

**Risk Management MN220:  
Seminar 6: OHS**



# SHERIDAN COLLEGE

PERTH | WESTERN AUSTRALIA

# Seminar 6. Health, Safety & Environmental (HSE) Risk Management

- Facts & Overview
- OHS and the legal framework
- Codes and standards - 4360 and 4801
- Occupational Health & Safety System (OHMS)
- Environmental Management System (EMS)







# Facts

- In Australia in 2004-2005 there were:
  - 254 compensated fatalities;
  - ~2000 disease related fatalities;
  - 146,465 serious compensation claims (av. \$6K per claim).

# Facts

- *With a total of ~43 work-related deaths per week in 2004/2005. More people died in Australia in that time from work-related causes than in road accidents which claimed around 30 lives/week.*

# Facts

- *“Health and safety failures at work cost Australia at least \$20Billion per year in lost production, treatment of injuries and illnesses, and rehabilitation and compensation for those injured or made sick by their work”*

# Trends – Employment Environment

- Move from FT to PT employment, casual and contract; transfer risk, e.g. long haul trucking;
- More low paid jobs; outsourcing work to homes;
- Ageing population and skills shortage; 45+ >37% Public service;
- Change in the type of industries; ↓ manufacturing; ↑ service;
- ↑ International competition;
- Integration in the global market; more diverse workforce;
- Increased govt regulation/enforcement; ↑ Penalties; gaol terms;
- Move to performance-based self-regulated approach.



# OSH?

- OHS risk management has traditionally been seen as a “cost” to the organisation;
- Adopting only the minimum standards and compliance were the norm.

# Is it really a cost ??

- OHS Cost-
- [https://www.youtube.com/watch?v=aciTGS6Sj50&list=PL2vMhKNwvYnJ8v\\_HeoWL306NUCvOwtM6R](https://www.youtube.com/watch?v=aciTGS6Sj50&list=PL2vMhKNwvYnJ8v_HeoWL306NUCvOwtM6R)
- <https://www.youtube.com/watch?v=PZmNZi8bon8>

# Hazards vs. Risks

- <https://www.youtube.com/watch?v=GwVTdsN1E>
- <https://www.youtube.com/watch?v=hklyvcQ0lEM&index=11&list=PLqZzxxn5C8ijtA4emCv6Hxet849tynPTH>

# Legislation

## 1. Statute (legislation)- Act of parliament

- Australia has ten sets of health and safety laws (States, Territories & Federal);
  - o *WA: The Act* - The Occupational Safety & Health (OSH) Act 1984 (as amended);
- *The Regulations* - Occupational Safety & Health (OSH) Regulations 1996 (as amended).

## 2. Common law (judge-made law or case law) negligence

- torts.





# OHS Acts and Authorities

OHS ACTS AND AUTHORITIES		
Jurisdiction	Act	Administered by
Commonwealth	OHS (Cwlth Employment) Act 1991	ComCare
Commonwealth	OHS (Maritime Industry) Act 1993	SeaCare
NSW	OHS Act 2000 (NSW)	NSW Work Cover Authority
VIC	OHS Act 2004 (VIC)	Work Safe Vic
QLD	Workplace H&S Act 2011	Workplace H&S Qld
SA	Work Health and Safety Act 2012 (SA)	Work Cover Corp.SA
WA	OHS Act 1984 (WA) and OHS Regulations 1996	Work Safe WA Workplace
TAS	Workplace H&S Act1995(Tas.)	Standards Tas.
ACT	OHS Act 1989	ACT Work Cover
NT	Work Health Act 2011 (NT)	NT Work Safe
The constitution does not give the Commonwealth power to legislate in OHS		

