Research

What are the Communication Challenges for Politicians, Experts and Stakeholders in order to Enhance Transparency in Nuclear Waste Management Decisions?

A Report from the Team Syntegrity Meeting within the RISCOM II Project

Kjell Andersson
Raul Espejo
Clas-Otto Wene

September 2003

SKi

Foreword: RISCOM II project overview

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

Objectives

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

Description of the work

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

In WP 4, a range of public participation processes has been analysed and a few have been used in experimental testing. A schools' web site has been tested with the aim of understanding how information technology can be utilised to engage citizens in decision-making. In WP 5 a hearing format has been developed, that allows 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 have been included in the course of the project (WP 6).

This report

The Team Syntegrity Meeting is a special part of the project. It aims for increased awareness among key stakeholder groups in Europe about how nuclear waste decision processes could be developed in order to increase transparency and trust. Team Syntegrity is conducted with a special meeting format. It is not a normal round-table discussion or seminar. The self-organisation of the meeting is a strong positive feature of the format. Instead of having a project leader setting the agenda, the participants formulate their own topics of relevance starting from an opening question. This report

documents the meeting that was held in Belgium in May 2002. The opening question for the meeting was:

What are communication challenges for politicians, experts and stakeholders in order to enhance transparency in nuclear waste management decisions?

There are different opinions about how communication on nuclear waste issues should be done. There are differences between stakeholder groups, and there are different approaches taken in various countries. Still it should be possible to reach a deeper understanding of social communications, that is, understanding the requirements to have effective communications between policy makers, experts and stakeholders. The aim was thus not to develop common views on the nuclear waste problem as such, but rather common grounds for developing procedures for effective communication. Hopefully, this meeting made some progress in this direction.

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 Radioprotection et de Sûreté Nucléaire, IRSN, France
Posiva Oy, Finland
Nuclear Research Institute, Czech Republic
Syncho Ltd, UK (sub-contractor)
Diskurssi Oy, Finland (sub-contractor)

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 02066.

What are the Communication Challenges for Politicians, Experts and Stakeholders in order to Enhance Transparency in Nuclear Waste Management Decisions?

A Report from the Team Syntegrity Meeting within the RISCOM II Project

Kjell Andersson[1]
Raul Espejo[2]
Clas-Otto Wene[3]

[1]Karinta-Konsult HB
Box 6048
SE-187 06, Täby, Sweden

[2]Syncho Ltd
30 Nettleham Road
Flat 3, North Place
GB-Lincoln LN2 1RE, UK

[3]Wenergy AB
Virvelvindsvägen 4G
SE-222 27 Lund, Sweden

September 2003

CONTENTS

1. Introduction

The overall objective of the RISCOM project is to support the participating organisations in the further development of trustworthy procedures for decision-making and risk assessment in nuclear waste management. Such procedures should have certain characteristics, most important they should have qualifications that allow transparent insight from people outside the groups of experts and from political decision-makers. Following this goal, the opening question for the meeting was formulated as:

> *What are communication challenges for politicians, experts and stakeholders in order to enhance transparency in nuclear waste management decisions?*

This report documents the Team Syntegity meeting conduced as Work Package 3 of the RISCOM II Project. We had participants representing a broad range of experiences and different views on nuclear waste management. There were nuclear waste management experts (regulators, implementers), academic experts (risk management, policy making, philosophy), citizens and NGOs from a number of European countries.

Chapter 2 provides a summary of issues discussed and conclusions reached. The structure of this chapter has a free format and does not follow the structure of issues represented by the working groups. Therefore, the chapter ends with a table relating the issues discussed in the summary to the teams. Chapter 3 describes the Team Syntegrity protocol that was implemented at the meeting. Chapter 4 relates the consolidated statements of importance that each group had as a point of departure for its discussions, and the three final statements ("outcome resolves") that were the products of the teams. The documentation from each group also includes "Rapporteur´s comments", the rapporteurs coming from the RISCOM project group, and the UK Environment Agency.

A number of appendices further document the workshop. Appendix 1 lists the workshop participants and the groups. Appendix 2 lists the statements of importance that the participants had produced before the workshop, and Appendix 3 gives the ggregated statements of importance that gave origin to the consolidated statements of importance or topics that were discussed by the groups.

2. Summary

The call for the Team Syntegrity (TS) Meeting resulted in 105 Statements of Importance given in Appendix 2. Following the TS format the meeting then formed its own agenda by first producing 30 Aggregated Statements of Importance (Appendix 3), which were grouped into 12 Consolidated Statements of Importance or topics. The group discussions were thus held under the twelve topics of: Consultation, communication and participation; Mutual learning; Roles and arenas; Heritage; Transparency; Wider context; Process; Risk; Institutional cultures; Resourcing; Facts and values; and Siting. In this summary the discussions and conclusion of these groups are brought together under eight themes or conclusions: 1) Consultation and mutual learning, 2) Trust, 3) The expert role, facts and values, 4) Transparency and consensus, 5) Institutional structures, 6) Resourcing, 7) Sustainable development, and 8) Nuclear debate.

Consultation and mutual learning

It was a general view in many of the group discussions that that transparency is not only the outcome of making information available or getting people involved in occasional consultation processes but also, and perhaps more fundamentally, of involving people in on-going reviewing processes, which avoid confrontation and encourage participation. The distinction was made between dialogue and debate; the former was recognised as more communicative and the latter as more inquisitive. In the end the value of both dialogue and debate was asserted. For instance it was said that "Debates raise the level of knowledge", "Opposing statements increase the level of knowledge", and that "It is good to have contradictory views; intensive debates are desirable".

Stretching[1] is desirable to make decision processes more transparent. But, what kind of transparency makes sense? Understanding all processes and procedures is not possible, not even for the experts. But, what are the limits for simplification in the provision of information? Understanding and appreciation requires a good deal of background information, and sharing it takes time and resources. Mutual learning requires more than interactions among stakeholders, experts and politicians; it requires sharing of background information, and this is a social process. It would appear that a degree of active design of communication and interaction processes is necessary.

For consultation and learning the meeting gave much importance to the existence of a stepwise process, which was seen as a positive factor for confidence. People need to know where you are in the process and where you are going, how and when people can be involved and how their views will be used. It should also be recognized that dialogue and public involvement must be given time enough so that each step in the process in well grounded. There needs to be flexibility with time in the siting process and a

---

[1] *Stretching* is a key component of the RISCOM Model for transparency. It means that the especially implementer of a proposed project should be challenged with critical questions raised from different perspectives such as environmental groups, regulators and other official stakeholders.

possibility to influence the timetable. Clear roles and responsibilities are also important. Empowerment in knowledge resources and access to expertise were also discussed as essential elements.

Trust

For consultation and mutual learning, trust between the actors is necessary. However, the relation between "transparency" and "trust" itself needs clarification. Statements given in the meeting such as "Transparency: important ingredient for building a forum to gain trust" and "Transparency creates honest areas for dialogue" imply that transparency generates trust. But on the other hand, mechanisms for transparency cannot be created without there being some initial form of trust between the actors. The debate in several of the groups demonstrated that setting up credible procedures for transparency requires such initial trust among the actors.

To avoid a "chicken-and-egg" argument, here it seems important to realize that transparency is the outcome of a process and trust describes relations between actors. The conclusion is that starting the transparency process requires some initial trust and when the process is successful, it deepens and widens this trust. The debate stressed that trust so created is a social good needed for a participative decision process. "Trust and transparency are social values meaning that one gets focused on important and controversial questions". The benefit one might have from trust and transparency is that you free resources from all involved to deal with other issues.

Continuity was considered important for trust and long time scales are needed for this. The balance between constancy and change may be particularly important in nuclear waste management where continuity has a special value. It was also emphasized that there is a need for roles and responsibilities to remain clear.

In the end, the level of confidence depends on how you behave as individuals and organizations. For this you need to meet people face to face. Your words and actions need to be consistent. It was recognized that the key to the successful process in Finland was face to face meetings but also that authorities have much trust in Finland.

The expert role, facts and values

Several groups discussed the expert role and the related topic if factual issues can be distinguished form value-laden issues. The RISCOM definition of transparency[2] also implies that facts and values and the links between the two are major themes in a transparency process.

There was extensive discussion about the two concepts of "facts" and "values" and whether they can actually be distinguished from one another. One view was that what are facts is easier to define and that values are more abstract. Facts set up as a

---

[2] Transparency and Public Participation in Radioactive Waste Management. RISCOM II Final report. SKI Report 2004:08, Page 11.

scientifically agreed knowledge base. When there are uncertainties or disagreement one can challenge experts with other experts. In the end the dominant view in the group was that values and facts are more on a continuum than being qualitatively different.

Despite these problems, the group was in agreement that one should strive for clarification about the factual versus the value-laden domain of an issue. First this will increase transparency and set limits to the experts professional area e.g. by revealing hidden values in expert investigations. The second aspect emphasised in the group was that in distinguishing between facts and values you are able to reduce the power differences between experts and other stakeholders and empower the lay people in a decision-making process. The distinction between facts and values should avoid the association of the formers with experts and the latter with stakeholders, otherwise the distinction may reinforce their power differences.

It is important to encourage the experts to overcome their reluctance to reveal the values that lie behind facts by creating challenging environments by stretching. It was also stated that roles often embody particular values. If you have a certain role (e.g. implementer, regulator, member of a certain NGO) in a decision-making process you will hold specific values. If this is the case, values will be more visible and transparency will be enhanced by clear definition and recognition of the roles of different actors in the process.

The relation between values, facts and experts was deeply discussed in the "Risk Group", which came to the conclusion that although there are established methods of assessing risk by the nuclear industry and regulators, risk is a complex mixture of values and perceptions incapable of reduction to a simple mathematical formulae, and perceived differently from individual to individual. Both society and the communities affected must be empowered to develop their own understanding of risk and be encouraged to accept, reject or negotiate developments accordingly, taking into consideration issues such as the social and economic benefits or costs that such developments may bring.

Transparency and consensus

"All the statements are motherhood statements". This critical comment, which was the very first one made in one group, calls attention to the way "transparency" is saluted as a "cure all" for democratic participation in contested decisions and thus becomes empty unless it is given a precise and operational meaning. The debate within the group focused on the meaning and the need of transparency and on mechanisms to obtain it.

Sometimes, as has happened in Oskarshamn, striving for awareness and transparency leads to consensus in decision-making. However, the result of empowerment and transparency may not always be desirable for the implementer due to for example revealed uncertainties and conflicting values. One group took a clear standpoint in this issue saying that "transparency is more important than consensus". It must be recognized that a transparent and democratic decision-making process may not always lead to the acceptance of a proposed project.

Two-way communication is important since the process attempts to combine the scientific evaluation of the experts with the interaction of the concerned people. Even if it is not obligatory to reach consensus, it should still be possible to present a coherent view on the impacts of the planned project.

Institutional structures

Almost all groups discussed how we can establish a good process with communication and transparency, and there was general agreement on the need for appropriate institutional structures. Consultation is an ongoing process which should be seen as part of a larger framework for decision-making and people must know what opportunities for consultation are available for them. It was argued for a broad, open and timely decision-making framework. Asking for more political and public involvement in key social decision-making processes is not difficult. What is more difficult is to implement the necessary mechanisms to bridge the gaps between stakeholder groups, overcoming the inherent imbalance in their relationships.

It was emphasised the need for strong institutional frameworks to underpin local and national processes. There was agreement that policy for nuclear waste management requires well-defined processes and procedures, and that policy outcomes have to be driven by the will of the people through democratic processes. This aspect made particularly relevant the design of interactions with stakeholders in such a way that decisions are given long-term legitimacy. And, there was agreement that the definition and recognition of roles and arenas is critical for these purposes. The arenas should emerge at an early stage in communication with stakeholders since building confidence between the public and the producer usually takes a very long time.

The process itself, the criteria for evaluating sites and the roles of the different parties should be defined through consultation at the beginning of the process. However, the process should be flexible to accommodate new needs.

It was furthermore suggested that, "as government is less committed having only policies but no law", legislation on this issue is necessary. A legal framework can stimulate and in certain cases empower transparency. In one group it was also suggested that such laws must contain rules on veto rights, possible benefits for the community and regulations for empowerment of the local actors. The belief in the regulator is also important, as has been demonstrated in Finland and Sweden. The regulators have a crucial role and they should be very active in the process.

Transparency needs resources and a guardian for the process. Where are the mechanisms to start and steer the transparency process? Who is responsible for the transparency process? Should the same organisation that is responsible for the management of the waste also be responsible for the transparency process? Or should it be the regulator? Or some independent body? These questions were discussed in the groups without a clear answer. Perhaps the solution will vary between countries depending on culture and institutional structures.

The topic of municipality veto power was raised at several occasions during the meeting. There are different levels of local power in the decision-making in different countries, and some of these powers can be overruled. It was found that veto power for a community also gives power to have influence over the siting process and "dialogue is dialogue as long as you can say no". It was agreed that the veto power of the local community is essential.

The use of environmental impact assessment (EIA) as a possible frame for the entire siting process and as an umbrella for activities aiming for transparency was also discussed. EIA can be understood as a formal legal process with certain requirements that must be fulfilled. There are EU directives on EIA. National legislation needs to be compatible with this but it can also be more demanding. It is clear, however, that the emphasis given to EIA varies quite much between individual countries. The group also noted that there are best practice principles for EIA developed by the International Association for Impact Assessment. EIA is not just an assessment of impact, but also a process of stakeholder participation and involvement. The scoping phase in EIA is very important.

Finally, institutions have to be aware that they are not acting in a social and cultural vacuum. They need to be sensitive to changing values in society. There is an interaction between institutions and society which informs the learning process and generates changes in values.

Resourcing

It can well be said that resourcing is a major communication challenge for stakeholder participation in order to enhance transparency in nuclear waste management decisions (referring to the opening question of the meeting). There can be a number of reasons for stakeholder participation such as legal requirements, the right of directly affected people to have their say, legitimacy of the decision-making process etc. In the RISCOM model, participants from outside the establishment are needed as a recourse in stretching. Once it has been said that participation is required or wished, the issue of resourcing immediately comes up.

The Mutual Learning group emphasized that resources and time are necessary and that learning can not be forced onto participants: "For mutual learning it is necessary to have the time and the resources", "Learning requires time for reflection" and "It is necessary to maintain the interaction over a period of time, and allow people to assess participants' different views".

A programme (once agreed) must be resourced to allow those who want to participate to do so and to encourage the disempowered to participate. Proper resourcing will encourage positive engagement, improve decision-making and increase public confidence. It may be necessary to recompense members of the public who are invited to participate in events such us focus groups or citizen panels. In addition to money, resources can include training, expertise and other methods of empowerment.

During a siting process, decisions about allocation of resources for local groups and people should be a matter of local negotiation. However, national guidelines on the allocation of resources may be useful for local negotiations.

Experience varies substantially from country to country. This should be documented so that individual countries can learn from each other. In general terms, the procedures for resourcing include issues of both principle and practical nature. Perhaps the most important is to establish legitimate principles for decisions on who should be supported (although it was said that the process "must be properly resourced to allow all to participate fully"). The role of NGOs was recognized as a resource in the debates but their possibilities to participate are often very limited due to lack of resources. The problem of actually engaging people was also discussed and resourcing was seen as a means to stimulate participation.

Regarding the level of resourcing it is clear that organisations that participate in the discussions need resources for their expenses, loss of salaries etc. It was, however, pointed out that resourcing also can mean the right to request services to be carried out by the implementer. The level of empowerment needed for own studies may also depend on the role of regulators, which in some countries can be seen as "the peoples experts". Clearly resources are always limited but, as emphasized in the Resourcing group, the amount of resourcing to enable participation will be small compared to the total cost of a programme.

Sustainable development

Nuclear waste management should be part of actions taken for sustainable development. Two aspects of sustainability were discussed:
- Decision-making process
- Sustainable solutions.

The interests of future generations can best be protected by ensuring that both the decision-making process and decisions taken by our generation can, as far as is reasonable, be modified or reversed in the future. We must ensure that the knowledge base, resources and mechanisms developed now allow for major societal change in the future, including the possibility of war, cultural change, human curiosity and the decline of civilisation. The practical implications of sustainability are, however, agued upon. For instance while some support the view that long-term storage is a better waste management option, this is disputed both among experts and citizens. This a good example of an issue for which an open dialogue about facts and values between experts and the community is needed to provide a solid basis for decision-making and empowerment.

A significant outcome of this debate is that we need deep integration of the technical and the social aspects. For this purpose scenario building, in the tradition of performance assessment, and ethical debates should be brought together in debates capable of giving democratic processes a chance. The extraordinary long-term nature of some forms of nuclear waste makes it necessary to consider extreme scenarios.

If the storage option is taken, is it not the case that societies are leaving the costs of disposal to future generations thus breaking the principle that "polluters pay"? If the disposal route is taken, is it not the case that societies are breaking the precautionary principle? Can we assume that societies have enough knowledge as to avoid leaving to future generations undesirable risks? Are they prepared to design and implement costly solutions to make post-closure retrievability possible should the need arise?

The nuclear debate

The Aggregated Statement of Importance dealing with "Wider Context" brought up the question whether it is desirable – or indeed ethical – to decouple decisions on nuclear electricity generation and nuclear waste management or whether the links between the two are so strong that it is impossible – or indeed unethical – to decouple such decisions.

Looking at national programmes, the participants felt that in practice the decision processes, e.g. in Finland, France and Sweden, separate waste management and nuclear production. However, in France for instance, instituting public debates about waste management on the regional level raised demands for opportunities to debate in public the nuclear issue in its entirety.

