LECTURE 13

Lecture Title: Risk Assessment Topics Overview

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Date: 08th July 2026

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AIM of Lecture

- To recap the key stages of risk assessment, evaluation and control
- To reinforce the importance of implementation, review and monitoring

What is Risk Assessment?

- Simplified definition:
  - Systematic examination of work activities
  - Identification of hazards
  - Evaluation of risks
  - Decision on preventive and protective measures
- Key purpose: *prevent injury and ill health*

What does a Risk Assessment Involve?

- Identify hazards
- Evaluate risks
- Implement controls
- Formal vs informal risk assessments

Risk assessment as the *foundation of H&S management*

Why Manage Health & Safety? (Moral, Financial, Legal)

- Moral reason – human suffering
- Financial reason – direct & indirect costs
- Legal reason – enforcement, prosecution, penalties

EU Framework Directive 89/391/EEC

- Forms the legal backbone of all EU OHS legislation
- Purpose of the Directive
  - Prevention
  - Risk assessment
  - Elimination of hazards
  - Worker information & training

Maltese Legislation – Cap. 646 (Health & Safety at Work Act)

- Who is covered (employees, self-employed, contractors)
- Role of the Occupational Health & Safety Authority
- Alignment with EU standards

Duties, Enforcement & Penalties

- Employers' duties
- Workers' duties
- Powers of Health & Safety Officers
- Administrative penalties and criminal offences

Aim of Risk Assessment & Legal Context

Aim of Risk Assessment

To **eliminate hazards** or **minimize risks**

Achieved through the correct application of:

- Legal requirements
- Relevant standards
- Good practice

Legal Context

Risk Assessment required under:

- **General Provisions (LN 36 of 2003)**

Applies to all workplaces and activities

Key principle:
➞ Risk must be reduced to **As Low As Reasonably Practicable (ALARP)**

Objectives of Risk Assessment

Risk assessment aims to prevent:

- Death and personal injury
- Occupational ill health
- Other forms of loss or incidents
- Breaches of statutory law

These objectives directly relate to:

- **MORAL** responsibility (prevent suffering)
- **LEGAL** responsibility (comply with law)
- **FINANCIAL** responsibility (avoid costs)

Risk Assessment

The Risk Assessment Process consists of 5 steps:

- Identify the hazards
- Identify who may be harmed and how
- Evaluate the risks and decide on precautions
- Record findings and implement controls
- Review and update the assessment

Key principle:
→Remove risk or reduce it to **ALARP**

Risk Assessment – Step 1: Identify the Hazards

Hazards are:

- Anything with the **potential to cause harm**

Two main types:

Safety Hazards

- Cause immediate physical injury
- Examples: slips, falls, machinery, electricity

Health Hazards

- Cause disease or ill health
- Can result from:
  - A single exposure
  - Long-term exposure

Risk Assessment – Types of Health Hazards

Health hazards may be classified into **five groups**:

Physical

Noise, vibration, radiation, extreme temperatures

Chemical

Lead, mercury, silica, solvents

Biological

Bacteria, viruses (e.g. legionella, hepatitis)

Ergonomic

Manual handling, repetitive movement, poor posture

Psychological

Stress, violence, trauma

Risk Assessment – Hazards vs Risks

Hazard

- The **source of potential harm**

Risk

- The **likelihood** that the hazard will cause harm
- Combined with the **severity** of the outcome

Example

- Hazard: Wet floor
- Risk: A person slipping and being injured

Key principle:
➞ Hazards are identified first, risks are then evaluated

Risk Assessment – Identifying Hazards in the Workplace

Hazards can arise from:

- Work activities
- Equipment and machinery
- Substances used or stored
- Workplace layout
- Movement of people and vehicles

Examples:

- Working at height
- Moving vehicles
- Poor housekeeping
- Manual handling tasks

Risk Assessment – Identify the People at Risk

When identifying people at risk, consider:

- **Who might be harmed**
- **How they might be harmed**

People at risk may include:

- Workers directly carrying out the task
- Other employees nearby
- Maintenance staff
- Cleaners
- Visitors
- Members of the public

Risk Assessment – Special Groups at Risk

Certain groups may face **greater risk**:

- Maintenance workers (safeguards removed)
- Cleaners (working alone or outside normal hours)
- Contractors unfamiliar with the workplace
- Lone workers

Members of the public near the workplace

Key principle:
➞ Risk controls must consider **all affected persons**, not only employees.

