



Institute of Chartered Foresters
National Conference 2015



Middlesex University

Making Decisions about Uncertain and Potentially Big Risks

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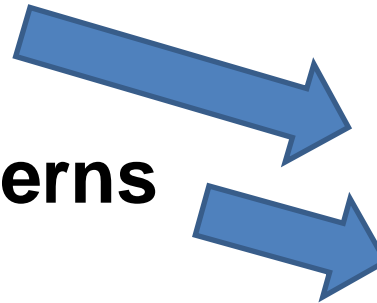
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THREE TYPES OF RISK

1. Individual risk

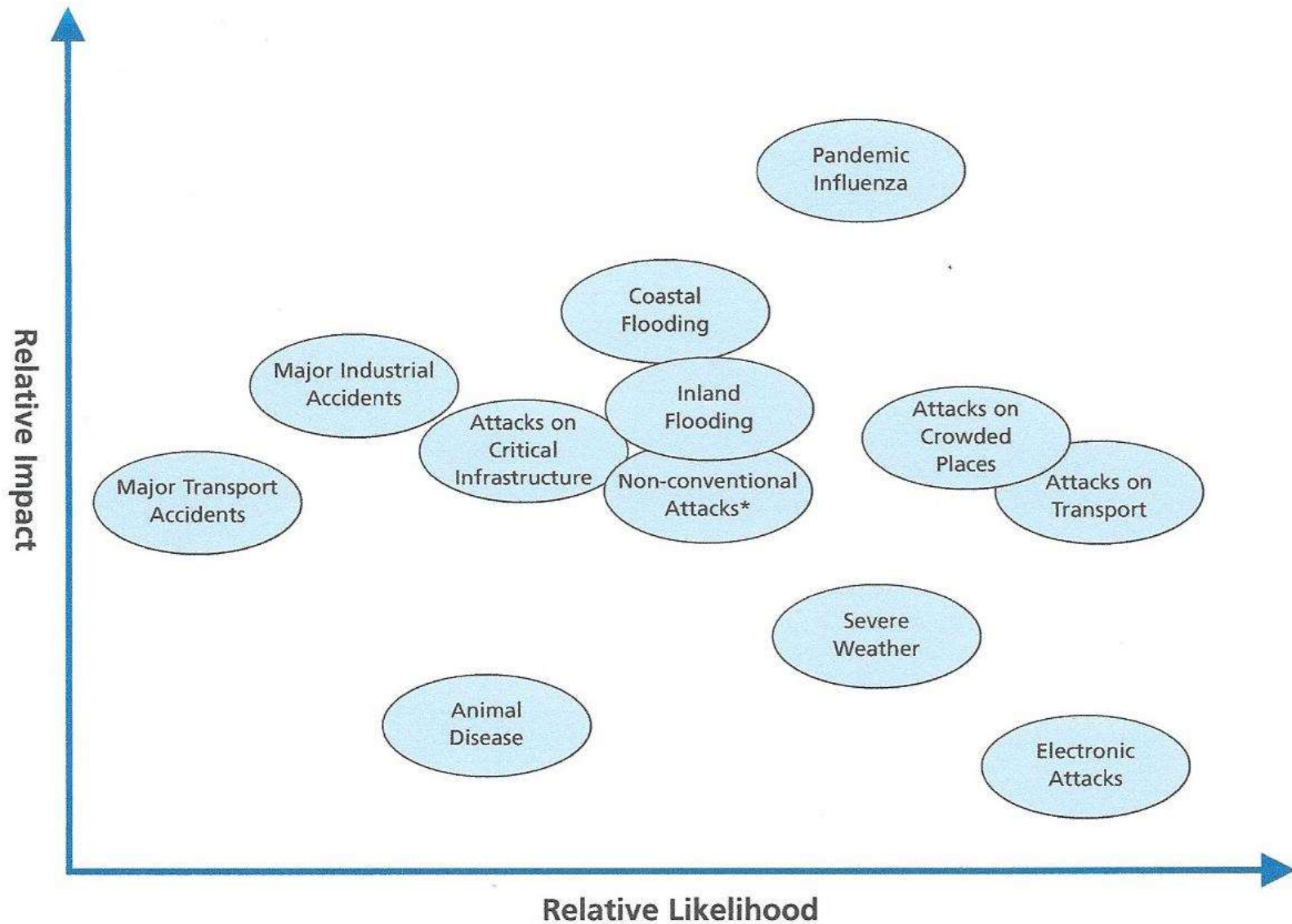
2. Societal risk

3. Societal concerns

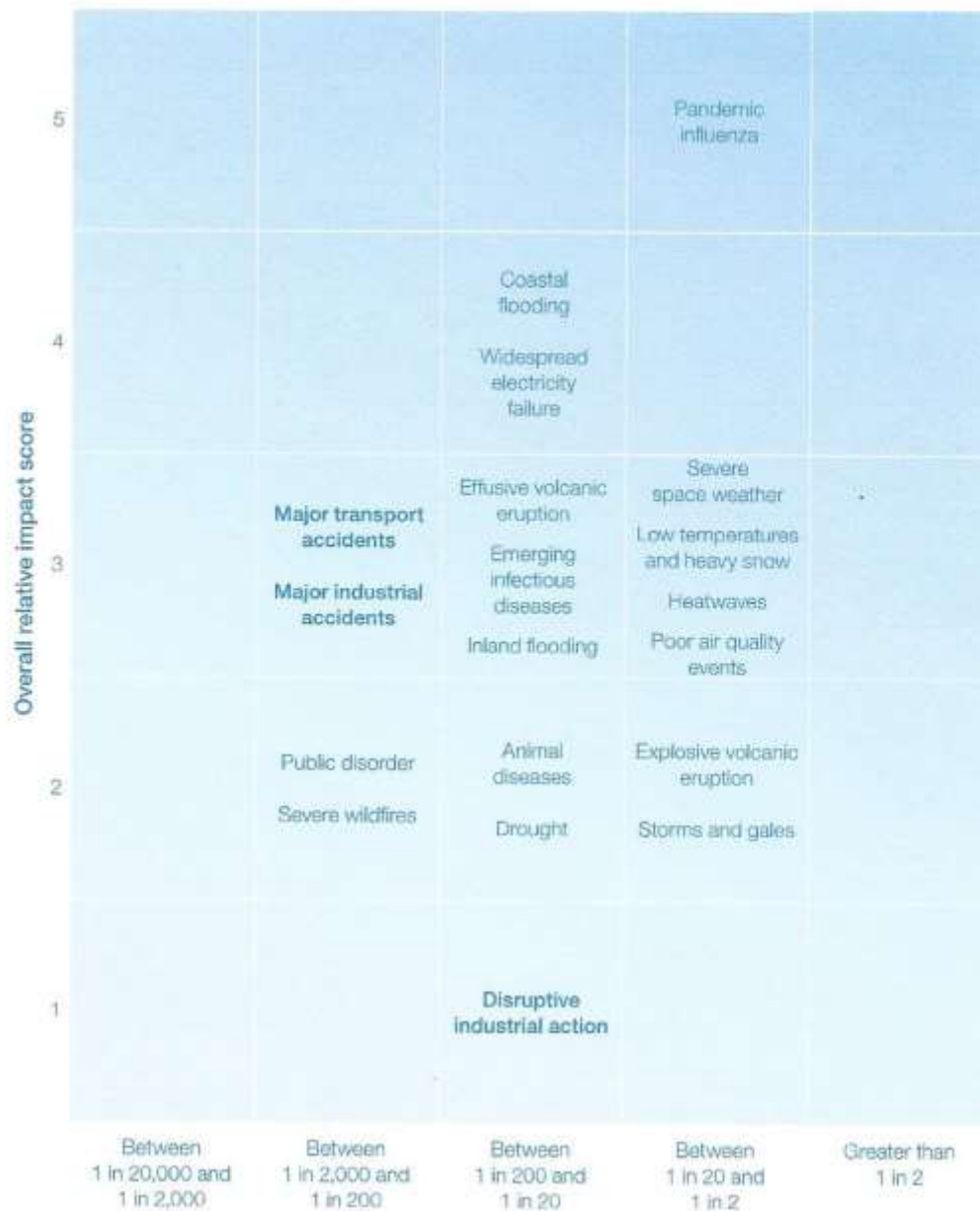


**The concept
of the 'HCLF'
risk**

Reference: HSE's 'Reducing risk, Protecting people' (2001)



