuring the active and passive protection system requirements in all premises complies with the requirements in the provisions of the law and current code of practice.

v) Drafting of regulations and standards with the cooperation's of local research agencies regarding usage of materials fire safety system installation.

vi) Assessment and ensuring fire safety installation usage of materials complies with regulations and current standards.

5.1.4 Department of Labour

The functions of the departments were as follow:

a) Management Function:

i) To supervise, monitor and control the general administrative machinery of the department;

ii) Training of officers and staffs;

iii) Research and planning.

b) Operational Functions

i) Enforcement of Labour Law

- To conduct statutory inspections to places of employment to ensure the provisions of the labour laws are adhered to by employers and employees;
- To investigate and settle labour complaints and workmen's compensation claims;
- To regulate the employment of non-resident employees through the issuance of License
- To Employ Non-Resident Employees;
- To conduct special enforcement operations with other enforcement departments/agencies at places of employment where non-resident employees are suspected to be employed.
- To prosecute employers who have contravened the provisions of the labour laws
- To regulate the employment of children, young persons and females
- To handle questions and appeals from employers, employees, trade unions and public regarding labour matters.

ii) Employment Services Division

- Registration and placement of job seekers;
- Career Guidance and advisory services;
- Employment mobility;
- Promotional Visits;
- Application for Private Employment Agencies License.

5.1.5 Atomic Energy Licensing Board (AELB)

The establishment of AELB is to ensure the safety, security and safeguarding of nuclear activities. The objective of the establishment of ALEB is include:

a) To ensure radiation and nuclear technology does not affect national and societal well-being by not significantly affecting the public, environment and workers negatively.

b) To acquire, disseminate and generate knowledge to enhance radiation and nuclear safety, security and where appropriate safeguards.

c) To create wealth by providing a conducive environment and international confidence through a credible and competent national regulatory framework to facilitate the introduction of modern industries and acquisition of sensitive state-of-art technologies to the nation.

Disposal of radioactive waste are according to Act 304 (Atomic Energy Licensing Act 1984). It covers the control of disposal procedure and accumulation of radioactive waste in the country. The radioactive waste in Malaysia shall be managed through:

a) Return back to supplier
b) Sent to the approved radioactive waste center
c) Store by user at appropriate storage facilities (only involve a large amount of radioactive waste)

Enforcement activity of the department mainly is focusing on license application, licensing inspection, and legal action for organization/company which involve in handling of radioactive.

5.2 OSH Research Institutions

5.2.1 OSH Related Research Conducted by Agencies under MOHR

5.2.1.1 Department of Occupational Safety and Health (DOSH)

Policy and Research Division in DOSH proposes policies through the studies, researches, and development of OSH. This department is responsible to plan and carry out research and development programmes aimed at enhancing the quality of products, such as the effectiveness of enforcement, compliance status, development of standards and legislations, policies, accident control, and work procedures, and occupational diseases.

In 2007 – 2010, 13 researches on various OSH elements were successfully completed under budget allocation for development of the 9th Malaysian Plan (RMK9) and in 2013-2014, 17 researches were successfully completed under RMK10. The researches developed were aimed at enhancing the country's level of occupational safety and health compliance and development. The list of researches conducted is as detailed in **Appendix 5C**.

5.2.1.2 National Institute of Occupational Safety and Heath (NIOSH)

The National Institute of Occupational Safety and Health (NIOSH) had been conducting research and development (R&D) activities in OSH and its related areas with cooperation from local research institute and other organizations. In order to maintain the status as a research institute and also conduct various areas of R&D in OSH, NIOSH has its own Research Management Centre to conduct the following services to:

i. Support applied research project

ii. Support projects with high OSH value

iii. Support project with high national priority

iv. Support project that utilize available infrastructure and scientific instrument at NIOSH

From 2010-2016, a total of 49 researches had been conducted in NIOSH with several sources of grants. Year 2014 showed the most researches (15 researches) had been conducted followed by year 2016 (13 researches) and 8 researches conducted in 2015. **Appendix 5D** showed lists of researches conducted from 2010 to 2016.

5.2.1.3 Social Security Organizations (SOCSO)

Throughout the years, SOCSO has been involved in carrying out research through its Risk and Research Division which aims to establish a comprehensive risk and research system consistent with SOCSO's aspirations and vision to be a distinguished social security organization in Malaysia. The Research Unit conducts studies of funding capabilities, and the expansion of social security scope.

In 2011, SOCSO stroke a strategic alliance with relevant parties in the promotion of Occupational Safety and Health. In the same year, SOCSO provided financial grants worth RM4.3 million to non-governmental organizations (NGOs) to carry out occupational safety and health programmes for both employers and employees. These grants encompassed 359 programmes which included courses, seminars and funding two research studies.

By 2012, SOCSO under its Research Initiative Scheme received RM52 million through the Ministry of Human Resources Under the Tenth Malaysia Plan to establish a Relief Fund for Loss of Employment for those who lost their jobs due to business failure, bankruptcy or those facing a financial difficulty by providing a protection to them through temporary financial aid and employment services.

In 2013, SOCSO developed a project to support and develop the design of the Employment Insurance System in Malaysia. This Employment Insurance System was introduced to protect the workers who suffered loss of employment. The workers who had lost their jobs and their dependants needed social protection and assurance of income including their employability. This was to ensure they returned to employment immediately. Hence this could provide a long-term response to the eradication of poverty.

In 2014, SOCSO had conducted research in improving the social welfare of Malaysian workers. As part of SOCSO's Strategic Plan 2011-2015, resource impact studies have been made to ensure the effectiveness of SOCSO's programmes/key activities as outlined in, of which are:

i. The National Level Social Security Protection Seminar 2014
ii. Processing of Dependants' Benefit
iii. Processing of Survivors' Pension

The results showed that the programmes/activities undertaken had a positive impact on employers, employees and SOCSO. The seminar programme succeeded in increasing the level of knowledge and awareness of employers and employees on SOCSO's protection schemes. An analysis of the processing period for Dependants' Benefit and Survivors'

Pension showed that clients in general are satisfied with the time frame for processing claims as well as the quality of services.

5.2.2 OSH Related Research Conducted by Other Agencies

5.2.2.1 Ministry of Works – Construction Industry Development Board (CIDB)

In 2014, a total of six researches/studies have been targeted to incorporate innovation in the construction industry. Among examples of researches and studies carried out are Affordable and Sustainable Design House for Middle Income Group in Klang Valley; and Guideline on Peat Soil Treatment Method in Sarawak for Construction Industry.

Collaboration programme with the institution of higher learning was carried out to obtain the results of studies on 'Transformation from IBS to Reproduction Degree of Construction', Development of IBS in Adopting Mechanisation & Automation: Economic Appraisal, Development of Standard Method of Measurement for IBS.

5.2.2.2 Ministry of Higher Education (MoHE)

Under the Ministry of Higher Education, public and private universities have been conducting research in the field of OSH in various field level including Diploma, Bachelor, Masters and PhD. The studies conducted are funded by Ministry of Higher Education under four main various researches grant namely:

a) Fundamental Research Grant Scheme (FRGS)
b) Prototype Research Grant Scheme (PRGS)
c) Long Term Research Grant Scheme (LRGS)
d) Exploratory Research Grant Scheme (ERGS)

Public universities also provide research grant for researchers to conduct short and small scale research studies. The main universities that provide internal research grants are those categorized as Research University (RU) including University Malaya (UM), University Putra Malaysia (UPM), National University (UKM), University Sains Malaysia (USM) and University Teknologi Malaysia (UTM). Renown Private Universities also provide research grant including but not limited to University Technology Petronas, Monash University, Nottingham University and University Tenaga Nasional (UNITEN).

On top of the internal grants, external grant or private link company grant are also available. External grants listed not limited to the list are based on the scope of science and technology, art, public health and medicine. Based on thorough search of external grant such as British Council, Erasmus Mundus etc., no direct research grants are

provided to OSH. However, grant by Japanese International Cooperation Agency (JICA) provide funding to government agencies in conducting research in the field of OSH.

In attracting private organization to fund research grant, the research scope should be within the interest of the organization. Certain industries such as the agriculture sector provides private research grant through direct negotiation (Memorandum of Agreements). An example is research conducted by University Putra Malaysia in collaboration with Sime Darby Research in conducting and developing new safety helmet among oil palm harvesters.

To summarize, research capability of Malaysian Universities is shown in Table 5.1.

5.2.2.3 Ministry of Science, Technology & Innovation (MOSTI)

The Ministry of Science, Technology & Innovation provided research grant to conduct viable research in various field of science and technology including OSH. The research grant schemes are popularly known as Sciencefund, Technofund and Innofund.

Table 5.1: Research institutes in Malaysia and their focuses

RESEARCH INSTITUTE	MAIN FOCUS IN OSH RESEARCH
Universiti Kebangsaan Malaysia (UKM) http://www.ukm.my	Research related to OSH fields including industrial safety, public health and OSH management system
Universiti Putra Malaysia (UPM) http://www.upm.edu.my	Research related to OSH fields, industrial safety, ergonomics, public health and occupational medicine
Universiti Sains Malaysia (USM) http://www.usm.my	Research related to OSH fields
Universiti Teknologi Mara (UTM) http://www.utm.my	Occupational Health and Safety in Engineering
Universiti Malaya (UM) http://www.um.edu.my	Research of Constructional Health and Safety, Emergency Response
Universiti Malaysia Pahang (UMP) http://www.ump.edu.my	Research related to OSH fields
University Teknologi Mara	Related to OSH and Environmental Health
International Islamic University	Related to Ergonomics and OSH
University Teknologi Melaka	Related to Ergonomics

RESEARCH INSTITUTE	MAIN FOCUS IN OSH RESEARCH
University Malaysia Perlis	Ergonomics and Industrial Hygiene
University Sabah Malaysia	Related to OSH and Environment
University Sarawak Malaysia	Cognitive Ergonomics
University Utara Malaysia	Occupational Safety and Health Management System.
Universiti Tun Hussein On Malaysia	Ergonomics

5.2.2.4 National Poison Centre (NPC)

The National Poison Centre (NPC) was established in 1982 by Universiti Sains Malaysia since 1982. Apart of their main activities, the Centre conducted research through Research and Documentation Unit. Studies related to OSH activities had been conducted particularly related to pesticide exposure. Three main projects include pesticide exposure among agriculture workers, management of pesticides exposure, and exposure to air quality among various sectors of industries.

5.2.2.5 Ministry of Transportation – Malaysian Institute of Road Safety (MIROS)

The Malaysian Institute of Road Safety Research (MIROS) was established in 2007 as the centre for conducting strategic studies and evaluating current procedures on road safety to generate information that will help in improving road safety in Malaysia. MIROS is headed by a Director General and the institute consists of three research centres namely Road Safety Engineering & Environment Research Centre (REER), Road User Behavioural Change Research Centre (RUBC), and Vehicle Safety & Biomechanics Research Centre (VSB).

REER is a centre for carrying out research works associated with road design and safe road environment. The centre comprises of three units which are Highway and Traffic Engineering Unit (HTE), Crash Data & Exposure Analysis Unit (CDE) and Intelligent Transport and System Development Unit (ITS). Besides conducting researches relating to road design and safe road environment, REER also provides national accident and injury database, map accident data, carry out diagnostic analysis on road accidents and analysis of safety interventions, develop traffic model and also perform travel survey.

RUBC on the other hand is responsible in conducting research related to human factor and psychology of road users. The centre consists of three units namely Social Marketing and Education Enhancement Unit (SME2), Behaviour Analysis & Valuation Unit (BehAV)

and Human Reaction & Simulation Unit (HURAS). The function of the centre is to develop national index and valuation on accident costing, besides developing safety guideline related to campaign, road safety education for children and community based programme. Other than that, RUBC also evaluates enforcement activities and assess and monitor the effectiveness of road safety education execution process.

VSB is a unit that conducts research projects in vehicle safety and fleet operation safety for safer car and safer mobility. VSB is widely known in Malaysia and the ASEAN region for its contribution towards the design of safer cars through New Car Assessment Programme (NCAP) and Safety Star Grading for safety operation of express buses for safer mobility projects.

Additionally, VSB had also successfully reconstructed the tragic bus crash in Genting Highland which claimed 37 lives. This research centre consists of three main units which are Crash Safety Engineering (CRASE), Crash Injury Science and Prevention (CRIS-P) and Crash Reconstruction Unit (CRU).

Appendix 5E summarized the research trend conducted by MIROS directly related to OSH.

5.2.2.6 Ministry of Urban Wellbeing, Housing and Local Government – Fire and Rescue Department of Malaysia

Research and development is conducted under the jurisdiction of Planning and Research Division. The research conducted by the Department focused on ensuring research in fire safety, fire suppression and rescue implemented systematically and scientifically in providing efficient and effective fire rescue services.

5.2.2.7 Ministry of Science, Technology and Innovation – Malaysian Nuclear Agency

The research scope of the Agency includes medical, energy, environment and agriculture. Two main research related to OSH includes study on Radiation Metrology and Radioactive Environmental Waste. Malaysian Nuclear Agency is proactive in promoting nuclear energy to the public especially on safety aspects. In 2011, Malaysian Nuclear Agency only provides internal R&D Grant which is Pre-Qualification of R&D or known as PQRD fund. This grant is available for industrial, agro-bioscience, waste and environment, radiation processing, technical service and safety and health research.

5.2.2.8 Ministry of Natural Resources and Environment – Department of Biosafety

The Department of Biosafety regulates the Biosafety Act 2007. Research conducted under the purview of the department is mostly related to living modified organism (LMO) and products of such organism. Research is conducted under Research and evaluation section of the department.

5.2.2.9 Ministry of Agriculture & Agro-Based Industry Malaysia – Department of Veterinary Services

The Department of Veterinary Services (DVS) conduct research related to zoonotic diseases. Most of the research conducted by DVS is done by Veterinary Research Institute (VRI). Research and development is part of the service conducted by the Zoonotic Section of VRI. It's continuously in collaboration with Institute of Medical Research (IMR) from the Ministry of Health.

The research projects can be divided into several categories based on the grant contributor or funder as follow:

i) Agricultural grant by Ministry of Agricultural and Agro-Based Industry

ii) E-Science grant, Ministry of Science, Technology and Innovation

iii) External funded grant collaboration with external agency and institute of higher learning.

iv) VRI funded grant involving research project which do not cover by above grants

Research and Development (R&D) committee of VRI acts in coordinating the research activities carried out by VRI are in line with DVS priority area. R&D department also monitor the research progress conducted by VRI. Research projects are divided into five (5) priorities area namely influenza diseases, respiratory-related diseases, herbal research, zoonotic diseases, and vaccine development. **Appendix 5F** listed the research conducted by VRI in public health concern.

5.2.2.10 Ministry of Health – National Institute of Health (NIH)

National Institute of Health (NIH) is a network of Ministry of Health (MOH) research institutes. NIH was approved in the 7th Malaysian Plan (7MP) and officially launched on 11 August 2003. NIH consists of six (6) institutes, namely:

i) Institute of Medical Research (IMR)
ii) Institute of Public Health (IPH)
iii) Clinical Research Centre (CRC)
iv) Institute for Health System Research (IHSR)
v) Institute for Health Management (IHM)
vi) Institute for Health Behavioural Research (IHBR)

A. Institute for Medical Research

IMR had conducted various research through their research centre namely:

i) Cancer Research Centre (CRC)
ii) Cardiovascular, Diabetes and Nutrition Research Centre (CDNRC)
iii) Environmental Health Research Centre (EHRC)

EHRC is the main centre with the Ministry of Health that conduct research in environmental and occupational health. EHRC research activities broadly encompass two main discipline; (1) Health risk assessment with regard to air and water pollution and food quality and safety issues, (2) Occupational Health issues.

In 2010, the occupational Health Unit had conducted three main researches:

i) Risk of tuberculosis infection among government hospital workers in the Klang Valley
ii) Prevalence of silicosis among quarry workers in Peninsular Malaysia
iii) Indoor environmental quality which include physical, chemical and comfort parameters of indoor working environment as well as health care workers' perception on indoor environment of government hospitals in Malaysia.

B. Institute of Public Health (IPH)

IPH focuses on public health research (disease control, family health, nutrition and occupational health). In 2009, Occupational Health Division of IPH had conducted three researches which are:

i) Status of neurobehavioral effects among MOH staffs exposed to neurotoxic chemical in vector control unit and pathology laboratory in state of Perak.
ii) An exploratory study to assess the implementation of the safety and health committee (SHC) and the perception of the SHC members in the healthcare facilities.

iii) Collaborative project with school of dental sciences, Universiti Sains Malaysia (USM) – Professional well-being: Occupational hazards in Malaysian Public Sector Dental Practices

5.2.3 Research conducted by employers – Malaysian Employer Federation (MEF)

The Malaysian Employer Federation (MEF) represents research that catered the interest of the employers. Many studies and survey had been conducted by the Federation. Only few studies were directly related to workers/employees. A research study on survey man-day loss had been conducted since 2010. The report analysed the total man-day loss for 2009. The report identifies the main causes of man-days loss among private sector employers, monitoring method, action taken, rate of man-day loss, measures to reduce man-day loss and its impact on productivity.

In 2015, survey on medical benefits together with man-day loss had been carried out. The survey was conducted with the objective of providing companies with a comprehensive guide on the various type of medical benefits provided by companies to their employees and total number of man-days loss (including absenteeism), the causes of man-day loss and measures to reduce the loss. The research was conducted by the Research and Information Department. **Appendix 5G** listed the research conducted by MEF from 2010 to 2015.

5.2.4 Research Conducted by Employees – Malaysian Trade Union Congress (MTUC)

As a union that protect the interest of employees, MTUC has been conducted research related directly to the welfare of the workers. Two researches had been reported includes Minimum Retirement Age Order, 2013 and Minimum Wages Order, 2012.

5.3 Occupational Safety and Health Laboratory

Generally, the Department of Occupational Safety and Health requires that all equipment used for monitoring or sampling and analysis of samples related to OSH activities to be carried out in accredited laboratory. In supporting the requirement, Department of Standards is the lead authority in accrediting laboratories to the MS ISO/IEC 170025.

A. The field of testing related to OSH

a) Chemical - Chemical tests and analysis on products and materials

b) Biological - Biological and microbiological

c) Electrical - Testing of electrical and electronic components

d) Thermal - Including thermal characteristics of building materials, fire testing such as tests evaluating fire resistance, ignitability and flammability

e) Mechanical - Mechanical/physical and includes tests such as tensile, rupture, elongation, elasticity, hardness and fatigue on materials.

f) Non-Destructive Testing (NDT) - Examination of materials, components, and assemblies to detect defects without damaging the material, component or assembly. Tests include radiography, ultrasonic, penetrants, magnetic particle and eddy currents.

g) Radioactivity Testing - Radioactivity test and analysis on materials and sample.

h) Toxicity- Testing for chemical products, manufactured products, cosmetic and skin care products, medical devices and also wastes and environmental samples.

i) Electromagnetic Compatibility (EMC) - Testing for electromagnetic compatibility (EMC) including electromagnetic disturbance test and immunity test.

j) Veterinary- Includes testing on the following scopes; bacteriology, mycology, serology, virology, parasitology, pathology, molecular biology, clinical pathology, immunology, prions, chemistry, feed analysis, animal nutrition.

k) Genetically Modified Organism (GMO) - Analysis for detection and quantification of GMO covers both DNA and protein based methods.

B. Fields of Calibration related to OSH

Among some of the example of laboratories are as follow:

i) Heats and Temperature Measurements – Including heat, temperature and humidity measuring equipment.

ii) Electrical Measurements – Including the calibration of electrical and electronic instruments and equipment.

iii) Mass and Mass-Related Quantities Measurements - Including measurement of mass, density, pressure, force, hardness, viscosity, flow, and volume and the examination of machines and instruments used in these measurements.

iv) Dimensional Measurement – Including various length and dimensional calibrations work.

v) Acoustic & Vibration Measurement – Including measurement of environmental noise and mechanical vibration, calibration of acoustic and vibration measuring equipment, acoustic and vibration characteristics of materials and structures, audiometry, measurement of sound power, acoustic and vibration performance tests and dynamic balancing.

Table 5.2: Accredited laboratories that offer services in OSH

GOVERNMENT OPERATED LABORATORIES	
Department of Chemistry	www.kimia.gov.my/
Scientific and Industrial Research Institute of Malaysia (SIRIM)	http://www.sirim.my/
National Institute of Occupational Safety and Health (NIOSH)	www.niosh.com.my/
National Poison Centre	www.prn.usm.my/
Institute Medical Research (IMR)	www.imr.gov.my/
PRIVATE LABORATORIES	
SGS Laboratory	http://www.sgs.com/
Sendi Mahir	sendimahir.com/
ERA Lab	www.eralab.com/
ALS Laboratory	http://www.alsglobal.com/
Onegasmaster	www.onegasmaster.com/
NML Lab	www.nmlab.com.my/
MY CO2 Laboratory	www.myco2.com.my/

5.4 OSH Information Centre and Awareness-Raising Structures

5.4.1 Main Organization

Five organizations have a special mission to promote the dissemination of information in the field of Occupational Safety and Health, listed in Figure 5.1:

5.4.1.1 Department of Occupational Safety and Health (DOSH)

The Department of Occupational Safety and Health promote OSH through various division with the Department including at Federal and State level. Small Medium Industry and Non-Factory Sector is important in promoting awareness to assisting small medium industries (SMIs) to comply with OSH legislation through the new initiatives.

The Department also worked closely with other government agencies and other stakeholders in supporting initiatives either through direct funding for program, through technical expert from the Department and awarding continuous education point for OSH related program.

DOSH, through the website has publication that can be downloaded online. Information and publication of legislations, activities, OSH alert and polling can be easily accessed online. DOSH is responsible to disseminate awareness to public especially related to public concern such as school safety, escalator safety, crane safety.

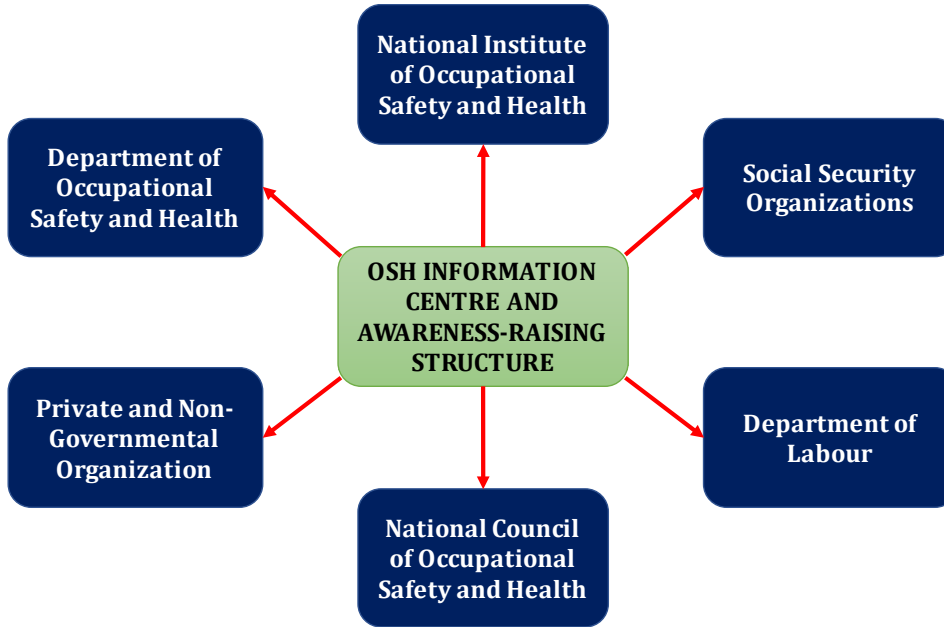

Figure 5.1: Main organization in promoting and dissemination of information in OSH

The information can be disseminated through DOSH's website, newspaper and social media. The social media of DOSH is shared with NCOSH including:

Facebook	https://www.facebook.com/groups/ncoshksm
Twitter	https://twitter.com/MajlisNegara
Feed Burner	http://feeds.feedburner.com/rss-dosh/pengumuman
DOSH's Calendar for activities	http://www.dosh.gov.my/index.php/en/component/jevents/month.calendar/2016/09/17/530?Itemid=1

5.4.1.2 National Council of Occupational Safety and Health (NCOSH)

The National Council of Occupational Safety and Health (NCOSH) had been active in promoting awareness of OSH through various industrial and community. NCOSH organizes annual programs to promote awareness which will be detailed in Chapter 7.

Under NCOSH, the following sub-committees were established

a) Sub-committee on OSH for Small and Medium Industry
b) Sub-committee on OSH for workers in Construction Industry
c) Sub-committee on OSH for workers in Educational Institution
d) Sub-committee on OSH for OSH Promotion
e) Sub-committee on OSH for Occupational Health

5.4.1.3 National Institute of Occupational Safety and Health (NIOSH)

The National Institute of Occupational Safety and Health (NIOSH) disseminate information through several channels:

a) Web service covers multidisciplinary topics such as safety, work ability, occupational health services, ergonomics, mental health at work, chemical safety, etc. The online information can be accessed through NIOSH Forum (http://www.niosh.my/forum/). Currently the Forum registered 3566 users with 3926 posts and a total of 2447 topics. Those who registered can also receive newsletter from NIOSH Website through an online registration. Other information accessible through NIOSH Social Media are such as:

Facebook	https://www.facebook.com/nioshmalaysia
Vimeo	https://vimeo.com/niosh/
Twitter	https://twitter.com/NioshMalaysia

b) NIOSH also published annual publication, newsletter and posters. Newsletter called as FYI Bulletin can be easily downloaded. The FYI or "NIOSH for Your Info" highlights NIOSH activities as well as OSH news and happenings in the country. The newsletter is published monthly and delivered free to NIOSH members and subscribers of the Journal of Occupational Safety and Health.

The Journal publication of NIOSH – The Journal of Occupational Safety and Health (JOSH) is devoted to enhancing the knowledge and practice of occupational safety and health (OSH) by widely disseminating research articles and applied studies of highest quality. It is intended that this journal should serve the OSH community, practitioners, students and public while providing vital information for the promotion of workplace health and safety.

JOSH is now published twice in a year (June and December). Currently a total of 49 publications can be accessed through the website (http://www.niosh.com.my/index.php/publication/niosh-journal#2014). Posters are easy way of disseminating awareness to public and workers. Various cartoon based OSH information are available to be purchased online or purchased through NIOSH Library nationwide.

c) NIOSH also organize and participates in various exhibitions, seminars and conferences held nationwide as well as advice and support industries in their safety and health campaign activities. Two main conferences that are organized annually are as follow:

i) Conference on Occupational Safety and Health (COSH)

ii) Scientific Conference on Occupational Safety and Health (Sci-COSH)

d) Media statement is another important channel where NIOSH disseminate information for local newspapers. The media statements are not limited to safety and health issues among workers but also include issues on safety of public interest. The statements were compiled in NIOSH website with open access to allow public to search for information.

e) Corporate Social Responsibility Program is another initiative by NIOSH in improving awareness in OSH among public and workers. OSH in school program (http://www.oshinschool.net.my/) is a program initiated by NIOSH in collaboration with other corporate agencies including ExxonMobil, government agencies including DOSH and NCOSH and various non-governmental organizations (NGO).

5.4.1.4 Social Security Organization (SOCSO)

The Malaysian Social Security Organization (SOCSO) disseminates OSH information through various mean:

a) Training grant for NGO – OSH information was disseminated by funding NGO and Educational Institution through short courses and conferences. SOCSO has also allocated RM6.47 million through SOCSO's Financial Assistance Grants to Non-Governmental Organisations to implement 688 programmes / courses related to OSH. Several initiatives and activities have been carried out during 2014 including;

   i) Advocacy and Prevention Programme

   ii) 'Train the Trainer' Training Programme Module for Prevention of Accidents

   iii) Best Practices in Implementing Commuting Safety Management

   iv) National Safe Commuting to Work Campaign

   v) Commuting Accident Prevention Seminar

b) SOCSO's OUTREACH PROGRAMME - SOCSO remains committed in increasing public awareness regarding the social security protection schemes through various activities and programmes. Among them are the National Social Security Protection Seminars and publicity programmes as well as publicity campaigns through print and electronic media. The National Social Security Protection Seminars 2014 which were held throughout the country has attracted 2,098 participants comprising of employers and employees from various industries.

   Through various activities and programmes that were carried out, the number of active employers increased by 2.18% to 402,039 employers while the number of active employees increased by 1.81% to 6.20 million employees compared to the previous year research and development of work, which improves the working conditions and promotes the safety and productivity aspects of workplace activities. The Fund also supports the practical application of the results of these research activities.

c) Online publication – SOCSO also reach through employers, employees and public through their online publication. The online publication can be easily accessed to view information on news, media statement, activities, online form, activities and annual report. SOCSO also updated their information through:

Facebook	https://www.facebook.com/PERKESO.Official/
Vimeo	https://www.youtube.com/channel/UCow6wB_JRvQVUChfxthUVdw
Twitter	https://twitter.com/PERKESO

5.4.1.5 Department of Labour

The Department of Labour disseminate information of OSH through various mean:

a) Industrial dialog
Industrial dialog is a best platform to discuss issue and dispute regarding labour law, public policy on labour issue and promotional programme and awareness on wage. Department of labour acts as middle organization between workers and employers and plays role in conducting industrial dialog as a step to ensure the harmony and stability of industrial relation is secured.

b) Labour advise
Department of Labour deliver labour advise to customer including private employers, workers, union and employers' association, and publics who want to know the current issues of labour. Customers can get advice directly in all departments throughout country. Based on the record, a total of 39,559 customers has received advice service related to labour law, promotional activity and policy implemented by the department in 2015.

c) Online publication
Online publication can be easily accessed to view information on media statement, activities, annual report, online transaction and archives. Department of Labour also updated their information through:

Facebook	https://www.facebook.com/JobsMalaysia.gov.my
Vimeo	http://feeds.feedburner.com/gov/Gdeh

5.4.2 Other Agencies on awareness raising structure

Other agencies also directly and indirectly involved in raising the awareness of OSH within their jurisdiction or within their employees and management.

5.4.2.1 Construction Industrial Development Board (CIDB)

The Construction Industrial Development Board (CIDB) disseminate information primarily through their website; http://www.cidb.gov.my/cidbv5/index.php. As the Board is empowered by legislative requirement, the Board is well known to construction industry generally which improve penetration to various level of contractors. Other sources of information are also available as follow:

Facebook	https://www.facebook.com/CIDBOfficial/
Twitter	https://twitter.com/CIDB_Malaysia
YouTube	https://www.youtube.com/channel/UCSdGNnJl8h5z3HX3DW-kdyw

5.4.2.2 Ministry of Education (MOE)

The Safe School Programme under the Ministry of Education is to create a safe school environment. This programme is implemented through a blueprint for a Safe School Programme in Malaysia, known as the Safe School Concept and Manual: Implementation Guide to Create a Safe School, Community and Family for Children (Ministry of Education, 2002). The aim of the blueprint is to disseminate safety through support of families and local communities. The social media of Ministry of Education is including:

Facebook	https://www.facebook.com/KementerianPendidikanMalaysia
Blogspot	http://buletinkpm.blogspot.my/
Twitter	https://twitter.com/KemPendidikan

5.4.2.3 Ministry of Health (MOH)

Ministry of Health increases the awareness of OSH only among their workers. This program is coordinated by the Occupational Health Unit of the Ministry. This includes:

a) Occupational Disease and Injury
b) Pesticide and chemical poisoning
c) Lung Diseases
d) Noise Induced Hearing Loss
e) Skin diseases

The social media of Ministry of Health is including:

Facebook	https://www.facebook.com/kementeriankesihatanmalaysia
Facebook	https://www.facebook.com/KKMKSU/
Facebook	https://www.facebook.com/DGHisham/
Instagram	http://www.instagram.com/kementeriankesihatanmalaysia
Twitter	https://twitter.com/KKMPutrajaya
Feed burner	http://www.moh.gov.my/english.php/pages/view/563
YouTube	https://www.youtube.com/c/kementeriankesihatanmalaysia
Mobile Web	http://www.moh.gov.my/index.php/mobile

5.4.2.4 Ministry of Science, Technology and Innovation (MOSTI):

The course on radiation safety is primarily directed to the safety of workers, members of the public and the environment by emphasizing aspects of radiation protection, in line with the requirement of the Atomic Energy Licensing Act 1984. Awareness program is conducted through Malaysian Nuclear Agency Training Centre.

Associate programme and training partnership in conducting program are Lady Faza Solution Sdn Bhd., Asia Lab Group Sdn Bhd., Madani Training, Ruane Tati Sdn Bhd. and many more. Public training and workshop conducted including courses on environmental safety and health program and radiation safety and health program. The social media for MOSTI including:

Facebook	https://www.facebook.com/1mosti
Instagram	http://instagram.com/mymosti
Twitter	https://twitter.com/mymosti/
YouTube	https://www.youtube.com/user/onemosti/

5.4.2.5 Ministry of Natural Resources and Environment (MNRE):

The Department of Biosafety under MNRE had jointly organized the Biosafety Training Workshop with several institutions/organizations. The main objective of these workshops was to create awareness among the researchers, lecturers and laboratory personnel on the Biosafety Act 2007 and Biosafety Regulations 2010 including some biosafety modules. The workshops are designed in an interactive way with the aim to stimulate thinking and encourage two-way communication.

Seminars are also conducted among Institutional Biosafety Committee members to create a healthy networking among members that are carrying out research activities involving living modified organism. The MNRE can be reach through media social including:

Facebook	https://www.facebook.com/NRE.Malaysia/
MyUSSD Services	http://www.nre.gov.my/en-my/Pages/myussd.aspx
Twitter	http://twitter.com/NREMalaysia
Feed burner	http://www.nre.gov.my/ms-my/Pages/RSS.aspx
YouTube	http://www.youtube.com/user/nreportal2011
Mobile Web	http://www.nre.gov.my/en-my/Pages/MobileWeb.aspx

5.4.2.6 Ministry of Urban Wellbeing, Housing and Local Government

Over recent years, there have been campaigns, seminars and trainings on fire safety conducted by the National Fire and Rescue Department of Malaysia throughout the nation. Comprehensive month to month fire safety campaigns was conducted in order to maintain the level of awareness. Throughout the campaigns there should be posters, banners, stickers, and buntings for making the public aware of the campaign. Media can be regarded as the best medium for delivering information.

The Fire and Rescue Department are working together with the Ministry of Urban Wellbeing, Housing and Local Government in distributing any reading materials (such as booklet, pamphlet, etc.) published by them on fire safety to the public.

Facebook	https://www.facebook.com/KPKTMalaysia
Instagram	http://instagram.com/kpkt
Twitter	https://twitter.com/kpkt_gov

5.4.3 Private Support on Awareness Raising in OSH

There is numerous website hosted by OSH practitioners in various social media including Blogspot, Facebook, twitter, Linkedin, Youtube and others. Examples of Blogspot are:

i) M Noor Fitri (Say yes to safety!!) http://masterchem.blogspot.com/

ii) Cyruzz, Miri (Things that you should know) http://ttysk.blogspot.com/

iii) Miosh Net. http://www.miosh.net/

iv) Anuar Saidin. http://www.anuar-osh.blogspot.com/

v) Mohamad Aliasman bin Morshidi. http://aliasmanshepro.blogspot.com/

vi) Mohammad Zainal Abidin Bin Aziyuddin. http://e-osh.blogspot.com/

vii) Hazri Ishak. http://hazriishak.blogspot.com/

viii) Ir. Daud Sulaiman. http://oshreflections.blogspot.com/

ix) Dr Aini Bin Hj. Murni. http://cendekiaohs.blogspot.com/

x) Melaka Safety Club. http://www.melakasafetyclub.co.cc/

xi) Zwageri Sdn Bhd. http://www.zwageri.com/

xii) Borneo Resources Network Sdn. http://www.hseqadvisors.blogspot.com/

xiii) Miros. http://miros-road-safety.blogspot.com/

xiv) Grand. http://grand-safetyhealth.blogspot.com/

5.4.4 Social Partner

Social partners including employers and employees' association are actively involved in increasing awareness on OSH among their members. This includes:

i. Malaysian Employer Federation and associates
ii. Federated Malaysian Manufacturing
iii. Malaysian Trade Union Congress and associates

In addition, NGO in OSH actively promote awareness through workshop, seminar, and road show. Among the NGO actively promoting awareness activities are such as but not limited to the following:

Table 5.3: NGO actively promoting awareness

NON-GOVERNMENTAL ORGANIZATIONS	WEBPAGE
The Malaysian Society for Occupational Safety & Health (MSOSH)	http://msosh.org.my/v2/
North Region Group Safety Health Environment (NRG-SHE)	www.nrg-she.com/
Malaysian Occupational Safety and Health Officer (MASHO)	https://www.facebook.com/groups/462067420481821/
Society of Occupational and Environmental Medicine (SOEM)	http://soem-mma.org.my/
Academy of Occupational and Environmental Medicine Malaysia	http://www.aoemm.org.my/
Risk Governance Association of Malaysian (RIGA)	https://www.facebook.com/RIGA-Malaysia-1757913474455953/
Malaysian association of Risk and Insurance Management (MARIM)	http://marim.org/
Malaysian Steam & Internal Combustion Engine Engineer Association (MSIEA)	https://www.facebook.com/MSIEA/
Sabah OSHE Association (SOSHEA)	https://www.facebook.com/groups/827265430704510/
Malaysian Occupational Safety & Health Practitioner's Association (MOSHPA)	www.moshpa.my/
Persatuan Pengamal Pengurusan Keselamatan, Kesihatan dan Persekitaran Pekerjaan Malaysia (OSHEM)	www.ukm.my/rosh/
Human Factors and Ergonomics Malaysia (HFEM)	http://hfem.org/
Master Builders Association Malaysia (MBAM)	http://mbam.org.my/

5.5 Occupational Health Services (OHS)

Occupational Health Services refers to services entrusted with essentially preventive functions and responsible for advising and assisting the employer, the workers and their representatives in the undertakings on:

a) The requirements for establishing and maintaining a safe and healthy working environment which will facilitate optimal physical and mental health in relation to work, and performing the work,

b) The adaptation of work to the capabilities of workers considering their state of physical and mental health

5.5.1 Existing Mechanism of OHS Implementation

According to the Guideline on Occupational Health Services by DOSH (2005), the mechanism on implementation of Occupational Health Services (OHS) consists of responsibility, method of implementation and several factors to be considered. The responsibility for compliances with the law and implementation of Occupational Health programmes in the workplace lie with the employer who creates the risk and the employee who works with the risk.

It is recognized that employers are responsible for the provision of Occupational Health Services in their respective workplaces. The employer should make the necessary arrangements within its organization to ensure that there are sufficient resources in terms of financial and manpower to implement the appropriate type of OHS in the workplace.

5.5.2 Function of OHS

The management of workplace occupational risk in Malaysia include management of workers' health and provision of emergency response and disaster management. Occupational Health Doctor (OHD) is one of the responsible competent person to conduct OHS in workplace, complying with the requirements of Regulations 27(2), Occupational Safety and Health (Use and Standard of Exposure of Chemicals Hazardous to Health) Regulations 2000.

The management of workplace occupational risks includes:

a) **Hazard Identification and assessment -** This involves identifying, anticipating, examining, and evaluating the workplace environment for any hazards that may arise from work operations and processes, materials and equipment used, products, by-products and effluents. These hazards include chemical, physical, biological, ergonomics and psycho-social. Some of the activities involves include but not limited to:

   i. Review of projects, designs, and purchase to anticipate hazards;

   ii. Identify workplace health hazards and understand their effects on people and their well-being;

   iii. Assess human exposures to hazards through combination of qualitative and quantitative methods to determine level of risks; and

   iv. Determining the need for, and appropriateness, of biological monitoring in risk assessment.

b) **Recommendation -** Recommendations of controls at workplace involves interpreting results of the assessment or evaluation of the work environment in terms of the ability to impair health, the nature of health impairment, worker's efficiency and community nuisance and/or damage. Specific recommendations on effective control measures to mitigate risks via the Hierarchy of Controls (elimination, substitution, engineering, administrative and personal protective equipment) are made. Other activities include but not limited to preparing and developing rules, standards, procedures and programs for the healthful conduct of work and prevention nuisance in the community. Examples of the occupational health controls are hearing conservation program, respiratory protection program, radiation protection program, etc.

c) **Risk Communication -** Risk communication involves communicating risks and control measures to workers, management, and other stakeholders. Some of the activities include awareness program, workers' training, community awareness, etc.

The OSH management of worker's health are:

a) **<u>Pre-employment medical examination</u>**

This is a medical examination for prospective employees before commencing employment. This examination should be conducted to assess whether they are fit to work. Example for the pre-employment medical examination is HIV-blood testing before gaining employment. Refusal to take a pre-employment HIV blood test generally will result in non-acceptance for employment by the employer. The other concern is patient confidentiality.

b) Pre-placement medical examination

Pre-placement medical examinations are performed for all employees who are new or transferred to jobs with special requirements such as:

i. To provide an evaluation of an employee's health status to ensure he/she is physically and mentally fit to perform the job and/ or to wear the Personal Protective Equipment provided

ii. To establish a baseline record of physical condition which later can be very important for stating if a health impairment had already existed before employment or if it could have been caused by workplace.

iii. To detect physical defects or disease which may be treated at an early stage.

c) Health Surveillance

Any examination and investigations which may be necessary to detect exposure levels and early biological effects and responses, and includes biological monitoring, biological effect monitoring, medical surveillance, enquires about symptoms of occupational poisoning or occupational disease and review of records and occupational history.

d) Medical removal

Any cases of definite or suspected occupational poisoning or disease and excessive absorption must be removed from their work area. The worker should not return to work until the signs and symptoms, abnormal cytology and biochemical results have recovered and he/she is certified fit for work by an Occupational Health Doctor.

e) Rehabilitation

Rehabilitation services are usually provided by external units which may by free-standing or hospital-based and staffed by rehabilitation specialists, occupational therapists, vocational counsellors and so on. There are some important aspects concerning the participation of occupational health services such as:

i. Playing an important role in seeing that workers recovering from injury or disease are referred for rehabilitation.

ii. Exploring the possibilities of modifying the original job (e.g.: changes in work assignment, limited hours, rest periods etc.)

iii. Follow up the worker's progress.

f) Return to work

After an episode of disease or injury employee might sustain disability with limits his ability to perform basic activities of daily living, a medical examination should be performed before return to work. This medical examination is to assist the employee in returning to and remaining effective in their jobs following an episode of disease

or injury. This service can also be provided to employees with emotional disorders or alcohol and drug dependence.

g) Follow-up of health among vulnerable groups

The purpose of this is to observe the potential effects of work on a medical condition and to take early steps to reassign or rehabilitate the employee and to prevent further deterioration of the detected departure from health. This may include pregnant employees or those with chronic illnesses (e.g. ischemic heart disease, diabetes mellitus, epilepsy, etc.). The adaptation of work and the work environment to the worker is particularly crucial for vulnerable groups as there may be a need to make adjustment to the work process, workplace or equipment to accommodate the physical and mental capability of the worker.

h) Investigation of occupational poisoning or occupational disease

All cases of occupational poisoning or occupational disease must be investigated to identify their causes. This is to prevent similar cases from occurring in the future.

i) Health Promotion

Health promotion is organized to provide the workers and employers information about the hazards at the workplace. In this way, both the workers and employers can work together to minimize these health hazards by implementing work improvements. Efforts to help workers make modifications to their lifestyle (e.g. smoking cessation; healthy eating; exercise; weight control, etc.) are included in this activity.

j) Post-employment medical examination

This is performed at the end of employee's service. It helps to detect any change in health status that may be related to employment. After the Fitness-For-Work examination, if the workers are fit the job, they are cleared for work and provided with health promotion as well as risk communication. However, if the workers do not fit to the job, the workers should be provided with clinical management of occupational illness and injuries. Besides, emergency response participation and disaster management, provision of clinical services and also keeping the record of work-related injuries are also covered under OHS.

5.5.3 Occupational Health Services by Related Agencies

5.5.3.1 Department of Occupational Safety and Health (DOSH), Ministry of Human Resources

DOSH initially focus on safety issues such as injuries occurred at workplaces justified by its emergencies, seemingly visible and high impact in nature especially to the media and regulatory bodies. Gradually, occupational diseases trailed behind due its long latent period (occurred following a long duration of exposure at the workplace) and seemingly low impact to the media and regulatory bodies have drawn more attention.

The turning point came with the advent of the Use and Standards of Exposure to Chemicals Hazardous to Health (USECHH) in 2000 followed by the Medical Surveillance Guidelines which provided a basis for employers and occupational health professionals to expand the scope of occupational health services to workers.

Other Guidelines produced by DOSH include Guidelines for the Registration of Assessor, Hygiene Technician and Occupational Health Doctor in 2000 and the Guidelines on Reproductive Health Policy and Programmes at the Workplace in 2002 to enhance OH services and reproductive health at work.

Another milestone to the development of occupational health services in the country was the establishment of the Guidelines on Occupational Health Services (OHS) in 2005. This guideline served to strengthen the provision of OHS by describing the mechanism on how to implement Occupational Health Services, functions of Occupational Health Services, qualifications and roles of various Occupational Health practitioners involved in delivering the services.

The Occupational Safety and Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease) Regulation 2004 with the related guideline complemented in 2005 has been enabling DOSH to identify the cause of the incidences and employing remedial measures, implement strategies and plans to administer and enforce the law based on the database of such occurrences.

Occupational health services that had been conducted by DOSH from the year of 2011 to 2015 are as in the Table 5.4.

Table 5.4: Occupational Health Services by DOSH

OCCUPATIONAL HEALTH SERVICES	YEAR	NUMBERS
Registration of Occupational Health Doctor New Registration	2011	55
	2012	44
	2013	53
	2014	43
	2015	66
Registration of Occupational Health Doctor (Renewal)	2011	107
	2012	130
	2013	130
	2014	129
	2015	160
Occupational Health Doctor Monitoring	2011	52
	2012	63
	2013	N/A
	2014	23
	2015	63
Occupational Health Awareness Seminar/Talk	2011	32
	2012	26
	2013	N/A
	2014	30
	2015	28

(Source: Occupational Health Unit, Department of Occupational Safety and Health)

5.5.3.2 National Institute of Occupational Safety and Health (NIOSH)

NIOSH were entrusted to contribute towards efforts in upgrading OSH practices in Malaysia through developing curriculum and training programmes, conducting applied research and development, providing advisory and consultancy services, and disseminating OSH information to industries in Malaysia.

As OSH standards are relatively new in the country, NIOSH Malaysia, through its core businesses have benefited the workforce in terms of OSH services rendered through Occupational Health Consultancy, Mobile Occupational Health Services, Occupational Medicine Centre and Occupational safety and health laboratory.

5.5.3.3 Occupational Health Unit (KPAS), Ministry of Health Malaysia

The objective of KPAS is to promote and maintain the physical, mental and social development of the highest level and ensure the health and safety of workers is guaranteed. This includes awareness and knowledge as well, to protect workers from the risks and hazards in the workplace in order to improve the work and the work environment to be more conducive for the safety and health of workers.

The OH services provided by KPAS are as follow:

a) Examine, treat and refer if necessary cases of illness and injury in the workplace

b) Collect and send notifications

c) Members of Health Level Assessment Program by Health Problems
   i) Pre-placement
   ii) Modification work
   iii) Return to Work Program

d) Medical Surveillance

Besides OH services, KPAS also provide Environmental Health services, specifically:

a) Preparedness for disasters (floods, pollution, Landslide)

b) Monitoring / Surveillance disaster

c) Environmental Hazard and Risk Assessment

d) Monitoring of Environmental Health at-risk (Schools, Prisons, Lockup, Depot)

Among activities of KPAS are as follow:

a) Quality Assurance Program: Needle-stick injuries among Member Health

b) Hepatitis B Immunization Program for Members of the Health Ministry of Health

c) Occupational Health Clinic Services

d) Notification and Investigation of Accidents and Occupational Diseases

e) Health Screening Members of Health through Productive Citizens Active Citizens program (WAWP)

f) Medical Surveillance Program:
   i) Member Vectors
   ii) Members of radiation exposure
   iii) TB vulnerable members

g) Infection control among Member Health Clinic

h) Committee on Occupational Safety and Health

i) Audit of Occupational Safety and Health at work

j) Chemical Control Program

MOH support the public through establishment of specialized OSH clinics specifically in industrialized states namely Selangor, Kuala Lumpur and Johor. On top of clinics for Occupational Health Services, several specialist hospitals in Selangor and Johor also cater the need of Occupational Health related diseases. MOH also support OH services through rehabilitation hospital and clinics throughout Malaysia for both work-related and non-work related disability.

For example, the Cheras Rehabilitation Hospital (HRC) is located at Jalan Cheras and it is the largest rehabilitation hospital in Southeast Asia to provide rehabilitation services in a holistic manner. HRC provide rehab services including clinical services and clinical support. The hospital was built with the aim to become a reference center that will provide comprehensive medical rehabilitation services in Malaysia. Given the HRC is a tertiary referral center; it only accepts referrals from rehabilitation specialists from other hospitals. Among the functions of the hospital are as follows:

- Provides inpatient rehabilitation after the acute stage of an illness or trauma.
- Provides outpatient rehabilitation services after patients discharged from hospital.
- Provide facilities in conducting an assessment of disability after an illness or trauma.
- Provide facilities for training and research in the field of medical rehabilitation and disability management.
- Strengthening the network of medical rehabilitation services among hospitals nationwide.

More information on HRC can be referred to http://www.hrc.moh.gov.my/utama/.

5.5.3.4 Social Security Organization (SOCSO)

Workers compensation benefits have been well serviced by the Social Security Organization (SOCSO) since its existence through its 2 major benefits being employment injury insurance scheme and the invalidity pension scheme. To improve and ease the approach in compensation claims, SOCSO published a guideline for Occupational Health Professionals (OHPs) to diagnose occupational diseases.

This was further consolidated by the preparation of a disability assessment guideline by SOCSO based on the American Medical Assessment Guidelines. The guidelines serve to facilitate certified independent medical assessors or medical specialist to assess the disability in a professional and objective manner.

In 2009, SOCSO announced that all its panel doctors must undergo at least basic training in occupational health by January 2011. The aim was to enable all SOCSO panel doctors

to accurately diagnose and report such cases. This would emphasis SOCSO‟s role in preventing workplace diseases and injuries and improving the quality of workers‟ well-being.

Four Occupational Health related organizations have been appointed to conduct this training in 2010 to facilitate panel doctors to fulfil this requirement from SOCSO, namely the:

a) Society of Occupational and Environmental Health Medicine,
b) Academy of Occupational and Environmental Medicine,
c) National Institute of Safety and Health, and
d) Malaysian Society of Occupational Health Physicians

Of late, SOCSO has begun to realize that the compensations draining their coffers approximating more than RM1.3 million per year due to the tremendous increase in compensation claims besides leaving the injured worker return home and manage their own disabilities. This has left a negative impact on the injured worker's ability to perform their usual physical, psychological and social functions.

This subsequently led SOCSO to strategize a new paradigm in enhancing benefits through a dynamic 'Return to Work' (RTW) programme in 2007. This RTW is a multidisciplinary rehabilitation programme, based on the theme 'Stay at work' with the programme being handled by trained case managers. This programme aims to enable disabled workers to maintain a decent work, provide a continuous and sustainable social system and the 'inclusion' and not 'isolation' of workers in the working environment.

The RTW programme has enabled SOCSO to be envisaged as not just compensating for the loss of income but to also provide a 'total replacement of income' through rehabilitation and return to work strategy. This creates a win-win situation for SOCSO to remain sustainable and affordable while providing benefits to workers with disabilities, hence adding value to human capital. The following are a list of SOCSO panel clinic (trained in OSH) in each state:

i) Kedah: 69
ii) Johor: 95
iii) Kelantan: 14
iv) KL: 63
v) Labuan: 3
vi) Melaka: 28
vii) Negeri Sembilan: 38
viii) Pahang: 30
ix) Perak: 88
x) Penang: 84
xi) Perlis: 3
xii) Sabah: 41
xiii) Sarawak: 53
xiv) Selangor: 162
xv) Terengganu: 19

Besides that, PERKESO Rehabilitation Centre is the first rehabilitation complex in the world that combines medical and vocational rehabilitation with an allied health institute. It is located in Bandar Hijau, Hang Tuah Jaya Melaka and has been built to help prepare workers with injuries or diseases to be placed back into the job market under PERKESO's 'Return To Work' Program.

The centre provides comprehensive physical and vocational rehabilitation services, together with disability management, to help improve the well-being of PERKESO-insured workers with employment injuries and diseases and, ultimately, enable them to return to work. Medical rehabilitation services at the PERKESO Rehabilitation Centre focuses on multiple fronts, including physiotherapy, occupational therapy, optometry, audiology, work hardening and vocational rehabilitation.

Each patient benefits from treatments that cover the entire end-to-end spectrum of service from doctors and other rehabilitation professionals. All services are supervised and enhanced by high quality medical rehabilitation equipment in the areas of Robotic Therapy and Industrial Rehab Training. The main focus of PERKESO Rehabilitation Centre is to provide the best rehabilitation treatments for SOCSO/PERKESO's insured persons and workers from all over Malaysia, while at the same time, accomplishing the mission of returning them to work and improving their overall well-being.

More information can be found on http://rehab.perkeso.gov.my/.

5.5.3.5 Local universities

The Universities can be considered to be indirectly imparting occupational health services to the nation by training doctors through their 4 year Masters of Public Health Programme specializing in Occupational Health. These specialists are competent in diagnosing occupational diseases like noise induced hearing loss, occupational skin diseases, occupational respiratory diseases and conduct disability assessment and provide a wide range of services from prevention, diagnosis and treatment, rehabilitation, disability assessment and compensation issues. The University Malaya Medical Centre is one of the teaching institutions in the country to provide occupational medicine services.

5.6 Social Protection and Compensation

5.6.1 Private Sector

5.6.1.1 Social Security Organization (SOCSO)

SOCSO provides free medical treatment, facility for physical or vocational rehabilitation, and financial assistance to employees if they have lost their abilities due to accidents or diseases that have reduced their abilities to work or rendered them incapacitated. The social security principles are solidarity fund, replacement of income and quality.

SOSCO provides coverage to eligible employees through the Invalidity Pension Scheme and the Employment Injury Insurance Scheme. Coverage is compulsory for Malaysian workers and permanent residents employed under a contract of service or apprenticeship and earning RM 2,000 per month or below. Government employees and self-employed persons are exempted.

Employment Injury Insurance Scheme

The Employment Injury Insurance Scheme covers eligible employees against occupational accidents and illnesses, including those arising during commutes to, from, and for work. The protection under this scheme covers the following accidents:

a) Industrial accidents while carrying out their duties

b) Accidents while travelling, which can be defined as either:

   i) On a route between place of residence or stay and place of work, or

   ii) On a journey made for any reason which is directly connected to the employment, or

   iii) On a journey between place of work and the place where employee takes his meal during any authorized recess

c) Accident during emergency: An accident happening to an employee while he is in or near any premises at which he is being employed and it occurs while assisting, rescuing or protecting other people from disaster or danger during an emergency.

Insured persons are entitled for the benefits as listed in **Appendix 5H.**

Invalidity Scheme

The Invalidity Schemes provides 24-hour coverage to employee who suffers from invalidity or death due to any cause and not related to his employment. An insured person shall be considered as suffering from invalidity by reason of specific morbid condition of permanent nature either incurable or is not likely to be cured and no longer capable of earning, by work corresponding to his strength and physical ability, at least one–third of the customary earnings of a sound insured person.

Insured persons are entitled for the benefits as listed in **Appendix 5I**.

Under the Act, Employment Injury Insurance Scheme and the Invalidity Pension Scheme are enacted as a tool to protect the welfare of the employees in case of injuries, or death arising from accidents and mishaps during work. Before 1 June 2016, Social Security Employee Act 1969 cover and protect all employees who work under employers under contract of service of apprenticeship with the salary RM3,000.00 or below for a month is subject to the 'once-in-always-in' principle. However, effective from 1 June 2016 with the amendments of Social Security Employee Act 1969 are:

i) The Once-In-Always-In' principle and Notice of Election are no longer effective

ii) All employees whom being employed under an employer under contract of service or apprenticeship with monthly salary of RM 4,000.00 must be registered and contribute to SOCSO.

5.6.1.2 Employee Provident Fund (EPF)

The EPF is a social security institution formed according to the Laws of Malaysia; Employees Provident Fund Act 1991 which provides retirement benefits for members through management of their savings. The EPF members are private and non-pensionable Public Sector employees which provide the following:

i) retirement benefits for members through management of their savings,

ii) incapacitation and Death Benefits payable to the member/guardian or beneficiary to help lessen the financial burden when the member suffers from incapacitation or in the event of death.

The contribution amount is calculated based on the monthly wages of an employee (11% is from the employee's monthly wage) while 12% is contributed by the employer. For those earning less than RM5,000, the employer contributes 13% since 2012. Each contributor will have two (2) accounts where 70% of the contribution will be channelled in account 1 and 30% to account 2.

Each EPF account is sub-divided into three sub-accounts: retirement, housing and education, and medical. A total of 60% of the contributions goes into the retirement account while 30% is allocated for housing and education fund, and the balance 10% into the medical fund. Members can request to withdraw up to 30% of their retirement savings at age 50 but are only allowed to withdraw the full amount of the retirement account at age 55. They may however withdraw earlier subjected to the following but reasons:

i) death of the member;

ii) physical or mental incapacitation that prevents the member from engaging in employment;

iii) or leaving Malaysia permanently (relinquished citizenship of Malaysia).

5.6.1.3 Private Insurance Scheme

Some large employers provide medical benefits to the employees through their panel clinics and hospitals. They may also buy private health insurance to cover hospitalization charges in the government or private hospitals. Licensed insurance companies & Takaful Operator by Bank Negara Malaysia are as listed in Table 5.5.

Table 5.5: List of licensed insurance companies

NO	LICENSED INSURANCE COMPANY & TAKAFUL OPERATOR
1	AIG Malaysia Insurance Berhad
2	AXA Affin General Insurance Berhad
3	Allianz General Insurance Malaysia Berhad
4	AmGeneral Insurance Berhad
5	Berjaya Sompo Insurance Berhad
6	Chubb Insurance Malaysia Berhad
7	Danajamin Nasional Berhad
8	Liberty Insurance
9	Lonpac Insurance Berhad
10	MPI Generali Insurans Bhd.
11	MSIG Insurance (Malaysia) Berhad
12	Overseas Assurance Corporation (Malaysia) Berhad

NO	LICENSED INSURANCE COMPANY & TAKAFUL OPERATOR
13	Pacific & Orient Insurance Co. Berhad
14	The Pacific Insurance Berhad
15	Progressive Insurance Bhd
16	QBE Insurance (M) Berhad
17	RHB Insurance Berhad
18	Tokio Marine Insurans (M) Berhad
19	Tune Insurance Malaysia Berhad

In an initiative to provide a wider coverage of social protection and compensation, the CIDB Green Card is an integrated programme involving the registration and accreditation of construction personnel, to enhance safety levels at construction work sites. Construction workers who register are automatically covered by a special insurance scheme that covers the construction personnel against death and accidents.

5.6.2 Government Sector

5.6.2.1 Government Pension

For public service officers who worked for Government, pension benefits are available not only for pensioner but also to a deceased pensioner's dependents who passed away either while still in the Government service or after retirement – known as Derivative Gratuity and Derivative Pension under the Pension Act, 1980 (Act 227) and Statutory and Local Authorities Pensions Act, 1980 (Act 239).

The types of pension are:

i) Compulsory Pension Under Section 10 of the Act 227/239

ii) Compulsory Retirement at the Instance of the Government Under Section 11 of the Act 227/239

iii) Optional Retirement Under Section 12 of the Act 227/239

iv) Retirement due to Privatization of a Government Agency Under Sections 10(5)(b), 12 and 12A/13 of the Act 227/239

The pension scheme is developed to acknowledge and appreciate the excellent service, with loyalty, dedication and honesty, rendered to the Government by a personnel, to develop a form of Compensation Scheme for personnel who are required to retire or passed away due to an injury or contracted a disease because of exposed to harm in the course of carrying out his/her duties and to provide the life subsistence for the dependents of personnel who have passed on during the term of service with the Government or after their retirement.

Besides, government pension also serves as bondage for personnel to retain their service with the Government. The rate of gratuity and pension to be paid depends on the period of reckonable service and the last drawn salary (substantive) by the officer. Pensioners are entitled for the benefits as follow:

a) Service Pension

Service pension is an income which paid monthly according to the number of years you have been a member of the scheme. A service pension can be paid to eligible veterans on the grounds of age or invalidity, and to eligible partners, former partners, widows and widowers.

b) Service Gratuity

Gratuity is a part of salary that is received by an employee from employer in gratitude for the services offered by the employee in the government service. An employee may be paid lump sum termination benefit in respect of his long period of service. Gratuity is a defined benefit plan and is one of the many retirement benefits offered by the employer to the employee upon leaving his job. An employee may leave his job for various reasons such as retirement, on being retrenched or by way of voluntary retirement.

c) Cash Award In lieu of Leave, when applicable (lump sum payment)

This Cash Award In lieu of Leave is paid by the Federal Government (through Pension Division) for federal officer and the State Government for state officer. Statutory Bodies and Local Authorities which adopt Service Circular No. 4 of 1993 will pay Cash In lieu of Leave to their employees.

d) Gratuity

It is calculated as 7.5% x number of months of reckonable service x corresponding last drawn salary.

e) Pension:

Pension Regulations 1980 is read together with Service Circular No 4 of 1993, which provides for Cash Award In lieu of Leave (GCR), which is leave not utilized due to

exigency of the service and is accumulated in accordance to the terms for accumulation under pension regulations and the above circular.

f) Disability Pension

Disability Pension is and additional benefit given to a Government officer who is required to retire because of health reasons, on condition the injury or disease is not contributed by negligence or misconduct of the officer as follow:

i) In the course of performing his official duty

ii) Contracting a disease to which he is exposed by the nature of his duty;

iii) Sustaining an injury due to a travel accident.

The rate of disability pension is paid according to the degree of disability as follows:

Table 5.6: Rate of disability pension

DEGREE OF IMPAIRMENT	RATE PAID
Slight impairment	1/8 of last drawn salary
Impaired	1/4 of last drawn salary
Major Impaired	3/8 of last drawn salary
Total destroyed	1/2 of last drawn salary

(Source: Malaysia Public Service Department)

g) Dependent's Pension:

It is an additional pension benefit given to dependents or a pensioner or officer who dies from injury obtained during the course of performing his official duty or contracting a disease or travel accident on condition:

i) The officer died in any one of the above conditions;

ii) The death of the pensioner or officer occurs within seven years of sustaining the injury or contracting the disease.

5.6.2.2 Ex-gratia Scheme

The Ex-Gratia Compensation Scheme was introduced by the Government of Malaysia in 1994 to provide compensation, which is not covered by any prior legislation, for all its workers suffering from injuries and illnesses due to work including oppression by bad social elements while carrying out official duties.

The scheme was revised and improved in 2001 to increase the coverage with better benefits. The scheme is administered by the Treasury and the two circulars, Treasury Circular No. 13, 1994 and Treasury Circular No. 7, 2001 are the reference documents for its implementation.

The scheme covers all government servants except those in the military, police and fire services; those engaged under services with government Trustee Fund (*Tabung Amanah*); attached officers and daily paid workers who have been covered under different schemes accordingly. It is applicable to all state and local governments as well as statutory bodies subject to acceptability and applicability at local settings respectively.

5.6.3 Foreign Workers' Compensation

Foreign workers who work in Malaysia are covered under Workmen's Compensation Act 1952. As provided under Section 26(2), it is mandatory for every employer to insure all their foreign workers employed by the company under the Foreign Workers Compensation Scheme (FWCS), effective 1st April 1993.

Section 26 (1) of the Act requires every employer to insure himself and keep himself insured with a valid workmen's compensation insurance policy which may be obtained from any of the panel of Insurance Companies appointed by the Government to undertake the implementation of the Workmen's Compensation Insurance Scheme established for this purpose.

The scheme provides foreign workers with personal accident and repatriation benefits during and outside of working hours. Foreign workers who are under the employment of the insured company will enjoy coverage that includes:

i) Death and disability due to an accident

ii) Disease arising out of and in the course of employment

iii) Medical expenses

iv) Repatriation expenses

The coverage benefits of the Foreign Workers Compensation Schemes are as Table 5.7.

The list of panel insurance companies appointed and approved by the Ministry of Human Resources to underwrite Foreign Workers Compensation Scheme (FWCS) is as in **Appendix 5J.**

Any employer who takes insurance policy from insurance companies other than those listed above commits an offence under Workmen's Compensation Act 1952. Such policy should be terminated immediately and a new policy should be taken from any of the insurance companies appointed above.

Table 5.7: Benefits under the Foreign Workers Compensation Schemes

NO.	TYPE OF ACCIDENT	AMOUNT OF COMPENSATION
1	Temporary disability	Half monthly payment, i.e. one-third of the average monthly income or RM165.00 whichever is less
2	Permanent disability	Percentage of loss of earning capacity x Average earnings x 60/84/108 months or RM23,000.00 whichever is less
3	Fatality	Average monthly income x 60 months or RM18,000.00 whichever is less and additional RM7,000.00 under the Foreign Worker Compensation Scheme Average monthly income x 60 months or RM18,000.00 whichever is less and additional RM7,000.00 under the Foreign Worker Compensation Scheme (RM18,000.00 + RM7000.00 = RM25,000.00)

(Source: Department of Labour Malaysia, Ministry of Human Resources)

Every employer must bear the full cost of the insurance premium of the Foreign Workers' Compensation Scheme of RM72 per year for each foreign worker. Employers who contravene the provisions of Section 26 (1) commits an offence and if convicted for an offence shall be liable to a fine of RM20,000.00 or imprisonment for a term not exceeding two years or to both fine and imprisonment.

The cost of obtaining such insurance policy shall be defrayed by the employer and shall not be deducted from the wages of a workman. Any deduction made by an employer for such purpose constitute an offence and if convicted for such offence, the employer will be liable to a fine of not more than RM5,000.00 or imprisonment for a term not exceeding one year or to both fine and imprisonment.

5.6.3.1 Department of Labour (Peninsular Malaysia)

Foreign workers' compensation is managed by Department of Labour Malaysia. Department of Labour (Peninsular Malaysia) was established in 1912 and is one of 10

departments and agencies under the purview of the Ministry of Human Resources. The Malaysian Labour Department is responsible for employee welfare, employer advantage, national labour policy implementation through administrative and Labour Act enforcement and effective promotion actions to provide the productive and committed human resources.

5.6.3.2 Department of Labour (Sabah)

The Department of Labour, Sabah was established during the British North Borneo Company's administration in the year 1880s. It is directly responsible to the Ministry of Human Resource Malaysia in the administration and enforcement of Labour Laws in Sabah.

5.6.3.3 Department of Labour, Sarawak (JTKSWK)

The Department of Labour, Sarawak (JTKSWK) was established by the State Government of Sarawak on 26th July 1960. Under the Inter-Governmental Committee (IGC) Report 1962, the Director of Labour Sarawak is directly responsible to the Minister of Human Resources through the Secretary General on the administration of labour matters in Sarawak. With the formation of Malaysia on 16th September 1963, Department of Labour Sarawak was placed under the jurisdiction of the Ministry of Human Resources.

5.7 Education, Training and Raising of Awareness

The term training refers to the acquisition of knowledge, skills, and competencies as a result of the teaching of vocational or practice skills and knowledge that relate to specific useful competencies. Training has specific goals of improving one's capability, capacity, and performance. It forms the core of apprenticeships and provides the backbone of content at institutes of technology.

In Malaysia, education and training is commonly looked upon in the form of formal education which is defined as the process of training and developing people in knowledge, skills, mind, and character in a structured and certified program. In the discipline of OSH, the education and training discussed herein are in the form of certified programmes, short courses, academic programmes, and industry requested safety programme for contractor.

Education and training are delivered in different form, such as through private and/or government institution, university or college, association and employer's/workers' organization. Education and training in these institutes, universities, association or organization has a fixed curriculum or modules which created to acquire knowledge, professionalism and skill from certificate, diploma, and degree at the undergraduate to master (MSc) or doctorate (PhD) at the graduate levels.

In terms of location, there are various institutions and association across the country in different regions and various locations providing different levels of training; both basic and advance. Industries in Malaysia have been able to benefit the availability of such abundance of capacity building resources. Specifically, resources can be optimized on training, education and skill development closer to location of operation instead of logistical arrangement (such as travelling and accommodation) when sending employees for training.

5.7.1 Institutions Providing OSH-related Training and Continuous Education Program

Both government and private (profit-based) institution provide OSH-related training and continuous educational program, such as certification program, short courses, and training or customized industrial OSH-related training programmes which are based on demand. Besides that, non-governmental organizations (NGO) were also equally and actively and providing specific professional education and training programmes to their members.

5.7.1.1 Government Institution

Different Ministries played a role in information dissemination activities play a vital role in enhancing OSH awareness among industries, students and public as a whole. These ministries contribute towards efforts in upgrading OSH through developing curriculum and training programmes for workers and employees, employers and those who are responsible, either directly or indirectly.

a) <u>National Institute of Occupational Safety and Health (NIOSH)</u>

The main OSH training institute in Malaysia is NIOSH. It was created to carry out training on compliance to the various OSH legislations such as OSHA 1994 and FMA 1967. NIOSH is responsible for the promotion of OSH in effort to inculcate "self-regulation of occupational safety and health culture" in Malaysia. NIOSH offers four (4) types of training program, such that,

i) Certification Programmes for competency courses (Refer Appendix 5K)

- Occupational Health Doctors (OHD)
- Occupational Health Nurses (OHN)
- Chemical Health Risk Assessor (CHRA)
- Hygiene Technician I (HT 1)
- Hygiene Technician II (HT II)
- Noise Monitoring
- Indoor Air Quality Assessor
- Scaffolding (Basic, Intermediate and Advanced)
- Authorized Gas Tester & Entry Supervisor for Confined Space
- Authorized Entrant & Stand-by Person for Confined Space

ii) OSH Practitioners Programmes

- Accident Investigation and Reporting Workshop
- Emergency Respond Plan Preparedness
- Hazard Identification, Risk Assessment and Risk Control
- Safety and Health Committee
- Occupational Safety and Health for Supervisor
- Occupational Safety and Health Act 1994 (OSHA)
- Compliance to Regulations Under OSHA 1994
- Compliance to Factories and Machinery Act 1967 and Regulations

iii) Trainer's Programme

- Train the Trainer
- Training Management for Business
- Safety Induction for Construction Workers
- Confined Space Train the Trainer

iv) **Safety Passport Programme** (A safety passport program is a program where safety training and induction is compulsory for new workers to attend and has requirement for examination. This is the initiative of the industry to coordinate training of contractors with NIOSH)

- Contractor Safety Passport System (CSPS) Program
- BPCM Safety Passport (NBPSP) Program
- NIOSH NESTLE Safety Passport (NNSP) Program
- Oil and Gas Safety Passport (OGSP) Program
- OSFAM Safety Passport (NOSP) Program
- NIOSH PORT Safety Passport (NPTSP) Program
- NIOSH SESB Safety Passport (NSESP) Program
- NIOSH TM Safety Passport (NTMSP) Program
- NIOSH TNB Safety Passport (NTSP) Program
- SYABAS NIOSH Safety Card (SNSC) Program

b) <u>Construction Industry - Construction Industrial Development Board (CIDB)</u>

Safety and Health Training for Personnel is aimed at employees who are registered as construction workers with CIDB. The target is to impart basic information on the good OSH practices at construction sites. In 2014, CIDB has recorded successful training of 214,913 construction employees.

The OSH-related at construction site training is detailed out in **Appendix 5L**. A renewal application to extend the registration certificate is approved based on the Contractor Continuous Development (CCD) points accumulated during the current registration period. The registration period is between one (1) to three (3) years, depending on the CCD points accumulated.

Besides that, CIDB green card is an integrated program that involves the registration and accreditation of Construction Personnel to enhance safety levels specifically for Construction personnel at work sites. The program is a compulsory program under CIDB before any personnel would be granted access to construction site.

The objective of the program includes:

- To ensure that Construction Workers are aware of the importance a safe and healthy working place;
- To provide a basic knowledge on safety and health at the Construction work site;
- To inform Construction Workers of the legal requirements in relation to safety and health.

The advantage of having this green card is that the holder will automatically covered by a special Insurance Scheme that insures the Construction Personnel against death and accidents. The Construction Academy of Malaysia, or *Akademi Binaan Malaysia* (ABM), is the training arm of the CIDB, which caters for the development and upgrading of skills amongst construction personnel.

The ABM focuses on equipping construction personnel with the right tools in order to be skilled, of a certain standard, competent, qualitative and productive. Training provided includes but not limited to:

i) Building
ii) Crane Operation
iii) Plant Operation
iv) Mechanical and Electrical
v) Drafting and Civil
vi) Welding
vii) Blasting & Painting
viii) Non-Destructive Testing
ix) Scaffold

c) <u>Ministry of Science, Technology and Innovation (MOSTI)</u>

Radiation Protection Officer (RPO) is a technical competent person appointed by the license and approved by AELB in writing, to supervise the implementation of appropriate radiation protection regulations; measures and procedures including the radiation protection programme.

Regulation 23 of Malaysian Radiation Protection (Basic Safety Standards) Regulations 1988, requires the applicant to employ a RPO, with the necessary knowledge, skill and training, enabling effective protection of individuals and minimizing danger to life, property and the environment for all activities sought to be licensed.

The course on radiation safety is primarily directed to the safety of workers, members of the public and the environment by emphasizing aspects of radiation protection, in line with the requirement of the Atomic Energy Licensing Act 1984. Awareness program is conducted through Malaysian Nuclear Agency Training Centre.

Associate programme and training partnership in conducting program are Lady Faza Solution Sdn Bhd, Asia Lab Group Sdn Bhd, Madani Training, Ruane Tati Sdn Bhd and many more. Public training and workshop conducted including courses on environmental safety and health program and radiation safety and health program.

d) Ministry of Natural Resources and Environment (MNRE)

The Department of Biosafety under MNRE had jointly organized the Biosafety Training Workshop with several institutions/organizations. The main objective of these workshops was to create awareness among the researchers, lecturers and laboratory personnel on the Biosafety Act 2007 and Biosafety Regulations 2010 including some biosafety modules.

The workshops are designed in an interactive way with the aim to stimulate thinking and encourage two-way communication. Seminars also conducted among Institutional Biosafety Committee members to create a healthy networking among members that are carrying out research activities involving living modified organism.

e) Ministry of Transportation (MOT), Malaysia

The Land Public Transport Commission (SPAD) was established on 3rd June 2010, injected a new impetus into public transport planning by introducing public transport master plans for both the country as well as for localized regions, while at the same time specifying accompanying initiatives designed to raise the overall level of service and safety standards of public transport.

SPAD Industrial Code of Practice Safety Training Programme (ICOP-Safety) is a safety initiative for all the Land and Public Transport Operators with the aim of making safety as a core value, operating norm and culture of the road public transport and the rail public transport industry. SPAD ICOP-SAFETY training started for bus operators on 27th November 2012 and the training being conducted as of 29th May 2013, Safety training for lorry operators commenced on 20th May 2013, SPAD ICOP-SAFETY to be a licensing condition for taxi operators and rail operators by 2015.

f) Ministry of Agriculture and Agro Based Industry

The National Agriculture Training Centre (NATC) was established on 1 October 2001. NATC is responsible to plan, prepare, regulate and evaluate the National Agriculture Training Programme to increase agricultural production through skilled human development model by carrying out competency-based skill training. Among the training provided by NATC, OSH-related training provided to farmers or pesticide handlers are:

i) Safe Handling of Toxic Substances
ii) Toxic Waste Management,
iii) Control and Management of Pesticides
iv) Safe Pesticide Spraying Procedures
v) Integrated Pesticide Management

5.7.1.2 Private Institution

Many companies have registered to become OSH training providers in which short courses are offered as on job training for those responsible for the health and safety of their companies.

a) <u>Oil and Gas Industry – Offshore Petroleum Industry Training Organization</u>

Offshore Petroleum Industry Training Organization (OPITO) sets industry standards in emergency response, industry training and competence. Standards are developed by oil and gas work groups, made up of industry representatives, training providers and trade associations.

The list of training centre certified by OPITO is:

i) IG Training Centre Sdn. Bhd.
ii) MSTS ASIA Sdn. Bhd. Johor (member of Falck Safety Services)
iii) SMTC Malaysia
iv) Borneo Safety Training Services Sdn. Bhd.
v) Malaysian Maritime Academy Sdn. Bhd.
vi) SEQU Offshore Safety Sdn. Bhd.
vii) Construction and Industrial Safety Training Centre Sdn. Bhd. (CONSIST)

From time to time, training standards are reviewed by OPITO and industry partners. The standards for training comprises of:

i) Emergency and Critical Response Standards
ii) Industry Training and Competence Standards
iii) UK National Occupational Standards
iv) Global Technical Standards

Details of the trainings provided is listed in **Appendix 5M.**

b) <u>NEBOSH International Technical Certificate in Oil and Gas Operational Safety</u>

This qualification is designed specifically for those with safety responsibilities in the oil and gas industry which focuses on international standards and management systems, enabling students to effectively discharge workplace safety responsibilities both onshore and offshore. The Certificate also highlights the importance of process safety management in the oil and gas industry.

List of training centre certified by NEBOSH are as follow:

i) Epsilon Skills Academy - Epsilon Skills Academy, Johor Bahru
ii) Fajar International College - Fajar International College, Miri, Sarawak
iii) JTN Technical Services Sdn. Bhd., Miri, Sarawak

iv) MSTS ASIA Sdn. Bhd., Johor
v) SAFEnviro - SAFEnviro, Selangor
vi) TWI Technology S.E. Asia Sdn.Bhd, Selangor Darul Ehsan
vii) Consist College
viii) Astutis International

c) <u>Other Occupational Safety and Health Training Provider</u>

Some of the private institutions provides training and educational services to provide wide range of occupational safety and health training courses to the safety and health practitioners to ensure that their professional training on safety, health and wellbeing at their workforce. There are three types of training program provided by private sectors, such as:

i) In-house OSH-related training

ii) Certification Program certified by DOSH such as
- CLASS Regulation (**Appendix 5N**),
- Crane Operator (**Appendix 5O**),
- Scaffold (**Appendix 5P**),
- Safety and Health Officer Program – all levels (**Appendix 5Q**),
- Site Safety Supervisor Program (**Appendix 5R**),
- Confines Space Courses (**Appendix 5S**),
- Radiation Protection Officer Program (**Appendix 5T**)

iii) Occupational Safety and Health training/short courses accredited as Continuous Educational Program (CEP) certified by DOSH (**Appendix 5U**)

5.7.2 University/College Offering OSH Related Programmes

Figure 5.2 shows the numbers of higher learning institutions both private and public which provide OSH courses. The OSH programs offered are mainly at the degree while a few were at the diploma level. At the postgraduate level, for those with science and engineering background, the degrees offered are usually at Master of Science (MSc) and doctorate (PhD) level.

For those with medical background, the Master of Public Health, Doctor in Public Health or PhD are offered. All these programs are offered under the Faculties of Medicine, Health Science or Allied Health Sciences in these public universities. Program such as Master of Science in Emergency Response, OSH management are offered in Engineering Faculty and School of Management.

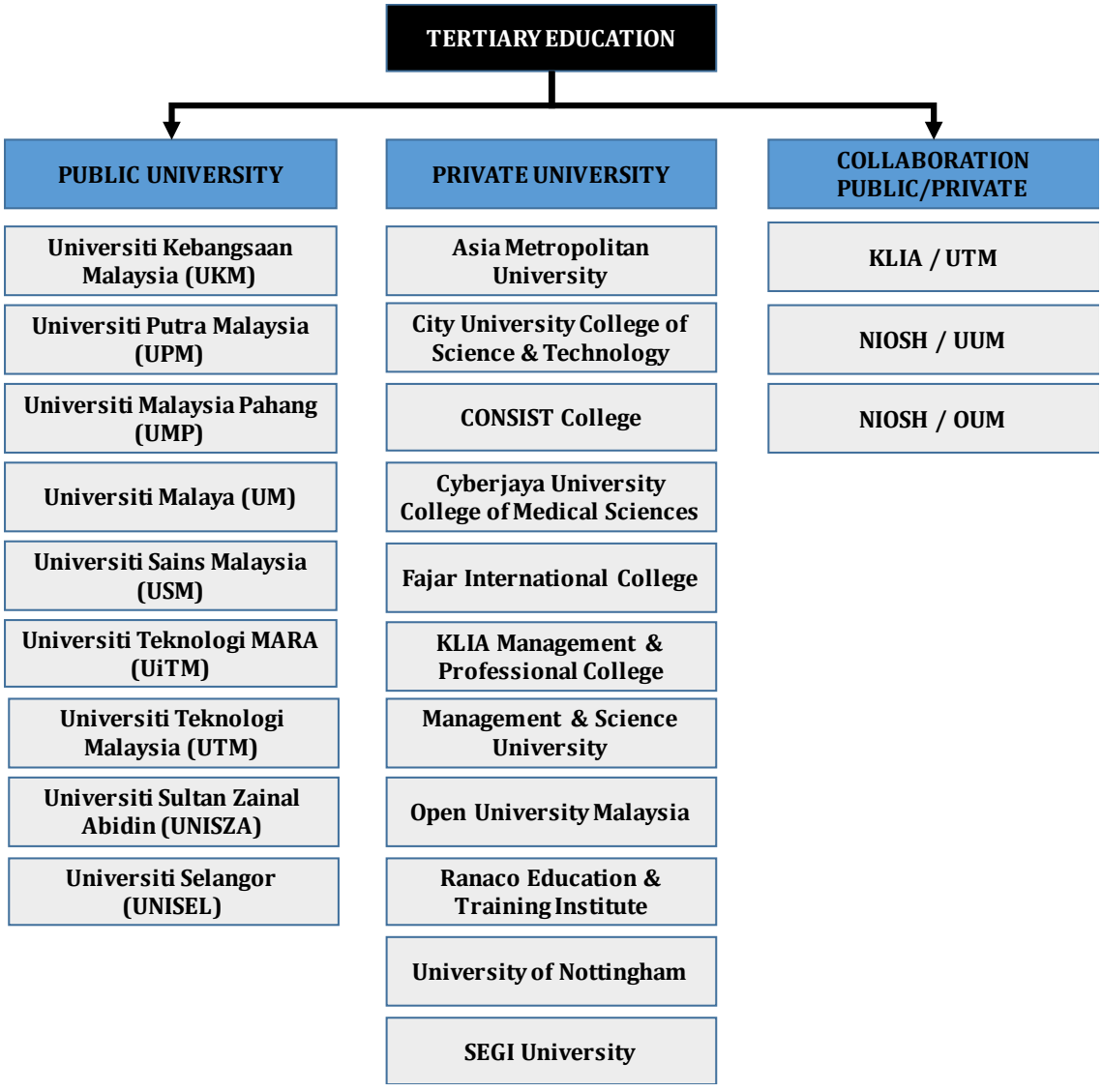

Figure 5.2: OSH Education Programs from Public and Private Institute of Higher Education

5.7.2.1 Curriculum certified by DOSH, Malaysia

Appendix 5R summarizes the universities/college offered OSH curriculum certified by DOSH, Malaysia. Among all,

a) Graduates from universities/colleges who completed classes of Executive Diploma in OSH are required to passed competency examination under National Institute of Occupational Safety and Health (NIOSH), he/she would then be certified competent to be registered as Safety and Health Officer (SHO) with the Department of

Occupational Safety and Health (DOSH) after 3 years' of experience in the field of Safety and Health.

b) Graduates from universities/colleges who passed Diploma, Graduate Diploma, Bachelor Degree, Master program are certified competent to be registered as Safety and Health Officer with the Department of Occupational Safety and Health (DOSH) after 3 years' experience in the field of Safety and Health.

c) Graduates from Universiti Putra Malaysia are exempted from the Chemical Health Risk Assessment training and proceed directly to the competency exam as a chemical health risk assessor.

5.7.2.2 Curriculum not certified by DOSH, Malaysia

There are academic programmes in various level which are offered by higher learning educational institution in the field of OSH in Malaysia. For most OSH programmes which were not certified by DOSH, the curriculums are accredited under Malaysian Qualification Agency (MQA), a statutory body in Malaysia set up to accredit academic program in quality assurance of higher education and also serve as the reference point for the criteria and standards for national qualification.

Programmes offered by universities/colleges as in **Appendix 5V** and **5W** includes executive diploma, diploma, degree, master (via research thesis or coursework project) or PhD (research thesis) program on academic programmes related to various sub-field on OSH as follow:

a) Occupational Health
b) Occupational Safety and Health Management
c) Occupational Health & Safety Leadership
d) Public Health
e) Environmental Health
f) Ergonomic
g) Emergency Response and Planning
h) Industrial Safety Management
i) Environmental Technology
j) Environmental Management
k) Other OSH-related discipline

The duration of study for a diploma program is usually 3 years with 90-100 credits hours of coursework while for the bachelor degree program, the duration of study is usually 4 years with 120-130 credit hours of coursework. The Bachelor program usually consists of coursework and a final year project.

For the postgraduate or master level, admission will be those with health, engineering or science background. Graduates trained at these levels are need at various industries to support the OSH practices in the field. The Master degree programs offered can either be research work (thesis) or by coursework.

The study mode for Master degree program can be either full time (where students are enrolled throughout the 3-4 semesters) or part time (where the durations can extend longer than 4 semesters for those who are in employment). The class for coursework structure can be offered on regular days or after hours and weekends which are known as "executive program", in order to accommodate part time student with a full-time job.

For doctorate level, students can either enrolled full time or part time doing a research dissertation. The duration of study is usually 6-8 semesters for full time enrolment and longer (6-10 semesters) for a part time with 40 credits.

5.7.2.3 OSH programs in Institute Collaborating with Universities

There are training institutes such as NIOSH which collaborates with the Universiti Utara Malaysia (UUM) in offering a Master Degree in Occupational Safety and Health Management. NIOSH also collaborates with Open University Malaysia (OUM) offering the Executive Diploma in Occupational Safety and Health.

Besides that, the Business and Advance Technology Centre also collaborate with Universiti Teknologi Malaysia (UTM) for an Executive Diploma in Occupational Safety and Health. Another institute, Kuala Lumpur Infrastructure University College (KLIUC) also collaborates with UTM offering Diploma in Occupational Safety and Health.

5.7.3 Education and Training by OSH-Related Association

In Malaysia, there are various OSH-related associations which make great impact in building a sustainable platform for health and safety professionals and anyone who have passion for safety and health at workplace worldwide. These associations aim to develop, maintain and promotes a body of knowledge that defines professional best practice and remains committed to creating a profession that can deliver and contribute to the national development of OSH in the field.

One of the way these professional society or association contributes are through sharing of knowledge in training/short courses to their professional health and safety members. These educational, training and awareness raising program are usually recognized as Continuous Educational Program (CEP) by DOSH, Malaysia. Competent persons registered with DOSH are required to accumulate a certain amounts of CEP points annually in order to maintain and renew their registration of competency.

Other than CEP program on educational and training purposes, some of these societies also provide DOSH-accredited competency program, as shown in Table 5.8 below:

Table 5.8: Associations provided CEP and DOSH-accredited certification program

Association	Example of DOSH-accredited certification program commonly offered
Malaysian Industrial Hygiene Association (MIHA)	▪ Basic, Intermediate and Advanced course for CLASS Regulation ▪ Competent Indoor Air Quality Assessor ▪ The Certified Professional Industrial Hygienist (CPIH) a program recognized and endorsed by the International Occupational Hygienist Association (IOHA) Committee.
Master Builders Association Malaysia (MBAM)	▪ Site Safety Supervisor Program
Malaysian Offshore Contractors Association (MOCA) Resources	▪ Authorized Entrant (AE) and Standby Person (SP) for Confined Space
Other Societies usually offering OSH-related program	
▪ Malaysian Occupational Safety and Health Practitioners Association (MOSHPA) ▪ The Malaysian Society for Occupational Safety & Health (MSOSH) ▪ North Region Group Safety Health Environment (NRG-SHE) ▪ Malaysian Occupational Safety and Health Officer (MASHO) ▪ Society of Occupational and Environmental Medicine (SOEM) ▪ Academy of Occupational and Environmental Medicine Malaysia ▪ Society of Occupational and Environmental Medicine (SOEMM) ▪ Sabah OSHE Association (SOSHEA) ▪ Malaysian Occupational Safety & Health Practitioner's Association (MOSHPA) ▪ Persatuan Pengamal Pengurusan Keselamatan, Kesihatan dan Persekitaran Pekerjaan Malaysia (OSHEM) ▪ Human Factors and Ergonomics Malaysia (HFEM) ▪ Malaysian Occupational Scaffolding Association (MOSA)	

5.7.4 Examples of Trainings Programmes Organized by Employers' and Workers' Organizations

5.7.4.1 Malaysian Employers Federation (MEF)

Malaysian Employers Federation (MEF) is the central organization of private sector employers in Malaysia recognized nationally, regionally and internationally. MEF Academy has a comprehensive range on public courses at competitive rates for members to prepare for current and future challenges. Facilitated by experienced trainers in their respective fields, training at MEF covers the entire spectrum of Industrial Relations, Human Resources Management & Development and Occupational Safety & Health (OSH).

Various OSH programmes were held throughout the year of 2010 to 2015 including training and awareness on safety and health at the workplace. These educational, training and awareness raising program are usually recognized as Continuous Educational Program (CEP) by DOSH, Malaysia. In 2015, 18 training programmes on OSH were conducted; of which 9 were public training programme, while another 9 were in-house training programmes. In 2014, there were 14 training programmes conducted for MEF members while in 2013, a total of 19 trainings were conducted.

Appendix 5X listed the training program held by MEF.

Other than training program, MEF academy also offer various certification and academic courses related to Industrial Relations and Occupational Safety and Health. Their executive Diploma is designed as an in-depth advanced course targeted at Human Resource practitioners and specialist Industrial Relations / Labour Laws personnel. This is a highly acclaimed and private sector recognized course, conducted by industrial relations practitioners, lawyers, human resource specialist, academicians and representatives from the ILO.

Their academic program mainly offer to Human Resource and Administration Managers, Heads of Departments and Senior Executives, Occupational Safety and Health Personnel, Management Decision Makers and anyone engaged with managing Employees. Table 5.9 summarizes the certification and academic course offered by MEF academy.

Table 5.9: The Certification and Academic Course offered by MEF Academy

CERTIFICATION AND ACADEMIC COURSES	PROGRAM OUTLINE
Certified Job Analysis Specialist (MEF Academy-UNIMAS Certificate Program)	Provide the tools and techniques to unravel the different job spectrum and how job dynamism can impact on the organization's strategy and structures.
Accredited Certificate in Human Resource Management (MEF Academy-UNIMAS Certificate Program)	Provide practical knowledge and skills for individuals currently employed in the human resources and administration function and who are considering entering the Human Resources field.
Accredited Certificate in Industrial Relations (MEF Academy-UNIMAS Certificate Program)	Provide knowledge & skills for all levels of employees and employer who requiring a wide understanding of the industrial relations and labour laws in managing human resources.
Executive Degree in Human Resources Management and Industrial Relations (MEF Academy-OUM Certificate Program)	Formalize competency standards required for effective human resource management & industrial relations professionals within an organization.
Executive Diploma in Human Resources Management and Development	Provide comprehensive approach for personnel working in / entering Human Resources field.
Executive Diploma in Industrial Relations	An in-depth advanced course targeted at Human Resource practitioners and specialist Industrial Relations / Labour Laws personnel.
Certificate in Occupational Safety and Health Management	Provide knowledge and skills for individuals currently employed in the occupational safety and health or Human Resources function and who are considering entering the OSH field.

5.7.4.2 Malaysian Trade Union Congress (MTUC)

MTUC is a federation of trade unions representing the Malaysian workers from all major industries and sectors in Malaysia. Over the year, it had been organizing various training on OSH, this includes basic courses on OSH, OSH intermediate training, OSH advance training, OSH Information workshop and specialized training in OSH. Most of the training is conducted in house and includes various topics in OSH are usually recognized as Continuous Educational Program (CEP) by DOSH, Malaysia. Topics covered are as follow:

a) HIV/AIDS at Workplace
b) Emergency Response Plan
c) Guidelines on OSH for Standing at work
d) How union can strengthen its effort in OSH
e) MTUC's policy on OSH
f) OSH challenge in Malaysia-DOSH view of point
g) Occupational Health diseases
h) OSH practices in Malaysia-past, present and challenges ahead
i) Stress management at the workplace
j) SARS at the workplace
k) Sexual harassment at the workplace

5.7.4.3 Federation of Malaysian Manufacturers (FMM)

FMM Institute, a subsidiary company of the Federation of Malaysian Manufacturers, was established to provide industry-relevant skills training for the manufacturing and services sectors for the continuing development of the human capital. These educational, training and awareness raising program are usually recognized as Continuous Educational Program (CEP) by DOSH, Malaysia. The corporate training programs cover of short courses, certification programs and diploma level programs which are stated as below:

a) <u>Corporate training programs</u> –

- Behaviour-Based Safety and Safety Performance Measurements
- Emergency Response Planning and Preparedness
- Enhancing Safety Programmes at Workplace Through an Effective Safety Committee
- Hazard Identification, Risk Assessment and Risk Control (HIRARC)
- How to Develop an Effective Safety and Health Committee
- Occupational First Aid Skills and Cardiopulmonary Resuscitation (CPR) Programme
- Occupational Health and Safety Leadership – A Paradigm
- Safe Forklift Driving Skills
- Total Chemical Safety Management
- Warehouse Safety and Manual Material Handling
- CLASS Regulations 2013: Implementation and Compliance Workshop
- Accident Investigation, Prevention and Reporting
- Compliance with Clean Air Regulations 2014
- Complying with the Environmental Legal Requirements and Scheduled Waste Management in Malaysia

- Developing an Effective Emergency Response Team: Mitigating Potential Losses
- Effective Environmental, Occupational Health and Safety Management
- Developing Effective Hearing Conservation Programme for Safe Work Environment
- Safe Handling of Chemical
- Operation Reach Truck Safety
- PPE at Workplace: Promoting Good Safety Practice and Compliance

b) <u>In-house Industry Safety & Environmental Management training programs</u> –

- CLASS Regulations 2013
- Accident Prevention at Workplace
- Basic Emergency First Response Team
- Basic Fire Safety Programme
- Chemical Safety Management
- Emergency First Aid and CPR Refresher Programme
- Safe Forklift Driving
- Safety Training for Safety Committee Members
- Safety and Health at Workplace
- Compliance with the Occupational Safety and Health Act 1994 and Its Regulations
- ISO 14001 Environmental Management System (EMS) Internal Auditing

c) <u>Certificate programs</u> –

- FMM Institute is an accredited centre to offer the Certificate in Safety and Health Officer Courses.
- Other certification program includes Container Packing Certificate (CPC) to equip authorized signatories with knowledge on dangerous cargo, prepared the participants to take public examinations conducted by Energy Commission to be competent persons such as Boilerman, Steam Engineer, Chargeman and Wireman.

d) <u>Diploma programs</u> –

- Enabled FMM diploma graduates to transfer their credit to the Logistics and Supply Chain Management, and Business Management Degree programs conducted by the Wawasan Open University.

5.8 Emergency Preparedness and Its Organization

Emergency can be defined as an incident or event which requires the suspension of normal activities or operation and activation of prompt coordination of available

resources in the protection of safety, health, welfare as well as to limit damage to properties without the need for external assistance.

On the other hand, disaster is characterized by an incident or situation that is complex in nature resulting in the losses of lives, properties damage, economics losses and environmental damages thereby require a comprehensive management, coordination and mobilization of extensive manpower, responders and resources usually involving external assistance.

To prevent incidents from becoming disastrous, an Emergency Response Plan (ERP) is implemented to minimize the potential damage to workers, community and the environment. It is a coordinated set of protocols and an ordered list of events to take place or procedures to be followed. Important elements in a program are the overall plans and the resources required to execute the plans. A comprehensive EPR would cover not only on-site incidents but also off-site incidents.

5.8.1 Workplace Emergency and Disaster Management in Malaysia

Emergency management is a comprehensive system set up to address and handles man-made and natural hazards. As shown in Figure 5.3, emergency management at workplace comprises of **four (4) phases**:

Figure 5.3: Emergency Management Cycle in Malaysia

5.8.1.1 Mitigation and Prevention

Mitigation is the sustained actions taken to reduce or eliminate any foreseen and long-term risk to people and property from hazards and their effects. With this, a mitigation plan is an on-going planning process which helps to form the foundation for a workplace strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction and repeated damage. This can be done through risk analysis, vulnerability analysis, hazard assessment or risk assessment at the workplace.
Prevention measures, on the other hand, is the preliminary actions implement by the management based on the risk-based decision making mitigation output. The prevention measures can be structural or non-structural.

Structural measures use technological/engineering solutions at machinery settings or chemical usage. The most common preventive measures applied are the installation of emergency warning system, such as emergency alarm (audible or visual alarms), or emergency shut-down systems.

Conversely, non-structural measures include behavior-based and human factors solutions by changing the safety behaviors of the workers through hazard and risk assessment. Refer Section 5.8.1.2 and 5.8.1.3 below for the provision of preventive measures through enforcement.

5.8.1.2 Preparedness

During this phase, resources such as (Chemical) Safety Data Sheets obtained from companies producing chemicals are valuable source of information on such material. The document typically contains information on physicochemical properties of the chemical which can be used for containment, emergency first aid measures and antidotes through different routes of exposures as well as toxic effect of the chemicals to the environment.

In Malaysia, companies which located in a particular industrial zone would usually sign an agreement to be part of the area mutual assistance program in cases of emergency. It helps enlarge the pool of resources and is especially beneficial for the smaller industries that may be less well equipped to cope with major incidents.

This effort of coordination has been implemented with the neighboring communities, and government emergency response agencies to liaise and maintain a network of mutual aid. The mutual aid plans were developed and the plan has approved by the local emergency plan committee.

