GREENER BUSINESS ASIA

Greener Business, Better Workplace

Module 5

Safety and Health at the Workplace

International Labour Organization

ILO/Japan Multi-bilateral Programme

Module 5: Safety and Health at the Workplace

Main topics

1. The importance of safety and health at work
2. Identifying hazards at the workplace
3. Assessing risks
4. Selecting and implementing solutions
5. Standard for Occupational Health and Safety - Thailand

The importance of safety and health at work

Health and Safety at work – why care?

People spend large part of their lives at the workplace, carrying out their tasks and responsibilities

Their physical, mental and social wellbeing is critically dependent on the working environment and work practices

Work-related accidents, ill health and environmental hazards can cause death, injury and disease

The impact and costs of injuries and illnesses for workers and employers are very large, and in addition to direct costs, there are often indirect or hidden ones

The impacts and costs of work-related injuries and illnesses

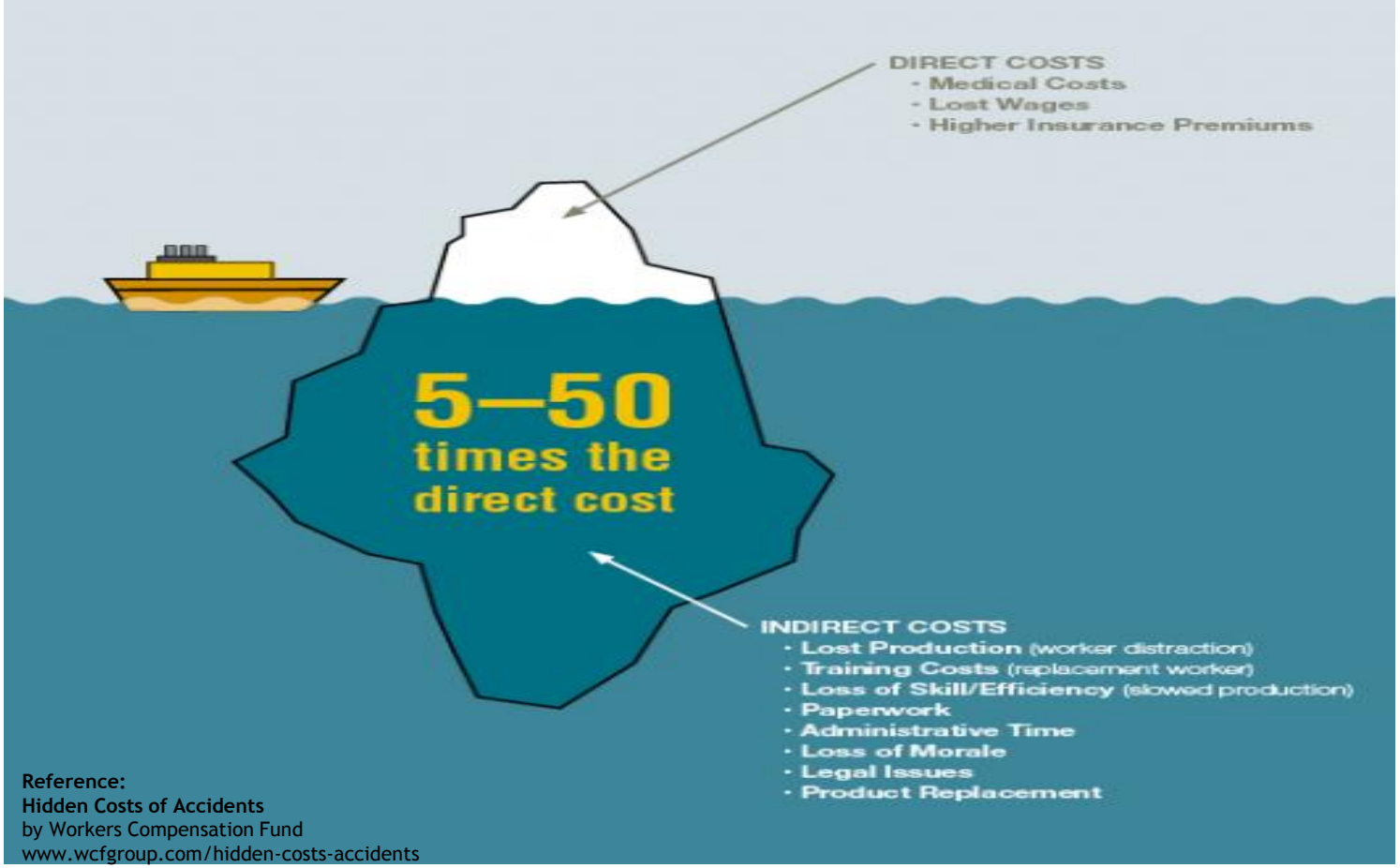
For workers and their families

- Suffering
- Loss of life
- Potential permanent or semi-permanent health damage/disability
- Healthcare costs
- Reduced productivity
- Potential loss of job
- Stress and worry
- Time and effort for caring for the injured by the family
- Financial losses
- …

For employers

- Medical and compensation payment
- Temporary halt of production
- Damage to goods and equipment
- Replacement of worker and retraining
- Insurance premiums
- Loss of morale among workers
- Fines
- …

Hidden Costs of Accidents



Reference:
Hidden Costs of Accidents
by Workers Compensation Fund
www.wcfgroup.com/hidden-costs-accidents

Reducing work-related accidents and illnesses - How?

