SKI Report 01:52

Research

# Performance Assessment, Participative Processes and Value Judgements

## Report from the First RISCOM II Workshop

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# Foreword: RISCOM II project overview

RISCOM II is a project within EC's 5:th framework programme. The RISCOM model for transparency was developed earlier within a Pilot Project funded by SKI and SSI. RISCOM II, which is a three-year project, started in November 2000.

## Objectives

The overall objective is to support the participating organisations and the European Union in developing transparency in their nuclear waste programmes and means for a greater degree of public participation. Although the focus is on nuclear waste, findings are expected to be relevant for decision making in complex issues in a much wider context.

## Description of the work

The project has six Work Packages (WPs). In WP 1, a study will be undertaken of issues raised in performance assessment to better understand how factual elements relate to value-laden issues. There will also be an analysis of statements made by the implementers, regulators, municipalities and interest groups during actual EIA and review processes within Europe. In WP 2 an organisation model (VIPLAN) will be used to diagnose structural issues affecting transparency in the French, the UK and the Swedish systems. In WP 3 a special meeting format (Team Syntegrity) is used to promote the development of consensus and a "European approach" to public participation.

In WP 4, a range of public participation processes will be analysed and a few will be selected for experimental testing. A schools web site will lead to greater understanding of how information technology can be utilised to engage citizens in decision making. In WP 5 a hearing format will be developed, that should allow the public to evaluate stakeholders' and experts' arguments and authenticity, without creating an adversarial situation. To facilitate integration of the project results and to provide forums for European added value, two topical workshops and a final workshop will be held during the course of the project (WP 6).

## The current workshop report

This workshop was the first one in a series of three workshops within the RISCOM II project. The aim was to gather the status of the project as a starting point to enhance discussions between project participants and with a number of invited participants.

The first day of the workshop was entitled *Value judgements, risk communication and performance assessment*, and the second day *Case studies exploring implications for the practical development of risk.*

The report summarises the presentations given at the workshop and the discussion that took place.

**Participants in RISCOM II**

Swedish Nuclear Power Inspectorate, SKI, Sweden (co-ordinator)
Swedish Radiation Protection Authority, SSI, Sweden
Swedish Nuclear Fuel and Waste Management Co., SKB, Sweden
Karinta-Konsult, Sweden
Nirex Ltd, UK
Environment Agency, UK
Galson Sciences, UK
Lancaster University, UK
Electricité de France, EDF, France
Institut de Protection et de Sûrete Nucléaire, IPSN, France
Posiva Oy, Finland
Nuclear Research Institute, Czech Republic

**Project information**

The European Community under the Euratom 5:th framework programme supports the RISCOM II project, contract number FIKW-CT-2000-00045.

Magnus Westerlind at SKI is the co-ordinator for RISCOM II.

SKI reference 01096.

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The conclusions and viewpoints presented in this report are those of the author/authors and do not necessarily coincide with those of any organisation participating in the RISCOM II project.

EC contract FIKW-CT-2000-00045

**THE EUROPEAN PROJECT RISCOM-II**

Enhancing transparency and public participation in nuclear waste management
WP-6: Workshops
**Deliverable 6.1**

# *Performance assessment, participative processes and value judgments*

## *Report from the first RISCOM-II Workshop*

Kjell Andersson, Karinta-Konsult
Christina Lilja, SKI

**DECEMBER 2001**

# *RISCOM –II Workshop No 1*

Time: September 5-6, 2001
Venue: Hotel NOVOTEL Vaugirard, 257/263 rue de Vaugirard, 75 015 PARIS

This workshop was the first one in a series of three workshops within the RISCOM-II project. The aim was to gather the status of the project as a starting point to enhance discussions between project participants and with a number of invited participants. The seminar also included two presentations from the OECD/NEA on NEA work related to stakeholder partcipation, as well as the EC Concerted Action COWAM. Discussions were held in direct connection to the talks and in special sessions.

The first day of the workshop entitled *Value judgements, risk communication and performance assessment* was moderated by Magnus Westerlind (SKI), the RISCOM-II coordinator. The second day was entitled *Case studies exploring implications for the practical development of risk communication* and was moderated by Anna Littleboy, UK Nirex Ltd.

The workshop was opened by Thierry Devriès, EDF. He welcomed the participants to Paris and gave some remarks about the French nuclear waste management situation and highlighted the significant French and EDF partcipation in RISCOM-II. He meant that the project should have possibilities to enhance transparency in nuclear waste programmes and noted that the new concept of stretching, introduced by RISCOM, is already is use.

In the following we summarize the talks given at the workshop and the discussion that took place. Appendix 3 gives a brief overview of the RISCOM-II project.

## *The RISCOM-II Project (Kjell Andersson, Karinta)*

Kjell Andersson gave an overview of the project activities that have been done, deliverables and events to come. He gave special attention to achievements made in Work Packages 1 and 4.

The general picture emerging from WP-1 is that steps should be taken to overlap the gap between the two ways of thinking of 1) the specialist analytical viewpoint and 2) the non-specialist viewpoint with an overall approach of energy policy and the decision-making process. It is essential to understand “what people want”, and in several occasions the initiatives launched within WP-1 showed that people wanted to talk about high level issues, such as ethical issues (e.g. time frames) and alternative waste management options (including retreivability). Andersson meant that performance assessment (PA) can become more communicative by incorporating value judgements of stakeholders, to start from the issues of concern among stakeholders and communicate with them during the PA work.

Andersson emphasized that a broad evaluation framework should consider possible alternative regulations and indicators of safety, still being adapted to the national

programmes. It is clear that these considerations in WP-1 sends a message to WP-4, which deals with stakeholder dialogues.

The deliverable 4.1 provides review and analysis of European and North American dialogue experiences and, not least important, gives definitions and terminology for the area of "public partcipation". One conclusion drawn in this report is that:

> "a variety of practices has been adopted by a wide range of institutions. Yet these practices, although sometimes fully institutionalised, remain largely experimental: what counts as good dialogue, why, and for whom, remain questions with many answers".

There are many new promising participative processes. They should be further analyzed, evaluated and developed within a consistent framework. Then the selection of a process, in a particular situation, can be made with awareness and with precise objectives. For this the RISCOM model should be a tool.

In the following discussion it was asked what was the aim of WP-2, which evaluates the prerequisites for transparency that are set by different organizational contexts. Andersson answered that the organisational institutions not necessarily have to be changed to enhance transparency. Already being aware of cultural and institutional factors will help in designing procedural tools that can be used within existing organizations, what is important is the attitude to communication and public views. It was agreed that the interaction between organisational structures and decision process is the key issue.

Concerning the "two ways of thinking" is was remarked that waste management organizations meet a challenge to answer the questions from "people in general"; who's responsibility is it to discuss energy politics ?

## *The aims of consultation: what is it for? (Jane Hunt, Lancaster Univ.)*

Jane Hunt emphasized the importance of not presuming that the way in which an issue is framed (i.e. what it is about, how it is seen) is shared, and not trying to impose, or assuming, an institutional framing. She gave a classification of aims for consultation and dialogue processes:

- instrumental: e.g. efficiency of process, learning, "sound science", new ideas
- procedural: e.g. is the process legitimate, is it inclusive, does it enable dialogue?
- constitutive: e.g. developing a sense of shared responsibilities and common good, shared value base

Perspectives and expectations differ between different stakeholders that start from different positions and often aim at different outcomes. In the WP-4 dialogue processes, as elsewhere, it is thus important to understand perspectives and expectations of different stakeholders. The processes should enable debate and deliberation and generate understanding between stakeholders. A particular aim of the WP-4

experiments is to see how dialogue can be generated between representatives of official institutions and ordinary members of the public.

In the discussion it was emphasized that participation takes time and resources and, perhaps most important, a willingness to give up some control of the outcome. It was also pointed out that one should be stringent on roles and separate between the opinions of the person or the organisation he/she represents and Hunt said that it is important to give feedback to organisations, as well as other participants, on their roles in the dialogue. It was also said that one should look at successful (e.g. Finland) and unsuccessful (e.g. Canada) examples, and not assume that works well in one context is transferable to others.

## *Dialogue, Values and Performance Assessment (Anna Littleboy, Nirex Ltd)*

Anna Littleboy, in her talk emphasized that dialogue is most meaningful if it can be linked to a decision and performance assessment is a key input to decisions. However, PA doesn't obviously address public concerns. People are concerned about: tangible impacts on quality of life, worst case scenarios, (maximum?) individual dose and spectacular future events, whereas the expert methods adopt quantitative risk targets at long times into the future, a "rational" modelling approach, and a structured FEP analysis. Thus, judgements framing the PA need wide stakeholder input. For example, judgements that deal with the repository's evolution could benefit from wider discussion (e.g. about scenarios) and judgements that determine tools and data inputs require expert input and peer review.

Littleboy questioned if we understand the role of PA in the decision-making process and if PA methods and tools are able to contribute to dialogue. These issues can be explored further by understanding and incorporating stakeholder issues and concerns into a broad PA evaluation framework including alternative indicators of risk. Some links are already established for a dialogue on these issues but they need to be strengthened by exploring the role of PA in decision-making, consultative framing of the PA and revisiting PA methods to develop an approach that incorporates stakeholder issues.

## *Plenary discussion*

The talk by Littleboy was followed by a plenary discussion in which one topic was whether PA actually is of any interest to the public. Some meant that this is not the case, however one should still communicate alternatives, the zero alternative etc. It was then questioned how it is possible to discuss alternatives without discussing the consequences of the alternatives (evaluated in PA). It was also objected that one easily falls into the expert trap believing that PA is of no public interest without seriously trying to communicate it.

Then it was asked if people ever trust PA considering that people trust people rather than organisations. Perhaps one should look at PA as a process and as a part of decision-making. However it was also argued that PA has limited value in decision-making since

it is perceived as always showing that repository is safe. The need for regulator engagement, a staged process and critical experts was emphasized.

It was said that actually some waste management organizations have discussed to do "alternative PA" along the lines proposed by Littleboy. However we have 20 years of tradition and there are difficulties to start again from scratch. There is also a new situation in countries where site(s) have been chosen. Perhaps the discussion was summarized by a remark that quantitative risk assessment (QRA) was "wonderful" 20 years ago, but that we now have a situation requiring much more of dialogue with laymen.

## *An attempt to discuss the content of PA with non-specialists: lessons learnt from the French initiative within RISCOM-II (Didier Gay, IPSN, Stéphane Chataignier, EDF, and Sandrine Pierlot, EDF)*

The presentation informed on the results of a series of interviews and meetings that was held in France in the framework of the Work Package 1. Meetings involved interdisciplinary groups (PA experts, PA users as well as people representative of wider public concern). The participants thus included specialists from ANDRA, IPSN and EDF, environmental philosophers and risk sociologists, and a member of an antinuclear group. Even if not representative of laymen people or the public as a whole, these participants enabled to have an insight in the opinion and concern of people who feel they are concerned even if they are not directly touched by the siting of a repository. A first series of preparatory meetings was held among specialists on the one side and non-specialists on the other side. In a second phase mixed working groups were set up to enable an exchange of views.

During the various meetings, the discussions happened to be influenced by the unfavourable background context associated to the radioactivity and the nuclear world in France. The military past of nuclear activities, civil accidents and a traditional culture of secrecy are thus often referred to in the debate about nuclear waste. This has led to a strong polarization of viewpoints between the nuclear lobby and environmentalists.

The main topics of concern for the non-specialists appeared to be at a higher level than initially expected and it turned to be difficult to limit the scope to the topic of waste disposal and PA. PA was thus considered relatively anecdotic and unessential at this stage and only a few topics normally addressed by the technical experts really triggered discussions. This was notably the case for inventories, scenarios (exhaustivity, human actions), time frames etc. The main interest of non-specialists was rather general policy questions such as the definition and justification of a national energy policy, the future of nuclear activities or the need for a more democratic decision-making process. A general distrust of institutions was often underlying the discussions on these topics. When technical points were addressed it also became apparent that the technical point of view was often blamed as arrogant. Furthermore, the legitimacy of scientists to extrapolate their knowledge over long periods of time was clearly contested, and long-term evaluations were considered doubtful.

From the series of meetings held, it appears that clarifications of the overall context of nuclear energy and energy policy but also of the conduct of decision process are preliminary conditions for opening a constructive debate on PA with the public. Aside from this need of prior clarification of the context, the difficulty for specialists and non-specialists to enter the debate at a common level was interpreted as a sign of reluctance from both sides to enter in foreign territory.

Even if the core of the discussion was rather around than on the question of PA, some potentially useful lessons could be drawn from this exchange between specialists and non-specialists. The following suggestionscan notably be proposed as potential tracks for improving the content, presentation or communication of PA:

- Before eventually revising its content or scope, PA first simply needs to be more extensively communicated.
- Communication of PA must be done in a manner understandable for a large public. From this point of view, figures and graphs must probably be kept for specific audiences only. A simple and discursive presentation is often more adapted to laymen people.
- The communication must avoid signs of arrogance and encourage humility.
- The question of communicating results or extrapolations over long-time scales in a credible and convincing manner is clearly a major challenge. The reasons principally lie in the way people perceive time. If its cultural, educational and professional background enables a geologist or an earth science specialist to conceptually handle periods of millions of years, this is clearly not the case for most people in a wider audience. Laymen people can usually only grasp much shorter time frames.
- There is thus an apparent need to strengthen the credibility of earth sciences and to more carefully explain why their ability to understand and extrapolate processes at geological time scales can be claimed. The reasons why a sufficient confidence can exist must be better documented and communicated.

## *A view of the RISCOM model from the French experiment (Stéphane Chataignier and Sandrine Pierlot, EDF)*

Stéphane Chataignier and Sandrine Pierlot went on to discuss the RISCOM model from the experiment in the French part of the WP1. They started from the theory of « communicative action » (developed by J Habermas) the model refers to and show that the link between this theory (1981) and the technocratic, decisionistic and pragmatic models (1963) is quite far in reality. Aiming to apply the communicative action, Habermas went further on to the « discourse ethics » (1991), a procedure trying to go beyond the communication barriers in society. In order to enhance the discourse ethics, he built a political and legal framework, the « deliberative democracy » (1992). Thus Habermas went much further on after the theory of communicative action thinking to apply it within a legal context rather than a cybernetical one.

Chataignier and Pierlot put forward three questions with regard to the application of the RISCOM model according to the meeting experiment between PA specialists and non-specialists. First a fundamental point is to define the problem partners want to discuss in

common. Thus it is necessary to consider the nuclear waste problem under three aspects: objective, normative, affective. A question the model may not answer is who defines the problem which should be discussed and how? The second question concerning the model is about transparency and more precisely about the guardian of transparency. In France, as nuclear waste problem is strongly linked with other nuclear issues, nuclear institutions can hardly be legitimated by all the stakeholders as the guardian of transparency. Moreover, supposing that the problem will be commonly solved, is a guardian necessary to solve the transparency problem? Thirdly last question is on putting in practice the theory. The ambition to control and masterize the organisations seems to be contradictory with the communicative philosophy. This aspect has been quite clear in the French experiment, and is quite a current phenomenon in debate, where we cannot control what will come out the discussion. Thus, how can a discussion be efficient? Or as Jane Hunt asked before: what is the aim for consultation?

In the discussion it was recognized that there is an on-going development since some 15 years ago from «going direct to the solution» to share the problem more with people. Is was also recognized that the RISCOM model as it stands today is static and thus it needs to be discussed how dynamics could be incorporated. One can say that it is a model for the contents of transparency not yet telling how the discourse should be designed to achieve it. This is a key issue to be tackled in the project, and for which WP-4 should help.

## *Hidden values among risk assessors in Sweden and Finland (Britt-Marie Drottz Sjöberg, NTNU)*

In Sweden and Finland work on risk analysis has been done by interviews with PA experts in the spring of 2001, as a joint effort between the RISCOM-II project and the Nordic NKS/SOS-1 Project. Briefly the aim of this work is to investigate assumptions of value-laden nature that PA experts have in their analyses, the importance this is given by the experts themselves and if this is done in a transparent way.

Experts from Finland and Sweden participated in interviews and in group discussions. There were in all five persons from the Radiation and Safety Authority in Finland (STUK), the implementer Posiva Oy, and the Technical Research Centre of Finland (VTT). The Swedish interviewees consisted of totally ten persons; six from the authorities (SKI and SSI) and four persons from SKB. Drottz Sjöberg described the outline of the interviews and gave plenty of examples of answers given.

During the PA process many choices are made about scenarios, models and data, and for some of these choices values are important. It is also clear that the criteria and regulatory framework plays an important role. Among the concerns raised in the interviews were how to take into account retreivability, perception of alternatives and perception of time frames. Drottz Sjöberg brought up as a source for discussion the resource allocation between industry and the authorities which may have an effect on public credibility, competence development, etc.

The results from this study will take use of a model presented by Drottz Sjöberg of the entire context within which PA and the communication about PA takes place. The

model includes the specified “expert tasks” within “science policy” which in a larger society context is included in “framework politics”. This model will constitute a basis for the discussion of the results, and a report is expected at the end of the year 2001. A general conclusion is that there is a need, and maybe a current tendency, to go from the tasks area to the science policy area to be able to clarify points-of departure and assumptions for the PA and related actions in waste management.

Drottz Sjöberg ended by citing one of the responding experts who asked how it will help to know more about the underlying values in PA, and how this information can be used.

In the discussion it was remarked that the organisational structure of the entire system with the specified expert tasks, the science policy and the framework politics must be important.

## *Discussion about the implications of the work: how to make PA more accessible to layman people*

This discussion was organized as group (country by country) discussions using the TASCOI model. Briefly TASCOI means that an activity can be defined by the following elements:

Transformation input- output
Actors, producing the Transformation
Supplier, who provided the input
Customer
Owner – who has the overview
Interveners, who provides the context

It was found the different groups applied the TASCOI model in quite different ways, to some extent due to different stages of the nuclear waste programmes in different countries.

One group found that when trying to formulate what is the transformation in PA it became what is expected from the EIA (Environmental Impact Assessment) process as the input is information and the output is an assessment of impacts. Another group gave the transformation a more specific meaning in that PA transforms technical data to a description of the behaviour of the disposal system in relation to some performance criteria. According to these two ideas of PA (one framing the PA system as being within the “nuclear waste community”, the other framing the system more broadly in society), the other elements in TASCOI followed in consequence. For example, with the broad definition the interveners are NGOs, media, politicians and communities, etc whereas in the narrower definition they are e.g. the international nuclear waste community and the legislative framework.

It may be commented that the TASCOI exercise made apparent that the workshop participants had different views on what PA actually is. Some took the expert analytic view, others a broader view. Depending on what view the PA community decides to

adopt the prerequisites for communicating PA to the public will be different. It has, though, to be acknowledged that the time available at the workshop was not enough for a deeper discussion about PA using the TASCOI concept, which otherwise might have given more insights in details about the implications of different views.

## *Analysis of arguments on final disposal in the Finish EIA process (Antti Leskinen, Diskurssi Oy)*

Antti Leskinen started by describing the EIA process which has taken part in Finland for the site selection. Clearly Posiva had success in the EIA process. It has been a staged decision-making process with much interaction between Posiva, the municipalities involved and other stakeholders. One important element has been face to face meetings with the experts and possibilities for anyone to take contact with them. One experience is that it is important for the company to have a uniform strategy between the information department and technical experts.

The Posiva/Diskurssi contribution to WP-4 is to analyse the public involvement procedures conducted by Posiva using information from documents and interviews. The analysis is done using communicative planning theory, theories of risk communication and theory of organizational learning. The "data base" consists of arguments that can be grouped in a number of areas: safety and health, image (municipal and regional), moral/ethical, ecological, political (e.g. referendum, suspected conspiracy), decision-making process, juridical (import from EU, international agreements), technological and economic (municipal, industry, employment). A report with results was available at the workshop.

The role of leadership was raised in the discussion, and Leskinen meant that you do not need a strong leader, but rather a team-leader in a process like this.

The Finnish EIA process in now concluded with the decision by the parliament.

## *Review of the Swedish hearings (Britt-Marie Drottz Sjöberg, NTNU, and Clas-Otto Wene, Wenergy)*

Clas-Otto Wene described the background and purpose of the hearings that had been set up by SKI and SSI in February 2001 as part of their review of the SKB proposal to start site investigations in three municipalities in Sweden. In a pre-project the hearings were prepared using the RISCOM model and with the TASCOI model as support. These preparations were done in cooperation with a reference group with representatives from each one of the municipalities involved in the SKB feasibility studies. A public meting was also held for three of the involved six municipalities to inform on the RISCOM model and the principles behind the proposed hearing format. Out of the four recursive levels in the RISCOM model only two were addressed at the hearings: waste management method (seminar type of meeting with group discussions), and the siting itself (inquiry format).

Britt-Marie Drottz Sjöberg went on by showing the precise hearing agendas. She had been given the assignment to evaluate the hearings for their effects. For that purpose questionnaires were distributed at the hearings, in the beginning about the expectations and at the end about the results. She also followed up these responses with a number of telephone interviews.

The results show an overall positive reaction to the hearing idea and the arrangements. Positive factors were e.g. that all central actors participated, the structure of the hearings, a stringent moderator and the group discussions. There were also negative responses concerning practical matters (e.g. time available, the meetings rooms), behaviour of the actors (too vague answers) and issues of a more fundamental character (e.g. mostly well informed people in the public, similar views among the actors).

It is clear from the evaluation that the majority did not change their opinion during the hearings about acting organizations and authorities, the little change there was, however was positive. In Norduppland, more than in Oskarshamn, there was a tendency to lump SKI /SSI and SKB as together "establishment".

There were a large number of views, questions, and comments which are summarized in a report. It should also be noted that the questions that could not be answered at the hearings due to time limits, have all later been answered in written format.

## *The COWAM project (Gilles Hériard-Dubreuil, Mutadis)*

Gilles Hériard-Dubreuil, who is the coordinator of the COWAM project, described its background and programme. Nuclear waste management (NWM) is "a global problem looking for a local solution". The linking between local and national levels may however be problematic since NWM is designed as a technical issue, and the local communities become involved only in a late stage of the decision-making process when almost all components of the decision are already fixed. There is thus need for more of mutual trust between the national and local levels.

Among the objectives of COWAM one is to empower concerned local communities in the NWM decision-making process and to create favourable conditions for them to network at the European level.

COWAM is a three year Concerted Action in EC DG/Research, building on experiences from the TRUSTNET on risk governance. The project aims to compare nuclear waste facility siting projects in Europe and to come up with concrete recommendations to improve the quality of decision-making in NWM. The participants come from local and regional councils (elected representatives and administration), NGOs, NWM operators and authorities in eight countries. Three meetings are planned in Oskarshamn (Sweden), Bure (France) and Wellenberg (Switzerland), and case studies will be a tool in reaching the project goals.

