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BPS1353 Hazard Recognition & Risk Management

Risk Assessment (Part I)

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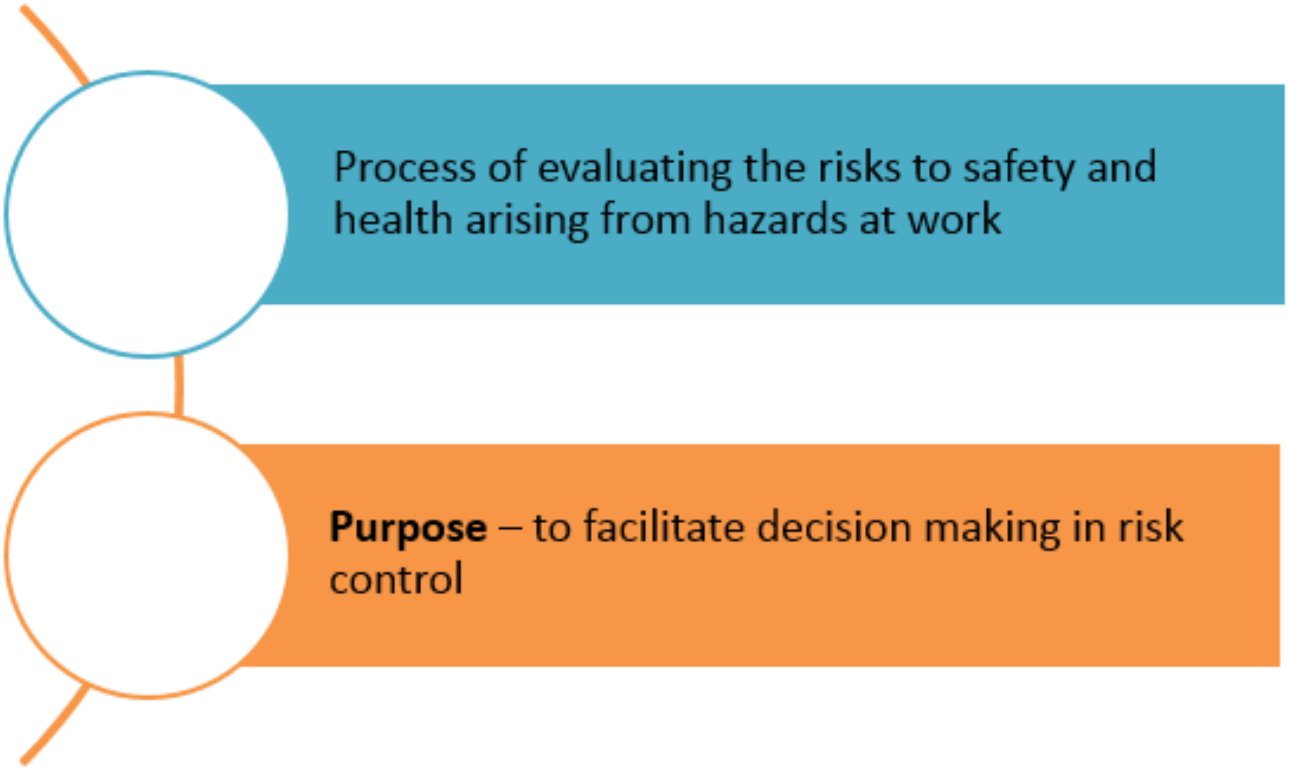
Chapter Description

- Aims
  - Explain qualitative risk assessment method
  - Demonstrate qualitative risk assessment process
- Expected Outcomes
  - Able to conduct qualitative risk assessment
- References
  - DOSH. 2008. Guidelines for Hazard Identification, Risk Assessment and Risk Control (HIRARC). Department of Occupational Safety and Health, Ministry of Human Resources. Malaysia.