In summary it was agreed that discussing nuclear waste management in the wider context involves many conflicting issues, which calls for establishing "a structured hierarchy of interlinked discussion arenas".

Conclusions

The main conclusions that can be summarised from the group discussions are as follows:

1. For consultation and learning a stepwise process is important. People need to know where you are in the process and where you are going, how and when they can be involved and how their views will be used. Dialogue and public involvement must be given time enough so that each step in the process in well grounded.

2. For good communication, trust between the actors is necessary. There is a mutual relationship between transparency and trust. Starting the transparency process requires some initial trust and when the process is successful, it deepens and widens this trust. Transparency is the outcome of a process and trust describes relations between actors. Trust so created is a social good needed for a participative decision process, and one benefit is that you free resources from all involved to deal with other issues.

3. One should strive for clarification about the factual versus the value-laden domain of an issue. This will increase transparency and set limits of the experts professional area e.g. by revealing hidden values in expert investigations. In

distinguishing between facts and values you are able to reduce the power differences between experts and other stakeholders and empower the lay people in a decision-making process.

4. Transparency is more important than consensus. A transparent and democratic decision-making process may not always lead to the acceptance of a proposed project. However, it should still be possible to present a coherent view on the impacts of the planned project.

5. There is a need for strong institutional frameworks to underpin local and national policy processes. Policy for nuclear waste management requires well-defined processes and procedures, and policy outcomes must be driven by the will of the people through democratic processes. The definition and recognition of roles and arenas is critical for these purposes. The arenas should emerge on an early stage in communication with stakeholders since building confidence between the public and the producer takes a long time.

6. A nuclear waste management programme must be resourced to allow for citizen participation and to encourage the disempowered to participate. Proper resourcing will encourage positive engagement, improve decision-making and increase public confidence. In addition to money, resources can include training, expertise and other methods of empowerment. In any case the amount of resourcing to enable participation will be small compared to the total cost of a programme.

7. Nuclear waste management should be part of actions taken for sustainable development. The practical implications of sustainability are, however, disputed. For instance while some support the view that long-term storage is a better waste management option, this is disputed both among experts and citizens. This is a good example of an issue for which an open dialogue about facts and values between experts and the community will provide a solid basis for decision-making and empowerment.

8. Nuclear waste management in the wider context of nuclear electricity generation involves many conflicting issues, which calls for establishing a structured debate with a hierarchy of interlinked discussion arenas.

Origin of conclusions

For quality assurance reasons, the origin of the conclusions in terms of discussion groups is shown below in table format.

Conclusion *Group Topic*	1	2	3	4	5	6	7	8
Consultation, Communication and Participation	X			X	X			
Mutual learning	X	X	X			X		
Roles and Arenas			X		X			
Heritage							X	
Transparency		X	X	X	X			
Wider Context			X		X			X
Process					X			
Risk			X				X	X
Institutional Cultures		X			X			
Resourcing						X		
Facts And Values			X		X		X	
Siting	X	X		X	X	X		

3. The team syntegrity procedure

The Team Syntegrity protocol supports the self-construction of the meeting agenda, the reverberation of ideas in a non-hierarchical set up and the contribution of all participants to the best of their abilities. The meetings lasts for three days, and can briefly can be described as follows:

1. Participants are asked in advance to contribute individually with their Statements of Importance" (SI) that should be relevant to the purpose of the meeting.

2. Based on SIs, the participants elaborate aggregated statements of importance (ASI). These are statements supported by several participants rather than by single individuals. In a room filled with flip charts, which plays the role of a "Market Place of Ideas", the participants discuss and achieve support from 4-5 people on what they consider relevant to the meeting. This process reduces significantly the number of statements (SIs).

3. The participants in plenary are asked to relate ASIs in groups of two and three associated ASIs, i.e. the ASIs are combined in groups that seem to address the same topic. The number of groups, defined by the Team Syntegrity format, is 12. Hence ASIs are reduced to 12 Consolidated Statements of Importance (CSIs), which are the topics allocated to the groups and define the agenda for the meeting.

4. A procedure follows that enables each participant to express his/her preferences for discussion.

5. Based on this procedure, topics are allocated to participants using a computer-supported algorithm. Each participant is a member of two groups and a critic of another two groups. The role of group members is to discuss the topics and to prepare the Final Statements of Importance (FSI). The role of the critics may be seen as "devil's advocates". They are free to discuss with the group members during allocated times, commenting on either the content of the discussion or on the process of the meeting.

6. The groups discuss the CSIs in three meetings of about one hour each. Facilitators, who also document the discussion on flip charts, moderate the discussions. Each meeting ends with a summary, the third being the groups´ Final Statement of Importance. Summaries are typed up and made available to all participants during the breaks between meetings, which enhances the reverberation of ideas that takes place between them. The Summaries thus provide immediate input to the documentation of the meeting.

7. The meeting concludes with a short plenary discussion.

4. Group reports

This chapter offers for each of the topics discussed in the meeting their aggregated statements of importance and also the three outcomes resolves produced by the related groups. Included are also comments made by meeting participants that did not take part in the discussions of the respective group. These comments are called "graffiti" since they were given on the same flipcharts where the outcome resolves of the groups' discussions were exhibited for all participants during breaks between sessions. This is followed by rapporteur´s comments, the rapporteur being a member, critic or observer of a team's discussions. The rapporteur´s comments are based on notes as recorded by the facilitators in the form of flipcharts during the workshop. The styles of these comments vary from commentaries about a group's ideas to a more detailed account of the group's process in its three meetings, leading to the elaboration of their "final statement of importance". Rather than standardising the reporting we felt that this variety helped conveying the richness of Team Syntegrity process.

The list of topics discussed in the meeting and the membership of the related groups are included in the table Groups' List in Appendix 1. For logistic purposes each group is recognised by a colour in addition to their full name.

4.1 Consultation, communication and participation

(GROUP: RED)

Aggregated Statements of Importance

NR: 1
All waste management options must be up for discussion.

NR: 2
National campaigns to raise awareness of the issues of radioactive waste management are needed.

NR: 3
We need to share/work with European-wide best practice in public partnership/dialogue in R.W. management.

Outcome resolve 1

Empowerment covers knowledge, finance and public awareness, Mechanisms must be in place to enable people to participate in debates. There must be a broad an open decision-making framework, which must be timely.

Timing and pace is important: you cannot rush awareness.

Local veto on decision-making is essential. It builds trust in the process.

Graffiti

- Effective empowerment also implies the need for functional decentralisation of resources.
- Unlimited time – unlimited cost!
- Do you mean financial costs?

Outcome resolve 2

The group looked at ways of sharing best practice and also of learning from experiences and difficulties across different countries, while taking account of cultural differences.

A broad legislative framework, with flexible processes for consultation, review and participation within that framework is seen as a desirable approach.

In the UK the quality of interaction and involvement at the local level is very poor. As an illustration of this the group found it valuable to learn of a UK experience with a citizens' panel. The process used in working with this panel was well regarded at the time by the panel members, who gave their time willingly and looked carefully into a range of complex issues.

Where the process fell down was in the follow-through: the final report did not properly reflect the panel's views, they were not given the chance to comment on a pre-published version of the report and there was a complete lack of follow-up communication (eg. about consultation with any other groups).

A key element in any consultation process was seen to be to manage expectations and make explicit how the information from the process will be used and how feedback will be provided.

What is the appropriate role of the citizen? Communication, consultation and INFLUENCE - not decision-making per se.

Outcome resolve:

Transparency in the process of decision-making is needed, particularly in revealing how different views have been taken into account, and feedback needs to be given to the stakeholders involved.

The scope of consultation must be defined at the outset and the expectations of stakeholders need to be managed.

A key requirement is an openness to change. There is no point in involving the public unless you are willing to change.

For the next iteration:

The group would like to discuss how we can exchange experiences and best practice in the future. Also how to ensure that a process of wide consultation followed by a narrowing down of options informs decision-making.

Outcome resolve 3

Consultation with stakeholders should be meaningful and visible and there should be feedback to show how their views have been taken into account.

The impetus for this should come primarily from the local level. The stakeholders should be identified and actively consulted.

The operators should purposely design the form for consultation.

The approach should be top-down as well as bottom-up.

More honesty must be a priority to create trust.

Managing expectations about the scope, content and procedure of discussions is important.

There is a need for maturity in all parties in how information is used and to ensure that active listening takes place.

Consultation is an ongoing process and should be seen as part of a larger framework for decision-making. People must be clear on what others opportunities for consultation are available to them and will follow.

Rapporteur´s comments (Espejo)

Aspects such as the military connotation of nuclear activities, the cold war uncertainties, the negative consequence of nuclear accidents like Chernobyl, are among others responsible for people's negative appreciation of nuclear activities. At the same time the global nature of nuclear policy and the local implications of its implementation make decision-making particularly difficult. In democratic societies these decisions cannot be imposed and communication, consultation and participation are seen as key to an effective long-term management of nuclear wastes. Particular communities need to be made aware of these issues before siting becomes an issue. During the first iteration of this group's discussions the appreciation of nuclear issues was central. Participants made statements such as:

"In the UK there is a good deal of ignorance about nuclear waste management. There is lack of awareness and hence the significance of schools to form future generations". "Raising awareness does not necessarily mean increasing people's concerns".

"Experiencing the siting problem is in the local community and not at the national level. So, the problem of siting awareness is not as important at the national level".
"Raising public awareness implies providing context and not only information".
"It is difficult to interest people in nuclear issues. For instance global warming is in the mouths of all, but this is not the same with nuclear".
"How to get involvement of people when it's not on their doorstep: That is the challenge. How to get discussions going ahead of sites?"
"The communication effort required is much larger in high population countries like Britain & France".
"Raising awareness takes time".
"Projects work better than campaigns. Concrete proposals. What does it mean to me? Could be done in parallel with awareness- rising?"

The group also expressed the urgency to have in place mechanisms to enable people to participate in debates. They argued for a broad, open and timely decision-making framework. In particular they discussed the national-local relations and expressed their support for local veto on decision-making. In their view it builds trust in the process. Legislation should enable effective mechanisms for participation.

This group had three British and one Swedish representative and their conversation was often focused on comparisons between the two countries:

"In Sweden it is easier for people to access information than in the UK".
"In Sweden the municipalities have the power to veto a siting decision; not in the UK".
"Legislation in the two countries is very different; this fact has triggered different frameworks and processes in the two countries".
"Legislative frameworks are very different between different countries. But best practice can be shared across countries (world wide), provided that adequate account is taken of cultural differences".
"There is a need for a balance between 'process and content' to add flexibility all the time. UK is more driven by rules and regulations".
"Legislation provides the framework for communication and implementation. It provides a framework for dealing with waste".
"Framework is the legislation, legal agreement with communities".
"The framework may also help in defining the process; for instance in Sweden, every 3 years SKB prepares an R&D plan in which it suggests a process; once the Government approves it there is link between process and framework. This gives legitimacy to the process".
"The aim of the current consultation process in the UK is to define framework and process".
"In the UK policy evolves from Green Paper prepared by the Government rather than by Parliament; policy is closer to the former. DEFRA/DTLR is increasingly involved in definition of framework".
"How can the public participate effectively in the definition of the framework?"

Some of the above statements and questions suggest that legislation can have an important role in creating participatory frameworks for decision-making and that producing this legislation can benefit from consultation processes. Perhaps an issue here is the extent to which technical rather than political participants drive the outcomes of

these consultations. This is a point that one of the group members had personally experienced after being involved in one of these consultations:

"In the UK the quality of interaction and involvement at the local level is very poor. As an illustration of this the group found it valuable to learn of a UK experience with a citizens' panel. The process used in working with this panel was well regarded at the time by the panel members, who gave their time willingly and looked carefully into a range of complex issues. Where the process fell down was in the follow-through: the final report did not properly reflect the panel's views, they were not given the chance to comment on a pre-published version of the report and there was a complete lack of follow-up communication (e.g. about consultation with any other groups). A key element in any consultation process was seen to be to manage expectations and make explicit how the information from the process will be used and how feedback will be provided."

The point of this experience is that, in general, we may expect that the values of the people are better aligned with those of the politicians that represent them than with those of the civil servants that support the government, and therefore that it makes more sense to have politicians driving the processes and outcomes of consultative processes than civil servants. This role of politicians should be considered in processes defining frameworks for decision-making, particularly because it is in their steering of stakeholders' interactions and in their monitoring of outcomes that they can give more opportunities to the effective implementation of democratic processes.

But it is the sheer imbalance between the large numbers of members of the public and the limited numbers of politicians representing them that produces many of the communication breakdowns we witness between them.

 "What is participation in a decision-making process? How realistic is this? Who has responsibility of the decision-making body?"
"Public influence can be indirect (via representation)"
"Different types of debates with different types of stakeholders. How do institutions process the public's information?"
"In Sweden people think that the decision to site a repository in Oskarsham has already been made. People criticise the quality of process; yet there are a range of options."

Asking for more political and public involvement in key social decision-making processes is not difficult. What is more difficult is to implement the necessary mechanisms to bridge them, overcoming the inherent imbalance in their relationships. This implies designing and implementing appropriate structures and processes. For instance, as made apparent by the Riscom Model, nuclear waste management policy entails several structural levels of debates, and each of them entails different forms of consultation and participation of the public. It is easy to conflate these levels of debate and with that to increase the cynicism and disappointment of the public in these processes. This group's focus on legislation to define frameworks for participation and consultation needs to be consistent with this design requirement.

Also the group paid attention to the quality of particular communications, like those between opponents and silent majorities and between implementers and stakeholders in the affected communities and beyond. Quality of communications is an important issue. Often consultation and participation are related to organising direct dialogues and meetings between representatives of the public and experts and politicians. However these interactions may not be enough to bridge the democratic gap:

"There is a problem with 'opponents' that do not represent the open majorities."
"Communication between NGO representatives and the public at large (i.e. silent majority) is problematic; people would like to see NGOs involved at the grass roots in local processes, however they should not assume that they are their representatives".
"People are afraid because of ignorance and the views of industry and pressure groups are polarised".
"People have their own views, they just don't want to discuss them with you."
"In the UK Green peace and Friends of the Earth are seen as trusted intermediaries between public and Government. If groups as important as these are having problems, that sends a message to the public, but in fact the public has not been engaged".
"In Sweden, Green peace is not seen as standing for the people. They prefer opinion formers and citizens' panels for this purpose".
"Pressure groups are not a substitute for public involvement. They have a specific perspective, which needs to be weighed up with other perspectives".

Discussions in the group's final iteration were focused on role of the citizen. In their view the role of the citizen was to just to influence decision-making. For this purpose citizens had to be involved in communications and in consultation processes.

"Responsibility must rest with the formal bodies"
"Opinion groups, focus groups and the like can help in the process to choose a site".
"Nirex is concerned with how to bring people into the process. The view is that in relative terms societal responsibility is low in the UK".
"In the UK quality of communications between local community and institutions is very poor indeed, often based on questionnaires"
"Transparency in the process of decision-making is needed, particularly how citizens' views were taken into account. And feedback should be given to the stakeholders involved".
"Interaction is the only way to influence".
"The scope of consultation must be defined. If issues arise which are outside the participants' scope, these need to be passed on to the right people".
"Need to make the ordinary person 'visible' in the process. This might encourage more people to participate".
"Adversarial or pragmatic approach? What are the trade-offs?"
"With an adversarial process there is much less chance that people will be (largely) satisfied".
"How people feel when they are consulted is important. They are more likely to buy into results".

A final reflection coming from these discussions is that transparency is not only the outcome of making information available or getting people involved in occasional consultation processes but also, and perhaps more fundamentally, of involving people in

on-going reviewing processes, which avoid confrontation and encourage participation. Indeed this is more likely to happen in a natural way in smaller societies. For larger societies this is an important design challenge.

4.2 Mutual learning

(GROUP: BLACK)

Aggregated Statements of Importance

NR: 4
COMMUNICATION EXPERTS $\longrightarrow$ PUBLIC

Experts must learn to transform their findings to a form that answers to the public's requirements.

Process must be properly resourced to allow <u>all</u> to participate fully.

NR: 5
Mutual learning is a way to mutual trust.
(For <u>all</u> stakeholders: waste management organisations, regulatory bodies, public, local representatives, etc)

NR: 6
The public needs to learn to talk to industry and industry needs to learn how to listen.

Outcome resolve 1

 Mutual Learning
 We concluded that we need more time to discuss this subject further in depth and also have the possibility to interact with other groups and topics.

 Not withstanding this, we stated that:
 "Learning does not require, but can create trust"
 "We feel that in this field oversimplification in giving information should be avoided"
 "Meeting places to learn must be created for all stakeholders"

 This statement will, amongst others, be discussed in our next meeting

Graffiti

What sort of meeting could create mutual learning?
Learning (competence building) takes time. The decision-making process must be given enough time for competence building and not be forced by deadlines.
Learning requires time for reflection (feed-back).

Can "learning" be a meeting place to learn"? What is required?

Trust is neither an attribute nor a property of an individual. Trust is an assessment we do on the sincerity and competence of others in our relations with them. So we learn how to be trusted. Hence mutual learning is the driving force for creating trustful relations. Perception of risk is apparently very different from one stakeholder to another (or even from one individual to another). Is it realistic to aim at a shared view, common understanding and a mutual learning about RISK?

Outcome resolve 2

In our second meeting we went over to some interesting questions. For instance we found that debating from oppositional perspectives can be useful in learning from each other. Also we stated that in a dialogue or debate or other sort of meeting consensus is not necessary for mutual learning; on the condition that there is respect and trust (authenticity) between participants.