The connection between RISCOM and COWAN was discussed after the presentation. Clearly there are common ideas between the two projects, but they are also different and complementary. RISCOM builds on a theoretical model that both drives the project and

is subject to testing with a number of activities. COWAM will create a lot of information from the communities involved and is a forum for them to express their views. There is a great value of having people talking in the process. Somewhat later, when the two projects have created more results, there should be good opportunities for interaction between them.

## *NEA/FSC Group (Rick Beauheim, OECD/NEA)*

Rick Beauheim from the OECD/NEA informed on the NEA Forum on Stakeholder Confidence (FSC). This NEA initiative seeks to improve the understanding of the principles of stakeholder interaction and public partcipation in decision-making related to RWM. The work of this group started in August 2000 with a workshop that reviewed the world-wide experiences in the area. The FSC members are nominees from a broad range of RWM institutions, and a wider representation is to be obtained through workshops to be held in national contexts with stakeholder involvement.

The NEA expects that the FSC over the first three years will create an atmosphere of trust for the discussion of issues. A working environment conductive to tangible results will be created. Furthermore a widely agreed upon document (collective opinion) will be produced on the principles, implications and practices of stakeholder involvement.

## *The evolution of the concept of the Safety Case (Sylvie Voinis, OECD/NEA)*

Sylive Voinis gave an international perspective to the evolution of the “safety case” as seen from the NEA perspective. The NEA IPAG (Integrated Performance Assessment Group) has produced a data base of safety cases since the early 1990’s. By safety case is meant not just a report of technical results but also justification of assumptions, sensitivity studies and a clear strategy. A safety case is about managing and integrating technical and non-technical information - it is not, per se, a science product. It is mostly a management challenge, requiring vision towards avoiding later problems. At the technical level the most important issue is how to manage dialogue with technical experts both in-house and outside.

The workshop acknowledged that the NEA is well positioned to describe international status and produce common views in both the technical (IGSC) area and the stakeholder interaction area (FSC). It will probably be important that there are good links between these two groups and that they do not take too much of a top-down approach.

## *The design and evaluation of dialogue experiments in the UK (Jane Hunt, Lancaster Univ.)*

In WP-4, five dialogue processes will be designed and run in the UK. Another part of the WP-4 is to design, build and run a schools dialogue website. This will be done with five schools with different socio-economic characteristics in the UK.

The dialogue processes will bring together official stakeholders with members of the public in structured group discussions. The main topic will be to explore what the public and other stakeholders think should be addressed in an Environmental Impact Assessment (EIA). All processes will be audio- and video taped. There will also be interviews and pre-and post-process questionnaires.

The web site will have a discussion forum as the core element. Interface stimuli will be important and polling/voting will be embedded. There will also be audio and video elements with e.g. interviews and links to appropriate other web sites.

## *Mapping of processes using the RISCOM model (Kjell Andersson, Karinta)*

As said earlier in this report, there are many new promising participative processes which should be further analyzed and evaluated within a consistent framework, for which the RISCOM should be a tool. Kjell Andersson introduced one example of an approach to this. The DECI pre-study report analyses a number of procedures such as Expert Committee, Science Court, Team Syntegrity, Dialogue, Science Shops, Consensus Conferences and Lay Peoples Panel. The report describes each one of the processes and procedures and map them in the following dimensions:

1) Potential to provide transparency: capacity to evaluate facts, values and authenticity and stretching capacity (the RISCOM model).
2) Extent of public involvement; if the procedures are interactive with the public, if they allow the public to set the agenda.
3) How "the public" is represented, e.g. with individual stakeholders, open to all, or with political decision makers.
4) The role in the decision-making process: purely informative, advisory or part of formal decision-making
5) Consensus building or adversarial in character

Others are working in the same direction. Renn et.al map procedures in the two dimensions of intensity of conflict and degree of complexity. Resources for the Future have done an extensive evaluation of participative processes in the US. And now also COWAM will contribute.

Andersson concluded with a list of issues he felt were critical to consider:

- Does transparency enhance consensus building ? Should it ??
- Communicative vs. strategic action (look up for manipulation!)
- Role of regulator
- NGOs must not be hostages in the process
- Reluctance from both sides to enter in "foreign territory",
- Who should be the process guardian ?
- Formal processes can look good – but be empty in real participation
- Informal processes does not guarantee anything, but can become very creative
- Role in decision-making; direct democracy vs. representative democracy

- We need both “umbrella processes” (EIA, SEA, Oskarshamn model) and “events” more limited in time (consensus conferences, hearings etc)

It was questioned if it should be the aim of consultation to get consensus? Andersson meant that this is not necessarily the case. The RISCOM model does not have this as the primary goal – it is to get all the arguments (factual and value-laden) visible, which even may lead to less consensus at least in an early stage.

## *The idea of “Front-End” Consultation (Elisabeth Atherton, Nirex Ltd)*

Elisabeth Atherton started with a model of a decision-making process in which stakeholders play an active role. She meant that there are many advantages of identifying stakeholder issues:

- Helps define the problem
- Guides information collection
- Improves communication
- Enables multiple stakeholders to participate
- Identifies criteria to evaluate options
- Develops relationships

There are a number of possible outputs from a front-end Dialogue:

- Issues that the decision-making process should address
- Roles within the decision-making process
- Stakeholder involvement in the process
- Ideas on options and evaluation criteria
- Review of the process

A front-end dialogue aims to develop a way forward by allowing stakeholders to frame the problem and issues to address. Thereby it increases support for the decision-making process, and, perhaps contrary to what many believe, it should decrease the overall time to find a solution.

Even if front-end dialogue looks like a good idea there are a number of issues that need careful consideration. The first one is obviously how to encourage participation. A second issue is the relation with the EIA process (possibly within the EIA scoping). As already discussed much in the workshop also the relation between front-end consultation and PA is a key issue.

In the discussion the issue was raised who should be the guardian of the process. Should it be the regulator? In the UK an advisory panel is process guardian. The Environment Agency is constrained by law. The Agency sets criteria which essentially is only one number - the rest is guidance on what should be included.

## *Plenary discussion*

The concluding plenary discussion focused on the "silent majority" versus small active groups having their own agendas, and the democratic consequences of this. It is a common experience that there are problems in engaging the silent majority in consultation. However, this is quite natural. People have a limited attention space, and they are rational in selecting what to pay attention to. As an example, the Oskarshamn land owners belonged to the silent majority, but are now an active group.

It was said that there seems to be three ways to handle the situation: The first is the normal process of representative democracy, the second is to get information on peoples opinion with statistical means such as opinion polls and the third one is to engage smaller groups in a guided process.

It was emphasized that there needs to be time efficiency, which means sufficient time for dialogue but short enough not for the dialogue not to die out. It was also emphasized that communicative action is expensive – it requires time and human resources. Also there are phases for strategic action and phases for communication. We need to develop the RISCOM model to become more dynamic.

The role of media was also discussed. Clearly the media are important. Often they tend to add to the fragmentation of complex issues and sometimes they become an important actor in the process. It has happened that "media events" have played an unforeseen role in the waste management programmes.

## *Closing Comments*

Magnus Westerlind closed the meeting with a few comments on the discussion during the two days of workshop. He found the discussion about how to communicate performance assessment especially interesting. His immediate reaction to that discussion was that maybe PA should remain as an expert activity, however framing the issues is a matter for consultation.

Westerlind concluded the meeting by thanking EDF for their arrangements in Paris which had been excellent.

**Appendices**

1. Workshop agenda
2. List of participants
3. Overview of RISCOM-II
4. Copies of overheads

# Appendix 1: Workshop agenda

***RISCOM –II Workshop No 1***

Time: September 5-6, 2001
Venue: Hotel NOVOTEL Vaugirard, 257/263 rue de Vaugirard, 75 015 PARIS

**Agenda**

DAY 1 Moderator: Magnus Westerlind (SKI; RISCOM-II coordinator)

***Value Judgements, risk communication and performance assessment***

| | |
|---|---|
| 9-9.15 | Opening (Thierry Devriès, EDF) |
| 9.15-9.45 | The RISCOM-II Project (Kjell Andersson, Karinta) |
| 9.45-10.15 | The aims of consultation: what is it for? (Jane Hunt, Lancaster Univ.) |
| 10.15-10.45 | Coffee break |
| 10:45- 11.15 | Dialogue, Values and Performance Assessment (Anna Littleboy, Nirex Ltd) |
| 11.15-12.00 | Plenary discussion |
| 12.00-1.30 | Lunch |
| 1.30-2.00 | An attempt to discuss the content of PA with non-specialists: lessons learnt from the French initiative within RISCOM-II (Didier Gay, IPSN, Stéphane Chataignier, EDF, and Sandrine Pierlot, EDF) |
| 2.00-2.30 | A view of the RISCOM model from the French experiment (Stéphane Chataignier and Sandrine Pierlot, EDF) |
| 2.30-3 | Hidden values among risk assessors in Sweden and Finland (Britt-Marie Drottz Sjöberg, NTNU) |
| 3-3.20 | Coffee Break |
| 3.20-5.00 | Discussion about the implications of the work: how to make PA more accessible to layman people |

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At the end of the day there will be a cocktail at NOVOTEL.

DAY 2 Moderator: Anna Littleboy, UK Nirex Ltd

***Case Studies exploring implications for the practical development of risk communication***

9-9.30 Analysis of arguments on final disposal in the Finish EIA process (Antti Leskinen, Diskurssi Oy)

9.30-10.10 Review of the Swedish hearings (Britt-Marie Drottz Sjöberg, NTNU and Clas-Otto Wene, Wenergy)

10.10-10.30 Coffee Break

10.30-11.00 The COWAM project (Gilles Hériard-Dubreuil, Mutadis)

11.00-11.15 NEA/FSC Group (Rick Beauheim, OECD/NEA)

11.15 – 11.30 The evolution of the concept of the Safety Case (Sylvie Voinis, OECD/NEA)

11.30-12.00 Discussion

12.00-1.30 Lunch

1.30-2 The design and evaluation of dialogue experiments in the UK (Jane Hunt. Lancaster Univ.)

2-2.30 Mapping of processes using the RISCOM model (Kjell Andersson, Karinta)

2.30-2.45 Coffee Break

2.45-3.15 The idea of 'Front End' Consultation (Elisabeth Atherton, Nirex Ltd)

3.15-4 Plenary discussion

4-4.30 Closing Comments

4.30 End Meeting

## Appendix 2: List of participants

| | |
|---|---|
| Thierry Devriès | EDF |
| Stéphane Chataîgnier | EDF |
| Sandrine Pierlot | EDF |
| | |
| Michele Viala | IPSN |
| Didier Gay | IPSN |
| Sylvie Charron | IPSN |
| | |
| Thomas Busuttil | ANDRA |
| Philippe Leconte | CEA |
| | |
| Magnus Westerlind | SKI |
| Christina Lilja | SKI |
| Mikael Jensen | SSI |
| Saida Engström | SKB |
| Claes Thegerström | SKB |
| | |
| Kjell Andersson | Karinta |
| Raul Espejo | Syncho |
| Patrick Hoverstad | Syncho |
| Clas-Otto Wene | Wenergy |
| Britt-Marie Drottz Sjöberg | BMD Research |
| | |
| Anna Littleboy | Nirex |
| Elisabeth Atherton | Nirex |
| Roger Yearsley | EA |
| Claire Twigger-Ross | EA |
| Dan Galson | GSL |
| Jane Hunt | Lancaster univ. |
| John Hetherington | Cumbria County Council |
| | |
| Jaana Avolahti | Posiva Oy |
| Juhani Vira | Posiva Oy |
| Antti Leskinen | Diskurssi Oy |
| | |
| Neale Kelly | EC |
| Gilles Heriard Dubreuil | MUTADIS/COWAM Project |
| Thierry Schneider | CEPN - COWAM steering group |
| | |
| Rick Beauheim | OECD/NEA |
| Sylvie Voinis | OECD/NEA |

# Appendix 3: Overview of RISCOM-II

RISCOM-II is a project within EC's 5:th framework programme. The RISCOM model for transparency (see below) was developed earlier within a Pilot Project funded by SKI and SSI in Sweden. RISCOM-II, which is a three-year project, started in November 2000.

## Objectives

The overall objective is to support the participating organisations and the European Union in developing transparency in their nuclear waste programmes and means for a greater degree of public participation. Although the focus is on nuclear waste, findings are expected to be relevant for decision-making in complex issues in a much wider context.

## Description of the work

The project has six Work Packages (WPs). In WP 1, a study is undertaken of issues raised in performance assessment to better understand how factual elements relate to value-laden issues. There will also be an analysis of statements made by the implementers, regulators, municipalities and interest groups during actual Environmental Impact Assessment (EIA) and review processes within Europe. In WP 2 an organisational model will be used to diagnose structural issues affecting transparency in the French, the UK and the Swedish systems. The data is collected through interviews with representatives of key organisations. In WP 3 a special meeting format (Team Syntegrity) is used to promote the development of consensus and a "European approach" to public participation.

In WP 4, a range of public participation processes are analysed and a few will be selected for experimental testing. A schools web site will lead to greater understanding of how information technology can be utilised to engage citizens in decision-making. In WP 5 a hearing format will be developed, that should allow the public to evaluate stakeholders' and experts' arguments and authenticity, without creating an adversarial situation. To facilitate integration the project's results and to provide forums for European added value, two topical workshops and a final workshop will be held during the course of the project (WP 6).

## Milestones and expected results

The project will provide a "map" of values encountered in performance assessment, a review of dialogue processes and hearing formats, diagnosis of organisational structures and understanding of the organisational impact on transparency, consensus statements from a group of key actors, production and evaluation of a Schools Web site. Recommendations will be made on procedures and strategies for improved dialogue processes and hearing formats and performance assessment.

## The RISCOM model for transparency

The RISCOM model for transparency, developed by Espejo and Wene (see references below), includes three basic elements: technical/scientific issues, normative issues and authenticity. In the old view, transparency meant explaining technical solutions to the stakeholders and the public. The task was to convince them that solutions proposed by implementers and accepted by regulators were safe. From this point of view, transparency was a matter of packaging technical information. However, major decisions on complex issues involve both technical/scientific and value-laden elements. The decisions will improve in quality if it is made clear to the public and the decision-makers how the two elements interact.

Technical/scientific issues can be clarified with scientific methods. They relate to questions like "Is this true?" or "Are we doing things right? Normative issues reflect what is considered fair and acceptable in society, what is legitimate. In an expert dominated area, such as nuclear waste management, value-laden issues are often not openly explored. Instead they are discussed "under the surface", often hidden in expert investigation.

Authenticity is what builds trust; it has to do with consistency between the actions of a person (or an organization) and who the person (or organization) is, or the role in the decision-making context. If a stakeholder considers an organization to be authentic, he is more likely to trust its views and decisions, thus reducing his demands for technical details.

***To achieve transparency there must be appropriate procedures in which decision-makers and the public can validate claims of truth, legitimacy and authenticity***.

Another element in the transparency model is the concept of "stretching", which means that procedures have to be developed to ensure that the environment of the implementer (of a proposed project) and the authorities is sufficiently demanding and that critical questions are raised from different perspectives.

***Transparency is strongly linked with public participation: Transparency needs public involvement – and meaningful public involvement cannot take place without transparent procedures.***

References

1. Kjell Andersson, Raul Espejo and Clas-Otto Wene: Building channels for transparent risk assessment, RISCOM Final Report, SKI Report 98:6

2. Clas-Otto Wene , and Raul Espejo: A Meaning for Transparency in Decision Processes, Proceedings, VALDOR Symposium Stockholm, June 1999

## List of participants

| Organization | Formal status/ Lead contractors | Contacts | E-Mail |
|---|---|---|---|
| SKI, Sweden | Co-Ordinator<br>Lead contractor WP 5 | Magnus Westerlind | magnus.westerlind@ski.se |
| SSI, Sweden | Principal Contractor | Björn Hedberg | bjorn.hedberg@ssi.se |
| SKB, Sweden | Principal Contractor | Saida Engström | saida.engstrom@skb.se |
| Karinta-Konsult, Sweden | Principal Contractor<br>Lead contractor for WP 3 and 6 | Kjell Andersson | kjell.andersson@karinta-konsult.se |
| Nirex Ltd, UK | Principal Contractor<br>Lead contractor for WP 4 | Anna Littleboy | anna.littleboy@nirex.co.uk |
| Environment Agency, UK | Principal Contractor<br>Lead contractor for WP 4 | Roger Yearsley | roger.yearsley@environment-agency.gov.uk |
| Galson Sciences, UK | Assistant Contractor | Dan Galson | dag@galson-sciences.co.uk |
| Lancaster University, UK | Assistant Contractor | Jane Hunt | j.hunt@lancaster.ac.uk |
| EDF, France | Principal Contractor<br>Lead contractor for WP 1 and 2 | Sandrine Pierlot | sandrine.pierlot@edfgdf.fr |
| IPSN, France | Principal Contractor | Didier Gay | didier.gay@ipsn.fr |
| Posiva, Finland | Principal Contractor | Jaana Avolahti | jaana.avolahti@posiva.fi |
| Nuclear Research Institute, Czech Republic | Principal Contractor | Ales Laciok | lac@nri.cz |
| Syncho Ltd, UK | Sub-Contractor | Raul Espejo | raul@syncho2.demon.co.uk |
| Diskurssi Oy, Finland | Sub-Contractor | Antti Leskinen | antti.leskinen@diskurssi.fi |

As part of the contract with SKI, Karinta supports SKI in the integration of the project, with the RISCOM Model of Transparency as the key element. Syncho Ltd is subcontractor for doing field work in UK and France with the VIPLAN organisational model and for running the Team Syntegrity meeting in WP-3. Diskurssi Oy is subcontractor for Posiva for work in Finland for analyzing arguments in the Finnish site selection process.

## Appendix 4: Copies of overheads

The RISCOM-II Project (Kjell Andersson, Karinta)

Aims of consultation and dialogue (Jane Hunt, Lancaster Univ.)

Dialogue, Values and Performance Assessment (Anna Littleboy, Nirex Ltd)

An attempt to discuss the content of PA with non-specialists: lessons learnt from the French initiative within RISCOM-II (Didier Gay, IPSN, Stéphane Chataignier, EDF, and Sandrine Pierlot, EDF)

A view of the RISCOM model from the French experiment (Stéphane Chataignier and Sandrine Pierlot, EDF)

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The COWAM project (Gilles Hériard-Dubreuil, Mutadis)

NEA/FSC Group (Rick Beauheim, OECD/NEA)

Safety Case: An international perspective (Sylvie Voinis and Claudio Pescatore, OECD/NEA)

Dialogue Designs and Schools Website (Jane Hunt and Mike O' Donoghue, Lancaster Univ.)

Mapping of processes using the RISCOM model (Kjell Andersson, Karinta)

The idea of 'Front End' Consultation (Elisabeth Atherton, Nirex Ltd)

# RISCOM - II

# The project will support transparency in the nuclear waste programmes and means for a greater degree of public participation

Kjell Andersson

# Work Package List

| WP No | WP Title | Lead contractor |
|---|---|---|
| **1** | **Public values and performance assessment** | **EdF** |
| 2 | Organisation field study | EdF |
| 3 | Team Syntegrity meeting | Karinta |
| **4** | **Dialogue** | **Nirex and EA** |
| **5** | **Hearing** | **SKI** |
| 6 | Workshops | Karinta |
| - | Co-ordination | SKI |

# Work Package No 1: Public values and performance assessment

## Objectives

- to identify value-laden issues in PA
- to find value judgements of stakeholders, and explore if and how they could be addressed in performance assessment
- to initiate open debate about risk and uncertainties among experts and the public
- to give recommendations on how performance assessment can developed to take stakeholders values more into account

**France**

- **Meetings between specialists and non-specialists in PA**
- **Draft report**

**Czech Republic**

- **evaluation of existing information from public surveys**
- **initial discussion with stakeholders about value-laden issues in PA.**

**Finland**

**analysis of existing material: 1) analysis of arguments, 2) rhetoric analysis**

**Sweden**

- **interviews and group discussion with PA experts in Sweden and Finland**
- **earlier: report on values in nuclear waste management**

**United Kingdom**

**overview of the process (as recently done by Nirex)**

**EDF Draft Report**

**Two ways of thinking about nuclear waste assessment: 1) the specialist analytical viewpoint and 2) the non-specialist viewpoint with an overall approach of energy policy and the decision making process.**

**PA is not a main issue, however, there is a real interest in PA**

- **scenarios,**
- **time scales**
- **comparisons between deep disposal and surface storage.**

**The Swedish work**

- **how to take into account retrievability alternatives**
- **perception of time frames**

**Czech Republic**
**alternatives such as transmutation should be considered (Local representatives).**

**UK work**

- **scenario development could benefit from wider discussions**
- **different time frames**
- **alternative indicators of safety**

## The general picture

**Essential to understand "what people want"**

**People want to talk about high level issues: ethical issues (e.g. time frames), alterative options (including retreivability)**

**How does this fit into the RISCOM Model?**

**How can PA become more communicative?**

- **Incorporate value judgements of stakeholders into PA**

- **start from the issues of concern among stakeholders and communicate with them during the PA work**

**A broad evaluation framework considering possible alternative regulations and indicators of safety**

**Adapt to the national programmes**

*WP-1 sends a message to WP-4*

## *Work Package No 4: Dialogue*

## Objectives

- **to identify and evaluate different processes for engaging the public in dialogue**

- **to develop and test processes to assess their potential contributions to this dialogue**

- **to investigate the usefulness of the Internet in this context**

- **to produce recommendations for the improvement of communication, transparency, and understandings of risk**

*RISCOM II - DELIVERABLE 4.1*

# Stakeholder Dialogue: Experience and Analysis

Jane Hunt (CSEC, Lancaster University) and
Kirsten Day & Ray Kemp (Galson Sciences Ltd)

*RISCOM II - DELIVERABLE 4.2*

# Website Review

M. O'Donoghue and B. Szerszyski (CSEC, Lancaster University)

## Stakeholder Dialogue Report

- **Provides review and analysis of European and North American dialogue experiences**

- **Gives definitions and terminology**

"A variety of practices has been adopted by a wide range of institutions. Yet these practices, although sometimes fully institutionalised, remain largely experimental: what counts as good dialogue, why, and for whom, remain questions with many answers"

**There are many new promising participative processes. They should be further analyzed, evaluated and developed within a consistent framework.**

**Then the process selection, in a particular situation, ca be made with awareness and with precise objectives**

The RISCOM should be a tool. Key elements in the model are clarity in factual issues, awareness of value-laden issues, testing of stakeholders authenticity, stretching of arguments and recursive levels at which issues are at stake.