- Find out what can cause accidents and illnesses at work.
- Think of solutions to prevent accidents and illnesses, incorporate then in SOP and staff training

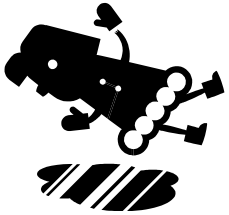
- Plan actions
- Implement actions
- Regularly monitor and review progress and results
- Ensure there are identified staff/management responsible for taking the lead on safety and health issues (safety officer / Occupational Health and Safety Committee)
- Involve workers and workers organizations: they the ones who have direct knowledge of the workplace and tasks at hand and can come up with solutions

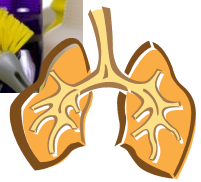
Remember: Improve through People & Systems

Hazards associated with hotel work

Hazards include those from

- Manual Handling
- Contact with dangerous substance
- Trips and falls
- Electrical equipment
- Fatigue
- …





Addressing risks in hotels: examples

Hazards and risks - definitions

Hazard

Something that can harm a person, the environment or damage property.

Example: exposed electrical wiring in the kitchen

Risk

The probability (likelihood) of harm or damage occurring and the likely consequences of that harm or damage for example.

Example: risk of electrocution from accidentally touching the exposed wiring while working in the kitchen

Types hazards at the workplace

In day to day work, we are exposed to different kinds hazards linked to the tasks we perform, tools or substances we use, working environment. Hazards can be

- Physical
- Mechanical
- Chemical
- Ergonomic
- Biological
- Psychosocial
- Environmental

Different types of hazards

Mechanical → Machinery and tools that can cause bruises, cuts, entrapment, etc.

Physical → Noise, temperature, light/lack of light, electricity, ventilation, radiation that can cause ill health and conditions of facilities (e.g. staircases, ladders, floors) that can cause falls and other accidents

Chemical → Substances (e.g. liquids, gases, vapors,…) that can be irritant/poisonous , explosive or flammable (examples: paints, cleaning solutions, swimming pool chemical agents)

Ergonomic → Poor design of work stations and seating arrangements, unsuitable tools, prolonged standing or static positions, postures that lead to disorders and disablement of the body's muscles and skeleton

Different type of hazards

Biological risks → Vermin (e.g. rodents, some insects), transmission of viruses, bacteria causing diseases and infections(e.g. due to poor sanitary facilities, hygiene standards)

Psychosocial → Sexual and other harrassement, discrimination, job insecurity, low/delayed pay, overtime, – these can cause stress and ill health

Environmental → Contamination of water, soil and air by polluting substances threatening the health of the workplace and local communities

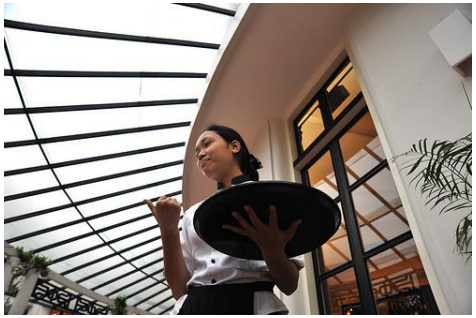
Exercise: Hazards - housekeeping department

- What hazards is s/he facing while working?- give examples thinking of different categories

Hazards in the hotel – think further

Situation

- Staff working at night shift
- Drunk guests



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Potential hazard

- Security issues at night in the area –risk of harrassement/violence?
- Confrontation between a drunk guest and other guests or hotel staffs

©khelvan

Improving occupational health and safety through Hazard Management Strategies (HMS)

Hazard management is about identifying potential hazards at the workplace, evaluating the risks they pose for workers, finding and implementing solutions to eliminate or reduce such risks

The processes of Hazard Management are:

1 Hazard identification- Finding the dangers and potential causes of harm and illness at the workplace

2 Risk Assessment : determining how serious is the harm they can cause and how likely it is to happen

3 Risk Control Measure: finding solutions to eliminate or reduce the risks and taking action

Identifying hazards at the workplace

Hazard Identification

Hazard Identification is the process of identifying hazards in order to plan for, avoid, or mitigate their impacts. Hazard identification is an important step in risk assessment and risk management.