We find that mutual learning concerns all stakeholders including "the public".

Recruiting the ordinary people is difficult but somehow they must be reached.

We concluded:

1. A bottom-up pressure on institutions and the need to be responded to, is the best approach.
2. Structures/means need to be defined by the public; and they need also to have the resources and time therefore.
3. Different forms of engagement to suit the needs of participants (Examples: debates hearing, discussion groups, seminars, web discussion etc.

Outcome resolve 3

In this meeting we first reviewed what we've done so far on mutual learning and understanding (each other). We concluded that most of the statements we made were valuable enough to report again in the outcome of our last meeting. And we added our final feelings and statements at the end.

So the efforts of our group can be translated as follows:

- Learning does not require but can create trust.
- Meeting places for mutual learning must be created for all stakeholders.
- A bottom-up pressure on institutions and the need to be responded to is the best approach for creating mutual learning.
- Structures/means need to be defined by the public (people); they also need to have the recourses and time for this.
- To suit the needs of all participants different forms of engagement should be explored all the time (examples: debates, hearings, discussion groups, seminars, web-discussions, etc)

So far this is what we stated in our first two meetings.

In our last meeting we added the following statements:

- Caring for each other, mutual empathy and respect is fundamental for mutual learning. So: show empathy and respect when going into any arena.
- Mutual learning never ends, it is a continuing process and the process needs time.
- Mutual learning is not specifically about decisions and decision-making.
- You can't rush awareness and learning.
- It is important to define the roles of all participants to create an understanding for each other and achieve mutual learning

Rapporteur´s comments (Espejo)

The emphasis of the discussions in this topic was in the quality of communications. Key concepts in the debates of this topic were trust, authenticity, respect for each other, roles, and time and resources. Also, conversations made apparent that the participants' concern for mutual learning was both at the individual and organisational levels.

Though it is apparent that as an outcome of recurrent interactions one can learn not to trust the other, the focus of this group was on the value of mutual learning as a platform to building up trust and also on the value of building up trust as a platform for mutual learning. Trust provides a positive emotional context for mutual learning:
"Empathy and care are fundamental for enhancing mutual learning".
"In the Czech Republic the problem of trust goes deeper since mistrust was the rule for decades".

The authenticity of key roles, particularly of those representing the nuclear industry, appears as key to build up trust. This was recognised as a weakness of the UK industry. Indeed, building up trust has been at the core of Nirex's activities since the rejection on appeal by Secretary of State for the Environment of their planning application for an URL at Sellafield in 1997.
"Experts need to be authentic, often they are dishonest as they produce institutional lies".
"Big learning steps are necessary for British industry; members of the industry talk to each other but they don't talk with the people."
"No company can afford to say that they don't care what the people think, but in the UK there are still companies operating without listening to the people",
"Public does not have tradition of participation",
"There is a need for 'continuous improvement' in relations industry-people."
"In France at the local level, people do not have problems with experts, except if they are employed by the implementer".

At an individual level, this may imply clarification of roles. To have a local nuclear plant employee at the same as a local government councillor, dealing with nuclear issues at the policy level, is likely to generate confusion. This was indeed the case of one of the members of this group.

The group discussed requirements for mutual learning. They emphasized that resources and time were necessary and that this learning could not be forced onto participants:
"For mutual learning it is necessary to have the time and the resources",
"Learning requires time for reflection" and
"It is necessary to maintain the interaction over a period of time, and allow people to assess participants' different views".

The views and positions of stakeholders, experts and politicians are likely to evolve overtime as they develop a better appreciation of their mutual concerns. It was particularly significant in this respect the statement by one of the Swedish participants that over the past 10 years, the positions of all participants in the nuclear debate in Sweden had significantly evolved, to the point that the Green Party had voted for the nuclear industry in a recent referendum. He stated:
"In Sweden in ten years we have experienced a fundamental change in the participation of roles. Perhaps this is the outcome of both a safety culture and the fact that learning is easier in small countries".

There are certain forms of interaction among participants that prove to be more constructive for mutual learning than others. While dissent may be welcome, antagonism may prove destructive. Dissent may increase the challenges that the implementer has to deal with, however if the opponents do not modify their positions, in whatever direction, as an outcome of the implementer's responses, then communication is failing and mutual learning is not happening.
"Opponents may stretch the industry without them learning"

But, how do we judge the quality of a debate? The distinction was made between dialogue and debate; the former was recognised as more communicative and the latter as more inquisitive (participants argue head-to-head). In the end the value of both dialogue and debate was asserted. For instance it was said that:
"Debates raise the level of knowledge. Opposing statements increase the level of knowledge".
"It is good to have contradictory views; intensive debates are desirable".

Stretching is desirable to make decision processes more transparent. But, what kind of transparency makes sense? Understanding all processes and procedures may not help in the end. But, what are the limits for simplification and over complication in the provision of information? Understanding and appreciation requires a good deal of background information, and sharing it takes time and resources. Mutual learning requires more than interactions among stakeholders, experts and politicians; it requires sharing of background information, and this is a social process. It would appear that a degree of active designing of communication and interactions processes is necessary. Statements like the following were said in the meetings:

"There is need for all types of meetings, but it is necessary for participants to know their type beforehand".

"It is necessary to avoid brain-washing the people involved".

"In Finland there is a working open culture, where errors are recognised openly. Things go wrong; we accept this. Value is given to lay knowledge about what can go wrong".

"In these interactions the public is the most important and also it is the most likely to stay away".

"In the UK people put forward very well articulated questions when consulted, even in very difficult issues".

"There are no structures to involve the public in the UK".

It seems important to characterise the public; to make distinctions between different types of public. They are likely to respond better to different forms of communications and interactions.

"How is/should be the public's involvement?"

"The public are ordinary people who are not in the barricades, as often opponents are".

"The silent ones are missing from discussions but they are critical".

"It is important to find key representatives of this public; but how do we get them involved?"

"They don't come in because of lack of power and also because of lack of information; whose responsibility is to overcome this lack of interest?"

"Local authorities, their employees, are good models of the people in the community, however, officers are not always good relays of their views."

Therefore officers could function as relays between the silent majority and the local policy-makers, but they often fail in this task. This is a structural aspect of local institutions, about their resources and relations, which may be important to explore further in order to support mutual learning. Indeed structures can help to balance top-down and bottom-up processes:

"Lay people assess risk very differently to the experts. Bottom-up assessment of risk is more meaningful than top-down."

Perhaps an important issue emerging from this group's discussions is that mutual learning requires more than interactions, it also requires an effective shared information background, that is, communication.

4.3 Roles and arenas

(GROUP: DARK BLUE)

Aggregated Statements of Importance

NR: 7
Experts' Role

Experts want to keep control – therefore they don't want processes that legitimise stakeholder and laymen involvement

NR: 8
Defined Roles

It is important for each 'actor' to understand different 'actors' roles and arenas to achieve a 'good' communication on the nuclear waste issue.

NR: 9
Role of the media

The role of the media – with such a complex and long term question – should they be considered as stakeholders or as key-players?

NR: 10
Experts can only propose
Public must be supportive THEN politicians can take a decision

NR: 11
Self-appointed experts in ethics take upon a role of spokesmen on ethical issues. Everybody is an expert in ethics. The experts' role should be only to make suggestions of questions to be raised. [eg: ethics of open and hidden agendas!]

Outcome resolve 1

- Identify 1st level Actors
- In absence of legal framework have problems identifying Actors
- Define roles of actors throughout decision-making chain
- Get opinion formers to participate in the process and thereby inform public

Still to discuss:

- Ethics
- Arenas
- Limited access to experts by certain groups

Graffiti:

- Get public to participate in the process and inform decision makers + opinion formers!
- Who 'defines' roles of actors?
- Use and empower existing structures rather than creating new special structures
- The ownership changes during the process
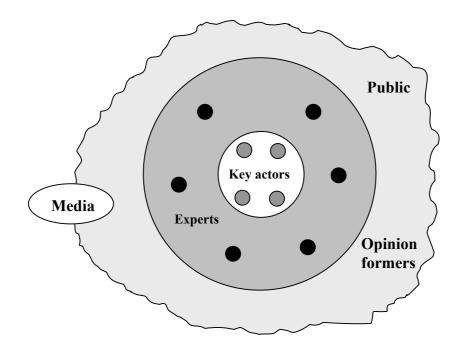
Outcome resolve 2

- Building local arenas at local level
- Need to have clarity in legal structure and scope of work for implementer
- Who does the independent review of the implementer's work?
- If you have weak authorities you have imbalance in power
- The need to involve all in preparatory phase
- Different local communities can have a different local arena
- Experience in dealing with regulators and industry determines the initial level of engagement by local communities

Outcome resolve 3

In the early stage of a process and its different arenas dedicated to various goals, the main roles and responsibilities have to be clearly defined collectively and in coherence with the legal structure.

From this definition, the expected work has to be performed in the arena comprising of three (3) layers of actors:

- Key decision-makers. (Those who legally accept or reject the state of the process). Depending on a legal framework these could include: government, municipalities, regulators and implementers.
- Experts. (Technical support, universities, health and safety experts, etc).
- Opinion formers – Public: (Representing different interests and interest groups). For instance media as a channel and as an opinion former.

To perform the process, a platform with actors having initiative will organise the work in a participative manner.

Actors in their roles have to prepare, plan, review, report and validate the process and the result.

This work should be done with the public involvement.

Rapporteur´s comments (Espejo)

Key issues discussed by this group were the 'veto power of municipalities', the 'role of experts' in decision processes and the 'meaning of the media' in these processes. In the context of this latter issue it was also discussed the 'role of opinion formers'. Additionally, it was discussed albeit at a general level, the contribution of different roles to different steps of the decision process and the acceptance of what is 'material' to a debate in particular arenas.

The group emphasised the need for strong legal frameworks to underpin local and national processes. There was agreement that policy for nuclear waste management required well-defined processes and procedures, and that policy outcomes had to be driven by the will of the people through democratic processes. This latter aspect made particularly relevant the designing of interactions with stakeholders in such a way that decisions were given long-term legitimacy. And, there was agreement that the definition and recognition of roles and arenas was critical for these purposes.

The group focused a good deal of their debates on Oskarshamn, where a decision process for a long term solution of nuclear waste had been in progress for a considerable time. It had been necessary to clarify the meanings of the relevant roles over time. "Decision-making process and role definition have been key topics in Oskarshamn" "The ownership of the process changes over time. The meanings of roles such as implementer, regulator, national government and local government change over time." "In Oskarshamn the municipalities play a very independent role. At the same time the regulators regulate and give advice". "Mistrust of authorities by municipalities in Sweden is low. So advice from the regulator is accepted". "Legislation may be too restrictive in terms of the roles that are officially recognised. In Oskarshamn they found the need to include other roles such as opinion formers. The democratic process took care of this lack. The role of opinion formers emerged this way". "As for the final decision, in Sweden national and local positive decisions are required before implementation." "In Sweden the national arena for SKB relates to their 3year R&D programme. (This has been done for the last 16 years). It has provided a good link between the national and local levels. This was originally for normal R&D, however over time it has incorporated the siting issue."

In France the picture of roles and arenas is different.

"The State is responsible for the definition of roles through legislation", but
"Some bodies can insist on their rights to be stakeholders.",
"The power of municipalities is relatively low and so far no decision process has been defined for site selection, however, in any case the national government could ignore local decisions, though at the cost of political problems".

Since decisions about nuclear waste management are part of a national policy with clear local implications, the veto power of municipalities emerged as an important aspect for consideration. The Swedish and the French cases offer two different approached to this issue, grounded in very different appreciations of the roles of national and local governments. It could be argued that the stronger position of municipalities in Sweden offers them the opportunity for a more democratic decision process than the more centralised French approach. In Sweden, when a municipality agrees to be part of the decision process it does not see itself losing the right to withdraw from it at a later stage. This situation is likely to increase their willingness to be part of the process. In France, on the other hand, agreeing or accepting to be part of such a process is likely to be perceived as a 'fait accompli'. The perception of many affected people in France is that the work in progress at the Bure's underground research laboratory (URL) is a decision already made to site a repository there. This situation is likely to increase the reserves of particular communities to join the process. In fact the search for a granite site for a second URL in France has run into difficulties because of people's rejection. The situation in the UK is different to the other two countries. Local authorities in the UK have the right to reject a planning application by the implementer, and, as it was the case with Sellafield, trigger a Planning Inquiry, which in this case led to the rejection of the application. The will of the local authority prevailed, however only after a long and costly inquiry.

"How much consultation is desirable? Too much consultation; doesn't it blur responsibility and accountability?"
"How to build up a local arena? It is necessary the backing of local groups and associations. It may be more difficult to build up national arenas."
"It is necessary to clarity the legal framework of the implementer's work."
"Who is doing the independent review of the implementer's work?"
"There is a risk of imbalances in power."

It is useful to compare the three countries' statutory arenas for communications in decision-making. The review-decide approach of the Swedes is based on an on-going process that gives participants time and resources to learn from each other (mutual learning). In the end communities can exit the decision process at any stage if they wish so. The functional capacity of the national bodies, whether public or private, is relatively large in order to sustain communications. On the other hand in France the size of the nuclear system is much larger, and national authorities and experts are less likely to find the resources and time to develop to the same degree the communicative approach of the Swedes. It would appear that the complexity of the French system, and its history of centralisation, makes it necessary for them to give fewer opportunities to local decision-making in order to function. If this hypothesis were correct it would imply a democratic-gap in the French system. It would be extremely costly to give people their say. Finally, in the UK, with also a much larger nuclear system than the Swedish, the inquiry-decide approach offers a means to balance the local and national

interests, but only in extreme situations, where roles are in fundamental disagreement, situation in which resources and time are allocated to what in effect is a confrontation of viewpoints and not an on-going communication process. It can be argued that this approach is not only costly but also less conducive to mutual learning than the review-decide approach.

The 'role of the experts' is an interrelated issue that also emerged in the discussions of this group. This is an issue that makes apparent the interdependence of roles and arenas. "There are statutory aspects that may restrict the contribution of roles to decision processes; this is the case with what is 'material' in these processes."

Any statutory framework may fragment role contribution to a decision-process. This became apparent in the UK with Nirex's planning application for the Rock Characterisation Facility (RCF) at Sellafield. Nirex considered that the RCF was part of the investigation process, not part of any application to develop the site for disposal. In consequence, because the RCF application had to be dealt under Town and Country planning legislation, that the HMIP (a predecessor body of the Environment Agency) had no formal role and that nuclear issues were not *material*[3] as they would be covered by consents and licences gained from the nuclear regulators should they became necessary. Planners and local representatives did not agree with this fragmentation, and refused Nirex's application, which went into appeal. The implications of this appeal for the nuclear waste management programme in the UK have been widely reported. For the purposes of this group's discussion it illustrates statutory restrictions fragmenting the participation of significant roles in a decision process. In France we also find that the role of experts can be restricted by custom and practice. For instance the experts of IPSN[4], who happen to be at the centre of new research with potential relevance to the articulation and definition of future policy, are not expected to get involved in these (articulation and definition) processes, reducing their role to being advisors to the regulators. Also in France, expert roles (IPSN) and regulatory roles (DSIN[5]) are separated and to give to regulators the responsibility for expertise is not appropriate. This view is indeed not taken in Sweden, where the regulator, SKI, has its own expertise:
"Authorities like SKI have their own experts". Also,
 "In the French culture only politicians make decisions; regulators don't make decisions".
"In Sweden SKI does not work for the Government."
"In the UK key decision makers are always politicians."

Finally, the group discussed the role of the media in the nuclear waste management arena. Some participants felt that the media were actors, since they had an active role in opinion forming, while others felt that the media had to be only conduits in between the people and policy makers. This indeed was the position taken in Oskarshamn.

---

[3] Nuclear issues were not included as part of the planning application. This limited the input of Her Majesty's Inspectorate of Pollution (HMIP, the regulator before EA was established) to the process.
[4] IPSN, the Institut de protection et de sûreté nucléaire is today part of IRSN, the Institut de radioprotection et de sûreté nucléaire
[5] DSIN, the Direction de la sûreté des installations nucléaires is today part of DGRSN, the Direction générale de la radioprotection et de la sûreté nucléaire

"Is the Media a stakeholder or a channel to the stakeholders?"
"In Sweden the media are not seen as a role."
"Media are not working with transparency."
"Media are focused on very 'personal' issues."
"Media sells news! Thus they focus on critical events."
"In Sweden, all news releases from municipalities will generally be published locally."
"Television tends to focus on controversy."
"Media is able to influence local opinion."
"Media should be there for objective information dissemination, but this doesn't really happen!"

In Oskarshamn it was felt that 'opinion formers' in the community could do a much better the job than the media in the involvement of the silent majority in policy processes.
"In Sweden an alternative is to engage 'opinion formers' to influence people's appreciations. They can be more effective than the media. An opinion former is an individual who is looked up, has a big network, and is trust worthy. In Oskarshamn there are about 50/100 opinion formers; if they are involved the situation changes (e.g. school teachers ...)"
"What is the role of the opinion formers? Is it to be a conduit to people or representatives of the people? In Sweden they bring people's views into the process."
"How do you identify an opinion former?"
"In France you go to an association or institution to find them (e.g. land users define who their representatives are)"
"Selection of opinion formers from within communities is unproblematic, however, particularly in large cities, this selection produces suspicion."

4.4 Heritage

(GROUP: GREEN)

Aggregated and Consolidated Statement of Importance

NR: 12
HERITAGE MANAGEMENT

How the heritage for future generations or equity between generations can be introduced in a pertinent way discussion. This point implicitly is an obstacle for decisions. The long-term management of risks cannot be explained in the framework of the sustainable development.

