Risk Management and Assessment Overview

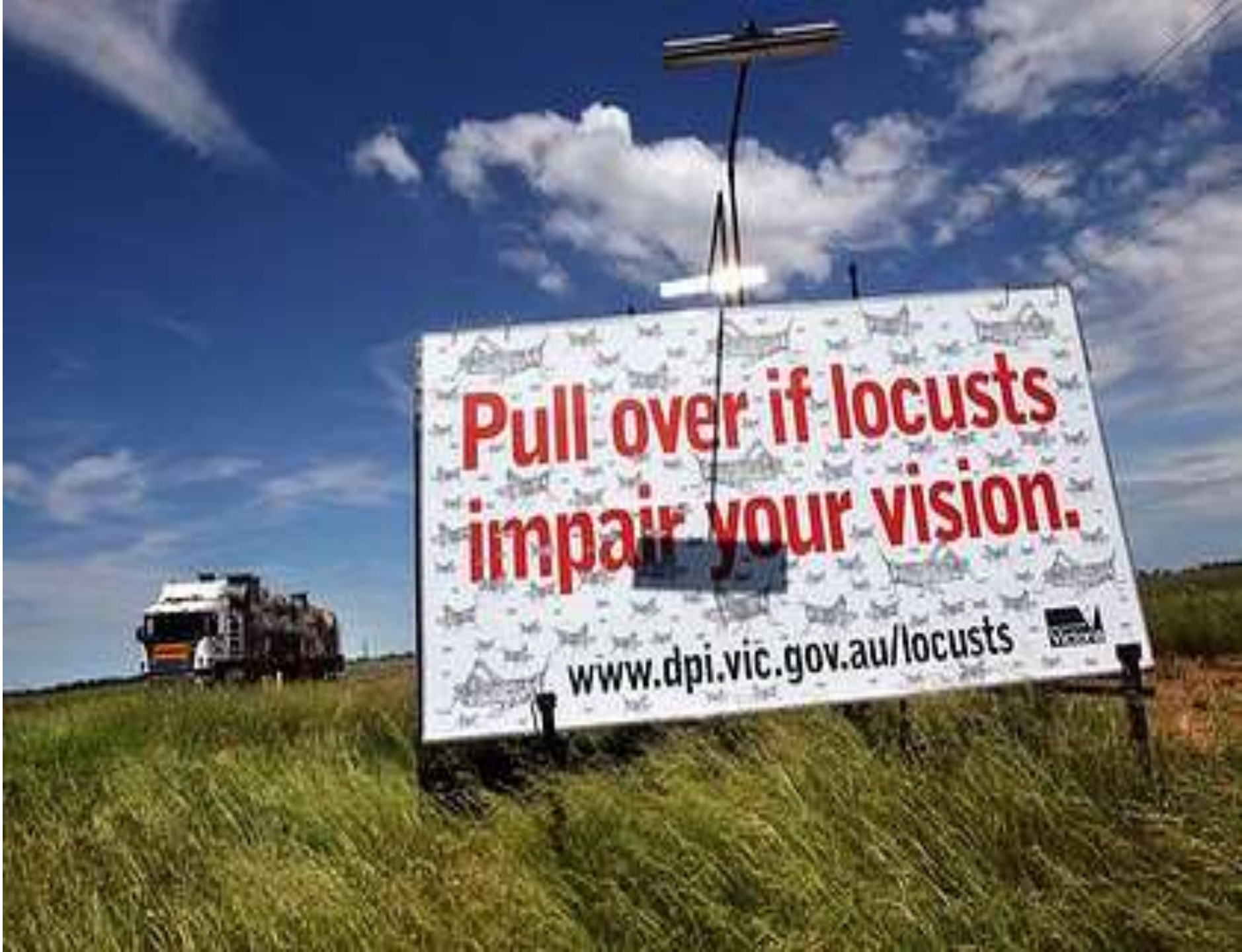
Alistair Nairn

EPA VICTORIA
Environment Protection Authority Victoria