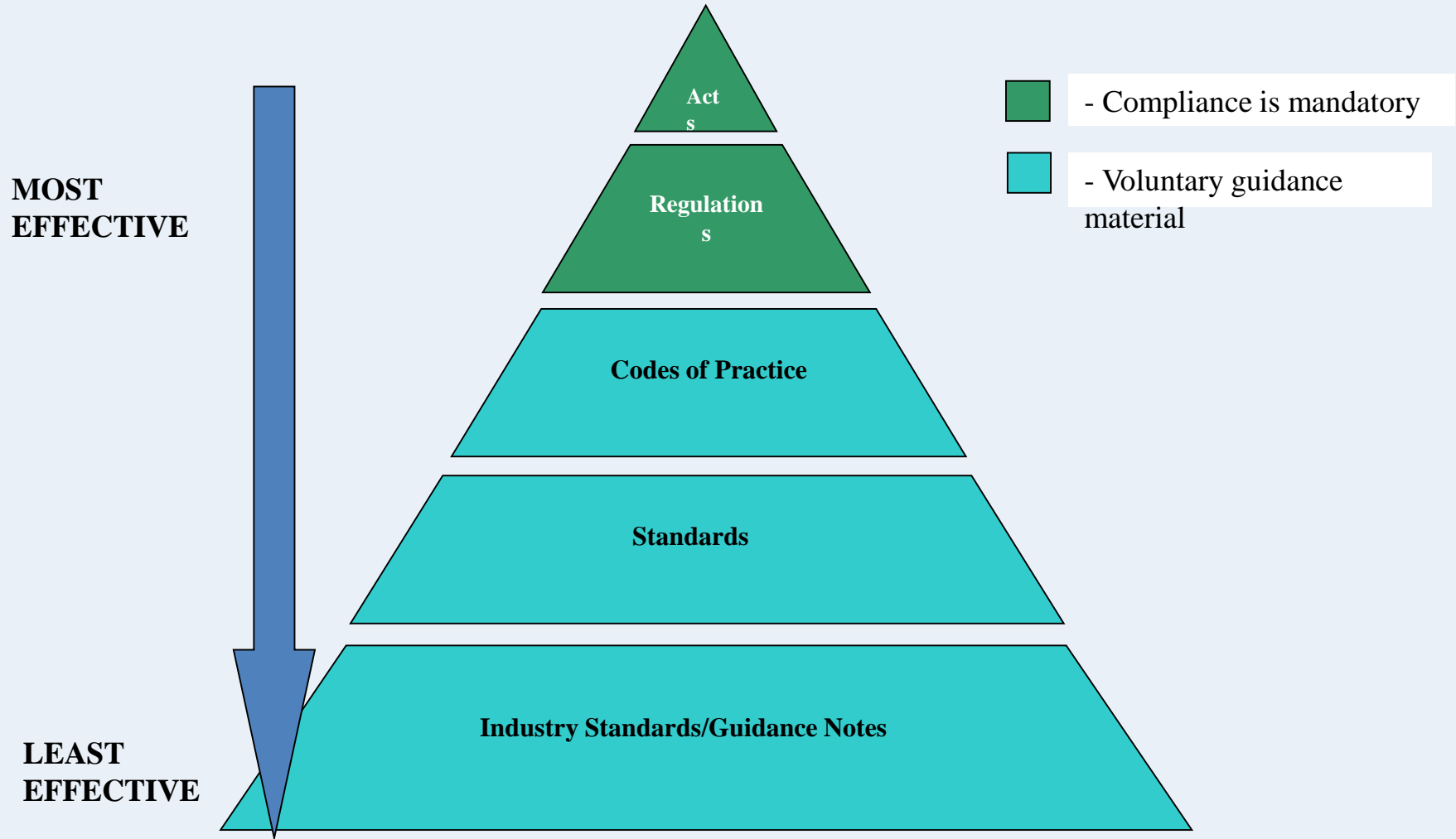
# Occupational health and safety harmonisation (2009)

- At a National Level
- <http://employment.gov.au/occupational-health-and-safety-harmonisation>
- <http://www.safeworkaustralia.gov.au/sites/SAWA>

# Trends in Legislation

- Problems with increasing compensation rates have led to a number of states and territories to:
- Increase penalties for breaches of OHS legislation;
- Introduce penalties for individuals;
- Introduce a criminal offence of industrial manslaughter;
- Create a new duty on employers to consult with employees, punishable by a fine for corporations and for individuals;
- Grant unions a right of entry where a breach of OHS legislation is suspected.

# The Legal Framework





# Codes and Standards

- National Occupational Health and Safety Commission (NOHCS) Codes of Practice – *promoting health and safety at work;*
- AS/NZS 4801:2001 Occupational health and safety management systems;
- Standards Australia HB205-2004 OHS Risk Management Handbook.

