



Australian Government

Department of Agriculture, Fisheries and Forestry

ATTITUDES TO RISK: SOCIAL ASPECTS OF QUARANTINE RISK MANAGEMENT

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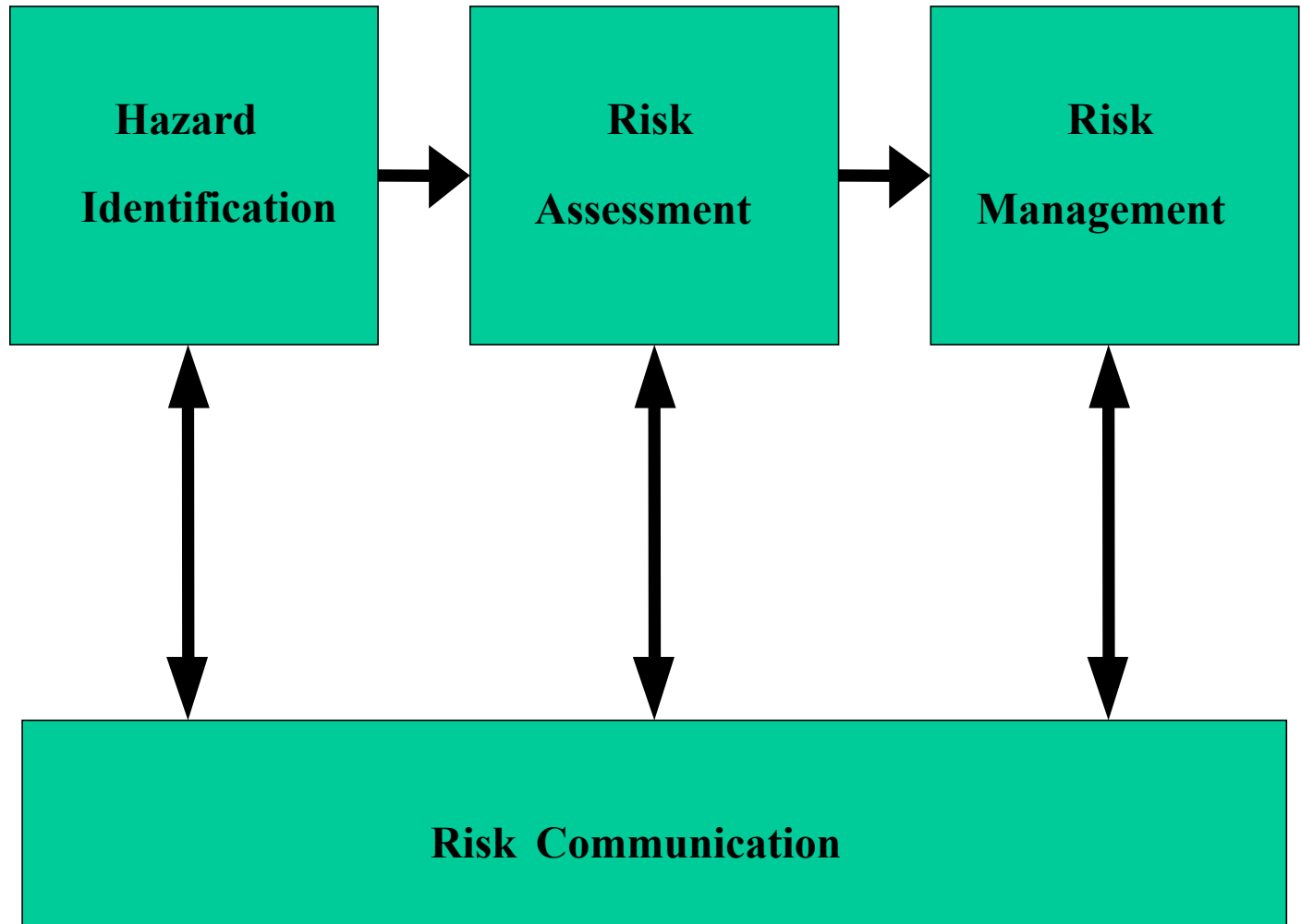
OVERVIEW

- Risk analysis
 - components
- A psychological perspective on risk
 - unfamiliarity and dread
 - trust and outrage
- Import risk analysis
 - principles
 - difficulties
 - managing risk
- Conclusions



Risk Analysis

- Risk assessment
 - identifying and estimating the risks associated with an option and evaluating the consequences of taking those risks
- Risk management
 - identifying, documenting and implementing measures to reduce these risks and their consequences
- Risk communication
 - interactive exchange of information and opinions concerning risk between risk analysts and stakeholders





Example (1)

- Shows we intuitively approach several elements of a risk analysis:
 - Probability:
 - likelihood or chance of an undesirable consequence
 - Consequence:
 - what do I stand to lose?
 - type, magnitude and duration of undesired consequence
 - Benefit:
 - what do I stand to gain?
 - cost–benefit analysis; expected value