Outcome resolve 1

We have raised the question of the choice between making decisions now for future generations, or giving them elements of solutions.

On-site storage of waste does not increase the site's risk profile, but creating a new area of contamination does.

How do you ensure long term expertise? This relates to knowledge and skills.

How can we ensure that knowledge of where contaminants are stored remains available to future generations/civilisations?

How do we as a culture address the extraordinary long term nature of materials that have to be dealt with?

The fact that we are continuing to produce nuclear waste compounds our problem.

Graffitti outcome resolve 1

- What is sustainable development?
- In which phase of the process debate, this kind of consideration has to be introduced?
- How to review the adopted solutions with this view?
- Peace or war scenarios for building solutions?
- Best heritage to future generations is to take care of waste now. It is our responsibility!

Outcome resolve 2

- Surface storage makes it easier to have knowledge about nuclear waste (where it is, how to look after it). Less risk of future generations accidentally disturbing nuclear waste.
- There are two kinds of sustainability:
  - Decision-making process. This needs to be reversible.
  - Sustainable solutions. It is difficult to have a sustainable solution without retrievability.

- A war scenario challenges the concept of sustainability. Deep repository does not necessarily offer protection. We need to think of sustainable approaches when take account of worst-case war scenarios. (UNESCO System).
- Reprocessing and separating plutonium: if we assume war, reprocessing is not an option. This is an extremely dangerous idea.

Outcome resolve 3

The interests of future generations can best be protected by ensuring that both the decision-making process and decisions taken by our generation can, as far as is reasonable[6], be modified or reversed in the future. We must ensure that the knowledge base, resources and mechanisms developed now allows for major societal change in the future, including the possibility of war, cultural change, human curiosity and the decline of civilisation.

Economic and human intellectual resources need to be committed to seek ways by which knowledge of nuclear waste could potentially be transmitted to far distant civilisations with a different technological base from our own.

Technical and decision-making procedures need to be constantly adapted to meet changing requirements.

The possibility of retrievability and access should be planned for.

While there is a national and/or international framework, the local community must also take an active role in the long term custodianship of the site.

Education and career paths should be developed with the waste management issue in mind. There should be incentives for people to get involved in this area.

Minority position within the group:

This issue is very important and needs to be treated in depth which requires another approach both more intellectual (philosophical, psychological,) and more practical (i.e., what to do?).

Rapporteur´s comments (Espejo)

This group's topic is at the heart of the ethical aspects of nuclear activities. Decisions made by society today about nuclear waste will have a bearing upon the inherited world of future generations. The debates of this group made apparent diversity of values, which could not be fully accommodated in a shared Final Outcome Resolve. Indeed, one participant felt the need to express the following minority position: "This issue is very important and needs to be treated in depth which requires another approach both more intellectual (philosophical, psychological,) and more practical (i.e., what to do?)". This group had a good balance of laypeople and experts with very different values. For instance while some of the non-experts supported the view that long-term storage was a better waste management option, experts did not want to rule out the option of geological disposal.

---

6 We define ´reasonable´ as: "choices are made through a process of inclusive and reasoned discussions".

"We have raised the question of the choice between making decisions now for future generations, or giving them elements of solutions. On-site storage of waste does not increase the site's risk profile, but creating a new area of contamination does".
"Surface storage makes it easier to have knowledge about nuclear waste (where it is, how to look after it). Less risk of future generations accidentally disturbing nuclear waste."
"Despite nuclear industry support, there is no evidence that deeper is safer"
" We have examples of huge expenses to clear the errors of two generations ago. A solution of 50 years ago may be considered unacceptable today".
"Can you have a sustainable solution if you know that there are unsolved problems and the selected solution is irreversible?" but from the experts viewpoint,
"Worst case scenario supports deep storage"

It is paradoxical that the very views made by non-experts about future uncertainties are based on the assessments made by the experts themselves.

Perhaps a significant outcome of this group's debates, though expressed only by one dissident viewpoint, was the proposition that 'heritage' debates require an integration of the technical and the social that goes deeper than that allowed by the Syntegration. For this purpose scenario building, in the tradition of performance assessment, and ethical debates should be brought together in debates capable of giving democratic processes a chance. The extraordinary long-term nature of some forms of nuclear waste makes it necessary to consider extreme scenarios.

This group discussed which of the current nuclear waste management alternatives was more appropriate in order to reduce risks for future generations. Decision-making needs to consider the reversibility of the decisions made. Decisions need to consider eventualities like wars, catastrophes, human intrusions and beyond that the unthinkable. This issue highlights the distinction between focusing attention on the next two/three generations and focusing on the very long-term. Implicitly, this was the distinction made by the group in its discussions about the advantages of long-term surface storage as opposed to geological disposal:
"Do we leave options open for future generations or do we try to solve nuclear waste problems today?"
"Is it more appropriate to deal with the waste now, disposing it for the long-term, or is it more appropriate to store it in the expectation that future generations will find better ways to deal with it?"

If the storage option is taken, is it not the case that societies are leaving the costs of disposal to future generations thus breaking the principle that 'polluters pay'? If the disposal route is taken, is it not the case that societies are breaking the 'precautionary' principle? Can we assume that societies have enough knowledge as to avoid leaving in the laps of future generations undesirable risks? Are they prepared to design and implement costly solutions to make post closure retrievability possible should the need arise?

And in any case, how can societies avoid erasing from their memories all about these disposals either as an outcome of natural evolution or of cataclysmic disruptions? How is kept knowledge about nuclear waste management over generations? Particularly, if

future generations are faced with the need to retrieve waste and they don't use nuclear energy any more. The group discussed educational and information transmission options:

"Economic and human intellectual resources need to be committed to seek ways by which knowledge of nuclear waste could potentially be transmitted to far distant civilisations with a different technological base from our own".

"It is necessary to leave information for future generations (e.g. Nirex's information system in the UK)".

"In France maintaining this long-term memory is the responsibility of particular institutions".

"Humans are curious (i.e. archaeologists) and will unearth waste unless they have enough information to understand the risks."

"There are instances of communities in the UK that in 60 years had forgotten stored information; there is need for mechanism to keep information and maintain knowledge into the future."

"It is necessary to find ways of transmiting knowledge through generations by means of abstraction, images, monuments…"

"Countries stopping their nuclear programmes most likely will lose their expertise and experts."

"There is a need for educational curriculum in nuclear waste management."

"In the UK there is concern that this expertise may be in the decline. There is a need for skill courses today to cater for the future; however the issue is how much skills and how much of the social and ethical concerns should they cover?"

A final issue discussed by this group was the custodianship of a repository in the longer run. Is it of national, local or mutual responsibility?

"In Sweden municipalities want to pass responsibility of any future deep repository to the nation." The view of the group was that localities had to take responsibility as well.

4.5 Transparency

(GROUP: GOLD)

Aggregated Statements of Importance

NR: 13
Why transparency?
Transparency is more important than consensus (eg a transparent and good process may not lead to a positive decision).

NR: 14
What is transparency?
Historically, nuclear waste management is framed as an expert area.

For transparency it must be opened to participative decision-making by:

identifying levels for meaningful dialogue

- on each level; stakeholder, experts, regulatory body NGO, implementers claims to truth, legitimacy and authenticity must be clarified.

NR: 15
To achieve transparency our objective should be that stakeholders are intelligent/informed customers.

Outcome resolve 1

After our first discussion we made the following statements:

1. Legal framework can enhance transparency.

2. What are the mechanisms to be built into transparency processes? (further discussions).

3. The mental state of all involved is important for getting transparency.

4. Find the right level – and the language for a particular level – in the right situation.

5. Decisions on facts and values are part of the transparency process, as they contribute to the emancipatory interests.

6. Links between different levels of discussion are needed.

Outcome resolve 1 graffitti

- Transparency requires experts to give up control and open a subject for discussion including its naked state of art. E.g. lack of knowledge is as important as knowledge to discuss.

- Can things be too transparent? > NO!

Outcome resolve 2

In this session we focussed on the following questions with the following answers:

What is transparency and why do we want it?
To get understanding and generate good questions instead of silence.
Trust and transparency are social values (will be discussed further).

Can we/should we give input from our discussions to the other groups?
Create honest arenas for structured dialogues.
The arenas should emerge in an early stage in communication with stakeholders.
A legal framework can stimulate and in certain cases empower transparency.

Outcome resolve 3

Our final statements are as follows:

What is transparency and why do we want it?

- Transparency goes beyond explaining scientific facts and making reports easily accessible to anybody.
- Transparency is the outcome of a continious, mutual learning process increasing awareness amongst stakeholders and stretching both the implementor and his critics. (note: stretching = a mechanism to stimulate self-evaluation and improvement)
- Transparency requires all participants to have an open mind, meaning that they search understanding and NOT imposing or winning the argument.
  Thus…transparency is to get understanding and creating good questions instead of silence and to focus on important and controversial questions.
- The benefits one might have from trust and transparency is that it frees resources for all involved to deal with other issues.

Mechanisms to enhance transparency

A legal framework can stimulate and in certain cases empower transparency. (still to be explored further; other groups have touched upon it, for instance: new municipality veto and hearings)

Possible issues in dialogues with other groups

- Create honest arenas for structured and interlinked dialogues, and find the right level – and the language for a particular level – in the right situation.
- The arenas should emerge in an early stage in communication with stakeholders.
- Decisions on facts and values are part of the transparency process, as they contribute to the emancipatory interests (emancipatory = increasing self-steering)

Rapporteur´s comments (Wene)

"All the statements are 'motherhood'". This critical comment was the very first one first made in the group and referred to the three Aggregated Statements of Importance (ASI). The comment calls attention to the way "transparency" is saluted as a "cure all" for democratic participation in contested decisions and thus becomes empty unless it is given a precise and operational meaning. The debate within the group focused on the meaning and need of transparency and on mechanisms to obtain it. However, to proceed beyond the motherhood statements, the group recognized the importance of cross-over conversations around AIS in other groups and proposed some issues for continuing the debates.

As clearly stated in the final outcome resolve, the group acknowledged from the outset that transparency goes beyond explaining science and accessibility of reports. The debate within the group showed that moving away from the "experts explaining to the

public" paradigm raises two fundamental issues: redefining relations among the actors, such as stakeholders, implementers, experts and regulators, and finding ways to manage the complexity of the new situation.

The need to take a new look at the *relations among the actors* was expressed in several comments, e.g., "Also: relations between actors? It is all about 'relations'". "Mental state is important for getting transparency" is a statement that applies to all actors and is further specified "Transparency requires all participants to have an open mind, meaning that they search understanding and NOT imposing or winning the argument". The word "respect" is repeated in several statements: "You cannot be transparent in a person you don't respect", "…respectful dialogue…", "Disrespect is not a good ground for transparency".

The key word in the statements pertinent to new relations between the actors is *trust*: "Key: how is the confidence and trust built up". However, the relation between "transparency" and "trust" itself needs clarification. Statements such as "Transparency: important ingredient for building a forum to gain trust" and "Transparency creates honest areas for dialogue" imply that transparency generates trust. But saying that "Mechanism without trust = manipulation" indicates that mechanisms for transparency cannot be created without there being some initial form of trust between the actors. The debate in the Brown group demonstrated that setting up credible procedures for transparency requires such initial trust among the actors.

To avoid a "chicken-and-egg" argument, it seems important to realize that transparency is the outcome of a process and trust describes relations between actors. The conclusion of this Rapporteur is that starting the transparency process requires some initial trust and when the process is successful, it deepens and widens this trust. "No transparency: no trust. Transparency is an ongoing process" expresses this insight. The debate in the group stressed that the trust so created is a social good needed for a participative decision process. "Trust and transparency are social values meaning that one gets focused on important and controversial questions." "The benefit one might have from trust and transparency is that you free resources from all involved to deal with other issues."

In discussing the value of trust and transparency it is important to keep a very strict borderline to the objectives of the implementer. The trust created through the transparency process is a resource for society independent from the implementer, as expressed in the comment "Trust doesn't belong to anyone: it is a social value". Outcome resolves 2 and 3 stress that transparency is "to get understanding and generate good questions instead of silence". In fact, the result may not be desirable for the implementer: "Transparency is more important than consensus (e.g., a transparent and good process may not lead to accepting the implementer's desired decision)".

Redefining the relations among actors brings new elements into the discussion. If – as in the earlier paradigm - transparency would come through explaining complex technical solutions to the public, the focus remains on objective facts, and trust is grounded in the scientific authority of the experts and the administrative competence of the regulators. However, moving away from "explaining" towards "dialogue", "understanding", "clarifying" and "creating good questions" makes issues connected with norms, roles,

values and authenticity become as important as the technical issues. The need to openly discuss values held by the actors, including implementer, experts and stakeholders are expressed in comments such as: "Discussion on facts and values = part of transparency process", "Links between facts/values and transparency (might deliver mechanisms)". Outcome resolves 1 and 3 underlines that facts and values are part of the transparency process.

The final outcome resolve states that transparency should "stretch" both the implementer and his critics. "Stretching" is defined as a "mechanism to stimulate self-evaluation and improvement". A basic element in self-evaluation is probing ones values and the relation between held values and proposed solutions. The definition of transparency proposed in the outcome resolve implies that facts and values and the links between the two are major themes in the transparency process.

In the transparency process, trust is not built on authority. This was somewhat provocatively pointed out in the graffiti: "Transparency requires experts to give up their control and open a subject for discussion including its naked state of art." The graffiti was not taken up in the group, but the comments "create good questions instead of silence" and "'So in to interact with others' and listen, listen…" , can be seen as recommendations both to experts and implementers participating, e.g. in a hearing.

Finding ways to manage transparency was the second major theme in the group's discussion. "Transparency needs dialogue" but "(where is the dialogue?)". "What are the mechanisms to be built into transparency process?"

There was consensus among the participants that transparency requires that the debate is structured – all issues cannot be discussed by everyone at the same time. Structuring the debate means finding levels of meaningful debate and arenas for carrying out the debate on the different levels. But structuring is also part of the transparency process. "Find the right level – and the language for a particular level – in the right situation." "The arenas should emerge on an early stage in communication with stakeholders." "Structuring debate via meaningful levels. Identifying them is a process as such." "In planning is important: how organize two way communication on what level".

To avoid fragmentation of the transparency process it is necessary to have links between levels and arenas; to have "interlinked dialogues". Outcome resolve 1 states quite generally: "Links between different levels of discussion are needed." It is possible to structure the debate in different types of levels, but specifically a geographical distinction of levels was taken as an example in the discussion within the group: "Linking between local, regional, national level is necessary".[7] Hiding or ignoring the links may be a form of manipulation. The transparency process must make it "possible to open dialogues without hiding levels."

---

[7] The structuring of the debate for the Swedish hearings described in Working Package 5 recognised the need for a geographic dimension in the form of a national level (Swedish Nuclear System) and a local level (Siting of Repository). However, the structuring also recognised the need for other levels of debate, for instance on the method for waste management and on the expert investigations. The geographic levels used in the GOLD discussion and the Swedish hybrid are two examples of how the debate can be structured.

Although there is need for "interlinked dialogues", the autonomy of the debate on the different levels and corresponding arenas must not be compromised. That would bring us back to a situation when all issues are discussed at the same time. For instance, opening a discussion on the advantages/disadvantages of nuclear power at a hearing about the siting of a repository in a local community may not contribute to transparency but confuse the issues. One comment on this situation was that "Local (opponents) play a more constructive role than [opponents] on regional and national level (stuck in politics)".

Transparency needs resources and a guardian for the process. Where are the mechanisms to start and steer the transparency process? Who is responsible for the transparency process? Should the same organisation that is responsible for the management of the waste also be responsible for the transparency process? Or should it be the regulator? Or some independent body? The group meant that a "legal framework can stimulate and in certain cases empower transparency" and that the "arenas [for debate] should emerge in an early stage in communication with stakeholders". However, the group also felt that questions on transparency mechanisms have very strong overlaps with themes in the other groups. Moving forward in this issue requires continued conversations based on the outcomes in these groups.

4.6 Wider context

(GROUP: BROWN)

Aggregated Statements of Importance

NR: 16

Nuclear/Waste
Nuclear electricity generation is a part of the discussion on nuclear waste management.

Outcome resolve 1

We have 2 positions:

1. It is unethical to bring in the nuclear energy issue when deciding on NWM issues.
2. It is unethical <u>not</u> to discuss nuclear energy production when deciding on the same.

Is there a political difficulty linking nuclear waste management with oil related energy issues?

In general nuclear energy is not a problem. Specifically nuclear energy has many problems, such as health risks, environmental pollution, etc. Nuclear energy is a way to produce funding waste deposit, or the taxpayers. Political games, the history of nuclear energy in the countries and legalisation, the rate of nuclear production are elements which impact the debates and legislation.

Outcome resolve 2

Graffitti outcome resolve 1

How can the industry address people's concerns?

"I sympathise with the difficulty this group might be experiencing, because of quite 'polar' viewpoints. Can the group find and express some common ethical ground?"
So who <u>should</u> define the agenda of what should be talked about?
These were <u>not</u> the views of the group, just one person's statement
Not true! Three persons contributed to this part of the statement of importance. Group did not object at any time.
Whether ethical or not, experience demonstrates emphatically that attempting to <u>exclude</u> nuclear energy (+ weapons) from the radiationwaste debate is <u>unacceptable</u> to the public.
What practical mechanisms can be developed for addressing views outside the frame of a consultation?

Some interesting comments coming from the critics say that, depending the phase of the process, or the place of the debate, the question to separate or not the problems (or issues) were pertinent. Of course, it is an holistic problem!