At the preparedness stage, the purpose of mutual aid is (1) to ensure that yearly drill is conducted at one of the facilities and members from neighboring plants will come and assist, (2) Site visits among members to the different plans to get a better idea of their operations and how to best respond in an emergency, (3) maintaining list of resources in central location.
Among some examples of voluntary existing mutual aid group are as follow:

- ❖ Petroleum Industry of Malaysia Mutual Aid Group (PIMMAG), supported by 15 operating oil companies to provide a coordinated Tier 2 response supplementary to member resources. There are three manned equipment bases at Kemaman, Port Dickson, Labuan and three unmanned bases at Kuching, Miri and Tawau.

- ❖ Pasir Gudang Emergency Mutual Aid (PAGEMA), involves the government agencies and high risk industries at Pasir Gudang Industrial Area to contribute effort in managing an emergency, e.g. chemical emergencies, chemical fire, natural disasters and severe weather, and radiation emergencies.

- ❖ Gebeng Emergency Mutual Aid (GEMA) agreement, initiated by BASF PETRONAS Chemicals which located at Gebeng Industrial Zone as part of area mutual assistance program.

Other than mutual aid agreement with neighboring industrial's community, most of the industries still implement their in-house emergency preparedness as follow:

- A yearly drill is conducted to train and familiarize personnel with emergency plan for specific duties which required special skills

- Types of training is planned, ranges from didactic lectures to disaster drills, e.g. chemical spillage handling, workplace first aid and basic life support, emergency preparedness and response and firefighting etc.

- Regular tests of emergency equipment and facilities e.g. spill kit, firefighting equipment, first aid, medical emergency and rescue equipment, etc.

5.8.1.3 Response

In year 2001, the Fire and Rescue Department came up with guidelines on creating an emergency response Plan (ERP), which incorporates the Incident Command System (ICS) with the formation of emergency response team (ERT) (Figure 5.4). The emergency response plan needs to incorporate the ICS and the Incident Action Plan (IAP) both on-site and off-site.

In view of this, different organization plans their ERT organization chart based on their resources, manpower and types of emergencies. The IAP is the specific actions or procedures in response to different types of emergencies, where the IAP for fire, chemical spillage and toxic release have different procedure in response plan.

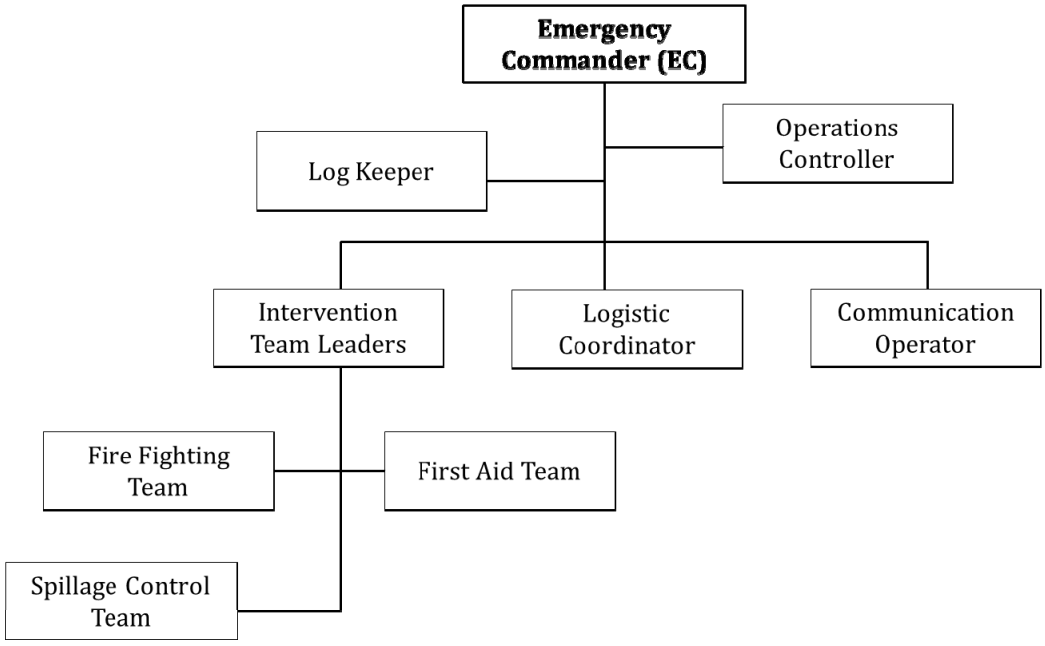

Figure 5.4: Example of Emergency Response Team (ERT) in Malaysia

Members of the ERT have different roles and responsibilities in the organization, which ultimately determine the effectiveness of the IAP (Table 5.10). The general principles of emergency procedures shall include (but not limited to) alarm activation; evacuation, rescue and first aid procedure; channels of communication and notification; and termination of emergency. Therefore, the ERP report must contain information on the management organization for the building or industry, process/operation flow chart, risk assessment and hazard identification for process and storage areas as well as transport.

Table 5.10: Example of an Incident Command System During an Emergency

ERT Organization	Roles and Responsibilities
Emergency Commander (EC)	– Control the emergency situation until relieved by BOMBA – Decide the necessary actions to combat emergency – Give an order for evacuations – Debrief once the incident is over
Operations Controller	– Support the role of EC – Provide technical advice to EC

ERT Organization	Roles and Responsibilities
Log keeper / historian	– Record time of all events & actions taken – Keep tracks of missing persons – Keep tracks persons involved in search & rescue
Intervention Team Leaders	– Lead the firefighting team, first aid team, spillage control team, search & rescue team etc.
Logistic Coordinator	– Mobilizes support vehicles, cleanup equipment, storage vessels, as & when required for the emergency
Communication Operator	– Liaise with media/relatives – Call for assistance & notifies relevant agencies & people

Other areas covered in this report are procedures, strategy and tactics, training and exercise, mutual aid arrangements, creation of pre-designated facilities, firefighting, and rescue and hazmat equipment.

5.8.1.4 Recovery

This phase has short term and long-term measures. The relief and rehabilitation efforts, which include clearance of debris and restoration of critical public services and provision of care to the victims, are short-term measures, while reconstruction activities (i.e. rebuilding of major structures such as building, roads, and machinery) or rehabilitation of those caused injuries by the emergency are long term measures.

5.8.2 Emergency Management Related Laws and Standards in Malaysia

The Malaysia government has recognized the need to regulate activities which have potential to cause major hazards. However, there are no single or comprehensive legislation on emergency management that covers all aspects of natural or man-made emergency in the industries. Regardless of the legal requirements, various governmental agencies, statutory bodies and private organizations have voluntarily published their own manual, standard operating procedures or guidelines in the management of disaster for their internal use.

5.8.2.1 OSH (Control of Industrial Major Hazards Installation) Regulations 1996

In the workplace setting, emergency preparedness including first aid is the responsibility of employer specified in the Occupational Safety and Health legislation.

Specifically, the primary legal provision which set forth such requirement in detail is addressed under Occupational Safety and Health (Control of Industrial Major Accident Hazards) Regulations 1996 enforced by DOSH.

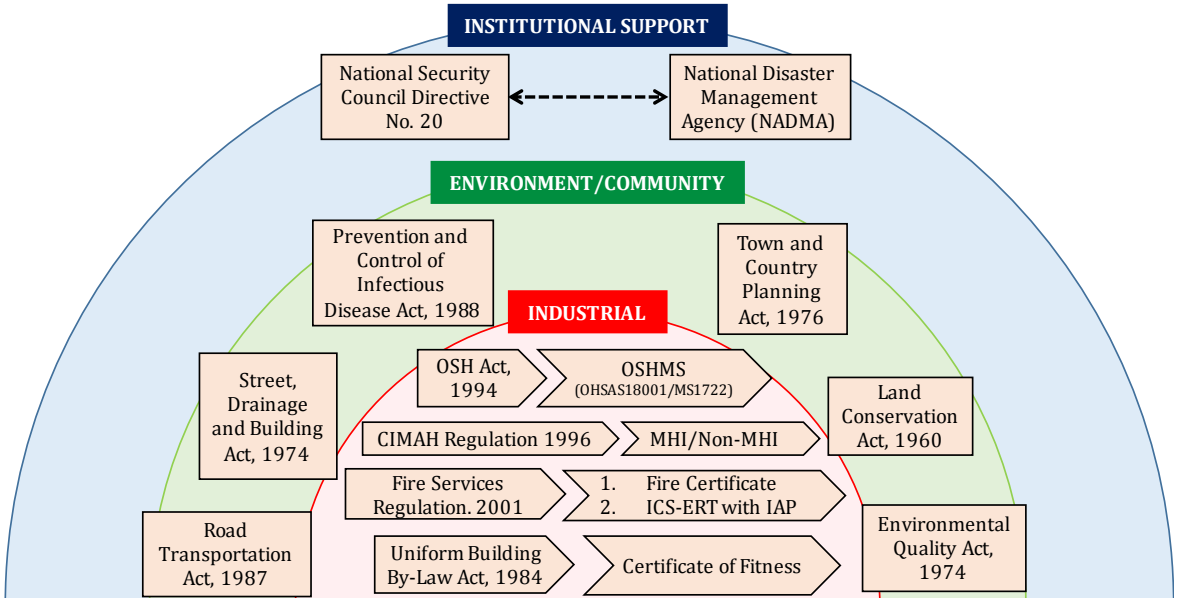

Figure 5.5: Framework for Emergency Management in Malaysia

In reference to the Regulation, the word emergency in the workplace or industrial setting can be referred to major accident as being defined as follow:

> *"An occurrence, event or situation of a major emission, fire or explosion resulting from uncontrolled development in the course of an industrial activity which leads to serious danger to persons, whether immediate or delayed or inside or outside and installation, or to the environment, and involving one or more hazardous substances"*

The regulation is directly empowered under the Director General of DOSH and it is applied to all industrial activities **except**:

a) a nuclear installation;

b) installation under the armed forces;

c) a vehicle or vessel transporting hazardous substances to or from the site of an industrial activity; and

d) an industrial activity in which there is involved or likely to be involved a quantity of hazardous substance or a category or categories of substances which is or are equal or less than ten per cent of the threshold quantity of the hazardous substance or substances.

As shown in Figure 5.6, the Regulation provides classification of industrial operations or activities being considered as major hazard installation (MHI) or non-major hazard installation (NMHI) based on the types of operation, types and quantity (threshold quantity) of hazardous chemical.

It further describes the requirement for approval of the installation following a comprehensive report whereby the risks are being identified, assessed and adequately controlled and reviewed periodically.

Table 5.11 summarizes the distribution of Major Hazard Installation (MHI) and Non-Major Hazard Installation (NMHI) in Malaysia. As shown in Figure 5.6, CIMAH Regulation 2016 make it mandatory requirement to prepare both on-site and off-site emergency response plan.

This regulation has specified the requirement to furnish, review and update the on-site emergency preparedness plan in the event of major accident hazard which likely to causes threat to property, life, product, and environment within the authority of a particular workplace.

Additionally, where the emergency may escalate to surrounding area (off-site), the provision of all reasonable facilities, preparation and implementation shall involve local or port authority and communicated to public in the off-site emergency preparedness plan.

Table 5.11: The Reported Industries Compliance with CIMAH Regulation from Year 2010-2015

YEAR	MHI	NMHI	LAI	ERP	ITP
2010	236	536	105	94	41
2011	270	589	112	101	17
2012	274	592	125	63	14
2013	277	737	106	71	22
2014	297	779	89	75	24
2015	299	870	99	71	43
2016	315	908	84	62	30

MHI = Major Hazard Installation
NMHI = Non-Major Hazard Installation
LAI = Industrial Activity Report
ERP = Emergency Response Plan
ITP = Information to the Public

(Source: Statistics from Petroleum Safety Division, DOSH, Malaysia, 2016)

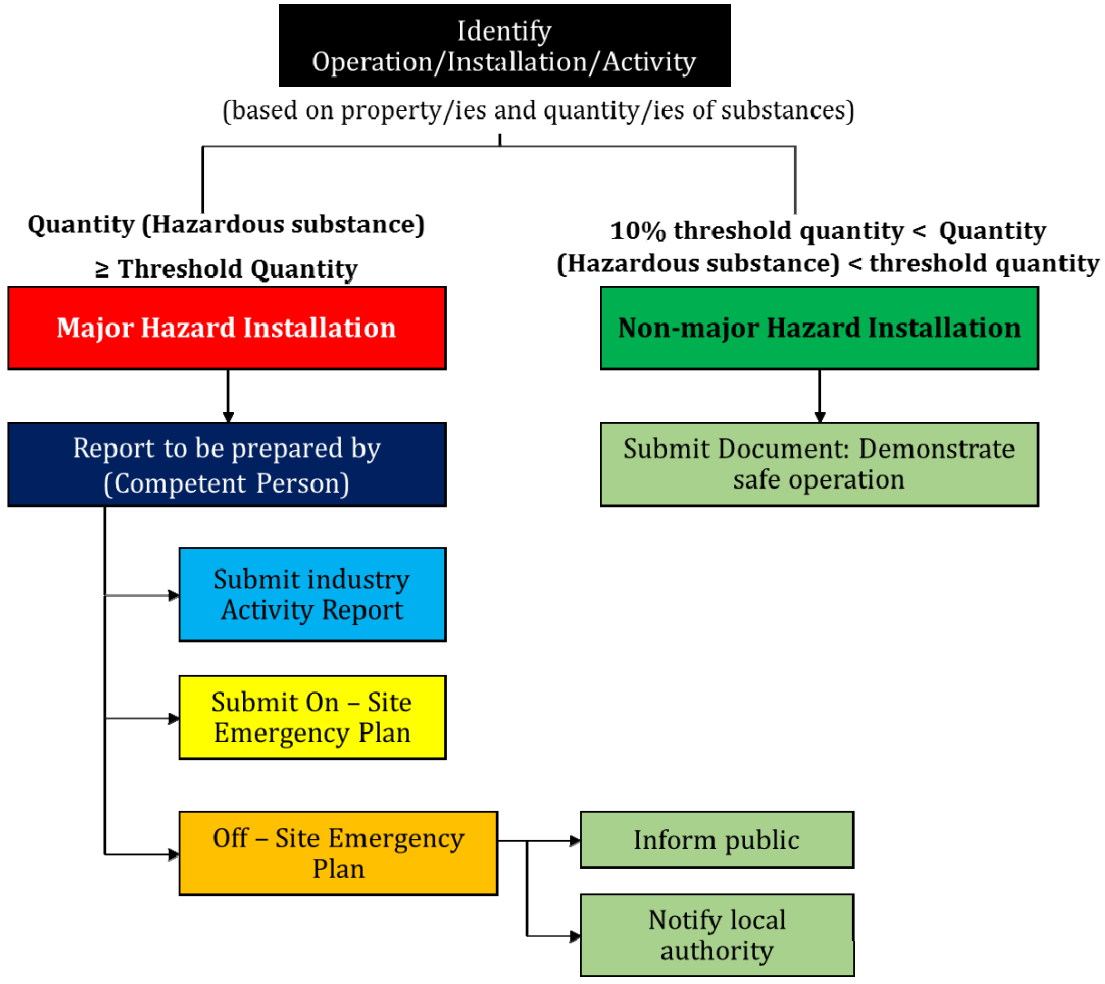

Figure 5.6: Summary of OSH (Control of Industrial Major Hazards Installation) Regulations 1996

5.8.2.2 Fire Services (Fire Certificate) Regulations, 2001

The Fire Services Act 1988 states the need for premises to obtain a fire certificate of which the details required to obtain this certificate are listed in Fire Services (Fire Certificate) Regulations 2001. The elements required to obtain a fire certificate are personal safety facility, fire prevention, fire protection, firefighting facilities, special needs and firefighting team on site.

Firefighting facilities should be checked to ensure that the devices are in good conditions for the renewal of the fire certificate annually. Although there is no specific mentioning in the Fire Services (Fire Certificate) Regulations 2001 on the need of an ERP, all the provisions mentioned are in fact elements within an ERP in an organization.

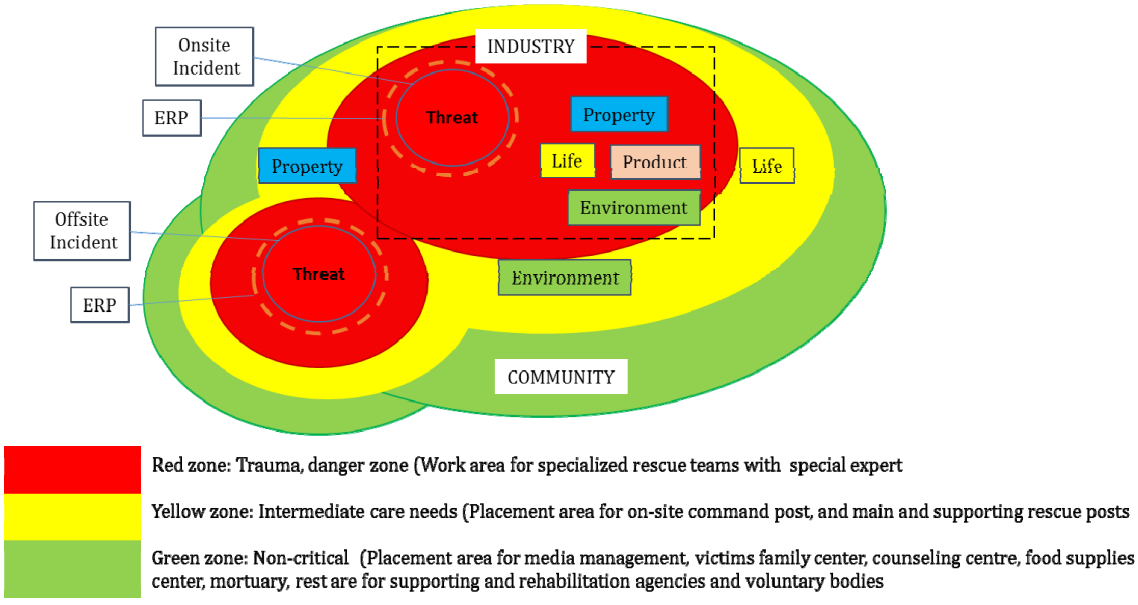

Figure 5.7: An example of threat management in an Emergency Response Plan

5.8.2.3 Uniform Building By-Laws (UBBL) 1984

The Uniform Building By-Laws 1984 states that as a pre-condition to the issuance of the Certificate of Fitness (CF) for a designated building, the local authority or an officer authorized by it must have inspected the building and that "all essential services including access roads, landscape, car parks, drains, sanitary, water and electrical installation, fire lifts, fire hydrant and others where required, sewerage and refuse disposal requirements have been provided.

Even though there is no specific mention on the need of an EPR in this UBBL, all the requirement for fire alarms, fire detection, fire extinguishment and firefighting access mentioned are in fact elements within an ERP in an organization.

5.8.2.4 Environmental Quality Act (EQA) 1974

Under the Environmental Quality Act (EQA) 1974, there is concerned for the scheduled hazardous waste transportation in the country. There are two major requirements, major fire response procedure, and major accident response procedure, which only focus on environmental pollution prevention.

5.8.2.5 Occupational Safety and Health Management System (OSHMS)

To improve the compliance of Emergency Preparedness and Response (EPR) and its provision of resources and facility, industries adopt the international/national occupational safety and health management system (OSHMS), such as,

- OHSAS 18001: 2007, Clause 4.4.7- Emergency Preparedness and Response
- MS 1722: 2011, Clause 3.3.4 - Emergency Prevention, Preparedness and Response

This is the standard document established by consensus and approved by a recognized body that provides setting up the ERP rules, guidelines or characteristics for activities, aimed at achievement of the optimum degree of order in a given context.

5.8.3 District, State and National (Local) Emergency and Disaster Management

In the event that the emergency escalates to disaster which is beyond the capability of the organization to respond, the management of the situation shall be handed over to the appropriate authority by notifying the emergency responders via MERS 999 which is the general line for emergency linked to various authorities on standby. Commonly, the activation of emergency system in most major hazard installation is automated to directly trigger the response of emergency services hence shortening the response time.

5.8.4 National Security Council Directive No. 20 (Revision 2012)

In Malaysia, the management of emergency, the instructions on policy, mechanism and structure for disaster and relief management on land primarily refers to National Security Council Directive No. 20 (Revision 2012). The Directive was first established on 1996 following the crash of Highland Towers in 1993 has been since revised in 2012 to accommodate various changes in due time, pattern and complexity of disaster.

The Directive detailed out a mechanism for more comprehensive disaster management including levels prior, during and after a disaster event as well as the roles and responsibilities of governmental agencies, statutory bodies, private sectors and voluntary organizations described in the following sub-chapters. The Directive is available at http://portalbencana.ndcc.gov.my/FileRepository/Portal/20150109-16012516.pdf.

Other than the national legal requirement gazette to prevent workplace-related emergency (Refer Section 8.1), the working committee of National Disaster Management

must comply with the National Security Council Directive No. 20 alongside other national legal frameworks in development process as follows:

- Land conservation Act 1960 (Act 385);
- Local Government Act 1976 (Act 171);
- Street, Drainage and Building Act 1974 (Act 133) (Revision 2007);
- Town and Country Planning Act 1976 (Act 172);
- Prevention and Control of Infectious Disease Act 1988 (Act 342);
- Road Transportation Act 1987 (Act 333) (Revision 2012);
- And other related Acts etc.

5.8.5 Level of Disaster Management and Committee

As summarized in Figure 5.8, the disaster management structure in Malaysia is divided into 3 escalating levels of committee; district, state and federal with respective scope, tasks and job functions. The different levels of management depend on the assessment by respective level of Disaster Management Committee is based on the criteria:

i) Complexity and magnitude
ii) Destruction and damages
iii) Financial capability, human resources and facilities/equipment
iv) Expertise
v) Assistance
vi) Response time

Level 1 Disaster refers to a localized controllable incident and does not have potential or spreading. In this case, the Level 1 District Disaster Management and Relief Committee (*Jawatankuasa Pengurusan Bantuan & Bencana Daerah*, JPBBD) coordinate and mobilize the existing or available assets and human resource at District level without external support or with limited external support.

Level 2 Disaster refers to disaster which took place across two districts in the same state and/or has the potential to spread. As such, the management of disaster shall be coordinated by Level 2 State Disaster Management and Relief Committee (*Jawatankuasa Pengurusan Bantuan & Bencana Negeri*, JPBBN) who has state resources and limited federal resources at their disposal in overcoming the disaster.

Level 3 Disaster refers to a complex disaster often affecting a wide area or more than 1 states which requires coordination and mobilization of national resources by the Level 3 Central Disaster Management and Relief Committee (*Jawatankuasa Pengurusan Bantuan & Bencana Pusat*, JPBBP) with or without additional assistance from foreign countries.

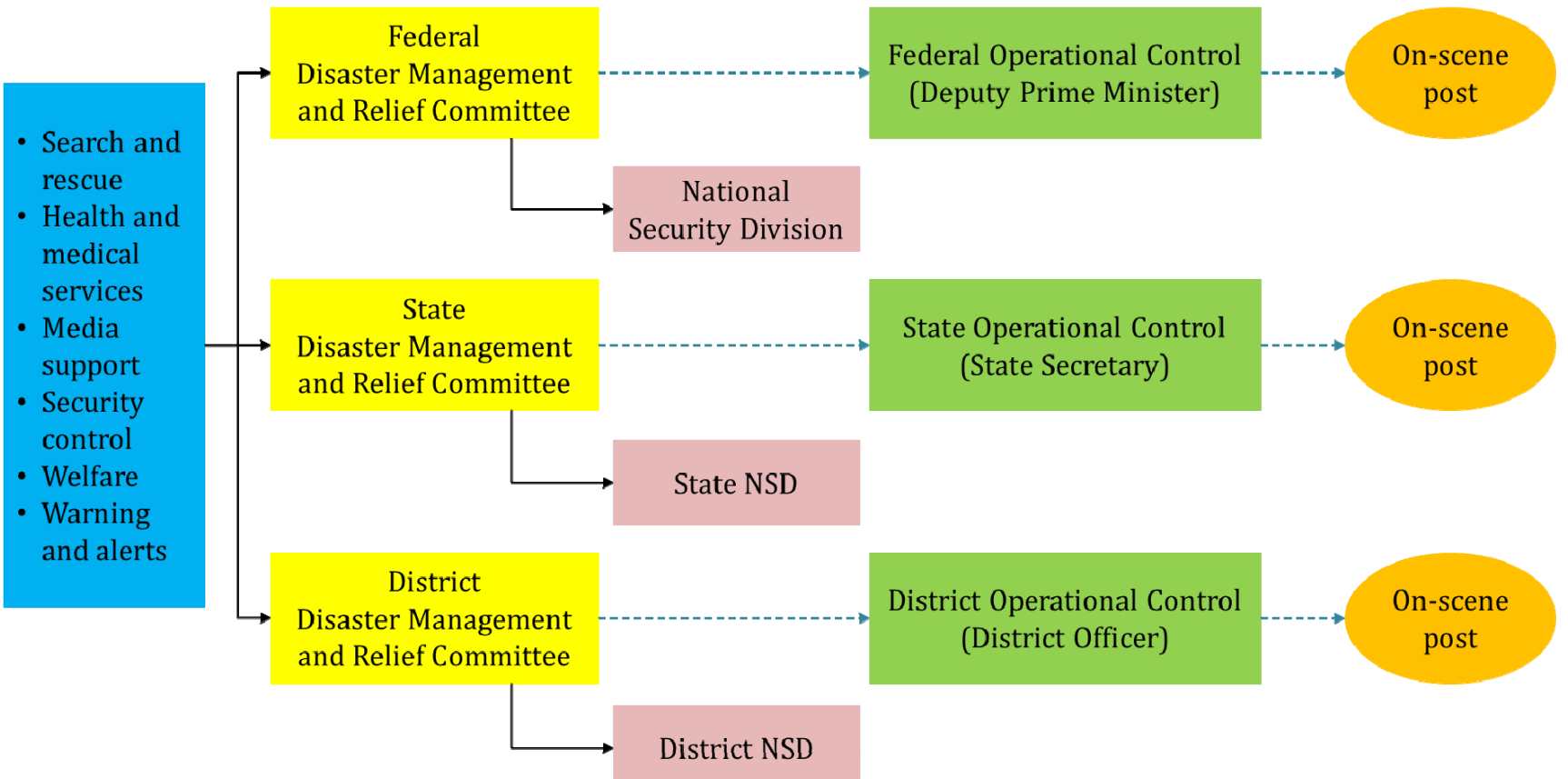

Figure 5.8: Summary of escalating disaster management structure

5.8.6 Coordinating Agency

The responsibility in management and relief of disaster (and emergency) falls under the new National Disaster Management Agency (NADMA) established in 2015 under the Prime Minister Department which took over the roles previously under National Security Council. Figure 5.9 shows the existing organizational structure of NADMA. It should however be noted that due to the fairly recent establishment, the discussion in the following sub-chapters are based on existing references – the NSC Directive No.20.

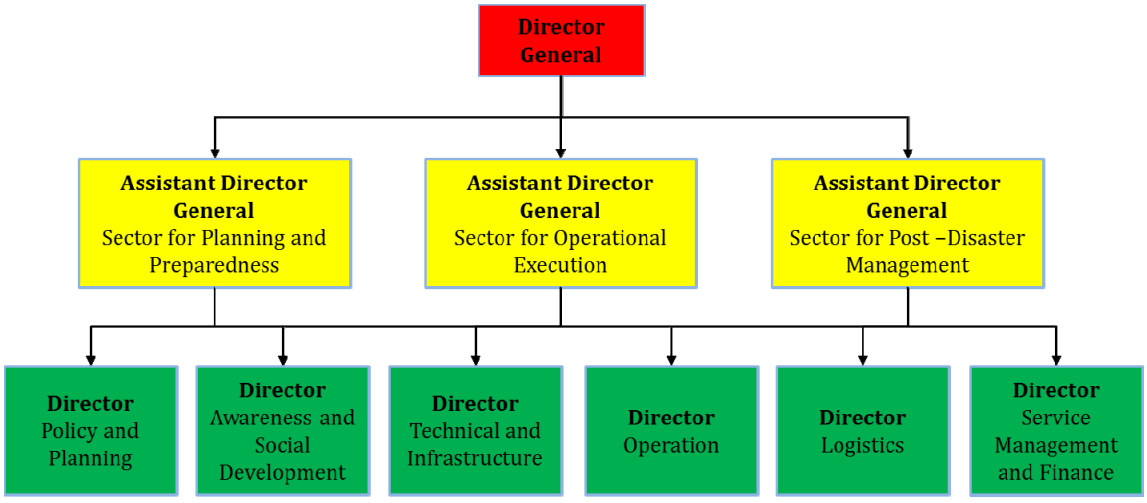

Figure 5.9: Organizational structure of NADMA

(Source: http://www.nadma.gov.my/nadma/)

5.8.7 Public Health Crisis Preparedness and Response

In the public health area, the Disease Control Division (DCD) of the Ministry of Health (MOH) has been the main leading agency on issues concerning outbreaks of infectious diseases. The MOH responded effectively to public health related incidents by mobilizing required health resources. Individually, sections of the Public Health branch have developed and implemented guidelines and Standard Operating Procedures (SOPs) to control and management of communicable disease during routine work activity (e.g. construction activity), natural disaster (flood, SARS, etc.), such as:

- Environmental health surveillance
- Sampling and laboratory investigation in outbreak management
- Disease notification and surveillance
- Outbreak investigation & management

5.8.8 Other Agencies Involved in Disaster Management

Besides the involvement of Ministry of Health (MOH), the involvement of multiple governmental agencies is inevitable given the various aspects of concerns being addressed demands immediate attention or solution during a disaster emergency. Figure 5.10 shows an example of composition and roles of each governmental agency in an on-scene command post during disaster.

Ultimately, the mission of emergency response team is to minimize injuries, property damages and provide rapid recovery in coordination with the emergency plan where emergency response team from respective governmental agencies typically serves a highly specialized and complementary functions, roles or responsibilities.

Among some of the primary agencies involved in search and rescue are as follow:

i. Special Malaysia Disaster Assistance and Rescue (SMART) Team
ii. Royal Malaysian Police (PDRM)
iii. Fire and Rescue Department Malaysia (JBPM)
iv. Malaysian Armed Forces (ATM)
v. Ministry of Health (MOH)
vi. Department of Civil Defense (JPAM)

Other associated agencies involved in relief, recovery and technical support (i.e.: utilizes, telecommunication, media, welfare, healthcare services) are such as:

i. Malaysian Public Works Department (JKR)
ii. Department of Information
iii. Department of Social Welfare (JKM)
iv. The People's Volunteer Corps (RELA)
v. Atomic Energy Licensing Board (LPTA)
vi. Ministry of Tourism
vii. Tenaga Nasional Berhad (TNB)/State Electrical Supply Companies
viii. Telekom Malaysia Berhad (TM)
ix. Malaysian Red Crescent Society (MRCS)
x. Other technical and expert agencies (such as DOSH, Department of Environment, Minerals & Geoscience Department Malaysia, etc.)

Among other statutory bodies, private organization, voluntary organization and individual who may provide assistance are such as but not limited to:

i. Universities
ii. Non-governmental Organization and Societies (such as MERCY Malaysia, United Nation, Malaysian Relief Agency, Malaysia First Aid Society, etc.)
iii. Private companies

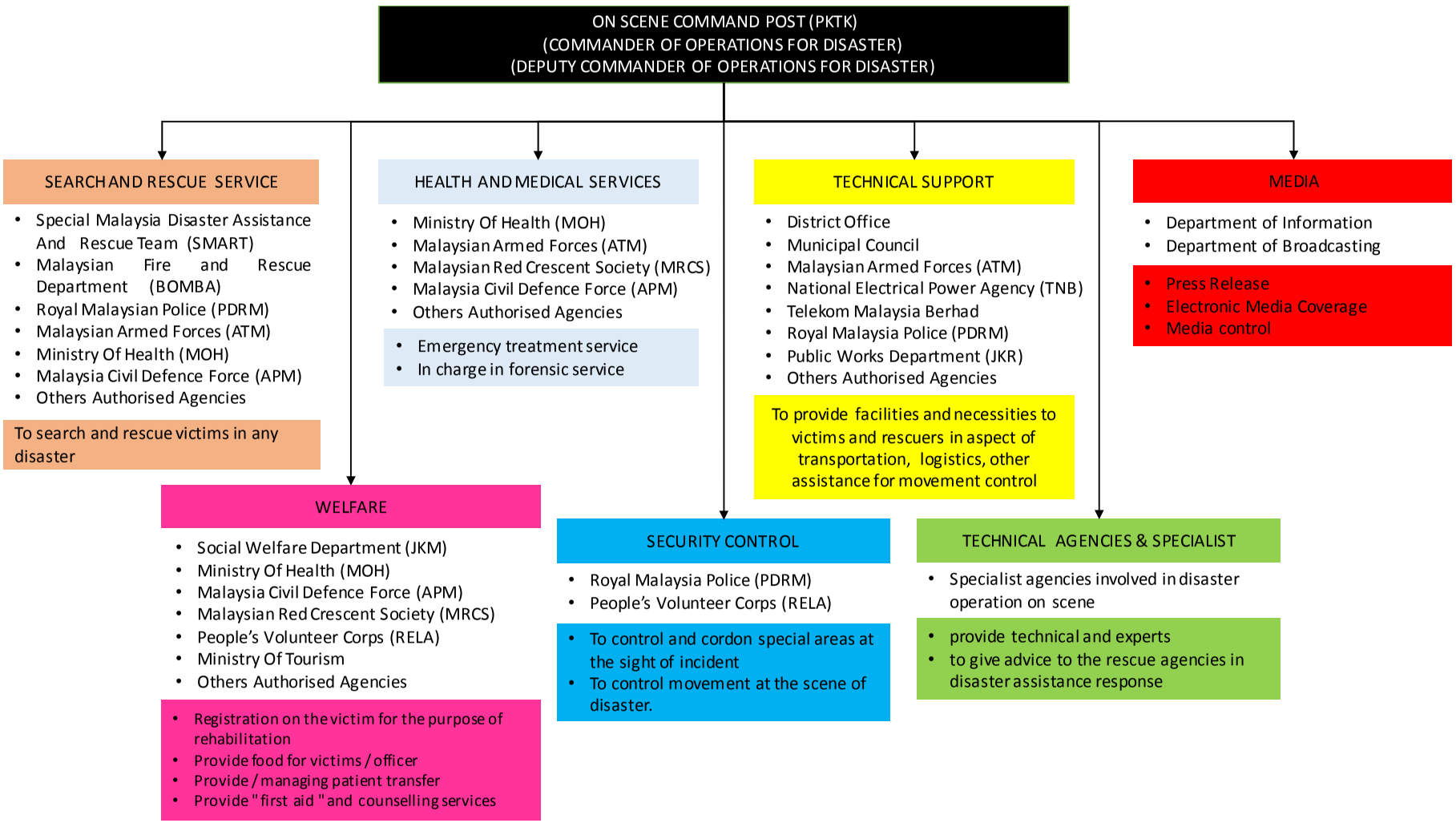

Figure 5.10: Composition and roles of each government agencies in a Disaster Management Committee

5.9 Occupational Safety and Health Practitioners, Professional/Competent Persons

OSH practitioner refers to individual who are trained and tasked to implement occupational safety and health programs, as well as support the occupational safety and health system in the workplace in accordance with the provisions of the OSH-related regulation.

OSH professional or competent person refers to any qualified person or group of persons who are duly-accredited to practice and render occupational safety and health services in a defined and specific scope or core competency. They may also provide consultative and/or advisory services on occupational safety and health fields.

5.9.1 Occupational Safety and Health Practitioners

5.9.1.1 Safety and Health Officer (SHO)

Occupational Safety and Health (Safety and Health Officer) Regulations 1997 require employers to employ SHO who are responsible for advising employers on measures to be taken in the interests of safety and health, investigating any accidents, near misses, dangerous occurrence, poisoning or disease, assist employer or safety and health committee in organizing and implementing OSH program, collect, analyze and maintain statistics, assist any officer in carrying his/her duty(ies) under the Act and Regulations and carry out any other instructions made by the employer regarding any matters pertaining to safety and health at workplace.

5.9.1.2 Site Safety Supervisor (SSS)

Under Regulation 25(1), of the Factories and Machinery (Building Operations and Works of Engineering Construction) (Safety) Regulations 1986 [BOWEC], the main contractor shall appoint a site safety supervisor for the safety supervision on construction activities within the site.

Among the duties of site safety supervisor are to inspect and rectify any unsafe conditions at the construction site, correcting any unsafe practices, reviewing work of sub-contractors to ensure compliance with the BOWEC or any other legislative provision made thereunder OSHA 1994 and FMA 1967 are complied with, and liaise with

contractor's safety supervisors appointed under Regulation 26 with respect to safety of work undertaken by sub-contractors.

Regulation 25(2) of Regulation BOWEC has stipulate that site safety supervisor must be a person who is competent to perform the duties specified in sub-regulation (3) and (4), and have qualifications approved by the Director General of the DOSH and working experience of at least for two years as a construction site foreman.

With regards to the competency of a site safety supervisor, Department of Occupational Safety and Health (DOSH) had decided that site safety supervisor must be a person who has successfully completed a site safety supervisor course carried out by the instructor registered with DOSH, and passed the examination conducted by the National Institute of Occupational Safety and Health (NIOSH) or institution accredited by DOSH.

5.9.2 Occupational Safety and Health Professional/Competent Persons

5.9.2.1 Major Hazard Competent Person

Major Hazard Competent Person is a registered OSH professional under the provisions of Regulation 13, Occupational Safety and Health (The Control of Industrial Major Accident Hazards) Regulations, 1996. Among the duties of the competent person is to provide consultations to the manufacturer in major hazard control especially in the following areas:

- In the preparation of a written Report (new report) containing the information specified under Schedule 6 of the Regulations for submission to the Director General.
- In the preparation of a further report (modification report) to take account of those changes make in any modification works for submission to the Director General.
- In the preparation of a further report (updating report) which shall have regard to new technical knowledge which materially affects the information in the previous report relating to safety and development in the knowledge of hazard assessment for submission to the Director General.
- In the preparation and keeping up to date an adequate on site emergency plan for submission to the Director General

5.9.2.2 Engineers and Drivers

Section 29 of Factory and Machinery Act, 1967 requires that certain machinery must be operated by competent person or staff who has undergoes training and deemed fit upon certified. Specific provision of these competent person was provided in the revised Factory and Machinery (Certificates of Competency – Examinations) Regulations, 1970 for competency as follow:

a) First Grade Engineer (Steam);
b) First Grade Engineer (Internal Combustion Engines);
c) Second Grade engineer (Steam);
d) Second Grade Engineer (Internal Combustion Engines);
e) Dredgemaster (Steam and Electric);
f) Dredgemaster (Internal Combustion Engines and Electric);
g) Dredgemaster (Electric);
h) First Class Engine Driver (Steam);
i) First Class Engine Driver (Internal Combustion Engines);
j) Second Class Engine Driver (Steam);
k) Second Class Engine Driver (Internal Combustion Engines)

Their primary duties were to ensure that the operation and maintenance of steam boiler, steam engine and internal combustion engine comply with the requirement of the Act and Regulations. Therefore, the occupier must ensure that machinery which is prescribed to be under the charge of a certificated engineer, dredgemaster or driver to be operated only by person with certificate of competency as an engineer, dredgemaster or driver; or written authority issued by the Director General of DOSH.

5.9.2.3 Scaffolder Fitter

Under Regulation 74(1), Factories and Machinery (Building Operations and Works of Engineering Construction) Regulations 1986, no scaffold shall be erected or be substantially altered or be dismantled accept under the direct supervision of a designated person. Every scaffolder should ensure installation according to design, sound material strength and safe for use.

5.9.2.4 Crane Operator

All crane operator should be registered with the DOSH before they can operate any cranes, such as tower crane, mobile crane and crawler crane. Under provision 26(1) of

the Factories and Machinery (Notification, Certificate of Fitness and Inspection) Regulations, 1970, this directive stipulates that all the said cranes must be operated by certificated operators. Crane operator is required to attend a Crane Operator course at training center recognized by DOSH. This is to ensure that the crane operators have a sufficiently high level of skills and are able to handle the crane correctly and in a safe manner.

5.9.2.5 Lift Competent Person

A person who intends to carry out duties as a Lift's Competent Person in pursuance to the provisions of Regulation 6, Regulation 30 and Regulation 31, of the Factories and Machinery (Passenger and Goods Lifts) Regulations, 1970 must be registered. There is different grade for the lift competent person; Grade I, Grade II and Grade III which has different qualification, duties tasks and responsibility respectively.

5.9.2.6 Designated Person (Hoisting Machine)

In pursuance to the provisions of section 29A, of the Factories and Machinery Act, 1967, no person shall manufacture, fabricate, test, install, maintain, dismantle or repair any machinery which is prescribed unless he has a written authority issued by the Chief Inspector. Thus, the duty of erection, maintenance and dismantling of hoisting machine is upon Designated Person (Hoisting Machine) in pursuance to the provisions of Section 29A, of the Factories and Machinery Act, 1967.

5.9.2.7 Occupational Health Doctor (OHD)

An OHD must have a basic medical degree registered with the Malaysian Medical Council and a post-graduate certificate or Diploma or Masters or PhD in OH that is recognized by DOSH. The need for an OHD is required under Occupational Safety and Health (Use and Standards of Exposure to Chemicals Hazardous to Health) Regulation, 2000 (USECHH) which stipulates that health surveillance must be conducted by Occupational Health Doctors registered with the department and having valid certificates.

The Occupational Health Division keeps a registry of Occupational Health Doctors and their renewal of registrations upon expiry. In compliance with this regulation, medical surveillances are conducted by the Occupational Health Doctors to protect workers exposed to, or likely to be exposed to, chemicals hazardous to health.

Apart from medical surveillance, Occupational Health Doctors are also responsible for carrying out health surveillance for employees who work in confined spaces to ensure the health of workers involved is in the optimum condition both physically and mentally. Health surveillance for employees working in confined spaces is as outlined in the Industry Code of Practice for Safe Working in Confined Space (2010).

The following are the list of roles and responsibilities of Occupational Health Doctor:

a) To conduct pre-placement medical examination, medical surveillance and other health management activities for employees.

b) To analyze Occupational Disease and Poisoning and co-relate with risk assessment. Interpret and explain the results of investigations to the employee and employer and specify what further action is necessary.

c) To notify cases of Occupational diseases and poisoning to DOSH and employer.

d) To assist in implementation of occupational health program in the workplace

e) To provide periodic education and advice to employees and employer on workplace health and safety issues.

f) To assist in audit/evaluation of occupational health program in the workplace; and

g) To maintain the medical records of employees during the course of employment and post termination.

5.9.2.8 Occupational Health Nurse (OHN)

Similar to OHD, possess basic nursing or medical assistant certificate, diploma or degree registered with the MOH; have a valid annual practicing certificate (APC) from the respective body (e.g. Nursing Board or Medical Assistant Board); and should complete a post-basic certificate, diploma or degree in Occupational Health.
Among the responsibilities of OHN in complementing the tasks of OHD are as described under the Guidelines on Occupational Health Services (2005) are as follow:

a) To manage cases (e.g. provide treatment, follow-up and referrals and emergency care for job related injuries and illnesses);

b) To counsel and intervene in crisis (e.g. counselling of workers about related illness and injuries, substance abuse and emotional problems);

c) To promote health such as health education programs that encourage workers to take responsibility for their own health;

d) To advise employer on legal and regulatory compliance; and

e) To assist in risk management (e.g. gathering health and hazard data, and using the data to prevent injury and illness).

5.9.2.9 Industrial Hygienist I and II

An Industrial Hygienist should possess a post-graduate degree in Occupational/ Industrial Hygiene from an accredited college/university or; a Bachelor's degree holder from an accredited college/university in industrial hygiene, biology, chemistry, engineering, physics or a closely related physical or biological science who with a minimum of 5 years working experience in industrial hygiene and by virtue of special studies and training, has acquired competence in industrial hygiene.

An Industrial Hygienist must be a full member of one the internationally recognized professional IH organizations such as MIHA, AIHA, ACGIH, BOHS, AIOH etc. A qualified Occupational Hygienist by the virtue of his/her academic qualification and working experience may be a competent Chemical Health Risk Assessor, Competent Person for Noise Monitoring and Hygiene Technician.

In Malaysia, Occupational Hygienist are divided into several different competencies in order for better monitoring by DOSH, compliance and specialization. Specifically, under USECHH Regulation (2000) and Guidelines for The Registration of Assessor, Hygiene Technician & Occupational Health Doctor 2nd Edition (2006), Hygiene Technician I responsibility is to carry out monitoring of exposure to chemical hazardous to health, while Hygiene Technician II is to carry out inspection, examination or test on engineering control equipment.

Table 5.12 differentiates duties for Hygiene Technician I and II.

Table 5.12: Duties and scope of Hygiene Technician I and II

Hygiene Technician I	Hygiene Technician II
Conduct employee exposure monitoring to chemical hazardous to health	Conduct the inspection, examination and testing of local exhaust ventilation system and other engineering control equipment

Hygiene Technician I	Hygiene Technician II
Make recommendation to the employer on the necessary improvement to be made to minimize the existing employee exposure	Make recommendation to the employer on the necessary improvement to be made to improve the performance of the existing equipment
Furnish a report of the chemical monitoring or the inspection, examination and testing of an engineering control equipment to the employer within one month of completion of the work	
Present finding and recommendation to the employer upon completion of the monitoring and examination report	
Submit (within 30 days) a summary to the Director General upon completion of the chemical exposure monitoring or inspection, examination and testing of an engineering control equipment of the nearest DOSH office.	

5.9.2.10 Authorized Gas Tester / Entry Supervisor

The requirement and tasks of Authorized Gas Tester and Authorized Entry Supervisor is detailed in the Industry Code of Practice for Safe Working in A Confined Space (2010). Authorized Gas Tested refer to a person who carry out atmosphere test for confined space. The main responsibility of AGT/ES includes:

a) Update knowledge on the hazards that may be faced during entry, including information on the mode, signs and symptoms, and consequences of the exposure

b) identify all chemical hazards and recommends control measures to ensure safe entry

c) be familiar with all confined space entry equipment used, for example emergency breathing apparatus, man riding winch, tripod, etc.

5.9.2.11 Indoor Air Quality Assessor

An Indoor Air Quality (IAQ) Assessor is a person who has the criteria outlined by DOSH and passed the IAQ examination or recognized equivalent IAQ competency. The roles of IAQ assessor is to assist employer in resolving indoor air quality issues and problem by carrying out the assessments of indoor air quality under the Industry Code of Practice of Indoor Air Quality (2010).

5.9.2.12 Ergonomist/Trained Person

An ergonomist should possess either a basic degree in ergonomics; or a degree in engineering, work physiology, biomechanics, psychology or other related sciences with a post-graduate diplomat or master in ergonomics; and three (3) years of experiences in solving ergonomics related works. Currently the need of ergonomist/trained person is enforced under Section 15 (General duties of employers and self-employed persons to their employees)

The responsibility of Ergonomist or Trained Person is as follow:

a) To identify work-related ergonomic risk factors in the working environment;

b) To assess work processes, tasks, designs and products, and assign risk level;

c) To give advice to the management on control measures of ergonomic related problems based on accepted ergonomic best practices and with any published government laws, regulations or guidelines that related to ergonomics;

d) To give advice to the management on how to manage work-related musculoskeletal disorders (MSDs); and

e) To communicate ergonomic solving process with the OHD, OHN, and the management team of a company.

5.9.2.13 Noise Competent Person

Under Factories and Machinery (Noise Exposure) Regulations 1989, the monitoring of employee exposed to noise shall be conducted by a competent person where the monitoring shall use approved noise measuring equipment for employee exposure monitoring.

5.9.2.14 Assessor (Chemical Health Risk Assessor)

The requirement of assessor is stipulated under Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000. An Assessor is a person who carries out chemical health risk assessment where their duties are as follow:

- To identify the hazards posed by each chemical substance used, stored, handled or transported within the place of work;

- To evaluate the degree of exposure of employees to the chemicals hazardous to health, either through inhalation, skin absorption or ingestion;
- To evaluate the adequacy of existing control measures;
- To conclude on the significance of the health risk posed by the chemicals hazardous to health; and
- To recommend further appropriate control measures to prevent or reduce risks

The summary of competent person from 2010 to 2016 is as tabulated in Table 5.13 below. Number of safety and health officer showed drastic decreasing starting from year 2013 to 2014. Meanwhile, steam engineer, site safety supervisor and authorized gas tester showed increasing trend from 2010 until 2016. Other OSH actors such as occupational health doctor, major hazard, assessor, etc. showed fluctuant trend from 2010 to 2016.

All numbers and values published are updated from Industrial Safety Division, Petroleum Safety Division, DOSH State Office and Occupational Health Division is up to 31st December 2016. However, data from Chemical Management Division and also from Industrial Hygiene Division is updated up to 12th January 2017.

Table 5.13: Number of OSH Competent Person

NO	COMPETENT PERSON	2010	2011	2012	2013	2014	2015	2016	SOURCE
1	Safety and Health Officer	NA	NA	4383	4588	4903	5385	5984	Industrial Safety Division
2	Lift Competent Person	82	139	159	172	211	264	292	
3	Steam Engineer*	1,924	2,054	2533	2,362	2,519	2,721	2,872	
4	Internal Combustion Engine Engineer*	254	282		319	355	372	432	
5	Hoisting Machine	52	61	67	79	90	96	120	
6	Site Safety Supervisor	NA	NA	NA	439	841	1369	2516	
7	Major Hazard	184	185	187	192	194	197	199	Petroleum Safety Division
8	Steam Engine Driver*	790	1229	1767	2214	2741	3219	3561	DOSH State Office
9	Internal Combustion Engine Driver*	319	560	888	1188	1584	1953	2220	
10	Scaffolder Fitter	2675	4390	6307	8634	12365	16204	19292	
11	Crane Operator	7884	9012	10245	11734	13767	15542	17040	
12	Occupational Health Doctor	747	802	845	898	941	1007	1113	Occupational Health Division
14	Assessor (CHRA)	234	244	274	288	310	371	398	Chemical Management Division
15	Indoor Air Quality Assessor	18	20	23	24	27	27	27	
16	Hygiene Technician I	113	118	131	141	155	175	203	
17	Hygiene Technician II	164	170	189	195	200	210	218	Industrial Hygiene and Division
18	Authorized Gas Tester	30	280	1180	1912	2488	3172	4012	
19	Noise Monitoring	191	205	216	224	234	252	264	

Legend:
NA Data not available
* License does not require renewal

6.0 OCCUPATIONAL ACCIDENT AND FATALITIES

6.1 Mechanism of Accidents and Occupational Disease Reporting

6.1.1 Department of Occupational Safety and Health (DOSH)

The Occupational Safety and Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease) Regulation, 2004 (NADOPOD) is one of the regulation established under the OSHA 1994 enforced by DOSH. The purpose of this regulation is to provide a legal framework for the employers to notify, report and keep record of work related to accidents, dangerous occurrences, occupational poisonings and occupational disease that had occurred at the workplace. The regulation was established such that employer is to determine the underlying causes of the incidences in order for remedial actions to be taken to prevent similar occurrences in the future.

The data gathered is expected to serve as an important database and justification for DOSH to determine effectiveness of existing policy, chart future direction and strategic action plan whilst administering and enforcing the law. Therefore, it is essential that the data recorded by the employers are uniform to facilitate analysis and to assure the validity of the statistical result. Every occupier is required to report by the quickest means to the nearest inspector for the occurrence of any incidence in connection with work which cause death, serious damage to property or machinery, bodily injury that prevent a person from doing his normal work for more than 4 days or occurrence of any dangerous.

Employers are required to notify the nearest OSH office if any such occurrence has occurred or is likely to occur such as accident, dangerous occurrence, occupational poisoning and occupational disease. If the incident has occurred, every registered medical practitioner attending or visiting a patient whom he believes to be suffering from any disease listed under FMA 1967 or any regulation made thereunder OSHA 1994 to report the matter to Director General of DOSH.

Figure 6.1 showed the flow chart of the NADOPOD mechanism. When any accident, dangerous occurrence, occupational poisoning or occupational disease occur in the workplace, every employer is required to determine the work-relatedness of the incident prior of reporting. If the case involves death or serious bodily injury (criteria as described in the First Schedule or Second Schedule of the NADOPOD Regulation, the employer need to notify the nearest DOSH state office by any quickest mean possible and send a written report using JKKP 6 form within seven days.

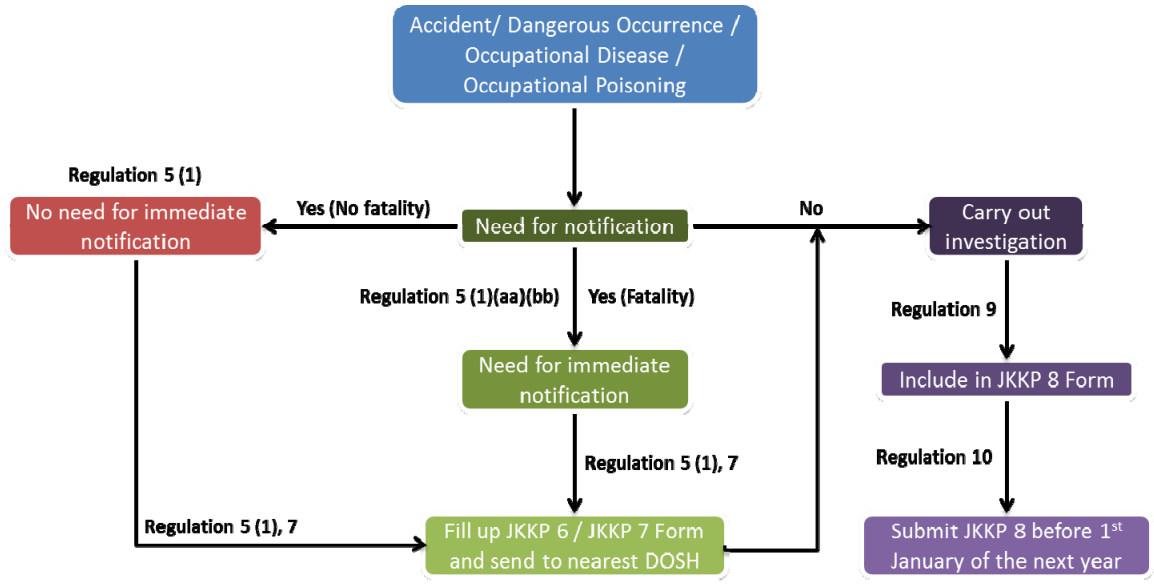

Figure 6.1: The NADOPOD 2004 Regulatory Framework

On the other hand, cases involving occupational poisoning or occupational disease as specified in Third Schedule, the employer should notify the occurrence using JKKP 7 form within seven days to the nearest DOSH state office.

All the cases must be recorded in JKKP 8 form for the record keeping. The employers are required to send to the Director General the form JKKP 8 before 31 January of each year. The register shall contain records for a period of twelve months ending 31 December of each year.

If there are no recordable cases for that particular year, the employer shall inform in writing to the Director General, giving details of the organization. In notifying and record keeping, three forms are used as follow:

A) JKKP 6: Form for Notification of Accident and Dangerous Occurrence.

Every employer need to fill this form and send to the nearest DOSH office within days of the date of accident or dangerous occurrence. At the same time, for every accident or dangerous occurrence reported using this form is necessary to record the incident in the registered JKKP 8 form.

B) JKKP 7: Form for Notification of Occupational Poisoning and Occupational Disease.

Employers of person suffering from any of the occupational poisoning and occupational disease listed in third schedule of the regulation must report to the nearest DOSH office using form JKKP 7 within seven days of knowing the case exist. For every registered medical practitioners or medical officer attending or visiting the patients must report the matter to the Director General using form JKKP 7. Upon completion, the investigation of the case, employer should record the occurrence in the form JKKP 8.

C) JKKP 8: Annual Report for Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Diseases

JKKP 8 serves as the Register of Occupational Accidents, Dangerous Occurrence, Occupational Poisoning and Occupational Disease, on which the occurrence and extent of cases are recorded during the year; and is used to summarize the records of occupational accidents, dangerous occurrence, occupational poisoning and occupational disease, at the end of the year to satisfy employers' obligations to submit the register.

This form is used as a register by employers which contain records of all accidents, dangerous occurrence, occupational poisonings and occupational disease that occurred at the workplace. The register can also be used in classifying occupational injuries and occupational disease and details of each case.

The register consists of three parts; a descriptive section which identifies the employee and briefly describes the injury or poisoning or diseases; a section covering the extent of the injuries recorded; and a section on the type and extent of poisoning or diseases.

6.1.2 Social Security Organization (SOCSO)

Unlike NADOPOD Regulation which reports to DOSH, the reporting of accidents and occupational disease to SOCSO under Employees' Social Security Act 1969 were for compensation. There are 2 mechanisms of accidents and occupational diseases reporting to SOCSO as follow:

A) Reporting of Accident (Employment Injury)

This compensation was coverage and protection for employees who suffer from employment injury. "Employment Injury" means a personal injury to an employee

caused by accident or an occupational disease arising out of and in the course of his employment in an industry to which this Act applies. Employers shall submit the claim form and other relevant documents to SOCSO within 48 hours upon notification of the accident that have occurred to an employee. As summarized in Figure 6.2, the protection under this coverage covers the following accidents: -

i) Industrial Accident while carrying out their duties

ii) Accidents while travelling:

a) On a route between his place of residence or stay and his place of work

b) On a journey made for any reason which is directly connected to his employment

c) On a journey between his place of work and the place where he takes his meal during any authorized recess

Note:
An accident that occurs during any interruption or deviation shall not be deemed to arise out of and in the course of his employment

iii) Accident during emergency

An accident happens to an employee while he is in or near any premises at which he is being employed and it occurs while assisting, rescuing or protecting other people from disaster or danger during an emergency. Example: Fire disaster at employer's premise

iv) Occupational Disease

Diseases resulted from his occupation as described in Fifth Schedule of Employees' Social Security Act 1969

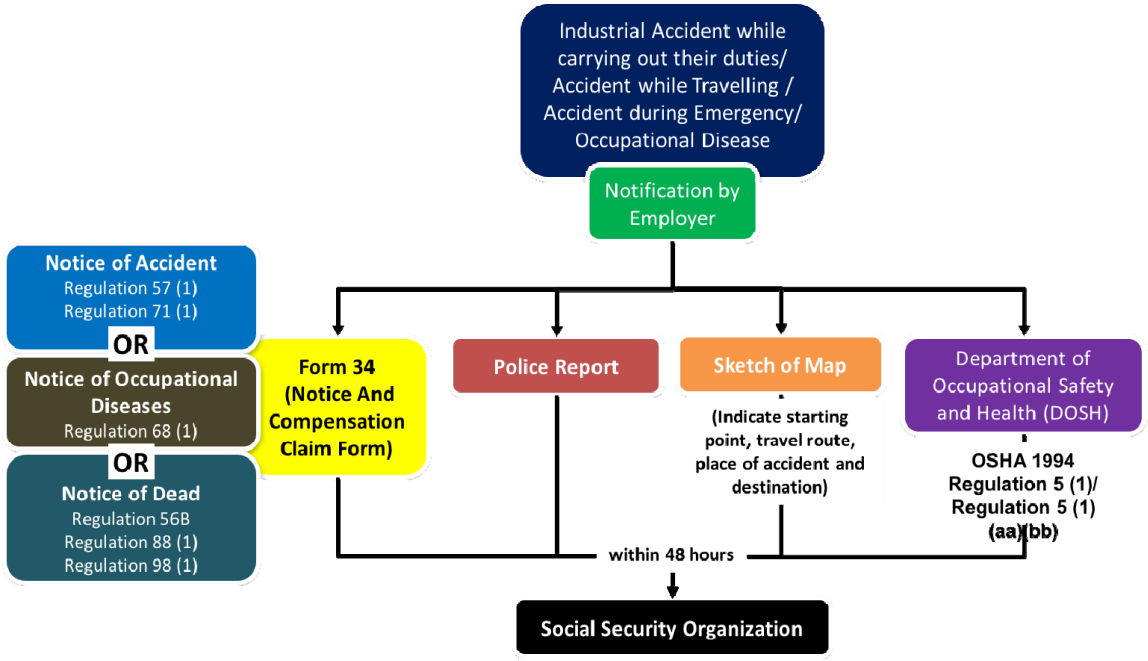

Figure 6.2: Flow chart of Reporting of Invalidity by Employee to SOCSO

B) Reporting of Invalidity

For invalidity, the submission of the claim form (*Borang Butiran Notis dan Tuntutan Faedah* - Form 34) and other relevant documents to SOCSO shall be performed by employees to notify the invalidity after obtaining the report from hospital as summarized in Figure 6.3. An insured person (employee) is considered to be suffering from invalidity when experiencing an illness lasting either incurable or may not be cured and is unable to earn a living by work which corresponds to the strength and energy, at least one third (1/3) of the normal capacity of the insured person.

The benefits provided under the Invalidity Scheme are:

a) Invalidity pensions
b) Help Invalidity
c) Allowances Service Always
d) Survivor pensions
e) Funeral Benefits
f) Physical or Vocational Rehabilitation Facilities and Dialysis
g) Program 'Return to Work'
h) Educational benefits

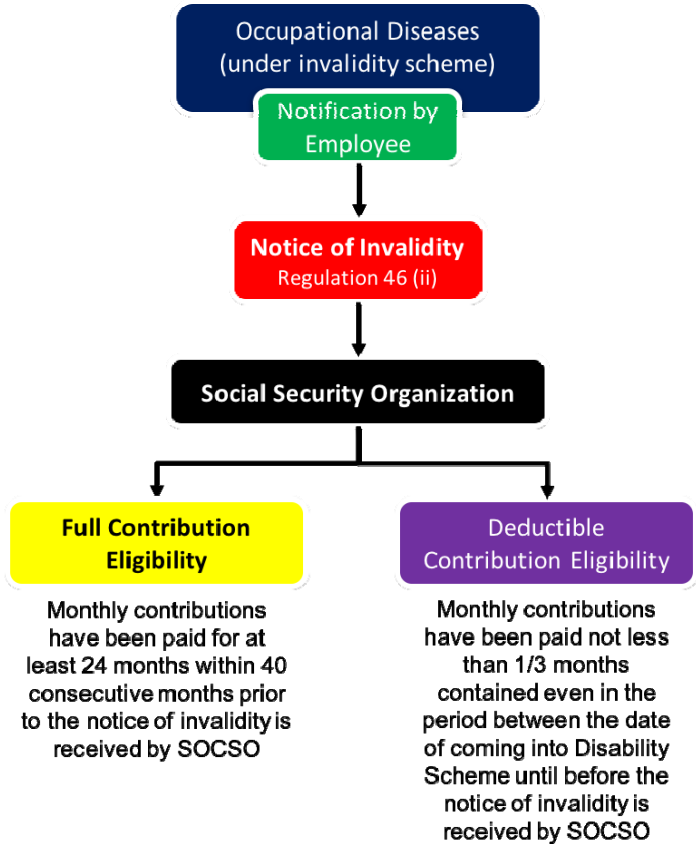

Figure 6.3: Flow chart of Reporting of Invalidity by Employee to SOCSO

This scheme provides 24-hour protection to workers who suffer from invalidity or death due to any cause related to work. To qualify as insured persons or dependents received total disability benefits under this scheme, the insured person must satisfy two conditions, namely:

1) Eligibility of Age

a) Prior to January 1, 2013:
   i) The cut began to contribute under the Disability is before age 50 years
   ii) The maximum age eligibility limit suffering from invalidity/death is before age 55 years.

b) Amendment of the Social Security Act 1969 to increase the age requirement January 1, 2013 resulted in a change to the eligibility age as follows
   i) The cut began to contribute under the Disability is before age 55 years
   ii) The maximum age eligibility limit suffering from invalidity/death is before age 60 years

2) Eligibility of Contributions

a) Full Contribution Eligibility
The insured person has completed a full and qualify if the employee monthly contributions have been paid for at least 24 months within 40 consecutive months prior to the notice of invalidity is received by SOCSO / month of death of the insured person; or Monthly contributions have been paid not less than 2/3 months contained even in the period between the date of coming into Disability Scheme until before the notice of invalidity is received by SOCSO / month of death of the insured person. The insured person is eligible to receive a full pension at the rate of 50% to 65% of the average monthly wage assumption

b) Eligibility Contribution Deductible
The insured person meets the qualifying deductible contributions if the employee monthly contributions have been paid not less than 1/3 months contained even in the period between the date of coming into Disability Scheme until before the notice of invalidity is received by SOCSO / month of death of the insured person. The insured person is eligible to receive a pension at a reduced rate of 50% of the average monthly wage assumption and the total number of monthly contributions paid in that period must be at least 24 months.

6.1.3 Department of Labour (JTK)

The Department of Labour of Peninsular Malaysia enforce the Workmen's Compensation Act 1952 at all employers hiring foreign workers. The purpose is to conduct assessment of compensation for foreign workers injured as a result of workplace accidents and to compensate to the next of kin of foreign workers in fatal accidents. The mechanism for notification of accidents and occupational diseases by employer is as summarized in Figure 6.4.

An occupational accident is a personal injury caused by an accident arising from and during the course of employment of the employee. Every employer is required to:

i) insure the foreign workers under the Foreign Worker Compensation Scheme with any insurer appointed by the Minister of Human Resources. Failure of the employer to insure foreign workers is an offence and if convicted the employer shall be liable to a fine not exceeding RM20,000 or imprisonment not exceeding two years or both (Section 26 of the Workmen's Compensation Act 1952).

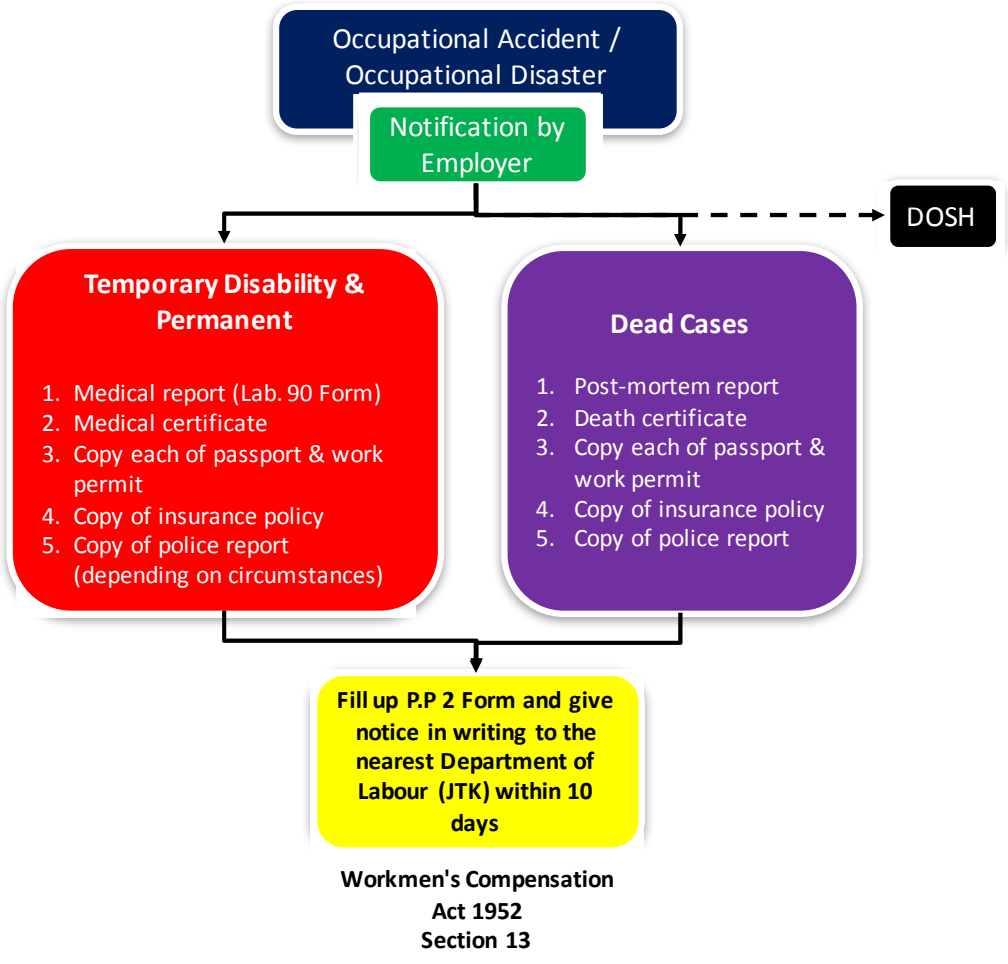

Figure 6.4: Flow chart of Reporting of Occupational Accidents or Occupational Disaster by Employer to JTK

ii) bear the full cost of the insurance premium of the Foreign Workers' Compensation Scheme of RM72 per year for each foreign worker and each employer also must furnish the latest information of the workers' next of kin when buying the insurance policy such as the next of kin's name, complete address in the country of origin, relationship and telephone number.

iii) give notice in writing to the nearest Department of Labour within 10 days of the date of an accident. Failure of the employer to report an accident involving foreign workers is an offence and if convicted the employer is liable to a fine not exceeding RM5,000 for the first offence and a fine not exceeding RM10,000 for any subsequent offence (Section 13 of the Workmen's Compensation Act 1952).

Temporary Partial Disability means the temporary reduced ability of a worker to earn a living in a job he is capable of doing due to an accident whereas Temporary Total Disability means an employee is temporarily totally unable to carry out all types of work that he is capable of doing due to an accident.

Permanent Partial Disability means the ability of a worker to earn a living in all types of work that he is capable of doing is reduced permanently due to an accident whereas Permanent Total Disability means an employee is permanently totally unable to carry out all types of work he is capable of doing due to an accident.

Employee not being entitled to compensation when the injury directly caused by the influence of alcohol or drugs during the accident unless the injury results in death and also a disability or death due to a self-inflicted injury or an injury from a deliberate accident.

Table 6.1: Coverage of Benefits

TYPE OF ACCIDENT	AMOUNT OF COMPENSATION
Temporary disability	Half monthly payment, i.e. one-third of the average monthly income or **RM165.00** whichever is less
Permanent disability	Percentage of loss of earning capacity **x** Average earnings **x** 60/84/108 months or **RM23,000.00** whichever is less
Fatality	Average monthly income **x** 60 months or RM18,000.00 whichever is less and additional RM7,000.00 under the Foreign Worker Compensation Scheme. **(RM18,000.00 + RM7000.00 = RM25,000.00)**

6.2 Reported Occupational Accidents and Fatalities by DOSH

Accident statistics are monitored by DOSH through Policy, International and Research Development Division. The Occupational Safety and Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease) Regulation 2004 (NADOPOD) alongside the complementing guideline published in 2005 has enabled DOSH to identify the cause of incidence and employ remedial measures, implement strategies and plan to administer and enforce the law based on each reported occurrence.

In 2015, 3,345 accidents were investigated based on reported cases through states and regional offices compared to 2,808 cases in 2014. The breakdown of accidents by sector from year 2011 to 2015 is listed in Table 6.2. Statistics shown in Table 6.2 were accidents reported to DOSH as required by the NADOPOD Regulations but does not include commuting accidents.

From the results in Table 6.2, manufacturing sector contributed to the highest count of permanent injuries and non-permanent injuries from 2011 – 2015. Manufacturing sector is highly responsive to business cycle, particularly in mature capitalist economies as well as those in transition towards industrialized economies. The statistics also indicated that manufacturing industry has been the major sector in creating employment opportunities in Malaysia.

The construction industry has been identified as one of the most hazardous industries in many parts of the worlds, as measured by work-related mortality, workers' compensation, injury and fatality rates. The construction industry produces the highest number for fatal occupational accidents per statistics reported by DOSH.

Figure 6.5 showed occupational accident rates from 2010 to 2015. The graph showed the decreasing rates from 3.68 per 1,000 workers in 2010 to 2.81 per 1,000 workers in 2015. It is anticipated that enhanced OSH programmes to promote awareness for a safer and healthier workplace are one of the strategies that contributed to this improvement.

Similarly, the rate of reported fatal accidents in this country significantly reduced from 6.45 per 100,000 workers in year 2010 to 6.17 per 100,000 workers in year 2011. A slight increase was observed for year 2012 and 2013 to 6.64 and 6.62 respectively before a major decrease to 4.21 per 100,000 workers on 2014 and finally an increase of 0.63 point of fatality rate per 100,000 workers was observed in 2015.

Table 6.2: Total number of accidents reported to DOSH according to sector from 2011 – 2015

SECTOR	NON-PERMANENT INJURIES					PERMANENT INJURIES					DEATHS (FATAL)				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Manufacturing	1493	1471	1469	1510	1906	162	133	128	112	89	59	45	58	45	46
Mining and Quarrying	2	16	30	43	32	1	0	0	4	3	1	7	5	15	4
Construction	50	43	83	94	138	4	5	12	6	11	66	51	69	72	88
Agriculture, Forestry, Logging and Fishery	467	365	488	441	440	18	12	14	9	9	30	41	33	42	31
Utilities	34	45	100	69	86	3	3	1	1	4	11	5	7	1	6
Transport, Storage and Communication	16	39	84	84	107	1	6	1	3	2	14	11	8	15	22
Wholesale and Retail Trade	0	13	66	74	102	0	3	7	3	3	0	1	5	6	3
Hotel & Restaurant	25	7	19	56	62	0	1	1	1	0	0	2	2	2	0
Finance, Insurance, Real Estate and Business Services	30	31	70	65	105	2	0	1	5	0	1	6	2	4	14
Public services and Statutory Bodies	40	59	67	20	31	1	1	0	1	1	3	7	2	5	0
GRAND TOTAL	**2157**	**2089**	**2476**	**2456**	**3009**	**192**	**164**	**165**	**145**	**122**	**185**	**176**	**191**	**207**	**214**

(Source: Department of Occupational Safety and Health)

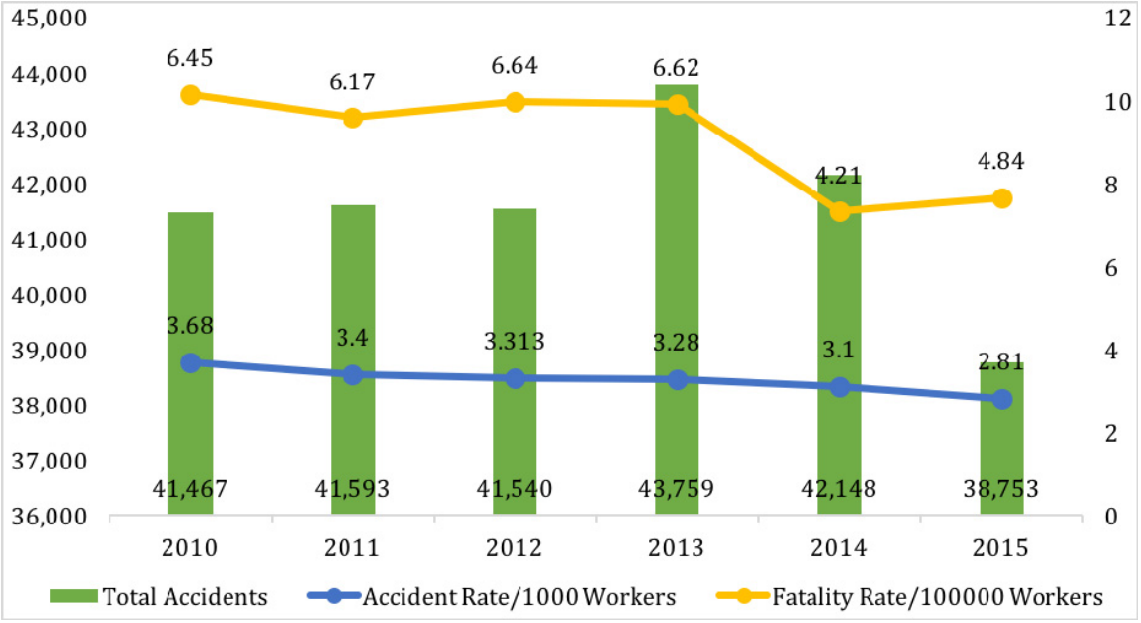

Figure 6.5: Occupational accident rates from 2010 to 2015

However, it should be noted that the occupational accident statistics in Figure 6.5 were based on combined data within the Ministry (i.e.: Social Security Organization (SOCSO) and Department of Labour (JTK)). This was to avoid overlapping of reporting as data from different agencies had different requirement or purposes, case definition and categories. For example, accidents data from SOCSO typically include commuting accidents while data from JTK were on foreign workers.

6.3 Reported Occupational Accidents and Fatalities by SOCSO

According to the 2014 Social Security Organization (SOCSO) Annual Report, road crash and death account for 482,870 cases which was 13.11% of all workplace-related accidents reported. Work-related accidents in Malaysia have decreased by 226 cases or 0.36% to 63,331 cases compared to 63,557 cases in 2013. Industrial accidents in Malaysia have generally shown a declining trend for the period of 2005 to 2009 but a slight increment was observed after 2009.

The number of reported industrial accidents has decreased by 604 cases or 1.68% to 35,294 cases compare to 35,898 cases in 2013. The number of work related commuting accidents increased by 378 cases or 1.37% to 28,037 cases compared to 27,659 cases in 2013. Industrial accidents comprised of 55.73% of accidents occurred at the workplace while 44.27% occurred during commuting.

The trend of the statistics involving number of accidents reported by SOCSO fluctuates from year to year. However, from year 2012 onwards, the number of accidents reported shows higher numbers than each preceding year, which is a cause of concern that the numbers will keep on increasing in the coming years. Year 2011 recorded the lowest number of accidents whereas 2013 reported the highest. Table 6.3 showed the frequency of accidents reported from 2010 to 2015.

Table 6.3: Frequency of accidents reported from 2010 to 2015

Year	Number of Reported Industrial Accidents[1]	Number of Reported Accidents During Commuting/ Meal Hours[2]	Total Number of Reported Accidents
2010	35,603	22,036	57,639
2011	35,088	24,809	59,897
2012	35,296	26,256	61,552
2013	35,898	27,659	63,557
2014	35,294	28037	63,331
2015	34,258	28,579	62,837

Notes:

[1] Refer to accidents at the workplace including occupational disease

[2] Refer to commuting accidents including from/to place of work, any authorised recess and other work-related accidents

6.4 Occupational Disease and Poisoning

6.4.1 Reported Occupational Disease and Poisoning by DOSH

Occupational Medicine Section under the Occupational Health Division of DOSH is required to monitor notification of reported occupational disease and poisoning in every state. In 2015, a total of 5,960 cases of occupational disease and poisoning have been reported to the Occupational Health Division as compared to 2,648 cases reported in the year 2014. Three highest occupational disease and poisoning cases for year 2015 reported were from Sabah (1,470 cases; 24.7%), Penang (1,341 cases; 22.5%) and Sarawak (704 cases; 11.8%). Figure 6.6 showed the number of occupational disease and poisoning cases received and investigated from 2009 to 2015.

A total of 4,034 cases have been successfully investigated for the purpose of carrying out improvements to the workplace in terms of occupational health. Out of 4,034 cases investigated, noise-induced hearing loss (NIHL) remain to be the single highest occupational disease recorded in 2015 compared to other disease experienced by workers with a total of 3,377 investigated (83.7%). This was followed by 147 cases (4.4%) of occupational musculoskeletal diseases and occupational lung diseases with 91 cases (2.3%) being investigated throughout 2015. Table 6.4 shows the number of cases of occupational disease and poisoning investigated in year 2010 to 2015.

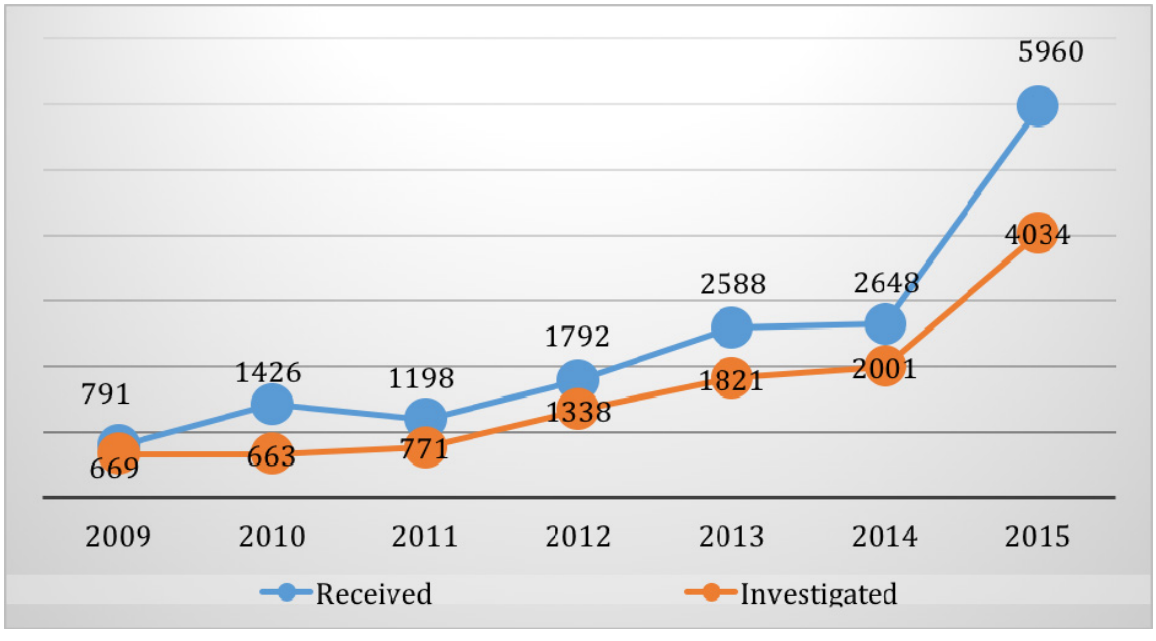

Figure 6.6: Number of occupational disease and poisoning cases received and investigated from 2009 to 2015

Table 6.4: Cases of occupational disease and poisoning investigated from 2010 to 2015

Type of Disease	2010	2011	2012	2014	2015
Noise-induced Hearing Loss	467	517	1,395	1,563	3,377
Occupational Lung Disease	43	65	115	133	91
Occupational Musculoskeletal Disease	30	54	82	132	147
Occupational Skin Disease	78	82	40	-	27
Occupational Poisoning	15	31	61	-	27
Disease Cause by Physical Agent	1	0	4	-	0
Disease Cause by Biological Agent	4	1	28	-	52
Occupational Cancer	0	3	1	-	2
Psychosocial Problem	1	1	1	-	1
Other Type Occupational Disease	5	11	15	-	6
Non-occupational Disease	19	6	50	-	304

6.4.2 Reported Occupational Disease and Poisoning by SOCSO

Besides DOSH, the occupational disease and poisoning cases recorded by SOCSO were in accordance to the agents causing them to provide protection to employees from occupational hazards, including occupational diseases and accidents during travel in connection with employment through The Employment Injury Scheme.

Generally, diseases caused by physical agent, occupational skin disease, occupational musculoskeletal disorders and other (miners' nystagmus) reported observe increase in each preceding year from 2010 to 2014. The number of reported cases involving occupational disease in 2014 increased by 367 or 13.95% to 2,997 cases compared to 2,630 cases in 2013. Table 6.5 shows the general break-down of the diseases classified into their types.

Table 6.5: Cases of occupational disease and poisoning from 2010 to 2015

TYPE OF DISEASE AND AGENT OF CAUSATION	2010	2011	2012	2013	2014	2015
Disease causes by agent						
Chemical agent	125	145	153	102	104	64
Physical agent	413	628	850	1168	1277	1,402
Biological agents	8	8	16	12	17	11
Disease by target organ system						
Occupational respiratory disease	103	108	117	146	106	248
Occupational skin disease	35	43	110	183	288	301
Occupational musculoskeletal disorders	238	268	448	517	675	708
Occupational cancer	14	9	15	12	15	9
Other (Miners' nystagmus)	279	328	400	490	515	615

6.5 Statistic on OSH Compensation

6.5.1 Compensation for Local Workers

The statistical information on compensation from accidental cases reported is according to the degree of disablement from Social Security Organization (SOCSO). Permanent Disablement is defined as a permanent disability due to employment injury that reduces employee's ability to perform his duty.

Temporary disablement is defined as short term circumstance wherein the person in question is temporarily unable to perform his or her usual duties to the usual extent, but he or she is predicted to recover totally and can work in some capacity until then. The employee can claim this benefit after the last day of temporary disablement.

According to 2014 SOCSO annual report, the number of recipients for all types of benefits decreased by 16.56% or 113,192 recipients. This decrease is caused by the decline in the usage of the Health Screening Program vouchers in 2014. This decrease resulted in the overall total of benefit recipients to drop to 570,625 persons compared to 683,457 persons in 2013.

Figure 6.7 and Figure 6.8 reflect the number of recipients and total payment for Temporary and Permanent Disablement Benefit respectively. In 2014, the total payment for Temporary Disablement Benefit increased by RM16.51 million or 10.99% to RM166.78 million compared to RM150.27 million in 2013. However, the number of recipients decreased by 0.21% or 122 persons to 59,190 persons compared to 59,312 persons the previous year.

Permanent disablement benefits are paid through three methods namely; lump sum, lump sum and periodical, and periodical payment. The payment increased by RM55.74 million or 14.19% to RM448.51 million in 2014 as compared to RM392.77 million in 2013. The number of Permanent Disablement Benefit recipients receiving lump sum payments in 2014 rose by 933 persons to 16,290 persons compared to 15,357 persons in 2013.

A total of 843 recipients opted for lump sum and periodical payments, while another 220 recipients received their Permanent Disablement Benefit in periodical payments in 2014.

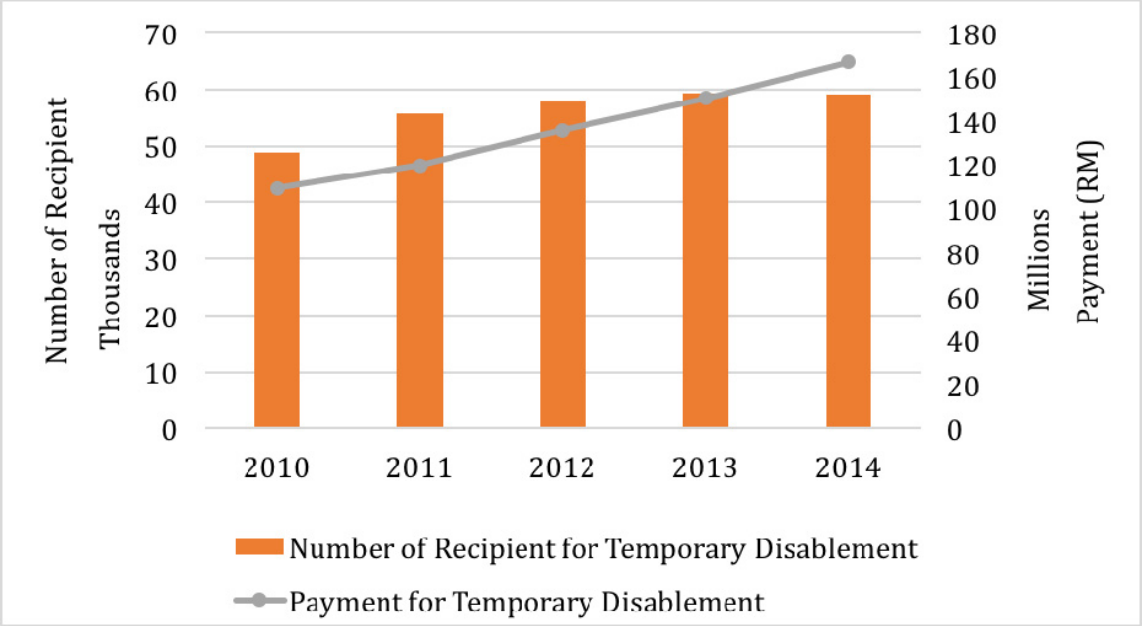

Figure 6.7: Number of Recipient and Total Payment for Temporary Disablement from 2010 to 2014

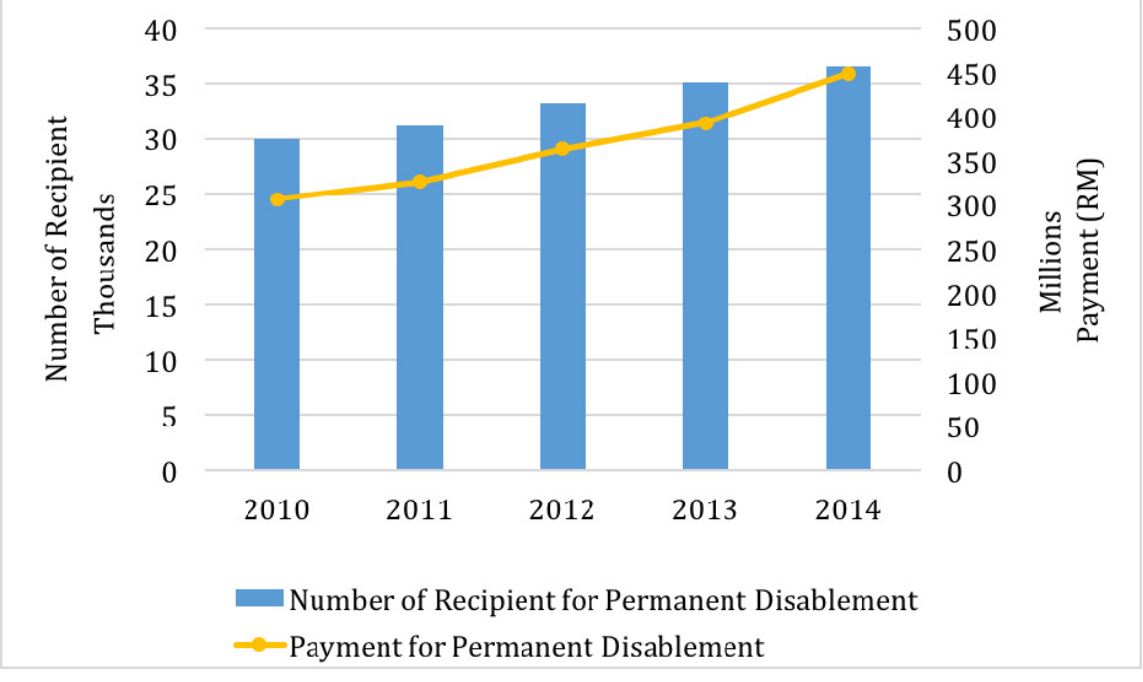

Figure 6.8: Number of Recipient and Total Payment for Permanent Disablement from 2010 to 2014

6.5.2 Compensation for Foreign Workers

As provided under Section 26(2) of the Workmen's Compensation Act 1952, it is mandatory for every employer to insure all foreign workers who possessed valid employment document to provide for the payment of compensation benefits for injuries sustained due to accident which arises out of or during employment or if death results from the accident. There are 3 categories of workmen's compensation claim namely; temporary disability, permanent disability and fatal.

The function of the Department of Labour is to make compensation assessment for foreign workers who are involved in accident at the workplace, to assist payment of compensation to the heirs of workers who suffer from fatal accidents and enforcing the provisions under the Workmen's Compensation Act 1952 to employers who employed foreign workers.

Based on Table 6.6, out of seven aspects of social security in Malaysia, only Disease Benefits that does not cover foreign workers employed legally as Workmen Compensation Act 1952 only disburse benefits if it is work-related diseases.

Table 6.6: Comparison of social Security for local and foreign workers in Malaysia

SOCIAL SECURITY BENEFITS	LOCAL WORKERS	FOREIGN WORKERS
Pension	Employee Provident Fund Act (Compulsory)	Employee Provident Fund Act (Voluntary)
Invalidity	Social Security Act 1969	Workman Compensation Act 1952
Liabilities	Social Security Act 1969	Workman Compensation Act 1952
Medical	Social Security Act 1969	Workman Compensation Act 1952
Disease	Social Security Act 1969	Workman Compensation Act 1952 (work-related disease only)
Maternity	Employment Act 1955/ Sabah Labour Ordinance1967 / Sarawak Labour Ordinance 1952	Employment Act 1955/ Sabah Labour Ordinance 1967 / Sarawak Labour Ordinance 1952
Employment injury	Social Security Act 1969	Workman Compensation Act 1952

6.5.3 Compensation for Foreign Workers in Peninsular Malaysia

Table 6.7 shows that almost all of compensation cases handled in the year 2011 to 2014 have been successfully completed in the same year. The achievement is driven by the factor of completion of compensation documents by employer before submission which enabled the officers to make prompt assessment and hence handled efficiently. The total compensation varies with a significant reduction in 2015 compared to 2014 (Table 6.8).

Table 6.7: The number of foreign worker's compensation cases handled and resolved from year 2011 to 2015 in Peninsular Malaysia

Year	Temporary disablement		Permanent disablement		Fatality	
	Handled	Solved	Handled	Solved	Handled	Solved
2011	3424	3371	736	733	503	494
2012	3333	3312	625	620	402	397
2013	3282	3252	722	712	485	480
2014	3586	3491	827	821	599	547
2015	3222	3119	775	770	514	461

Table 6.8: Comparison between number of cases and estimated amount of compensation payment to the injured and dependents' workers from 2013 to 2015 in Peninsular Malaysia

Year	2013		2014		2015	
	No of claim	Total claim (RM)	No of claim	Total claim (RM)	No of claim	Total claim (RM)
Temporary disablement	654	2,880,200.22	772	3,110,584.68	650	2,850,375.48
Permanent disablement	2359	1,643,607.10	2515	1,395,679.70	1952	1,070,223.20
Fatality	163	3,967,557.38	178	4,238,437.62	158	4,058,077.28
Total	3176	8,491,364.72	3456	8,744,701.95	2760	7,987,675.95

6.5.4 Compensation for Foreign Workers in Sabah

In Sabah, plantation sector relied heavily on foreign workers especially from Indonesia. For instance, up to year 2009, a total of 390,697 foreign workers were engaged in plantation and construction sector in Sabah. The Federal Land Development Authority (FELDA), a major Government-Linked Company (GLC) pointed out that there is lack of interest of the local workers especially the younger generation in the said sectors.

Prior to year 2011, foreign worker's recruitment in the Sabah allowed only workers from the Philippines and Indonesia to legally work in selected productive sectors namely, services, estates, manufacturing, constructions, fisheries, loggings, mining and domestic helpers. The restriction changed when the Chief Minister State of Sabah allowed male foreign workers from Bangladesh, Nepal, Myanmar and Vietnam to work in constructions, estates, agriculture and forestry sectors in order to boost development in the state.

Data obtained from Manpower Department of Sabah (see Table 6.9) indicated that most of the cases received was completely solved from 2010 to 2015 in the same year. Temporary disablement recorded highest number of claim among the three types of compensation. The total payment for compensation in 2015 increased 4.71% or RM52,873.58 from previous year. The overall claims were between RM1 million to RM1.2 million from 2010 to 2015. Payment of claims by type of injury from 2010 to 2015 in Sabah is showed in Table 6.10 below.

Table 6.9: The number of foreign worker's compensation cases handled and resolved based on type of accident in the year 2011 to 2015 in Sabah

Year	Temporary disablement		Permanent disablement		Fatality	
	Receive	Complete	Receive	Complete	Receive	Complete
2010	331	278	149	148	44	32
2011	213	194	90	90	31	25
2012	270	240	105	105	47	41
2013	256	226	97	97	57	46
2014	246	225	90	89	57	48
2015	165	148	69	68	43	36

Table 6.10: Payment of claims by type of injury 2010 to 2015 in Sabah

Year	Temporary disablement		Permanent disablement		Fatality		Total	
	No of claim	Total claim (RM)	No of claim	Total claim (RM)	No of claim	Total claim (RM)	No of claim	Total claim (RM)
2010	221	186,052.56	123	557,765.04	24	549,629.07	368	1,293,446.67
2011	168	122,562.95	74	385,925.22	21	494,297.06	263	1,002,785.23
2012	208	174,634.37	92	414,477.45	30	744,000.00	330	1,333,111.82
2013	202	236,650.68	93	479,733.92	34	833,413.13	329	1,549,797.73
2014	169	138,265.17	63	390,111.05	24	592,698.00	256	1,121,074.22
2015	128	138,673.05	60	438,727.25	25	596,547.50	213	1,173,947.80

6.5.5 Compensation for Foreign Workers in Sarawak

The number of non-fatal accident cases reported decreased by 8.5% in 2015 compared to 2014 (Figure 6.9) whereas the number of fatal accident cases reported was similar in year 2014 and 2015. Figure 6.10 shows the reported number of claims by categories and total claim from year 2010 to year 2016 which detailed statistics is tabulated in Table 6.11.