VICTORIA State Government

Purpose of risk management

To define what may happen in the future and to choose among alternatives is a question that lies at the heart of contemporary societies.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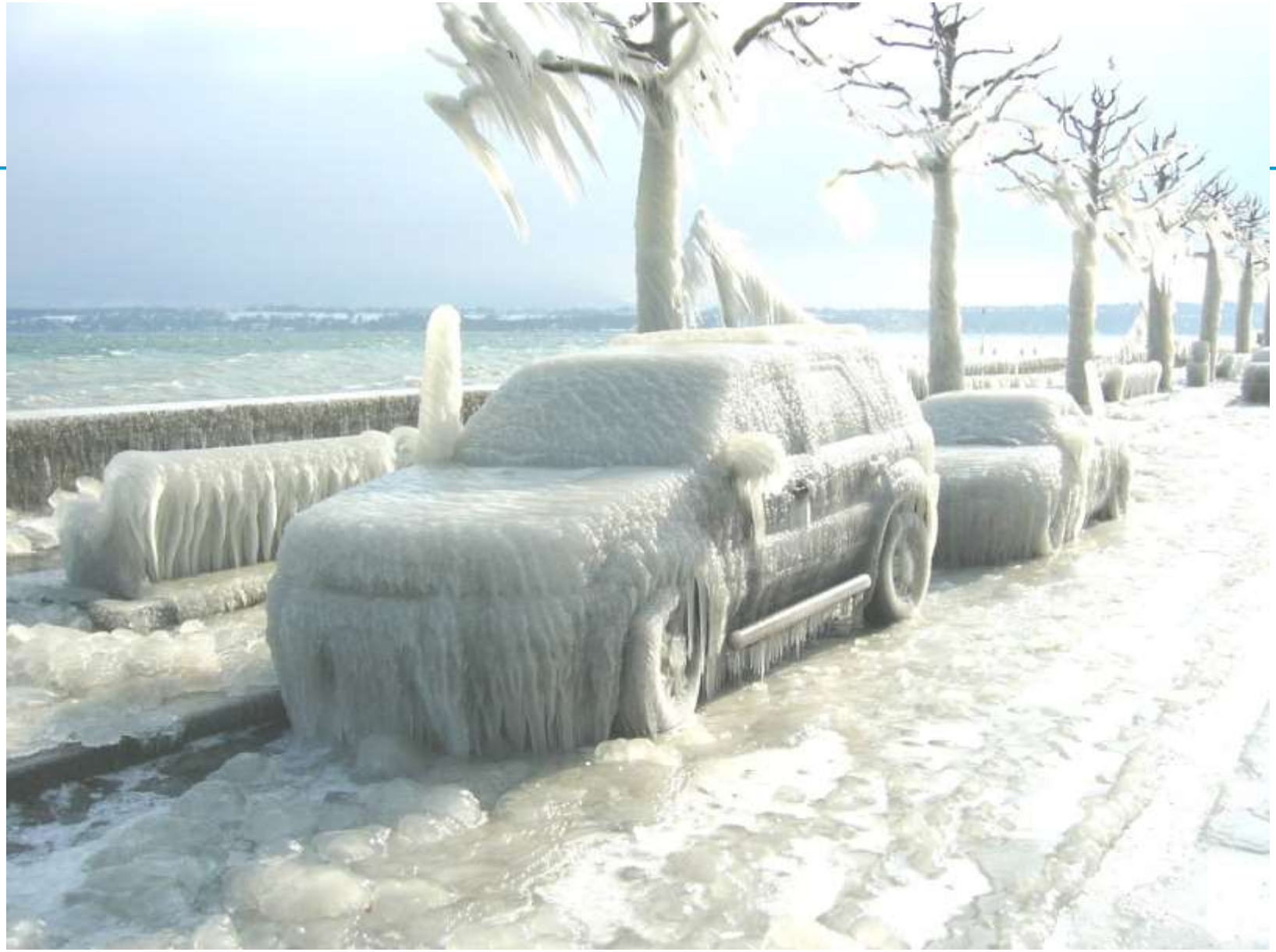
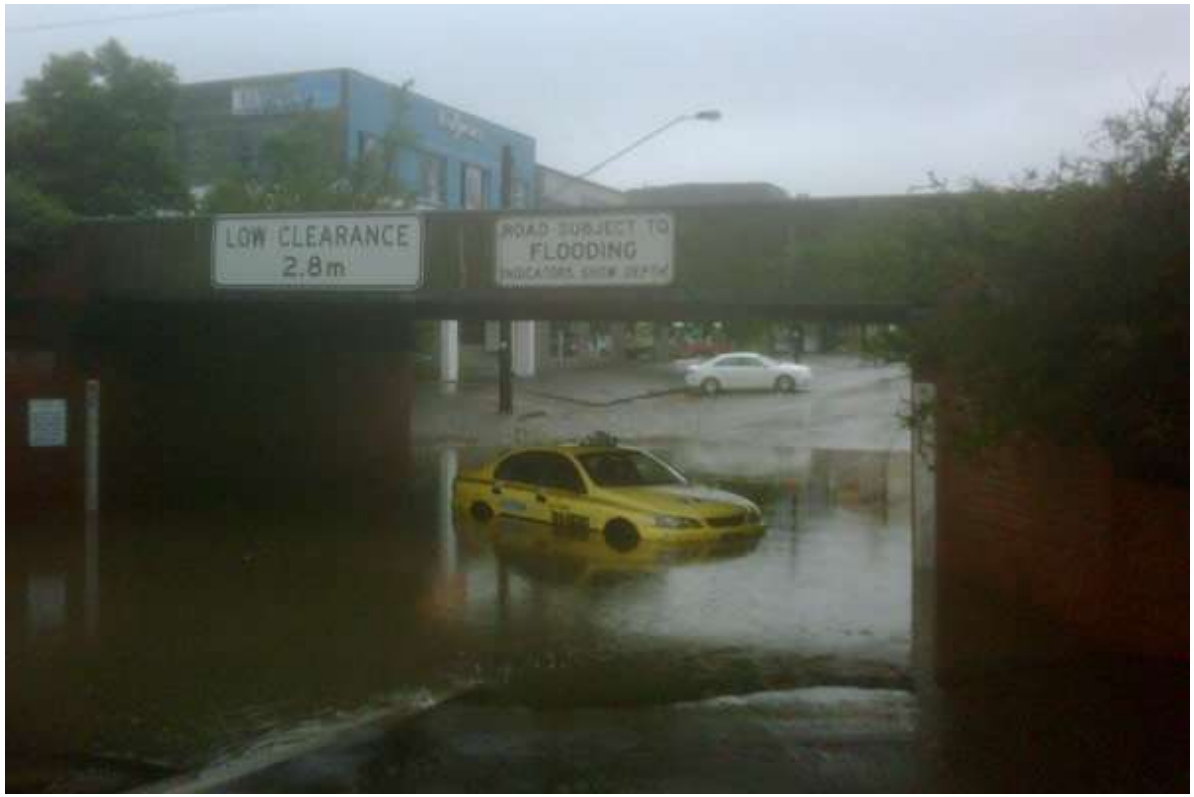