Obviously a discussion has to be constrained to yield results. Find a common ground to define acceptable constraints!

Outcome resolve 2

Common ground

It is a fact of life. Most countries have nuclear production and the result is that the nuclear waste problem has to be solved.

Public communication approach both aspects (of production and waste) together and public would like to have only one source of information.

Data about risk, doses, exposure, impact of radioactivity are interesting for both debates.

We can not discuss waste management unless we have discussed nuclear energy production.

It's necessary to create arenas for specific debate with a well defined goal in order to avoid confusion between debates.
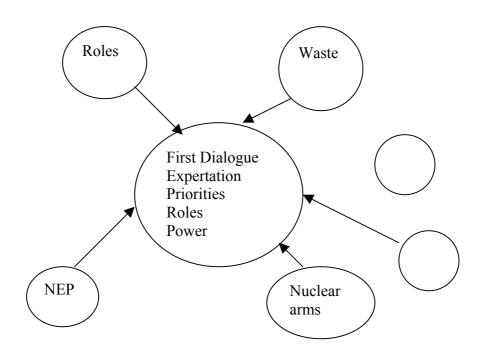
Outcome resolve 3

Common ground

In an early stage an area has to be established to find the issues and to establish a national dialogue. The issues are, amongst other things:
- To explore the issues
- To link the level
- To create agendas
- To define clear roles and frameworks
- To install arenas

It's necessary to create arenas for specific debate with a well-defined goal, in order to avoid confusion between debates.
You have to follow up the results, if necessary by legislation.

```
      Roles                         Waste


                  First Dialogue
                  Expertation
                  Priorities
                  Roles
                  Power

      NEP                         Nuclear
                                  arms
```

Discussing of NWM in the wider context involves so many, often conflicting, other issues that a structured hierarchy of interlinked discussion arenas should be established. This would encourage informed discussion amongst participants who would understand their roles and potential influence.

Rapporteur´s comments (Wene)

The Aggregated Statement of Importance (ASI) brings up the question whether it is desirable – or indeed ethical – to decouple decisions on nuclear electricity generation and nuclear waste management or whether the links between the two are so strong that it is impossible – or indeed unethical – to decouple such decisions. The debate within the group came to deal with two different issues. During the first session the participants discussed arguments for and against the ASI, that is whether it is correct-incorrect, right-wrong, good-bad to decouple/link questions of nuclear waste and nuclear energy, and how links are treated in different countries. As it became clear that there were no common ground to move forward on these substantive issues, the debate focussed instead on ways to structure and conduct correct and fair public discussions on these issues. The *peripeteia* came at the end of the second session and in the final outcome resolve the group reached consensus on some conditions for establishing a national dialogue.

The two ethical positions in Outcome Resolve 1 reflect the strongly opposite views held by members of the group. The debate continued also in the Graffiti. The fact that nuclear waste exists and must be managed provides an argument for not bringing in "the nuclear energy issue when deciding on NWM issues". This is expressed in statements such as "We do accept most countries have a nuclear program. There is a nuclear waste problem to be solved." and restated as part of the Common Ground in Outcome Resolve 2. However, it was argued that solving the nuclear waste issue does not in itself open the way for *future* nuclear energy: "If waste is solved it doesn't mean nuclear energy is solved". Another argument for discussing nuclear energy production when deciding on waste management, is that public debate already makes the linking between production and waste: "Public communication approach both aspects (of production and waste) together and public would like to have only one source of information" (Common Ground in Outcome Resolve 2).

Looking at national programmes, the participants felt that in practice the decision processes separated waste management and nuclear production. Finland, France and Sweden reported such separation. For instance, in Sweden the electric utilities have formed a separate company, SKB, with the mission order: "Solve the WM issue". Experiences point, however, to the need for a distinction between the practical requirements of the decision process for a specific proposal to solve the waste management (WM) issue and the public debate preparing for this decision. In France for instance, instituting public debates about waste management on the regional level raised demands for opportunities to debate in public the nuclear issue in its entirety.[8] The French example refocused the debate within the group on ways to structure and conduct correct and fair public dialogues.

The Swedish efforts provided one example for structuring the public debate on nuclear waste management. Key idea in these efforts is the identification of levels for meaningful debate. This idea guided the set up of arenas for hearings in 2002 in the

---

[8] The requirement to discuss the wider issues around nuclear waste also comes out of the experiment performed by the French participants in the RISCOM project. See the report from RISCOM Working Package 1.

Swedish communities proposed as possible sites for final repositories for spent nuclear fuel by SKB.[9]

A major conclusion of the group, repeated both in Outcome Resolve 2 and 3 is that "It's necessary to create arenas for specific debate with a well defined goal in order to avoid confusion between debates". However, creating arenas with well-defined goals also means providing a special frame for the debates. Although restrictions are necessary to have meaningful debates, it is important that the framing does not lead to fragmentation of the issues. The process of "creating of arenas for specific debate" must be an open and transparent one and subject to revisions. The group concludes in Outcome Resolve 3, that "In an early stage an arena has to be established to find the issues and to establish a national dialogue". The structuring of the public debate could be discussed on this initial stage, where the tasks would be to explore substantive issues, define roles and frameworks, create agendas, install and link arenas for specific debates. Public meetings provide one type of arenas. Research centres are examples of actors on the arenas. Facilitators may be needed to manage the debate. There is also a need for publicly available, unbiased reports from the arenas.

In summary the group agreed that discussing nuclear waste management in the wider context involves many conflicting issues, which calls for establishing "a structured hierarchy of interlinked discussion arenas".

4.7 Process

(GROUP: YELLOW)

Aggregated Statements of Importance

NR: 17
Decision-making process

NR: 18
Confidence is something you must earn by openness and participation.

NR: 19
Role of decision makers
Decision makers should prepare a process where the experts and stakeholders can discuss their reports.

NR: 20
The sooner stakeholders are involved, the better, because otherwise they will perceive that decisions have already been made and the process is flawed.

NR: 21
Legitimacy of constraints in dialogues

---

[9] The setting up and conducting of the hearings are described in RISCOM Working Package 5. Levels of meaningful debate are key concepts in the RISCOM Model.

Once a level of meaningful debate has been agreed, it is legitimate to delay answering questions not relevant to this level, but deferring them to subsequent discussion on the relevant level.

NR: 22
Participative/Representative Democracy
Public participates in ?
Experts identify and explore scientific/technical topics
Politicians decide/make decisions
Everyone has his/her own role and must stick to it.

Outcome resolve 1

In our first meeting many questions on our subject have arisen. To give an impression a few questions are summarized below:

"Who is running the process" (the company or …..)?
"What kind of processes are we dealing with"?
"How can we/must we constrain the processes"?
"What is the best process"?
"Is having a law a condition sine qua now for due processes"?
"Should fragmentation of the process be avoided by all means"?

In our second outcome resolve we will focus on the next topics:
1. Seeking for solutions in order to formulate proper law.
2. The role of veto in the processes.
3. Building confidence (by early involving stakeholders).
4. Confidence is a long term process.
5. The role of experts.

Outcome resolve 2

- What does 'constrain' mean?
- How does SEA/EIA fit in?
- There is no 'best' process, this always depends on context (issue, participants, etc).

In our second meeting we focused on siting processes. We spent a great deal of time in exchanging information about existing processes in the various countries (Finland, UK, France).

We found out that in comparison to the UK and France, Finland has already a lot of (legal) experience in handling siting processes. It occurred that discussions (dialogues) between the public and the producer take place in a very early stage of the process. These are long term processes (20 years).

We also acknowledged that confidence building between the public and the producer takes a very long time. Setting up the right arenas for discussion between parties in a very early stage is absolutely necessary. Even so involving the role of regulator in a very early stage.

As we think that government is less committed having only policies but no law, we find legislation on this issue necessary.

Our conclusion was that to enable smooth processes legislation, or setting out a legal framework, is obligatory. Such law must at any case contain rules on veto rights; possible benefits for the community and regulations for empowerment of the local actors.

Outcome resolve 3

In addressing process design, there is a hierarchy of issues to consider. These include:

National need

> Create widespread awareness of the need to find acceptable solutions for waste management.
> The drivers for this include:
> - Responsibility
> - Sustainability
> - Caring for the public
>
> A process is needed to do the above.

Basis principles for processes
- Early involvement of stakeholders
- Active consultations
- Transparent processes in specific arenas
- Step-by-step approach/milestones
- Narrowing the options
- Responsibility on basis of well defined roles
- 'Bankable' progress but with review mechanism
- Political commitment by legislation
- Clear targets
- Outline of timetables
- Options for retrievability (to be discussed further)
- Volunteer communities (if possible)

Legislation (legal framework)
- Main principle and policy
- Funding system
- Veto system

- Community benefits
- Decision-making principles
- Empowering roles

Veto (see also legislation)
- Possibility for local community veto is essential for local confidence and trust
- Opportunity to veto should be associated with (linked with) the principle decision of government.

Rapporteur´s comments (Twigger-Ross)

Notes from session 1

1. First question is what should the process be and what role should people have in it.
2. The question is how closely you bound the process to include stakeholders in process design and loose timetable - not governed by politicians
3. Agree that it should include stakeholders early but need a balance.
4. Wanted to include statement 23 (about the EIA process) - because the EIA process worked well in Sweden - clear milestones and timetable - included all stakeholders.
5. Did stakeholders help design the process - somewhat?
6. Who is the process owner?
    - timetables are important
7. Point - in the UK we are at the start of a policy process vs when at the siting stage - more flexibility at the policy stage?
8. Start early and be open
9. Processes only legitimate when politicians say so. Politicians set out process and roles.
10. In Finland as a "good" example - parliament took a decision only when local communities and the regulator agree on siting issues.

Critic

Talk about the different countries and their history. The Finnish case was constrained - need constraints.
Different processes for policy and siting.
Why should politicians care about processes if up for election in 5 years time

11. In Finland legislation forced the issue but in the UK - policy only
12. Different between policy and siting process - if going to do a policy that would go into legislation would have to have a very good process.
13. In the UK would it be a law - possibly but if it is a policy then cabinet only - if law it would have to go before parliament.
14. UK consultation on consultation.
15. The lesson to learn is to try and get it right first time.
16. At mercy of the politicians - no framework for the process in the UK
17. In France there is a law with a decision to be made in 2006
18. Without institutional processes everything else is only preparation

19. Avoid fragmentation - joint response for waste is needed
20. Make stakeholders aware that they have a vested interest and they are aware of the whole nuclear field
21. Conclusion - seek solutions and formulaes - proper law
22. The role of veto for communities

Notes from session 2

1. We said that we would address a set of questions - is that still a good idea or should we reflect on what we are doing.
2. Should we decide what types of process and say what the key characteristics are.
3. Kick off with issues from yesterday
4. Who is running the process - not very important who but it is important that there is someone running it. In Finland done by Posiva and done well - waste company - duty to dispose of waste.
5. Who is the decision maker? Who says yes or no?
6. The state - find the solution - the responsible stakeholder
7. The process is being driven by someone other than the decision maker.
8. The power company is being closely involved by the decision maker
9. The producer has to take care of waste
10. But it has to happen in the context of government policy
11. NO - there is a duty on the producer
12. In the UK we are focussing on low and medium waste rather than dealing with spent fuel
13. One of the our first questions was whether it is enough just to have a policy or whether you need a law
14. If you need law - what would be the key features of that law.
15. Good question - if the process runs smoothly then don't need to question it - e.g. Finland came to siting decision very smoothly but in the UK the problem that has emerged says we need to go back to the policy
16. It is about commitment - if government has a policy they are less committed than if it is law
17. In Finland it starts with the operator because we are producing waste - law is following and law is existing.
18. The state and municipality is governing the company
19. Do you have a specific law that says there will be a power of veto for the communities?
20. Yes
21. How much is specified in the law about the siting process?
22. And are the benefits put down in law?
23. Somewhat - attachment to law
24. Concern that in the UK the law could be too ridgid - too specific and not allow negotiation between communities and the state.
25. The impression that I get is that in Finland the producer carries out the consultation process - is that set down in law?
26. Been working with this for 25 years.
27. Veto - is that once and for all - a lot of work before the veto could be used.

28. You must trust it - we had four sites from 92 - working with this 4 went to government on application forms
29. In terms of exercising veto is it just the municipality or do they have to do a referendum to see what people think. Elected members and it has been tested by an appeal against the acceptance - and it was rejected
30. According to law stupid decisions can be made.
31. I would be concerned as to whether the local municipality has sufficient legitimacy to take that decision
32. How were the local community involved - by the producer or the local municipality. Two processes - EIA and a public hearing - six months from the application - ask for statements and everyone could send letters - arrange meetings for those who can't write to put their view. Who listens? Officials from the government not producers - all written down.
33. Not like a public meeting - no answers
34. EIA - listened to concerns and made reports
35. Important point - favours processes that are not adversarial - ones that advocate dialogue
36. 20 plus years - answers early on - in the public hearing only 10 submissions - long process and long involvement with communities and right information earlier.
37. Made changes to the programme re: questions. The people know that they can get into the process.
38. Confidence building is very important - 10-20 years, 300 areas to start with in Finland .

Critic

Wouldn't be surprised if in the UK you would get a wide law - current laws cover these issues - could get a mishmash and not the spirit of what is being talked about. Response saying that at the moment nothing is in law about vetoes or benefits - need to develop those carefully in law.

Don't like economic benefits - not the right way in my view.

Critic

It is very educational sitting here to look at the Swedish and Finnish cases - the areas were set really early - not one year before - a lot of time before. If good then arenas must be set up early on and process goes on for decades.

39. Possible to identify minimum requirements for the process:
    - veto
    - empowered communities
    - economic benefits

But too much focus on the local level - the main difficulties in France come from the national level - NGOs want to influence the process - can we discuss this.
40. National level - it is a strategic decision to be made but decisions can be stupid - but parliament members have many types of committees for us from a local level it is very difficult to know how decisions are made - many forces both for and against.

With such an important decision the green party agreed because they thought it was moral to look after our waste.

Critic

What is the role of the regulator in the process? When How?

41. In UK one of the comments as a result of the rock characterisation failure at Sellafield was that the Environment Agency (EA) should have been involved earlier.
42. The situation was that NIREX proposed to build a rock characterisation facility - no need to get it authorised - only planning - but along the line would have asked for a licence - too late for the EA.
43. Regulator in Sweden is seen as the public's friend/champion - would be good to get to that state - a goal for the regulator.

Critic

Regulators are judged in different arenas - SEPA (Scottish EPA) are regarded as how they regulate the agriculture

44. EA Northampton has been coloured by the flooding.
45. How do you take into account national groups?
46. At a local level national groups will inevitably want to be present - so they should be encouraged
47. Different when there are areas of overlap
48. Even if you have a good process at one level it might not be at another level
49. Lucky in the UK - can do it at the National level - but will it hold up in 10 years time?
50. National debate on national issues then focus and scope comes down - don't reevaluate it.

Statement

Piece of law which sets out minimum requirements - veto, common benefits.

Notes from session 3

1. Start with the statement - two groups have started with a prepared statement. The other method is to set out 4 headings and fill in under those.
2. RE: Veto - other way of veto - state veto or regulatory veto
3. Have "veto" as a heading - another one would be "law"
4. Above the law are principles such as early involvement
5. National need - as a basic principle or another heading - umbrella
6. Something about basic process - narrowing down to the process - stepwise
7. Should we decide we have a good set of headings?
8. Start with national need - what is the statement we should make about this?

9. "Create widespread awareness of the need to find an acceptable solution to waste management. A process is necessary to do so"
10. Does this capture this point?
11. Might be another process to create this awareness to judge this
12. Needs a separate process - difficulty when all go together
13. What are the drivers - responsibility, sustainability, protection of the public, caring for the public
14. Put the second sentence under it.

Basic principles:
early involvement
inclusivity - all relevant stakeholders
active consultation which tries to find people
transparent processes
stepwise approach/milestones
narrow down the options
responsibility based on well defined roles
"bankable" progress with review

15. Links with siting? Independent research.
16. Transparent processes need to include the appropriate arenas, specific arenas for specific areas of discussion
17. Independent peer review by experts - robust peer review of expert knowledge
18. International review also all at the national level are involved
19. Legislation / Law - refer to yesterday
20. Main principles and policy
21. The principle is that there should be political commitment to finding a solution by legislation
22. Key point to legislation is what?
23. In law we have the veto - but also the funding system for the whole programme
24. Might want to highlight funding for local communities - benefits and empowerment
25. Yesterday said it was for common benefits - put in common benefits

Legislation
- funding system and veto
- common benefits
- decision-making principles
- empowering roles

26. Links with basic principles - not surprising since you want to include basic principles in law
27. Include a date? No I don't agree
28. Timescale can get - but this was the case in Finland and Sweden - date by which it had to be done - "attachments to law"
29. Clear targets but not in legislation
30. Put indicative timetable in basic principles and targets
31. One member of the group thinks we have captured what we need in basic principles - what would say about basic processes?
32. Veto - possibility of community veto is essential for confidence and trust

33. Other issues of veto - exercising of veto come before the decision in principle
34. Should be a system in law
35. Opportunity to veto should come close to the end of the process - not sure BUT should ask at the beginning of the process - should you seek volunteer communities and at which stage can they withdraw from the process.
36. FUNDAMENTALLY disagree that you could have a veto at the beginning but that would be made without any knowledge whereas at the end equals made for good reasons.
37. Not needed at the beginning
38. (Disagreement in the group) - you have to use a volunteer community if not you don't get their buy
39. Detail of veto? NO - the key must veto for the right reason
40. In France - key point - if you don't get neutral or positive view to start with then it does not go forward.
41. (There was not agreement on the issue of volunteer communities)

4.8 Risk

(GROUP: LIGHT BLUE)

Aggregated Statements of Importance

NR: 23
Risk
The discussion of 'risk' must be coupled to economic and social well-being.