# Website review report

Overview of Internet consultation

Existing practice

Factors in design

Highlights potentials and limitations

# Work Package 5

# Public hearings

Hearings were organised by SKI and SSI in the municipalities during the review of the SKB "FUD-K" report

The RISCOM Model was used in the design phase - was communicated with the municipalities

The outcome is being reviewed – to be reported within RISCOM-II. The aim is to provide recommendations for future hearings

# Work Package No 2

# Organisational field study

The VIPLAN model (Syncho) will be used to diagnose structural issues affecting the transparency of the French and British Nuclear Waste Management systems.

By comparisons with earlier studies in Sweden and partially in the UK a deeper understanding will be achieved of the organisational impact on the prerequisites for transparency, and of how decision processes could be adapted to certain organisational structures to improve these prerequisites.

# Work Package No 3

# Team Syntegrity Meeting

# Objectives

- Increased awareness among key stakeholder groups in Europe (including NGOs) about how nuclear waste decision processes should be developed in order to increase transparency and trust.

- The promotion of the development of a "European approach" to public participation in the area of nuclear waste management.

**Meeting in spring 2002**

**Number of participants**

**From implementers, regulators , communities, NGOs**

- **A very special meeting format**
- **Only input: an opening question**
- **Democratic**
- **Exhausting**
- **Very educational**
- **The documentation will become a rich source**

**Planning starts now !**

# Aims of consultation and dialogue

Jane Hunt
Lancaster University

## Classification of aims

- Instrumental - practical purposes achieved
- Procedural - legitimacy of process gives authority to outcomes
- Constitutive - generating identities, roles, relationships; creating meaning ('values are not positions we argue from but something we argue towards')

# Instrumental aims

- informed decisions
- implementable decisions
- reduction of conflict
- efficiency of process
- legislative compliance
- useable outcomes

# Instrumental aims 2

- Learning
- best knowledge elicited
  - inclusive of different epistemologies
- 'sound science' elicited
  - truth/facts challenged
  - assumptions and uncertainties identified
- new ideas elicited
- social intelligence gained

# Procedural aims

- Transparency of process (how it is done, and why)
- Transparency of relationship with decision making
- participants not bound by disciplining nature of event
- Equality of access (being able to speak)

# Procedural aims 2

- Deliberation
- resourcing equality
- inclusiveness
- representative of groups
- representative of views
- results justifiable by reference to legitimacy of process

# Constitutive aims

- Generating relationships
- increasing understanding
- motivation
- active sense making
- reflexivity
- framing - what is the nature of the problem?

# Constitutive aims 2

- Sense of shared responsibility
- sense of the common good
- shared (negotiated?) value base
- meanings and understandings generated
- empowerment

# Perspectives and expectations

- Different stakeholder groups
  - e.g. official stakeholders, members of public, environmental groups
- starting from different positions
- aiming at different outcomes (persuasion of others, gaining information, articulating own position, influencing decisions ....making 'better decisions')

# WP4 Dialogue Processes

- Understanding perspectives and expectations of different stakeholders
- enabling debate and deliberation (process factors)
- generating understanding between stakeholders (interactive sense making)

# Dialogue, values and performance assessment

Anna Littleboy

RISCOM II workshop:
15 June 2001

nirex

## Objectives of presentation

- to explore issues about linking dialogue, PA and value judgements
- to consider options for moving forwards

# Context

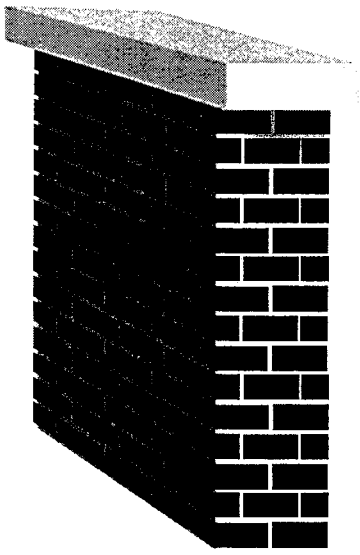
- nearly one year into RISCOM
- well into WP1 (Value Judgements in PA)
- follows presentations at a WP1 working meeting in June
- draft reports from EDF and Nirex

***I would not have said the same things six months ago***

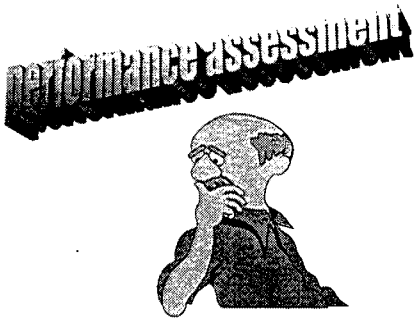


# The problem

Dialogue is most meaningful if it can be linked into a decision



Performance assessment is a key input to decisions



# Why does this problem exist?

- different views about what constitutes a PA
  - whats in it and why is it done
- different specialist and non specialist opinions about PA
- PA doesn't obviously address public concerns



| ***People are concerned about:*** | ***Expert methods adopt*** |
|---|---|
| • tangible impacts on quality of life | • quantitative risk targets at long times into the future |
| • worst case scenarios | • "Rational" modelling approach |
| • (maximum?) individual dose | • collective averaging (CGs or PEGs) |
| • spectacular future events | • structured FEP analysis |

Presentation to RISCOM II
Workshop, 5th September 2001:

nirex

# Values and performance assessment

- they affect the framing of the PA

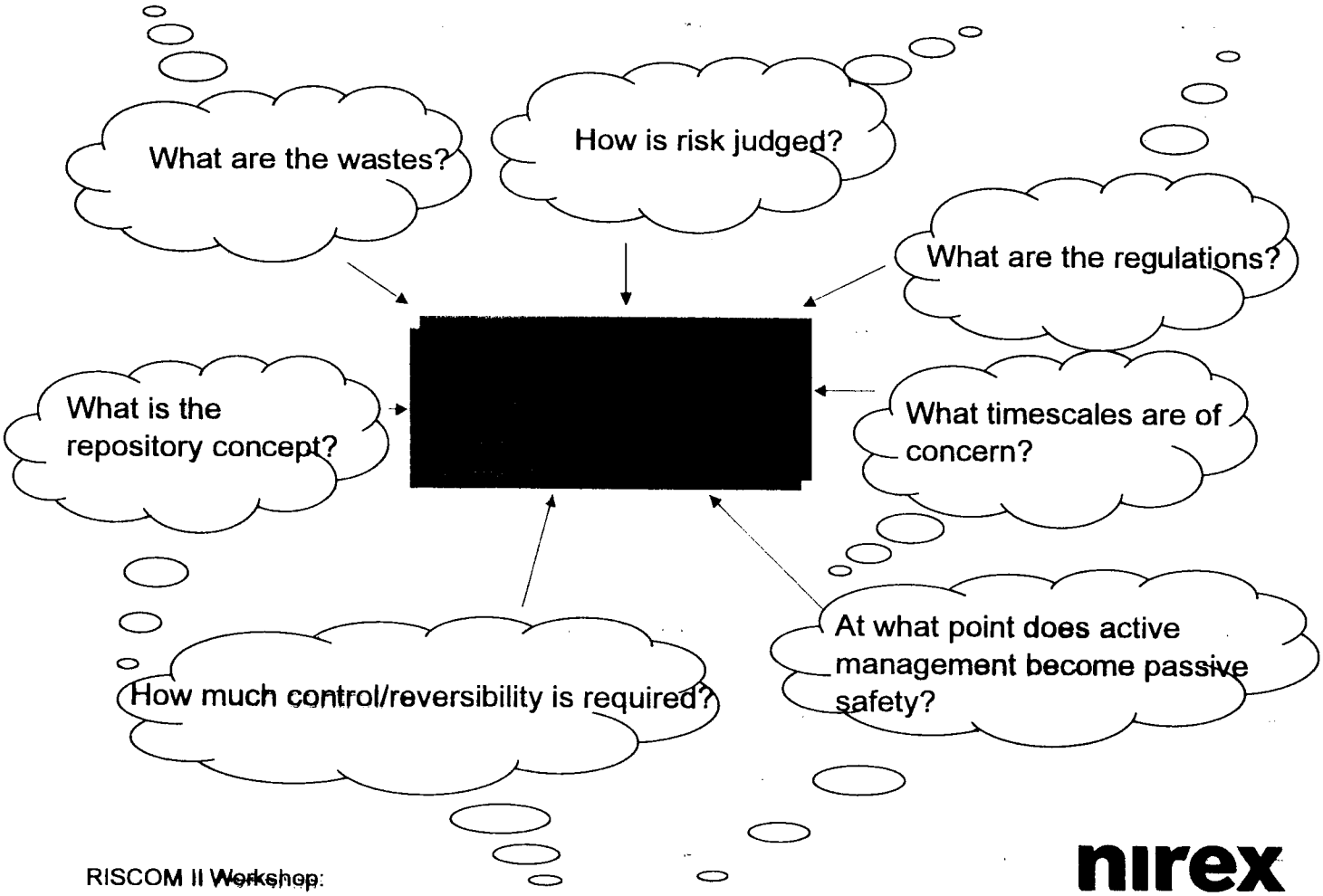
- What is being assessed and how is it being judged?

- What's important?
- what methods to be used?
- what numbers should go in?

- they affect the content of the PA

Presentation to RISCOM II Workshop, 5th September 2001:

nirex



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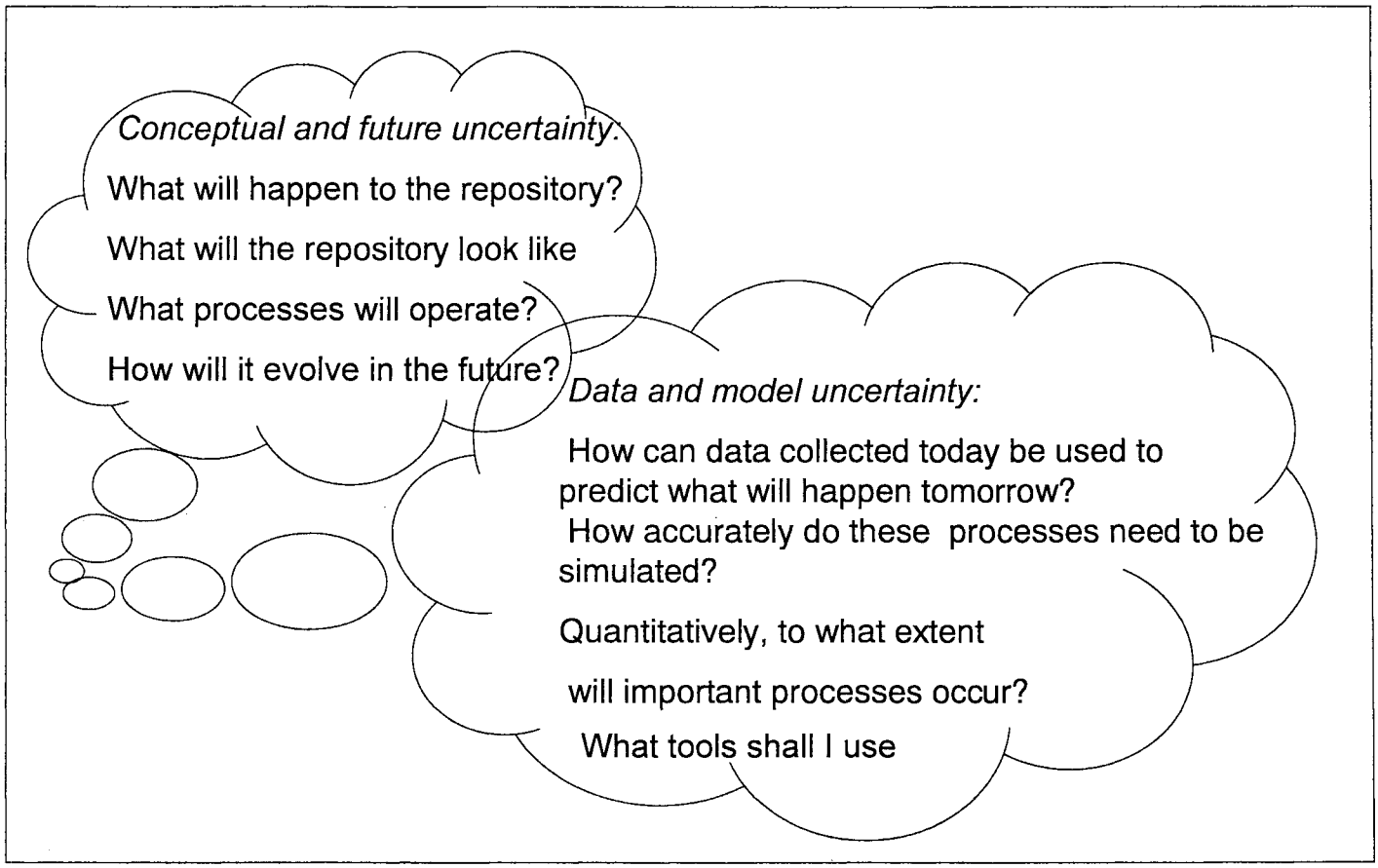





nirex

# WP1 conclusions so far

- judgements framing the PA → need wide stakeholder input
- judgements that deal with the repository's evolution → could benefit from wider discussion, eg about scenarios
- judgements that determine tools and data inputs → require expert input and peer review



nirex

# Are there deeper underlying issues?

- Do we understand the role of PA in the decision making process?

- Are PA methods and tools able to:
  - contribute
  - respond

  to dialogue?



## Can we explore these issues further?

- 1. By dialogue on the scope of PA and its role in decision making
  - what is PA for?
  - Who should do it?
  - What should it encompass?
- 2. By understanding and incorporating stakeholder issues and concerns into a broad PA evaluation framework
  - alternative indicators of risk
  - consultative scenario definition

- Expert technical evaluations of long term safety

dialogue

- Stakeholder values



# Dialogue, values and performance assessment - summary

- Some links already established
  - value judgement and PA (but via experts)
  - dialogue and value judgements
- BUT NOT PA and dialogue
- could be strengthened by:
  - exploring the role of PA in decision making
  - consultative framing of the PA
  - revisiting PA methods to develop an approach that incorporates stakeholder issues

# WP1: facts and values

## An attempt to discuss the content of PA with non-specialists : lessons learnt from the french initiative within RISCOM-II

S. Chataignier, S. Pierlot (EDF)
&
D. Gay (IPSN)



## RISCOM-II : initial objectives of WP-1

- To state the assumptions conventionally used in PA
- To confront them with the viewpoints of non-specialists
- To compare specialists'standard of values to that of non-specialists
- To improve the presentation of PA by taking better account of the public's concerns.

RISCOM II Workshop / Paris, 5-6 September 2001

# Stages of the method

- Constituting the **groups** and drafting introductory and preparatory **documents**
- **Work phase** with specialists on one hand and with non-specialists on other hand
- A **work phase** with both mixed groups (specialists and non specialists)
- A release phase for **validation**



# Results about the debate in France (1/3)

- An unfavorable nuclear and French context

☹ **Military past** of nuclear activities (Hiroshima, Nagasaki), and **civil accidents** (Three Miles Island, Chernobyl)

☹ Traditional culture of **secrecy**

☹ History of the nuclear energy in France : **no democratic debate**

# Results about the debate in France (2/3)

- A strong polarisation of viewpoints

⇨ Nuclear lobby

⇨ Environmentalists against nuclear activities

- But a reassuring debate in the RISCOM-II context

☺ Respect of the different viewpoints

☺ Openess of the debate beyond safety assessments



# Results about the debate in France (3/3)

😐 Two ways of thinking :

***Specialists* : an analytic approach**

Classifying and breaking down issues, with public intervention at the beginning for the ethical issues, at the end, to hear the results.

***Non - Specialists* : an overall approach**

Radwaste issues must not be isolated from other related problem such as energetic choices, ...

Citizens should be associated to the decision making process, at each step, not only at the end

## Some ideas to enhance debate

- Better, wider, more tangible **information**
- A **change in the institutions' behaviour** (more opened, ready to hear, to debate, ...)
- **Opening discussion** about all issues concerning radwaste, and with a lot of viewpoints
- **Not a too formal debate**
- A wider participation of the **public during all the decision making process**, not only at the end

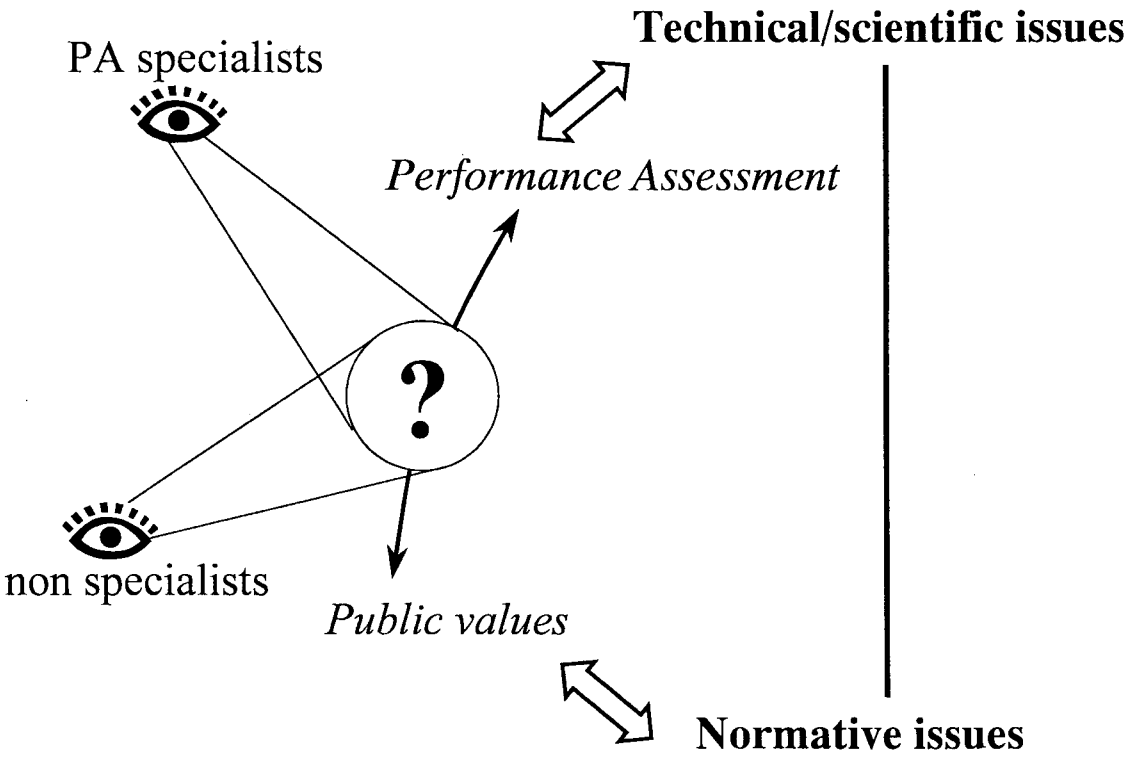


# Facts and values in PA

## Work in France

Results from a

*«PA specialist»*'s point of view





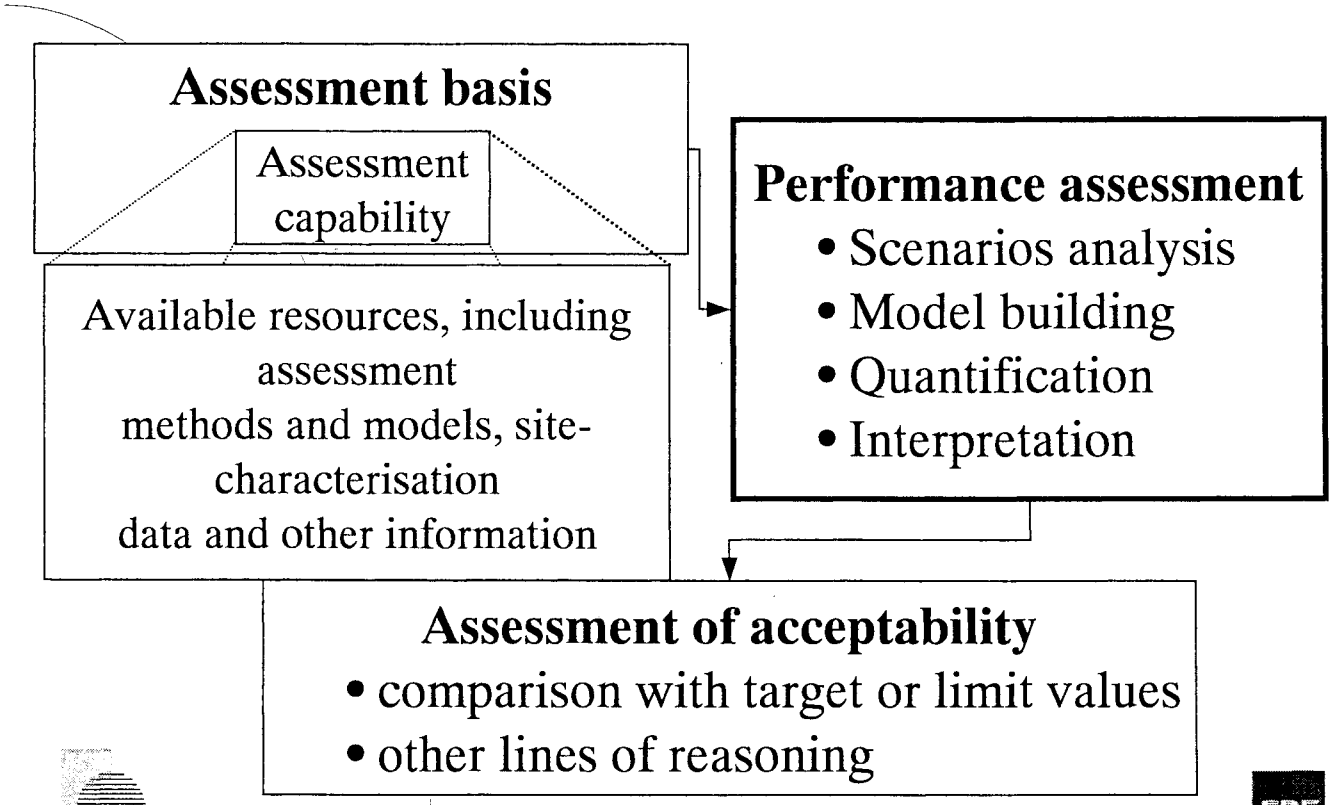

- Performance assessment

*"the analysis of the performance of the system concept, with the aim of developing confidence that the system will (or can be designed to) perform within acceptable bounds"*

(from NEA / Confidence in the Long-term Safety of Deep Geological Repositories)