Risk Management

Risk management is a structured approach to managing **uncertainty** related to a threat, a sequence of human activities including:

- Risk assessment,
- Development of strategies to manage it,
- Mitigation of risk using managerial resources



- The objective of *risk management* is to reduce different risks related to a pre-selected domain to the level accepted by society.
  - 'Acceptable level of risk' is, of course, a highly contested concept!
  - 'Domain' may refer to numerous types of threats caused by environment, technology, humans, organisations and politics.
  - **Control** – a process or policy developed to minimise negative risk.
  - **Risk Management Framework** – an organisation's system for managing risks.
  - **Risk reduction** – the steps taken to reduce or prevent a risk from happening.
  - **Risk sharing** – sharing the potential loss or gain from a potential risk (e.g. insurance)
  - **Stakeholders** – those people or organisation who may affect, or be affected by, a particular risk (aka 'interested parties').

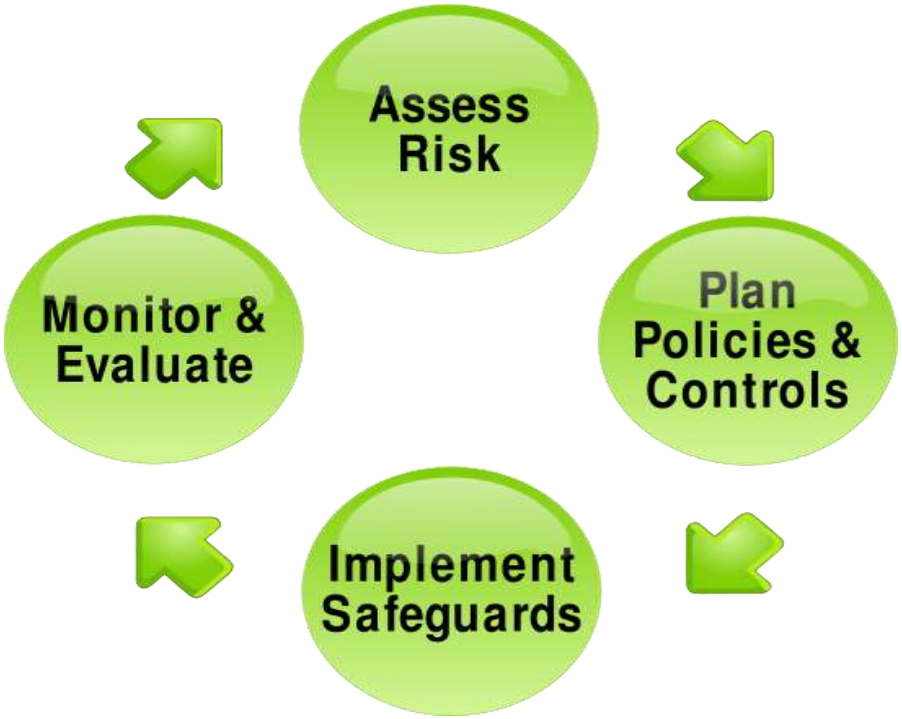
- The objective of *risk management* is to reduce different risks related to a pre-selected domain to the level accepted by society.
  - 'Acceptable level of risk' e.g. the development of State Environment Protection Policies (SEPPs), designed to protect 'beneficial uses' e.g. SEPP Groundwaters of Victoria (GoV)
  - 'Domain' e.g SEPPs, National Environment Protection Measures (NEPM) are relevant to particular segments of the environment.
  - **Control** – e.g., buffer, bund, a cap, a flare, a filter
  - **Risk Management Framework** – e.g. Assessors, Audit system, audit reviews.
  - **Risk reduction** – assess risk, apply risk framework, identify measures and controls, statutory notices e.g. Post Closure Pollution Abatement Notice .
  - **Risk sharing** – e.g insurance, financial assurance
  - **Stakeholders** – e.g. Local planning authority, Community

Risk Management

Risk management is the term applied to a logical and systematic method of:

- Establishing the context
- Identifying
- Analysing
- Evaluating
- Treating
- Monitoring
- Communicating

risks associated with any activity, function or process in a way that will enable organisations to minimise losses and maximise opportunities.