Hazards need to be assessed and controlled:

- when planning work processes
- when introducing new work processes and staff positions
- whenever changes are made to the workplace, including work methods and processes, tools and equipment, substances /supplies
- whenever new information becomes available, including work methods and processes, tools and equipment, substances /supplies

Hazard identification – how?

Walk around the workplace and look for what could reasonably be expected to cause harm.

Discuss with workers to know some hazard which may not immediately obvious during walk around.

Use tools and techniques like ecomaps, bodymapping and checklist to help you find and record hazards

Check manufacturers' instructions or data sheets for chemicals and equipment as they can be very helpful in spelling out the hazards and putting them in their true perspective.

Look back accident records – these often help to identify the less obvious hazards.

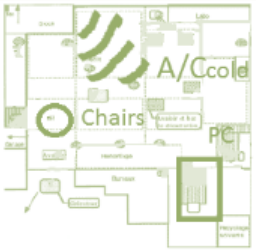
Remember to think also about long-term hazards to health (e.g. high levels of noise or exposure to harmful chemical substances) as well as safety hazards (e.g fire/slippery floors).

EXERCISE

Find the potential hazards in the following picture

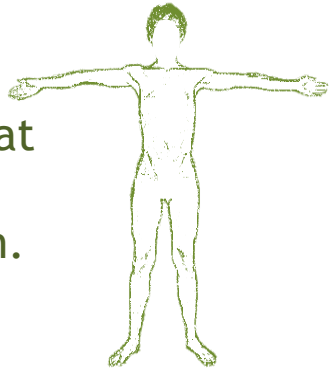
Reference: www.harcourtschool.com/activity/disaster_kitchen/kitchena.html

Tools and techniques for hazard identification



Eco-mapping

Use eco-mapping to pin point hazards in work areas. Mark OSH related hazards in your workplace on the rough layout of the work area; use different symbols to identify different hazards (i.e. a circle for hazard that pose immediate or very serious dangers).



Body - mapping

Body mapping is a technique to gain awareness and understanding of what is harming the health of workers. Employees mark areas where they experience problems on an outline of a body that has been roughly drawn.

Checklist

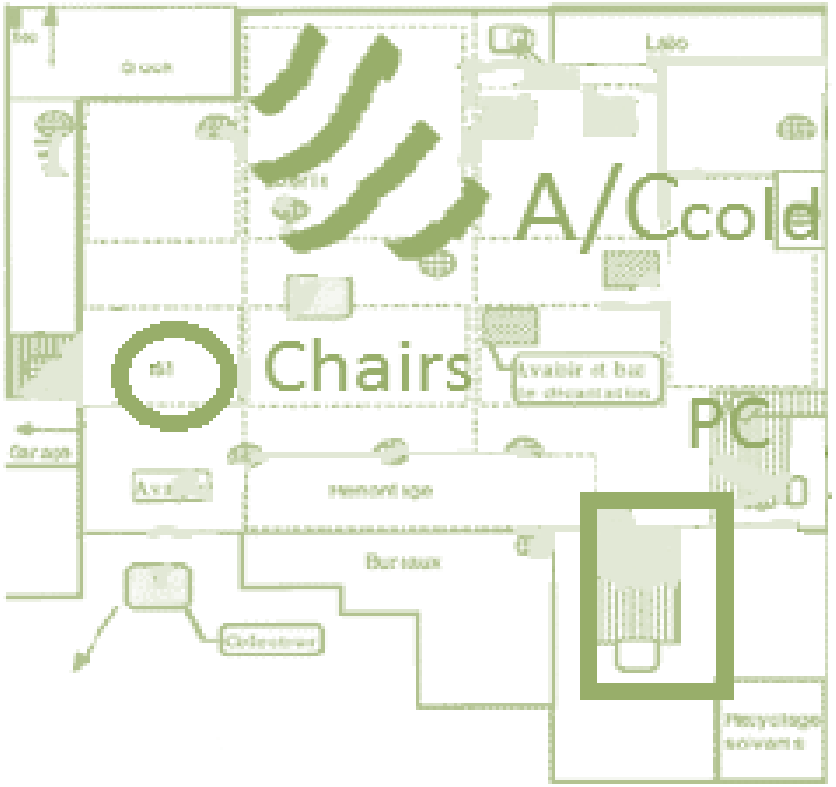
A checklist is used for inspecting your workplace and verifying if there are unresolved OSH problems. Using a checklist allows you to ensure you don't forget any important items.