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Risk Assessment – Types of Risk Assessment

Risk assessment may be:

- **Qualitative**
  - Used when:
    - Hazards are **few and simple**
    - Risks are **obvious**
    - Small or low-risk workplaces
- **Semi-Quantitative**
  - Used when:
    - Hazards are **moderate or mixed**
    - Some specialist knowledge required
- **Quantitative**
  - Used when:
    - Hazards are complex and high-risk
    - Consequences may be severe

Risk Assessment – The Hierarchy of Controls

Once hazards are identified:

➞ Controls must be selected to reduce risk

Hierarchy (most to least effective):

1. Elimination
2. Substitution
3. Engineering controls
4. Administrative controls
5. Personal Protective Equipment (PPE)

Key principle:
➞Always aim for the **highest level possible.**

Risk Assessment –Risk Control Plan

A risk control plan explains:

- How identified risks will be controlled
- Which control measures will be implemented
- How risks are reduced to ALARP

Developed after:

- Hazards are identified
- Risks are evaluated and prioritized

- A good risk control plan is:
  - Based on the hierarchy of controls
  - Proportionate to the level of risk
  - Practical and feasible
  - Developed in consultation with workers
  - Clearly assigned and documented

Risk control does not end after implementation:

- Controls must be monitored
- Effectiveness must be assessed
- Adjustments made if controls fail

Key principle:
➞ Controls must work in practice, not just on paper.

Risk Assessment – Common Pitfalls in RA

Why Risk Assessments Fail

- Common mistakes in risk assessment
- Why accidents still happen despite having RAs
- How poor practice undermines safety

Key idea:

➞ Typical failures include:

- Treating RA as paperwork only
- Accepting unsafe practices because “nothing has happened”
- Doing the RA too late
- Over-reliance on numbers and statistics
- Poor preparation and competence
- Assuming someone else is responsible
- Focusing on trivial details instead of real risks

Key principle:
➞ A bad risk assessment can be **worse than none at all**.

Risk Assessment – ERGONOMICS & HEALTH & SAFETY

1. What is Ergonomics?

Ergonomics is the science of:

- Designing work to fit the worker
- Improving safety, comfort, and performance
- Reducing human error and injury

2. Why Ergonomics Matters in Health & Safety

- Poor ergonomics can lead to:
- Musculoskeletal disorders (MSDs)
- Fatigue and discomfort
- Errors and reduced productivity
- Good ergonomics supports:
- Injury prevention
- Risk assessment
- Accident prevention
- Improved performance and wellbeing

3. Ergonomics is relevant to:

- Manual handling
- Workstation design
- Repetitive tasks
- Posture and movement
- Work organisation and workload

Key principle:
➞ *Fit the job to the person, not the person to the job*

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Risk Assessment – MONITORING & AUDITING RISK CONTROLS

1. Why Monitoring & Auditing Matter

- Checking whether risk controls are **actually working**
- Ensuring controls are implemented and maintained
- Supporting **continuous improvement** in health and safety

Key principle:
➞ Risk assessment does not end with control — **controls must be monitored and audited**.
➞ Monitoring checks **what is happening now**
➞ Auditing checks **whether the system works**

2. Monitoring vs Auditing (Big Picture)

Monitoring

- Ongoing checking of safety controls
- Identifies failures in day-to-day operations

Auditing

- Periodic, systematic review of the safety system
- Checks compliance, effectiveness, and structure

Conclusion – Managing Risk is a Continuous Process

Throughout this module we learned that:

- Hazards must be **identified**
- Risks must be **evaluated**
- Controls must be **selected and implemented**
- Risk assessments must be **recorded, reviewed, and updated**
- Controls must be **monitored and audited**
- Ergonomics and human factors are essential to prevention
- Poor practice leads to **pitfalls and failures**
- Effective systems support **Vision Zero**

Key principle:
➞ Effective health & safety is not paperwork —
➞ It is **planning, action, monitoring, and continuous improvement**.

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