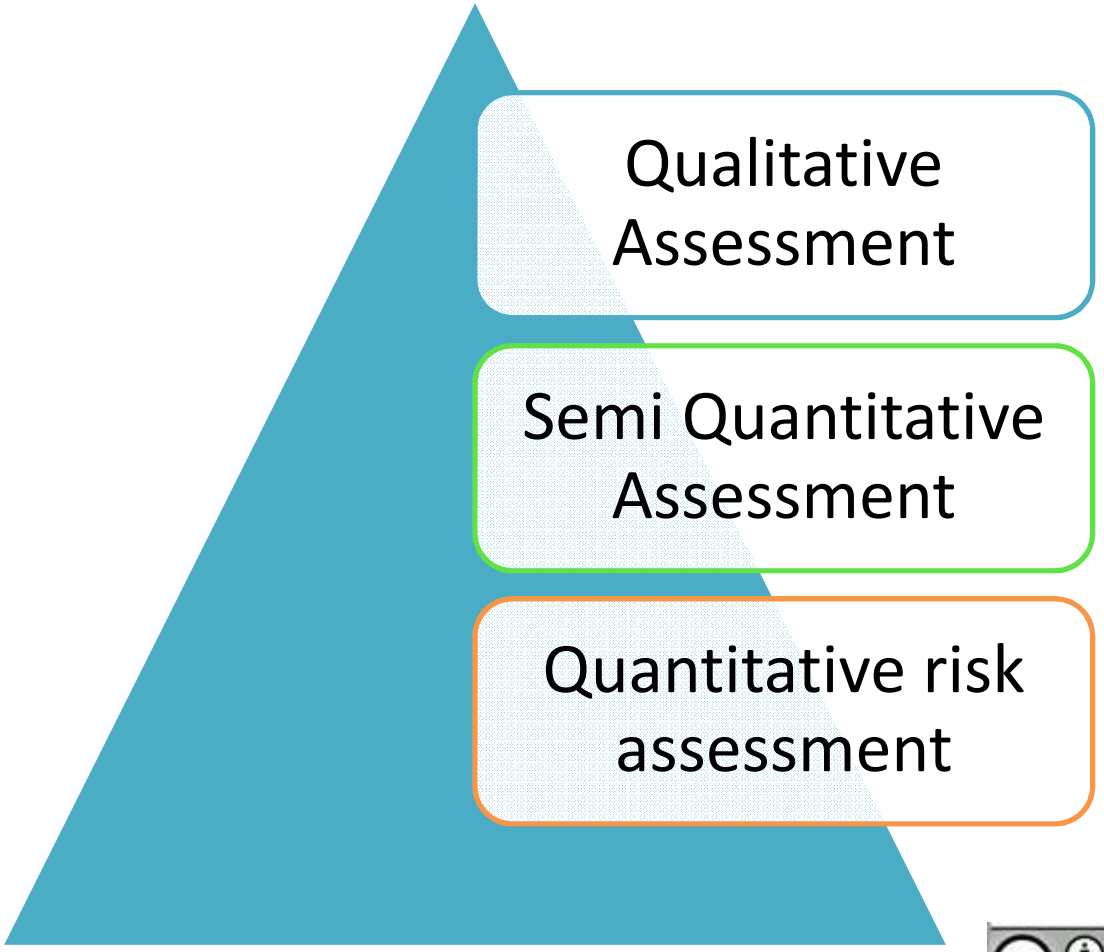
Content

- Introduction
- Risk Assessment Methodology
- Risk Assessment Process
- Risk Criteria

Introduction



Risk Assessment Methodology



Risk Assessment Process

$$\text{Risk (R)} = \text{Likelihood (L)} \times \text{Severity (S)}$$

Risk Assessment Process

Severity of Hazard

Severity can be divided into five categories

SEVERITY (S)	EXAMPLE	RATING
Catastrophic	Numerous fatalities, irrecoverable property damage and productivity	5
Fatal	Approximately one single fatality major property damage if hazard realized	4
Serious	Non-fatal injury, permanent disability	3
Minor	Disabling but not permanent injury	2
Negligible	Minor abrasions, bruises, cuts, first aid type injury	1


(source: DOSH Malaysia, 2008)


HHRM by HAA

Risk Assessment Process

Likelihood of Occurrence

- Question "How many time has this event happened in the past?"
- Worker experience, analysis or measurement based.

LIKELIHOOD (L)	EXAMPLE	RATING
Most likely	The most likely result of the hazard/event being realized	5
Possible	Has a good chance of occurring and it is not usual	4
Conceivable	Might be occur at sometime in future	3
Remote	Has not been known to occur after many years	2
Inconceivable	Is practically impossible and has never occurred	1

(source: DOSH Malaysia, 2008)

Risk Assessment Process: Risk Matrix (DOSH, 2008)

	Severity (S)				
Likelihood (L)	1	2	3	4	5
5	5	10	15	20	25
4	4	8	12	16	20
3	3	6	9	12	15
2	2	4	6	8	10
1	1	2	3	4	5

High
Medium
Low

1. Find severity column that best describes the outcome of risk
2. Follow the likelihood row to find the description that best suits the likelihood that the severity will occur
3. Risk level = where row and column meet