Outcome resolve 1

- Risk is multi-dimensional
- Nuclear waste risk is difficult to calculate
- Risk is >> mathematical formula

Still to discuss:

- Risk in relation to various radioactive mechanisms
- Multi-dimensionality: decision taking/making development of a mechanism

Outcome resolve 2

Graffitti outcome resolve 2:

- Residents are experts in many fields and recourses to improve safety relations
- How can public concerns be included in risk assessments?
- Risk = probability x consequence, but risk is also perceived, that means there are value-judgments that also have to be considered

- Risk should be 'measurable' to enable its assessment, otherwise risk criteria are meaningless
- The residual risk depends on the scenario's which are used in the analysis. How the scenario takes into account the worst events encountered in the past.
- Risk is risk! It is how stakeholder perceive risk that is >>a mathematical formula
- But to be of any use, stakeholders' perceptions of risk have to be periodically observed, recorded and assessed; this is the meaning of a 'measure' here, it is not a simple 'mathematical' formula. It is a mechanism for doing quality observations.

Outcome resolve 2

- Communities need to be in a position of negotiating
- Need to resource communities (give money, experts, education)
- Need to define role of participatory processes
- Difficult to impose level of acceptable risk
- Reach common understanding of different dimensions of risk
    - Risk linked to errors
    - You have assurance that catastrophic risk is unlikely in next 1000 years
    - What is catastrophic failure?

- How does risk assessment impact on economically deprived areas?

Still to discuss:

- Public consultation
- Risk with redundant nuclear plant
- Definition of catastrophic risk

Outcome resolve 3

Although there are established methods of assessing risk by the nuclear industry and regulators, risk is a complex mixture of values and perceptions incapable of reduction to a simple mathematical formulae, perceived differently from individual to individual.

Both society and the communities affected must be empowered to develop their own understanding of risk and encouraged to accept, reject or negotiate developments accordingly, taking into consideration issues such as the social and economic benefits or costs that such developments may bring.

By empowerment we mean:

- Making information and other resources available,
- Multi-directional dialogue,
- Making available education from multiple sources,
- Stretching experts and other stakeholders.

Rapporteur´s comments (Twigger-Ross)

Notes from session 1

1. Important to get into the discussion of risk, the issue that past generations have taken more risks, we are now more risk averse - we need to appreciate that some risks are worth taking for the progress we have made.
2. BUT Risks in the past cannot be compared with nuclear risks which pose bigger threats with respect to accidents.
3. BUT we accept that construction workers and fishermen get killed whereas with nuclear we are asking for no risk at all.
4. NOT so – if you are looking at things that have a the potential for catastrophe then it is different. Also, the risk is elective since the construction workers and fishermen know that they will be putting themselves at risk for a specific benefit. BUT radioactive waste management means that people are put at risk that they have not elected to take – especially with respect to future generations.
5. For example – the reason the Dounreay shaft exploded was because people thought is was safe to put waste in it – future generations had to deal with that.
6. It is hard when looking at risk for future generations
7. Mining – is an example where we are now living with the risks from past generations – passing on risk is not a new concept – not new to nuclear but it has to be done responsibly.
8. The statement (referring to the initial Statement of Importance) is self-evident that there should be weight between costs and benefits – it is easy to say.
9. (NEW TOPIC) Risk is multidimensional
10. In the end there will be some decision that involves risk SO we need to communicate it
11. BUT we have different parameters for evaluating risk
12. MUCH more than Prob x Consequence, not just a mathematical formula
13. BUT risk is a mathematical concept that is enshrined in law.
14. The regulator and operator may be happy to meet the law BUT where is the public – who seem to be wary of putting trust in politicians.
15. BUT we have had BSE so there is some justification for the lack trust.
16. "broken dreams of designers and broken lives of those who believed them"
17. Brings in the issues of SECRECY – in other countries (rather than the UK) what is known and what is not is said e.g. Finland – public are kept informed of developments
18. Before we address RISK we must be honest about the past

Critics

1. Distinguish between risk and risk perception
2. Risks vs risk perception
3. Death by nuclear vs other forms
4. Level of risk not worth going below
5. Are we becoming so precautionary that it may affect future prosperity?

19. Is there a level of risk below which it is not worth going? We can´t calculate the risk from nuclear waste. Is there something fundamentally different about nuclear waste.

20. The problem is the way countries are dealing with it – i.e. deep repository which could have a catastrophic failure – which is why the risk issues are different.
21. There is still a problem talking about risk
22. Mary Allan gave the view from the UKCEED panel: we discussed that in some areas you take risks but with respect to a deep repository no risk should be taken.
23. Perception is important
24. BUT this no risk situation only works if you don´t look at the alternatives – you need the risk profiles of all the different options
25. The UKCEED panel felt that there was still a risk attached to monitored and retrieveable nuclear waste BUT that was a risk that they were happy to accept
26. ALSO felt that the existence of the repository means that there is a risk that a future government will decide to close it up and walk away.
27. This brings us back to the first question…..that to maintain the risk at an acceptable level costs to society.
28. The Dounreay shaft was cheap in the beginning but it has become an expensive option in the long run and there is a feeling that the deep repository is the same – cheap now but will cost later.
29. All agree with the first statement – that there are risks and benefits.
30. BUT would dispute the idea that we need nuclear energy – we could replace it with renewables – for the one off cost of Torness you could insulate all the homes in Scotland and save the energy that it would generate.
31. Renewables could meet our needs
32. If you talk about risk then you inevitable widen the frame to include the nuclear energy discussion.

SEE OUTCOME RESOLVE 1 for summary and areas still to be discussed

Notes from session 2

1. Categorisation of risk - clear from the graffiti that there are people who are keen on calculating risk from a mathematical perspective and it is used - this is one category
2. Maths plus social add ons is another category
3. Otherside of the coin is more important to the public (perception rather than maths) and we should do more than the legal minimum to inspire some confidence in the public – the emotional side of risk.
4. The crossover comes when you do the calculations and it is much lower than the regulation – some may say they want it even lower.
5. Within the risk calc there are some hidden forgotten values – a process is needed for showing this
6. NO risk is much more intuitive – the maths part is a much smaller corner whether it is elective or not is very important, whether the consequences are catastrophic or not, and whether it affects our generation or the next generation – these are not tricks or nuances, and are more sound than mathematical risk.
7. Can´t decouple it from the mathematical risk – if low across generations then not a problem if giving benefit now
8. Can you give an example of catastrophic impact ……
9. What type of risk – mathematical risk is not a good base for discussion – what I find interesting is that you could disaggregate the prob and consequence – whether it

lasts for a long/short time – risk discussions can be helped by maths but need to have a wider picture.

10. Introduced the idea that risk from background and risk from the repository should be related – to say that there is already a background risk.

11. Although it can be useful to compare background and repository it is not helpful if we are having difficulties in talking about risk – better to talk about what could be the catastrophic situation

12. Experts in the UK have acknowledged that if you bury waste it will come back into the environment – which is catastrophic – the question is when will this happen – the argument has centred around whether it could fail in 200, 1000 years etc. Can make best judgement and have to make assumptions but can´t be certain

13. Could say that the coming back of radionuclides is planned – that is a different view – and does it pose the same sort of risk or more – comes back at less than background if there are no failures. Leave it there until low enough to come back – at point of disposal it is hi-risk – if after 10.000 years not a problem.

14. Where does this lead? Natural background and we know about the factors around risk perception – how do we use this?

15. Those that have to live with it should make the decisions – different people weight different aspects of risk. Community decides rather than the experts.

16. Long communication process so that community knows all the information and need to start with something simple.

17. I don´t know what is an acceptable risk and what is not . People need to be able to understand the arguments and then they can make up their minds. Need to start with something simple

18. How do you do this in an organised way – how are these processes to be used?

Critic:
Moral dilemma e.g. national/global vs local e.g. climate change

19. Part of the risk is common to all society and part is local

20. Communities are sitting with it (nuclear waste) – doing something will reduce the risk – doing nothing at present puts us at greater risk.

21. That is not so in the UK as long as it is being looked after properly you don´t raise the risk of the site if it is an active site – national issue.

22. If more nuclear was the way to tackle global warming then we would all agree to it but that is not so.

23. Some issues about the national risk should be part of the education programme – people would get a better feel for living in a risky world.

24. Would a community be prepared to accept risks if it increased their economic and social well being or if their economy was ok would they reject is?

25. How much might people be influenced by their economic situation

26. The 3rd world will take nasties for economic reasons- one of the issues is of pushing risks onto poorer people.

27. A risk might be acceptable but an affluent community might choose not to take it whereas a deprived community might take it BUT not if above an acceptable level.

28. I don´t believe that – in rural areas in Scotland they would accept it.

29. BUT isn´t that OK because you said that the local communities should take the decisions

30. BUT links with resourcing – deprived areas don´t have access to resources in order to be able to know all the information.
31. Trade offs between social and economic benefit – a negative reason for accepting the site was that it was in a deprived area (nationally not acceptable) – complex at the national level – but poorer, weaker therefore cheating them in someway.
32. How do we agree what is an acceptable risk?
33. In law there are levels of risk – using the best practice levels differ between communities and factories.
34. I find that patronising and irrelevant – no point in having this workshop if going to say that the government has it sorted.
35. No – not what I mean both sides are necessary
36. Need to challenge the legal system
37. I don´t agree with the statement on the flip chart
38. Either we agree or we need to put up what has been said – the latter is agreed
39. Communities need support to enable stretching and saying it is up to the communities to decide. ARE the UK processes linked to the decision-making processes?
40. Mechanisms for disposal should be negotiated by communities which meets their perception of risk – including math forms of risk.
41. Difficult to impose a level of acceptable risk
42. Recognise that there are many factors behind risk and we have a number of processes but not clear how they will capture the multidimensional aspects of risk.

Notes from session 3

1. A group member suggested a statement (THE FOLLOWING IS THE FINAL STATEMENT - NOTES BELOW SHOW HOW IT WAS DEVELOPED)"Although there are established methods of assessing risk by the nuclear industry and regulators, risk is a complex amalgam of values and perceptions incapable of reduction to a simple mathematical formula, perceived differently from individual to individual. Both society and the communities affected must be empowered to develop their own understanding of risk and encouraged to accept, reject or negotiate developments accordingly, taking into consideration issues such as the social and economic benefits of costs such developments may bring"
2. Can we say that there are structured ways of dealing with risk?
3. Values - means both mathematical values and other values.
4. Can't throw out the mathematical formula but it is much more than this.
5. Add in "Although there are mathematical ways of assessing risk.." at the beginning.
6. Well balanced but first paragraph is a difficult one to progress from - a bit pessimistic perhaps but the second one does clarify the first.
7. Issue running through the last two meetings is helping communities to know about risk assessment.
8. Yes - put that into the second paragraph = empowered.
9. I think it does capture that
10. Largely I agree but it suggests that it is only the communities who are concerned - it is also society.
11. Add in society - " Both society…."

Critic

When we talk about radioactive waste it must be environmentally safe - the compensation is not because w are asking people to take risks

12. Take out "accepted" and put in "established" instead
13. (facilitator pointed to the to do list - which was ignored)
14. Put in values and perceptions to cover both technical and no technical.
15. What would empowerment mean in practice?
16. "By empowerment we mean:
    - providing information
    - multi-dimensional dialogue
    - making available education from all sources
    - stretching experts and other stakeholders"
17. Discussion ensued around the concept of stretching - challenging the status quo
18. Change the first bit - tidy it up a bit
19. Does not agree with the above
20. Amalgam - not a word very readily understood - change it to mixture
21. Add in "facts?
22. But inherent in it is the notion of facts
23. Anyone wanting to change it - I do think it is a bit clumsy - what do other think
24. stick with it…
25. Anything more??? On empowerment
26. Resources
27. "Making information and other resources available"
28. Add in
29. Perhaps this is more important - easy to say you will provide information but people are overwhelmed by information and need resources to get folk together
30. Can we suggest that empowerment goes broader than risk - not done in isolation or part of a structured process?
31. Depends
32. Not really necessary

Critic

Links with the facts and values groups and the resources and communications groups.

33. Anything else to clarfy?
34. Can we put in empowerment as part of the statement?
35. Shows we have thought a bit deeper - more structured thinking?
36. I see where you are coming from but it needs to be as concise as possible
37. Keep bullets at the end - better left as is… two sentences and leave bullets at the end
38. Question of the role of regulation of risk - suggests that responsibility moves from the regulator to the community - do we want to say this. Could be dangerous if leaving it up to the communities.
39. Role of regulation is to set a basic level of standards - would hope it would not be that people just go for what the regulation says.
40. If have risk criteria for a repository it can't be precisely calculated so need soft processes

41. Add in "regulators" to the statement.

4.9 Institutional cultures

(GROUP: SILVER)

Aggregated Statements of Importance

NR: 24
All involved need to understand how their institutional (or not) commitments and cultures impact on their understanding of the issue.

Outcome resolve 1

- The balance between constancy and change is particularly important in nuclear waste management where continuity has a special value.
- Institutions need to continually review their practices. Their responses need to be authentic rather than cosmetic.

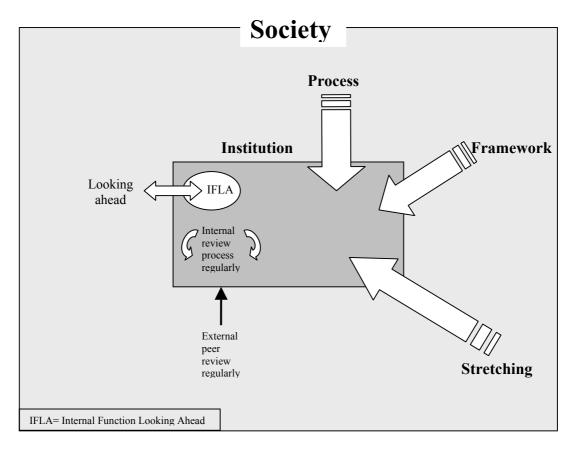For the next time we will address the following issues:

- Second order learning involves the public as well as the institutional stakeholders. The public should be seen as active participants. This is the distinction between dialogue and being informed.
- We will review areas where continuity is significant.
- We will explore processes that enable different perspectives to become explicit to the institutions themselves and others.

Outcome resolve 2

Institutions need to continually review their practices. Their responses need to be authentic rather than cosmetic.

Outcome resolve 3

Processes that enable different perspectives to become explicit to the institutions themselves and to others

Society

Process

Institution

Looking ahead ⟷ IFLA

Framework

Internal review process regularly

External peer review regularly

Stretching

IFLA= Internal Function Looking Ahead

1. Constancy and change

The balance between constancy and change is particularly important in nuclear waste management where continuity has a special value.

Continuity is important for trust. Long-time scales are needed to build trust. The effects are very long term.

There is a need for roles and responsibilities to remain clear.

2. Institutions need to continually review their practices. Their responses need to be authentic rather than cosmetic (Learning mode).

The need for change and the need for learning may be perceived differently (possibly undermined) according to the degree of trust that exists.

Institutions need to show humility and be aware of the need for life-long learning. This does not imply an abdication of responsibility.

The processes that are now developing in the UK are supportive of this evolving culture.

3. *Wider society*

Institutions have to be aware that they are not acting in a social and cultural vacuum. They need to be sensitive to changing values in society.

There is an interaction between institutions and society. This interaction informs the learning process and generates changes in values.

Institutions may themselves be an agent of change within society.

Rapporteur´s comments (Twigger-Ross)

Notes from session 1

- Institutions impact on processes and can transform processes.
- Stakeholders may vary according to their institutional backgrounds.
- In institutions, tension may exist between personal and role-related positions. These may be in conflict.
- Learning processes within institutions are related to flexibility .vs. maintenance of stable shared values.
- Institutions can no longer work according to 'old rules'.
- Issue of roles: what type of people is needed to do different types or roles (e.g., employees .vs. professional consultants .vs. contractors). They share different degrees of independence and different ethical stances.
- Institutions need to constantly review their practices. This often leads to going way beyond the legal minimum. Otherwise the institution may become locked into its past.
- How do you sell change? How do you encourage a paradigm shift? It seems that peer reviews can be useful to progress.
- Empowerment and 'selling' change processes are involved in institutional change.
- On the other hand, experts can be fearful of exposure to the public. They need to be given skills to communicate meaningfully.
- Experts need to be convinced that creating trust is in their own interest.
- We need to switch from a 'science-base' culture to a more 'communicative-base' culture. Social and economic issues should be important also.
- Note that survival is a great driver for institutional change.
- Disaster can catalyse change.
- A big challenge is getting away from a single-minded focus on issues to a regular review of policies.

- Constancy and change need to be in balance.
- Sometimes institutions may simply simulate change for particular purposes.
- If you change the environment of a phenomenon you can stimulate change (Stafford Beer). Can his be related to first and second order learning?
- New values need to be internalised by those who are leading change. What do we do about them?
- Younger people in organisations are generally more adaptable to change than the leaders of the organisation.
- The higher up people are in the organisation structure of hierarchical institutions, the more there is to lose by change. A meta-level has a role to play here.
- Change is not necessarily good by itself. Institutions have to adapt to specific circumstances.
- How do you get the people working in institutions to understand the underlying motives behind decisions? The framing of issues is part of this, in other words, the understanding of different perspectives is key.
- It is difficult to create new practices in a culture where there is no tolerance of errors.
- The need for constancy is high in order to ensure confidence in certain institutions.
- It seems that the 'institutional problem' is particularly acute in the UK.
- Constancy and change are not necessarily in a contradiction.
- Sometimes it is not clear how to implement a desired goal.
- It seems that maturity is required in the writing and reading of reports that are directed to the lay-public.
- We need to invest in change.