# Common Law Liability

- Common law **“duty of care”** requirements: requires that employers and employees ensure their work activities do not put a third party, including contractors and visitors, at risk and those they supply goods and services too.

# Common Law Liability

Employers need to provide:

- Competent/appropriately trained staff;
- Sufficient number of workers to carry out the work;
- Safe place of work without risks to health;
- Proper plant and equipment; and
- Safe systems and methods of work.

# Common Law Liability

- Vicarious liability
  - An employer is responsible for the actions of employees
  - Instructions to conduct unlawful acts leads to liability
- Contributory negligence
  - Percentage of employee liability
- Occupiers liability
  - Duty of care to provide safe environment



# Government Priority Industry Sectors

- Industries with the highest incident rate and/or high numbers of workers compensation claims:
  - Building & construction
  - Transport and storage;
  - Manufacturing;
  - Health & community services; and
  - Agriculture, forestry & fisheries.

# Critical Elements Determining OHS within an Organisation

- **Commitment** - does senior management make OHS a priority? How is it communicated?
- **Consultation** - are workers involved in OHS decisions?
- **System** - are there policies/procedures? Is there systematic identification of hazards and management of risk? Performance monitored & reviewed?
- **Culture** - Is everyone aware of the hazards and risks? Are they empowered to report hazards?

# Key Stakeholders

- Workers; avoid risks; adequate compensation; good job.
- Employers; meet organisational objectives; reduce \$; comply with law.
- Governments; protect community; build economy; reduce \$.
- Insurers; expand business; to be competitive.
- OHS Professionals; assist employees/ & employers to build professional capacity.
- Unions/trade associations – represent workers.
- Courts/Lawyers – deal with compensation.
- Standards bodies/Scientists; prepare standards; research new hazards.

# Duties of Contractors/ Principals

**Principal is someone who engages a contractor.**

Duty applies only to matters over which the Principal has control

*For example:*

A Principal on a building site, who engages an electrical contractor to work at height, would have a duty to protect the contractor from the hazard of falling. The Principal would have to implement appropriate systems and structures to ensure that adequate fall protection was in place. These are clearly matters over which the Principal has the capacity to exercise control.

In relation to the electrical work for which the Principal has no expertise, the Principal would not have the capacity to control the way in which the work is done.



