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# Risk Perception, Major Accident Hazards and Pipelines

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# Introduction

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- ◆ Public risk perceptions a theme of social science research for 30 years
- ◆ Initially focused on expert/lay gap and 'correcting' public misperceptions
- ◆ More recently focused on understanding perceptions of risk, alternative rationalities and how risks perceptions are formed and constructed
- ◆ Much research not related specifically to major accident hazards + US rather than UK based

# Researching risk perceptions

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- ◆ HSE funded, 3 year research project
  - with Brunel and Lancaster Universities
- ◆ 7 case study sites (4 CIMAH)
- ◆ Focus groups (incl. land use planning scenarios)
- ◆ Statement sorting exercise
- ◆ Project report - HSE report series 194/1998

# Themes of analysis of focus group discussion

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## ◆ Context

- Sites a feature of everyday life
- Evaluated 'in the round'; risks, pollution, car parking, community involvement etc...
- Other local issues may be on a day to day basis far more significant than accident risk
- But when become 'notorious' can have strong stigmatising effects
- BUT all sites are different; physically, historically, experience of accidents, functionally, contribution to economy etc... therefore context is important

# Themes of analysis of focus group discussion

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## ◆ Evidence

- sensory evidence important (smell, noise, appearance, security)
- local networks important
- accident history important
- local memories are long lasting
- company information and media appeared less significant
- Informal communication more important than formal

# Themes of analysis of focus group discussion

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- ◆ Risk reasoning: how do people reason and argue about risk?
  - Use of analogies
  - Consequence more than probability
  - For some morality and ethics are significant
  - Others more prepared to see trade-offs,
  - Equity and who gains/loses important
  - Trust and credibility important in which messages are believed

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- ◆ VIDEO
  - ◆ reformed focus groups
  - ◆ two sites only ...

# Findings on Policy Issues

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- **pro need for regulation** (anti-deregulation)
- **recognised need to rely upon experts** (preferably 'independent' - but who are?)
- **pro rights to participate** (but few felt able or motivated to)
- **pro need for land use planning controls**
- **pro 'rights to information'** (but questions of trust, scepticism and interpretation)



# Findings on CIMAH Info

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- ◆ Far from perfect recall and retention of emergency action information – information is filtered and evaluated
- ◆ Issues in mixing emergency action info and 'public relations' messages
- ◆ Local public aware of practical problems with emergency action information e.g.

- ‘How I am going to hear sirens etc with windows shut and the stereo up loud?’
- How about if I’m not in the house or I’m on the bus?
- People selling houses don’t pass on information
- How is turning off a gas heater going to protect you from a toxic gas?
- Going upstairs and shutting windows isn’t going to protect you when ‘the whole place goes up’
- During actual accidents people ignored instructions and watched what was going on
- The emergency services are too far away to protect us’

# Confidence and toleration

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- ◆ there is day-to-day toleration of 'living at risk'
- ◆ this toleration is tacit - based on 'putting up with it', hoping for the best, fatalism, cynicism about making a difference .....
- ◆ toleration and community consent is unstable and can be easily lost

# Why might pipeline perceptions be different?

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- ◆ Local context and sources of evidence are very different
- ◆ the existence of the pipeline, let alone any associated risks, may be entirely unknown to local people
- ◆ there are no everyday 'indicators' (such as odours or visual cues) of potential risk to shape public views of the risk producing activity
- ◆ there is usually no association between the pipeline risk and local benefits such as employment

# Why might pipeline perceptions be different?

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- ◆ the corporate identity of the pipeline operator may be unknown or obscure (trust, credibility issues)
- ◆ there have been no risk communication obligations or initiatives applied to pipelines (apart from the limited communication along route)
- ◆ the distribution of the risk is spatially more extended rather than focused on a specific community
- ◆ pipeline risks MAY be evaluated in comparison to other alternative forms of transport and their risks

# Final Thoughts

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- ◆ difficult to read across from fixed sites to pipelines
- ◆ wider risk communication (if it happens) will need to be approached carefully and sensitively
- ◆ the forthcoming HSE research project should provide some more answers

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