PART 1: OVERVIEW OF OCCUPATIONAL SAFETY, HEALTH & ENVIRONMENT.

1.1 Historical Perspective
Learning Objectives

- To describe the historical development of OSH management over the centuries.
- To explain the development of OSH Management System.
Early Recognition Of Occupational Diseases

- In 1473 a German physician, Ellenborg, published the first known pamphlets on occupational disease from gold miners.

- In 1556 the German scholar, Agricola, described the diseases of miners.
Early Recognition Of Occupational Diseases

- In 1713 Ramazzini, who is regarded as the father of occupational medicine, suggested that in diagnosis doctors should ask patients about their occupations.
Emergency Of Industrial Accident

- Industrial accidents arose out of the Factory System during the Industrial Revolution in Britain in 18th Century (1700s).

- Women and children worked as heavy labourers under unsafe and unhealthy workplaces.
Emergency Of Industrial Safety Legislation

- In 1833 **English Factory Act** was the **first effective industrial safety law**.

- It provides **compensation** for accidents rather than to control their causes.
Emergency Of Industrial Safety Legislation

- Insurance companies inspected work places and suggested prevention methods

- Problem: **Safety became injury and insurance oriented**
Emergency Of Safety Management

- Role of Herbert W. Heinrich (1930’s),
  - Developed **Domino Theory** and **promoted control of workers behaviour**.

- Problem:
  - Focused on **worker behaviour** and not management
  - Caused people to think that **safety is about policing worker**
Emergency Of Safety Management

- Frank Bird (1970) developed **Loss Control Theory**.
- Suggested that underlying cause of **accidents are lack of management controls and poor management decisions**.

Problem:

- Not so popular: **blames management** (responsibility and control).
Emergency Of Safety Management

- In 1980’s, **Behavioural Based Safety** (BBS) was introduced;
- Based on Heinrich’s findings.
- Work by recognizing safe work habits and offering rewards and punishment.

**Problem:**
- Focuses on **workers** and not on hazard or management
- **Reward and punishment system have flaws**
Emergency Of Safety Management System

Current development of Occupational Safety And Health management system was driven by two parallel forces:

A. **Self-regulatory legislation** in the United Kingdom (1974),

B. **Quality management movement**
A Self-Regulation Legislation

- **Lord Robens**, Chairman of a Royal Safety Commission Report noted that:
  - there was too many OSH legislation,
  - was fragmented,
  - limited in coverage (specific hazards & workplace),
  - out of date and difficult to update,
  - inflexible,
  - people thought that safety was what government inspectors enforced.
A Self-Regulation Legislation

- Lord Robens recommended
  - Self regulation

- Report resulted in the Health and Safety of Workers At Work Act in the UK in 1974
A Self-Regulation Legislation

- Similar legislation was enacted in Australia in 1984

- Enacted in Malaysia in 1994 after the 1992 Bright Sparkler accident in Sungai Buloh
A Self-Regulation Legislation

- Features of “Robens style” legislation:
  - General **duties of care** by:
    - Employer, employee, manufacturer, designer, supplier
    - Duty of employer to make the workplace safe
  - **Consultation** with employees through **Safety and Health Committees**
  - **Safety and Health Officer** as advisor and coordinator
  - **Improvement and prohibition notices**
A Self-Regulation Legislation

Legislation follow major accidents and reinforce need for management system

<table>
<thead>
<tr>
<th>ACCIDENT</th>
<th>REGULATION/PROGRAMME</th>
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<tbody>
<tr>
<td>Flixborough (1974)</td>
<td>CIMAH regulations 1996</td>
</tr>
<tr>
<td>Bhopal (1984)</td>
<td>“Responsible Care” / Process safety</td>
</tr>
<tr>
<td>Piper Alpha (1988)</td>
<td>Risk Assessment / Management system</td>
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Quality Management Approach to Occupational Safety & Health Management

- There are similar issues in safety management as in quality management
- Example:
  - Productivity
  - Worker involvement
  - Proactive approach
  - Scientific approach
  - Customer and human rights
Quality Management Approach to Occupational Safety & Health Management

- Management system standards:
  - ISO 9000 QMS was proven successful and ISO 14000 EMS was introduced in 1996
Quality Management Approach to Occupational Safety & Health Management

- International and auditable OHSAS 18001 OSH Management System published in 1999

- ILO approved an OSH management system for governments to adopt during 2000
Summary

- The industrial revolution cause of industrial accidents.
- Laws were enacted to compensate and protect workers in 1833.
- Safety management guidelines began with Heinrich and followed by Frank Bird and others.
Summary


- Outcome of accidents in the 1970s and 1980s resulted in OSH management system today.
Summary

- Health problems due to occupation has been known from ancient times

- Accidents in the 70’s & 80’s resulted in OSH-MS today