## **GROUP ACTIVITY - DISCUSSION**

**What are some of the duties of the principal and contractor?**

# Duties of Employers

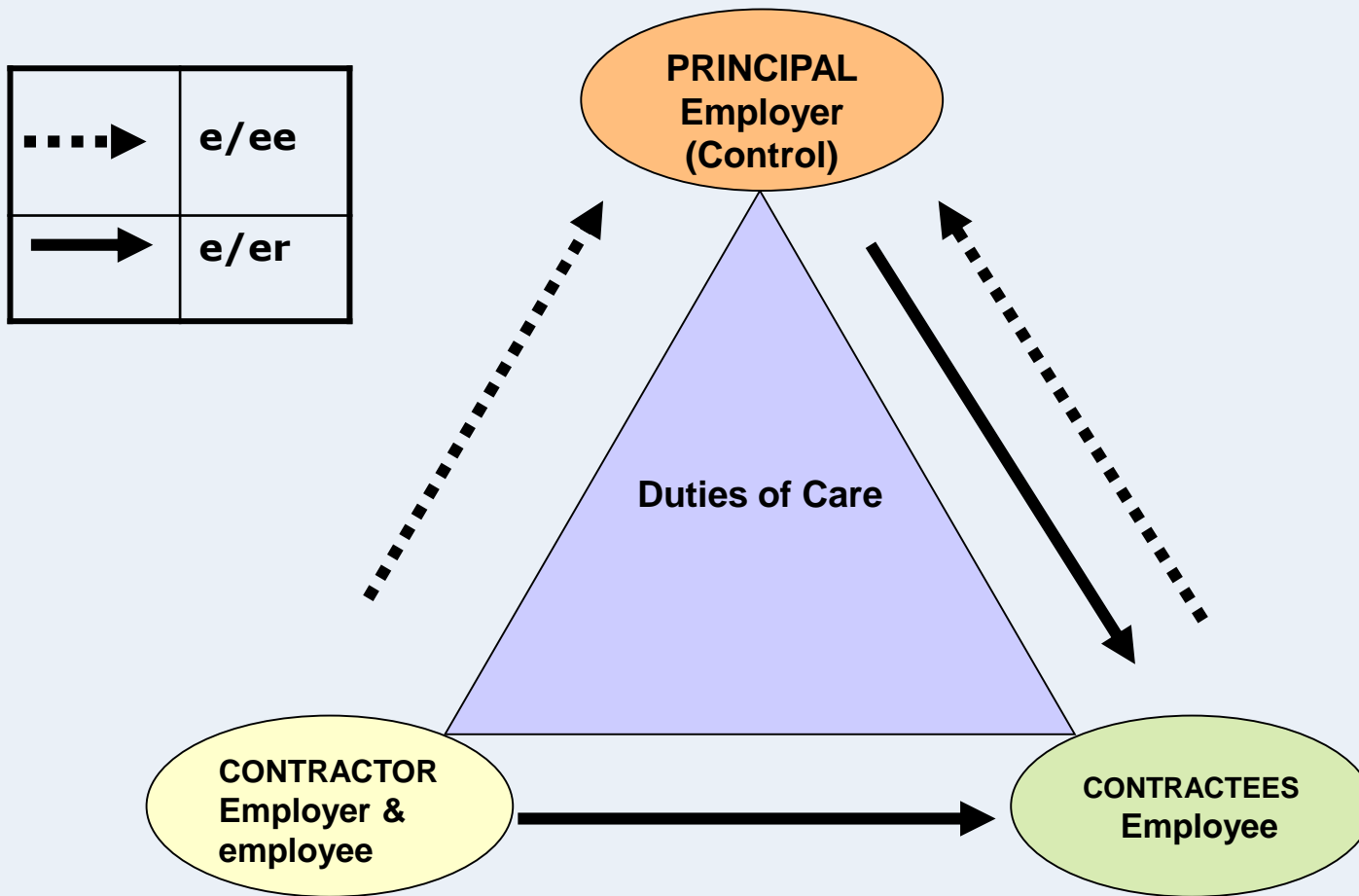
Employers must provide:

- Safe systems of work and safe workplaces
- Information, instruction, training and supervision
- Consultation & co-operation with SHR
- Personal Protection & Equipment (PPE)
- Safe use of plant and substances
- Report work-related deaths and certain injuries and diseases.

# Duties of Contractors/ Principals

- The duties of the Act overlap in the case of a contractor and principal.
- Both the contractor and the principal have duties to the contractor's employees *e.g. electrician on high rise building site*
- Contractors and their employees have duties of an employee in relation to the work for the Principal.
- A contractor may have both the duties of an employer (in relation to his or her own employees) and the duties of an employee (in relation to the work for the Principal).

# Duties of Contractors/ Principals



# OSH Management System

An overall management system should include:

- Organisational structure
- Planning activities
- OSH policy
- Responsibilities defined
- Implementation: practices, procedures and resources for developing, implementing, maintaining OHS;
- Measurement and evaluation
- Management review
- Continual improvement

# Planning

- Plan the identification of hazards, risks, assessments and controls
- Objectives of OHS programme

# OHS Policy<sup>10</sup>



Policy - Occupational Safety and Health - OSH MdU - Windows Internet Explorer

http://osh.murdoch.edu.au/policies/hr021-osh-policy.html

File Edit View Favorites Tools Help

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Policy - Occupational Safety and Health - OSH MdU

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## Occupational Safety & Health

Contact Us HR News Services HR Policies HR Forms Useful Links

- OSH Home Page
- OSH Documents List
- Incident Reporting
- Hazardous Substances
- EMERGENCY
- Risk Management
- Bulletins
- Radiation Safety
- Biosafety
- OSH Representatives
- Safety Committees
- Issue Resolution
- OSH Training
- Workers Compensation
- HR Home Page
- HR Topic Links
- FAQs

Approved on	11 Jul 2005	by	Vice Chancellor	Res. No.	
Last Amended		by		Res. No.	
Next Review Date	Jul 2006				
Keywords	occupational safety and health policy statement				
<a href="#">Responsibilities</a> , <a href="#">Related Materials / Policies</a> , <a href="#">Revision History</a> & <a href="#">Appendices</a>					
Please Note					

### Occupational Safety and Health Policy Statement

#### Policy

Murdoch University recognises its duty to ensure the safety and health of its employees, students, contractors and visitors and in meeting this duty will comply with the requirements of the Occupational safety and Health Act 1984 and any other legislation and supporting documents that apply to its operations.

