

A Planned Risk ?

*Christopher D. Snary,
School of Planning,
Oxford Brookes University,
Headington, Oxford OX3 0BP
Tel: 01865 483448
Fax.:
E-mail: 97120452@brookes.ac.uk*

Main theme of PhD

Planning applications for waste disposal units are notoriously met by considerable local opposition. In the case of waste incinerators much of this opposition has been centred upon the potential that the emissions have to pose a health risk. There has been a tendency among waste management companies to view such concerns as irrational, and consequently to approach the problem with a view that education and the provision of information will induce positive changes in people's perceptions towards waste incinerators. This approach has been widely criticised for: being unsuccessful at reducing the level of local opposition accompanying incinerator planning applications; not realising that the problem goes well beyond NIMBY and involves issues of risk perception, trust, and fundamental decisions about the most appropriate waste management strategy (1); and, not making decisions through fair and competent discourse (2).

It is increasingly being realised that risk must be looked at within a social context (3); (4), and that non-uniform scientific approaches to assessing environmental risk could be producing non-consistent results (5). Much literature and past research has established risk as a socially constructed problem. Theories on public perception of risk indicate that risk has physical, psychological, social, political, ethical, and economic dimensions (6); (7); (8); (9); (10); and (11). Therefore, it can be said that the effective assessment of risk requires an interdisciplinary approach that recognises the inherent scientific and social pluralities; an integration of scientific and non-scientific perspectives that are both *expert* in their contexts; and a recognition of citizen knowledge and expertise (12).

With waste management companies and local Government beginning to reach the stage of desperation over the difficulty of gaining planning permission for waste incinerators they are

beginning to show signs of change - moving towards more comprehensive risk assessments, and undertaking more genuine forms of risk communication and public participation. This thesis seeks to evaluate these more imaginative forms of risk assessment and communication against the more traditional approaches: do they create a situation of fair and competent discourse?; what effect do they have on the level of conflict?; and, how do the different stakeholders involved in the process feel about the methods?

Relevance to planning knowledge

Evaluation of past and current risk assessment and communication practices will enable suggestions to be made as to the most desirable type and level of democratic process, and blend of scientific and social values for waste disposal unit planning applications of the future. This will form the basis for a series of practical recommendations for the use of risk assessment and communication methods within environmental impact assessment and other environmental information used within and related to the planning process.

Research methodology and progress

The research methodology can be seen as a filtering process, from many cases to few. A questionnaire has been sent to UK planning officers who have been involved in one or more planning application for waste incinerators with the aim of gaining further information on the treatment of environmental risk within the planning system and to identify potential case studies for further analysis. The use of the questionnaire has enabled data to be collected on the methods used to assess environmental risk in environmental impact assessments (under the Environmental Assessment Directive EC 85/337, planning applications made for certain projects are required to be submitted with an accompanying environmental impact assessment); the planning officer's preferred method of assessment; how the prediction of risk was evaluated; the risk communication strategy used in the planning application; and, the relationship that existed between the planning and pollution control authorities.

Further information on the risk assessment and communication approaches of seventy of these applications has been collected by means of a review of the accompanying environmental impact assessments. The review was mainly concerned with the assessment of incinerator emissions under normal operating conditions, although details were also made of the assessment of risk posed by emissions under emergency release scenarios, good house keeping practices, and where the social construct of risk was addressed. Each impact assessment was reviewed with the aid of a set of criteria drawn up from the appropriate literature and guidelines. The assessment categories are too numerous to receive detailed attention in this note, however these are a few examples: discussion of uncertainties; consideration of existing ambient air conditions; exposure pathways assessed; discussion of dose response modelling; and, types of risk comparison.

The basic findings included a three way split of assessment methods between referencing to emission standards, air dispersion modelling, and risk assessment. As was to be expected, emissions under emergency release scenarios and the perceptions of risk were given extremely variable treatment. Further analysis will be made subsequently.