RISCOM II Workshop / Paris, 5-6 September 2001

# Content of a Performance Assessment



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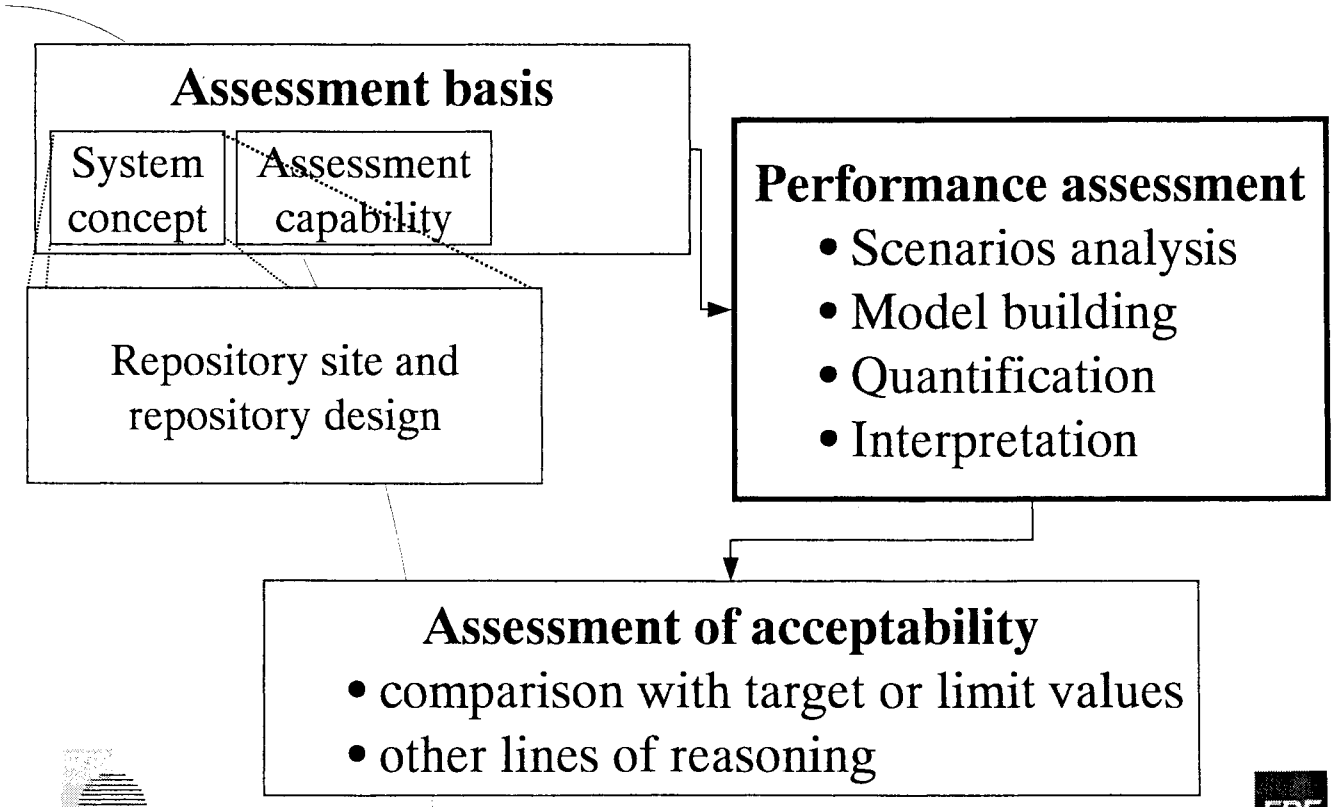

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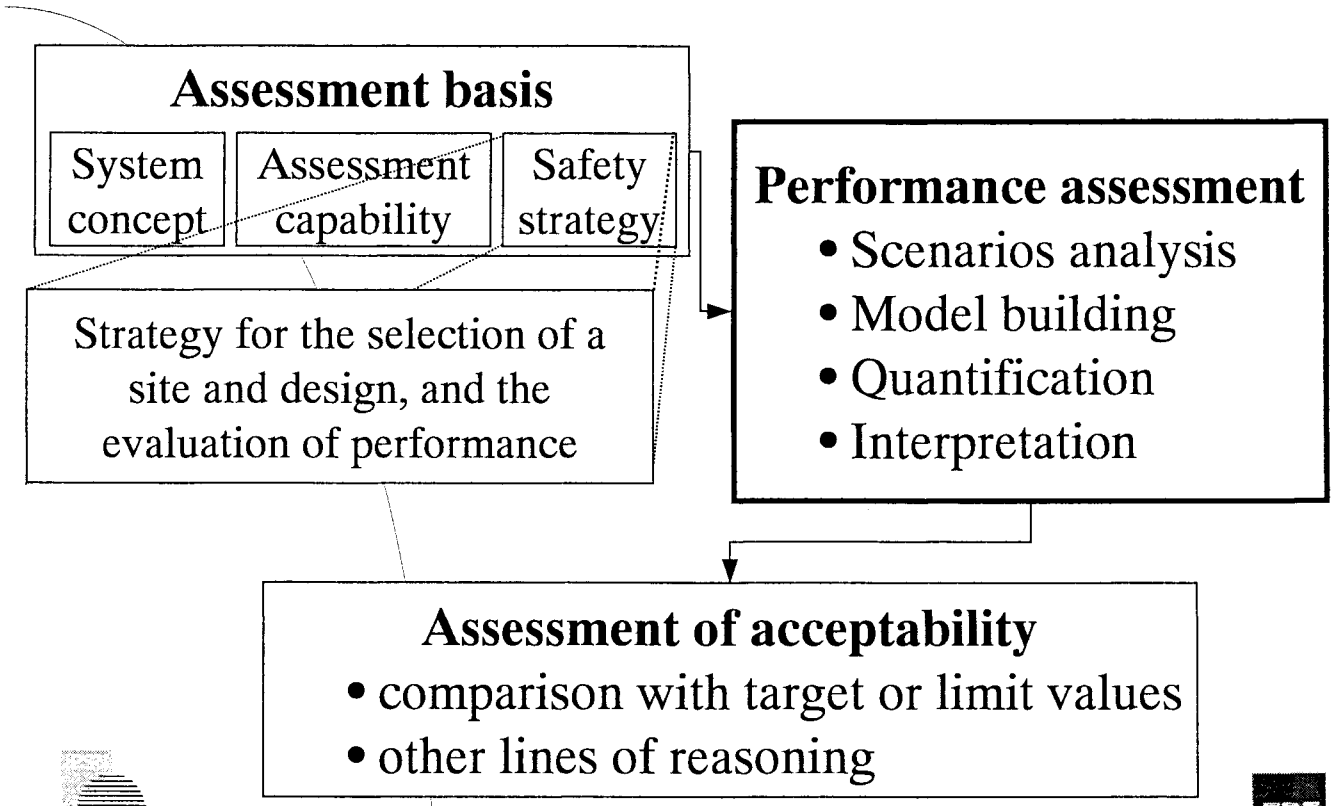
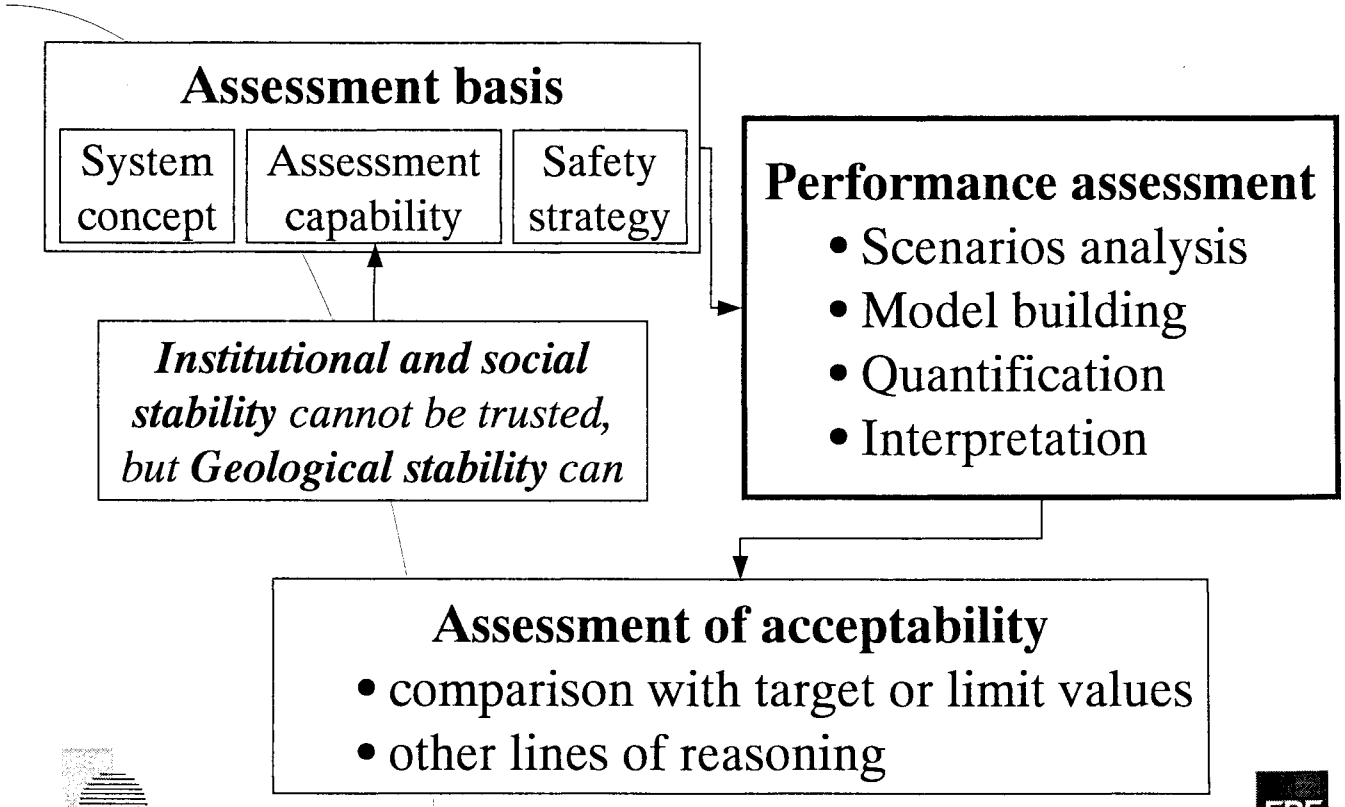





# PA & values: point of view of PA specialists



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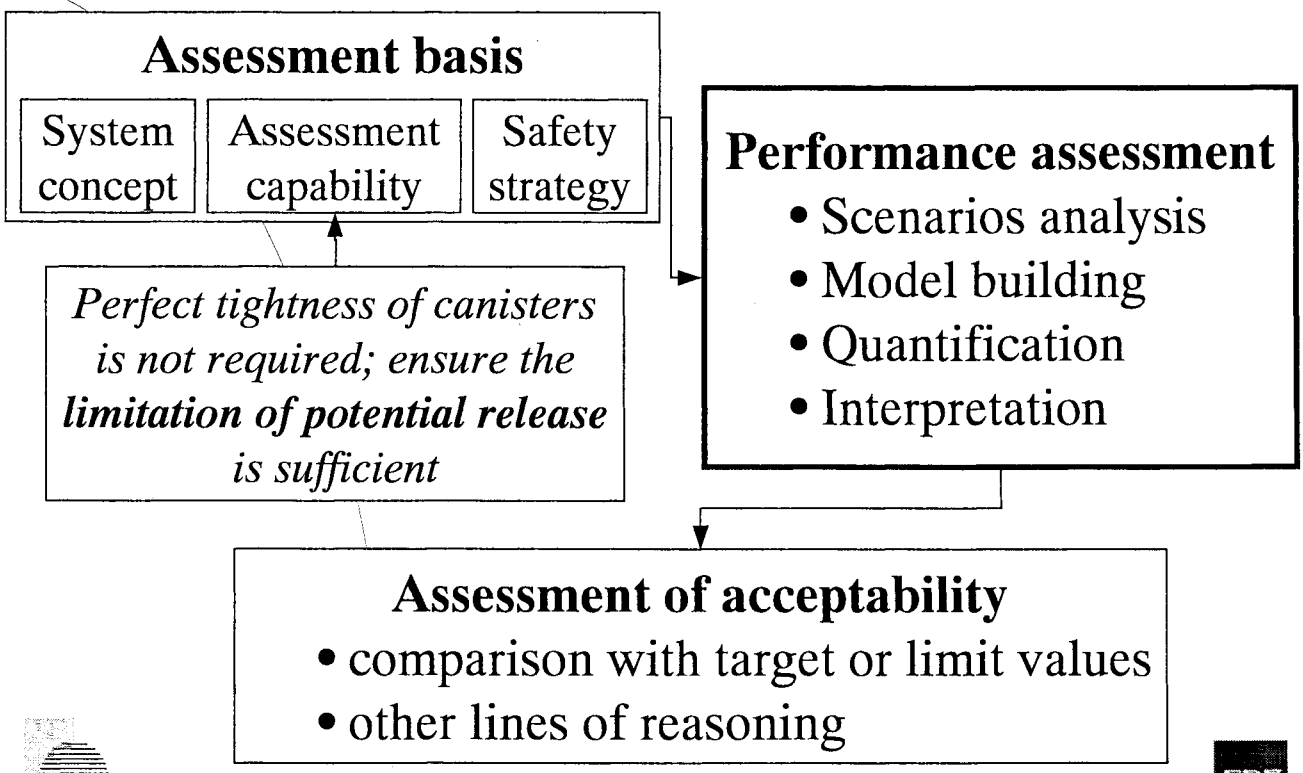




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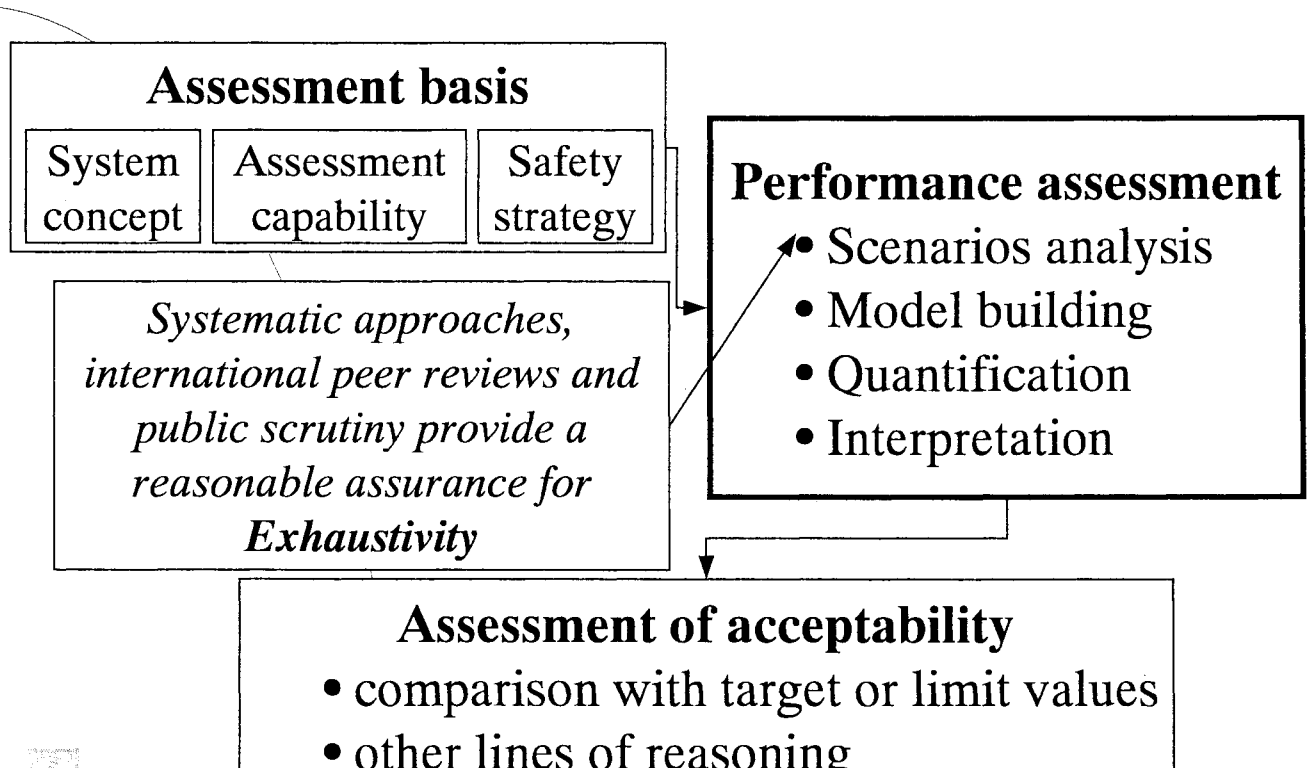


RISCOM II Workshop / Paris, 5-6 September 2001

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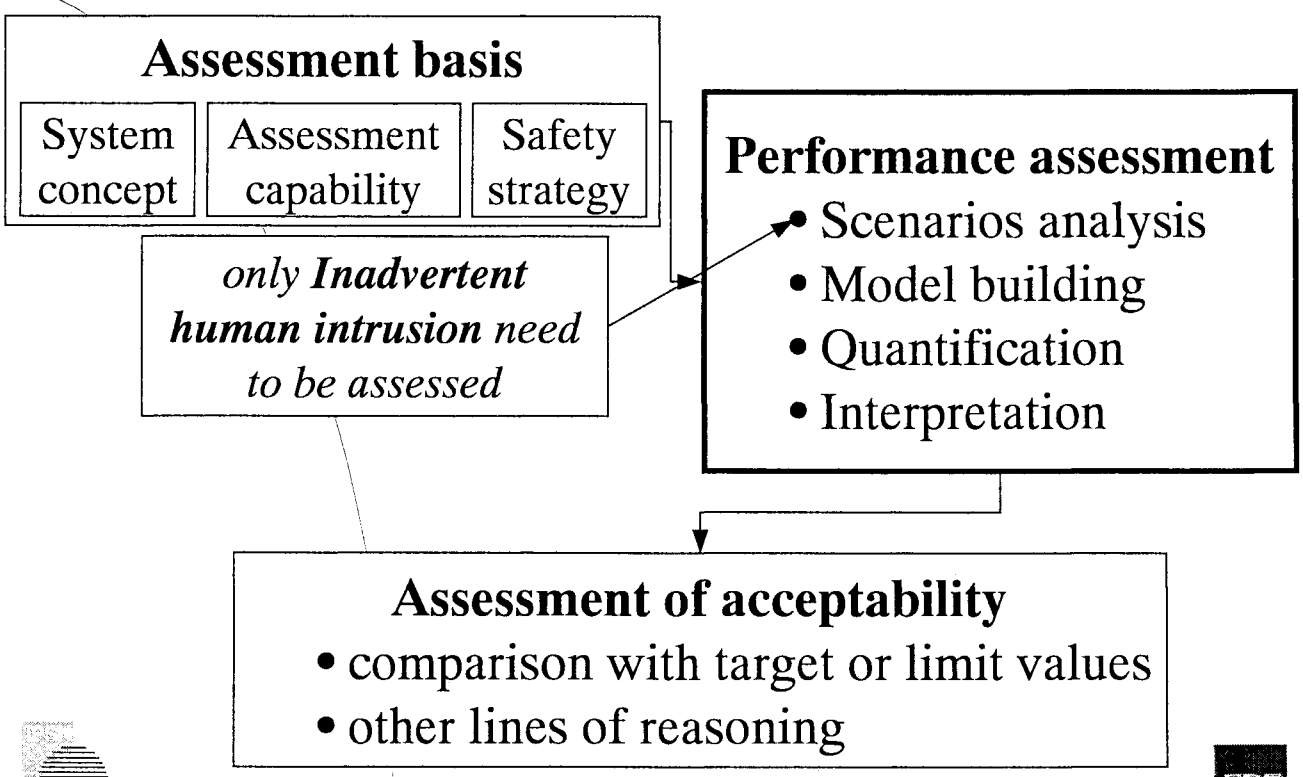




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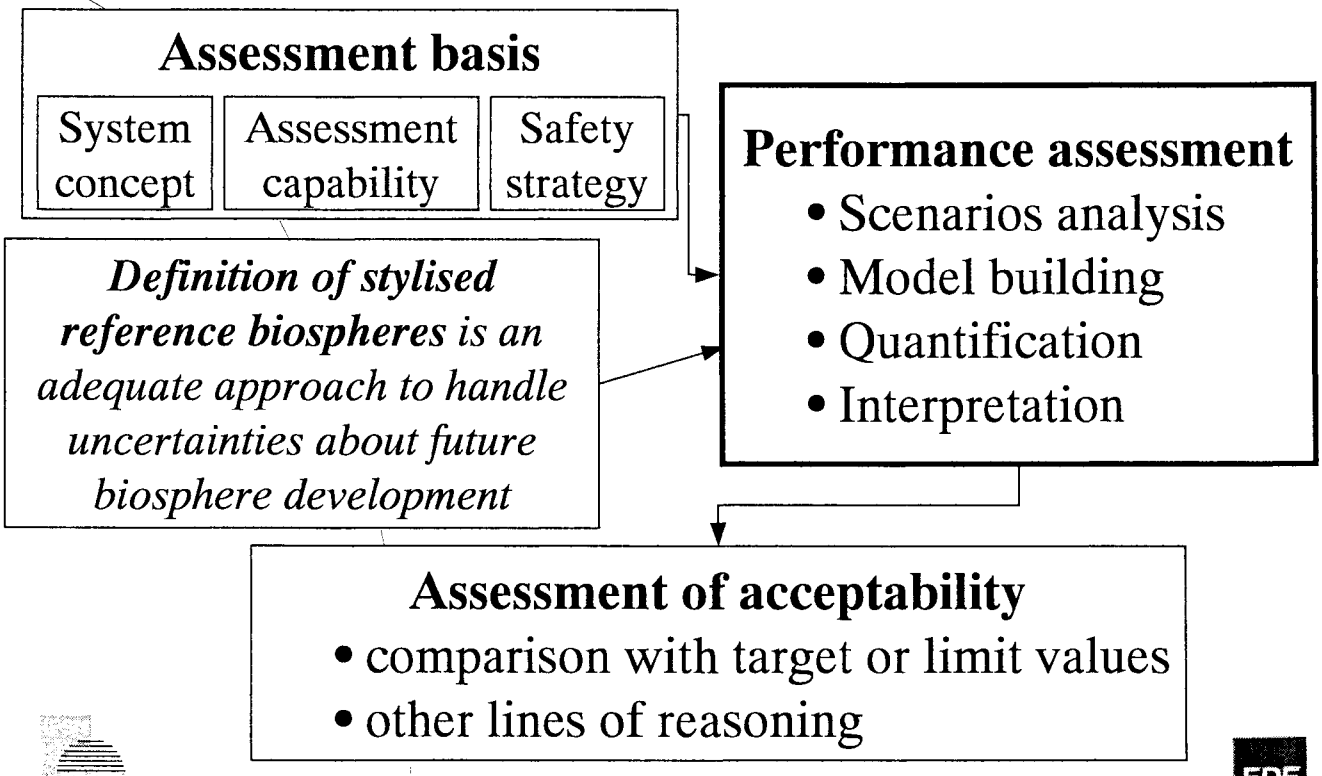