Murdoch University, in its mission to extend knowledge, stimulate learning and promote understanding for the benefit of the community, is committed to achieving the highest standards of occupational safety and health in accordance with best practice.

It is our policy:

Internet 100%

Start Inbox - Microsof... Legrand CRM PR... R:\2. Sales and ... MB5 572 Risk Ma... Resume Lim Yew... Lecture 7.ppt Policy - Occupa... 2:56 PM

<sup>10</sup> Murdoch University -<http://osh.murdoch.edu.au/policies/hr021-osh-policy.html>

# Implementation

- Identify, assess and manage risks as they relate to workplace and employee health and safety;
- Relationship between 4360 and OHS risk management.



# Risks AS/NZS 4360 – AS/NZS 4801<sup>5</sup>

AS/NZS ISO 31000:2018 Risk Management – Principles and guidelines	Risk <i>“effect of uncertainty on objectives”</i>
AS/NZS 4804	OHS Risk (In relation to any potential injury or harm) the likelihood and consequence of that injury or harm occurring

# Hazards AS/NZS 4360 – AS/NZS 4801

AS/NZS ISO 31000:2018 Risk Management –  
Principles and guidelines;

- A source of potential harm;

AS/NZS 4804:

- A source or a situation with a potential for harm in terms of human injury or ill health, damage to property, damage to the environment, or a combination of these

# Relationship Between Hazard and Risk<sup>7</sup>

Hazard		Risk Event
Unguarded rollers on printing press.	→	Worker's hand may be drawn into the machine and crushed.
Infected blood in syringe at hospital.	→	Needle stick injury may result in infection of a staff member.
45kg cement bags at construction site (no lifting equipment provided).	→	Workers may injure their backs or experience other muscle related disorders from lifting and carrying the heavy bags.

<sup>7</sup> Planning Occupational Health and Safety, CCH Australia

# Identifying Risks

1. Unstructured, identification processes result in risk events being excluded. Whereas well structured processes identify sources of harm and events that can lead to harm.

Structured processes include:

- Checklists; judgements (experience & records), flow charts, brainstorming, scenario analysis, system techniques, e.g. :
  - HAZID (HAZard IDentification);
  - HAZAN (HAZard ANalysis);
  - JSA (Job Safety Analysis).

2. **Identification of harm seeks to answer the questions:**

- **What could happen if...?**
- **Is it possible that ... ?**
- **Could someone...?**
- **Has anybody ever ....?**

# Identifying Risks -Groups of Hazards

- **Physical hazards** (machinery, noise, heat, cold);
- **Chemical hazards** (poisonous liquids/gases, fumes);
- **Ergonomic hazards** (repetitive movements/poor posture);
- **Radiation hazards** (radioactivity, excessive sunshine);
- **Psychological hazards** (stress, work load, bullying);
- **Biological hazards** (infectious disease, fungus, mould).

# Risk Assessment & Role Plays

- **Method**

<https://www.youtube.com/watch?v=fY6KGN72d7Q>

# Assessing Risks

Develop an understating of the risk:

- Identify existing controls/ adequate systems to give early warning on failure?
- Range of consequences;
- Likelihood of the consequence;
- Decide priority;



- Does the risk need to be treated?