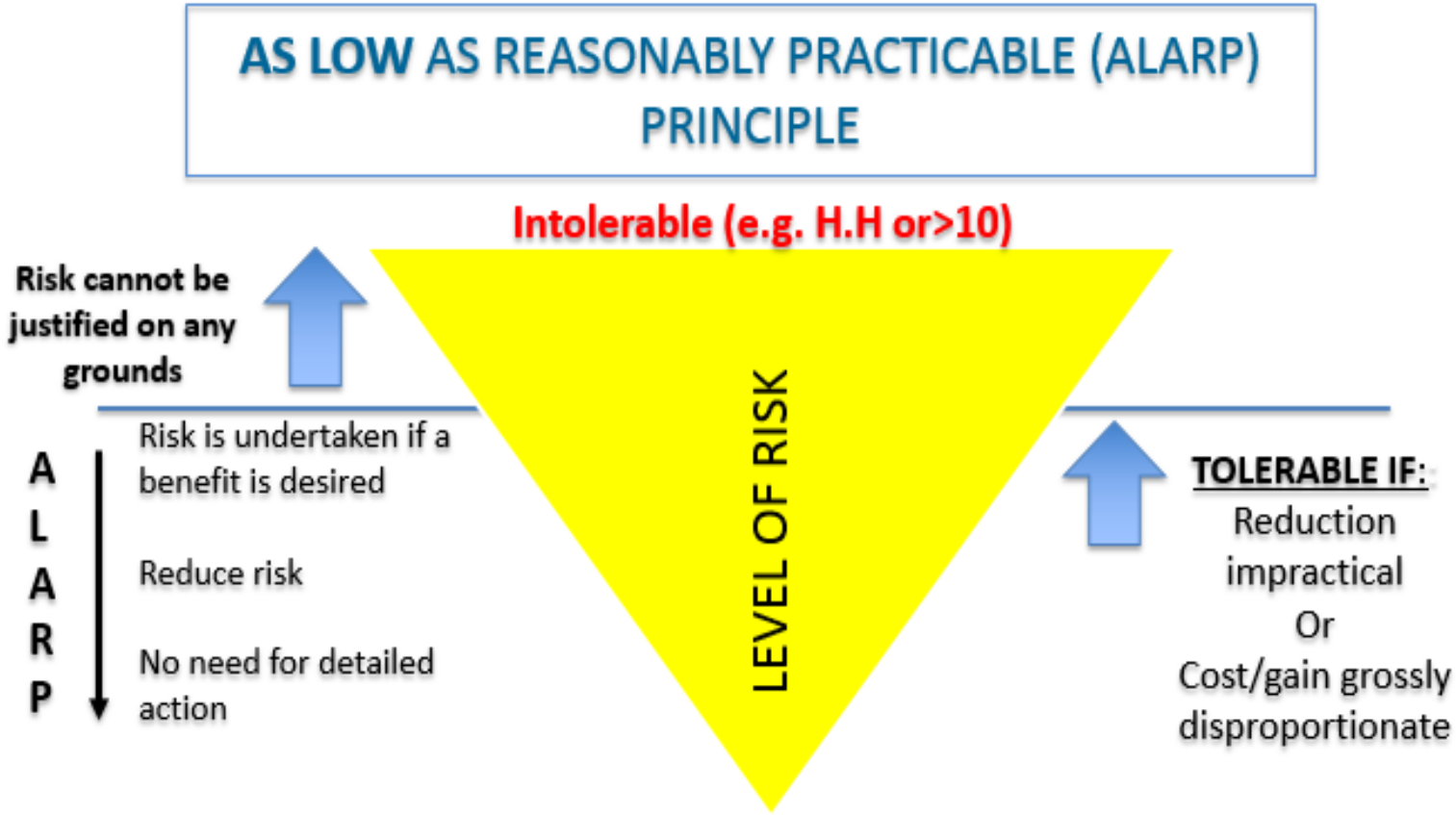
 (source: DOSH Malaysia, 2008)

Risk Criteria (DOSH, 2008)

RISK	DESCRIPTION	ACTION
15 - 25	HIGH	A HIGH risk requires **immediate** action to control the hazard as detailed in the hierarchy of control. Actions taken must be documented on the risk assessment form including date for completion.
5 - 12	MEDIUM	A MEDIUM risk requires a planned approach to controlling the hazard and applies temporary measure if required. Actions taken must be documented on the risk assessment form including date for completion.
1 - 4	LOW	A risk identified as LOW may be considered as acceptable and further reduction may not be necessary. However, if the risk can be resolved quickly and efficiently, control measures should be implemented and recorded.

(source: DOSH Malaysia, 2008)

Decision for Action



Conclusion

- Risk assessment process depends on probability and severity of the event.
- Relative risk value can be used to prioritize necessary actions to effectively manage workplace hazards

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