Example (2)

– Utility:

- individual differences in attitudes to risk
- what risk is 'acceptable'?
 - individual
 - group

– Choice:

- voluntary
- imposed



Risk rankings

| | Public | Expert |
|--------------------------|---------------|---------------|
| Nuclear power | 1 | 20 |
| Motor vehicles | 2 | 1 |
| Smoking | 4 | 2 |
| Alcohol | 6 | 3 |
| Private aviation | 7 | 12 |
| Police work | 8 | 17 |
| Surgery | 10 | 5 |
| Fire fighting | 11 | 18 |
| Mountain climbing | 15 | 29 |
| Swimming | 19 | 10 |
| Skiing | 21 | 30 |
| X-rays | 22 | 7 |



RISK: a psychological perspective

- Slovic's three elements in risk perception:
 - unfamiliarity
 - dread
 - number of people exposed

Note changes occur — varies depending on time, place



Unfamiliarity

- not observable
- unknown to those exposed
- delayed effect
- new
- unknown to science
- uncontrollable
- fear
- globally catastrophic



Unfamiliarity (2)

- fatal consequences
- not equitable
- risk to future generations
- not easily reduced
- risk increasing

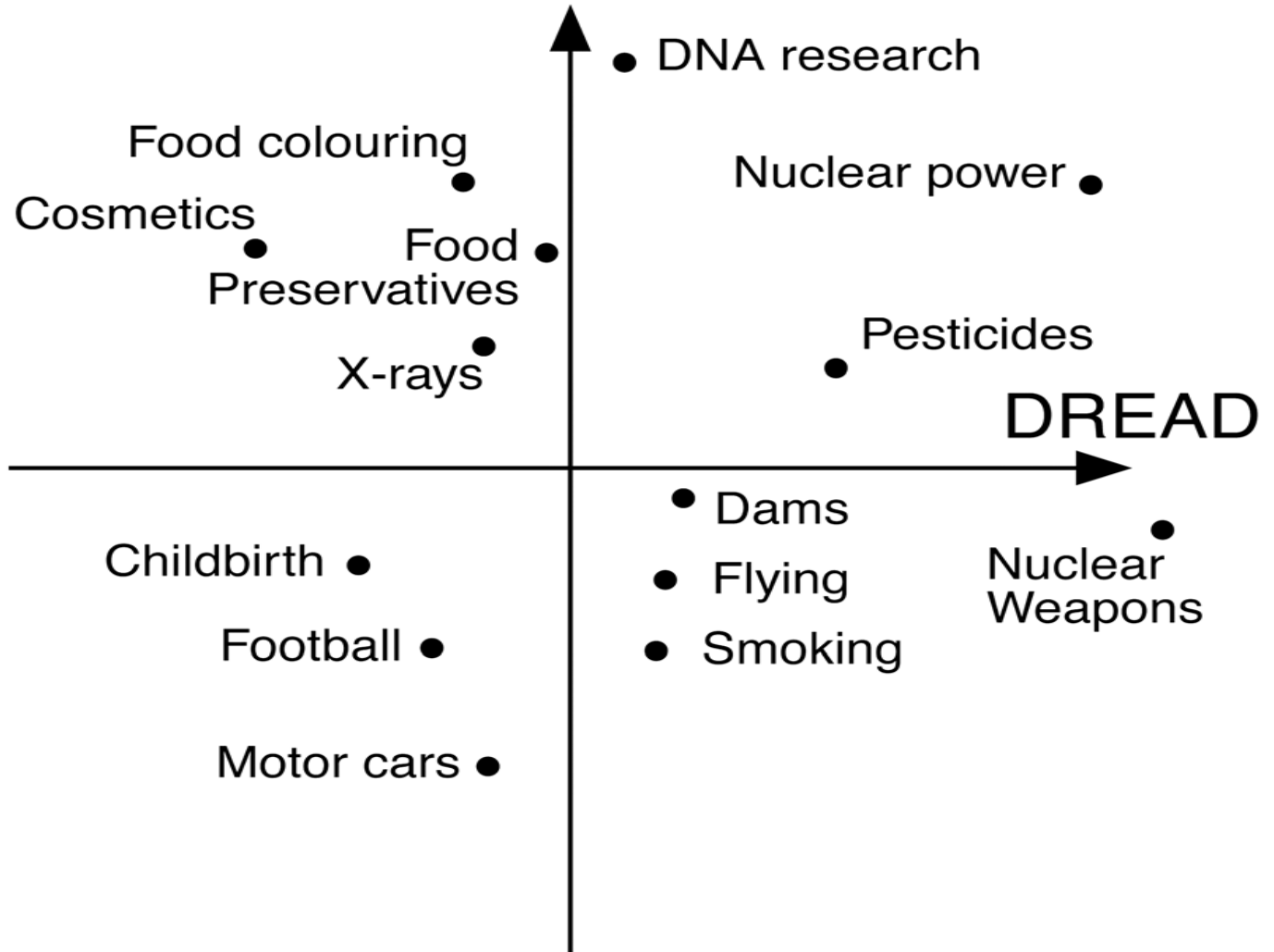


Dread

- uncontrollable
- fear
- globally catastrophic
- fatal consequences
- not equitable
- risk to future generations
- not easily reduced
- risk increasing
- involuntary
- affects ***me***