# Spot the Hazard @ Workplace

- Workplace- 2 groups
- **Group 1 (Office) :**  
[https://www.youtube.com/watch?v=TCUiGEL\\_g6U](https://www.youtube.com/watch?v=TCUiGEL_g6U)
- Group 2: (Workplace)
- [https://www.youtube.com/watch?v=d6\\_6N0m9H1I](https://www.youtube.com/watch?v=d6_6N0m9H1I)



# Risk Register

Hazard Register									
<b>Workplace:</b>	Foundry	<b>Inspection Date</b>	20-Sep-08	<b>Inspector</b>	T. Rex				
<b>Process</b>	<b>Hazards</b>	<b>Potential injury</b>	<b>Severity</b>	<b>Probability</b>	<b>Risk</b>	<b>Control</b>	<b>Resp Person</b>	<b>Imp Date</b>	<b>Check</b>
Shot blast	Plant & Eqp - guard damaged	Knock/ abrasion	3	3	Medium	replace guard	Fred	27th Sept 2008	20-Oct-08
Grinders	Work env - dust	Damage lungs	4	4	High	upgrade exhaust	Fred	27th Nov 2008	4-Dec-08

# Treating Risks - Hierarchy of Controls<sup>8</sup>

Elimination	Get rid of the hazard out of the workplace, i.e., designing the problem out. This is the best option if it can be done.
Substitution	Use something less hazardous. For example, water based chemicals rather than solvent based ones.
Engineering controls	Design and install equipment to counteract the hazard. For example installing an exhaust ventilation system to extract dangerous fumes or dust.
Administrative controls	Arrange work to reduce the time people are around the hazard.
Personal protective equipment	Have people wear protective equipment and clothing while near the hazard. For example, ear plugs or earmuffs.

<sup>8</sup> Standards Australia HB 205 – 2004 OHS Risk Management Handbook

# “As far as is Practicable”

Practicability is determined by considering:

- The severity and likelihood of any potential harm to a person (to whom the duty is owed);
- The state of knowledge about the harm, the risk of it occurring, and the means of removing or reducing the risk and
- The availability, suitability and cost of the means of addressing it.

# Implementation

- Structure responsibility and accountability;
- Training and competency;
- Consultation, communication and reporting;
- Documentation;
- Document and data control;
- Hazard/risk identification, hazard/risk assessment;
- Emergency preparedness and response.

# Measurement and Evaluation

- Monitoring and measurement
- Incident investigation, corrective and preventative action
- Records management
- OHMS audit

# Management Review

- Review the OHMS
- Continuously improve the OHMS

Terry Tate- improved workplace  
safety and productivity

[https://www.youtube.com/watch  
?v=Mz6ChdD6H6M&list=PLD3  
BE0EED32AD6462&index=8](https://www.youtube.com/watch?v=Mz6ChdD6H6M&list=PLD3BE0EED32AD6462&index=8)

## **3 Case Studies OHS Controls**



# Environmental Risk Management

# Environmental Risk Mgmt. - Approach

- Risks, threats and impacts to the environment;
- Control measures to prevent impacts;
- Legal framework;
- Development of the environmental management system.

- Environmental Hazards
- <https://www.youtube.com/watch?v=Q-kFBOdqXWc>

# Environmental Impacts

Include:

- Emissions to the air;
- Releases to the water;
- Releases to the land;
- Usage of raw materials (soil, water, land);
- Use of energy;
- Energy emitted; and
- Waste and by-products.

# Environmental Mgmt System (EMS)

- Environmental Policy
- Planning
- Implementation and operation
- Checking
- Management review
- Continual improvement

# Environmental Policy

- Establishes the principles of action for the organisation;
- Sets the level of environmental responsibility;
- Sets performance levels;
- Needs to be appropriate for the organisation.

# Planning

- Environmental aspects:
  - o How does the organisation interact with the environment?
  - o Elements of the organisation's products and services which interact with the environment (i.e. discharge, emission, noise)
- Legal and other requirements;
- Objectives, targets and programme(s).

# Implementation

- Resources, roles, responsibility and authority;
- Competence, training and awareness;
- Consultation, communication and reporting;
- Hazard/risk identification, hazard/risk assessment
- Operational control;
- Documentation and control of documents; and
- Emergency preparedness and response.



# Management Review

Identify areas for improvement - internal audit and/or ongoing feedback:

- Policy
- System
- Communication and consultation
- Objectives and targets
- Records
- Monitoring and measurement
- Evaluation and compliance
- Non-conformity, corrective action & preventative action

# Summary

OHS and EMS both require a similar approach:

- Plan
- Implement
- Measure and evaluate
- Review
- Continuously improve





















Legge 626: L'apoteosi

# **STUDENT ARTICLE REVIEW**