RISCOM II Workshop / Paris, 5-6 September 2001

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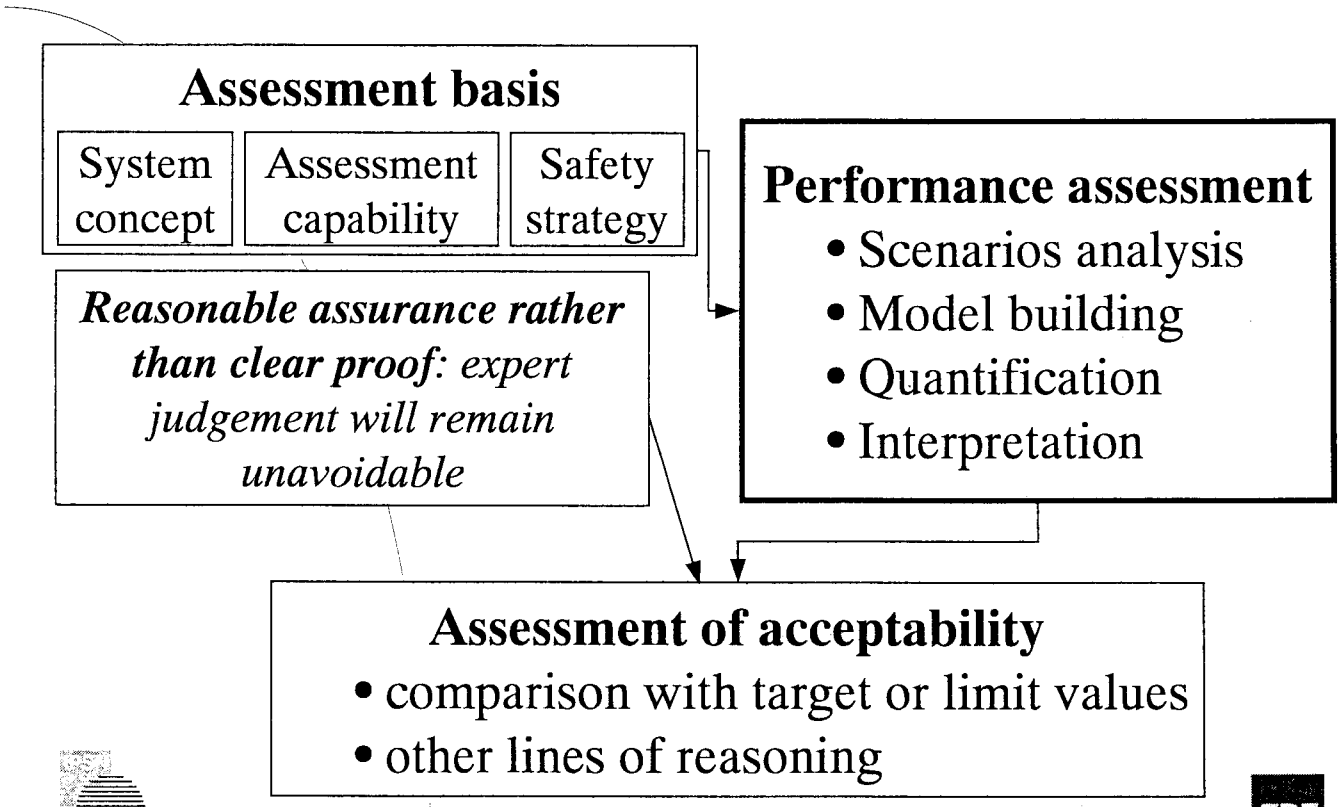
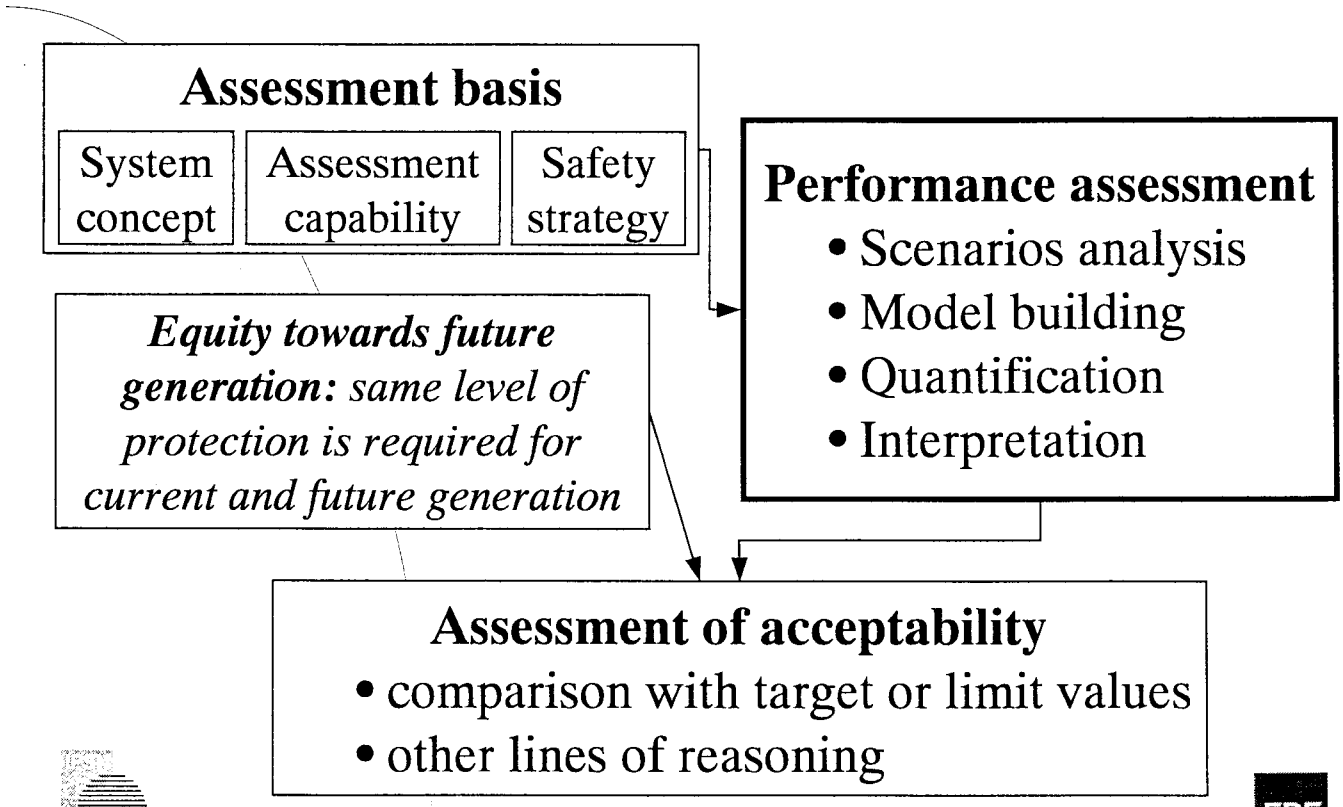





# **PA & values:** point of view of PA specialists




RISCOM II Workshop / Paris, 5-6 September 2001

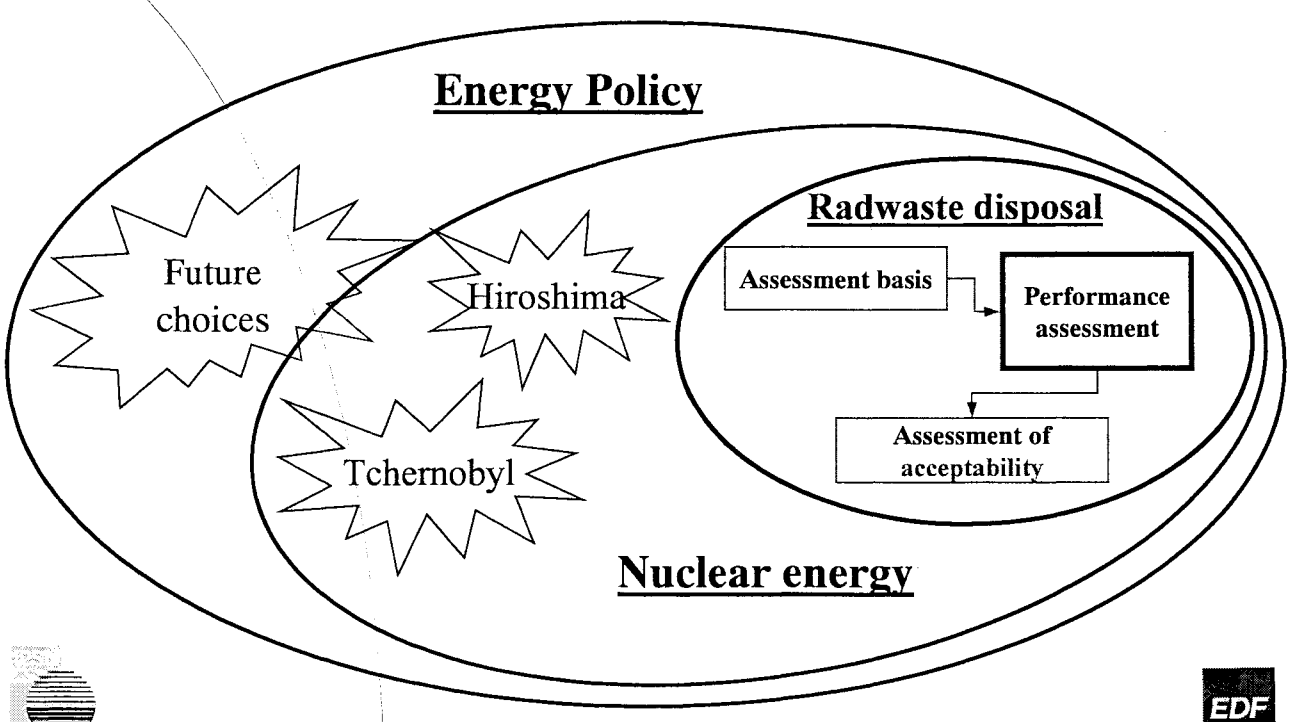
# **PA & values:** point of view of PA specialists

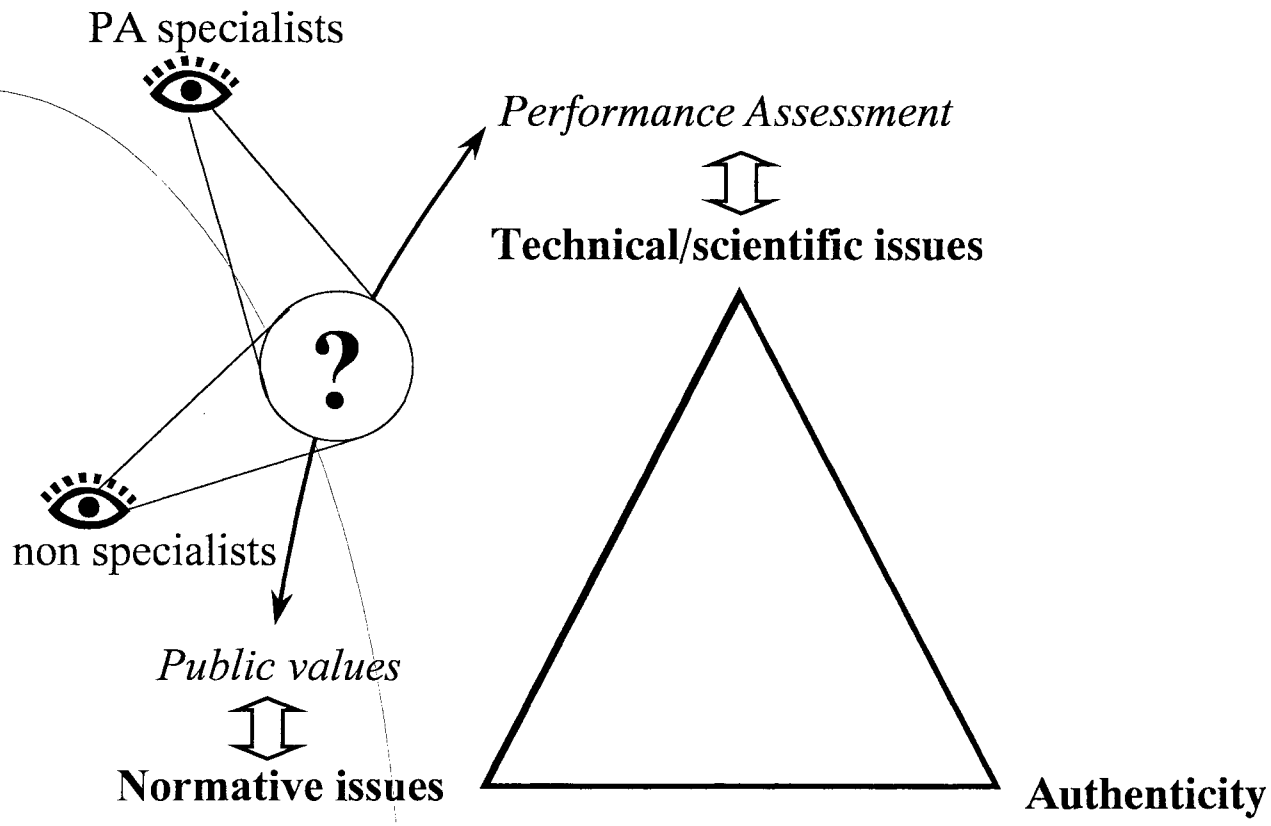
- Public values lie at the boundaries of PA
  - *To define objectives, to limit the scope, to bridge scientific gaps*
  - *To weigh different criteria and judge acceptability*

- Ideally the core of PA lie in the arena of science
  - *Values are scientific values rather than public values*
  - *Transparency and confidence essentially rely on the question of authenticity and trust*



# **PA & values:** point of view of non-specialists / Actual content of the discussions








# **PA & values:** point of view of non-specialists / Actual content of the discussions

- Questioning at a much higher level; PA is considered relatively anecdotic and unessential at this stage
- General distrust of institutions
- Technical point of view is often blamed as arrogant
- Legitimacy of scientists to extrapolate their knowledge over long-period of times is contested, considered doubtful

# Main topics of interest for non-specialist

- Inventories
  - How many wastes? Where are they now?
- Scenarios
  - Exhaustivity
  - Human intrusion
    - ⋆ man, society, history ...
    - ⋆ radiological accidents (Goïana)
- Time frames
  - Long term predictability
  - Long periods of time are meaningless; unreachable for common understanding

EDF Electricité de France

# Tentative interpretations

- Reluctance to enter in *"foreign territory"*:
  - PA clearly lies in the realm of science and specialists
  - Non specialists naturally prefer to start discussion in their own world: social and political consideration first
- PA's objective is viewed as a way to justify, to prove, not to propose choices
  - Non-specialists' opinion: Information is not sufficient; they claim to be heard and understood not convinced
- Clarifications or conditions are necessary before to open a debate on PA:
  - Justification of the national energy policy
  - Clarification of the decision process

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# Lessons learnt

- More open communication
  - PA probably needs firstly to be more extensively communicate.
  - PA must be communicated in a manner understandable by a large public. Whole context must be precise.
  - Communication must avoid signs of arrogance and encourage humility.
- Enhance confidence in our ability to handle long-term
  - By stressing the ability of earth sciences to understand and extrapolate processes at geological scales.
  - By improving the place of earth sciences in public cultural background.

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# A view of the RISCOM model from the french experiment

by

Stéphane CHATAIGNIER & Sandrine PIERLOT

(EDF)



# Content of the presentation

- Some words about the transparency model of RISCOM
- The Habermas' theory
- Some questions linked to our french experiment

# The Habermas' theory

- Forty years to build a critical theory of society
  *(J. Habermas : born in 1929, still alive)*

- Three main steps in his theory
  - ☞ Theory of communicative action (1981)
  - ☞ The discourse ethics (1991)
  - ☞ Right and democracy (1992)



# Theory of communicative action (1/3)

- From a Language theory and a society theory
- Language theory : three roots

→ **What I say is true**

→ **What I say is normatively correct**

→ **Authenticity**

# Theory of communicative action (2/3)

- Society theory

  Modern societies are complex, divided into specialised systems to insure the different functions of society (legal, political, economical ones, ...)

  ➡ Difficulty to communicate, need of dialogue



# Theory of communicative action (3/3)

**Language theory**

**+**

**Society theory**

**=**

**Theory of communicative action :**

- **Scientific** rationality from the objective world
- **Values** rationality from the normative world
- **Feelings** rationality from the emotional world

# The discourse ethics

- One step further: a procedure trying to go beyond the communication barriers in society
- Main basement: **to define the problem in common**, and to agree on the discussion process

→ symetry of partners
→ sincerity of partners
→ freedom for partners



# Deliberative democracy

The discourse ethics is not spontaneous

A political and legal framework to enhance the discourse ethics: the «deliberative democracy»

→ A concrete example ? the Barnier law

# Three questions from the WP-1 french experiment

1) On the problem definition in common

2) On the legitimacy of the guardian of transparency

3) On the aim for consultation

# Hidden Values among Risk Assessors in Sweden and Finland

Presentation at the RISCOM II Workshop in Paris, September 5-6, 2001.

Britt-Marie Drottz Sjöberg

Content:

⇒ Task and work method

⇒ Examples (Sweden & Finland)

⇒ Model

⇒ Conclusion

## Task and work method

### Task

A. To outline "points-of-departure" and assumptions of a qualitative nature that experts in the area of risk analysis believe have relevance for the work of safety analysis

B. To investigate how risk analysts clarify (create awareness for themselves and others) for such qualitative aspects

c To investigate what importance risk analysts give values regarding qualitative decisions

d To investigate how risk analysts make attempts to clarify values or "points-of-departure" in the resulting safety analysis

# Method

Interviews (approx. 1 hour/person)

Content & Participants:

Background; Work tasks & risk analysis; Definition of risk; Creation & use of scenarios, Models & data values; Uncertainty & acceptance; Changes in risk analysis over time; Considerations in choices; Communicative aspects; Summing up.

| Sweden | | | Finland | | |
|---|---|---|---|---|---|
| SKI | SSI | SKB | STUK | VTT | Posiva Oy |
| 4 | 2 | 4 | 1 | 2 | 2 |
| Group discussion: remains | | | Group discussion: Yes | | |

# OUTLINE OF THE INTERVIEW

1. Introduction

- Description of purpose
- Questions about the interviewees work and background

2. Personal "framing" of work tasks

- Views of main purpose (analysis) work
- How are or can the tasks be standardised
- What frames are given due to computer or analytic models – programs
- What distinguishes a good product
- How is a result validated

3. Definitions of risk

## OUTLINE OF THE INTERVIEW, cont.

4. Work with scenarios

- How are scenarios and composition models chosen for the analysis
- According to which criteria or on what basis are parameters or raw data changed in the analyses
- How reliable are the estimations / analyses

5. (Un)certainty margins

- Which criteria are used for acceptance of the safety margins employed
- To what extent do one think about whether given safety margins actually are acceptable
- Change of safty standards and margins over time

6. The change of risk analysis (or the actual work tasks) over time

-Last 10 years
- Which were the most important changes
- What can be expected to change within 10 years

---

# Examples (Sweden & Finland)

## Tasks:

"What we have thought a lot about the last year is how one should select scenarios that should be analysed in the risk analysis and how one should do that in a systematic manner and still feel somewhat convinced about that one has covered the most critical or – so that one achieves the most comprehensive analysis or description of scenarios as possible..." (Sweden)

"And somehow I think we have to make some approach between field chemistry and flow transport, and try to see how you could comfort better this field chemistry and flow simulations and that's a hard question .... You have to work for such consistent model or consistent basis for it ..." (Finland).

**c= importance**

**"You started by asking me who is the customer ... and I thought you were considering expert groups and communication, and I suppose you could also ask who is the customer here ... and I think that the work may have different customers at different times... and I think they should talk the language that the customer speaks at any time ... What this leads to is a layered approach, it's not possible that the experts completely get rid of the jargon – they need the jargon to be precise – but, of course, they should also be able to use other languages... to master several languages as ordinary people do when they are speaking different natural languages. But (...) when dealing with the public at large (...) why, in fact, should the public at large know so much about waste properties or migration things – I don't think they do have to (....). (Finland)**

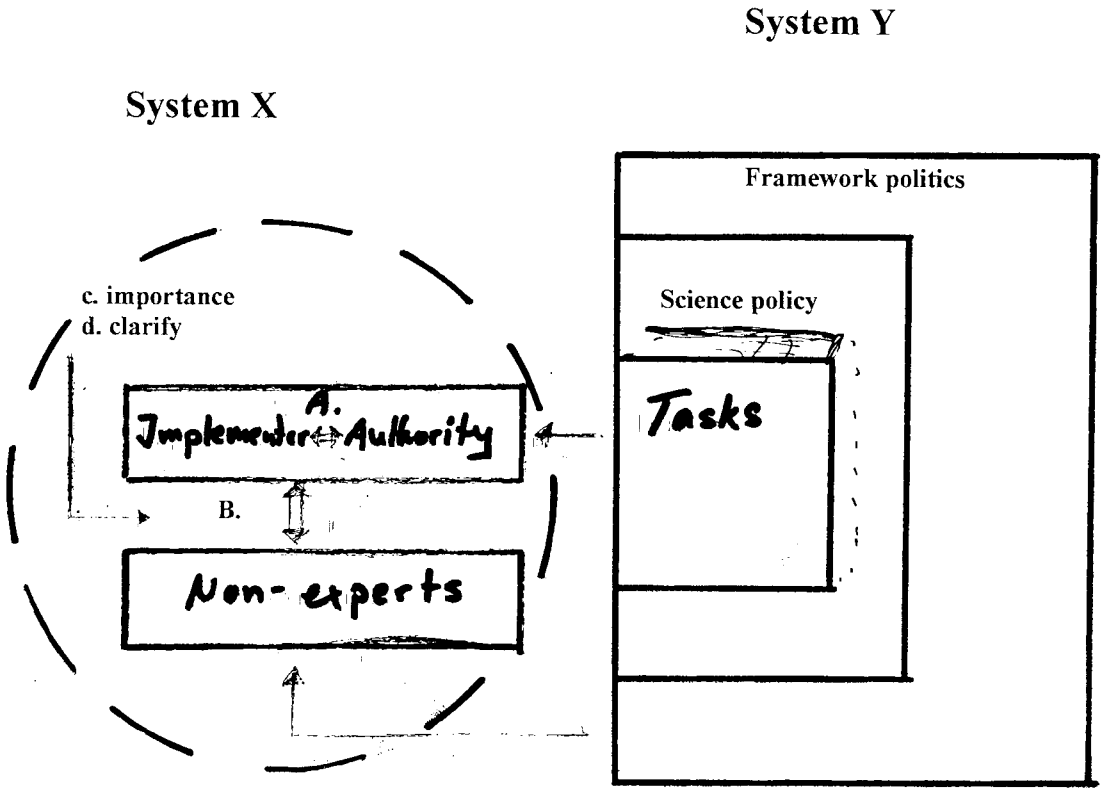
**d= To clarify**

"I think we have tried to make a lot of efforts to be safe, transparent ..." (Finland).