Notes from session 2

- Lets start with the exploration of processes. How to review processes?
- They need to be genuinely committed (not just form-filling)
- But how to create a need for review? Otherwise the media will destroy the organisation, although some organisations are good at surviving.
- We don´t want institutions to collapse. They are necessary for continuity.
- It is easier to learn from failures than from successes.
- Sticking to technical tasks .vs. instituting second order learning. An example could be Nirex. This could be a result of the embeddedness of a top-down culture.
- Organisations assess themselves via internal operational performance measurements.
- There is a need to ensure that these measurements are the correct ones. There is also a need for a qualitative/quantitative balance/tension.
- Some external measures are also needed.
- There were various signals within Nirex but there was no alternative culture to move to (the legal planning framework was the only one). People at the top level did not see what was happening.
- Transparency also applies to organisations and organisational processes.

- There is a need to build up an awareness of alternatives.
- The concept of stretching needs to be extended throughout the organisation. There also have to be a willingness to look outside the organisation (to the right spot) to a future focus. This implies a willingness to redefine objectives.
- Nirex has a huge responsibility. It was seen as part of a political will, formed on a model of a civil service organisation. This was why it took them so long to change.
- However there was a root and branching cutting following the failure of Nirex. Second order learning has taken place.
- The whole industry was arrogant and this lead to the failure.
- We are talking about how to manage audits and assessments. One way is to do high level inspections as in France to make explicit how the organisation works.
- There are also global assessments in plants (e.g., IPSM reports) conducted by audit teams.
- In the UK there is a similar practice with a task inspectorate.
- When Nirex failed it was not being regulated.
- Outside its framework there is a need to put some pressure (stretching) in the institutions.
- Audits and reviews are measuring against a set mindset.

Continuity and change

- What do we mean by continuity? Criteria leading to a safe repository is an example of continuity.
- Criteria for good practice – separate from the organisation.
- If the organisation is open, then good relationship with stakeholders becomes a force of continuity.
- Continuity is important for trust. Long-time scales are needed to build trust. The effects are very long term.
- Trust is not transferable.
- Brand loyalty is more short-term in other industries.
- Authorities have to have a great deal of trustworthiness in them.

4.10 Resourcing

(GROUP: ORANGE)

Aggregated Statements of Importance

NR: 25
COSTS
Politicians need to define not only the process but also timetables, so that estimates of the society's costs can be made.

Nr 26
Process must be properly resourced to allow <u>all</u> to participate fully.

Outcome resolve 1

We agree in principle that resourcing should be provided to enable participation but there are practical difficulties which ideally should be addressed at start.

In Sweden they have local community resources.

There is much international experience to draw upon.

Still to discuss there are the following issues:

- How do you decide who should get the resources?
- How/who decides?
- State the level of resourcing.
- How do you avoid the professionalisation of "lay people", which in turn can exclude the wider involvement of community members?

Outcome resolve 2

Graffiti Outcome resolve 1

1) How do you avoid the professionalization of "lay people" , which in turn can exclude the wider involvement of community members?
2) Who should control the funding?
3) Who should pay for it?
4) Who designs the interaction process?
5) "Ethical" use of resources?
6) What about empowerment and training, hiring of experts to help people?

Outcome Resolve 2

1. Resourcing: How you decide appears be a matter of local negotiation.
2. Politicians need guidelines.
3. Communities should decide for themselves.
4. Resourcing should attract same "rights" as other requirements e.g. sports facilities.
5. Is there a need for guidelines or legislation? If so, what are they?
   - local self determination versus need for guidance.
6. What are the criteria for allocating funds locally and nationally?
7. Amount of money should not be an issue for resourcing needs – as a principle?

Outcome resolve 3

The programme (once agreed) must be resourced to allow those who want to participate to do so and to encourage the disempowered to participate.

Proper resourcing will encourage positive engagement, improve decision-making and increase public confidence.

In addition to money, resources can include training, expertise and other methods of empowerment.

The amount of resourcing to enable participation will be small compared to the total cost of a programme.

It may be necessary to recompense members of the public who are invited to participate in events such us focus groups or citizen panels.

During siting process, decisions about local allocation of resources for local groups and people should be a matter of local negotiation. However, national guidelines on allocation of resources at a national level may be useful for local negotiations.

Experience varies substantially from country to country. This experience should be documented so that individual countries can learn from others.

Rapporteur´s comments (Andersson)

It can well be said that resourcing is a major communication challenge for stakeholder participation in order to enhance transparency in nuclear waste management decisions (referring to the opening question of the meeting). There can be a number of reasons for stakeholder participation such as legal requirements, the right of directly affected to have their say, legitimacy of the decision-making process etc. In the RISCOM model participants from outside the establishment are needed as a recourse in stretching. Once it has been said that participation is required or wished, the issue of resourcing immediate comes up. The group discussed a number of difficult questions in this context, such as:

- Who decides on resourcing?
- Where should the recourses come from?
- How can one decide which organizations or individuals should be resourced?
- What is the appropriate level of resourcing?

Concerning the first three of these questions, which all deal with procedural issues, the group exchanged experiences from participants home countries. It was seen that the arrangements are quite different between the countries. In Sweden the electricity producers pay a fee to the "nuclear waste fund" which covers all cost for the nuclear waste disposal program. There is a procedure established by government decision that a certain amount of money (4 MSEK) can be used from the fund to support the

municipalities involved. The actual decisions on this are taken by SKI. The resources are used by the municipalities for their activities to build up knowledge and competence, to stretch SKB and the authorities etc. Some of the municipality funding goes to local environmental organizations. However, in Sweden there is no funding for environmental organizations at the national level.

In France, the nuclear waste management program follows the Baitaille Plan for the period of 1991 – 2006 with general consultation on waste management. The affected communities have resources as voted by parliament. There is a case by case process depending on the interest of the region and response to the situation.

In the UK, the issue of funding always comes up in a range of front-end consultations. Generally resourcing is not issue for recognized stakeholders. However, local authorities do not have much resources and NGOs do not have them at all without support. Funding comes from various sources, including companies and are paid to legitimate stakeholders for their time (under consideration). People are paid for their time if they are not funded through regular work. Often there is also a need to persuade people to participate by giving them money.

In general terms, the group discussions and the experiences from different countries reflect that the procedures for resourcing include issues of both principle and practical nature. Perhaps the most important is to establish legitimate principles for decisions on who should be supported (although it was said that the process "must be properly resourced to allow all to participate fully"). The role of NGOs was recognized as a resource in the debates but their possibilities to participate are often very limited due to lack of resources. The problem to actual engage people was also discussed and resourcing was seen as a means to stimulate participation.

Regarding the level of resourcing it is clear that organisations that participate in the discussions need resources for their expenses, loss of salaries etc. It was, however, pointed out that resourcing also can mean the right to request services to be carried out by the implementer. The level of empowerment needed by own studies may also depend on the role of regulators, which in some countries can be seen as "the peoples experts". Clearly resources are always limited but, as emphasized in the group, the amount of resourcing to enable participation will be small compared to the total cost of a programme.

The group also discussed some possible issues of concern with respect to funding of lay people (individuals or organizations). One such issue is that resources given to certain organizations or a limited number of individuals may empower them (this is of course the intention) which can lead to an increased level of professionalisation. This in turn could have the negative effect to exclude the wider involvement of community members.

Finally, it was also emphasized that resourcing leads to expectations among the resourced and the general public but also among the established organizations. Thus there needs to be follow up of results in terms of involvement, empowerment, impact on programs etc.

4.11 Facts and values

(GROUP: WHITE)

Aggregated Statements of Importance

NR: 27
Value & facts
Nuclear Waste disposal is as much about values as about facts. The public knows at least as much about values as the experts

NR: 28
Facts are values
There is no 'true' knowledge, but institutions can't cope with this yet, at all.

Outcome resolve 1

It is difficult and important to distinguish between values and facts. Why is it important? It is important to have clarity in presenting your proposal so you can engage with other stakeholders so you can share those values and gain transparency.
In distinguishing between facts and values you are able to reduce the power differences between experts and other stakeholders.

Outcome resolve 2

Graffitti outcome resolve 1:

- How can experts identify and explain their own values in the work they do?

- There could not be transparency if the values behind the different standpoints are not openly declared

- The distinction between facts and values should avoid the association of the former with experts and the latter with stakeholders, otherwise the distinction may <u>reinforce their power differences.</u>

  'We are working for the opposite!'

- The distinction between facts and values serve the emancipatory interest of the stakeholders. This is improving transparency.

- Who owns the 'facts'?

Outcome resolve 2

We accept that facts and values are on a continium with no clear distinction.

Sharing values
1. does not mean agreeing
2. empowers all stakeholders
3. leads to less control by experts or could lead to ways of sharing values include open debates between opposing experts.

Outcome resolve 3

Values and facts are on a continuum.

An open dialogue about facts and values between experts and community will provide a solid basis for decision-making and empowerment. Retrievability is a technical issue almost only based on values.

Overcoming reluctance by experts to reveal values behind facts by creating challenging environments.

Roles define values. By clear definition of roles in the decision-making process values will be more visible. It links with the roles group and institutional process.

Rapporteur´s comments (Andersson)

The group had an extensive discussion about the two concepts of "facts" and values" and whether they actually can be distinguished from one another. One view was that what is facts is easier to define and that values are more abstract. Facts set up as a scientifically agreed knowledge base. When there are uncertainties or disagreement one can challenge experts with other experts.

In the end the dominant view in the group was that values and facts are more on a continuum than being qualitative different. It was also noted that the term "expert judgment" can be misleading since it can be understood as a value judgment made by experts, when the correct meaning of the term is judgment done by experts about uncertainties in factual issues.

Despite of these problems the group was in agreement that one should strive for clarification about the factual versus the value-laden domain of an issue. First this will increase transparency and set limits on the experts professional area e.g. by revealing hidden values in expert investigations. The second aspect emphasised in the group was that in distinguishing between facts and values you are able to reduce the power differences between experts and other stakeholders and empower the lay people in a decision-making process.

The question is then how to make values explicit. Experts typically resist to this, perhaps because it means decreasing control on their part. This reluctance by experts to reveal their values can only be overcome by creating challenging environments with an open debate ("stretching" in the RISCOM model).

It was also said that roles define values. If you have a certain role (e.g. implementer, regulator, member of a certain NGO) in a decision-making process you will hold specific values. If this is the case values will be more visible and transparency enhanced by clear definition of roles in the process. This point links with the discussions held in the dark blue group (topic: roles and arenas) and the silver group (topic: institutional cultures).

4.12 Siting

(GROUP: PURPLE)

Aggregated Statements of Importance

NR: 29
IMPORTANT TO FOLLOW THESE ELEMENTS IN SUCCESSFUL SITING
Local socio-economic benefits
local and national trust
open and public siting process
quality and transparency of scientific and technological program
national need, support by legalization, clear responsibilities

NR: 30
EIA – Process/NWM
The two-way communication is important since the process attempts to combine the scientific evaluation of the experts with the interaction of the local people. It is, however, not obligatory to reach a consensus, but present a coherent view on the (impacts) of the planned project.

Outcome resolve 1

We all agreed that the veto power of the local community is essential. The belief in the regulator is important, not only in Finland and Sweden.
Site selection criteria and process need to be clarified early in the process.
It is important to have a stepwise process. Before taking the next step you need to have re-evaluation and the possibility of reversing steps.
The safety case should answer public concerns.

Outcome resolve 2

Synthesis key issues like Veto, Confidence, Time, Responsibility, Power, Stepwise and Transparency. The siting process has to be organized transparently. EIA could be the umbrella under which it can be done.

There are different levels of local power in the decision-making in different countries, and some of these powers can be overruled. The scoping phase in EIA is very important.
EIA is not just an assessment of impact, but a process of stakeholder participation and involvement.

Strategies for the whole country before consensus EIA should be applied.
Social part of EIA?
EIA process demands open access to information
Social impacts definitely have to be evaluated
It is also about respect for the people.
EIA is not just an assessment process.
The directive is not prescriptive.
- Safety case

Outcome resolve 3

Siting is a crucial phase in developing the solution to radioactive management.

Key aspects are:

- Siting should be a stepwise process with clear milestones.
- The process itself, the criteria for evaluating sites and the roles of the different parties should be defined through consultation at the beginning of the process. However, the process should be flexible to accommodate new needs.
- Public involvement in the process is essential. This needs time, resources, accessible information and appropriate forums. (EIA process etc)
- The siting process needs to be transparent.
- Social impacts need to be evaluated.
- The local community should have power in the decision-making process.
- The regulators role is crucial and should be very active in the process.
- Siting is a crucial phase in developing the solution to radioactive waste management
- Public concerns should be addressed in the assessments, including the safety case.

Rapporteur´s comments (Andersson)

The discussion of the purple group dealt with aspects of a siting process such as the role of he local community, the possibility for the community to veto siting, roles and responsibility of involved organizations, and aspects of confidence including timing.

The environmental impact assessment (EIA) process was discussed at some length as well as the role of the RISCOM model in a siting process.

Community empowerment

The siting of a nuclear waste repository will mostly affect people in the local community, while it is also a matter of national significance. Empowerment of the local community was seen as essential for a good siting process. It is a matter of trusting laypeople to take responsibly for their own future. It must also be remembered that local people have the best knowledge of their own conditions and living environment. A matter touched upon in the group, which was given deeper consideration in the orange (resourcing) group, was that people tend to have low interest in nuclear waste.

The role of the local community in the context of the overall decision-making process was also discussed. In siting of a repository, decisions are taken by the national parliament or government. It is therefore important that government officials is well informed and listens also to the local debates. The formal power of the local community varies between countries. In some countries there is the possibility to veto against siting. In the UK veto is in the planning system. Local government can say no but the secretary of state can brake the decision. Also in Sweden there is municipality veto, which is regarded as final although the government can under certain conditions overrule it. In Finland the veto right is absolute. In their siting process this was not seen a threat by the implementer, but the veto right was seen as a kind of backdoor for the municipality. In the Czech Republic the state is responsible and there are as yet no requirements for public consultation.

The group found that veto power for a community also gives power to have influence over the siting process and "dialogue is dialogue as you can say no".

EIA

The use of EIA as a possible frame for the entire siting process and as an umbrella for activities aiming for transparency was discussed. EIA can be understood as a formal legal process with certain requirements that must be fulfilled. There are EU directives on EIA. National legislation needs to be compatible with this but it can also be more demanding. It is clear though that the emphasis given to EIA varies quite much between individual countries. The group also noted that there are best practice principles for EIA developed by the International Association for Impact Assessment.

In the EIA structure the scoping phase was considered especially important since it means narrowing down the range of phenomena to be studied. In this phase different stakeholders can participate in discussions and agree on which issues are important to study without giving up their freedom in the actual decisions on siting. EIA is thus not just an assessment of impact but a process of stakeholder participation and involvement.

It was asked how alternative waste management options can be treated in the EIA process. In practice, at least in the Swedish case, alternatives must be treated by the implementer in the final EIS (Environmental Impact Statement) but some consensus on

how this should be done may be achievable in the EIA process. In this context it was also noted that in parallel to EIA there also exists a similar process on a strategic and programmatic level, called SEA (Strategic Environmental Assessment).

Confidence and responsibilities

For confidence the group gave much importance to the existence of a stepwise process. People need to know where you are in the process and where you are going, how and when people can be involved and how their views will be used. It must also be recognized that dialogue and public involvement takes time. There needs to be flexibility with time in the siting process and a possibility to influence the timetable. Clear roles and responsibilities are also important in the siting process. Empowerment in knowledge resources and access to expertise were also discussed as essential elements. This aspect, however, was more discussed in the orange (resourcing) group.

In the end, the level of confidence depends on how you behave as individuals and organizations. For this you need to meet people face to face. Your words and actions need to be the same. It was recognized that the key to the successful process in Finland was face to face meetings but also that authorities have much trust in Finland.

Transparency

The issue that the siting process needs to be transparent was a major theme in the group meetings. A process with clear phases (stepwise) was considered as one important element for this, as well as community involvement and clear responsibilities. EIA was seen as one, although not the only one, possible umbrella process for transparency and the "RISCOM triangle" as a useful instrument.