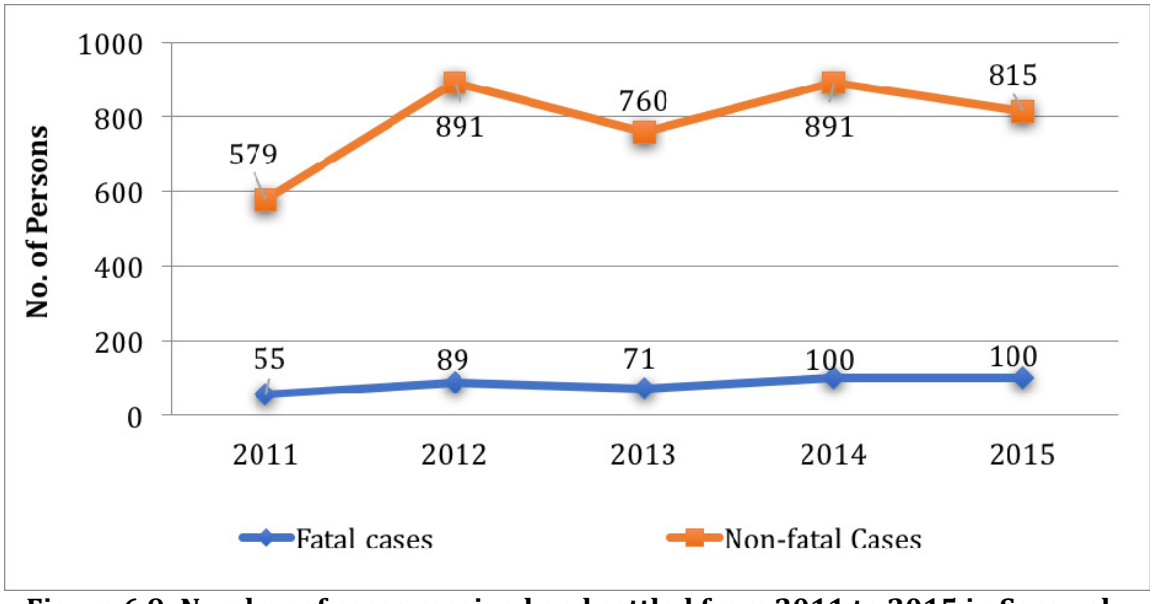

Figure 6.9: Number of cases received and settled from 2011 to 2015 in Sarawak

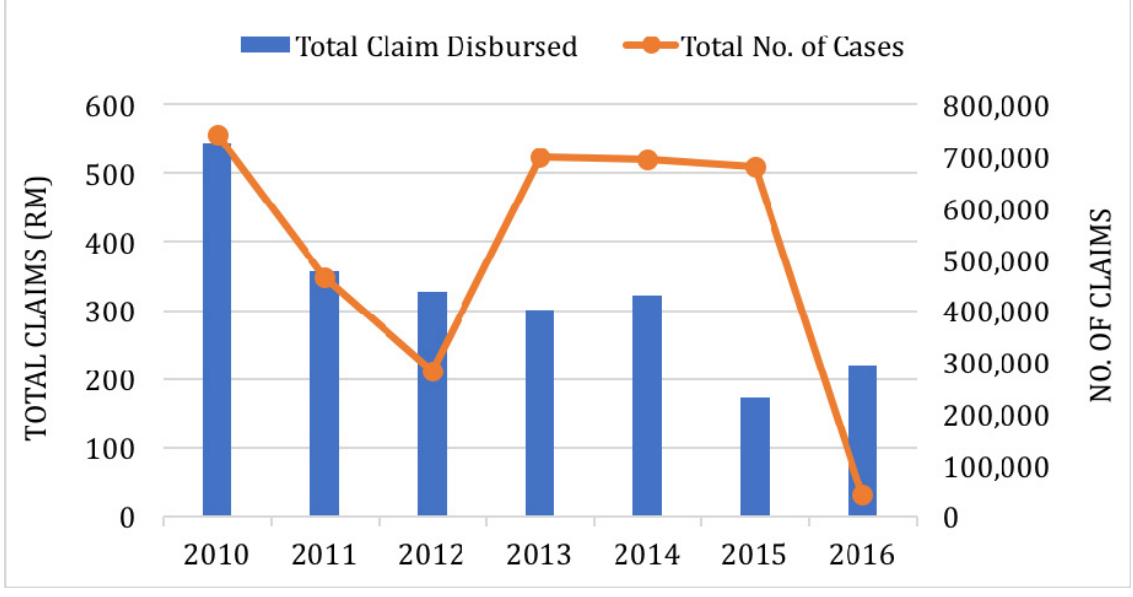

Figure 6.10: Number and total of compensation claims in Sarawak

Table 6.11: Payment of claims by type of injury 2010 to 2016 in Sarawak

TYPE OF DISABLEMENT		DEATH	PERMANENT DISABLEMENT	TEMPORARY DISABLEMENT	GRAND TOTAL
2010	No. of Claims	57	43	457	**557**
	Total Claims (RM)	351,974	260,384	114,648	**727,006**
2011	No. of Claims	34	48	267	**349**
	Total Claims (RM)	169,002	214,974	92,110	**476,086**
2012	No. of Claims	17	31	163	**211**
	Total Claims (RM)	284,579	76,693	75,685	**436,957**
2013	No. of Claims	41	84	398	**523**
	Total Claims (RM)	112,400	103,891	184,313	**400,604**
2014	No. of Claims	67	79	374	**520**
	Total Claims (RM)	196,088	163,117	70,566	**429,771**
2015	No. of Claims	74	84	352	**510**
	Total Claims (RM)	80,600	77,582	72,952	**231,134**
2016	No. of Claims	16	15	74	**31**
	Total Claims (RM)	205,198	62,652	26,741	**294,591**

6.5.6 Appointed Insurance Panel – Foreign Workers' Compensation Scheme

In addition to compensation offered by SOCSO, there are numerous insurance companies that offer alternative compensation for permanent and temporary disability due to occupational accidents. Table 6.12 below shows the types of insurance offered by insurance companies in Malaysia.

Table 6.12: List of Insurance Covered for Foreign Workers

No	Insurance company	Scheme offered			
		Foreign Workers Compensation Scheme (FWCS)	Foreign Workers Hospitalization & Surgical Scheme (FWHS)	Foreign Workers Insurance Guarantee (FWIG)	Foreign worker plus (FWP)
1	ACE insurance	/	/	/	
2	AIG Malaysia Insurance Berhad	/	/	/	
3	Allianz General Insurance Malaysia Berhad	/	/	/	/
4	AmGeneral Insurance Berhad (Kurnia Insurans)	/			
5	AXA Affin General Insurance Berhad		/		
6	Berjaya Sompo Insurance Berhad	/	/	/	
7	Etiqa Insurance Berhad & Etiqa Takaful Berhad	/	/	/	
8	Hong Leong MSIG Takaful Berhad	/			
9	Lonpac Insurance Berhad	/	/		
10	MCIS Zurich Insurance Berhad	/			
11	MSIG Insurance (Malaysia) Berhad	/	/	/	

No	Insurance company	Scheme offered			
		Foreign Workers Compensation Scheme (FWCS)	Foreign Workers Hospitalization & Surgical Scheme (FWHS)	Foreign Workers Insurance Guarantee (FWIG)	Foreign worker plus (FWP)
12	Multi-Purpose Insurans Berhad	/	/		
13	Overseas Assurance Corporation (Malaysia) Berhad	/	/		
14	Pacific & Orient Insurance Co. Berhad	/			
15	Progressive Insurance Bhd	/	/		
16	Prudential BSN Takaful Berhad	/			
17	QBE Insurance (M) Berhad	/	/		
18	RHB Insurance Berhad	/	/		
19	Syarikat Takaful Malaysia Berhad	/	/		
20	Takaful Ikhlas Sdn. Bhd	/	/		
21	The Pacific Insurance Berhad	/	/		
22	Tokio Marine Insurans (M) Berhad	/	/		
23	Tune Insurance Malaysia Berhad	/			
24	Uni. Asia General Insurance Berhad	/	/		
25	Zurich Insurance Malaysia Berhad	/			
26	Zurich Takaful Berhad	/	/	/	

7.0 REGULAR AND ONGOING ACTIVITIES RELATED TO OSH

7.1 National OSH Promotion Activities

For over a decade, the OSH activities were primarily focused to improve OSH and working conditions in the small-medium-sized enterprises (SMEs) and informal economy (IE) workplaces in the region. It was evaluated that the program including OSH activities was relevant and effective at national and regional levels. The activities include the OSH component in which there are OSH activities including workshops, training programs, seminar, conference, dialog and visit.

7.1.1 Promotional Activities by Department of Occupational Safety and Health (DOSH)

Health and safety promotion is one of the DOSH's missions towards creating a safe and healthy work culture at workplace. Towards that goal, DOSH has been actively involved in carrying out various OSH promotional activities at federal level. The OSH activities were planned, implemented, and reported regularly by an OSH team and report can be obtained through DOSH annual report every year.

The Promotion Section is a unit under which the administration of State DOSH level which is responsible for the promotion of awareness of safety and health at work through printed media, lectures and exhibitions. The functions and activities of Promotion and Resources Section of State DOSH are as follows:

i. Manage and coordinate the distribution of all the information, posters, buntings, brochures, flyers, guidelines, promotional CDs, and OSH materials to the target groups and maintain the resource centre at each state office to ensure it is always available and readily available;

ii. Coordinate the collection of data and information related to OSH promotion and ensure the provision of the latest statistics for the use of the State Council and the internal and external customers

iii. Participate and provide assistance in promoting the implementation of OSH activities by the Council of State, the employers, the non-governmental organizations (NGOs) or the state-level industry associations

iv. Participate in a series of scheduled promotional tours by the members of the State Council at the state level

v. Conduct awareness and promotion workshops on the guidelines, codes of practice or newly-enacted industry regulations under OSH

vi. Give input on the budget estimation for the preparation of required materials for the promotion of OSH

vii. Become a customer service centre to obtain data and information relating to OSH

Some of the activities carried out as part of the OSH promotion in the state DOSH are lectures and exhibitions, promotion of OSH in workplaces and public places and also OSH promotion in electronic media. For example, Occupational Health Section guides and monitor the HIV/AIDS program and at the same time monitor the implementation of the code of practice on HIV/AIDS and drug, alcohol and substance at workplace.

The section also carried out Basic Occupational Health Service Program (BOHS) especially in the small and medium industries sector. Table 7.1 summarize all the activities had been conducted by DOSH from 2011 to 2015. The number of all activities shows declining trend from 2011 to 2015. The full list of activities conducted is showed in **Appendix 7A**.

Table 7.1: Summarized activities conducted by Department of Occupational and Health from 2011 to 2015.

Year	2011	2012	2013	2014	2015	2016
Workshop/Courses	1194	3136	6852	10318	7146	4516
Seminar/Conferences	35	124	160	218	130	77
Dialogue/Meeting	94	1877	5354	6024	2680	703
Visit/Training	2254	3912	4899	5170	3892	5201
Exhibition	670	1367	1379	1472	1384	1178
Others	1311	6605	14046	8769	8432	9369

7.1.2 The National Council for Occupational Safety and Health (NCOSH)

The National Council for Occupational Safety and Health (NCOSH) is an advisory body under the Ministry of Human Resources that is responsible to determine the direction and policy of the State relating to OSH in Malaysia. NCOSH is set up as an ongoing effort by the Government to ensure the safety, health, and welfare of employees at the workplace.

This body is fully responsible for the management and coordination of its activities and programs involving OSH. For the past 18 years since its establishment, it has continued to improve the standards of OSH in its effort to instil a safe and healthy work culture in Malaysia.

The effort was primarily based on the process of tripartism, government-to- government interaction, employers and workers (through their representatives) as equal and independent partners to seek solutions to issues of common concern. For example, NCOSH has introduced OSH in School programme. In 2014, NCOSH developed draft guidelines for OSH for Co-Curricular Activities in School to be absorbed into appropriate modules or syllabus.

Table 7.2 summarized the number of activities from 2011 to 2015 conducted by NCOSH. The total number of promotional activities shows exponential increase from year 2011 to 2014 but decreases in year 2015. From 2011 to 2014, the number of promotional activities increased by 413%, of which the number of seminars, dialogues, talks and exhibitions increased steadily year by year.

However, in 2015, the number of promotional activities done by NCOSH decreased tremendously compared to the previous year. List of full activities conducted by NCOSH from 2011 to 2014 is showed in **Appendix 7B**.

Table 7.2: Number of Activities from 2011-2015 by NCOSH

PROMOTION	YEAR				
	2011	**2012**	**2013**	**2014**	**2015**
Seminar/Talk	1198	3139	6858	10327	6033
Dialogue	94	1877	5354	6024	2680
Meeting	28	17	18	17	16
Workshop/ Courses	1	0	0	4	7
Visit	4	4	4	6	2
Exhibition	670	1367	1379	1472	1384
Others	46	36	41	42	85
Total	**2041**	**6440**	**13654**	**17892**	**10207**

The trend in Figure 7.1 indicated a significant increase of promotional program by NCOSH. This shows that NCOSH is committed to promotional program related to OSH in Malaysia.

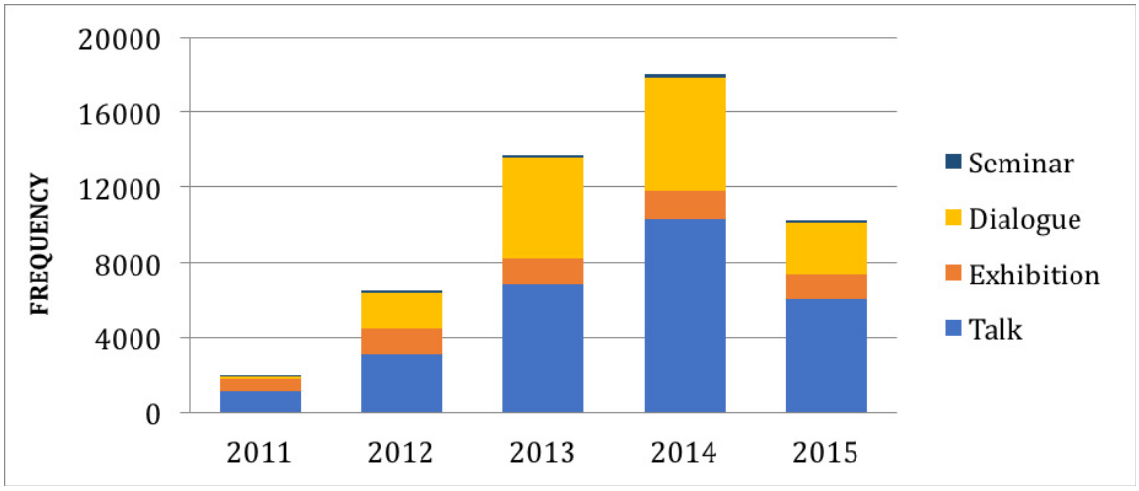

Figure 7.1: Number of National Promotion Activities from 2011-2015 by NCOSH

(Source: National Council for Occupational Safety and Health, NCOSH)

7.1.3 National Institute of Occupational Safety and Health (NIOSH)

The National Institute of Occupational Safety and Health (NIOSH) is responsible for OSH training and education, OSH promotion and OSH-related research and development activities. This is to complement the enforcement efforts of DOSH. NIOSH has been a primary governmental statutory agency actively promoting OSH awareness throughout the country. The location of NIOSH regional office is listed in Table 7.3 below.

Table 7.3: NIOSH Regional Office and Their Coverage

NO	REGIONAL OFFICE	LOCATION
1	Southern	Johor and Malacca
2	East Coast	Kuantan and Kemaman
3	Northern	Penang
4	Sarawak	Bintulu, Kuching and Miri
5	Sabah	Sandakan, Labuan and Kota Kinabalu

In 2015, a total of 5727 programmes were successfully conducted for various industries at NIOSH. Program Development Division (PDD) has undertaken a review of NIOSH training modules. A total of 5 modules in 2015, one module in 2014 and 2 additional

modules were reviewed. PDD planned to develop 4 new training modules with the addition of 6 modules from 2014.

Besides that, NIOSH Safety Passport Programme is a safety Induction Programme developed and customized specifically for companies in Malaysia. In 2015, NIOSH has trained a total of 82075 people and conducted 3051 safety Passport Programme throughout Malaysia. NIOSH also has signed memorandum of Agreement for two Research & Development (R&D) project with Telekom Malaysia to conduct R&D projects especially in identifying, evaluating and implementing measures to solve problems related to OSH at workplace.

NIOSH Occupational Safety and Health Committee Meeting (NOSHCOM) is conducted once in every three months throughout the year to discuss issue related to the OSH. NIOSH also alongside various partners in OSH organized the annual Conference and Exhibition on Occupational Safety and Health (COSH) which held every year. During COSH, the staffs have undertaken additional activities to promote the department's functions in consultation, research and development.

Table 7.4 lists the number of information dissemination activities from year 2010 to 2015 whereas **Appendix 7C** list out all the activities conducted by NIOSH from 2010 to 2015.

Table 7.4: The Number of Information Dissemination Activities by NIOSH in Year 2010-2015

PROMOTION	YEAR				
	2010	2011	2012	2014	2015
Conference	-	-	-	1	2
Seminar	24	26	26	60	90
Talk	91	73	73	69	128
Exhibition	171	289	289	109	118
Publication	96	109	109	56	62
Visits	-	-	-	41	38
TOTAL	**382**	**497**	**497**	**336**	**438**

(Source: National Institute of Occupational Safety and Health, NIOSH)

7.1.4 Social Security Organization (SOCSO)

From 2010 until 2013, training programmes were conducted under three categories, namely internal training, external training, and overseas training. SOCSO's training policy makes it compulsory for all employees to undergo at least eighteen hours training cumulatively in a year. This is a necessary step to ensure that the staffs possess the knowledge, skills and progressive attitude in order to attain the organization's vision, mission and objectives.

In 2010, a total of 339 courses and training were conducted by SOCSO, of which 121 were internally done, 178 were external, and 40 were conducted overseas. Through a comprehensive Operational Training Plan, a total of 113 internal training sessions and 203 external courses were held in addition to the 50 overseas courses organized in year 2011.

The total number of training programs showed the highest number in 2012 whereby it increased by almost 2 folds compared to the total number of courses conducted in 2011. All the activities conducted detailed out in **Appendix 7D**. In 2013, the number of courses conducted decreased by 32.8% compared to 2012 because priority was given to courses involving the ICT PINTAR project.

In realizing the SOCSO' Strategic Plan 2011-2015, SOCSO has allocated financial in the form of SOCSO Financial Assistance Grants to Non-Governmental Organization (NGO) in order to implement programmes/courses which are related to OSH to promote awareness to both the employees and employers. Table 7.5 below showed allocation grant from 2011 to 2016.

Table 7.5: Financial grant allocated from 2011 to 2016

YEAR	NUMBER OF ACTIVITIES	FINANCIAL ASSISTANCE GRANT (RM)	NUMBER OF NGO
2011	415	4,030,571.40	16
2012	604	8,121,518.20	22
2013	606	5,876,074.00	26
2014	685	6,468,246.00	30
2015	589	4,336,408.30	27
2016	511	3,791,316.00	24

Various seminar and sponsored program were conducted. Table 7.6 summarized number of program conducted by SOCSO.

Table 7.6: Total number of courses/training conducted by SOCSO in Malaysia

TYPE OF COURSE	TOTAL			
	2010	2011	2012	2013
Internal Training	121	113	175	66
External Training	178	203	357	299
Overseas	40	50	71	40
TOTAL	339	366	603	405

(Source: Social Security Organization)

7.1.5 Construction Industry Development Board (CIDB)

CIDB is one of the statutory governmental agencies working closely with DOSH, other related government agencies and the industry, to continuously charted the progress of the construction industry, giving close attention to the safety and health of the industry workforce. In meeting the nation's aspiration for an innovative culture and productivity enhancement, CIDB continues to encourage innovative activities through mechanization in construction industry.

In its role to deliver its commitment to ensure superior performance in all areas, CIDB concentrates in several priority areas to deliver its services to its clients and customers efficiently and effectively. One of the priority area that has been establish is "Strengthening CIDB Service Delivery to the Industry". Program conducted by CIDB has direct and indirect relation with OSH. However, CIDB is the main partner in promoting OSH in construction sector.

Since 2012, CIDB has signing MoU between CEUPACS for collaboration in training and accreditation of the public sector. In order to increase awareness and adoption of sustainable practices at the global level, CIDB continues to encourage the adoption of efforts that will ensure sustainability of the environment and efficient use of resources, by engaging with the stakeholders and the relevant agencies to encourage the use of green technology in construction and other initiatives.

Among major programme which have been developed and implemented were such as the Quality Assessment System in Construction (QLASSIC), Safety and Health Assessment System in Construction (SHASSIC), and a nationwide assessment system for rating of green projects. The programmes are introduced to provide comprehensive exposure to sustainable construction to the industry and to promote the implementation of projects that incorporate sustainability features.

Therefore, CIDB has introduced MyCREST, a National Green Building Assessment System. MyCREST is an evaluation system that integrates sustainability impact with carbon indicator for a particular building. Related activities had been conducted every month including launching ceremony, signing memorandum, training and visit. Besides that, a number of new construction technologies have the vision of drastically reducing the instances of accidents at site, one for example is the Industrialized Building System (IBS).

CIDB started to promote the use of IBS since 2003. Efforts and initiatives to enhance use of IBS in private sector projects will also be continued through the appropriate promotion programmes. IBS technology is also capable of reducing accidents at construction sites and thus contributes to a safer and healthier industry. Efforts for a wider adoption of mechanization in construction continued to be enhanced through training and seminar, incentive, promotion in media, the publication of Coffee Table Books, a two-day IBS seminar for *Bumiputera* entrepreneur was held at Kuching Sarawak which saw not less than 300 participants and a number IBS studies carried out through collaboration with an institution of higher learning centre, UiTM.

During 2014, a total of 118 construction projects managed to be assessed using SHASSIC for projects which are between 25% - 75% completed. The highest score achieve is five star. Average score for 2014 is three stars (58%). In order to promote the use of SHASSIC a memorandum of understanding (MOU) was signed with Master Builders Association of Malaysia (MBAM) on 15 April 2014 to establish cooperation implementing safety and health programme for construction industry.

Also, on the year 2014, a number of SHASSIC roadshows has been held at Sibu, Sarawak, Kota Kinabalu, Sabah, Terengganu, Penang, Johor and Malacca. The roadshows aimed at providing information on SHASSIC and the benefits that can be gained from SHASSIC assessment. For SHASSIC training, a total of 10 trainings involving 449 participants were held throughout 2014. Table 7.7 showed summary of activities involved while **Appendix 7E** list out all the related activities conducted by CIDB from 2012 to 2014.

Table 7.7: Activities conducted by CIDB in Malaysia

TYPE OF ACTIVITIES	2012	2013	2014
Conference/congress	2	2	4
Visit/meeting	4	7	5
Seminar	2	4	2
Award	2	10	8
TOTAL	**10**	**23**	**19**

7.1.6 Ministry of Health (MOH)

Ministry of Health has an important role in preventing and managing occupational diseases, through promotional activities, occupational disease surveillance and provision of occupational health services. Health promotion is conducted under Health Promotion Unit of Public Health Division in every state Health Department.

Doctors, medical assistants, nurses, and health inspectors (Assistant Environment Health Officers) from the Ministry of Health played key role as health promoters at the hospital and community level as the primary agents of change. In the hospital setting, patient education services include bedside teaching, counselling, and dedicated classes for patient and care takers. Among the promotion and activities provided by MOH are:

i) Getting involved in planning and managing campaigns or health promotion activities at the national, state or district level to increase the capacity and ability of the community in reducing the risk of diseases

ii) Promoting lifestyle changes among high-risk groups and also get the community to be involved in the promotion of lifestyle changes for all levels of society

iii) Participating in committees, meetings and activities to encourage cooperation between government agencies, non-governmental organizations (NGOs) as well as certain individuals in ensuring the effectiveness of health promotion programs

iv) Providing information and health education at the community level through information and communication technology (ICT)

The activities under the Ministry of Health (MOH) Public Health Programme are broad and comprehensive in order to ensure that the individuals, families and society in general maintain good health. The main objective of the Public Health Programme is to reduce the occurrence of diseases and deaths due to communicable and non-communicable diseases as well as occupational environmental related diseases so that they will no longer pose a threat to the public's health.

The OSH Unit continues its role in carrying out activities in the workplace with the aim of protecting workers' safety, health and well-being, as well as improving working condition. From 2010 to 2014, many activities had been conducted to achieve their objective. **Appendix G** details out the activities conducted under MOH. Table 7.8 below summarized the number of activities had been conducted from 2010 to 2014.

Table 7.8: Number of activities conducted by MOH in 2010 to 2014

TYPES OF ACTIVITIES	YEAR				
	2010	2011	2012	2013	2014
Programme	4	-	8	8	7
Launch	1	1	-	-	-
Training and Seminars	2	3	-	-	-
Talk	-	1	-	1	-
Total	**7**	**4**	**8**	**9**	**7**

7.1.7 Examples of OSH Promotion by Employer and Employees Union

7.1.7.1 Malaysian Employer Federation (MEF)

MEF has conducted various dialogues, international and regional cooperation, conferences, seminars and meeting at various levels throughout 2008 – 2015. Table 7.9 listed the activities conducted by MEF from 2008-2015.

Table 7.9: Number of National Promotion Activities by MEF from 2008-2015

PROMOTION	YEAR							
	2008	2009	2010	2011	2012	2013	2014	2015
Dialogues	9	9	9	5	5	7	8	5
International and Regional Cooperation	9	9	4	7	6	12	8	5
Conferences and Seminars	-	2	4	26	69	95	89	5
International Meetings and Seminars	18	16	14	23	19	35	31	30
Total	**36**	**36**	**31**	**61**	**65**	**91**	**84**	**45**

(Source: Malaysian Employers Federation, MEF)

7.1.7.2 Federation of Malaysian Manufacturers

Table 7.10 show the list of all Federation of Malaysian Manufacturers branch at all state that conducted OSH programs. Overall, the number of training programmes conducted by FMM in each branch (of every state) increases over the year. Based on the record gathered, Selangor branch has not held any training programmes on year 2016, significant contrast from the previous year.

Besides that, FMM appears to have not organized any training programmes in Johor, WP Kuala Lumpur and Negeri Sembilan from 2012 till year 2015 but conducted a huge number of programs in the year 2016. Only one training program was conducted in the State of Sabah from 2013 – 2016 each year. Pahang, Kelantan & Terengganu, Melaka, Kedah & Perlis as well as Pulau Pinang recorded a significant reduced number of training programmes conducted in the year 2016 compared to the previous year.

Figure 7.2 shows more clearly the trends for each branch at each state at below.

Table 7.10: Occupational Safety and Health Training Programmes conducted by Federation of Malaysian Manufacturer

STATES	2012	2013	2014	2015	2016
Pahang, Kelantan, & Terengganu	1	2	0	7	1
Johor	0	0	0	0	10
Melaka	2	3	3	4	1
Perak	1	2	2	5	12
WP Kuala Lumpur	0	0	0	0	16
Kedah & Perlis	2	3	4	5	1
Sabah	0	1	1	1	1
Sarawak	2	3	5	10	4
Selangor	1	3	2	4	0
Pulau Pinang	3	8	15	29	20
Negeri Sembilan	0	0	0	0	11
TOTAL	**12**	**25**	**32**	**65**	**77**

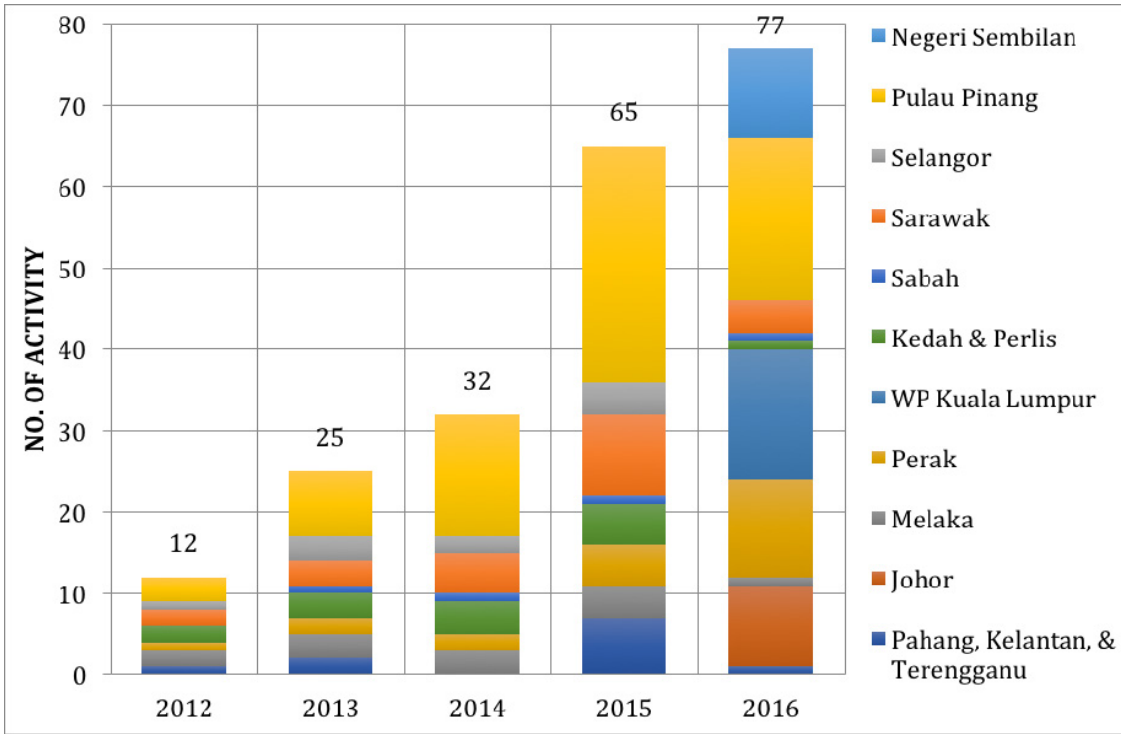

Figure 7.2: Occupational Safety and Health Training Programmes conducted by Federation of Malaysian Manufacturer

7.1.7.3 Malayan Agriculture Producer Association (MAPA)

MAPA provide various types of training programs and educational seminars, including instructor led training, workshop and coursework. MAPA training consultants have vast experience in the field of industrial relations, labour laws, human capital management and OSH. Programmes offered by MAPA are tailored program that specifically addresses their member's needs and can be provided at any skill level.

MAPA training program related to employment and OSH includes:

- Guidelines on Dealing with Dismissal and Employment Misconduct
- A Practical and Legal Approach to Conducting Domestic Inquiry
- Mock Inquiry
- Conducting an Effective Domestic Inquiry
- Handling of Discipline and Grievances Effectively
- Misconduct at the Workplace
- The Employment Contract - Terms and Conditions of Service
- Legal Rights and Obligations of Employers and Employees
- The Benefits of a Productivity-Linked Wage System

- The Employment Act, 1955: Scope and its Implementation
- Collective Agreements: Scope and its Implementation
- Status and Rights of Probationers
- Condonation and Disciplinary Action
- Dismissal, Redundancy and Retrenchment
- How to deal with Late Comers and Absenteeism
- Social Security and Provident Fund
- The Law on the Employment of Foreign Workers
- Workers' Minimum Standards of Housing and Amenities Act, 1990; The implementation process
- The Right to Transfer
- Retirement: Inference and Implication
- Maternity Protection
- The Doctrine of Constructive Dismissal
- Understanding Labour Laws
- Industrial Court Awards on Insubordination
- Termination on Medical Grounds: Law and Practice
- The Law relating to Absenteeism in the Workplace
- OSH: Theories of Accident Causation in the Workplace
- Negligence in the Context of Employment
- Handling Conflict & Employee Discipline at Work
- How to prepare the Inquiry Report and Findings of a Disciplinary Inquiry
- An Understanding of Collective Agreements, Trade Dispute & Industrial Actions
- Post-Retirement Employment: Law & Practice
- Managing Problematic Employees: A Practical Approach
- Sexual Harassment and Handling of Sexual Harassment
- Guidelines in Framing Allegations of Employment Misconducts
- The Law relating to Suspension of Employees
- The Doctrine of Forced Resignation
- The Law relating to Unsatisfactory Work Performance
- The Legal Aspects of Fixed-Term Employment Contracts
- Handling Absenteeism & Tardiness in the Workplace
- The Calculation of Average Earnings & Ordinary Rate of Pay (ORP)
- Employers' Obligation under the OSH Act 1994
- Labour Ordinance of Sabah (Amendment) Act 2005
- Labour Ordinance of Sarawak (Amendment) Act 2005

7.1.7.4 Chemical Industries Council of Malaysia (CICM)

A. Codes of Management Practices

CICM promote 6 Codes of Management Practices, a Responsible Care initiative. The Codes focus on specific areas of chemical manufacturing, transportation, research and handling and companies must in good-faith make continuous efforts to attain the goals of each Code.

DISTRIBUTION CODE: This Code reduces employee and public risk during transportation and distribution of chemicals and chemicals products. The scope of this Code covers all modes of transportation. It protects the carrier, distributors, contractor and the environment. It covers also activities such as storage, handling, transfer and packaging.

COMMUNITY AWARENESS AND EMERGENCY RESPONSE (CAER) CODE: Designed to help ensure emergency preparedness and foster community involvement. The Code builds on the voluntary self-regulation concept by emphasizing a broader dialogue and interaction between employees, the general public, government officials as well as emergency responders. It also requires companies to establish facility outreach programme that includes an ongoing assessment of employee and community concerns about their operations.

POLLUTION PREVENTION CODE: The Code presents a broad framework that is useful to any company, regardless of its existing efforts. Its management practices are aimed at helping companies to reduce both emission released into the various media, the amount of waste generated and also deals with waste management.

EMPLOYEE HEALTH AND SAFETY CODE: The goal of this Code is to protect and promote the health and safety of people working at; or visiting the company work sites. It provides a framework for identifying and assessing hazards, preventing unsafe acts and conditions, maintaining and improving employee health and fostering communications on health and safety issue. Some of this Code's requirements run parallel with the Occupational Safety and Health Act 1994, however it also goes beyond OSHA regulations.

PROCESS SAFETY CODE: The approach of this Code is to eliminate risks from the outset; i.e. safety begins at the very early planning stages of the plant's production processes. Potential sources of danger which may emerge because of the plant itself or through chemical substances used in the production are analysed and eliminated as far as possible. It also requires that employees must be trained in the safe operational and maintenance methods and be able to recognize potential sources of error and be capable

of assessing the resulting risks. The reactions of the community to the issues in the chemical plant are communicated to those doing the designs and modifications of the plant.

PRODUCT STEWARDSHIP CODE: The aim of this Code is to make health, safety and environmental (HSE) protection an integral part of the research, designing, manufacturing, marketing, distributing, using, recycling and ultimate disposal of chemical products. It emphasizes the need for everyone involved in the developing and handling of chemicals to do so responsibly to help maintain a safe and healthy environment. The key is to keep a flow of information coming back to the company about how customers are actually using and disposing the products.

B. CICM Responsible Care Awards

One of the flagship activities of Responsible Care initiative in Malaysia is the annual CICM Responsible Care Awards. The objectives of the Awards are to promote greater awareness of the Responsible Care Programme and its principles and to give recognition to those organizations that have made most progress in implementing the Responsible Care's Six Codes of Management Practices in Malaysia.

C. Safe Road Award

The Safe Road Award aims to recognize good performers and to identify best practices among chemical transporters. It complements the objectives of Responsible Care, which is the global voluntary initiative by the chemical industry to continuously drive improvements in health, safety and environmental performance.

7.1.7.5 Malaysian Trade Union Congress (MTUC)

Programmes promoted by MTUC are codenamed MTUC-OSH. This program had the objective to improve the safety conditions of workers in petroleum and chemical industry and to strengthen the trade union movement in OSH.

The activities which were divided into 3 phase target participants such as:

- Trade Union leader in all branches
- Trade Union officer (IRO)
- All union members

First Phase

- Awareness campaigns and promotion of this program.
- Establish an OSH committee in branches.
- Develop IEC materials such as posters, flyers and stickers to be distributed in branches.

Second Phase

- Educational programmes to all union members at the local level such as campaigns, seminars and workshops.
- Integrate a programme to consider the macro point of view of the condition of the safety of the workers

Third Phase

- All branches must complete the evaluation form.
- Award Scheme to motivate more employees

7.1.7.6 Congress of Unions of Employees in the Public and Civil Services (Malaysia) - CUEPACS

CUEPACS at the National level did not directly promote OSH as the main organizer but mostly are within associate partners of CUEPACS. However, at the federal level, CUEPACS promote OSH in term of OH services. Two OH services currently promoted by CUEPACS:

- CUEPACS CARE – to be use for private hospitalization
- CUEPACSPA – insurance scheme

7.1.7.7 Summary of Promotional Activities by Other Unions

Table 7.11: Summary of Promotional Activities by Other Unions

NO	UNION	ACTIVITY INVOLVED
1	Congress of Unions of Employees in Public Services (CEUPACS)	OSH Seminar for Educator
2	Malaysian Trade Union (MTUC)	a) All education activities in OSH b) Provide training on OSH c) Workers' Memorial Day every 28th April throughout the year d) National Seminar on OSH collaborating with

NO	UNION	ACTIVITY INVOLVED
		SOCSO e) Visit to DOSH New Delhi
3	Kesatuan Sekerja Industri Elektronik Wilayah Barat Semenanjung Malaysia	a) Awareness on OSH in state and federal level b) National MTUC OSH seminar
4	Kesatuan pekerja-pekerja dalam perkhidmatan perubatan dan kesihatan swasta	a) OSH committee in MTUC b) International seminar on OSH
5	National Union Bank Employees (NUBE)	a) OSH awareness course b) Awareness on OSH in federal c) Discussion with employers regarding OSH

7.1.8 OSH Promotion by Non-Governmental Organization

Consistent with the effort by governmental agencies and private (profit-based oriented) organizations, the non-profit, non-governmental organization (NGO) has also been active in promotional activities and programmes as well as initiatives for OSH improvements among their members as well as public.

Typically, the activities and programmes held were such as seminars, dialogue, training program, conferences and through various other means. Among some examples of the NGOs are as follow:

- The Malaysian Society for Occupational Safety & Health (MSOSH)
- North Region Group Safety Health Environment (NRG-SHE)
- Malaysian Occupational Safety and Health Officer (MASHO)
- Human Factors and Ergonomics Malaysia (HFEM)
- Malaysian Industrial Hygiene Association (MIHA)
- Society of Occupational and Environmental Medicine (SOEM)
- Malaysia Association of Environmental Health (MAEH)
- Malaysian Occupational Health Nurses Association (MOHNA)

Table 7.12 shows the non-exhaustive examples of types of activities conducted obtained from available public open resources.

Table 7.12: Types of OSH promotional activities carried out by NGO in Malaysia

UNION	ACTIVITY INVOLVED
Malaysian Society for Occupational Safety and Health (MSOSH)	a) Conduct public course/ seminar/ talks and consultancy services b) Maintain close with DOSH, SOCSO, NIOSH, BOMBA, MTUC, SME Corp c) Conduct safety and health inspection and audit d) Organize courses with other safety and health organization and consultants e) Conduct in-house programme, talk and courses f) Provide information services such as: i) Safety and health activities for other members ii) Expertise on OSH in the country iii) Information on member who are safety consultants and suppliers of PPE and other OSH services iv) Drawing up OSH policy v) Setting up of an effective safety and health committee vi) Publishing of newsletter for members

UNION	ACTIVITY INVOLVED
	g) Interact with representative of corporates members of the society h) Provide services to member through branch office i) Organize the annual MSOSH OSH award and SME award competition j) Provide advisory service and assistance in organizing in-house OSH campaign, safety week and exhibition. k) Actively participate in the APOSHO conference and annual grand meeting.
Kelantan Environmental Safety and Health (KESH)	a) OSH in Kelantan b) Environmental, occupational safety and health practitioner gathering
Persatuan Pengamal Keselamatan dan Kesihatan Pekerjaan Negeri Johor (SRG-SHE)	a) OSH in school b) Seminar on OSH in Tanjung Leman c) Weekly OSH discussion
Malaysia Industrial Safety and Health Association (MISHA)	a) OSH on the go b) OSH in school at state and federal level c) OSH in school program (Selamat Pagi Malaysia, TV Al-Hijrah)
Lembaga Pemegang Amanah Majlis Pengamal Keselamatan dan Kesihatan Pekerjaan Malaysia (MPKKPM)	a) Training on basic OSH topic b) Collaboration program with KLIA college
Persatuan Bekas Kakitangan JKKP Malaysia (DOSHTECH)	a) Social activity of ex-DOSH officer b) Sharing expertise from ex-DOSH officers with university
Pusat Pengurusan Risiko, Kelestarian dan Kesihatan Pekerjaan (OSHEM)	Not available
Malaysia Occupational Scaffolding Association	Industrial scaffolding enhancement and standard practitioner
Malaysia Steam & Internal Combustion Engine Engineer Association (MSIEA)	Dignity career in the field of steam and internal combustion engine in Malaysia
Malaysia Authorized	NIOSH seminar series – knowledge about confined space

UNION	ACTIVITY INVOLVED
Gas Tester Association (MAGTA)	and understanding and implement the industry code of conduct
Malaysian Industrial Hygiene Association (MIHA)	a) Guideline the use of PPE against chemical hazardous course b) Fundamental of Industrial Hygiene course c) Indoor air quality course (implementing industry code of practice on IAQ) awareness and workshop d) IOHA international scientific conference e) CHRA refresher course
Society of Occupational and Environmental Medicine (SOEMM)	a) 3rd CPD series for 2016 – Fitness to work b) CPD series 2 for 2016/2017 session – preventing occupational disease – a collective task c) CPD on medical surveillance d) MEF: Self-regulation talk e) Lecture on Occupational, Industrial health and environmental health f) SOME-MMA annual seminar 2016 g) E-notification for occupational disease
Malaysian Occupational Safety & Health Practitioner's Association (MOSHPA)	a) World Safety Day b) 11th MOSHPA OSH conference & award 2015 c) OSH seminar collaborating with Perkeso d) 2nd annual asia pacific HSE forum 2009 e) Road safety program f) Basic first aid course
Human Factor Ergonomics Society Malaysia (HFEM)	a) Developed ergonomic risk assessment guideline b) SOCSO's program on memupuk Keselamatan Kesihatan dan Pekerjaan c) Ergonomic risk assessment training d) Ergonomic consultancy
Sabah OSHE association (SOSHEA)	Not available
Perak Occupational Safety, Health & Environment Group (PORSCHE)	Not available
Risk Governance Association of Malaysia (RIGA)	Not available
Johor Occupational safety, health & environmental Association (JOSHEA)	Not available

7.2 Initiatives in OSH Promotion

7.2.1 National Initiatives

7.2.1.1 National Level Occupational Safety and Health Excellent Award National OSH Award of Excellence

The National Occupational Safety and Health Excellence Awards (OSH Award) is an annual event organized by National Council for Occupational Safety and Health which aims to give national recognition to the leaders, the media, journalists and organizations from various industry sectors that have an excellent track record in the implementation of occupational safety and health management systems (OSHMS) in the workplace.

This prestigious award is an effort by the government as a sign of appreciation for their outstanding achievements in practicing safe and healthy work culture in their workplace. These award aims to give recognition to the industry leaders, chief executive officers, media and organizations that demonstrate outstanding performance of OSH in Malaysia.

With this award, it was hoped that it will indirectly inspire and motivate the industry to improve their performance in OSH. This award is created to show the commitment and seriousness of the government in the implementation of OSH management system by the employer which can help to increase employee productivity and create a safe and healthy workplace for all.

This award create lesson to learn from each other through information sharing besides a sense of competition with one another on OSH among workers and employers to enhance the safety and health at workplace. Table 7.13 lists of all awards in the field of OSH in Malaysia to recognize excellent individuals and industries for their effort in OSH.

Table 7.13: OSH Excellence Award Category

NO.	CATEGORY
1.	Large Manufacturing Award - Category Electrical / Electronic
2.	Large Manufacturing Award - Category Petroleum / Gas / Chemicals
3.	Large Manufacturing Award - Category Other Manufacturing
4.	Award for Small and Medium Industries
5.	Award Mining And Quarrying
6.	Construction Awards

NO.	CATEGORY
7.	Agricultural Award
8.	Forestry Award
9.	Fisheries Awards
10.	The Air Awards
11.	The Gas Awards
12.	The Electricity Awards
13.	Cleanliness Awards
14.	Transport Award
15.	Storage Awards
16.	Communication award
17.	Wholesale and Retail Trade Award
18.	Awards Hotel and Restaurant
19.	Award of Finance, Insurance and Real Estate
20.	Business Service Award
21.	Award for Public Service and Local Authorities
22.	Chief Executive Officer of the OSH Awards
23.	Journalist Award
24.	The Idol Award
25.	Media Award
26.	OSH School Award

7.2.1.2 Example of National Level OSH Activities by DOSH

A. Mentor-Mentee Program

To ensure the success mentor mentee program, the role played by the leader (mentor) is very important. Leading companies should be able to provide dedicated employees and time to ensure the success of this program. Mentor-mentee program is one of the effective programme in achieving the awareness of safety and health in workplace. DOSH has an important role in the success of this program through monitoring over the mentor and mentee relationship and activities.

Among the responsibilities that should be shouldered by leading companies is to appoint a special staff (preferably Safety and Health Officer for the company) to coordinate and implement this program, plan schedule of visits and training for the mentee. The quality and ability to lead the mentee is one of the factors contributing to the success of this program.

Achievements for each state are shown in Figure 7.3. Industrialized State including Selangor and Johor had the highest numbers of mentor and mentee program while Penang had the lowest number of the program. In average, each state had about 10 mentor mentee program since 2011. Breakdown of mentor mentee program by state is showed in **Appendix 7F.**

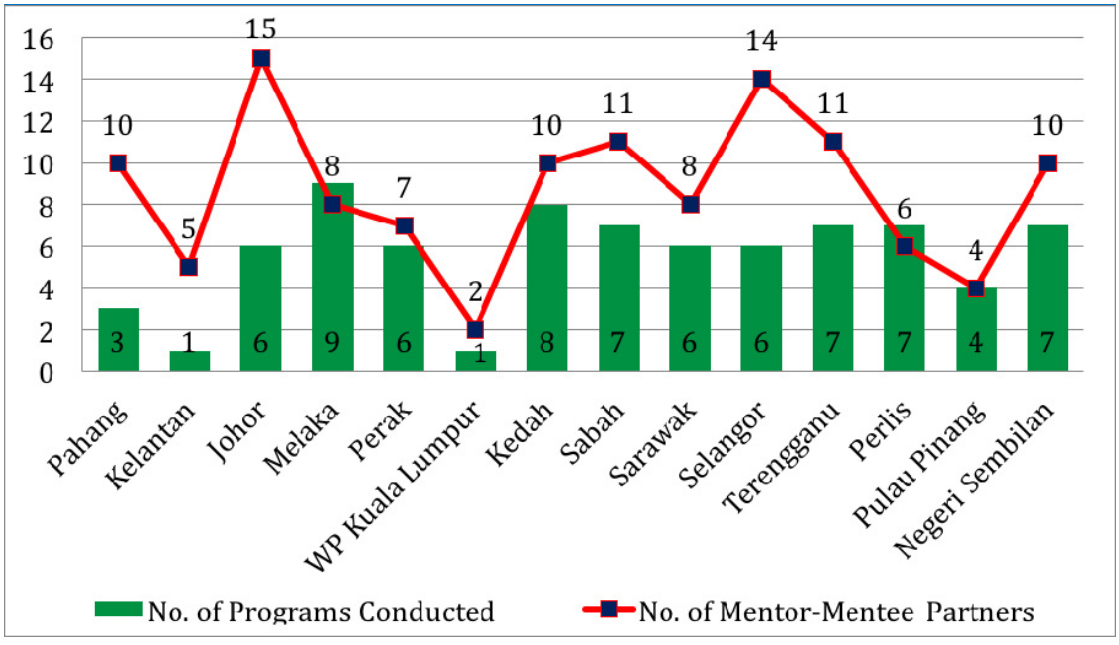

Figure 7.3: Mentor Mentee Activities and Program conducted in every state for year 2011 until year 2015

B. Compliance Support Program

A new initiative called Compliance Support for the Small and Medium Enterprises (SMEs) has also been developed by DOSH. As the name suggest, this initiative encompasses the action plans and measures to address problems in OSH for the Small and Medium Enterprises Sector through pilot projects such as door-to-door, mobile CAT van promotion, continuous registration and umbrella project.

This proactive measure was in line with the Government's Economic Transformation Programme, which is to enhance the productivity and competitiveness of enterprises in the SMI/SME sector. This project is conducted in collaboration with the Ministry of Human Resources, SOCSO, NIOSH, and the Small and Medium Enterprise Corporation Malaysia (SME Corp).

The aim of the Compliance Support initiative was to assist employers and employees in creating and implementing the Occupational Safety and Health Management System at the workplaces. The expectation of DOSH was improved regulatory and OSH laws compliance by SMEs, subsequently reduces accident rate and increase productivity through the programs.

As a result, a 153% performance was achieved in 2010, covering activities such as the Pioneer Project (Door to Door), the Umbrella Project and the CAT Van Mobile Promotion. During the year of 2012, a total of 15 small and medium enterprises participated in this programme and have since showed an increase in the use of OSH management system at the workplace.

Among output of the initiative which is still on-going were research projects as follow:

i) Researching, Proposing and Preparing Action Plan for Improvement of Occupational Safety and Health in Manufacturing Sector (Metal) in Malaysia

ii) Exposure of Chemical Hazardous to Health Among Rice Planters in Peninsular Malaysia

iii) Review, Recommend and Preparing Action Plans for Improvement of Occupational Safety and Health in Mining and Quarrying Sector in Malaysia

iv) Researching, Proposing and Preparing Action Plans for Improvement of Occupational Safety and Health in Utilities Sector in Malaysia

v) Researching, Proposing and Preparing Action Plans for Improvement of Occupational Safety and Health in MRT Construction Sector in Klang Valley

Figure 7.4: LPG Stockist Compliance Support Activity by CIMAH Section

Other activities conducted under this initiative in 2015 were:

i) Workshop on OSH Enhancement (in collaboration with SOCSO)

A total of 15 HIRARC workshop has been conducted nationwide with a total of 3682 participants.

ii) OSH Management System

A total of 25 workplaces has been chosen to be involved in activities on legislative compliance program. Each of all the 25 workplaces involved in this program received support in the form of Personal Protective Equipment. The program was executed by a third party observed by DOSH officer. Among the activities were as follow:

a) Chemical Health Risk Assessment (CHRA)
b) Local Exhaust Ventilation (LEV)
c) Indoor Air Quality (IAQ)
d) Noise Monitoring
e) Medical Surveillance
f) Audiometric Testing
g) Gap Analysis
h) OSH Management System Development
i) OSH Documentation Preparation
j) Safety Audit
k) Ergonomic Risk Assessment

iii) Door to Door

A total of 950 SME workplaces has been chosen from 15 states. A total of 926 SMEs successfully completed the door-to-door program under the Compliance Support initiative whereas the remaining 24 were unable to be completed due to cessation of factory operation. The summary of the activities were as follow:

a) Pre-Audit
- Obtain baseline grading
- Identify suitable improvement for implementation

b) Guidance support visit
- Implementation based on weakness found in workplace
- Uses a 7-module guidance

c) Post-Audit
- Obtain final grading
- Identify implemented improvement

The results of audit and grade improvement is as shown in Figure 7.5 and 7.6.

Besides that, a report entitled OSH Best Practices 2015 has been published as a result of SMEs' OSH Compliance Support. The execution involved 7 elements which were:

i) Safety and Health Committee
ii) Workplace Environment
iii) Safety and Health Policy
iv) Ergonomics
v) Hazard Identification, Risk Assessment and Risk Control
vi) Preparation of Safe Working Procedures
vii) Gap Analysis
viii) Notification of Accident, Dangerous Occurrence and Occupational Poisoning and Diseases

This report is an indicator to show the effectiveness of OSH Compliance Support in SMEs and as a guide to improve the level of OSH in SMEs workplaces.

Figure 7.5: OSH Compliance Support program in Federal Territory of Labuan

Figure 7.6: OSH Compliance Support program in Pahang

Figure 7.7: Compliance Support program conducted by DOSH Negeri Sembilan (left) and Selangor (right)

C. Systematic Occupational Health Enhancement Level Programme (SOHELP)

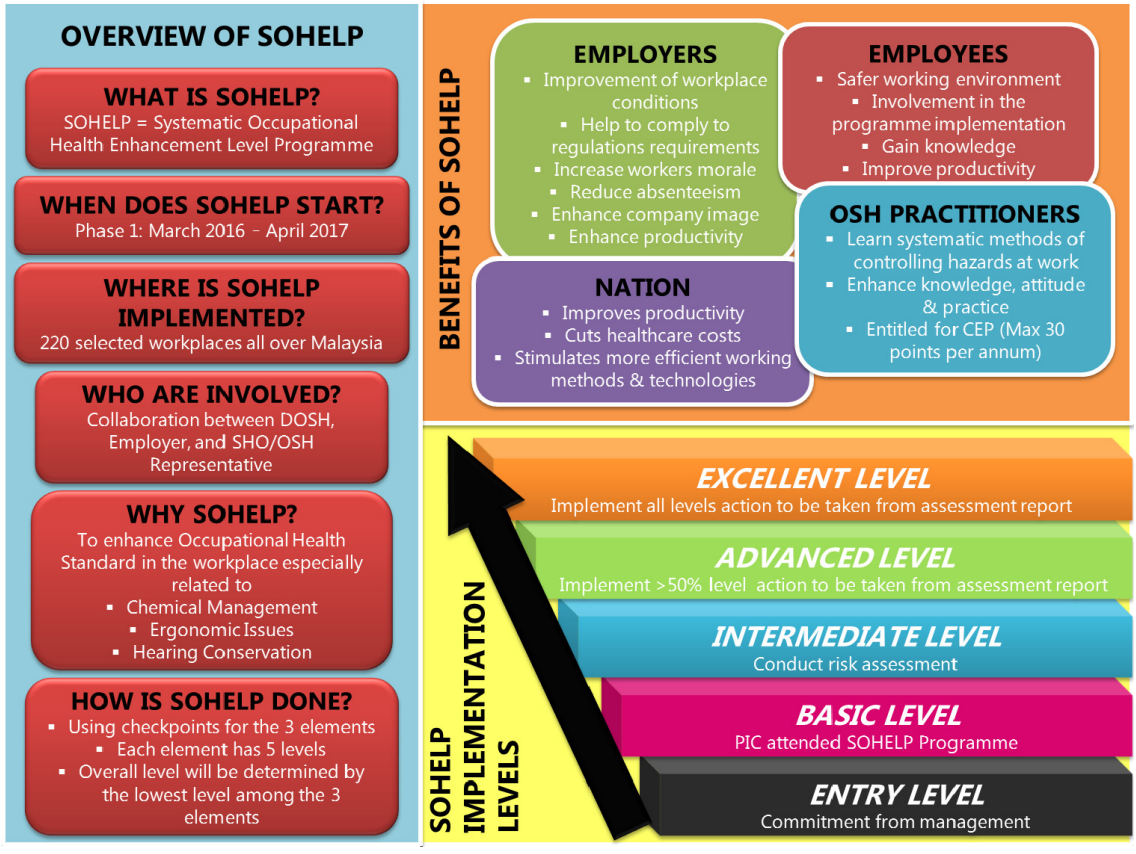

Figure 7.8: General Overview of SOHELP

(Source: Department of Occupational Safety and Health)

SOHELP is a programme initiated by DOSH to further streamline the management of Occupational Health (OH) and Industrial Hygiene (IH), of which it has been implemented in 220 selected workplaces all over Malaysia. Figure 7.8 above shows the general overview of SOHELP. The programme is implemented to focus on areas such as chemical, noise and ergonomics which were carried out using 'checkpoint' method developed by DOSH headquarters.

The 'checkpoint' method is where each of the 3 elements are benchmarked using 5 levels of implementation, and the overall level was determined by the lowest level among the 3 elements. The three main bodies involved in this programme are DOSH, employers, and SHO/OSH representatives. The three main objectives of this programme are:

- To improve OSH compliance related to industrial hygiene (chemical, noise & ergonomic)
- To understand the implementation of SOHELP
- As an engagement between OSH practitioners & OSH Authority

There are 5 phases of implementation of SOHELP, of which the first phase has begun since March 2016 and end on April 2017. The levels of implementation can be summarized as the Table 7.14 below.

Table 7.14: The levels of implementation of SOHELP

LEVEL	ERGONOMICS	CHEMICAL	HEARING
LEVEL 5 (EXCELLENT)	▪ Full implementation of workplace ergonomic survey ▪ No new case of health problem related to ergonomics ▪ Implementation of ergonomic promotion ▪ Review policy, budget and planning on OSH	▪ Implement all actions to be taken as stated in the CHRA or SiRAC report ▪ No new case of occupational disease related to chemical ▪ Implement chemical management promotion ▪ Review policy, budget and planning on OSH	▪ Implement all actions to be taken as stated in the Noise Assessment report ▪ No new case of occupational disease related to noise ▪ Implement hearing conservation promotion ▪ Review policy, budget and planning on OSH
LEVEL 4 (ADVANCED)	▪ Implement most (50%) action to be taken in the ergonomic survey ▪ Reporting/ notification of occupational diseases case related to ergonomics	▪ Implement most (50%) action to be taken in the CHRA or SiRAC report ▪ Reporting/ notification of occupational diseases case related to chemicals	▪ Implement most (50%) action to be taken in the Noise Assessment report ▪ Reporting/ notification of occupational diseases case related to noise
LEVEL 3	▪ Conduct workplace	▪ Conduct CHRA or	▪ Conduct noise risk

LEVEL	ERGONOMICS	CHEMICAL	HEARING
(INTERME-DIATE)	ergonomic survey ▪ Conduct ergonomics training to employees ▪ Implementation of PPE programmes ▪ Good record system	SiRAC ▪ Conduct information, instruction and training ▪ Implementation of PPE programmes ▪ Good record system	assessment ▪ Provide training to employees exposed to excessive noise ▪ Implementation of PPE programmes ▪ Good record system ▪ Identify hearing protection zone
LEVEL 2 (BASIC)	▪ PIC attended program ▪ Provide appropriate warning signs ▪ PIC prepare action plan	▪ PIC attended program ▪ Provide appropriate warning signs ▪ PIC prepare action plan ▪ Prepare chemical register ▪ Label of CHH & SDS ▪ Proper storage of chemicals ▪ Emergency response and preparedness programme	▪ PIC attended programme ▪ Provide appropriate warning signs ▪ PIC prepare action plans
LEVEL 1 (ENTRY)	▪ Commitment from management to implement program ▪ Appointment of PIC to implement program ▪ Provide a place for workers' meeting and training ▪ Provide and maintain basic welfare facility		

The implementation of SOHELP is expected to:

1. Show significant improvement in awareness and implementation of SOHELP in high risk workplace/activities

2. Improve OSH legal compliance

3. Improve working conditions

4. Increase chance to participate in OSH National Awards

5. Increase potential to be shared through international platforms such as ASEAN-OSHNET, OIC-OSHNET and other international organizations.

In addition, the programme is also expected to give significant benefits to 4 representatives in particular, which are employers, employees, OSH practitioners and also the nation. Table 7.15 below summarizes the benefits of SOHELP for employers, employees, OSH practitioners and for the nation.

Table 7.15: Benefit of SOHELP for Employers, Employees, OSH Practitioners and Nation

BENEFIT FOR EMPLOYERS
a) Improvement of workplace conditions b) Help to comply to regulations requirements c) Increase workers' morale d) Reduce absenteeism e) Enhance company image f) Enhance productivity
BENEFIT FOR EMPLOYEES
a) Safer working environment b) Involvement in the programme implementation c) Gain knowledge d) Improve productivity
BENEFITS OF SOHELP FOR OSH PRACTITIONERS
a) Learn systematic methods of controlling hazards at work b) Enhance knowledge, attitude & practice c) Entitled for CEP (Max 30 points per annum)
BENEFITS OF SOHELP FOR THE NATION
a) Improves productivity b) Cuts healthcare costs c) Stimulates more efficient working methods & technologies

7.3 INTERNATIONAL COLLABORATION

International collaboration is an essential part in promoting safety and health at work. Enhancing OSH knowledge and information networking activities is a strategic objective to enrich the worldwide dialogue on prevention, through various means and activities. The aim is to strengthen and actively supporting the contribution of knowledge in OSH to the large social debates on the topic.

Cooperation with other international organizations and bodies involved in various field related to OSH is an effective way of ensuring that development of related international instruments and technical standards. Through international collaboration, ILO is at the centre of global network and alliances which are vital for maintaining the currency for its technical knowledge bases, as well as influencing those of its partner.

ILO provides advisory and technical assistance to support member and social partner's activities in the area of OSH. ILO has recently followed a coherent strategy focuses on enhancing the impact of the standard system. Assistance has been provided to the number of countries for the development of national OSH profile.

The adoption of OSH policies and the implementation of national OSH programme, the aim being for these countries to assess the national situation as the first step before taking actions to improve national system through focused programme. The provision of training in various areas of OSH has also been an important element of technical cooperation.

7.3.1 Collaboration with International Labour Organizations (ILO)

Malaysia has been a member of the ILO since 1957 and has ratified 18 ILO Conventions, of which 17 are still in force. These include five of the ILO's eight core conventions, the non-ratified core conventions being the Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87) and the Discrimination (Employment and Occupation) Convention, 1958 (No. 111).

In 1990, the Government denounced one of the core conventions it had ratified, C.105 on the abolition of forced labour. In 2011, the ILO launched a five-year AusAID-funded project to protect migrants within and from the Greater Mekong Sub-region from labour exploitation – TRIANGLE. In 2015, the project's work in Malaysia was renewed for a further ten years. TRIANGLE aims to strengthen recruitment and labour protection policies and promote decent work for the large number of migrant workers in Malaysia.

In recent years, technical cooperation with the Ministry of Human Resources in Malaysia has focused on minimum wages, social security schemes (actuarial review and unemployment insurance) and green jobs.

In 2015, Ministry of Human Resources Malaysia requested ILO technical assistance with labour law reforms as part of the Labour Consistency Plan. The ILO's technical cooperation work in Malaysia is supported through the ILO Regional Office for Asia and the Pacific, based in Bangkok, Thailand.

Although various collaboration between ILO and Malaysia, there is limited project by ILO that relates Occupational Safety and Health.

7.3.1.1 ILO Project in Malaysia

A) Tenth Actuarial Valuation of the Social Security Fund in Response to Section 82 of the Social Security Act 1696 (15th June 2015 – 14th June 2017)

SOCSO has asked the ILO to undertake the tenth actuarial valuation. This is expected to serve as one of the periodical actuarial valuations required by law. At the same time, it is intended to shape options for reforms and to assess the relevance of the reforms that were proposed by the ninth actuarial valuation. The recommendations will be reformulated so that they support improvements in the coverage and adequacy of the benefits, and help to secure the long-term financial sustainability of the systems, in line with the Social Security Act, 1969. The ILO will continue to provide periodic technical assistance during this process.

B) World OSH Day Campaign

Under the collaboration in promoting OSH, Malaysia had participated in each of the event organized by ILO. The annual program held in various countries with ILO collaboration including International Organization of Employers (IOE); International Trade Union Confederation (ITUC), World Health Organization (WHO), International Social Security Association (ISSA), Workplace Safety and Health Institute and Workplace Safety and Health Council in Singapore. Malaysia through DOSH had participated in all event organized under World OSH Day (Table 7.16).

Table 7.16: World OSH Day Program in Malaysia

DATE	LOCATION	THEME	LOCATION IN MALAYSIA	DATE IN MALAYSIA
28th April 2016	ILO HQ - Geneva	World Day for Safety and Health at Work 2016 - Workplace Stress: a collective challenge	Resorts World Kijal, Terengganu	10th May
28th April 2015	ILO HQ - Geneva	Building a culture of prevention of occupational safety and health	Dewan Jubli Perak, Sultan Haji Ahmad Shah, Kuantan Pahang	28th April
28th April 2014	Global Campaign	Safety and health in the use of chemicals at work	Bangunan Lama Dewan Undangan Negeri Sarawak	28th April
28th April 2013	Global Campaign	The prevention of occupational diseases	Dataran Bersejarah, Ayer Keroh, Melaka	28th April
28th April 2012	ILO HQ - Geneva	Promoting safety and health in a green economy	Dewan Orang Ramai Muadzam Shah, Pahang	28th April
28th April 2011	ILO HQ - Geneva	OSH management system: A tool for continual improvement	Tapak Pembinaan Marlborough College, Nusajaya, Johor	28th April
28th April 2010	ILO HQ - Geneva	Emerging risks and new patterns of prevention in a changing world of work	NIOSH, Bandar Baru Bangi, Selangor	28th April
28th April 2009	ILO HQ - Geneva	Health And life at work: A basic human right	Pusat Konvensyen Antarabangsa Putrajaya (PICC)	28th April
28th April 2008	ILO HQ - Geneva	Managing risk in the work environment	Pusat Konvensyen Antarabangsa Putrajaya (PICC)	28th April
28th April 2007	ILO HQ - Geneva	Safe and Healthy workplaces – Making decent work a reality	Hotel Marriott Putrajaya	28th April

7.3.2 Event and Meeting

7.3.2.1 ILO/ISSA International Conference (28th to 29th October 2015)

The ILO/ISSA Conference took place during the 34th International A+A Congress organized by German Federal Association for Occupational Safety and Health. Over 50 series of events with high-profile speakers discussed and gathered information on the entire range of current topics in the field of safety, health and ergonomics. Malaysia is represented by Nik Amsharija Mohamed, General Manager, Medical and Rehabilitation, Operational Division of the Social Security Organisation (SOCSO), Malaysia.

7.3.2.2 Tripartite Sectoral Meeting on Safety and Health in the Road Transport Sector (12th to 16th October 2015)

The Tripartite Sectoral Meeting on Safety and Health in the Road Transport Sector was held at the International Labour Organization (ILO) in Geneva from 12 to 16 October 2015. The International Labour Office (Office) had prepared a report which served as the basis for the Meeting's deliberations. The report for discussion dealt particularly with:

i) recent developments in the road transport sector;
ii) employment and other features of the road transport sector;
iii) occupational safety and health (OSH) risks;
iv) work-related disorders; and
v) the ILO, policy coherence and responses.

Twenty-five countries participated in the Meeting including Bangladesh, Belgium, Plurinational State of Bolivia, Brazil, Cambodia, Cameroon, Chile, China, Congo, Côte d'Ivoire, Dominican Republic, Indonesia, Malaysia, Mauritius, Mexico, Morocco, Mozambique, Portugal, Russian Federation, Sri Lanka, Sudan, Thailand, Uruguay, Bolivarian Republic of Venezuela, and Zimbabwe. Malaysia is represented by Mr. Omar bin Mat Piah, Deputy Director-General (Occupational Safety), DOSH and Mr Ummar Jai Kumar Abdullah, Labour Attaché, Permanent Mission of Malaysia, Geneva, Switzerland.

Representatives of the following intergovernmental organizations also attended the Meeting: The United Nations Economic Commission for Europe (UNECE); the United Nations Conference on Trade and Development; and the World Health Organization (WHO). At the invitation of the Governing Body, observers from the following non-governmental international organizations were present: The International Organisation of Employers (IOE); the International Road Transport Union (IRU); the International

Trade Union Confederation (ITUC); the International Transport Workers' Federation (ITF); and the International Union of Public Transport (UITP)

7.3.2.3 ILO-ACTRAV Symposium Role of Trade Unions in the Promotion of OSH in Asia-Pacific 1-3 October 2014, Jakarta, Indonesia

Trade Union representatives from 14 countries in Asia and the Pacific Region (Australia, Cambodia, China, Fiji, India, Indonesia, New Zealand, Malaysia, Mongolia, Myanmar, the Philippines, Thailand, Timor-Leste and Viet Nam) met in Jakarta from 1-3 October 2014 for the ILO-ACTRAV Symposium supported under South-South Cooperation ACTRAV/ ACFTU Programme to review and share experiences on the state of OSH in the region.

One of the important outcome of the symposium was continuous effort in ratify/implement the ILO key Instruments on OSH: Convention No 155, its 2002 Protocol and Convention No 187:

- Participate in the preparation, implementation and review of national OSH policies and programmes
- Participate and contribute to the development, strengthening and review of the national OSH systems
- Work to set up tripartite National OSH Councils
- Promote social dialogue at the enterprises (OSH committee or other forms)

7.3.2.4 Labour Inspection and the Role of Private Compliance Initiatives (10th to 12th December 2013, Geneva, Switzerland)

The purpose of the meeting was to increase the knowledge of the ILO, its member States and Employers' and Workers' organizations on labour inspection and the role of private compliance initiatives and consider good practices and possible policy responses at the national, regional and international level.

Twenty-four (24) experts with 8 were nominated by the Employers' group of the Governing Body; eight experts nominated by the Workers' group of the Governing Body; and eight experts nominated by the Governments of Brazil, France, India, Jordan, Morocco, Poland, South Africa and the United States.

Malaysia was represented by Mr Roslan Bahari, Labour Attaché, Permanent Mission of Malaysia, Switzerland and Mr Seng Wing Goh, Senior Consultant – Industrial Relations, Malaysian Employers Federation (MEF), Malaysia.

7.3.2.5 ILO International Safety and Health Conference 2013 (6 to 7th November 2013), Düsseldorf, Germany

The conference shared international and national good practices as part of an effort to enhance the effectiveness of action to prevent, identify, record and compensate occupational diseases. Under the theme "Make it visible: Occupational Diseases - Recognition, Compensation and Prevention", the conference offered an excellent forum to share the experience of different stakeholders and learn how to put it in practice at each level.

It aimed to call on governments and social security officials, employers, workers' organizations, labour inspectors, OSH professionals and their organizations to collaborate in the development and implementation of national policies and strategies directed at preventing occupational and work-related diseases. Malaysia was represented by Dato' Dr Mohamed Azman, Chief Executive Officer of Social Security Organisation.

Figure 7.9: Roundtable on the way forward and international collaboration. From left to right: Mr Kris de Meester, Dr Mohamed Azman, Dr Ivan Ivanov, Dr Jorge Costa-David, Ms Michele Patterson, Mr Seiji Machida

7.3.2.6 International Labour Conference

The International Labour Conference held in month of June every year in Geneva, Switzerland and attended by all 187 ILO member states. International Labour Conference is globally the most important labour-related conference and the highest decision making body of the ILO. Each member is represented by a delegation consisting of two government delegates, an employer delegate, a worker delegate, and their respective advisers.

In 2016, the 105th session of the International Labour Conference was successfully held in Geneva and was represented by The Ministry of Human Resource (Dr Richard Riot). The conference discussed a series of world of work issues including global supply

chains; decent work for peace, security and disaster resilience, as well as the impact of the ILO Declaration on Social Justice for a Fair Globalization.

Delegates will also consider amendments to the Code of the Maritime Labour Convention and review the report of the Director-General on poverty.

7.3.3 Involvement of another ILO Related Program

Malaysia also participated ILO related congress and Conferences including:

a) 31st International Congress on Occupational Health

The International Congress on Occupational Health started as a congress to prevent the industrial accident and occupational disease in Milan, Italy, 1906. It is the world's largest international congress in the field of the occupational health in which OSH experts gather together every three years to provide new knowledge and information about accident prevention and share experience about the prevention of industrial accident and occupational disease and good practices with each other.

The 31st International Congress on Occupational Health (ICOH Congress 2015) was held under the motto "Global Harmony for Occupational Health: Bridge the World", which will be realized by active participation and cooperation of global occupational health professionals and leaders. Malaysia had been represented by NIOSH, DOSH, and Academician from Universities.

b) XX World Congress on Safety and Health at Work 2014 (24th to 27th August 2014)

The World Congress for Safety and Health at Work offers a platform for the exchange of information and views to experts in OSH, representatives of enterprises and workers (the social partners), decision-makers in governments and public authorities, and anyone else active in the area of OSH. Malaysia were represented by The Executive Director of SOCSO and by another academician from Universiti Putra Malaysia.

c) XIX World Congress on Safety and Health at Work (11th to 15th September 2011)

The XIX World Congress on Safety and Health at Work, jointly organized by the International Labour Organization (ILO), the International Social Security Association (ISSA) and the Ministry of Labour and Social Security of the Republic of Turkey, was held in Istanbul, 11-15 September 2011. The Congress includes an International Film and Multimedia Festival organized by the ISSA, which will feature over 200 short films and multimedia presentations on OSH.

d) International Forum on Occupational Health and Safety: Policies, Profiles and Services, 20th to 22nd June, 2011. Espoo, Finland

The aim of the International Forum is to consider occupational safety and health policies and profiles and make an inventory, and then to continue with the introduction and further development of occupational health services, Basic Occupational Health Services in particular. The objective was to recommend for further actions for more sustainable solutions in the world of work

e) XXIXth International Symposium of the ISSA Construction Section on Occupational Safety and Health in the Construction Industry, 23 to 25th November 2009, Brussel, Belgium.

The ISSA Construction Section was founded in 1968 and is one of the 11 International Sections on Prevention. The purpose of ISSA Construction Section is to carry on international actions intending to promote the prevention of occupational accidents and diseases.

7.3.4 Government to Government Organization

7.3.4.1 ASEAN-OSHNET

ASEAN-OSHNET is one of the subsidiary bodies established under ALMM to promote cooperation in improving safety and health in the workplace in the ASEAN region. It also serves as a platform to exchange experience and information in the field of occupational safety and health standards, training, research, inspection and national framework.

The activities of ASEAN-OSHNET comprise of 7 main areas and appointed 7 member countries as Programme Area Coordinator. Table 7.17 listed programme area coordinator. Malaysia was the previous host for ASEAN-OSHNET and the secretariat is based at NIOSH, Malaysia. Malaysia will be host for 35th Asia and Pacific Occupational Safety and Health Organization (APOSHO) in 2020.

Malaysia has taken part in activities organized by ASEAN OSHNET. Table 7.18 listed the activities regarding involvement of Malaysia in ASEAN OSHNET. Figure 7.10 showed the ASEAN-OSHNET award ceremony attended by Mr Anuar Embi and Mr Omar bin Mat Piah. Further information can be found in the website http://www.aseanoshnet.org.

Table 7.17: Programme Area Coordinator

NO	PROGRAMME AREA	COORDINATING COUNTRY
1	Information	Thailand
2	Research	Indonesia
3	Standard	Malaysia
4	Training	Philippine
5	Inspection	Singapore
6	National OSH Framework	Vietnam
7	SME and Informal Economy	Cambodia

Table 7.18: ASEAN-OSHNET activities from 2010 to 2016

YEAR	AGENDA	VENUE
2010	3rd ASEAN-OSHNET and 3 policy dialog on OSHMS	Luang Prabang, Lao PDR
	Strategy conference on prevention – risk management and social security "The soul – Roadmap towards better safety and health at work	Hanoi, Vietnam
2011	13th ASEAN-OSHNET Coordinating Board Meeting	Manila
	Training Programme on Industry and Environmental Protection for ASEAN organized by The Association for Overseas Technical Scholarships (AOTS) Japan	AOTS Tokyo Kenshu Centre (TKC), Tokyo, Japan
	High level multi-stakeholder dialogue on HIV Prevention, Treatment, Care and Support for Migrants in the ASEAN Region	Bangkok, Thailand
2012	ASEAN OSHNET workshop session for OSH-MS Guideline	Singapore

YEAR	AGENDA	VENUE
	2nd ASEAN Labour Inspection Conference	Vietnam
	Asia Europe Meeting (ASEM) Occupational Safety and Health Symposium	Singapore
2013	14th ASEAN-OSHNET Coordinating Board Meeting	Myanmar
2014	1st ASEAN OSHNET Conference	Singapore
2015	16th ASEAN-OSHNET Coordinating Board Meeting representative by Mr Anuar Embi, General Director for International Policy and Research Development Division.	Bangkok, Thailand
2016	17th ASEAN-OSHNET Coordinating Board Meeting	Vietnam
	3rd ASEAN OSHNET Conference	Vietnam

Figure 7.10: ASEAN-OSHNET award ceremony

7.3.4.2 Third Country Training Program (TCTP)

Third Country Training Program (TCTP) is an international training programme organized by the Department of Occupational Safety and Health (DOSH) with the collaboration with Japan International Cooperation Agency (JICA), Japan and Malaysian Technical Cooperation Programme (MTCP) under the Ministry of Foreign Affairs, Malaysia.

JICA and the Malaysian Government had a 5-year agreement on The Project for Improving Occupational Safety and Health Administration of DOSH Malaysia. The DOSH-JICA Project started in April 2007 until April 2012 with the purpose of improving OSH administration by DOSH Malaysia, focusing on construction industry and Small and Medium Scale Enterprises.

The course is titled "Occupational Safety and Health Management for Lao PDR, Myanmar and Vietnam" and focuses on occupational safety and health management in the construction sector. The course, organized from 2013 to 2015, is an extension from the 5-year DOSH-JICA Project for Improving Occupational Safety and Health Administration of DOSH Malaysia. The target participants of the course are government officers and trainers in occupational safety and health in Lao PDR, Myanmar and Vietnam.

Looking at the benefits of the previous TCTP, MTCP and JICA has agreed to continue TCTP in 2016 for a new cycle extending the participation to include Cambodia and focusing on OSH in both the construction and the small and medium enterprise (SME) sectors. This course entitled "Occupational Safety and Health Management for Cambodia, Lao PDR, Myanmar and Vietnam (CLMV)" within the framework of occupational safety and health (OSH) technical training. Table 7.19 below details out the course conducted for TCTP programme.

Information of TCTP can be referred through the following website: https://www.jica.go.jp/english/our_work/thematic_issues/south/activity_03.html.

Table 7.19: Course conducted for TCTP Programme

DATE	PROGRAMME	VENUE	PARTICIPANTS
11 – 29 November 2013	Occupational Safety and Health Management for Lao PDR, Myanmar and Vietnam	NIOSH, Malaysia	18 participants • 8 from Lao PDR; • 3 from Myanmar • 7 from Vietnam • 4 from Malaysia (3 from DOSH; 1 from SOCSO).
8 – 26 September 2014	Occupational Safety and Health Management for Lao PDR, Myanmar and Vietnam	NIOSH, Malaysia	16 participants • 5 from Lao PDR • 11 from Myanmar • 5 from Malaysia (3 from DOSH, 1 from SOCSO) • No participant from Vietnam due to some misunderstanding
11 – 29 May 2015	Occupational Safety and Health Management for Lao PDR, Myanmar and Vietnam	NIOSH, Malaysia	22 participants • 9 from Lao PDR • 11 from Myanmar • 2 from Vietnam • 5 from Malaysia (3 from DOSH; 1 from NIOSH; 1 from SOCSO)
15 August – 2 September 2016	Occupational Safety and Health Management for Cambodia, Lao PDR, Myanmar And Vietnam (CLMV)	NIOSH, Malaysia	20 participants • 6 from Cambodia • 6 from Lao PDR • 4 from Myanmar • 4 from Vietnam • 5 from Malaysia (3 from DOSH; 1 from NIOSH; 1 from SOCSO)

7.3.4.3 Malaysian Technical Cooperation Programme (MTCP)

Malaysian Technical Cooperation Programme (MTCP) is the first programme organized by the Department of Occupational Safety and Health (DOSH). This course targets participants from the Organization of Islamic Cooperation (OIC) countries. Malaysia is one of the partners of the Organization of Islamic Cooperation Occupational Safety and Health Network (OIC-OSHNET). Therefore, Malaysia would like to share its experience to countries from the region in terms of OSH.

The course in 2015 and entitled "Occupational Safety and Health Competency Management" discuses Malaysia's experience in OSH especially in the scope of competency management and aiming to increase knowledge, understanding and skill among the officers of OIC member countries in the enforcement of OSH with respect to competent persons. Table 7.20 listed programme organized under MTCP. Further details about MTCP can be viewed from https://mtcp.kln.gov.my/.

Table 7.20: Course organized under MTCP programme

YEAR	PROGRAMME
2009	Safety and Health Officer Program for Developing Country (ISHO)
2010	Safety and Health Officer Program for Developing Country (ISHO)
	Basic Train the Trainer for Developing Country
2011	Safety and Health Officer Program for Developing Country
	Globally Harmonized System of Classification and Labelling of Chemicals
	Confined Space Safety
2015	Occupational Safety and Health Competency Management

7.3.4.4 Organization of the Islamic Cooperation (OIC)

OIC Network for Occupational Safety and Health (OIC-OSHNET) is a transnational networks project under the framework of Vocational Education and Training Programme for Islamic Countries (OIC-VET). The establishment of OIC-OSHNET is to establish an international network for systematic sharing of information and experience in occupational safety and health issues among professionals, to build up awareness of occupational safety and health in OIC Member countries, as well as to improve the quality of the service in this area. Currently Malaysia has six panels in OSH experts, as listed in Table 7.21.

Besides that, Occupational Health and Safety Capacity Building (OHSCaB) Programme has been initiated in early 2010 to address the outstanding needs and ways for improving workplace safety and health in OIC member counties. Within this framework, the centre is organizing short term occupational health and safety training programmes according to the needs and capacities of the occupational health and safety institution in the members' countries of the OIC. Table 7.22 lists the OHSCaB Programme participated by OIC members including Malaysia.

Figure 7.11: Safety and Health Officer Program for Developing Countries (ISHO) 2010

Table 7.21: OSH Experts in Malaysia

NO.	NAME	INSTITUTION	FIELD OF EXPERTISE
1	Oladokun Sulaiman	University Malaysia Terengganu	Ship building, transportation, haulage in mining, engineering, agriculture, construction, electricity.
2	Anuar Mohd Mokhtar	Department of Occupational Safety and Health	Manufacturing, mining, small and medium enterprises, engineering, chemicals, confined space
3	Johari Basri	Department of Occupational Safety and Health	Engineering
4	Habsah Md Ishak	Department of Occupational Safety and Health	Construction
5	Sirajuddin Hashim	Ministry of Health, Malaysia	Health care
6	Saiful Azhar Mohd Said	Department of Occupational Safety and Health	Manufacturing, metal, small and medium enterprises, engineering

Table 7.22: OSHCaB Programme from 2010 – 2015

YEAR	OSH PROMOTION ACTIVITIES	VENUE
2016	Training Course on 'Personal Protective Equipment'	Bandar Seri Begawan, Brunei
2016	Panel Session on 'The Role of National and International OSH Organisations'	Istanbul, Turkey
2016	3rd Meeting of the OIC Occupational Safety and Health Network (OIC-OSHNET)	Istanbul, Turkey
2016	Training Course on 'Occupational Health: Chemical Exposure'	Lahore, Pakistan
2016	Training Course on 'Occupational Safety and Health in Construction Sector and Fundamentals of Industrial Hygiene'	Muscat, Oman
2015	Technical Training Course on 'Occupational Hygiene and Safety'	Ankara, Turkey
2015	General Guidelines on Occupational Safety and Health (OSH) was endorsed	Jakarta, Indonesia
2015	Training Course on "Occupational Hygiene"	Baku, Azerbaijan
2015	Training Course on "Occupational Hygiene"	Lahore, Pakistan
2014	Training Course on "Occupational Hygiene" in Brunei Darussalam	Bandar Seri Begawan, Brunei
2014	Training Course on 'Occupational Safety'	Tirana, Albania
2014	SESRIC, IDB and OSHNET Secretariat held joint meeting	Ankara, Turkey
2014	Training course on 'Occupational Hygiene'	Khartoum, Sudan
2014	Training Programme on 'Occupational Health and Safety: International OSH Regulations'	Dhaka, Bangladesh
2014	Training Course on 'Occupational Hygiene'	Paramaribo, Suriname
2014	Workshop on 'Occupational Safety and Health Regulations and Standards'	Istanbul, Turkey
2012	Training Course on 'Occupational Hygiene: Chemical Factors and Chemical Exposure'	Malaysia
2011	Symposium on 'International Partnership in OSH Training' at XIX World Congress on Safety and Health at Work	Istanbul, Turkey
2011	OIC Network for Occupational Safety and Health (OIC-OSHNET): Kick-off Meeting	Ankara, Turkey

YEAR	OSH PROMOTION ACTIVITIES	VENUE
2011	Training Course on 'Occupational Health and Safety'	Islamabad, Pakistan
2011	Training Course on 'Occupational Hygiene: Chemical Factors and Chemical Exposure'	Muscat, Oman
2011	Training Course on 'Occupational Health and Safety'	Bandar Seri Begawan, Brunei
2010	Training course on 'Basic Occupational Health and Safety: International OHS Regulations, Health and Safety Management System and Risk Assessment Methodologies' in Ankara	Ankara, Turkey
2010	Cooperation Project on Occupational Safety and Health	Ankara, Turkey

7.3.5 National Institute of Occupational Safety and Health

NIOSH Malaysia is hosted for the Asian Occupational Safety and Health Research Institute (AOSHRI) meeting in 2014 to discuss smart cooperation, latest OSH developments, regional OSH issue and the short term/long term directions of OSH research and development activities. The first AOSHRI meeting was initiated and organized by the National Institute of Industrial Health of Japan in 2004. AOSHRI meetings provide a platform for workplace safety and health (WSH) research institutes in Asia to:

- Discuss OSH research activities in national or regional OSH research institutes in Asia;
- Utilize this information for further activities in each institute;
- Set up an international network for continuous cooperation among institutes; and
- Facilitate international research cooperation to help solve (OSH) issues.

The 5th AOSHRI meeting in 2015 was held in Singapore which was attended by NIOSH representatives and 11 other countries with a discussion session with OSH experts from Sheffield Group Meeting which consists of representative from 14 countries. At the meeting attended by 43 experts, the presentation of reports and sharing of the latest developments in the field of OSH has strengthened the relationship and interests of all members in formulating a direction to resolve various OSH issues in the workplace.

Figure 7.12: The 5th AOSHRI Meeting 2015 on 11 March 2015, Singapore

7.3.6 International Activities by NGO

7.3.6.1 Asian Pacific Occupational Safety and Health Organization (APOSHO)

Asian Pacific Occupational Safety and Health Organization (APOSHO) is an international body consist of non-profit professional organizations. APOSHO focused on prevention of occupational accidents and diseases among workers. Malaysia become full member for APOSHO represented by:

1. Malaysian Society for Occupational Safety & Health (MSOSH)
2. National Institute of Occupational Safety & health (NIOSH)
3. Malaysian Occupational Safety and Health Professionals' Association (MOSHPA)

APOSHO has organized conference annually for their members and delegates. Table 7.23 listed the OSH event participated by the members. Figure 7.13 and 7.14 showed the relevant picture for APOSHO programme.

Table 7.23: OSH event participated by members of APOSHO

YEAR	EVENT	VENUE
2013	XX World Congress on Safety and Health at Work	Congress Center Frankfurt, Germany
2013	28th APOSHO conference and seminar	Jakarta
2014	29th Annual Conference of APOSHO	Bangkok
2015	Department of Occupational Safety & Health (DOSH) - Malaysia and International Powered Joint Access Federation (IPAF) Joint Seminar 2015.	Puri Pujangga, UKM

Figure 7.13: Official Launch of 'Are You Trained' Campaign in Malaysia

Figure 7.14: The 28th APOSHO Conference and Seminar

7.3.6.2 ASEAN Labour Minister Meeting (ALMM)

ASEAN Labour Ministers (ALM) Work programme acts in guidance of ASEAN's work on labour and human resource since year 2000. The Work Programme gives the framework to prepare the region's labour force to confront the challenges of globalization and trade liberalization.

The five broad priorities initially set in the Work Programme are in the areas of employment generation, labour market monitoring, labour mobility, social protection, and tripartite cooperation. In May 2006, the ASEAN Labour Ministers agreed in their Joint Statement of 2006 to add a sixth priority area, namely OSH, in the ALM Work Programme. Table 7.24 outlines the programme organized by ALMM from 2010 to 2016.

Table 7.24: List of programmes organized by ALMM from 2010 to 2016

YEAR	PROGRAM	VENUE
2016	The 9th ASEAN Plus Three Labour Ministers Meeting	Vientiane, Lao PDR
2016	The 24th ASEAN Labour Ministers Meeting	Vientiane, Lao PDR
2012	ASEAN Plus Three Labour Ministers Meeting	Cambodia
2012	22nd ASEAN Labour Ministers Meeting	Cambodia
2010	ASEAN Plus Three Labour Ministers Meeting	Hanoi
2010	21st ASEAN Labour Ministers Meeting	Hanoi

7.3.6.3 International Association of Labour Inspection

The International Association of Labour Inspection (IALI) is the global professional association for labour inspection. It was established in 1972, and currently has over 100 members worldwide. Malaysia is one of the members of IALI where Ir. Mohtar bin Musri, the current Director General of DOSH acts as the representative. The main aims of IALI are:

- To promote the professionalism of its members on all aspects of labour inspection, so as to enhance their impact and effectiveness;

- To hold international and regional conferences and similar events at which members can exchange ideas and experience about how best to promote compliance with labour law and good practice;

- To provide information to its members about professional issues through the Association's website, newsletters, reports and other publications;

- To promote closer collaboration between its members, through regional networking and activities.

IALI seeks to achieve these aims through a wide range of activities each year. Its activities often focus on working conditions and OSH topics and other concerns to labour inspectors, such as illegal employment and child labour. More information of IALI can be viewed from website https://www.iali-aiit.org/.

Table 7.25 list out activity which Malaysia involve as participant. Figure 7.15 and 7.16 showed relevant picture for the programme.

Table 7.25: Activity participated by Malaysia as IALI member

YEAR	CONFERENCE AND EVENT	VENUE
2010	The Singapore Workplace Safety and Health (WSH) Conference	Singapore
2011	XIX World Congress on Safety and Health at Work	Istanbul, Turkey
2012	Asia-Europe Meeting (ASEM) OSH Symposium on Developing a Preventive OSH Culture	Singapore
2014	XX World Congress on Safety and Health at Work	Frankfurt, Germany
2014	The Singapore WSH Conference	Singapore
2016	The Singapore WSH Conference	Singapore

Figure 7.15: The Singapore Workplace Safety and Health Conference 2010

Figure 7.16: The Singapore Workplace Safety and Health Conference 2016

7.3.7 MIHA-IOHA

MIHA (Malaysian Industrial Hygiene Association) is non-profit professional organization founded in May 2003. It is amongst the pioneer of its kind in South East Asia. With more than 100 members within its first year, it is successfully serving the needs of its members in promoting the field of Industrial Hygiene, providing education and training, forums for the exchange of ideas and information plus representing the interests of Industrial Hygienists and those they provide service for. MIHA is also an affiliate member of the International Occupational Hygiene Association (IOHA) in pursuit of international recognition and standing.

The Malaysian Industrial Hygiene Association (MIHA) is an organization of professionals dedicated to: -

- Promote the anticipation, identification, evaluation, and control of environmental factors, stressors arising in or from the workplace or its products in relation to the health or well-being of workers and the public
- Increase the knowledge of Industrial Hygiene through sharing, interchanging and dissemination of information and to bring together individuals and organizations interested in the various areas of Industrial Hygiene and environment health fields
- To promote the profession through encouragement of interest within the group and participation and cooperation with governmental, industrial, educational and other professional bodies
- To collect and make accessible to all who engaged in Industrial Hygiene, such information and data that may assist them in the fulfilment of their duties
- To contribute knowledge and expertise to needful organizations and industries where appropriate
- To promote the professional field of Industrial Hygiene via providing education and training, plus forums for exchanging ideas and information amongst industrial hygienists and those they provide service for.

Currently, MIHA members comprise of full, associate, organizational and student members with a good mix of experience and expertise. They are among the pioneers in Industrial Hygiene in Malaysia and are a much-valued resource. These include:

- Certified Industrial Hygienists
- Industrial Hygienists

- Local legislative representatives
- Safety & Health Officers
- Industrial hygiene & safety practitioner
- Engineer
- Chemist
- Environment Scientist
- Independent Organization
- Local institution student

Membership shall be opened to all who are interested in the objectives of MIHA and shall be of six classes, namely Full Member, Associate Member, Affiliate Member, Student Member and Organizational Member and Honorary Member. Approval by the Committee Members for its designee shall be required for election to all classes of membership.

MIHA organize various activities regularly in conjunction with the objectives of the association. Besides that, MIHA maintain close working relationship with DOSH and SOCSO, participating in several workshops and engagement sessions. Among some initiatives and activities are such as:

- Quarterly Technical Hygiene Forum, Courses and Dialogue Sessions concentrating on the latest Industrial Hygiene issues of concern for both Industrial Hygiene professionals as well as those they serve in the Malaysian industry.

- Tea-talks and discussions with national and international Industrial Hygienists in sharing experiences and promoting the field.

- Comprehensive Industrial Hygiene related courses conducted by renowned Industrial Hygiene professionals from international Universities worldwide.

Figure 7.17: Assessment and Control of Hot Environments Course, 21st and 22nd of January 2016 at Corus Hotel, Kuala Lumpur

Figure 7.18: IH Knowledge Café, 24th March 2016 at Corus Hotel, Kuala Lumpur

Figure 7.19: In-house Fundamental of Industrial Hygiene Course, 12th–14th April 2016 at UNIMAP, Perlis

7.3.8 Human Factors and Ergonomics Society of Malaysia (HFEM)

HFEM had collaborated with various agencies in promoting ergonomics in Malaysia. HFEM had been actively conducted international conference and short seminar in Malaysia and participated the conferences in Asia, United States and Australia. HFEM together with Singapore, Indonesia, Philippine and Thailand had established The South-East Asia Network of Ergonomics Societies (SEANES).

The country members of SEANES takes turn to organize a biennial Conference which member countries elect the next SEANES's President in the conference organized. Malaysia had been the president of SEANES in the year 2012 to 2013 and had been the main organizer with other SEANES countries as co-organizer supporting technical team in scientific papers and presenters.

A total of 180 delegates from 20 countries gathered in Langkawi on 9-12 July for the 2nd International Conference of Southeast Asian Network of Ergonomics Societies (SEANES) which was hosted by the Human Factors and Ergonomics Society Malaysia (HFEM). More than 140 research papers were presented in 32 technical sessions. An added value to the conference was the presence of eight present and past officers of the International Ergonomics Association (IEA) and eight SEANES council members who discussed issues from ergonomics interventions in SMEs to writing technical papers for IEA-endorsed journals, and providing services across border.

Figure 7.20: SEANES CONFERENCE 2012 (Langkawi 9 to 12 July 2012)

In addition to conferences, HFEM and SEANES are currently working together in developing ergonomics checklist at the workplace for indoor and outdoor work areas including manufacturing, transportation, agriculture, clean room, offshore installation and offices. The checklist developed in collaboration with expert from Japan, Hong Kong and the International Ergonomics Association (IEA) based in Zurich. The developed check point between SEANES members had been presented and reviewed by subject matter experts and presented at IEA conference in 2015 in Melbourne Australia and twice in Malaysia and Indonesia during the 4th SEANES Conference in Bandung, Indonesia.

Figure 7.21: SEANES Checkpoint workshop in Bangkok, Thailand.

HFEM is also an inviting member of the International Ergonomics Association (IEA) which comprises of 49 members Sates and affiliated societies and Ergonomics Network including SEANES. Malaysia through HFEM has the right to vote the executive committee within IEA and any direction within IEA. Currently through IEA, HFEM managed to collaborate in organizing and attending conferences and seminar endorsed by IEA and be a sub-technical committee under certification of professional ergonomist.

The IEA cooperates with other international bodies with common or similar goals. In some cases, the Memoranda of Understanding have been established to facilitate information exchange and joint activities. MOUs have been signed with the International Commission on Occupational Health (ICOH), International Association of Applied Psychologists (IAAP) and the International Occupational Hygienists Association (IOHA). The IEA is developing a Joint Statement on Ergonomics with the WHO, ILO, ICOH and IOHA. This will enable on-going cooperation and joint initiatives with these international bodies.

8.0 OCCUPATIONAL SAFETY AND HEALTH STATISTICS

8.1 Key Statistics of Labour Force in Malaysia – Demographic Data

8.1.1 Basic Country Information

According to Department of Statistics, Malaysia has a population of 31.0 million (16.0 million males, 15.0 million females) with life expectancy at birth of 74.8 years (72.5 years for men and 77.4 years for women). The geographical area of the country is 330,803 km^2, giving a population density of 92 per km^2. The crude birth rate of Malaysia is 16.9 per 1,000 populations and the death rate 4.4 per 1,000 population. The population growth rate is 1.3 % in 2015.

8.1.2 Key Statistics of Labour Force in Malaysia

Labour Force Survey (LFS) is conducted by Department of Statistics, Malaysia (DSM) every month through household approach to obtain data on the structure of labour force, employment and unemployment. LFS is carried out with probability sampling via personal interview comprising citizens and non-citizens in urban and rural areas for every state in Malaysia. LFS present the principle statistics of the labour force for population in the working age of 15 to 64 years old. The key definition of the terms used is as in Table 8.1.

Table 8.1: Definition for each key term used in Labour Force Statistics

KEY TERMS	DEFINITION
Labour Force	Sum of employed plus unemployed, that is person who are eligible to work and they either not working or actively seeking work
Employed person	Individuals with a minimum required age who work during a certain time for a business. In Malaysia, minimum required to be eligible for full time employment is at the age of 15
Persons Outside the Labour Force	Persons aged 15 and over who are neither employed nor unemployed (they are neither working nor seeking work) during the reference period. These persons are not considered to be in the labour force category. Examples of person outside of the labour force in Malaysia were housewives, students, retired, disabled persons and those not interested in working
Labour force participation rate	population that is either employed or unemployed (that is, either not working or actively seeking work)

KEY TERMS	DEFINITION
Employed	People with jobs
Unemployed	People who are jobless, looking for a job, and available for work. The unemployment rate is a measure of the prevalence of unemployment and it is calculated as a percentage by dividing the number of unemployed individuals by all individuals currently in the labour force.

(Source: Department of Statistics, Malaysia)

According to the information compiled by the Malaysian Economic Planning Unit (EPU) and the DSM, the total population at the end of 2015 was 31 million. The total Malaysian labour force consists of 14,518,000 persons; approximately about 46.84 % of the total population. Out of the total labour force, 14,067,700 (96.90 %) persons are actively employed while 450,300 (3.10 %) are unemployed. The key statistics of labour force of Malaysia from 2008 - 2015 is as summarized in Table 8.2 whereas Figure 8.1 display the composition of labour force survey in 2015.