UNFAMILIARITY





Trust

- Acceptance of risks depends on confidence in risk management; this depends on *trust*
 - e.g. medical versus industrial uses of radiation or chemicals
- Effectiveness of *risk communication* is proportional to the amount of trust



Trust (2)

- Trust is fragile: compared to positive events, trust-destroying (negative) events:
 - are much more more visible
 - carry much greater weight
 - tend to be seen as more credible
 - reinforce and perpetuate distrust
- In the absence of trust, science (including risk assessment) only feeds distrust by uncovering more bad news



Outrage

- Sandman's equation:
 - Risk = Hazard + Outrage
- Outrage is:
 - as real as hazard
 - as measurable as hazard
 - as manageable as hazard
 - as much a part of risk as hazard
 - as much a part of your job as hazard
- In general, we do better at managing hazard than outrage



Components of outrage

- voluntary/coerced
- natural/artificial
- familiar/unfamiliar
- memorable/not memorable
- dreaded/not dreaded
- chronic/catastrophic
- knowable/not knowable
- controlled by me/others
- fair/unfair ('NIMBY')
- morally relevant/irrelevant



Components of outrage (2)

- effect on vulnerable populations
- delayed or immediate effect
- can I trust you or not?
- is the process responsive/unresponsive?
- effect on future generations
- identifiability of the victim
- elimination or reduction
- risk–benefit ratio
- media attention
- opportunity for collective action



Reducing outrage

- Stake out the middle, not the extreme
- Acknowledge prior mistakes
- Acknowledge current problems
- Discuss achievements with humility
- Share control and be accountable
- Bring concerns into the open



IMPORT RISK ANALYSIS: Principles

- Consultation
 - early and broad
 - ongoing and iterative
- Scientific basis
 - especially risk assessment
- Transparency
 - open to peer review and public scrutiny
- Consistency and harmonisation
 - national policy
 - international obligations



Principles (2)

- Subject to appeal on process
 - need less if consultation is good
- Subject to periodic external review
 - to ensure transparency etc.
- Need to take account of:
 - risk perception
 - risk communication (e.g. in stakeholder consultation)



Difficulties

- Lack of relevant data
 - how detailed should assessment be?
 - validation and lack of a 'gold standard'?
- Limited number of risk management options
- Recognising and assessing potential consequences
 - national, regional and local effects
 - information gaps
 - measuring and valuing environmental consequences



Difficulties (2)

- Distributional aspects
 - who benefits?
 - who bears the consequences?
 - compensation/adjustment?
- What is an 'acceptable' level of risk?
 - depends who you are!
 - use of precaution
 - consensus by consultation
- How to handle disputes
 - nationally
 - internationally



Quarantine

- Continuum of 'quarantine' (or biosecurity):
 - preborder
 - border
 - post-border
- Each element uses measures to reduce and manage risk



Pre-border: general

Measures to reduce risk include:

- working in regional and neighbouring countries:
 - disease surveillance and intelligence
 - disease control
- influencing international guidelines and standards for trade in animals, plants and their products



Pre-border: IRA process

- Measures that reflect risk analysis principles include:
 - extensive stakeholder consultation
 - strong focus on scientific risk assessment
 - open to peer review and public comment
 - consistent with international obligations
 - subject to appeal on process
 - subject to periodic review
 - cognisant of risk perception



Border: general

Measures to reduce risk include:

- rigorous ‘barrier’ inspection
- increased barrier intervention (post 2001 UK FMD epidemic):
 - dogs
 - X-rays
 - baggage inspection



Post-border

Measures to reduce risk include:

- Emergency animal disease response agreement
 - shared decision-making (for eradication responses)
 - agreed cost-sharing (governments and industry)
- Similar arrangements being negotiated for plants



CONCLUSIONS

- Risk communication is an integral part of risk analysis and needs to:
 - begin early, ongoing, interactive
 - Avoid distinctions between experts and public
- Risk communication needs to acknowledge and manage outrage:
 - use a communications strategy
 - recognise decisions are not always 'win-win'



Conclusions (2)

- Understanding Australian attitudes to quarantine and risk
 - Assessments by stakeholders
 - Information used
 - Impact of scientific uncertainty
 - Is information provided meeting needs