"...use the national and international experts in the field to find some alternative ways to communicate results". (Finland).

"The most difficult thing to gain understanding for is this uncertainty discussion, that is an important thing. It's much easier to say "it's like this" or "it's not like this"... (Sweden)

## ⇒ Emerging model and Examples (Sweden & Finland)




## Examples (Sweden & Finland)

### Science policy

**"You asked quite a lot about risk analysis and safety analysis, and we actually don't use those words very much. We don't use the word risk analysis – there is a fundamental difference between reactor safety analysis and safety assessment of a repository, and we are not able to give any clear-cut number, or quantitative estimate, of the repository system and – the role of the quantitative analysis has gone down and down and we are now speaking of the safety evaluation of the system…" (Finland)**

**"Since SR-97 there is a discussion about "risk" which we all believed was well defined before, but when we made SR-97 I am not sure where we will end and SSI has obviously got some head ache about how they should interpret their own instructions (directions)… one must interpret it clearly – that interpretation must be done and that's the thing that international evaluation has observed as well, luckily… (Sweden)**

# Examples (Sweden & Finland)

## Framework politics

**"We must be cautious when we make comparisons between Scandinavian countries and the rest of the world. For example, the United States is completely another world in this respect, and – one thing to remember is the size of the country, because that certainly creates – the more there are people the more there are interest groups with conflicting interests, and – something about money behind some issues. I think this is also affecting science processes ... it's just in the interests of some groups to oppose some project or plans – they somehow get some advantages or money or whatever in opposing some proposals, for example, as far as pure science is concerned, it is also a question of who finances science and how much money is devoted to various areas of science. For example, I can see that transmutation can be opposed to deep geological disposal, and perhaps that might be a case in the future, and it's an example of "the best is the enemy of good"( ... ) Many problems have been related to other political questions – so we go into the area of politics here (...) but one thing is openness here and for example the United States and England that have a culture of openness, but still ... "** (Finland)
:

## Tasks

Data/scenario sampling & choices
Integration of valid "materials"
Assessing risk & safety
Exchange & communication

## Science policies

Area interests & conflicts
Trusted, traditional knowledge
Accumulated investments
Changes, developments
(e.g. dos → risk concept)
Resource allocation

## Framework politics

Energy politics; decisions
Laws & regulations
Defined tasks & roles
Normal procedures

(Examples: Choice of energy sources,
Separation of energy & waste issues
No dead-line in time 0-alternative
Depositing of imported fuel
Etc.)

## ⇒ General conclusion

There is a need, and maybe a current tendency, to go from the "tasks" area to the "science policy" area to be able to clarify points-of-departure, postulations and assumptions for the risk and safety assessment work and the related actions in e.g. the waste management area.

## Discussion

"Well, what if you get some information about underlying values or choices, I would like to know, how would you use that then? How they chose values, parameters for calculations, if you know that so how could that help you make it better? What is your proposal? – If you document all there is – does that really help?"

# PRESENTATION AT THE RISCOM II -WORKSHOP 6TH SEPTEMBER 2001, PARIS

**Antti Leskinen**
**Diskurssi Ltd**
**Finland**

## THE ARGUMENTS

**Safety vs. non-safety**
*facility: geological, technical design
*transportation: container durability

**Health**
*physiological
*psycho-social e.g. fears
*health and safety at work

1

**Image**
*municipal
*regional

**Moral/ethical**
*future generations
*national responsibility

**Ecological**
*nature
*pollution

2

**Political**
*democracy: referendum, suspected conspiracy
*centralisation of power
*risks: unstable conditions, terrorism, war

3

## Planning and decision-making process

*information: sufficiency, reliability
*risk acceptance
*participation: openness, fairness, effectiveness, local / nation-wide participation
*alternatives
*stepwise, decision just to research further

4

## Juridical and other agreements

*import from EU
*interim storage not legal
*international agreements and principles

## Technological

*non-feasible alternatives
*loosing domestic expertise
*follow-up of international research

5

## Economic

*municipal - neighbours / tax revenue
* employment
*commerce and industry
*existing state fund
*costs: accidents / control / retrieval

6

## REASONS FOR POSIVA`S SUCCESS

Diskursi Oy

- ✔ No big mistakes in argumentation
- ✔ Effort to make things comprehensible
- ✔ Freedom of the EIA-team
- ✔ Staged decision making process
- ✔ trust by participation
- ✔ two staged high-quality EIA
- ✔ something important to opponents

1

## FINNISH CONTRIBUTION TO THE WORK PACKAGE 4

Diskursi Oy

- ✔ PURPOSE: to analyse the public involvement procedures conducted by Posiva
- ✔ OBJECTIVES: to highlight and clarify important aspects of communication and participation; to construct a practical model of action

2

## FINNISH CONTRIBUTION TO THE WORK PACKAGE 4

Diskursi Oy

- ✔ THEORY: Communicative planning theory, theories of risk communication, theory of organisational learning
- ✔ MATERIAL AND METHOD: Qualitative; documents + interviews
- ✔ SOME RESEARCH QUESTIONS

3

# WP5: Swedish Hearings - TIMELINE

Development of hearing framework built on RISCOM model:
- Two Recursive Levels
- TASCOI

Four types of activities:
- *Methodology*: Proposing procedures/questions
- *Disseminating:* Communicating whole method.
- *Documenting Transformation*: Questionnaires
- *Practical Preparations*: Finding/instructing C&R

June 2000:
1st WG meeting SKI/SSI/SKB

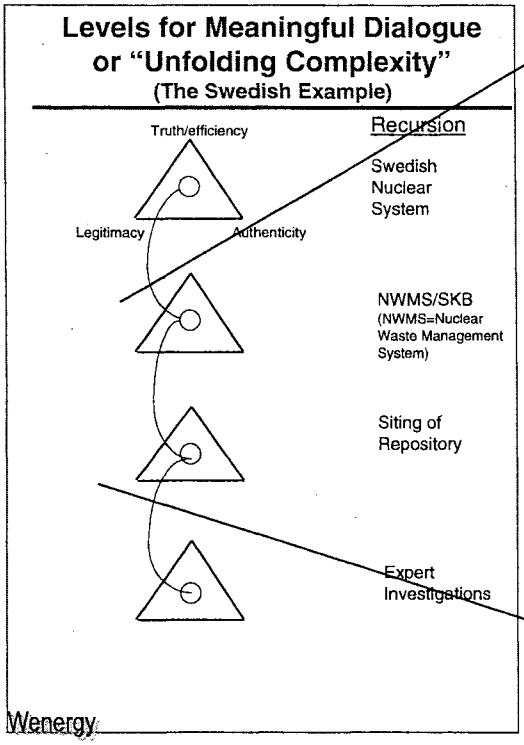
Autumn 2000:
RG: Discussions about purpose and format
WG: Further meetings of WG practical prep.

January 2001:
Joint Three Municipalities Meeting:
Presentation & discussion of purpose and format

February 2001:
Two two-days hearings at two locations.
3+2 municipalities involved

Wenergy

# WP5: Swedish Hearings - TWO RECURSIONS



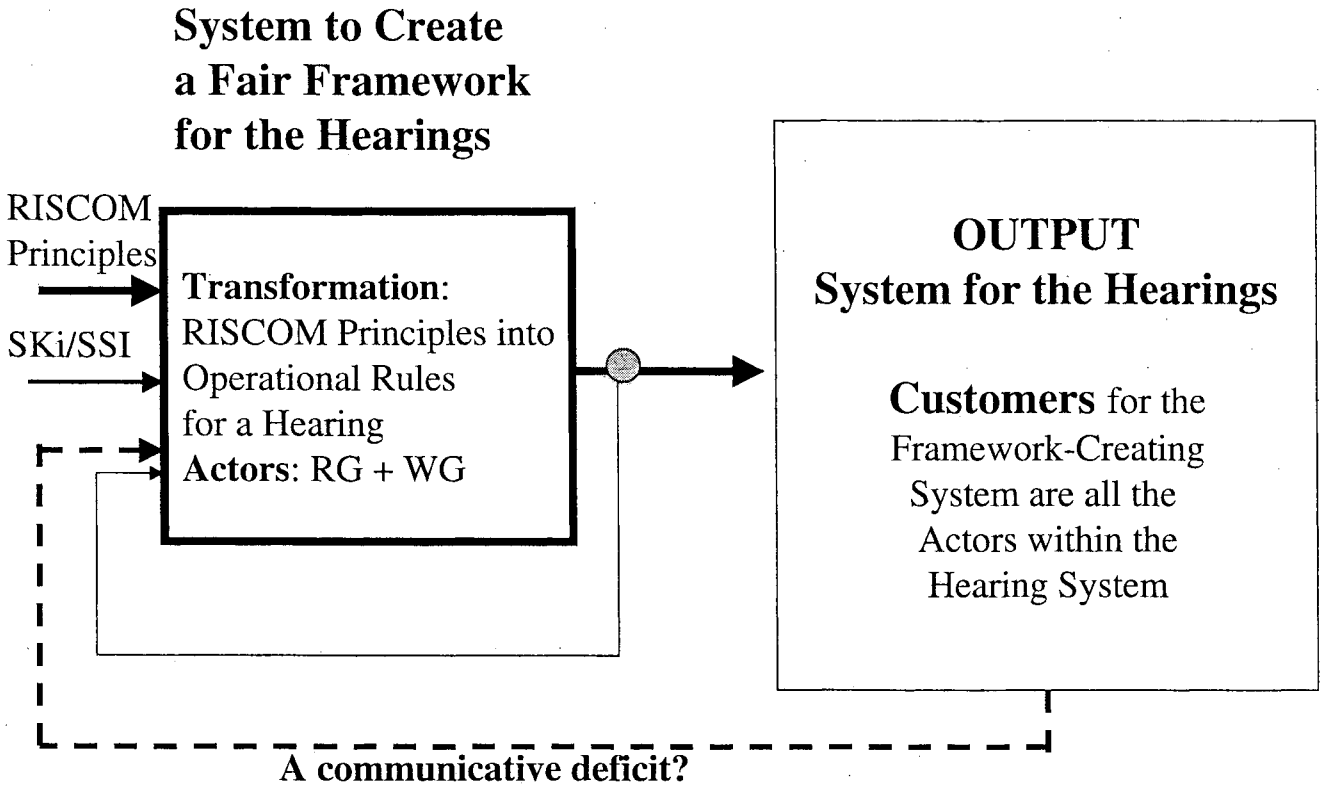

## NWMS: Methods

- increase awareness of issues
- stretch whole system (incl. authenticity of SKi/SSI)
- seminar-type: plenary⇒ group discussions⇒plenary

## Siting: Selection

- increase awareness of SKB selection procedures
- stretch SKB
- inquiry format: Q+A sessions with interrogator

# WP5: Swedish Hearings - TASCOI

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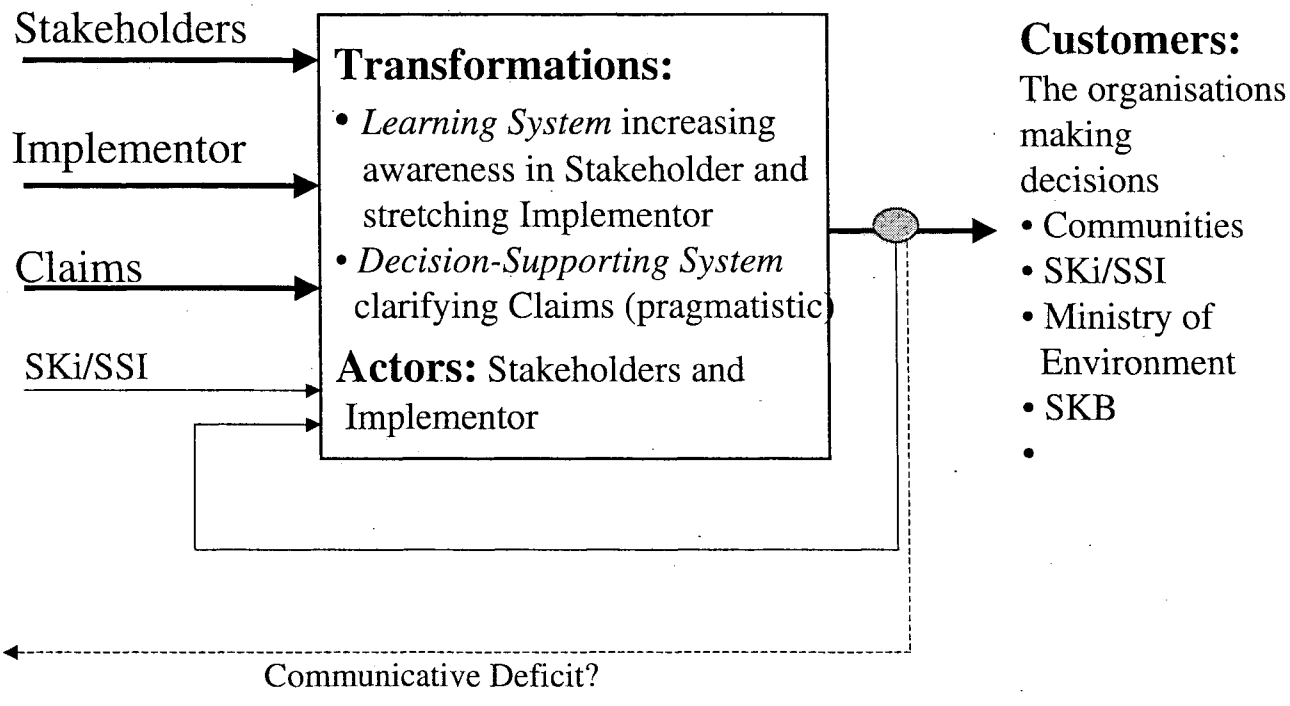
# WP5: Swedish Hearings - TASCOI

## System for the Hearings




Wenergy

# AN EVALUATION OF HEARINGS ON NUCLEAR WASTE ISSUES

**A Report on Public Hearings**
**on the**
**Issues of Metod and Locailty for a High Level Nuclear Waste Repository**
**in the Communities of**
**Östhammar, Tierp, Älvkarleby, Hultsfred and Oskarshamn**



**Presentation at the RISCOM II Workshop in Paris,September 5-6, 2001.**

Britt-Marie Drottz Sjöberg

## The Structure of the Programs

### Chair person, Moderator, Panel & Public

**Nordduppland: February 7: Methods**

**Morning 10.30-13.00**

**1. Review by SKI**

**2. SKB presentations**
- system analysis
- deep bore holes
- 0-alternative
- long range safety, KBS-3

**3. Transmutation – an alternative?**

**Afternoon 14.30-17.30**

**Group discussions**
- to find the questions essential for the choice of method (repository)
- to prepare questions

**Evening 19.00-21.30**

Hearing: SKB, SKI & SSI

# The Structure of the Programs

## Chair person, Moderator, Panel & Public

## Norduppland: February 8: Choices of Localities

**Afternoon 15-20**

1. SKB presentations (1 h)

- Report on choices of communities

-Aims in the studies at the locations

2. Hearings

- Questions prepared the previous day
- Moderator & public

# The Structure of the Programs

## Chair person, Moderator, Panel & Public

## Hultsfred: February 13: Methods

**Morning 10.30-13.15**

1. Review by SKI

2. SKB presentations
- system analysis
- deep bore holes
- 0-alternative
- long range safety, KBS-3

3. Transmutation – an alternative?

**Afternoon 14.15-16.15**

Group discussions
- to find the questions essential for the choice of method (repository)
- to prepare questions

**Evening 19.00-21.30 in Oskarshamn**

Hearing: SKB, SKI & SSI

# The Structure of the Programs

## Chair person, Moderator, Panel & Public

**Figeholm (Oskarshamn): February 14: Choices of Localities**

**Afternoon 16-21**

1. SKB presentations (1 h)

- Report on choices of communities

-Aims in the studies at the locations

2. Hearings

- Questions prepared the previous day
- Moderator & public

# The Structure of the Programs

## Chair person, Moderator, Panel & Public

**Nyköping: February 15: Method + Choices of Localities**

**Afternoon 15-19**

1. Introductions

2. SKB presentations

Dinner

3. Hearings

- questions from the moderator
- questions from the participants

# Assignment:

- To participate in the hearings

- To evaluate the hearings

  for their effects, especially regarding how they might have changed the participants' views of the process, and in relation to relevant facts, and general attitude

- To report

---

# Questionnairs & Participants

| | VERSION | | |
|---|---|---|---|
| | 1 only | 2 only | 1+2 both |
| Norduppland | 23 | 12 | 49 |
| Småland | 23 | 21 | 71 |
| Nyköping | - | 14 | - |
| Sum | 46 | 47 | 76 |

**Questionnaire no 1** 46+ 76 = 122

**Questionnaire no 2** 47 + 76 = 123

**Questionnaire no 3** (Summer 2001) = 43 (of 70; 61%)

# Participating Groups

| | Norduppland | Småland | Nyköping | All |
|---|---|---|---|---|
| **Questionnaire 1** | | | | |
| Engaged | 40 | 20+16=36 | - | 76 |
| Novices | 10 | 1 + 3 =4 | - | 14 |
| Authorities | 11 | 4 + 1 =5 | - | 16 |
| SKB | 11 | 4 + 1 =5 | - | 16 |
| Sum | 72 | (29)(21)=50 | - | 122 |
| | | | | |
| **Questionnaire 2** | | | | |
| Engaged | 34 | 7+21=28 | - | 62 |
| Novices | 11 | 3 + 4=7 | - | 18 |
| Authorities | 8 | 2 + 3=5 | - | 13 |
| SKB | 7 | 1 + 8=9 | - | 16 |
| Sum | 60 | (13)(36)=49 | 14 | 123 |

## Examples of Questionnaire Questions

### Part 1.

**Qualitative**

Which is the most important question you want a response to today?

What, in your opinion, is the most important result to be achieved at this hearing?

Which are the most important reasons that you participate in the hearings?

**Quantitative**

I what way have you prepared yourself for this hearing?

How credible are the following organizations and authorities, generally speaking and according to your opinion? (SKB, the community review org., the local group of critics, SKI, SSI).

Which is the best way, in your opinion, to deposit Swedish nuclear waste?

Would you accept a nuclear waste repository in your community if it was shown that the place fulfilled the demands of the authorities?

To what extent do you think that the questions you have today will be responded to during this hearing?

Some background variables

## Examples of Questionnaire Questions

## Part 2.

### Qualitative

Did you receive answers to your questions?

What was GOOD with this hearing?

What was BAD with this hearing?

What can one learn from this kind of work procedure, in your opinion?

Are there still questions to respond to regarding Swedish nuclear waste handling, in your opinion? (If yes: What questions?)

### Quantitative

Did you learn anything new with respect to the hearings and the discussions?

Did your attitude change to any organization or authority due to their appearance in the hearings?

## Part 3.

### Qualitative

What is your opinion, in retrospect, of the idea to arrange and carry through the hearings?

How did SKB, and the authorities, manage to respond to the questions that were put to them in the hearings, in your opinion?

Is the form of hearing that you participated in a good or bad form for illuminating questions, problems and views in a correct and comprehensive in your community?

# Examples of Questions

## Method

* When will the choice of method be taken?
* Which are the pros and cons with fresh and salt water?
* Why the change in the thickness of the canister?
* What will happen if the bentonit clay gets too much water? – too little water? – will it be stable?
*How much radiation will be emitted from a hot canister (90° C)?
* What is the difference between "good" and "good enough" rock/geology?
* What is the worst that can happen?
* What does SSI mean when writing (p. 48) that radiation protection should be as strong as economically and technically motivated?

## Location & procedure

* Was the participation of Hultsfred and Älvkarleby just for the statistics?
* What role did the transports play in the choice?
* Why is there no safety assessment of a scenario with several nuclear facilities?
* What happens if no locality gets acceptance from the authorities?
* What does the government say?
* Why such hurry (now)?
* What demands (and criteria) have been formulated by the authorities?
* What guaranties do we have that no foreign nuclear material will be accepted into Sweden/ deposited?

# RESULTS

| Good | Not so good | Bad |
|---|---|---|
| - The idea and the arrangement | - Easily too little time | |
| - Responded to a demand for clarifying answers | - Easily too much from opponents | - Three communities together |
| - A way to develop democracy | - The level of talk & discussion | - Few "novices", the public |
| - Supplementing information | - Difficulties advertising | - Some rooms too small |
| - Competent persons responded | - Time for discussions | - Some could be more precise / specific |
| - All central actors participated | - Some answers less clear | - No independent experts |
| - Structure and realization | - "Professional" talkers | - Unwanted questions dropped |
| - Stringent moderator | - No choice of themes or groups in the discussion groups | - Some answers too vague |
| - Clarifying of roles | - Too large discussion groups | - Discussants not listening |
| - Group discussions | - Strong persons can dominate | - All actors have the same view |
| - The timing was right | - Daytime / evenings | |

## Were the hearings good or bad?

| | Response frequences* | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Good | | Neither/nor | | Bad | | No resp. | | | | | |
| Locailty | N | % | N | % | N | % | N | % | M# | SD | N | |
| Norduppland | 45 | 75 | 6 | 10 | 6 | 10 | 3 | 5 | 2.23 | 0.76 | 60 | |
| Småland | 39 | 80 | 7 | 14 | 2 | 4 | 1 | 2 | 2.08 | 0.68 | 49 | |
| Nyköping | 10 | 71 | 1 | 7 | 1 | 7 | 2 | 14 | 1.92 | 0.90 | 14 | |

* Frequences reported in groups of "Good" (1+2), "Neither/nor" (3) and "Bad" (4+5).
# Scale: 1=Very good, 2= Rather good, 3= Neither/nor, 4= Rather bad, 5= Very bad.