EXERCISE – OSH ecomapping

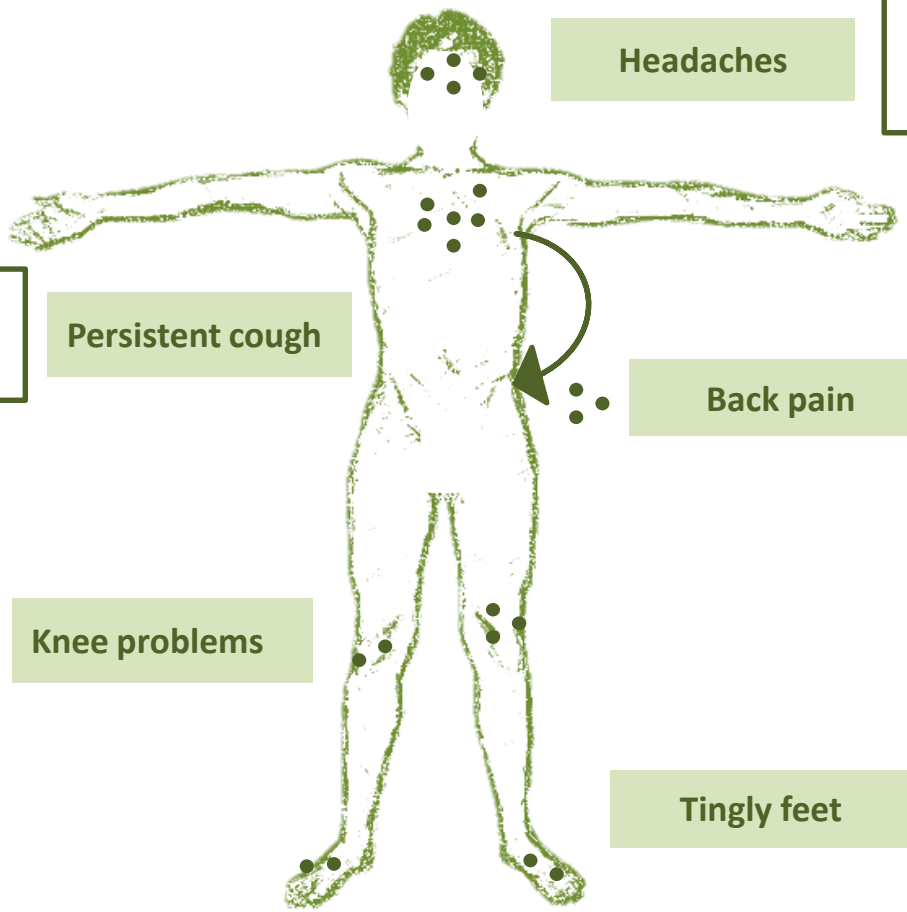
Exercise 3:
Identify the potential hazard in selected working area

Instruction: (20 min.)

1. Divide into 4-5 groups by section or job.
2. Draw a map of the selected working area
3. Identify all potential hazards
4. Groups report findings to all participants



Mapping health problems



Assessing risks

Risk Assessment

Once hazards have been identified, you need to determine which ones require the most urgent attention

Risk assessment is the process of evaluating the severity and likelihood of injury or illness arising from a hazard you identified.

In risk assessment you look at

- How great s the harm that the hazard can cause? (severity)

- How likely is it to happen? (likelihood)

- The greater the harm, the greater the risk, similarly the more likely the event, the greater the risk

<u>Risk assessment helps you to prioritise which hazards and risks need to be most urgently addressed in view of their severity and likelihood</u>

Tools: Risk assessment matrix

The risk assessment matrix helps you evaluate the risks posed by hazards.
Through the matrix you can give scores to hazards which correspond to their levels of risk, combining the severity and likelihood factors

The highest score indicates the greatest risk potential. Such hazard risk needs to be controlled and minimized most urgently.

Severity(column):

- Co 1: Death/Serious incapacity /Major damage
- Col 2: Lost time/moderate damage
- Col 3: Minor incapacity

Likelihood (row):

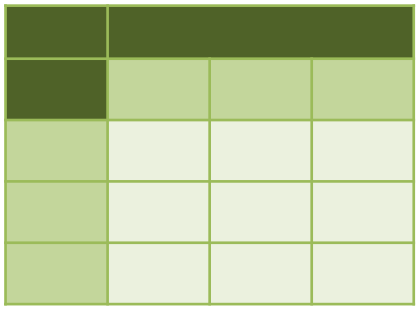
- Row 1: Highly likely
- Row 2: Moderately likely
- Row 3: Unlikely

Risk assessment matrix

		Severity - How severely could it hurt someone?		
Likelihood: How likely is it that it will hurt somebody		Death/severe injury/ major damage to property/equipment (3)	Medical treatment/ time off work/damage to property/equipment (2)	First-aid/little or no damage to property/ Equipment (1)
	Very likely (3)	3x3 = 9	2x3 = 6	1x3 = 3
	Likely (2)	3x2 = 6	2x2 = 4	1x2 = 2
	Unlikely (1)	3x1 = 3	2x1 = 2	1x1 = 1

Exercise – Evaluate risks

Risk Analysis by using the results of the eco-mapping



Instruction: (15 min.)