Acknowledgements

Appendix 1: Participants and groups

ORGANISER
Raul Espejo   Syncho

PARTICIPANTS

Czech Republic
Ales Laciok   Nuclear Research Institute

Finland
Veli-Matti Ämmälä   Posiva
Altti Lucander   Eurajoki Muncipality

France
Stephane Chataignier   EDF
Didier Gay   IRSN
Benoît Jacquet   Préfecture de la Meuse, Secrétariat du CLIS
Genevieve Baumont   Secretariat Permanent du Comite de la Prevention et de la
                             Precaution
Gérard Cohen   COGEMA

Sweden
Magnus Westerlind   SKI
Saida Engström   SKB
Björn Hedberg   SSI
Åsa Wiklund   Dept. of the Environment
Lennart Sunnerholm   Östhammars kommun
Harald Åhagen   Oskarshamns kommun
Kjell Andersson   Karinta-Konsult
Clas-Otto Wene   Wenergy

United Kingdom
Elizabeth Atherton   Nirex
Clare Twigger-Ross   Environment Agency
Allan McGoff   Nirex
David Broughton   UKAEA
Lorraine Mann   Scotland Against Nuclear Dumping
Patricia England   Councillor
Jane Hunt   IEPPP/CSEC
Fred Barker   Independent Nuclear Policy Analyst
Mary Allan   UK CEED Citizens´ Panel
Bill Thompson   Lancaster University
Raul Espejo   Syncho

COWAM
Serge Gadbois   MUTADIS

FACILITY TEAM

Raul Espejo   Syncho, UK
Tony Gill   Syncho, UK
Toni Gill   Syncho, UK
Alfonso Reyes   Syncho, UK
Karin Losscher   Losscher Ass., The Netherlands
Hans Losscher   Losscher Ass., The Netherlands
Dirk Landsaat   Facilitator, The Netherlands
Marc van Woudenberg   Logistics, The Netherlands

Groups' List

RED GROUP: Consultation **Members:** Allan McGoff, Saida Engström, Mary Allan, Elizabeth Atherton **Critics:** Benoît Jacquet , Bill Thompson, Patricia England, Genevieve Baumont	**WHITE GROUP: Facts & Values** **Members:** Björn Hedberg, Gérard Cohen, Stephane Chataignier, Harald Åhagen, Clare Twigger-Ross **Critics:** Fred Barker, Lennart Sunnerholm, Kjell Andersson, Veli-Matti Ämmälä
BLACK GROUP: Mutual Learning **Members:** Jane Hunt., Björn Hedberg, Benoît Jacquet, Altti Lucander, **Critics:** Patricia England, Serge Gadbois, Ales Laciok, Elizabeth Atherton	**LIGHT BLUE GROUP: Risk** **Members:** Mary Allan, Lorraine Mann, Kjell Andersson, David Broughton **Critics:** Fred Barker, Åsa Wiklund, Harald Åhagen, Clare Twigger-Ross, Didier Gay
ORANGE GROUP: Resourcing **Members:** Jane Hunt, Fred Barker, Åsa Wiklund, Lennart Sunnerholm **Critics**: Gérard Cohen , Lorraine Mann, Harald Åhagen, Kjell Andersson, Magnus Westerlind	**BROWN GROUP: Wider Context** **Members:** Patricia England, Stephane Chataignier, Ales Laciok, Genevieve Baumont, David Broughton **Critics:** Allan McGoff, Altti Lucander, Clas-Otto Wene, Saida Engström
GREEN GROUP: Heritage **Members:** Bill Thompson, Gérard Cohen, Serge Gadbois, Lorraine Mann **Critics:** Jane Hunt, Benoît Jacquet, Magnus Westerlind, Elizabeth Atherton	**YELLOW GROUP: Process** **Members:** Allan McGoff, Fred Barker, Didier Gay., Altti Lucander, Veli-Matti Ämmälä **Critics:** Clas-Otto Wene., Stephane Chataignier, Clare Twigger-Ross, David Broughton
GOLD GROUP: Transparency **Members:** Saida Engström, Lennart Sunnerholm, Serge Gadbois, Clas-Otto Wene **Critics:** Björn Hedberg, Altti Lucander, Stephane Chataignier, Ales Laciok , Veli-Matti Ämmälä	**DARK BLUE GROUP: Roles/Arenas** **Members:** Benoît Jacquet , Harald Åhagen, Genevieve Baumont, Didier Gay, Magnus Westerlind **Critics:** Mary Allan, Åsa Wiklund, Bill Thompson, Lorraine Mann
SILVER GROUP: Institutional Cultures **Members:** Åsa Wiklund, Bill Thompson, Clas-Otto Wene, Clare Twigger-Ross **Critics:** Mary Allan, Allan McGoff, Genevieve Baumont, David Broughton, Didier Gay	**PURPLE GROUP: Siting** **Members:** Elizabeth Atherton, **Kjell Andersson,** Ales Laciok, Veli-Matti Ämmälä, Magnus Westerlind **Critics:** Jane Hunt, Björn Hedberg, Lennart Sunnerholm, Gérard Cohen, Serge Gadbois

Appendix 2: Statements of Importance

These statements were provided as input to the Team Syntegrity meeting, Lanaken, Belgium, May 14-17, 2003.

1. The opening question is opaque; the meaning of the terms 'communication challenges' 'stakeholders' 'experts' and 'transparency' are not self evident and are widely and differently interpreted and contested, the reason for the selection and differentiation between the three groups of politicians, experts and stakeholders is invisible, and this opaqueness contradicts the aim of 'transparency'.

2. Those with decision-making power and influence must learn to listen, and to hear and genuinely respond to, the concerns and aspirations of those with less power and influence (i.e. the general public.

3. Most official bodies still fundamentally misconstrue the nature of the radioactive waste problem.

4. Debate, dialogue, discussion and deliberation must not be constrained either in what can be talked about or in who is included and excluded.

5. Much wider social, cultural and political change is necessary to enable proper deliberation: the real question is how can the radioactive waste issue contribute to this wider change, rather than how to 'communicate' to solve the radioactive waste problem.

6. Experts and nuclear organisations need to deserve confidence of the community

7. Experts need to communicate understandably

8. Discussion about benefits and burdens must be fair

9. What are communication challenges for politicians, experts and stakeholders in order to enhance transparency in nuclear waste management decision

10. "Building blocks" of successful siting:
    - Local socio-economic benefits
    - Local and national trust
    - Open and public siting process
    - Quality and transparency of scientific and technological program
    - National need, supported by legislation, clear responsibilities.

11. Waste managers need to know the political agenda.

12. Can stakeholders accept that taking reasonable risk in industrial endeavour brings economic and social wellbeing?

13. Politicians tenure period is too short to take nuclear waste management decisions.

14. No real dialogue on nuclear waste management is possible with some NGOs as this is the battleground for fighting nuclear power.

15. All involved need to understand that each other's institutional commitments and general institutional culture colour their perception of the situation.

16. It is necessary for politicians, experts and 'official stakeholders' both to acknowledge and to act on the right of the general public to be counted as stakeholders.

17. Politicians must involve stakeholders in the framing of decision-making processes.

18. Special effort must be made to address stakeholder concerns about nuclear power, which fall outside the frame of nuclear waste management decisions.

19. The need of formation, not only for the stakeholders, but also for the public. That is a condition for understanding experts, expertise's, and a contribution for social trust.

20. The difficulty of keeping people interesting with a complex and long term project (in its process and in its outcomes).

21. Experts should be on tap, not on top.

22. Politicians must not impose time limits on the exploration and resolution of complex issues.

23. Information must be provided to the public so that all points of view can be heard.

24. Different stakeholders have different ethical standpoints - how can these be reconciled?

25. Knowledge holds many forms.

26. The communication of information is dependent on audience. How can information be made transparent to a wide range of different stakeholders?

27. Is enhancing transparency necessarily a good thing?

28. The definition of "acceptable" varies for different people. How will decision-makers ever decide what is acceptable?

29. Experts need to make information jargon free.

30. Experts and politicians need to understand that the general public can understand the complex issues of radioactive waste management 3 transparency should be put into action immediately - no more procrastination

31. More communication is needed between the industry and pressure groups
too much time has already been wasted in arguing instead of communicating

32. TV program's, adverts etc. should be used in an innovative and creative way to enhance knowledge and understanding of radioactive waste management, and the decision-making process.

33. The stakeholders need to be aware of the discussions between politicians and experts as regards the scope of expertise.

34. The stakeholders need to have an influence on the discussions between politicians and experts as regards the scope of expertise.

35. The stakeholders need to be aware of the discussions between politicians and experts as regards the results and conclusions of expertise, and its implementation in decision-making.

36. The stakeholders need to have an influence on the discussions between politicians and experts as regards the results and conclusions of expertise, and its implementation in decision-making.

37. The experts need to be informed of stakeholders' views on the issues at stake to identify the scope of relevance of the expertise they will input in the decision-making process.

38. The politicians need to solicit stakeholders' views on the issues at stake at the different steps of the decision-making process.

39. The politicians need to have the experts' reports debated by the stakeholders.

40. The participation of stakeholders in the experts' debate would blur the scientific assessment of the questions at stake.

41. The stakeholders need to enter experts' discussions to grasp the issues at stake in the decisions involving technical options.

42. Stakeholders need to have specific resources/training to develop competence to exchange views with the experts.

43. The politicians should not share the responsibility of the decisions with the stakeholders.

44. It is the sole politicians' responsibility to balance the experts' and the stakeholders' views in the decision.

45. It is necessary to have a frank, open and honest communication in terms that are comprehensible for ordinary people.

46. Great efforts must be made to gain people's confidence in politicians and authorities.

47. It is nearly impossible to publish true and unambiguous information about waste management in current governance of media ("medio crazy")

48. Experts need comprehend policy-making processes.

49. Communications at national and local (municipal) levels are equally important.

50. Knowledge of local conditions has paramount importance for waste management organisations.

51. Full transparency in decisions is important.

52. Simplification of scientific information and knowledge has limits.

53. Waste management organisations have to be credible and trustworthy.

54. Public should trust experts (they do not want ruin nature and threaten health of people).

55. Public and stakeholders should actively participate in decisions.

56. Mutual learning is a way for mutual trust.

57. Experts must stop to think that they must control the issues and debate

58. Values shall be separated from facts

59. All parties must be prepared to discuss values

60. Experts must realize that they do not understand everything - the public already knows this

61. "Anti groups" and critical experts as well as implementor and regulatory experts must be equally stretched in the process

62. A sustainable model and sustainable liaison will include the views of the opposition and the presence of independent experts.

63. Public apathy contributes to poor relations and 'top-down' communications.

64. The lack of trust and confidence in the authorities must be addressed.

65. When the public says they do not agree with experts, the experts say the public needs educating instead of providing an opportunity for informed debate.

66. There must be balance between telling the facts and creating panic.

67. Most fears about nuclear technology are based on ignorance

68. Emergency planning is about partnership with the public and supported dialogue.

69. 'My Own Front Door' (focus groups)
What is your life like, your perspective in relation to the nuclear industry in your neighborhood? Invite residents to relate their own experiences through photos, comments, maps, poems /songs, letters.

70. The nuclear industry will not dialogue with 'green' organisations.

71. Effective planning / communications includes knowledge of 'the public', the client, the customer; it is achievable by way of outreach to the informal social networks that exist in every community & a database of key interested, skilled individuals / clients /customers the organisation wants to connect with can be developed.

72. Transparency in nuclear waste management decisions can only happen ifthe consultation process is properly funded, allowing as wide a cross-section of the population as possible to participate.

73. Communities must have the lead role in decision-making in nuclear waste management.

74. All nuclear waste management options must be open for discussion.

75. Decisions must not be imposed against the will of the communities who will have to live with them.

76. Opponents, in particular representatives of NGOs, do not hear the voice of the local silent majorities before articulating their objections to the Nuclear Waste Management System.

77. Often the values transpiring from the current performance of the Nuclear Waste Management System are not aligned with the values espoused by politicians and experts for the future Nuclear Waste Management System.

78. In some countries the management of the operations of the existing Nuclear Waste Management System is fragmented and does not inspire trust in the people and their representatives.

79. Politicians today cannot challenge effectively the views of those either managing the existing Nuclear Waste Management System or of those researching and proposing the future Nuclear Waste Management System.

80. It is the responsibility of those researching and designing the future Nuclear Waste Management System to involve as many external stakeholders as possible in the stretching of their proposals, going beyond dialogues mainly with their most vocal 'representatives'.

81. The experts want to keep control, therefore they don't want an agenda that legitimizes layman involvement

82. Strong stakeholders play with media as a way to impact decisions.

83. There is too much believe in authority.

84. Authorities and licensing bodies are too passive with respect to communities and stakeholders.

85. Authorities are often seen as part of the nuclear establishment.

86. Nuclear waste management decisions are complex - and complexity is often used by implementers as an excuse for not discussing the real issues.

87. No one has an interest in transparency which would mean loosing control and /or flexibility.

88. Is transparency an informational or a communicational problem?

89. Is the problem to be ready to give right information or to exchange viewpoints?

90. Which link between transparency and public debate?

91. What kind of public debate in nuclear waste management?

92. Which role for different institutions (nuclear electricity producer, waste manager, regulator...) in public debate?

93. Politicians and experts need to find ways to understand what the important issues are for stakeholders involved, in order to use their recourses (both financial and human) in the most effective way and still be responding to the public's demands.

94. Politicians must look into and discover ways to keep the public interest alive during the very long processes that nuclear waste management decisions often tend to become.

95. Since the decision processes often are complex and time assuming, stakeholders must detect who are, or can be, their allies and cover their interests in the process.

96. Experts must learn to transform their findings into a format which answer to the publics demands.

97. Politicians and experts must develop decision-making processes which are possible to predict and easy to understand.

98. Experts' safety assessments should better reflect and incorporate the public's values and concerns.

99. Stakeholders should have access to both politicians and experts.

100. Role and work of experts must not be limited to what interests public or stakeholders.

101. Experts may devote themselves in priority to real technical and safety issues

102. Communication must not aim to prove the absence of risk but rather to discuss the acceptability of potential risks.

103. The management of long-lived radioactive wastes raises specific issues about long-term; they refer to concepts difficult to grasp and thus require a special and long-running effort of communication.

104. Communication effort is all the more effective that it is be based on practical and concrete issues and conducted at a local scale.

105. It is easier to understand things we can see and touch and trust people we can meet and discuss with.

Appendix 3: Aggreated Statements of Importance

NR: 1
All waste management options must be up for discussion.

NR: 2
National campaigns to raise awareness of the issues of radioactive waste management are needed.

NR: 3
We need to share/work with European-wide best practice in public partnership/dialogue in R.W. management.

NR: 4
COMMUNICATION EXPERTS AND THE PUBLIC
Experts must learn to transform their findings to a form that answers to the public's requirements.

Process must be properly resourced to allow all to participate fully.

NR: 5
Mutual learning is a way to mutual trust.
(For all stakeholders: waste management organisations, regulatory bodies, public, local representatives, etc)

NR: 6
The public needs to learn to talk to industry and industry needs to learn how to listen.

NR: 7
EXPERTS' ROLE
Experts want to keep control – therefore they don't want processes that legitimise stakeholder and laymen involvement

NR: 8
DEFINED ROLES
It is important for each 'actor' to understand different 'actors' roles and arenas to achieve a 'good' communication on the nuclear waste issue.

NR: 9
ROLE OF THE MEDIA
The role of the media – with such a complex and long term question – should they be considered as stakeholders or as key-players?

NR: 10
- Experts can only propose
- Public must be supportive THEN politicians can take a decision

NR: 11
Self-appointed experts in ethics take upon a role of spokesmen on ethical issues.
Everybody is an expert in ethics. The experts' role should be only to make suggestions
of questions to be raised. [eg: ethics of open and hidden agendas!]

NR:12
 HERITAGE MANAGEMENT
How the heritage for future generations or equity between generations can be introduced
in a pertinent way discussion. This point implicitly is an obstacle for decisions. The
long-term management of risks cannot be explained in the framework of the sustainable
development.

NR: 13
WHY TRANSPARENCY?
Transparency is more important than consensus (eg a transparent and good process may
not lead to a positive decision).

NR: 14
WHAT IS TRANSPARENCY?
Historically, nuclear waste management is framed as an expert area.

For transparency it must be opened to participative decision-making by:

-    identifying levels for meaningful dialogue

- on each level; stakeholder, experts, regulatory body NGO, implementers claims to
truth, legitimacy and authenticity must be clarified.

NR: 15
To achieve transparency our objective should be that stakeholders are
intelligent/informed customers.

NR: 16
NUCLEAR/WASTE
Nuclear electricity generation is a part of the discussion on nuclear waste management.

NR:17
Decision-making process

NR: 18
Confidence is something you must earn by openness and participation.

NR: 19
ROLE OF DECISION MAKERS
Decision makers should prepare a process where the experts and stakeholders can
discuss their reports.

NR: 20
The sooner stakeholders are involved, the better, because otherwise they will perceive that decisions have already been made and the process is flawed.

NR: 21
LEGITIMACY OF CONSTRAINTS IN DIALOGUES
Once a level of meaningful debate has been agreed, it is legitimate to delay answering questions not relevant to this level, but deferring them to subsequent discussion on the relevant level.

NR: 22
PARTICIPATIVE/REPRESENTATIVE DEMOCRACY
Public participates in ?
Experts identify and explore scientific/technical topics
Politicians decide/make decisions
Everyone has his/her own role and must stick to it.

NR: 23
RISK
The discussion of 'risk' must be coupled to economic and social well-being.

NR: 24
All involved need to understand how their institutional (or not) commitments and cultures impact on their understanding of the issue.

NR: 25
COSTS
Politicians need to define not only the process but also timetables, so that estimates of the society's costs can be made.

Nr 26
Process must be properly resourced to allow all to participate fully.

Nr 27
VALUE & FACTS
Nuclear Waste disposal is as much about values as about facts. The public knows at least as much about values as the experts

NR: 28
FACTS ARE VALUES
There is no 'true' knowledge, but institutions can't cope with this yet, at all.

NR: 29
IMPORTANT TO FOLLOW THESE ELEMENTS IN SUCCESFUL SITING
Local socio-economic benefits
local national Trust
open and public sitting process
quality & transparency of scientific and technological program
national need, support by legalization, clear responsibilities

NR: 30
EIA – PROCESS/NWM
The two-way communication is important since the process attempts to combine the scientific evaluation of the experts with the interaction of the local people. It is, however, not obligatory to reach a consensus, but present a coherent view on the (impacts) of the planned project.

www.ski.se