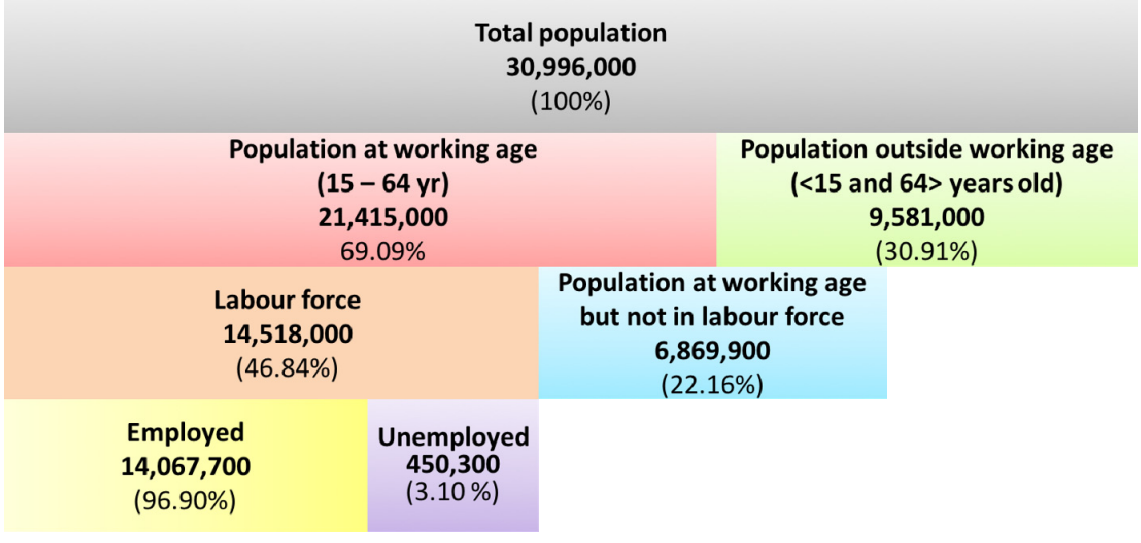

Figure 8.1: Summary of Labour Force Survey in 2015

(Source: Department of Statistics, Malaysia)

Table 8.2: Key Statistics of Labour Force Survey from 2008 – 2015

YEAR	2008	2009	2010	2011	2012	2013	2014	2015
Total Population	27,568,000	28,082,000	28,589,000	29,062,000	29,510,000	30,214,000	30,598,000	30,996,000
Population at Working Age (15-64 years old)	18,350,000	18,855,000	19,341,000	19,779,000	20,167,000	20,780,000	21,099,000	21,415,000
Population Outside of Working Age (<15 Or 64> years old)	9,218,000	9,227,000	9,247,000	9,283,000	9,343,000	9,433,000	9,499,000	9,581,000
Labour Force	11,028,100	11,315,300	12,303,900	12,675,800	13,119,600	13,634,600	14,263,600	14,518,000
Employed	10,659,600	10,897,300	11,899,500	12,284,400	12,723,200	13,210,000	13,852,600	14,067,700
Unemployed	368,500	418,000	404,400	391,400	396,300	424,600	411,100	450,300
Outside Labour Force	6,575,700	6,665,700	7,023,000	7,008,800	6,897,400	6,700,800	6,821,000	6,869,900

(Source: Department of Statistics, Malaysia)

8.1.3 Employed Labour Force by Age and Gender in Malaysia

Table 8.3 shows the employed labour force by age and gender from year 2010 to 2015 whereas Figure 8.2 shows the age distribution of population in 2010 to 2015. The labour force currently employed workers in all the age categories consistently increase throughout the years. Nevertheless, similar to many other developed countries, Malaysia can be foreseen to be heading towards aging population as the youngest workforce (15 – 19 years old) category shows minimal increment as compared to other age category for female whilst the male shows decline employment (Figure 8.3 and Figure 8.4).

8.1.4 Unemployment in Malaysia

The unemployed are classified into two that is the actively unemployed and inactively unemployed. The actively unemployed include all persons who did not work during the reference week but were available for work and actively looking for work during the reference week. Inactively unemployed persons include the following categories:

- Persons who did not look for work because they believed no work was available or they were not qualified
- Persons who would have looked for work if they had not been temporarily ill or had it not been for bad weather
- Persons who were waiting for result of job applications
- Persons who had looked for work prior to the reference week

Meanwhile, the unemployment rate is the proportion of unemployed population to the total population in labour force. This rate measures the percentage of unemployed population in labour force. The total of unemployment and unemployment rate for the year of 2010 to 2015 are as in Figure 8.5.

8.1.5 Educational Attainment of Malaysia Labour Force

Based on the statistic produced by Department of Statistics, Malaysia, the labour force with secondary education level is the highest. Figure 8.6 shows that more than half of the labour force in Malaysia have at least secondary education level. The educational attainment of the labour force in Malaysia is then followed by tertiary education; primary education and lastly, only small percentage of labour force have no formal education.

Table 8.3: Employed persons by sex and age group, Malaysia, 2010–2015

	Year	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	Total
Total	2010	443,800	1,721,800	2,231,600	1,732,200	1,511,900	1,343,300	1,190,800	919,300	524,500	280,200	11,899,500
	2011	467,300	1,725,000	2,321,800	1,833,200	1,552,500	1,378,200	1,236,300	958,400	572,300	306,500	12,351,500
	2012	479,500	1,752,500	2,367,700	1,921,800	1,594,700	1,422,700	1,267,200	1,022,200	642,600	349,700	12,820,500
	2013	491,500	1,847,900	2,448,600	2,085,300	1,674,200	1,488,400	1,322,900	1,098,900	707,900	379,800	13,545,400
	2014	498,600	1,860,000	2,498,000	2,187,500	1,725,100	1,508,800	1,337,500	1,124,600	734,100	378,500	13,852,600
	2015	450,500	1,843,200	2,530,900	2,269,800	1,760,300	1,537,100	1,364,200	1,141,700	780,400	389,600	14,067,700
Male	2010	294,700	1,033,600	1,375,500	1,117,200	980,000	877,500	799,500	637,800	380,000	212,000	7,707,800
	2011	309,300	1,045,400	1,422,700	1,161,300	995,000	885,900	815,700	657,600	412,200	229,700	7,934,800
	2012	313,100	1,080,500	1,450,800	1,206,500	1,013,500	894,800	820,000	684,800	448,300	257,300	8,169,500
	2013	318,100	1,143,600	1,495,000	1,287,400	1,039,700	912,100	827,800	715,600	480,000	265,300	8,484,600
	2014	320,900	1,134,300	1,510,900	1,331,600	1,058,900	921,100	826,400	729,200	493,200	260,900	8,587,500
	2015	287,100	1,129,600	1,521,700	1,367,400	1,083,700	931,300	827,100	738,700	529,100	275,500	8,691,100
Female	2010	149,200	688,100	856,100	615,100	531,900	465,800	391,300	281,500	144,400	68,200	4,191,700
	2011	158,000	679,600	899,100	671,900	557,500	492,300	420,700	300,800	160,000	76,800	4,416,700
	2012	166,400	672,100	916,900	715,300	581,200	527,900	447,200	337,400	194,300	92,400	4,651,000
	2013	173,400	704,300	953,600	797,900	634,500	576,300	495,100	383,300	227,800	114,500	5,060,800
	2014	177,700	725,700	987,100	855,900	666,100	587,700	511,100	395,400	240,900	117,600	5,265,100
	2015	163,400	713,500	1,009,200	902,400	676,600	605,800	537,200	403,000	251,300	114,100	5,376,700

(Source: Department of Statistics, Malaysia)

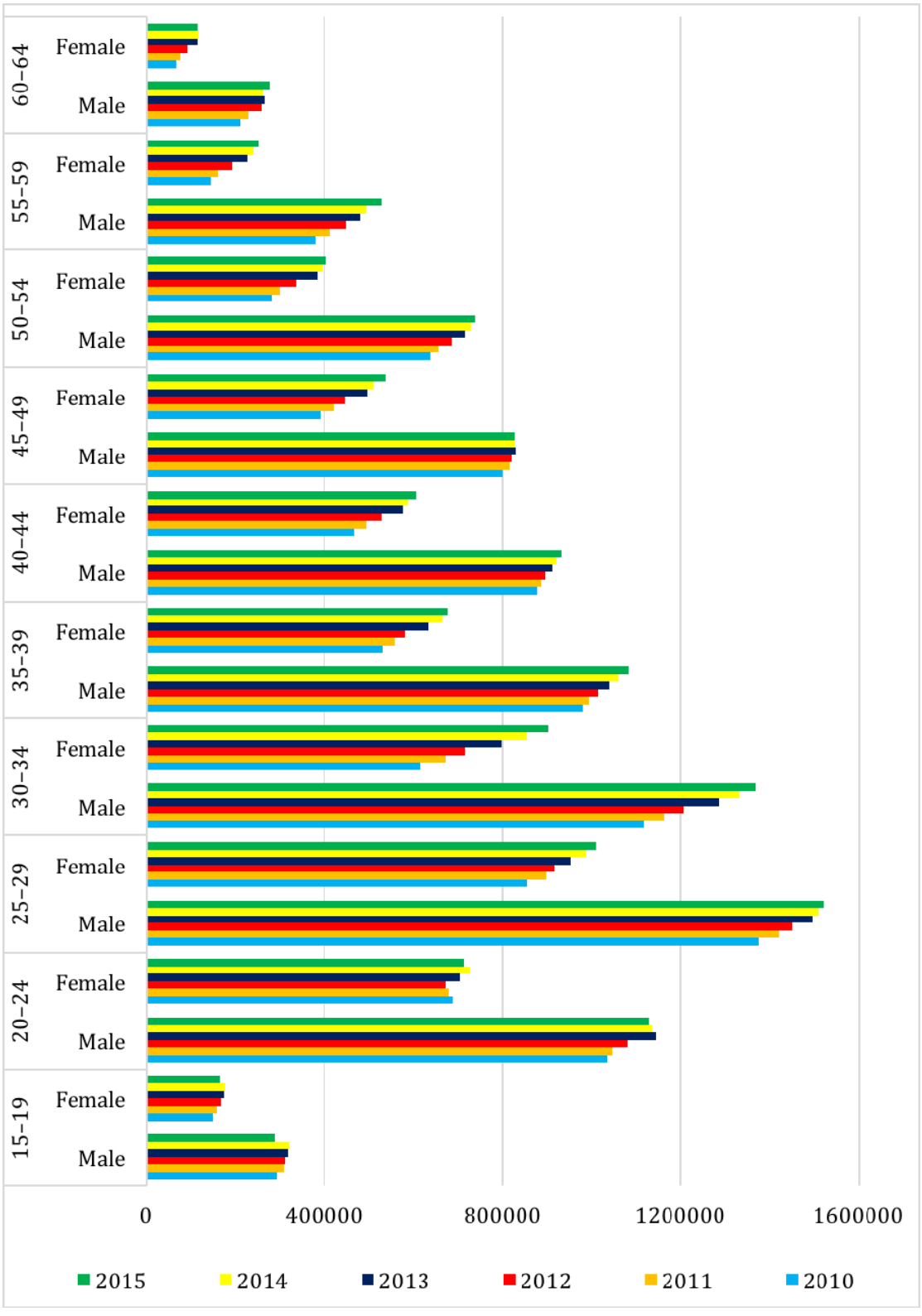

Figure 8.2: Employed Labour Force by Sex and Age Group for year 2010-2015

(Source: Department of Statistics, Malaysia)

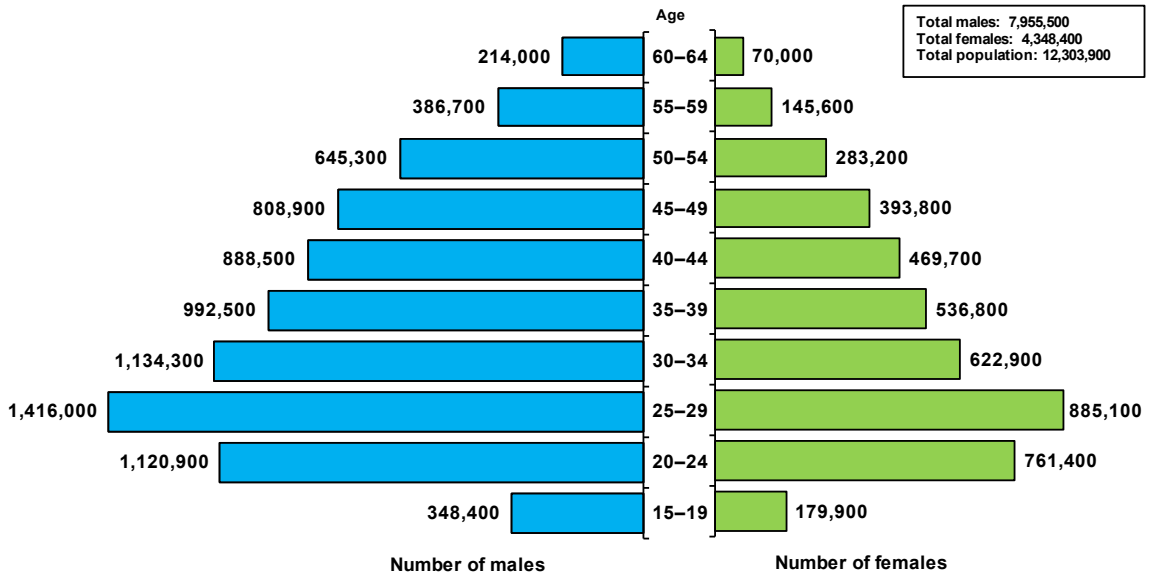

Figure 8.3: Employed Labour Force by Sex and Age Group for year 2010

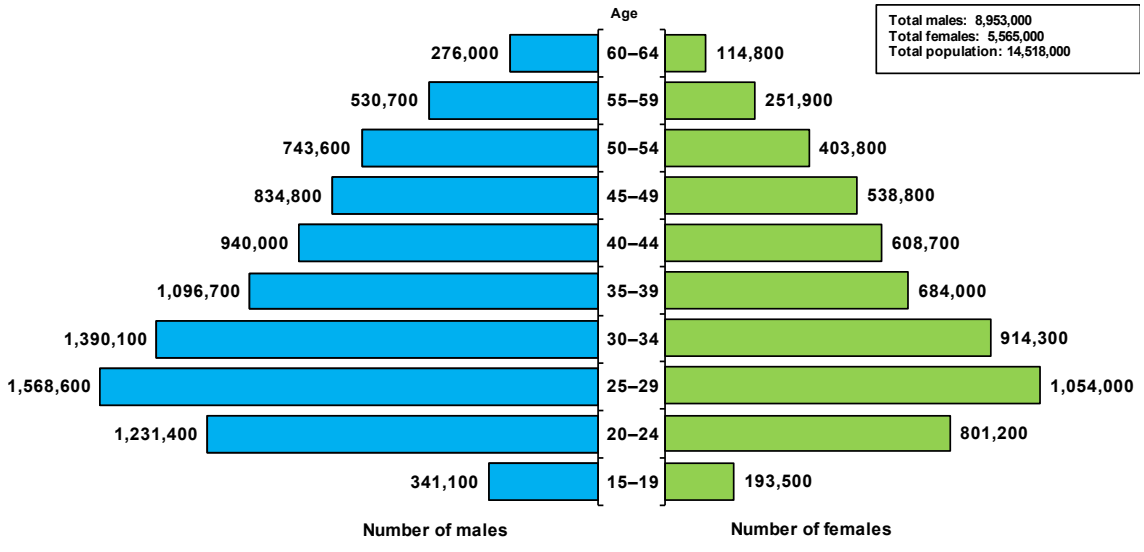

Figure 8.4: Employed Labour Force by Sex and Age Group for year 2015

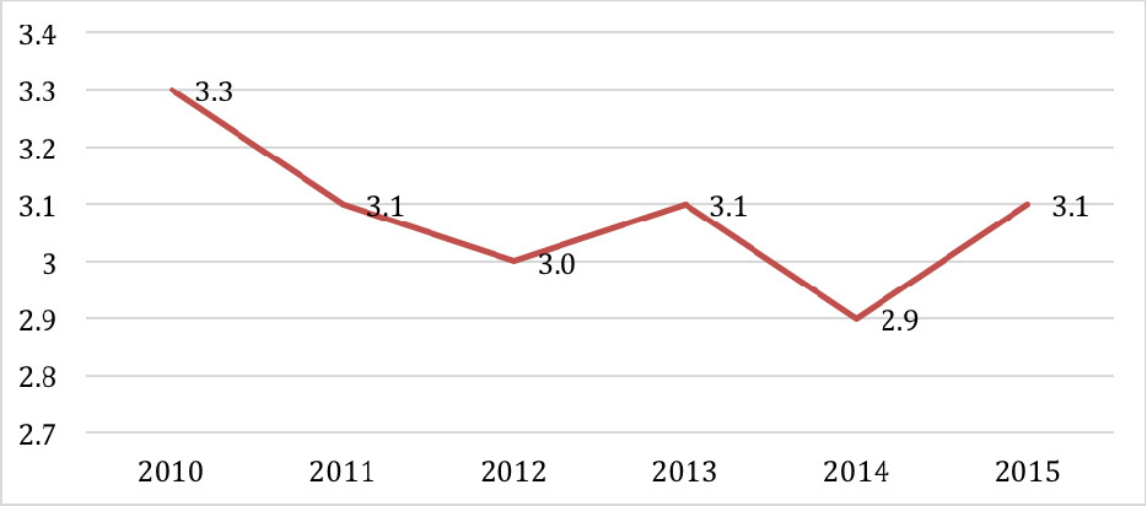

Figure 8.5: Unemployment rate from 2008 to 2015

(Source: Department of Statistics, Malaysia)

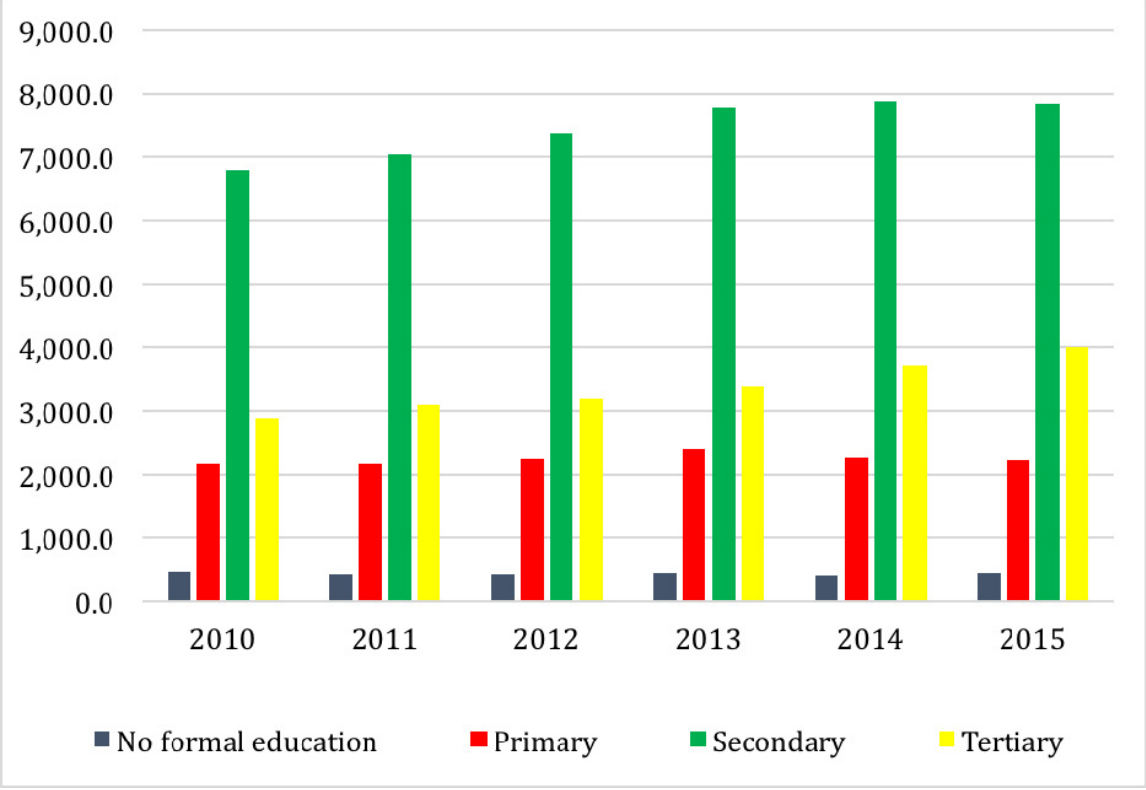

Figure 8.6: Level of Education Attainment of Labour Force from 2010 to 2015

(Source: Department of Statistics, Malaysia)

8.1.6 Employed Person According to Economic Sectors and Industries

The data for labour force can also be represented by segregation of economic sectors or industry in Malaysia. Starting 2010, Malaysia Standard Industrial Classification (MSIC) 2008 had classified industries based on the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4. Detailed employed person according to economics sectors and industries for each state is as provided in **Appendix 8A**.

Figure 8.7 shows the percentage of employed workers according to industries and economic sectors in Malaysia in year 2010 to 2014. The largest employment of labour force indicated in Figure 8.8 is the agricultural, manufacturing, wholesale and retail trade, repair of motor vehicles and motorcycles sectors while the sector with the least employment is the electricity, gas, steam and air conditioning supply, real estate activities and activities of extraterritorial organizations and bodies.

8.1.7 Status in Employment

Status in employment refers to the position or status of an employed person within the establishment or organization for which he or she worked. Employed persons are classified according to the status of employer, employee, own account worker and unpaid family worker.

The definition of employer according to Department of Statistics, Malaysia is a person who operates a business, a plantation or other trade and employs one or more workers to help him. Employee is a person who works for a public or private employer and receives regular remuneration in wages, salary, commission, tips or payment in kind.

On the other hand, own account worker is a person who operates his own farm, business or trade without employing any paid workers in the conduct of his farm, trade or business, while unpaid family worker is a person who works without pay or wages on a farm, business or trade operated by another member of the family.

According to Figure 8.8, employees represent the largest group of total workforces from 2008 to 2015, followed by the own account workers, unpaid family workers and employers.

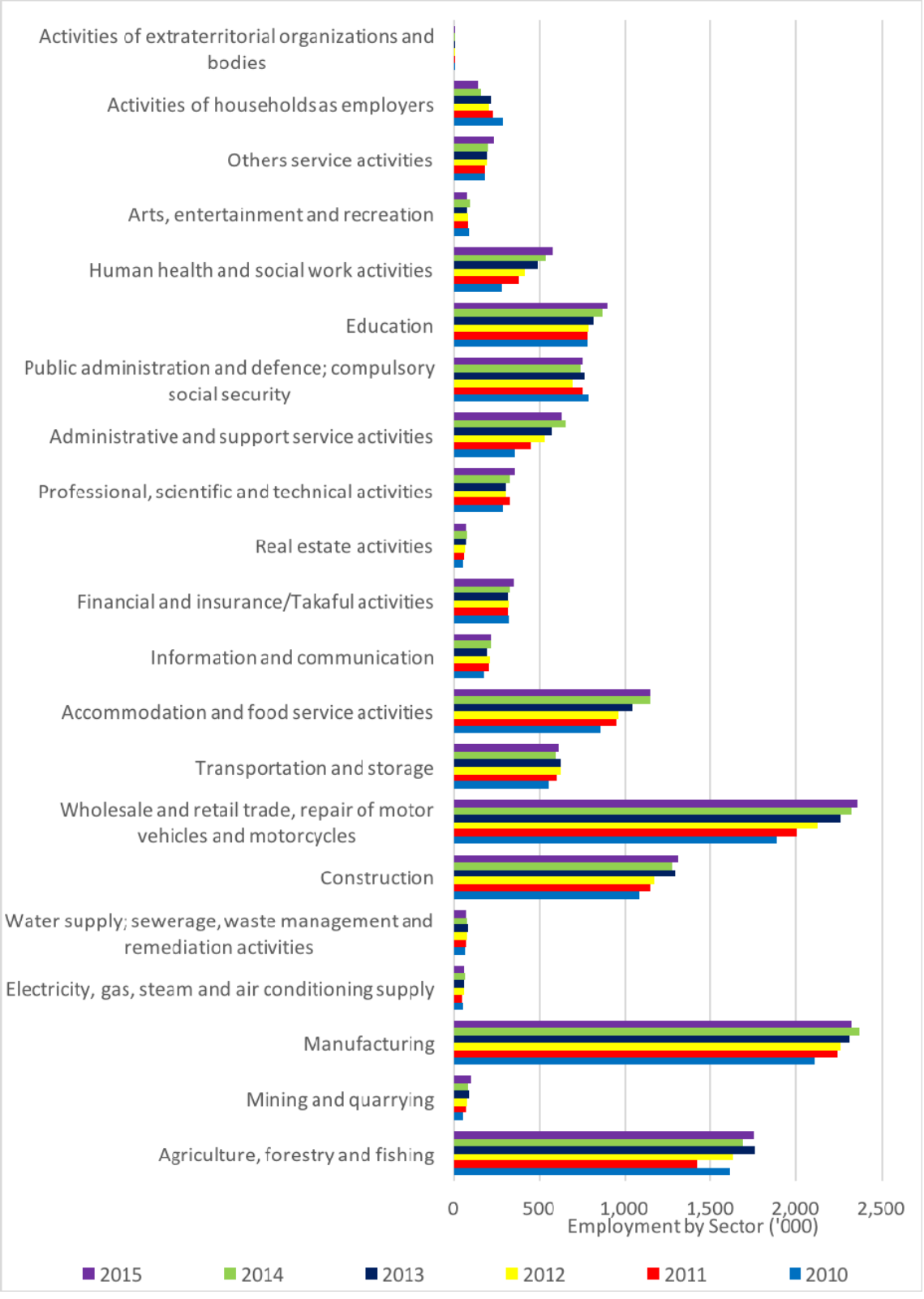

Figure 8.7: Employment by Sectors and Industries from 2010 – 2015

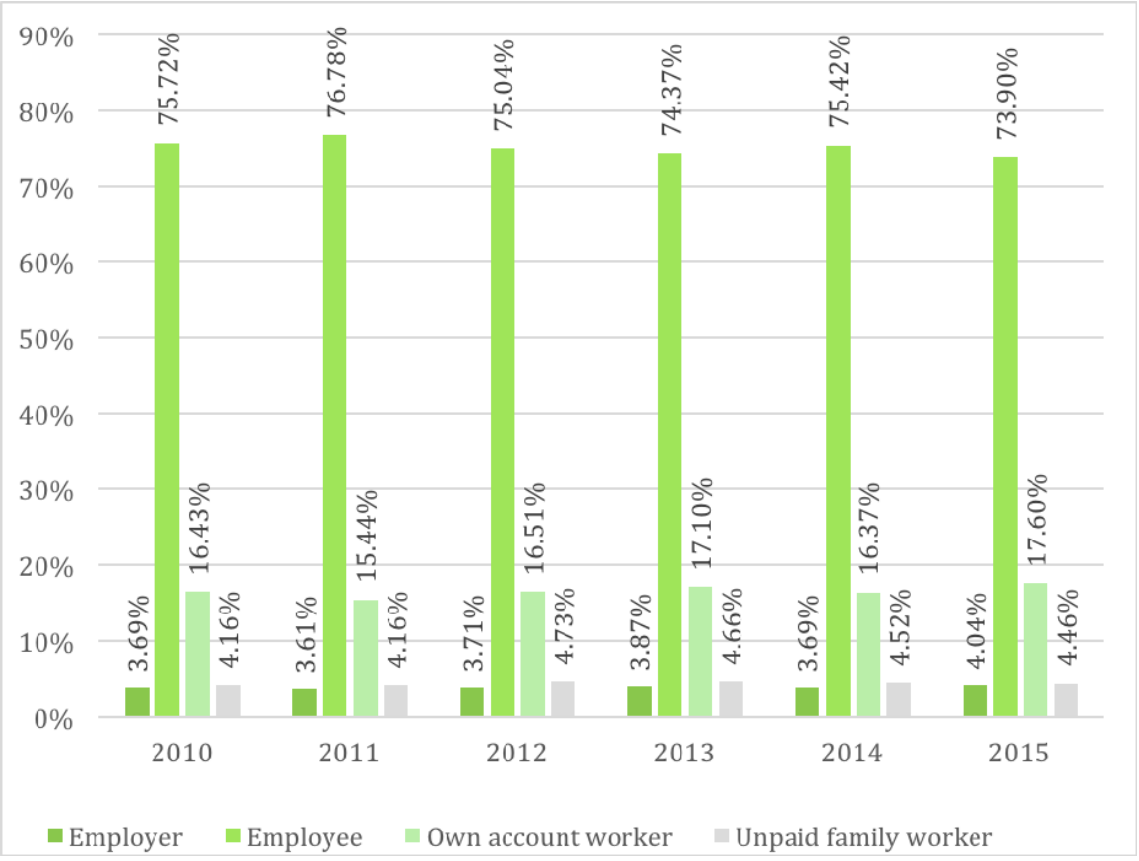

Figure 8.8: Employment by status from 2010 to 2015

8.2 Economic and Productivity Data

8.2.1 Gross Domestic Product (GDP) and Gross National Income

GDP is the total value of all goods and services produced in a certain period after deducting the cost of goods and services used up in the process of production. This value is before deducting the allowances for consumption of fixed capital. GDP is equivalent to expenditure on the GDP such as the sum of all components of final expenditure on goods and services less imports of goods and services.

For base year of 2010, the economic activities were compiled in accordance to the latest Malaysia Standard Industrial Classification 2008 (MSIC 2008). Rebasing of GDP has undertaken changes and improvements mainly in the changes in conceptual treatment and methodology, data reconciliation as well as changes in industrial classification.

Gross National Income (GNI) refers to total goods and services produced within the country, plus income received from other countries, less similar payments made to other countries. GNI can also be derived from GDP by adding net factor incomes from abroad. Malaysia GDP and GNI from the year of 2010 to 2014 can be referred in Table 8.4.

Table 8.4: Malaysia GDP and GNI from 2010 to 2014

YEAR	GDP (RM)	GDP (RM) per capita	GNI (RM)	GNI (RM) per capita
2010	821,434	28,733	795,303	27,818
2011	864,920	31,372	839,052	30,629
2012	912,261	32,913	871,804	31,698
2013	955,260	33,720	916,903	32,596
2014	1,012,506	36,165	971,916	34,945

(Source: Department of Statistics, Malaysia)

8.2.2 Productivity Performance

8.2.2.1 In the Manufacturing Sectors

Malaysia's manufacturing sector is broadly and export-oriented industries (Figure 8.9). Under the Economic Transformation Programme (ETP), three manufacturing sub-sectors which are electrical and electronic, palm oil and refined petroleum products were identified as National Key Economic Areas (NKEAs) with potential multiplier effects on other sub-sectors along their supply chains.

As export-oriented industries, these three sub-sectors are also expected to contribute to the country's export income and boost economic growth. The productivity growth of manufacturing sectors from 2010 to 2014 is as in Figure 8.10. The productivity growth of manufacturing sector recorded inconsistent and ever changing growth from the year of 2010 to 2014. The year 2011 recorded lower productivity growth at 2.0% compared to 9.4% in 2010.

The productivity growth recorded by the manufacturing sector in 2012 (4.5%) reflects higher output generated, with greater profitability through improved efficiency. In 2013, productivity growth of manufacturing sector rose to 5.4% and 2014; the productivity growth is 3.8%. Despites the growth reduction, manufacturing continues to be the second largest contributor to national GDP.

Figure 8.9: Categories of Manufacturing Sectors Identified in Malaysia

[Source: Productivity Report, Malaysia Productivity Corporation (MPC)]

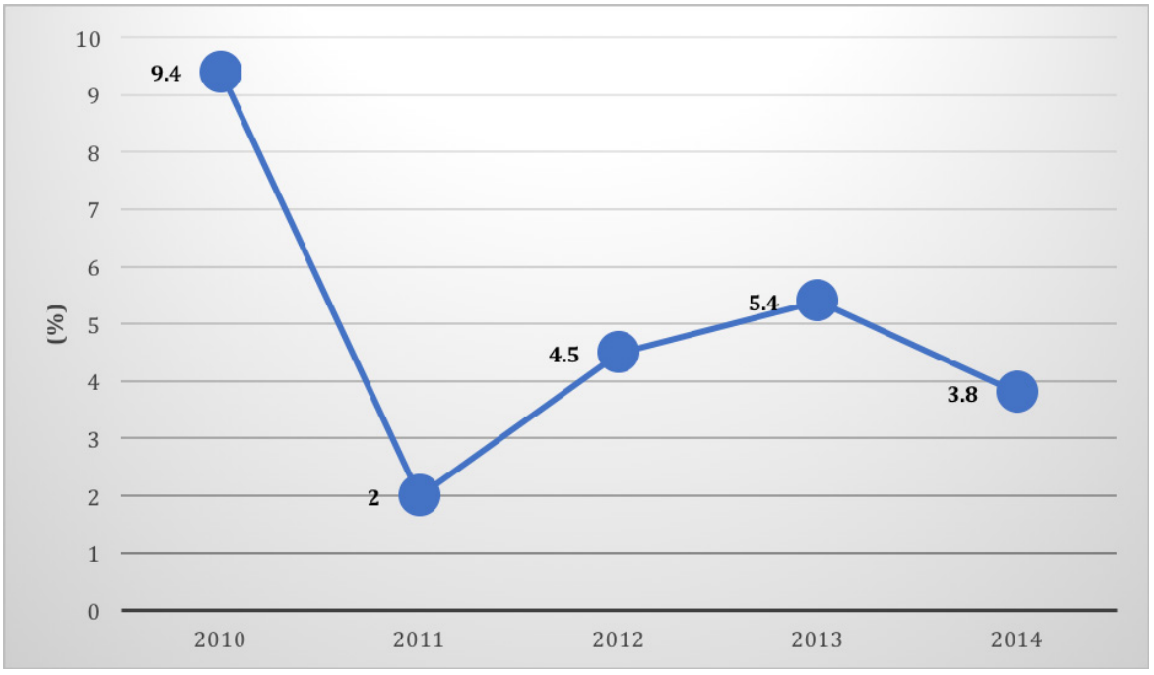

Figure 8.10: Productivity growth of manufacturing sectors

[Source: Productivity Report, Malaysia Productivity Corporation (MPC)]

8.2.2.2 Agricultural Sectors

The agriculture sector plays an important role in Malaysia's economic development in providing rural employment, uplifting rural incomes and ensuring national food security. Agriculture sector has been identified as the third engine of growth after manufacturing and service sectors. The sector comprised of various sub-sectors, as illustrated in Figure 8.11. The productivity growth of agriculture sectors from 2010 to 2014 are as in Figure 8.12.

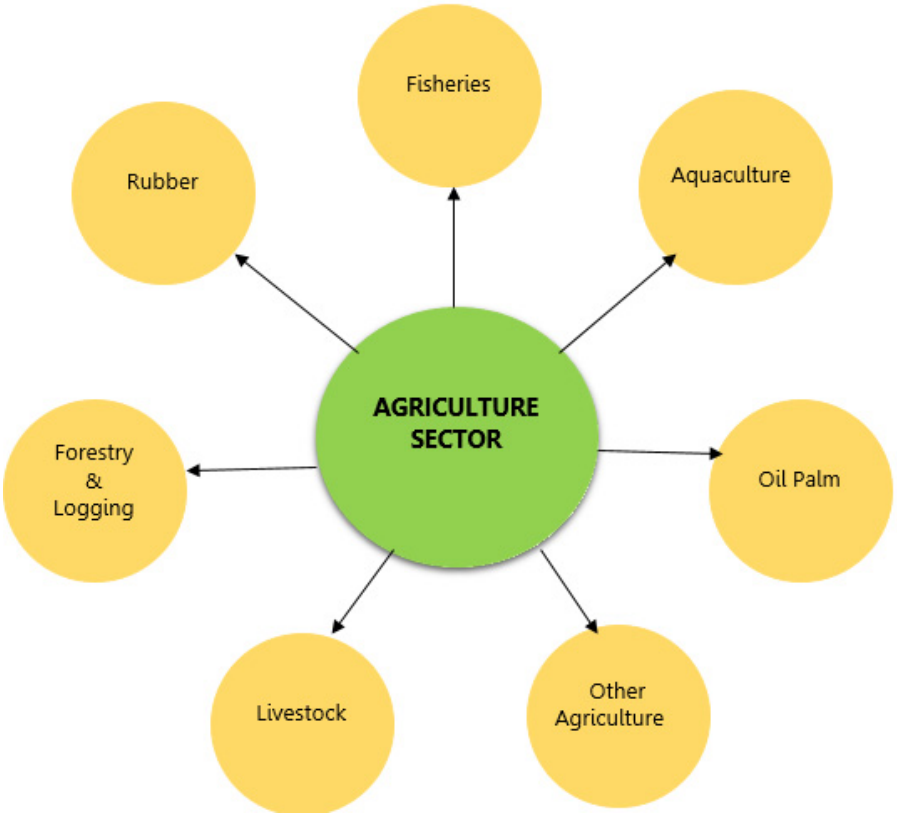

Figure 8.11: Agriculture Sub-sectors

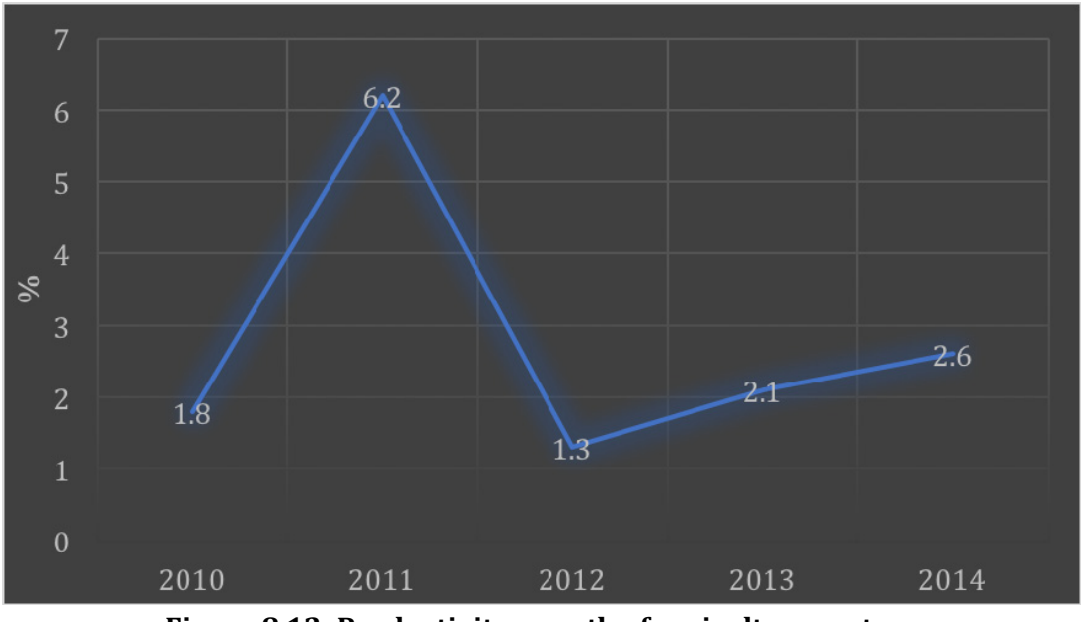

Figure 8.12: Productivity growth of agriculture sectors

[Source: Productivity Report, Malaysia Productivity Corporation (MPC)]

In 2011, agriculture sector registered a productivity growth rate of 6.2% compared to 1.8% in 2010. The higher growth rate of the agriculture sector was driven by higher crude palm oil (CPO) and rubber production. Production of livestock, fruits and vegetables also expanded strongly. The implementation of high impact projects such as Aquaculture Industrial Zone (AIZ) and Permanent Food Production Park (TKPM), coupled with the implementation of various EPPs of the Agriculture NKEA have contributed to the higher productivity of the agriculture sector.

However, in 2012, the productivity growth of agriculture sector declined sharply to 1.3% from 6.2% in the previous year. The agriculture sector is going through a period of change as traditional farming practices give way to modern agricultural techniques and smallholders consolidate their operations to gain greater economies of scale. The development thrusts of the Agriculture NKEA are targeted to transform this traditionally small-scale, production-based sector into a large-scale agribusiness industry that makes a significant contribution to economic growth and sustainability. The productivity growth started to recover in 2013 and 2014 at 2.1% and 2.6% respectively.

8.2.2.3 Construction Sectors

The construction sector is one of Malaysia's key economic drivers and a major enabler of the Economic Transformation Programme. The construction sector comprised of four major subsectors which are residential, non-residential, specialized activities and civil engineering. The first three sub-sectors generally encompass all building activities, with the specialized sub-sector providing essential services such as mechanical and electrical works, plumbing, glass works, painting, tiling and others. The productivity growth of construction sectors from 2011 to 2014 are as in Figure 8.13.

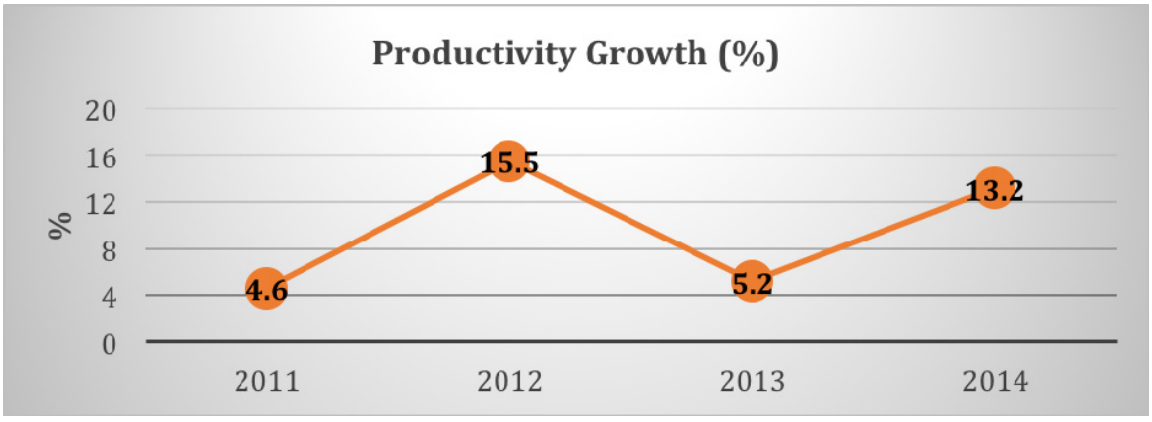

Figure 8.13: Productivity growth of construction sectors

[Source: Productivity Report, Malaysia Productivity Corporation (MPC)]

The construction sector recorded a productivity growth of 4.6% in 2011. This productivity growth came from the implementation of the Government policy which required Industrialised Building System (IBS). In 2012, the construction sector registered a growth of 15.5% with an improvement in labour cost competitiveness. Supporting the growth of the sector is the initiatives promoting the construction of smart houses, green buildings and renewable energy have resulted in a greater utilisation of manufactured mechanical and electrical components for 'green' purposes, including control systems and the use of building integrated photovoltaic (BIPV) parts.

However, the productivity in the construction sector grew by a moderate 5.2% in 2013. The decline in productivity growth indicates that some on-site construction practices and tasks still require a high degree of labour input and that the sector has been relatively slow at adopting mechanisation, automation and other advanced methods of construction. In 2014, the construction sector experienced remarkable productivity growth to 13.2%. The government's growth in community projects such as *Rumah Mesra Rakyat, Rumah Mampu Milik and Rumah Impian Rakyat* contributed to the increase in both output and demand, pushing the subsector to greater levels of productivity.

8.3 Foreign Workers

The Department of Labour of Peninsular Malaysia is responsible for employment and labour matters concerning foreign workers who are legally employed and entitled to enjoy the protection and benefits stipulated by labour laws. The employment of foreign workers is a temporary measure to fill job vacancies. Employers must notify the Department of Labour of vacancies by registering at JobsMalaysia to ensure registered local job seekers are given priority.

Foreign workers in Malaysia are allowed to work in 5 sectors, namely domestic worker, manufacturing, construction, services and agriculture. The number of foreign workers in Malaysia by the permissible sectors for 2008 to 2015 is as in Table 8.5 while data in Table 8.6 shows the country of origin of the registered foreign workers in Malaysia for the same period of time.

6P program stands for Comprehensive Settlement of Foreign Worker Program and illegal immigrants. Six in the name of the 6P program means to the six stages of implementation will be driven during the program, starting with the Registration (*Pendaftaran*), Whitening (*Pemutihan*), Forgiveness (*Pengampunan*), Monitoring (*Pemantauan*), Enforcement (*Penguatkuasaan*) and expulsion (*Pengusiran*). The 6P programme was implemented in 2011 to reduce the population of illegal immigrants.

Table 8.5: Number of Foreign Workers in Malaysia by Sector, 2008 – 2015

SECTOR	2008	2009	2010	2011	2012	2013	2014	2015
Maid	293,359	251,355	247,069	184,092	142,936	169,936	155,591	148,627
Manufacturing	728,867	663,667	672,823	580,820	605,926	751,772	747,866	450,364
Construction	306,873	299,575	235,010	223,688	226,554	434,200	411,819	745,131
Services	212,630	203,639	165,258	132,919	138,823	269,321	270,048	293,433
Agriculture	520,867	499,910	497,711	451,542	457,350	625,093	488,090	497,480
TOTAL	**2,062,596**	**1,918,146**	**1,817,871**	**1,573,061**	**1,571,589**	**2,250,322**	**2,073,414**	**2,135,035**

(Source: Ministry of Home Affairs)

Table 8.6: Number of Foreign Workers in Malaysia by Country of Origin, 2008 – 2015

Country Of Origin	2008	2009	2010	2011	2012	2013*	2014	2015
Indonesia	1,085,658	991,940	792,809	785,236	746,063	1,021,655	817,300	835,965
Bangladesh	316,401	319,020	319,475	116,663	132,350	322,750	296,930	282,437
Thailand	21,065	19,402	17,209	5,838	7,251	17,044	12,467	13,547
Philippine	26,713	24,384	35,338	44,359	44,919	69,126	63,711	65,096
Pakistan	21,278	21,891	28,922	26,229	31,249	50,662	51,563	72,931
Myanmar	144,612	139,731	160,504	146,126	129,506	161,447	143,334	145,652
Nepal	201,997	182,668	251,416	258,497	304,717	385,466	490,297	502,596
India	130,265	122,382	95,112	87,399	93,761	124,017	105,188	139,751
Others**	114,607	96,728	117,086	102,714	81,773	98,155	92,624	77,060
TOTAL	**2,062,596**	**1,918,146**	**1,817,871**	**1,573,061**	**1,571,589**	**2,250,322**	**2,073,414**	**2,135,035**

* 2013 data including foreign workers through Amnesty Programme 6P

** Including UK, Australia, Japan, Kenya etc.

(Source: Ministry of Home Affairs, Malaysia)

9.0 GAPS ANALYSIS AND BENCHMARK

9.1 Gaps Analysis and Proposed Actions

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
1	National OSH Policy	National OSH policy in Malaysia does not exist		Establishment of a road map for Malaysian OSH Policy	1. Programs under OSHMP 2020 is structured as a Master Plan (which is in fact the expanded details of the OSH Policy). 2. The methodology in determining the effectiveness of OSH Master Plan need to be formulated	Summarize OSHMP 2020 into National OSH Policy
		Action taken	The development of National OSH Policy currently is on-going under DOSH Master strategic planning (2015)	Malaysia had already implemented OSH Policy 2015 and currently in progress of developing OSH Policy 2020		
2	Strong multi-sector coordination among OSH related authorities and other agencies	Overlapping and differences of information and statistical data exist between agencies such as SOCSO, DOSH, MOHR, MOH and DSM No centralized synchronization and		There is inter-agencies coordination within MOHR	There is still lack of coordination between Ministries: • Ministry of Human Resources • Ministry of Health • Ministry of Higher Education • Ministry of Work • Ministry of Environment and Natural	Establish Task Force or National coordination Committee under Ministry of Human Resource (MOHR) with other agencies as members to

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
		coordination between agency or system to provide an exact statistical data and activities A major gap is caused by the lack of coordination, different law that governed each of the agencies, the different systems of reporting and understanding between agencies. The improvement of inter-agency coordination and communication between different ministries is therefore, needed to reduce the gaps between them.			Resources • Ministry of Transportation • Ministry of Science and Innovation • Ministry of Women, Family and Community Development Difficulty still exist in: • Database information sharing • Statistical data • Classification of types of industry activities within departments under MOHR and under different Ministries • Safety and Health Education • Common objective (s) in improving safety and health for workers and community There is lack of coordination in implementing OSH or OSH related curriculum within institute under MOHR. Training centre(s) under Ministry of Human Resource should be encourage to have safety and health competency programs to be part of their curriculum or as a certificate program such as Centre for Instructor and Advanced Skill Training (CIAST) is under the management of	review inter-ministerial/ interagency coordination Establish National Reference Centre in collaboration with University to create a database which capture, record, collect, identify, verify, publish and share all available OSH-related information within the country (i.e.: ILOSTATS, LEGOSH, webPortal, etc). Coordination and revising on the classification on the type of industries
		Action taken	Coordination between agencies within the MOHR in sharing common			

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
			statistical data and activities is coordinated under the Institute for Labour Market Information and Analysis (ILMIA)		the Manpower Department, Ministry of Human Resource which offered courses in Instructor Training, Supervisory Training and Advanced Skill Training for instructors, supervisors and skilled workers from the private and public sectors.	between government agencies Coordinating on the awareness and OSH promotion program between agencies within Ministries Integrate safety and health training program within institute under the Ministry of Human Resource
3	National Chemical Safety System	A complete information database about chemicals/ hazardous substances is not available No specific regulation that manages chemicals for a safer use in its full cycle		2009 - started the Environ-mentally Hazardous Substance Notification and Registration Scheme (EHSNR)	The national committee on chemical management still lacks the legal mandate for securing a coordinated chemical management Each agency still does not have comprehensive information on hazardous chemical except that regulate under their jurisdiction	11th Malaysia Plan (2016 – 2020) 6 strategies proposed to integrate and strengthen chemical

<table>
<tr><th>NO</th><th>TARGET</th><th>PREVIOUS SITUATION</th><th>CURRENT SITUATION</th><th>CURRENT GAP</th><th>PROPOSED ACTION</th></tr>
<tr>
<td></td>
<td></td>
<td>No agency has a legal mandate to ensure the coordination and cooperation from relevant agencies to achieve a sound management of chemicals has been established

Inadequate chemical information for entry and upstream activities

Major loophole when chemical does not fall under enforcement of any agencies

Action Taken: Ninth Malaysian Plan (2006 -2010)

Development of National Policy on Chemical Management</td>
<td>online system - voluntary basis until specific regulations is gazetted and enforced

2012 – published 2nd edition of guidance document “Guidance for The Industry on The Environ-mentally Hazardous Substances Notification & Registration Scheme in Malaysia

Incorporate chemical management pillar into 11th Malaysia</td>
<td>There are initiatives for improvement to enhance chemical management however it takes place within the scope of each agency.

Signatories of Stockholm Convention (2002) and but not ratified

Department involved:
<table>
<tr><th>Jurisdiction</th><th>Agencies</th><th>Legislation</th></tr>
<tr><td>Import, export, sales and trades - Petroleum & petroleum products</td><td>Ministry of International Trade and Industry</td><td>Industrial Co-ordination Act 1975</td></tr>
<tr><td>Import & exports</td><td>Ministry of Finance (Royal Malaysian Custom)</td><td>Customs Act 1967</td></tr>
<tr><td>Industrial Chemicals</td><td>Ministry of Human Resource (Department of</td><td>OSHA 1994</td></tr>
</table>
</td>
<td>management framework system in Malaysia
• Establishment of National Chemical Management Board/ Commission

• Proposed Chemical Management Act 20xx including regulation framework

• Merging platform for database system between EHSNR (DOE) and CIMS (DOSH) by streamline existing agencies</td>
</tr>
</table>

<table>
<tr><th>NO</th><th>TARGET</th><th colspan="2">PREVIOUS SITUATION</th><th>CURRENT SITUATION</th><th>CURRENT GAP</th><th>PROPOSED ACTION</th></tr>
<tr><td></td><td></td><td></td><td>• Adoption of a globally harmonized system for the registration of imports, transportation and a safe handling of chemical and hazardous substances (MITI)
• Approaches & technologies to treat and convert toxic wastes into a resource for reuse. (DOE)
• Appropriate incentives for the proper management of hazardous chemicals (CICM)</td><td>National Plan (2016-2020)

2013 - Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 (CLASS Regulations) being gazetted.

2014 - Industry Code of Practice on Chemicals Classification and Hazard Communication (Gazetted)

Online Chemical</td><td>
<table>
<tr><td></td><td>Occupational Safety and Health)</td><td></td></tr>
<tr><td>Pharmaceuti-cal, drugs, some consumer products</td><td>Ministry of Health (Pharmaceuti cal Service Division)</td><td>Poison Act 1952, Dangerous Drugs Act 1952, Food Act 1983</td></tr>
<tr><td>Pesticides</td><td>Ministry of Agriculture and Agro-Based Industry Malaysia (Department of Agriculture)</td><td>Pesticides Act, 1974</td></tr>
<tr><td>Consumers Product</td><td>Ministry of Domestic Trade, Co-operatives and Consumerism</td><td>Consumer Protection Act 1999</td></tr>
</table>
</td><td>database system infrastructure (interface link) including MITI, MOF, MOHR, MOH, MOA, MDTCC, MOFA, MNRE

• Review guidance document on chemical use notification and registration Scheme

• To establish National Chemical Inventory e.g. the quantity and the usage of chemicals

• To Ratify: Stockholm and</td></tr>
</table>

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
			• Steps to address the indiscriminate use of chemicals, particularly in agricultural practices, will be intensified. (DOA) Tenth Malaysia Plan (2010–2015) • Government will continue efforts to improve the efficiency and effectiveness of waste management • Increase awareness among public and educate them of the	Information Management System (CIMS) introduced 2015 – Introduction of innovative step by step chemical management system for industries under SOHELP platform.	<table><tr><td>Chemical Weapon Convention</td><td>Ministry of Foreign Affair</td><td>Chemical weapon Convention Act 2005</td></tr><tr><td>Hazardous Waste (Scheduled Wastes)</td><td>Ministry of Natural Resources and Environment</td><td>EQA 1974</td></tr></table>	Minamata Convention • Develop risk management measures to mitigate risk of exposure including the phase out of hazardous substances • Develop training modules on life cycle management of chemicals for stakeholders to improve management efficiency e.g. modules to be included in training schedules

NO	TARGET	PREVIOUS SITUATION	CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
		importance to reduce, reuse and recycle of waste (all stakeholders) • Proposed to merge database between EHSNR and CIMS (DOE and DOSH).		Chemical security management is not being addressed accordingly.	• Develop plan for cross sectoral training, workshops and seminar in good chemical management • To assist relevant lead agencies to coordinate matters related to management of chemical security.
4	Implementa-tion of OSHMS	Malaysian Standard for Occupational Safety and Health Management System (OSHMS) is developed based on the ILO OSH Guidelines 2001. The implementation of OSHMS is not compulsory, thus the acceptance and	Revision of MS 1722:2011 by DOSH. The implementation of OSHMS is yet to be mandatory in Malaysia.	OSHMS is in place in spite OSHMS Regulations has not been implemented yet. Small industries or companies may not be able to implement due to cost factor. There is the need to promote OSHMS among all government agencies. Therefore, SMEs are not compelled to comply to OHSMS unless required by the client.	• Introduce OHSMS Regulation 20xx. • Use of new ISO 45001 OSH Management Systems – Requirements.

NO	TARGET	PREVIOUS SITUATION	CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
		implementation in SME are less. Action Taken: Establishment of MS 1722: 2005.		Small and Medium enterprises – made up of 59% of job sectors in Malaysia and only complied to 50% of OSH legal requirements. The data base between DOSH and Department of Standards is still lacking leading to the difficulty in determining the exact numbers of companies certified under OHSAS 18001 and MS1722 or any other OSHMS.	• Sharing of database between DOSH and DSM is required. Database should be updated quarterly.
5	A strong Knowledge management and information centre (local and international network).	Two agencies and institutions act as OSH knowledge management and information centre for ILO CIS: NIOSH and Hospital Kuching. Other Institutions act as informal centre for OSH including DOSH, universities, National Institute of Human Resources, MTUC and AELB. There is a lack of	Only NIOSH still been recognized as centre of network for International OSH Knowledge Network by ILO There was no update on both centre to act as OSH knowledge network. Last update in 2007. Although a member,	There is a need to centralize and coordinate all the OSH information for easier access by the public. There is still lack of improvement in terms of OSH knowledge management and no information centre expansion There should be a centralized knowledge and information management coordinated by DOSH. Department of Safety and Health should retrieve information and data from: • Agencies within MOHR including NIOSH • Agencies outside MOHR	• Include DOSH (Policy Division) in the Malaysian's ILO-CIS. • Compile and maintain information as continuous KMC. • Published Newsletter with collaboration with FIOH

NO	TARGET	PREVIOUS SITUATION	CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
		coordination between the government agency, universities, NGO's and research institutions in providing the information. For local, no agency act beyond the jurisdiction of their department obligation. Action Taken: None	Malaysia did not report on network event to ILO.	• Research data and publication from universities, NIOSH and research institutes • Demographic data • NGOs A strong coordination between agencies is needed to prevent the overlapping of information.	(FIOH stopped publication of Asia Pacific Newsletter). • Recognized new CIS centre such as University to managed and develop CIS on behalf of Malaysia. • Proper funding in maintaining a well establish Knowledge Management Centre.
6	Awareness campaigns	OSH awareness campaigns are effective at national and enterprise levels, but poorly execute at the community level.	Public is unaware of the information on OSH especially in the district and community	No proper education for community in school curriculum in improving awareness in OSH. Lack of awareness with other Ministries in providing awareness among various group in community.	Enhance and improve coordination with other Ministries and associations among:

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
		There is a high level of awareness in multinational and establish companies, but awareness among SME and the public is poor.		The campaigns needed to be held more frequent at all level among the community to increase the public's awareness. There is partial improvement in the community in terms of activities and awareness programs: • Social media • Portals • Blogs • School programs	Lack of coordination with other NGO's that can assist in promoting safety and health. No proper integration with other Ministerial Policy such as Safe School Policy, Women and children Safety Policy, transportation safety.	• Ministry of Education • Ministry of Higher Education • Ministry of Women, Family and Community Development • Ministry of Science • Ministry of Education • Teachers & parent association • Other related association Immediate introduction of basic safety and health education for: • pre-school
		Action Taken	Programs initiated by NCOSH, DOSH, NIOSH, NGOs, employers and employee's representatives in promoting awareness to small and medium enterprises.			

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
						• primary school • secondary school • vocational • Universities Holistic curriculum should be developed together with stakeholders. Promotion with government own media – Ministry of Information (through regular news – safety information, advertising, TV and radio).
7	ILO ratification	Malaysia has ratified 3 convention from ILO OSH. • C187 (Promotional framework for OSH		Malaysia had ratified 5 ILO convention	Fundamental Conventions: 0 of 8 Governance Conventions (Priority): 0 of 4 Technical Conventions: 5 of 177	The government needs to urgently ratify the ILO convention to comply with

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
		Convention 2006). • C119 (Guarding of Machinery Convention 1963). • In process of ratifying C155 (OSH Convention 1981).		**Peninsular** C119 C012 C017 C019 C045 **Sabah** C016 C086 C094 C097 **Sarawak** C007 C011 C012 C014 C015 C016 C019 C086 C094	Out of 5 Conventions ratified by Malaysia - Peninsular, of which 5 are in force. No Convention has been denounced; none have been ratified in the past 12 months. **List not Ratified (OSH and OSH compensation)** A. <u>Governance</u> i. C081 - Labour Inspection Convention, 1947 (No. 81) ii. C129 - Labour Inspection (Agriculture) Convention, 1969 (No. 129) iii. C144 - Tripartite Consultation (International Labour Standards) Convention, 1976 (No. 144) B. <u>Technical Instrument</u> i. C077 - Medical Examination of Young Persons (Industry) Convention, 1946 (No. 77) ii. C095 - Protection of Wages Convention, 1949 (No. 95) iii. C102 - Social Security (Minimum Standards) Convention, 1952 (No. 102) iv. C110 - Plantations Convention, 1958 (No.	international convention. Main ILO ratification need to be ratified. C155 C187 C014 C077 C102 C115 C121 C124 C130 C139 C148 C152 C157 C160 C161 C162 C167 C170 C171 C172
		Action Taken	To prioritize and comply requirement for ratification			

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
					110) v. C115 - Radiation Protection Convention, 1960 (No. 115) vi. C118 - Equality of Treatment (Social Security) Convention, 1962 (No. 118) vii. C120 - Hygiene (Commerce and Offices) Convention, 1964 (No. 120) viii. C121 - Employment Injury Benefits Convention, 1964 [Schedule I amended in 1980] (No. 121) ix. C124 - Medical Examination of Young Persons (Underground Work) Convention, 1965 (No. 124) x. C128 - Invalidity, Old-Age and Survivors' Benefits Convention, 1967 (No. 128) xi. C130 - Medical Care and Sickness Benefits Convention, 1969 (No. 130) xii. C149 - Nursing Personnel Convention, 1977 (No. 149) xiii. C152 - Occupational Safety and Health (Dock Work) Convention, 1979 (No. 152) xiv. C154 - Collective Bargaining Convention, 1981 (No. 154) xv. C155 - Occupational Safety and Health Convention, 1981 (No. 155) xvi. C157 - Maintenance of Social Security Rights Convention, 1982 (No. 157)	C174 C175 C176 C184 P081 P110

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
					xvii. C159 - Vocational Rehabilitation and Employment (Disabled Persons) Convention, 1983 (No. 159) xviii. C160 - Labour Statistics Convention, 1985 (No. 160) xix. C161 - Occupational Health Services Convention, 1985 (No. 161) xx. C162 - Asbestos Convention, 1986 (No. 162) xxi. C163 - Seafarers' Welfare Convention, 1987 (No. 163) xxii. C164 - Health Protection and Medical Care (Seafarers) Convention, 1987 (No. 164) xxiii. C165 - Social Security (Seafarers) Convention (Revised), 1987 (No. 165) xxiv. C166 - Repatriation of Seafarers Convention (Revised), 1987 (No. 166) xxv. C167 - Safety and Health in Construction Convention, 1988 (No. 167) xxvi. C170 - Chemicals Convention, 1990 (No. 170) xxvii. C171 - Night Work Convention, 1990 (No. 171) xviii. C172 - Working Conditions (Hotels and Restaurants) Convention, 1991 (No. 172) xxix. C173 - Protection of Workers' Claims (Employer's Insolvency) Convention, 1992	

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
					(No. 173) xxx. C174 - Prevention of Major Industrial Accidents Convention, 1993 (No. 174) xxxi. C175 - Part-Time Work Convention, 1994 (No. 175) xxxii. C176 - Safety and Health in Mines Convention, 1995 (No. 176) xxiii. C177 - Home Work Convention, 1996 (No. 177) xxiv. C178 - Labour Inspection (Seafarers) Convention, 1996 (No. 178) xxv. C179 - Recruitment and Placement of Seafarers Convention, 1996 (No. 179) xxvi. C180 - Seafarers' Hours of Work and the Manning of Ships Convention, 1996 (No. 180) xxvii. C183 - Maternity Protection Convention, 2000 (No. 183) xviii. C184 - Safety and Health in Agriculture Convention, 2001 (No. 184) xxix. C185 - Seafarers' Identity Documents Convention (Revised), 2003 (No. 185) xl. C187 - Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187) xli. C188 - Work in Fishing Convention, 2007 (No. 188)	

<table>
<tr><th>NO</th><th>TARGET</th><th colspan="2">PREVIOUS SITUATION</th><th>CURRENT SITUATION</th><th>CURRENT GAP</th><th>PROPOSED ACTION</th></tr>
<tr><td></td><td></td><td colspan="2"></td><td></td><td>xlii. P081 - Protocol of 1995 to the Labour Inspection Convention, 1947
xliii. P089 - Protocol of 1990 to the Night Work (Women) Convention (Revised), 1948
xliv. P110 - Protocol of 1982 to the Plantations Convention, 1958
xlv. P147 - Protocol of 1996 to the Merchant Shipping (Minimum Standards) Convention, 1976
xlvi. P155 - Protocol of 2002 to the OSH Convention, 1981</td><td></td></tr>
<tr><td>8</td><td>OSH practitioners and OSH competent persons.</td><td colspan="2">The proportion of OSH actors is inadequate to supply the demand of the workers/ employees.</td><td>The proportion of OSH actors still is inadequate to supply the demand of the workers/ employees.</td><td>The current no. of existing SHO registered under DOSH is 1,405 showing a significant decline in the numbers.
The target of 20% increase on the number of registered SHO was not met.

There is a decline in numbers of OSH personnel

<table><tr><th>Competent person</th><th>No</th></tr><tr><td>Lift</td><td>217</td></tr><tr><td>Steam engine driver</td><td>6923</td></tr><tr><td>Scaffolding fitter</td><td>2801</td></tr><tr><td>Crane operator</td><td>3393</td></tr><tr><td>OHD</td><td>559</td></tr><tr><td>Assessor</td><td>171</td></tr></table></td><td>Review and improve existing capacity building institution (qualification of training provider) and training material (existing curriculum and training program).

Develop a formula or calculator based on international</td></tr>
<tr><td></td><td></td><td>Action Taken</td><td>Increase the number of certified training provider.

Improvement of continuous education program for OSH personnel.</td><td></td><td></td><td></td></tr>
</table>

<table>
<tr><th>NO</th><th>TARGET</th><th colspan="2">PREVIOUS SITUATION</th><th>CURRENT SITUATION</th><th>CURRENT GAP</th><th>PROPOSED ACTION</th></tr>
<tr><td></td><td></td><td colspan="2"></td><td></td><td><table><tr><td>IAQ Assessor</td><td>20</td></tr><tr><td>Hygiene Technician 1</td><td>77</td></tr><tr><td>Hygiene Technician 2</td><td>66</td></tr><tr><td>AGT</td><td>1761</td></tr><tr><td>Noise monitoring</td><td>100</td></tr></table></td><td>definition for projection/ratio to allow benchmarking/ comparison.

Review the need for minimum number of OSH practitioner’s in high risk sector to improve the proportion of OSH actor to workers.

Improving training provider to cater specific skills for OSH personnel.</td></tr>
<tr><td>9</td><td>Occupational Health Services (OHS)</td><td colspan="2">Malaysia has inadequate facilities or practice to give occupational health services to the employees as well as the public.</td><td>Government Sector:

• There is difficulty of</td><td>The number of occupational diseases that shows an increasing trend:
• Noise-induced Hearing Loss (NIHL)
• Occupational musculoskeletal disorders
• Occupational skin disease</td><td>MOH and MOHR should share a single platform to alert any OSH related diseases.</td></tr>
</table>

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
		In addition, there are no appropriate guidelines for practitioner to practice and promote the OHS.		public and workers in identifying government occupational health clinics and specialist government's hospitals. • Difficulty in identifying OSH related services as not documented and promoted directly by MOH. • There is evidence showing government hospitals have the capacity to manage emergency	The number of occupational health doctors shows a declining pattern indicating market competitiveness in servicing occupational health. MOH had started to upgrade their OSH services for public in specialist's Hospitals. Most of the services provided by government's hospitals lack of specific diagnostic test related to the guideline on Occupational Health Services (Medical Surveillance 2001). MOHR and MOH worked within the boundary of each Ministry. No direct support from MOH in improving the infrastructure and the sub-speciality related to occupational diseases. Clinics related to Occupational diseases and revision within MOH database system. Recognition by MOH for Occupational Medicine specialist. Curriculum of OHD outdated and should be	Revision of OHD and OHN curriculum with sub specialty training Development of specialist Occupational health clinics within MOH including specific test in compliance to USECHH Regulation Organize dialogue and discussion with MMC and MMA to enhance recognition, review and boost Occupational Medicine practices among doctors.
		Action Taken	Evidence of database sharing by MOH and DOSH (Occupational Health Division).			

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
				response events related to occupational accidents. Private Sector: • There is improvement in pre-and post-employment medical check-up for related to OSH for multi-national companies (oil and gas sector). • Medical check-up is compulsory for foreign workers but not based on Guideline Medical	revise to meet the current challenges in OSH. Awareness of industry in compliance with Medical Surveillance Guideline 2001 is still very low to none. The guideline on occupational health services (Medical Surveillance 2001) lack certain diseases including vibration-related and psychosocial. Additional funding by EPU, MOH and MOHR to improve and setting up a new facility for OHD to promote OSH services for employee and public.	Provide mechanism for certification/ recognition of clinical specialist eg. Ent, Orthopedic, Nephrology, Respiratory, Dermatology, Oncology etc as OH Specialist. Database of Ergonomist, occupational therapist and Occupational health nurse. Revision of existing guideline on medical surveillance to cater occupational disease not covered before.

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
				Surveillance 2001. • OHD are related to public health and need to consult specialist in any occupational health related diseases. • Data on supporting personnel are not captured: Occupational health nurse, Ergonomist, Occupational therapist. • Regulations such as noise		Introduce Occupational Health Service (Medical Surveillance) Regulation 20xx/ Industrial code of practice. Introduce Ergonomics Risk Assessment at the workplace Industrial Code of Practice 20xx. Increase awareness program to SMEs and hospitals (government and private) related to OHS.

NO	TARGET	PREVIOUS SITUATION	CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
			exposure regulations do not specify the need to have verification from OHD.		
10	Compensa-tion	SOCSO has a good system in providing social security protection for workers and their dependants through the Social Security Scheme, nevertheless private insurance companies report no data on occupational health and safety claims of the workmen under Compensation Act. Government personnel lack of compensation if any related injuries or invalidity while working SOCSO limit contribution of those earning less than	Compensation to local is still arising. The list of approved insurance companies is maintained by Department of Labour The yearly cost compensated to foreign workers is still unknown as data is not shared. Government	It is not a statutory requirement by the private insurance companies to published and compiled total amount compensated to foreign workers. There is a need for private insurance to publish record on accident, injury and death due to occupation to DOSH. There is a need to amend the insurance act to ensure that self-employed and those not cover under other social compensation can be compensated under private insurance company. Compensation scheme for government staff still unsatisfactory.	Coordinate task force with Department of Labour to retrieve information related to foreign workers. Public Service Department (JPA) in collaboration with MOHR to review the need to tally/match/level compensation scheme for work related injuries among government staff with that of

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
		RM3000 for those working as government staff.		workers still underpaid in compensation.		SOCSO. More awareness activities are required for SOCSO among self-employed on protection and compensation scheme.
		Action Taken	Database on the list of insurance companies for compensation of foreign workers. Mechanism in place for synchronization of SOCSO's report with DOSH data.			
11	Asbestos	The information and data regarding the asbestos is per year but was not classified by the type of industries. Only the manufacturing and oil and gas sector has information regarding asbestos. Although asbestos has become a re-emerging		Control and management of asbestos under various agencies including DOSH: • Factory and Machinery Act (Asbestos Regulation)	Percentage of industries compliance to the Occupational Safety and Health Act (Use and Standards of Exposure of Chemicals Hazardous to Health) 2000 is not very favourable. Improvement notices by DOSH were given out to employers to ensure that proper control measures were exercised. Although there are only 17 listed manufacturers of asbestos based products, the number of people involved in using and	Ratification on C162 - Asbestos Convention, 1986 (No. 162) Full banning on the use of any type of asbestos materials The need for collaboration and

NO	TARGET	PREVIOUS SITUATION	CURRENT SITUATION	CURRENT GAP	PROPOSED ACTION
		issue, lack of enforcement and complacent attitude have been neglected by the authorities and stakeholders. There is urgent need to eradicate the use of asbestos in any industries and to be included in DOSH Master Plan 2015. Action Taken: Proposed banning on the use of Asbestos	1986 • Occupational Safety and Health Act (Use and Standards of Exposure of Chemicals Hazardous to Health) 2000 • Occupational Safety and Health Act (Prohibition of Use of Materials) 1999 including Crocidolite (Asbestos) Lack of coordination between PWD, DOE, DOSH, Royal Customs Department,	handling these products could not be determined. Lack of facilities and expertise to establish and validate medical record data on asbestos-related diseases due to insufficient numbers of specialist doctors trained in asbestos related disease diagnosis and treatment. The tax- free import of chrysotile by manufacturers who produce asbestos roofing results in cheaper but hazardous building products in Malaysia Estimated the full of ARD burden predicted between 2010 – 2020, therefore the perception on asbestos impact on Malaysian workers in minimal Difficulty of early detection Under reporting on the amount import of asbestos Currently, the Factories and Machinery Act 1967 (Building Operations and Works of Engineering Construction) (Safety) Regulation 1986 regulates the safety and health of the	cooperation mechanism among related government agencies which include but not limited to: • DOSH • Department of Public Health (DPH) • NIOSH • MITI These agencies should respond to the earlier efforts from the Public Work Department, Ministry of Works There is a need for collaborative efforts across several policy domains,

<table>
<tr><th>NO</th><th>TARGET</th><th colspan="2">PREVIOUS SITUATION</th><th>CURRENT SITUATION</th><th>CURRENT GAP</th><th>PROPOSED ACTION</th></tr>
<tr><td></td><td></td><td colspan="2"></td><td>NIOSH, CIDB, SIRIM, Architect Association Malaysia, Institute of Quantity Surveyors of Malaysia (IQSM). MTUC, Building Workers International (BWI), the International Federation of Metallurgy Workers, MATRADE.</td><td>workers exposed to ACMs during their works by using the definition of Control Use of asbestos in the factories. However, various types of maintenance works were not considered

There is no banning on exportation of asbestos contained materials.

Various regulations that govern asbestos with no regulations that exclude the exportation of asbestos materials.

<table><tr><th>Stage</th><th>Act/regulations/Code</th></tr><tr><td rowspan="3">Import of asbestos mineral</td><td>Customs Duties Order 1996 Royal Malaysian Customs Department</td></tr><tr><td>Classification, Labelling and Safety Data Sheet of Hazardous Chemicals Regulations 2013</td></tr><tr><td>OSH Act (Prohibition of Use of Substance) Order 1999</td></tr></table></td><td>including public health, industry, commerce and trade, and environment.

Taxation on chrysotile: The introduction of a tax on chrysotile would help in discouraging the use of asbestos-based products and encourage the use of asbestos-free substitutes until a total ban of asbestosis in place.

Prohibition of asbestos use in buildings: Although Asbestos</td></tr>
</table>

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP		PROPOSED ACTION
						Use and Standard of Exposure to Chemicals Hazardous to Health Regulation 2000	contained materials (ACM) have not been used in schools, clinics, and hospitals since 1999 and in all government buildings since 2005, this prohibition needs to be extended to all building. Regulations for managing ACMs in existing Buildings - important issue is managing asbestos in existing buildings and new private buildings. The FMA (Building Operations and Works of Engineering
					Production stage of asbestos-containing building material	Factories and Machinery (Asbestos Process) Regulations 1986	
						Factories and Machinery Act 1967 (Building Operations and Works of Engineering Construction) (Safety)	
						Uniform Building By Law (UBBL) 1984 under Street, Drainage and Building Act 1974 (Act 133) Ministry of Housing and Local Government	
						Notification of Accident, Dangerous Occurrence, Occupational Poisoning. and Occupational Disease (NADOPOD) Regulations 2004	

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP		PROPOSED ACTION
					Development and consumption stage	National Standard for Building Material produces by SIRIM	Construction) (Safety) Regulation 1986 needs to be redefined by considering the various types of maintenance works. Amendments to the Uniform Building By-Laws(UBBLs) under the Building, Street and Drainage Act: The UBBLs still contain an option for the use of ACM in private buildings. For the safety and health of the occupants and maintenance workers in these buildings, priority
						Standard Specification for Building Works 2005 or JKR Spec. 2005 Department of Works, Ministry of Works	
						Guidelines for Public Safety and Health in Development Site 2007	
						Guidelines for Construction of Workers Housing	
						Guidelines for Additional Small Development in front part of Terrace House	
						Environmental Quality (Clean Air) (Amendment) Regulations,2000	
					Demolition of buildings which contain asbestos and	Factories and Machinery Act 1967 (Building Operations and Works of Engineering Construction) (Safety) Regulation 1986.	

NO	TARGET	PREVIOUS SITUATION		CURRENT SITUATION	CURRENT GAP		PROPOSED ACTION
					disposal of building material	Environmental Quality (Scheduled Waste) Regulations 2005 Environmental Quality (Clean Air) (Amendment) Regulations 2000.	should be given to ban asbestos in existing buildings by amending this Act.
						Code of Practice for Building Operator (Malaysian Standard/MS 282: Part 1, 1975) under Standards of Malaysia Act 1996 [Act 549	
						Code of Practice: Demolition of Building (Malaysian Standard/MS 2318 (P) 2010) under Standards of Malaysia Act 1996 [Act 549]	

9.2 Other Gaps Identified

	ISSUES	ACTION NEEDED
International OSH Strategic alliance	• Formal alliance with South East Asia Countries– ASEAN OSH NET • Loose alliance between Islamic country - OIC-OSHNET • No proper mechanism of collaboration with International OSH Expert and Institute	• Develop a formal networking and alliance with Islamic countries (OIC -OSHNET) • Develop a procedure and sustaining mechanism of collaboration with international OSH experts and institute (through ILO CIS/FIOH)
The coordination of current legislation within the boundary of each other department/ agencies	• Mineral Development Act, 1994 • Biosafety Act (2007) • Gas Supply (Amendment) Act, 2016 • Electricity Supply Act, 1990 • Pesticides Act, 1974 • Poison Act, (1952) – Packaging • Construction Industry Development Board Act, (2000) • Merchant Shipping Ordinance, (1952) • Armed Forces Act, (1972) • Other related Acts Addition • There is a need to ensure the safety and health under those working within the industries not	Standardizing with amendment of regulation to ensure compliance with OSHA 1994 Although seafarers and armed forces personnel are governed under the boundary of their own Act and ordinance, there is a need to assist them within the scope of OSH Act 1994 in ensuring their safety, health and welfare are taken care of Transferring the authority of related regulation such as Electric Passenger and Goods Lift (1970) to related Ministry of Urban Wellbeing, Housing

	ISSUES	ACTION NEEDED
	covered under Schedule 1 of OSH Act 1994. This include those under Merchant Shipping Ordinance, (1952) and Armed Forces Act, (1972)	and Local Government (within the boundary of the Ministry enforcement)
	• There is a need to expand governance and enforcement of public safety related issues such as approval, installation and inspection of lift, escalator, dumbwaiters and amusement park under Electric Passenger and Goods Lift (1970) to other government agencies including local authorities and Ministry of Urban Wellbeing, Housing and Local Government.	Create inter-agencies task force under DOSH in developing a new mechanism on management of public machineries including amusement park. The joint task force should look into potential for development of procedure and mechanism for registration, notification and inspection as well as capacity building for technical capabilities.
	• Under the Control of Industrial Major Accident Hazards Regulation 1996 (CIMAH) stated the ned to have onsite and offsite emergency plan and preparation that include various agencies. The regulation short stop at coordinating offsite emergency plan leading to improper coordination within the local authorities. Only selected few from the local authority especially from the district office were invited in emergency planning but without proper arrangement in term of roles and responsibilities.	The Ministry of Urban Wellbeing, Housing and Local Government should establish a unit/plan in coordinating offsite emergency plan with proper roles and responsibilities within local authorities especially those with plant that are categorized under Major Hazard Installation NCOSH should play the role or act as the main body to manage and mediate overlapping of jurisdiction,

	ISSUES	ACTION NEEDED
		cooperation and coordination between different ministries/agencies.
Implementation of OSH Standard	• Mechanism on how to implement OSH Standard • OSH standard that is under regulations, ICOP or Guidelines are voluntary basis • SMEs will have major issue in implementing OSH standard	• Develop mechanism on OSH standard implementation by industries (mechanism should be easy for SMEs) • Integrate current existing OSH standard within regulations, ICOP and guidelines • Increase awareness on existing OSH standard by DOSH and DS through website and others social media
National and International Hygiene and Ergonomics collaboration	• The road map for Hygiene and Ergonomics is unclear with statistic shows increase of occupational health issues • How data and program to be recorded and supported • Mechanism on collaboration with National and International expert on how to harvest their expertise and skill • The need to revise existing Hygiene and Ergonomics regulations, ICOP, standards and guidelines	• DOSH need to invite local expert to work together with international expert in sustaining skill and expertise to DOSH and stakeholder • DOSH need to collaborate with local expert from NGOs, academician, IH and OH in revision of related Industrial Hygiene and ergonomics • DOSH need to focus problem related to IH and ergonomics in reducing the issues (i.e NIHL, MSD and skin contact dermatitis)

	ISSUES	ACTION NEEDED
OSH through association activities	There is no: • There is no funding/grant/seed money for activities • There is no formal recognition of NGOs by DOSH • There is no database of societies related to DOSH • There is no proper coordination between DOSH and Society in Networking and type of activities to be conducted • Who will do OSH awareness prospective workers?	• DOSH should motivate NGOs in funding/grant/seed money for activities • Formal recognition of NGOs by DOSH • Development of database of societies related to DOSH and SOCSO (sharing single platform) • Proper coordination between DOSH and Society in Networking and type of activities to be conducted. (Should be conducted under Policy Division and NCOSH)
OSH Innovation	• There is no recognition of OSH innovation by stakeholders (industries, universities and research institution) • There is no promotion by DOSH on tangible product related to OSH developed • There is no incentive by DOSH in any innovation develop by industries especially related to low cost improvement • There is no sharing session between industries in innovation developed	• DOSH need to recognize and promote OSH innovation by stakeholders by promoting competition and sharing session • Tax reduction incentive for workable OSH innovation • Promotion of low cost improvement to enhance SME's in complying to legal requirement and improvement of OSH
OSH Data Research	• There is no mechanism in coordinating between DOSH and academic institutions • DOSH lack of research grant/consultation for	• Develop a working secretariat in collaboration with DOSH and academic institutions

	ISSUES	ACTION NEEDED
	academic institution • There is lack of one centre depository online of research publication • There is no full-time researcher in DOSH or Research Division within DOSH • DOSH, NIOSH and Universities need to collaborate in research	• DOSH should promote research grant in producing research output in publication • Collaboration of research between institutions for developing significant findings in: 1. Innovation 2. Policy 3. Risk Assessment 4. Standard 5. Re-engineering • DOSH to compile all research related to OSH in their repository and searchable under online website • DOSH should evaluate research findings in order to use as future OSH policies

9.3 Gaps Identified from Focus Group Discussion

This section deals with the findings of the study which is summarized in Figure 9.1. The data was obtained from informants representing the Employees, OSH Professionals and Industries Leaders.

Discussion 1:

The first question posed to the informants were on their awareness of the OSH policy for Malaysia and whether this policy is clear and effectively communicated to the industry. The informants from the Employee Representative had low awareness of the OSH policy. Among the response were:

> "…personally not aware of any OSH policy for Malaysia" (NUBE)
>
> "...I am not aware of the OSH Policy" (MTUC)
>
> "OSH is not mentioned as an item in the educational system" (NUTP)
>
> "Most of the higher institution or government servants are not aware of the OSH elements" (Higher Institutions Rep.)
>
> "...the OSH awareness levels among the employees are still low" (CUEPACS)

As a result of having a very low awareness of the OSH policy, it is not surprising that the informants from the Employee Representative mentioned that the policy is not clear and not effectively communicated to the industry. Some of their views were as followed:

> "...the policies need to be clear" (Healthcare Sector Rep.)
>
> "DOSH needs to come out with a workable policy before it can be clear and effective, not the one with solely for documentation process" (MTUC)
>
> "…many supporting staff in my working institution are not aware of the implementing OSH at their workplace" (Higher Institutions Rep.)
>
> "Only 2 schools in the country teach OSH out of more than 10,000 schools" (NUTP)

On the other hand, there were mixed views from the OSH Professionals with regards to the first question. For the informants from the Oil & Gas Industry, Utilities (Electric) and Manufacturing Industry (1) the policies are clear and effectively communicated.

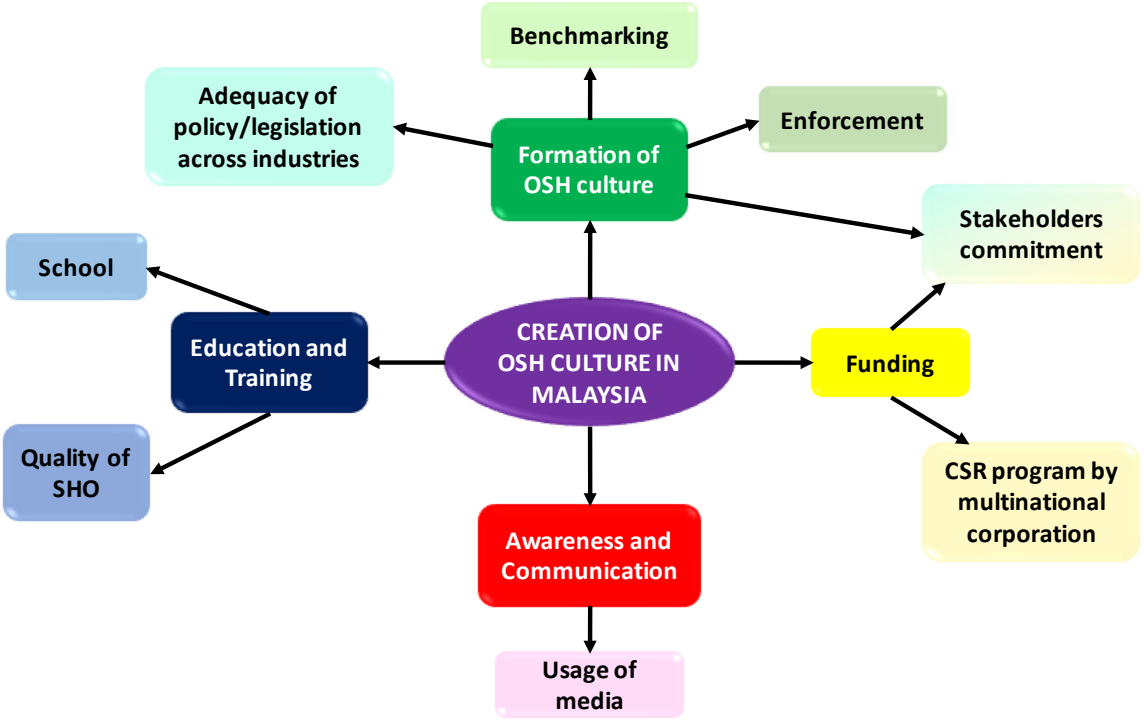

Figure 1: Gaps Identified from Focus Group Discussion

However, contradicting views were expressed by the informants from the Quarry, Services (Restaurant), Bank and Manufacturing Industry Representative (2). Besides, according to the informant from the agricultural industry representative, it looks like there is more legislation of the policies and the process of implementation is lacking.

Based on the feedback from the informants of the Industry Leaders, it is evident that the consensus is the OSH policy is not clear and not effectively communicated to the industry. Besides, some informants had also mentioned that they are confused with the policies and it is not specific according to industries. Among their statements are as follows:

> "…policies are missing…policies are not effective, no transparency" (MEF)
>
> "…not clearly communicated to all industry" (Construction Industry Rep. 2)
>
> "Policy direction is not clear…policy communication problems (Construction Industry Rep. 2)

Confused…Lack of communication" (NIOSH Rep.: OSH Training Provider)

QSH policies are known but lack implementation…policies are not specific for hotel industry (Hotel Sector Rep.)

Policy is sufficient for general industry but not specific (Agricultural Industry Rep. 2)

"…current OSH policy is too general…industry does not know how to interpret it (Higher Education Rep.)

Judging from the above data, it is quite obvious that the OSH policy is not clear and not effectively communicated to the industry.

Discussion 2:

The second question given to the informants was to seek their opinion on the adequacy of the OSH policy and two main legislations (OSHA 1994 and FMA 1967) to govern OSH matters in Malaysia. Not much feedback was obtained from the informants of Employee Representative regarding this query as many had abstained from answering.

The only feedback given was by the NUBE representative who argued if there were any laws or guidelines under OSH that stated the provision of accommodation to the foreign workers. The same goes for the informants from the OSH Professionals whereby only a few responded to this item.

The available responses show that this group had mixed views as the informants from the Construction 2 and Quarry said it is adequate. On the other hand, the informant from the Oil & Gas industry said it is not specific. Most of the informants from the Industry Leaders gave their response to this item. According to them, generally laws are adequate however improvement is needed for SMEs, the palm-oil industry also on implementation, enforcement, and updating.

Among their views are as follows:

"Current trend of accidents (crane, accident, escalator, etc.) means that the laws are not effectively implemented" (MEF)

"…oil & gas, there is enough. OSH laws are adequate but for small-medium industry, something needs to be done" (Oil & Gas Industry Rep.)

"…covered quite good to govern almost all aspects. Additional guidance is needed like Code of Practice for palm-oil industry level, example harvesting, machinery safety, design" (Agricultural Industry Rep. 1)

"…continuous update of regulations to cater the changes of industry's needs" (Aviation Manufacturing Rep.)

"The current OSH laws and regulations is sufficient but need to have more enforcement and self-regulation implementation in the hospitality industry" (Hotel Sector Rep.)

"Enough to govern OSH issues. Not fully implemented so not adequate. Issue is on implementation (NIOSH Rep.)

The laws are general but not specific. Enforcement is absent. (Construction Industry Rep. 1)

The problem is industry people interpretation and implementation of the law which gives rise to the problem of enforcement (Construction Industry Rep. 2)

Need to review, some of the content is out-dated…implementation is of concerned (Construction Industry Rep. 3)

…needs to be updated…a lot of technology need used… through…implementation of the act at industry levels (Higher Education Rep.)

Discussion 3:

Informants were also asked to give their views on the impact that can be seen from the OSH enforcement by the authority to their organization. All the informants from the three different groups agreed that there is still needed much improvement in terms of impact. Generally, the informants from the Employee Representative did not feel any impact and it is solely for demonstration purposes only. Among the issues highlighted by this group were as follows:

"…employers are not keen to apply…no employee dares to raise the issues…find it difficult to the employer" (NUBE)

"Impact from the OSH authority is minimum…teachers is not being exposed to the OSH….communicable diseases prevention and control is limited" (NUTP)

"…enforcement is lacking" (MTUC-OSH Committee)

…absence of OSH training provided by their employer as gazette under OSHA 1994 (MTUC and Higher Institution Rep.)

…solely for demonstration purposes only. The focus on children's health and safety are not being highlighted (CUEPACS)

The input from the informants of the OSH Professionals showed that there is still needed the enforcement from DOSH, and there is no standard way of enforcement with different contractors. Their views are as follows:

"Continue to work closely with DOSH…OSH practices…we have evolved its operations to include DOSH requirements" (Oil & Gas Industry Rep.)

"…feel less on the DOSH enforcement…DOSH office focuses mainly on the high-risk industry. At times…DOSH office …support us…want to enforce OSH to our sub-contractor" (Utilities: Electrical Sector Rep.)

"…appreciate the enforcement from DOSH as it indicates the continuous support…need to examine small contractors who work to serve small-medium industry on maintenance and cleaning service" (Services Industry Rep.)

"OSH practitioners feel the stress…burden of in-charge of safety and health is fall on the shoulder of OSH practitioner" (Manufacturing Industry Rep. 2)

"There are no competent enforcement officers…prosecuting officers must be well-trained in OSH-related practices and experience with work process with different industries…enforce rightly with right statement…train and focus on the needs of employees from Sabah and Sarawak" (Agricultural Industry Rep.)

"DOSH deals differently with different contractors. There is no standard way of enforcement…a gap in the decision-making…needs to standardize the standards of enforcement from the main contractor to sub-contractor level" (Construction Industry Rep.)

"Enforcement at the water industry are quite positive…one of the reason is that our industry bring the public figure" (Utilities: Electrical Sector Rep.)

"…suggest the enforcement from DOSH shall give it full force so that OSH practitioners and employer could aware of the necessary of OSH (Quarry Sector Rep.)

…the enforcement as a supportive action from DOSH…could creates awareness to the management level…not to create fear but to create a sustainable development with OSH practitioner, employer and the DOSH office (Oil & Gas Industry Rep.)

Informants form the Industry Leaders too mentioned that generally enforcement is lacking and need a lot of engagement with DOSH. Among the voices of the informants are:

"No enforcement is felt. The enforcement should be as preventive measures instead of reactive action" (MEF)

"…continued to work closely with DOSH and has made the industry to be better. OSH enforcement is still needed. We are not yet at the maturity level. A level of enforcement is needed" (Oil & Gas Rep.)

"Need a lot of engagement with DOSH that will enable preparedness of compliance. Enforcement is still lacking. Will appreciate more regular focused discussions/consultations with DOSH personnel on OSH matters and updates at plantation industry" (Agricultural Industry Rep. 1)

"For plantation industry, the enforcement is not there yet. Most of the plantation industry is not mature in handling OSH" (Agricultural Industry Rep. 2)

"Enforcement is lacking" (Aviation Manufacturing Rep.)

"OSH enforcement is good but the lack of engagements with the hospitality industry. The maturity level is not there so self-regulation is weak" (Hotel Sector Rep.)

"Regular visits from DOSH help the organization (NIOSH Rep.)

""…there is a lack of inspection. …DOSH…more efforts need to be put in…the presence of DOSH will help...will enhance awareness and create some form of responsibility from the side of the industry" (Construction Industry Rep. 1)

> "…DOSH has some form of impact which is already felt though very little…strong self-regulation and strong enforcement…Malaysia are not there yet" (Construction Industry Rep. 2)

> "Enforcement is needed in the construction industry…quality enforcement…Self-regulation will take time…will need the industries to be educated on that…need the commitment of the industries" (Construction Industry Rep. 3)

> "…culture is what they are looking at now…one day…we hope…would be able to self-regulating when it comes to OSH matters" (Higher Education Rep.)

Discussion 4:

Another query posed to the informants was how successful was the implementation programs on OSH conducted by their organization and the challenges encountered to have OSH practices in place in the organization. The informants from the Employee Representative mentioned that it was not successful while the OSH Professionals and Industrial Leaders felt there was some success. The OSH Professionals mentioned that there was some success in the manufacturing industry while according to Industrial Leaders success is felt on the safety aspect instead of health.

The main challenge faced to have OSH practices in place in the organization is funding that was voiced out by all the three groups. On top of it, the OSH Professionals felt that the employee commitment is lacking. Besides, other challenges expressed were from the Industry Leaders who said that the resistance is due to instiling safety mind-set & safety culture to employees, safety practitioners do not have adequate knowledge of construction process, implementation by the middle managers, and employment of foreign workers.

Discussion 5:

Informants were also asked to give their suggestions towards creating OSH culture in Malaysia through voluntary compliance. All three groups concurred that OSH culture should start from school-level among the children. In addition, other suggestions are as follows:

i) Employee representatives: usage of the media stations (MTUC: OSH Committee), promoting OSH to create awareness (MTUC: OSH Committee), and formation of OSH clubs (MTUC and Higher Institution Rep.);

ii) OSH Professionals: create awareness programs (Oil & Gas Industry Rep.); and

iii) Industry Leaders: use of prime media (MEF), need to enhance education and training (Oil & Gas Industry Rep.), recognition and reward from the Ministry (Agricultural Industry Rep. 1), tax deductions practices (NIOSH Rep.), and safety conservation financing system (Higher Education Rep.).

Discussion 6:

The following question posed to the informants was whether the OSH best practices in their organization successfully contribute to the success of the organization in terms of business performance and to the well-being of all workers in the organization.

From the perspective of Employee Representative, the OSH best practices is a failure as stated by the informant from NUTP. A similar view was presented by the informant from MTUC who said:

> "…it is not a successful one…there should be improvement…there is no work life balance because workers are not happy. When it comes to best practice, we are still at the bottom…biggest challenges…the SMEs…hire a lot of foreign workers…do not know OSH…they run the work, take risks but no SOSCO to protect them."

Meanwhile, the informants from the OSH Professionals also stated that the OSH best practices were not a good measure. The following statements depict these informants' feelings:

> "…safety audit is not a good measure…audit are done not to improve the system but to meet the certification requirement…meet the minimum requirement" (Manufacturing Industry Rep. 2)

> "OSH best practices…when we see a problem we solve it with the aim to improve the quality of working life of the employee…cost money to the company" (Construction Industry Rep. 2)

> "OSH practitioner is local but most of the workers are foreigner" (Oil & Gas Industry Rep.)

Moreover, according to the informants from the Industry Leaders, much needed to be done on the OSH best practices. Industry Leaders feel that there is a need to develop best practices based on the industry, need for all industries to sit and discuss which best practice work for them so that various industries can learn and improve from it, look at

various tools to increase quality working life, benchmarking of best practices, and linking quality, safety and productivity under one heading. Their views are as follows:

> "only people in the league know about best practices…people outside don't know...the public should know…develop best practices based on the industry" (MEF)
>
> "have an impact on the quality of working life" (Oil & Gas Industry Rep.)
>
> "different ways to calculate the index of an indicator of OSH best practices. Looking at various to increase quality of working life" (Agricultural Industry Rep. 1)
>
> "…how to measure best practices, how to put the practices in places" (Aviation Manufacturing Rep.)
>
> "If we have all OSH best practices in place, the quality of life will increase" (Hotel Sector Rep.)
>
> "Need all industries to sit and discuss which best practice works for them so various industries can learn and improve from it…document industry discussions on best practices" (NIOSH Rep.)
>
> "…what benchmark of best practices are we looking at? Balance employee demand and employer affordability" (Construction Industry Rep. 1)
>
> "Linking quality, safety and productivity under one heading" (Construction Industry Rep. 3)
>
> "OSH championing employees welfare…once the welfare is championed, the good OSH practices will be in places as well as other aspects like productivity" (Higher Education Rep.)

Discussion 7:

The last question given to these informants was to seek their opinion on other suggestions and recommendations that they would like to offer to close gaps between the national agenda on OSH and the practices they encountered in their organization.

The feedback from the Employee Representatives showed that there is a need for policy makers to have a benchmarking, work on enforcement, start educating the public free of charge, all foreign workers should attend OSH seminars and training, big companies should have CSR programs. Among their responses are as follows:

"…the sectorial (hotel, services, industry) tripartite emphasis on OSH will help if it is initiated by DOSH…need the policy maker to walk the talk…need to have a benchmark" (NUBE)

"…compound…awareness" (MTUC)

…work on enforcement (MTUC and Healthcare Sector Rep)

"start educating the public free of charge. Every school should recruit one teacher as OSH officer…OSH officer attend seminars and other forms of training" (NUTP)

"…all foreign workers should attend OSH seminars and training…big companies should have CSR programs…assisting school programs in OSH….government should allocate budget…the international community can come in and assist" (MTUC)

"OSH training…open registration to people at all level" (MTUC and Higher Institutions Rep.)