1. Looking at identified potential hazards from the, previous exercise, prioritize the risks using the risk assessment matrix score 1-5

2. Groups report findings to all participants

Selecting and implementing solutions

Risk Control Measures

Once you have identified hazards in the workplace, and you have assessed their risks and decided which ones to prioritise, you need to decide what to do address them and take action

Risk Control Measures are solutions that eliminate or minimize risks caused by an hazard

Risk control measures: the hierarchy of controls

Most preferred

Least preferred. Last resort

Types of control measures	Explanation
Eliminate	Removing the hazard, e.g. taking a hazardous piece of equipment out of service.
Substitute	Replacing a hazardous substance or process with a less hazardous one, e.g. substituting a hazardous substance with a non-hazardous substance.
Isolation & Engineering solutions	Restricting access to plant and equipment, use barriers or guards; Redesign a process or piece of equipment to make it less hazardous
Administrative solutions	Adopting standard operating procedures (SOPs) or safe work practices or providing appropriate training, instruction or information.
Personal Protective Equipment (PPE)	The provision and use of personal protective equipment could include using gloves, glasses, earmuffs, aprons, safety footwear, dust masks.

Note!: In many cases, it will be necessary to use more than one control. Back-up controls, such as personal protective equipment, should only be used as a last resort.

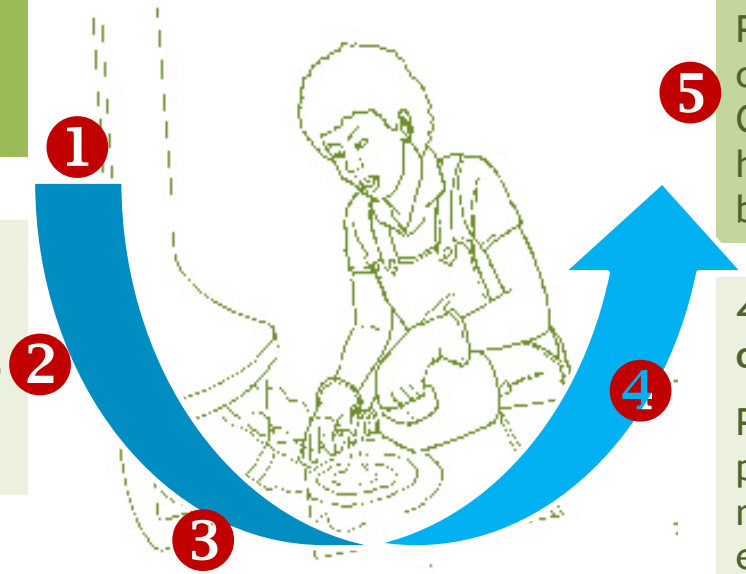
Application of control measures: Working with chemical products/agents

1.Elimination

Can you stop using the chemical?

2.Substitution

Can you use an alternative safer substance *(substitution may not be completely safe but safer)*



3.If elimination & substitutions are not possible, Isolate the hazard /use engineering solutions

(provide ventilation, proper storage/containers/disposal facilities, proper eyewash facility, dispose with care)

4.Administrative - safe systems of work

Provide training to know hazard, promote good housekeeping, monitor exposure to chemical, do employee health checks and keep record, ensure job rotation, enforce safe work practice and instruction, ensure SDS sheets are in place and understood

5.PPE

Provide PPE to appropriate for the chemical product e.g. goggle, Chemical resistance gloves, half/full face mask, coverall suite, boots.

Safe systems of work with chemicals: Training and information on Safety Data Sheets

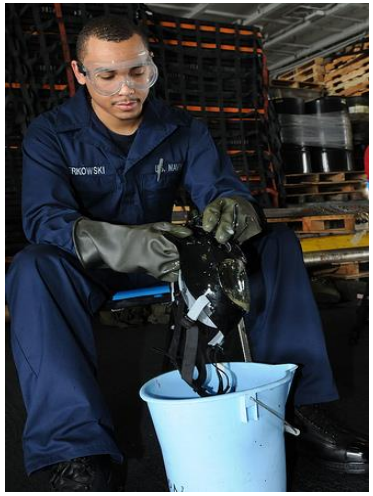
Safety Data Sheet (SDS) are a document that contains information on the potential hazards posed by the chemical (in terms of health, fire, reactivity and environment) and how to work safely with the chemical product. It also contains information on the use, storage, handling and emergency procedures all related to the hazards of the material.

What information is on the SDS?