Source: National Risk Register (2008) Cabinet Office



Source: National Risk Register (2015) Cabinet Office


Tree Health and Plant Biosecurity Expert Taskforce

Final Report

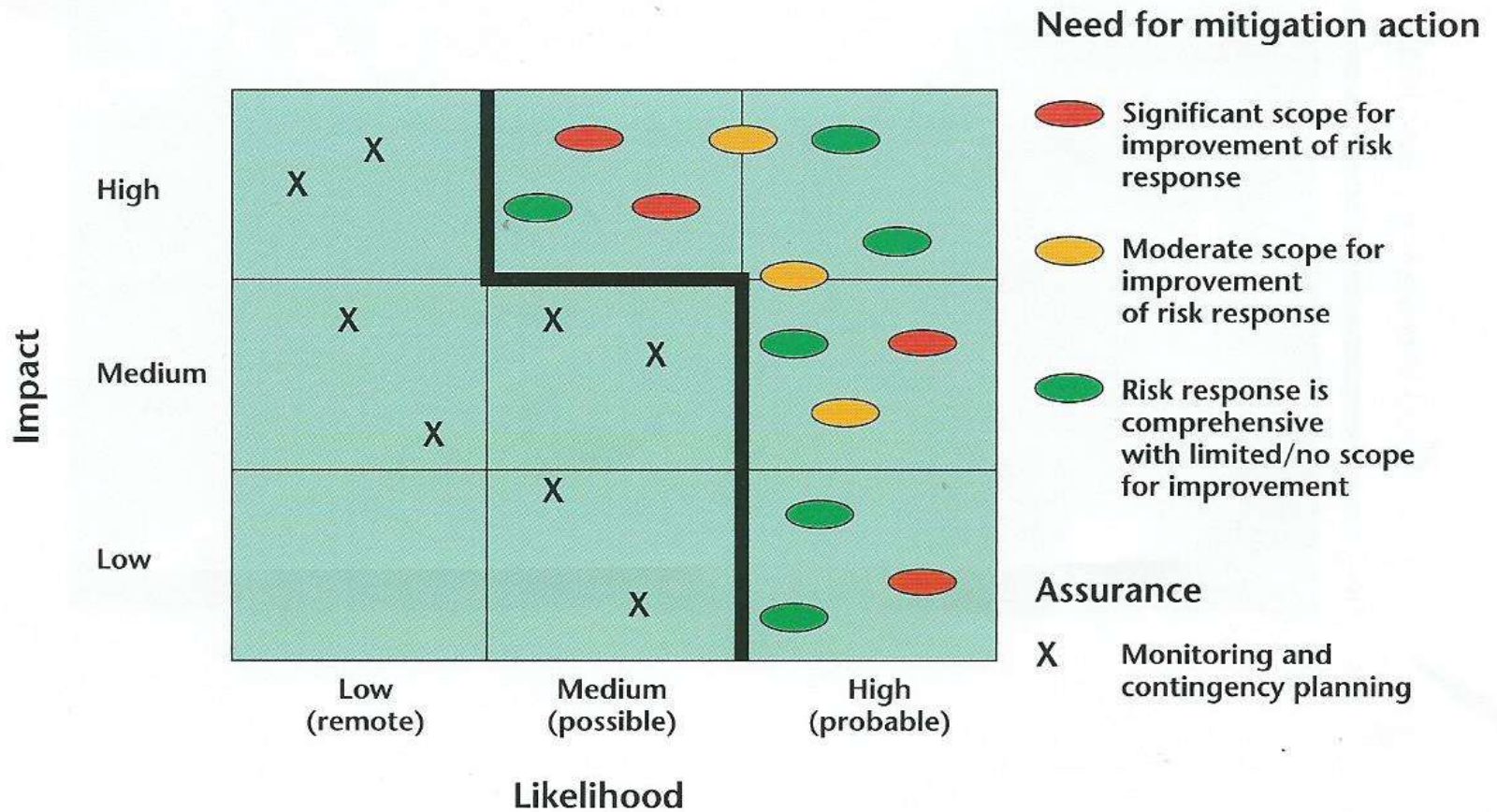
20th May 2013



The *Risk-consequence matrix* – a standard tool

Consequence	Likelihood (risk)		
	Low (1)	Medium (2)	High (3)
High (3)			
Medium (2)			
Low (1)			

Three blue arrows with dashed tails point from the top-right cell (High Consequence, High Likelihood) towards the bottom-left cell (Low Consequence, Low Likelihood), indicating a path of risk reduction.



Source: Cabinet Office Strategy Unit (2002)

Three approaches to (*or philosophies of*) risk control*

	Zero risk	Precautionary Principle	'Rational' i.e. Risk-based & ALARP
Exponents	Politically motivated	Environmentalists	Risk professionals, the law
Pros	Simplicity; single-mindedness	Appealing	Aims to implement controls which are 'practicable'
Cons	Cost and unintended implications are ignored	What does it mean? Begs the question	Difficulty of defining 'practicability'

*There are other philosophies too – for further information see 'Ships in the night and the quest for safety,' International J. Injury Control & Safety Promotion, 2000.

'Rational' i.e. Risk-based & ALARP

Any control measure meeting this criterion (ALARP) should be implemented:



Should HCLF hazards be afforded extra resources?

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This is a very difficult question!

To say 'Yes' implies a risk averse position (precautionary)

To say 'No' implies risk neutrality (utilitarianism)

Note: Utilitarianism tries to get max good for max people

The best bet – to quantify all effects and all costs which are amenable to quantification and to include, qualitatively if necessary, all other factors of concern

Pest (A)	Prob. Outbreak (B)	Monetised Impacts			Expected Cost (F) Based on B(C+D+E)	Non-monetised Expected Impacts (based on Prob. Outbreak & size of impact) (Small/Med/Large)			Overall Pest Risk Priority (Low/Med/High) (J) Based on F, G, H and I
		Economic (C)	Social (D)	Environmental (E)		Economic (G)	Social (H)	Environmental (I)	
W	0.1 to 0.3	£100M	£50M	£50M	£20-60M	Med	Med	Med	Med
X	0.4 to 0.6	£70M	££50M	£0M	£48-72M	Med	Large	Large	High
Y	0.05	£200M	£0M	£100M	£15M	Med	Small	Small	Low
Z	1	£0M	£15M	£15M	£30M	Small	Small	Small	Low

Source: Report of Tree Health and Plant Biosecurity Expert Taskforce (2013)

Proposed format by Prof Rob Fraser