# Did your attitude change to any of the organizations or authorities?

| | | Type of organization | | | | |
|---|---|---|---|---|---|---|
| | | (1) SKB | (2) Com. rew. org. | (3) Local critics gr. | (4) SKI | (5) SSI |
| Nord-uppland | M | 3.14 | 3.06 | 2.93 | 3.04 | 3.04 |
| | SD | 0.59 | 0.65 | 0.92 | 0.78 | 0.73 |
| | *Freq: | | | | | |
| N=60 | More neg. | 4 | 4 | 12 | 11 | 8 |
| | No change | 41 | 38 | 33 | 32 | 36 |
| | More pos. | 10 | 8 | 10 | 14 | 13 |
| | No resp. | 5 | 10 | 5 | 3 | 3 |
| Småland | M | 3.16 | 3.27 | 2.95 | 3.12 | 3.15 |
| | SD | 0.56 | 0.52 | 0.58 | 0.64 | 0.50 |
| | *Freq: | | | | | |
| N= 49 | More neg. | 2 | 2 | 5 | 5 | 2 |
| | No change | 36 | 31 | 28 | 34 | 38 |
| | More pos. | 7 | 12 | 4 | 9 | 8 |
| | No resp. | 4 | 4 | 12 | 1 | 1 |
| Nyköping | M | 3.15 | 2.83 | 3.00 | 3.42 | 3.42 |
| | SD | 0.38 | 0.39 | 0.74 | 0.52 | 0.52 |
| | *Freq.: | | | | | |
| N=14 | More neg. | 0 | 2 | 3 | 0 | 0 |
| | No change | 11 | 10 | 6 | 7 | 7 |
| | More pos. | 2 | 0 | 3 | 5 | 5 |
| | No resp. | 1 | 2 | 2 | 2 | 2 |

Skala: 1= Ja, mycket mer negativ, 2= Ja, lite mer negativ, 3= Inte alls, 4= Ja, något mer positiv, 5= Ja, mycket mer positiv. * Frekvenser redovisas med sammanslagna negativa (1+2) respektive positiva (4+5) värden.

Two models predicting acceptance of a nuclear repository in the home community from ratings of credibility of four organizations, participants from the hearings in Norduppland and Småland.

| Predictor | Locality | N | $R^2$(adj) | β* | T* | p |
|---|---|---|---|---|---|---|
| | Norduppland | 64 | 0.54 | | | |
| SKB | | | | -0.35 | -2.56 | 0.02 |
| Local critical group | | | | 0.25 | 2.65 | 0.01 |
| SKI | | | | -0.31 | -2.32 | 0.03 |
| | Småland | 37 | 0.19 | | | |
| SKB | | | | -0.39 | -2.51 | 0.02 |
| Local critical group | | | | 0.41 | 2.65 | 0.02 |

## Summary

1. **Positive evaluations overall, but also some constructive and some less constructive criticism**

2. **Participants were the already knowledgeable, there was very little participatuion from "the general public"**

3. **People were very pleased with getting replies to their questions, but not all questions were (or could be) given complete responses, and there was some time preassure**

4. **The most satisfied community was Nyköping, although that was a very small group responding to the question**

5. **The majority did not change their opinion about acting organizations or authorities the little change there was, however, was positive**

6. **A large numer of views, questions and comment are summarized in a report (in Swedish)**

## + The COWAM European Concerted Action



## + COWAM Rationales

- NWM a global problem looking for a local solution
- need for a sound contract between the national community and a local community
- need for mutual trust between the national and a local community

+ local - national linking, a very problematic issue for NWM in the last decades
  - NWM designed as a technical issue,
  - local communities only involved at the last stage of the DMP
  - when almost all components of the decision were already fixed

## + The COWAM European Concerted Action

- A 3 years collective learning process (2000-2003)
- supported by The European Commission DG Research
- 4 seminars located in an involved local community, a concluding workshop
- the existing experience of TRUSTNET on Risk Governance



## + Objectives of COWAM

- to empower concerned European local communities in the NWM decision making process
- to give them the opportunity to give their views on what is a good decision making process
- to create favourable conditions for local communities to network at the European level
- to propose a collective learning process based on existing experiences of NWM decision making in different European countries
- to improve dialogue of local communities with a panel of operators, national nuclear authorities and experts

+ **Expected outcome of COWAM**

- A comparative analysis of nuclear waste facility siting decision-making processes in Europe
- Concrete recommendations to improve the quality of decision-making related to NWM facility siting and operating
- Practicable guidelines to assist national policy formulation



+ **The participants of COWAM**

- Elected local and regional councils,
- Local NGOs
- Administration of local and regional councils
- Local Trade Unions
- NWM Operators
- National Authorities in NWM
- Experts

+ **COWAM European Network**
  + 120 participants from
    - Belgium
    - Finland
    - France
    - Germany
    - Spain
    - Sweden
    - Switzerland
    - UK



- 75% from European local communities
- about 20 European local communities involved

+ **COWAM Preliminary programme**
  + Oskarshamn (October 2001)
    + case studies on
      - Sellafield (UK)
      - Tierp (Sweden)
      - Oskarshamn (Sweden)
  - Bure (2002)
  - Wellenberg (2002)

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# THE NEA/RWMC FORUM ON STAKEHOLDER CONFIDENCE

R. Beauheim, NEA

RISCOM II: Workshop 1
5-6 September 2001

1

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## FORUM ON STAKEHOLDER CONFIDENCE (FSC)

- RWMC initiative to improve understanding of the principles of stakeholder interaction and public participation in decision-making related to radioactive waste management
- First workshop held in August 2000: 75 participants from 14 countries; widely varied backgrounds; many lessons learnt; proceedings, including a summary of the workshop, are available
- Second workshop to be held in Finland in November 2001

2

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## ISSUES

- Technology is no longer perceived as the bright future; ... centralised decision-making has ceded to a stronger involvement of local authority, ... direct participation of the public in policy and decision making apart from their elected representatives is an established trend
- How can stakeholders best be made aware of the country's policy and of the roles of the various actors charged with implementing the policy?
- How can stakeholders best be actively involved while the rules of the game are being established?
- How much seeking involvement is enough?

3

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## AUGUST 2000 WORKSHOP

- Reviewed the world-wide experience
- Was a first gathering of information and assessment of level of interest
- Continuation of the initiative was strongly encouraged, including the formulation of strategic guidelines

4

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## FSC STRATEGIC DOCUMENT

- Acknowledges the political trend developing in democratic societies toward decisions on technical matters being increasingly made with consideration of, and input from, external technical and non-technical stakeholders
- Links the FSC to the strategic directions taken by the OECD as a whole, and to the strategic needs identified by the RWMC
- Describes the modus operandi and main expectations
- Lists the major issues

5

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## FSC PARTICIPATION

- The FSC members are nominees from a broad range of waste management institutions. Individually, they have responsibility, overview, and/or experience in stakeholder involvement.
- A wider representation of civil society is to be obtained through workshops to be held in national contexts, with local stakeholders.
- Not everybody can be invited all the time, but a relationship can be maintained with all participants and with other organisations/individuals that wish to be kept abreast.

6

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## WORKSHOPS AND MEETINGS

- FSC alternates between workshops and meetings (one each per year)
- Workshops are held at national locations where the dialogue/debate can involve a wide range of stakeholders for a specific project
- Meetings involve only FSC members (and invited experts). Lessons are distilled; tools for dialogue are developed/checked; next workshop program is identified (workshops may also be used for testing developed tools)

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## Workshops Provide Opportunities

- To view and discuss:
  - the inner workings, and national decision-making structure, of waste-management programmes
  - the methods employed for stakeholder interactions
  - the successes and failures they have had
- To hear directly from involved stakeholders their own views about the methods by which they were involved in the decision-making
- Workshops will be "case studies" and more, due to the high level of interaction

8

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## Meetings Provide Opportunities

- To exchange information on stakeholder involvement and interactions in NEA Member countries
- To organise subgroups to carry out specific actions or studies
- For strategic discussions and topical sessions

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## THREE FOCUS AREAS OF FSC

- Process/Structure
- Organisational Issues/Trust
- Stakeholder Involvement

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## Process/Structure

- What is the role of the Environmental Impact Assessment as an "umbrella" for the decision-making process?
- How can a waste-management programme be integrated in a regional development plan?
- What is the role and input of science/technology in the decision-making for long-term waste management?
- What institution can ensure the safe management of radioactive wastes on the scale of 100 to 300 years?
- Waste management is but one problem in society where decision-making is complex and where there exist radically different views between parties as to how to proceed. Can lessons be learnt from other areas involving similar issues of governance and management?

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## Organisational Issues/Trust

- What is "good" organisational behaviour and culture for trust building? Can the FSC propose a list of desirable organisational features?
- What are the characteristics of a "good" institutional framework? And, in particular, what are the roles and organisational characteristics of the various players, including the constraints imposed by the organisational characteristics and/or mandates?
- How can information obtained from dialogues with stakeholders be integrated into organisational outlook and operations?
- Is it necessary and useful to discuss separately such concepts as "acceptance", "values", and "trust"?

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## Stakeholder Involvement

- Who are stakeholders and what are their roles in decision-making and in implementing decisions?
- Are there ways of consulting and involving a broader segment of stakeholders early in the programme when policy is being defined?
- How can people be convinced to co-operate in finding a long-term solution to the waste-management issue, independently of their view on the future of nuclear energy?
- Are there methods for a third party to evaluate public interaction programmes objectively?

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## Main Expectations over the Next Three Years

- Create an atmosphere of trust for the discussion of issues. Document these discussions
- Create a working environment conducive to tangible results
- Produce a widely agreed upon document (collective opinion) on the principles, implications, and practices of involvement of technical and non-technical stakeholders in long-term waste-management projects

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## NEXT STEPS

- An annotated skeleton of the document on the principles of stakeholder involvement will be started and developed over the years (internal to FSC)
- A compilation of experiences of stakeholder involvement exists, based on an RWMC survey, and will be updated this year
- A database of tools/products useful for dialogue will be started this year and developed over the years (internal to the FSC)
- Next workshop

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## NEXT WORKSHOP

- Second workshop to be held in Turku, Finland from 14-16 November 2001
- Workshop theme: *Stakeholder Involvement and Confidence in the Process of Decision Making for the Disposal of Spent Nuclear Fuel in Finland*
- Workshop will examine the history leading up to the Decision in Principle taken by the Finnish Parliament to proceed with a final disposal facility for spent fuel
- A wide spectrum of Finnish stakeholders (implementers, regulators, policy-makers, opponents, communities, media, utilities, etc.) will be heard

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## Workshop Sessions

- Introduction and Background to Decision in Principle
- The Process of Stepwise Decision-Making from the Stakeholders Viewpoint, Past and Future
- Stakeholder Involvement, particularly in the Environmental Impact Assessment
- Confidence Building: What Gives Confidence to the Various Categories of Stakeholders?
- Conclusions, Assessment, and Feedback

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## Workshop Format

- A variety of stakeholders will give presentations in each session
- Participants will be seated at small round tables with a bilingual facilitator and a rapporteur at each table, and will discuss focused questions following each session's presentations
- An FSC facilitator will survey the tables and obtain feedback at the conclusion of the discussions
- Four thematic rapporteurs with backgrounds in social psychology, public governance, technical decision-making, and community development and negotiation will summarise their observations during the workshop

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# SAFETY CASE : AN INTERNATIONAL PERSPECTIVE

By Sylvie Voinis and Claudio Pescatore
( NEA/RWMP division)



As indicated in the NEA confidence document :

**A Safety Case is**

" A collection of arguments at a given stage of repository development, in support of the long-term safety of the repository. A Safety Case comprises the findings of a safety assessment and a statement of confidence in theses findings. It should knowledge the existence of any unresolved issues and provide guidance for work to resolve these issues in future development stages"

# PRESENTATION : FOUR PARTS

PART A : Feedback from the IPAG exercises

PART B : Feedback from Peer reviews and NEA Confidence document

PART C : Feedback from IGSC meetings and initiatives

PART D : Future Work and exchanges



## PART A : Feedback from IPAG exercises

**IPAG ( Integrated Performance Assessments Group) for deep repositories:**

- ***IPAG 1*** **: Developing and documenting IPAs (1995-1996)**
  **10 organisations**
  **Report published**
- ***IPAG 2 : Regulatory experience of IPAs reviews (1997-1998)***
  **17 organisations**
  **Report published**
- ***IPAG 3 :*** **Approaches and Arguments for establishing confidence**
  **20 organisations**
  **Final report under review**

**=> DATA BASE of "Safety Cases" since early 90's**

## PART A : Feedback from IPAG exercises

KEY MESSAGES

•Repository development through several stages, several decades for completion ; Safety Case is required as a basis for making decisions

• Evolution from calculation (PA) to integration (SC)

•Safety Case :

- •More than a report of technical results
- •Justification of assumptions , sensitivity studies, clear strategy

•Data and knowledge of disposal system : Quality of R&D, procedures , data and use of data

•Assessment Approach : Clear, logical, iterative; independent peer reviews

• IPA Models : alternative conceptual models and modelling approaches

•Feedback to design and Site : Support for changes, overall quality of system.



PART A : Feedback from IPAG exercises

KEY MESSAGES

•Questions in the IPAG exercises could be used as a check list: Elements of safety assessment report

•Communication to and with stakeholders are an important issue for building confidence in a Safety Case

• Need to describe clearly in a practical way what is a Safety Case

• Terminology always mentioned as a problem => need to clarify the terms used in a Safety Case

• Different national situation, constraints

•Identification of weakness topics need to be identified

## PART B : Feedback from Peer reviews and Confidence Document -

**PEER REVIEWS :**

- Typical problem areas:
  - Completeness of scenario analysis
  - Consistency in assumptions, level of detail,vocabulary
  - Pre-saturation phase needs more attention
  - Issues of traceability and transparency
    - role and use of experts
    - less technical sections do exist but are not accessible to non-specialists
    - lots of details but little rationale for choices/decisions, e.g., role of scenarios, role of biosphere representations, data, ...



PART B : Feedback from Peer reviews and Confidence Document -

⌧ CONFIDENCE DOCUMENT

A Safety Case is more than a SA/PA. Additionally:

- it shows strategic thinking focused on "safety first"
- it argues confidence, and prospects in future stages

- Key to Safety Case is the assessment basis, and in particular:
  -The articulation of the strategy followed to achieve and argue safety
  - the assessment capability

## PART B : Confidence Document -

**SAFETY ASSESSEMENT step 1 to 3, SAFETY CASE step 1 to 4**

(i) Establish an **ASSESSMENT BASIS**
- define a ***safety strategy*** that describes a suitable approach to the building of a safety case
- define the repository site and design (***system concept***)
- define the ***assessment capability***

(ii) Carry out a **PERFORMANCE ASSESSMENT**
- evaluate repository performance for the assessment cases
- assess compliance with acceptance guidelines
- carry out sensitivity analyses

(iii) **EVALUATE CONFIDENCE** in the calculated safety and modify, if necessary, the assessment basis

(iv) Compile a **SAFETY CASE**
- document the safety assessment
- state confidence in the safety indicated by the assessment and describe proposed way forward

**Interact with decision makers and modify, if necessary, the assessment basis**



## PART B : Feedback from Peer reviews and Confidence Document -

⌦ STRATEGY TO ACHIEVE SAFETY

- **Emphasises that there exist a conscious "safety first" approach**
  - Through site and design choices, the avoiding or forcing to low probability, or consequences, most phenomena that could be detrimental to safety
  - The further characterisation and means to reduce uncertainty through R&D,
  - Continuity of means and resources
  - Avoiding over-reliance on any single safety provision

## PART B : Feedback from Peer reviews and Confidence Document -

### ⊠ STRATEGY TO ACHIEVE SAFETY

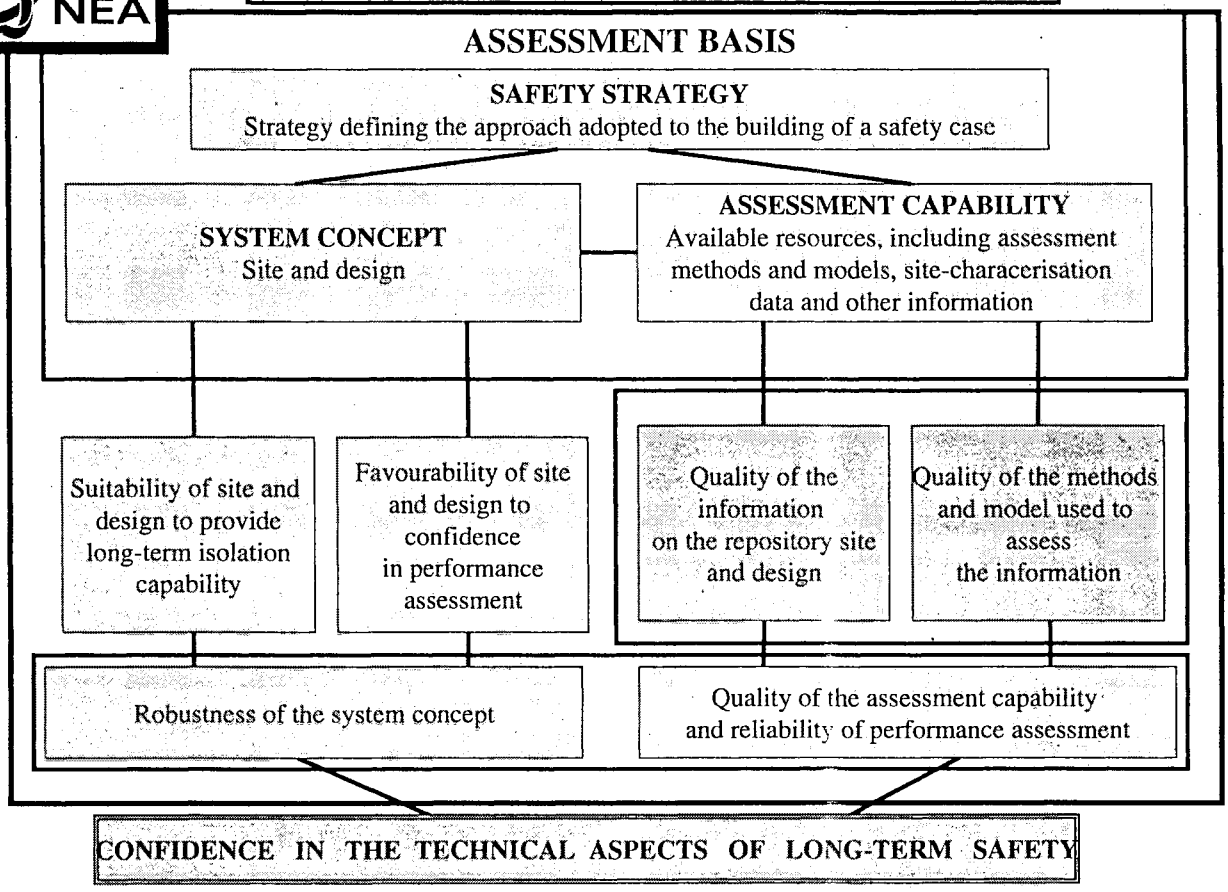
- Identified process for acquisition of technical knowledge and tools
- Internal guidelines showing a controlled, fit-for-purpose programme
- Periodic programme and quality reviews
- QA procedures to minimise likelihood of defects and errors
- Openness towards dealing with varied technical opinions (inside and outside programme)
- .....



## PART B : Feedback from Peer reviews and Confidence Document -

### ⊠ STRATEGY TO ARGUE SAFETY

- Declare role of barriers and system functions
- Identify and explain assessment cases
- Verify quality of tools, data, analyses
- Explain that PA is for testing system performance
- Analyse system beyond design basis and regulatory compliance points
- .....






# PART B : Feedback from Peer reviews and Confidence Document -

- ***Confidence statement*, as to the fact that**
  - all relevant data and info, and their uncertainty, have been given consideration
  - all models have been tested adequately
  - a rational assessment procedure has been followed
  - results have been fully disclosed and subjected to QA and review procedures
  - the safety strategy is appropriate to handle remaining, not-fully resolved safety-related issues in future stages.
- ***The discipline that all this involves enhances confidence in the quality of the safety case***

## PART C : Feedback from IGSC Exchanges -

• The IGSC has a role to develop common views on key aspects of the Safety Case but should not be prescriptive.

•Multiple lines of reasoning should include additional safety measures and indicators.

•It is not possible to rigorously demonstrate compliance, the only realistic objective is to achieve adequate confidence.

•The way in which different bodies of scientific opinion are dealt with in the Safety Case is an important and outstanding issue.

•Whether, for example, operational safety is included in the safety case will depend on the particular circumstances of the Member countries.



## PART C : Feedback from IGSC Meetings -

•We should take a common sense definition of the Safety Case and not make it more complicated than it needs to be.

•It is a presentation and linking of information and arguments on safety needed to support the decision making process.

•Dependent on the programme-specific and regulatory context, the implications of retrievability may need to be dealt with in the Safety Case.

•Different countries are at different stages and therefore opinions can be expected to vary on where the key issues remain.

SAFETY CASE BROCHURE

•clearly will address both the process and product aspects .
Based on extensive experience accumulated since early' 90s

•will explain the quantitative performance assessment and other more qualitative arguments and will describe technical techniques

•will depart from the confidence document with practical requirements ;

•IPAG feedbacks will also contribute

To be discussed at the third IGSC meeting





## CONCLUSION -

- SC is about managing and integrating technical and non-technical information, it is not, per se, a science product
- SC is mostly a management challenge, requiring vision towards avoiding later problems
- At a technical level, the most important issue is how to manage dialogue with technical experts both in-house and outside
- "Management" - "Safety culture" - "Strategy" - "Confidence" are key words

# WP4: Dialogue Designs and Schools Website

Jane Hunt and Mike O'Donoghue
CSEC, Lancaster University

- 5 dialogue processes
- stage 1: design and run 3 processes (October/November 2001)
- review
- stage 2: revise/design 2 processes (Spring 2002)

# Schools Website

- Design, build and run dialogue website
- 5 schools in different areas of UK
- different socio-economic characteristics
- Autumn 2001

# First 3 dialogue processes: aims

- Bring together official stakeholders (regulators, government, agencies) and members of the public
- Meet 9 (summary) aims:
  - transparency and legitimacy of process
  - equality of access
  - deliberative environment
  - open problem framing

- Developing insight and new meanings
- inclusive knowledge elicited
- producing acceptable/tolerable and useable outcomes
- improving trust and understanding between participants
- developing sense of shared responsibility and common good

# Process factors

- Mix of
  - national and local level
  - relationships and roles of official stakeholders and the public
  - information inputs
  - facilitation roles
  - complexity/simplicity
  - task focussed/open discussion

# Topic

- 'What do the public and other stakeholders think should be addressed in an Environmental Impact Assessment (for an underground repository, and for a centralised surface storage facility)

# 1) Discussion Groups

- 10 members of public + 1 official stakeholder + facilitator
- 2 x 2 hour sessions, 4 days apart
- Basic information (types and amounts of wastes, current management, radioactivity etc)
- specific information on underground repository and surface storage in 'locations'

# 2) Future Search Variation

- 15 MoPs and 10 official stakeholders (regional)
- 1.5 days
- review the past, explore the present, imagine the future
- different group mixes (peer and mixed)
- identify shared vision for short and long-term futures

# 3) Scenario Pyramids

- 28 MoPs and 12 official stakeholders (local)
- 4 groups of 10
- examine underground repository and surface storage issues in relation to 'here' and 'somewhere else'
- 2 circulating facilitators + 2 information resources
- potential for use with larger group

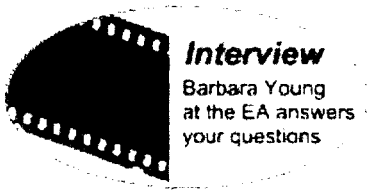
# Expectations and experience

- Pre and post process interviews with c. 20% of participants
- pre and post process questionnaires for all participants
- all processes will be audio- and video- taped
- analysis, review and re-design

# Online Consultation Centre for Schools and Colleges

**Menu**
About RII
RII news
Events
Who's who
Partner schools

**Radioactive nuclear waste**
Background info
Facts
Issues
FAQs
Links
Post a question
Contact us
Guestbook



## Welcome to the Riscom II !

Some details here about who is involved and how you can join in.

