

# Technical summary

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## Participatory Risk Assessment – Involving Lay Audiences in Decisions on Environmental Risk R&D Technical Summary E2-043/TS

The Department of the Environment, Transport and the Regions (DETR), the Environment Agency (“the Agency”) and the Medical Research Council (MRC) Institute for Environment and Health published revised departmental Guidelines for Environmental Risk Assessment and Management in July 2000. This guidance, which sets out an overarching philosophy and framework for environmental risk management in England and Wales, signals a desire for risk practitioners to consider stakeholder involvement in decisions on risk. The Agency therefore initiated this research in order to explore in detail the practicalities of this shift in approach.

Specifically, the research objective is to inform the Agency’s developing approach to the practical involvement of non-specialist stakeholders (lay audiences) in environmental risk assessment work. It reflects the desire of the Agency to improve stakeholder (including public) engagement in key decisions involving risk issues whilst, and importantly, having due regard to regulatory and operational demands and constraints.

The work was conducted by the University of Birmingham’s Centre for Environmental Research and Training with support from PDA International. It was undertaken in close collaboration with the Agency’s Environmental Policy – Risk and Forecasting unit (formerly known as the National Centre for Risk Analysis and Options Appraisal) and with active research input from the Agency’s Project Board.

The research has the following specific objectives:

- Understanding what participatory risk assessment is
- Identifying relevant stakeholders
- Exploring the contexts in which the Agency makes decisions concerning risk
- Evaluating the potential to open up the process of risk assessment to public involvement

The following have been undertaken:

- An extensive review of the published and ‘grey’ literature and practical experience of participatory risk assessment.
- Completion of a ‘needs analysis’ for key Agency staff and non-specialist stakeholders in terms of participation in risk assessment.
- A detailed characterisation of the Agency’s regulatory context for decisions involving risk in terms of the potential for, and barriers to, participation in risk assessment.
- The design and execution of a simulation exercise to test a possible method of participatory risk assessment.

The work has identified a need for the Agency to develop more deliberative techniques for involving the public in the decision-making process. This would bring benefits in terms of the quality of decisions reached and the trust of the public. It also has the potential to increase scientific literacy amongst the public and to enable them to have greater ownership of decisions made. Whilst doubt is frequently expressed about the ability of the public to participate in technical debate, interviews clearly demonstrated that this is a misconception - it is the presentation of this material that causes the problems rather than the material *per se*.

The research results indicate that a staged process that optimises participation at key stages in the assessment process – i.e. problem definition and framing, assessment and evaluation – is favoured by potential stakeholders and reflects developing international best practice.



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Characterisation of the contexts in which decisions involving risk are taken has shown that the methods used to this end need to be tailored for different contexts. It is important to consider factors such as the nature of the issue (e.g., the extent of a potential adverse impact); the role of the Agency and of other parties; the volume and nature of technical information; and the timescale on which the decision will be taken. It is also important to achieve a careful balance between the desire to be open (i.e., to seek to actively engage interested parties) and the need for meaningful participation. Thorough scoping, including gauging the level of interest in a particular issue, is important before embarking on any participatory process.

Wishing to explore the practicalities of the proposals generated in this research, the project successfully tested a method to involve the public in the problem definition and framing for a hypothetical 'authorisation' decision. This involved small group deliberation about the nature of the issues presented by a proposal to burn waste as fuel at a cement kiln and the identification of data and information needs. The individuals who participated in the simulation were evidently interested in the process and able to deal with complex technical issues when given sufficient time to assimilate information and to ask questions. The workshop identified a requirement that participants must be able influence the decision if they are to feel that their participation is worthwhile.

This R&D Technical Summary relates to information from Project E2-043 contained in the following research outputs:

1. **R&D Technical Report E2-043/TR/01** – Participatory Risk Assessment: Involving Lay Audiences in Decisions on Environmental Risk. Literature Review and Stakeholder Interviews, ISBN 185705 9131
2. **R&D Technical Report E2-043/TR/02** – Participatory Risk Assessment: Characterising Environment Agency Decisions on Risk, ISBN 1844321630
3. **R&D Project Record E2-043/PR** – Workshop Simulation: Participatory Risk Assessment Project Record, ISBN 1844321622
4. Homan, J., Petts, J., Pollard, S.J.T. and Twigger-Ross, C. (2001) Participatory Risk Assessment for Environmental Decision-Making. In: *Proceedings VALDOR 2001 - The 2<sup>nd</sup> VALDOR Symposium Addressing Transparency in Risk Assessment and Decision-Making*, K.Anderson (ed.), 10-14 June, Stockholm, Sweden, 2001: 398-406
5. Petts, J., Pollard, S.J.T., Gray, A.J, Orr, P., Homan, J. and Delbridge, P. (2003) Involving Lay Audiences in Environmental Risk Assessments. In: *ConSoil 2003, Proceedings 8th International FZK/TNO Conference on Contaminated land*, 12-16 May 2003, Ghent, Belgium: Theme D: 2969-2978

Internal Status: Released to Regions  
External Status: Publicly Available

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Copies of these documents are available internally from the National Library and Information Service, and externally from the Environment Agency's R&D Dissemination Centre, c/o WRc, Frankland Road, Blagrove, Swindon, Wiltshire SN5 8YF  
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