Besides, the OSH Professionals feel that safety officers should be OSH practitioners with minimum academic requirements, making it mandatory for the employer to attend OSH related training/seminar at least once a year, and safety implementation at the workplace include the stakeholders from different sectors. Their opinions are as follows:

"Safety implementation at the workplace include the stakeholders from different sectors…to ensure the OSH is a liability to the work they do, there should be an act to monitor by the board of stakeholders…all those working for safety as safety officers should be OSH practitioners with minimum academic requirements" (Manufacturing Industry 2)

"...government funding to have OSH awareness at the school-level" (Agricultural Industry Rep.)

"The educational level has to be streamlined. Minimum qualification needs to be instituted" (Construction Industry Rep. 1)

"…bring sustainable change formulas…need to have the authority and who has the authority the top management has the authority to bring change in the organization" (Construction Industry Rep. 2)

> "…have the OSH Officer Board to recognize the professionalism…make it mandatory for the employer (top-management) to attend OSH related training/seminar at least once a year" (Quarry Sector Rep.)

On top of it, according to the Industry Leaders to close gaps there is a need for training to be industry-driven, improve the quality of safety officers, and responsibility of the employer to ensure safety training of the employee.

Based on the above input, it shows that all the three groups agree that training and seminars are pertinent to close the gaps between the national agenda on OSH and practice. Besides, much emphasis should be placed on the selection of quality safety officers and the implementation of safety from all stakeholders. Moreover, viable enforcement is also recommended besides benchmarking from policy makers and organizing CSR programs by big companies.

STAKEHOLDERS	ISSUES ADDRESSED	PROPOSED ACTION
Employers 'perspective	• Not aware and full understanding with OSH policy with suggestion that policy is not clear and not effectively communicated. • Generally, laws are adequate however improvement is needed for SMEs, palm-oil industry also on implementation, enforcement and updating. • The SHO that produced by the training provider has not the specific quality needed by each of the sector but due to lack of SHO must be employed. This lead to re training and error while working. • Generally, enforcement is lacking and need a lot of engagement with DOSH. • The successfulness of OSH Program is related to safety aspect instead of health. Resistance are due to funding, instilling safety mind-set & safety culture to employees, safety practitioners that do not have adequate knowledge of construction process, implementation by the middle managers, employment of foreign workers. • Who to conduct training when SHO retention rate is high? • Budget constraint in conducting specific training and the replacement of SHO if sent for training.	• Participants generally feel that OSH culture should start from schools. • The use of prime-time media • The need to enhance education and training, recognition and reward from the Ministry • Tax deductions practices • Safety conservation financing system • Training should be industry-driven, improve the quality of safety officers, and responsibility of the employer to ensure safety training of the employee. • OSH best practice: 1) There is a need to develop best practices based on the industry, need for all industries to sit and discuss which best practice work for them so that various industries can learn and improve from it, 2) Look at various tools to increase quality working life, benchmarking of best practices, and linking quality, safety and productivity under one heading

STAKEHOLDERS	ISSUES ADDRESSED	PROPOSED ACTION
Employee Union	• There is lack of OSH culture and the culture need to cultivate from school days • Low awareness level of OSH among many workers in government sector and only certain department aware of OSHA • Majority did not take serious anything related to OSH • Majority not aware on OSH Policy. • The policy is not clear and not effectively communicated to the industry • OSH legislations and policy are not adequate • Majority lack on emergency preparedness • Lack enforcement by DOSH regarding Occupational Health among foreign workers • Impact on OSH to employees is to low solely for demonstration purposes only, or minimum • Section 27 is not implemented well and still discrimination to workers • The implementation programs on OSH conducted in the organization is generally not successful as there are resistance from employees, and funding. • Many companies do not have OSH committee set up. • Workers not sure on the effectiveness of OSH • NADOPOD Only work at Private sector but majority of government sector did not comply in notifying any dangerous occurrence, occupational disease and occupational injuries • There is perception that contract workers do not comply to OSHA • OSH best practices are considered failure. There is no work life balance because workers are not happy.	• Need to start educated and bring the knowledge since primary school • Need to seriously enforced OSHA to government's department • Need to ensure that discrimination to workers is controlled and eliminated • Need to bring and voice out OSH issue through media • More promotion of OSH through various media • DOSH to sponsor the OSH program to employee's union • Increase understanding of workers in the importance of OSH though various method with the assistance of employee's union • There is a need from policy makers to: 1) Benchmarking with other countries, 2) Improve on enforcement 3) Educating the public free of charge 4) Compulsory for all foreign workers to attend OSH seminars and trainings 5) More CSR programs related to OSH sponsored by establish companies

STAKEHOLDERS	ISSUES ADDRESSED	PROPOSED ACTION
	• Majority of foreign workers do not know OSH and they take risks	
OSH Practitioner	• Lack of awareness on OSH culture and there is a need for a proper time line for it to mature • For Oil & Gas Industry/Utilities (Electric)/Manufacturing Industry agreed that the policies are clear and effectively communicated • For Quarry/Services (Restaurant)/Bank/Manufacturing Industries, the policy is clear but not effectively communicated with the employer/employee • For agriculture, there are more legislation but no implementation • For oil and gas, OSH Policy developed by DOSH is unclear including statement in unclear and confusing and non-specific • For construction and mining indicate the existing policy is adequate • OSH policy developed by DOSH is not effectiveness • There is a need to include regulation by certain industry and integration (i.e. aviation Industry) • Communication breakdown in delivering of OSHMP 15 • Some of the existing Guidelines developed by DOSH need to be updated • DOSH need to spot check to the top management in implementing OSH in the organization • Request not only SHO but the Top Management and CEO also need to responsible in implementing OSH • Top management should attend mandatory OSH related training/seminar at least once a year	• Need to start educated and bring the knowledge since primary school • More promotion through awareness program • Revise OSH Policy to a simpler operational level for execution • Revision of existing outdated guideline together with OSH practitioners for different guidelines with the sector • Consistency of DOSH enforcement • Sustain SOHELP as it is considered as effective program • Developed board of professional SHO • Improvement of tripartite collaboration for effective feedback and OSH improvement • Develop classification of SHO • Tax exemption in promoting OSH best practices

STAKEHOLDERS	ISSUES ADDRESSED	PROPOSED ACTION
	• When registration of a new company, DOSH requirement for OSH is not clearly stated especially at for contractor • There is no consistent enforcement by DOSH with DOSH enforcement is still needed • Lack of leadership within the organization on OSH • OSHMP – SOHELP Program effective but need more programs to be promoted • Section 29 – improvement on the code of conduct of SHO is needed • The implementation of OSH programs show some success in the manufacturing industry but feel the resistance due to funding, commitment from parties involved • Tripartite arrangement need to be improve as it is critical to have feedback • Need to develop a professional Board of accreditation for SHO such as Board of Engineer for SHO professionalism (IR), ethics and welfare • Provide similar CEP Point for Top Management same like SHO as part of revision for continuous education program • Develop classification and Standard of SHO rank • OSH best practice: Safety audit is not a good measure as it is done to meet the certification requirement. Additionally, to implement OSH best practices it costs money to the company. Besides, OSH practitioner is local but most of the workers are foreigners thus the culture could not be instilled.	

9.4 Benchmark (Between Malaysia, Finland and Singapore)

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
DESCRIPTION OF OSH REGULATORY FRAMEWORK		The legislative structure of OSH in Malaysia is leaded by the Constitution. The major OSH laws include the Occupational Safety and Health Act 1994, the Factories and Machinery Act 1967, the Petroleum Act (safety measures) 1984. There are also other laws with a strand on OSH, such as the Employment Act 1955, and Labour Ordinance Acts 2005. Besides, the regulations (especially the regulations under the three major OSH laws), Orders and Director General Circulars complete the legislative	The Ministry of Social Affairs and Health is responsible for the drafting and development of occupational safety and health legislation and occupational safety and health policy and for international cooperation in the field of occupational safety and health. Finland has a comprehensive legislation for the promotion of employees' safety and health and most of this legislation is based on European Union legislation and/or the ILO Conventions ratified by Finland. The statutes on	The Workplace Safety and Health Act [WSH Act] is the leading OSH legislation in Singapore. The WSH Act is an act related to the safety, health and welfare of persons at work in a workplace. The Act incorporates 3 key principles from the WSH reform: – 1. Reduce risk at source; 2. Industry to take greater ownership of the OSH standards and outcomes; and 3. Higher penalties for poor safety management.

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		framework of OSH in Malaysia.	occupational safety and health are drafted on a tripartite basis, whereas the legislation on general labour law is drafted in the Ministry of Employment and the Economy.	
SCOPE, COVERAGE AND EXCLUSIONS	**HEALTH AND SAFETY COVERS PHYSICAL AND PSYCHOLOGICAL HEALTH**	Despite no explicit provisions about the coverage of mental health, the interpretation from Guidelines for prevention of stress and violence at the workplace indicates that both physical health and mental health are included in the OSH legislation.	The objective of the Occupational Safety and Health Act is to improve the working environment and working conditions in order to ensure and maintain the work ability of employees as well as to prevent occupational accidents and diseases and eliminate other hazards from work and the working environment to the physical and mental health of employees (section 1 of the Occupational Safety and Health Act). The Occupational Safety	The WSH Act covers both physical and psychosocial health of persons at work in Singapore according to the WSH guideline on healthcare. However, there is no legal provision which specifically addresses psychosocial hazards at workplace.

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
			and Health Act provides protection for both physical and mental health.	
COVERAGE OF CATEGORIES OF WORKERS	**DEFINITION OF WORKER**	"Employee" means a person who is employed for wages under a contract of service on or in connection with the work of an industry to which this Act applies Occupational Safety and Health Act 1994 (No. 514). (S 3(1))	"The Occupational Safety and Health Act applies to work carried out under the terms of an employment contract and to work carried out in an employment relationship in the public sector or in comparable service relation subject to public law. In practice, the Occupational Safety and Health Act applies to all paid work performed in the employment of others. Occupational Safety and Health Act (738/2002). (2)	"Employee" means any person employed by an employer to do any work under a contract of service. Workplace Safety and Health Act (2009 Ed.) (Art. 6 (1))
	DEFINITION OF EMPLOYER	"Employer means the immediate employer or the principal employer or	The Occupational Safety and Health Act does not contain an exact definition	"Employer" means a person who, in the course of the person's

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		both." (Occupational Safety and Health Act 1994, S 3(1))	of an employer. The Occupational Safety and Health Act applies to work carried out under the terms of an employment contract and to work carried out in an employment relationship in the public sector or in comparable service relation subject to public law. As a rule, the Occupational Safety and Health Act applies to all work performed in the employment of others.	trade, business, profession or undertaking, employs any person to do any work under a contract of service Workplace Safety and Health Act (2009 Ed.) (Art. 6 (1))
	EXCLUSION OF BRANCHES OF ECONOMIC ACTIVITY	(Sometimes) According to Section 1 (3), OSHA 1994 does not apply to work on board ships governed by the Merchant Shipping Ordinance 1952 [Ord. No. 70 of 1952], the	Yes	Sometimes

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		Merchant Shipping Ordinance 1960 of Sabah [Sabah Ord. No. 11 of 1960] or Sarawak [Sarawak Ord. No. 2 of 1960] or the armed forces.		
	MECHANISM FOR COMPENSATING OTHER DISEASES AS OCCUPATIONAL ONES	Section 32A of the Employees' Social Security Act 1969 on the determination of occupational diseases states that any question related to whether an employment injury is caused by an occupational disease as specified in the Fifth Schedule may be determined by a Medical Board in accordance with the regulations. With regards to compensation, Section 32A (5) states that the disable person shall be informed in writing by the	In Finland, the concept of occupational disease has not been restricted to diseases listed in the list of occupational diseases. Under the Occupational Accidents, Injuries and Diseases Act (459/2015), an occupational disease means a disease which probably mainly results from the employee's exposure to physical, chemical or biological agents at work. The list of occupational diseases includes diseases that are considered as the	If an employee contracts, on or after the date of commencement of the Work Injury Compensation (Amendment) Act 2011 (referred to in this section as the appointed day), a disease which is not specified in the first column of the Second Schedule but which is directly attributable to an exposure, arising out of and in the course of his employment, to a chemical or biological agent and the

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		Organization of the decision of the Special Medical Board and the benefit, if any, to which the insured person shall be entitled.	most common occupational diseases, and agents causing them are listed there too. The list is not exhaustive or restricting. A disease can be compensated as an occupational disease even it is not mentioned in the list if the causal relationship between the disease and an exposing agent referred to in the act can be proved with sufficient probability. Occupational Accidents, Injuries and Diseases Act (459/2015) (26).	incapacity or death of the employee results from that disease, compensation shall be payable as if the disease were a personal injury by accident arising out of and in the course of that employment and all the other provisions of this Act shall apply accordingly, subject to this section. Work Injury Compensation Act, 2008 (Cap. 354). (Art. 4 (1A), Second Schedule)
INSTITUTIONS AND PROGRAMMES RELATING TO OSH ADMINISTRATION AND/OR ENFORCEMENT	**COMPETENT NATIONAL AUTHORITY FOR SAFETY AND HEALTH AT WORK**	The Minister shall appoint a public officer to be the Director General of Occupational Safety and Health, in this Act referred to as the "Director General.	The Occupational Safety and Health Administration (Regional State Administrative Agencies) act as the competent national authority for occupational safety and	The Occupational Safety and Health Division (OSHD) in the Ministry of Manpower works to promote workplace safety and health (WSH) at the national

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		Occupational Safety and Health Act 1994 (No. 514). (S 5(1))	health in Finland. The Occupational Safety and Health Administration, operating under the auspices of the Ministry of Social Affairs and Health, is responsible for the regional direction of OSH and enforcement of occupational safety and health legislation at regional level. (Section 1 of the Act on Occupational Safety and Health Administration) Act on OSH Management (16/1993). (1)	level.
	NATIONAL OSH RESEARCH PROGRAMME OR INSTITUTE	National Council of Occupational Safety and Health (NCOSH) National Institute of Occupational Safety and Health (NIOSH)	The Finnish Institute of Occupational Health (Ministry of Social Affairs and Health) Ordinance respecting the activities and financing of the Occupational Health Institute	WSH Council and WSH Institute

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
			Finnish Institute of Occupational Health Act on the Operations and Financing of the Finnish Institute of Occupational Health (159/1978)	
	NATIONAL OSH PROGRAMME	The Occupational Safety and Health Master Plan 2015 (2010-2015) (OSH-MP 15) is essentially the middle stage of a series of three consecutive 5-year action plans that began in 2005 which will culminate in 2020 with achievement of the safety culture. The document contains the pledge by key partners to implement the Plan.	No data available	A national strategy until 2018 has been made public by the Ministry of Manpower. In the document is indicated that "WSH 2018 Plus sets out the plan (...) to achieve the 2018 target while laying the foundation to address emerging WSH challenges and sustain continuous improvement beyond 2018." National Strategy for

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
				Workplace Safety and Health: WSH 2018 Plus
EMPLOYERS' DUTIES AND RESPONSIBILITIES TO PROTECT THE SAFETY AND HEALTH OF WORKERS AND OTHERS	**DUTY TO ENSURE THE HEALTH AND SAFETY OF EMPLOYEES**	"It shall be the duty of every employer and every self-employed person to ensure, so far as is practicable, the safety, care, and welfare at work of all his employees." Occupational Safety and Health Act 1994 (No. 514). (S 15 (1))	"Employers are required to take care of the safety and health of their employees while at work by taking the necessary measures. For this purpose, employers must consider the circumstances related to the work, working conditions and other aspects of the working environment as well as the employees' personal capacities." (section 8(1) of the Occupational Safety and Health Act) "Employers must design and choose the measures necessary for improving the working conditions..." (section 8(3) of the	Articles 11 and 12 of the WSH Act stipulate the general duties of occupiers and employers to ensure the safety and health of their employees.

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
			Occupational Safety and Health Act).	
EMPLOYERS' DUTY TO ORGANIZE PREVENTION FORMALLY ALONG GENERALLY ACCEPTED OSH MANAGEMENT PRINCIPLES AND PRACTICES	**ELEMENTS OF AN OSH MANAGEMENT SYSTEM**	(Yes) Section 15, Occupational Safety and Health Act 1994 (Act 514). The implementation of OSHMS in organizations is aimed to reduce the risks related to the Occupational Safety and Health by reducing accidents and improving the productivity, safety and health of employees. There are two standards used as a reference in Malaysia which are the: MS 1722:2001 (National standard) and OHSAS 1800s1:2007 (International standard)	No data available	Sometime Workplace Safety and Health (Safety and Health Management System and Auditing) Regulations 2009 (No. S. 607).

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
	OBLIGATION TO IMPLEMENT A SPECIFIC OSH MANAGEMENT SYSTEM OR STANDARD	The Occupational Safety and Health Act 1994 (Act 514), Factory and Machinery Act 1967 (Act 139) and Petroleum (Safety Measures) Act 1984 (Act 302) and their relevant regulations set the requirements for OSHMS implementation in Malaysia.	No data available	The safety and health management system shall be implemented in accordance with any relevant Singapore Standard relating to safety and health management systems or such other standards, codes of practice or guidance issued or approved by the Workplace Safety and Health Council. Workplace Safety and Health (Safety and Health Management System and Auditing) Regulations 2009 (No. S. 607). (Art. 8 (2))
EMPLOYERS' DUTY TO ENSURE AVAILABILITY OF EXPERTISE AND COMPETENCE IN HEALTH AND SAFETY	**OSH COMPETENCE**	(Sometimes) According to Section 29 of OSHA 1994 and the Occupational Safety and Health (Safety and Health	If the employer does not have adequate expertise to analyse and assess the risks at work he or she shall use external experts (Section 10(2) of the Occupational	Yes

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		Officer) Regulations 1997, every employer is required to employ a safety and health officer (competent person). These safety and health officers (SHO) are required to advice the employer on the measures to promote the health and safety of the employees and how to tackle hazards, near misses and other dangerous occurrences. They also assist the employer or OSH committee in organizing OSH programs and collecting and analysing statistics and carrying out any other instructions made by the employer regarding any matters pertaining to safety and	Safety and Health Act). "The employer shall arrange occupational health care at his own expense in order to prevent and control health risks and problems related to work and working conditions and to protect and pro-mote the safety, working capacity and health of his employees" (Section 4 of the Occupational Health Care Act 1383/2001) Occupational Safety and Health Act (738/2002). (10)	

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		health at workplace (Regulation 18).		
	APPOINTMENT OF AN OSH PRACTITIONER	In industries determined by the Minister, the employer shall employ a competent person to act as a safety and health officer at the place of work. Occupational Safety and Health Act 1994 (No. 514). (s 29(1)(2)(3))	Section 10 of the Occupational Safety and Health Act provides that "The employer shall, taking the nature of the work and activities into account, systematically and adequately analyse and identify the hazards and risk factors caused by the work, working hours, working premises, other aspects of the working environment and the working conditions and, if the hazards and risk factors cannot be eliminated, assess their consequences to the employees' safety and health." If the employer does not have adequate expertise for this action, he or she shall	Every workplace within the prescribed class or description of workplaces shall have appointed in respect thereof a workplace safety and health officer or a workplace safety and health co-ordinator Workplace Safety and Health Act (2009 Ed.) (Art. 28 (1))

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
			use external experts. The employer shall make sure that the experts have adequate competence and other qualifications needed for carrying out the task properly. Provisions on the use of occupational health care experts and professionals and on workplace surveys are contained in the Occupational Health Care Act (1383/2001) Occupational Safety and Health Act (738/2002). (10)	
WORKERS' RIGHTS AND DUTIES	**DUTY TO TAKE REASONABLE STEPS TO PROTECT THEIR OWN SAFETY AND HEALTH**	"It shall be the duty of every employee while at work - (a) to take reasonable care for the safety and health of	“Employees shall follow the orders and instructions given by the employer within his or her competence.	It shall be the duty of every person at work to use in such manner so as to provide the protection intended, any suitable appliance,

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		himself and of other persons who may be affected by his acts or omissions at work; (b) to co-operate with his employer or any other person in the discharge of any duty or requirement imposed on the employer or that other person by this Act or any regulation made thereunder; (2) A person who contravenes the provisions of this section shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding one thousand ringgit or to imprisonment for a term not exceeding three months or to both."	Employees shall also otherwise observe such order and cleanliness as well as care and caution that is necessary for maintaining safety and health necessitated by the work and working conditions." (section 18(1) of the Occupational Safety and Health Act) Occupational Safety and Health Act (738/2002). (18)	protective clothing, convenience, equipment or other means or thing provided (whether for his use alone or for use by him in common with others) for securing his safety, health and welfare while at work. Workplace Safety and Health Act (2009 Ed.) (Art. 15 (1) (a))

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		Occupational Safety and Health Act 1994 (No. 514). (S 24)		
	DUTY TO TAKE REASONABLE STEPS TO PROTECT THE SAFETY AND HEALTH OF OTHERS	"It shall be the duty of every employee while at work— (a) to take reasonable care for the safety and health of himself and of other persons who may be affected by his acts or omissions at work; (...) (2) A person who contravenes the provisions of this section shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding one thousand ringgit or to imprisonment for a term not exceeding three months or to both."	"Employees shall also, in accordance with their experience as well as the instruction and guidance provided by the employer and according to their occupational skills, by available means take care of both their own and the other employees' safety and health." (section 18(2) of the Occupational Safety and Health Act) Occupational Safety and Health Act (738/2002). (18)	No person at work shall wilfully or recklessly interfere with or misuse any appliance, protective clothing, convenience, equipment or other means or thing provided (whether for his use alone or for use by him in common with others) pursuant to any requirement under this Act for securing the safety, health or welfare of persons (including himself) at work. Any person at work who, without reasonable cause, wilfully or recklessly does any act which

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		OCCUPATIONAL SAFETY AND HEALTH ACT 1994 (NO. 514). (S 24)		endangers the safety or health of himself or others shall be guilty of an offence Workplace Safety and Health Act (2009 Ed.) (Art. 15(2)(3))
	SUPERVISORS' DUTY TO TAKE REASONABLE STEPS TO PROTECT THE SAFETY AND HEALTH OF OTHERS	Malaysia, there is no specific regulation that places the protection and safety and health of others on the supervisor. However, Regulation 25 (3), (4) of the Factories and Machinery (Building Operations and Works of Engineering Construction) Safety) Regulations 1986 requires the site safety supervisor to inspect and rectify any unsafe conditions at the construction site, correcting any unsafe	No data available	While there is no duty imposed on supervisor specifically to take steps to protect safety and health of others under the WSH Act, there are some specific duties imposed under the Regulations, such as scaffold's supervisor under the WSH (Scaffolds) Regulations, lifting supervisor under the WSH (Operation of Cranes) Regulations. Workplace Safety and Health (Operation of

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		practices, reviewing work of sub-contractors to ensure compliances with the BOWEC or any other legislative provisions		Cranes) Regulations 2011 (No. S 515). Workplace Safety and Health (Scaffolds) Regulations 2011 (No. S 518).
	SENIOR OFFICERS' DUTY TO TAKE REASONABLE STEPS TO PROTECT THE SAFETY AND HEALTH OF OTHERS	(No data available)	No data available	No data available
	SELF-EMPLOYED PERSONS' DUTY TO TAKE REASONABLE STEPS TO PROTECT THEIR OWN AND OTHER PEOPLE'S HEALTH AND SAFETY	"It shall be the duty of every employer and every self-employed person to ensure, so far as is practicable, the safety, health and welfare at work of all his employees." Occupational Safety and Health Act 1994 (No. 514). (S 15 (1))	No data available	(1) It shall be the duty of every self-employed person (whether or not he is also a contractor or subcontractor) to take, so far as is reasonably practicable, such measures as are necessary to ensure the safety and health of persons (not being his employees) who may

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
				be affected by any undertaking carried on by him in the workplace. (2) Every self-employed person shall, where required by the regulations, give to persons (not being his employees) the prescribed information about such aspects of the way in which he conducts his undertaking as might affect their safety or health while those persons are at his workplace Workplace Safety and Health Act (2009 Ed.) (Art. 13)
	DUTY TO COMPLY WITH OSH-RELATED REQUIREMENTS	"(1) It shall be the duty of every employee while at work —	No data available	It shall be the duty of every person at work to co-operate with his

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		(c) to wear or use at all times any protective equipment or clothing provided by the employer for the purpose of preventing risks to his safety and health; and (d) to comply with any instruction or measure on occupational safety and health instituted by his employer or any other person by or under this Act or any regulation made thereunder. (2) A person who contravenes the provisions of this section shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding one thousand ringgit or to		employer or principal and any other person to such extent as will enable his employer, principal or the other person, as the case may be, to comply with the provisions of the WSH Act. Workplace Safety and Health (Incident Reporting) Regulations 2006 (No. S 136). (Art. 15 (1) (b))

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		imprisonment for a term not exceeding three months or to both." Occupational Safety and Health Act 1994 (No. 514). (S 24(1)(c)(d)(2))		
	RIGHT TO ENQUIRE ABOUT RISKS AND PREVENTIVE MEASURES	In Malaysia, there is no explicit provision giving right to the workers to enquire about risks and preventive measures at the workplace. But the Occupational Safety and Health (Use and Standard of Exposure of Chemicals Hazardous to Health) Regulations 2000 requires the employer to communicate the risks and control measures involved to workers, management, and other stakeholders.	No data available	While there is no explicit provision giving rights to workers to inquire about the risks and preventives measures at their workplace; the following requirements ensure that processes are in place for such communication. For example, employers have explicit duties to ensure that their workers received adequate information to enable them to perform their work.

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
	RIGHT TO REMOVE THEMSELVES FROM A DANGEROUS SITUATION	There is no express provision for workers to remove themselves from a dangerous situation under the OSHA 1994, but Section 14(3) of the Employment Act 1955 states that an employee may terminate his contract of service with his employer without notice where he or his dependants are immediately threatened by danger to the person by violence or disease such as such employee did not by his contract of service undertake to run.	No data available	An employee may terminate his contract of service with his employer without notice where he or his dependant is immediately threatened by danger to the person by violence or disease such as the employee did not by his contract of service undertake to run. Employment Act (Ch. 91). (Art. 15)
	RIGHT TO BE REASSIGNED TO NON-HAZARD WORK	There is no specific provision giving right to workers to be reassigned to non-hazardous work but Section 28 of the Occupational Safety and Health (Use and Standard	No data available	There is no explicit provision giving rights to workers to request to be re-assigned to a less hazardous work under the WSH Act.

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		of Exposure of Chemicals Hazardous to Health) Regulations 2000 states that pre-placement medical examinations are performed for all employees who are new or transferred to jobs with special requirements in order to provide an evaluation of an employee's health status to ensure he/she is physically and mentally fit to perform the job and/ or to wear the Personal Protective Equipment provided.		However, any worker who is or is to be employed in hazardous occupations such as those which requires them to handle certain chemical or be exposed to noisy environment, the employer is required to send such worker for pre-employment and periodic medical examinations under the WSH (Medical Examinations) Regulations. Workplace Safety and Health (Medical Examinations) Regulations 2011 (No. S 516).
	RIGHT TO WITHDRAW WITH COMPENSATION	(No data available) No provision available	No data available	No data available

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
	WHEN WORKERS ARE NOT REASSIGNED TO NON-HAZARD WORK			
CONSULTATION, COLLABORATION AND CO-OPERATION WITH WORKERS AND THEIR REPRESENTATIVES	**NATIONAL OSH COMMITTEE, COMMISSION, COUNCIL OR SIMILAR BODY**	There shall be established a council called the "National Council for Occupational Safety and Health". Occupational Safety and Health Act 1994 (No. 514). (S 8)	No data available	There shall be Workplace Safety and Health Council consisting of a chairman; a deputy chairman; and at least 10 but not more than 18 other members. Workplace Safety and Health Act (2009 Ed.) (Art. 39 (1)) Website of Workplace Safety & Health Council of Singapore
	EMPLOYERS' DUTY TO CONSULT WORKERS ON RISKS	"Every employer shall consult the safety and health committee with a view to the making and maintenance of arrangements which will	"Employers must give their employees necessary information on the hazards and risk factors of the workplace and ensure, taking the employees'	Under the WSH (WSH Committees) Regulations, the occupier of factories in which 50 or more persons are employed,

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		enable him and his employees to co-operate effectively in promoting and developing measures to ensure the safety and health at the place of work of the employees, and in checking the effectiveness of such measures."	occupational skills and work experience into consideration	are required to form a WSH committee. The committee must be represented from the management and employees. The number of employee representatives must not be less than that of the management. Workplace Safety and Health (Workplace Safety and Health Committees) Regulations 2008.
	WORKERS' RIGHT TO SELECT THEIR REPRESENTATIVES FOR HEALTH AND SAFETY MATTERS	An OSH committee shall be organized at the workplace which includes members of the workers' representatives	"At workplaces where at least ten employees work regularly, the employees shall from among themselves choose an	It shall be the duty of the occupier of a factory to ensure that- (a) the workplace

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
			occupational safety and health representative and two vice representatives to represent them in the cooperation referred to in this chapter, and to keep contact with occupational safety and health authorities. In other workplaces, too, the employees can from among themselves choose the representatives mentioned above. Clerical employees at a workplace are entitled to choose their own occupational safety and health representative and two vice representatives from among themselves." (section 29(1) of the Act on Occupational Safety and Health Enforcement and	safety and health committee of the factory consists of members who are representatives of persons at work in the factory and of the management of the factory; and (b) at all times, the number of members who are representatives of the persons at work in the factory is not less than those who are representatives of the management of the factory. WSH (Workplace Safety and Health Committees) Regulations 2008. (Reg 6)

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
			Cooperation on Occupational Safety and Health at Workplaces) Act on Occupational Safety and Health Enforcement and Cooperation on Occupational Safety and Health at Workplaces (44/2006). (29)	
	OSH REPRESENTATIVES' FUNCTIONS, RIGHTS AND POWERS	(Sometimes) Section 30 and Section 31 of the OSHA 1994 provide the establishment and the functions of the Safety and Health Committee respectively. Regulations 11 of the OSH (Safety and Health Committee) Regulations, 1996.	Yes Act on Occupational Safety and Health Enforcement and Cooperation on Occupational Safety and Health at Workplaces (44/2006). (31)	Sometimes
	RIGHT OF WORKERS' REPRESENTATIVES	(No data available)	No data available	No data available

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
	FROM OUTSIDE THE UNDERTAKING TO ADDRESS OSH ISSUES AT THE WORKPLACE	No provision available		
	MANDATORY TRAINING FOR MEMBERS OF JOINT OSH COMMITTEE(S)	"An employer shall take such steps as are reasonably practicable to provide the members of a safety and health committee with adequate training in occupational safety and health to enable them to perform the functions of the committee effectively." Occupational Safety and Health (Safety and Health Committee) Regulations 1996 [P.U.(A) 616/96] (S29)	"The employer shall see to that it is possible for the occupational safety and health representative and the vice representative to receive appropriate training for carrying out their coop rational duties. The training shall cover provisions and instructions concerning occupational safety and health, as well as other matters within the duties, taking account of the representatives' experience and any earlier training in occupational safety and health matters." (section 33 of the Act on Occupational Safety and Health Enforcement and	It shall be the duty of the occupier of a factory to take, so far as is reasonably practicable, such measures to ensure that the members of the workplace safety and health committee have a basic understanding and knowledge of the functions and duties of a workplace safety and health committee under the Act. WSH (Workplace Safety and Health Committees) Regulations 2008. (Art. 16)

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
			Cooperation on Occupational Safety and Health at Workplaces) Act on Occupational Safety and Health Enforcement and Cooperation on Occupational Safety and Health at Workplaces (44/2006). (33)	
	PROTECTION AGAINST REPRISALS	"No employer shall dismiss an employee, injure him in his employment, or alter his position to his detriment by reason only that the employee— (a) makes a complaint about a matter which he considers is not safe or is a risk to health; (b) is a member of a safety and health committee established pursuant to	An employer, or a representative thereof, who when advertising for a vacancy or selecting an employee, or during employment without an important and justifiable reason puts an applicant for a job or an employee in an inferior position because of industrial activity or a comparable circumstance shall be sentenced for work discrimination to a fine or to imprisonment for at most six months. (Chapter 47,	An employer shall not dismiss or threaten to dismiss an employee because the employee is performing his duties in good faith as a member of a workplace safety and health committee Workplace Safety and Health Act (2009 Ed.) (Art. 18 (2) (c))

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		this Act; or (c) exercises any of his functions as a member of the safety and health committee." Occupational Safety and Health Act 1994 (No. 514). (S27)	section 3 of the Criminal Code)	
	IMMUNITY FROM CIVIL AND CRIMINAL LIABILITY FOR EXERCISING OSH RELATED RIGHTS AND DUTIES	Section 58 of the OSHA 1994 states that no person shall incur any personal liability for any loss or damage caused by any act or omission by him in carrying out the duties under this Act or any regulation made there under, unless the loss or damage was occasioned intentionally or through recklessness or gross negligence.	No data available	Section 61 of the WSH Act provides protection from personal liabilities to the Commissioner, Deputy Commissioner, inspector and authorized examiner for any damage done in the course of carrying out test and examination done in good faith on any item specified in section 61(2). Protection from

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
				personal liability is also provided to Commissioner and Deputy Commissioner for anything done or omitted in course of performing their duties in good faith under section 21 (issue of stop-work-order or remedial order) Workplace Safety and Health Act (2009 Ed.) (Art. 61)
SPECIFIC HAZARDS OR RISKS	**BIOLOGICAL HAZARDS**	"(1) It shall be the duty of a person who formulates, manufactures, imports or supplies any substance for use at work (Occupational Safety and Health Act, S. 66(1)(2)(k)) Occupational Safety and Health Act 1994 (No. 514).	Under section 40(1) of the Occupational Safety and Health Act, employees' exposure to biological agents that cause hazards or risks to safety or health shall be reduced to such a level that no hazard or risk from these agents is caused to the employees' safety or health or reproductive	(1) Where any person at work in any workplace carries out any process, operation or work involving exposure to any infectious agents or biohazardous material which may constitute a risk to his health, it shall be the duty of the

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		(S 66(1)(2)(k)) Factories and Machinery Act 1967 [Act 139]. (S 21, 22 (1)(a))	health. (section 40(1) of the Occupational Safety and Health Act) The Government Decision on Protecting Employees from Work-Related Risks Caused by Biological Agents (1155/1993) contains further provisions on biological 8agents and their identification, type and duration of exposure, exposure assessment, limit values and prevention. The Decree of the Ministry of Social Affairs and Health on the Classification of Biological Agents (921/2010) contains further provisions on the characteristics of biological exposure agents known to be harmful.	employer of that person to take effective measures to protect that person from their harmful effects. (2) In this regulation, "biohazardous material" includes — a) any substance which contains toxins; b) any biological waste; c) any culture medium; d) any contaminated blood, urine or faeces; e) any infected tissue or organ; and f) any infected animal. Workplace Safety and Health (General Provisions) Regulations

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
			Occupational Safety and Health Act (738/2002). (40)	2006 (No. S 134). (Art. 3)
	CHEMICAL HAZARDS	"(1) The Minister may make regulations for or with respect to the safety, health and welfare of persons at work in order to achieve the objects of this Act. (2) In particular, and without prejudice to the generality of subsection (1), such regulations may— (...) (k) prescribe the standards in relation to the use of, including standards of exposure to, any physical, biological, chemical or psychological hazard; (...)" (S 66(1)(2)(k))	Under section 38(1) of the Occupational Safety and Health Act, employees' exposure to chemical agents that cause hazards or risks to safety or health shall be reduced to such a level that no hazard or risk from these agents is caused to the employees' safety or health or reproductive health. Particularly, protective measures necessary for preventing poisoning, oxygen deficiency or other similar serious risks shall be ensured. The Government Decree on Chemical Agents at Work (715/2001) contains	Yes

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
			further provisions on chemical agents and their identification, type and duration of exposure, exposure assessment, limit values and prevention, as well as on the handling, transport and storage of hazardous agents. Occupational Safety and Health Act (738/2002). (38)	
	ERGONOMIC HAZARDS	Standards, regulations and guidelines ensure the safety and health of employees is broad and covers ergonomic. The current guidelines on ergonomic are; a) Guidelines on Occupational Vibration (2003); b) Guidelines on Occupational Safety and Health for Seating	Section 24 of the Occupational Safety and Health Act lays down the general requirements for the ergonomics of the workstation, work postures and work motions	The general duties of employer under section 12 to ensure the safety and health of their employees is broad and covers ergonomic. The WSH (Risk Management) Regulations requires employers to carry out risk assessment in respect to their

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		at Work (2003); c) Guidelines on Occupational Safety and Health for Working with Video Display Unit (VDU's), 2003; and d) Guidelines on Occupational Safety and Health for Standing at Work (2002). Currently the need of ergonomist/trained person is enforced under Section 15 (General duties of employers and self-employed persons) to their employees.		undertaking and it is explicitly stated that it includes ergonomics hazards (see definition 'hazard' in the WSH (Risk Management) Regulations.
	PHYSICAL HAZARDS	(Sometimes) Factories and Machinery Act 1967 (Act 139**)** provides for the control of factories with respect to	No data available	Sometimes

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		matters relating to the safety, health and welfare of person therein, the registration and inspection of machinery and for matters connected therewith. Also Section 4(c) of the OSHA 1994 states one of the objectives of the Act is to promote an occupational environment for persons at work which is adapted to their physiological and psychological needs.		
	PSYCHOSOCIAL HAZARDS	(Sometimes) Section 4(c) of the OSHA 1994 states one of the objectives of the Act is to promote an occupational environment for persons	No data available	Yes

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		at work which is adapted to their physiological and psychological needs.		
	OTHER HAZARDOUS SUBSTANCES	(Yes) Governed by the Occupational Safety and Health (Classification, Labelling of Safety Data Sheet of Hazardous Chemicals) Regulations 2013. Occupational Safety and Health (Prohibition of Use of Substance) Regulations 1999. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.	No data available	Yes
	MACHINERIES	(Yes)	Yes	Yes

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		Governed by the Factories and Machinery Act 1967.		
	PROVISIONS TO PROTECT WORKERS IN SPECIFIC CONDITION OF VULNERABILITY	(Yes) Section 15 of the OSHA 1994 on Employer's Duty	No data available	Yes
RECORDING, NOTIFICATION AND INVESTIGATION OF ACCIDENTS/INCIDENTS AND DISEASES	**DUTY TO RECORD AND/OR INVESTIGATE THE CAUSES OF WORK ACCIDENTS, NEAR MISSES INCIDENTS AND CASES OF OCCUPATIONAL DISEASES**	(YES) Section 32 of the OSHA 1994 and Occupational Safety and Health (NADOPOD) Regulations 2004.	Data not available	Yes • Workplace Safety and Health (Incident Reporting) Regulations 2006 (No. S 136).
	EMPLOYERS' DUTY TO NOTIFY OSH AUTHORITIES OF WORK RELATED DEATH AND/OR INJURIES TO HEALTH	(1) An employer shall notify the nearest occupational safety and health office of any accident, dangerous occurrence, occupational poisoning or occupational	Data not available	The Minister may by regulations require an employer, an occupier, a registered medical practitioner or any other person to notify or to submit a report to

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		disease which has occurred or is likely to occur at the place of work. (2) Every registered medical practitioner or medical officer attending to, or called in to visit, a patient whom he believes to be suffering from any of the diseases listed in the Third Schedule of the Factories and Machinery Act 1967 [Act 139], or any disease named in any regulation or order made by the Minister under this Act, or occupational poisoning shall report the matter to the Director General. Occupational Safety and Health Act 1994 (No. 514). (Section 32)		the Commissioner in the event of an accident, a dangerous occurrence or an occupational disease in a prescribed workplace. (WSH Act, 27(1))

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
OSH INSPECTION AND ENFORCEMENT OF OSH LEGISLATION	**APPOINTMENT OF OSH INSPECTORS**	"The Director General may, as he deems fit, appoint a person or an independent inspecting body from any of the industries to advise or assist him in carrying out the objects and purposes of this Act." • Occupational Safety and Health Act 1994 (No. 514). (S 6(1))	No data available	The Workplace Safety and Health Commissioner may, with the approval of the Minister, delegate the exercise of all or any of the powers conferred or duties imposed upon him by the WSH Act (except the power of delegation conferred by this subsection) to any Deputy Commissioner, inspector or authorised officer, subject to such conditions or limitations as the Commissioner may specify. Workplace Safety and Health Act (2009 Ed.) (Art. 7 (4))
	OSH INSPECTORS' POWERS	(Yes) Sections 39 to 50, OSHA 1994 gives DOSH power to	No data available	Sometimes

BENCHMARK BETWEEN MALAYSIA, FINLAND AND SINGAPORE				
STANDARDS	**SUB STANDARDS**	**MALAYSIA**	**FINLAND**	**SINGAPORE**
		conduct inspection on the OSH activities carried out by organizations and to review and advice on seen or unforeseen hazards.		
	OSH INSPECTORS' ENFORCEMENT POWERS	(Yes) According to Sections 39 to 50 OSHA 1994, DOSH conducts enforcement activities to ensure the safety, health and welfare of people at work and to protect others from the dangers arising from the occupational activities	No data available	Sometimes
	APPLICATION OF SANCTIONS BY COURTS	(Sometimes) Sections 51-54 and 56, OSHA 1994 provide for several forms of sanctions; imprisonment and fines to punish wrongdoers, who are mainly corporate bodies and individuals.	Data not available	Yes Workplace Safety and Health Act (2009 Ed.)

9.5 Benchmark on ILO Standards

ILO STANDARDS	FINLAND	SINGAPORE	MALAYSIA
Awareness campaigns such as April 28, annually	Yes	Yes	Yes
List of occupational disease and compensation criteria	Occupational Safety and Health Act (738/2002). (1)	Workplace Safety and Health Guidelines - Healthcare 2008	List of occupational diseases under NADOPOD 2004 and under Fifth Schedule of Employees' Social Security Act 1969 Compensation criteria: • Employees' Social Security Act 1969 and • Employees' Social Security (General) Regulations 1971
Occupational accident index based on acc. Rate (per 100,000 workers)	(2013) 2305	(2015) 364	(2015) 615 (2.81/1000 workers)
Cases of non-fatal occupational injury by sex and economic activity	(2013) Male :32933 Female: 16081	11842 (total -2013)	(2015) Male :32698 Female: 6350
Cases of non-fatal occupational injury by sex, type of incapacity and economic activity	(2013) Permanent Male: 82 Female: 16	(2014) Permanent: 672 Temporary: 12863	(2015) Permanent Male: 7215 Female: 6305

ILO STANDARDS	FINLAND	SINGAPORE	MALAYSIA
	Temporary Male: 32851 Female: 16065		Temporary Male: 30592 Female: 5109
Fatal accident index based on fatality rate (per 100.000 workers)	(2013) 0.8	(2015) 1.9	(2015) 4.84
Cases of fatal occupational injury by sex and economic activity (manufacturing)	(2013) Male:3 Female:1 Total:4	(2015) Male:4 Female:2 Total:6	(2015) Male:35 Female:1 Total:36
Occupational injuries -- Time lost (Days lost per occupational injury by sex and economic activity)	(2013) Male:19 Female:3 Total:22	(2013) Male:3 Female:1 Total:4	(2015) Male:49 Female:48 Total:48
Occupational injuries -- Time lost (Days lost due to cases of occupational injury with temporary incapacity for work by sex and economic activity)	(2013) Male: 707039 Female: 306300 Total: 1013339	Total:156964	(2015) Male: 1228355 Female: 249042 Total: 1477397
Knowledge management and information centre	Tampere University of Technology (TUT) Finnish Institute of Occupational Health	Occupational Safety and Health Division Ministry of Manpower	National Institute of Occupational Safety and Health (NIOSH) Information and Technology Division (ITD) Occupational & Environmental

ILO STANDARDS	FINLAND	SINGAPORE	MALAYSIA
			Health Unit Sarawak State Health Department
Recording and notification system on accident/occupational diseases	The Workers' Compensation Center maintains a register of occupational accidents and occupational diseases, which contains information about loss events, insurance policies, the insured and compensations (section 235 of the Occupational Accidents, Injuries and Diseases Act).	(a) the nature of the risk involved; and	NADOPOD Regulation 2004, Osha 1994
Management systems, implementation of ILO-OSH 2001	Occupational Safety and Health Act (738/2002). (9)	Any measure or safe work procedure implemented under regulation 4(2).	Voluntary
National system on chemical safety based on conv. 170, GHS, CSDS, ICSCs	The Government Decree on Chemical Agents at Work (715/2001) contains further provisions on chemical agents and their identification, type and duration of exposure, exposure assessment, limit values and prevention, as well as on the handling, transport and storage of hazardous agents.	All hazardous substances in a workplace shall be kept, stored, used, handled or disposed of in such a manner as not to pose a risk to the health and safety of any person at work in the workplace.	Environ-mentally Hazardous Substance Notification and Registration Scheme – Department of Environment Online Chemical Information Management System - Chemical management Division, DOSH

ILO STANDARDS	FINLAND	SINGAPORE	MALAYSIA
Asbestos based on consumption	Government Decree on the Safety of Asbestos Work (798/2015)	Yes. Workplace Safety and Health (Incident Reporting) Regulations 2006 (No. S 136).	Occupational Safety and Health Act 1994 (No. 514). (S 28(1)(d), S 66(1)(2)(k), Third Schedule (1))
National Profile	Yes	Yes	Yes
National policy, strategy and program Action plan, targets, deadlines	The policies include the national policy referred to in the Convention of the International Labour Organization (ILO) on the Promotional Framework for Occupational Safety and Health (Convention no. 187).	The Occupational Safety and Health Division (OSHD) in the Ministry of Manpower works to promote workplace safety and health (WSH) at the national level. Website of the Occupational Safety and Health Division (OSHD) of the Ministry of Manpower of Singapore	The Occupational Safety and Health Master Plan 2015 (2010-2015) (OSH-MP 15) is essentially a series of three consecutive 5-year action plans that began in 2005 which will culminate in 2020 with achievement of the safety culture. The document contains the pledge by key partners to implement the Plan. The first stage which ended in 2010 was targeted towards spreading out OSH ownership to all key stakeholders and social partners. OSH-MP 15, as the second stage, focuses on building and sustaining the culture of self-regulation. By

ILO STANDARDS	FINLAND	SINGAPORE	MALAYSIA
			end 2015, self-regulation would have been fully ingrained into the working culture of all workplaces. The main aim of the OSH-MP 15 is to build a safe, healthy and productive pool of human capital by creating, cultivating and sustaining a safe and healthy work culture in all organizations throughout Malaysia. To achieve this aim, four strategies are envisaged, namely: • Fostering and enhancing Government leadership and practices; • Inculcating preventative workplace culture; • Industry leadership and business & community engagement; and • Strong partnerships locally and internationally. Specific programmes and activities are foreseen under the individual strategies.

ILO STANDARDS		FINLAND	SINGAPORE	MALAYSIA
				The National Council of Occupational Safety and Health is the entrusted agency to monitor the status and progress of the respective programmes
Coverage of occupational health services		Policies for the work environment and well-being at work until 2020	The Act covers any premises where a person carries out work such as hotels and restaurants, unless such premises or persons are exempted under the WSH (Exemption) Order or Sixth Schedule of the Act. Workplace Safety and Health Act (2009 Ed.)	Occupational Safety And Health Act 1994 covers all industries as in Schedule 1 except those who work on board ships governed by the Merchant Shipping Ordinance 1952 (Ord. 70/52), the Merchant Shipping Ordinance 1960 of Sabah (Sabah Ord. 11/60) or Sarawak (Sarawak Ord. 2/60) or the armed forces
Coverage of workers' compensation	**Share of unemployed receiving regular periodic social security unemployment benefits**	59.1	0.0	0
	Percentage of	80.8	39.6	58.3

ILO STANDARDS		FINLAND	SINGAPORE	MALAYSIA
	health care expenditure not financed by private households' out of pocket payments			
	Public social protection expenditure [all functions] as a percent of GDP	30.5	2.8	3
	Public social protection expenditure [excluding health care] as a percent of GDP	22.0	1.6	1
	Share of population above statutory pensionable age receiving an old age pension	100.0	NA	19.8

ILO STANDARDS	FINLAND	SINGAPORE	MALAYSIA
6) Active contributors to an old age contributory scheme as a percent of the working-age population	68.5	0.0	28.1
Labour inspectors per 10,000 persons	1.4	0.3	0.3
Number of labour inspection visits to workplaces during the year (2015)	2586	5247	647
Labour inspection visits per inspector (%) (2015)	70	112	115

10.0 QUESTIONNAIRE SURVEY FINDINGS – PRIMARY DATA

10.1 Data Collection Methodology

A cross-sectional study was conducted from April 2016 – January 2017 to determine the current Occupational Safety and Health situation using various indicators and collecting baseline information to define the landscape of OSH of the country.

The sampling method for this study was convenient sampling, which were carried out for all states in Malaysia including the Federal Territory. Data collection covers all industries in Malaysia as specified under the Occupational Safety and Health Act of 1994, including foreign workers employed in Malaysia. Sampling throughout Malaysia was based on the division of zones as follows:

a) Zone A: Perlis, Kedah, Penang and Perak
b) Zone B: Kelantan, Terengganu and Pahang
c) Zone C: Selangor, Kuala Lumpur, Putrajaya and Negeri Sembilan
d) Zone D: Melaka and Johor
e) Zone E: Sabah, Sarawak and Labuan

A total of 12,962 employees, 1,415 OSH personnel and 644 employers from over 3,000 workplaces were involved across the different zones. This sample size has taken into account the density factor of an industrial zone and the number of companies and factories registered with DOSH and the Companies Commission of Malaysia.

The questionnaires were developed based on previous OSH profile in order to have a baseline comparison. The survey was made in 3 forms of instruction; copy paper, and online form. The survey for the paper copy were mailed and/or faxed to companies that do not have interactive communication.

The questionnaire were prepared in both English and Malay language medium for local workers, employers and OSH personnel; while for foreign workers, the questionnaire were translated into the native language of the employee and if the employee is unable to write and read, the service of a translator was sought.

a) The employer or employer's representative

b) Occupational Safety and Health personnel (SHO accredited – Green Book holder, OSH Executive – without accreditation, representative of the OSH committee)

c) The General worker (local employees – supervisors and operations, foreign workers – supervisors, operations, skilled, semi-skilled and labor)

The elements or content is based on the categories of workers as in Table 10.1:

Table 10.1: List of Information or Elements from Different Target Groups

TARGET GROUP	TYPES OF INFORMATION COLLECTED
Employers or employer's representative	a) Type of production output b) Number of employees c) Implementation of OSH system d) Foreign workers and the impact of the levy e) Use of HRD funds for training f) Impact of Social Security Contributions g) Implementation of the programs under OSHMP15 h) The cost and effect of compliance with OSH legislation i) Effect of "hire and fire" from legal perspective
Occupational Safety and Health Personnel – SHO Accredited (Green Book) – Safety and Health executive (Not accredited) – OSH Committee	a) Demographic information b) Exposure to hazards c) Implementation and compliance with OSH d) Implementation of OSH Management System e) Financial and economic impact on OSH f) Effectiveness of OSHMP 15 g) Workplace practice h) Indicator for quality of life i) Review of reports and accidents not reported j) Continuous professional education k) Training requirements for OSH committee
Local employees	a) Demographic information b) Perception of exposure to hazards c) Understanding of OSH including compensation system d) Understanding of OSH Management System e) Implementation of and compliance with OSH f) Effectiveness of OSHMP 15 g) Workplace practice h) Indicator for quality of life i) Reporting and under-reporting of incidence
Foreign workers	a) Demographic information b) Perception of exposure to hazards c) Understanding, implementation and compliance with OSH d) Understanding of OSH Management System e) Effectiveness of OSHMP 15 f) Workplace practice g) Indicator for quality of life h) Reporting and under-reporting of incidence

10.2 Survey Findings (Employer/Employer's Representative)

Under the Occupational Safety and Health Act 1994, employer means a person that employs an employee under a contract of employment and has a responsibility to provide a safe workplace. In this survey, "employer" was recruited either among human resources/administrative manager or operation manager in an organization.

Table 10.2: Employer/Employers' Representative based on industry who contributed to the survey

CATEGORY	(%)
Manufacturing	42.7
Agriculture, Forestry and Fishing	19.9
Transportation and Communication	2.5
Trades, Banking and Finance	2.2
Governmental Services	1.2
Oil and gas	4.0
Construction	20.2
Mining and Quarrying	0.3
Utilities	1.7
Services	3.9
Hotel and Restaurant	1.4

Total number of participant (N=644)

10.2.1 Organizational Background

Table 10.3 summarizes the socio-demographical background of OSH employer or employers' representative. Based on the survey findings, employers comprised of operation manager (67%), and human resources/administrative manager (33%). Employer have worked in the current position with their organization for more than 5 years (48%), 3-5 years (26%), 1-3 years (20%) or less than 1 year (6%).

According to the Ministry of International Trade and Industry Malaysia, the definition of Small-Medium Enterprises (SME) in Malaysia covers all sectors, namely services, manufacturing, agriculture, construction and mining & quarrying. Sales turnover and number of full-time employees are the two criteria used in determining the definition.

Table 10.3: The Socio-demographic Background of OSH Employers (N=644)

COMPANY BACKGROUND		(%)
Current Position	Human Resource/Admin Manager	33.0
	Operation Manager	67.0
How long have you been working in the current position? (Years)	<1	6.0
	1-3	20.0
	3-5	26.0
	>5	48.0
Size of company operation based on the sales turnover	Micro (< RM 300,00.00)	13.0
	Small (RM 300,000 < RM 15 mil)	29.0
	Medium (RM 15 mil < RM 50 mil)	24.0
	Large (and not categorized as SME)	33.0
Company spent on OSH from the yearly turn over budget (%)	Compliance to OSH legal requirement (assessment, monitoring, etc.)	32.0
	OSH program (training, induction, etc.)	23.0
	Control measures (installation of equipment, LEV system, etc.)	7.0
	Personal Protective Equipment	36.0
	Others (conference, courses, insurance, etc.)	2.0
Company engaged in shift work	Yes, 2 shifts	23.0
	Yes, 3 shifts	23.0
	No	54.0
Local employees (permanent, contract, part-time)	Less than 50	46.0
	50-100	24.0
	More than 100	30.0
Foreign employees (permanent, contract, part-time)	Less than 50	68.0
	50-100	10.0
	More than 100	22.0

Based on the sales turnover, the findings of this survey indicated that 66% of employer are working in SME industry, which includes 29% from small (RM 300,000 < RM 15 mil), 24% of medium (RM 15 mil < RM 50 mil) and 13% from micro (<RM 300,000.00) industries. The rest of 33% of employer participate in this study are from large (not categorized as SME) industries.

When examined, the company total expenses on OSH from the yearly turnover budget, most of them indicated that they spent most on PPE (36%), compliance to OSH legal requirement (32%), followed by OSH program (training, induction, etc.) (23%). Only 7% and 2% of employer claimed that they spent on control measures (installation of equipment, LEV system, etc.) and others (conference, courses, insurance, etc.). Besides, most (54%) of the employer indicated that their company do not engage in shift work practices.

For the employee (permanent, contract, and part-time) recruitment, 46% of employer indicated that they have less than 50 of local employees, 30% employer have more than 100 local employees and 24% have 50-100 local employees. However, for foreign worker recruitment, 68% of employer had less than 50 employees work, 22% have more than 100 foreign employees and 10% of them have 50-100 foreign employees in their organization.

Based on the yearly turnover budget of an organization, Figure 10.1 showed that 37% of employer spent 5-10% expenses on SOSCO, 33% spent less than 5%, 16% spent 10-30%, and 10% spent more than 50%. Only 3% of employer does not collect contribution from the employees to SOCSO.

Other than registration and collection of contributions from employees to pay off benefits to workers and/or their dependents when tragedy strikes or provision of physical and vocational rehabilitation benefits under SOCSO, some company provide other insurance (e.g. medical, travel and life) insurance to workers.

Based on the yearly turnover budget, Figure 10.2 indicated that 33% of employers' companies spent less than 5%, 27% spent 5-10%, 15% spent less than 10-30% of insurances to protect their workers. However, 15% of employer does not provide any other insurance as it has been contributed under SOCSO scheme.

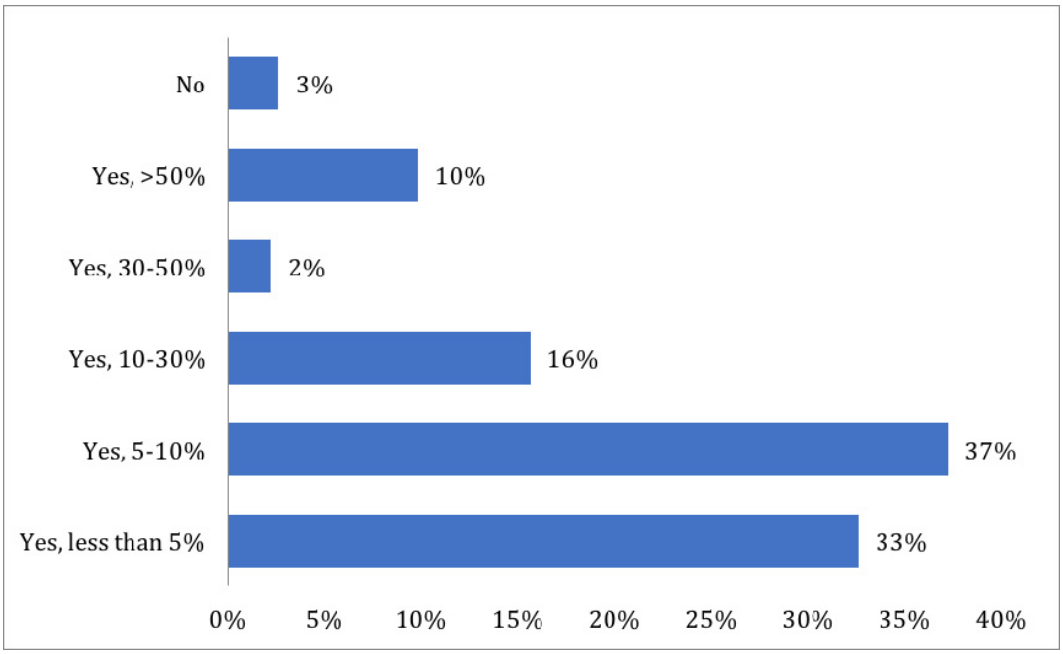

Figure 10.1: Overall expenses on SOSCO from the yearly turnover budget (N=644)

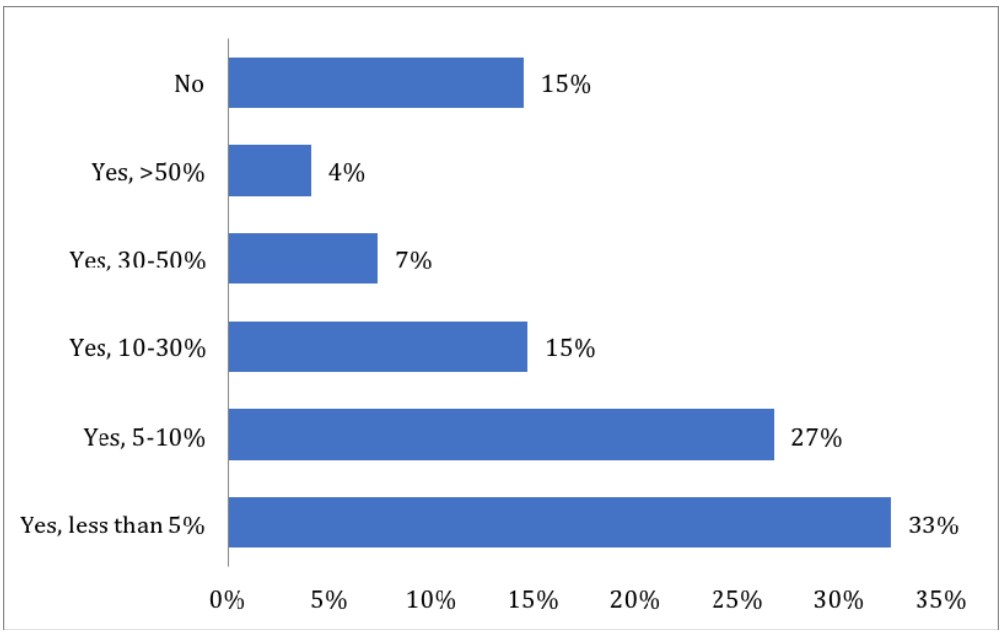

Figure 10.2: Company provide insurance (medical, travel, life) insurance to worker (N=644)

10.2.2 Illness and Work-Related Injuries

This section examines the illness and work-related injuries at the workplace conducted among employer. As shown in Table 10.4, about 40% of the employer reported that their company ever managed illness and work-related injuries for the past one year.

Among the reported injuries by the employers were NIH impairment (8%), occupational skin disease (8%), lung disease (6%), occupational ENT disease (5%), occupational cancer (5%), pulmonary tuberculosis (4%), chemical poisoning (4%), work-related MSD (3%), occupational nervous system disease (1%), work-related CVD (1%), and others (1.8%) (e.g. anxiety, malnutrition, arthritis, diabetes, diabetes, hair falling).

The employer was asked to determine the most costly work-related injuries happened in their workplace which causes, consequences such as fatalities, permanent disability and non-permanent disability to their employees.

Table 10.4: Reported record of managing illness and work-related injuries at the workplace (N=644)

ILLNESS AND WORK-RELATED INJURIES		Employers (N=644) (%)
Yes, company managed illness and work-related injuries for the past one year		40.0
	Lung Diseases	6.0
	Pulmonary Tuberculosis (TB)	4.0
	Work Related Musculoskeletal Disorders (MSD)	3.0
	Occupational Skin Diseases	8.0
	Occupational Nervous System Diseases	1.0
	Occupational Ear Nose Throat (ENT) Diseases	5.0
	Vibration induced Disorders	0.0
	Occupational Kidney Diseases	6.0
	Work Related Cardiovascular Diseases (CVD)	1.0
	Occupational Cancer	5.0
	Chemical Poisoning	4.0
	Noise-induced Hearing (NIH) Impairment	8.0
	Other**	1.8

**Note: Other diseases including: anxiety, malnutrition, arthritis, colon problem, diabetes, hair falling.

In this context, the term non-permanent (temporary) disability is often used to describe illnesses or injuries that prohibit an individual from taking part in routine working activities.

On the other hand, a permanent disability is a type of disability that an individual is not expected to recover from. The employee will likely live with this disability for the remainder of his/her life. A permanent disability can result from a number of different circumstances or situations. For example, an individual can be born with a permanent disability, or it may be caused by an accident.

Figure 10.3 illustrates that 60% of the employers claimed that non-permanent (temporary) disability is the most costly work-related injuries that company need to bear, followed by fatal (21%) and permanent disability (19%).

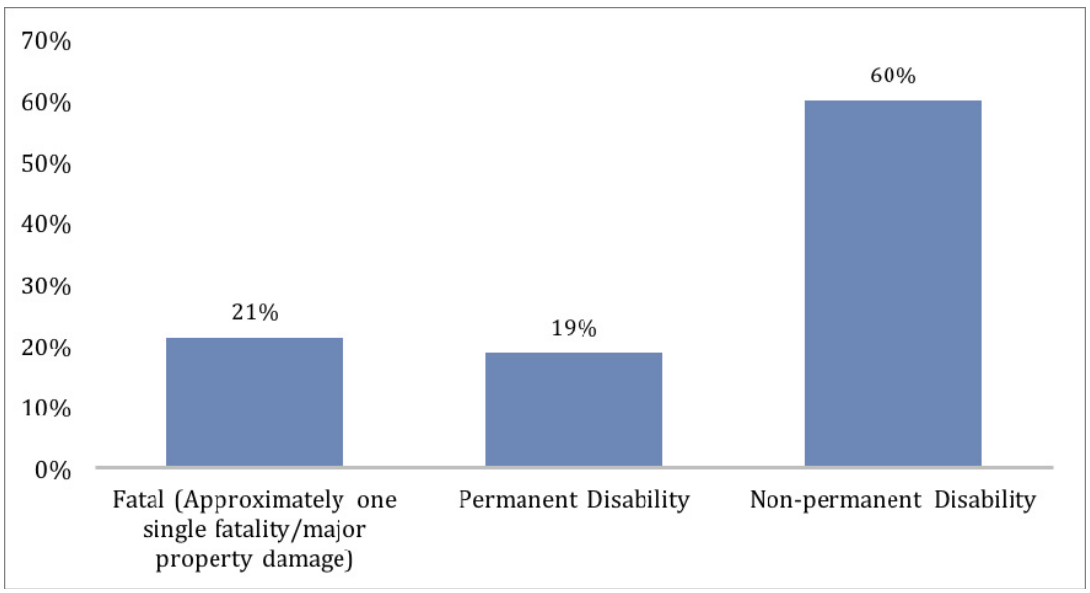

Figure 10.3: Most costly work-related injuries to your workplace (N=644)

10.2.3 Occupational Safety and Health Management System (OSHMS)

Figure 10.4 shows that at least 70% of employers admitted of implemented occupational safety and health management system (OSHMS) at the workplace, which includes those companies which implement and certified to OHSAS 18001 (23%), implement and certified with MS 1722 (4%), implement and certified by other certification (11%), and 32% of employer claimed that their company implement OSHMS but is yet to certify by any certified body.

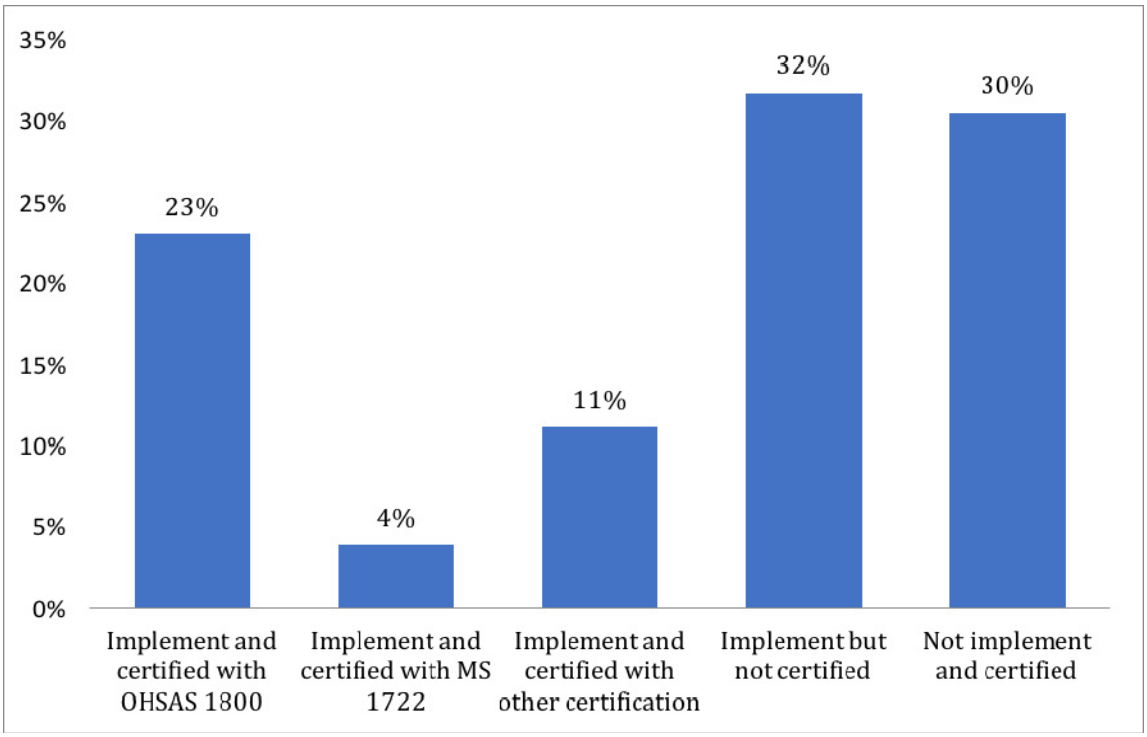

Figure 10.4: The Implementation of OSHMS at Workplace (N=644)

The risks for occupational accidents and diseases at work have to be managed by the employers and workers who are facing with them. In order to ensure effective action, it is essential to establish occupational safety and health (OSH) management systems at all workplaces for continual improvement of working environment and preventive measures.

The employer was examined on the implementation of the OSH program as a proactive approach at their workplace, such as safety committee, HIRARC, safety and health induction/training, etc. As shown in Table 10.5, at least 76% of employer indicated that their company implemented the OSH program at the workplace.

Among them, the employers claimed that the main driving factors of implementation are due to law enforcement and to fulfil the legal requirement (37%), and to perform client's requirement (27%); otherwise due to other factors (16%) of the proactive measures such as due to company policy and commitment, self-regulation needs, awareness, accountability. About 20% of employer indicated that the OSH program was implemented in the workplace due to the influence of mass media.

Table 10.5: Implementation of OSH Program at the Workplace

OSH PROGRAM AT WORKPLACE		OSH PERSONNEL (N=644) (%)	
		Yes	No
Implementation of OSH program at workplace		76	24
Factors that drives the implementation of OSH program at workplace (N=489)			
	Law enforcement	37	
	Mass media	20	
	Client requirement	27	
	Others**	16	

**Note: Other factors including: company policy and commitment, self-regulation needs, awareness, accountability, etc.

Employers have both general and specific responsibilities related to hazard control and worker health and safety. In carrying out these duties, management—from the Chief Executive Officer through to the first-level supervisor—can demonstrate their commitment to health and safety in the workplace.

In addition, one of the commitments provided by the employer is to place an OSH program at the workplace depends on the size of the workforce and the nature and extent of the risks and hazards in the workplace, with the ultimate goals to managing the OSH at workplace through proactive preventive measures.

As shown in Figure 10.5, only 58% of employer indicated that they have implemented the reward system as recognition of their employees' commitment to OSH in the workplace. This includes providing bonus (11%), OSH award (10%), voucher/coupon (9%), promotion (10%), and other reward which was otherwise not mentioned (2%), such as fear, feel ownership, Leadership teams, positive reinforcement, and utilize employee feedback.

The appeal of reward programs is hard to deny. To employers, they offer the promise of a safer workplace, lower injury and illness rates, and decreased costs. To workers, it is a chance to win a bonus, get a promotion, voucher or coupon through their hard work. In other words, incentive programs can enhance established occupational safety programs and considered as an easy fix to underlying safety problems.

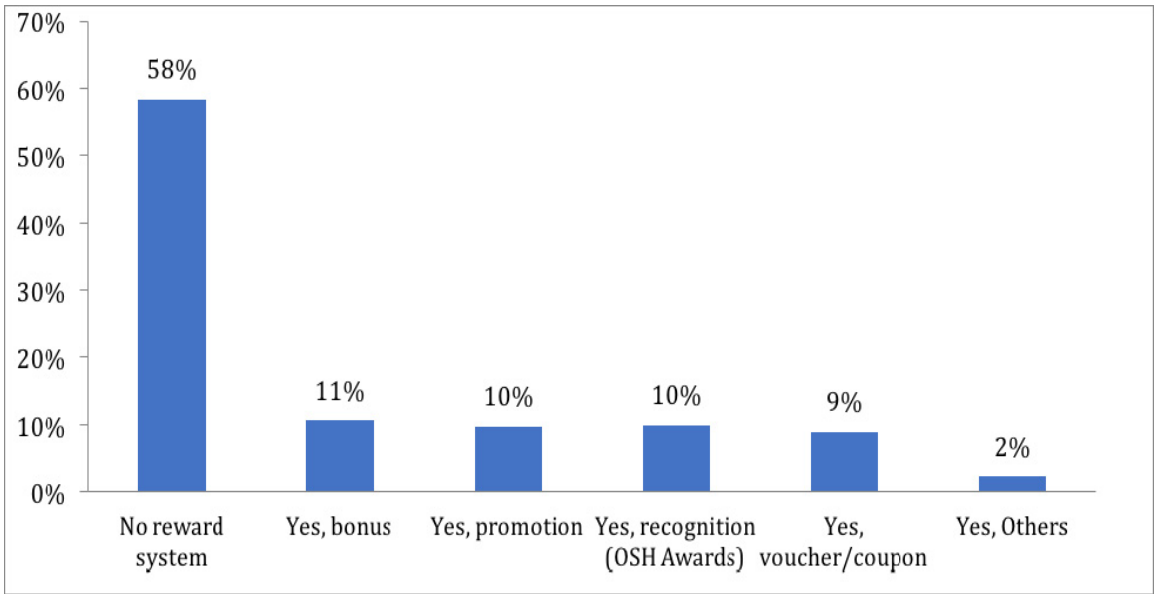

Figure 10.5: The Reward System implement at Workplace (N=644)

Workplace injuries and illnesses have a major impact on an employer's bottom line. The costs of workplace injuries and illnesses include direct and indirect costs. When workplace injuries occur, it is easy to see the immediate and direct costs, but the multitude of ongoing and indirect costs should also be taken into account as it incur even more losses that are hidden.

Direct costs include workers' compensation payments, medical expenses, and costs for legal services. Examples of indirect costs include training replacement employees, accident investigation and implementation of corrective measures, lost productivity, repairs of damaged equipment and property, and costs associated with lower employee morale and absenteeism.

Figure 10.6 summarizes the most indirect cost of accident at workplace encountered by the OSH personnel. This survey findings show that, employers indicated that the most indirect cost of accident at workplace is loss of productivity (45%), follow by training of replacement new workers (14%), equipment damage (13%), administrative time for the purposes of investigation (11%), third party liability claims (9%), as well as, post-accident cleaning-up and repairing (4%).

One of the reasons for implementing an Occupational Safety and Health Management System (OSHMS) in the workplaces is to show that the organization cares for its employees and is a good employer. Through the implementation of OSHMS, employer lead to a better understanding of processes, problems and possible solutions, and enable the implementation of measures to reduce hazards and control risks.

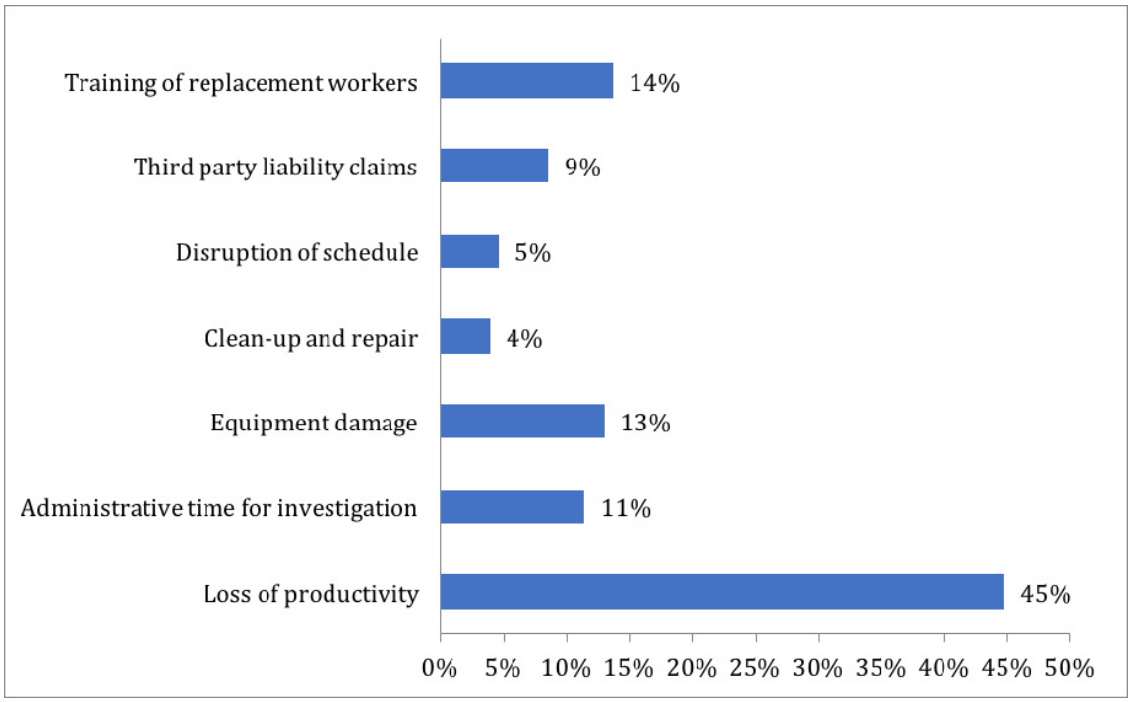

Figure 10.6: The most indirect cost of accident at workplace (N=644)

In view of this, Table 10.6 summarizes the OSHMS-related practices at the workplaces. The employer agrees that the most common practices is to ensure the availability of OSH resources (82.1%), provide safety induction (72.8%), in line with business strategy (65.0%), conduct staff forum (35.7%), performs OSH-related training (25.0%), and implement individual key performance index (KPI) to monitor employees' OSH related performance at their daily work routine (51.1%).

Other practices which are not the common practices among employers are such as providing a platform of formal communication (34.4%), provide a platform of formal communication (26.7%), regular staff forum or meeting (35.7%), as well as implementing strategic objectives for continuous improvement purposes (19.7%).

One of the opportunities to improve OSH practices at the workplace is through the initiative of infromation sharing and provide best practices among employees and improved coordination resources and efforts to advance workplace health and safety. Therefore, this survey examines the criteria that the employer finds it necessary to help improving the OSH practices at the workplace as summarized in Figure 10.7.

Table 10.6: The OSHMS-related practices at the workplace provided by the Organization (N=644)

Occupational Safety and Health Management System Practices at Workplace	OSH personnel (N=644) (%)	
	Yes	No
Demonstrate commitment to OSH induction	34.4	65.6
Platform of formal communication	26.7	73.3
Regular staff forum or meeting	35.7	64.3
Strategic objective	19.7	80.3
OSH related training	25.0	75.0
Personal key performance index (KPI)	51.1	48.9
Performance review	38.4	61.6
OSH strategy in line with business strategy	65.0	35.0
OSH resources available	82.1	17.9
Provide Safety induction	72.8	27.2

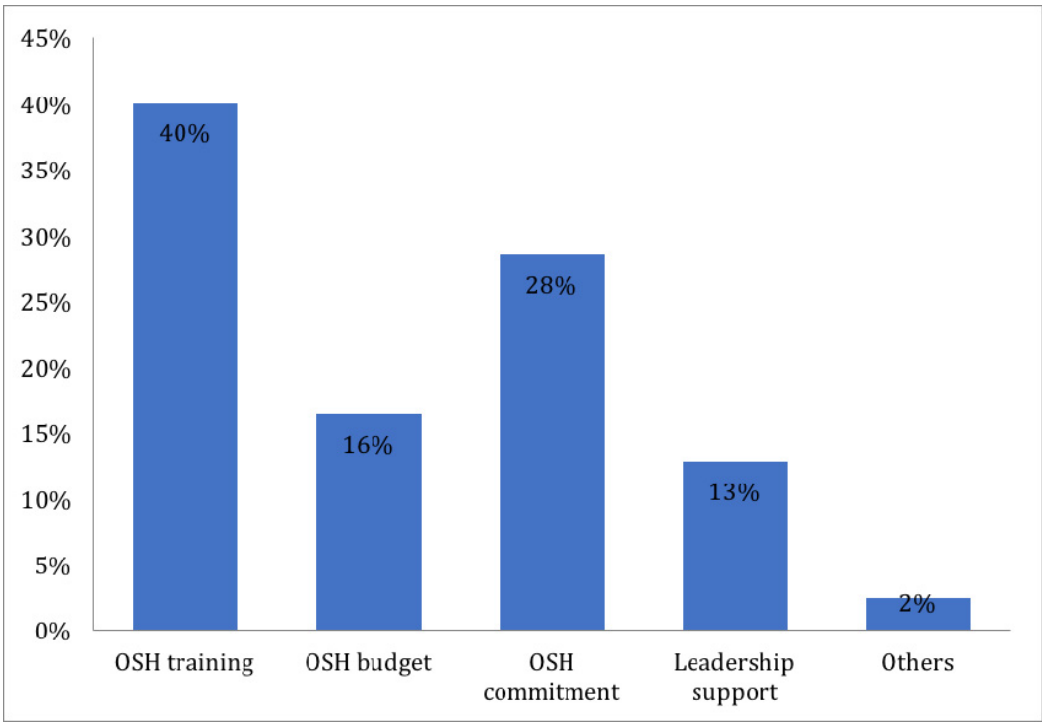

Figure 10.7: The necessary to improve OSH practices at the workplace claimed by the employer (N=644)

Findings show that, 40% and 28% of employer claimed that OSH training for employee-employer and sustainable OSH commitment of the orgnization is of importance, followed by provide sufficient OSH budget (16%) to perform necessary OSH-related management the workplace and create leadership support (13%).

About 2% of employer mentioned otherwise, such as through delivering on corporate social responsibility, maintain morale in the workplace, develop a positive stakeholder engagement, proper measurement and evaluation, planning, reputation enterprise, and safer working methods.

OSH performance indicators are used to measure and assess the status quo and the development in the main areas of OSH practices at the workplaces, such as workplace hazard and work-related ill-health, prevention measures, OSH infrastructure, etc. As shown in Figure 10.8, at least 57% of employer indicated that the OSH performance of their company is based on the risk assessment and effective risk reduction measures.

Others claimed that the OSH performance is measured by assessing the process-related activities, such as number of incident report updated (21%), the number of audits performed (15%), number of compliance resolved issues (1%), the number of near-miss incident reported/reviewed/updated/available (5%) and number of progress (action) plans developed (1%).

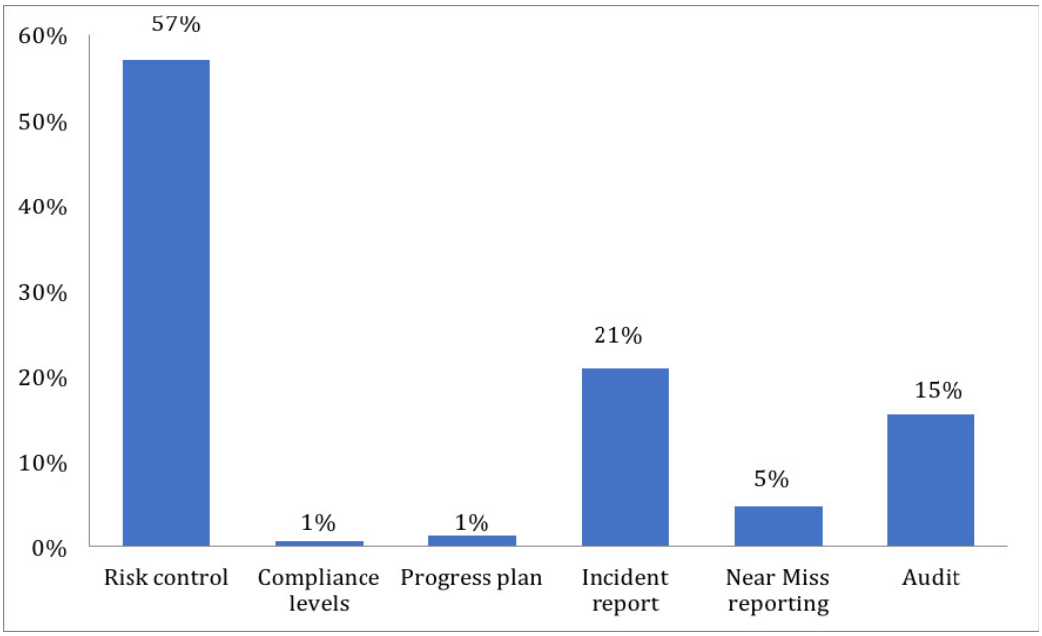

Figure 10.8: The common practice to measure OSH performance at the workplace reported by the employer (N=644)

In order to meet all organizational objectives related to OSH, communication has been consistently identified as a key factor. The success of one's organization OSH practices hinges on timely and effective communication. Therefore, the OSH communication system should be considered broadly-various levels and types of communication are important in ensuring the health and safety of workers, visitors, contractors and third parties impacted by organizational activities. In other word, for communication about health and safety to be effective, values about health and safety should be consistent and shared among those in an organization.

Figure 10.9 demonstrated that overall OSH communication practices at the workplace reported by employer's shows that their company practices "two-way" communication (47%), and gained stronger top-level support (26%). However, 15% of the employer mentioned that they haven't practice relevant OSH communication system at the workplace.

It is widely recognized that occupational safety and health is good for business as well as being a legal and social obligation. Figure 10.10 shows that 69% of employer agrees that OSH performance is crucial to the success of a company. The employer can actually enjoy significant benefits by investing in OSH with returns on investment as high as improving quality, cutting insurance premiums and the motivation of employees.

In fact, the benefits of good OSH performance can lead to the success of one company through increasing investor confidence, lower costs, accidents and illnesses, managed insurance costs, increase productivity, as well as winning and retaining business customers. These are essential parts of a successful business that employer would appreciate while investing on OSH.

Based on Figure 10.11, among the 644 employers involved in this survey, 65% of them were aware of the existence of Occupational Safety and Health Master Plan (OSHMP 2015), while the rest of 35% were not aware of it. OSHMP 2015 (2010-2015) is essentially a 5-year action plans that began in 2005 which will culminate in 2020 with the achievement of the safety culture.

The document contains the pledge by key partners to implement the Plan. The main aim of the OSH-MP 15 is to build a safe, healthy and productive pool of human capital by creating, cultivating and sustaining a safe and healthy work culture in all organizations throughout Malaysia.

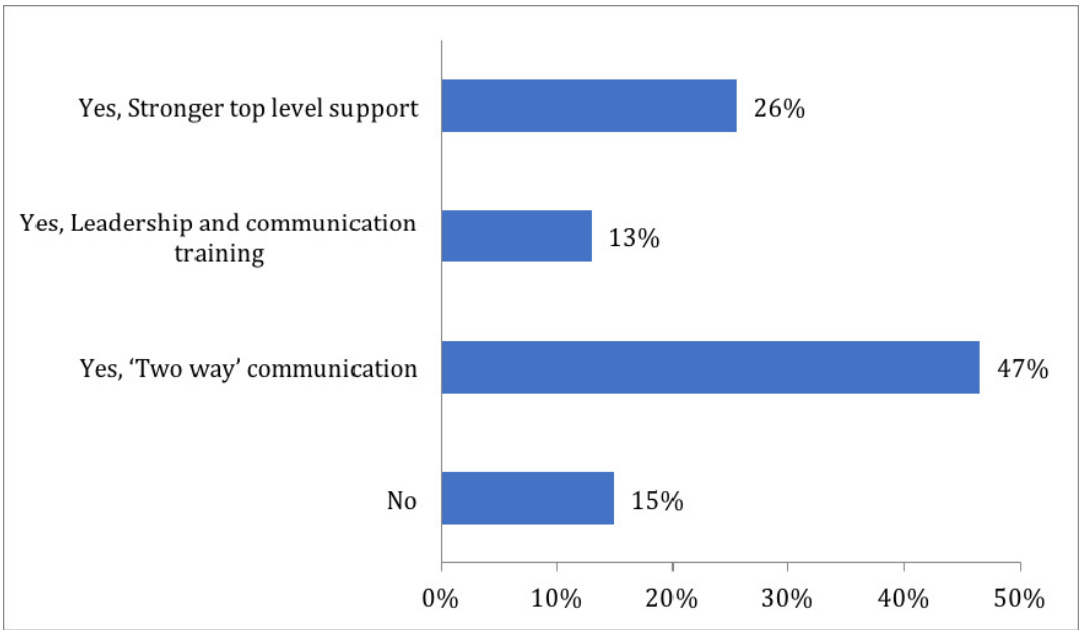

Figure 10.9: The OSH communication at the workplace reported by Employer (N=644)

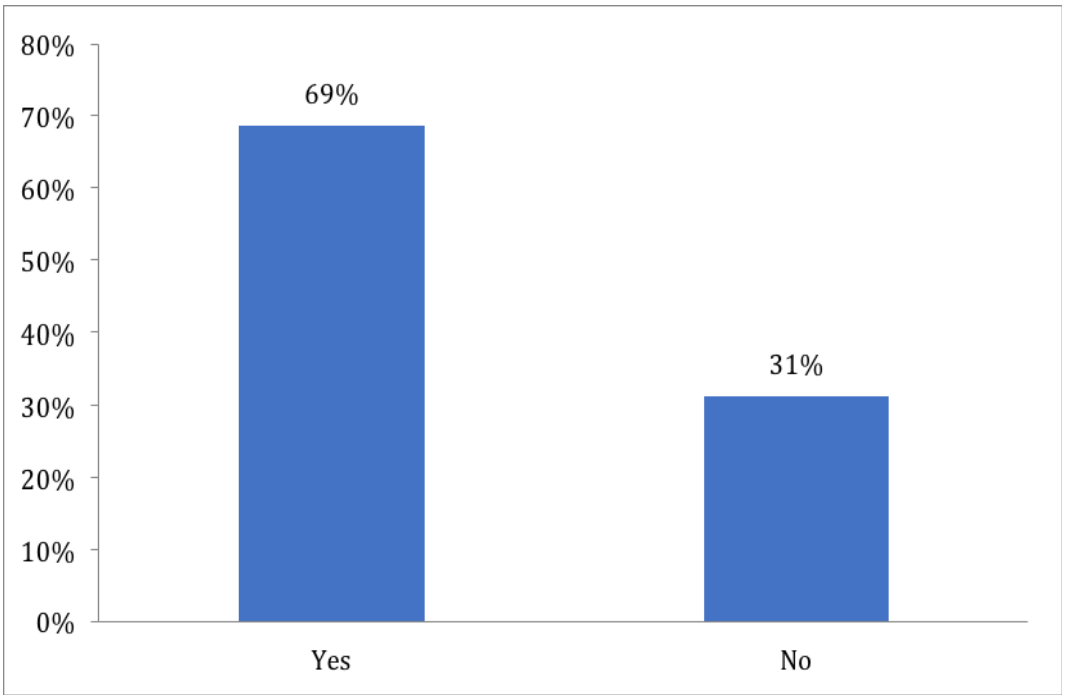

Figure 10.10: Answer of "OSH performance is crucial to the success of company" by the employer (N=644)

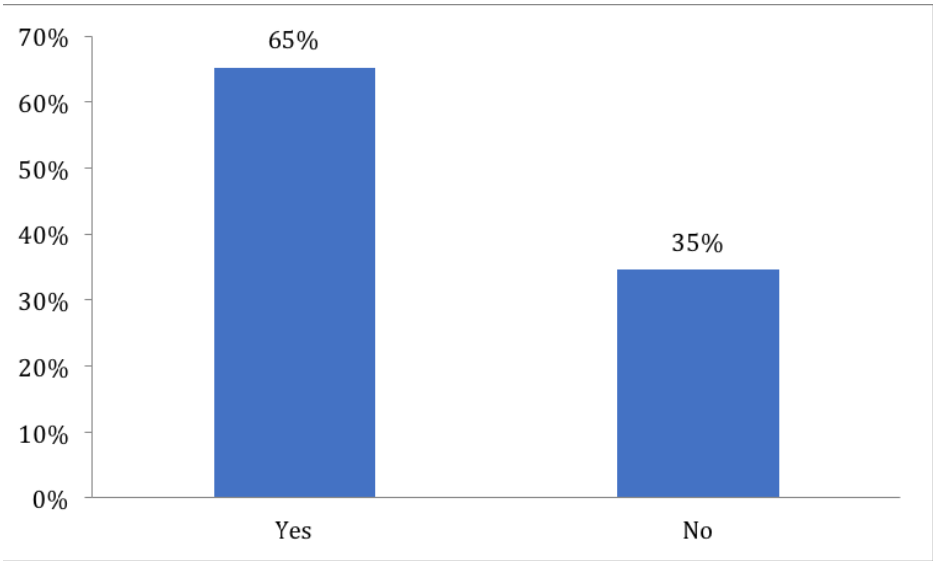

Figure 10.11: The awareness of OSHMP15 by the employer (N=644)

10.2.4 OSH Practice at the Workplace

The best practices in OSH can be considered as such rules of action and such projects that lead an enterprise to good or very good results in OSH. Employer who implements best OSH practices at their workplace shall indicate methods and steps that can be taken at the workplace or enterprises in order to improve working/living conditions, or to reduce hazard for health and safety on the enterprise level, concentrate, when possible, on identifying hazards at source, be effective and ethical, meet respective law requirements, be up-to-date and adapted to the needs of target users, contain enough information so that it can be applied at other workplaces, assume serious attitude of all parties, especially the workers who will be part of the actions undertaken, and their representatives. In other word, the best practices in OSH may also be a reference level in evaluating their everyday activity.

Table 10.7 summarizes the OSH practices at workplace identified by employers. At least 65.8% of employers claimed that their company aware about the new OSH legislation, while 86% agrees that the existing OSH legislation is still relevant to their company. About 49.9% of employer saying that there are code of practice and guidelines within a legislative framework that has been introduced in their company, but 40.6% of employer experiencing difficulties in complying with overlapping legal requirements (e.g.: DOSH vs. CIDB). In addition, 34.3% of the company conduct calculation of accident cost, 39.4% was aware of the national World OSH day, 30% of employer developed an OSH program in different languages to reach out the foreign workers, and 59.4% of them include their supplier, vendors, or subcontractors in their OSH program.

Besides, 42.3% of employers were aware of the existing and function of National Council of OSH (NCOSH), but only 29.8% of their company were involved in any NCOSH's event and 37.5% company were aware of the existence and functions of International Collaboration (OSHNet). A total of 42% of employer indicated that their company was aware of OSHMP 2020 and 41.3% of them is ready to accept and implement OSHMP 2020 by the government. On the other hand, 54.8% of employers suggest that their company needs to provide more expenditure expenses towards OSH program, but 51% of them claimed that the fund for OSH awareness program is sufficient. In general, 42.8% of employer indicated that their company is financially supportive when it comes to organizing OSH programs.

Table 10.7: The OSH Practices at the workplace claimed by the employer (N=644)

OSH Practices at Workplace	Employer (N=644) (%)		
	Yes	No	Unsure
Is your company aware about the new OSH legislation?	65.8	23.8	10.5
Is the existing OSH legislation still relevant to your company?	86.0	8.9	5.1
Does any code of practice and guidelines within legislative framework have been introduced in your company?	49.9	42.1	7.9
Are your company experiencing difficulties in complying with legal requirements that overlap (e.g.: DOSH vs. CIDB)?	40.6	50.5	8.9
Does your company calculate the costs of accident?	34.3	44.9	20.9
Is your company aware of the National World OSH Day?	39.4	37.4	23.3
Do your company develop OSH program in different languages to reach out the foreign workers?	30.0	63.6	6.4
Does the company include your supplier, vendors, or sub-contractors in your OSH program?	59.4	30.9	9.8
Is your company aware the existence and functions of National Council OSH (NCOSH)?	42.3	42.4	15.4
If Yes, have your company involved or attended any NCOSH's events?	29.8	56.8	13.5
Is your company aware of the existence and functions of International Collaboration (OSHNet)?	37.5	50.6	11.9
Is your company aware of OSHMP 2020?	42.0	44.3	13.8

OSH Practices at Workplace	Employer (N=644) (%)		
	Yes	No	Unsure
Is your company ready to accept and implement OSHMP 2020 by the government?	41.3	43.0	15.6
The company is prepared to provide more expenditure towards OSH programs' expenses.	54.8	32.1	13.1
The fund for OSH awareness program is sufficient.	51.0	34.1	14.9
Did your company financially support you when it comes to organizing OSH program?	42.8	38.1	19.1

10.2.5 Economic Impact Related to OSH

Employers that invest in workplace safety and health can expect to reduce fatalities, injuries, and illnesses. This will result in cost savings in a variety of areas, such as lowering workers' compensation costs and medical expenses, avoiding OSH-related penalties, and reducing costs to train replacement employees and conduct accident investigations.

In addition, employers often find that changes made to improve workplace safety and health can result in significant improvements to their organization's productivity and financial performance. In view of this, Table 10.8 summarizes the possible economic impact encountered by the employer while investing on OSH in their workplace.

The foreign worker levy, commonly known as "levy", is a pricing mechanism to regulate the number of foreign workers in Malaysia. The levy ends when the work permit is canceled or expires. The employer faces penalties for not paying the levy for their foreign workers. With this, 16% of employer claimed that the payment to levy incur economic impact of the OSH performance in their organization.

The "Hiring and Firing" is practiced widely by the Human Resources department (HRD), in which "hiring" is defined as the addition of workers to provide services for a company while "firing" is defined as the reduction of workers that have not properly provided services for a company.

About 35% of the employer indicated that the "hiring and firing" practices in their organization is evaluated based on worker's performance, and 36% of employer claimed that most of the time, the expenditure spent for the workers in the OSH implementation (practices, training, risk control and etc.) during hiring and firing.

Table 10.8: Types of Economics Impact related to OSH reported by Employer (N=644)

ECONOMIC IMPACT	EMPLOYER (N=644)		
	YES, (%)	NO, (%)	UNSURE (%)
Is the funding of OSH implementation is affected by the payment of LEVI?	16.0	58.0	26.0
Is hiring and firing practices in HRD Department is based on worker's performance?	35.0	42.0	23.0
Is the money spent for the workers on OSH implementation considered during hiring and firing?	36.0	43.0	20.0
Does your company implement 'return to work program'?	47.0	33.0	20.0

This survey found that 47% of employer implemented 'return to work program' in their workplace as part of a business strategy to retain valued employees and to enhance the productivity of the workforce. "Return to Work" is the process of returning an injured or ill employee to the workplace as soon as it is medically safe to do so.

It is an important aspect of rehabilitation, which aims to reduce the level of a person's impairment. Getting back to work can help the process of recovering from an injury, and it can also assist in minimizing the financial and emotional disruption for the injured person and their family. Return to Work is the aim of all workers' compensation schemes in Malaysia.

10.2.6 Overview of OSH Performance at Workplace by Employer

As shown in Figure 10.12, the overview of OSH performance at the workplace from the scale of 1 to 5 with 5 being the best performance and 1 being the worst performance among the employer. Employer participated in this survey were asked to rate their own company overall OSH performance based on the current practices, system and management.