1. Product name and chemical information
2. Hazardous Ingredients
3. Physical Data
4. Fire or Explosion Hazard Data
5. Reactivity Data
6. Toxicological Properties
7. Preventive Measures
8. First Aid Measures
9. Contact Information

Make sure your chemicals all have SDS attached/displayed, and that they are well understood by the staff using them – translate them into local languages if needed; provide training.

Personal Protective Equipment (PPE)



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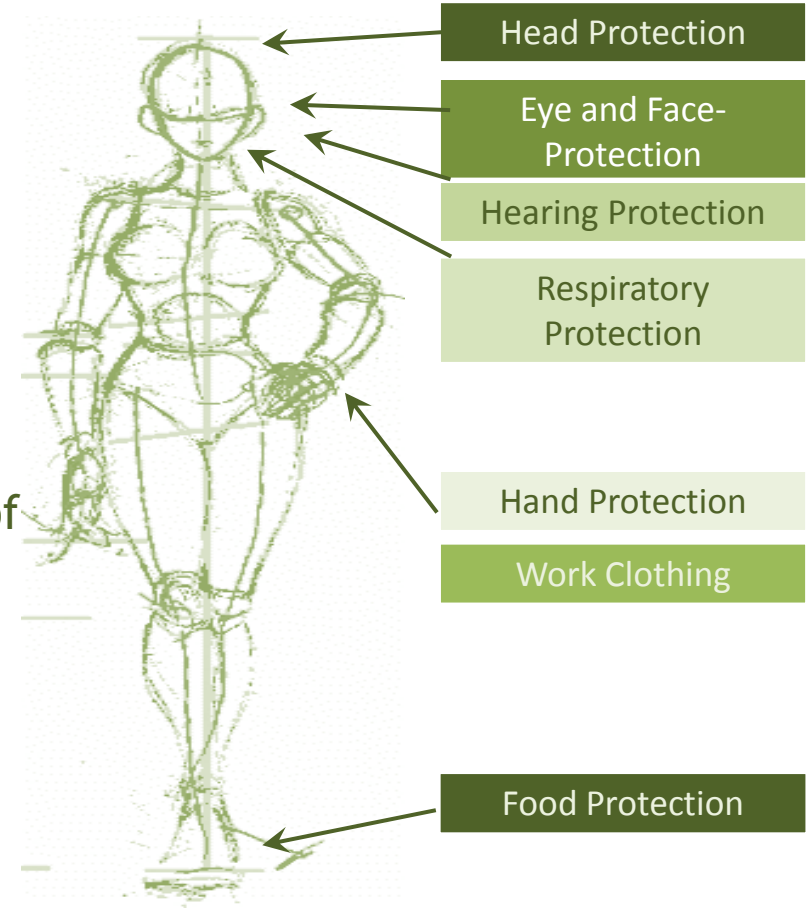
There are many types of PPE and the selection of appropriate ones for a given workplace is dependent on the level and nature of risk perceived for the given work activity.

Remember!: PPE should only be used as a last resort hazard control measure



Personal Protective Equipment (PPE)

Provision, Use, and Maintenance of PPE

Only after the hierarchy of control has been applied should the PPE selection process begin.

When selecting the PPE to be used in a given work space, the following considerations should be made:

- The type of PPE must be appropriate for the hazard
- The size of the PPE must fit to the user
- The PPE must be checked regularly and replaced when necessary

How to prioritize and plan action?

- Addressing the hazards with the highest risks score in the risk matrix should be given priority
- However, hazards that have lower scores in the risk matrix, but can be controlled quickly and easily, can be addressed at the same time
- When selecting control measures, the best available control measures should be put in place as soon as possible, noting that in some cases it may be necessary to put temporary controls in place until the better and permanent solution can be implemented.
- Wherever there is a high risk, the activity must cease until adequate controls are implemented.

Safety and health: roles and responsibilities

The **employer** is to

- Have overall responsibility for the protection of workers' safety and health and should take a leadership role in OSH activities
- Provide information to workers
- Provide health and safety training programmes and arrange for the training of safety officers and the OSH committee members
- Provide opportunities for workers and trade unions to be consulted on OSH issues
- Ensure appropriate systems are in place and compliance with legal requirements

Workers are to:

- Follow regulations and procedures to ensure their health and safety
- Report dangerous hazards and dangerous situations to line manager
- Workers and trade unions Participate in consultations on occupational health and safety

In addition to the responsibilities by employers and workers, there are some designated persons with specific duties, tasks and positions:

- The Joint Occupational Health Safety Committee

- The Safety officers

The OSH Committee

Membership: representatives from operator, supervisor, and General Manager (members have attended the relevant training –see later section)

Tasks of the committee include:

Holding regular meetings

Conducting workplace surveys to identify hazards

Determining and proposing risk control measures

Organizing activities to promote safer work practices

Evaluating performance regularly for continuous improvement

Helping establish department safety officers (operator and supervisor level), if needed