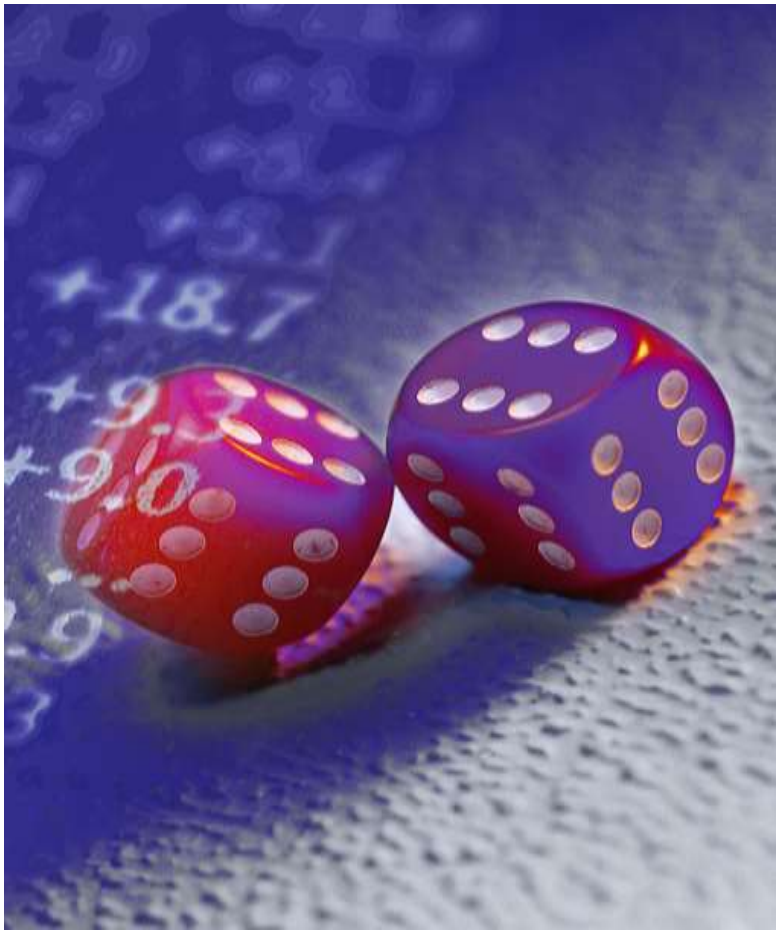
Risk Assessment – the process of understanding the nature of and level of risk. It includes:

- Risk identification – the process of determining what, where, when, why and how something could happen
- Risk analysis – the systematic process to understand the nature of and to deduce the level of risk
- Risk evaluation – process of comparing the level of risk against risk criteria
- Risk Criteria – terms of reference by which the *significance* of risk is assessed.
- Can include associated costs and benefits, legal and statutory requirements, socio-economic and environmental aspects, the concerns of stakeholders, priorities and other inputs to the assessment.

Key elements in risk matrix

Likelihood:

- Chance
- Probability
- Liability
- Likeliness
- Possibility
- Prospect



Taken from Roget's Thesaurus

Key elements in risk matrix

Consequence:

- Impact
- Outcome
- Effect
- Repercussion
- Result

Taken from Roget's Thesaurus

Risk Matrix

Likelihood	Consequences				
	1 – Negligible	2 – Minor	3 – Moderate	4 – Major	5 – Extreme
A – Rare	L	L	L	M	H
B – Unlikely	L	L	M	M	H
C – Likely	L	M	M	H	H
D – Almost Certain	M	M	H	H	C
E – Certain	M	M	H	C	C

Level of Risk:

L = Low H = High

M = Medium C = Critical

EPA and the Audit system

- The Audit system is a key aspect of environmental risk management in Victoria.
- Auditors appointed by EPA under *Environment Protection Act 1970* EPA provides detailed guidance for conducting audits.
- EPA's role is to administer the environmental audit system in Victoria, which includes appointing environmental auditors and the review of audits undertaken, also ensuring good conduct, periodic review of auditors work and re-appointment.
- Environmental audits must deliver authoritative, independent and transparent advice and recommend measures to reduce identified risks to the environment from a site or industrial facility.

Risk assessment

What are your concerns:

- Provision of information from the process?
- Input in the process?
- Relevant factors not considered in specific risk assessments? Cumulative or separate?
- What else?

What next?

What aspects of this would you like more information on?