Overall, 45% of employer claimed that the OSH performance their workplace is moderate and room of improvement at the current practices with a rate of "3" whereas 33% of employer consider the OSH performance at their workplace is good with the current practices.

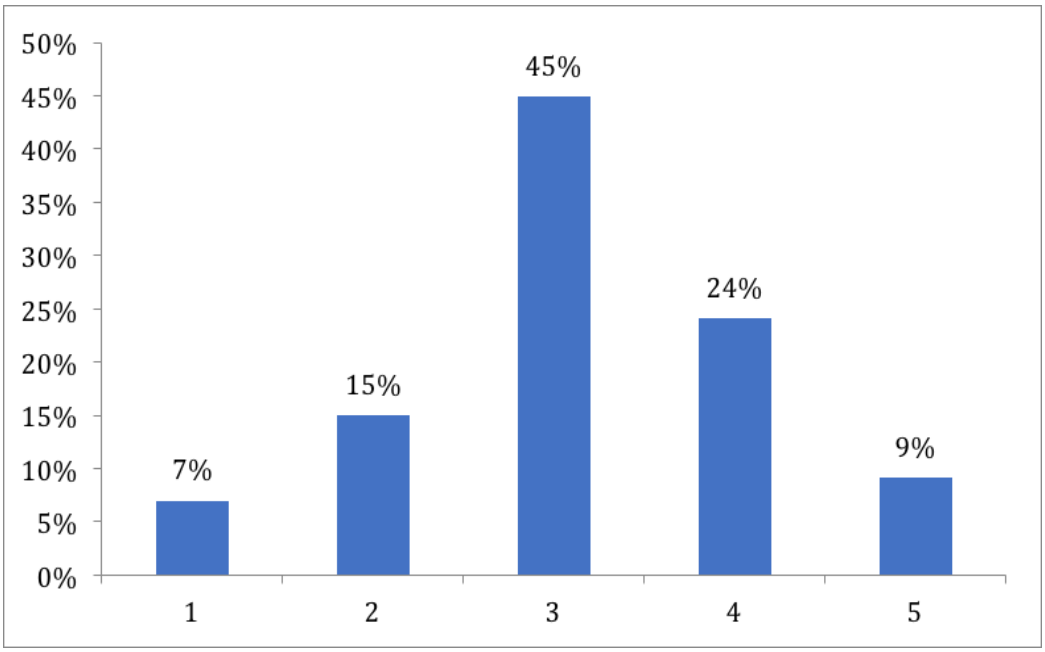

Figure 10.12: Question asked: "On a scale of 1 to 5 with 5 being the best performance, how would you describe the overall OSH performance on your company?" (N=644)

10.3 Survey Findings (OSH Personnel)

OSH personnel refer to any employee trained and tasked to implement an OSH programs in the workplace in accordance with the provisions of the OSH law and regulations. In this context, OSH personnel either hold a position as Safety and Health Officer (accredited – Green Book holder), Safety and Health Executive – without accreditation, or representative of the OSH committee.

Table 10.9: OSH personnel based on industry who contributed to the survey

CATEGORY	(%)
Manufacturing	41.9
Agriculture, Forestry, Fishing	6.2
Transportation and Communication	1.7
Trades, Banking and Finance	1.6
Governmental Services/Statutory Bodies	4.0
Oil and Gas	6.0
Construction	11.2
Mining and Quarrying	0.5
Utilities	2.6
Business and Services	14.0
Hotel and Restaurant	10.3

Total number of participant (N=1,415)

10.3.1 Socio-Demographic Characteristics

Based on Table 10.10, 37.8% of the OSH personnel were 26-35 years old, 7.3% were 18-25 years old and 7.8% were above 55 years old. At least 81.2% of the OSH personnel were male. Besides that, 50.8% of the OSH personnel were not working in shifts while 24.9% were working in 2 shifts and 24.3% were working in 3 shifts.

It was also found that 29% of personnel were working as safety and health officers, 21% of OSH personnel were working as OSH executives, 16% of personnel were working as OSH managers. However, only 9% of OSH personnel were working as OSH technician. Among all, 33.1% of the OSH personnel had worked in their current position for 1-3 years and 27.6% for 3-5 years and 27% for more than 5 years. Only 12.2% of OSH personnel claimed to have less than 1 year of work experience in the current company.

Table 10.10: The Socio-demographic Background of OSH personnel (N=1,415)

SOCIO-DEMOGRAPHIC BACKGROUND		(%)
Age	18-25	7.3
	26-35	37.8
	36-45	29.1
	45-55	18.0
	>55	7.8
Gender	Male	81.2
	Female	18.8
Shift Work	Yes, 2 shifts	24.9
	Yes, 3 shifts	24.3
	No	50.8
Position	OSH Manager	16.0
	OSH Executive/Engineer	21.0
	Safety and Health Officer	29.0
	OSH supervisor/Coordinator	25.0
	OSH technician	9.0
Working in current company (year)	<1	12.2
	1-3	33.1
	3-5	27.6
	>5	27.0

10.3.2 OSH Commitment at Workplace

Based on Table 10.11, OSH personnel were asked to evaluate the OSH commitment at their workplace provided by the organization. Interestingly, more than 59.8% of OSH personnel mentioned that their company sponsored them for continuous education program, and only 40.2% said no. With this, about 55.1% of OSH personnel had working experience related to OSH before joining as OSH personnel at the current company.

A total of 97.2% of OSH personnel acknowledged that their company had established Safety & Health Committee, and 78.6% of OSH personnel indicated that they were a member of the company's Safety & Health Committee. About 55.5% of the OSH personnel claimed that they have a monthly OSH Committee meeting. 32.2% indicated that their meeting is quarterly, and only 12.3% mentioned that there is no fixed date for their meetings.

A total of 83.8% of OSH personnel indicated that their company provided training to the OSH committee, the types of training program includes, OSH legislation (67.4%), Hazard Identification, Risk Assessment and Risk Control (HIRARC) (52.5%), Chemical Handling and Management (42.7%), Emergency Response (71.1%) and others (19.5%) training which not otherwise mentioned above, such as OSH Awareness, Ergonomic, MS Audit, Lifting Operation, Scaffold, Machinery Safety, Site Inspection, Working at Height, Confined Space Entry, Hygiene, Incident Investigation and etc.

Table 10.11: The OSH Commitment at the Workplace Provided by the Organization (N=1,415)

OCCUPATIONAL SAFETY AND HEALTH COMMITMENT AT WORKPLACE	OSH PERSONNEL (N=1,415) (%)	
	YES	NO
Does company sponsor for education	59.8	40.1
Working experience related to OSH	55.1	44.9
Establish safety and health committee	97.2	2.8
You are the member of the SHC	78.6	21.5
Frequency of OSH Committee Meeting conducted (N=1,112)		
Monthly	55.5	
Quarterly	32.2	
Non-fixed date	12.3	
Company provide OSH related training	83.8	16.2
OSH legislation training	67.4	32.6
HIRARC	52.5	47.5
Chemical handling & management	42.7	57.3
Emergency response	71.1	28.9
Others **	19.5	80.5

**Note: Others training provided by the organization such that MS Audit, Lifting Operation, Scaffold, Machinery Safety, Site Inspection, Working at Height, Confined Space Entry, Hygiene, Incident investigation

Table 10.12 shows that 36.8% of OSH personnel indicated that they encountered accidents at their workplaces as listed under Schedule 1, 2 & 3 OSH (NADOPOD) Regulation 2014, but did not report to DOSH. While investigating the reason of non-reporting accident, 43.5% claimed that worry of legislative action (43.6%), 44.7% of OSH personnel fear of company's reputation loss.

In addition, 35.2% of OSH personnel are trying to avoid delaying the production or afraid of the increasing operation cost in cases of reporting the accident to the authority. Nevertheless, 26.6% of OSH personnel indicated that some of the accident was not required to report under OSH (NADOPOD) Regulation 2004, or cases were preferred to manage through internal accident investigation or due to the ignorance and negligence by the employer.

Table 10.12: Workplace Accident Reported by OSH Personnel (N=1,415)

WORKPLACE ACCIDENT		OSH PERSONNEL (N=1,415) (%)	
		YES	NO
Accidents not reported		36.8	63.2
Reason of non-reporting accident (N=521)			
	Legislative action	43.6	
	Delaying in production	35.2	
	Increased of operational cost	32.0	
	Fear of reputation loss	44.7	
	Others**	26.6	

**Note: Others reasons of non-reporting accident due to, not required under accident not required under NADOPOD, ignorance and negligence by employer, internal accident investigation

10.3.3 Occupational Safety and Health Management System (OSHMS)

Figure 10.13 shows that at least 86% of OSH personnel indicated that their company implemented occupational safety and health management system (OSHMS) at the workplace, which includes those companies which implement and certified to OHSAS 18001 (45%), implement and certified with MS 1722 (10%), implement and certified by other certification (10%), and 20% of OSH personnel claimed that their company implement OSHMS but is yet to certify by any certified body.

While managing OSH at the workplace, a reactive response occurs after an injury or illness and usually has the purpose of minimizing the costs associated with the injury or illness. On the other hand, a proactive response to safety and health in the workplace takes place before an accident has occurred. It anticipates and tries to prevent accidents. By emphasizing hazard prevention, risk reduction, accident preparedness and mitigation, it helps to create early awareness and good safe work practices among the employees.

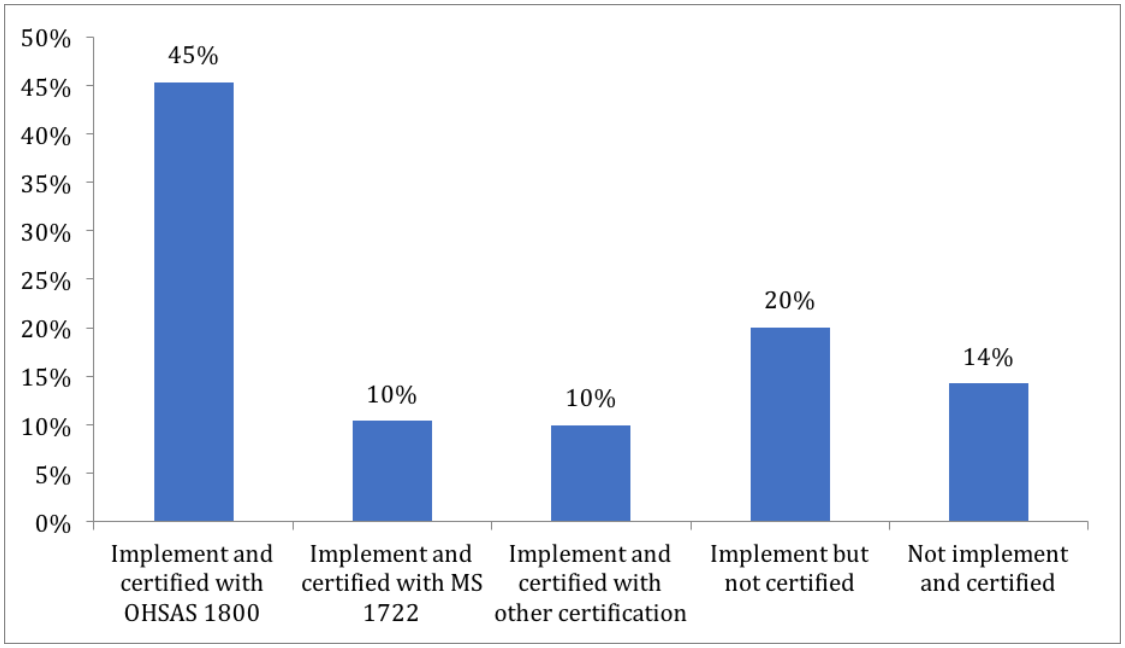

Figure 10.13: The Implementation of OSHMS at Workplace (N=1,415)

In view of this, OSH personnel was examined on the implementation of the OSH program as a proactive approach at their workplace, such as safety committee, HIRARC, safety and health induction/training, etc. As shown in Table 10.13, a total of 95% of OSH personnel indicated that their company implemented the OSH program at the workplace.

Among them, OSH personnel claimed that the main driving factors of implementation are due to law enforcement and to fulfil the legal requirement (50%), and to perform client's requirement (24%); otherwise due to other factors (23%) such as the proactive measures to prevent accident, company policy, organizational culture, HSE performance or OSH awareness among employee-employer at the workplace. Only 3% of OSH personnel indicated that the OSH program was implemented in the workplace due to the influence of mass media.

Recognition and reward for a job well done fulfills a basic human need for acknowledgement and affirmation. When employees are recognized for their commitment to OSH at the workplace, they naturally engage at a higher level and contribute more. OSH personnel may incorporate the concept of recognition and reward into their safety programs to drive positive safety behavior and ultimately impact financial results.

Table 10.13: Implementation of OSH Program at the Workplace (N=1,145)

OSH PROGRAM AT WORKPLACE	OSH PERSONNEL (N=1,415) (%)	
	Yes	No
Implementation of OSH program at workplace	95	5
Factors that drives the implementation of OSH program (N=1,344)		
Law enforcement	50	
Mass media	3	
Client requirement	24	
Others**	23	

**Note: Others factors, accident prevention, awareness on OSH, company culture, company policy, HSE performance,

Figure 10.14 shows that 80% of OSH personnel implement a reward system as recognition of their employees' commitment to OSH in the workplace. This includes OSH award (40%), voucher/coupon (20%), promotion (10%), and other reward which was not otherwise mentioned (10%). Nevertheless, 20% of OSH personnel indicated that their company does not have any reward system to help motivate employees to be safer.

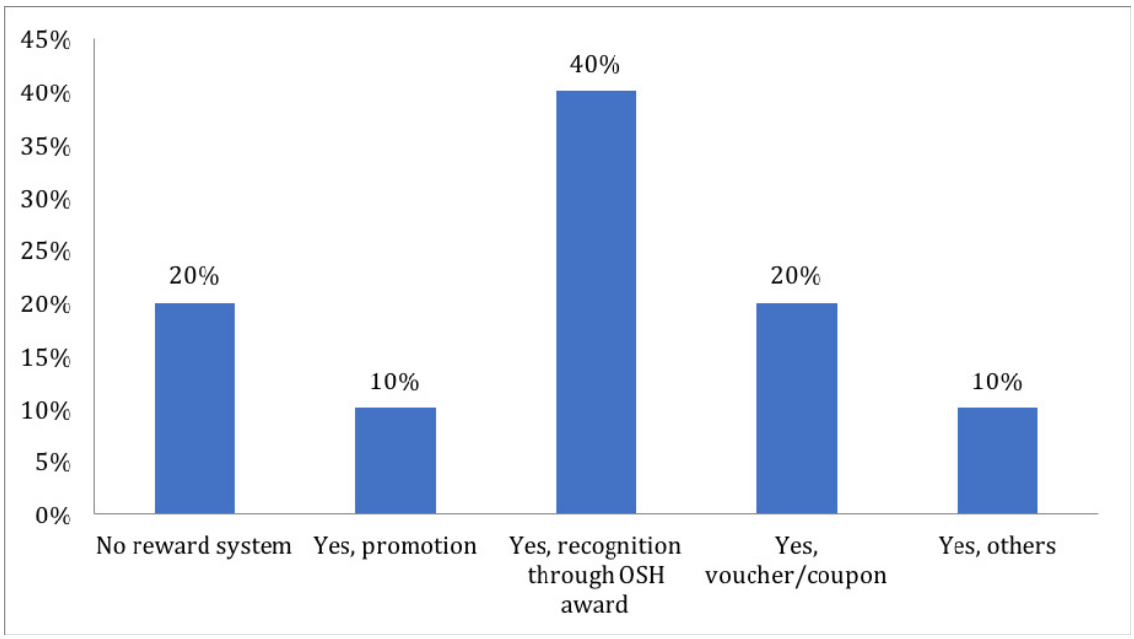

Figure 10.14: The reward system implement at Workplace (N=1,415)

When workplace injuries occur, it's easy to see the immediate and direct costs, but there is a multitude of ongoing and indirect costs that should also be taken into account. Indirect costs can be higher than the direct costs, depending on the types of workplace circumstances following the accident. In other words, preventing workplace injuries not only keeps employees safe, it also prevents any potentially significant costs.

In view of this, Figure 10.15 summarizes the most indirect cost of accident at workplace encountered by the OSH personnel. This survey findings show that, OSH personnel agrees that the most indirect cost of accident at workplace is loss of productivity (20%), follow by disruption of schedule (27%), administrative time for the purposes of investigation (12%), equipment damage (10%), training of replacement new workers (8%), post-accident cleaning-up and repairing (7%), as well as third party liability claims (6%).

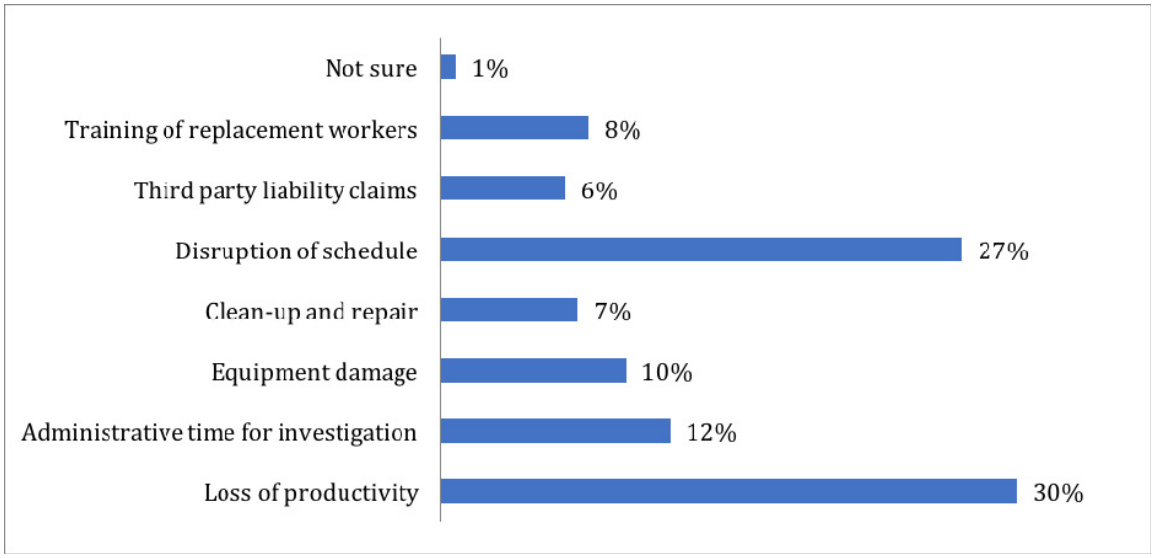

Figure 10.15: The most indirect cost of accident at workplace (N=1,415)

A good system to manage occupational safety and health at the workplace is a basic implementation required when building, improving or maintaining good health and safety level at work. In other word, Occupational Safety and Health Management System (OSHMS) is part of the organization's management system which covers the planning, management, practices, procedures, and resources for developing and implementing, reviewing and maintaining the occupational safety and health policy. The system covers the entire gambit of an employer's occupational health and safety organization.

In view of this, Table 10.14 summarizes the OSHMS-related practices at the workplaces. OSH personnel indicated that the most common practices were to ensure that OSH strategy is in line with business strategy (83.3%), provide safety induction (75.2%), ensure the availability of OSH resources (68.6%), conduct staff forum (60.5%), performs OSH-related training (56.4%), and implement personal key performance index (KPI) to monitor employees' OSH related performance at their daily work routine.

Other practices not commonly practiced among OSH personnel were such as providing a platform of formal communication (48.2%), performance review (45.4%), demonstrates commitment to OSH induction (40.6%), as well as implementing strategic objectives for continuous improvement purposes (37.4%).

Table 10.14: The OSHMS-related practices at the workplace provided by the Organization

OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT SYSTEM PRACTICES AT WORKPLACE	OSH PERSONNEL (N=1415)	
	YES (%)	NO (%)
Demonstrate commitment to OSH induction	40.6	59.4
Platform of formal communication	48.2	51.8
Regular staff forum or meeting	60.5	39.5
Strategic objective	37.4	62.6
OSH related training	56.4	43.6
Personal key performance index (KPI)	52.3	47.7
Performance review	45.4	54.6
OSH strategy in line with business strategy	83.3	16.7
OSH resources available	68.6	30.5
Provide Safety induction	75.2	24.8

The best practices in OSH can be considered as such rules of action and such projects that lead an enterprise to good or very good results in OSH. They should also meet additional criteria, i.e., the possibility to apply by other enterprises, good planning, self-evaluation, and ethics of action. Therefore, this survey examines the criteria that OSH personnel find it necessary to help improving the OSH practices at the workplace as summarized in Figure 10.16.

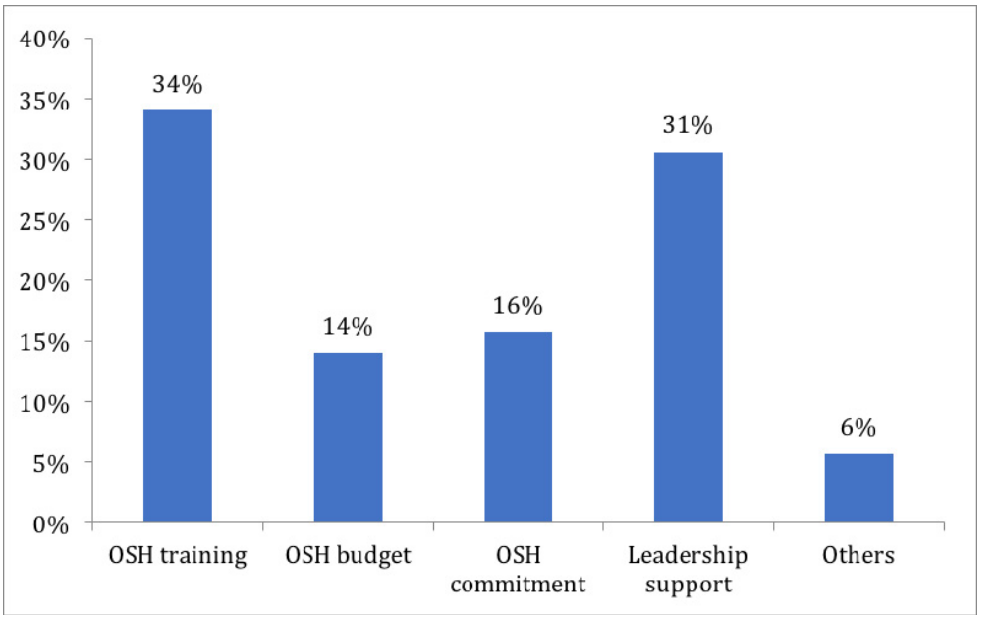

Figure 10.16: The necessary to improve OSH practices at the workplace claimed by the OSH personnel (N=1,415)

The findings show that, 34% and 31% of OSH personnel claimed that OSH training for employee-employer and continuous leadership support is of importance, following by create a sustainable OSH commitment among employee-employer (16%), and provide sufficient OSH budget to perform necessary OSH-related management the workplace. Another 6% of OSH personnel indicated that the necessary elements to improve OSH practices at the workplace are through organizational awareness and commitment, clear directive, as well as involve contractor and visitors in the OSH system of management.

OSH performance indicators are used to measure and assess the status quo and the development in the main areas of OSH practices at the workplaces, such as workplace hazard and work-related ill-health, prevention measures, OSH infrastructure, etc. As shown in Figure 10.17, at least 36% of OSH personnel indicated that the OSH performance of their company is based on the risk assessment and effective risk reduction measures.

Others claimed that the OSH performance is measured by assessing the process-related activities, such as number of audits performed (32%), the number of incident report updated (18%), number of compliance resolved compliance issues (7%), number of progress (action) plans developed (4%), and a number of near-miss incident reported/reviewed/updated/available.

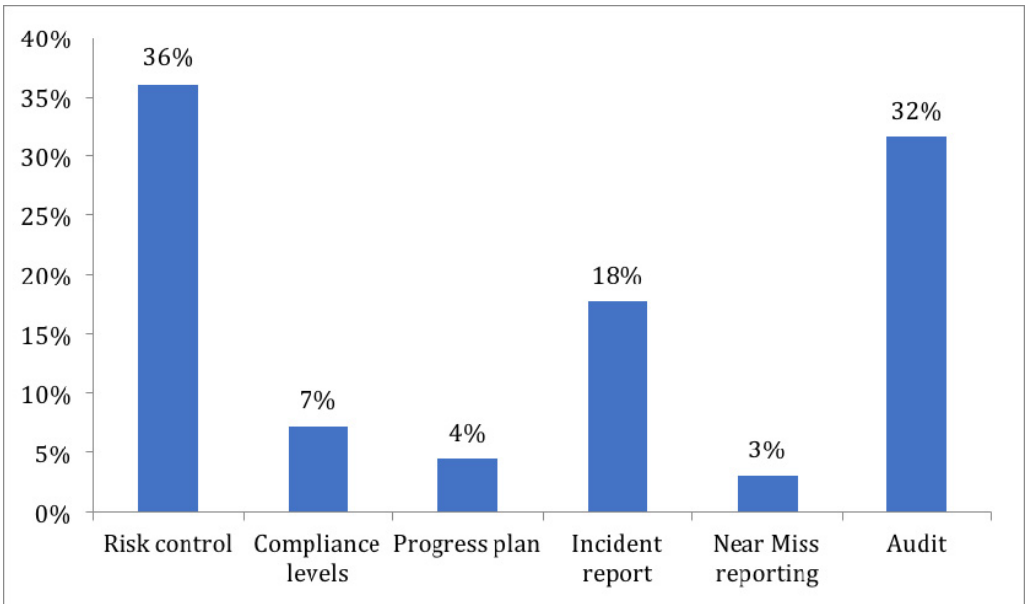

Figure 10.17: The Common practice to measure OSH performance at the workplace reported by OSH personnel (N=1,415)

Figure 10.18 demonstrated that overall OSH communication practices at the workplace as reported by OSH personnel, such that most indicated that their company practices "two-way" communication (45%), gained stronger top level support (27%), or others mentioned that their communication is via leadership and communication training (16%).

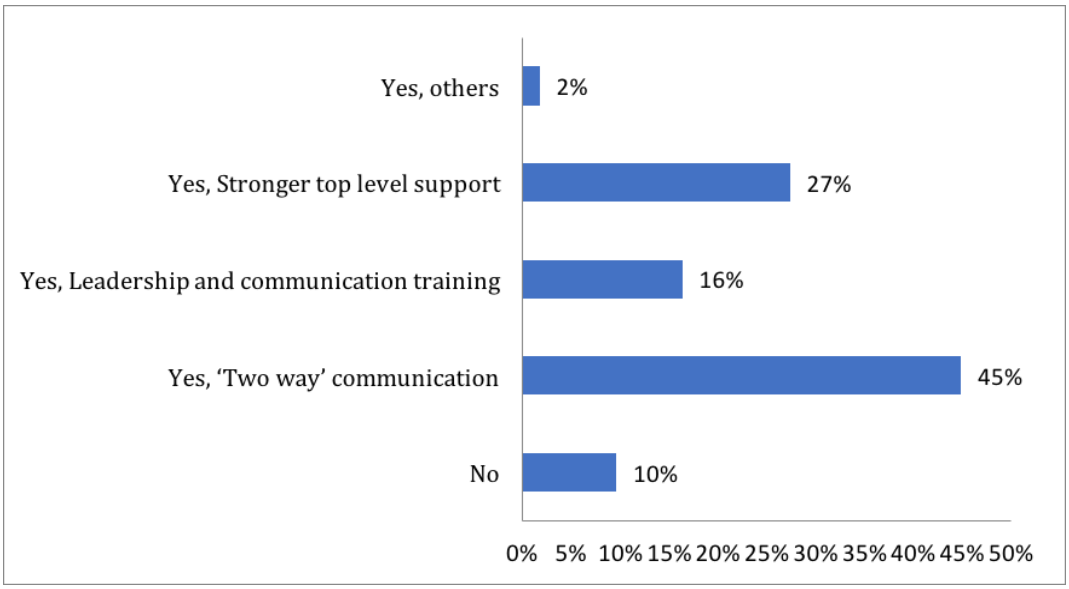

Figure 10.18: The OSH communication at the workplace reported by OSH personnel (N=1,415)

In other word, OSH personnel in this survey finding establish OSH communication systems to ensure work is co-ordinated safely and the risks are minimized. Implementing OSH communication is one of the core values practiced by most organizations. Effective OHS Communication is an essential, yet often overlooked (or underdone) area of an OHS management system in the workplace.

Figure 10.19 shows that 84% of OSH personnel agree that OSH performance is crucial to the success of a company. This may due to the fact that OSH is good for businesses while concurrently implying legal and social obligation. An effective OSH performance at the workplace helps to prevent people from being harmed or made ill through work, but it is also an essential part of a successful business, such that builds a more competent and healthier workforce, reduce business costs and disruption, protects and enhances brand images and values, etc.

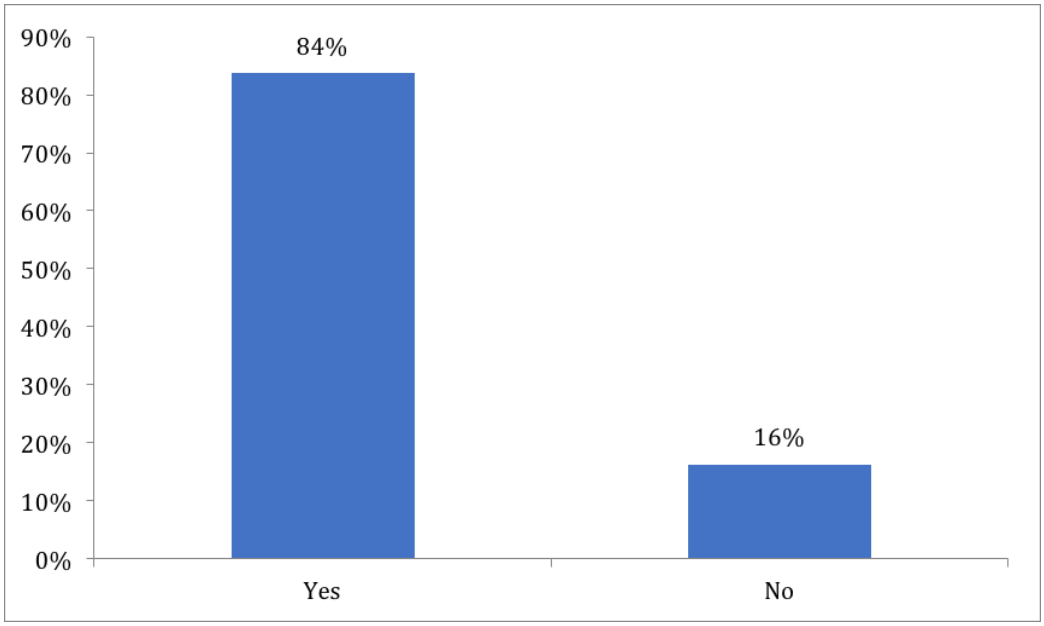

Figure 10.19: Answer of "OSH performance is crucial to the success of company" by the OSH personnel (N=1,415)

Based on Figure 10.20, among the 1,415 OSH personnel involved in this survey, 72% of them were aware that the existence of Occupational Safety and Health Master Plan (OSHMP 2015), while the rest of 28% do not aware of it. The OSHMP 2015 (2010-2015) is essentially a 5-year action plans that began in 2005 which were expected to culminate in 2020 with the achievement of the safety culture.

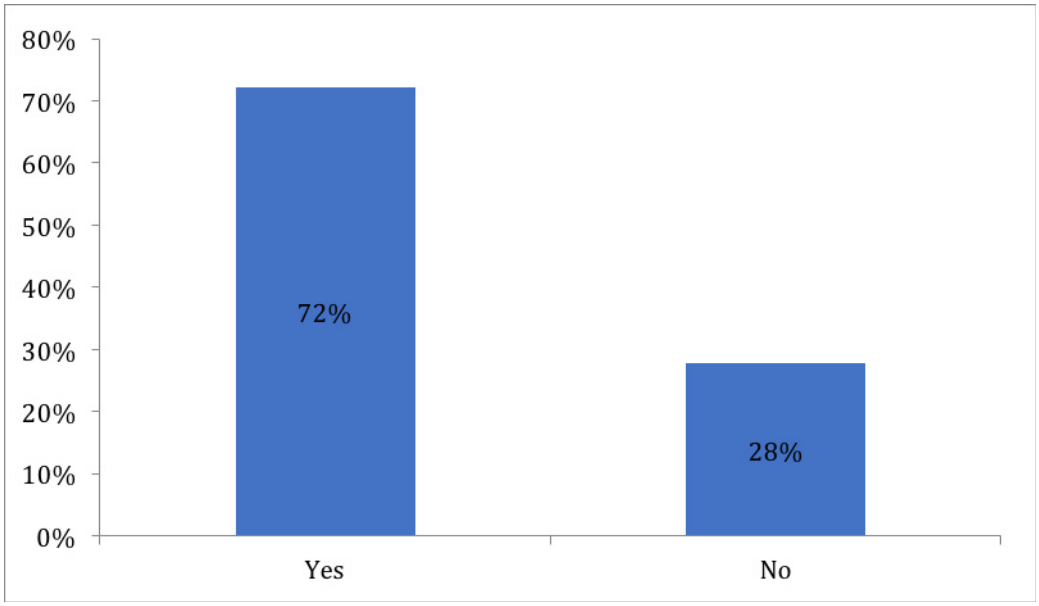

Figure 10.20: The awareness of OSHMP15 by the OSH personnel (N=1,415)

The document contains the pledge by key partners to implement the Plan. The main aim of the OSH-MP 15 is to build a safe, healthy and productive pool of human capital by creating, cultivating and sustaining a safe and healthy work culture in all organizations throughout Malaysia.

10.3.4 OSH Practices at the Workplace

It is essential to develop networks of OSH personnel who have good OSH practices for ensuring impacts and sustainability at the workplace. Findings of this survey shows that at least 60% of OSH personnel who participated in this survey have positive practices on OSH in their respective workplace.

As such, Table 10.15 summarizes that 68.7% of OSH personnel know the OSH law, 67.6% were involved in a promotional OSH activity, 69.6% indicated that their management shows determination to maintain a safe and healthy work environment, 60.6% claimed that their management provide rewards, 79.9% know where the fire extinguisher located, and 77% will report hazards should they identify any on site, and 72.4% indicated that they know what to do if their workers get injured.

Table 10.15: The OSH Practices at the workplace reported by the OSH personnel (N=1,415)

OCCUPATIONAL SAFETY AND HEALTH PRACTICES AT WORKPLACE	OSH PERSONNEL (N=1,415) (%)		
	YES	NO	UNSURE
I know OSH law	68.7	22.2	9.1
I involve in promotional OSH activity	67.6	24.9	7.5
The management show determination to maintain safe and healthy work environment	69.6	22.2	8.2
The management provide rewards	60.6	30.0	9.4
I know the place of fire extinguisher	79.9	14.2	5.8
I will report hazards	77.0	17.2	5.8
I know what to do if my worker get injured	72.4	20.1	7.4

10.3.4.1 Workplace Hazards

Table 10.16 summarizes the workplace hazards reported by OSH personnel. Health and safety hazards exist in every workplace. Some are easily identified and corrected, while others create extremely dangerous situations that could be a threat to your life or long-term health. Among the four common workplace hazards encounter by OSH personnel, 80.5% reported of physical hazard, 70.1% of OSH personnel reported of chemical hazard, 61.9% having biological hazard and 81% are suffering ergonomic hazard.

Table 10.16: Types of Hazards Encountered at the Workplace reported by OSH personnel (N=1,415)

WORKPLACE HAZARDS	OSH PERSONNEL (N=1,415)	
	YES, (%)	NO, (%)
Physical Hazard	80.5	19.5
Chemical Hazard	70.5	29.5
Biological Hazard	61.9	38.1
Ergonomic Hazard	81.0	19.0

Among the 1,139 OSH personnel indicated that they encountered physical hazards, Table 10.17 summarizes the types of physical hazards encountered by OSH personnel. With this, 56% encountered noise, 47% experience extreme temperature from their work environment, 40% reported exposure to vibration from hands-tool or machinery, as well as 32% and 33% reported to have radiation and lighting problem at the workplace.

Other physical hazard such as bad environmental weather, confine space, construction safety hazards, cut injury, possible marine collision, fire & explosion, machinery, equipment, machinery, slip & trip, falling hazard, and etc.

Table 10.17: Types of Physical Hazards Encountered at the Workplace reported by OSH personnel (N=1,139)

PHYSICAL HAZARDS	OSH PERSONNEL (N=1,139)	
	Yes, (%)	No, (%)
Noise	56	44
Vibration	40	60
Radiation	32	68
Extreme temperature	47	53
Lighting	33	67
Others	26	74

Among the 998 OSH personnel, indicated that they encountered chemical hazards, Table 10.18 summarizes the types of chemical hazards encountered by OSH personnel. With this, 44% encountered mineral dust through inhalation, 41% used mixtures of pesticides in their nature of work activity, 39% of OSH personnel handling heavy metals, as well as 37% and 35% reported to have used organic solvents and chemical fertilizers in the workplace. Other chemical hazard includes chemical additives, lubricant and hydraulic oil, and other commercial used products.

Findings show that a total of 876 OSH personnel reported to encounter biological hazards. With this, Table 10.19 shows that 55% reported that vectors (mosquitoes, flies, mites, cockroaches, etc.) exist in their workplace, followed by 44% having microbiological (mold, bacteria, virus), 42% claimed to have encountered poisonous animal (snake and scorpion) and 34% reported to have rodent-type (rate, bat) at the workplace.

Table 10.18: Types of Chemical Hazards Encountered at the Workplace reported by OSH personnel (N=998)

CHEMICAL HAZARDS	OSH PERSONNEL (N=998)	
	Yes, (%)	No, (%)
Pesticide	41	59
Chemical fertilizer	35	65
Organic solvent	37	63
Heavy metal	39	61
Mineral dust	44	56
Others**	10	90

Table 10.19: Types of Biological Hazards Encountered at the Workplace reported by OSH personnel (N=876)

BIOLOGICAL HAZARDS	OSH PERSONNEL (N=876)	
	Yes, (%)	No, (%)
Microbiological (mold, bacteria, virus)	44	56
Vectors (mosquitoes, flies, mites, cockroaches)	55	45
Rodent (rat, bat)	34	66
Poisonous animal (snake, scorpion)	42	58

Findings have also shown that a total of 1,146 OSH personnel agreed that they encountered ergonomic hazards. With this, Table 10.20 shows that 62% reported that they encountered ergonomic problems such as lifting and manual handling in the workplace, followed by 50% involved in repetitive movement related to work, and 46% of them claimed that their workers are using hand tools without proper ergonomics concerns.

Besides, 41% of OSH personnel claimed that their workers are working with awkward position and 36% mentioned that poor workplace designs which were not ergonomically creates effective workplaces for their workers. Other ergonomic hazard includes computer systems, thermal comfort, equipment layout and operation, repetitive motions, force exertion.

Table 10.20: Types of Ergonomic Hazards Encountered at the Workplace reported by OSH personnel (N=1,146)

ERGONOMIC HAZARDS	OSH PERSONNEL (N=1,146)	
	Yes, (%)	No, (%)
Lifting, manual handling	62	38
Repetitive movement	50	50
Awkward posture	41	59
Workplace design	36	64
Hand tools	46	54
Others	6	94

10.3.4.2 Quality of Working Life

Table 10.21 summarizes the quality of working life examined among 1,415 OSH personnel. The "Quality of Working Life" (QWL) is a term that had been used to describe the broader job-related experience an individual has. The key components to consider satisfaction of quality of working life are one needs through resources, activities, and outcomes stemming from participation in the workplace. In other word, the quality of working life will direct or indirectly influence employee health and safety while performing their job in the particular workplace.

In view of this, finding of this survey indicated that 77% of OSH personnel claimed that their employer is considerate if they have personal matters during working hours, most of them (75.5%) having a harmonious relationship with their colleagues, as well as having a good relationship with their superior (72.8%).

About 60% of OSH personnel have positive comments on facilities, welfare and work conditions. A total of 64.9% claimed that the company provided food facilities, 65.9% indicated that the company provided good welfare activities and 66.3% mentioned that the current work conditions allow them to be as productive as they could be. In addition to this, 59% of OSH personnel have a good and highly motivated work environment while 49.5% of them received a sufficient wages by their organization.

Table 10.21: Quality of Working Life among OSH personnel (N=1,415)

QUALITY OF WORKING LIFE	OSH PERSONNEL (N=1,415) (%)		
	Yes	No	Unsure
I find my work quite stressful	32.9	60.0	7.1
My company work environment is good and highly motivated	59.0	28.5	12.6
It is hard to take time off during our work if emergency or family matters.	29.8	64.3	5.9
The wage given by my company is sufficient.	49.5	39.3	11.3
There is a harmonious relationship with my colleagues.	75.5	21.0	3.5
My employer is considerate if I have personal matters during working hours	77.0	17.0	6.0
There is a good relationship with my superior	72.8	20.8	6.4
Good facilities are provided by the company	64.9	28.2	6.9
Good welfare activities are provided by our Company	65.9	25.2	8.8
Work conditions allow me to be as productive as I could be	66.3	27.1	6.6
Company provide flexible working shift	54.0	37.2	8.7

10.3.4.3 Overview of OSH Performance at Workplace by OSH Personnel

From the scale of 1 to 5 with 5 being the best performance and 1 being the worst performance, OSH personnel participated in this survey were asked to rate their own company overall OSH performance based on the current practices, system and management.

Overall, Figure 10.21 highlighted that 48% of OSH personnel claimed that the OSH performance their workplace is good at the current practices with a rating of "4" whereas 35% of OSH personnel consider the OSH performance in their workplace is good with room of improvement based on current practices.

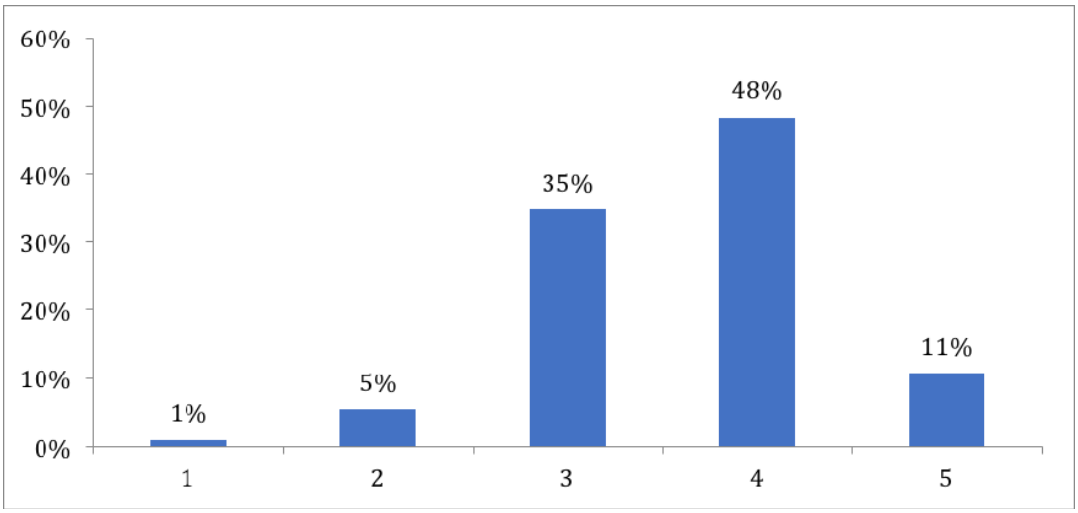

Figure 10.21: Overall OSH performance reported by OSH personnel (N=1,415)

10.4 Survey Findings (Local and Foreign Worker)

Table 10.22 shows that a total of 12,962 general workers were recruited to participate in this survey, which comprises of 8,756 Malaysian and 4,206 foreign workers. A general worker performs responsible unskilled manual work; does related work as required. Work is performed under immediate supervision. This position may exist in more than one department, which the essential functions may vary by department.

Table 10.22: Local/Foreign Worker based on industry who contributed to the survey

CATEGORY	(%)
Manufacturing	43.8
Agriculture, Forestry, Fishing	1.4
Transportation and Communication	2.9
Trades, Banking and Finance	1.0
Governmental Services/Statutory Bodies	5.7
Hotel and Restaurant	10.6
Oil and Gas	2.3
Construction	18.1
Mining and Quarrying	0.1
Utilities	1.3
Business and Services	6.7
Wholesale and retail	6.1

Total number of participant (N=12,962)

10.4.1 Socio-Demographic Characteristics

Based on Table 10.23, 42.9% of the general worker was 26-35 years old, 22.7% were 36-45 years old and 19.8% were 18-25 year old. At least 82.5% of the general workers are male where 70.6% of general workers have secondary and tertiary educational level. Among the total of 12,962 general workers, 67.5% were Malaysian, and 32.5% are foreign worker. The foreign workers are mainly comprised of Indonesia (16.6%), and Bangladeshi (13.3%). Other foreign workers are Pakistani, Cambodian, Chinese, Nepali, Indian, Myanmar, Vietnam, Afghanistan, Singapore, Taiwan, or Libya.

Most of the general workers indicated that they have worked in the current company for 1-3 years (32.7%), less than 1 year (25.5%), more than 5 years (25.5%) and 3-5 years (16.2%). However, 92% of foreign workers claimed that they have worked in Malaysia for more than 1 year; 1-3 year (38.6%), 3-5 years (18.5%) and more than 5 years (34.9%).

Table 10.23: The Socio-demographic Background of General Workers (N=12,962)

SOCIO-DEMOGRAPHIC BACKGROUND		(%)
Age	18-25	19.8
	26-35	42.9
	36-45	22.7
	45-55	12.6
	>55	2.1
Gender	Male	82.5
	Female	17.5
Education Level	Illiteracy	12.8
	Primary education	16.5
	Secondary education	37.6
	Tertiary education	33.0
Nationality	Malaysian	67.5
	Indonesian	16.6
	Bangladeshi	13.3
	Pakistani	0.3
	Cambodia	0.2
	China	0.01
	Nepali	0.6
	Indian	0.1
	Myanmar	0.01
	Vietnam	0.1
	Other (Afghanistan, Singapore, Taiwan, Libya)	1.3
Working in current company (year)	<1	25.5
	1-3	32.7
	3-5	16.2
	>5	25.5

SOCIO-DEMOGRAPHIC BACKGROUND		(%)
Working in Malaysia, only foreigners (year)	<1	8.0
	1-3	38.6
	3-5	18.5
	>5	34.9

10.4.2 Occupational Safety and Health Management System (OSHMS)

This section examines the occupational safety and health system of management at the workplace among the general workers. One of the most effective ways to reduce workplace hazards and injuries is through a comprehensive, proactive safety and health management system. A safety and health management system is a proactive, collaborative process to find and fix workplace hazards before employees are injured or become ill. The benefits of implementing safety and health management systems include protecting workers, saving money, and making all your hazard-specific programs more effective.

Based on Table 10.24, foreigner had noticed the existence of OSH policy or any system better than foreigner (71% Malaysians vs 87.1% foreigners). It is interesting to know that 73% of foreigners received training related to OSH from their employer before starting new task and this rate was higher than Malaysian (65.4%). Besides, 62.9% of Malaysian mentioned that their employer provided safe and suitable equipment/tools based on safety procedure and work instruction which were higher than those reported by foreigners (55.4%). In addition, Malaysian (73.1%) and foreigners (75.8%) were equally aware of the risks in their occupation.

Table 10.24: OSHMS info at the workplace for the General Workers (N=12,962)

OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT SYSTEM (OSHMS)	MALAYSIAN (N=8,756) (%)		FOREIGNERS (N=4,206) (%)	
	YES	NO	YES	NO
Notice OSH policy or any system	71.2	28.4	87.1	12.7
Receive any training related to OSH from your employer before starting new task	65.4	34.4	73	27
Your employer provide safe & suitable equipment/tools based on safety procedure & work instruction	62.9	37.3	55.4	44.5
You aware of the risk in your occupation	73.1	26.4	75.8	24.1

10.4.3 Occupational Safety and Health (OSH) Practices

Worker participation is vital to the success of safety and health programs. They have much to gain from a successful program and the most to lose if the program fails. They also often know the most about potential hazards associated with their jobs. Successful programs tap into this knowledge base.

Including worker input at every step of program design and implementation improves your ability to identify the presence and causes of workplace hazards, creates a sense of program ownership among workers, enhances their understanding of how the program works, and helps sustain the program over time. In other words, worker participation means that workers are involved in establishing, operating, evaluating, and improving the safety and health program.

Table 10.25 shows that, it is notable that 73.7% of Malaysian, and 76.4% of foreigners know at least one OSH-related law. It should be noted that, 83.9% of foreigners were involved in OSH activities/programs and this rate were higher than their parallel group (50.3%). About 6.6% of foreigners mentioned that they report to their management of the potential hazards of the workplace, and this rate was 78.7% among Malaysian. It is good to know that, 84.5% of foreigners knows what to do if they get injured and this rate was 79% among Malaysian workers.

Table 10.25: The OSH Practice at the workplace among the General Workers (N=12,962)

OCCUPATIONAL SAFETY AND HEALTH (OSH) PRACTICES	MALAYSIAN (N=8,756) (%)			FOREIGNERS (N=4,206) (%)		
	YES	NO	UNSURE	YES	NO	UNSURE
Know at least one OSH law	73.7	20.0	6.3	76.4	10.7	12.9
Involve in OSH activities/program	50.3	41.5	8.1	83.9	12.9	3.2
I report to management about any potential hazards at workplace	78.7	18.1	3.2	86.6	10.4	3.0
I know what to do if I get injured/emergency situation	79.0	16.5	4.5	84.5	12.6	2.9

10.4.4 Workplace Hazards

Workers are often best positioned to identify safety and health concerns and program shortcomings, such as emerging workplace hazards, unsafe conditions, close calls/near misses, and actual incidents. In other words, an employer should consider how safe their employees feel. While employees feel safer and more secure at work, thus removing distractions that can undermine their productivity.

Figure 10.22 examined how safe the general workers feel in their current working environment. The findings shows that more than 50% of workers feel safe in their working environment and this rate was equal to 61% among Malaysian and 58.3% of the foreigners. On the other hand, around 40% of both local and foreign employees do not feel safe in their work environment.

Accidents can happen at any time, but when they occur in the workplace, there are various considerations. A work accident, workplace accident, occupational accident, or accident at work is a "discrete occurrence in the course of work" leading to physical occupational injury. As shown in Figure 10.23, more than 60% of workers (68.4% foreigners and 65.3% Malaysian) mentioned that they have not encountered any type of accident at the workplace.

Under-reporting is one of the phenomenons where underestimation of work-related injuries and illnesses occurs when organizations fail to record employee injuries and illnesses (organizational-level under-reporting) or when employees fail to report injuries and illnesses occurring at work (individual-level under-reporting). In the current survey, we define not reporting accident as the accidents experienced by the employee but not reported to the organization by employees. Figure 10.24 showed that about 89.4% foreign workers and 51.9% local workers indicated that they had encountered an unreported accident in their workplace.

In view of this, this section is to examine the extent of the “accident under-reporting” phenomenon among the general workers. Under-reporting has always been related to multiple factors such as perceived lack of management responsiveness, organizational safety climate, fear of reprisals or loss of benefits, and with a general acceptance that injuries are a fact of life in certain lines of work.

As summarized in Table 10.26, both local and foreign workers indicated different factors of non-reporting cases. For local employees, 30.8% of local general workers were perceived as pointless to report the cases, 30.5% feel embarrassed as the victim of the accident, 29% assume that the accident or pain is a natural part of my job, and 28.3% perceived that it is lack of interest from companies to take action.

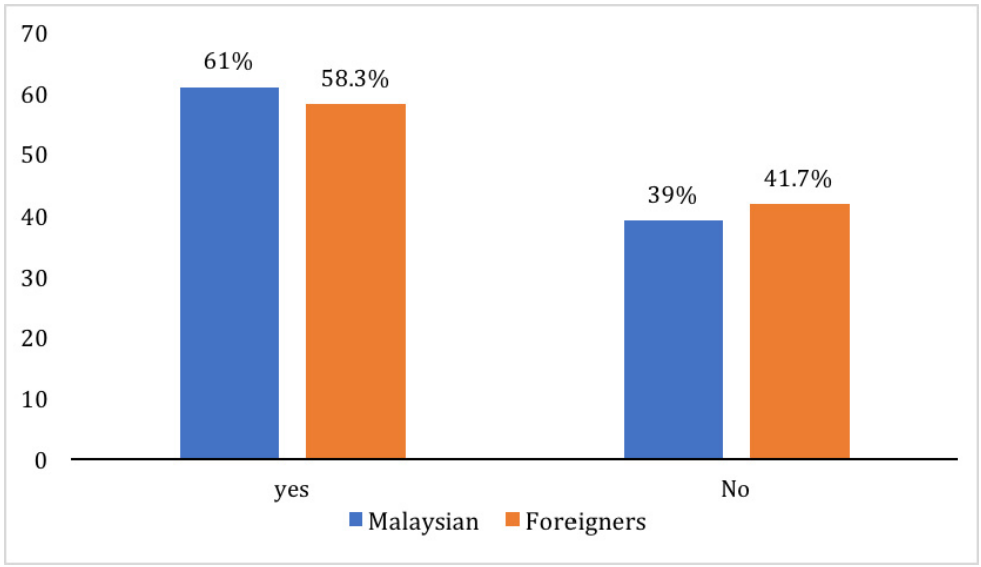

Figure 10.22: General workers answered if they feel safe in their work environment (Malaysian = 8,756, Foreigners = 4,206)

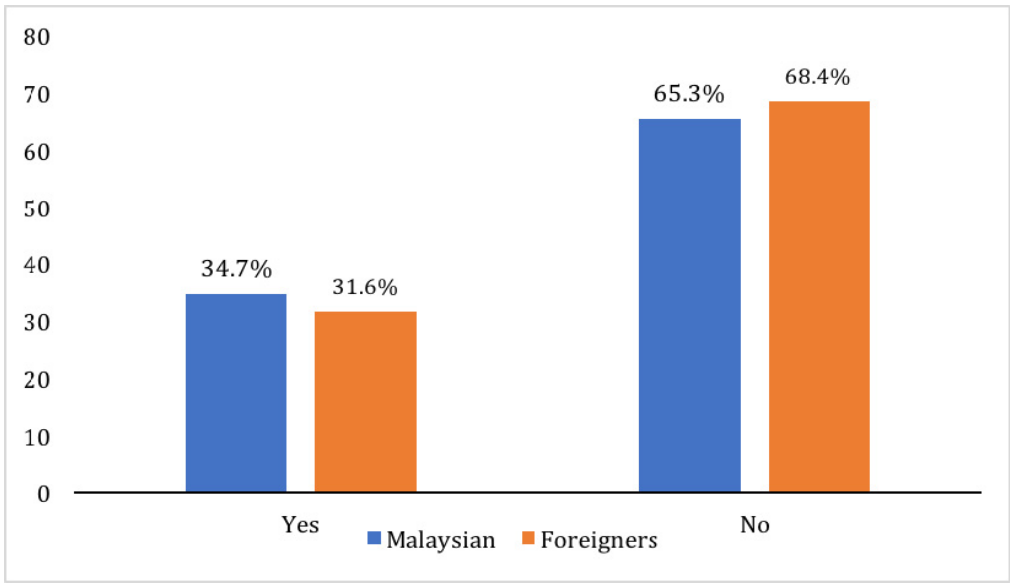

Figure 10.23: General workers answered if they encountered any types of accidents in their work environment (Malaysian = 8,756, Foreigners = 4,206)

However, 66.8% of the foreign workers claimed that they feel embarrassment for reporting accident to the employer, 63.1% of them assume that the accident or pain is a natural part of their job, 62.2% finds it difficult to report as the reporting procedure and policy is complicated, 58.5% of them feel not worthy to report accident to their employer, 55.2% feel that their company has no interest to take action and 50.2% of foreign workers fearing of retaliation (risk of losing work opportunities and reputation).

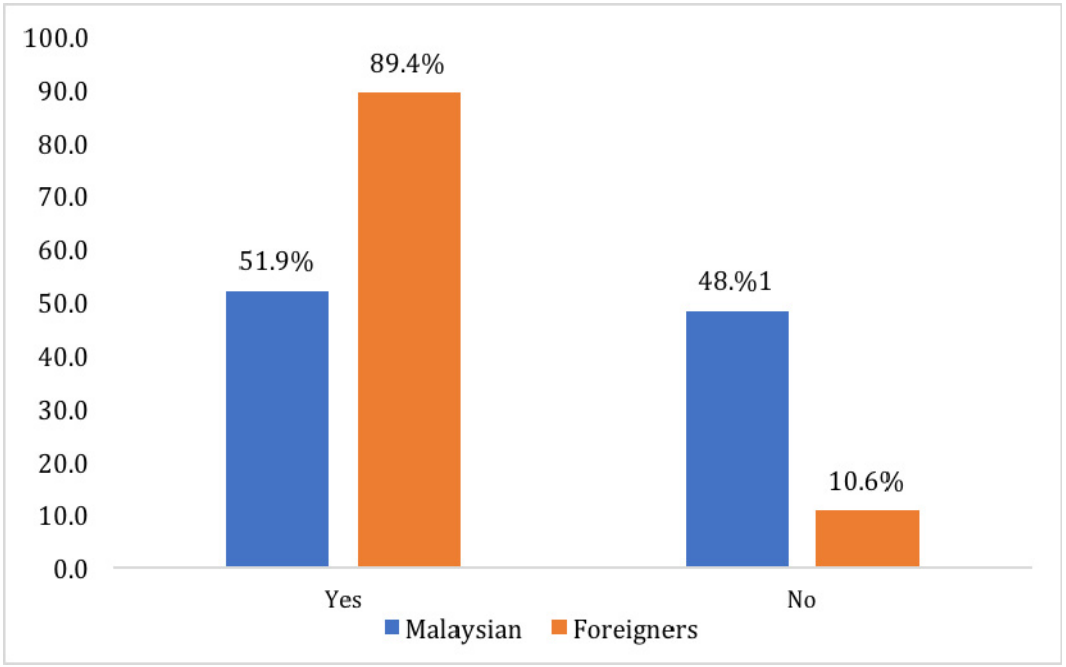

Figure 10.24: General workers answered if there is an accident they encountered but not reported to the employer (Malaysian = 8,756, Foreigners = 4,206)

Table 10.26: Reason of not reporting the Accident to the Employer

REASON	MALAYSIAN (N = 5,018) (%)		FOREIGNERS (N = 3,764) (%)	
	YES	NO	YES	NO
Fear of retaliation (loss of work opportunities, reputation)	25.9	74.1	50.2	49.8
Assume that the accident or pain is a natural part of my job	29.0	71.0	63.1	36.9
Embarrassment	30.5	69.5	66.8	33.2
Difficult and complicated of procedure and policy	22.6	77.4	62.2	37.8
It's easier not to report	23.4	76.6	30.5	69.5
Lack of interest from company to take action	28.3	71.7	55.2	44.8
Perceived as pointless to report	30.8	69.2	58.5	41.5
Lack of training	23.6	76.4	49.9	50.1

Every workplace has hazards, therefore, the best way to protect the employees from workplace hazards is to identify and manage them and take reasonable steps to prevent their potential to harm. In other words, to manage workplace health and safety and help prevent accidents and sickness absence, it's important to identify, monitor and reduce the risk associated with workplace hazards.

These survey findings reported that foreign workers encountered physical, chemical, biological and ergonomic hazards more than local workers. Table 10.27 summarizes that 76.7% of local workers indicated to have encountered ergonomic hazards, 69.2% of them had physical hazards, 64% had reported chemical hazards and 57.3% of them have biological hazards in their workplace. On the other hand, most of the foreign workers indicated that they encountered physical (94.5%), chemical (92.8%) and ergonomic hazard (92.2%) at their workplace. At the same time, 80% of foreign worker reported to have encountered biological hazards in their working environment.

Table 10.27: Types of Hazards Encountered at the Workplace reported by General Workers (Malaysian = 8,756, Foreigners = 4,206)

WORKPLACE HAZARDS	MALAYSIAN (N=8,756) (%)		FOREIGNERS (N=4,206) (%)	
	YES, (%)	NO, (%)	YES, (%)	NO, (%)
Physical Hazard	69.2	30.8	94.5	5.5
Chemical Hazard	64	36	92.8	7.2
Biological Hazard	57.3	42.7	80	20
Ergonomic Hazard	76.7	23.3	92.2	7.8

As discussed in Table 10.27, a total of 6,059 local workers and 3,975 foreign workers indicated that they encountered physical hazards at their workplace. Among the local workers, most of them (68%) encountered noise, 54% reported to have a lighting problem in their workplace, 43% of them experienced vibration and extreme temperature, and 36% of them indicated that they worked directly or indirectly from radiating hazards.

Conversely, the most physical hazards indicated by foreign workers were inadequate lighting provided at the workplace, followed by 79% of them complained that they work under extreme temperature. In addition, 63% of foreign workers claimed to encounter noise hazards, 51% reported to have radiation hazards and 40% indicated of vibration sources in their workplace.

Table 10.28: Types of Physical Hazards Encountered at the Workplace reported by Local and Foreign General Workers (Malaysian =8756, Foreigners =4206)

PHYSICAL HAZARDS	MALAYSIAN (N=6,059) (%)		FOREIGNERS (N=3,975) (%)	
	YES, (%)	NO, (%)	YES, (%)	NO, (%)
Noise	68	32	63	37
Vibration	43	57	40	60
Radiation	36	64	51	49
Extreme temperature	43	57	79	22
Lighting	54	46	88	12

A total of 5,604 local workers and 3,903 foreign workers indicated that they encountered chemical hazards in their workplace. Among all, Table 10.29 summarizes that 80% of foreign workers reported that they handled chemicals such as pesticide (90%), chemical fertilizer (89%), and heavy metal (88%) during their work activity.

Another 60% and 55% of foreign workers indicated that they were exposing to mineral dust and organic solvent in their workplace. On the other hand, 59% of local workers exposed to heavy metal, 44% handle chemical fertilizer, with another 43% and 40% of them expose to mineral dust and pesticides. Other chemical hazard includes petrol, sand, wash solution, acetone, gas, chlorine, battery acid, lubricants are also reported to be commonly used by employees.

Table 10.29: Types of Chemical Hazards Encountered at the Workplace reported by Local and Foreign General Workers (Malaysian =8,756, Foreigners =4,206)

CHEMICAL HAZARDS	MALAYSIAN (N=5,604)(%)		FOREIGNERS (N=3,903)(%)	
	YES, (%)	NO, (%)	YES, (%)	NO, (%)
Pesticide	40	60	90	10
Chemical fertilizer	44	56	89	11
Organic solvent	30	70	55	45
Heavy metal	59	41	88	12
Mineral dust	43	57	60	40
Others	13	87	2	98

A total of 5,017 local workers 3,365 foreign workers indicated that they encountered biological hazards in their workplace. As shown in Table 10.30, about 85% of foreign workers reported that there was vectors (mosquitoes, flies, mites, cockroaches), 79% claimed that microbiological (mold, bacteria, virus) exist in their workplace, 64% and 60% of foreign workers indicated that poisonous animal (snake, scorpion) as well as rodent type of animals in their workplace.

For local workers, 70% reported that there is vectors (mosquitoes, flies, mites, cockroaches, etc.) exist in their workplace, followed by 56% having microbiological (mold, bacteria, virus), 54% reported to have rodent-type (rate, bat) and 42% claimed to have a poisonous animal (snake and scorpion) and at the workplace. Other reported biological hazard such as dog, monkey, and cat are also mentioned by local workers.

As discussed in Table 10.31, a total of 6,716 local workers 3,878 foreign workers agrees that they encountered ergonomic hazards in their workplace. With this, Table 10.31 showed that 47% of local workers reported that they encountered ergonomic problems such as awkward posture, followed by about 44% of them indicated they were involved in lifting, manual handling, and repetitive movement without a proper ergonomic workplace design.

Another 14% of local workers mentioned other ergonomic problem they encountered which not otherwise mentioned, mainly due to limited working space, prolonged sitting or standing, visual display setting. As for foreign workers, 68% of them claimed that they worked with awkward posture, 61% of them complaining about their non-ergonomic design hand tools, 56% indicated that they work with repetitive movement and 48% claimed to work with non-ergonomic workplace design.

Table 10.30: Types of Biological Hazards Encountered at the Workplace reported by Local and Foreign General Workers (Malaysian =8,756, Foreigners =4,206)

BIOLOGICAL HAZARDS	MALAYSIAN (N=5,017) (%)		FOREIGNERS (N=3,365) (%)	
	YES	NO	YES	NO
Microbiological (mold, bacteria, virus)	56	44	79	21
Vectors (mosquitoes, flies, mites, cockroaches)	70	30	85	15
Rodent (rat, bat)	54	46	60	40
Poisonous animal (snake, scorpion)	42	58	64	36
Others	25	75	0	100

Table 10.31: Types of Ergonomic Hazards Encountered at the Workplace reported by Local and Foreign General Workers (Malaysian =8,756, Foreigners =4,206)

ERGONOMIC HAZARDS	MALAYSIAN (N = 6,716)		FOREIGNERS (N = 3,878)	
	YES, (%)	NO, (%)	YES, (%)	NO, (%)
Lifting, manual handling	43	57	30	70
Repetitive movement	44	56	56	44
Awkward posture	47	53	68	32
Workplace design	43	57	48	52
Hand tools	36	64	61	39
Others	14	86	0	100

10.4.4.1 Economic Impact towards Occupational Safety and Health

SOCSO (Social Security Organization), also known as PERKESO (*Pertubuhan Keselamatan Sosial*), was established to provide social security protections to all employees/workers in Malaysia. Every company is required to contribute SOCSO for its employees, whether they are full/part time, permanent or temporary, employment or contract. It is interesting to know that around 80% of Malaysian make a contribution to SOCSO, and they understand if any accident occurs, they are entitled to receive compensation. Table 10.32 noted that 62.8% of the Malaysian feels safe when they contributed to SOCSO, and 39% of Malaysian uses their own money to buy personal protective equipment (PPE) to use at work.

As foreign workers are not entitled to contribute to SOSCO as local employees did, local employer who recruited the foreign employees in their workplace shall make the contribution of foreign worker levy (pricing mechanism to regulate the number of foreign workers). Table 10.33 showed that more than 85% of foreigners have insurance and more than 90% understand if the accident occurs to them and they are entitled to receive compensation. It is good to know that more than 70% think that the cost of LEVI will burden them, and they have used their own money to buy personal protective equipment.

Table 10.32: Economic Impacts towards OSH among Local General Workers (N=8,756)

ECONOMIC IMPACTS	LOCAL GENERAL WORKERS (N=8,756)		
	YES, (%)	NO, (%)	UNSURE, (%)
Do you contribute to SOCSO?	79.1	8.7	12.2
Do you understand if any accident occurs, you are entitled to receive compensation?	79.7	8.3	12.1
Do you feel safe when you have contributed to SOCSO?	62.8	15.9	21.4
Have you use your own money to buy personal protective equipment's (PPE)?	39	44.9	16.1

Table 10.33: Economic Impacts towards OSH among Foreign General Workers (N=4,206)

ECONOMIC IMPACTS	FOREIGN GENERAL WORKERS(N=4,206)		
	YES, (%)	NO, (%)	UNSURE, (%)
Do you have insurance?	86.9	10.5	2.7
Do you understand if the accident occurs to you, are you entitled to receive compensation?	90.8	4.7	4.5
Do you think that the cost of LEVI will burden you?	72.3	20.3	7.4
Have you use your own money to buy personal protective equipment's (PPE)?	73.3	18.1	8.6

10.4.4.2 Quality of Working Life

The "Quality of Working Life" (QWL) is a term that had been used to describe the broader job-related experience an individual has. It is presumed that, a well-designed OSH practices at the workplace would produce a productive and safe working environment, without potential physical, emotional and mental health risks.

In view of this, Table 10.34 summarizes the quality of working life among local and foreign general workers. For local worker, 77% of them agreed that they have a harmonious relationship with my colleagues, 66.8% of them saying that they had a good relationship with their superior, 66% of them was provided with a good facility by their employer, 55.7% of them enjoyed the good welfare activities by their company and 53.8% of them agreed that their current work conditions allow them to be as productive as they could be.

Conversely, most of the foreign workers (91.7%) have had a harmonious relationship with their colleagues, 89.1% of them had a good relationship with their superior and about 88% of them claimed that their work conditions allow them to perform as productive as they can with the providing good and motivated work environment. In addition, about 70% of foreign workers satisfy with better facilities and welfare provided by the company.

Table 10.34: Quality of Working Life among Local and Foreign General Workers (Malaysian = 8,756, Foreigners = 4,206)

QUALITY OF WORKING LIFE	MALAYSIAN (N=8756) (%)			FOREIGNERS (N=4206) (%)		
	YES	NO	UNSURE	YES	NO	UNSURE
I find my work quite stressful	30.3	44.2	25.5	3.0	6.1	90.9
My company work environment is good and highly motivated	59.9	25.9	14.2	88.7	8.3	3.0
It is hard to take time off during our work if emergency or family matters.	34.4	43	22.6	3.4	5.7	90.9
The wage given by my company is sufficient.	49.7	20.7	29.6	5.7	3.4	90.9
There is a harmonious relationship with my colleagues.	77.0	11.3	11.7	91.7	6.2	2.1
My employer is considerate if I have personal matters during working hours	48.7	22.8	28.5	6.8	1.6	91.6

QUALITY OF WORKING LIFE	MALAYSIAN (N=8756) (%)			FOREIGNERS (N=4206) (%)		
	YES	NO	UNSURE	YES	NO	UNSURE
There is a good relationship with my superior	66.8	16.7	16.5	89.1	9.4	1.5
Good facilities are provided by the company	66.0	18.9	15.1	77	20.8	2.2
Good welfare activities are provided by our Company	55.7	22.9	21.5	70.0	24.2	5.8
Work conditions allow me to be as productive as I could be	53.8	20.7	25.5	88	10.2	1.8

10.4.4.3 Overview of OSH Performance at Workplace by General Worker

From the scale of 1 to 5 with 5 being the best performance and 1 being the worst performance, the employees participated in this survey were asked to rate their own company overall OSH performance based on the current practices, system and management.

Overall, 46% of foreign workers claimed that the OSH performance at their workplace were good at the current practices with a rating of "4" and 23.5 % of them consider the OSH performance in their workplace is good with room of improvement based on current practices. On the other hand, 69.5% of local workers indicated that the OSH performance their workplace is at their best practices with the current practices with the performance rated as "5" and "4".

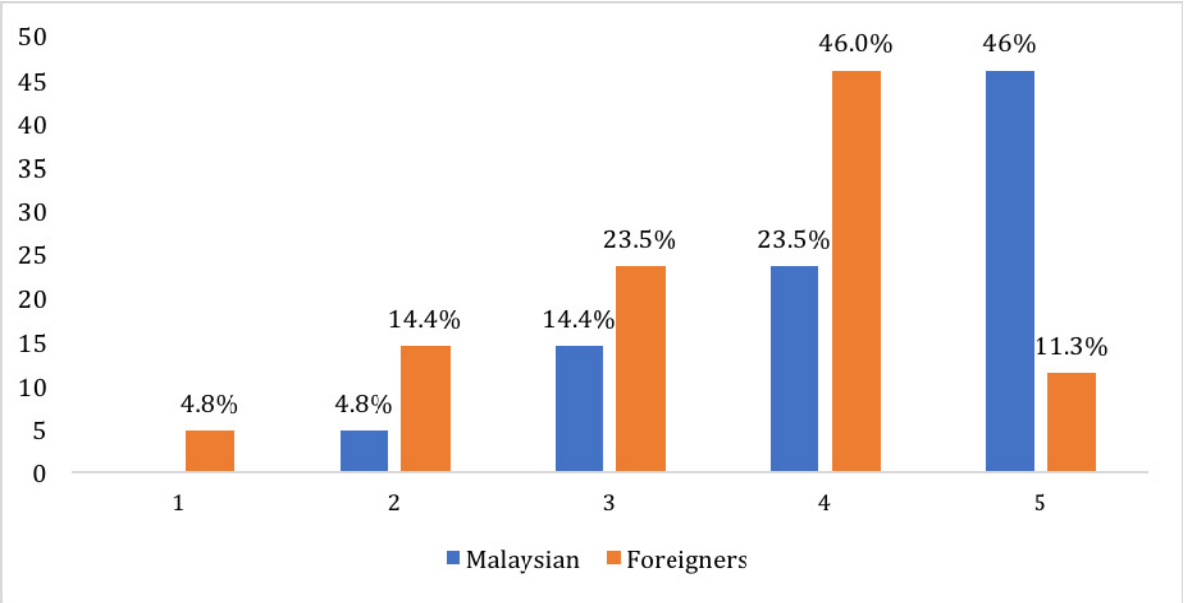

Figure 10.25: Question asked: "On a scale of 1 to 5 with 5 being the best performance, how would you describe the overall OSH performance on your company?"

ADDRESS LOCATION AND CONTACT INFORMATION OF DOSH OFFICES NATIONWIDE

Headquarter
Jabatan Keselamatan dan Kesihatan Pekerjaan Malaysia (JKKP)
Aras 1, 3, 4 & 5, Blok D4, Kompleks D,
Pusat Pentadbiran Kerajaan Persekutuan, 62530 W. P. Putrajaya
Email: projkkp@mohr.gov.my
Tel.: +603 8000 8000
Fax: +603 8889 2443

Federal Territory of Kuala Lumpur
Jabatan Keselamatan dan Kesihatan Pekerjaan WP Kuala Lumpur
Aras 11 (West Wing), The I-CON
No. 1 Jalan 1/68F, Jalan Tun Razak,
55000 Kuala Lumpur
Email: jkkpwp@mohr.gov.my
Tel.: 03-2161 1414 / 03-2161 0720 / 03-2166 0412
Fax: 03-2161 0809

Selangor
Jabatan Keselamatan dan Kesihatan Pekerjaan Selangor
Level 7, Wisma Consplant 2,
Jalan SS16/1, 47500 Subang Jaya, Selangor
Email: jkkpsl@mohr.gov.my
Tel.: 03-5623 6400
Fax: 03-5638 9159

Johor
Jabatan Keselamatan dan Kesihatan Pekerjaan Johor
Level 9, Menara TJB,
Jalan Dato' Mohd Mufti,
80534 Johor Bahru, Johor
Email: jkkpjh@mohr.gov.my
Tel.: 07-221 4121 / 07-224 2122 / 07-224 3076
Fax: 07-224 2667 (Level 9) / 07-224 9039 (Level 7)

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Melaka
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Aras 3 & 4, Menara Persekutuan,
Jalan Persekutuan, Hang Tuah Jaya,
75450 Ayer Keroh, Melaka
Email: jkkpmk@mohr.gov.my
Tel.: 06-234 5123
Fax: 06-234 5121

Negeri Sembilan
Jabatan Keselamatan dan Kesihatan Pekerjaan N.Sembilan
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Jalan Sg.Ujong,
70000 Seremban, Negeri Sembilan
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Tel.: 06-761 2828
Fax: 06-764 3143

Kedah
Jabatan Keselamatan dan Kesihatan Pekerjaan Kedah
Aras 5, Zon A, Wisma Persekutuan
Pusat Pentadbiran Kerajaan Persekutuan,
06550 Bandar Muazam Shah, Kedah
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01000 Kangar Perlis
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Jalan Mat Kilau,
25000 Kuantan, Pahang
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Fax: 084-315 940

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ADDRESS LOCATION AND CONTACT INFORMATION OF DOSH OFFICES NATIONWIDE

Sandakan

Jabatan Keselamatan dan Kesihatan Pekerjaan Cawangan Sandakan
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Batu 7, Jalan Labuk, W.D.T 71,
Bangunan Rumah Persekutuan,
90500 Sandakan, Sabah
Email: jkkpsdkn@mohr.gov.my
Tel.: 089-672 059 / 089-672 072
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AGRICULTURE AND MANUFACTURING

1. All Malayan Estates Staff Union (AMESU)
2. Kesatuan Kakitangan Jabatan Pertanian Sarawak
3. Kesatuan Pekerja-pekerja FELDA
4. Kesatuan Pekerja-pekerja Lembaga Kemajuan Ikan Malaysia
5. Sabah Plantation Industry Employees Union
6. Sabah Rubber Fund Board Employees Union
7. Association of Agricultural Executives Sabah
8. Kesatuan Pekerja-pekerja Felda Plantations Sdn. Bhd.
9. Kesatuan Pekerja-pekerja Jabatan Hutan Sarawak
10. Kesatuan Pekerja-pekerja Felda Rubber Products Sdn. Bhd.
11. Kesatuan Eksekutif Felcra Bhd.
12. Kesatuan Pekerja-pekerja Sabah Forest Industry
13. Association Shell Oilfields Supervisory and Specialist Staff Union

MINING AND PETROLEUM & TRANSPORT AND COMMUNICATIONS

1. Kesatuan Kakitangan Petroleum Nasional Bhd (Petronas) Sarawak
2. Kesatuan Kebangsaan Pekerja-pekerja Lombong Semenanjung Malaysia
3. Kesatuan Pekerja-pekerja Esso Production Malaysia Inc.
4. Kesatuan Pekerja-pekerja Kumpulan Shell Semenanjung Malaysia
5. Sabah Mining Employees Union
6. Sabah Petroleum Industry Workers Union
7. Sarawak Petroleum Industry Workers Union
8. Sarawak Shell Employees Union
9. Sarawak Shell Oilfields Supervisory and Specialist Staff Union

ELECTRICITY AND WATER/ SERVICES

1. Kesatuan Kakitangan Lembaga Air Melaka
2. Kesatuan Kakitangan Pihak Berkuasa Air Pulau Pinang
3. Kesatuan Kakitangan Puncak Niaga (M) Sdn. Bhd.
4. Kesatuan Sekerja Lembaga Air Sibu
5. Sabah Water Industry Employees Union
6. Sarawak Electricity Supply Corporation Employees Union
7. TNB Junior Officers Union
8. Kesatuan Pekerja-pekerja Indah Water Konsortium Sdn. Bhd.
9. Kesatuan Eksekutif Syarikat Puncak Niaga (M) Sdn. Bhd.
10. Kesatuan Jurutera-jurutera Sabah Electricity Sdn. Bhd.
11. Kesatuan Pekerja-pekerja SAJ Holdings Sdn. Bhd.
12. Kesatuan Percantuman Pekerja-pekerja Tenaga Nasional Bhd.
13. Persatuan Eksekutif Tenaga Nasional Bhd.

CONSTRUCTION

Union of Employees in the Construction Industry

COMMERCE, BANKING AND FINANCE

1. Association of Bank Officers Malaysia
2. Association of Hong Kong Bank Officers
3. Association of Maybank Class One Officers
4. Association of Maybank Executives
5. Kesatuan Kakitangan Angkatan Koperasi Kebangsaan Malaysia Bhd. (KESUKA)
6. Kesatuan Kakitangan Eksekutif Bank of Commerce (M) Bhd.
7. Kesatuan Pegawai-pegawai Bank Muamalat (M) Bhd.
8. Kesatuan Sekerja Kakitangan Bank Kerjasama Rakyat Malaysia Berhad
9. National Union of Bank Employees
10. National Union of Commercial Workers
11. Sabah Banking Employees Union
12. Sabah Commercial Employees Union
13. Sarawak Bank Employees Union
14. Kesatuan Pegawai-pegawai Bank Sabah
15. Kesatuan Kakitangan Bank Simpanan Nasional
16. Persatuan Pegawai-pegawai Pentadbiran Industri Insurans

MANUFACTURING

1. Cement Industry Employees Union
2. Chemical Workers Union of Malaya
3. DMIB Employees Union
4. DMIB Management Staff Association
5. Drink Manufacturing Industry Employees Union, Sarawak
6. Electrical Industry Workers Unions
7. F&NCC Beverages Sdn. Bhd. Executive Staff Union
8. Johore Textile and Garment Workers
9. Kesatuan Kakitangan Espek Sdn. Bhd.
10. Kesatuan Kakitangan Perak – Hanjoong Simen Sdn. Bhd.
11. Kesatuan Kakitangan Percetakan Keselamatan Nasional Berhad
12. Kesatuan Pekerja MTC
13. Kesatuan Pekerja-pekerja Perodua
14. Kesatuan Pekerja-pekerja SME Technologies Sdn. Bhd.
15. Kesatuan Pekerja-pekerja Acrylic Textiles of Malaysia Sdn. Bhd.
16. Kesatuan Pekerja-pekerja Amalgamated Parts Manufacturers Sdn. Bhd.
17. Kesatuan Pekerja-pekerja APM Shock Absorbers
18. Kesatuan Pekerja-pekerja Auto Parts Manufacturing (Seats & Radiators)
19. Kesatuan Pekerja-pekerja Central Sugar Refinery

MANUFACTURING
20. Kesatuan Pekerja-pekerja Fujikura Federal Cable
21. Kesatuan Pekerja-pekerja Gula Padang Terap Bhd.
22. Kesatuan Pekerja-pekerja Harris Advanced Technology (M) Sdn. Bhd.
23. Kesatuan Pekerja-pekerja Kian Joo
24. Kesatuan Pekerja-pekerja Kilang Gula Felda Perlis Sdn. Bhd.
25. Kesatuan Pekerja-pekerja Lucas Automotive Sdn. Bhd., Senai
26. Kesatuan Pekerja-pekerja Malay-Sino Chemical
27. Kesatuan Pekerja-pekerja Nippon Electric Glass (M) Sdn. Bhd.
28. Kesatuan Pekerja-pekerja Perusahaan Kumpulan United Motor Works
29. Kesatuan Pekerja-pekerja Perusahaan Membuat Tekstil dan Pakaian Perak
30. Kesatuan Pekerja-pekerja Pewter Kraftangan
31. Kesatuan Pekerja-pekerja Syarikat Gummi Metall Teknik (M) Sdn. Bhd.
32. Kesatuan Pekerja-pekerja Sime Tyres International Malaysia Sdn. Bhd.
33. Kesatuan Pekerja-pekerja Tamura Electronics (M) Sdn. Bhd.
34. Kesatuan Pekerja-pekerja Perusahaan Membuat Tekstil dan Pakaian Pulau Pinang dan Seberang Perai
35. Machinery Manufacturing Employees' Union
36. Malayan Sugar Manufacturing Employees' Union
37. Metal Industries Employees' Union
38. Motor Assemblers Supervisory Staff Union Peninsular Malaysia
39. National Union of Drinks Manufacturing Industry Workers
40. National Union of Employees in Companies Manufacturing Rubber Products
41. National Union of Industrial Mineral Smelting Workers
42. National Union of Petroleum and Chemical Industry Workers
43. National Union of Tobacco Workers
44. National Union of Transport Equipment Allied Industry Workers
45. National Union of Workers in the Shoe Manufacturing Industry
46. Non-Metallic Mineral Products Manufacturing Employees' Union
47. Negeri Sembilan and Malacca Textile and Garment Workers Union
48. Paper and Paper Products Manufacturing Employees' Union
49. Printing Industry Employees' Union
50. British American Tobacoo Employees' Union, Malaysia
51. Selangor and Federal Territory Textile Workers Union
52. Union of Beverage Industry Workers
53. Union of Malayawata Steel Workers
54. Kesatuan Pekerja-pekerja Nippon Elec (M) Sdn. Bhd.
55. Kesatuan Pekerja-pekerja Time Reach Sdn. Bhd.
56. Kesatuan Pekerja-pekerja Epson Precision (M) Sdn. Bhd.
57. Kesatuan Kakitangan C.G.E. Utilities (M) Sdn. Bhd.
58. Kesatuan Pekerja-pekerja Kami Electronics Industry (M) Sdn. Bhd.

MANUFACTURING
59. Kesatuan Pekerja-pekerja Perodua Engine Manufacturing Sdn. Bhd.
60. Kesatuan Pekerja-pekerja Hokuden (M) Sdn. Bhd
61. Kesatuan Pekerja-pekerja Casio (M) Sdn. Bhd.
62. Kesatuan Kakitangan Petroleum Nasional Bhd (Petronas Sabah)
63. Kesatuan Pekerja Shell MDS (M) Sdn. Bhd. Sarawak
64. Kesatuan Kakitangan Percetakan Nasional Malaysia Bhd. Sarawak
65. Kesatuan Pekerja-pekerja Sabah International Dairies Sdn. Bhd.
66. Kesatuan Pekerja-pekerja Hitachi Consumer Products (M) Sdn. Bhd.
67. Kesatuan Kakitangan Eksekutif Industri Makanan SM
68. Beverage Industry Executive Staff Union
69. Kesatuan Pekerja-pekerja Sabah International Dairies Sdn. Bhd.
70. Kesatuan Pekerja-pekerja Exxonmobil Exploration and Production Malaysia Inc.
71. Kesatuan Pekerja-pekerja Flextronics Manufacturing (M) Sdn. Bhd.
72. Kesatuan Pekerja-pekerja Perkayuan Semenanjung Malaysia
73. Kesatuan Pekerja-pekerja Qimonda Malaysia Sdn. Bhd

TRANSPORT & COMMUNICATION
1. Brooke Dockyard & Engineering Works Corporation Employees Union, Sarawak
2. Kesatuan Kakitangan Klang Container Terminal Sdn. Bhd.
3. Kesatuan Pekerja-pekerja Airod Sdn. Bhd.
4. Kesatuan Pekerja-pekerja Johor Port Bhd.
5. Kesatuan Pekerja-pekerja Limbongan Kapal
6. Kesatuan Pekerja-pekerja Limbongan Timor
7. Kesatuan Pekerja-pekerja M'sia Airports Bhd.
8. Kesatuan Pekerja-pekerja Malaysia Airport Bhd. Sarawak
9. Kesatuan Pekerja-pekerja MHS Aviation Sdn. Bhd. (Lapangan Terbang Kerteh – Kemaman)
10. Kesatuan Pekerja-pekerja Naval Dockyard Sdn. Bhd.
11. Kesatuan Pekerja-pekerja Pakaian Seragam Pos
12. Kesatuan Pekerja-pekerja Pelabuhan Klang Port Management Sdn. Bhd.
13. Kesatuan Pekerja-pekerja Pengkalan Bekalan Kemaman Sdn. Bhd.
14. Kesatuan Pekerja-pekerja Perbadanan Perkapalan Antarabangsa Malaysia Berhad (MISC) Semenanjung Malaysia
15. Kesatuan Pekerja-pekerja Perkeranian Pos Malaysia Berhad
16. Kesatuan Pekerja-pekerja Projek Lebuhraya Utara Selatan (PLUS)
17. Kesatuan Penyelia-penyelia Projek Lebuhraya Utara Selatan Bhd.
18. Kesatuan Sekerja Kakitangan Sistem Televisyen (M) Bhd.
19. Klang Port Management Staff Union
20. Malaysian Airlines System Employees' Union Peninsular Malaysia
21. MAS Executive Staff Association

TRANSPORT & COMMUNICATION
22. National Union of Newspaper Workers
23. National Union of Telekoms Employees
24. Penang Port Workers Union
25. Persatuan Pegawai-Pegawai Kanan Lembaga Pelabuhan Klang
26. Pos Malaysia Berhad Clerical Staff Union, Sabah
27. Railwaymen's Union of Malaya
28. Rajang Port Authority Employees Union
29. Redifussion Workers Union Of Malaya
30. Sabah Port Authority Workers Union
31. Transport Workers Union
32. Union of Employees in Port Ancillary Services Suppliers
33. Kesatuan Pekerja-pekerja Telekom Malaysia Bhd. Sabah
34. MHS Aviation Sdn. Bhd. Employees' Union Sarawak
35. Kesatuan Pegawai-pegawai Kanan Penang Port Sdn. Bhd.
36. Persatuan Pegawai Keselamatan Bukan Eksekutif Kuantan Port Consortium Sdn. Bhd.
37. Kesatuan Pekerja-pekerja Telekom Malaysia Bhd. Sabah
38. Kesatuan Pekerja Telekom Malaysia Berhad Sarawak
39. Persatuan Eksekutif Pos Malaysia
40. Kesatuan Pekerja–pekerja Lembaga Pelabuhan Kuching
41. Persatuan Kakitangan Eksekutif Sistem Penerbangan Malaysia (KK)
42. Kesatuan Eksekutif Utusan Melayu (M) Bhd.
43. Airlines Workers Union, Sarawak
44. Kesatuan Pekerja-pekerja Malaysia Airports Bhd. Wilayah Sabah
45. Kesatuan Eksekutif Airod Sdn. Bhd.
46. Kesatuan Sekerja Kakitangan Bintulu Port Sdn. Bhd.
47. Kesatuan Kakitangan Eksekutif MISC Bhd.
48. Kuching Port Authority Employees' Union
49. Sabah Executive Staff Association of Malaysia Airlines
50. Kesatuan Pelaut Sabah

SERVICES
1. Club Employees Union, Peninsular Malaysia
2. Commonwealth Services Employees Union
3. Concorde Hotel Employees Union
4. Kesatuan Kakitangan Am Kolej Tunku Abdul Rahman
5. Kesatuan Pekerja-pekerja Pens Travelodge Kangar
6. Kesatuan Pekerja-pekerja Hotel Sarawak
7. Kesatuan Pekerja-pekerja Parkroyal Kuala Lumpur
8. Kesatuan Pekerja-pekerja Safeguards Corporation Berhad

SERVICES
9. Kesatuan Pekerja-pekerja Securicor (M)
10. Kesatuan Pekerja-pekerja Securicor (M) Sdn. Bhd. Sabah
11. Kesatuan Pekerja-pekerja Securicor Sarawak
12. Kesatuan Pengawal-pengawal Keselamatan Malayan Banking
13. National Union of Hotel, Bar & Restaurant Workers, Peninsular Malaysia
14. National Union of Race Horse Syces Pen
15. National Union of Teachers in Independent Schools
16. Penang Turf Club Race Day Workers Union
17. Resort World Bhd. Executive Union
18. Resort World Employees Union
19. Sarawak Medical Services Union
20. Union of Employees in Private Medical Health Services
21. Union of Employees in Trade Unions
22. Sarawak Club Employee's Union
23. Kesatuan Pekerja-pekerja B. Braun Medical Industries Sdn. Bhd.
24. Kesatuan Kebangsaan Kakitangan Akademik Institusi Pengajian Tinggi
25. Kesatuan Pekerja-pekerja Zetavest Sdn. Bhd.
26. Kesatuan Eksekutif Angkatan Koperasi Kebangsaan Malaysia Bhd.
27. Sabah Hotel, Resort & Restautant Employees Union
28. Kesatuan Pekerja-pekerja Alam Flora Sdn. Bhd.
29. Kesatuan Pekerja-pekerja LSG Sky Chefts-Brahim's Sdn. Bhd.