Standard for Administration and Management of Occupational Safety, Health and Environment - Thailand

Safety management system assigned by law

Ref: Ministerial Regulation on the Prescribing of Standard for Administration and Management of Occupational Safety, Health, and Environment B.E.2549

Any hotel employing 50 persons or above has to:

- ✓ Establish an Occupational Safety, Health and Environment Committee with Roles & Responsibilities
- ✓ Develop OSHE Policy
- ✓ Member of OSHE Committee attend relevant training course
- ✓ Develop OSHE Plan and Implementation
- ✓ Assess and Review OSHE in work places
- ✓ OSHE Committee takes responsibility as assigned by laws

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Ref: Ministerial Regulation on the Prescribing of Standard for Administration and Management of Occupational Safety, Health, and Environment B.E.2549

Overall responsibilities - employer

Employer

Employer means an Employer under the Labour Protection law and also entrepreneur who allows any person to work for or to provide benefit for/or in an establishment, whether the working or providing some benefit in part or as a whole or a part of production process or business under responsibility of the entrepreneur.

- The employer should have overall responsibility for the protection of workers' safety and health, and provide leadership for OSH activities in the organization.
- The employer and senior management should allocate responsibility, accountability and authority for the development, implementation and performance of the OSH management system and the achievement of the relevant OSH objectives

Safety officers and OSH committee – qualification ad training

Safety Officer

The safety officer in supervisory or management level shall be an employee in supervisory level and possess at least one of the following qualifications:

(1) Be trained according to the regulations and procedures stipulated by the Director-General of welfare Labour Protection, Ministry of Labour OL

(2) Be or used to be a safety officer in supervisory or management level according to the Announcement of the Ministry of Labour and Social Welfare on the Occupational Safety of Employees dated 31st March BE. 2540 (1997)

OSH Committee

The Committee of Occupational Safety, Health and Work Environment of the Workplace shall attend the training totaling twelve hours as follows:

- Effective administration of the Committee (3 hours)
- Occupational safety law (1.5 hours)
- Roles and duties of the Committee (7.5 hours)

Safety officers– qualification ad training and registration

Ref: Ministerial Regulation on the Prescribing of Standard for Administration and Management of Occupational Safety, Health, and Environment B.E.2549

Safety Officer

- All management attend and are certified in the Safety Officer Management training course
- All supervisors must attend and certified the Safety Officer Supervisor training course
- Appoint a manager and a supervisor to be Safety Officer of each level within 180 days

OSHE Committee

The employer shall report the result of the training of the Committee to the Director-General or the persons designated within 30 days of the completion of the training course, together with

- Name and location of the Employer's establishment
- Training schedule signed by the trainers of each topic
- Photocopies of the Certificates of the trainees

Role and responsibilities: safety officers

Ref: Ministerial Regulation on the Prescribing of Standard for Administration and Management of Occupational Safety, Health, and Environment B.E.2549

Supervisor Level

- To supervise employees to follow regulations and guidelines
- To identify and analyze hazards and risks
- To teach correct working procedures.
- To check working conditions of machinery, tools and equipment
- To direct and supervise the use of PPE
- To report the accidents to the employer
- To investigate the cause of the accident, and illnesses

Management Level

- To supervise safety officers in other levels
- To propose a workplan on occupational safety measures
- To promote, support and follow-up on the th the workplan
- To supervise and follow-up issues reported by a safety officer or the committee

Composition of the Committee of Occupational Safety, Health and Work Environment at Workplace

Number of employees	Min. member required	The Committee of Occupational Safety, Health, and Work Environment			
		CEO	Supervisor (1)	Operator (2)	Secretary (3) (Safety Officer)
1-49	Not required by laws but recommend to have the OSHE committee				
50-99	5	1	2	2	1
100-499	7	1	2	3	1
500+	11	1	4	5	1

- Committee members at supervisory level are selected by employer
- Committee members at operator level are elected by employees
- Secretary is appointed by the committee by Chairman

Role and responsibilities- OSH committee

Ref: Ministerial Regulation on the Prescribing of Standard for Administration and Management of Occupational Safety, Health, and Environment B.E.2549

OSHE Committee

- To hold OHSE Committee meetings at least once a month.
- Conduct an OHSE survey in the workplace at least once a month.
- Propose ways to comply OHSE laws and standard requirements.
- Promote activities to improve OHSE.
- Determine and propose safe work procedures.
- Determine OHSE policy, rules and annual work plan then propose to employer.
- Establish and determine training plan to improve OSHE for all levels of workers
- Follow up proposals made to employer
- Evaluate OSHE activities in the workplace, report and improve annually
- Carry out other duties concerning OHSE as assigned by the Employer