**Hot Gossip**
Join in the R-2 chat

**Question time**
Send in your questions to ask**

## This month's poll

This month's question has been set by students at Mortasker College:

**Are nuclear materials too dangerous to transport on our railways?**

- Yes - too dangerous
- No - there's nothing to worry about

Quick comment:

Vote

*Voting ends on 28-September*

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**Riscomll Online discussion is managed by CSEC , Lancaster University, Lancaster, LA1 4YL**
Tel. 01524 592863 Fax. 01524 ----- Email: riscom2@lancaster.ac.uk


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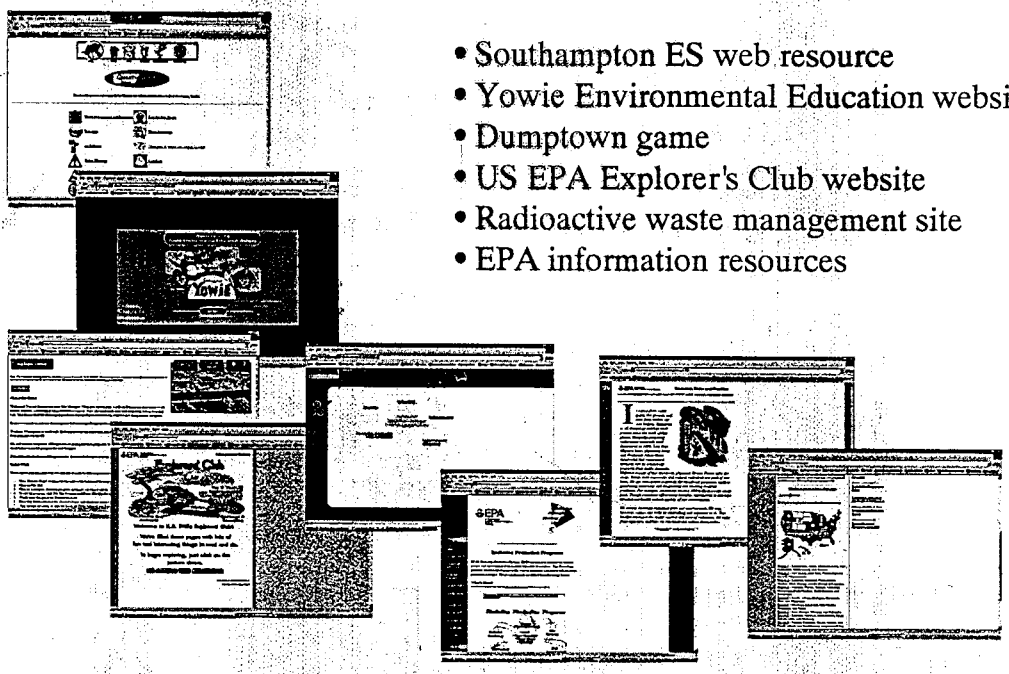
Sample only
Draft - Aug 2001
For Paris/MCR AG meetings

MJOD$

# Web site design influences

- Existing websites



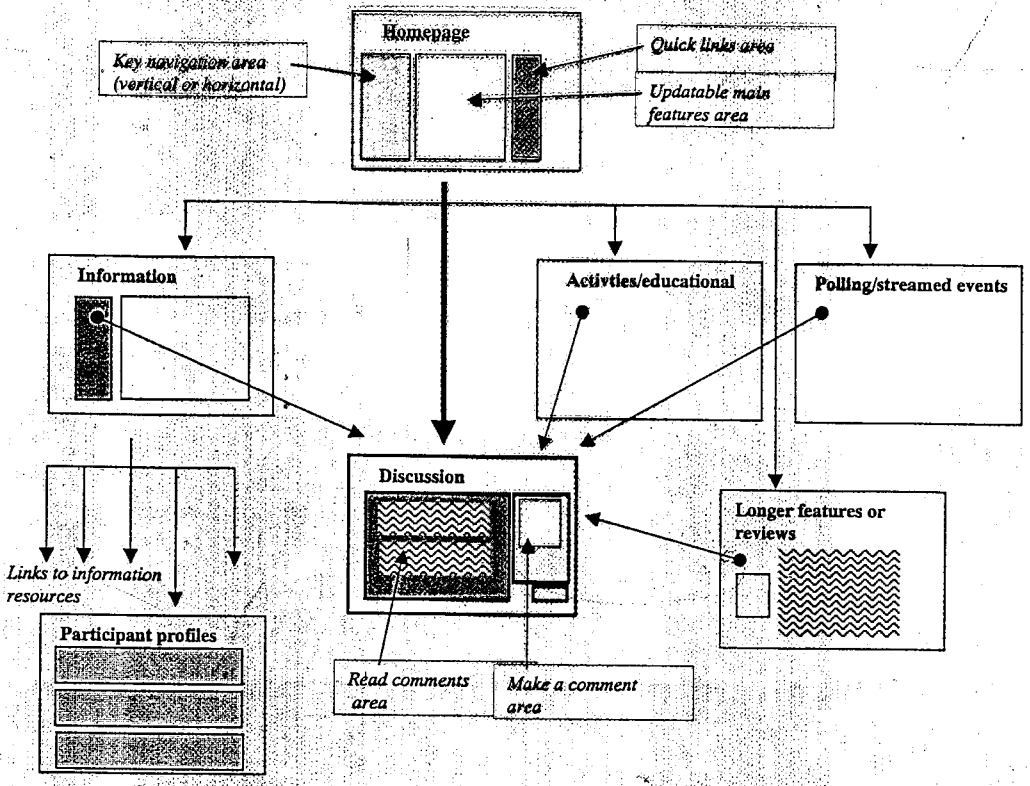
- Southampton ES web resource
- Yowie Environmental Education website
- Dumptown game
- US EPA Explorer's Club website
- Radioactive waste management site
- EPA information resources

# Web site design - key points

- **Discussion/forum is the core of the web site**
- **Small user population - frequent use - ownership**

- **Interface stimuli important**
- **Navigation has to be easy/intuitive**
- **Homepage to follow a magazine format**
- **Polling/voting mechanism to be embedded**
- **Appropriate use of audio and video (e.g. interviews)**
- **Structured user information**
- **Appropriate links**
- **Associated activity - stimulate discussion**

# Web site design - Structure



# Mapping of processes using the RISCOM model

Kjell Andersson, Karinta

**There are many new promising participative processes. They should be further analyzed, evaluated and developed within a consistent framework.**

**Then the process selection, in a particular situation, ca be made with awareness and with precise objectives**

The RISCOM should be a tool. Key elements in the model are clarity in factual issues, awareness of value-laden issues, testing of stakeholders authenticity, stretching of arguments and recursive levels at which issues are at stake.

**There are quite a number of projects with the aim to analyse and evaluate participative processes**

- **RISCOM II - Work Package 4**
- **Resources for the Future**
- **The DECI project**
- **Ortwin Renn**
- **COWAM**

# Procedures investigated

## "Umbrella processes"

- UK Planning Inquiry
- Strategic Environmental Assessment (SEA)
- EIA Forum, as defined by the Kalmar County, Sweden
- The Oskarshamn model

# Specific procedures

- **Expert Committee**
- **Science Court**
- **Team Syntegrity**
- **Dialogue (SKI project)**
- **Science Shop**
- **Consensus Conference**
- **Lay Peoples Panel.**

# Mapping

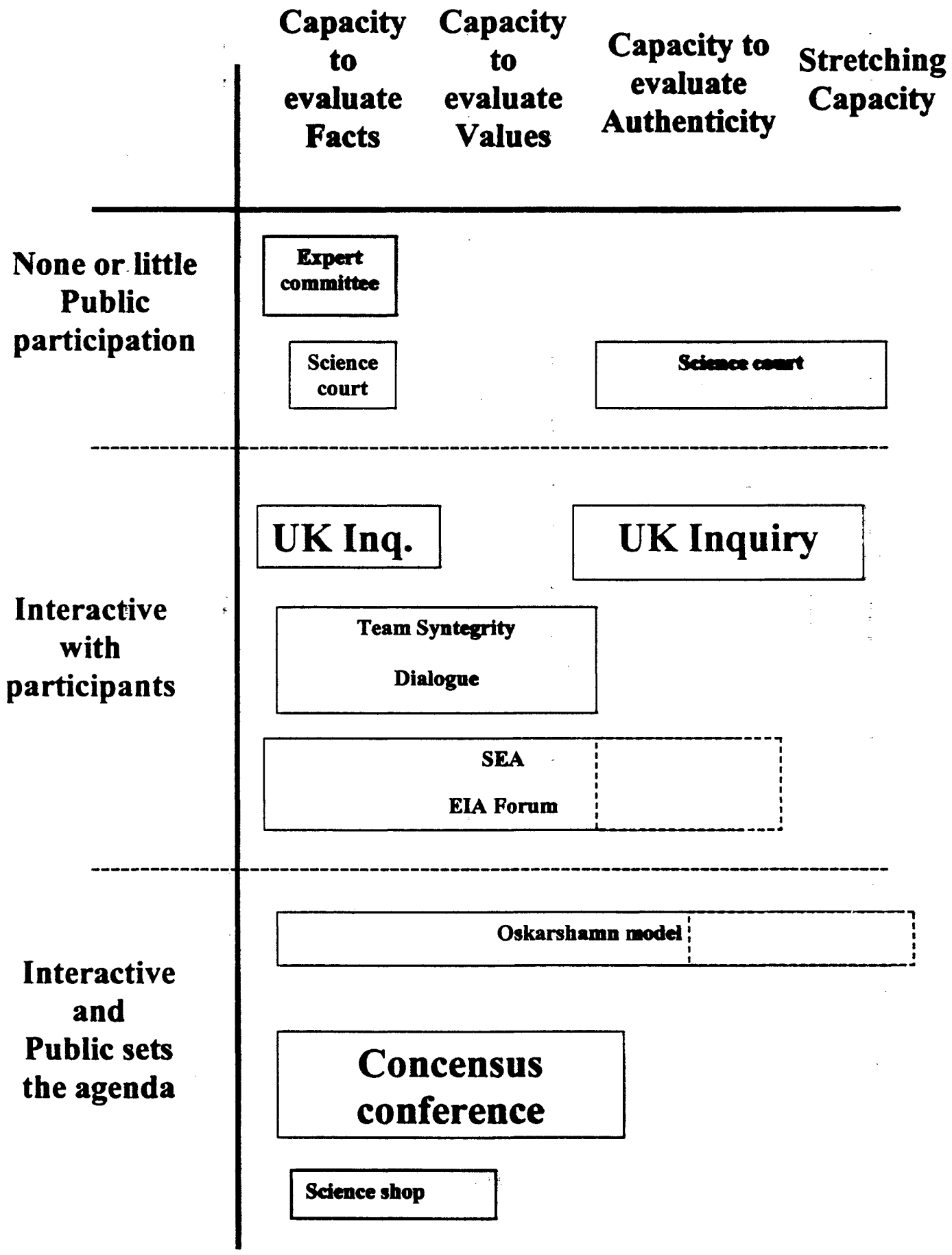
**1) Potential to provide transparency**

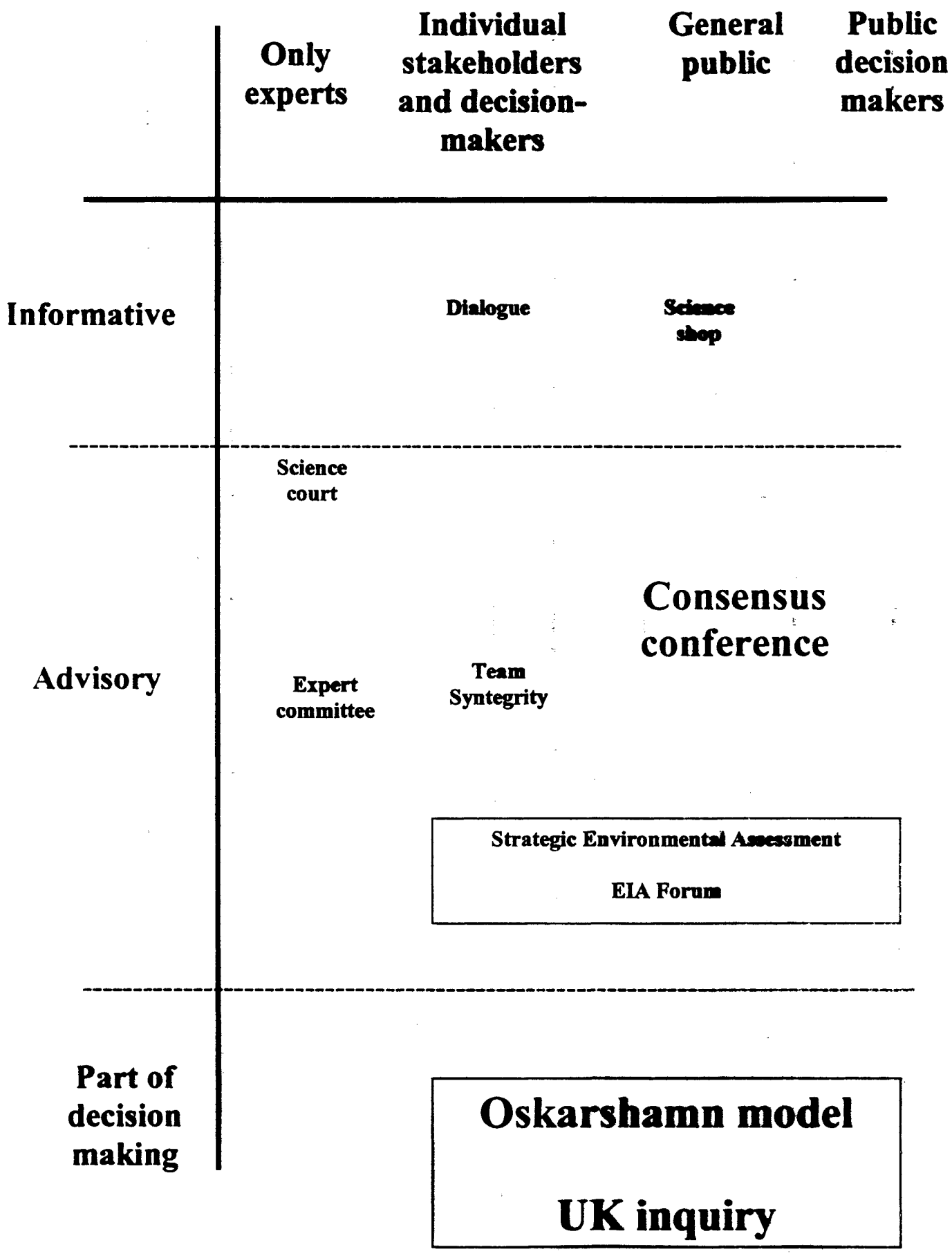
**2) Extent of public involvement**

**3) How "the public" is represented**

**4) The role in the decision making process**

**5) Consensus building or adversarial in character**


Capacity to evaluate Facts
Capacity to evaluate Values
Capacity to evaluate Authenticity
Stretching Capacity
None or little Public participation
Expert committee
Science court
Science court
Interactive with participants
UK Inq.
UK Inquiry
Team Syntegrity
Dialogue
SEA
EIA Forum
Interactive and Public sets the agenda
Oskarshamn model
Concensus conference
Science shop


Only experts
Individual stakeholders and decision-makers
General public
Public decision makers
Informative
Dialogue
Science shop
Science court
Consensus conference
Advisory
Expert committee
Team Syntegrity
Strategic Environmental Assessment
EIA Forum
Part of decision making
Oskarshamn model
UK inquiry

# Some thoughts

- What is a good process?
- Does transparency enhance consensus building , Should it ??
- Communicative vs. strategic action (look up for manipulation!)
- Role of regulator
- NGOs must not be hostages in the process
- reluctance from both sides to enter in «foreign territory»,
- Who should be the process guardian ?

- **Formal processes can look good – but be empty in real participation**

- **Informal processes does not guarantee anything, but can become very creative**

- **Role in decision making; direct democracy vs. representative democracy**

- **We need both "umbrella processes" (EIA, SEA, Oskarshamn model) and "events" more limited in time (consensus conferences, hearing etc)**

- **The T-PP Link:**
  - *** T requires PP**
- **Meaningful PP must have T**

# Front End Consultation

Elizabeth Atherton

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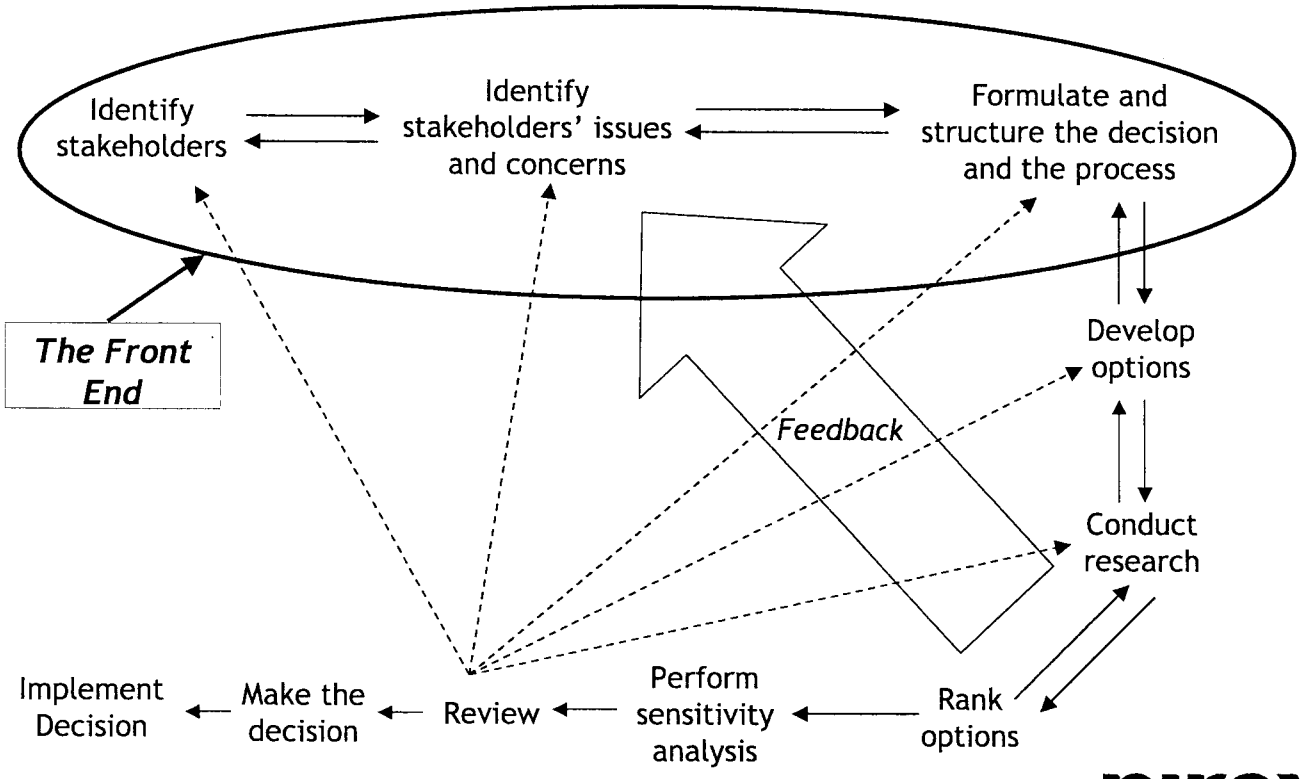
## The Decision Making Process

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# Principles of Consultation

- ***Openness*** - open debate and access to information
- ***Transparency*** - of actions, deliberations and decisions
- ***Inclusion*** - all stakeholders have the opportunity to be involved
- ***Accountability*** - for actions to all parties
- ***Feedback*** - interactive process
- ***Devolved Process*** - several mechanisms used

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# Advantages of Identifying Stakeholder Issues

- Helps define the problem
- Guides information collection
- Improves communication
- Enables multiple stakeholders to participate
- Identifies criteria to evaluate options
- Develops relationships

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# Stakeholders

- The General Public
- Community-Based Organisations
- Local Government Organisations
- Government departments
- The implementing organisation
- Regulators
- Scientific Research Community
- Non-Governmental Organisations
- The media
- Trade Unions
- The nuclear industry
- Ministry of Defence

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# The Aims of the Front End

- Allow stakeholders to define the problem
- Identify issues of concern and use them to drive the process
- Demonstrate a commitment to incorporating different views
- Acknowledge constraints on what can be decided
- Guide the overall decision-making process
- Avoid criticism of there having been a 'hidden agenda

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# Outputs from the Front End

- Issues that the process should address
- Roles within the decision making process
- Stakeholder involvement in the process
- Ideas on options and evaluation criteria
- Review of the process

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# Techniques to Use

- Advertising and media campaign
- Providing background material
- Workshops and meetings with stakeholders
- A web site
- Discussion groups with the general public
- Questionnaires
- Open houses and exhibitions

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# Summary

- Aim to develop a way forward
- Increase support for the decision making process
- Decrease overall time to find a solution
- Allowing stakeholders to frame the problem and issues to address

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# Issues to Consider

- How to encourage participation
- Front end consultation within EIA (scoping)
- Front end consultation and PA (role of PA and its content)
- Adding a front end when developing research
- Adding a front end to other consultations

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