GOVERNMENT SERVICES
1. Amalgamated Union of Employees in Government Clerical and Allied Services
2. Employees Provident Fund Board Staff Union
3. Kuala Lumpur City Council Workers Union
4. Kesatuan Kakitangan Am Universiti Putra Malaysia
5. Kesatuan Kakitangan Kumpulan Wang Simpanan Pekerja Sarawak
6. Kesatuan Kakitangan Lembaga Pasaran dan Pelesen Getah Malaysia, Semenanjung Malaysia
7. Kesatuan Kakitangan Lembaga Urusan dan Tabung Haji
8. Kesatuan Kakitangan Lembaga Pembangunan Pelaburan Malaysia (MIDA)
9. Kesatuan Kebangsaan Pembantu Tadbir Kesihatan Semenanjung Malaysia
10. Kesatuan Pegawai-pegawai Hasil Dalam Negeri
11. Kesatuan Pegawai-pegawai Majlis Amanah Rakyat (MARA)
12. Kesatuan Pekerja pekerja Jabatan Cetak Kerajaan
13. Kesatuan Pekerja-pekerja Jabatan Kebajikan Masyarakat Malaysia Semenanjung Malaysia (KIKMAS)
14. Kesatuan Pekerja-pekerja Koperasi Polis Diraja Malaysia Bhd.
15. Kesatuan Pekerja-pekerja Perbadanan Kemajuan Pelancongan Malaysia

GOVERNMENT SERVICES
16. Kesatuan Pekerja-pekerja Perbadanan Pembangunan Bandar Malaysia (UDA)
17. Kesatuan Pekerja-pekerja Zoo Negara/Akuarium Tunku Abdul Rahman
18. Kesatuan Sekerja Anggota Kumpulan Wang Simpanan Sabah
19. Kesatuan Sekerja Kakitangan Kemajuan Pahang Tenggara (DARA)
20. Kesatuan Sekerja Kakitangan Majlis Perbandaran Tawau
21. Malayan Nurses Union
22. Malayan Technical Services Union
23. Malaysian Rubber Board Staff Union
24. National Union of Public Works Department Employees
25. National Union of the Teaching Profession
26. Penang Municipal Services Union
27. Sabah Electricity Board Employees Union
28. Sabah Medical Services Union
29. Senior Officers Association University Hospital
30. University Hospital Staff Union
31. University of Malaya General Staff Union
32. Kesatuan Kakitangan Perbadanan Hal Ehwal Bekas Angkatan Tentera
33. Sabah Inland Revenue Employee's Union

1. Peninsular Malaysia Customs Officers Union, or Kesatuan Pegawai Kastam Semenanjung Malaysia (KPKSM)
2. Kesatuan Penyediaan Makanan Hospital Semenanjung Malaysia
3. Kesatuan Pembantu Perangkaan Kerajaan Semenanjung Malaysia
4. Amalgamated Union of Employees in Government Clerical and Allied Services
5. Kesatuan Kakitangan Lembaga Tabung Angkatan Tentera
6. Kesatuan Pegawai-pegawai Hutan Melayu Semenanjung Malaysia
7. Kesatuan Pekerja-pekerja Perbadanan Kemajuan Negeri Selangor
8. Kesatuan Pekerja Bomba dan Penyelamat Semenanjung Malaysia
9. Kesatuan Pekerja-pekerja Jabatan Perhilitan Semenanjung Malaysia
10. Kesatuan Kakitangan Am Pusat Perubatan Universiti Malaya
11. Kesatuan Kakitangan Perkhidmatan Tadbir dan Awam Pasukan Polis Semenanjung Malaysia
12. Sarawak Medical Services Union
13. Kesatuan Pegawai-pegawai Kastam Sarawak
14. Kesatuan Juruteknologi Pergigian Semenanjung Malaysia
15. Kesatuan Pembantu Pembedahan Pergigian Semenanjung Malaysia
16. Kesatuan Perkhidmatan Teknik Semenanjung Malaysia
17. Kesatuan Kakitangan Lembaga Kemajuan Pertanian Kemubu
18. Malayan Nurses Union (MNU), or Kesatuan Jururawat Malaya
19. Kesatuan Pembantu Pertanian Semenanjung Malaysia
20. Kesatuan Pekerja Rendah Awam Kerajaan Negeri Perak Darul Ridzuan
21. Kesatuan Pekerja-pekerja Perdananan Kemajuan Negeri, Negeri Sembilan
22. Kesatuan Pekerja-pekerja Majlis Bandaraya Melaka Bersejarah
23. Kesatuan Pekerja-pekerja Lembaga Kemajuan Tanah Persekutuan (FELDA)
24. Kesatuan Kakitangan Am Universiti Teknologi Malaysia
25. Kesatuan Perkhidmatan Perkeranian Kerajaan Kelantan
26. Kesatuan Kakitangan Am Universiti Putra Malaysia
27. Kesatuan Penyelia Asrama Kementerian Kesihatan Semenanjung Malaysia
28. Kesatuan Pekerja-pekerja Kuasa-kuasa Tempatan Negeri Perak
29. Kesatuan Pegawai-pegawai Majlis Amanah Rakyat (MARA)
30. Persatuan Pegawai-pegawai Perkhidmatan Perhubungan Perusahaan Kementerian Sumber Manusia
31. Kesatuan Pegawai Kanan Pihak Berkuasa Kemajuan Pekebun Kecil Perusahaan Getah (RISDA)

32. Kesatuan Kakitangan Umum Universiti Teknologi MARA
33. Kesatuan Kebangsaan Pembantu Perawatan Kesihatan Semenanjung Malaysia
34. Kesatuan Kakitangan Lembaga Pemasaran Pertanian Persekutuan (FAMA)
35. Kesatuan Kebangsaan Kakitangan Majlis Amanah Rakyat (MARA)
36. Kesatuan Pembantu Veterinar Semenanjung Malaysia
37. Kesatuan Pekerja-pekerja Lembaga Kemajuan Pertanian Muda (MADA)
38. Kesatuan Pekerja-pekerja Keretapi Negeri Sabah
39. Kesatuan Pekerja-pekerja Awam Angkatan Tentera Malaysia
40. Kesatuan Buruh Majlis Bandaraya Pulau Pinang
41. Kesatuan Kakitangan Jabatan Pertanian Sarawak
42. Kesatuan Penolong Pegawai Penyediaan Makanan Kementerian Kesihatan Semenanjung Malaysia
43. Kesatuan Penolong Pegawai Kesihatan Persekitaran Sabah
44. Kesatuan Sekerja Kakitangan Majlis Agama Islam Kelantan
45. Kesatuan Kakitangan Am Institut Penyelidikan Dan Kemajuan Pertanian Malaysia (MARDI) Malaysia
46. Kesatuan Pembantu Tadbir Kesihatan Semenanjung Malaysia
47. Kesatuan Kebangsaan Pekerja-pekerja Jabatan Kerja Raya dan Air
48. Kesatuan Sekerja Kakitangan Makmal Kementerian Pendidikan Semenanjung Malaysia
49. Kesatuan Kebangsaan Pekerja-pekerja Pihak Berkuasa Tempatan Semenanjung Malaysia
50. Kesatuan Perkhidmatan Perguruan Kebangsaan Semenanjung Malaysia
51. Kesatuan Perkhidmatan Perubatan Sabah
52. Kesatuan Pekerja-pekerja Kerajaan Kedah
53. Kesatuan Bidan-bidan dan Jururawat Desa Kerajaan Semenanjung Malaysia
54. Kesatuan Penyelenggara Setor Kerajaan
55. Kesatuan Pegawai Pengangkutan Jalan Semenanjung Malaysia
56. Persatuan Pengajar Jururawat Semenanjung Malaysia
57. Kesatuan Pekerja-pekerja Lembaga Getah Malaysia
58. Kesatuan Pekerja-pekerja Kerajaan Negeri Kelantan
59. Kesatuan Pembantu Operasi Perkhidmatan Awam Semenanjung Malaysia
60. Kesatuan Pekerja-pekerja Jabatan Kebajikan Masyarakat Malaysia Semenanjung Malaysia

61. Kesatuan Pekerja-pekerja Pihak Berkuasa Kemajuan Pekebun Kecil Perusahaan Getah (RISDA) Semenanjung Malaysia
62. Kesatuan Pekerja-pekerja Kerajaan Negeri Melaka
63. Kesatuan Inspektor Kesihatan Semenanjung Malaysia
64. Kesatuan Pekerja-pekerja Pengangkutan Majlis Amanah Rakyat (MARA) Malaysia Barat
65. Kesatuan Kakitangan Am Universiti Sains Malaysia
66. Kesatuan Pekerja-pekerja Lembaga Air Perak Darul Ridzuan
67. Kesatuan Kakitangan Pertubuhan Keselamatan Sosial
68. Kesatuan Kakitangan Perbadanan Pembangunan Pelaburan Malaysia (MIDA)
69. Kesatuan Pegawai-pegawai Penguatkuasa Kementerian Perdagangan Dalam Negeri dan Hal Ehwal Pengguna Malaysia
70. Kesatuan Kakitangan Universiti Utara Malaysia
71. Kesatuan Pegawai Eksekutif
72. Kesatuan Kakitangan Akademik Universiti Teknologi MARA
73. Kesatuan Pemandu-pemandu Kementerian Kesihatan Semenanjung Malaysia
74. Kesatuan Pembantu Tadbir dan Pembantu Tadbir Rendah (Pendidikan) Semenanjung Malaysia
75. Kesatuan Jurubahasa-jurubahasa dan Penterjemah-penterjemah Kementerian Kehakiman Malaysia Barat
76. Kesatuan Kakitangan Am Lembaga Minyak Sawit Malaysia
77. Kesatuan Pekerja-pekerja Kerajaan Negeri Johor
78. Kesatuan Pegawai Eksekutif Lembaga Pemasaran Pertanian Persekutuan (FAMA)
79. Kesatuan Penolong Pegawai Pembangunan Masyarakat dan Pembantu Pembangunan Masyarakat Jabatan Perpaduan Negara dan Integriti Nasional Semenanjung Malaysia
80. Kesatuan Kakitangan Lembaga Tabung Haji
81. Sarawak Government Dental Employees' Union
82. Kesatuan Pekerja-pekerja Kumpulan Perusahaan dan Buruh Kasar Majlis Bandaraya Perbandaran dan Daerah Bahagian Kuching dan Samarahan
83. Kesatuan Pekerja Awam Kementerian Pertahanan Malaysia (KESATRIA Sarawak)
84. Kesatuan Pekerja-pekerja Gaji Hari dan IMG JKR Sarawak
85. Kesatuan Kakitangan Awam Polis Sarawak (SPOCSU)
86. Kesatuan Guru-guru Bumiputera Sarawak
87. Sibu Water Board Employees Union
88. Kesatuan Pekerja-pekerja Majlis Bandaraya Miri

89. Kesatuan Pembantu Makmal (Pelajaran) Negeri Sarawak (KESPEMS)
90. Kesatuan Sekerja Kakitangan Majlis Perbandaran Tawau
91. Kesatuan Pekerja-pekerja Jabatan Air Sabah
92. Kesatuan Sekerja Jabatan Laut Sabah
93. Kesatuan Sekerja Kastam Diraja Sabah
94. Kesatuan Pekerja-pekerja Jabatan Kerja Raya Sabah
95. Kesatuan Guru-guru Kerajaan Sabah
96. Kesatuan Juruteknik Jabatan Kerja Raya Sabah
97. Kesatuan Perkhidmatan Perbandaran Pulau Pinang
98. Kesatuan Pekerja Dewan Bandaraya Kuala Lumpur
99. Kesatuan Pekerja-pekerja Rendah Awam Pihak Berkuasa Tempatan Negeri Johor
100. Kesatuan Pekerja-pekerja Jabatan Pertanian Sabah
101. Kesatuan Perkhidmatan Kawalan Vektor Semenanjung Malaysia
102. Kesatuan Kakitangan Jabatan Hal Ehwal Orang Asli Semenanjung Malaysia
103. Kesatuan Anggota-anggota Jabatan Penerangan
104. Kesatuan Kakitangan Am Universiti Sains Malaysia
105. Kesatuan Kakitangan Am Universiti Kebangsaan Malaysia (KESUKMA)
106. Kesatuan Kakitangan Am Universiti Malaya

List of OSH-Related Industrial Code of Practice in Malaysia

	CHEMICAL MANAGEMENT	YEAR
1	Industry Code of Practice on Chemicals Classification and Hazard Communication	2014
2	Industry Code of Practice on Indoor Air Quality	2010
	INDUSTRIAL HYGIENE	**YEAR**
1	Industry Code of Practice for Safe Working in a Confined Space	2010
	OCCUPATIONAL HEALTH	**YEAR**
1	Code of Practice on Prevention and Eradication of Drug, Alcohol and Substance Abuse in the Workplace	2005
2	Code of Practice on Prevention and Management of HIV/AIDS at the Workplace	2001
	TRANSPORTATION	**YEAR**
1	Code of Practice for Road Transport Activities	2010
2	Code of Practice on Safety, Health and Environment for Transportation Sector (SHE Code)	2007

List of Guidelines Published by DOSH

NO.	AGRICULTURE, FORESTRY & FISHING	YEAR
1	Guidelines on Occupational Safety and Health in Logging Operations	2004
2	Guidelines on Occupational Safety and Health in Fishing and Aquaculture Operations	2003
3	Guidelines on Occupational Safety and Health in Agriculture	2002
NO.	**BUILDING CONSTRUCTION & ENGINEERING WORK**	**YEAR**
1	Guidelines For Approval of Design Scaffolding	2016
2	Guidelines for Public Safety and Health at Construction Sites	2007
3	Guidelines for the Prevention of Falls at Workplaces	2007
4	Guidelines on Trenching for Construction Safety	2000
5	Guidelines on Occupational Safety and Health in Tunnel Construction	1998
NO.	**CHEMICAL**	**YEAR**
1	Guidelines on Mercury Management in Oil and Gas Industry	2011
2	Guide for the Generic Use of Assessment of Health Risk Arising From the Use of Chemical Hazardous to Health	2006
3	Guidelines on Storage of Hazardous Chemicals: A Guide for Safe Warehousing of Packaged Hazardous Chemicals	2005
4	Guidelines on the Use of Personal Protective Equipment Against Chemicals Hazards	2005
5	Guidelines on the Monitoring of Airborne Contaminant for Chemicals Hazardous to Health	2002
6	Guidelines on the Control of Chemicals Hazardous to Health	2001
7	Guidelines for the Preparation of a Chemical Register	2000
8	Assessment of the Health Risks Arising From the Use of Hazardous Chemical in the Workplace (2nd Edition)	2000
9	Guidelines on Method of Sampling and Analysis for Airborne Lead	1997
NO.	**COMPETENCY**	**YEAR**
1	Guidelines for Certification of Scaffolding Operator Training Centre	2016

2	Guidelines of Point System for Continuous Education Program	2011
3	Guidelines for Registration of Training Centre for Site Safety Supervisor	2011
4	Guidelines of Employee Training, Registration of Training Centre and Operation of Confined Space Training Course	2008
5	Guidelines for Certification of Crane Operator Training Centre	2004
6	Guidelines for Application of Safety and Health Officer Training Centre	2003
7	Guidelines for the Registration of Assessors, Hygiene Technician and Occupational Health Doctor	2000
8	Examination Syllabus for Engineer's Certification of Competency (Steam and Internal Combustion Engines) Examination	1996
9	Guidelines for Registration - Responsible Person for Tower Crane Installer-Maintainer / Passenger & Goods Hoisting Machine and Gondola	-
NO.	**ERGONOMIC**	**YEAR**
1	Guidelines on Occupational Vibration	2003
2	Guidelines on Occupational Safety and Health for Seating at Work	2003
3	Guidelines on Occupational Safety and Health for Working with Video Display Unit (VDU's)	2003
4	Guidelines on Occupational Safety and Health for Standing at Work	2002
NO.	**GENERAL**	**YEAR**
1	Guidelines On Contract Management	2015
2	Guidelines For The Factories And Machinery (Special Scheme Inspection)(Risk-Based Inspection)	2014
3	Guidelines in Courier Services Industry	2015
4	Guidelines on Occupational Safety and Health Act 1994 (Act 514)	2006
5	Guidelines on Occupational Safety and Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning & Occupational Disease) Regulations 2004 (NADOPOD)	2005
6	Guidelines on Occupational Safety and Health in the Service Sector	2004
7	Guidelines on Gender Issues in Occupational Safety & Health	2003
8	Guidelines for Media Professionals	2000

9	Guidelines on Occupational Safety and Health in the Office	1996
10	Guidelines for the Protection of Employees Against the Effects of Haze at Workplaces	-
11	Guidelines on Occupational Safety and Health Management Systems (OSHMS)	-
NO.	**HIRARC**	**YEAR**
1	Guidelines for Hazard Identification, Risk Assessment and Risk Control (HIRARC)	2008
NO.	**INDUSTRIAL HYGIENE**	**YEAR**
1	Guidelines On Heat Stress Management At Workplace	2016
2	Guidelines on Occupational Safety and Health for Design, Inspection, Testing and Examination of Local Exhaust Ventilation System	2008
3	Guidelines for Control of Occupational Noise	2005
NO.	**OCCUPATIONAL HEALTH**	**YEAR**
1	Guidelines on Aedes Mosquito Control in Construction Sites	2015
2	Guidelines on Occupational Health Services	2005
3	Guidelines on Preventing and Responding to Drugs and Alcohol Problems in the Workplace	2004
4	Guidelines on First Aid in the Workplace (2nd Edition)	2004
5	Guidelines on Reproductive Health Policy & Programmes at the Workplace	2002
6	Guidelines on Medical Surveillance	2001
7	Guidance for the Prevention of Stress and Violence at the Workplace	2001

List of Ergonomics Related Standard

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
1	MS ISO 26800:2013	ISO 26800:2011	Ergonomics - General Approach, Principles and Concepts	2013
2	MS ISO 9241-420:2012	ISO 9241-420:2011	Ergonomics of Human-System Interaction - Part 420: Selection of Physical Input Devices	2012
3	MS ISO 24500:2012	ISO 24500:2010	Ergonomics - Accessible Design - Auditory Signals for Consumer Products	2012
4	MS ISO 24501:2012	ISO 24501:2010	Ergonomics - Accessible Design - Sound Pressure Levels of Auditory Signals for Consumer Products	2012
5	MS ISO 9241-910:2012	ISO 9241-910:2011	Ergonomics of Human-System Interaction - Part 910: Framework for Tactile and Haptic Interaction	2012
6	MS ISO 24502:2012	ISO 24502:2010	Ergonomics - Accessible Design - Specification of Age-Related Luminance Contrast for Coloured Light	2012
7	MS ISO 24503:2012	ISO 24503:2011	Ergonomics - Accessible Design - Tactile Dots and Bars on Consumer Products	2012
8	MS ISO 9241-210:2011	ISO 9241-210:2010	Ergonomics of Human - System Interaction - Part 210: Human-Centred Design for Interactive Systems	2011
9	MS ISO 11064-5:2010	ISO 11064-5:2008	Ergonomic Design of Control Centres - Part 5: Displays and Controls	2010
10	MS ISO 9241-306:2010	ISO 9241-306:2008	Ergonomics of Human-System Interaction - Part 306: Field Assessment Methods for Electronic Visual Displays	2010

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
11	MS ISO 13732-1:2010	ISO 13732-1:2006	Ergonomics of The Thermal Environment - Methods for The Assessment of Human Responses to Contact with Surfaces - Part 1: Hot Surfaces	2010
12	MS ISO 11399:2010	ISO 11399:1995	Ergonomics of The Thermal Environment - Principles and Application of Relevant International Standards	2010
13	MS 2326:2010	-	Ergonomics of The Thermal Environment - Methods for The Assessment of Human Responses toContact with Surfaces at Moderate Temperature	2010
14	MS ISO 9241-303:2010	ISO 9241-303:2008	Ergonomics of Human-System Interaction - Part 303: Requirements for Electronic Visual Displays	2010
15	MS ISO 9241-171:2010	ISO 9241-171:2008	Ergonomics of Human-System Interaction - Part 171: Guidance on Software Accessibility	2010
16	MS ISO 9241-307:2010	ISO 9241-307:2008	Ergonomics of Human-System Interaction - Part 307: Analysis and Compliance Test Methods for Electronic Visual Displays	2010
17	MS ISO 9241-304:2010	ISO 9241-304:2008	Ergonomics of Human-System Interaction - Part 304: User Performance Test Methods for Electronic Visual Displays	2010
18	MS ISO 13732-3:2010	ISO 13732-3:2005	Ergonomics of The Thermal Environment - Methods for The Assessment of Human Responses to Contact with Surfaces - Part 3: Cold Surfaces	2010

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
19	MS ISO 9241-920:2010	ISO 9241-920:2009	Ergonomics of Human-System Interaction - Part 920: Guidance on Tactile and Haptic Interactions	2010
20	MS ISO 9241-151:2010	ISO 9241-151:2008	Ergonomics of Human-System Interaction - Part 151: Guidance On World Wide Web User Interfaces	2010
21	MS ISO 9241-20:2010	ISO 9241-20:2008	Ergonomics of Human-System Interaction - Part 20: Accessibility Guidelines for Information/ Communication Technology (ICT) Equipment and Services	2010
22	MS ISO 9241-300:2010	ISO 9241-300:2008	Ergonomics of Human-System Interaction - Part 300: Introduction to Electronic Visual Display Requirements	2010
23	MS ISO 9241-920:2010	ISO 9241-920:2009	Ergonomics of Human-System Interaction - Part 920: Guidance on Tactile and Haptic Interactions	2010
24	MS ISO 9241-151:2010	ISO 9241-151:2008	Ergonomics of Human-System Interaction - Part 151: Guidance On World Wide Web User Interfaces	2010
25	MS ISO 9241-20:2010	ISO 9241-20:2008	Ergonomics of Human-System Interaction - Part 20: Accessibility Guidelines for Information/Communication Technology (ICT) Equipment and Services	2010
26	MS ISO 9241-300:2010	ISO 9241-300:2008	Ergonomics of Human-System Interaction - Part 300: Introduction to Electronic Visual Display Requirements	2010
27	MS ISO 9241-302:2010	ISO 9241-302:2008	Ergonomics of Human-System Interaction - Part 302: Terminology for Electronic Visual Displays	2010

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
28	MS ISO 9241-302:2010	ISO 9241-302:2008	Ergonomics of Human-System Interaction - Part 302: Terminology for Electronic Visual Displays	2010
29	MS ISO 9241-303:2010	ISO 9241-303:2008	Ergonomics of Human-System Interaction - Part 303: Requirements For Electronic Visual Displays	2010
30	MS ISO 9241-171:2010	ISO 9241-171:2008	Ergonomics of Human-System Interaction - Part 171: Guidance on Software Accessibility	2010
31	MS ISO 1503:2010	ISO 1503:2008	Spatial Orientation and Direction of Movement - Ergonomic Requirements	2010
32	MS ISO 9241-304:2010	ISO 9241-304:2008	Ergonomics of Human-System Interaction - Part 304: User Performance Test Methods for Electronic Visual Displays	2010
33	MS ISO 9241-305:2010	ISO 9241-305:2008	Ergonomics of Human-System Interaction - Part 305: Optical Laboratory Test Methods for Electronic Visual Displays	2010
34	MS ISO 9241-307:2010	ISO 9241-307:2008	Ergonomics of Human-System Interaction - Part 307: Analysis and Compliance Test Methods for Electronic Visual Displays	2010
35	MS ISO 15743:2010	ISO 15743:2008	Ergonomics of The Thermal Environment - Cold Workplaces - Risk Assessment and Management	2010
36	MS ISO 13731:2010	ISO 13731:2001	Ergonomics of The Thermal Environment - Vocabulary and Symbols	2010
37	MS ISO 11429:2010	ISO 11429:1996	Ergonomics - System of Auditory and Visual Danger And Information Signals	2010

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
38	MS ISO 9920:2009	ISO 9920:2007	Ergonomics of The Thermal Environment - Estimation of Thermal Insulation and Water Vapour Resistance Of A Clothing Ensemble	2009
39	MS ISO 10075-3:2009	ISO 10075-3:2004	Ergonomic Principles Related to Mental Work-Load - Part 3: Principles And Requirements Concerning Methods for Measuring And Assessing Mental Workload	2009
40	MS ISO 9241-410:2009	ISO 9241-410:2008	Ergonomics of Human-System Interaction - Part 410: Design Criteria for Physical Input Devices	2009
41	MS ISO 9241-410:2009	ISO 9241-410:2008	Ergonomics of Human-System Interaction - Part 410: Design Criteria for Physical Input Devices	2009
42	MS ISO 10075-2:2009	ISO 10075-2:1996	Ergonomic Principles Related to Mental Work-Load - Part 2: Design Principles	2009
43	MS ISO 10075:2009	ISO 10075:1991	Ergonomic Principles Related to Mental Work-Load - General Terms And Definitions	2009
44	MS ISO 7726:2009	ISO 7726:1998	Ergonomics of The Thermal Environment - Instruments for Measuring Physical Quantities	2009
45	MS ISO 10551:2009	ISO 10551:1995	Ergonomics of The Thermal Environment - Assessment of The Influence of The Thermal Environment Using Subjective Judgement Scales	2009
46	MS ISO 11428:2009	ISO 11428:1996	Ergonomics - Visual Danger Signals - General Requirements, Design and Testing	2009
47	MS ISO 11079:2008	ISO 11079:2007	Ergonomics of The Thermal Environment - Determination and Interpretation Of Cold Stress When	2008

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
			Using Required Clothing Insulation (IREQ) And Local Cooling Effects	
48	MS ISO 15265:2008	ISO 15265:2004	Ergonomics of The Thermal Environment - Risk Assessment Strategy for The Prevention Of Stress Or Discomfort In Thermal Working Conditions	2008
49	MS ISO 14505-3:2008	ISO 14505-3:2006	Ergonomics of The Thermal Environment - Evaluation Of Thermal Environments In Vehicles – Part 3: Evaluation Of Thermal Comfort Using Human Subjects	2008
50	MS ISO 14505-2:2008	ISO 14505-2:2006	Ergonomics of The Thermal Environment - Evaluation Of Thermal Environments In Vehicles – Part 2: Determination Of Equivalent Temperature	2008
51	MS ISO/TS 20646-1:2007	ISO/TS 20646-1:2004	Ergonomic Procedures For The Improvement Of Local Muscular Workloads - Part 1: Guidelines For Reducing Local Muscular Workloads	2007
52	MS ISO 15535:2008	ISO 15536-1:2005	Ergonomics - Computer Manikins And Body Templates - Part 1: General Requirements	2007
53	MS ISO 13406-1:2007	ISO 13406-1:1999	Ergonomic Requirements For Work With Visual Display Based On Flat Panels - Part 1: Introduction	2007
54	MS ISO 13406-2:2007	ISO 13406-2:2001	Ergonomic Requirements For Work With Visual Display Based On Flat Panels - Part 2: Ergonomic Requirements For Flat Panel Displays	2007
55	MS ISO 9921:2007	ISO 9921:2003	Ergonomics - Assessment of Speech Communication	2007

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
56	MS ISO 15536-2:2007	ISO 15536-2:2007	Ergonomics - Computer Manikins And Body Templates - Part 2: Verification Of Functions And Validation Of Dimensions For Computer Manikin Systems	2007
57	MS ISO 8996:2007	ISO 8996:2004	Ergonomics of The Thermal Environment -Determination Of Metabolic Rate	2007
58	MS ISO 11064-6:2007	ISO 11064-6:2005	Ergonomic Design of Control Centres - Part 6: Environmental Requirements For Control Centres	2007
59	MS ISO 11064-4:2007	ISO 11064-4:2004	Ergonomic Design of Control Centres - Part 4: Layout And Dimensions Of Workstations	2007
60	MS ISO 9355-3:2007	ISO 9355-3:2006	Ergonomic Requirements For The Design Of Displays And Control Actuators - Part 3: Control Actuators	2007
61	MS ISO 9886:2007	ISO 9886:2004	Ergonomics - Evaluation of Thermal Strain By Physiological Measurements	2007
62	MS ISO 11064-7:2007	ISO 11064-7:2006	Ergonomic Design of Control Centres - Part 7: Principles For The Evaluation Of Control Centres	2007
63	MS ISO 7730:2007	ISO 7730:2005	Ergonomics of The Thermal Environment - Analytical Determination And Interpretation Of Thermal Comfort Using Calculation Of The Pmv And Ppd Indices And Local Thermal Comfort Criteria	2007
64	MS ISO 7731:2007	ISO 7731:2003	Ergonomics - Danger Signals For Public And Work Areas - Auditory Danger Signals	2007
65	MS ISO 7933:2007	ISO 7933:2004	Ergonomics Of The Thermal Environment - Analytical Determination And Interpretation Of	2007

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
			Heat Stress Using Calculation Of The Predicted Heat Strain	
66	MS ISO/TS 16071:2007	ISO/TS 16071:2003	Ergonomics Of Human-System Interaction - Guidance On Accessibility For Human-Computer Interfaces	2007
67	MS ISO 9241-110:2007	ISO 9241-110:2006	Ergonomics Of Human-System Interaction - Part 110: Dialogue Principles	2007
68	MS ISO 9241-400:2007	ISO 9241-400:2007	Ergonomics Of Human-System Interaction - Part 400: Principles And Requirements For Physical Input Devices	2007
69	MS ISO 9241-17:2006	ISO 9241-17:1998	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) - Part 17: Form Filling Dialogues	2006
70	MS ISO 9241-11:2006	ISO 9241-11:1998	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 11: Guidance On Usability	2006
71	MS ISO 9241-13:2006	ISO 9241-13:1998	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 13: User Guidance	2006
72	MS ISO 9241-12:2006	ISO 9241-12:1998	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 12: Presentation Of Information	2006
73	MS ISO 9241-16:2006	ISO 9241-16:1999	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 16: Direct Manipulation Dialogues	2006
74	MS ISO 9241-9:2006	ISO 9241-9:2000	Ergonomic Requirements For Office Work With Visual Display Terminals	2006

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
			(VDTs) – Part 9: Requirements For Non-Keyboard Input Devices	
75	MS ISO 9241-8:2006	ISO 9241-8:1991	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 8: Requirements For Displayed Colours	2006
76	MS ISO 9241-15:2006	ISO 9241-15:1997	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 15: Command Dialogues	2006
77	MS ISO 9241-14:2006	ISO 9241-14:1997	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 14: Menu Dialogues	2006
78	MS ISO 9241-1:2005	ISO 9241-1:1997 and its Amendment 1:2001	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 1: General Introduction	2005
79	MS ISO 9241-2:2005	ISO 9241-2:1992	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 2: Guidance On Task Requirements	2005
80	MS ISO 9241-6:2005	ISO 9241-6:1999	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 6: Guidance On The Work Environment	2005
81	MS ISO 9241-7:2005	ISO 9241-7:1998	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 7: Requirements For Display With Reflections	2005
82	MS ISO 9241-4:2005	ISO 9241-4:1998 and its Technical Corrigendum 1:2000	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 4: Keyboard Requirements	2005

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
83	MS ISO 9241-3:2005	ISO 9241-3:1992 and its Amendment 1:2000	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 3: Visual Display Requirements	2005
84	MS ISO 9151:2005	ISO 9151:1995	Protective Clothing Against Heat And Flame – Determination Of Heat Transmission On Exposure To Flame	2005
85	MS ISO 9241-5:2005	ISO 9241-5:1998	Ergonomic Requirements For Office Work With Visual Display Terminals (VDTs) – Part 5: Workstation Layout And Postural Requirements	2005
86	MS ISO 15534-1:2003	ISO 15534-1:2000	Ergonomic Design For The Safety Of Machinery – Part 1: Principles For Determining The Dimensions Required For Openings For Whole-Body Access Into Machinery	2003
87	MS ISO 15534-2:2003	ISO 15534-2:2000	Ergonomic Design For The Safety Of Machinery – Part 2: Principles For Determining The Dimensions Required For Access Openings	2003
88	MS ISO 11226:2003	ISO 11226:2000	Ergonomic – Evaluation Of Static Working Postures	2003
89	MS ISO 11064-2:2003	ISO 11064-2:2000	Ergonomic Design Of Control Centres – Part 2: Principles For The Arrangement Of Control Suites	2003
90	MS ISO 9355-2:2003	ISO 9355-2:1999	Ergonomic Requirements For The Design Of Displays And Control Actuators – Part 2: Displays	2003
91	MS ISO 9355-1:2003	ISO 9355-1:1999	Ergonomic Requirements For The Design Of Displays And Control Actuators – Part 1: Human Interactions With Displays And Control Actuators	2003

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
92	MS ISO 11064-1:2003	ISO 11064-1:2000	Ergonomic Design Of Control Centres – Part 1: Principles For The Design Of Control Centres	2003
93	MS ISO 11064-3:2003	ISO 11064-3:1999 and its Technical Corrigendum 1:2002	Ergonomic Design Of Control Centres – Part 3: Control Room Layout	2003
96	MS ISO 1503:2010	ISO 1503:2008	Spatial Orientation And Direction Of Movement - Ergonomic Requirements	2010
97	MS ISO 6385:2005	ISO 6385:2004	Ergonomic Principles In The Design Of Work Systems	2005
98	MS ISO 7250:2003	ISO 7250:1996	Basic Human Body Measurements For Technological Design	2003
99	MS ISO 7250-1:2008	ISO 7250-1:2008	Basic Human Body Measurements For Technological Design - Part 1: Body Measurement Definitions And Landmarks (First Revision)	2008
100	MS ISO 14915-1:2007	ISO 14915-1:2002	Software Ergonomics For Multimedia User Interfaces - Part 1: Design Principles And Framework	2007
101	MS ISO 14915-3:2007	ISO 14915-3:2002	Software Ergonomics For Multimedia User Interfaces - Part 3: Media Selection And Combination	2007
102	MS ISO 14915-2:2007	ISO 14915-2:2003	Software Ergonomics For Multimedia User Interfaces - Part 2: Multimedia Navigation And Control	2007
103	MS ISO 15537:2005	ISO 15537:2004	Principles For Selecting And Using Test Persons For Testing Anthropometric Aspects Of Industrial Products And Designs	2006

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
104	MS ISO 20282-1:2009	ISO 20282-1:2006	Ease Of Operation Of Everyday Products - Part 1: Design Requirements For Context Of Use And User Characteristics	2009
105	MS ISO 20685:2011	ISO 20685:2010	3-D Scanning Methodologies For Internationally Compatible Anthropometric Databases (First Revision)	2011

List of Safety Standard

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
1	MS 980:1985	-	Specification for Safety Signs and Colours: Colorimetric and Photometric Properties of Materials	1985
2	MS 981:1985	-	Specification for Safety Signs and Colours: Colour and Design	1985
3	MS 1722:2011	-	Occupational Safety and Health (OSH) Management Systems - Requirements (First Revision)	2011
4	MS 1804:2008	-	Globally Harmonized System (GHS) For Classification and Labelling of Chemicals – Specification for The Classification, Labelling and Formulation of Safety Data Sheet for Chemical Products	2008
5	MS ISO 11161:2009	ISO 1161:2007	Safety of Machinery - Integrated Manufacturing Systems - Basic Requirements	2009
6	MS ISO 12100:2012	ISO 12100:2010	Safety of Machinery - General Principles for Design - Risk Assessment and Risk Reduction (First Revision)	2012
7	MS ISO 13849-2:2014	ISO 13849-2:2012	Safety of Machinery - Safety-Related Parts of Control Systems - Part 2: Validation (First Revision)	2014
8	MS ISO 13849-2:2005	ISO 13849-2:2003	Safety of Machinery - Safety-Related Parts of Control Systems – Part 2: Validation	2005
9	MS ISO 13849-1:2008	ISO 13849-1:2006	Safety of Machinery - Safety - Related Parts of Control Systems - Part 1: General Principles For Design (First Revision)	2008

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
10	MS ISO 13850:2008	ISO 13850:2006	Safety of Machinery - Emergency Stop - Principles for Design (First Revision)	2008
11	MS ISO 13851:2005 (CONFIRMED:2011)	ISO 13851:2002	Safety of Machinery - Two-Hand Control Devices - Functional Aspects and Design Principles	2005
12	MS ISO 13854: 2003 (CONFIRMED:2011)	ISO 13854:1996	Safety of Machinery – Minimum Gaps to Avoid Crushing of Parts of The Human Body	2003
13	MS ISO 13855:2012	ISO 13855:2010	Safety of Machinery - Positioning of Safeguards with Respect to The Approach Speeds of Parts of The Human Body (First Revision)	2012
14	MS ISO 13856-2:2006	ISO 13856-2:2005	Safety of Machinery – Pressure – Sensitive Protective Devices – Part 2: General Principles for The Design and Testing of Pressure-Sensitive Edges and Pressure-Sensitive Bars	2006
15	MS ISO 13856-1: 2003	ISO 13856-1:2001	Safety of Machinery – Pressure-Sensitive Protective Devices – Part 1: General Principles for Design and Testing of Pressure-Sensitive Mats and Pressure-Sensitive Floors	2003
16	MS ISO 13856-3:2008	ISO 13856-3:2006	Safety of Machinery - Pressure-Sensitive Protective Devices - Part 3: General Principle for The Design and Testing of Pressure-Sensitive Bumpers, Plates, Wires and Similar Devices	2008
17	MS ISO 13857:2010	ISO 13857:2008	Safety of Machinery - Safety Distances to Prevent Hazard Zones Being Reached by Upper and Lower Limbs (First Revision)	2010
18	MS ISO 14118:2005 (CONFIRMED:2011)	ISO 14118:2000	Safety of Machinery – Prevention of Unexpected Start Up	2005

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
19	MS ISO 14119:2005	ISO 14119:1998	Safety of Machinery - Interlocking Devices Associated with Guards - Principles for Design and Selection	2005
20	MS ISO 14120:2005	ISO 14120:2002	Safety of Machinery - Guards - General Requirements for The Design and Construction of Fixed and Movable Guards	2005
21	MS ISO 14121: 2004	ISO 14121:1999	Safety of Machinery – Principles of Risk Assessment	2004
22	MS ISO 14122-1:2004 (CONFIRMED:2011)	ISO 14122-1:2001	Safety of Machinery - Permanent Means of Access to Machinery - Part 1: Choice of Fixed Means of Access Between Two Levels	2011
23	MS ISO 14122-4:2005 (CONFIRMED:2011)	ISO 14122-4:2004	Safety of Machinery – Permanent Means of Access to Machinery – Part 4: Fixed Ladders	2011
24	MS ISO 14122-3:2003	ISO 14122-3:2001	Safety of Machinery – Permanent Means of Access to Machinery – Part 3: Stairs, Stepladders and Guard-Rails	168
25	MS ISO 14122-2: 2003	ISO 14122-2:2001	Safety of Machinery – Permanent Means of Access to Machinery – Part 2: Working Platforms and Walkways	169
26	MS ISO 14122-1: 2004	-	Safety of Machinery – Permanent Means of Access to Machinery – Part 1: Choice of Fixed Means of Access Between Two Levels	170
27	MS ISO 14122-3:2003 (CONFIRMED:2011)	ISO 14122-3:2001	Safety of Machinery - Permanent Means of Access to Machinery - Part 3: Stairs, Stepladders and Guard-Rails	171
28	MS ISO 14123-2:2003 (CONFIRMED:2011)	ISO 14123-2:1998	Safety of Machinery - Reduction of Risks to Health from Hazardous Substances Emitted By	172

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
			Machinery - Part 2: Methodology Leading to Verification Procedures	
29	MS ISO 14123-1:2004 (CONFIRMED:2012)	ISO 14123-1:1998	Safety of Machinery - Reduction of Risks to Health from Hazardous Substances Emitted by Machinery - Part 1: Principles and Specifications for Machinery Manufacturers	173
30	MS ISO 14159:2005 (CONFIRMED:2011)	ISO 14159:2002	Safety of Machinery - Hygiene Requirements for The Design of Machinery	174
31	MS ISO 14738: 2004	ISO 14738:2002	Safety of Machinery - Anthropometric Requirements for The Design of Workstations at Machinery	2004
32	MS ISO 19353:2006 (CONFIRMED:2011)	ISO 19353:2005	Safety of Machinery - Fire Prevention and Protection	2011
33	MS ISO 21469:2007	ISO 21469:2006	Safety of Machinery - Lubricants with Incidental Product Contact - Hygiene Requirements	202
34	MS ISO 29042-3:2010	ISO 29042-3:2009	Safety of Machinery - Evaluation of The Emission of Airborne Hazardous Substances - Part 3: Test Bench Method for The Measurement of The Emission Rate of a Given Pollutant	2010
35	MS ISO 29042-2:2010	ISO 29042-2:2009	Safety of Machinery - Evaluation of The Emission of Airborne Hazardous Substances - Part 2: Tracer Gas Method for The Measurement of The Emission Rate of a Given Pollutant	2010
36	MS ISO 29042-4: 2010	ISO 29042-4: 2009	Safety of Machinery – Evaluation of The Emission of Airborne Hazardous Substances – Part 4: Tracer Method for The Measurement of The Capture Efficiency of An Exhaust System	2010

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
37	MS ISO 29042-5: 2011	ISO 29042-5: 2010	Safety of Machinery – Evaluation of The Emission of Airborne Hazardous Substances- Part 5: Test Bench Method for The Measurement of The Separation Efficiency by Mass of Air Cleaning Systems with Undusted Outlet	2011
38	MS ISO 29042-6: 2011	ISO 29042-6: 2010	Safety of Machinery – Evaluation of The Emission of Airborne Hazardous Substances- Part 6: Test Bench Method for The Measurement of The Separation Efficiency by Mass of Air Cleaning Systems with Ducted Outlet	2011
39	MS ISO 29042-7: 2012	ISO 29042-7: 2010	Safety of Machinery – Evaluation of The Emission of Airborne Hazardous Substances- Part 7: Test Bench Method for The Measurement of The Pollutant Concentration Parameter	2011
40	MS ISO 29042-9: 2012	ISO 29042-9: 2011	Safety of Machinery- Evaluation of The Emission of Airborne Hazardous Substances – Part 9: Decontamination Index	2012
41	MS ISO 29042-8: 2012	ISO 29042-8: 2011	Safety of Machinery- Evaluation of The Emission of Airborne Hazardous Substances – Part 8: Room Method for The Measurement of The Pollutant Concentration Parameter	2012

List of Personal Protective Equipment related standard

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
1	MS 183 : 2001	-	Specification For Industrial Safety Helmet (First Revision)	2001
2	MS 707:1981	-	Specification For Industrial Safety Belts And Harnesses Of Materials Other Than Leather	1981
3	MS 1732: PART 4:2004	-	Acoustics – Hearing Protectors: Part 4: Measurement Of Effective Sound Pressure Levels For Level-Dependent Sound-Restoration Ear-Muffs	2004
4	MS 1732 : PART 3 : 2004	-	Acoustics – Hearing Protectors : Part 3 : Simplified Method For The Measurement Of Insertion Loss Of Ear–Muff Type Protectors For Quality Inspection Purposes	2004
5	MS 1952:2007	-	Personal Eye Protection - Sunglare Filters For Industrial Use	2007
6	MS 1953:2007	-	Personal Protection - Equipment for Eye and Face Protection During Welding and Allied Processes	2007
7	MS 1955:2007	-	Personal Eye-Protection – Optical Test Methods (First Revision)	2007
8	MS 1957:2007	-	Personal Eye-Protection - Filters For Welding And Related Techniques - Transmittance Requirements And Recommended Use (First Revision)	2007
9	MS 1958:2007	-	Personal Eye-Protection - Ultraviolet Filters - Transmittance Requirements And Recommended Use (First Revision)	2007

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
10	MS 1959:2007	-	Personal Eye-Protection - Infrared Filters - Transmittance Requirements And Recommended Use (First Revision)	2007
11	MS 2050:2007	-	Personal Eye-Protection – Specifications (First Revision)	2007
12	MS 2051:2007	-	Personal Eye-Protection – Vocabulary (First Revision)	2007
13	MS 2096: PART 7:2008	ISO 12402-7:2006	Personal Flotation Devices - Part 7: Materials And Components - Safety Requirements And Test Methods	2008
14	MS 2096: PART 9:2008	ISO 12402-9:2006	Personal Flotation Devices - Part 9: Test Methods	2008
15	MS 2096: PART 8:2008	ISO 12402-8:2006	Personal Flotation Devices - Part 8: Accessories - Safety Requirements And Test Methods	2008
16	MS 2096: PART 2:2008	ISO 12402-2:2006	Personal Flotation Devices - Part 2: Lifejackets, Performance Level 275 - Safety Requirements	2008
17	MS 2096: PART 3:2008	ISO 12402-3:2006	Personal Flotation Devices - Part 3: Lifejackets, Performance Level 150 - Safety Requirements	2008
18	MS 2096: PART 5:2008	ISO 12402-5:2006, COR. 1:2006	Personal Flotation Devices - Part 5: Buoyancy Aids (Level 50) - Safety Requirements	2008
19	MS 2096: PART 4:2008	ISO 12402-4:2006	Personal Flotation Devices - Part 4: Lifejackets, Performance Level 100 - Safety Requirements	2008
20	MS 2096: PART 10:2008	ISO 12402-10:2006	Personal Flotation Devices - Part 10: Selection And Application Of Personal Flotation Devices And Other Relevant Devices	2008

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
21	MS 2096: PART 1:2008	ISO 12402-1:2005	Personal Flotation Devices - Part 1: Lifejackets For Seagoing Ships - Safety Requirements	2008
22	MS 2096: PART 6:2008	ISO 12402-6:2006, MOD	Personal Flotation Devices - Part 6: Special Purpose Lifejackets And Buoyancy Aids - Safety Requirements And Additional Test Methods	2008
23	MS 2238:2009	-	Industrial Safety Belts - Specification (First Revision)	2009
24	MS 2307-2:2010	-	Personal Protective Equipment Against Falls From A Height - Part 2: Guided Type Fall Arresters Including A Flexible Anchor Line	2010
25	MS 2307-1:2010	-	Personal Protective Equipment Against Falls From A Height - Part 1: Guided Type Fall Arresters Including A Rigid Anchor Line	2010
26	MS 2308:2010	-	Personal Protective Equipment Against Falls From A Height - Lanyards (First Revision)	2010
27	MS 2309:2010	-	Personal Protective Equipment Against Falls From A Height - Energy Absorbers (First Revision)	2010
28	MS 2310:2010	-	Personal Protective Equipment Against Falls From A Height - Retractable Type Fall Arresters (First Revision)	2010
29	MS 2311:2010	-	Personal Protective Equipment Against Falls From A Height - Full Body Harnesses (First Revision)	2010
30	MS 2312:2010	-	Personal Protective Equipment Against Fall From A Height - Connectors	2010

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
31	MS 2313:2010	-	Personal Fall Protection Equipment - Personal Fall Protection Systems	2010
32	MS 2315:2010	-	Personal Protective Equipment Against Falls From A Height - General Requirements For Instructions For Use, Maintenance, Periodic Examination, Repair, Marking And Packaging	2010
33	MS 2316:2010	-	Protection Against Falls From A Height - Anchor Devices - Requirements And Testing	2010
34	MS 2486:2012	-	Respiratory Protective Devices - Full Face Masks - Requirements, Testing, Marking	2012
35	MS 2487:2012	-	Respiratory Protective Devices - Self-Contained Open-Circuit Compressed Air Breathing Apparatus With Full Face Mask - Requirements, Testing, Marking	2012
36	MS 2488:2012	-	Respiratory Protective Devices - Fresh Air Hose Breathing Apparatus For Use With Full Mask, Half Mask Or Mouthpiece Assembly - Requirements, Testing, Marking	2012
37	MS 2489-1:2012	-	Respiratory Protective Devices - Compressed Air Line Breathing Apparatus With Demand Valve - Part 1: Apparatus With A Full Face Mask - Requirements, Testing, Marking	2012
38	MS 2489-2:2012	-	Respiratory Protective Devices - Compressed Air Line Breathing Apparatus With Demand Valve -	2012

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
			Part 2: Apparatus With A Half Mask At Positive Pressure - Requirements, Testing, Marking	
39	MS 2490:2012	-	Respiratory Protective Devices - Half Masks And Quarter Masks - Requirements, Testing, Marking	2012
40	MS 2552:2014	-	Respiratory Protective Devices - Mouthpiece Assemblies - Requirements, Testing, Marking	2014
41	MS 2486:2012	-	Respiratory Protective Devices - Full Face Masks - Requirements, Testing, Marking	2012
42	MS 2487:2012	-	Respiratory Protective Devices - Self-Contained Open-Circuit Compressed Air Breathing Apparatus With Full Face Mask - Requirements, Testing, Marking	2012
43	MS 2488:2012	-	Respiratory Protective Devices - Fresh Air Hose Breathing Apparatus For Use With Full Mask, Half Mask Or Mouthpiece Assembly - Requirements, Testing, Marking	2012
44	MS 2489-1:2012	-	Respiratory Protective Devices - Compressed Air Line Breathing Apparatus With Demand Valve - Part 1: Apparatus With A Full Face Mask - Requirements, Testing, Marking	2012
45	MS 2489-2:2012	-	Respiratory Protective Devices - Compressed Air Line Breathing Apparatus With Demand Valve - Part 2: Apparatus With A Half Mask At Positive Pressure - Requirements, Testing, Marking	2012

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
46	MS 2490:2012	-	Respiratory Protective Devices - Half Masks And Quarter Masks - Requirements, Testing, Marking	2012
47	MS 2552:2014	-	Respiratory Protective Devices - Mouthpiece Assemblies - Requirements, Testing, Marking	2014
48	MS ISO 4856:2003 (CONFIRMED: 2011)	ISO 4856:1982	Personal Eye-Protectors - Synoptic Tables Of Requirements For Oculars And Eye-Protectors	2011
49	MS ISO 4869-2:2004 (CONFIRMED: 2012)	ISO 4869-2:1994	Acoustics - Hearing Protectors: Part 2: Estimation Of Effective A-Weighted Sound Pressure Levels When Hearing Protectors Are Worn	2012
50	MS ISO 4869-1:2004 (CONFIRMED: 2012)	ISO 4869-1:1990	Acoustics - Hearing Protectors: Part 1: Subjective Method For The Measurement Of Sound Attenuation	2012
51	MS ISO 6161:2003	ISO 6161:1981	Personal Eye-Protectors – Filters And Eye-Protectors Against Laser Radiation	2003
52	MS ISO 4856:2003 (CONFIRMED: 2011)	ISO 4856:1982	Personal Eye-Protectors - Synoptic Tables Of Requirements For Oculars And Eye-Protectors	2011
53	MS ISO 4869-2:2004 (CONFIRMED: 2012)	ISO 4869-2:1994	Acoustics - Hearing Protectors: Part 2: Estimation Of Effective A-Weighted Sound Pressure Levels When Hearing Protectors Are Worn	2012
54	MS ISO 4869-1:2004 (CONFIRMED: 2012)	ISO 4869-1:1990	Acoustics - Hearing Protectors: Part 1: Subjective Method For The Measurement Of Sound Attenuation	2012

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
55	MS ISO 6161:2003	ISO 6161:1981	Personal Eye-Protectors – Filters And Eye-Protectors Against Laser Radiation	2003
56	MS ISO 6529:2002	ISO 6529:2001	Protective Clothing – Protection Against Liquid Chemicals – Determination Of Resistance Of Protective Clothing Materials To Permeation By Liquids And Gases	2002
57	MS ISO 6530:2002	ISO 6530:1990	Protective Clothing – Protection Against Liquid Chemicals – Determination Of Resistance Of Materials To Penetration By Liquids	2002
58	MS ISO 11612:2005	ISO 11612:1998	Clothing For Protection Against Heat And Flame - Test Methods And Performance Requirements For Heat-Protective Clothing	2005
59	MS ISO 11613:2005	ISO 11613:1999	Protective Clothing For Firefighters – Laboratory Test Methods And Performance Requirements	2005
60	MS ISO 12127:2005	ISO 12127:1996	Clothing For Protection Against Heat And Flame - Determination Of Contact Heat Transmission Through Protective Clothing Or Constituent Materials	2005
61	MS ISO 13688 : 2004	ISO 13688:1998	Protective Clothing – General Requirements	2004
62	MS ISO 14567:2003 (CONFIRMED:2012)	ISO 14567:1999	Personal Protective Equipment For Protection Against Falls From A Height - Single-Point Anchor Devices	2012
63	MS ISO 14877:2005	ISO 14877:2002	Protective Clothing For Abrasive Blasting Operations Using Granular Abrasives	2005

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
64	MS ISO 15025:2005	ISO 15025:2000	Protective Clothing – Protection Against Heat And Flame – Method Of Test For Limited Flame Spread	2005
65	MS ISO 15383:2005 (CONFIRMED:2012)	ISO 15383:2001	Protective Gloves For Firefighters - Laboratory Test Methods And Performance Requirements	2012
66	MS ISO 15538:2005 (CONFIRMED:2012)	ISO 15538:2001	Protective Clothing For Firefighters - Laboratory Test Methods And Performance Requirements For Protective Clothing With A Reflective Outer Surface	2012
67	MS ISO 17491:2005	ISO 17491:2002	Protective Clothing – Protection Against Gaseous And Liquid Chemicals – Determination Of Resistance Of Protective Clothing To Penetration By Liquids And Gases	2005
68	MS ISO 20344:2008	ISO 20344:2004, COR. 1:2005	Personal Protective Equipment - Test Methods For Footwear (First Revision)	2008
69	MS ISO 20345:2008	ISO 20345:2004, COR. 1:2005	Personal Protective Equipment - Safety Footwear (First Revision)	2008
70	MS ISO 20347:2008	ISO 20347:2004, COR. 1:2005	Personal Protective Equipment - Occupational Footwear	2008
71	MS 1731 : 2004	-	High-Visibility Warning Clothing	2004

Health/Industrial Hygiene related standard

NO.	ISO/MS	IDENTICAL STANDARD	NAME	YEAR
1	MS 866: 1983	-	Code of Practice for Methods of Defining, Recording and Assessing Work Injuries	1983
2	MS ISO 7243:2009	ISO 7243:1989	Hot Environments - Estimation of The Heat Stress on Working Man, Based on the WBGT-Index (Wet Bulb Globe Temperature)	2009
3	MS ISO 13407:2007	ISO 13407:1999	Human-Centred Design Processes for Interactive Systems	2007
4	MS ISO/IEC GUIDE 71:2012	ISO/IEC Guide 71:2001	Guidelines for Standards Developers to Address the Needs of Older Persons and Persons with Disabilities	2012

List of Standards for Safety Standards for Laboratory

NO.	ISO/MS	NAME	YEAR
1	MS 1042: PART 6:1992	Code Of Practice For Safety In Laboratories : Part 6: Mechanical Aspects	1992
2	MS 1042: PART 3:1986	Code Of Practice For Safety In Laboratories Part 3 : Microbiological	1986
3	MS 1042: PART 4:1992	Code Of Practice For Safety In Laboratories Part 4 : Ionizing Radiations	1992
4	MS 1042: PART 1:2007	Safety In Laboratories - Code Of Practice - Part 1: General (First Revision)	2007
5	MS 1042-2:2009	Safety In Laboratories - Code Of Practice - Part 2: Chemical Aspects (First Revision)	2009
6	MS 1042-7:2011	Safety In Laboratories - Code Of Practice - Part 7: Fume Cupboards	2011

Functions of each division in DOSH

A. CORPORATE SERVICE

1. HUMAN RESOURCE SECTION

i. Career advancement, disciplinary and award
ii. Services and retirement
iii. Staffing, training and examination

2. ADMINISTRATION AND EXPENDITURE SECTION

i. General management
ii. Asset and store
iii. Operation and development budget
iv. Revenue collection

3. TRAINING SECTION

i. Designing training needs for workshop, seminars and forums
ii. Managing internal and external training
iii. Preparing reports for training, workshop and seminar
iv. Assessing training impact and needs

4. INFORMATION TECHNOLOGY SECTION

i. Identifying, planning and managing ICT project
ii. Managing, development coordinating and implementation of application system
iii. Managing and monitoring support service and maintaining of application system

B. INTERNATIONAL, POLICY AND RESEARCH DEVELOPMENT

1. INTERNATIONAL AND POLICY SECTION

A. <u>International and Policy Unit</u>

i. Secretariat for meeting and committee
ii. Coordinating program and preparing proposal at international level

B. <u>Research Unit</u>

i. Conducting research program, supervising and coordinating research with university.
ii. Conducting data analysis for occupational disease and accident, enforcement and promotional program.
iii. Secretariat for OSHMP-15

2. DEVELOPMENT SECTION

A. Developing and Revising Unit
   i. Developing of acts, guidelines, order, code of practice and regulation.
   ii. Revising and amending of acts, guidelines, order, code of practice and regulation.

B. SWO Unit
   Act as secretariat of Standard Writing Organization (SWO).

C. INDUSTRIAL SAFETY

1. EXAMINATION, CERTIFICATION AND ACCREDITATION SECTION

This section is divided into two units namely Accreditation Unit and Examination and Certification Unit which functioned to overseeing registered OYK and FYK so that legal requirement and regulation are complied.

2. DESIGN SECTION

Divided into four units namely boiler unit, unfired pressure vessel unit, lift unit and hoisting machine unit. This section conducting several functions such as:

i. Ensuring design for machinery such as boiler, unfired pressured vessel, hoisting machine and lift are designed to meet standard approved by the department and comply with the requirement of Factory and Machinery Act 1967.

ii. Reviewing and processing exemption of hydrostatic test application for boiler and unfired pressured vessel.

iii. Reviewing and processing applications for modifications of certificated machinery.

iv. Reviewing and processing exemption of registration for certified machinery.

v. Revision and improvement of procedure, standards, guideline, etc related to design approval

D. SMALL MEDIUM INDUSTRY & NON-FACTORY SECTOR

1. SMALL MEDIUM INDUSTRY & NON-FACTORY SECTOR

i. Designing and implementing all compliance support programs involving SME sector

ii. Providing advice services, technical training, and expertise of the SME sector

iii. Coordinating and monitoring implementation of programs of the SME sector in state DOSH offices

2. NON-REFINERY SECTOR SECTION (SBK)

i. Planning and implementation of all activities involving enforcement in SBK sector

ii. Providing advice services technical training, and expertise of the SBK sector

iii. Coordinating and monitoring the implementation of the activities in the Enforcement Section in the state offices

E. INDUSTRIAL HYGIENE AND ERGONOMICS

1. INDUSTRIAL HYGIENE RECOGNITION AND APPROVAL SECTION

A. Industrial Hygiene Recognition and Approval Unit

i. Implementing recognition activities for new applications/ renewal of OYK/OYB, teaching centres and accredited instructors (Confined Space Program)

ii. Monitoring the performance of OYK and OYB through observation or interview sessions

iii. Monitoring the performance of training centres and accredited instructors for Confined Space Program

B. Approval and Monitoring of Hazard Control Unit

i. Implementing the application process for personal protective equipment approval, quiet room approval including audiometer calibration, and sandblasting approval

ii. Providing advice services, training and guidelines for hazard control

iii. Monitoring the sandblasting activities of inspection agencies

2. INDUSTRIAL HYGIENE CONTROL AND ERGONOMICS SECTION

A. Management and Technical Equipment Unit

i. Planning and coordinating the calibration, maintenance, and verification of technical equipment for DOSH throughout Malaysia

ii. Providing and maintaining the database for data storage of technical equipment in the headquarters and state offices

iii. Analysing data and providing report of technical equipment usage in the headquarters and state offices

iv. Providing advice services and expert assistance relating to equipment

v. Providing technical specifications for the purchase of industrial hygiene equipment when needed

B. Monitoring and Industrial Hygiene Services Unit

i. Coordinating Industrial Hygiene Section Head Meeting

ii. Providing and maintaining the database for data storage of achievements by the Industrial Hygiene section at the state office

iii. Providing technical support to the Industrial Hygiene officers at the state office in monitoring/ analysis of hazards

iv. Carrying out monitoring activities/ research regarding industrial hygiene, new hazards and ergonomics

v. Developing compliance standards, guidelines and codes of practice in the field of ergonomic

F. PETROLEUM SAFETY

i. Enforce the Petroleum (Safety Measures) Act 1984, Occupational Safety and Health Act 1994 and the Factories and Machinery Act 1967

ii. Assessing the report on the industrial activities or safety reports, Floor Plan Emergency, Information to the Public and Safe Operation Demonstration

iii. Assessing organizational capacity in terms of knowledge, health and safety management practices before implementing SSI

iv. Designing and implementing enforced compliance audit acts enforced and implemented OSH management system including offshoring self-regulation audits on any offshore petroleum facilities

v. Ensuring the transportation system and petroleum substance handling through pipes, land and water is safe and free from danger

vi. Revising, analysing, checking and monitoring the premises of petroleum substance storage and petroleum handling

1. **CIMAH SECTION**

i. Conducting evaluations on: industrial activities reports, site safety plan and delivery of information to the public prepared and submitted by the manufacturer of major hazard installations to the Department in compliance with the requirements of Regulation CIMAH

ii. Processing the applications of qualified competent persons

iii. Evaluating safe operation demonstration reports prepared and presented by the minor hazard installations in compliance with the requirements of Regulation CIMAH

iv. Conducting audits/ evaluations on the installations of MHI/stokes LPG (MHI)

2. **SPECIAL SCHEME INSPECTION**

i. Ensuring application for extension of Certificate of Fitness in accordance with legal provisions and the Director General's Order

ii. Conducting physical checking on machineries for applications of Certificate of Fitness

iii. Processing and conducting audits for application of Special Inspection Scheme (risk-based inspections) at the premises of the applicant in accordance with the provisions of SSI Regulation

iv. Carrying out verification of RBI data by using Advance NDT Technique

v. Conducting evaluation/ audit on 'aging plant' on plants exceeding 20 years to ensure the integrity and that the machineries are good to operate

3. **OFFSHORE SECTION**

i. Performing audits of the OSH Management System and Asset Integrity Management System used (Offshore Self-Regulation Management System OSR-MS)

ii. Conducting tests and evaluations on the hydrocarbon pipelines

iii. Conducting integrity management audits of offshore petroleum pipelines

iv. Carrying out investigations on complaints and accidents.

4. **TRANSPORTATION SECTION**

i. Approving the transport of petroleum by road, rail, water, permission to install and operate petroleum pipelines

ii. Inspecting and auditing the integrity of the transmission of petroleum by road, rail, water and pipeline

iii. Ensure bulk storage systems and pipelines are designed according to design code that is recognized by the Department through a thorough evaluation

iv. Carrying out investigations on complaints and accidents

v. Audit the recognition of companies that design and construct tanker lorries

vi. Carrying out audits on pipeline operators

5. **STORAGE AND HANDLING SECTION**

i. Standards Development / Policy related to the storage of petroleum products (design and installation) of the terminal, gas stations and LPG stockists

ii. Providing expert advice in support of the issuance of licenses for permission to store petroleum to the Local Authorities (PBT)

iii. Conducting inspections on the premises of the storage / handling of petroleum

6. **EQUIPMENT AND INSTALLATION SECTION**

i. Conducting research based on petroleum safety during storage and handling of petroleum (equipment and installations)

ii. Developing/ reviewing legislations relating to safety

iii. Processing and giving approval to the equipment and petroleum equipment

G. CHEMICAL MANAGEMENT

1. **HAZARD CLASSIFICATION AND COMMUNICATION UNIT**

i. Reference expert on CLASS 2013 Regulations

ii. Operations Secretariat on CLASS 2013 Regulations

iii. Focal Point Implementation of GHS in Malaysia

iv. (Chemical Industry)

v. Process & Maintenance for chemical inventory material sheet / CIMS

2. **CHEMICAL HEALTH RISK ASSESSMENT UNIT**

i. Reference expert on CHRA Enforcement in workplace

ii. Register and renewal of CHRA Assessor

iii. Process and Approval of Generic CHRA

iv. Development of simple risk assessment (SiRAC)

v. Develop and maintain on SiRAC online

3. **CHEMICAL CONTROL UNIT**
   i. Indoor Air Quality (IAQ) Specialist
   ii. Operation Secretariat for USECHH
   iii. Processing application to renovating asbestos containing material at workplace
   iv. Technical expertise for chemical substance monitoring tools

4. **CHEMISTRY COORDINATION UNIT**
   i. Member of the National Authority for Chemical Weapons Convention (CWC)
   ii. Chairman of the Article 11 (Development Technology & Economy) CWC
   iii. International focal point on chemical safety management at workplace
   iv. Inter-agency collaboration between government or private sector and also focal point international conventions

H. OCCUPATIONAL HEALTH

Occupational health division is divided into two section namely occupational health and recognition section. These two sections carried out function such as:

i. Occupational Diseases and Poisoning Investigation
ii. New and Renewal Registration for Certification of Occupational Health Doctor (OHD)
iii. Medical Surveillance Program (Medical Surveillance)
iv. Implementation of the Basic Health Service Program at Small and Medium Industry
v. Implementation of Code of Practice on the Prevention and Management of HIV/ AIDS at the Workplace
vi. Implementation of Code of Practice on the Prevention and Eradication of Drug, Alcohol and Substance Abuse at the Workplace
vii. Investigation for Ex-Gratia Work Disaster Scheme
viii. Inspection team for Dengue at Ministry level
ix. My Health Status Surveillance System (MyHESS) programme

I. BUILDING CONSTRUCTION SAFETY

1. Legal enforcement for safety, health and welfare of workers in construction industry.

2. Conduct research and technical analysis on occupational safety issue in construction industry.
3. Conduct incentive programme and publication to increase awareness to occupational safety and health at construction industry.

1. **ANALYSIS SECTION**
   i. Coordinate the construction site enforcement activities by the construction work section
   ii. Statistical analysis data from enforcement and operation of construction site.
   iii. Manage training activities and dissemination information of construction work section.

2. **ENGINEERING SECTION**
   i. Provide construction safety engineering expert service
   ii. Carry out research on new machinery in accordance with international codes

J. FORENSIC ENGINEERING

Forensic engineering division is function as to serve expertise in forensic engineering to research officer from state office. Forensic engineering divide into 5 section namely:

i. Mechanical Engineering
ii. Chemical Engineering
iii. Construction Engineering
iv. Research and Analysis
v. Laboratory

K. OFFICE OF LEGAL ADVISOR

1. To provide legal advisor regarding occupational safety and health issue to department in-line with the provision of the federal constitution and other related law.
2. To review the agreement and memorandum of understanding which will be signed by the department and other documents containing legislation elements to ensure all the documents are in order in term of the law.
3. Monitor, manage, supervise and coordinate prosecution case involving the department throughout the country.

4. Conduct civil litigation for summon case involving department and issued claim notice on parties liable for outstanding payment of premises and machinery registration.
5. Proclamation for appointing an officer, exemption order or any order or regulation made by the department.
6. Reviewing proposed amendment of act, order and regulation as well as formulation of new order and regulations
7. Collaborate with other division to give training and advisor relating to legislation.

Enforcement activities conducted by DOSH

ACTIVITY	DESCRIPTION
Approval and Permission	The department issues approval and permission to repair the steam boiler, unfired pressure vessel and hoisting machine. It also issues permission to install general machinery.
Registration	Registration of factories and installations, work sites and machinery which require a certificate of fitness such as steam boilers, unfired pressure vessels, vessels hoisting machinery, lifts and escalators.
Accreditation	Certificates of competency are issued to individuals who have qualifications, experience, expertise and knowledge in the fields stated in the act and regulations enforced. The fields of competency accredited by the department are: **<u>Competent firms</u>** i. Scaffolding Operator Training Centers ii. Crane Operator Training Centers iii. Safety & Health Officer Training Centers iv. Manufacturers/Repairers/Installations Unfired Pressure Vessels & Boilers v. Gas Contractors vi. Suppliers/Manufacturers of Lifts & Escalators vii. Manufacturers of Hoisting Machinery viii. Erection/Dismantling of Tower Cranes & Hoisting Machinery ix. Manufacturers of Scaffolding x. Inspection Authorities xi. Stationary Audiometric Companies (Clinics) xii. Stationary Audiometric Companies (Factories) xiii. Laboratories xiv. Indoor Air Quality Training Centers **<u>Competent Persons</u>** i. Major Hazard Competent Persons ii. Steam Engineers Grades One and Two iii. Internal Combustion Engine Engineers Grades I and II iv. Steam Engine Drivers Grades I and II v. Internal Combustion Engine Drivers Grades I and II vi. Lift Competent Persons vii. Safety and Health Officers

ACTIVITY	DESCRIPTION
	viii. Passenger Hoist/Tower Crane Installer ix. Scaffolding Erectors/Dismantlers x. Crane Operators xi. Trainers of the Safety & Health Induction Course for the Construction Sector xii. Noise Monitoring xiii. Occupational Health Doctors xiv. Assessors xv. Hygiene Technicians I and II xvi. Indoor Air Quality Assessors xvii. Authorized Gas Testers
Inspection	The conducting of initial, annual and supplementary inspections on steam boilers, unfired pressure vessels, hoisting machinery, factories and installation and other workplaces. Investigation of complaints, accidents, occupational diseases and poisoning were also being conducted.
Accident Investigation and Complaints	Investigation of complaints, accidents, occupational diseases and poisoning.
Legal Actions	Legal actions are taken in the form of prohibition and improvement notices, compounds and prosecution in court.

Research conducted by the Policy and Research Division in DOSH from 2007-2014 (RMK-9 and RMK-10)

NO	RESEARCH UNDER RMK9
1	Understanding and compliance of NADOPOD Regulation
2	Research on OSHA effectiveness after 10 years
3	Merging accident and occupational disease statistic in Malaysia
4	Measuring the safe and health work culture with their accident rate in Malaysia
5	Research on Chemical Handling – Female Sprayer with critical Occupational Safety and Health Issues
6	Correlation between Ergonomics Risk Factor with Health effect among VDU Users for Government servant.
7	Correlation between Ergonomics Risk Factor with Acute Back Injury problem and Chronic Back Pain among Nurse in Malaysia
8	Impact of Occupational Safety and Health (Safety and Health Committee) Regulation 1996 towards safety level and Industrial occupation in Malaysia
9	Researching, Proposing and Preparing of National Occupational Safety and Health Policy
10	Determination of Permissible Exposure Limit (PEL) of Chemicals Hazardous to Health in Malaysia
11	Researching, Proposing and Preparing of Malaysian Occupational Safety and Health Profile Report
12	Usage of Asbestos Profile in Malaysia
13	Developing Indoor Air Quality reference value in Malaysia by using MM-40 Questionnaires
NO.	**RESEARCH UNDER RMK10**
	(A) Compliance Support
1	Researching, Proposing and Preparing Action Plan for Improvement of Occupational Safety and Health in Manufacturing Sector (Metal) in Malaysia
2	Exposure of Chemical Hazardous to Health Among Rice Planters in Peninsular Malaysia
3	Review, Recommend and Preparing Action Plans for Improvement of Occupational Safety and Health in Mining and Quarrying Sector in Malaysia

4	Researching, Proposing and Preparing Action Plans for Improvement of Occupational Safety and Health in Utilities Sector in Malaysia
5	Researching, Proposing and Preparing Action Plans for Improvement of Occupational Safety and Health in MRT Construction Sector in Klang Valley
(B) Regulatory Impact Analysis (Ria)	
1	Regulatory Impact Analysis (RIA) on Statutory Inspections of Certified Machineries by Third Parties (Licensed Persons)
2	Regulatory Impact Analysis (RIA) on Third Party Suspension on Design, Installation, Inspection, Testing, Commissioning and Abandonment of Petroleum Pipeline Activities.
3	Preservation of Migration of Factories and Machinery Act 1967 and Occupational Safety and Health Act 1994
4	Regulatory Impact Analysis (RIA) on Preservation of Occupational Safety and Health (Control of Industrial Major Accident Hazards) Regulations 1996 (CIMAH 1996)
(C) OSH Calculator	
1	Research on Accident Costs at Work Place for Manufacturing Sector
2	Research on Accident Costs at Work Place for Utilities Services Sector
3	Research on Accident Costs at Work Place for Construction Sector
4	Research on Accident Costs at Work Place for Agriculture Sector
5	Research on Accident Costs at Work Place at Work Place for Public Services Sector
(D) Health	
1	Developing a Comprehensive Management and Control System for Asbestos and Other Work Place-Related Diseases
2	Research on Reporting of Occupational Diseases and Poisoning by Medical Practitioners
3	Determining Appropriate Biomarker Level and Diagnostic Criteria for Medical Surveillance Programme among Workers in Malaysia

List of researches completed in NIOSH from 2010 to 2016

YEAR	GRANT	RESEARCH
2016	NIOSH	Baseline Data of Visual Status in relation to visual performance amongst Industrial Visual Display Terminal Users
	NIOSH	Financial Impact & Causes of Chronic MSDs Cases Reported To SOCSO
	NIOSH	Indoor Air Quality (IAQ) In Malaysian Childcare Centre: Defining The Effectiveness Of Ultraviolet Germicidal Irradiation (UVGI) Application
	NIOSH	Assessment on Level of Knowledge, Attitude and Practices in OSH among Workers in Agriculture Sector in Malaysia
	NIOSH	Asbestos Exposure During Renovation of Old Building Among Construction Worker
	NIOSH	Study on Level of Compliance of OSH Towards Contractors in the Paddy Industry
	NIOSH	Ultrafine Particle Exposure at Printing Industry in Malaysia
	NIOSH	Effects of Dust Exposure Towards the Risk of Developing Cardiovascular Diseases among Workers in Iron and Steel Industry
	NIOSH	Predicting Prevalence of Hand Arm Vibration Syndrome On Hand-Held Grass Cutter Workers Using Qualitative and Quantitative Measures
	NIOSH	Identifying The Effeciency of Concluding Hazard Rating in Chemical Health Risk Assessment Among Assersors
	NIOSH	Study of Physical and Mental Fatigue Amongst Interstate Bus Drivers
	NIOSH	Developing Workstation Design Guideline For Malaysian Workers
	NIOSH	A Comparative Study On Legionella Spp. Quantitative Analysis Base On AS/NZS 3896:2008
2015	NIOSH	Prevalence of Work-related Musculoskeletal Disorder among Tea Pluckers
	NIOSH	Level Of Self-Regulated Learning (SRL) Among OSH Related Learner In Malaysia

YEAR	GRANT	RESEARCH
	NIOSH	Application Of X-Ray Difractometer (XRD) On Analysis Of Respirable Crystalline Silica In Garnite Quarry
	NIOSH	Knowledge, Attitude and Practices of Pesticide Use Among Palm Oil Workers in Johor
	NIOSH	Whole Body Vibration Exposure of Off Road Lorry Driver
	NIOSH	An Assessment of Atmospheric Testing and Monitoring In Tunnel
	NIOSH	Awareness of Safety Management and Safety Behaviors Among SME Workers
	NIOSH	The Effects of Ergonomics Training On Knowledge, Attitudes, Practices and Musculoskeletal Complaints Among Plotters in Manufacturing Plants
2014	NIOSH	A Study on The Challenges Of R&D Activities For NIOSH Towards Becoming A More Effective, Integration & Profesional Institution
	NIOSH	Dust Exposure and Chronic Respiratory Symptoms In Tea Processing Workers
	NIOSH	Effectiveness and Factors Influencing The Staff Perception Of OHSAS 18001:2007 And MS1722:2005 Safety Management System Implementation For Construction Industry
	NIOSH	Background Level of Airborne Microbe in New Office Building
	ILMIA	Awareness Study of "Behavioral Based Safety" (BBS) in Reducing Accidents at the Workplace in Construction Industry
	ILMIA	Implementation of BBS Program to Reduce the Number of Accidents at the Workplace for For Large Scale Industries
	ILMIA	Reduction in Number of Accidents at the Workplace Through OSH Management System for Sewage Services Subcontractors
	ILMIA	Reduction in Number of Accidents at the Workplace Through OSH Management System for Electricity Supply Subcontractors
	SOCSO	Study on Effectiveness of OSH Development of Measurement and Monitoring in Industrial Sector
	SOCSO	Study on Effectiveness of Occupational Skin Diseases Prevention Program

YEAR	GRANT	RESEARCH
	SOCSO	Study on Effectiveness of Motorcycle Training Program
	DOSH	Regulatory Impact Analysis (RIA) on the Statutory Examination for Machineries Certified by Third Party (Licenced Person)
	DOSH	Study, Suggest and Preparing Action Plan for Improvement of OSH in Facilities Sector (Small and Medium Enterprises)
	NIOSH	The Evaluation of Safe Travel Distance with Respect of Ergonomics Design
	NIOSH	The Effect of Body Traits On The Occurency Of Musculoskeletal Disorder Among Electronics Assembly Workers
2013	NIOSH	Indoor Air Quality (IAQ) Commissioning and Maintenance in New Offices
	NIOSH	Approach in Promoting OSH among Workers in the Paddy Planting Industry
	NIOSH	Anthrophometric Measurement among Malaysian Industrial Workers
	NIOSH	A Comparative study on occupational safety and health (OSH) audit compliance at National Service Training Programme (NSTP) camp in Malaysia : Training Element
	NIOSH	Prevalence of Work-related Musculoskelatal Disorders For Sewing Machine Operators In Cloth Making Industry
2012	NIOSH	t,t-muconic acid as the biomarker for benzene exposure among oil workers in the rubber processing industry
	NIOSH	Laboratory Osh Compliance Status Among Chemical Testing Laboratory In Lembah Klang
2011	NIOSH	Need analysis & concept design of starter pack kit for safety & health officer
	NIOSH	Prevalence of hearing impairment among noise exposed group in aviation, manufacturing & semiconductor industry in Selangor.
	GALAXY SDN BHD	Air Purifier Using Photoplasma Technology In Reducing Microbe And Tvoc In Indoor Environment
	NIOSH	Assessment Study on the Level of Knowledge, Attitude and Practice of OSH by Workers in Malaysia

YEAR	GRANT	RESEARCH
2010	NIOSH	Relation Between Environmental Factors and Microbe Growth In Indoor Environment: Case Study Of Niosh
	NIOSH	Occupational Safety and Health Training programme: A Malaysian Perspective.

Research conducted by MIROS from 2010 to 2014

NO.	RESEARCH TITLE
2014	
1	Helmet Use of Malaysian Motorcyclist: A Case Study in Selected District in Selangor - OPS Selamat Raya
2013	
1	Feasibility Study Of Bus Vs Private Vehicle
2	Evaluation Of Taxi Driver Performance Using MIROS Instrumented Car For SPAD Land Public Transport Award 2013
2012	
3	Bus Users' Exposure: A Case Study on Bus Express Transit (BET)
4	Safety Level of Express Bus from Passengers' Perspective
5	Identifying of High Risk Group of Obstructive Sleep Apnoea (OSA) among Lorry Drivers
6	Exploring Sleep Quality and Driver Behaviour and Its Associations with Crash and Near Crash Involvement Among A Population of Truck Drivers Performance of After-Sales Passenger Car Tire
7	Design of New High Energy Rear RUPD for Rigid Heavy Vehicles
8	Child Motorcycle Pillion Rider Anthropometric Measurement for Motorcycle Design
9	Driver fatigue: Factors Contributing and Effect on Driver's Neuropsychological Performance: A Study among Truck Drivers
2011	
1	Exposure and Risks While Commuting for Work: Case Study Among SOCSO Contributors
2010	
1	Development of an Assessment Tool for Determining SHE COP Compliance by Bus Operators
2	Evaluation of SHE COP Practices among Express Bus Operators
3	Evaluation on Selected Elements of SHE COP Practices among Express Bus Operators and Drivers - A Comparative Study

List of research conducted by VRI

YEAR	RESEARCH CONDUCTED
2010	A survey of Bacterial and Parasitic Infections of Rats Caught in the Veterinary Research Institute (VRI), Ipoh
2011	Identification of Salmonella Serotypes Isolated from Meat Samples in Malaysia
2012	A Preliminary Report on The Surveillance of Highly Pathogenic Avian Influenza (H5N1) And Newcastle Disease (ND) Viruses in Edible Bird Nest Swiftlet (*Aerodramus Fuciphagus* & *Aerodramus Maximus*)
	Seroprevalence of Melioidosis among Livestock in Malaysia 2000-2009
2014	Antimicrobial Resistance of Salmonella *Enterica Serovar Typhimurium* from Various Meats Received In VRI
2015	Vectors of Veterinary Importance In Malaysia: A Survey Of Biting Flies In Relation To Trypanosomiasis In Perak

Research conducted by MEF from 2010 to 2015

YEAR		RESEARCH CONDUCTED
2010	1	Salary surveys for executives and non-executives 2010
	2	Survey on Fringe Benefits
	3	Analysis of collective agreements and awards on terms & condition of employment 2010
	4	Compensation and benefit survey for sales/marketing personnel
	5	Survey on implementation of performance/ productivity-linked wage system
	6	Survey on Man-days loss
	7	Survey on extension of retirement age in private sector
2011	1	Salary surveys for executives and non-executives 2011
	2	Survey on human resources practices and benchmarking on HR Indicator
	3	Feedback on manpower requirement
	4	Survey on projected requirement on foreign workers for the period of 2011-2015
	5	Survey on the proposed retrenchment/ termination fund and unemployment insurance scheme
2012	1	Salary surveys for executives and non-executives 2012
	2	Analysis of collective agreements and awards on terms & condition of employment 2011
	3	Survey on work life balance
	4	Survey on application for foreign workers
	5	Survey on proposals to include "over-time payment" within the definition of wages under EPF Act 1991
	6	Survey on implementation of National Minimum Wages
	7	Survey on implementation of Minimum Retirement Age
2013	1	Salary surveys for executives and non-executives 2013
	2	Analysis of collective agreements and awards on terms & condition of employment 2012

YEAR		RESEARCH CONDUCTED
	3	Fringe Benefits survey 2013
	4	Survey on the impact of the increase in electricity tariff and electricity saving measures adopted by companies
	5	Survey on impact of the implementation on GST on industry
	6	Survey on development of practical guidelines for employers on the recruitment, placement, employment and repatriation of foreign workers in Malaysia.
2014	1	Salary surveys for executives and non-executives 2014
	2	Analysis of collective agreements and awards on terms & condition of employment 2013
	3	Work-life balance practices 2014
	4	Survey on employers contributions to private retirement schemes
	5	Survey on issues and challenges of water rationing
2015	1	Salary surveys for executives and non-executives 2015
	2	Analysis of collective agreements and awards on terms & condition of employment 2014
	3	Allowances & reimbursement survey 2015
	4	Medical benefits & man-days loss survey
	5	Survey on proposal of issuing medical sick certificate by Chinese physicians/ traditional medical practitioners
	6	Survey on issues faced by employers during the conciliation at the industrial relations (IR) Department, Malaysia

Benefits from Employment Injury Insurance Scheme (SOCSO)

Medical Benefit

Employees suffering from employment injuries or occupational diseases may receive free medical treatment at SOCSO's panel clinic or Government clinic and/or hospital. Treatment must be continued until they are fully recovered.

Temporary Disablement Benefit

Temporary Disablement Benefit is paid for the period the employee is on medical leave certified by a doctor for not less than four (4) days including the day of accident.

However, Temporary Disablement Benefit will not be paid for the days for which the employee works and earns wages during this period.

Permanent Disablement Benefit

Permanent Disablement is defined as a permanent disability due employment injury that reduces employees' ability to perform his duties. Permanent Disablement Benefit can be claimed after the last day of temporary disablement.

Constant-attendance Allowance

This allowance is paid to an employee who is suffering from total permanent disablement and is so severely incapacitated as to constantly require the personal attendance of another person.

Facilities for Physical and Vocational Rehabilitation

Rehabilitation facilities may be provided free of charge by the Organisation to an employee who suffers permanent disablement

Return to Work Programme

SOCSO's Return to Work (RTW) program was introduced on the 15th of January 2007 for Insured Person suffering from employment injury or claiming to be invalid.

The Return to Work program involves a proactive approach taken in helping Insured Person with injuries or diseases, opportunities to safe and productive work activities as soon as it is medically possible or when maximum medical improvement is achieved with a primary focus of minimizing the impact of injuries or disabilities.

Dependants' Benefit

Dependant's benefit is for the dependants of the employee who dies as a result of employment injury.

Funeral Benefit

Funeral Benefit will be paid to the eligible person as prescribed in the Act, if the employee dies due to any cause. In the absence of such person, the benefit will be paid to the person who actually incurs the expenditure.

Education Benefit

Education Benefit is a SOCSO benefit that can come in the form of education benefits or scholarships to dependent beneficiaries based on PERKESO's Benefits Schedule which meets SOCSO's requirement.

Benefits from Invalidity Schemes (SOCSO)

Invalidity Pension

Invalidity is defined as permanent morbid condition that are unlikely to be cured that result in an employee losing at least 1/3 of his or her capability compared to a normal individual, which ultimately causes a loss of income for the employee.

Invalidity Grant

Invalidity Grant is payable to the eligible insured persons who have been certified invalid by the Medical Board or Appellate Medical Board but not eligible for invalidity pension due to failure to complete any qualifying conditions.

Constant-attendance Allowance

This allowance is paid to an employee who is suffering from invalidity and is so severely incapacitated as to constantly require the personal attendance of another person, certified by Medical Board or Special Medical Board or the Appellate Medical Board.

Survivor's Pension

Survivors' Pension is payable to the eligible dependents of an insured person who dies irrespective of the cause of death not related to employment.

Funeral Benefit

Funeral Benefit will be paid to the eligible person as prescribed in the Act, if the employee dies due to any cause. In the absence of such person, the benefit will be paid to the person who actually incurs the expenditure.

Facilities for Physical and Vocational Rehabilitation and Dialysis

Rehabilitation facilities are made available by SOCSO for physical and technical rehabilitation for all employees that have permanent disabilities, and all costs will be borne by SOCSO based on prevailing terms and conditions

Return to Work Programme

SOCSO's Return to Work (RTW) program was introduced on the 15th of January 2007 for Insured Person suffering from employment injury or claiming to be invalid. The Return to Work program involves a proactive approach taken in helping Insured Person with injuries or diseases, opportunities to safe and productive work activities as soon as it is medically possible or when maximum medical improvement is achieved with a primary focus of minimizing the impact of injuries or disabilities.

Education Benefit

Education Benefit is a SOCSO benefit that can come in the form of education benefits or scholarships to dependent beneficiaries based on PERKESO's Benefits Schedule which meets SOCSO'Ss requirement.

Insurance companies approved for Foreign Worker's Insurance

NO	APPOINTED INSURANCE PANELS	WEBPAGE
1	ACE Jerneh Insurance Berhad	https://www2.chubb.com
2	AIG Malaysia Insurance Berhad	http://www.aig.com
3	Allianz General Insurance Malaysia Berhad	https://www.allianz.com.my
4	AmGeneral Insurance Berhad	http://www.amgeneralinsurance.com
5	AXA Affin General Insurance Berhad	https://www.axa.com.my/axa-affin-general-insurance
6	Berjaya Sompo Insurance Berhad	http://www.berjayasompo.com.my
7	Etiqa Insurance Berhad	http://www.etiqa.com.my
8	Etiqa Takaful Berhad	http://www.etiqa.com.my
9	Hong Leong MSIG Takaful Berhad	http://www.hlmtakaful.com.my
10	AIA Bhd.	https://www.aia.com.my
11	Lonpac Insurance Berhad	http://www.lonpac.com
12	MCIS Zurich Insurance Berhad	https://www.mcis.my
13	MAA Takaful Berhad	http://www.zurich-takaful.com.my
14	MSIG Insurance (Malaysia) Berhad	https://www.msig.com.my
15	MultiPurpose Insurans Bhd.	http://www.mpigenerali.com
16	Overseas Assurance Corporation (Malaysia) Berhad	http://www.oac.com.my
17	Pacific & Orient Insurance Co. Berhad	http://www.pacific-orient.com/poi/
18	Progressive Insurance Bhd	http://www.progressiveinsurance.com.my
19	Prudential BSN Takaful Berhad	https://www.prudential.com.my
20	QBE Insurance (M) Berhad	http://www.qbe.com.my/

NO	APPOINTED INSURANCE PANELS	WEBPAGE
21	RHB Insurance Berhad	http://www.rhbgroup.com/investor-relations/financial-reports/annual-reports/rhb-insurance-berhad
22	Syarikat Takaful Malaysia Berhad	http://www.takaful-malaysia.com.my
23	Takaful Ikhlas Sdn. Bhd.	http://www.takaful-ikhlas.com.my/
24	The Pacific Insurance Berhad	http://www.pacificinsurance.com.my/
25	Tokio Marine Insurans (M) Berhad	http://www.tokiomarine.com
26	Tune Insurance Malaysia Berhad	https://www.tuneprotect.com
27	Uni. Asia General Insurance Berhad	http://www.uniasiageneral.com.my/
28	Zurich Insurance Malaysia Berhad	https://www.zurich.com.my
29	Amanah General Insurance Berhad	https://www.axa.com.my/
30	Arab Malaysian Assurance Berhad	https://www.amassurance.com.my/
31	London & Pacific Insurance Company Berhad	https://www.lonpac.com/web/my
32	Mayban Assurance Berhad	http://www.etiqa.com.my
33	MNI Takaful Sdn. Bhd	http://www.etiqa.com.my
34	Malaysia British Assurance Berhad	N/ A
35	Malaysian Assurance Alliance Berhad	https://www.maa.my/maa/index.php
36	Malaysia National Insurance Berhad	http://www.etiqa.com.my
37	The Pacific Insurance Berhad	http://www.pacificinsurance.com.my

List of Certificate/Competency Programs offered by NIOSH

i.	Authorized Entrant & Stand-by Person for Confined Space
ii.	Authorized Entrant & Stand-by Person for Confined Space (Refresher)
iii.	Authorized Gas Tester & Entry Supervisor for Confined Space
iv.	Authorized Gas Tester & Entry Supervisor for Confined Space (Refresher)
v.	Basic Occupational First Aid
vi.	Basic Offshore Occupational First Aid
vii.	Certificate Program for Safety & Health Officer (Full Time/Part Time/Modular)
viii.	Chemical Health Risk Assessor (CHRA) Program
ix.	High Pressure Water Jetting Competency Program
x.	Indoor Air Quality for Assessor
xi.	Monitoring of Chemical Hazardous to Health (IHT Module 1)
xii.	Inspection, Testing & Examination of Engineering Control Equipment (IHT Module 2)
xiii.	Monitoring of Noise Exposure
xiv.	Safe Handling of Forklift Truck Competency Program
xv.	Safe Handling of Forklift Truck Competency Program (Refresher)
xvi.	Scaffolding 3 in 1 (Frame / Tubular / Modular) - Basic
xvii.	Scaffolding 3 in 1 (Frame / Tubular / Modular) - Intermediate
xviii.	Scaffolding 3 in 1 (Frame / Tubular / Modular) - Advanced
xix.	Occupational Health Doctor (OHD) Program
xx.	Occupational Health Nurse (OHN) Program

List of trainings provided by CIDB

Course	Level
Building	
Aluminium Framework Fabrication	1
Bar-bending	1
Brick-laying	1
Building Architectural Coating Application	1&2
Building Decorative Painting	1&2
Building Operation & Maintenance (C&S)	1
Carpentry (Formwork)	1
Carpentry (Joinery)	1
Concreting	1
Demountable Ceiling Installation	1&2
Drywall Partition Installation	1
Fixed Ceiling Installation	1&2
Plastering	1
Plumbing (Building & Sanitary Fitting)	1
Plumbing (Water Reticulation)	1
Scaffolding Erection	1
Steel Structure Erection & Fabrication	1
Tiling	1
Crane operation	
Crawler Crane Operation	2
Mobile Crane Operation	2
Tower Crane Operation	2
Plant Operation	
Backhoe Loader Operation	2
Hydraulic Excavator Operation	2

Course	Level
Track Dozer Operation	2
Wheel Loader Operation	2
Mechanical and Electrical	
Air-Condition & Mechanical Ventilation	1&2
Building Wiring Installation	
Chargeman (Penjaga Jentera)	AO
Gas Pipe Installer (High Pressure)	1
Gas Pipe Insulation	1
Single Phase Electrical Installation	PW1/2
Three Phase Electrical Installation	2
Wireman (Sarawak)	1&2
Drafting	
Architectural Drafting	1&2
Welding	
Flux-Cored Arc Welding (FCAW)(GS)-3G	2
Flux-cored Arc Welding (FCAW)(GS)-6G	3
Flux-Cored Arc Welding (FCAW)(SS)-3G	2
Flux-cored Arc Welding (FCAW)(SS)-6G	3
Gas Metal Arc Welding (GMAW/MIG)-6G	3
Gas Tungsten Arc Welding (GTAW/TIG)-6G	3
Gas Tungsten/Shielded Metal Arc Welding (GTAW+SMAW)-6G	3
Gas Tungsten Arc Welding (GTAW/TIG)-3G	2
Shielded Metal Arc Welding (SMAW/MMA)-1G	1
Shielded Metal Arc Welding (SMAW/MMA)-3G	2
Shielded Metal Arc Welding (SMAW/MMA)-6G	3
Blasting & Painting	
Blasting & Painting	2

Course	Level
Non-Destructive Testing	
Interpretation of Radiographs	
Magnetic Particle Testing	
Penetrant Testing	
Ultrasonic Testing Thickness Measurement	
Ultrasonic Testing Weld	2

List of trainings provided by OPITO

	Emergency Response (Training and Competence)
1	Basic H2S Training
2	Basic Offshore Safety Induction and Emergency Training
3	Basic Offshore Safety Induction and Emergency Training
4	Onshore Emergency Response
5	Bridging Elements
6	Compressed Air Emergency Breathing System (CA-EBS) Initial Deployment Training
7	Control Room Operator
8	Elected Safety Representatives Development Training Module 1
9	Elected Safety Representatives Development Training Module 2
10	Elected Safety Representatives Development Training Module 3
11	Elected Safety Representatives Development Training Module 4
12	Emergency Breathing System
13	Escape Chute Training
14	Further Offshore Emergency Training
15	Further Offshore Emergency Training (with CA-EBS)
16	Further Onshore Emergency Response
17	FHDA and HERTM Further Training
18	Helideck Emergency Response Team Member (HERTM) Training
19	Helicopter Underwater Escape Training
20	Helicopter Underwater Escape Training (with CA-EBS) HLO/HERTL-FHLO and HERTL Further Training
21	Helideck Emergency Response Team Leader (HERTL) Training
22	Major Emergency Management Initial Response Training
23	Minimum Industry Safety Training for Experienced Workers
24	Offshore Emergency Response Team Leader
25	Offshore Emergency Response Team Member
26	Offshore Helicopter Landing Officer (HLO) Initial Training

27	Offshore Helideck Assistant (HDA) Initial Training
28	Offshore Lifeboat Coxswain RO Offshore Radio Operator
29	OIM Controlling Emergencies
30	Travel Safely by Boat
31	Tropical Basic Offshore Safety Induction and Emergency Training Tropical Further Offshore Emergency Training
32	Tropical Helicopter Underwater Escape Training
	Emergency Response and Rescue Vessel
1	ERRV Crew Advanced Medical Aid
2	ERRV Crew Daughter Craft Coxswain
3	ERRV Crew Fast Rescue Craft Boatman
4	ERRV Crew Fast Rescue Craft Coxswain
5	ERRV Crew Initial Training Shipboard Operations
6	Ongoing Onboard Development & Training Programme for ERRV Master and Crew
	Others Non-Emergency Response Based (Training and Competence)
1	Application of Insulation Systems Training
2	Authorized Gas Tester Training Level 1
3	Authorized Gas Tester Training Level 1 (CBT)
4	Authorized Gas Tester Training Level 2
5	Authorized Gas Tester Training Level 2 (CBT)
6	Authorized Gas Tester Training Level 3
7	Authorized Gas Tester Training Level 3 (CBT)
8	Banksman and Slinger Training - Stage 1, 3,4
11	Blaster Sprayer Competence
12	Blaster/Sprayer Training
13	Competence Assessor
14	Control of Work Training for Performing Authorities
15	Dangerous Goods By Sea
16	Fire Proofing Training

17	Internal Verifier
18	International Minimum Industry Safety Training
19	LOLER Competent Person Assessment
20	Minimum Industry Safety Training
21	Offshore Crane Operator - Stage 1 Introductory Training
22	Offshore Drilling Industry Greenhand
23	Offshore Lifeboat Coxswain Supplementary Fall Training (Single Fall)
24	Offshore Lifeboat Coxswain Supplementary Fall Training (Twin Fall)
25	Offshore Lifeboat Coxswain Training (Free Fall)
26	Offshore Lifeboat Coxswain Training (Single Fall)
27	Offshore Lifeboat Coxswain Training (Twin Fall)
28	Offshore Safety Representative
29	Rigger Competence - Stage 3
30	Rigger Competence - Stage 4
31	Rigger Training - Stage 1
32	Safe Driving at Work
33	Command and Control for ERRV Masters and Mates

Private and Government Institution as Certified Training center for CLASS Regulation registered with DOSH

TRAINING CENTRE	DOSH KIM REGISTRATION NO.	PREMISE ADDRESS	TYPE OF COURSE	ACCREDITATION PERIOD
UKM Technology Sdn. Bhd.	127/11/2-1 (2)	Collaborative Innovation Centre (PIK) Universiti Kebangsaan Malaysia 43600 UKM Bangi, Selangor Tel. No.: 03-89214876 Email: pghinovasi@ukm.edu.my	Stage: 1) Basic 2) Intermediate 3) Advanced	1 September 2016 - 31 August 2019
Malaysian Industrial Hygiene Association (MIHA)	127/11/2-1 (3)	No. 19A, 1st Floor, Jalan 2/14, Bandar Baru Selayang, 68100 Batu Caves, Selangor Tel. No.: 03-61352990 Email: admin@miha2u.org	Stage: 1 Basic 2 Intermediate 3 Advanced	1 October 2016 - 30 September 2019
National Institute of Occupational Safety and Health (NIOSH)	127/11/2-1 (4)	Lot 1, Jalan 15/1, Seksyen 15, 43650 Bandar Baru Bangi, Selangor Tel. No.: 03- 87692100/89113800 Email: major.hanif@niosh.com.my	Stage: 1 Basic 2 Intermediate	1 October 2016 - 30 September 2019

Private and Government Institution as Certified Training center for Crane Operator registered with DOSH

AGENCIES	SERVICES PROVIDED	WEBPAGE
Gamuda Plant Operator School (GPOS)	Mobile Crane Crawler Crane Tower Crane	http://gpos.com.my
Institut Kemahiran Belia Negara	Tower Crane	http://eikbn.gov.my
Beruntung Skills Training Centre Sdn Bhd	Mobile Crane Crawler Crane	http://beruntungskilltrainingcentre.com
Akademi Binaan Malaysia Wilayah Selatan	Mobile Crane Crawler Crane	http://www.akademibinaan.com.my/web/index.php/kampus/abm-wilayah-selatan
Akademi Binaan Malaysia Wilayah Timur	Mobile Crane Crawler Crane	http://www.akademibinaan.com.my/web/index.php/kampus/abm-wilayah-timur
Akademi Binaan Malaysia (Utara) Sdn Bhd	Mobile Crane Crawler Crane	http://www.akademibinaan.com.my/web/index.php/kampus/abm-wilayah-utara
Akademi Binaan Malaysia Wilayah Sarawak	Mobile Crane	http://www.akademibinaan.com.my/web/index.php/kampus/abm-wilayah-sarawak
Akademi Binaan Malaysia (Selangor) Sdn Bhd	Mobile Crane	http://www.akademibinaan.com.my/web/index.php/kampus/abm-wilayah-tengah

Private and Government Institution as Certified Training center for Scaffold courses registered with DOSH

COMPANIES	LEVEL	WEBPAGE
HRSB Training Sdn Bhd	Level 1 Level 2 Level 3	http://gpos.com.my
Institut Kemahiran Belia Negara (IKBN)	Level 1 Level 2 Level 3	http://eikbn.gov.my
Akademi Binaan Malaysia/ CIDB	Level 1 Level 2	http://www.akademibinaan.com.my
Mega United Skill Training Sdn Bhd	Level 1 Level 2 Level 3	http://www.megaunited.com.my/must.html
Teras Universal Sdn Bhd	Level 1 Level 2 Level 3	http://terasuniversal.blogspot.my
SR Scaffold Resources Sdn Bhd	Level 1 Level 2	http://srglobaltraining.com.my
Malaysia Marine and Heavy Engineering (MMHE) Sdn Bhd	Level 1	http://www.mhb.com.my
MKRS Bumi (M) Sdn Bhd	Level 1 Level 2 Level 3	http://www.mkrs.com.my/home
Scaffolding Access, Training & Consultancy Sdn Bhd	Level 1 Level 2	None
Asia Consultant & Training Services Sdn Bhd	Level 1 Level 2	http://asiaconsultants.com.my
UIE Solution (M) Sdn Bhd	Level 1 Level 2	http://www.uie-solutions.com/
Cahaya Educational and Training Academy Sdn Bhd	Level 1	http://ceta.com.my
Cahaya Gunung Mega Sdn Bhd	Level 1	None
Teknikal Timur Services Sdn Bhd (Technical Training Centre)	Level 1	None

Private and Government Institution as Certified Training Center for Safety and Health Officer (accredited by DOSH)

AGENCIES	WEBSITE
Certificate Level	
National Institute of Safety and Health (NIOSH)	www.niosh.com.my
FMM Institute of Manufacturing	http://fmm.org.my/
Construction and Industrial Safety Training Centre Sdn. Bhd. (CONSIST)	www.consist.edu.my
Centre for Continuing Education &. Professional Development (CENFED), Universiti Malaysia Pahang	http://www.education.phm.my/
ITS Management Sdn. Bhd.	https://its1998.com/
MIFFA Consultancy and Training Services Sdn. Bhd.	www.miffa.com.my
KLIA Training and Research Centre Sdn. Bhd.	http://www.kliatraining.com.my/
Ranaco Marine Sdn. Bhd.	http://www.reti.edu.my/
Skill Solutions Sdn. Bhd.	http://skillsolutions.blogspot.my/
Global Institute of Safety Management Sdn. Bhd. (GISM Sdn. Bhd.)	http://www.gism.com.my/
Pusat Pembangunan Kemahiran Sarawak	https://ppks.edu.my/
Cyberjaya Integrated Environmental, Safety and Health (CIESH) Excellent Academy	https://ciesh.wildapricot.org/
Pahang Skills Development Centre (PSDC)	http://www.psdc.gov.my/ps/index.php
NOSH Global Sdn. Bhd.	http://www.nosh.com.my/noshnew/
Cerna Minda Sdn. Bhd.	http://www.cernaminda.com/
CIDB Holding Sdn. Bhd.	http://www.cidbholdings.com.my/webv2/
Septronic Skills Training Centre Sdn. Bhd.	http://www.septronic.edu.my/mal/

AGENCIES		WEBSITE
Diploma Level		
Kolej Antarabangsa Fajar		http://www.kolejfajar.edu.my/
Ranaco Education Training Institute (RETI)		http://www.reti.edu.my/
Kolej CONSIST		www.consist.edu.my
Centre for Continuing Education &. Professional Development (CENFED), Universiti Malaysia Pahang		http://www.education.phm.my/
Kolej Professional & Pengurusan KLIA		http://www.kliatraining.com.my/
Universiti Curtin Sarawak, Malaysia		http://www.curtin.edu.my/
City University College of Science and Technology		http://www.city.edu.my/
Postgraduate Diploma Level		
Universiti Kebangsaan Malaysia	Postgraduate Diploma in Industrial Safety Management	http://www.ukm.my/portal/postgraduate/
Bachelor Degree Level		
Universiti Putra Malaysia	Bachelor of Science (Environmental and Occupational Health)	http://www.medic.upm.edu.my/BSkppBM#BSkppBM
Universiti Malaysia Pahang	Bachelor of Science (Occupational Safety and Health)	http://ftek.ump.edu.my/
Executive Master Degree Level		
Universiti Teknologi Malaysia	Executive Master (Occupational Safety and Health Management)	http://razakschool.utm.my/emosh/
Master Bachelor Degree Level		
Universiti Kebangsaan Malaysia	Master of Science (Industrial Safety Management)	http://www.ukm.my/fsk/schools/school-of-diagnostic-applied-health-sciences/environmental-health-industrial-safety-programme/

Appendix 5

Universiti Utara Malaysia	Master of Science (Occupational Safety and Health) Management	http://uumkl.uum.edu.my/index.php/my/academic-2/45-demo-content/249-master-of-science-occupational-safety-and-health-management

Private and Government Institution as Certified Training center for Site Safety Supervisor (accredited by DOSH)

AGENCIES	WEBSITE
KLIA Training and Research Centre Sdn. Bhd.	http://www.kliatraining.com.my/
Master Builders Association Malaysia (MBAM)	http://mbam.org.my/
People & Skills Sdn. Bhd.	Not available
Skill Solutions Sdn. Bhd.	http://skillsolutions.blogspot.my/
National Institute of Safety and Health (NIOSH)	www.niosh.com.my
NOSH Global Sdn. Bhd.	http://www.nosh.com.my/noshnew/
Septronic Skills Training Centre Sdn. Bhd.	http://www.septronic.edu.my/mal/
Zone Safety Technology Sdn. Bhd.	https://www.facebook.com/Zone-Safety-Technology-Sdn-Bhd-129471047104722/

Private and Government Institution as Certified Training Center for Confined Space Training (accredited by DOSH)