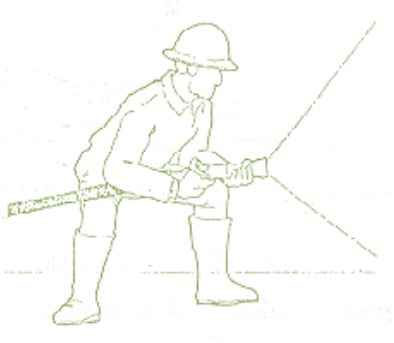
Fire Prevention and Suppression

Ref: Ministerial Regulations on the prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in Fire Prevention and Suppression B.E.2555

Fire prevention and suppression (1)

Fire extinguisher

- Provide sufficient fire extinguishers appropriate for hotel areas
- Prepare instructions in Thai language
- Inspect fire extinguisher every 6 months and record on the inspection tag



Fire hose cabinet

- Reserve water to sufficient for firefighting if there is no public hydrant nearby
- Hotel hydrant must be the same type of public hydrant or provide an adapter
- Provide sufficient length of fire hoses
- Periodically inspect, at least once a month ,and keep records for reference

Fire detection system

- Smoke detector and heat detector must be periodically inspected annually

Fire prevention and suppression (2)

Fire alarm system

• Fire alarm system is required for two floor buildings or if there is area greater than 300 sq.m.

• Fire alarm sound must be as loud as at least 70 dB and louder than other sound nearby surrounding area at least 15 dB

• All records of tests, maintenance, repair or replacement of alarm systems should be retained.

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Fire exit

• There are at least 2 exit ways at each floor in order to evacuate all personnel to muster station within 5 minute.

• Distance between fire exits is not over 60 meter

• Fire exit way must easy accessible and with sufficient light

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Fire prevention and suppression (3)

Fire exit sign

- Use standard exit sign.
- Letter on the exit sign must greater than 15 cm.
- Fire exit sign must be self-illuminated or with battery

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Fire fighting training

- Provide basic fire fighting training to employees - at least 40% of total manpower

Fire evacuation

- Prepare an emergency response plan and train all employees
- Submit plan for fire evacuation exercise to government agent prior to commencing the exercise - at least 30 days in advance
- Conduct fire evacuation exercise annually and keep recorda for further reference

OSH Checklist for compliance with Thai Law

OSH Compliance Checklist

Other Laws related to OSH

Other OSH laws

- Occupational Safety, Health and Environment Act B.E.2554
- Explanation on the Occupational Safety, Health and Environment Act B.E.2554
- Ministerial Regulation on the Prescribing Of Standard for Administration and Management of Occupational Safety, Health and Environment B.E. 2549
- Ministerial Regulation on the Prescribing Of Standard for Administration and Management of Occupational Safety, Health and Environment B.E. 2549 (Level 2)
- Announcement of the Department of Labour Protection and Welfare on Criteria and Method of Training for the Safety Officer B.E.2549
- Announcement of the Department of Labour Protection and Welfare on Criteria and Method of Training for the Committee of Occupational Safety, Health and Environment of the Workplace
- Guideline on the Establishing the Committee of Occupational Safety, Health and Environment of Workplace

Other OSH laws

- Ministerial Regulation on the Prescribing of weight allowance of the employer to the employee work B.E.2547

- Explanation of Ministry of Labour on the Ministerial Regulation on the Prescribing of Criteria and Method of Conducting Health Check Up of Employees and Forwarding the Results of Health Check Up to Labour Inspector B.E. 2547

- Ministerial Regulation of Ministry of Labour on the Prescribing of List of Dangerous Chemical which Required Conducting Health Check Up of Employees B.E. 2552

- Ministerial Regulation on the Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in Relation to Heat, Light and Noise B.E. 2549

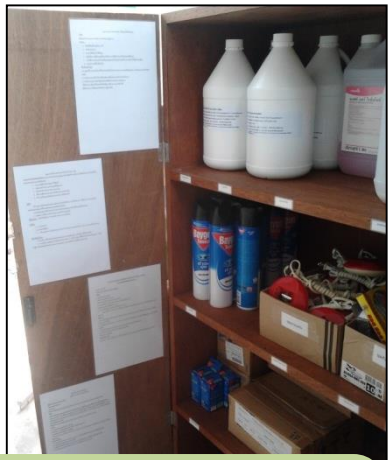
- Ministerial Regulation on the Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in Machine, Crane and Boiler B.E. 2552

- Announcement of the Department of Labour Protection and Welfare on the Prescribing of Standard of Personal Protective Equipment B.E. 2554

GBA Hotel Examples

Separate storage for chemicals and removal of smoking corner near chemical storage

Well functioning OSH committee



Safety datasheets displayed

Training on the use of chemical products and PPE

Review identified problems, areas for improvement, and possible solutions

&

Discuss and list possible improvement actions