It was important that potential case studies had considerable risk issues attached to them, they had currency, and were for waste to energy incinerators. Risk was an issue in nearly all of the planning applications looked at but, problematically, very few planning applications for incinerators have been submitted within the past 2 years. Currency is an important issue as it will be much harder to justify the accuracy of responses from surveys concerning older applications as time affects people's memories in different ways. The draft of the UK waste strategy emphasises that dwindling landfill capacity will mean that more waste will be disposed of by new generation waste to energy incinerators. It follows that all three case studies chosen for further analysis are for ongoing waste to energy incinerator planning applications. The methods of risk assessment and communication utilised in each vary from the bare minimum to the most advanced methods undertaken in the UK to date.

In order to determine the effectiveness of the various methods of risk assessment and communication utilised in each case study, semi-structured interviews and standard format

questioning will be conducted with the main stakeholders - central government officials, local government officials, the developer, the environmental consultant, national interest groups, local interest groups, local industry, members of focus groups, and local residents. Prospective interviewees have been contacted by letter and will be interviewed person to person or over the telephone over the next 4 months. All interviews will be recorded and transcribed. In addition to the interviews, approximately 50 local residents will be chosen at random from the local population of each case study and will be questioned on points such as their concerns about the planning application; the sources of environmental information which they have been exposed to; and, the level of trust that they have in the various stakeholders.

Major obstacles in developing the research

A major concern about the research was that the developers would be unwilling to comment upon the successes and failures of their risk assessment and communication strategies while the planning application was still live. This is understandable with large amounts of money resting on the decision. The problem was circumvented by a simple confidentiality agreement which prevents me from publishing any of their views before the planning application concerned has been decided.

Preliminary results

To date my research suggests that even the most cutting edge risk assessment and communication strategies have been and continue to be far from what theory and guidance terms effective. In practice, possible reasons (to be researched) for this ineffectiveness include: the developer's view of the planning process as a bet and a resulting reluctance to invest in risk assessment and communication programmes; the adversarial nature of the planning process; the Government shrugging off responsibility for the waste problem at a national (not following up the waste strategy with an effective programme of risk communication) and local level (the provision of often meaningless waste local plans); litigation becoming an increasing feature of the planning process; and Counties being unlikely to become regionally self-sufficient in the near future with the advent of SERPLAN like strategies (excepting London).

References

- (1) Petts, J. (1994) Effective Waste Management: Understanding and Dealing With Public Concerns, *Waste Management and Research* vol. 12, p. 207-222.
- (2) Habermas, J. (1984) *Theory of Communicative Action. Vol. 1: reason and the rationalisation of society*, translated by Thomas McCarthy, Beacon Press.
- (3) Krimsky, S. and Golding, D. (eds.) (1992) *Social Theories Of Risk*, New York, Praeger.
- (4) Wynne, B. and Lash, S. (1992) Introduction. In U. Beck *Risk Society: Towards A New Modernity*, London, Sage.
- (5) Barnes, G. B. (1994) Times Are Tough - Brother, Can You Paradigm?, *Risk Analysis*, vol. 14, no. 3.
- (6) Desvousges, W. H., Kunreuther, H., Slovic, P. and Rosa, E. A. (1993) Perceived Risk And Attitudes Towards Nuclear Wastes: National And Nevada perspectives. In R. Dunlap, M. Kraft and E. Rosa *Public Relations To Nuclear Waste: Citizens' Views Of Repository Siting*, Durham, NC, Duke University Press.
- (7) Douglas, M. and Wildavsky, A. (1982) *Risk And Culture*, Berkeley, University of California Press.
- (8) Fischhoff, B., Lichtenstein, S., Slovic, P., Derby, S. L. and Keeney, R. L. (1981) *Acceptable Risk*, Cambridge, Cambridge University Press.
- (9) Kraus, N. N. and Slovic, P. (1988) Economic Analysis Of Perceived Risk, *Risk Analysis*, vol. 8, no. 3.
- (10) McDaniels, T. L., Kamlet, M. S. and Fischer, G. W. (1992) Risk perception and the Value of Safety, *Risk Analysis*, vol. 12, no. 4.
- (11) Segerson, K. (1992) The Policy Response To Risk And Risk Perception. In D. Bromley and K. Segerson (eds) *The Social Response To Environmental Risk. Policy Formulation In An Age Of Uncertainty*, Boston, Kluwer.
- (12) Irwin, A. (1995) *Citizen Science: a study of people, expertise and sustainable development*, Routedledge