AGENCIES	SERVICES PROVIDED	WEBPAGE
National Institute of Safety and Health (NIOSH)	i. Authorized Gas Tester (AGT) and Entry Supervisor ii. Authorized Entrant (AE) iii. Standby Person (SP)	http://www.niosh.com.my
Malaysia Marine and Heavy Engineering Sdn. Bhd.	i. Authorized Entrant (AE) ii. Standby Person (SP)	http://www.mhb.com.my
Malaysian Offshore Contractors Association (MOCA) Resources		http://moca.org.my
Alticasia Sdn. Bhd.		http://alticasia.blogspot.my
MIFFA Consultancy & Training Services Sdn. Bhd.		http://e-miffa.com/home.php
Petronas Technical Training Sdn. Bhd. (INSTEP)		https://www.instep.my/Pages/default.aspx
Newwin Engineering (M) Sdn. Bhd.		https://www.instep.my/Pages/default.aspx
Indah Water Konsortium Sdn. Bhd. (IWK)		https://www.iwk.com.my/iwtc
Falcon Training & Services Sdn. Bhd.		http://falcontraining.com/what-we-do/
NOSH Global Sdn. Bhd.		http://www.nosh.com.my/noshnew/

Private and Government Institution as Appointed by Atomic Energy Licensing Board for Radiation Protection Officer Training

AGENCIES	WEBSITE
Nuclear Agency Malaysia	www.nuclearmalaysia.gov.my/
Alpha Centennial (M) Sdn. Bhd	www.alphacentennial.tripod.com/
Asia Lab (M) Sdn. Bhd.	www.asialabgroup.com/
Green Technologies Technical Services Sdn. Bhd.	www.green.com.my/
Bangi Ray Services Sdn. Bhd.	http://my309341.panpages.my/about-us
Raysafe Consultancy Sdn Bhd	www.raysafe.com/

Private Institutions, Association and Organizations Offering Various Occupational Safety and Health Related Training Courses

INSTITUTIONS	SERVICES PROVIDED	WEBSITES
Malaysian Employer Federation (MEF)	Conferences, Seminars, Training, Workshop on OSH	http://www.mef.org.my
National Institute of Occupational Safety and Health (NIOSH)	All aspects of OSH	http://www.niosh.com.my
Malaysian Trade Union Congress (MTUC)	All aspects of OSH	http://www.mtuc.org.my
UPM Holdings	All aspects of OSH	http://www.upmet.upm.edu.my/
Malaysian Industrial Hygiene Association (MIHA)	All aspects of OSH	http://www.miha2u.org
Skills Development Centre or Pusat Pembangunan Tenaga Industri (PUSPATRI)	Certificate of Industrial Skills Enhancement Program for SHO and short courses in OSH.	http://www.puspatri.edu.my
Ranaco Marine Sdn Bhd	Industrial Safety Services, Diploma in OSH and vocational training for safety supervisor.	http://www.reti.edu.my/
Borneo Safety Training Services	Various OSH related courses	http://bsts.org/v2/
Akademi Binaan Malaysia	Occupational Safety and Health courses related to construction	http://www.akademibinaan.com.my/web/index.php/kursus/kursus-ccd-cpd
ErgoWorks Sdn Bhd	Course in ergonomics	http://www.my-ergoworks.com

INSTITUTIONS	SERVICES PROVIDED	WEBSITES
MIFFA Consultancy and Training Services	Certificate programs in OSH	http://www.miffa.com.my/training and services.asp
Medi-Ihsan Occupational Safety and Health	Various OSH related courses	http://www.miosh.com.my
Malaysian Society for Occupational Safety and Health (MSOSH)	Seminars, OSH programs for OSH practitioners	http://msosh.org/courses.html
Mina Resources Sdn Bhd	Course in OSH Management	Not available
Camp Systems Sdn Bhd	Course in OSH	https://camp3776.wordpress.com/
AIMS-Asian Sdn Bhd	Master in OSH (MSc.)	http://aimsasia.net/
Upstream Downstream Process & Services Sdn Bhd	Course and program in OSH in chemical management	http://www.udps.com.my
KnowledgeCom Corporation Sdn Bhd	Course in safety management	http://www.eknowledge.com.my/
Marcus Evans	Course in Risk Assessment	http://www.marcusevans.com
PELORUS	Certificate programs in OSH. Diploma in Environmental Health and Safety and consultancy in OSH.	http://www.pelorus.com.my/training.html
GMP Environmental Consultants	Course in all aspects of OSH such as environmental, OSHMS, risk assessment, etc.	http://www.gmp-worldwide.com/

INSTITUTIONS	SERVICES PROVIDED	WEBSITES
BEAT Consultancy Sdn Bhd	Training Courses in OSH	http://beacon.com.my/
Nuri Allied Consultants Sdn Bhd	Consultancy in OSHMS	Not available
University Technology Petronas	Technical Training in Petroleum Industry	https://www.utp.edu.my/SitePages/Home.aspx
Pelita Akademi	Training in maritime industry	http://www.pelitaakademi.com/courses/
Federations of Malaysian Manufacturer	Training program for OSH Practitioner	http://www.fmm.org.my
Gading Institute Sdn Bhd	Training program for OSH practitioner	Not available
Safety and Fire Academy	Course in fire safety management	Not available
SHE Monitorings (M) Sdn Bhd	Course in OSH such as OSHMS, Safety audit and risk assessment	http://www.shemonitoring.com
Safety Care Management Centre (M) Sdn Bhd	Courses in OSH such as accident reporting, Classification, Packaging and Labelling of Hazardous Chemicals and others	Not available
Comfori Sdn Bhd	Programs for OSH Practitioners	http://www.comfori.com
Etels Training Networks Sdn Bhd	Conference in Behavioral Based Safety Culture	http://www.etelstraining.com
Mega Mekar Solutions Sdn Bhd	Courses in OSH	Not available

INSTITUTIONS	SERVICES PROVIDED	WEBSITES
Media Expert Enterprise	Courses in OSH	Not available
Mega United Skill Training Sdn Bhd	Courses in OSH	http://www.megaunited.com.my
Best Multi Level Training Sdn Bhd	Courses in OSH	Not available
Frontier In Knowledge (M) Sdn Bhd	Courses in OSH	Not available
Safety Utama Training and Management Services	Courses in OSH	http://www.safetyutama.com
Det Norske Veritas As Sdn Bhd	Lead Auditor Courses on OHSAS	https://www.dnvgl.com/about/
Three S HSE Sdn Bhd	Programs for OSH Practitioners	Not available
ITS Management System Sdn Bhd	Courses in OSH	Not available
MSTS Asia Sdn Bhd	Courses in Advanced Fire Fighting	http://www.msts-my.org/en/
Edi Training & Consultancy Sdn Bhd	Courses in Job Safety Analysis (JSA)	Not available
World Class Training Centre Sdn Bhd	Courses in Accident Investigation and Reporting	Not available
Malaysian Occupational Safety and Health Practitioners Association (MOSHPA)	Programs for OSH Practitioners	Not available

INSTITUTIONS	SERVICES PROVIDED	WEBSITES
Masters Builders Association Malaysia (MBAM)	Programs for OSH Practitioners	http://www.mbam.org.my
Corporate Frontier	Courses in OSH	http://cfrontier.com/
CONSIST	Programs for OSH Practitioners	http://www.consist.edu.my
HSE Resources	Certificate Programs in Scaffolding	http://www.hse-resources.com/training.html
Multi Skills Consultancy	Programs for OSH Practitioners	Not available
Xpert Conference & Exhibition Services	Programs for OSH Practitioners	Not available
Safety Lab	Courses in OSH	http://www.safetylab.com.my/
Knowledge Group of Companies	Conference and Workshop in OSH	http://www.knowledgegroupco.com
EHS Solution & Marketing	Programs for OSH Practitioners	Not available
KLIA Consultancy Services Sdn Bhd	Seminar	http://www.kliaholdings.com.my
Aziz EHS Consult	Courses in Safety & Health Committee	http://www.azizehsconsultant.com/

Public Universities with OSH Program

INSTITUTION	PROGRAM OFFERED	WEB PAGE
Universiti Kebangsaan Malaysia (UKM)	1) Bachelor of Environmental Health and Industrial Safety 2) Bachelor of Occupational Therapy 3) Master of Science Environmental Assessment and Monitoring 4) Master of Science Environmental Sciences 5) Doctor of Philosophy Industrial Safety Management 6) Doctor of Philosophy Environmental Sciences 7) Bachelor of Science in Emergency Medicine 8) Master in OSH Management 9) Master in Community Health Sciences (Occupational Health) 10) Doctor of Public Health (DrPH)	http://www.ukm.my
Universiti Malaysia Pahang (UMP) (Previously known as: Kolej Universiti Kejuruteraan & Teknologi Malaysia (KUKTEM))	1) Bachelor of Occupational Safety & Health 2) Master of Technology Management Industrial Safety & Health 3) Master of Science Environmental Management 4) Master of Science Environmental Technology 5) Doctor of Philosophy Environmental Management 6) Doctor of Philosophy Environmental Technology	http://www.ump.edu.my
Universiti Putra Malaysia (UPM)	1) Bachelor of Science (Environmental and Occupational Health) 2) Master of Science Occupational Safety & Health 3) Doctor of Philosophy Occupational Safety & Health 4) Master of Emergency Response and Planning 5) Master of Science (Public Health) (Coursework) 6) Master of Public Health (MPH) (Research)	http://www.upm.edu.my/

INSTITUTION	PROGRAM OFFERED	WEB PAGE
	7) Doctor of Public Health (DrPH)	
Universiti Sains Malaysia (USM) (Health Campus) (Kubang Kerian)	1) Bachelor of Health Sciences (Environmental and Occupational Health) 2) Doctor of Public Health (DrPH)	http://www.ppsk.usm.my
Universiti Selangor (UNISEL), (Previously known as: Universiti Industri Selangor (UNISEL))	1) Bachelor of Occupational Safety & Health 2) Diploma in Environmental Health	www.unisel.edu.my
Universiti Teknologi Malaysia (UTM)	1) Executive Diploma in Occupational Safety and Health 2) Executive Master Occupational Safety and Health Management	https://www.utm.my https://executive.utmspace.edu.my
Universiti Teknologi MARA (UiTM) (Shah Alam)	1) Diploma Environmental Health 2) Bachelor of Health & Environmental Safety 3) Master of Science Environmental Technology	www.uitm.edu.my
Universiti Sultan Zainal Abidin (UNISZA)	1) Master and PhD (Occupational Medicine) 2) Master and PhD (Community Medicine) 3) Master and PhD (Occupational Health) 4) Master and PhD (Environmental Health) 5) Master and PhD (Occupational Safety and Health) 6) Master and PhD (Ergonomics)	www.unisza.edu.my

INSTITUTION	PROGRAM OFFERED	WEB PAGE
Universiti Malaya (UM)	1) Doctor of Public Health (DrPH)	

Private Universities with OSH Program

INSTITUTION	PROGRAM OFFERED	WEBPAGE
Asia Metropolitan University (Previously known as Masterskill University College of Health Sciences)	1. Diploma in Occupational Safety & Health 2. Diploma in Environmental Health	http://www.amu.edu.my
City University College of Science & Technology (CUCST) Previously known as: Unity College International (UCI)	1. Diploma in Occupational Safety & Health 2. Diploma in Environmental Health 3. Bachelor of Occupational Safety & Health (Hons.) 4. Bachelor of Environmental Health (Hons)	http://www.city.edu.my
CONSIST College	1. Diploma in Occupational Safety and Health Management 2. BSc in Occupational Safety, Health and Environment (collaborated with Middlesex University)	http://www.consist.com.my/v4/
Cyberjaya University College of Medical Sciences	1. Diploma in Occupational Safety and Health Management 2. Bachelor in Occupational Safety and Health Management 3. Master of Occupational Safety and Health Management	http://cybermed.edu.my/
Fajar International College Previously known as: Kolej Fajar	1. Diploma in Occupational Safety and Health 2. Executive Diploma in Occupational Safety and Health 3. International General Certificate in Occupational Safety and Health (NEBOSH)	http://www.kolejfajar.edu.my

INSTITUTION	PROGRAM OFFERED	WEBPAGE
KLIA Professional & Management College	1. Diploma in Occupational Safety & Health 2. Specialist Diploma in Occupational Safety & Health (NEBOSH) 3. Executive Master Occupational Safety & Health	http://kliacollege.edu.my/
Management and Science University (MSU) Previously known as: Kolej Universiti Teknologi dan Pengurusan Malaysia (KUTPM)	Diploma Occupational Safety & Health	http://www.msu.edu.my
Open University Malaysia (OUM)	1. Executive Diploma in Occupational Safety & Health 2. Bachelor of Occupational Safety & Health Management 3. Master of Occupational Safety & Health Risk Management	http://www.oum.edu.my
Ranaco Education and Training Institute (RETI)	Diploma in Occupational Safety & Health	http://www.reti.edu.my

Training program held by MEF from 2010 to 2015

YEAR	PUBLIC PROGRAMME	IN-HOUSE PROGRAMME
2010	OSH Act 1994 and its Regulations	Formation of an effective safety and health committee
	OSH Act 1994	Behavioral-based safety
	Understanding and Implementing and OSH at the Workplace	Office safety
		OSH at the workplace
		Chemical Safety
2011	OSH (Notification of accidents, dangerous occurrence, occupational poisoning and disease) Regulation 2004	Formation of an effective safety and health committee
	Formation of an effective safety and health committee	Understanding and Implementing OSH Act and its regulations
		OSH Act 1994
		OSH at the workplace
		Material handling
		Hazard identification, risk assessment and risk control
2012	OSH Act 1994	Hazard identification risk assessment and risk control
	Formation on an effective safety and health committee	Formation of an effective safety and heath committee
	Job safety analysis	Office safety
	OSH at the workplace	OSH at the workplace
	Understanding and Implementing OSH Act and its regulations	OSH Act 1994
	Office safety	Ergonomic Awareness
		Formation of an effective safety and health committee
2013	Formation of an effective safety and health committee	Chemical safety training
	Understanding and Implementing OSH Act and its regulations	OSH at the Workplace
	Accidents investigations	Formation of an effective safety and health committee

YEAR	PUBLIC PROGRAMME	IN-HOUSE PROGRAMME
	OSH Act 1994	
	Job safety Analysis	
	Office Safety	
	OSH (Notification of accidents, dangerous occurrence, occupational poisoning and disease) Regulation 2004	
2014	OSH (Notification of accidents, dangerous occurrence, occupational poisoning and disease) Regulation 2004	Emergency response preparedness
	OSH Act 1994	Essential OSH Supervisory Training
	OSH at the Workplace	Fatigue Risk Management
		Formation of an Effective Safety and Health Committee
		Hazard identification, risk assessment and risk control
		OSH at the Workplace
		OSH awareness
2015	OSH at the Workplace	
	Formation of an Effective Safety and Health Committee	
	OSH and Environment Legal Requirement	
	OSH Act 1994	
	Emergency response preparedness	
	Job Safety Analysis	
	OSH (Notification of accidents, dangerous occurrence, occupational poisoning and disease) Regulation 2004	
	Understanding and Implementing OSH Act and its regulations	

General Promotional Activities Conducted by DOSH – Targeting Public Participation

2011	
1	World OSH day
2	Develop and Implement the WIND/WISE/WISCON projects.
3	Develop the Good Neighbourhood programme
4	Develop and integrate current programmes and courses based on the National Occupational Skill Standards (NOSS) with the aim to enhance workers' awareness of OSH
5	Introduce OSH in schools. Incorporate OSH into the appropriate modules or syllabi
6	Exhibitions and the publication of technical brochures and Safety Alerts
7	Raise awareness of the importance of safe design among designers, clients and the community
8	Mentor-Mentee Programme.
9	Awareness talks and lectures on occupational health
10	Occupational Health Division conference
11	MyHESS programme
12	Cooperation with the "Umbrella Programme" under the Small and Medium Industries Section in State offices.
13	Guidance and technical programmes with emphasis on imparting knowledge of occupational health.
14	Carrying out basic health checks among the employees to identify occupational diseases and poisoning.
15	Implementation of Basic Occupational Health programmes
2012	
1	World OSH day
2	Osh in school programme
3	Developing and implementing the WIND/WISE/WISCON project
4	Mentor mentee programme
5	Formulating and implementing Basic Occupational Health Series Program (BOH)
6	Dialogue session on the elimination of hazards at the design stage

Appendix 7

7	Exhibitions and publication of safety alert and other articles of a technical nature
8	Talks on occupational health awareness
2014	
1	World OSH day
2	Seminar and promotion series for OSHMS
3	Develop and integrate competencies according to NOSS for existing courses to increase workers' awareness to OSH
4	Implementing and monitoring programme 1) WISE (300 workplace), 2) WIND (237 workplace)
5	OSH in school programme Developed draft guidelines for OSH for so-curricular activities in school OSH in school magazine publication
6	Newsletter, pamphlet and poster printed for mentor-mentee programme
7	Forensic Engineering Seminar
8	Promotion of Health at Work Place Seminar
9	MyHESS programme
2015	
1	World OSH day
2	OSH awareness programme in school
3	Promotion of occupational health
4	Program Basic Occupational Health Series Program (BOH)
5	Seminar to increase awareness in designing stage among designer and users
6	International OSH seminar
7	Construction newsletter to increase awareness among construction workers
8	MyHESS programme

Promotional Activities Conducted by DOSH – State level

PROMOTIONAL PROGRAMME	2010	2011	2012	2013	2014	2015
SECTION OF PROMOTION AND RESOURCES						
1. Delivering talks	1,082	1194	3,136	6,852	10,318	6, 025
2. Organizing exhibitions	717	670	1,367	1,379	1,472	1,384
3. Promoting OSH at workplaces	405	376	2,589	6,818	4,206	2,277
4. OSH promotion at the Public area	216	251	893	3,042	689	679
5. Promoting OSH through electronic media	60	65	65	112	103	453
6. Promoting OSH through print media	71	104	148	135	142	153
7. Dialogues on OSH	119	94	1,877	5,354	6,024	2,680
8. Seminars on OSH	56	-	124	160	218	130
GUIDANCE AND MONITORING PROGRAM						
HIV/AIDS	11	13	11	40	27	13
Drugs and Alcohol	12	15	13	46	28	12
Basic Occupational Health Services (Small and Medium Industries)	170	115	1,045	1,621	2,326	2,310
My HESS	697	-	-	1,122	1,131	1,074
Audit Occupational Health Doctor		-	-	-	-	87

Appendix 7

Specific Technical Promotional Activities Conducted by Department of Occupational and Health from 2011 to 2015.

YEAR	WORKSHOP / COURSE	SEMINAR / CONFERENCE	DIALOG / MEETING	VISIT / TRAINING	OTHER
2015	Workshop on Road Safety organized by the Japan Automotive Research Institute and the Government of Malaysia	Road Safety Seminar in conjunction with the 56th Annual General Meeting (MAT) of Road Safety Council (MKJR) Malaysia	Use of Grass-cutting Machines Safety Dialog	OIC-OSHNET Technical Training Program on OSH in Isgum, Ankara, Turkey	Restructuring of audiometric testing (PUA) in the state offices
	International Workshop on Employment Applications of Environment and Climate Change	The 2015 US Chemical Sector Security Summit in Virginia, United States	Competent person and OHD Dialog in EPF Learning Centre Bangi, Selangor	Technical Visit to a Crane-building Factory	Restructuring of the approval process at Sandblasting in the state offices
	OSH Awareness in Public Sector Course	Seminar on CWC and Chemical Safety and Security Management for Member States in the Asia Region in Doha, Qatar	Dialog with Lift and Escalator Society (MALEA)	Technical Visit to an Electricity Generating Plant in China	Best Practices: Medium and Small Scale Chemicals Industry Disaster Management and Promotion on Safety and Security Legal and Regulatory Standards in Gujarat, India
	'OSH Best Practices' Report Development Workshop in SME Sector of State DOSH		Dialog with Scaffolding Evaluators	RBI SSI Online Training Session at KIPC Kertih	Basic Occupational Health Program in the Small Medium Enterprises (Basic

YEAR	WORKSHOP / COURSE	SEMINAR / CONFERENCE	DIALOG / MEETING	VISIT / TRAINING	OTHER
					Occupational Health Services)
	OSH Compliance Support			Visit to Offshore Platform Section to Malikai Platform Project of Sabah Shell in MMHE Pasir Gudang	Special Task Force for Dengue in the Ministry 2015
	Seoul Workshop on the Peaceful Development and Use of Chemistry for Member States of the OPCW in the Asian Region				
2014	Working Safely in Confined Space Course	Second Seminar for the Road Safety Management System organised by the Malaysian Institute of Road Safety Research (MIROS)	National Tourism Human Resources Development Council (NTHRDC) Meeting	Monitoring of the level of exposure to hazardous chemicals on workers in a pharmaceutical manufacturing plant	Question and answer sessions during the program launch and storehouse ICOP CLASS 20104 located in RHR Hotel Bangi
	Session practical courses Indoor Air Quality (IAQ) at the Health Clinic Jalan Masjid, Kuching,	DOSH Small and Medium Industries Section and Enforcement Section Directors Conference	Malikai Project Meeting between Offshore Division and Sabah Shell Petroleum Co. Ltd.	Site Visit at Mass Rapid Transit (MRT), Kuala Lumpur	HRA monitoring programs held in Onshore Gas Terminal (OGT) Oil Exploration PT. Bhd. Kerteh, Terengganu

YEAR	WORKSHOP / COURSE	SEMINAR / CONFERENCE	DIALOG / MEETING	VISIT / TRAINING	OTHER
	Sarawak on August 26, 2014				
	Basic Emergency Aid Course For Occupational Safety And Health Department Officers	Promotion Of Health At Work Place Seminar	SSI Regulations Introduction Dialogue Session at FMM Johor by SSI Section	Site Visit at Mega Project in Kimanis, Sabah	Technical Briefing on Design Code of the American Society for Mechanical Engineers (ASME) by the Inspection Body
	Crane Assessment Course at a Training Provider	DOSH Malaysia Forensic Engineering Seminar 2014		Technical visit at a disc brake manufacturing plant in Negeri Sembilan	Technical Briefing on lift installation by Competent Firm
					'Technical Knowledge Sharing' at a Pipe Laying Barge at Kapal Kota Laksamana 101, PBJV
2012	Course on Safe Working in a Confined Space	Seminar on CLASS Compliance Support	Dialogue session with lift supplying, installing, maintaining, and inspecting companies	Visit to One Gasmaster Sdn. Bhd.	Launching and handing over of Stay Away from Drugs and AIDS Policy by Felda Global Ventures Berhad in Dewan Merak Kayangan, Felda
	CLASS Regulations Enforcement Course	National Level Occupational Health Seminar in	Dialogue session with tower crane installing, maintaining, and	Visit to Walk About Malaysia Sdn. Bhd.	

YEAR	WORKSHOP / COURSE	SEMINAR / CONFERENCE	DIALOG / MEETING	VISIT / TRAINING	OTHER
		collaboration with the Kuala Lumpur General Hospital	dismantling companies		
	Asbestos Alternative Materials Workshop for the industry and Government agencies	Conferences and meetings of the Occupational Health Division at the Sri Cempaka Hall of NIOSH in Bangi		Technical visit to a palm oil factory to monitor hydrostatic tests done on steam boilers	
	Indoor Air Quality Industry Code of Practice 2010 (Phase 2) Course at state offices	Occupational Health Awareness Seminar in Dewan Seri Cempaka, NIOSH		Technical visit on a gangway tower hoisting machine at Tanjung Bin, Johor	
	Courses on IAQ new technical equipment (radon meter and dust track) at state offices	National Level Occupational Health Seminar in Auditorium Utama, Kuala Lumpur General Hospital		Site visit on the launcher segment used in Pulau Pinang Second Bridge project	
	Courses on the usage of CWC equipment (GCMS/GC Voyager/FTIR) at the DOSH state offices			Working visit to Radicare Sdn Bhd, Teluk Panglima Garang	

YEAR	WORKSHOP / COURSE	SEMINAR / CONFERENCE	DIALOG / MEETING	VISIT / TRAINING	OTHER
	Chemical Health Risk Assessment (CHRA) 3rd Edition Course			Working visit to Shell MDS Bintulu, Sarawak	
	Simple Risk Assessment and Control (SiRAC) Course			Working visit to the National Institute of Occupational Safety and Health, Bandar Baru Bangi	
	Chain of Sample Custody for Chemical Hazardous to Health Course			Technical visit to a launcher structure manufacturer company	
	Compliance Guide Workshop for the CLASS Regulations 201X Proposal and Application of CIMS System for industrial representatives held at INTEKMA, Shah Alam			Technical Visit to LEKAS project in Sungai Udang, Malacca	
	Workshop on Occupational Health Awareness for HIV/AIDS Prevention Programme and Code			Technical Visit to IHI Co. Ltd. Japan	

YEAR	WORKSHOP / COURSE	SEMINAR / CONFERENCE	DIALOG / MEETING	VISIT / TRAINING	OTHER
	of Practice Management at Workplaces				
	Workshop on Occupational Health Awareness at NIOSH, Bandar Baru Bangi			Technical Visit to Waiko Engineering Works Sdn Bhd in Selangor and Perak	
	First Aid at Workplaces Course, Series 1 and 2, at NIOSH, Bandar Baru Bangi			Technical Visit to Pahang-Selangor Raw Water Transfer project	
				SSGP Project technical visit to Kimanis in Sabah with the DOSH Deputy Director-General (Operations)	
2011	Course on Safe Working in a Confined Space	GCHRA, ICOP IAQ, OSHMS Regulations 201X dan SiRAC seminar to the competent person and SHO	Dialogue with Occupational Health Doctors in Primula Beach Hotel, Kuala Terengganu, Terengganu	Technical Visit to Electrified Double Track project in Perak	CIMS practical sessions at DOSH's state offices
	Industrial Hygiene Mini Conference 2011	Regional Conference on Occupational	Dialogue with Occupational Health	GHS training sessions for new officers in the	CLASS Regulations/GHS briefing to industries

YEAR	WORKSHOP / COURSE	SEMINAR / CONFERENCE	DIALOG / MEETING	VISIT / TRAINING	OTHER
		Health di Hotel Seri Pacific, Kuala Lumpur	Doctors in Dynasty Hotel, Miri, Sarawak	Chemical Management Division	
	CHRA Courses for Local Authorities	Return to Work Conference at Putra World Trade Centre, Kuala Lumpur	Talk on eye health at Ministry of Human Resources Auditorium	Equipment Use Training (GC-MS, GC Voyager and FTIR) by Chemical Management Division at Headquarters	CWCA & Chemical Weapon Convention
	Enforcement of CLASS 201X Regulation Course organised by Chemical Management Division at JKKP Kuala Lumpur Office	Mini Conference of the Hygiene and Ergonomic Division at Puri Pujangga, UKM, Bangi	Senior Labour Officials Meeting – Working Group on HIV Prevention and Control in the Workplace (SLOM-WG-HIV) at Hotel Le-Meridien, Jakarta, Indonesia	Site visit at a construction project for water tube steam Boiler in Sabah	CLASS Regulations/GHS briefing to industries
	Courses on the usage of CWC equipment (GCMS/ GC Voyager/FTIR) at DOSH's state offices	Psychosocial Hazard Seminar with UMBI-COHORT Study Division, UKM Medical Centre	Meeting with the Malaysia Mobile Crane Owners Association at DOSH Putrajaya office	Site visit on Quay Crane repair work at Port Klang	ICOP IAQ 2010 briefing to industries
	Courses on Indoor Air Quality Industry Code of Practice 2010 at DOSH's state offices			Site visit on segment launcher which would be used for the	Petronas Health Risk Assessment organised by JKKP Sarawak and

YEAR	WORKSHOP / COURSE	SEMINAR / CONFERENCE	DIALOG / MEETING	VISIT / TRAINING	OTHER
				Penang Second Bridge project.	Petronas at Somerset Gateway Sarawak
	Courses on IAQ technical equipments (Radon Meter and Dust Track) at DOSH's state offices			Technical Visit to Jabatan Kimia Petaling Jaya, Selangor	Introduction to Liquefied Petroleum Gas organised by Forensic Engineering Division at Headquarters
	Indoor Air Quality ICOP Pilot Course organised by Chemical Management Division at Puri Pujangga, UKM			Technical Visit to Petronas Bottling Plant, Melaka	Forum on HIV/AIDS at Workplace, Mandarin Oriental Hotel, Kuala Lumpur
	IAQ technical equipment (Radon Meter, Dust Track) courses			Technical Visit to Pahang-Selangor Raw Water Transfer Project, Ulu Langat, Selangor	
	Workshop on Environmental Performance Index organised by Ministry of Natural Resources and Environment at PICC Putrajaya			Technical Visit to Bosch Rexroth, Selangor	

YEAR	WORKSHOP / COURSE	SEMINAR / CONFERENCE	DIALOG / MEETING	VISIT / TRAINING	OTHER
	First Aid Course at KWSP Institute, Bangi			Technical Visit to Ann Joo Steel, Pulau Pinang	
	Course on Occupational Health Service Implementation for Grade U29 Officers at Level 3, DOSH Headquarters			Technical Visit to Penang Second Bridge Construction Project, Pulau Pinang	
	Course on Non-Ionizing Radiation at Royale Chulan Hotel, Kuala Lumpur				
	Workshop on Safety and Health Implementation at NIOSH, Bangi				
	Occupational Health Nurse Course at NIOSH, Bangi				

List of activities conducted by NCOSH from 2010 to 2015.

YEAR	SEMINAR / CONFERENCE/ WORKSHOP	LAUNCH EVENT/ AWARD	VISIT / TRAINING	AWARENESS PROGRAM
2010	Occupational Health and Safety Seminar in Tourism Sector	Launching of Occupational Safety and Health and the OSH Seminar on Educational Institutions 2010	National Council of Occupational Safety and Health Visits to the First Dairy Farm, Muadzam Shah, Pahang	Occupational Safety and Health Week 2010
	Seminar on Occupational Safety and Health in the Construction Sector in 2010	Safety Excellence Award and the 2010 National Occupational Health	Visit of National Council of Occupational Safety and Health to BadanBas Sdn Bhd, Kajang, Selangor	
	Seminar on Occupational Safety and Health and the Prevention of Drug at Workplace 2010		Visit of Deputy Minister of Human Resources to Balai Berita Harian, Kuala Lumpur	
	Prime Seminar of Occupational Safety and Health in Small and Medium Enterprises in 2010		Visit of Deputy Minister of Human Resources to Thermiks Technologies Sdn Bhd, Bukit Beruntung, Selangor	
	MBAM Annual Safety Conference 2010		Visit of Deputy Minister of Human Resources to Heveafill Sdn Bhd, Bukit Beruntung, Selangor	
			Visit of National Council of Occupational Safety and Health to Department of Chemistry, Petaling Jaya, Selangor	

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YEAR	SEMINAR / CONFERENCE/ WORKSHOP	LAUNCH EVENT/ AWARD	VISIT / TRAINING	AWARENESS PROGRAM
			Visit of Deputy Minister of Human Resources to Balai Berita Utusan Malaysia, Kuala Lumpur	
			Visit of Deputy Minister of Human Resources to BOSCH Roberts Sdn Bhd, Petaling Jaya, Selangor	
2011	Accident Prevention Seminar	Opening Ceremony of Occupational Safety and Health for Improvement in Plantation Sector Program	MSM Working Visit to Project Site MARA, Kuala Lumpur	World Day for Safety and Health at Work 2010
	MBAM Annual Safety Conference 2011			
2012	Occupational Health and Safety Seminar 2012	Minister of Human Resources with Launch Media Guidelines "Safework Practices For Media Professionals Night"	Chairman of the National Council for Occupational Safety and Health (NCOSH) Visit to the Timber Industry Development Training Centre (WISDEC)	Health and Safety Awareness Program in Terengganu Schools State Level 2012
	Seminar on Occupational Safety and Health in Construction Site in 2012	Launching of the Guidelines on Mercury Management in Oil and Gas Industry	Chairman of National Council for Occupational Safety and Health (NCOSH) Visit to the Factory Recycling Environmental Quality UEM Environment Sdn. Bhd.	Health and Safety Awareness Program in Schools state level in 2012 (Melaka)

YEAR	SEMINAR / CONFERENCE / WORKSHOP	LAUNCH EVENT / AWARD	VISIT / TRAINING	AWARENESS PROGRAM
	OSH Practitioners Conference 2012	Launch of Occupational Safety and Health Week 2012 National Level	Expert Visits of the National Council for Occupational Safety and Health (NCOSH) to Petronas Fertilizer Kedah Sdn. Bhd.	Health and Safety Awareness Program in Schools in the Federal Territory of Kuala Lumpur in 2012
		Excellence Awards Ceremony of the National Occupational Safety and Health 2012		
2013	Stress Management Seminar At Workplace 2013	Launching Of National Occupational Safety And Health Week 2013 (OSH Week 2013)		Occupational Safety And Health Campaign In School (Negeri Sembilan) 2013
	Seminar On Occupational Safety And Health For Tourism Sector In 2013	Award Winning National Occupational Safety And Health Ceremony 2013 (OSH Award 2013)		Occupational Safety And Health Campaign In School (Kelantan) 2013
	Occupational Safety And Health Seminar In Small And Medium Enterprises (SME) 2013			Occupational Safety And Health Campaign In School (Penang) 2013
	Occupational Safety And Health Convention 2013			Occupational Safety And Health Campaign In School Selangor 2013

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YEAR	SEMINAR / CONFERENCE / WORKSHOP	LAUNCH EVENT / AWARD	VISIT / TRAINING	AWARENESS PROGRAM
	HIRARC Workshops At School 2013			
	HIRARC Workshops At School Sabah 2013			
	HIRARC Workshops At School Sarawak 2013			
	Health Workshop In Small And Medium Enterprises (SMEs) 2013			
2014	Occupational Safety and Health Seminar For Small And Medium Enterprises Central Zone 2014	Launching of the Factories and Machinery (Special Scheme Inspection) (Risk-based Inspection)		Occupational Safety and Health Awareness Program In Schools (Pahang) 2014
	OSH Seminar for Tourism Sector in Sabah	Launching Ceremony of DOSH Safety Patrol Unit and Infrastructure		Occupational Safety and Health Awareness Program In Schools 2014 Johor State Level
	OSH Seminar in Kelantan	National OSH Excellence Award 2014		OSH Awareness Program in Schools (Perak)
	OSH Seminar for Agricultural Sector in Sabah			OSH Awareness Program in School (Kedah)

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YEAR	SEMINAR / CONFERENCE / WORKSHOP	LAUNCH EVENT / AWARD	VISIT / TRAINING	AWARENESS PROGRAM
	OSH Seminar for Agricultural Sector in Kedah			OSH Awareness Program in Penang Schools
	OSH Seminar on Small and Medium Enterprises North Zone			
	National Seminar on Occupational Health and Safety in the Construction Sector in 2014			
2015	OSH Seminar on Small and Medium Enterprise 2015 Johor State Level	Launching Ceremony of OSH Week 2015	Visit By The Minister Of Human Resources To The Collapse Of The Structure Of Construction In Pulau Sebang, Melaka	Safety Awareness Program in Occupational Health and Educational Institutions in the Federal Territory of Putrajaya 2015
	National Level OSH Seminar 2015	Awards and Appointments of the Council Member of National Council for Occupational Safety and Health 2015	Visit by the Minister of Human Resources to the MRT construction site in TRX Station	Awareness Program Occupational Safety and Health in the School (Sarawak) 2016
		Excellence Awards Ceremony of the National Occupational Safety and Health 2015		OSH Awareness Program While Conducting Extra-Curricular Activities at The School in 2015

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YEAR	SEMINAR / CONFERENCE/ WORKSHOP	LAUNCH EVENT/ AWARD	VISIT / TRAINING	AWARENESS PROGRAM
	Hazard Identification, Risk Assessment and Risk Control (HIRARC) Workshop in School (Kelantan) 2013			

Activities conducted by NIOSH in Malaysia

YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ PROGRAM	VISIT/ MEETING	AWARD/ MEMORANDUM
2010	Internal training	OSH in School Programme		
		OSH Talk		
		Inspection of Fire Hydrant		
		Basic fire drill		
2011	Symposium OSH SESB/OSH-SV	OSH Talk	ASEAN OSHNET 12th Coordinating Board Meeting (CBM)	Exhibitor at Petronas SBO Excellence Week
	26th Asia Pacific Occupational Safety and Health Organisation (APOSHO), Perth, Australia	National OSH week		Exhibition by Department of Labour
		OSH in School Programme		Exhibition by Department of Labour
				Chemical Carnival by Chemical Standard
2012	APOSHO 27 Conference and 14th ASPPI Occupational Safety and Health Annual Convention and General Assembly	JICA-OSHMS and KYT Seminar	ASEAN OSHNET 13th Coordinating Board Meeting (CBM)	
	ILO-World Conference on Injury Prevention and Safety Promotion	Occupational Safety and Health Programme	NOSHCOM Meeting	
		OSH in School Programme		

YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ PROGRAM	VISIT/ MEETING	AWARD/ MEMORANDUM
		Safety and Health Officer Programme for Developing Countries (ISHO)		
2015	18th Conference and Exhibition on Occupational Safety and Health (COSH 2015)	Seminar For CEO "Sharing on OSH Excellence & Leadership"	Official Visit to NIOSH, Cincinnati, Ohio, United States of America	NIOSH trainer's appreciation day
		Inspection at work	NIOSH Sri Lanka Technical Capacity Development Programme Visit	The signing ceremony of a Memorandum of Understanding (MoU) between NIOSH and Samsung Electronics (M) Sdn Bhd
			5th Meeting of Asian Occupational Safety & Health Research Institute (AOSHRI) in Singapore	Memorandum of Agreement (MoA) signing between NIOSH and TM.
			NOSHCOM meeting	

Activities conducted by SOCSO in Malaysia

YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ FORUM	VISIT/ MEETING/ LAUNCH	AWARD/ CAMPAIGN
2010	National Return to Work Conference 2010	World Social Security (ISSA) Forum	Work Visit to the Offices and Plants of MPI, UCHI, UNISEM, ENG TECK & JCY in China	
	Training Workshops for Disabled Persons (OKU) and Equal Treatment	Asian Seminar on Unemployment Insurance in Thailand	Work Visit to Resorts World Sentosa, Singapore	
	2010 Personal Injury Management Conference	Asia Assets Servicing Seminar	Work Visit to National Rehabilitation Centre (NRC) and Japan International Cooperation Agency (JICA)	
	ICOH-SCAP International Conference on Accident Prevention Programme	Asian Pension Fund Roundtable 2010 – Managing Risk in the Face of Austerity Seminar	Study Visit to Central Provident Fund Board Singapore	
	Fellowship Training on Employment Insurance (EII) in Collaboration with The Korea Workers Compensation and Welfare Service (COMWEL) and the Korea International Labour Foundation (KOILAF) Conference	World Pension Summit 2010	Work Visit to Norway and Sweden	
	Social Protection on Floor and the Informal Economy – What	International Forum on Disability Management	Work Visit to Vietnam	

YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ FORUM	VISIT/ MEETING/ LAUNCH	AWARD/ CAMPAIGN
	Initiatives to Ensure Universal Access to Basic Social Protection: Towards a New Balance Within Social Protection, How Does it Support Employment? Workshop	2010 (IFMDM) & Study Visit to National Institute Disability Management & Research (NIDMAR)		
	Employment Law Conference in Auckland	5th China International Forum on Work Safety Programme	Working Visit (Day Trip) to Singapore	
	OSH Conference in Suntec, Singapore	4th International Solar Cities (ISCI) Initiative Seminar	Working Visit to Oil & Gas Companies in Singapore	
	SECUREASIA @ Singapore - Information Security Asia Conference	APJ Converged Infrastructure Executive Forum	Study Visit to Understand and Learn about the Social Security Schemes (Enforcement & Benefit)	
	APOSHO 25th Meeting & Conference Emerging Safety, Health & Environment Issues in a Changing World in Mauritius	ISSA Technical Seminar on Best Practice in the Collection of Contributions and Enforcement Programme	Visit by a Delegation from World Bank	
	Symposium Wireless Enterprise (WES 2010) in Orlando, Florida, USA	APAC Investment Summit 2010 in Macau, China	Visit by National Pension Scheme Authority (NAPSA) Zambia Delegations	

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YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ FORUM	VISIT/ MEETING/ LAUNCH	AWARD/ CAMPAIGN
	5th International Conference on FRP Composites on Civil Engineering (CICE 2010) Seminar	Trend Micro South East Asia Security Summit in Vietnam	Visit by Delegation from Safety and Health Officer for Developing Country	
	The Japan Kaizen Training in Tokyo, Japan	Employment Promotion Insurance Study in Tokyo, Japan	Visit by Central Provident Fund Board Singapore	
	Training of Trainers on Job Coach Course		Visit by National Indonesia	
	Return to Work Programme		Visit by Delegations of Kumpulan Wang Persaraan (KWAP)	
	Social Security Financing in Turin, Italy		Social Experts's (OECD/ Korea Policy Centre) Annual Meeting	
	2010 International Legislative Drafting Institute in New Orleans, Louisiana, USA		25th ASEAN Social Security Association Meeting (ASSA)	
	Advanced Financial Analysis and Valuation Modelling Course			
2011	Disability Management Training Workshop		Meeting with Government-linked Companies (GLCs)	5 star rating in the evaluation of Malaysian Government Portals & Website Assessment (MGPWA) 2011

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YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ FORUM	VISIT/ MEETING/ LAUNCH	AWARD/ CAMPAIGN
	Disability Management Transformation Forum; Post National RTW Conference		Delegation from Indonesia	SOCSO's Smile Campaign
	Workshop on Disability Equality Training: Towards Inclusion and Diversity		Korean Worker's Compensation and Welfare Service (COMWEL) Visit to SOCSO Headquarters	Launch of Safety Video "30 Tahun Kemudian"
	SOCSO Rehabilitation Service Delivery Transformation Workshop			National Safe Journey to Workplace Campaign 2011
	World Congress on Safety and Health at Work			
2012	Regional Tripartie Workshop at Wisma PERKESO Kota Kinabalu, Sabah	National Seminar On Social Security Protection	Delegation from The Research Institute from Policies on Pension and Aging (RIPPA), Japan	Certificate of Merit in conjunction with ISSA Good Practice Awards Asia And the Pacific Competition 2012 from International Social Security Association (ISSA) for 'Commuting Accident Prevention Plan' programme
	Disability Management Workshop for Employers	ISSA Technical Seminar on Administrative and Operational Efficiency In Social Security	Delegation from Namibia on 22 June 2012	

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YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ FORUM	VISIT/ MEETING/ LAUNCH	AWARD/ CAMPAIGN
	National Conference on Return to Work and Job Carnival 2012		Delegation from Malaysian Institute of Road Safety Research (MIROS)	
	Corporate Health and Fitness at Work Workshop		Delegation from the Ministry of Labour, Eastern Province Branch, Kingdom of Saudi Arabia	
			The TPC meeting to discuss the terms of reference of UIS study in Malaysia	
			TPC Meeting chaired by Datuk K. Selvarajah (SOCSO) with representatives from the Government, MEF and MTUC	
2013	Return to Work Programme	National Seminar on Social Security Protection 2013	Official Visit of The Minister and Deputy Minister of Human Resources To Menara PERKESO	Best Employees' Union Award
	Pelan Pengurusan Perubahan Projek ICT Core System PERKESO 2012-2013'	National Seminar on Social Security Protection 2013	30th ASEAN Social Security Association (ASSA) Board Meeting	Special Award on Human Rights 2013
	Briefing on Social Security Coverage for Temporary and Contract Employees Of Civil Service	Accident Prevention Seminar at Sunway Putra Hotel, Kuala Lumpur	Delegation from the Social Security Board (SSB), Myanmar	"Medal of Merit" Award to SOCSO Chief Executive

YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ FORUM	VISIT/ MEETING/ LAUNCH	AWARD/ CAMPAIGN
		World Social Security Forum 2013	Delegation of seven Senior Management officials from the National Security Fund (NSSF), Tanzania	"Special Award on Human Rights 2013" From SUHAKAM
			SOCSO Top Management Study Trip to Germany, Denmark And Finland	SOCSO Portal and Website Achieves 5 Star Status
			Goodwill visit from Mr. Kim Jooyung from ILO Bangkok and Dr. Ravi P. Rannan-Eliya from the Institute for Health Policy, Sri Lanka	Award for Return to Work Programme – "Best Practices Innovative Policy 2013"
			Namibia Social Security Commission Delegation Visit	National Safe Commuting to Work Campaign 2013
			Industrial Rehabilitation Centre, Thailand Visit	
			Meet the People Programme in The Serian Area with YB Dato' Sri Richard Riot Anak Jaem, Minister of Human Resources	
2014	Team Building Workshop on Disability Management in Agrotek	Commuting Accident Prevention Seminar 2014 (CAPS) at MONASH	Working Visit to Telekom Malaysia	First place at the International Media Festival for Prevention

YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ FORUM	VISIT/ MEETING/ LAUNCH	AWARD/ CAMPAIGN
	Garden Resort, Hulu Langat, Selangor	University Malaysia, Bandar Sunway		(IMFP) in conjunction with the XX World Congress of Safety and Health at Work, in Frankfurt, Germany
	Workshop on Disability and Equality Training with the theme "Towards Inclusion and Diversity" in Sabah SOCSO Office	National Level Social Security Protection Seminar	Official Visit by the Chief Secretary to the Human Resources Ministry	Silver Award in the 38th International Convention on Quality Control Circle (ICQCC) 2014 in Colombo, Sri Lanka
	Return to Work Regional Conference: "Economic Empowerment and Societal Reintegration" at Putra World Trade Centre (PWTC), Kuala Lumpur	Seminar on the Concept of Disability Management for Contractual and Temporary Staff of Government and Statutory Bodies in Kuala Lumpur State SOCSO Office	'Program Turun Padang' by the Minister of Human Resources and the SOCSO Health Screening Programme	5 Star Rating Excellence Award from the Multimedia Development Corporation (MDEC) in the Malaysia Government Portals and Websites Assessment 2013 at the JPA Auditorium in Putrajaya
	Training Programme for the Indonesian BPJS Labour Staff	Occupational Health Promotion Seminar at the Corus Hotel, Kuala Lumpur	'Program Turun Padang' by YB Human Resources Minister at Resorts World Genting Highland	Silver Medal Award for AKRAB Best Practices in the Public Services Department Malaysia

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YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ FORUM	VISIT/ MEETING/ LAUNCH	AWARD/ CAMPAIGN
				AKRAB National Convention Ceremony at the Hotel De Palma, Shah Alam, Selangor
	Accident Prevention Module of the Train the Trainer Training Programme	Benefit Presentation Ceremony at the Sarawak State SOCSO Office	Launching ceremony of National Safe Commuting to Work Campaign at the Mydin Mall, Seremban 2, Negeri Sembilan	Certification from MIMOS in the Commercialised Intellectual Property Category through the SOCSO PINTAR ICT Project
	Regional Return to Work Conference 2014	Return to Work Programme	Guidelines on Impairment and Disability Assessment of Traumatic Injuries, Occupational Diseases and Invalidity 3rd Edition Book Launching Ceremony	CCTV group from the Klang SOCSO Office received the 3 Star Gold Award in conjunction with the National Team Excellence Convention 2014 in KLCC
		SOCSO with the Media Programme	Certified Medical Impairment Assessor (CMIA) Course 2014 And SOCSO Rehabilitation Facility Video Launch	Ministry of Human Resources Innovation Month 2014 Ceremony
			Launch of the National Safe Commuting to Work Campaign at	SOCSO Corporate Integrity Pledge

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YEAR	CONFERENCE/ WORKSHOP/ TRAINING	SEMINAR/ FORUM	VISIT/ MEETING/ LAUNCH	AWARD/ CAMPAIGN
			the Mydin Mall, Seremban 2, Seremban, Negeri Sembilan	Signing Ceremony with the Malaysian Anti-Corruption Commission (MACC)
			Indonesian BPJS Labour Delegation Visit	

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Activities conducted by CIDB in Malaysia

YEAR	CONFERENCE/ CONGRESS	VISIT/ LAUNCH/ MEETING	AWARD/ MoU	SEMINAR/ DIALOG
2012	International Constructional Steel Conference 2012	Visit By The Nigerian Institute Of Builders (NIOB)	MCIEA Awards Night	Seminar Legal Reforms, Sarawak
	8th Design & Health World Congress	Visit By H.e. Khin Maung Myint Minister Of Construction Myanmar And Delegates	MoU Between CIDB And CUEPACS For Collaboration in Training And Accreditation Of The Public Sector Workforce	IBS & Mechanization Seminar 2012
		Visit by Delegation from Oman		
		Dialogue Session with MBAM Following a Courtesy Call By MBAM		
2013	International Sustainable Infrastructure and Built Environment Conference 2013 – ECOBUILD	Visit of Delegates from The British Institute of Facility Management, United Kingdom to CIDB	Panel of Judges Meeting for the Construction Industry Excellence Awards Malaysia (MCIEA) 2012	Dialogue Session with Master Builder Association Malaysia
	International Construction Week	Minister & Deputy Minister of Works Working Visit to CIDB	MCIEA Awards Night	Senior Officer Seminar CIDB 2013
		Delegation from the National Construction Authority of Kenya Visit to CIDB	Industry Appreciation Night & Launch of the Build Brigade	Seminar Regulating Construction Materials & Products in Malaysia
		Visit by Minister of Urban Welfare, Housing and Local Government to CIDB IBS Center	MOU Between CIDB Malaysia and MRT Corp for Skill Training and Shassic Program	Briefing for Physical Work Implementation Cooperation Between

YEAR	CONFERENCE/ CONGRESS	VISIT/ LAUNCH/ MEETING	AWARD/ MoU	SEMINAR/ DIALOG
				Government Agencies in Selangor and CIDB Selangor
		Visit by the Delegation from Indonesian Association of Energy Technique to CIDB	MoU Between CIDB and Bayer in The Areas of Training and Sustainable Housing Development	
		The Delegation from The Parliament of the United Republic of Tanzania Visit to CIDB	MoU Between CIDB and Skills Development Fund Corporation (PTPK) in Skill Training for Construction Personnel	
		Technical Visit of The Sustainable Development Association of the Governorate of SFAX, Tunisia to CIDB	Memorandum of Cooperation Agreement (MOCA) Between CIDB and Export-Import Bank of Malaysia Berhad (Exim Bank) & Multimedia Development Corporation (MDEC) in the Areas of Training, R&D and Information Sharing	
			The Graduation Ceremony for Construction Academy Malaysia Sabah Region	
			MoU Between the Department of Statistics and CIDB Malaysia in the Area of Construction Industry Statistics	

YEAR	CONFERENCE/ CONGRESS	VISIT/ LAUNCH/ MEETING	AWARD/ MoU	SEMINAR/ DIALOG
			MoU Between CIDB and Lafarge in Areas of Training and Use of Cement & Concrete	
2014	Building Information Modeling Conference	Launching of CIDB Apps During the Monthly Assembly of Ministry of Works	Memorandum of Understanding Between CIDB Holdings and Building Construction Body of Indonesia	Construction Industry Dialogue With The Minister Of Works
	CIDB's construction mission to Yangon in conjunction with Myanmar Infrastructure Summit, Yangon, Myanmar	Visit of The Minister of Works to The Project for Upgrading of Hospital Kuala Lumpur	The Signing of Memorandum of Understanding Between CIDB And MBAM For Safety and Health in Construction	Seminar for Enhancing Quality in Construction and Launching Of Qis 7 – 2014 QLASSIC
	6th Malaysian Construction Summit 2014	Official Visit by Secretary-General of Ministry of Works To CIDB	Prize Award Ceremony Open Ideas Competition for Students 2014	
	International Construction Weeks 2014 Opening Ceremony	Meeting of the 2013 MCIEA Panel of Juries	Signing Ceremony For Memorandum Of Understanding And Seminar On The Malaysian Civil Engineering Standard Method Of Measurement (MyCESMM)	
		Working Visit to Kazakhstan in Conjunction with Astana Economic Forum (AEF), Astana, Kazakhstan	Signing Ceremony of MoC on Corporate Governance Integrity and Anti-Corruption in Construction Industry	

YEAR	CONFERENCE/ CONGRESS	VISIT/ LAUNCH/ MEETING	AWARD/ MoU	SEMINAR/ DIALOG
			Smart Partnership Agreement Between CIDB Malaysia & Institute of Engineers Malaysia (IEM)	
			Malaysian Construction Industry Excellence Award (MCIEA 2013)	
			Graduation Ceremony For Academy Binaan Malaysia Sarawak 2014	

Mentor Mentee Program (breakdown by State) for 2011 until 2015

STATE	MENTOR-MENTEE PROGRAM	
	MENTOR MENTEE PARTNER	PROGRAM
Pahang	i. Bousted Plantation Berhad – Kolej Vokasional Muadzam Shah ii. Petronas Gas Berhad – Urban Environmental Industries iii. BASF Petronas Chemicals – SMK Muadzam Jaya iv. Polyplastics Asia Pacific – SMK Kuantan v. Sime Darby Plantation – Liong Brothers Engineering vi. Sime Darby Plantation – Menuju Wawasan vii. Sime Darby Plantation – Temerloh Jaya Industrial viii. Sime Darby Plantation – Koyan Resources ix. Sime Darby Plantation – Kim Foong Construction x. Sime Darby Plantation – Grant Wealth	1) MoU 2) Pre-Audit & Post-Audit 3) Trainings Conducted: • Safety Operating Procedure (SOP) • HIRARC • Emergency Response Plan (ERP) • OSH Committee Training
Kelantan	i. Telekom Malaysia – Kolej Politek Mara ii. Air Kelantan Sdn. Bhd – Kolej Vokasional Pengkalan Chepa iii. Stesen Janakuasa TNB – Universiti Malaysia Kelantan iv. Link holder Packaging – Budu Ketereh v. Link holder Packaging – Budu Ketereh	1) MoU
Johor	i. TM Berhad – Aneka Bena Sdn Bhd ii. TM Berhad – Jurusaha Sdn Bhd iii. TM Berhad – Motobina Sdn Bhd iv. TM Berhad – Datasmart Technology v. TM Berhad - KZH Enterprise vi. TM Berhad – Televenture Sdn Bhd vii. TM Berhad – Kazakon Sdn Bhd viii. TM Berhad – Syarkat Perkhidmatan & Pembinaan FAMIE ix. TM Berhad – PCC Power Tech Sdn Bhd x. TM Berhad – ALCOM Enterprise xi. CCM Chemicals Industries - Genius Technics	1) MoU 2) Pre-Audit & Post-Audit 3) Trainings Conducted 4) Health and Safety Policy 5) HIRARC 6) OSH Committee

STATE	MENTOR-MENTEE PROGRAM	
	MENTOR MENTEE PARTNER	PROGRAM
	xii. TNB Sultan Iskandar – Worldwide Shona Denki xiii. Synthomer Sdn Bhd – Gong San Forklift xiv. Hanson Quarry – Poly Quarry Resources Sdn Bhd xv. Hanson Quarry – Concentric Effort Sdn Bhd	
Melaka	i. Petronas Pelapisan Melaka – TTESB ii. Petronas Pelapisan Melaka – Dominat Energy Sdn Bhd iii. Micro Nano Precision – CSC steel iv. KNM Process System – Jati Beringin v. Kilang Kelapa Sawit Kempas – Choon Hin Environmental vi. Farm Best Sdn Bhd – Sinmah Breeders Sdn Bhd vii. Vishay Semiconductor Sdn Bhd – JoSiong Enterprise viii. Ansell Malaysia Sdn Bhd – Honda Malaysia	1) MoU 2) Pre-Audit & Post-Audit 3) Trainings Conducted 4) OSH Committee 5) Safety Operating Procedure (SOP) 6) Chemical Handling Management 7) Emergency Response Plan (ERP) 8) HIRARC 9) Reporting Procedure & Incident Investigation
Perak	i. MMC Gamuda – Dekon Sdn Bhd ii. MMC Gamuda – Ota Tunel iii. TM Berhad – Evertronik Sdn Bhd iv. TM Berhad – Amir Hamzah v. Kilang Sawit ELPHIL – KK Nathan Transport vi. Estate ELPHIL – Prestige Centrall Management vii. Estate ELPHIL – Prestige Centrall Management	1) MoU 2) Pre-Audit & Post-Audit 3) Trainings Conducted 4) Safety Operating Procedure (SOP) 5) HIRARC 6) OSH Committee Training
WP Kuala Lumpur	i. Petronas Dagangan – SMK Padang Tembak ii. Makhostia Sdn Bhd – Doite (Malaysia) Sdn Bhd	1) MoU
Kedah	i. Beras Nasional Berhad – Kilang Beras BERNAS Pering ii. Petronas Chemical Fertilizer – Az-One Industries iii. Malaysian NPK Fertilizer Kedah – Hayara Sdn Bhd iv. Nichias FGS – Maxkeen Sdn Bhd v. Sime Darby Plantation – Agi Maju Enterprise	a) MoU b) Pre-Audit & Post-Audit c) Trainings Conducted: d) Safety & Health Policy e) Safety Operating Procedure (SOP) f) Chemical Registration g) HIRARC

STATE	MENTOR-MENTEE PROGRAM	
	MENTOR MENTEE PARTNER	PROGRAM
	vi. Sime Darby Plantation – Krishnan Ramoo Enterprise vii. Sime Darby Plantation – SS Naven Engineering viii. Sime Darby Plantation – Asamax Sdn Bhd ix. Sime Darby Plantation – Mayang Bayumas Sdn Bhd x. Infineon Technologies (Kulim) Sdn Bhd – PPH Printing Sdn Bhd	h) Emergency Response Plan (ERP)
Sabah	i. Rakyat Berjaya Sdn Bhd – Asiatic-Lumber Industries ii. Rakyat Berjaya Sdn Bhd – Plus Greeworld Sdn Bhd iii. Rakyat Berjaya Sdn Bhd – Kontraktor Malaysia iv. Rakyat Berjaya Sdn Bhd – Takat Bistari Sdn Bhd v. Rakyat Berjaya Sdn Bhd – BP Al Extrusion vi. Rakyat Berjaya Sdn Bhd – Borneo Benar vii. Blue Scope Enterprise – NCT Forwarding Colour Coil viii. Blue Scope Enterprise – F&N Beverages ix. Sabah Port – SMK Likas x. Rakyat Berjaya Sdn Bhd – Beta Bumi Sdn Bhd xi. Rakyat Berjaya Sdn Bhd – Indah Seri Mas	a) MoU b) Pre-Audit & Post-Audit c) Trainings Conducted: d) Safety & Health Policy e) Safety Operating Procedure (SOP) f) HIRARC g) Emergency Response Plan (ERP)
Sarawak	i. Malaysia LNG – BWS Engineering ii. Shell MDS (M) Sdn Bhd – Apticon Sdn Bhd iii. Petronas Carigali – Dayang Enterprise iv. Petronas Carigali – Deleum Oil Field Services v. Asean Bintulu Fertilizer – Mamanis Sdn Bhd vi. Asean Bintulu Fertilizer – Tenaga Kemena Sdn Bhd vii. Shell MDS (M) Sdn Bhd – Gusteam Corporation viii. JGC (M) Sdn Bhd – Naim Engineering Sdn Bhd	a) MoU b) Pre-Audit & Post-Audit c) Trainings Conducted: d) Safety & Health Policy e) HIRARC f) Safety Operating Procedure (SOP)

STATE	MENTOR-MENTEE PROGRAM	
	MENTOR MENTEE PARTNER	PROGRAM
Selangor	i. Emery Oleochemicals – O G Tech Sdn Bhd ii. Gas Malaysia – Dewina Food Industry iii. Macfood – GC Logistic iv. Puncak Niaga – Delta Perdana v. Fujiseats (M) Sdn Bhd – Matrix ED vi. Dusun Durian Estate – Tiong Ying Enterprise vii. Fujiseat (M) Sdn Bhd – Masdeloy Sdn Bhd viii. East Estate – Lim Kim Seng Sdn Bhd ix. Kilang Bukit Kerayong – Fuji Technic Engineering x. CCM Chemical – Kejuruteraan Asas Jaya xi. Goodyear (M) Sdn Bhd – A&C Oil Sdn Bhd xii. Fujiseat (M) Sdn Bhd – Kah Hong Precision xiii. Goodyear Malaysia Sdn Bhd – Nu Mao Eng Sdn Bhd xiv. Kesan Industries Sdn Bhd – Hibon Corporation Sdn Bhd	a) MoU b) Pre-Audit & Post-Audit c) Trainings Conducted: d) Safety & Health Policy e) HIRARC f) Safety Operating Procedure (SOP)
Terengganu	i. CUF Sdn Bhd – RB Solution Sdn Bhd ii. CUF Sdn Bhd – Maintenance Sdn Bhd iii. Petronas Gas Berhad – Process 3 Solution iv. Kertih Terminals – SMT Kuala Terengganu v. Stesen Janaelektrik Sultan Sulaiman – Makar Mas Tenaga vi. Sime Darby Plantation – Sri Aman Engineering Work vii. Sime Darby Plantation – Semai Alam Sdn Bhd viii. Sime Darby Plantation – Lam Sowe China ix. Sime Darby Plantation – Mahu Berjaya Enterprise x. Sime Darby Plantation – Tuju Timur Construction xi. Sime Darby Plantation – LCC Gold Enterprise	a) MoU b) Pre-Audit & Post-Audit c) Trainings Conducted: d) Safety & Health Policy e) HIRARC f) Safety Operating Procedure (SOP) g) Emergency Response Plan (ERP)
Perlis	i. Global E-Technic Sdn Bhd – Astranet Corporation Sdn Bhd	a) MoU b) Pre-Audit & Post-Audit

STATE	MENTOR-MENTEE PROGRAM	
	MENTOR MENTEE PARTNER	PROGRAM
	ii. Shorubber (M) Sdn Bhd – Hasnu Enterprise iii. Shorubber (M) Sdn Bhd – Sumley Enterprise iv. Kilang gula Felda Perlis Sdn Bhd – Hup Huat Construction and Engineering Sdn Bhd v. Negeri Sembilan Cement Industries – Habsah Mohd Gani Construction vi. Negeri Sembilan Cement Industries – Koperasi Kumpulan CIMA Bhd	c) Trainings Conducted: d) Safety & Health Policy e) HIRARC f) Safety Operating Procedure (SOP) g) Emergency Response Plan (ERP)
Pulau Pinang	i. TM Berhad – Pembinaan Bumi Jaya Sdn Bhd ii. TM Berhad – Proserins Sdn Bhd iii. TM Berhad – Juruniaga Sdn Bhd iv. CMB Penghantaran – SM Gua Perahu Indah	a) MoU b) Pre-Audit & Post-Audit c) Trainings Conducted: d) Safety & Health Policy
Negeri Sembilan	i. Samsung Corning Sdn Bhd – Daniskha Enterprise ii. Platinum Biofuel Sdn Bhd – Faro Industries Sdn Bhd iii. IWK Consortium Sdn Bhd – Syarikat Cahaya Murni iv. Road Builder Malaysia - Timbunan Bakti Construction v. Road Builder Malaysia – Pembinaan duta Idaman Sdn Bhd vi. TM Berhad – Televenture Sdn Bhd vii. TM Berhad – VAS Industries Sdn Bhd viii. TM Berhad – Kobelcom Sdn Bh ix. Nestle Manufacturing Sdn Bhd – Omori Innovation Sdn Bhd x. Jimah Energy Ventures Sdn Bhd – Ammar Teknik Sdn Bhd	a) MoU b) Pre-Audit & Post-Audit c) Trainings Conducted: d) Safety & Health Policy e) HIRARC f) Safety Operating Procedure (SOP) g) Emergency Response Plan (ERP)

Table A1: Number of employed persons by industry, Malaysia, 2010–2015

NUMBER ('000)	YEAR	2010	2011	2012	2013	2014	2015
CATEGORY OF INDUSTRY	Agriculture, forestry and fishing	1,614.9	1,421.7	1,628.2	1,758.9	1,694.2	1,753.9
	Mining and quarrying	57.2	73.5	80.8	87.9	84.7	104.4
	Manufacturing	2,108.5	2,244.0	2,263.7	2,315.8	2,372.5	2,322.7
	Electricity, gas, steam and air conditioning supply	55.5	51.0	61.9	61.5	65.6	61.7
	Water supply; sewerage, waste management and remediation activities	66.7	71.9	81.0	83.7	81.2	72.1
	Construction	1,082.7	1,151.5	1,174.7	1,292.1	1,277.7	1,309.9
	Wholesale and retail trade, repair of motor vehicles and motorcycles	1,887.8	2,005.4	2,125.6	2,261.4	2,324.4	2,361.4
	Transportation and storage	554.7	604.0	624.3	626.5	598.2	615.0
	Accommodation and food service activities	856.7	951.1	965.1	1,041.5	1,149.3	1,150.8
	Information and communication	178.9	206.5	208.8	194.1	213.2	214.2
	Financial and insurance/takaful activities	323.4	319.3	322.1	318.9	329.1	354.4
	Real estate activities	58.5	61.2	68.9	72.7	79.7	71.2
	Professional, scientific and technical activities	285.6	328.4	307.3	306.8	328.8	359.3
	Administrative and support service activities	359.2	448.0	532.2	566.9	654.3	634.8
	Public administration and defence; compulsory social security	787.7	750.2	696.4	761.4	741.7	751.0
	Education	779.3	782.3	784.9	816.6	871.4	899.0
	Human health and social work activities	280.0	384.1	414.3	490.0	532.9	573.1
	Arts, entertainment and recreation	91.6	87.5	84.8	79.4	94.1	81.7
	Others service activities	182.9	181.8	190.5	192.4	199.1	233.1
	Activities of households as employers	285.4	225.8	202.7	214.8	159.1	142.3
	Activities of extraterritorial organizations and bodies	2.3	2.3	2.3	2.1	1.4	1.7
	TOTAL	**11,899.5**	**12,351.5**	**12,820.5**	**13,545.4**	**13,852.6**	**14,067.7**

Table A2: Number of employed persons by industry, Johor, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	115.8	108.0	122.8	134.4	141.7	141.5
		Mining and quarrying	7.5	7.5	4.5	4.2	3.1	5.2
		Manufacturing	404.4	402.1	401.7	405.1	407.4	400.1
		Electricity, gas, steam and air conditioning supply	3.2	2.6	6.4	3.0	3.6	6.1
		Water supply; sewerage, waste management and remediation activities	9.9	12.0	8.6	9.8	11.7	9.8
		Construction	119.3	142.5	129.9	143.0	140.9	149.2
		Wholesale and retail trade, repair of motor vehicles and motorcycles	237.0	240.6	260.0	263.8	248.0	258.8
		Transportation and storage	85.1	84.7	84.4	81.2	74.4	84.4
		Accommodation and food service activities	103.7	109.7	120.2	131.7	131.4	134.5
		Information and communication	7.8	8.3	9.3	5.9	11.3	7.8
		Financial and insurance/takaful activities	26.2	25.4	25.2	28.3	27.8	30.8
		Real estate activities	4.0	5.2	5.9	8.5	11.3	10.0
		Professional, scientific and technical activities	23.3	28.3	26.5	25.8	28.0	32.3
		Administrative and support service activities	45.3	54.8	57.9	62.2	68.6	66.8
		Public administration and defence; compulsory social security	64.7	55.0	52.1	57.5	65.1	51.5
		Education	78.9	88.0	76.8	89.1	99.0	87.8
		Human health and social work activities	23.8	35.9	33.2	51.0	58.9	56.7
		Arts, entertainment and recreation	5.9	7.2	11.7	8.9	7.4	8.6
		Others service activities	22.7	23.5	24.1	25.2	26.5	30.6
		Activities of households as employers	29.9	20.6	20.3	14.8	13.8	10.0
		Activities of extraterritorial organizations and bodies	0.4	0.0	0.0	0.0	0.0	0.1
		TOTAL	**1,418.8**	**1,461.9**	**1,481.5**	**1,553.4**	**1,579.7**	**1,582.6**

Table A3: Number of employed persons by industry, Kedah, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	115.3	118.0	162.9	171.5	119.3	119.0
		Mining and quarrying	0.7	0.9	2.4	2.7	1.5	2.6
		Manufacturing	158.2	170.5	159.0	182.2	178.2	187.1
		Electricity, gas, steam and air conditioning supply	1.6	1.9	1.8	2.5	2.8	3.2
		Water supply; sewerage, waste management and remediation activities	3.2	4.7	6.7	5.9	6.3	5.5
		Construction	60.5	49.0	54.0	61.7	63.6	63.0
		Wholesale and retail trade, repair of motor vehicles and motorcycles	107.0	107.6	118.7	118.7	135.2	135.2
		Transportation and storage	24.7	25.7	24.2	29.3	29.2	33.9
		Accommodation and food service activities	65.2	66.6	65.6	62.6	85.9	85.1
		Information and communication	2.6	4.0	3.1	2.6	4.0	3.1
		Financial and insurance/takaful activities	8.7	8.8	7.7	6.8	8.8	9.3
		Real estate activities	1.4	1.9	3.1	1.3	2.0	1.1
		Professional, scientific and technical activities	10.5	7.5	6.2	6.8	7.1	8.8
		Administrative and support service activities	19.8	22.6	30.4	33.3	42.0	42.0
		Public administration and defence; compulsory social security	51.2	54.7	44.8	38.7	50.9	50.8
		Education	53.6	54.2	50.5	64.0	62.2	68.3
		Human health and social work activities	17.3	24.2	24.0	30.2	41.0	42.7
		Arts, entertainment and recreation	4.1	2.5	4.3	3.6	3.9	3.7
		Others service activities	10.2	11.2	12.0	11.7	10.6	13.5
		Activities of households as employers	9.9	7.0	5.6	6.1	5.5	3.7
		Activities of extraterritorial organizations and bodies	0.0	0.0	0.0	0.1	0.0	0.0
		TOTAL	**725.7**	**743.4**	**786.9**	**842.3**	**859.8**	**881.6**

Table A4: Number of employed persons by industry, Kelantan, 2010–2015

NUMBER ('000)	YEAR	2010	2011	2012	2013	2014	2015
CATEGORY OF INDUSTRY	Agriculture, forestry and fishing	112.7	100.2	128.3	116.3	109.5	95.9
	Mining and quarrying	1.0	1.9	1.1	2.1	1.2	2.5
	Manufacturing	57.9	51.3	59.2	58.8	56.2	68.0
	Electricity, gas, steam and air conditioning supply	2.3	2.6	2.1	1.7	1.8	2.5
	Water supply; sewerage, waste management and remediation activities	1.0	1.0	2.2	1.9	1.5	1.4
	Construction	66.7	67.4	65.9	77.4	78.8	76.7
	Wholesale and retail trade, repair of motor vehicles and motorcycles	89.8	103.0	105.1	115.9	133.0	148.1
	Transportation and storage	12.6	13.7	16.1	16.3	15.1	18.3
	Accommodation and food service activities	42.6	48.4	49.7	54.0	58.0	51.4
	Information and communication	1.8	2.0	1.9	2.2	1.6	1.8
	Financial and insurance/takaful activities	5.0	6.9	5.4	5.5	5.8	6.8
	Real estate activities	0.3	0.7	0.4	0.6	0.9	0.5
	Professional, scientific and technical activities	3.2	5.8	4.6	4.5	5.4	6.8
	Administrative and support service activities	11.5	14.6	19.4	20.3	21.9	24.4
	Public administration and defence; compulsory social security	38.0	40.0	35.3	37.2	34.4	42.4
	Education	52.5	50.9	49.9	50.3	57.9	58.4
	Human health and social work activities	17.7	23.5	22.1	26.9	31.2	34.0
	Arts, entertainment and recreation	1.0	1.4	1.5	1.8	1.7	2.4
	Others service activities	6.6	4.7	5.6	6.4	6.8	7.3
	Activities of households as employers	9.9	4.8	2.7	2.4	2.3	2.5
	Activities of extraterritorial organizations and bodies	0.1	0.0	0.2	0.2	0.2	0.0
	TOTAL	**534.2**	**544.6**	**578.7**	**602.7**	**625.2**	**652.1**

Table A5: Number of employed persons by industry, Melaka, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	16.9	12.2	21.4	20.5	17.1	16.0
		Mining and quarrying	0.4	0.4	2.2	1.1	0.6	1.8
		Manufacturing	76.9	77.2	75.9	87.9	95.8	94.4
		Electricity, gas, steam and air conditioning supply	1.0	1.2	2.3	1.9	1.4	2.3
		Water supply; sewerage, waste management and remediation activities	2.3	2.8	4.1	2.6	3.2	2.5
		Construction	27.4	26.3	28.9	25.6	30.2	29.7
		Wholesale and retail trade, repair of motor vehicles and motorcycles	53.3	55.3	59.4	61.5	61.9	61.3
		Transportation and storage	14.1	12.5	10.7	10.4	10.9	11.8
		Accommodation and food service activities	28.8	36.4	36.6	38.5	43.4	39.1
		Information and communication	3.3	3.3	3.6	2.3	2.5	2.7
		Financial and insurance/takaful activities	7.0	6.2	7.0	6.8	6.9	6.6
		Real estate activities	0.7	0.5	0.5	0.5	0.8	0.9
		Professional, scientific and technical activities	9.0	7.0	5.8	8.0	8.0	8.3
		Administrative and support service activities	11.4	16.2	19.1	18.0	19.4	20.3
		Public administration and defence; compulsory social security	27.6	28.5	24.2	26.5	23.2	25.0
		Education	29.0	28.5	27.6	31.3	31.3	34.1
		Human health and social work activities	9.8	13.4	16.0	22.1	25.3	27.9
		Arts, entertainment and recreation	1.6	3.1	2.1	1.8	2.6	2.7
		Others service activities	6.4	6.2	6.5	5.6	6.7	7.4
		Activities of households as employers	8.3	3.7	3.1	2.7	3.7	3.5
		Activities of extraterritorial organizations and bodies	0.0	0.0	0.0	0.0	0.0	0.0
		TOTAL	**335.1**	**340.8**	**357.0**	**375.5**	**394.9**	**398.3**

Table A6: Number of employed persons by industry, Negeri Sembilan, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	53.4	51.7	54.9	44.6	48.1	49.5
		Mining and quarrying	0.7	1.3	1.1	1.5	1.2	2.1
		Manufacturing	66.4	71.8	78.9	76.8	73.7	75.2
		Electricity, gas, steam and air conditioning supply	2.2	2.2	1.7	2.8	2.2	1.9
		Water supply; sewerage, waste management and remediation activities	4.6	2.3	3.7	2.5	3.7	4.8
		Construction	31.4	28.2	34.9	39.6	39.0	38.7
		Wholesale and retail trade, repair of motor vehicles and motorcycles	62.7	66.0	61.1	71.7	80.8	67.7
		Transportation and storage	22.7	23.5	24.1	23.9	28.0	30.7
		Accommodation and food service activities	34.6	32.2	42.8	48.0	42.5	43.5
		Information and communication	2.9	3.5	4.1	3.6	3.1	3.7
		Financial and insurance/takaful activities	8.1	8.5	8.2	10.9	9.9	8.6
		Real estate activities	2.7	2.3	1.9	2.2	2.2	2.0
		Professional, scientific and technical activities	7.4	6.9	7.1	9.4	8.4	6.1
		Administrative and support service activities	13.9	19.2	18.9	25.7	21.8	29.0
		Public administration and defence; compulsory social security	32.9	33.4	30.5	34.2	28.2	34.7
		Education	28.8	31.9	32.2	31.2	34.2	30.8
		Human health and social work activities	9.0	14.9	17.1	18.7	22.2	24.1
		Arts, entertainment and recreation	2.3	2.9	3.0	1.4	4.2	3.2
		Others service activities	8.2	6.0	8.2	6.9	6.4	7.4
		Activities of households as employers	10.8	7.5	7.6	8.5	6.8	5.2
		Activities of extraterritorial organizations and bodies	0.0	0.0	0.1	0.0	0.0	0.0
		TOTAL	**405.4**	**416.1**	**442.1**	**464.1**	**466.5**	**468.7**

Table A7: Number of employed persons by industry, Pahang, 2010–2015

NUMBER ('000)

CATEGORY OF INDUSTRY / YEAR	2010	2011	2012	2013	2014	2015
Agriculture, forestry and fishing	151.6	146.2	157.5	157.6	154.5	162.8
Mining and quarrying	2.6	4.1	2.9	5.5	5.0	5.4
Manufacturing	63.3	62.7	69.7	68.4	73.8	73.3
Electricity, gas, steam and air conditioning supply	1.1	2.6	2.3	2.4	3.0	2.8
Water supply; sewerage, waste management and remediation activities	6.7	4.0	5.2	4.7	4.2	4.6
Construction	43.7	44.4	50.7	57.5	51.6	46.9
Wholesale and retail trade, repair of motor vehicles and motorcycles	84.1	90.6	92.4	99.5	107.7	112.4
Transportation and storage	18.6	22.5	23.5	24.8	24.2	27.1
Accommodation and food service activities	51.1	56.5	48.1	58.9	65.6	65.6
Information and communication	2.0	3.3	2.4	2.5	2.0	2.5
Financial and insurance/takaful activities	7.9	7.5	8.8	7.6	9.8	8.2
Real estate activities	0.6	1.2	1.4	0.7	1.6	1.5
Professional, scientific and technical activities	7.2	8.4	8.4	6.6	6.6	8.2
Administrative and support service activities	15.2	21.0	27.1	25.0	26.3	29.1
Public administration and defence; compulsory social security	48.2	49.5	47.1	47.3	43.9	45.0
Education	45.1	43.6	46.5	46.6	49.4	49.0
Human health and social work activities	12.5	21.8	23.3	29.3	32.8	35.0
Arts, entertainment and recreation	9.8	4.8	2.0	3.4	8.3	4.6
Others service activities	5.6	6.1	8.3	8.6	10.6	11.0
Activities of households as employers	14.2	7.5	5.6	2.9	2.5	2.3
Activities of extraterritorial organizations and bodies	0.0	0.1	0.0	0.0	0.0	0.2
TOTAL	**591.0**	**608.4**	**633.1**	**659.8**	**683.2**	**697.5**

Table A8: Number of employed persons by industry, Perak, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	128.8	118.9	142.9	156.4	114.6	121.5
		Mining and quarrying	2.7	5.0	3.7	5.4	7.4	9.9
		Manufacturing	164.1	175.8	162.0	168.3	176.4	176.1
		Electricity, gas, steam and air conditioning supply	3.5	4.0	4.3	5.7	5.4	5.0
		Water supply; sewerage, waste management and remediation activities	3.1	5.1	5.7	3.2	4.8	3.5
		Construction	77.2	73.7	68.4	73.2	86.6	84.0
		Wholesale and retail trade, repair of motor vehicles and motorcycles	141.5	148.2	163.3	155.7	163.9	173.2
		Transportation and storage	29.5	33.4	31.4	34.0	32.8	27.8
		Accommodation and food service activities	71.4	83.0	82.8	88.5	87.1	95.9
		Information and communication	5.3	6.4	5.7	4.7	5.1	8.2
		Financial and insurance/takaful activities	14.2	14.8	11.2	13.8	16.4	18.5
		Real estate activities	1.9	1.8	1.1	0.7	2.1	1.3
		Professional, scientific and technical activities	12.0	16.5	14.1	12.4	13.2	15.1
		Administrative and support service activities	23.8	33.1	36.9	38.2	39.5	40.9
		Public administration and defence; compulsory social security	73.1	63.7	61.9	63.1	60.4	61.0
		Education	67.1	69.5	63.3	62.6	70.3	71.3
		Human health and social work activities	25.7	36.1	38.3	30.5	39.2	37.2
		Arts, entertainment and recreation	4.3	7.8	5.6	7.0	6.3	6.6
		Others service activities	13.8	12.7	15.3	14.0	14.6	17.9
		Activities of households as employers	15.6	10.1	9.3	10.3	7.9	6.9
		Activities of extraterritorial organizations and bodies	0.1	0.1	0.0	0.1	0.1	0.0
		TOTAL	**878.7**	**919.7**	**927.1**	**947.8**	**954.1**	**981.8**

Table A9: Number of employed persons by industry, Perlis, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	12.5	13.2	13.5	13.7	13.3	12.6
		Mining and quarrying	0.2	0.2	0.3	0.4	0.1	0.4
		Manufacturing	6.9	9.4	8.4	10.3	9.1	10.3
		Electricity, gas, steam and air conditioning supply	0.3	0.2	0.2	0.4	0.4	0.4
		Water supply; sewerage, waste management and remediation activities	0.3	0.3	0.4	0.2	0.4	0.8
		Construction	8.6	7.9	8.2	9.7	8.9	9.1
		Wholesale and retail trade, repair of motor vehicles and motorcycles	11.1	11.6	13.3	14.7	13.5	13.1
		Transportation and storage	2.8	2.7	2.9	3.3	3.6	2.6
		Accommodation and food service activities	7.7	7.7	9.0	10.2	11.1	11.7
		Information and communication	0.2	0.2	0.2	0.3	0.2	0.4
		Financial and insurance/takaful activities	0.9	1.0	0.8	0.8	1.2	0.8
		Real estate activities	0.0	0.0	0.0	0.1	0.1	0.1
		Professional, scientific and technical activities	0.5	0.6	0.6	0.6	0.6	0.9
		Administrative and support service activities	3.8	4.9	5.2	6.4	5.6	6.8
		Public administration and defence; compulsory social security	9.8	7.8	9.1	9.1	10.3	9.7
		Education	9.9	9.7	9.6	8.1	9.9	10.5
		Human health and social work activities	2.8	3.8	3.8	3.9	4.9	6.1
		Arts, entertainment and recreation	0.5	0.5	0.4	0.5	0.5	0.5
		Others service activities	0.9	0.9	0.8	0.8	0.9	1.0
		Activities of households as employers	1.1	0.6	0.6	0.8	0.7	0.5
		Activities of extraterritorial organizations and bodies	0.1	0.1	0.0	0.0	0.0	0.0
		TOTAL	**80.9**	**83.3**	**87.1**	**94.3**	**95.2**	**98.2**

Table A10: Number of employed persons by industry, Pulau Pinang, 2010–2015

NUMBER ('000)	YEAR	2010	2011	2012	2013	2014	2015
CATEGORY OF INDUSTRY	Agriculture, forestry and fishing	14.0	15.9	22.8	23.1	17.2	12.1
	Mining and quarrying	0.2	0.0	0.4	1.4	0.4	0.9
	Manufacturing	248.4	263.8	246.3	261.9	272.8	283.7
	Electricity, gas, steam and air conditioning supply	1.7	2.3	1.4	2.2	2.1	2.7
	Water supply; sewerage, waste management and remediation activities	4.1	5.4	4.2	6.1	6.0	4.5
	Construction	49.1	49.0	57.8	60.5	54.2	47.3
	Wholesale and retail trade, repair of motor vehicles and motorcycles	122.2	119.2	123.9	133.2	130.0	129.7
	Transportation and storage	39.9	39.4	41.2	36.7	36.5	42.2
	Accommodation and food service activities	63.7	73.8	65.4	70.8	92.5	73.2
	Information and communication	4.1	5.7	5.2	3.9	6.9	5.9
	Financial and insurance/takaful activities	21.1	16.7	17.6	17.7	17.5	21.5
	Real estate activities	5.4	5.0	5.3	5.2	6.2	4.7
	Professional, scientific and technical activities	14.3	19.0	16.5	18.6	19.5	20.9
	Administrative and support service activities	27.4	23.8	34.2	32.4	37.7	37.0
	Public administration and defence; compulsory social security	26.6	32.7	28.5	26.5	29.7	29.8
	Education	42.9	35.6	40.1	41.9	47.0	48.6
	Human health and social work activities	22.7	33.0	35.6	38.4	35.1	43.8
	Arts, entertainment and recreation	4.2	4.6	5.1	6.1	5.1	4.1
	Others service activities	15.6	16.4	12.6	15.9	15.0	12.1
	Activities of households as employers	14.8	11.5	15.7	9.5	7.7	9.5
	Activities of extraterritorial organizations and bodies	0.0	0.0	0.0	0.0	0.1	0.0
	TOTAL	**742.3**	**772.8**	**779.8**	**811.9**	**839.2**	**834.2**

Table A11: Number of employed persons by industry, Sabah, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	492.1	385.4	402.5	457.8	542.3	625.7
		Mining and quarrying	5.0	5.1	12.3	10.4	9.2	6.4
		Manufacturing	122.0	166.8	165.5	170.9	176.9	146.9
		Electricity, gas, steam and air conditioning supply	4.8	5.2	4.4	6.1	4.2	5.7
		Water supply; sewerage, waste management and remediation activities	5.3	4.9	8.6	6.4	6.4	4.4
		Construction	115.6	140.0	146.8	174.1	149.6	149.3
		Wholesale and retail trade, repair of motor vehicles and motorcycles	225.4	257.2	280.9	326.7	312.9	291.4
		Transportation and storage	53.4	60.1	61.2	70.0	61.3	60.5
		Accommodation and food service activities	77.2	94.7	108.2	99.4	118.4	113.2
		Information and communication	6.5	9.6	5.8	5.6	5.0	5.4
		Financial and insurance/takaful activities	17.1	18.0	15.9	16.2	14.0	14.8
		Real estate activities	3.5	6.6	3.8	5.7	4.5	3.9
		Professional, scientific and technical activities	15.0	19.9	17.1	19.3	18.4	17.1
		Administrative and support service activities	24.3	48.6	49.3	51.9	55.7	44.7
		Public administration and defence; compulsory social security	72.1	71.3	72.6	88.2	78.0	82.0
		Education	69.1	79.2	79.2	88.3	82.5	98.2
		Human health and social work activities	26.8	26.6	29.9	36.9	36.4	45.2
		Arts, entertainment and recreation	13.4	11.1	12.2	10.5	10.7	9.2
		Others service activities	17.4	20.3	21.3	22.7	20.3	27.5
		Activities of households as employers	32.6	43.5	39.4	38.5	33.9	19.6
		Activities of extraterritorial organizations and bodies	0.0	0.3	0.5	0.4	0.3	0.0
		TOTAL	**1,398.6**	**1,474.4**	**1,537.4**	**1,706.0**	**1,740.9**	**1,771.1**

Table A12: Number of employed persons by industry, Sarawak, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	298.5	251.0	295.6	347.0	331.5	304.4
		Mining and quarrying	10.3	13.2	14.4	11.8	14.9	21.7
		Manufacturing	139.1	134.8	155.7	139.8	135.1	132.2
		Electricity, gas, steam and air conditioning supply	4.8	4.6	7.2	4.4	4.2	8.7
		Water supply; sewerage, waste management and remediation activities	6.3	5.1	5.2	2.9	3.8	3.8
		Construction	98.7	117.7	118.4	122.8	143.9	134.7
		Wholesale and retail trade, repair of motor vehicles and motorcycles	130.5	155.4	154.7	160.2	175.6	166.8
		Transportation and storage	43.2	44.2	45.7	44.7	46.9	43.0
		Accommodation and food service activities	48.0	65.2	68.5	66.7	76.9	82.4
		Information and communication	4.5	6.2	7.8	8.4	7.7	8.3
		Financial and insurance/takaful activities	15.7	14.2	14.7	14.7	15.5	16.4
		Real estate activities	1.7	1.3	1.7	1.7	2.1	2.5
		Professional, scientific and technical activities	11.8	15.0	15.8	15.2	15.6	18.0
		Administrative and support service activities	27.6	39.8	39.4	39.2	46.2	46.9
		Public administration and defence; compulsory social security	74.7	70.6	66.9	76.8	76.9	80.3
		Education	71.5	63.6	70.8	63.8	73.1	79.3
		Human health and social work activities	20.2	22.5	29.1	35.7	31.4	32.8
		Arts, entertainment and recreation	4.7	5.5	6.1	5.6	6.1	5.7
		Others service activities	16.2	13.8	15.6	13.9	16.0	16.9
		Activities of households as employers	17.4	14.1	10.6	13.4	8.9	9.9
		Activities of extraterritorial organizations and bodies	0.2	0.3	0.0	0.0	0.0	0.1
		TOTAL	**1,045.6**	**1,058.1**	**1,143.9**	**1,188.5**	**1,232.2**	**1,214.8**

Table A13: Number of employed persons by industry, Selangor, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	50.1	46.2	50.1	55.5	42.4	48.5
		Mining and quarrying	16.7	25.1	26.6	28.9	26.6	31.4
		Manufacturing	496.4	539.3	555.0	573.0	601.9	568.5
		Electricity, gas, steam and air conditioning supply	22.7	15.8	18.6	19.1	25.4	14.6
		Water supply; sewerage, waste management and remediation activities	12.3	15.8	17.5	25.2	18.8	20.0
		Construction	246.8	263.1	275.0	299.2	279.5	338.1
		Wholesale and retail trade, repair of motor vehicles and motorcycles	382.3	398.6	425.1	468.4	489.9	524.8
		Transportation and storage	162.1	187.8	208.8	195.4	182.3	174.1
		Accommodation and food service activities	163.8	174.1	166.8	174.9	217.6	223.7
		Information and communication	94.2	111.5	121.1	116.1	117.8	130.2
		Financial and insurance/takaful activities	134.6	124.5	125.9	125.3	130.6	139.5
		Real estate activities	21.4	25.1	32.3	33.4	29.1	27.7
		Professional, scientific and technical activities	114.5	134.8	127.7	120.0	131.1	140.6
		Administrative and support service activities	77.1	87.0	132.2	141.7	198.1	169.7
		Public administration and defence; compulsory social security	176.9	126.2	117.1	136.9	120.7	135.4
		Education	168.1	153.5	165.9	166.5	178.0	185.9
		Human health and social work activities	60.1	86.2	92.4	115.2	123.4	136.2
		Arts, entertainment and recreation	28.9	25.2	21.0	18.9	28.2	18.8
		Others service activities	39.5	39.2	37.6	39.2	43.3	57.5
		Activities of households as employers	82.4	65.9	58.4	80.0	48.2	49.2
		Activities of extraterritorial organizations and bodies	0.2	0.3	1.0	0.5	0.7	0.6
		TOTAL	**2,551.1**	**2,645.2**	**2,776.1**	**2,933.3**	**3,033.6**	**3,135.0**

Table A14: Number of employed persons by industry, Terengganu, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	51.2	53.6	50.7	58.9	41.1	42.1
		Mining and quarrying	6.4	5.4	4.6	6.7	9.6	8.5
		Manufacturing	41.0	46.0	47.3	50.2	53.4	50.4
		Electricity, gas, steam and air conditioning supply	2.1	2.5	5.4	4.3	4.3	3.4
		Water supply; sewerage, waste management and remediation activities	5.8	3.8	5.5	7.0	5.1	2.3
		Construction	54.4	53.9	53.6	56.8	59.6	64.0
		Wholesale and retail trade, repair of motor vehicles and motorcycles	49.9	58.4	58.7	56.7	64.2	65.2
		Transportation and storage	12.6	10.4	11.9	13.7	14.1	14.4
		Accommodation and food service activities	34.0	32.0	33.3	39.4	40.3	41.1
		Information and communication	1.8	1.5	1.0	1.4	1.8	1.5
		Financial and insurance/takaful activities	3.1	3.2	4.5	3.5	3.5	3.7
		Real estate activities	0.1	0.1	0.2	0.1	0.3	0.1
		Professional, scientific and technical activities	3.6	4.3	6.4	4.3	4.5	5.5
		Administrative and support service activities	16.6	21.5	18.3	19.8	21.2	23.0
		Public administration and defence; compulsory social security	31.4	36.8	32.1	30.2	28.7	32.3
		Education	29.8	34.1	32.7	31.1	35.8	36.7
		Human health and social work activities	9.6	12.9	15.1	14.3	16.7	16.5
		Arts, entertainment and recreation	1.3	1.6	1.8	1.8	1.4	1.3
		Others service activities	3.9	4.6	4.4	4.7	6.7	6.7
		Activities of households as employers	8.0	3.7	2.1	2.0	2.5	1.9
		Activities of extraterritorial organizations and bodies	0.0	0.0	0.0	0.1	0.1	0.0
		TOTAL	**366.6**	**390.3**	**389.6**	**407.0**	**414.9**	**420.5**

Table A15: Number of employed persons by industry, Wilayah Persekutuan Kuala Lumpur, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	1.2	0.2	1.2	0.8	0.8	0.6
		Mining and quarrying	0.8	1.3	1.5	2.4	0.6	1.7
		Manufacturing	59.1	67.7	73.6	56.8	56.6	51.7
		Electricity, gas, steam and air conditioning supply	4.0	2.9	3.7	4.9	4.2	2.3
		Water supply; sewerage, waste management and remediation activities	1.4	4.5	3.3	5.0	5.0	3.9
		Construction	78.9	82.1	76.9	86.1	86.4	74.4
		Wholesale and retail trade, repair of motor vehicles and motorcycles	185.9	186.6	202.5	207.5	200.7	207.0
		Transportation and storage	31.3	39.9	35.1	39.3	35.6	40.6
		Accommodation and food service activities	62.6	67.0	64.2	93.7	73.0	86.5
		Information and communication	41.5	39.6	36.5	33.3	42.6	31.3
		Financial and insurance/takaful activities	52.5	61.5	67.2	59.0	59.4	67.3
		Real estate activities	14.3	9.0	10.6	11.5	16.2	14.3
		Professional, scientific and technical activities	52.7	52.5	49.0	53.4	60.7	68.8
		Administrative and support service activities	38.8	37.1	39.8	48.4	45.2	49.3
		Public administration and defence; compulsory social security	55.5	50.6	44.0	59.6	62.3	44.4
		Education	30.4	33.8	34.1	36.4	35.9	35.3
		Human health and social work activities	21.1	26.7	31.5	33.6	31.0	31.8
		Arts, entertainment and recreation	9.1	9.0	7.6	7.8	7.4	10.0
		Others service activities	15.7	16.0	17.6	16.4	14.3	15.8
		Activities of households as employers	29.5	23.4	19.7	20.9	13.2	15.6
		Activities of extraterritorial organizations and bodies	1.7	1.1	0.8	1.0	0.9	0.8
		TOTAL	**788.0**	**812.5**	**820.4**	**877.8**	**852.0**	**853.4**

Table A16: Number of employed persons by industry, Wilayah Persekutuan Labuan, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2010	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	0.7	1.0	1.0	0.8	0.8	1.6
		Mining and quarrying	1.9	1.8	2.7	3.4	3.2	3.8
		Manufacturing	4.3	3.9	4.6	4.4	4.1	3.9
		Electricity, gas, steam and air conditioning supply	0.3	0.2	0.1	0.1	0.3	0.1
		Water supply; sewerage, waste management and remediation activities	0.3	0.3	0.1	0.2	0.1	0.3
		Construction	4.6	5.3	4.3	4.0	4.3	3.8
		Wholesale and retail trade, repair of motor vehicles and motorcycles	5.2	4.9	5.0	5.5	5.8	5.2
		Transportation and storage	2.0	2.5	2.3	2.7	2.5	2.9
		Accommodation and food service activities	2.4	3.0	3.0	3.1	4.4	3.1
		Information and communication	0.4	0.2	0.2	0.3	0.0	0.1
		Financial and insurance/takaful activities	1.2	1.1	1.3	1.1	1.2	0.8
		Real estate activities	0.3	0.2	0.3	0.3	0.2	0.5
		Professional, scientific and technical activities	0.7	0.9	0.6	0.8	0.8	0.7
		Administrative and support service activities	2.7	2.9	3.4	3.5	3.7	3.4
		Public administration and defence; compulsory social security	5.0	4.8	5.1	4.5	4.5	4.4
		Education	2.7	3.6	2.9	3.1	2.6	2.1
		Human health and social work activities	1.0	0.7	0.9	1.0	0.9	1.0
		Arts, entertainment and recreation	0.4	0.2	0.2	0.2	0.4	0.2
		Others service activities	0.3	0.3	0.5	0.3	0.3	0.4
		Activities of households as employers	1.1	0.9	1.0	0.8	0.6	1.2
		Activities of extraterritorial organizations and bodies	0.1	0.0	0.0	0.0	0.1	0.0
		TOTAL	**37.6**	**38.6**	**39.4**	**40.1**	**40.8**	**39.5**

Table A16: Number of employed persons by industry, Wilayah Persekutuan Labuan, 2010–2015

NUMBER ('000)	CATEGORY OF INDUSTRY	YEAR	2011	2012	2013	2014	2015
		Agriculture, forestry and fishing	**41.4**	**40.3**	**40.7**	**40.3**	**38.5**
		Mining and quarrying	0.0	0.0	–	–	–
		Manufacturing	0.1	0.0	0.0	0.1	0.0
		Electricity, gas, steam and air conditioning supply	1.0	0.9	0.9	1.0	1.0
		Water supply; sewerage, waste management and remediation activities	0.2	0.2	0.2	0.1	0.1
		Construction	0.1	0.0	0.1	0.1	0.1
		Wholesale and retail trade, repair of motor vehicles and motorcycles	1.1	1.0	0.8	0.6	1.0
		Transportation and storage	1.9	1.6	1.9	1.4	1.4
		Accommodation and food service activities	0.8	0.8	0.7	0.9	0.8
		Information and communication	0.9	0.8	1.0	1.2	0.8
		Financial and insurance/takaful activities	1.3	0.9	1.1	1.3	1.3
		Real estate activities	1.1	0.9	0.9	0.8	0.7
		Professional, scientific and technical activities	0.1	0.2	0.1	0.1	0.1
		Administrative and support service activities	1.1	0.8	1.0	1.0	1.2
		Public administration and defence; compulsory social security	1.0	0.9	0.9	1.5	1.6
		Education	24.9	25.1	25.1	24.4	22.3
		Human health and social work activities	2.5	2.9	2.5	2.4	2.7
		Arts, entertainment and recreation	1.9	2.0	2.3	2.5	2.1
		Others service activities	0.1	0.1	0.1	0.0	0.1
		Activities of households as employers	0.2	0.1	0.1	0.1	0.1
		Activities of extraterritorial organizations and bodies	1.1	1.0	1.2	0.8	0.9
		TOTAL	0.0	0.1	0.0	0.0	0.2

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